



Geotechnical and Geoenvironmental Report

Site: Walnut Way, Merthyr Tydfil

Prepared For: Merthyr Valleys Homes Limited

Issue Date: December 2021

Job No: 16811

REPORT TITLE : **Geotechnical and Geoenvironmental Report:
Proposed Residential Development, Walnut
Way, Merthyr Tydfil**

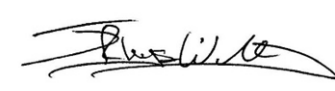
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Executive Summary

Site Location and Proposed Development	<i>Merthyr Valleys Homes Limited (the Client) is proposing a residential development on land at Walnut Way, Merthyr Tydfil. The development is yet to be finalised but will be residential in nature. The development is likely to comprise four bungalows with two located to the north and south of the existing road. The houses have associated car parking, gardens and areas of hard and soft landscaping.</i>
Site History	<i>The earliest edition shows the site to fall in an area of field land and a field boundary possibly comprising a stream crosses the southern portion of the site. The site remains unoccupied in the 1963 edition, but the surrounding area has been developed with a housing estate. The site has taken its present day form.</i>
Geology	<i>Superficial deposits of Till are shown over the solid geology which comprises sandstone and mudstone of the South Wales Lower Coal Measures Formation. Given the developed nature of the surrounding area a thin veneer of made ground is also anticipated on the site.</i>
Radon	<i>No radon protection measures are required.</i>
Ground Conditions	<i>Ground conditions encountered made ground between 0.40m-0.60m. Soft becoming stiff clay underlies this, with very stiff clay being present from >1.60m.</i>
Coal Mining Risk Assessment	<i>Based upon the desk study information it is concluded that there is an insignificant risk to the development from past shallow underground mining.</i>
Contamination of Concern	<i>No contaminants of concern were identified within near surface soils.</i>
Ground Gas Risk Assessment	<i>To protect the future site users from identified ground gas, proposed structures will need to incorporate within its construction a suitable ground gas protection system. The ground gas protection system should be designed, verified, installed and validated in accordance with the British Standard 8485:2015+A1:2019 and CIRIA guidance C735:2014. In addition, NHBC guidance may also need to be adopted depending on the requirements of the proposed development guarantor.</i>
Foundation Solution	<i>It is recommended that mass concrete strip or trench fill foundations be used; founded within the firm/stiff clays at a depth in excess of 1.60m below the existing ground level. An allowable bearing pressure of 100kN/m² may be used for strips up to 1000mm wide.</i>

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Drawing 01 Proposed Site Layout

SECTION 1 Introduction and Proposed Development

1.1 Introduction

Merthyr Valleys Homes Limited (the Client) is proposing the development of residential homes at Walnut Way, Merthyr Tydfil.

Terra Firma (Wales) Limited have been commissioned by the Client to undertake a geoenvironmental assessment and geotechnical investigation of the site.

The main objectives of the geoenvironmental assessment programme are:

- Investigate the potential human health and environmental liabilities at the site associated with any contamination
- Provide a summary of the human health and environmental conditions at the site, together with any necessary further intrusive works and / or remediation works to render the site fit for its intended use

The main objectives of the geotechnical site investigation are:

- Investigated the type, strength and bearing characteristics of the shallow superficial and underlying solid geology
- Investigate the risk, if any, from historical shallow underground mining features
- Provide engineering foundation and floor slab recommendations for the proposed development
- Provide infiltration rates and stormwater drainage viability.
- Provide recommendations regarding any other geotechnical aspects pertaining to the development

In order to achieve the above objectives, Terra Firma (Wales) Limited carried out an assessment programme including a site walkover, a review of existing data, followed by a field investigation to collect geotechnical and geoenvironmental data from selected locations.

1.2 Limitations and Exceptions of Investigation

The Client has requested that a Geoenvironmental Site Assessment (GSA) and Geotechnical Investigation (GI) be performed to enable the outlined main objectives.

The GSA and GI were conducted, and this report has been prepared for the sole internal reliance of the Client and their design and construction team. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Terra Firma (Wales) Limited. If an unauthorised third party comes into possession of this report, they rely on it at their peril and the authors owe them no duty of care and skill. The report represents the findings and opinions of experienced geoenvironmental and geotechnical consultants. Terra Firma (Wales) Limited does not provide legal advice and the advice of lawyers may be required.

The subsurface geological profiles, any contamination and other plots are generalised by necessity and have been based on the information found at the locations of the exploratory holes and depths sampled and tested.

1.3 Quality Assurance

The quality and environmental aspects of the assessment comply with Terra Firma Wales Ltd business management system which is UKAS Accredited to ISO 9001:2015 and ISO 14001:2015 standards.

SECTION 2 Review of Existing Data

2.1 Physical Setting and Current Site Use

The site is irregular in shape and locates to the north and south of Walnut Way on the junction with Hawthorne Avenue which locates to the west. The site centres on an approximate National Grid Reference of 305010 207660 occupying a plan area of approximately 0.18 Hectares.

The site is currently unoccupied and is an area of public open space. The east west trending Walnut Way divides the site in half.

The site is relatively flat with a very gentle slope in a north southerly? direction. A bank leading down to a stream is present to the east of the site. It locates at an approximate height of 266m A.O.D, The surrounding area also falls to the south.

The surrounding area is dominated by residential developments with supporting infrastructure to the west. To the east is an area of woodland beyond which is an open area of land.

The site location can be seen on **Figure 2.1**.

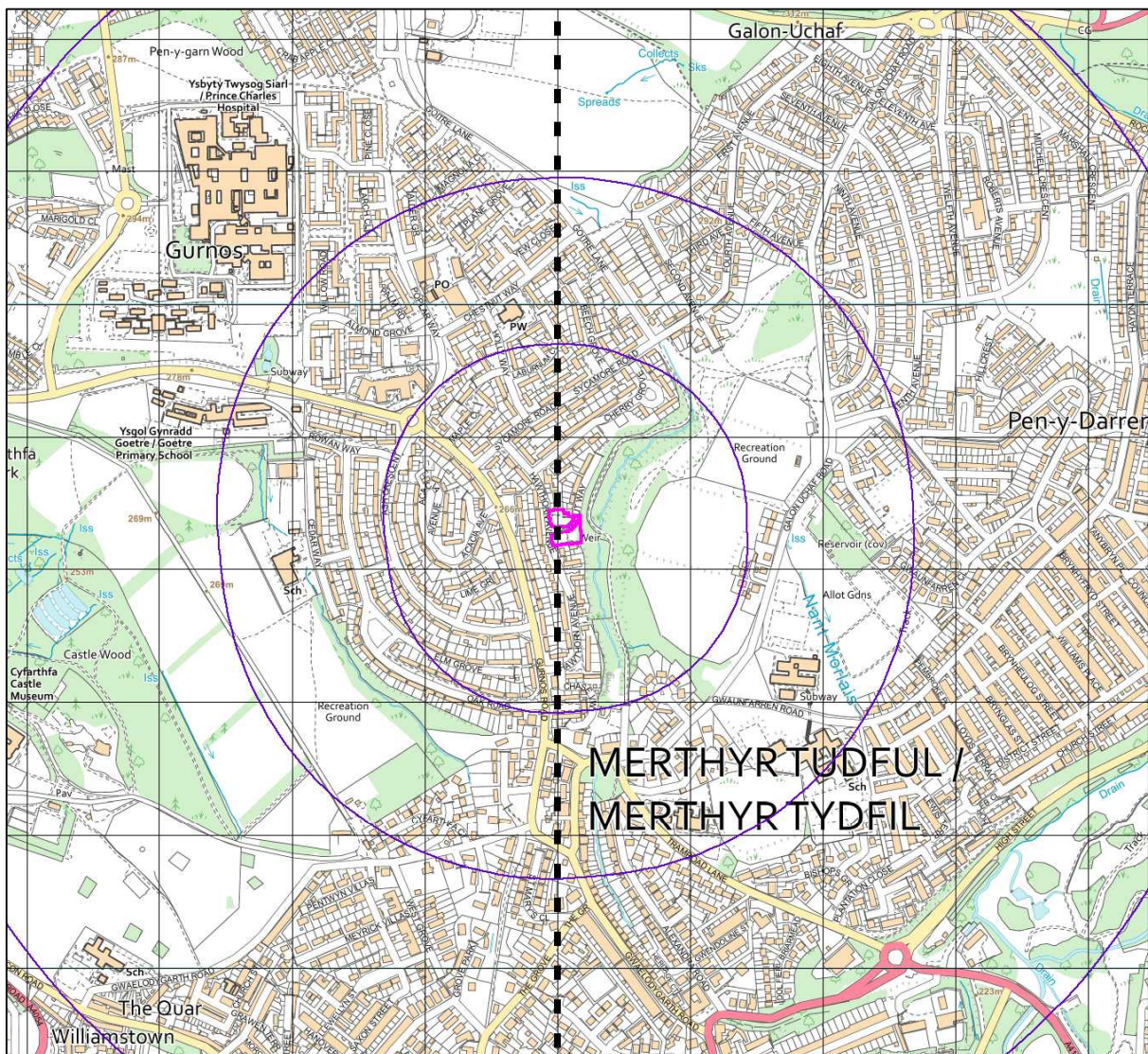


Figure 2.1 Site Location (Map provided by Envirocheck)

2.2 Site History

Historical maps of the site have been obtained in an Envirocheck Report, provided by Landmark Information Group. The history plans are supplied in **Annex A** of this report, and the most relevant editions are summarised in **Table 2.1**. Distances, where quoted are approximate, and any changes in-between map editions may not be recorded.

Table 2.1 Historical Development from Map Information

Map Edition & Scale	Key Features on Site	Key Features off Site
1875 (1:2,500)	The site falls within a field and is unoccupied. A field boundary possibly with a small stream crosses the southern half of the site.	A road or track, possibly with a tram line, locates 10m to the east of the site, this track is seen to run in a north south orientation and serves a coal and ironstone level 250m north east of the site. The level provided access in a northerly direction. An air shaft also locates 325m east of the site. A small stream is present to the east and at its closes is 30m away. A road also locates 70m west of the site. The surrounding area is dominated by field land. An area of modified topography containing mounds is located 130m east of the site.
1900 (1:2,500)	No significant changes.	The stream to the east of the site is shown to flow in a southerly direction. An area 300m to the south of the site has been developed with houses and supporting infrastructure.
1919 (1:2,500)	No significant changes.	A spring is located 45m west of the site. A stream originates from this point and flows in a southerly direction before turning south easterly and converging with the stream that flows past to the east of the site. Further development has taken place to the south of the site and numerous rows of terrace houses have been constructed 500m to the south east at Pen-y-Darren
1945 Historic Aerial Photography	No significant changes.	Additional residential development has been undertaken 350m to the north east of the site.
1963 (1:2,500)	The site is unoccupied but now appears to have taken its present day form.	A housing development has been constructed around the site. Walnut Way is present across the centre of the site with the houses forming the northern and southern boundaries. Hawthorne Avenue is present to the west of the site. Areas 150m to the north of the site appear to be still under construction. The surrounding area is now dominated by a residential land use.
1977-1979 (1:10,000)	No significant changes.	The residential development of the area has continued in a northerly direction with the construction of the Gurnos. The area to the east has been modified topographically once again and the mounds appear to have been flattened.
1993 (1:1,250)	No significant changes.	A small rectangular feature present immediately south of the south eastern corner is identified as an electricity substation.
2000 Historic Aerial Photography	The site is seen to be covered with grass and footpaths can be seen crossing the site providing access to the neighbouring houses.	No significant changes.
2006 & 2021 (1:10,000)	No significant changes.	No significant changes.

2.3 Geological Setting

2.3.1 Geology

The 1:50,000 scale British Geological Map of the area (Sheet 231 Merthyr Tydfil) and Envirocheck map was consulted for geology underlying the site. The site is shown to be underlain by a sandstone unit of the South Wales Lower Coal Measures Formation. Detailed stratigraphical information is provided in **Table 2.2**.

Table 2.2 Detailed Stratigraphical Information

Period	Group	Description
Carboniferous	South Wales Lower Coal Measures Formation	Grey, (productive) coal-bearing mudstones/siltstones, with seatearths and minor sandstones.

The dip of the bedrock is shown to vary between 6° and 10° to the south east.

Superficial deposits in the form of Till are indicated to be present over the solid geology. These are likely to comprise clay and silt with varying quantities of sand, gravel, cobbles and boulders..

A thin veneer of made ground may also be present on the site associated with the construction of the neighbouring houses. An area of made ground is also shown to be present to the east of the site on the opposite side of the stream.

2.3.2 BGS Borehole Information

No BGS Borehole records are available for the site or in the surrounding area.

2.3.3 Radon

The Envirocheck datasheet and maps (**Annex A**) detail that the site is in a lower probability radon area as less than 1% of homes are estimated to be at or above the action level.

Radon protection is not required for new development on the investigation site.

2.3.4 Mining and Mineral Sites

A Coal Authority report was obtained, and it details that the site 'in not within a surface area that could be affected by any past recorded underground coal mining'. There are also no recorded mine entries known to the Coal Authority within, or within 20m of the property boundary.

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

The Coal Authority Coal Mining Report is appended in (**Annex B**).

There are four recorded mineral sites within 1km of the site. The nearest locates 707m to the north east. This is identified as the Pen-Y-Bryn site and was exploiting sandstone of the South Wales Lower Coal Measures Formation by opencast methods. The status is recorded as ceased.

There is an insignificant risk to the site from past underground coal mining.

2.3.5 Natural Hazards

The Envirocheck details the following hazard potentials for the site.

Collapsible Ground:	Very Low
Compressible Ground:	No Hazard
Ground Dissolution:	No Hazard
Landslide:	Very Low
Running Sand:	Very Low
Shrinking and Swelling Clays:	Very Low

The site investigation will add further information on the potential natural hazards.

2.4 Environmental Setting

The following sections have been compiled using the Landmark Information Group Envirocheck datasheet and maps which can be found in **Annex A**.

2.4.1 Hydrogeology

The bedrock beneath the site has an aquifer designation of 'Secondary A'. These are "permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers".

The superficial deposits are classified as 'Secondary A – Unclassified' this designation 'has been assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type'.

Deeper groundwater flow within the underlying bedrock will be controlled by the strata dip and any fractures or bedding planes within the rock units.

The hydraulic gradient will be at its steepest during periods of heavy rainfall and aquifer recharge.

The site does not locate within, or within 1km of a groundwater source protection zone.

There are no groundwater or water abstraction points within 1km of the site.

2.4.2 Hydrology

The nearest surface water feature to the site is identified 27m to the east and this corresponds with the small unnamed stream which flows in a southerly direction.

The topography of the site and surrounding area falls gently to the south with a bank down to the small stream present to the east. Surface and shallow groundwater beneath the site is likely to flow in a south / south easterly direction towards the unnamed stream. Given the developed nature of the surrounding area surface water is likely to be collected by surface drainage systems.

2.4.3 Flooding

The flood maps provided by Envirocheck show that the site is **not** in an area at risk from flooding associated with the rivers or sea.

The maps also show that Hawthorne Avenue to the west has a low risk for surface water flooding to occur.

The site falls in an area where there is potential for groundwater flooding to occur at the surface.

2.4.4 Waste

There is one recorded historic landfill sites located within 250m of the site. This site is located 241m to the east of the site and was operational between 31st December 1960 and 1975. The deposited waste is included as inert, industrial, commercial, household and special.

A second Local Authority Recorded Landfill Site is also present 147m to the east of the site. No further information is available for this location.

There are no licensed waste management facilities within 250m of the site.

2.4.5 Pollution

There are no entries on the Contaminated Land Register within 1km of the site.

There have been no recorded pollution incidents to controlled waters within 750m of the site.

There are no records on the substantiated pollution incident register within 1km of the site.

2.4.6 Sensitive Land Use

The site is not located within a sensitive land use area.

There are two areas of ancient woodland within 1km of the site, the nearest locates 426m to the west.

2.4.7 Urban Soil Chemistry

The BGS have published estimated soil concentrations for several common contaminants and the estimated concentrations are listed below:

Arsenic:	15 - 25 mg/kg
Cadmium	<1.8 mg/kg
Chromium	60 - 90 mg/kg
Lead	<100 mg/kg
Nickel	15 - 30 mg/kg

The estimated concentrations are below residential (with plant uptake) guidelines.

2.4.8 Industrial Land Use

Relevant contemporary trade directory entries recorded within 250m of the site are summarised in **Table 2.3**.

Table 2.3 Relevant Contemporary Trade Summary

Company	Distance / Direction	Classification	Status
Bil-D-Aid	178m North	Damp and Dry Rot Control	Inactive

2.4.9 Infilled Land

There are no areas of potentially infilled land (non-water) within 250m of the site.

There are five areas of potentially infilled land (water) within 250m of the site. The nearest is identified on the site and is seen to cross the southern half in a west to east orientation. This is a linear feature and corresponds with the feature seen on this historic maps.

The remaining features are located 59m south west, 169m south, 208m south and 222m south. These again relates to small linear features which were possibly streams.

SECTION 3 Site Reconnaissance Findings

A site reconnaissance survey was completed by Terra Firma (Wales) Ltd on the 8th of July 2021. The characteristics of the site observed during the walkover are summarised in **Table 3.1**.

Whilst the walkover summary includes consideration of current operations and housekeeping on the site as potential sources of contamination, it does not constitute a comprehensive environmental audit of the site as covered under ISO 14001.

Table 3.1 Site Reconnaissance Findings

Feature	Description
Physical Characteristics	
Access Constraints	There are no access constraints as the site is open from the surrounding roads.
Site Topography	The site is seen to be flat, with the eastern boundary along the top of a bank.
Surface Cover	The site is covered by grass.
Site Drainage	A gully is present on Walnut Way.
Surface Water	No surface water was observed at the site.
Vegetation	Trees are seen along the eastern boundary of the site on the bank.
Invasive species	No evidence of invasive species was observed.
Existing Buildings	No buildings are present on the site.
Retaining Walls	No retaining walls are present on the site.
Basements on Site	No basements are located on site.
Adjacent Buildings	Houses are present around the site to the north, south and west.
Potentially Unstable Slopes	None on site. It has not been possible to observe the bank on the eastern boundary due to the dense vegetation
Buried and Overhead Services	Overhead cables are present with a telegraph pole present on the northern half of the site. The wires serve the surrounding houses. A water hydrant is present on Walnut Way and a stop valve is seen near the south western corner on Hawthorne Avenue. Two circular man hole covers are present near the western boundary. An electricity substation is present near the south eastern corner of the site.
Areas of Public Open Space and Rights of Way	The site is currently public open space with pavements and footpaths to the existing houses.
Environmental Characteristics	
Underground/Above Ground Storage Tanks and Pipework	None observed.

Potentially Hazardous Materials Storage and Use	None observed.
Asbestos Containing Materials.	None observed.
Waste Storage and Fly-Tipping	None observed.
Electricity Sub-stations / Transformers	Electricity substation is present near the south eastern corner
Evidence of Possible Land Contamination	None observed.
Potential Off-Site Sources of Ground Contamination	None observed

SECTION 4 Preliminary Human Health and Environmental Risk Assessment

4.1 General

The preliminary human health and environmental risk assessment is a qualitative evaluation of unacceptable risks to human health or the environment from potential 'contaminated land', based on reviewed information in preceding sections of this report.

For 'contaminated land' to exist as defined in Part 2A of the Environmental Protection Act (EPA) 1990, a Pollutant Linkage needs to be identified. Pollutant linkages are defined by having a valid 'source – pathway – receptor' as established in the preliminary conceptual site model.

For our definitions of pollution linkage and how we define risk please refer to **Annex C** which includes our classifications of consequence and probability, and risk assessment matrix.

4.2 Potential Sources of Contamination

Potential or known sources of contamination associated the sites current and historical land use are summarised in **Table 4.1**.

Table 4.1 Contamination Sources

ID	Source	Contaminant
S1	Natural Soils	Metals, Semi-Metals and Non-Metals
S2	Made Ground Soils	Metals, Semi-Metals and Non-Metals, Speciated PAH, Petroleum Hydrocarbons, Asbestos
S3	Adjacent Buildings	Asbestos / Asbestos Containing Materials
S4	Landfills	Landfill Gas
S5	Infilled Land	Ground Gas

4.2.1 Omitted Potential Sources

One potential source of contamination highlighted in this Phase 1 Desk Study has been excluded from further risk assessment. These are listed in **Table 4.2**.

Table 4.2 Omitted Contamination Sources

Source	Reasoning
Existing Roads	The existing roads adjacent and dividing the site have been omitted as they are considered unlikely sources of contamination. Fuel leaks from parked cars or cars using the roads are unlikely to have impacted the site and any spills that have occurred are likely to have been minor.
Tramline to East	This line is not considered to be a potential source of contamination on the site. The line is a running line rather than a siding and the transient passing of trams is therefore unlikely to have produced contamination. The line is also located topographically lower than the site and the potential for contamination migration on to site is therefore negligible.

4.3 Potential Pollution Pathways

Potential contaminant pathways associated with a **residential** land use are as follows.

- P1 – Direct soil and dust ingestion
- P2 – Consumption of homegrown produce
- P3 – Dermal contact

P4 – Inhalation of dust and vapours
P5 – Vertical migration of leachates (unsaturated zone)
P6 – Horizontal and vertical migration of contaminants (saturated zone)
P7 – Artificial contaminant pathway (borehole, pile, excavation etc)
P8 – Surface run-off
P9 – Plant uptake
P10 – Horizontal and vertical migration of ground gasses and vapours
P11 – Direct contact with construction materials
P12 – Inhalation of asbestos fibres

4.4 Potential Receptors

There are human and hydrological receptors to any contamination that may be present on site. Potential receptors include.

R1 – Construction and maintenance workers
R2 – Future site users (residents and visitors)
R3 – Passers-by or neighbouring site users
R4 – Groundwater (aquifer)
R5 – Surface waters (stream)
R6 – Area of public open space
R7 – Construction materials (concrete/potable water pipes)

4.5 Preliminary Conceptual Site Model

The preliminary conceptual site model establishes potential pollutant linkages between contaminants (source), pathways and receptors, realised during the preparation of the desk study report. Where a potential pollutant linkage is identified an assessment of risk is subsequently undertaken. The preliminary conceptual site model is tabulated in **Table 4.3**.

Outcomes of the preliminary conceptual site model are used as a basis for the design and implementation of the site investigation, whereby areas of potential contamination can be targeted as well as investigating the wider site.

Findings of the site investigation can in turn be used to develop and refine the conceptual site model.

4.6 Data Gaps and Uncertainties

Key data gaps and uncertainties identified in the CSM at desk study stage include:

- There are no previous site investigations available for the site, therefore no information is available on actual concentrations of contaminants in soil and groundwater at this stage.
- Groundwater depth and flow direction are conceptual at this stage.

Table 4.3 Preliminary Conceptual Site Model

Source	Pathway	Receptor	Preliminary Risk Assessment		
			Consequence	Probability	Risk
Human Health					
Contaminated Soils S1 & S2 Adjacent Buildings S3	Direct soil and dust ingestion P1 Dermal contact P3 Inhalation of dust and vapours P4	Construction and maintenance workers R1	Medium	Low	Low Risk: Significant contamination is not anticipated
		Passers-by or neighbouring site users R3	Medium	Low	Low Risk: Dust suppression measures if required.
	Direct soil and dust ingestion P1 Consumption of homegrown produce P2 Dermal contact P3 Inhalation of dust and vapours P4	Future site users (residents and visitors) R2	Medium	Low	Low Risk: Significant contamination is not anticipated
Radon Gas	Horizontal and vertical migration of ground gasses and vapours P10	Future site users (residents and visitors) R2	Medium	Unlikely	Near Zero Risk: No radon protection measures required.
Landfill Gas S4		Future site users (residents and visitors) R2	Severe	Low	Medium Risk: Two landfills are recorded within 250m of the site.
Ground Gas S5		Future site users (residents and visitors) R2	Severe	Low	Medium Risk: An infilled stream is possibly present across the south
Vapours		Future site users (residents and visitors) R2	Severe	Unlikely	Low Risk: No source of vapours has been identified on the site.
Impacted Groundwaters	Horizontal and vertical migration of contaminants (saturated zone) P6 Dermal contact P3	Construction and maintenance workers R1	Medium	Low	Low Risk: Significant contamination is not anticipated
Contaminated Soils S1, S2 & S3	Plant uptake P9 Consumption of home grown produce P2	Future site users (residents and visitors) R2	Medium	Low	Low Risk: Significant contamination is not anticipated
Contaminated Soils S1, S2 & S3	Direct Contact P11	Construction materials (water pipes) R7	Mild	Low	Low Risk: Significant contamination is not anticipated
Aggressive ground conditions – Sulphates S1 & S2		Construction materials (concrete) R7			
Aquatic Environment					
Contaminated Soils S1, S2 & S3	Vertical migration of leachates (unsaturated zone) P5	Groundwater (aquifer) R4 Surface waters (stream) R5	Mild	Low	Low Risk: Significant contamination is not anticipated
	Surface run-off P8	Surface waters (stream) R5			

	Horizontal and vertical migration of contaminants (saturated zone) P6				
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SECTION 5 Field Investigation

5.1 Site Works

A geotechnical and geoenvironmental site investigation comprising three boreholes and one trial pit soakaway was undertaken on the 12th November, 2021.

The fieldwork was supervised by Terra Firma (Wales) Limited, who logged the exploratory holes to the requirements of BS 5930:2015+A1:2020. The proposed locations of the exploratory holes were determined by Terra Firma (Wales) Ltd in general accordance with BS 10175:2011+A2:2017 in order to assess the findings of the preliminary conceptual site model.

Trial pits referenced TP01 was formed using a JCB 3CX excavator with a 0.60m wide bucket.

Representative disturbed samples were taken and retained in airtight containers for environmental and geotechnical testing.

On completion all trial pits were backfilled with materials arisings compacted in layers using the excavator bucket. The ground surface was reinstated.

The trial pit logs are presented in **Annex D**.

Soakaway tests were carried out in trial pit TP01 in general accordance with BRE DG 365:2016. The excavation sides were squared using the excavator bucket and dimensions recorded within the test section. The trial pit was partially filled with clean water using a dedicated bowser with a 75mm diameter outlet and the fall in level recorded against time. The results are presented in **Annex E**.

The boreholes referenced WS01 to WS03, were formed using a Terrier 2000 rig. Dynamic sampling techniques were employed from surface to produce a continuous disturbed sample.

Standard penetration tests (SPT) were carried out at regular intervals in general accordance with BS1377: Part 9:1990:3.3. SPT results summarised as N values are presented on the borehole log.

Boreholes were monitored for groundwater ingress as drilling proceeded.

Representative disturbed samples were taken and retained in airtight containers for environmental and geotechnical testing.

The borehole logs are presented in **Annex F**.

On completion WS02 was backfilled with materials arising and the surface reinstated.

On completion, WS01 and WS03 were installed with slotted standpipes consisting of a 50mm ID HDPE slotted tube set in a granular filter zone and sealed above with a bentonite plug. Installations were protected at surface with a flush cover. Full installation details are recorded on the relevant logs.

The installations were tested for carbon dioxide, methane, oxygen, hydrogen sulphide and carbon monoxide using a gas analyser GA5000. Atmospheric pressure and gas flow were also recorded. Subsequent monitoring readings are presented in **Annex I**.

Exploratory hole locations are shown on **Drawing 01**.

5.2 Ground Conditions

The ground conditions encountered by the exploratory holes can in general be summarised as shown in **Table 5.1**.

Table 5.1 Summary of Typical Ground Conditions

Depth (m)			Thickness (m)	Stratum
0.00	-	0.40-0.60	0.40-0.60	MADE GROUND. Brown SILT.
0.40-0.60	-	1.60-2.20	1.20-1.70	Firm orangish brown slightly sandy CLAY
1.60-2.20	-	2.00-2.60	>0.40	Stiff gravelly CLAY

5.3 Groundwater

Groundwater was not recorded during the site investigation

5.4 Stability and Obstructions

Trial pits remained stable and vertical during excavation.

5.5 Installation Well Construction

Gas well locations were selected on a non-targeted basis to characterise the gas contamination status of the site.

Gas installation well construction details are summarised in **Table 5.2**.

Table 5.2 Installation Well Summary

Location	Response Zone		Stratum
	From (m)	To (m)	
WS01	0.6	2.60	Firm orangish brown slightly sandy CLAY
WS03	0.5	2.00	Firm orangish brown slightly sandy CLAY

5.6 Laboratory Chemical Testing

5.6.1 Sampling Strategy

Soil sampling locations were selected on a non-targeted basis to characterise the contamination status of the site.

5.6.2 Soil Laboratory Analysis

During the site investigation works soil samples were taken and despatched to the accredited laboratories of Eurofins Chemtest for laboratory chemical testing. Soil samples were tested for the determinants listed in **Table 5.3**.

Table 5.3 Soil Laboratory Analysis

Metals & Metalloids	In-Organics	Organics	Others
Arsenic	Cyanide	Phenols	pH (acidity)
Cadmium	Sulphate	PAH	Asbestos
Chromium III		Petroleum Hydrocarbons	
Chromium VI			
Copper			

Lead			
Mercury			
Nickel			
Selenium			
Zinc			

The results are discussed in detail in **SECTION 6** and the laboratory test results certificates may be found in **Annex G**.

5.7 Soil Property Testing

5.7.1 In-situ Permeability Testing

During the site investigation one trial pit soakaway test was undertaken in TP01 and carried out in general accordance with BRE DG 365:2016.

Soakaway test results are summarised in **Table 5.4**.

Table 5.4 Summary of Soakaway Results

Trial Pit	Depth Range of Test (m)	Infiltration Rate (ms ⁻¹)
TP01	0.60-1.40	Insufficient outflow to calculate infiltration

The test results are discussed in **SECTION 10.5** and the calculation sheets may be found in **Annex E**.

5.7.2 Laboratory Geotechnical Testing

A schedule of laboratory tests was prepared by Terra Firma Wales Ltd and samples were despatched to the accredited laboratories of Apex Testing Solutions. A summary of the testing carried out is presented in **Table 5.5**.

Table 5.5 Summary of Geotechnical Testing

Geotechnical Test	Standard (BS1377:1990)	No. Tested
Moisture Content	Part 2, Clause 3.2	3
4 Point Liquid and Plastic Limit	Part 2, Clause 4.3 & 5.3	3

The test results are presented in **Annex H** and discussed in **SECTION 7** of this report.

SECTION 6 Evaluation of Geoenvironmental Analytical Results

6.1 Assessment Methodology

Comparison of the analytical results has been made with the 2015 Suitable 4 Use Levels (S4UL) provided by Land Quality Management (LQM) Limited and the Chartered Institute of Environmental Health (CIEH) or provisional Category 4 Screening Levels (pC4SL).

Sulphate results have been compared to guidelines presented in British Research Establishment (BRE SD1:2015). Sulphate levels need only be considered for buried concrete risk assessment and are not human health related.

6.2 Soil Test Results

A summary of the chemical test results which include the regulatory soil guideline values used in a residential setting with plant uptake are given in the following tables. The complete results can be found in **Annex G**.

6.2.1 Inorganics & Miscellaneous

Four samples were tested for a standard suite of inorganics, pH and organic matter. The summarised results are in **Table 6.1**.

Table 6.1 Summary of Soil Chemical Test Results – Inorganics & Miscellaneous

Substance	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Arsenic	37	LQM/CIEH	3.50	11.00	0
Cadmium	11	LQM/CIEH	0.18	0.53	0
Chromium III	910	LQM/CIEH	20.00	26.00	0
Chromium VI	6	LQM/CIEH	<0.5	<0.5	0
Copper	2400	LQM/CIEH	32.00	62.00	0
Lead	200	pC4SL	27.00	43.00	0
Mercury (inorganic)	40	LQM/CIEH	<0.05	0.12	0
Nickel	180	LQM/CIEH	24.00	37.00	0
Selenium	250	LQM/CIEH	<0.20	<0.20	0
Zinc	3700	LQM/CIEH	65.00	80.00	0
Cyanide	-	-	<0.5	<0.5	-
Boron	290	LQM/CIEH	<0.40	0.54	0
Sulphate (%)	0.24	BRE	<0.01	0.02	0
Organic Matter (%)	-	-	0.30	2.00	-
pH	-	-	7.70	8.50	-
Notes:					
- No available guideline					

6.2.2 Organics

Four samples were tested for speciated polycyclic aromatic hydrocarbons. The summarised results are in **Table 6.2**.

Table 6.2 Summary of Soil Chemical Test Results – Speciated Polycyclic Aromatic Hydrocarbons

Substance	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Naphthalene	2.3	LQM/CIEH	<0.1	<0.1	0
Acenaphthylene	170	LQM/CIEH	<0.1	<0.1	0
Acenaphthene	210	LQM/CIEH	<0.1	<0.1	0
Fluorene	170	LQM/CIEH	<0.1	<0.1	0
Phenanthrene	95	LQM/CIEH	<0.1	<0.1	0
Anthracene	2400	LQM/CIEH	<0.1	<0.1	0
Fluoranthene	280	LQM/CIEH	<0.1	0.21	0
Pyrene	620	LQM/CIEH	<0.1	0.13	0
Benzo(a)anthracene	7.2	LQM/CIEH	<0.1	<0.1	0
Chrysene	15	LQM/CIEH	<0.1	<0.1	0
Benzo(b)fluoranthene	2.6	LQM/CIEH	<0.1	<0.1	0
Benzo(k)fluoranthene	77	LQM/CIEH	<0.1	<0.1	0
Benzo(a)pyrene	2.2	LQM/CIEH	<0.1	<0.1	0
Indeno(123cd)pyrene	27	LQM/CIEH	<0.1	<0.1	0
Dibenzo(ah)anthracene	0.24	LQM/CIEH	<0.1	<0.1	0
Benzo(ghi)perylene	320	LQM/CIEH	<0.1	<0.1	0
Total PAH	-	-	<2.0	<2.0	-

Notes:

Thresholds based on 1.0% soil organic matter

- No available guidelines

Four samples were tested for petroleum hydrocarbon. The summarised results are shown in **Table 6.3**.

Table 6.3 Summary of Soil Chemical Test Results – Petroleum Hydrocarbons

Substance	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Aliphatic					
PH C5 – C6 Ali	42	LQM/CIEH	<1.0	<1.0	0
PH C6 – C8 Ali	100	LQM/CIEH	<1.0	<1.0	0
PH C8 – C10 Ali	27	LQM/CIEH	<1.0	<1.0	0
PH C10 – C12 Ali	130	LQM/CIEH	<1.0	<1.0	0
PH C12 – C16 Ali	1100	LQM/CIEH	<1.0	<1.0	0
PH C16 – C21 Ali	65000*	LQM/CIEH	<1.0	<1.0	0
PH C21 – C35 Ali	65000*	LQM/CIEH	<1.0	<1.0	0
PH C35 – C44 Ali	65000	LQM/CIEH	<1.0	<1.0	0
Aromatic					
PH C5 – C7 Arom	70	LQM/CIEH	<1.0	<1.0	0
PH C7 – C8 Arom	130	LQM/CIEH	<1.0	<1.0	0
PH C8 – C10 Arom	34	LQM/CIEH	<1.0	<1.0	0
PH C10 – C12 Arom	74	LQM/CIEH	<1.0	<1.0	0
PH C12 – C16 Arom	140	LQM/CIEH	<1.0	<1.0	0
PH C16 – C21 Arom	260	LQM/CIEH	<1.0	<1.0	0

PH C21 – C35 Arom	1100	LQM/CIEH	<1.0	<1.0	0
PH C35 – C44 Arom	1100	LQM/CIEH	<1.0	<1.0	0

Notes:

PH – Petroleum Hydrocarbon

Ali – Aliphatic

Arom – Aromatic

Thresholds based on 1.0% soil organic matter

* – Ali C16-21 and C21-C35 based on criteria for Ali EC >16-35

6.2.3 Asbestos Testing

All soil samples were scheduled for asbestos screening. Asbestos was not detected.

SECTION 7 Geotechnical Testing Results

Geotechnical testing results are summarised in the following sections and presented in their entirety in **Annex H**.

7.1 Plasticity & Moisture Content Testing

During the investigation three samples of the shallow clay material was taken and submitted for plasticity testing. The test results are summarised in **Table 7.1**.

Table 7.1 Plasticity & Moisture Content Test Results

Location	Depth (m)	Laboratory Principal Soil Type	Moisture Content (%)	Plasticity Index (%)	Passing 425µm Sieve (%)	Modified Plasticity Index (%)	Volume Change Potential
WS01	0.8-1.0	Clay	16.8	19	83	15.77	Low
WS02	1.6-1.8	Clay	23.3	13	76	9.88	Low
WS03	1.8-2.0	Clay	10.1	15	66	9.90	Low

In line with the NHBC (Chapter 4.2), the modified plasticity index for each sample was calculated. For design purposes the soils on site should be assumed to have a low volume change potential.

7.2 BRE SD1 Testing

Two samples were subject to BRE SD1 testing for concrete classification. The results are summarised in **Table 7.2**.

Table 7.2 BRE SD1 Testing Summary

Location	Depth (m)	2:1 Water/Soil Extract		Total Potential Sulphate (%)	pH	Design Sulphate Class for Location	ACEC Class for Location
		SO ₄ (mg/l)	Mg (mg/l)				
WS01	0.4-0.6	<0.01	<0.01	0.02	8.30	DS-1	AC-1
WS02	0.8-1.0	<0.01	<0.01	<0.01	8.2	DS-1	AC-1

SECTION 8 Ground Gas Risk Assessment

8.1 Gas Screening Value

Two ground gas monitoring wells were installed in WS01 and WS03. Installation details are shown on the relevant log.

One rounds of gas monitoring have been carried out to date. The installations were tested for carbon dioxide, methane, oxygen, carbon monoxide and hydrogen sulphide using a Gas Analyser GA5000.

Recorded gas concentrations are summarised in **Table 8.1**.

Table 8.1 Measured Gas Concentration Summary

Gas	Minimum (% V/V)	Maximum (% V/V)
Methane	0	0
Carbon Dioxide	4.8	5.2
Oxygen	14.6	16.1

Methane levels peaked at 0% V/V. Carbon dioxide levels varied between 4.8% and 5.2% V/V. Oxygen concentrations varied between 14.6% and 16.1% V/V.

The gas flow rate from the boreholes was also assessed, no flow was recorded

Based on a flow rate of 0.1l/hr (limit of detection) and the highest recorded carbon dioxide concentration of 5.2%, a gas screening value of 0.0052 l/hr is calculated, as follows:

$$(5.2/100) \times 0.1 = 0.0052 \text{ l/hr}$$

The results to date are presented in **Annex I**.

8.2 Conclusion

When this monitoring result is compared with Table 8.5 of CIRIA report C665, the site is classified as 'Gas Characteristic Situation 1' (CS1). However, as the peak carbon dioxide has risen above 5%, consideration should be given to elevating this classification.

Due to the limited monitoring results obtained to date, it is recommended that 'Gas Characteristic Situation 2' (GS2) be applied to the site in line with recommendations provided in CIRIA C665 as a precaution.

Upon completion of the full six rounds of monitoring the recommendation will be reviewed in a letter report and if necessary amended.

SECTION 9 Quantitative Risk Assessment

9.1 Contaminants of Concern

All substances tested for were found to be present at concentrations below their respective human health threshold level.

9.2 Mitigation and Remedial Measures

The following sections summarise the likely mitigation and remedial measures suitable for the identified contamination and proposed development. Detailed methodology to achieve the measures should be prescribed in a Remediation Strategy Report and the results presented in a Validation Report upon completion of the development.

9.2.1 Human Health

9.2.1.1 Contaminated Soils

Site specific mitigation and remedial measures are not required with respect to human health.

As good practice, construction workers should adhere to good site management, COSHH, good standards of hygiene and appropriate health & safety on site, with personal protection equipment (PPE) and dust suppression where appropriate.

All imported soils should be validated as clean and suitable for use in accordance with 'Requirements for the Chemical Testing of Imported Soils for Various End Uses and Validation Cover Systems'.

For proposed new supply water pipes, the UK Water Industry Research publication 'Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites (Report 10/WM/03/21)' should be consulted.

In accordance with EC Regulation 1272/2008 and Environment Agency Guidance WM3 soils destined for off-site disposal should be classified on the basis of their hazard phrases prior to disposal. Soils are classified as a mirror entry waste and should be classified on the basis of their specific chemical properties.

If during earthworks ground conditions are encountered that are markedly different to those found during the investigation then the ground should be subject to additional sampling and testing and any necessary remedial measures designed and implemented before continuing with the works.

9.2.1.2 Ground Gas

To protect the future site users from identified ground gas, proposed structures will need to incorporate within its construction a suitable ground gas protection system. The ground gas protection system should be designed, verified, installed and validated in accordance with the British Standard 8485:2015+A1:2019 and CIRIA guidance C735:2014. In addition, NHBC guidance may also need to be adopted depending on the requirements of the proposed development guarantor.

It is recommended that a specialist consultant is retained to prepare a risk assessed ground gas protection system Verification Plan for the proposed development. The Verification Plan will detail the required protection measures based on the perceived risk associated with the complexity of design, experience of the installer, size of the site and gas characteristic situation. The Verification Plan also details the step by step process and requirements to allow

for the completion of a Validation Report. Terra Firma (Wales) Ltd offer Verification and Validation services.

Validation of installed ground gas protection systems by an independent third party will be required upon completion of the development. Validation may only be achieved if processes prescribed in the Verification Plan are undertaken.

9.2.2 Aquatic Environment

Site specific mitigation and remedial measures are not required with respect to the aquatic environment.

During the construction period, there is a risk to the environment/adjacent sites from de-watering, digging foundations, moving contaminated soil, drainage misconceptions, discharges to local surface waters or the ground, runoff from construction materials and/or exposed ground, wheel washings and oil or chemical spills.

The risk is considered to be negligible as any adverse effects will be easily preventable by due diligence to good construction practise and housekeeping in preventing surface runoff and the spillage of materials.

The basic measures that should be taken are as follows:

- Prepare a drainage plan and mark the manholes to prevent pollutants accidentally reaching the surface water sewers;
- Carry out any activities that could cause pollution in a designated, bunded area, away from rivers or boreholes. Where possible it should drain to the foul sewer;
- Use settlement ponds to remove silty water;
- Store all oils and chemicals in a fully bunded area to prevent leaks or spills;
- Get advice on whether you need an environmental permit and apply in good time

SECTION 10 Engineering Recommendations

10.1 Preparation of Site

Areas of vegetation including all roots should be stripped and removed from beneath the proposed development site.

Allowances should be made for any temporary/permanent support works to any existing adjacent structure necessary as a result of the proposed works.

Contingencies should be made for the protection/diversion of any underground/overhead services present beneath/above the site brought about as a result of the proposed works.

Any reduced levels should be brought up to the required levels with suitable inert mainly granular materials. Department of Transport (DTp) type 2 sub-base or similar should be used and compacted in layers to the requirements of the Specification for Highway Works.

Allowances should also be made for the excavation of any soft spots/areas and their replacement with well compacted imported granular materials.

In accordance with EC Regulation 1272/2008 and Environment Agency Guidance WM3 soils and other materials destined for off-site disposal should be classified on the basis of their hazard phrases prior to disposal. Soils are classified as a mirror entry waste and should be classified on the basis of their specific chemical properties. Terra Firma (Wales) Ltd offer this service if required.

10.2 Foundation and Floor Slab Solution

It is recommended that mass concrete strip or trench fill foundations be used; founded within the firm/stiff clays at depths greater than 1.60m below the existing ground level. An allowable bearing pressure of 100kN/m² may be used for strips up to 1000mm wide.

Foundations must sit at least 200mm within the founding horizon.

For the given foundation solutions and bearing pressure, maximum total settlements of >25mm should result with differential movements of the superstructure not exceeding 1:750.

If trees are to be incorporated within the proposed development, foundations will need to be taken deeper within influencing distance of the tree root systems. The National House Building Council (NHBC) Chapter 4.2 gives guidelines as to the appropriate type of floor slab and void based on the type of tree, distance of the foundation from the tree and the plasticity index of the in-situ materials.

For design purposes the superficial cohesive deposits should be assumed to have a low volume change potential.

Foundations should be taken down to a minimum depth of 750mm below finished levels when founding in low volume change potential soils.

Floor slabs should be designed as suspended.

Allowances should be made for the removal of any 'soft spots' and their replacement with well-compacted granular materials. Department of Transport (DoT) Type 2 materials or similar could be used and should be compacted in layers to the specification for Highway Works.

All foundation formations should be inspected by a suitably qualified Engineer before being concreted.

10.3 Excavations and Formations

Most of the shallow excavations will be possible with normal soil excavating machinery.

Shallow perched water and groundwater flows were not encountered during the investigation. Any water inflows together with rainwater infiltration should be dealt with by conventional pumping techniques. However, it should be noted that during times of heavy rainfall a higher water table will be encountered.

The sides of any excavations deeper than 1.20m, or shallower if unstable, should be supported by planking and strutting or other proprietary means.

The sub-formations/formations are likely to be susceptible to loosening, softening and deterioration by exposure to weather (rain, frost and drying conditions), the action of water (flood water or removal of groundwater) and site traffic.

Formations should never be left unprotected and continuously exposed to rain causing degradation, or left exposed/uncovered overnight, unless permitted by a qualified engineer.

Construction plant and other vehicular traffic should not be operated on unprotected formations.

As a minimum the formation/excavation surfaces must be protected by blinding concrete immediately after exposure.

Allowances should be made for the removal of soft spots/areas and their replacement with well compacted granular materials.

Allowances should also be made for special precautions to prevent formation deterioration in addition to the above.

10.4 Protection of Buried Concrete

When the results are compared with Table C1 of BRE Digest 1:2005, it indicates that buried concrete should generally conform to Class AC-1.

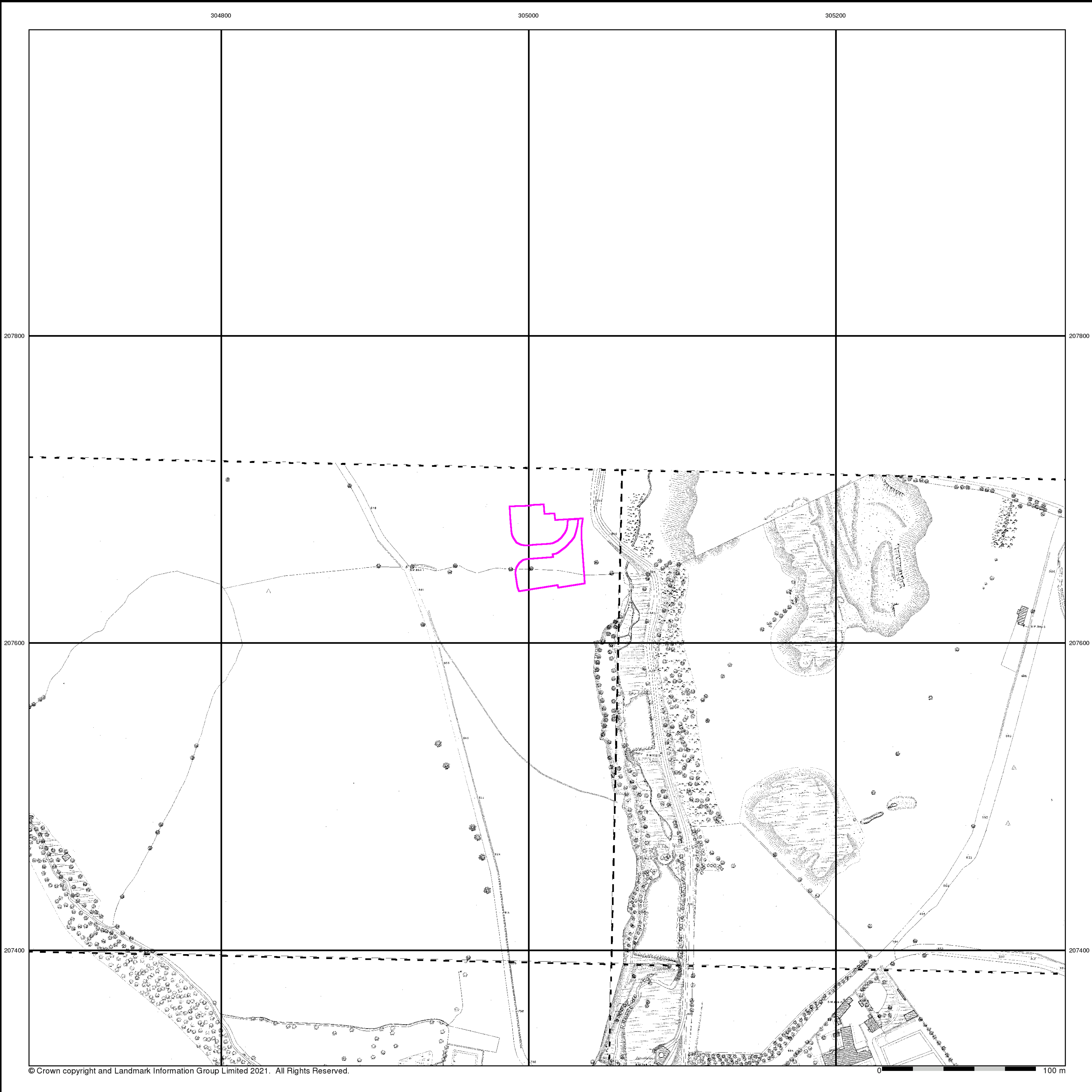
10.5 Storm Water Drainage

During the site investigation one soakaway test was undertaken in general accordance with BRE DG 365:2016. The soakaway test was carried out in trial pit TP01 within natural materials.

The soakaway test recorded insufficient infiltration and was subsequently terminated early.

Soakaway storm water drainage is therefore not recommended at the site.

**ANNEX A
Envirocheck Report**



Geotechnical & Geoenvironmental Specialists

Glamorganshire

Published 1875

Source map scale - 1:528

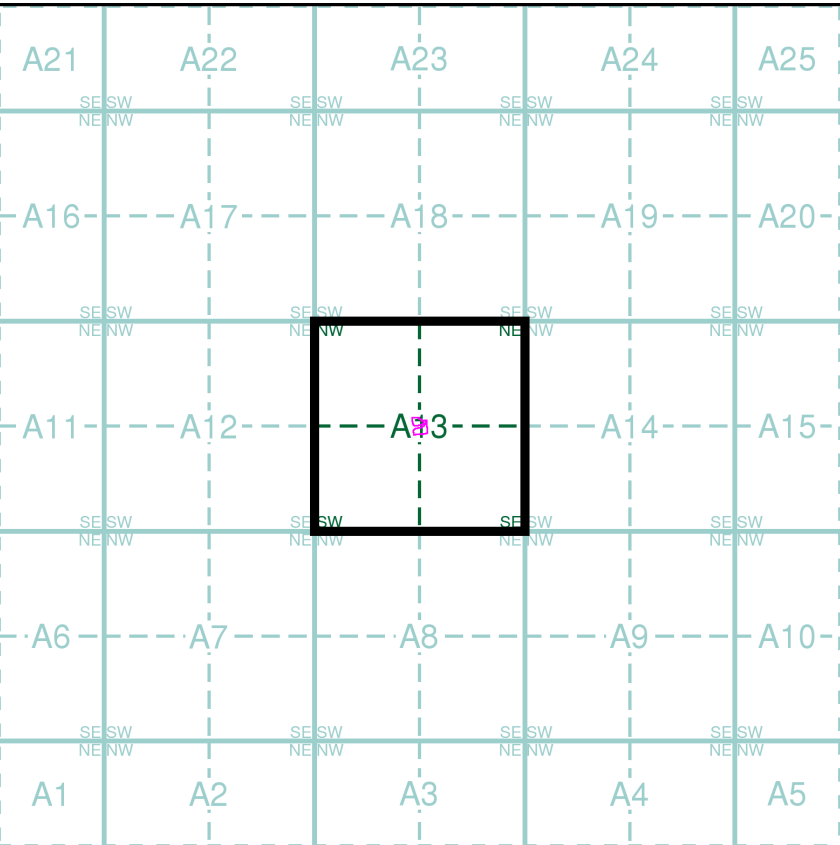
The 1:528 scale Ordnance Survey mapping was adopted in 1850 as an alternative to the 1:1056 scale, that had been deemed to be inadequate for sanitary planning, which had come very much to the fore following the passing of the Public Health Act of 1948. Around 29 towns in England and Wales were surveyed at this scale, the bulk of which were undertaken between 1850 and 1855. These were predominantly towns that were outside the areas being surveyed at 1:10,560 or 1:2500 scale. As well as showing the details characteristic of the later 1:500 plans, they show features of sanitary interest such as privies, taps, cow houses, cess pits, brew and bake houses and cart sheds and stables.

Please note: Due to the partial coverage of Historical Town Plans, it is possible that not all segments within an order will contain mapping. Only the segments that have Town Plan coverage will be generated.

Map Name(s) and Date(s)

012_01_003	012_01_004
1875	1875
1:528	1:528
012_01_008	012_01_009
1875	1875
1:528	1:528

Historical Town Plan - Segment A13



Order Details

Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 0

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS



Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

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

	Quarry		Gravel Pit		Sand Pit
	Clay Pit		Shingle		Refuse Heap
	Sloping Masonry		Flat Rock		
	Marsh		Reeds		Osiers
	Rough Pasture		Furze		Wood
	Mixed Wood		Brushwood		Orchard
	Fir		Ford		Stepping Stones
	Ferry		Waterfall		Lock
	Trig. Station	507	Altitude at Trig. Station		
B.M. 325.9	Bench Mark	342	Surface Level		
	Arrow denotes flow of water		Antiquities (site of)		
	Cutting		Embankment		
	Railway crossing Road		Level Crossing		Road crossing Railway
	Railway crossing River or Canal		Road over single stream		Road over River or Canal
-----	County Boundary (Geographical)				
- . - . - .	County & Civil Parish Boundary				
+ . + . + .	Administrative County & Civil Parish Boundary				
Co. Boro. Bdy.	County Borough Boundary (England)				
Co. Burgh Bdy.	County Burgh Boundary (Scotland)				
B.P. B.S.	Boundary Post or Stone	P.C.B.	Police Call Box		
B.R.	Bridle Road	P	Pump		
E.P.	Electricity Pylon	S.P.	Signal Post		
F.B.	Foot Bridge	Sl.	Sluice		
F.P.	Foot Path	Sp.	Spring		
G.P.	Guide Post or Board	T.C.B.	Telephone Call Box		
M.S.	Mile Stone	Tr.	Trough		
M.P. M.R.	Mooring Post or Ring	W	Well		

	Inactive Quarry, Chalk Pit or Clay Pit		Active Quarry, Chalk Pit or Clay Pit
	Rock		Boulders
	Cliff		Slopes
	Roofed Building		Glazed Roof Building
	Sloping Masonry		Archway
	Non-Coniferous Tree (surveyed)		Coniferous Tree (surveyed)
	Non-Coniferous Trees (not surveyed)		Coniferous Trees (not surveyed)
	Orchard Tree		Scrub
	Coppice, Osier		Reeds
	Rough Grassland		Heath
	Direction of water flow		Bench Mark
	Cave Entrance		Triangulation Station
	Electricity Transmission Line		Antiquity (site of)
	County Boundary (Geographical)		Electricity Pylon
	County & Civil Parish Boundary		
	Civil Parish Boundary		
	Admin. County or County Bor. Boundary		
	London Borough Boundary		
	Symbol marking point where boundary mereing changes		
BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

	Cliff		Slopes		Top
	Rock		Rock (scattered)		Boulders (scattered)
	Boulders		Positioned Boulder		Scree
	Non-Coniferous Tree (surveyed)		Coniferous Tree (surveyed)		Non-Coniferous Trees (not surveyed)
	Non-Coniferous Trees (not surveyed)		Coniferous Trees (not surveyed)		Orchard Tree
	Orchard Tree		Scrub		Bracken
	Coppice, Osier		Reeds		Marsh, Saltings
	Rough Grassland		Heath		Culvert
	Direction of water flow		Triangulation Station		Antiquity (site of)
	Electricity Transmission Line		Electricity Pylon		Bench Mark
	Bench Mark		Buildings with Building Seed		Roofed Building
	Roofed Building		Glazed Roof Building		Civil parish/community boundary
	District boundary		County boundary		Boundary post/stone
	Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)				
Bks	Barracks	P	Pillar, Pole or Post		
Bty	Battery	PO	Post Office		
Cemy	Cemetery	PC	Public Convenience		
Chy	Chimney	Pp	Pump		
Cis	Cistern	Ppg Sta	Pumping Station		
Dismted Rly	Dismantled Railway	PW	Place of Worship		
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station		
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge		
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light		
FB	Filter Bed	Spr	Spring		
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track		
Gas Gov	Gas Valve Compound	Tr	Trough		
GVC	Gas Governor	Wd Pp	Wind Pump		
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap		
MH	Manhole	Wks	Works (building or area)		
MP, MS	Mile Post or Mile Stone	W	Well		



Mapping Type	Scale	Date	Pg
Glamorganshire	1:2,500	1875	2
Brecknockshire	1:2,500	1887	3
Glamorganshire	1:2,500	1900	4
Brecknockshire	1:2,500	1904	5
Brecknockshire	1:2,500	1919	6
Ordnance Survey Plan	1:1,250	1957 - 1963	7
Ordnance Survey Plan	1:2,500	1963	8
Ordnance Survey Plan	1:1,250	1963 - 1977	9
Additional SIMs	1:1,250	1963 - 1990	10
Ordnance Survey Plan	1:1,250	1970	11
Supply of Unpublished Survey Information	1:1,250	1975	12
Additional SIMs	1:1,250	1988 - 1990	13
Additional SIMs	1:1,250	1989	14
Large-Scale National Grid Data	1:1,250	1993	15
Historical Aerial Photography	1:2,500	2001	16

Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 100

Walnut Way, MERTHYR TYDFIL, CF47 9RS



Geotechnical & Geoenvironmental Specialists

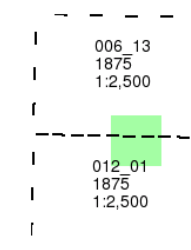
Glamorganshire

Published 1875

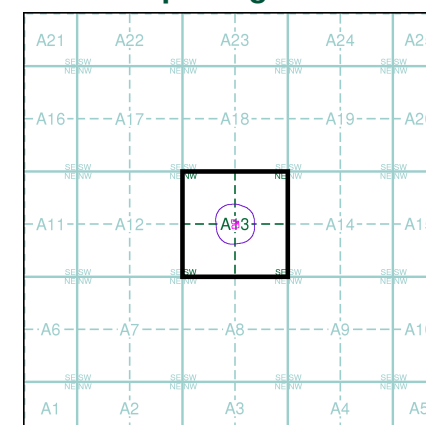
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

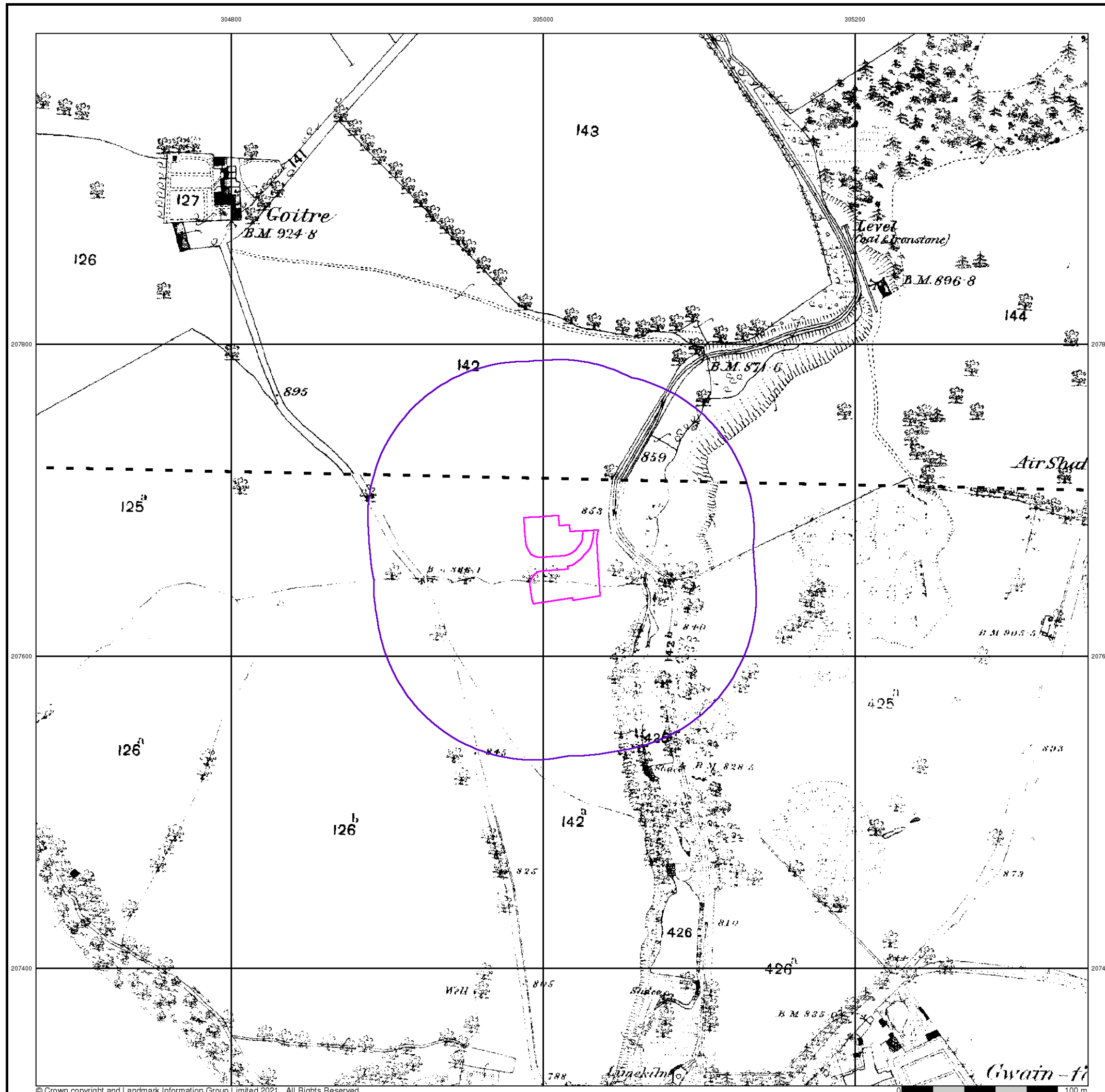
Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 100

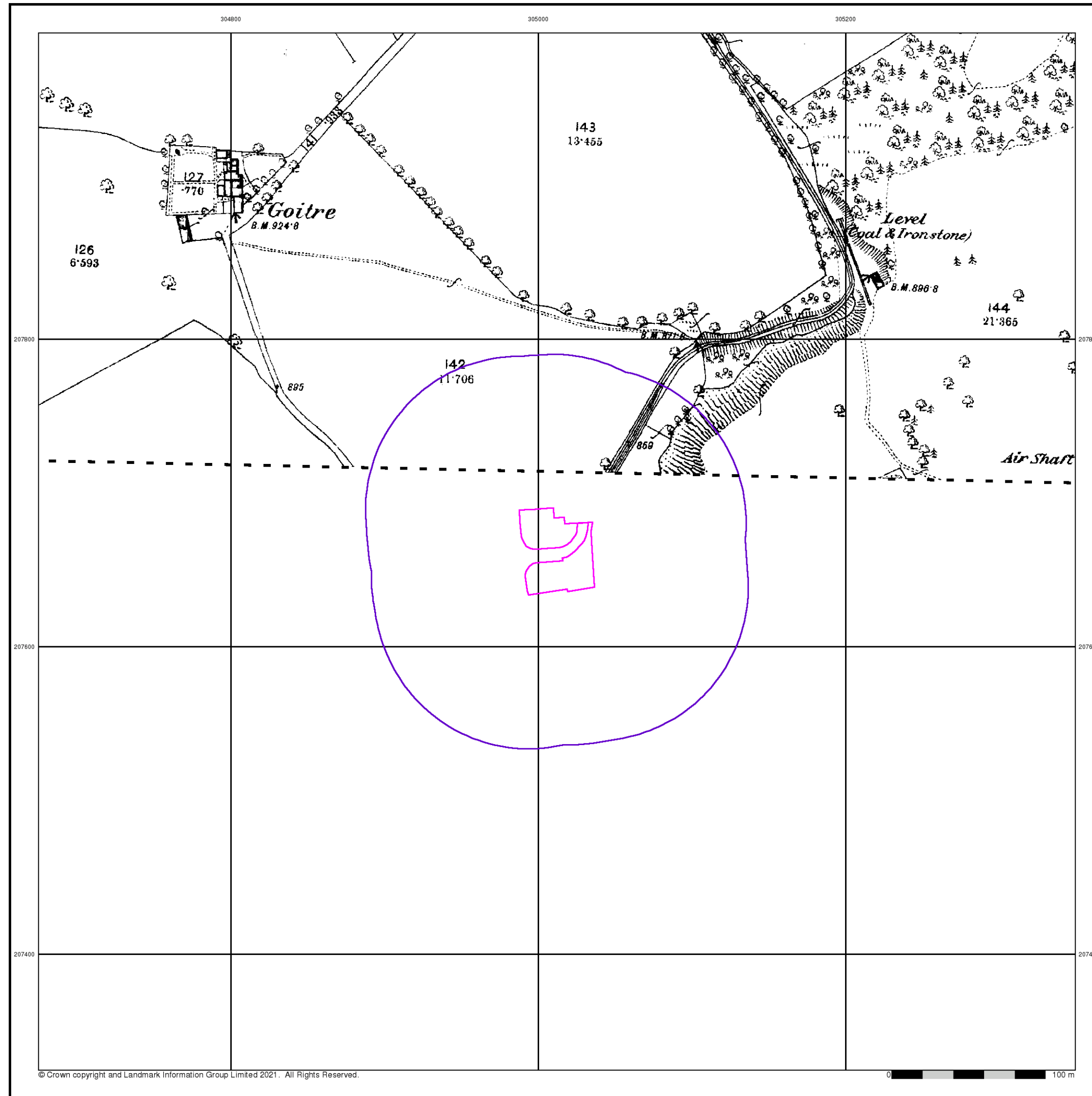
Site Details

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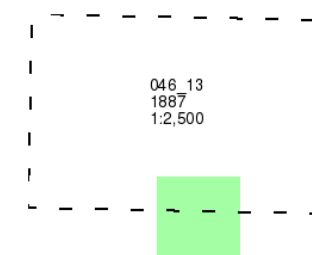
Brecknockshire

Published 1887

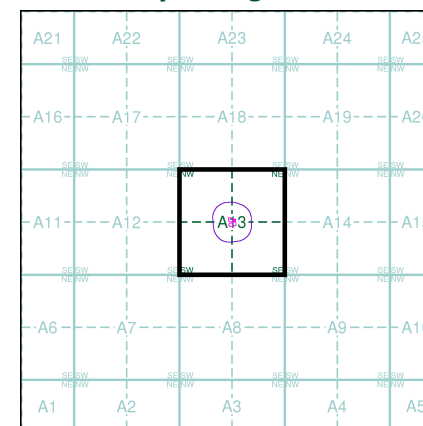
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

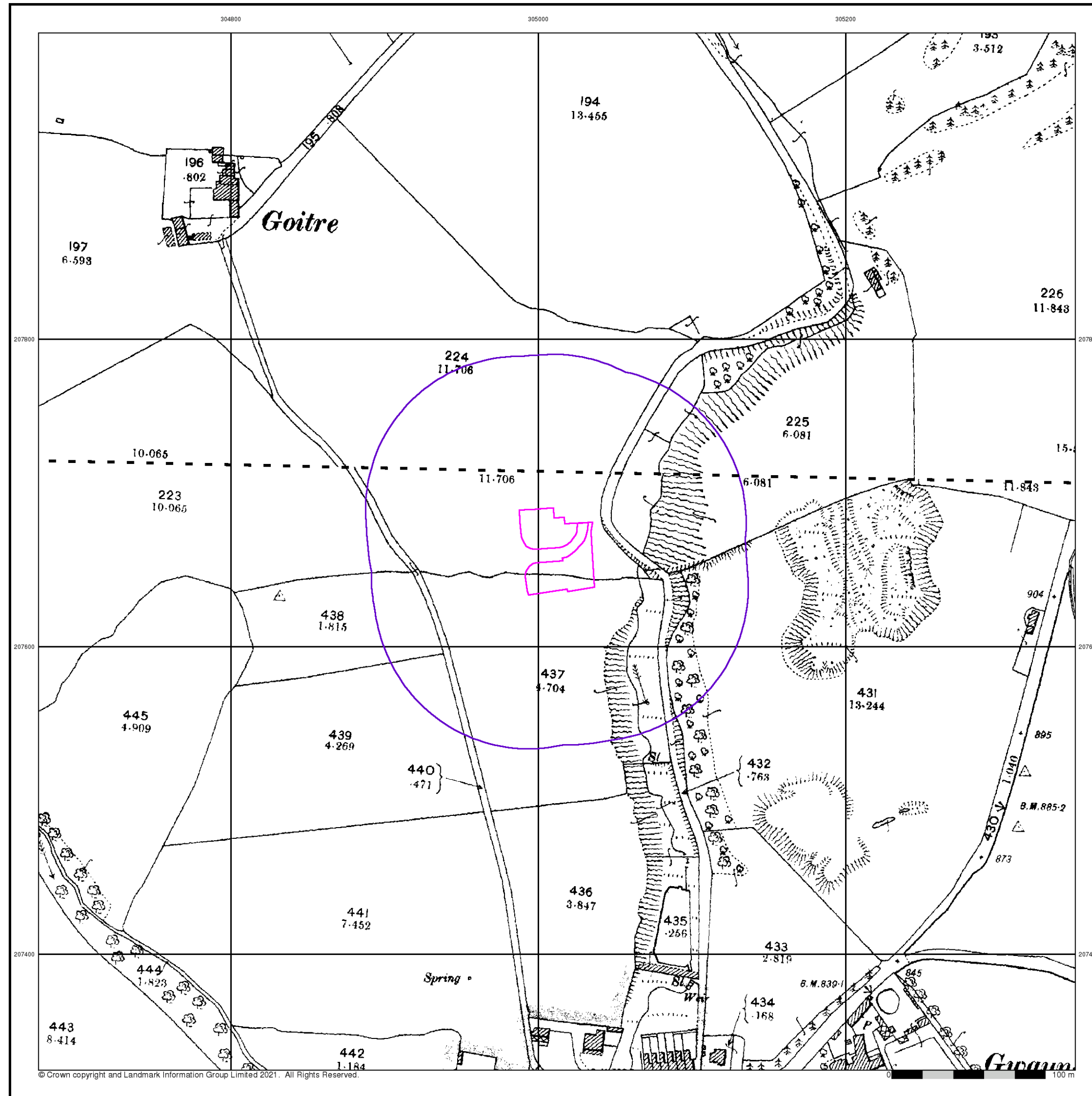
Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
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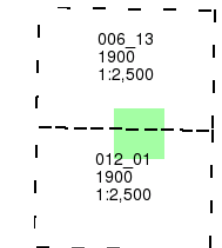
Glamorganshire

Published 1900

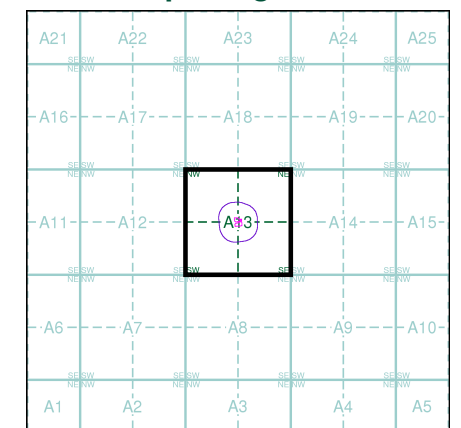
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

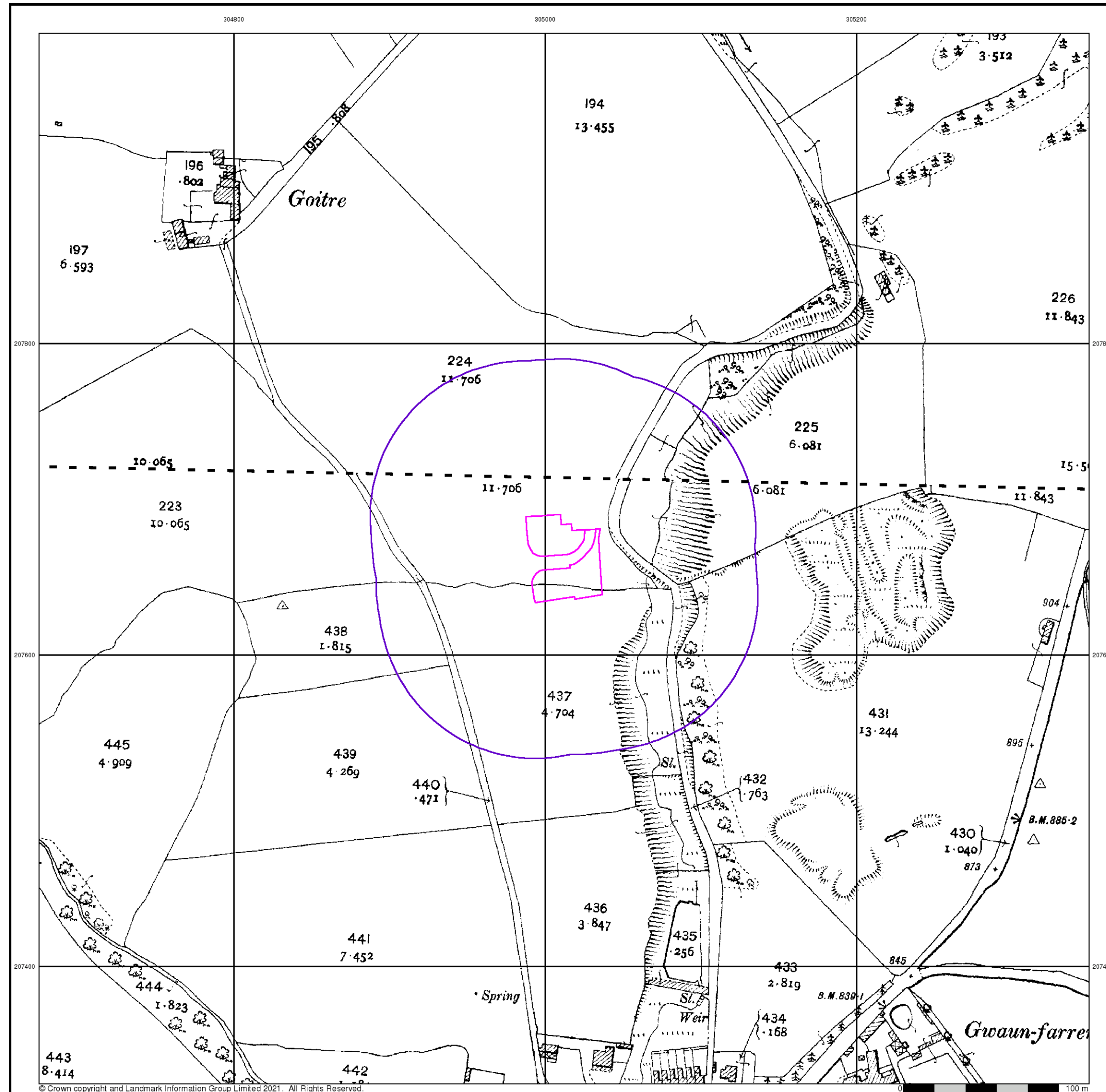
Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 100

Site Details

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Brecknockshire

Source map scale - 1:2,500

Map Name(s) and Date(s)

Historical Map - Segment A13



Order Details

Site Details

Landmark®
INFORMATION GROUP



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Brecknockshire

Published 1919

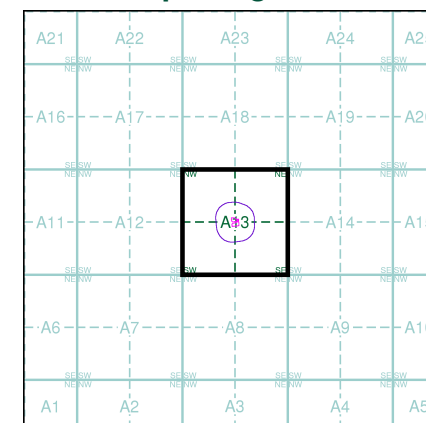
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

046_13
1919
1:2,500
051_01
1919
1:2,500

Historical Map - Segment A13



Order Details

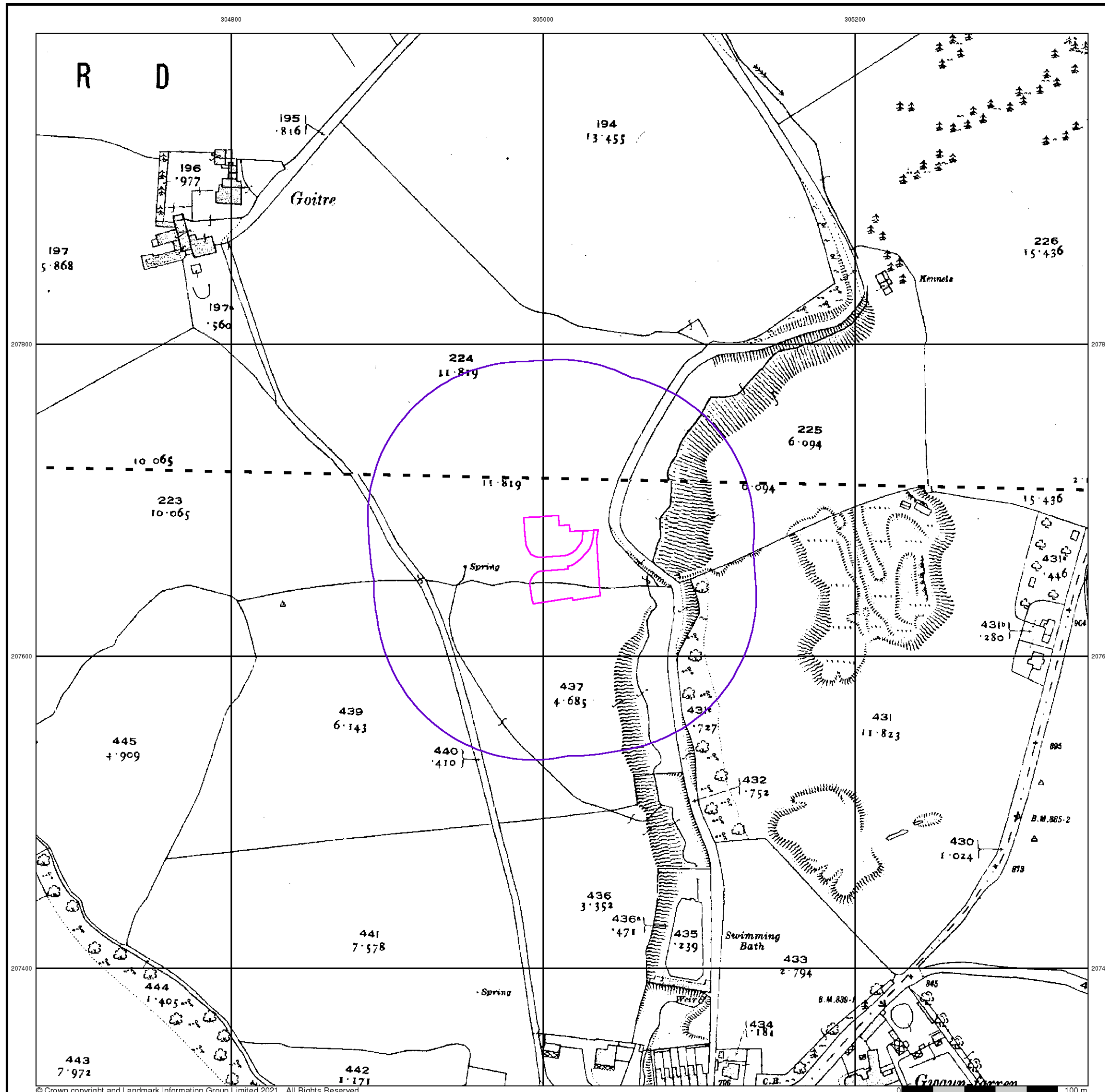
Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 100

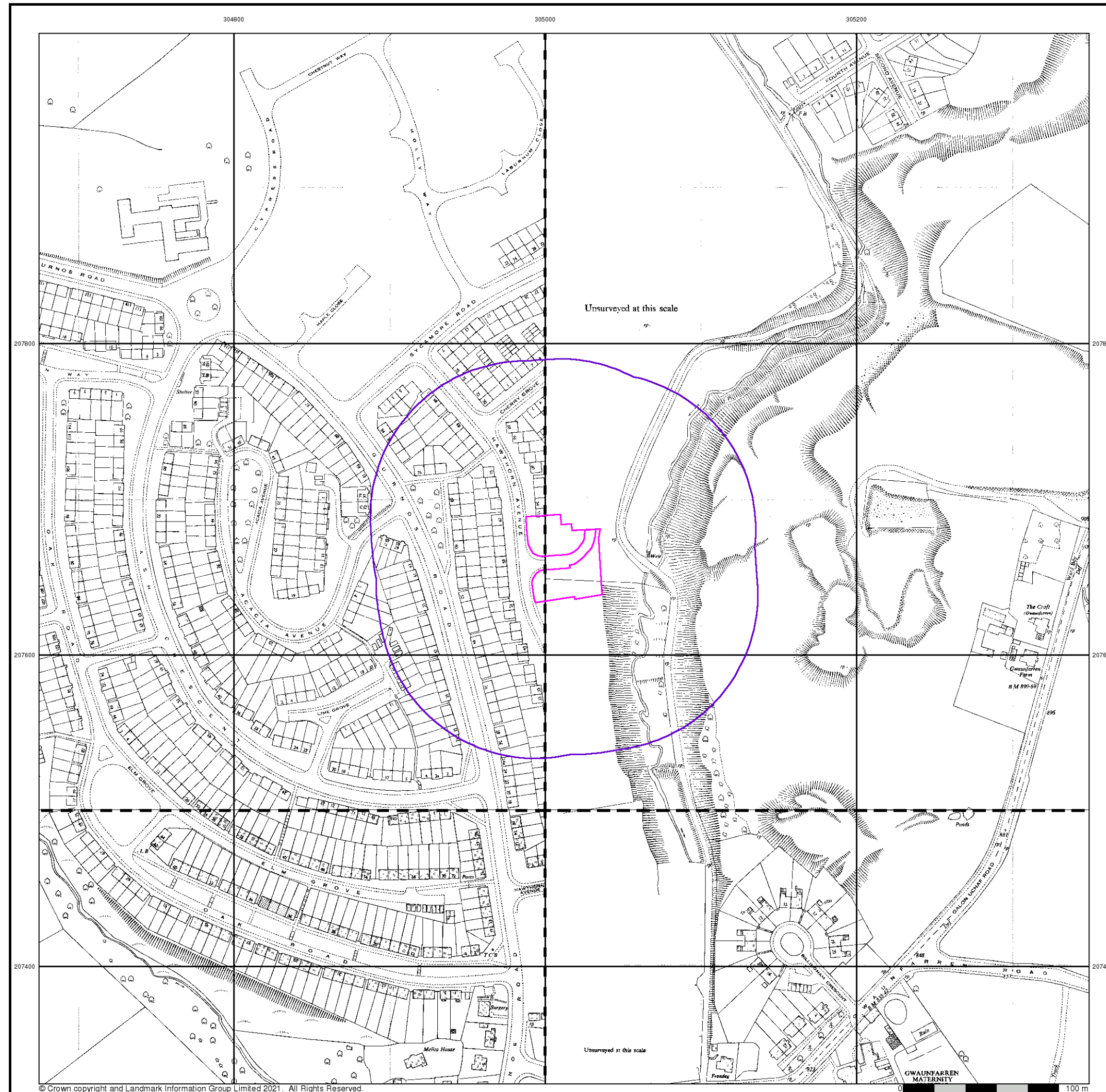
Site Details

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Ordinance Survey Plan

Source map scale - 1:1,250

Map Name(s) and Date(s)

Historical Map - Segment A13



Order Details

Site Details

Landmark[®]
INFORMATION GROUP



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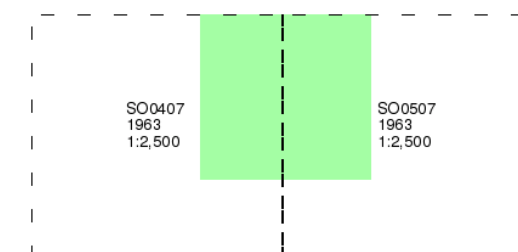
Ordnance Survey Plan

Published 1963

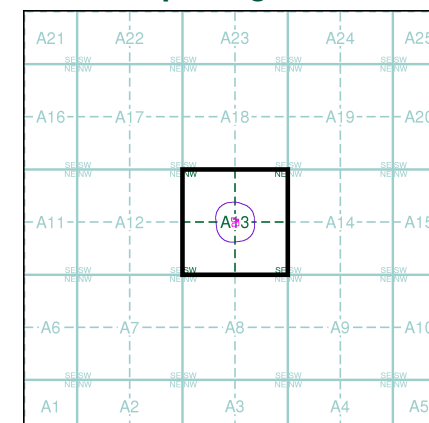
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

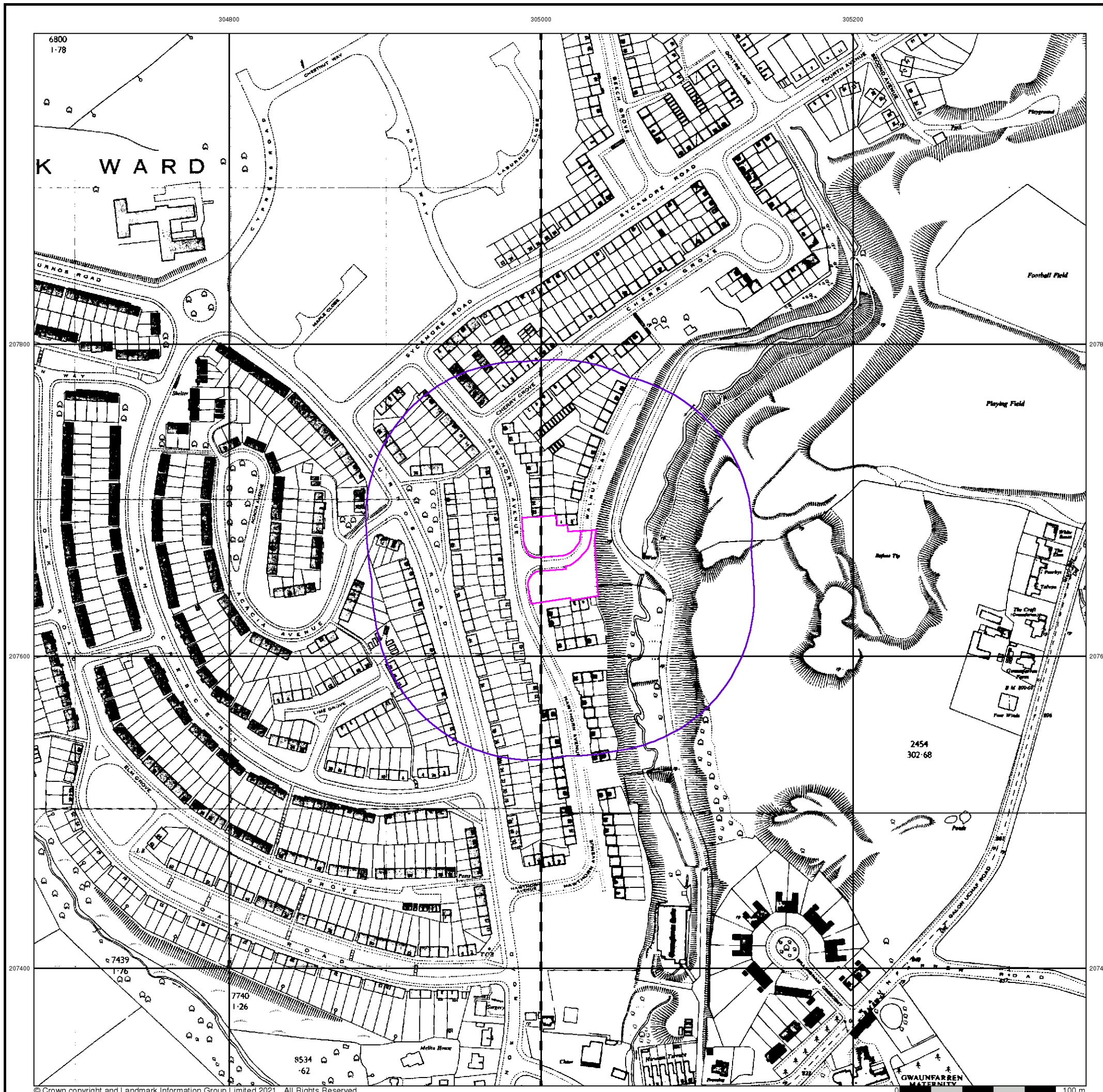
Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 100

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Ordnance Survey Plan

Published 1963 - 1977

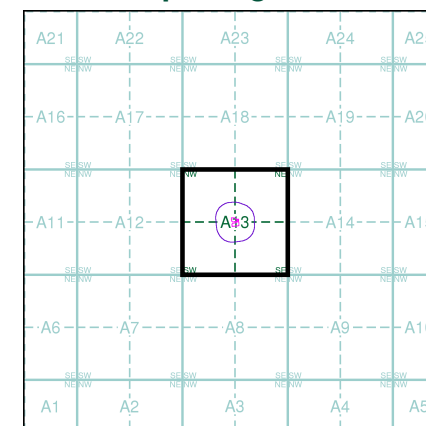
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

SO0407NE 1970 1:1,250	SO0507NW 1963 1:1,250
SO0407SE 1977 1:1,250	SO0507SW 1963 1:1,250

Historical Map - Segment A13



Order Details

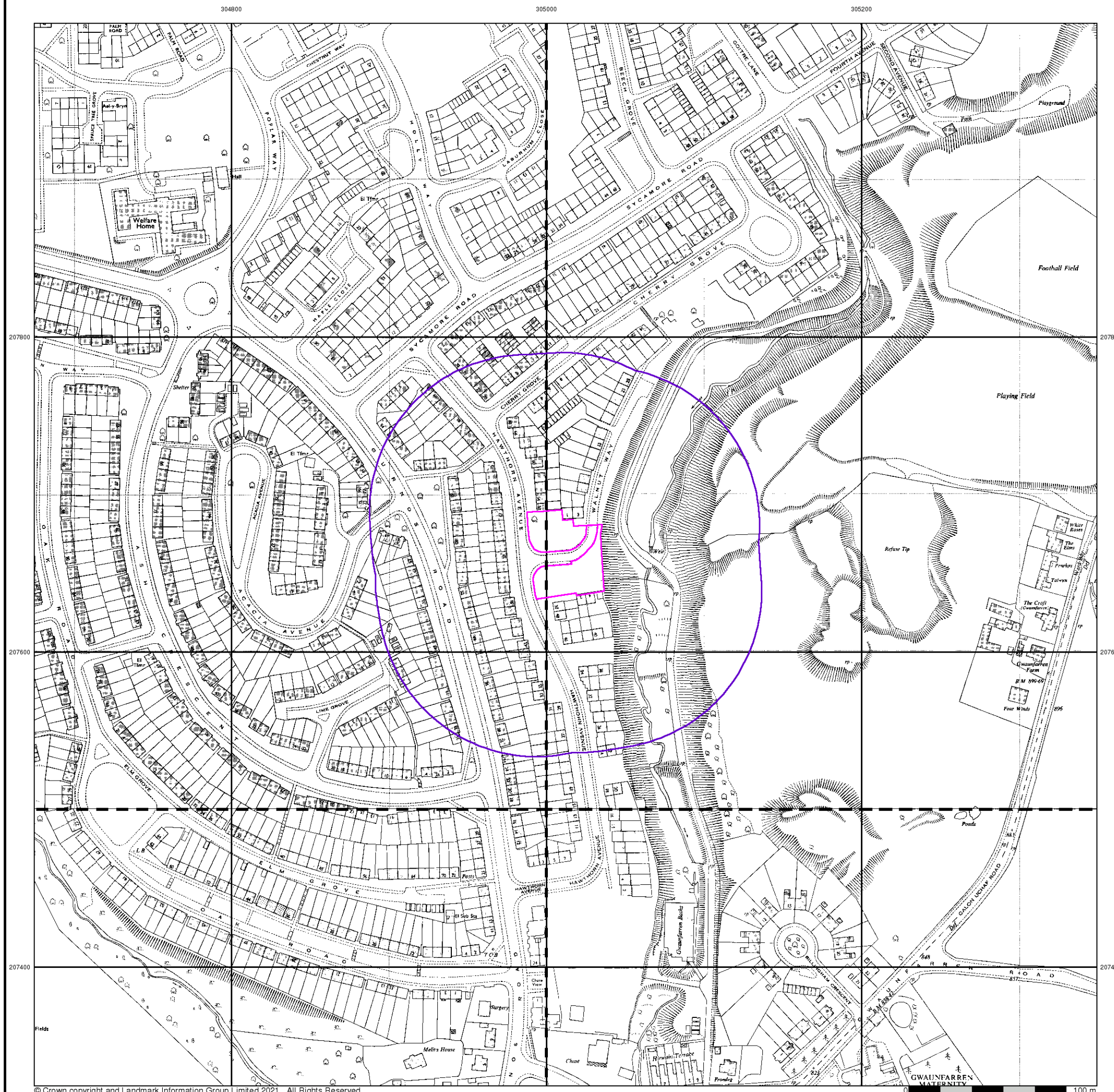
Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 100

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Additional SIMs

Published 1963 - 1990

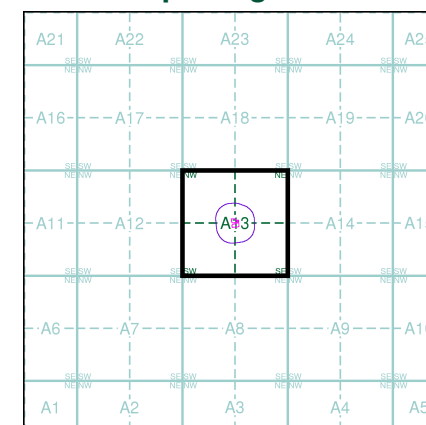
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

SO0407NE 1986 1:1,250	SO0507NW 1963 1:1,250
SO0407SE 1990 1:1,250	SO0507SW 1979 1:1,250

Historical Map - Segment A13



Order Details

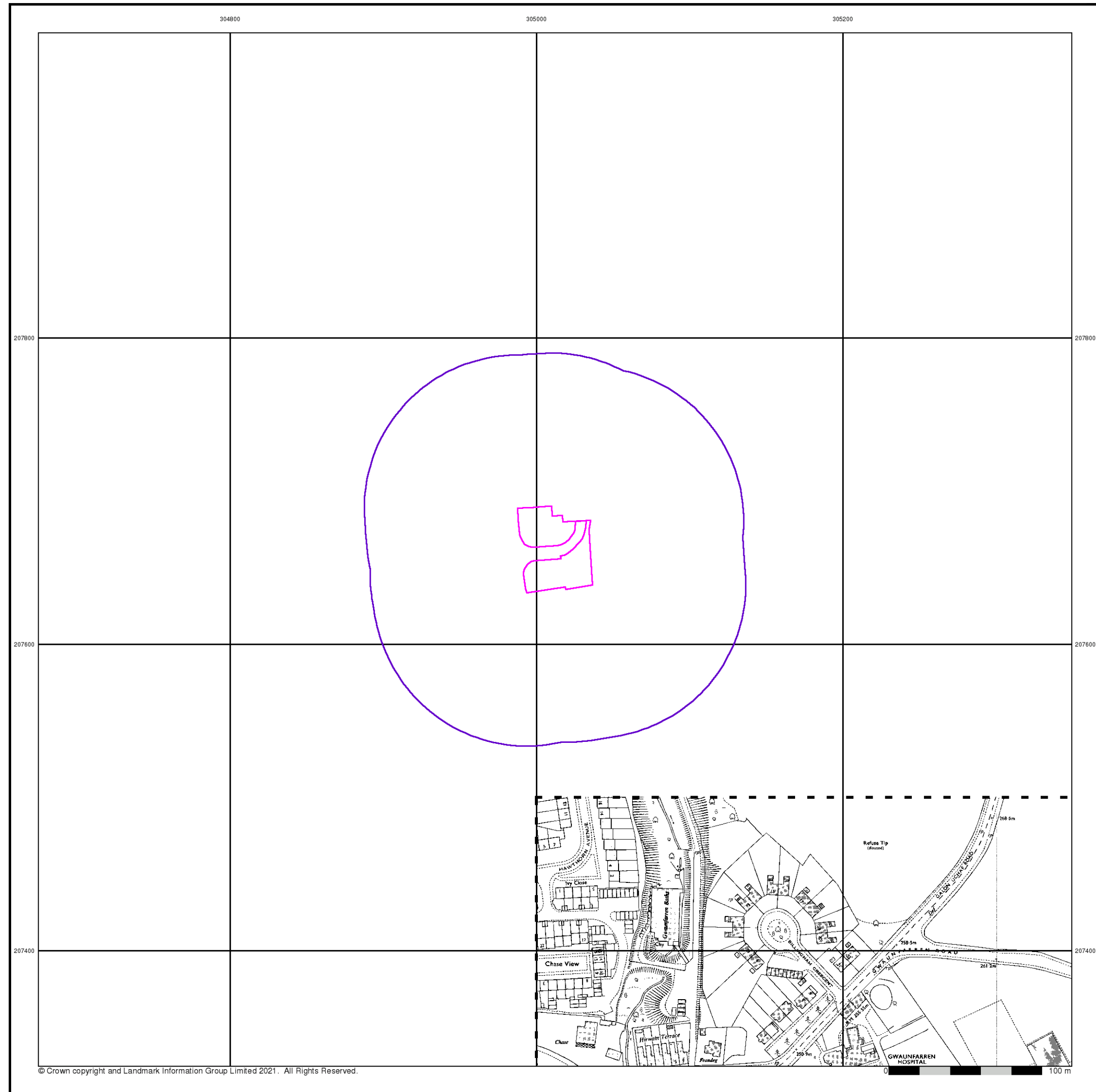
Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 100

Site Details

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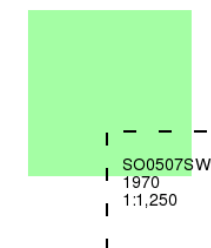
Ordnance Survey Plan

Published 1970

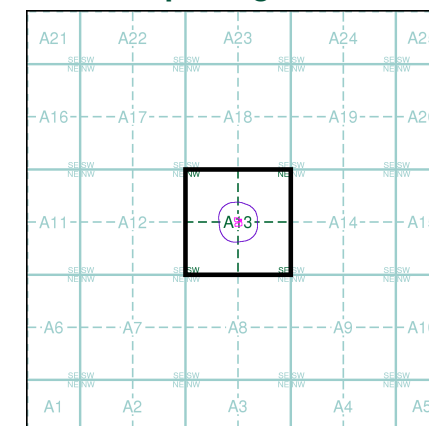
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

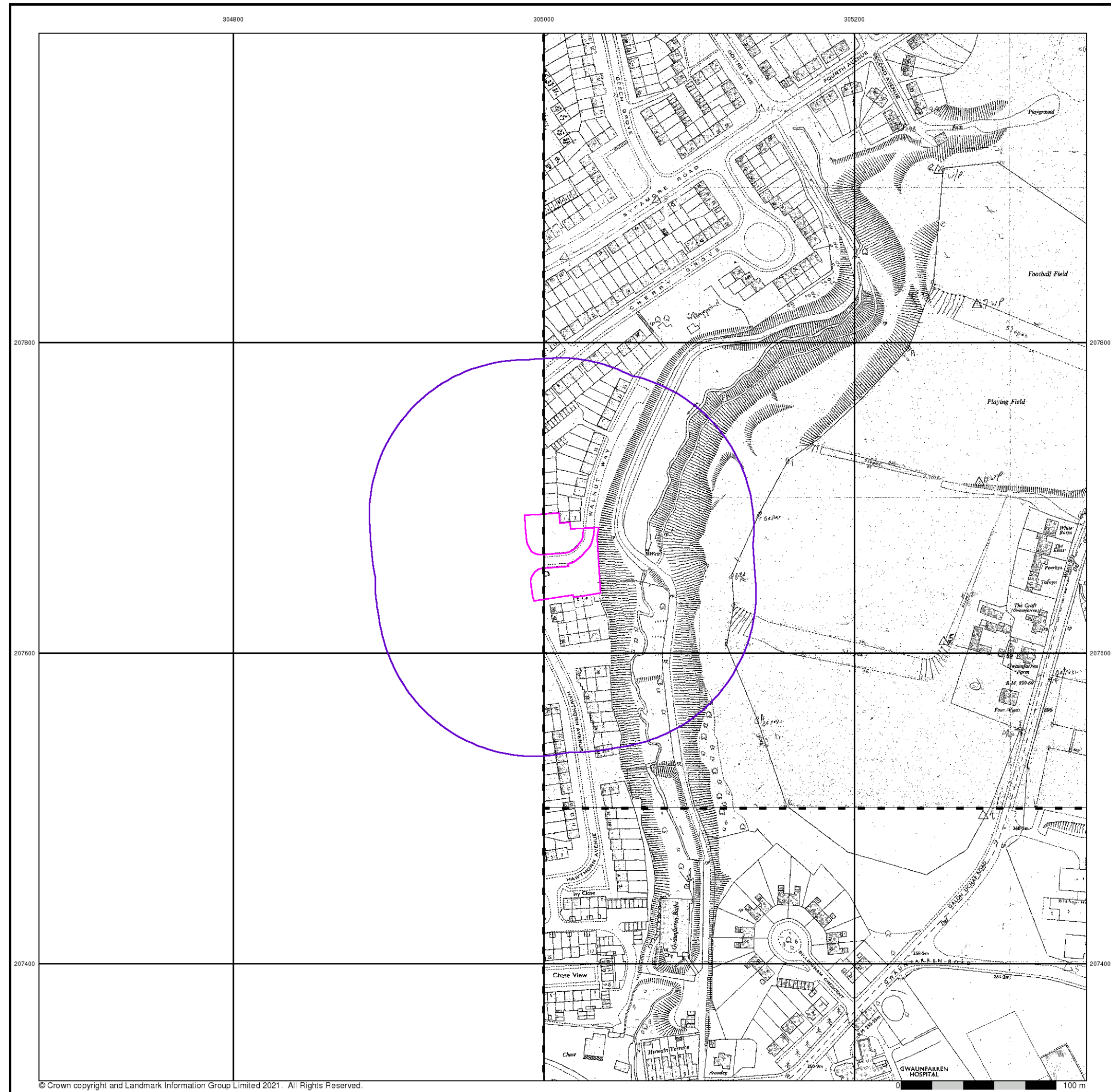
Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 100

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Supply of Unpublished Survey Information

Published 1975

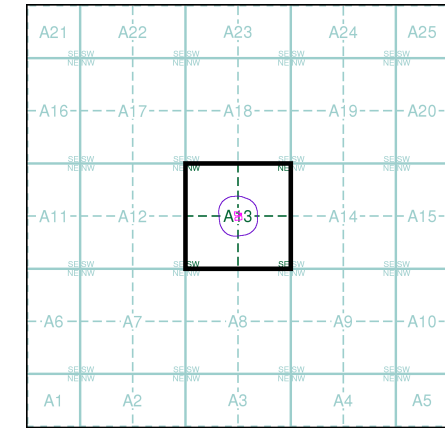
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a 'work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SO0507NW
1975
1:1,250
SO0507SW
1975
1:1,250

Historical Map - Segment A13



Order Details
Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 100

Site Details
Walnut Way, MERTHYR TYDFIL, CF47 9RS



Geotechnical & Geoenvironmental Specialists

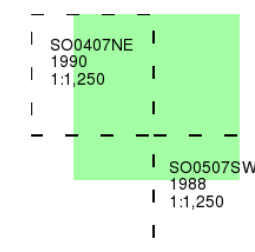
Additional SIMs

Published 1988 - 1990

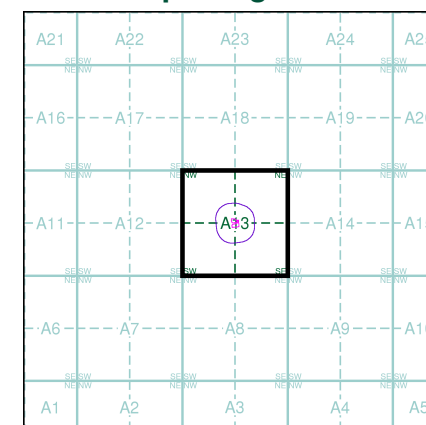
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

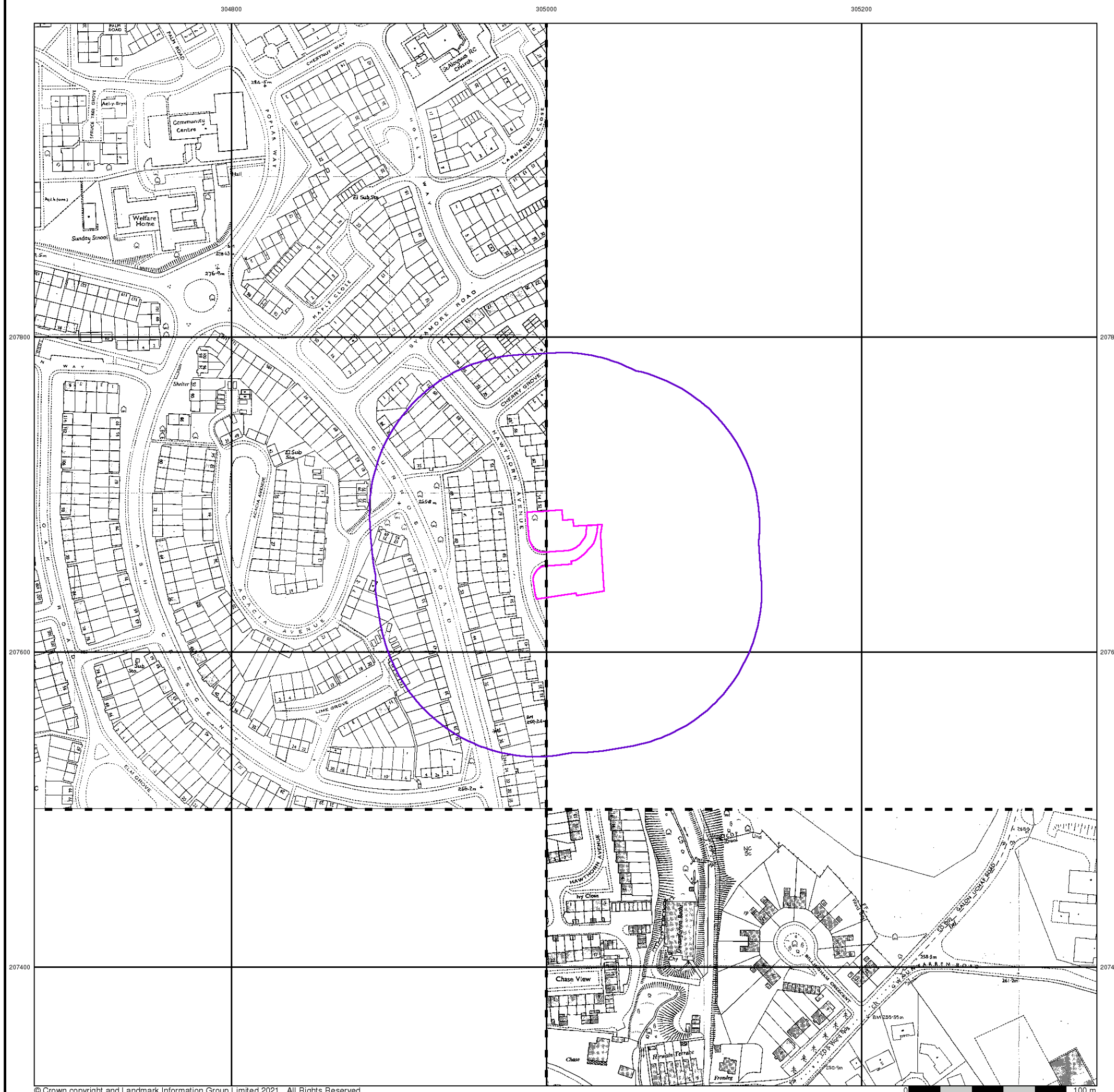
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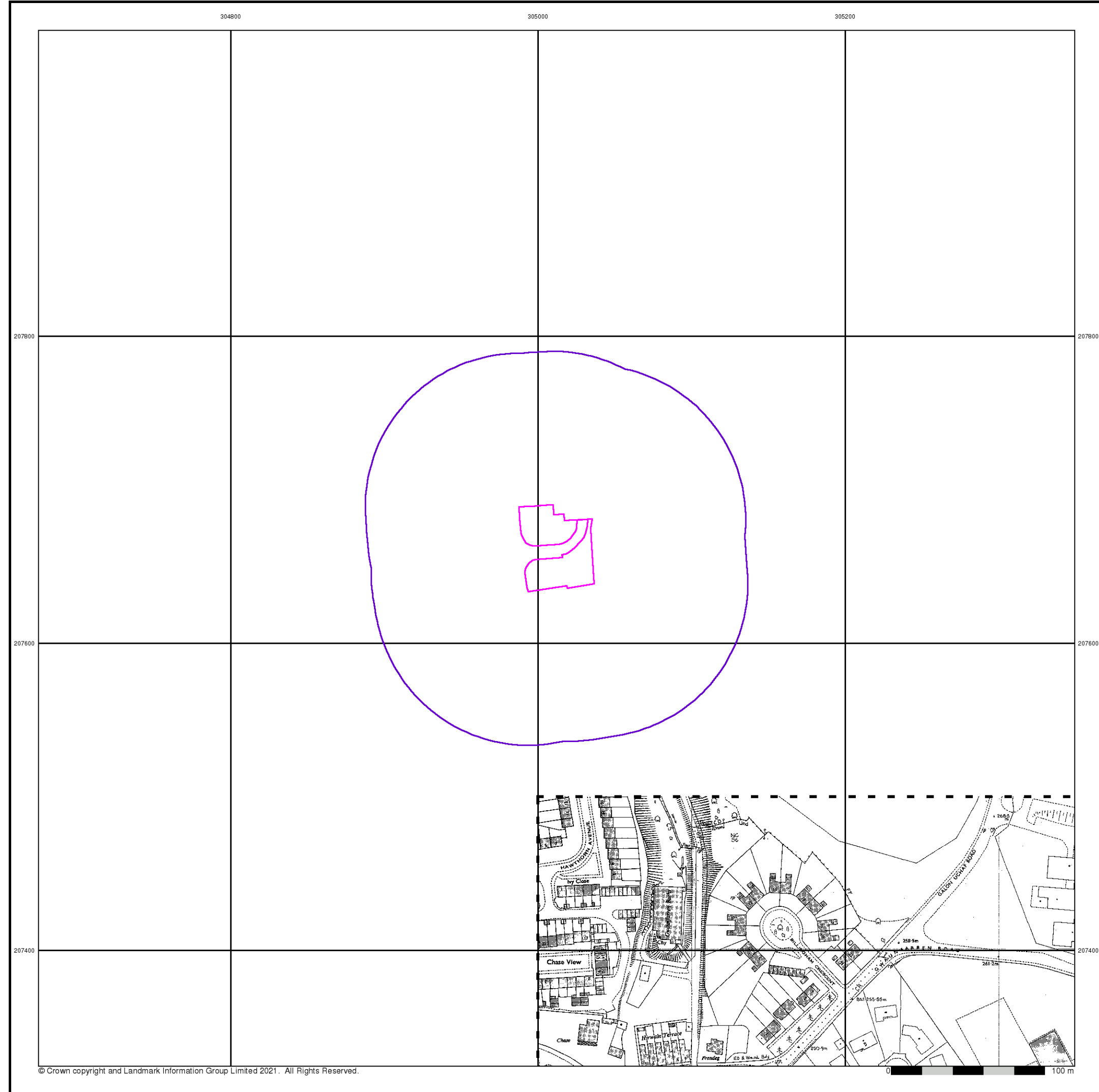
Site Details

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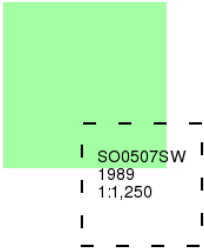
Additional SIMs

Published 1989

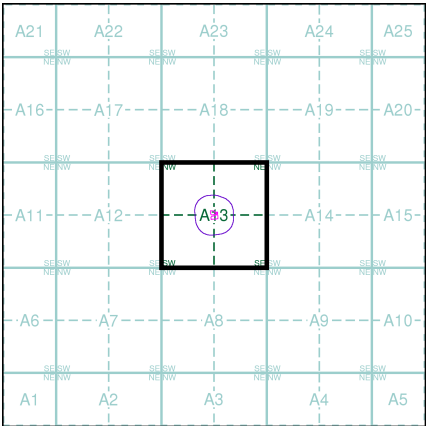
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 100

Site Details

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Large-Scale National Grid Data

Published 1993

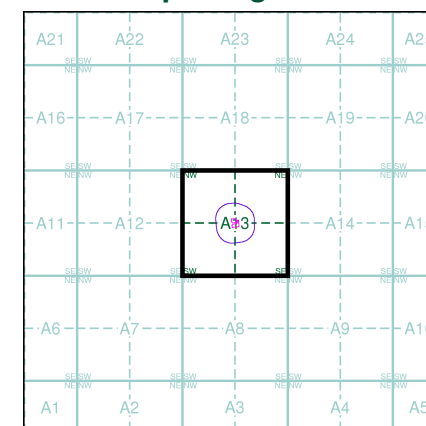
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

SO0407NE 1993 1:1,250	SO0507NW 1993 1:1,250
SO0407SE 1993 1:1,250	SO0507SW 1993 1:1,250

Historical Map - Segment A13



Order Details

Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 100

Site Details

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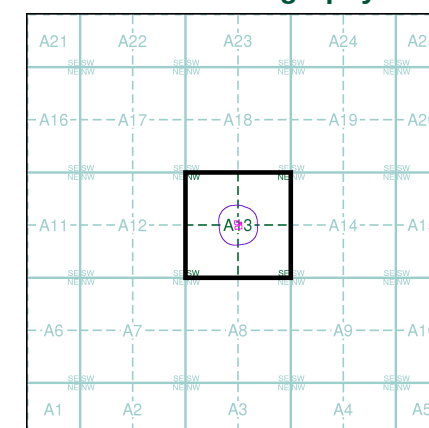
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Historical Aerial Photography

Published 2001

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

Historical Aerial Photography - Segment A13



Order Details

Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 100

Site Details

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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

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

Ordnance Survey Plan 1:10,000

	Chalk Pit, Clay Pit or Quarry		Gravel Pit
	Sand Pit		Disused Pit or Quarry
	Refuse or Slag Heap		Lake, Loch or Pond
	Dunes		Boulders
	Coniferous Trees		Non-Coniferous Trees
	Orchard		Scrub
	Bracken		Heath
	Marsh		Reeds
	Building		Glasshouse
	Sloping Masonry		Pylon
	Cutting		Embankment
	Road Under		Road Over
	Level Crossing		Foot Bridge
	Standard Gauge Multiple Track		Standard Gauge Single Track
	Siding, Tramway or Mineral Line		Narrow Gauge
	Geographical County		Administrative County, County Borough or County of City
	Municipal Borough, Urban or Rural District, Burgh or District Council		Borough, Burgh or County Constituency
	Civil Parish		
	BP, BS		Ch
	CH		F E Sta
	FB		Fn
	GP		MP
	MS		Pol Sta
	PO		PC
	PH		SB
	Spr		TCB
	TCP		W

1:10,000 Raster Mapping

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

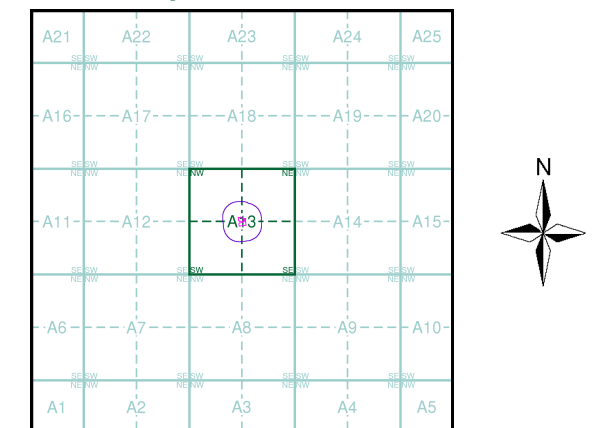


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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Brecknockshire	1:10,560	1884 - 1885	2
Monmouthshire	1:10,560	1884	3
Glamorganshire	1:10,560	1885	4
Glamorganshire	1:10,560	1901	5
Brecknockshire	1:10,560	1905	6
Brecknockshire	1:10,560	1922	7
Brecknockshire	1:10,560	1938 - 1951	8
Historical Aerial Photography	1:10,560	1945	9
Brecknockshire	1:10,560	1951	10
Ordnance Survey Plan	1:10,000	1965	11
Ordnance Survey Plan	1:10,000	1977 - 1979	12
Ordnance Survey Plan	1:10,000	1983	13
Ordnance Survey Plan	1:10,000	1992	14
10K Raster Mapping	1:10,000	1999	15
10K Raster Mapping	1:10,000	2006	16
VectorMap Local	1:10,000	2021	17

Historical Map - Slice A



Order Details

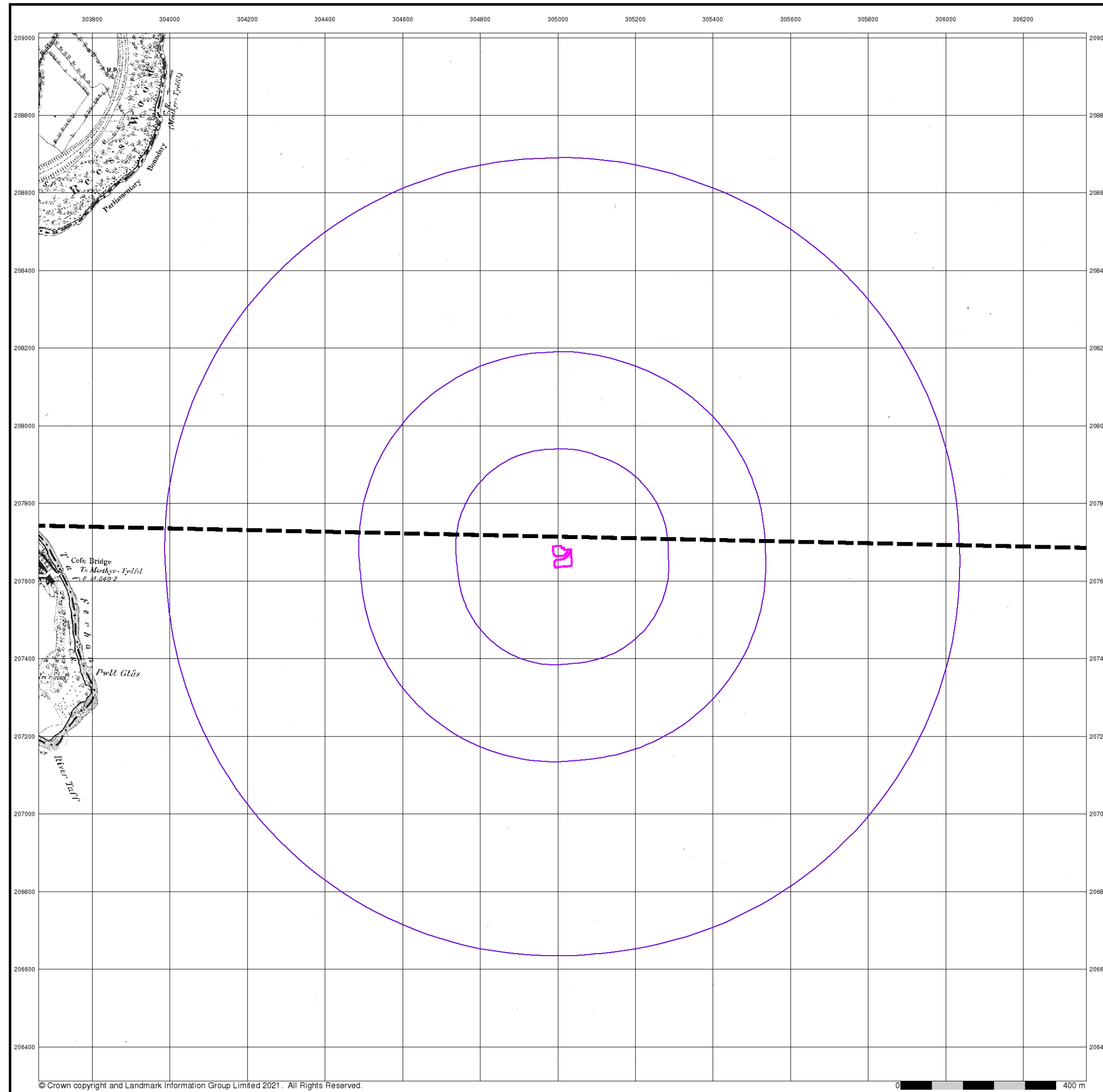
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Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 1000

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS

Landmark
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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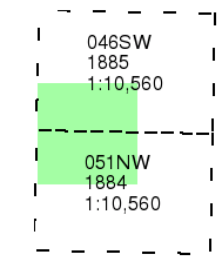
Brecknockshire

Published 1884 - 1885

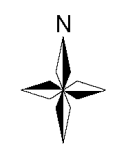
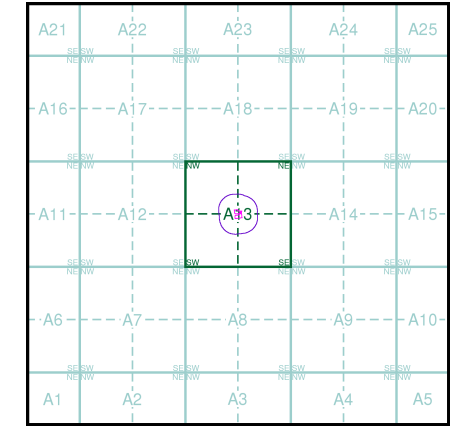
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

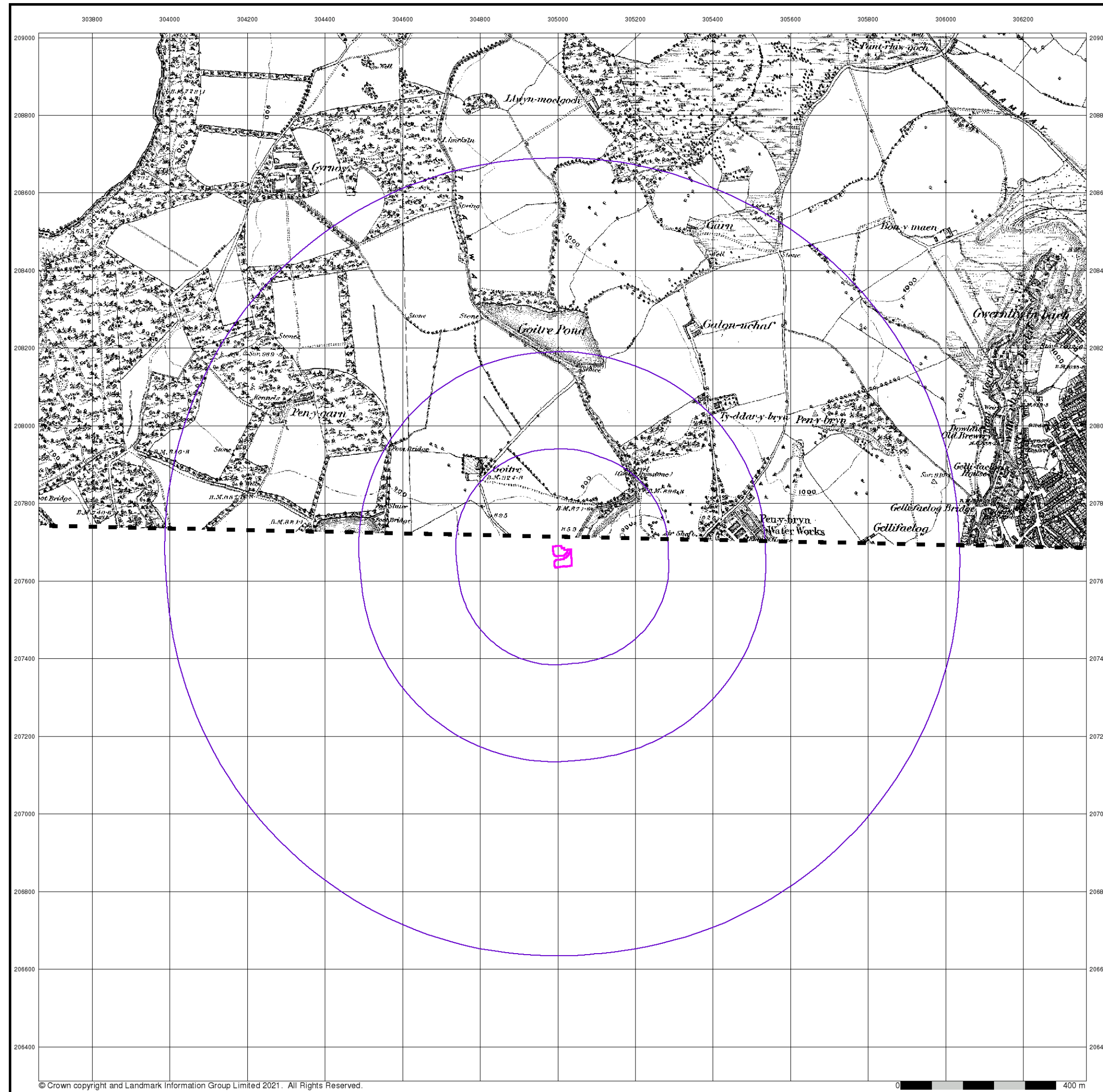
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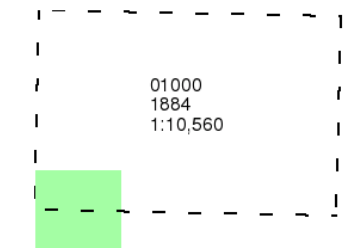
Monmouthshire

Published 1884

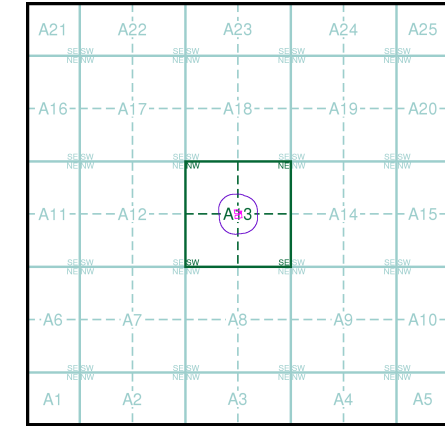
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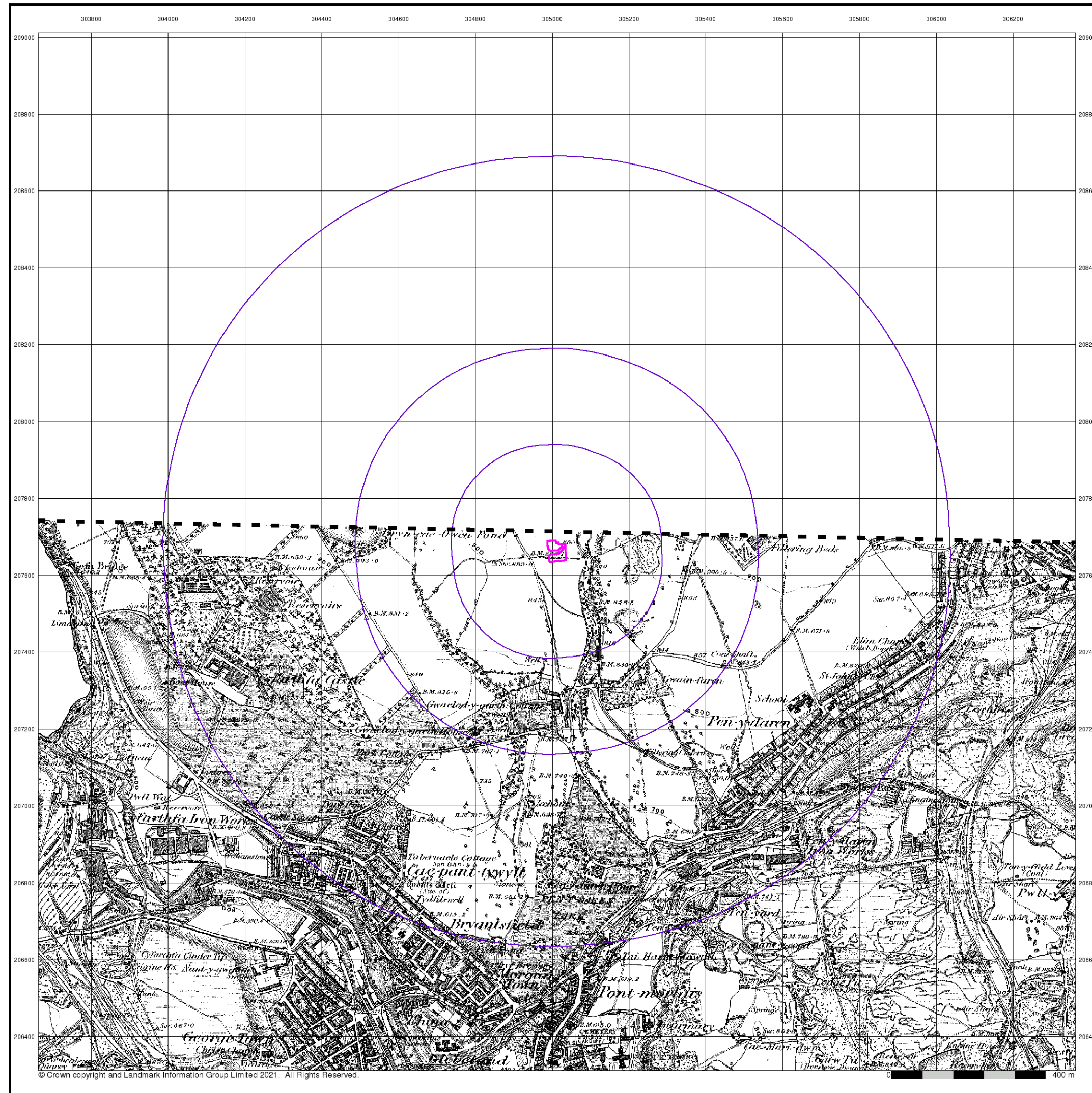
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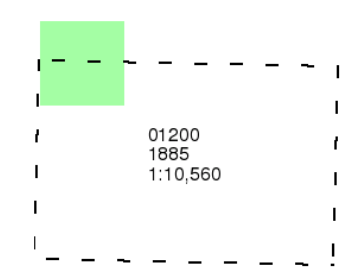
Glamorganshire

Published 1885

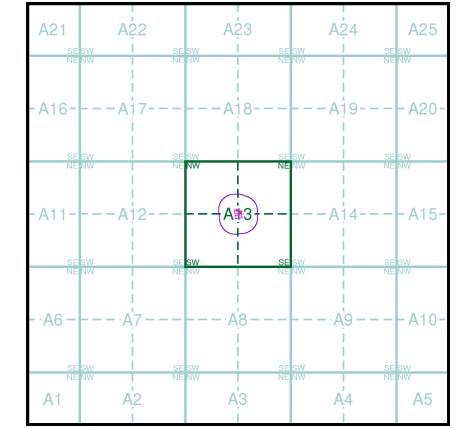
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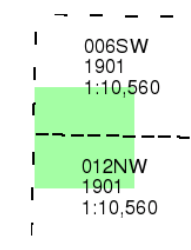
Glamorganshire

Published 1901

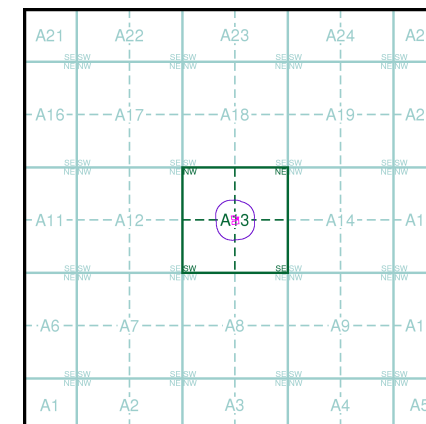
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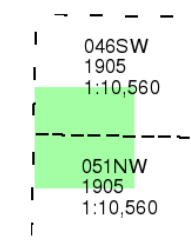
Brecknockshire

Published 1905

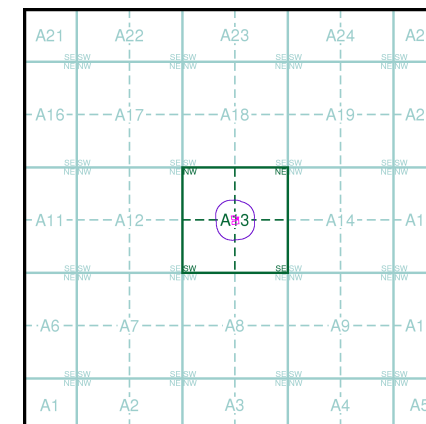
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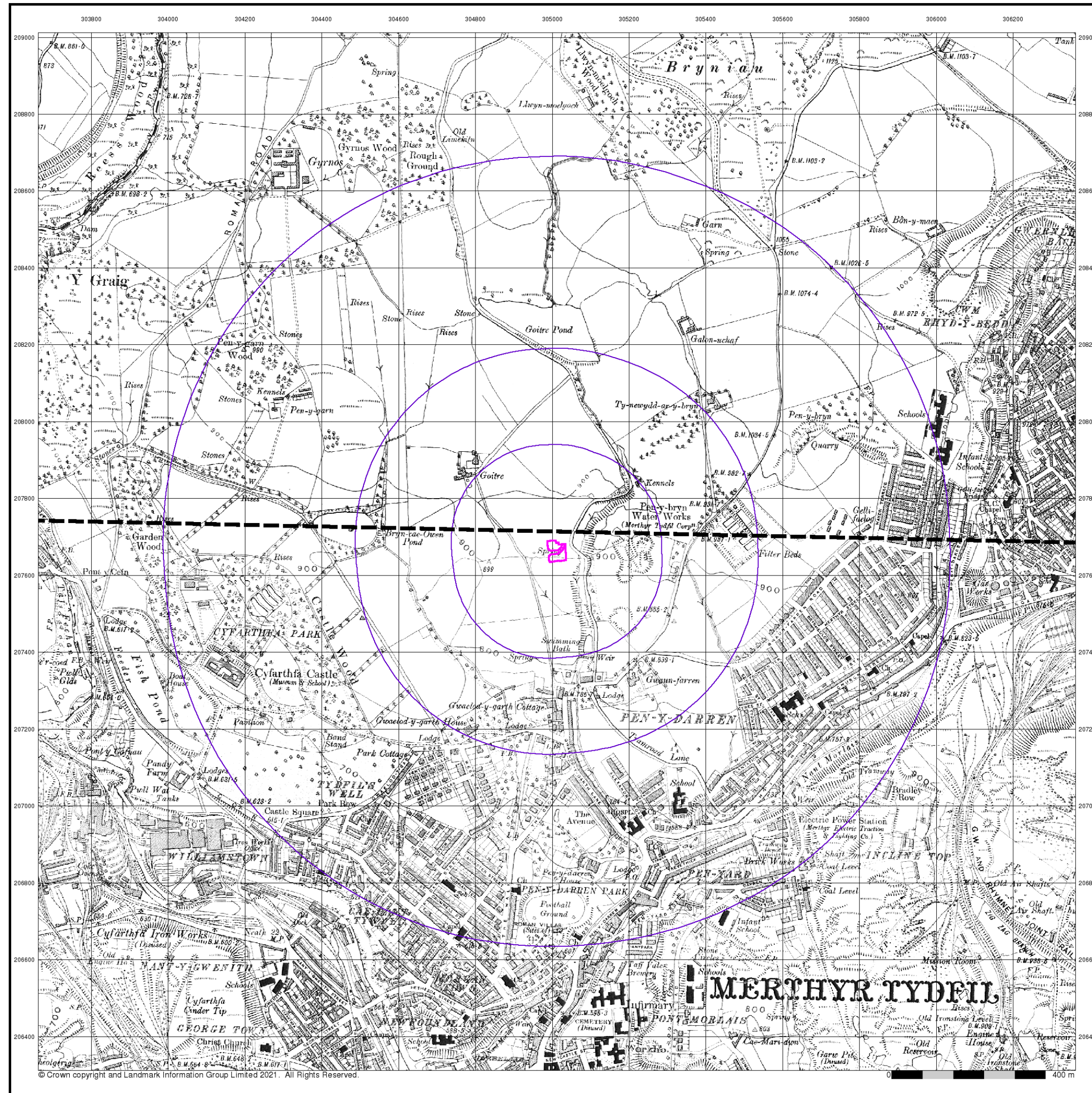
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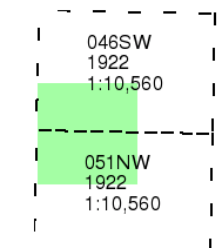
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Published 1922

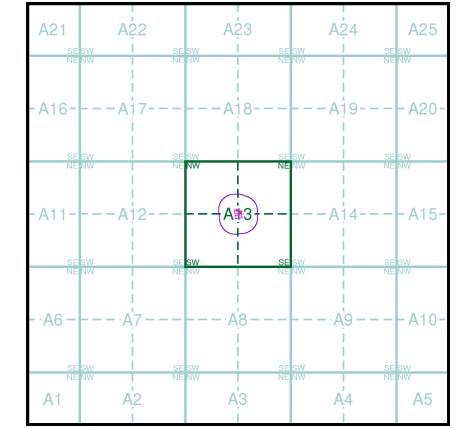
Source map scale - 1:10,560

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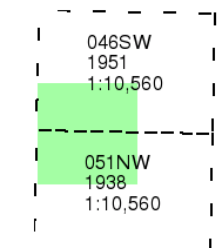
Brecknockshire

Published 1938 - 1951

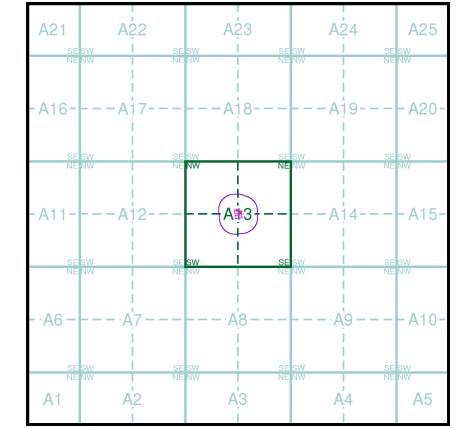
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Historical Aerial Photography

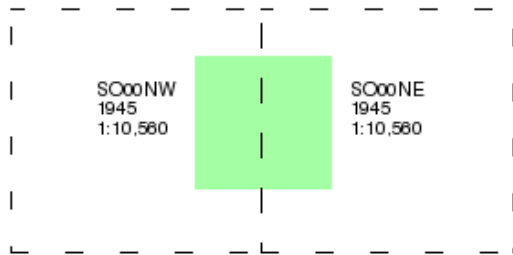
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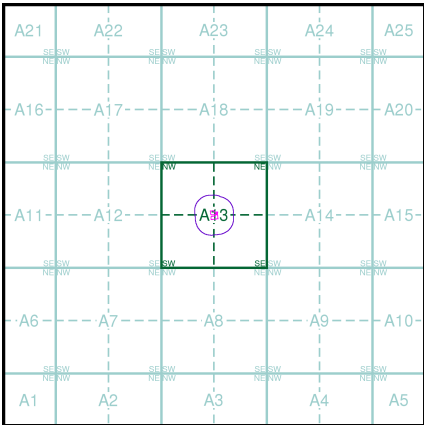
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

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Map Name(s) and Date(s)



Historical Aerial Photography - Slice A



Order Details

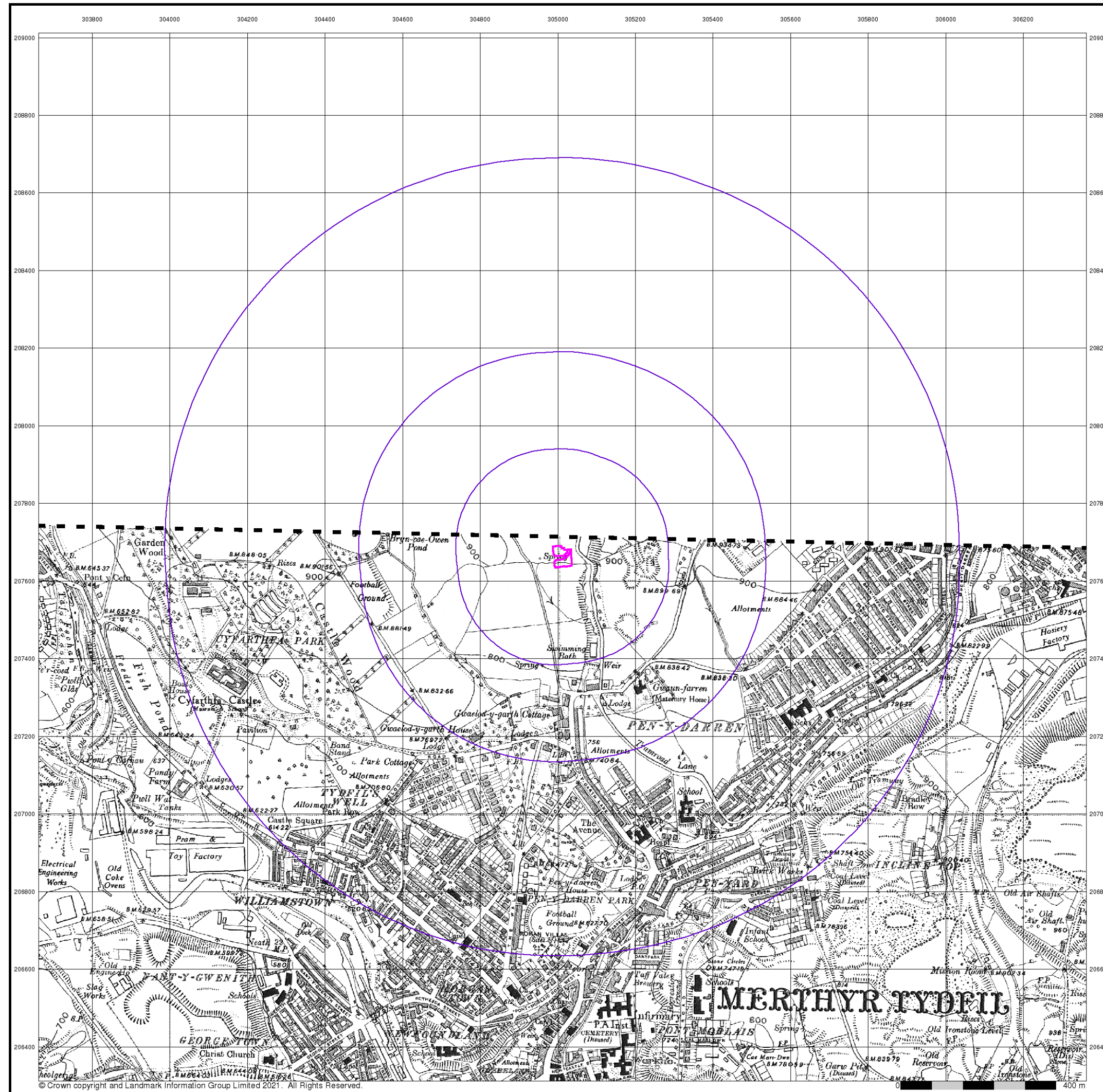
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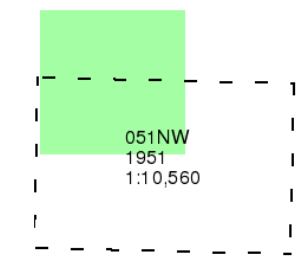
Brecknockshire

Published 1951

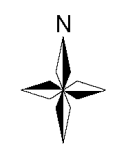
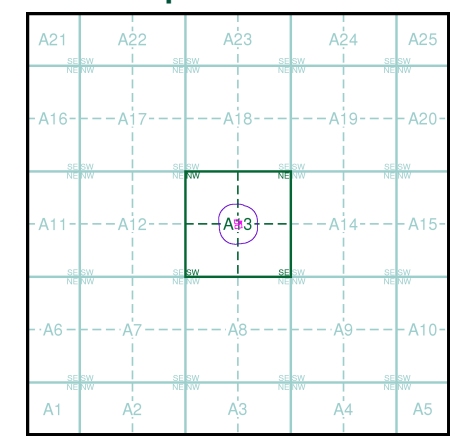
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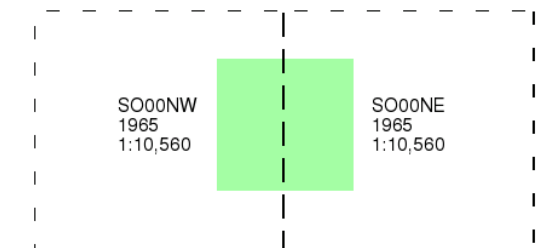
Ordnance Survey Plan

Published 1965

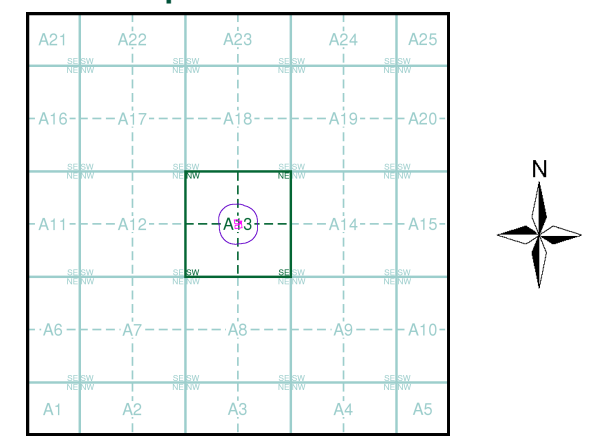
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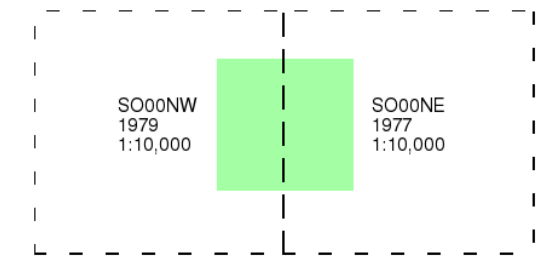
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Published 1977 - 1979

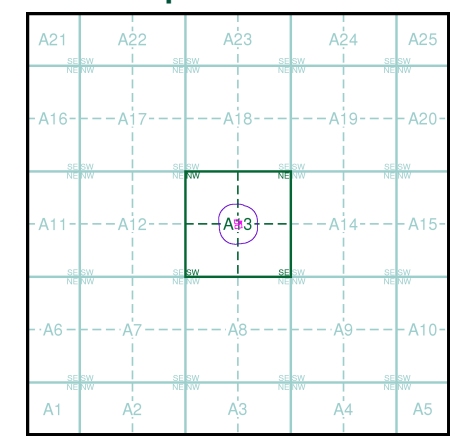
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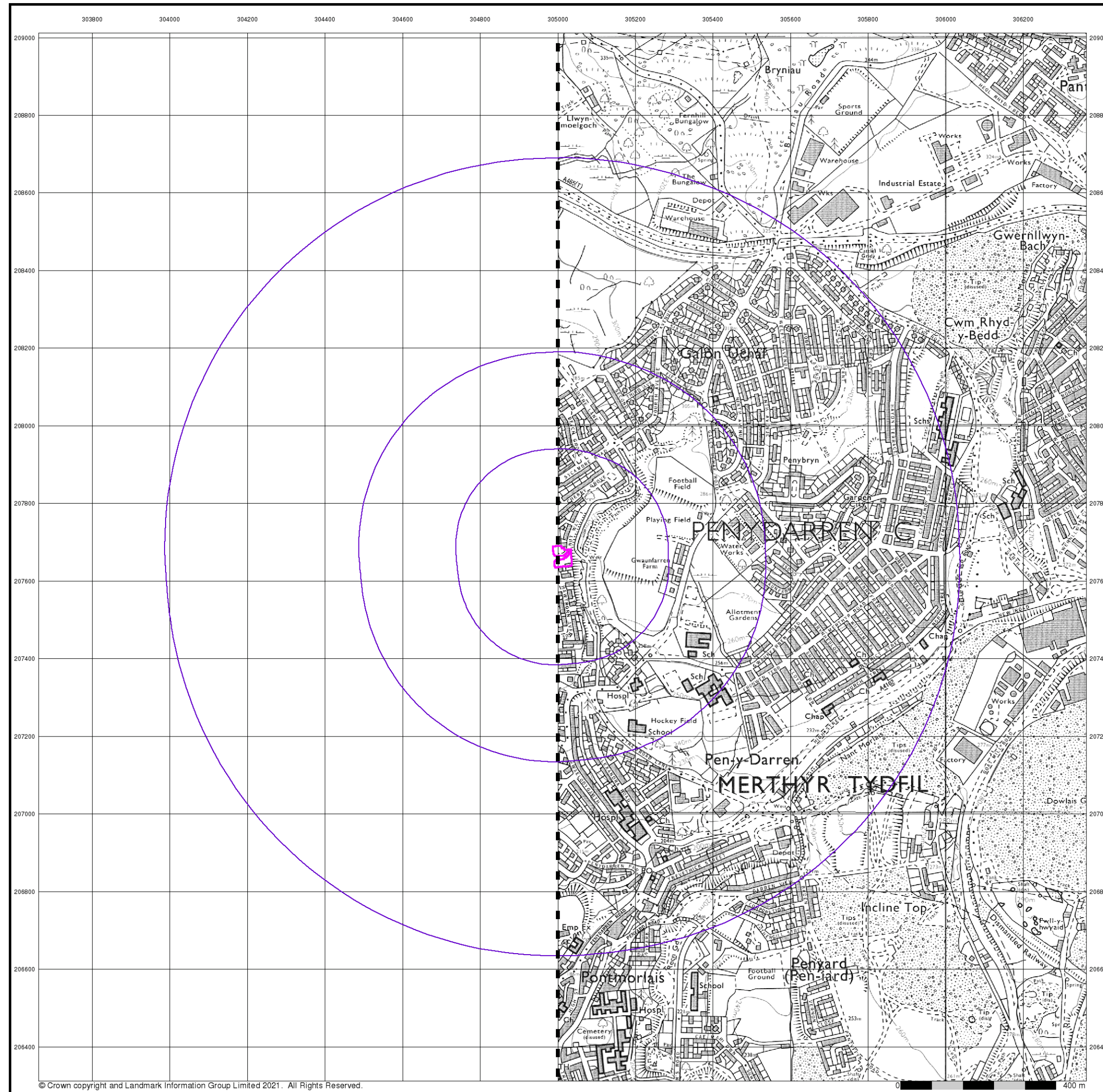
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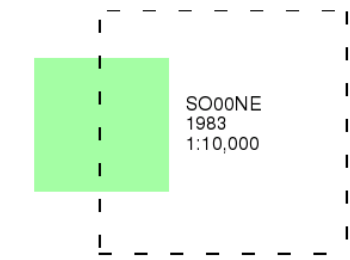
Ordnance Survey Plan

Published 1983

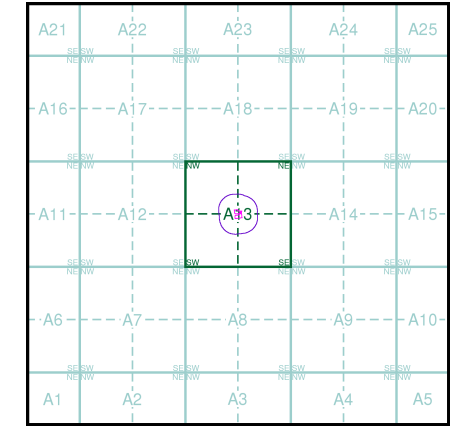
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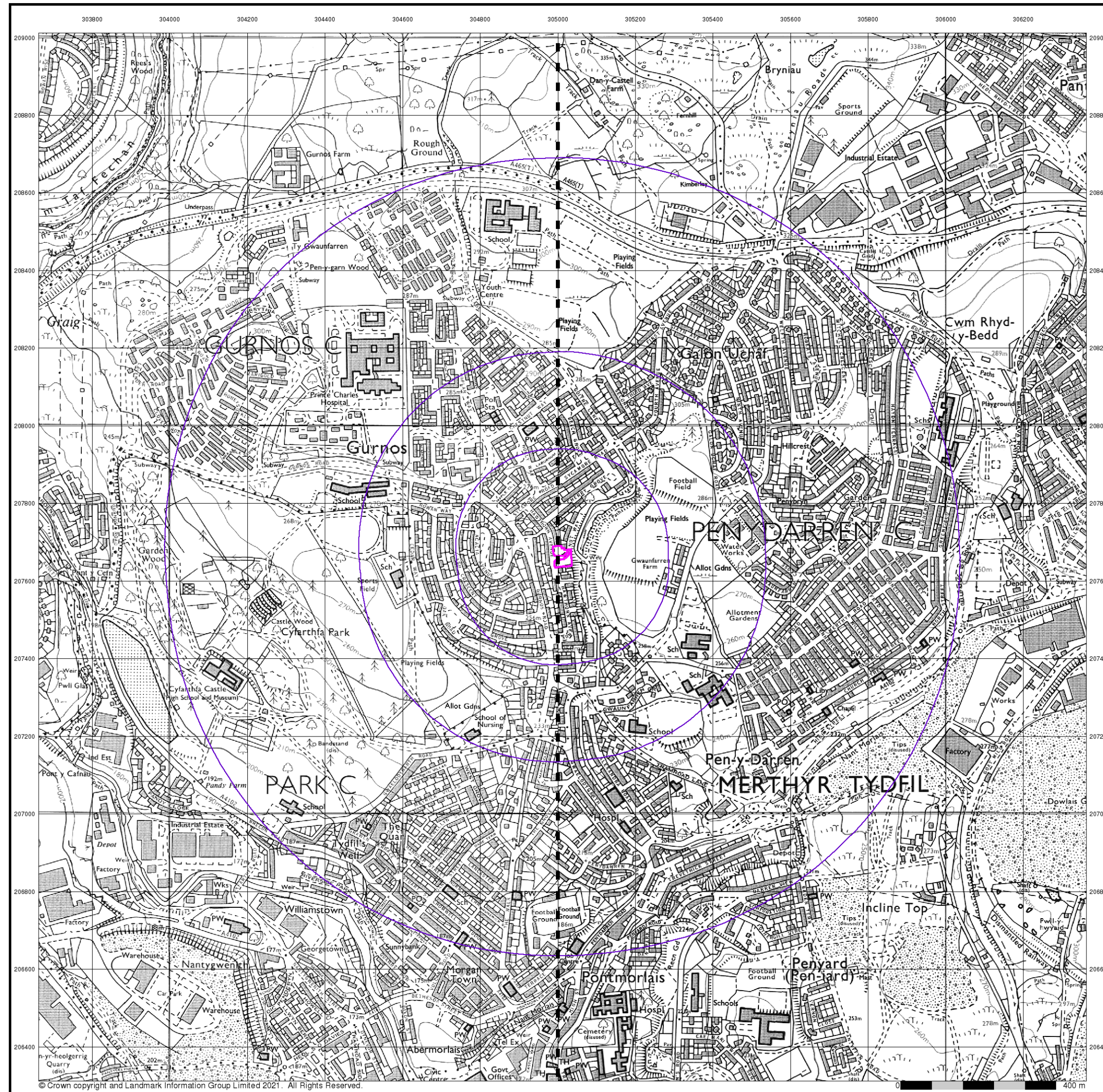
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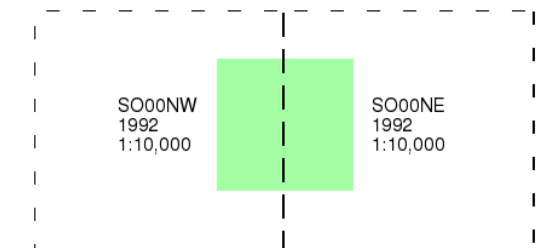
Ordnance Survey Plan

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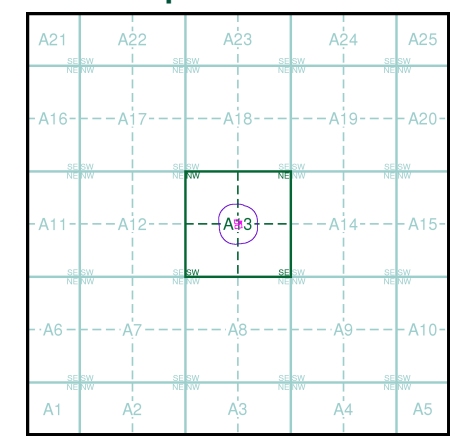
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Geotechnical & Geoenvironmental Specialists

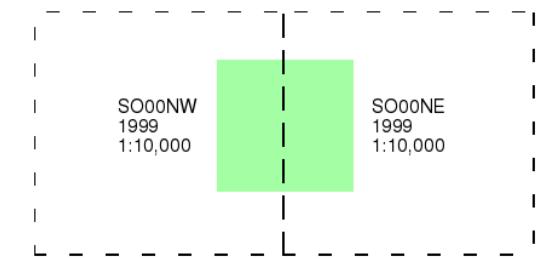
10k Raster Mapping

Published 1999

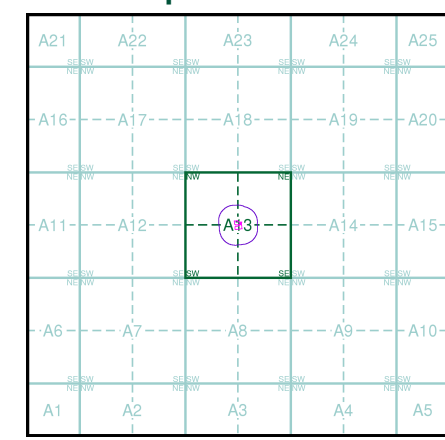
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 1000

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS



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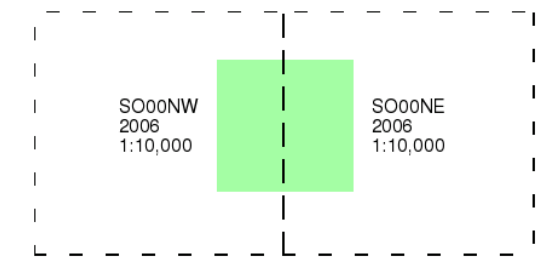
10k Raster Mapping

Published 2006

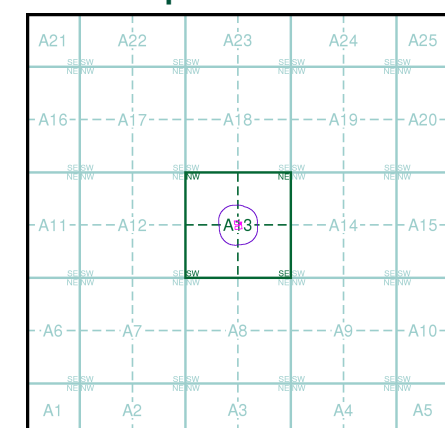
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

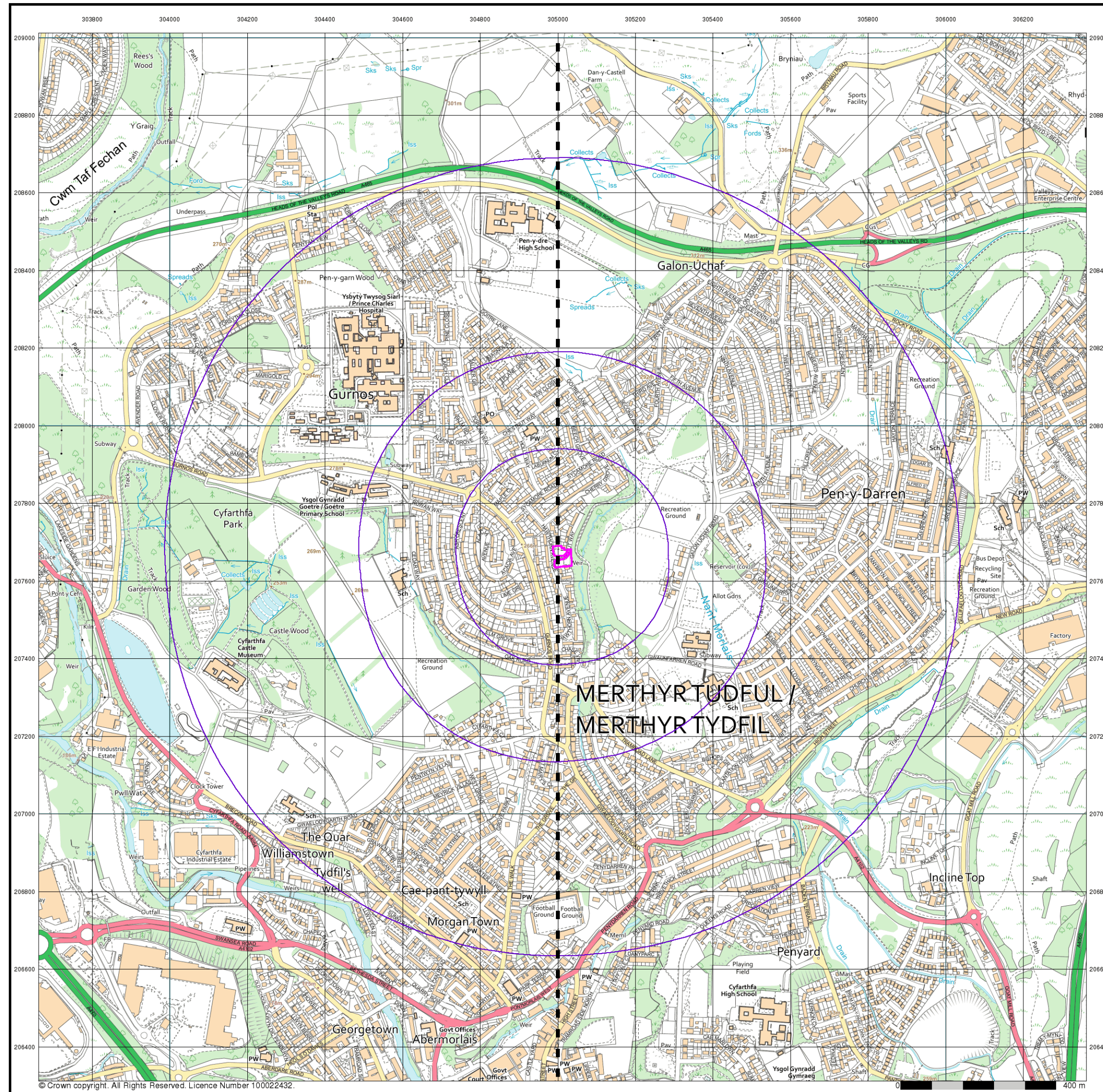
Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
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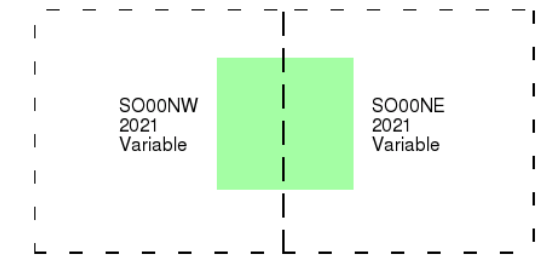
VectorMap Local

Published 2021

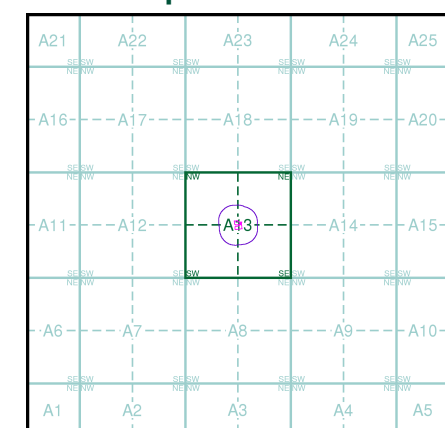
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
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Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	TILLD	Till, Devensian	Diamicton	Not Supplied - Devensian

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	SWCM	South Wales Middle Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	SWCM	South Wales Middle Coal Measures Formation	Sandstone	Not Supplied - Westphalian
	SWLCM	South Wales Lower Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	SWLCM	South Wales Lower Coal Measures Formation	Sandstone	Not Supplied - Westphalian
	BISHM	Bishopston Mudstone Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Namurian
	TWR	Twrch Sandstone Formation	Sandstone and Conglomerate, Interbedded	Not Supplied - Namurian
	BISHM	Bishopston Mudstone Formation	Sandstone	Not Supplied - Namurian
	OHL	Oxwich Head Limestone Formation	Limestone	Not Supplied - Visean
	PDO	Penderyn Oolite Member	Limestone, Ooidal	Not Supplied - Visean
	DWL	Dowlais Limestone Formation	Limestone	Not Supplied - Visean
		Faults		
		Rock Segments		



Geology 1:50,000 Maps

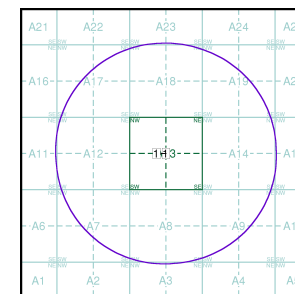
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	231
Map Name:	Merthyr Tydfil
Map Date:	1979
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

Geology 1:50,000 Maps - Slice A



Order Details:

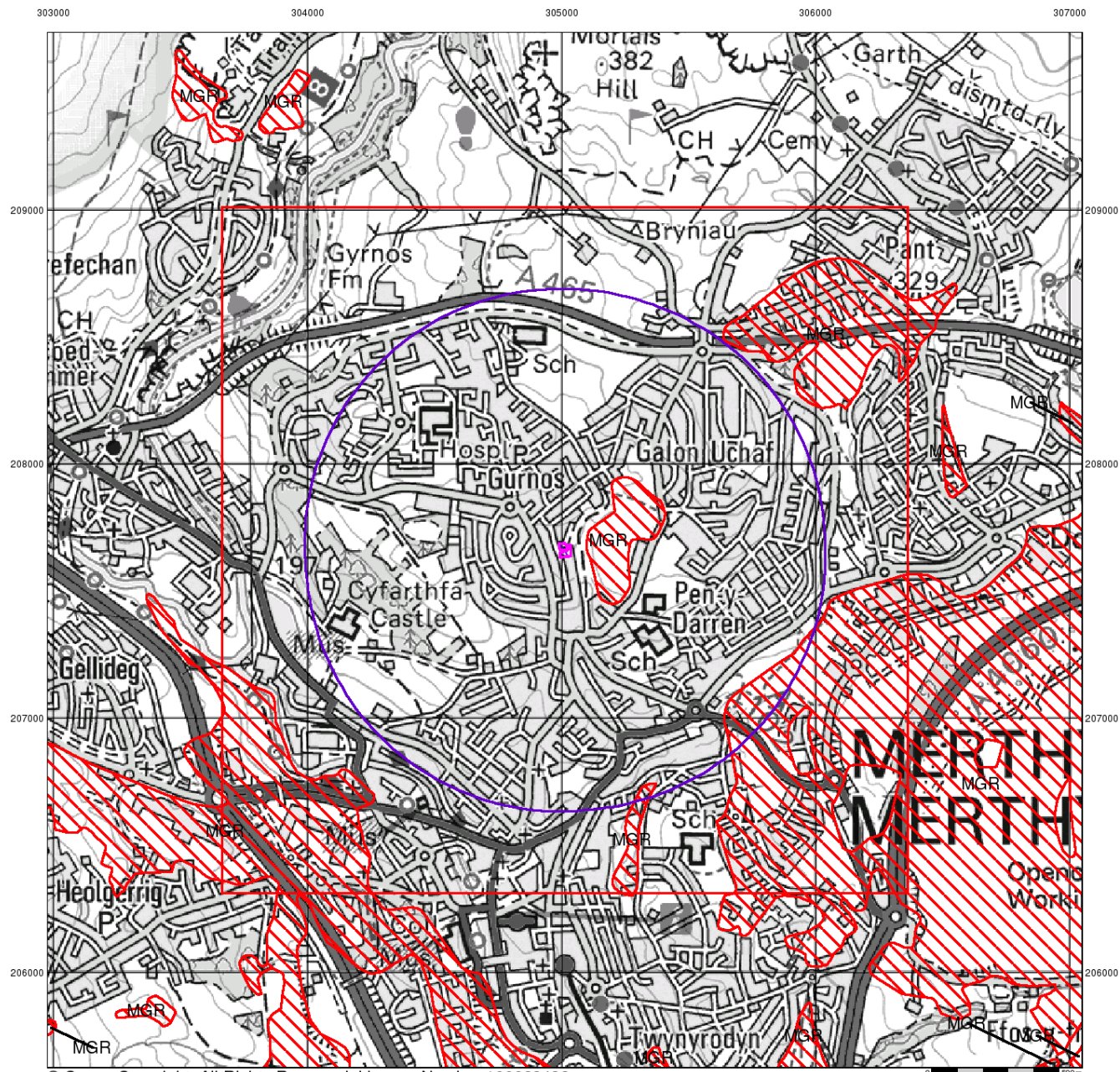
Order Number:	281311811_1_1
Customer Reference:	16811 - Walnut Way, Merthyr Tydfil
National Grid Reference:	305010, 207660
Slice:	A
Site Area (Ha):	0.18
Search Buffer (m):	1000

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Artificial Ground and Landslip

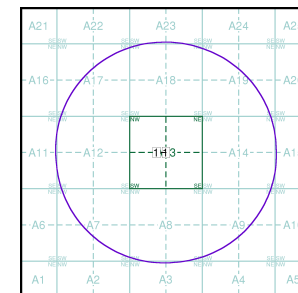
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



Order Details:

Order Number: 281311811_1_1
 Customer Reference: 16811 - Walnut Way, Merthyr Tydfil
 National Grid Reference: 305010, 207660
 Slice: A
 Site Area (Ha): 0.18
 Search Buffer (m): 1000

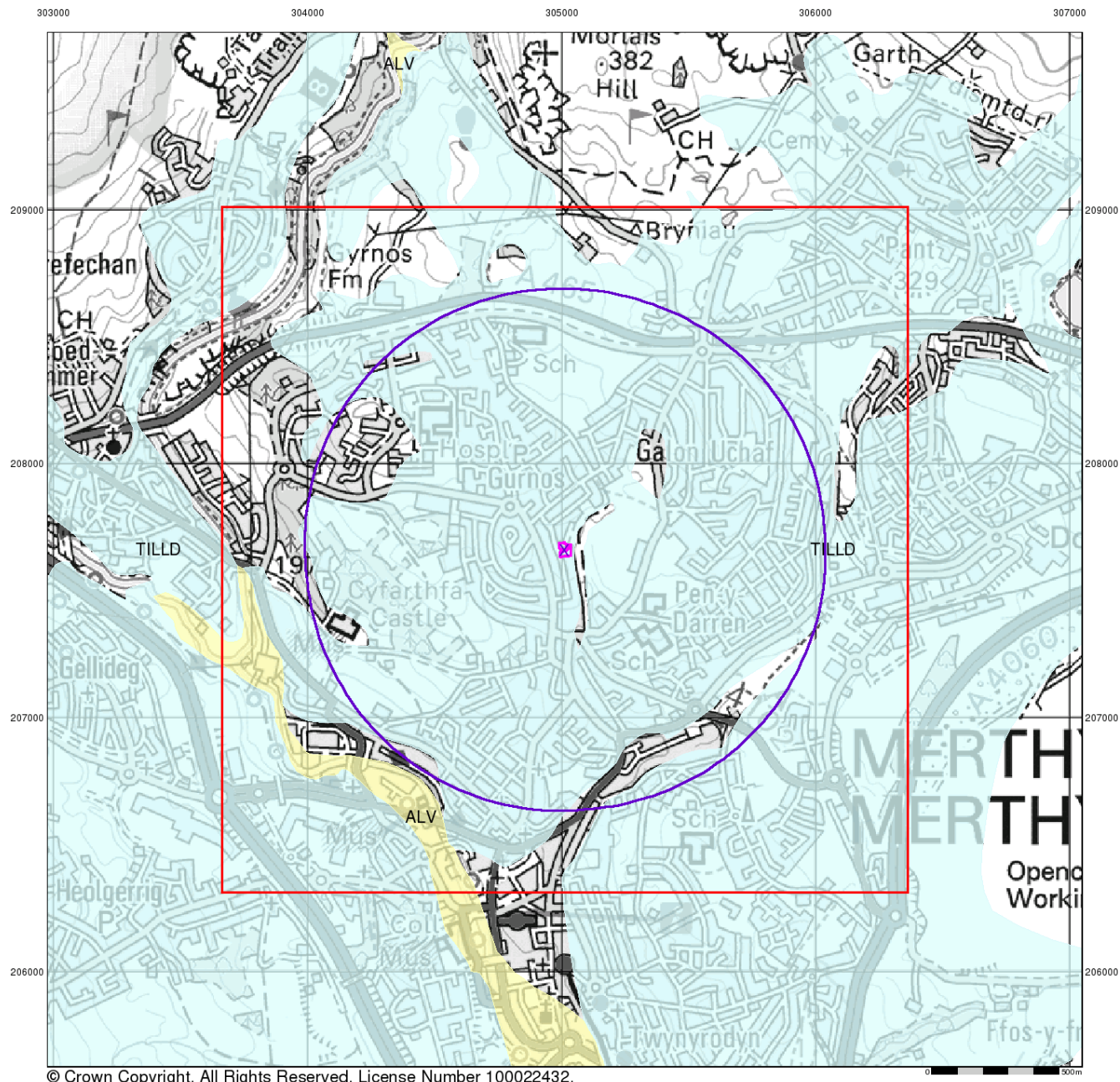
Site Details:

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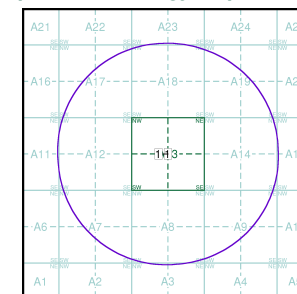
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



Order Details:

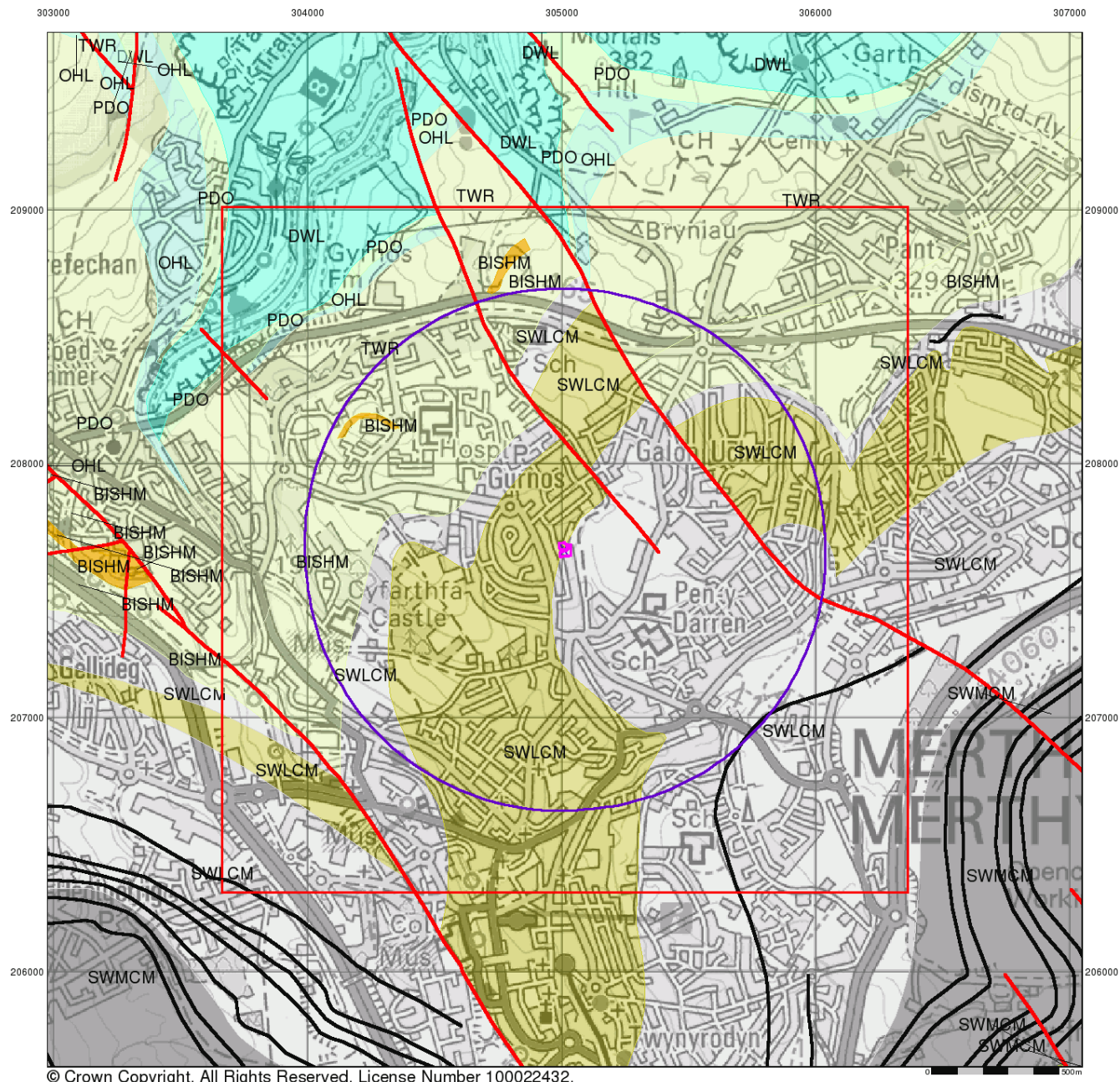
Order Number: 281311811_1_1
 Customer Reference: 16811 - Walnut Way, Merthyr Tydfil
 National Grid Reference: 305010, 207660
 Slice: A
 Site Area (Ha): 0.18
 Search Buffer (m): 1000

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Bedrock and Faults

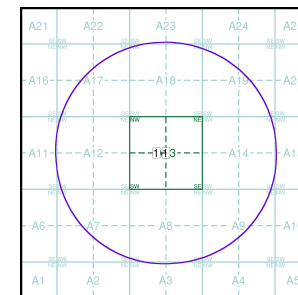
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



Order Details:

Order Number: 281311811_1_1
 Customer Reference: 16811 - Walnut Way, Merthyr Tydfil
 National Grid Reference: 305010, 207660
 Slice: A
 Site Area (Ha): 0.18
 Search Buffer (m): 1000

Site Details:

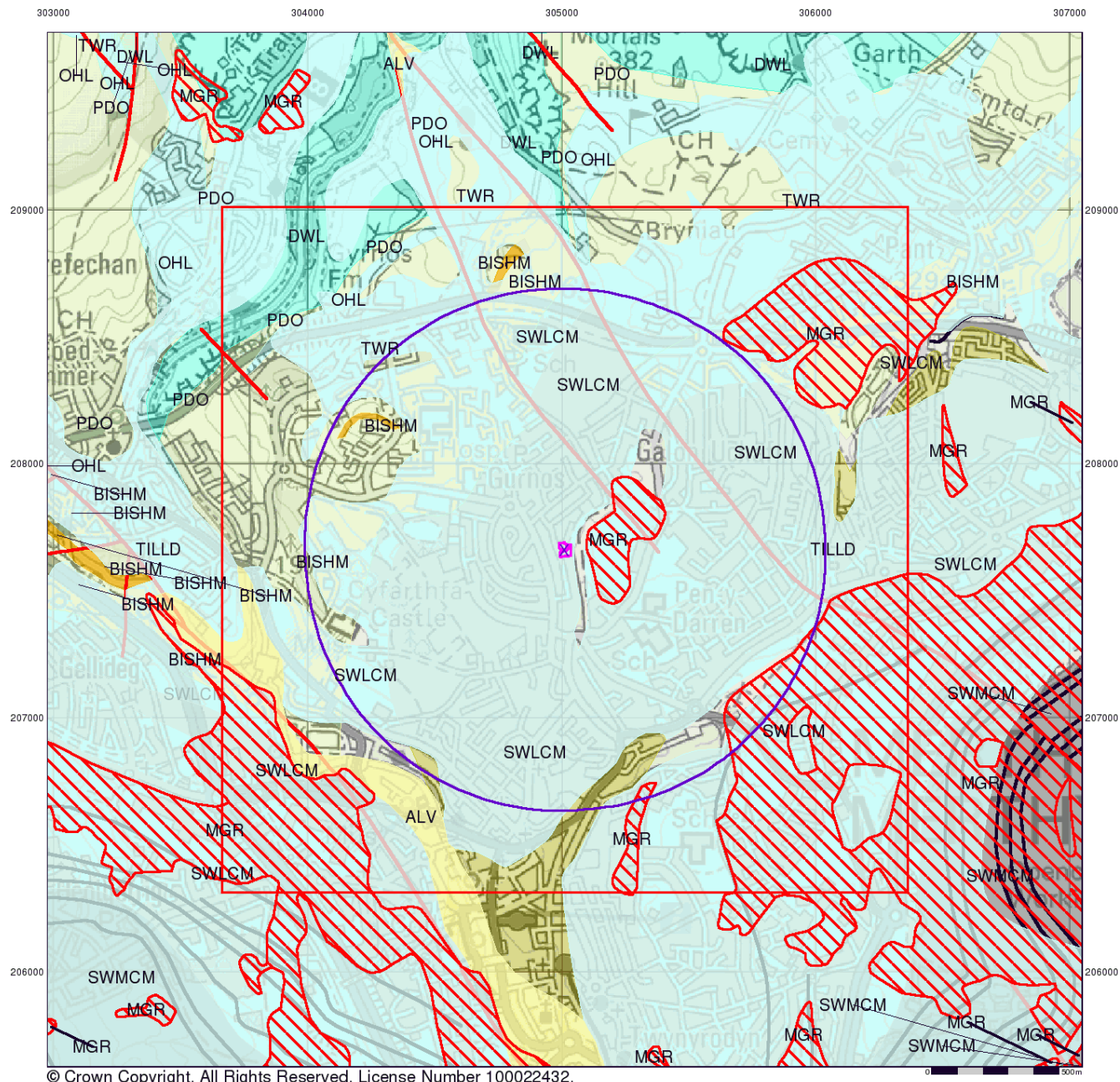
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Page 4 of 5



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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

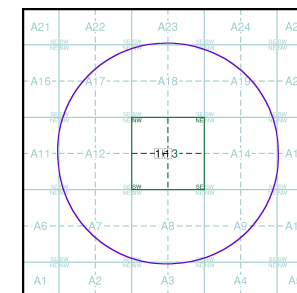
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A



Order Details:

Order Number:	281311811_1_1
Customer Reference:	16811 - Walnut Way, Merthyr Tydfil
National Grid Reference:	305010, 207660
Slice:	A
Site Area (Ha):	0.18
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Datasheet

Order Details:

Order Number:

281311811_1_1

Customer Reference:

16811 - Walnut Way, Merthyr Tydfil

National Grid Reference:

305010, 207660

Slice:

A

Site Area (Ha):

0.18

Search Buffer (m):

1000

Site Details:

Walnut Way
MERTHYR TYDFIL
CF47 9RS

Client Details:

Mr A Beattie
Terra Firma (Wales) Ltd
5 Deryn Court
Wharfdale Road
Pentwyn
Cardiff
CF23 7HB

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	27
Hazardous Substances	-
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Industrial Land Use	35
Sensitive Land Use	41
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Data Suppliers	47
Useful Contacts	48

Introduction

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

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 3		4	4	11
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 8				4
Local Authority Pollution Prevention and Control Enforcements	pg 8				2
Nearest Surface Water Feature	pg 8		Yes		
Pollution Incidents to Controlled Waters	pg 9				5
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances	pg 9				12
River Quality	pg 11				2
River Quality Biology Sampling Points	pg 12				1
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 12				(*3)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 13	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 13	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 13	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 13		7	16	88

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 27		1		
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 27				1
Local Authority Landfill Coverage	pg 27	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 27		1		
Potentially Infilled Land (Non-Water)	pg 27			2	4
Potentially Infilled Land (Water)	pg 27	1	4	9	14
Registered Landfill Sites					
Registered Waste Transfer Sites	pg 29				1
Registered Waste Treatment or Disposal Sites	pg 29				1
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 30	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 30	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 32				4
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 33	Yes	n/a	n/a	n/a
Mining Instability	pg 33	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities	pg 33				1
Non Coal Mining Areas of Great Britain	pg 33	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 33	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 33		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 34	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 34	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 34	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 35		1	1	27
Fuel Station Entries	pg 37				1
Points of Interest - Commercial Services	pg 37				7
Points of Interest - Education and Health	pg 38				6
Points of Interest - Manufacturing and Production	pg 38				3
Points of Interest - Public Infrastructure	pg 38		2		
Points of Interest - Recreational and Environmental	pg 39		2	6	16
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 41			1	1
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (W)	0	1	305000 207662
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (W)	0	1	305011 207662
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (N)	10	1	305011 207700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (S)	34	1	305000 207600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (S)	35	1	305011 207600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	56	1	304950 207600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (E)	64	1	305100 207662
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	68	1	305100 207700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (NE)	71	1	305050 207750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (S)	84	1	305000 207550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	95	1	304950 207550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (E)	114	1	305150 207662
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	117	1	305150 207700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	134	1	305150 207750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (S)	134	1	305000 207500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (S)	134	1	305011 207500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (NE)	136	1	305100 207800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (S)	141	1	304950 207500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	153	1	305100 207500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	179	1	305200 207750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (NE)	204	1	305150 207850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	221	1	305150 207450

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	226	1	305250 207750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (N)	229	1	305100 207900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	246	1	304750 207600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	263	1	304750 207800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (N)	263	1	305050 207950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	265	1	305150 207400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	283	1	304800 207900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (W)	288	1	304700 207700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (W)	288	1	304700 207662
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	290	1	305200 207400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	294	1	304700 207750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	295	1	304700 207600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	307	1	305250 207900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	318	1	304750 207900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	324	1	304900 208000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	343	1	304650 207750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	377	1	305200 207300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (NE)	385	1	305250 208000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (W)	388	1	304600 207662
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (W)	390	1	304600 207650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (W)	394	1	304600 207600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (W)	403	1	304600 207550

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (NE)	405	1	305200 208050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (NE)	427	1	305250 208050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NW (S)	434	1	305011 207200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	435	1	304600 207450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (W)	440	1	304550 207650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	442	1	304550 207750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (NE)	451	1	305200 208100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	458	1	304600 207400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (N)	460	1	305000 208150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (NE)	471	1	305250 208100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (SW)	481	1	304550 207450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (SE)	489	1	305250 207200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	498	1	304800 208150
1	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Water Supply Grid Location: Penybryn Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Am0008401 Permit Version: 1 Effective Date: 2nd October 1989 Issued Date: 2nd October 1989 Revocation Date: 14th March 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Soakaway Status: Consent expired Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	204	2	305200 207800
1	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Goitre Lane Cso, Gurnos, Merthyr Tydfil, Cf47 9ty Authority: Natural Resources Wales Catchment Area: NANT MORLAIS - SOURCE TO CONF R TAFF Reference: Ae2025303 Permit Version: 4 Effective Date: 21st August 2019 Issued Date: 21st August 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Goitre Brook Status: Effective Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	216	2	305200 207820

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso Goitre Lane Merthyr Tydfil Authority: Natural Resources Wales Catchment Area: NANT MORLAIS - SOURCE TO CONF R TAFF Reference: Ae2025303 Permit Version: 2 Effective Date: 11th December 2001 Issued Date: 10th December 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Goitre Brook Status: Effective Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	216	2	305200 207820
1	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso Goitre Lane Merthyr Tydfil Authority: Natural Resources Wales Catchment Area: NANT MORLAIS - SOURCE TO CONF R TAFF Reference: Ae2025303 Permit Version: 2 Effective Date: 11th December 2001 Issued Date: 10th December 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Goitre Brook Status: Effective Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	216	2	305200 207820
2	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Not Supplied Location: Penybryn Depot Merthyr Tydfil, Merthyr Tydfil Ua, Wales Authority: Natural Resources Wales Catchment Area: NANT MORLAIS - SOURCE TO CONF R TAFF Reference: AN0216701 Permit Version: 1 Effective Date: 30th April 1990 Issued Date: 30th April 1990 Revocation Date: Not Supplied Discharge Type: Trade And Other Matter Discharge Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of Nanr Morlais Status: Effective Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	298	2	305300 207500
2	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Not Supplied Location: Penybryn Depot Merthyr Tydfil, Merthyr Tydfil Ua, Wales Authority: Natural Resources Wales Catchment Area: NANT MORLAIS - SOURCE TO CONF R TAFF Reference: An0216701 Permit Version: 1 Effective Date: 30th April 1990 Issued Date: 30th April 1990 Revocation Date: Not Supplied Discharge Type: Trade And Other Matter Discharge Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of Nanr Morlais Status: Effective Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	298	2	305300 207500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Merthyr - Goitre Lane Authority: Natural Resources Wales Catchment Area: River Taff Reference: AE2025303 Permit Version: 1 Effective Date: 15th April 1964 Issued Date: 15th April 1964 Revocation Date: 10th December 2001 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Goitre Stream Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	A18SE (N)	339	2	305150 208000
4	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Merthyr - Rear Of Gwaelodygart Authority: Natural Resources Wales Catchment Area: River Taff Reference: Ae2025306 Permit Version: 1 Effective Date: 15th April 1964 Issued Date: 15th April 1964 Revocation Date: 6th May 1998 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Goitre Stream Status: Consent expired Positional Accuracy: Located by supplier to within 100m	A8NW (S)	434	2	305000 207200
5	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso Waterloo House Merthyr Tydfil, Merthyr Tidfil Authority: Natural Resources Wales Catchment Area: River Taff Reference: Ae2025305 Permit Version: 2 Effective Date: 31st March 2002 Issued Date: 21st December 2001 Revocation Date: 16th July 2002 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Morlais Brook Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	823	2	305600 207040
5	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Merthyr - Waterloo House Authority: Natural Resources Wales Catchment Area: River Taff Reference: AE2025305 Permit Version: 1 Effective Date: 15th April 1964 Issued Date: 15th April 1964 Revocation Date: 30th March 2002 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Morlais Brook Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	823	2	305590 207030

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: A Cso At Waterloo House Merthyr, Merthyr Tydfil Authority: Natural Resources Wales Catchment Area: NANT MORLAIS - SOURCE TO CONF R TAFF Reference: Ae2025305 Permit Version: 3 Effective Date: 17th July 2002 Issued Date: 16th July 2002 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Morlais Brook Status: Effective Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	825	2	305570 207010
5	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: A Cso At Waterloo House Merthyr, Merthyr Tydfil Authority: Natural Resources Wales Catchment Area: NANT MORLAIS - SOURCE TO CONF R TAFF Reference: Ae2025305 Permit Version: 3 Effective Date: 17th July 2002 Issued Date: 16th July 2002 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Morlais Brook Status: Effective Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	825	2	305570 207010
5	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: A Cso At Waterloo House Merthyr, Waterloo House, Penydarren, Merthyr Tydfil, Cf47 9ha Authority: Natural Resources Wales Catchment Area: NANT MORLAIS - SOURCE TO CONF R TAFF Reference: Ae2025305 Permit Version: 4 Effective Date: 7th October 2019 Issued Date: 7th October 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Morlais Brook Status: Effective Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	826	2	305598 207034
6	Discharge Consents Operator: British Coal Opencast Property Type: Undefined Or Other Location: Merthyr Tydfil - Incline Top O Authority: Natural Resources Wales Catchment Area: River Taff Reference: An0138201 Permit Version: 1 Effective Date: 15th June 1989 Issued Date: 15th June 1989 Revocation Date: 14th April 1994 Discharge Type: Trade Effluent Discharge: Not Supplied Environment: Receiving Water: Nant Morlais Status: Consent expired Positional Accuracy: Located by supplier to within 100m	A9NE (SE)	855	2	305700 207100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Merthyr Tydfil-Trevethick Monu Peny, Penyard Road Authority: Natural Resources Wales Catchment Area: River Taff Reference: AE2025307 Permit Version: 1 Effective Date: 15th April 1964 Issued Date: 15th April 1964 Revocation Date: 7th December 2001 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Morlais Brook Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	A8SE (S)	943	2	305130 206700
7	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso Trevithick Monument Merthyr, 1 Gwalia Place, Thomas Town, Merthyr Tydfil, Cf47 0aj Authority: Natural Resources Wales Catchment Area: NANT MORLAIS - SOURCE TO CONF R TAFF Reference: Ae2025307 Permit Version: 3 Effective Date: 11th October 2019 Issued Date: 11th October 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Morlais Brook Status: Effective Positional Accuracy: Located by supplier to within 10m	A8SE (S)	982	2	305120 206660
7	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso Trevithick Monument Merthyr, Merthyr Tydfil Authority: Natural Resources Wales Catchment Area: NANT MORLAIS - SOURCE TO CONF R TAFF Reference: Ae2025307 Permit Version: 2 Effective Date: 8th December 2001 Issued Date: 7th December 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Morlais Brook Status: Effective Positional Accuracy: Located by supplier to within 10m	A8SE (S)	982	2	305120 206660
7	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso Trevithick Monument Merthyr, Merthyr Tydfil Authority: Natural Resources Wales Catchment Area: NANT MORLAIS - SOURCE TO CONF R TAFF Reference: Ae2025307 Permit Version: 2 Effective Date: 8th December 2001 Issued Date: 7th December 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Morlais Brook Status: Effective Positional Accuracy: Located by supplier to within 10m	A8SE (S)	982	2	305120 206660

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	Discharge Consents Operator: Bailey Homes Ltd Property Type: Undefined Or Other Location: Chapel Bethlehem Site Merthyr Tydfi, Merthyr Tydfil Authority: Natural Resources Wales Catchment Area: River Taff Reference: An0080902 Permit Version: 1 Effective Date: 15th August 1988 Issued Date: 15th August 1988 Revocation Date: 31st March 1995 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Taff Status: Consent expired Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	969	2	304500 206800
9	Local Authority Pollution Prevention and Controls Name: Prince Charles Hospital Location: Gurnos Road, Gurnos Estate, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Authority: Merthyr Tydfil County Borough Council, Environmental Health Department Permit Reference: PG5/1/A Dated: 30th October 1992 Process Type: Local Authority Pollution Prevention and Control Description: PG5/1 Clinical waste incineration processes under 1 tonne an hour Status: Authorisation revoked Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	682	3	304496 208161
10	Local Authority Pollution Prevention and Controls Name: Texaco LtdStar Location: High Street, Penydarren, Merthyr Tydfil, Mid Glamorgan, CF47 9HA Authority: Merthyr Tydfil County Borough Council, Environmental Health Department Permit Reference: PG 1/14(96)-4 Dated: 1st March 1999 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station Status: Authorisation revoked Positional Accuracy: Automatically positioned to the address	A9NW (SE)	795	3	305574 207054
10	Local Authority Pollution Prevention and Controls Name: Shell Service Stations Location: High Street, Penydaren, MERTHYR TYDFIL, Mid Glamorgan, CF47 9HA Authority: Merthyr Tydfil County Borough Council, Environmental Health Department Permit Reference: Pg 1/14[96]-5 Dated: 1st March 1999 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Authorised Positional Accuracy: Automatically positioned to the address	A9NW (SE)	795	3	305574 207054
11	Local Authority Pollution Prevention and Controls Name: Merthyr Dry Cleaners Location: 16 Brecon Road, Merthyr Tydfil Authority: Merthyr Tydfil County Borough Council, Environmental Health Department Permit Reference: DryC/RJD/1/07 Dated: 30th November 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning Status: Permitted Positional Accuracy: Manually positioned to the address or location	A7SE (SW)	930	3	304489 206853
12	Local Authority Pollution Prevention and Control Enforcements Location: Prince Charles Hospital Type: Air Pollution Control Enforcement Notice Reference: PG/1/A/Enf2 Date Issued: Not Supplied Enforcement Date: 28th July 1993 Details: Not Supplied Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	682	3	304496 208161
12	Local Authority Pollution Prevention and Control Enforcements Location: Prince Charles Hospital Type: Air Pollution Control Enforcement Notice Reference: PG/1/A/Enf1 Date Issued: Not Supplied Enforcement Date: 28th July 1993 Details: Not Supplied Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	682	3	304496 208161
	Nearest Surface Water Feature	A13SE (E)	27	-	305062 207646

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	Pollution Incidents to Controlled Waters Property Type: Not Given Location: The Avenue, MERTHYR Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 9th April 1992 Incident Reference: 3630 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	790	4	305500 207000
14	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Theatre Royal Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 1st December 1994 Incident Reference: 22063 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	954	4	305200 206700
15	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Storm Overflow Location: Quarry Row Cso, MERTHYR Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blocked Sewer Incident Date: 17th January 1996 Incident Reference: 27163 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	969	4	304500 206800
15	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Quarry Row Cso, MERTHYR Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blocked Sewer Incident Date: 17th January 1996 Incident Reference: 27163 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	971	4	304505 206795
15	Pollution Incidents to Controlled Waters Property Type: Not Given Location: In The Back Garden, Of 7 Riversdale Road Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Neglect Incident Date: 18th July 1996 Incident Reference: 29587 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	974	4	304500 206795
16	Registered Radioactive Substances Name: North Glamorgan Nhs Trust Location: Prince Charles Hospital, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Authority: Natural Resources Wales Permit Reference: AX8608 Dated: 11th February 1997 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Minor variation to authorisation under RSA Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Automatically positioned to the address	A17SE (NW)	678	2	304491 208151

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	Registered Radioactive Substances Name: North Glamorgan Nhs Trust Location: Prince Charles Hospital, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Authority: Natural Resources Wales Permit Reference: AV5136 Dated: 6th June 1996 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Initial variation to an authorisation under RSA Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Automatically positioned to the address	A17SE (NW)	682	2	304491 208156
16	Registered Radioactive Substances Name: North Glamorgan NHS Trust Location: Prince Charles Hospital, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Authority: Natural Resources Wales Permit Reference: AV5144 Dated: 1st May 1996 Process Type: Registration under S7 RSA for the keeping and use of Radioactive materials (was RSA60 S1) Description: Minor variation to a registration under the Act of an open source which is also the subject of an authorisation Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Automatically positioned to the address	A17SE (NW)	689	2	304476 208151
16	Registered Radioactive Substances Name: North Glamorgan Nhs Trust Location: Prince Charles Hospital, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Authority: Natural Resources Wales Permit Reference: AS2718 Dated: 10th August 1995 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Minor variation to authorisation under RSA Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Unknown	A17SE (NW)	689	2	304486 208161
16	Registered Radioactive Substances Name: East Glamorgan Nhs Trust Location: Prince Charles Hospital, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Authority: Natural Resources Wales Permit Reference: AH5132 Dated: 31st March 1991 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA Status: Authorisation either revoked or cancelled Positional Accuracy: Unknown	A17SE (NW)	689	2	304481 208156
16	Registered Radioactive Substances Name: Cwm Taf Local Health Board Location: Prince Charles Hospital, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Authority: Natural Resources Wales Permit Reference: CD8872 Dated: 29th September 2009 Process Type: Registration under S7 RSA for the keeping and use of Radioactive materials (was RSA60 S1) Description: Discretionary registration under the Act of an open source which is also the subject of an authorisation Status: Application has been authorised and any conditions apply to the operator Positional Accuracy: Automatically positioned to the address	A17SE (NW)	692	2	304481 208161
16	Registered Radioactive Substances Name: Cwm Taf Local Health Board Location: Prince Charles Hospital, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Authority: Natural Resources Wales Permit Reference: CD8864 Dated: 24th September 2009 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Discretionary authorisation under RSA Status: Application has been authorised and any conditions apply to the operator Positional Accuracy: Automatically positioned to the address	A17SE (NW)	692	2	304481 208161

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	Registered Radioactive Substances Name: North Glamorgan Nhs Trust Location: Prince Charles Hospital, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Authority: Natural Resources Wales Permit Reference: Bw8666 Dated: 1st December 2003 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Minor variation to authorisation under RSA Status: Authorisation either revoked or cancelled Positional Accuracy: Automatically positioned to the address	A17SE (NW)	692	2	304481 208161
16	Registered Radioactive Substances Name: North Glamorgan Nhs Trust Location: Prince Charles Hospital, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Authority: Natural Resources Wales Permit Reference: Bq3878 Dated: 18th March 2002 Process Type: Registration under S7 RSA for the keeping and use of Radioactive materials (was RSA60 S1) Description: Substantial variation to a registration under the Act of an open source which is also the subject of an authorisation Status: Authorisation either revoked or cancelled Positional Accuracy: Automatically positioned to the address	A17SE (NW)	692	2	304481 208161
16	Registered Radioactive Substances Name: North Glamorgan Nhs Trust Location: Prince Charles Hospital, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Authority: Natural Resources Wales Permit Reference: AF4976 Dated: 18th March 1993 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Substantial variation to authorisation under RSA Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Unknown	A17SE (NW)	692	2	304481 208161
16	Registered Radioactive Substances Name: North Glamorgan Nhs Trust Location: Prince Charles Hospital, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Authority: Natural Resources Wales Permit Reference: AG0437 Dated: 31st March 1991 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Unknown	A17SE (NW)	696	2	304476 208161
16	Registered Radioactive Substances Name: North Glamorgan Nhs Trust Location: Prince Charles Hospital, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Authority: Environment Agency, Welsh Region Permit Reference: AH5159 Dated: 31st March 1991 Process Type: Registration under S7 RSA for the keeping and use of Radioactive materials (was RSA60 S1) Description: Registration under the Act of an open source which is also the subject of an authorisation Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Unknown	A17SE (NW)	699	4	304476 208166
	River Quality Name: Nant Morlais GQA Grade: River Quality C Reach: Conf.Goitre Bk.-Headwaters Estimated Distance (km): 2.4 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A9SW (SE)	857	4	305528 206937
	River Quality Name: Nant Morlais GQA Grade: River Quality C Reach: Conf.Taff - Conf.Goitre Bk Estimated Distance (km): 1 Flow Rate: Flow less than 0.62 cumecs Flow Type: River Year: 2000	A9SW (SE)	881	4	305365 206821

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	River Quality Biology Sampling Points Name: Morlais Reach: Confluence River Taff To Confluence Goitre Brook Estimated Distance: 1.00 Positional Accuracy: Located by supplier to within 100m Year: 1990 GQA Grade: River Quality Biology GQA Grade E - Poor Year: 1995 GQA Grade: River Quality Biology GQA Grade E - Poor Year: 2000 GQA Grade: River Quality Biology GQA Grade D - Fair Year: 2002 GQA Grade: River Quality Biology GQA Grade Not Supplied Year: 2003 GQA Grade: River Quality Biology GQA Grade Not Supplied Year: 2004 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2005 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2006 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2007 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2008 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2009 GQA Grade: River Quality Biology GQA Grade C - Fairly Good	A8SE (S)	880	4	305300 206800
	Water Abstractions Operator: Balfour Beatty Civil Engineering Limited Licence Number: Wa/057/0021/002 Permit Version: 1 Location: Point A On Taf Fechan Alongside Cyfarthfa Leat Authority: Environment Agency, Welsh Region Abstraction: Industrial/Commercial/Energy/Public Services: Transfer between sources Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 06 June Authorised End: 31 October Permit Start Date: 6th June 2012 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11NE (W)	1284	4	303704 207663
	Water Abstractions Operator: P Forker Contractors Limited Licence Number: 21/57/22/0037 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, Welsh Region Abstraction: General Industrial Abstraction Type: Not Supplied Source: River Daily Rate (m3): 300 Yearly Rate (m3): 15000 Details: River Taff Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A3SW (S)	1611	4	304700 206050
	Water Abstractions Operator: Merthyr Tydfil County Borough Council Licence Number: Wa/057/0021/0011 Permit Version: Not Supplied Location: Cyfarthfa Leat, Cyfarthfa Castle Museum, Cyfarthfa Park, Merthyr Tydfil, Merthyr Tydfil, Cf47 8re Authority: Natural Resources Wales Abstraction: Industrial/Commercial/Energy/Public Services: Transfer between sources Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16NW (NW)	1661	2	303483 208391

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: 40-70% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	A13SW (W)	0	2	305000 207662
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: Low	A13SW (W)	0	2	305011 207662
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SW (W)	0	2	305011 207662
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SW (W)	0	2	305000 207662
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13SW (W)	0	2	305000 207662
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13SW (W)	0	2	305011 207662
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
18	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 191.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (E)	27	5	305063 207649
19	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (E)	30	5	305065 207654

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 356.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13NE (E)	32	5	305066 207663
21	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 25.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (SE)	172	5	305089 207476
22	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 43.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (SE)	172	5	305089 207476
23	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (SE)	182	5	305132 207484
24	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 164.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (S)	196	5	305093 207451
25	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 200.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13NE (NE)	287	5	305161 207938
26	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 196.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (E)	310	5	305346 207644
27	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 853.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (E)	310	5	305346 207644
28	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 405.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SW (SW)	333	5	304779 207380

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 245.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NE (S)	348	5	305060 207291
30	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 28.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SE (W)	369	5	304628 207577
31	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 55.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SE (W)	373	5	304622 207603
32	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 226.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NW (S)	380	5	304867 207276
33	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 160.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SE (W)	398	5	304592 207650
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14SW (SE)	411	5	305413 207476
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14SW (SE)	418	5	305417 207465
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 105.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14SW (SE)	421	5	305418 207463
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 74.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18SE (N)	430	5	305066 208116

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12NE (W)	443	5	304556 207787
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12NE (W)	443	5	304556 207787
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 165.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18SE (N)	472	5	305021 208162
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 333.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14SW (SE)	504	5	305462 207371
42	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 346.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NE (S)	584	5	305113 207060
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 17.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NW (S)	590	5	304901 207052
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NW (S)	607	5	304898 207035
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NW (S)	608	5	304898 207034
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 285.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SE (SW)	614	5	304435 207380

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 481.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NW (S)	619	5	304896 207023
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 137.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18SE (N)	632	5	305075 208319
49	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 438.8 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7NE (SW)	652	5	304517 207190
50	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 21.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	694	5	304305 207547
51	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	709	5	304292 207533
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	709	5	304292 207533
53	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 26.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	711	5	304289 207537
54	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 29.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12NW (W)	716	5	304273 207670
55	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 17.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	723	5	304280 207523

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
56	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	723	5	304280 207523
57	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 81.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	724	5	304278 207526
58	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 41.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A12SW (W)	726	5	304264 207643
59	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 57.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	726	5	304264 207643
60	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 177.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	737	5	304268 207510
61	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	737	5	304268 207510
62	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 28.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	739	5	304264 207514
63	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 51.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	747	5	304244 207624
64	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 64.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A12SW (W)	766	5	304223 207650

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
65	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 109.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A12SW (W)	766	5	304223 207650
66	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 13.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	786	5	304208 207588
67	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	787	5	304206 207600
68	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	787	5	304204 207610
69	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	787	5	304205 207609
70	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 5.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	796	5	304196 207599
71	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 371.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NW (SE)	796	5	305682 207175
72	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 111.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NW (SE)	797	5	305683 207173
73	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 70.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NW (SE)	797	5	305683 207173

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
74	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 13.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	799	5	304195 207587
75	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 4.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	799	5	304195 207587
76	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 4.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A12SW (W)	800	5	304192 207603
77	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 145.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	802	5	304192 207584
78	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NW (SE)	813	5	305628 207082
79	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 107.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NW (SE)	815	5	305629 207080
80	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NW (SE)	815	5	305629 207080
81	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NW (SE)	815	5	305629 207081
82	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.8 Watercourse Level: Underground Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NW (SE)	819	5	305628 207074

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
83	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 515.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NW (SE)	822	5	305544 206993
84	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 24.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NW (SE)	823	5	305629 207068
85	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 62.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NW (SE)	831	5	305683 207118
86	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 84.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NE (E)	848	5	305829 207978
87	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 83.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9SW (SE)	872	5	305607 206980
88	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 89.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A12SW (W)	875	5	304114 207654
89	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 37.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NE (SE)	882	5	305731 207097
90	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 36.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	886	5	304123 207466
91	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18NE (N)	897	5	305107 208581

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
92	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18NE (N)	902	5	305114 208585
93	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 34.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18NE (N)	905	5	305106 208590
94	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 42.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	914	5	304102 207437
95	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NE (SE)	921	5	305708 207009
96	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 329.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NE (SE)	921	5	305708 207009
97	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 29.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NE (SE)	924	5	305710 207006
98	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 33.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18NE (N)	926	5	305127 208608
99	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 49.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8SE (S)	928	5	305212 206728
100	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 26.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18NE (N)	937	5	305097 208622

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
101	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 26.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	944	5	304079 207402
102	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 378.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18NW (N)	945	5	304984 208635
103	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 117.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18NW (N)	945	5	304984 208635
104	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8SE (S)	947	5	305172 206702
105	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 7.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9SW (SE)	948	5	305630 206901
106	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9SW (SE)	948	5	305630 206901
107	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 28.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8SE (S)	950	5	305173 206699
108	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 49.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9SE (SE)	953	5	305727 206983
109	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 31.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9SE (SE)	953	5	305727 206983

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
110	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 1.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9SW (SE)	955	5	305632 206893
111	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 42.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18NE (N)	959	5	305085 208646
112	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 24.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18NE (N)	959	5	305085 208646
113	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 107.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A12SW (W)	964	5	304025 207653
114	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	964	5	304064 207380
115	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 163.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18NE (N)	965	5	305152 208644
116	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 15.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	969	5	304060 207376
117	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 27.0 Watercourse Level: Underground Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8SE (S)	971	5	305158 206675
118	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 15.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9SE (SE)	974	5	305728 206954

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
119	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 105.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9SE (SE)	975	5	305718 206942
120	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8SE (S)	983	5	305135 206661
121	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 146.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (W)	983	5	304046 207372
122	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8SE (S)	985	5	305123 206657
123	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 74.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Morlais Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8SE (S)	985	5	305117 206657
124	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 20.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18NE (N)	986	5	305112 208671
125	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 31.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A23SE (N)	995	5	305079 208683
126	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 26.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11NE (W)	996	5	303993 207742
127	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 143.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19SE (NE)	996	5	305791 208329

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
128	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 65.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19NE (NE)	999	5	305777 208350

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
129	Historical Landfill Sites Licence Holder: Merthyr Tydfil Borough Council Location: Galon Uchaf Name: Greenie Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14083 First Input Date: 31st December 1960 Last Input Date: 31st December 1975 Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial, Household and Special Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6925/0014 BGS Ref: Not Supplied Other Ref: Not Supplied	A13NE (E)	241	2	305275 207697
130	Licensed Waste Management Facilities (Locations) Licence Number: 30170 Location: Prince Charles Hospital, Gurnos Estate, Merthyr Tydfil, Glamorgan, CF47 9DT Operator Name: North Glamorgan N H S Trust Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Clinical Waste Transfer Stations Licence Status: Surrendered Issued: 18th October 1995 Last Modified: 22nd March 2002 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 15th January 2004 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	749	2	304520 208273
	Local Authority Landfill Coverage Name: Merthyr Tydfil County Borough Council - Has supplied landfill data		0	3	305011 207662
131	Local Authority Recorded Landfill Sites Location: Galon Uchaf Reference: 120 Authority: Merthyr Tydfil County Borough Council, Environmental Health Department Last Reported Status: Closed Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A13NE (E)	147	3	305181 207692
132	Potentially Infilled Land (Non-Water) Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13NE (NE)	257	-	305223 207857
133	Potentially Infilled Land (Non-Water) Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NW (E)	333	-	305366 207715
134	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14SW (SE)	525	-	305501 207395
135	Potentially Infilled Land (Non-Water) Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NW (E)	576	-	305576 207876
136	Potentially Infilled Land (Non-Water) Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A8SW (S)	793	-	304879 206849
137	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A9NW (SE)	827	-	305664 207101
138	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A13SW (S)	0	-	305011 207646

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
139	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A13SW (SW)	59	-	304938 207613
140	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A13SE (S)	169	-	305085 207477
141	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A13SE (S)	208	-	305097 207441
142	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A13SE (S)	222	-	305085 207423
143	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A13NE (NE)	286	-	305150 207943
144	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A13SE (SE)	331	-	305226 207368
145	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A8NE (S)	351	-	305058 207287
146	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A8NW (S)	363	-	304862 207296
147	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A12SE (W)	369	-	304623 207625
148	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A12NE (W)	448	-	304542 207723
149	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A17SE (NW)	456	-	304659 208005
150	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A8NW (S)	466	-	304893 207179
151	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A18SE (N)	477	-	305038 208166
152	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A12NE (NW)	501	-	304572 207968
153	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A8NE (S)	550	-	305036 207086
154	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A8NW (S)	552	-	304885 207093
155	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A8NE (S)	587	-	305117 207058
156	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922	A18SW (N)	593	-	304832 208261
157	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A18SW (N)	629	-	305001 208319
158	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A8SW (S)	659	-	305004 206975
159	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A8SE (S)	665	-	305161 206986

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
160	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A18SE (N)	682	-	305233 208335
161	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A17SE (NW)	702	-	304606 208278
162	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A18NW (N)	813	-	304991 208502
163	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1891	A18NW (N)	950	-	304986 208640
164	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A8SW (S)	982	-	304756 206681
165	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A17NE (NW)	988	-	304619 208605
166	Registered Waste Transfer Sites Licence Holder: North Glamorgan Nhs Trust Licence Reference: 950134 Site Location: Prince Charles Hospital, Gurnos Estate, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Operator Location: Prince Charles Hospital, Gurnos Estate, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Authority: Environment Agency Wales, South East Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 18th October 1995 Preceded By: 910123 Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Clinical Wastes Prohibited Waste: Max.Storage In Licence Waste N.O.S.	A17SE (NW)	693	4	304480 208160
167	Registered Waste Treatment or Disposal Sites Licence Holder: Mid Glamorgan Health Authority Licence Reference: 910123 Site Location: Prince Charles Hospital, Gurnos Estate, MERTHYR TYDFIL, Mid Glamorgan, CF47 9DT Operator Location: St Tydfils Hospital, Merthyr Tydfil, Mid Glamorgan Authority: Environment Agency Wales, South East Area Site Category: Incineration Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Licence Status: Site exempt from licenceExempt Dated: 1st November 1993 Preceded By: Not Given Licence: Superseded By: 950134 Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Clinical Wastes	A17SE (NW)	707	4	304500 208200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Pennine Lower Coal Measures Formation And South Wales Lower Coal Measures Formation (Undifferentiated)	A13SW (W)	0	1	305011 207662
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13SW (W)	0	1	305011 207662
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 25 - 35 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13NW (NW)	0	1	305005 207665
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: <15 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13SE (E)	12	1	305048 207658
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13NW (NW)	285	1	304736 207822
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: <15 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13NE (NE)	356	1	305276 207943
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A18SW (N)	577	1	304874 208254

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 25 - 35 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A19SW (NE)	597	1	305497 208059
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 35 - 45 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A18NE (N)	732	1	305271 208374
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 35 - 45 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A8SE (SE)	758	1	305333 206942
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 35 - 45 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A17SE (NW)	769	1	304365 208139
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: <15 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A9SW (SE)	811	1	305409 206919
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 35 - 45 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A18NW (N)	813	1	304740 208463

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SW (W)	817	1	304229 207346
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 25 - 35 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8SE (S)	907	1	305330 206781
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 35 - 45 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7SE (SW)	934	1	304479 206855
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7SE (SW)	952	1	304400 206891
168	BGS Recorded Mineral Sites Site Name: Pen-Y-Bryn Location: Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125675 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	707	1	305679 207971
169	BGS Recorded Mineral Sites Site Name: Tydfil'S Well Location: Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125653 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A8SW (S)	793	1	304876 206850

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
170	BGS Recorded Mineral Sites Site Name: Bradley Row Location: Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125682 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	921	1	305797 207121
171	BGS Recorded Mineral Sites Site Name: Pen-Yard Level Location: Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125673 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	987	1	305665 206878
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13SW (W)	0	6	305011 207662
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13SW (W)	0	-	305011 207662
	Natural Cavities Easting: 304674 Northing: 208337 Distance: 720 Quadrant Reference: A17 Quadrant Reference: SE Bearing Ref: NW Cavity Type: Phreatic Cave, Sinkhole, Solution Pipe, Solution Widened Joint or Fissure, Swallow Hole Solid Geology Detail: Carboniferous Limestone Supergroup, Lower Carboniferous Limestone, Millstone Grit Group, Upper Carboniferous Limestone Superficial Geology Detail: Glacial sand	A17SE (NW)	720	7	304674 208337
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305011 207662
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305000 207662
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305000 207662
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305011 207662
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305000 207662
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305011 207662

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	62	1	305097 207669
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305000 207662
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305011 207662
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305011 207662
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305000 207662
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	305023 207664
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	36	1	305071 207654
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	76	1	305068 207749
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	81	1	304910 207641
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	211	1	305202 207810
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305000 207662
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305011 207662
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	12	1	305048 207658
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305000 207662
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305011 207662
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	42	1	305076 207666
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	304999 207662
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305011 207662
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	304999 207662
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	305011 207662

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
172	Contemporary Trade Directory Entries Name: Bil-D-Aid Location: 45, Sycamore Road, Merthyr Tydfil, Mid Glamorgan, CF47 9RU Classification: Damp & Dry Rot Control Status: Inactive Positional Accuracy: Automatically positioned to the address	A13NE (N)	178	-	305051 207863
173	Contemporary Trade Directory Entries Name: Classic Blinds Location: Redlands, Brooklands Close, Merthyr Tydfil, Mid Glamorgan, CF47 8EJ Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NW (S)	458	-	304929 207181
174	Contemporary Trade Directory Entries Name: Supakleen Location: 10, Royal Crescent, Penydarren, Merthyr Tydfil, Mid Glamorgan, CF47 9LA Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SW (E)	559	-	305563 207454
175	Contemporary Trade Directory Entries Name: W R Jones Location: 18, Park Row Gardens, Merthyr Tydfil, Mid Glamorgan, CF47 8TG Classification: Coal & Smokeless Fuel Merchants & Distributors Status: Active Positional Accuracy: Automatically positioned to the address	A7NE (SW)	647	-	304617 207108
176	Contemporary Trade Directory Entries Name: Steve'S Domestic Location: 5, Talbot Square, Penydarren, MERTHYR TYDFIL, Mid Glamorgan, CF47 9LP Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Active Positional Accuracy: Automatically positioned to the address	A9NW (SE)	683	-	305601 207256
177	Contemporary Trade Directory Entries Name: Baxter Healthcare Ltd Location: Prince Charles Hospital, Merthyr Tydfil, Mid Glamorgan, CF47 9DT Classification: Hospitals Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	692	-	304481 208161
177	Contemporary Trade Directory Entries Name: C W M Taf University Heath Board Location: Prince Charles Hospital, Merthyr Tydfil, CF47 9DT Classification: Hospitals Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	722	-	304465 208186
178	Contemporary Trade Directory Entries Name: Blade Environmental Location: 59, Brynhyfryd Street, Merthyr Tydfil, Mid Glamorgan, CF47 9YW Classification: Recycling Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SE (E)	745	-	305779 207579
179	Contemporary Trade Directory Entries Name: Merthr Tack Location: 6, Garth Villas, Merthyr Tydfil, Mid Glamorgan, CF47 0RX Classification: Pet Foods & Animal Feeds Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SE (S)	764	-	305247 206905
180	Contemporary Trade Directory Entries Name: Welsh Country Foods Location: 14, Tanybryn Place, Merthyr Tydfil, Mid Glamorgan, CF47 9EJ Classification: Meat - Wholesale Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SE (E)	787	-	305822 207662
181	Contemporary Trade Directory Entries Name: Shell (Uk) Ltd Location: High Street, Penydarren, Merthyr Tydfil, Mid Glamorgan, CF47 9HA Classification: Petrol Filling Stations - 24 Hour Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	795	-	305574 207054
182	Contemporary Trade Directory Entries Name: Eddie Thomas Location: Prospect House, Prospect Place, Merthyr Tydfil, Mid Glamorgan, CF47 0DX Classification: Coal & Smokeless Fuel Merchants & Distributors Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SE (S)	825	-	305247 206842

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
183	Contemporary Trade Directory Entries Name: Bio Quest Ltd Location: 93, Trevethick Street, Merthyr Tydfil, Mid Glamorgan, CF47 0RJ Classification: Chemical Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	842	-	305474 206919
184	Contemporary Trade Directory Entries Name: Mobile Total Tune Location: 30, Trevethick Street, Merthyr Tydfil, Mid Glamorgan, CF47 0HX Classification: Car Engine Tuning & Diagnostic Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SE (S)	854	-	305336 206840
185	Contemporary Trade Directory Entries Name: Williams Country Supplies Ltd Location: Unit 3 Trevethick Industrial Estate, Merthyr Tydfil, Mid Glamorgan, CF47 0HX Classification: Pet Foods & Animal Feeds Status: Active Positional Accuracy: Manually positioned within the geographical locality	A9SW (SE)	855	-	305400 206866
185	Contemporary Trade Directory Entries Name: Ambassador Horse & Country Supplies Location: Unit 3 Trevethick Industrial Estate, Merthyr Tydfil, Mid Glamorgan, CF47 0HX Classification: Pet Foods & Animal Feeds Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A9SW (SE)	855	-	305400 206866
186	Contemporary Trade Directory Entries Name: Celtic Cleaning Ltd Location: Waterloo House, Penydarren, Merthyr Tydfil, Mid Glamorgan, CF47 0SX Classification: Commercial Cleaning Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	863	-	305624 207008
186	Contemporary Trade Directory Entries Name: In-Stitches Embroidery Location: Waterloo House, Penydarren, Merthyr Tydfil, Mid Glamorgan, CF47 0SX Classification: T-Shirts Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	863	-	305624 207008
187	Contemporary Trade Directory Entries Name: Greers Gas Location: 3, Hodges Street, Merthyr Tydfil, Mid Glamorgan, CF47 9NX Classification: Gas Suppliers Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NE (E)	876	-	305910 207722
188	Contemporary Trade Directory Entries Name: Seams Sew Right Location: Unit 1, Trevethick St, Merthyr Tydfil, Mid Glamorgan, CF47 0HX Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A8SE (S)	894	-	305254 206772
189	Contemporary Trade Directory Entries Name: Gilgen Door Systems Location: 1b, Twelfth Avenue, Merthyr Tydfil, Mid Glamorgan, CF47 9TA Classification: Door Manufacturers - Industrial Status: Inactive Positional Accuracy: Automatically positioned to the address	A19NW (NE)	906	-	305601 208388
189	Contemporary Trade Directory Entries Name: First Choice Blinds Location: Creative House, Rocky Road, Merthyr Tydfil, Mid Glamorgan, CF47 9JL Classification: Blinds, Awnings & Canopies Status: Active Positional Accuracy: Automatically positioned to the address	A19NW (NE)	943	-	305608 208429
189	Contemporary Trade Directory Entries Name: Divine Window Manufacturers Location: Creative House, Rocky Road, Merthyr Tydfil, Mid Glamorgan, CF47 9JL Classification: Window Frame Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A19NW (NE)	943	-	305608 208429
190	Contemporary Trade Directory Entries Name: Home & Dry Damp Proofing M T Ltd Location: 22, Harrison Street, Merthyr Tydfil, Mid Glamorgan, CF47 9SJ Classification: Damp & Dry Rot Control Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NE (E)	917	-	305943 207801

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
191	Contemporary Trade Directory Entries Name: Shabby Chic Antiques Location: 6, Park Place, Merthyr Tydfil, Mid Glamorgan, CF47 0LJ Classification: Antiques - Repairing & Restoring Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SE (S)	925	-	305163 206723
192	Contemporary Trade Directory Entries Name: Castle Auto Repairs Location: Pontsarn Road, Merthyr Tydfil, Mid Glamorgan, CF48 2TN Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A19NW (NE)	948	-	305415 208549
193	Contemporary Trade Directory Entries Name: E Williams Car Sales Location: High Street, Penydarren, MERTHYR TYDFIL, Mid Glamorgan, CF47 9HE Classification: Car Dealers - Used Status: Active Positional Accuracy: Automatically positioned to the address	A14SE (E)	989	-	305996 207399
194	Contemporary Trade Directory Entries Name: Alan Evans Motors Location: 28-33, Brecon Road, Merthyr Tydfil, CF47 8NL Classification: Car Dealers - Used Status: Active Positional Accuracy: Automatically positioned to the address	A7SE (S)	996	-	304641 206703
195	Contemporary Trade Directory Entries Name: Martha'S Professional Ironing Services Location: 37, Pontmorlais, Merthyr Tydfil, Mid Glamorgan, CF47 8UN Classification: Ironing & Home Laundry Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A3NE (S)	997	-	305084 206641
196	Fuel Station Entries Name: Star Penydarren Location: High Street , Penydarren , Merthyr Tydfil, Merthyr Tydfil, CF47 9HA Brand: Obsolete Premises Type: Not Applicable Status: Obsolete Positional Accuracy: Automatically positioned to the address	A9NW (SE)	795	-	305574 207054
197	Points of Interest - Commercial Services Name: Haydn Lewis & Sons Location: 38 Galon Uchaf Road, Merthyr Tydfil, CF47 9TP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A19SW (NE)	559	8	305404 208101
198	Points of Interest - Commercial Services Name: S & P Mason Location: 52 Tenth Avenue, Merthyr Tydfil, CF47 9TE Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A14NW (NE)	583	8	305529 207989
199	Points of Interest - Commercial Services Name: Blade Environmental Location: 59 Brynhyfryd Street, Merthyr Tydfil, CF47 9YW Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A14SE (E)	745	8	305779 207579
200	Points of Interest - Commercial Services Name: Castle Auto Repairs Location: Pontsarn Road, Merthyr Tydfil, CF48 2TN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19NW (NE)	948	8	305415 208549
201	Points of Interest - Commercial Services Name: Alan Evans Location: 29 Brecon Road, Merthyr Tydfil, CF47 8NL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7SE (S)	995	8	304641 206704
201	Points of Interest - Commercial Services Name: Alan Evans Motors Ltd Location: 28-33 Brecon Road, Merthyr Tydfil, CF47 8NL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7SE (S)	995	8	304641 206704

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
201	Points of Interest - Commercial Services Name: Alan Evans Motors Location: 28-33 Brecon Road, Merthyr Tydfil, CF47 8NL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7SE (S)	996	8	304641 206703
202	Points of Interest - Education and Health Name: Prince Charles Hospital Location: Prince Charles Hospital, Merthyr Tydfil, CF47 9DT Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A17SE (NW)	692	8	304481 208161
202	Points of Interest - Education and Health Name: Prince Charles Hospital Location: Prince Charles Hospital, Merthyr Tydfil, CF47 9DT Category: Health Practitioners and Establishments Class Code: Accident & Emergency Department Positional Accuracy: Positioned to address or location	A17SE (NW)	692	8	304481 208161
202	Points of Interest - Education and Health Name: Prince Charles Hospital Location: Prince Charles Hospital, Merthyr Tydfil, CF47 9DT Category: Health Practitioners and Establishments Class Code: Accident & Emergency Department Positional Accuracy: Positioned to address or location	A17SE (NW)	692	8	304481 208161
202	Points of Interest - Education and Health Name: Prince Charles Hospital Location: Prince Charles Hospital, Merthyr Tydfil, CF47 9DT Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A17SE (NW)	692	8	304481 208161
202	Points of Interest - Education and Health Name: Prince Charles Hospital Location: Prince Charles Hospital, Merthyr Tydfil, CF47 9DT Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A17SE (NW)	722	8	304465 208186
202	Points of Interest - Education and Health Name: Prince Charles Hospital Location: Prince Charles Hospital, Merthyr Tydfil, CF47 9DT Category: Health Practitioners and Establishments Class Code: Accident & Emergency Department Positional Accuracy: Positioned to address or location	A17SE (NW)	758	8	304438 208211
203	Points of Interest - Manufacturing and Production Name: Tank Location: CF47 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	729	8	304529 208255
203	Points of Interest - Manufacturing and Production Name: Tank Location: CF47 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	733	8	304523 208255
203	Points of Interest - Manufacturing and Production Name: Tank Location: CF47 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	734	8	304530 208262
204	Points of Interest - Public Infrastructure Name: Weir Location: CF47 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A13NE (E)	34	8	305068 207662
204	Points of Interest - Public Infrastructure Name: Weir Location: CF47 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A13NE (E)	37	8	305071 207663

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
205	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	156	8	305110 207817
205	Points of Interest - Recreational and Environmental Name: Playground Location: Cherry Grove, CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A13NE (NE)	159	8	305097 207827
206	Points of Interest - Recreational and Environmental Name: Playground Location: Galon Uchaf Road, CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A14NW (E)	372	8	305382 207815
207	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	376	8	304637 207515
207	Points of Interest - Recreational and Environmental Name: Playground Location: Cedar Way, CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A12SE (W)	377	8	304636 207516
208	Points of Interest - Recreational and Environmental Name: Playground Location: Second Avenue, CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	384	8	305312 207947
208	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	392	8	305321 207948
209	Points of Interest - Recreational and Environmental Name: Play Area Location: CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18SE (N)	428	8	305048 208116
210	Points of Interest - Recreational and Environmental Name: Playground Location: Gwaunfarren Close, CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A14SW (E)	539	8	305566 207540
210	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	542	8	305569 207541
211	Points of Interest - Recreational and Environmental Name: Playground Location: Tyllwyd Street, CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	648	8	305583 207291
211	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	655	8	305591 207292

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
212	Points of Interest - Recreational and Environmental Name: Playground Location: Tramroad Lane, CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A9NW (SE)	651	8	305394 207096
213	Points of Interest - Recreational and Environmental Name: Play Area Location: CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	752	8	304568 208312
213	Points of Interest - Recreational and Environmental Name: Play Area Location: CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	793	8	304511 208322
214	Points of Interest - Recreational and Environmental Name: Play Area Location: CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A12SW (SW)	783	8	304268 207342
215	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8SE (SE)	799	8	305331 206897
215	Points of Interest - Recreational and Environmental Name: Playground Location: High Street, CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	800	8	305326 206894
216	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	809	8	304362 207129
216	Points of Interest - Recreational and Environmental Name: Playground Location: Nr Gwaelodygarth Road, CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A7NE (SW)	809	8	304361 207130
217	Points of Interest - Recreational and Environmental Name: Playground Location: Honeysuckle Close, CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A17SW (NW)	912	8	304140 208025
218	Points of Interest - Recreational and Environmental Name: Playground Location: Nr Haydn Terrace, CF47 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A14NE (E)	946	8	305933 207979
218	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	952	8	305935 207989
219	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A17SW (NW)	956	8	304187 208211

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
220	Ancient Woodland Name: Not Supplied Reference: 12365 Area(m ²): 8854.39 Type: Ancient and Semi-Natural Woodland	A12NE (W)	426	2	304562 207678
221	Ancient Woodland Name: Not Supplied Reference: 21419 Area(m ²): 137845.16 Type: Restored Ancient Woodland Site	A12SE (SW)	614	2	304435 207380

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Caerphilly County Borough Council - Environmental Health Department Merthyr Tydfil County Borough Council - Environmental Health Department Powys County Council - Public Protection Department Natural Resources Wales Rhondda Cynon Taff County Borough Council - Environmental Services	August 2013 February 2013 February 2015 June 2020 October 2017	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annually Annual Rolling Update
Discharge Consents Natural Resources Wales Environment Agency - Welsh Region	April 2021 August 2014	Quarterly Quarterly
Enforcement and Prohibition Notices Environment Agency - Welsh Region	March 2013	
Integrated Pollution Controls Environment Agency - Welsh Region	October 2008	
Integrated Pollution Prevention And Control Natural Resources Wales Environment Agency - Welsh Region	April 2021 January 2021	Quarterly Quarterly
Local Authority Integrated Pollution Prevention And Control Caerphilly County Borough Council - Environmental Health Department Powys County Council - Public Protection Department Rhondda Cynon Taff County Borough Council - Public Health and Protection Division Merthyr Tydfil County Borough Council - Environmental Health Department	February 2013 May 2014 September 2014 September 2016	Variable Variable Variable Variable
Local Authority Pollution Prevention and Controls Powys County Council - Public Protection Department Rhondda Cynon Taff County Borough Council - Public Health and Protection Division Caerphilly County Borough Council - Environmental Health Department Merthyr Tydfil County Borough Council - Environmental Health Department	May 2014 September 2014 September 2014 September 2016	Annual Rolling Update Annual Rolling Update Not Applicable Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Powys County Council - Public Protection Department Caerphilly County Borough Council - Environmental Health Department Rhondda Cynon Taff County Borough Council - Public Health and Protection Division Merthyr Tydfil County Borough Council - Environmental Health Department	May 2014 September 2014 September 2014 September 2016	Variable Variable Variable Variable
Nearest Surface Water Feature Ordnance Survey	January 2021	
Pollution Incidents to Controlled Waters Environment Agency - Welsh Region	December 1998	
Prosecutions Relating to Authorised Processes Environment Agency - Welsh Region Natural Resources Wales	March 2013 March 2013	
Prosecutions Relating to Controlled Waters Environment Agency - Welsh Region Natural Resources Wales	March 2013 March 2013	
Registered Radioactive Substances Natural Resources Wales Environment Agency - Welsh Region	January 2015 June 2016	Annually Annually
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register Natural Resources Wales Environment Agency Wales - South East Area	April 2021 January 2021	Quarterly Quarterly

Agency & Hydrological	Version	Update Cycle
Water Abstractions Environment Agency - Welsh Region Natural Resources Wales	April 2021 April 2021	Quarterly Quarterly
Water Industry Act Referrals Natural Resources Wales Environment Agency - Welsh Region	April 2021 October 2017	Quarterly Quarterly
Groundwater Vulnerability Map Natural Resources Wales	June 2018	As notified
Bedrock Aquifer Designations Natural Resources Wales	January 2018	Annually
Superficial Aquifer Designations Natural Resources Wales	January 2018	Annually
Source Protection Zones Natural Resources Wales	November 2016	Annual Rolling Update
Extreme Flooding from Rivers or Sea without Defences Natural Resources Wales	August 2018	Quarterly
Flooding from Rivers or Sea without Defences Natural Resources Wales	September 2020	Quarterly
Areas Benefiting from Flood Defences Natural Resources Wales	November 2019	Quarterly
Flood Water Storage Areas Natural Resources Wales	August 2019	Quarterly
Flood Defences Natural Resources Wales	November 2019	Quarterly
OS Water Network Lines Ordnance Survey	June 2021	Quarterly
Surface Water 1 in 30 year Flood Extent Natural Resources Wales	October 2013	Annually
Surface Water 1 in 100 year Flood Extent Natural Resources Wales	October 2013	Annually
Surface Water 1 in 1000 year Flood Extent Natural Resources Wales	October 2013	Annually
Surface Water Suitability Natural Resources Wales	October 2013	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Natural Resources Wales	July 2017	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Welsh Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency Wales - South East Area Natural Resources Wales	January 2021 January 2021	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency Wales - South East Area Natural Resources Wales	April 2021 April 2021	Quarterly Quarterly
Local Authority Landfill Coverage Caerphilly County Borough Council - Environmental Health Department Merthyr Tydfil County Borough Council - Environmental Health Department Powys County Council Rhondda Cynon Taff County Borough Council	May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Caerphilly County Borough Council - Environmental Health Department Merthyr Tydfil County Borough Council - Environmental Health Department Powys County Council Rhondda Cynon Taff County Borough Council	May 2000 May 2000 May 2000 May 2000	
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	
Registered Landfill Sites Environment Agency Wales - South East Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency Wales - South East Area	March 2003	
Registered Waste Treatment or Disposal Sites Environment Agency Wales - South East Area	March 2003	
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	
Planning Hazardous Substance Enforcements Brecon Beacons National Park Caerphilly County Borough Council - Planning Department Powys County Council - Planning Department Rhondda Cynon Taff County Borough Council - Planning Department Merthyr Tydfil County Borough Council - Planning Department	August 2008 February 2016 February 2016 February 2016 September 2007	Annual Rolling Update Variable Variable Variable Variable
Planning Hazardous Substance Consents Brecon Beacons National Park Caerphilly County Borough Council - Planning Department Powys County Council - Planning Department Rhondda Cynon Taff County Borough Council - Planning Department Merthyr Tydfil County Borough Council - Planning Department	August 2008 February 2016 February 2016 February 2016 September 2007	Annual Rolling Update Variable Variable Variable Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2021	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	April 2021	Quarterly
Fuel Station Entries Catalist Ltd - Experian	June 2021	Quarterly
Gas Pipelines National Grid	May 2021	Annually
Points of Interest - Commercial Services PointX	June 2021	Quarterly
Points of Interest - Education and Health PointX	June 2021	Quarterly
Points of Interest - Manufacturing and Production PointX	June 2021	Quarterly
Points of Interest - Public Infrastructure PointX	June 2021	Quarterly
Points of Interest - Recreational and Environmental PointX	June 2021	Quarterly
Underground Electrical Cables National Grid	May 2021	Annually

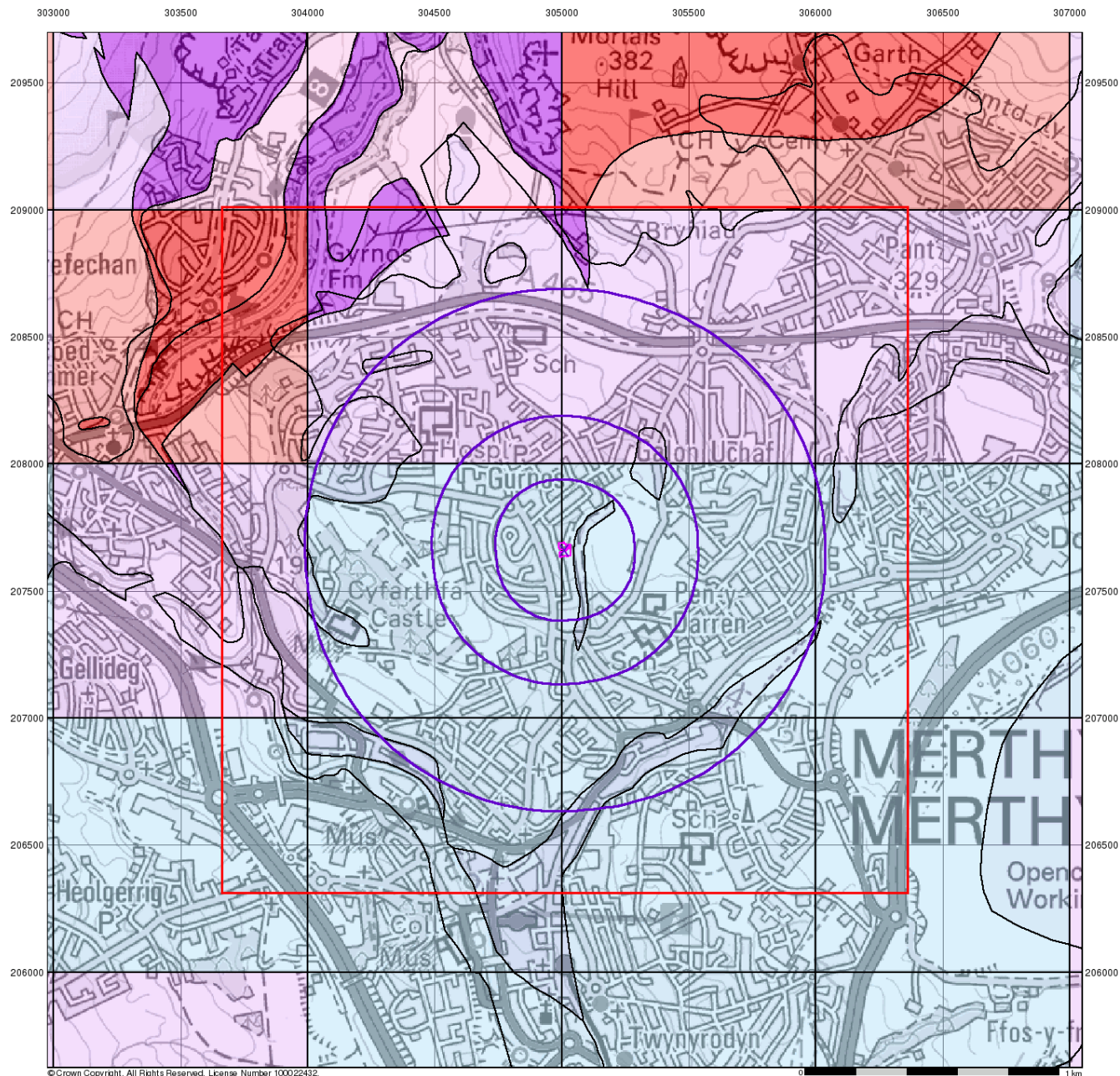
Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural Resources Wales	August 2018	Bi-Annually
Areas of Adopted Green Belt Brecon Beacons National Park Caerphilly County Borough Council Merthyr Tydfil County Borough Council Powys County Council Rhondda Cynon Taff County Borough Council	June 2020 June 2020 June 2020 June 2020 June 2020	Quarterly Quarterly Quarterly Quarterly Quarterly
Areas of Unadopted Green Belt Brecon Beacons National Park Caerphilly County Borough Council Merthyr Tydfil County Borough Council Powys County Council Rhondda Cynon Taff County Borough Council	June 2020 June 2020 June 2020 June 2020 June 2020	Quarterly Quarterly Quarterly Quarterly Quarterly
Areas of Outstanding Natural Beauty Natural Resources Wales	June 2019	Bi-Annually
Environmentally Sensitive Areas The National Assembly for Wales - GI Services (Department of Planning & Countryside)	January 2017	
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Caerphilly County Borough Council Merthyr Tydfil County Borough Council Powys County Council Rhondda Cynon Taff County Borough Council	August 2018 August 2018 August 2018 August 2018	Bi-Annually Bi-Annually Bi-Annually Bi-Annually
Marine Nature Reserves Natural Resources Wales	August 2018	Bi-Annually
National Nature Reserves Natural Resources Wales	June 2019	Bi-Annually
National Parks Natural Resources Wales	August 2018	Annually
Nitrate Vulnerable Zones Natural Resources Wales The National Assembly for Wales - GI Services (Department of Planning & Countryside)	July 2019 October 2005	Bi-Annually
Ramsar Sites Natural Resources Wales	July 2019	Bi-Annually
Sites of Special Scientific Interest Natural Resources Wales	March 2020	Bi-Annually
Special Areas of Conservation Natural Resources Wales	August 2020	Bi-Annually
Special Protection Areas Natural Resources Wales	August 2018	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Natural Resources Wales Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	Merthyr Tydfil County Borough Council - Environmental Health Department Civic Centre, Castle Street, Merthyr Tydfil, Mid Glamorgan, CF47 8AN	Telephone: 01685 725000 Fax: 01685 725024 Website: www.merthyr.gov.uk
4	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
5	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	The Coal Authority - Property Searches 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
7	Stantec UK Ltd Caversham Bridge House, Waterman Place, Reading, RG1 8DN	Telephone: 0118 950 0761 Email: pba.reading@stantec.com Website: www.stantec.com
8	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
9	Merthyr Tydfil County Borough Council Civic Centre, Castle Street, Merthyr Tydfil, Mid Glamorgan, CF47 8AN	Telephone: 01685 725000 Fax: 01685 722146 Website: www.merthyr.gov.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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



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Groundwater Vulnerability

General

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

Agency and Hydrological

Bedrock Aquifers

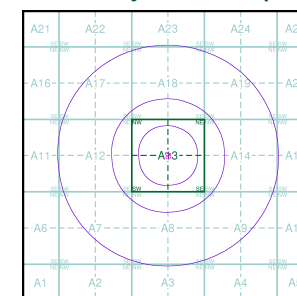
- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

Superficial Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

- Unproductive Aquifer
- Soluble Rock

Site Sensitivity Context Map - Slice A



Order Details

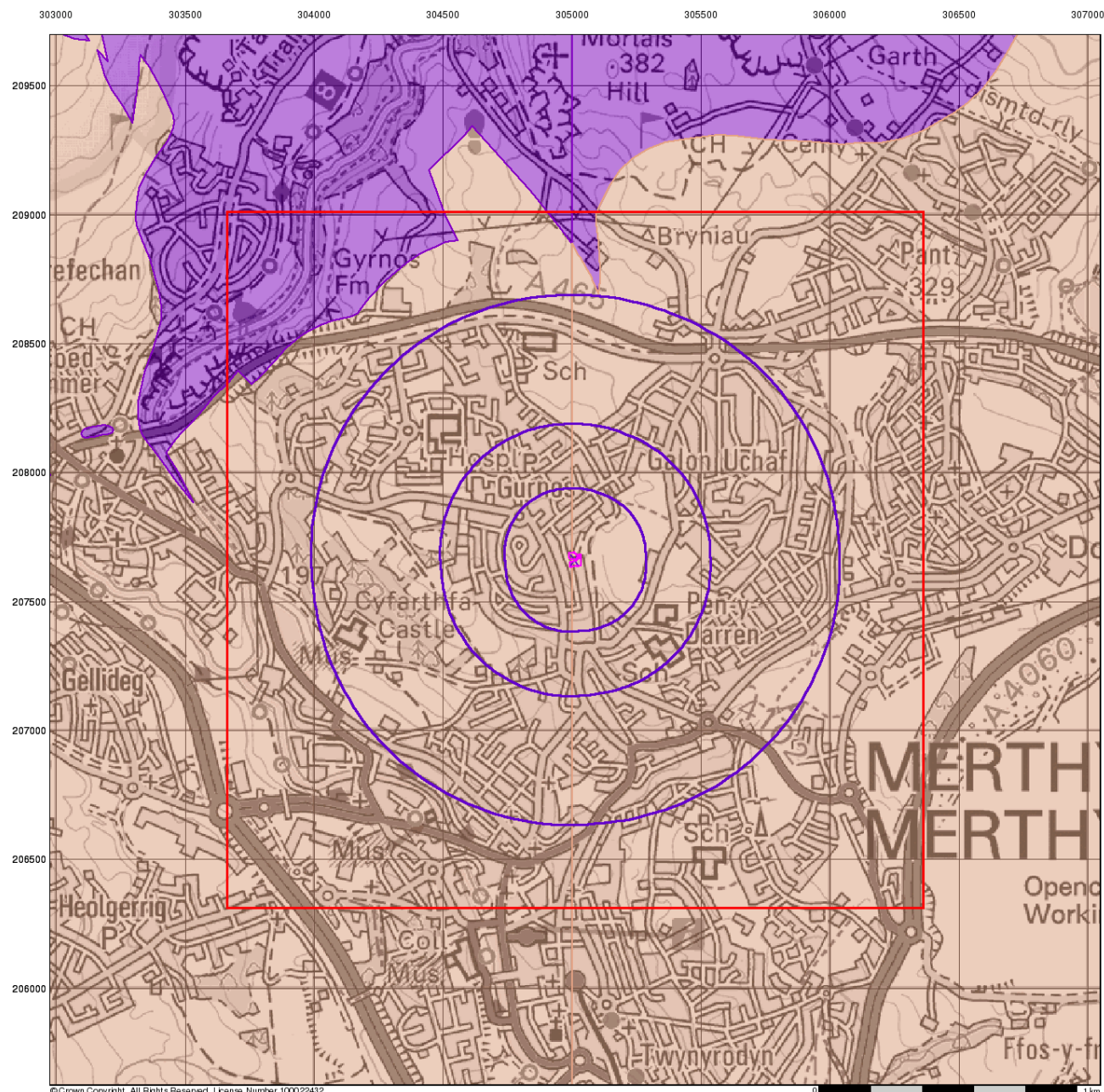
Order Number: 281311811_1_1
 Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
 National Grid Reference: 305010, 207660
 Slice: A
 Site Area (Ha): 0.18
 Search Buffer (m): 1000

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS



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Bedrock Aquifer Designation

General

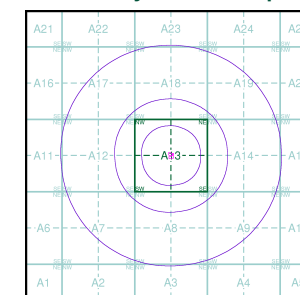
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

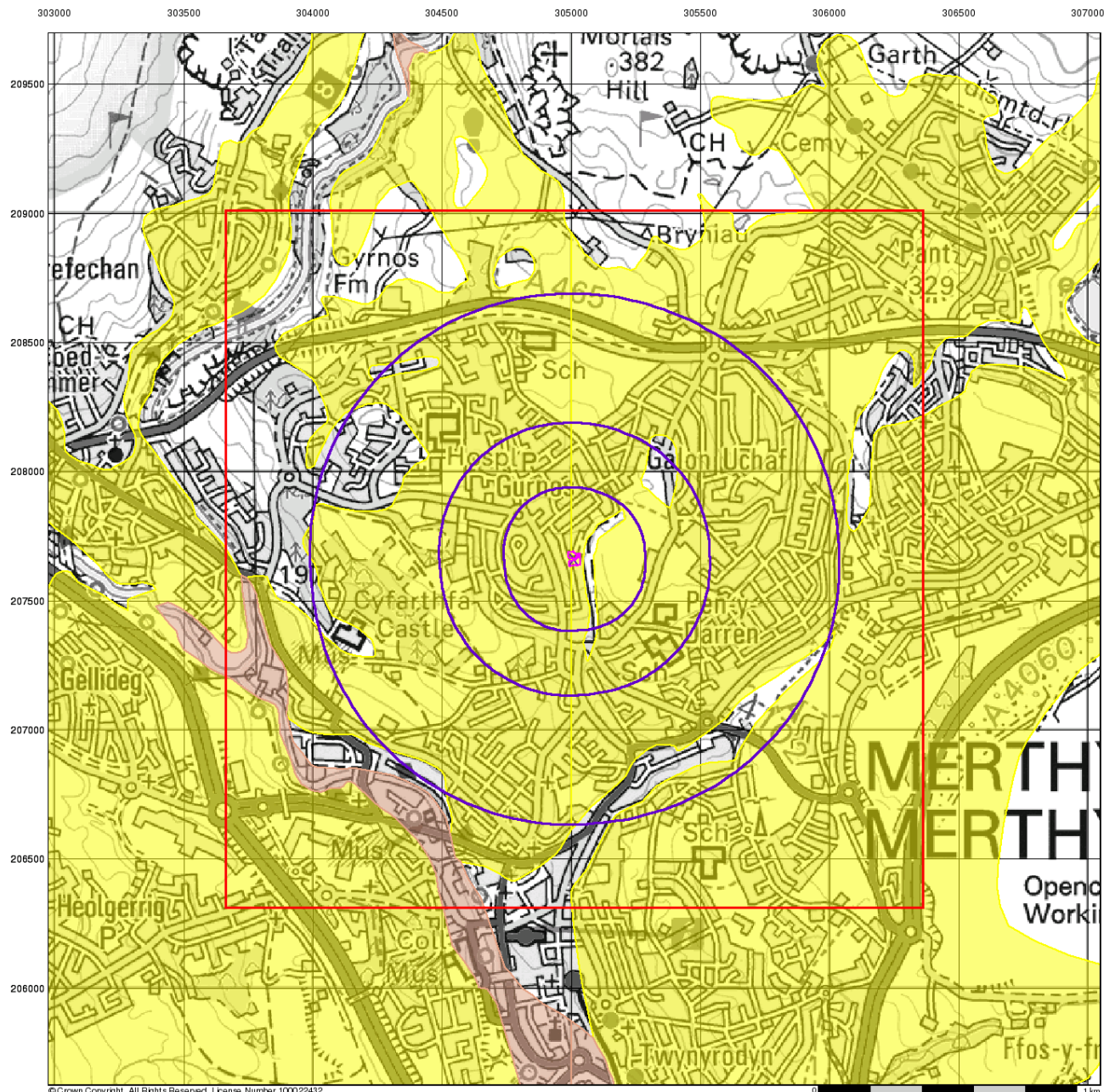
Order Number: 281311811_1_1
 Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
 National Grid Reference: 305010, 207660
 Slice: A
 Site Area (Ha): 0.18
 Search Buffer (m): 1000

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Superficial Aquifer Designation

General

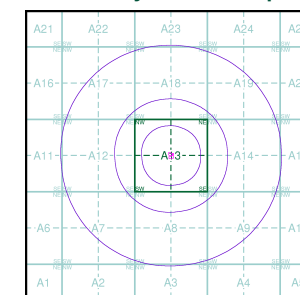
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

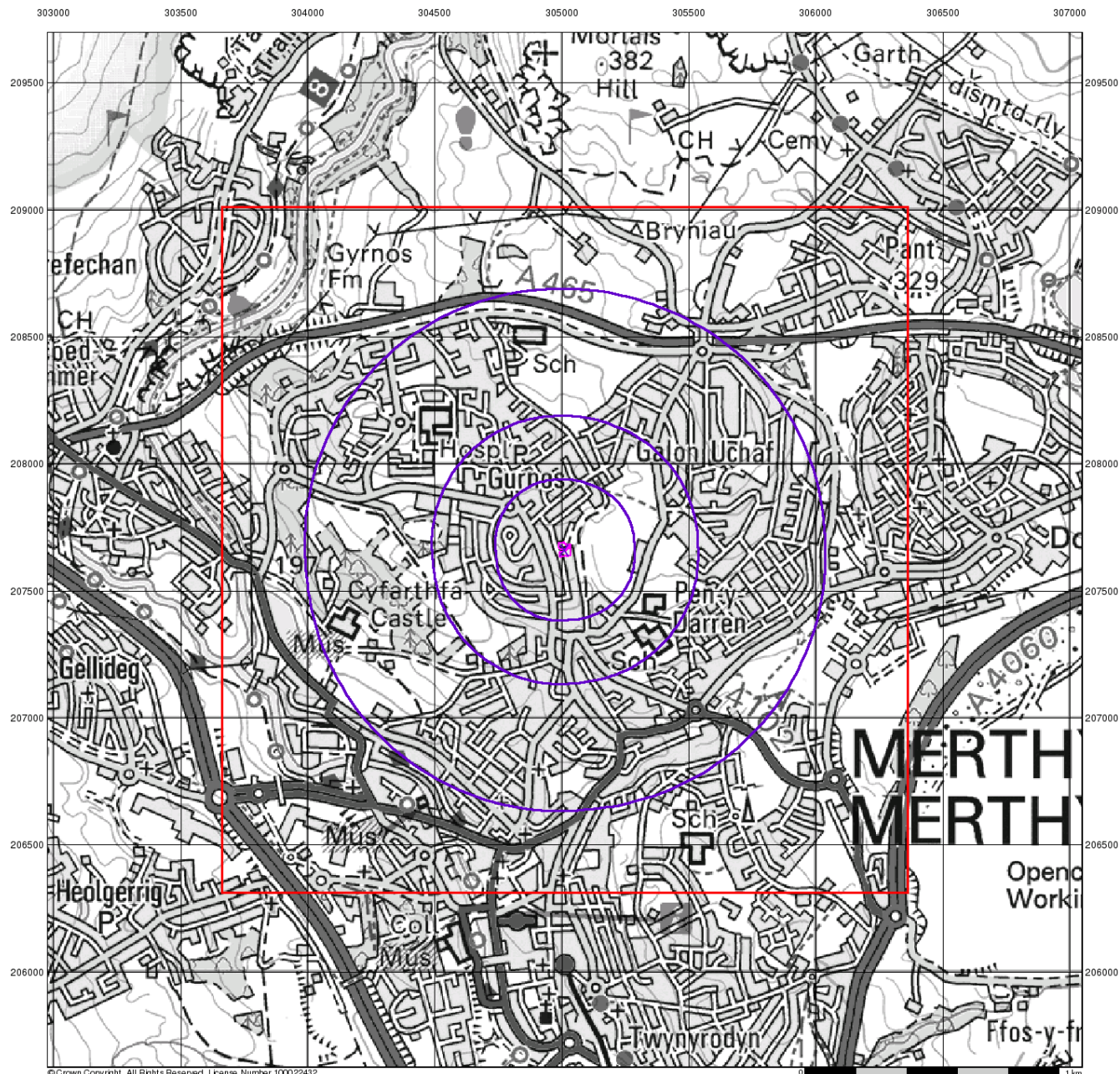
Order Number: 281311811_1_1
 Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
 National Grid Reference: 305010, 207660
 Slice: A
 Site Area (Ha): 0.18
 Search Buffer (m): 1000

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Source Protection Zones

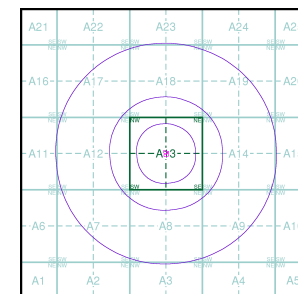
General

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

Agency and Hydrological

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

Site Sensitivity Context Map - Slice A



Order Details

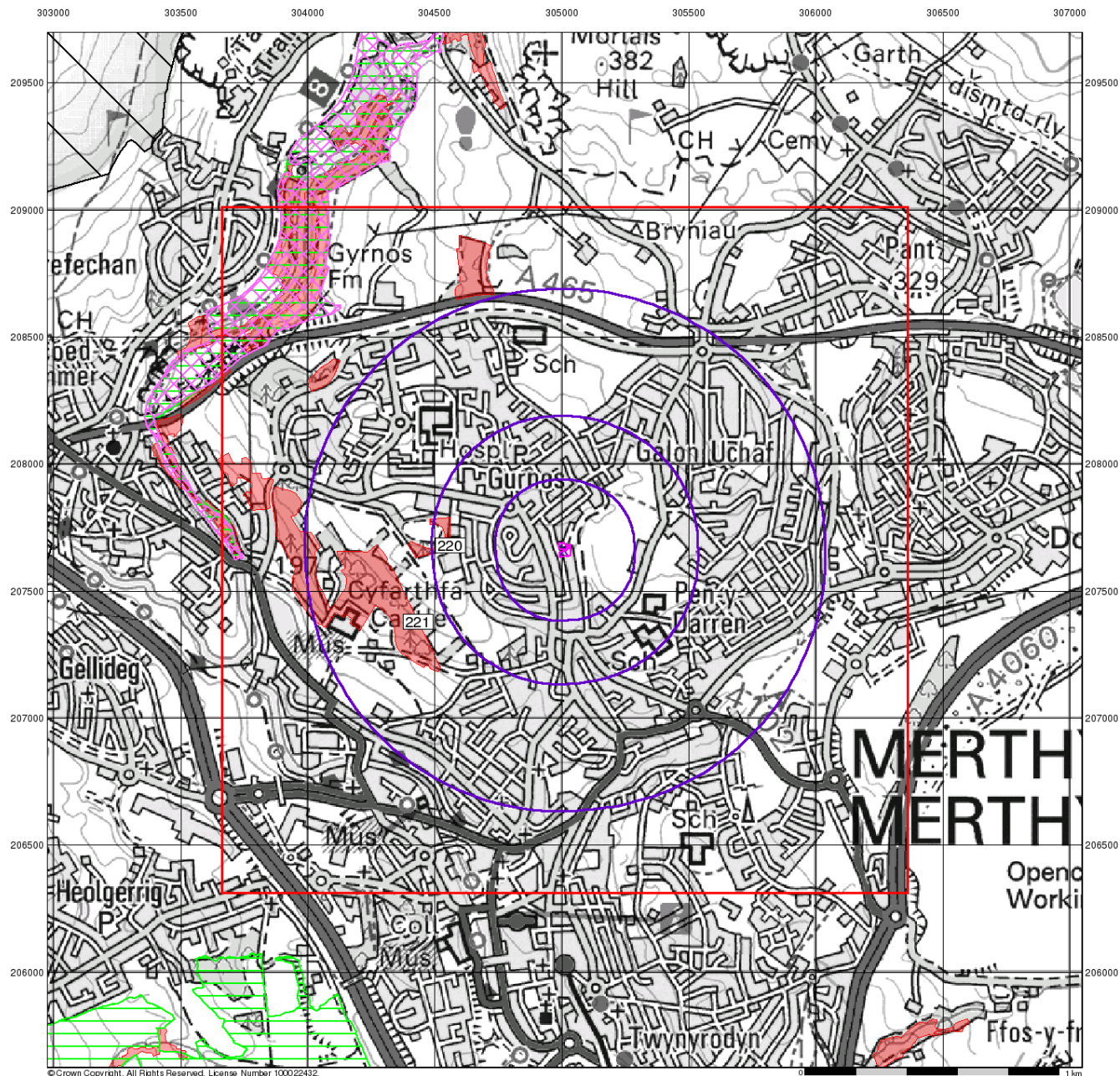
Order Number: 281311811.1.1
 Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
 National Grid Reference: 305010, 207660
 Slice: A
 Site Area (Ha): 0.18
 Search Buffer (m): 1000

Site Details

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Sensitive Land Uses

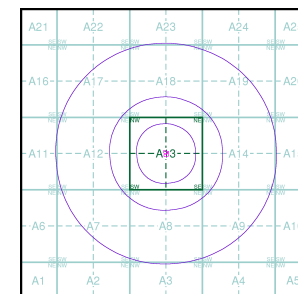
General

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

Sensitive Land Uses

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

Site Sensitivity Context Map - Slice A



Order Details

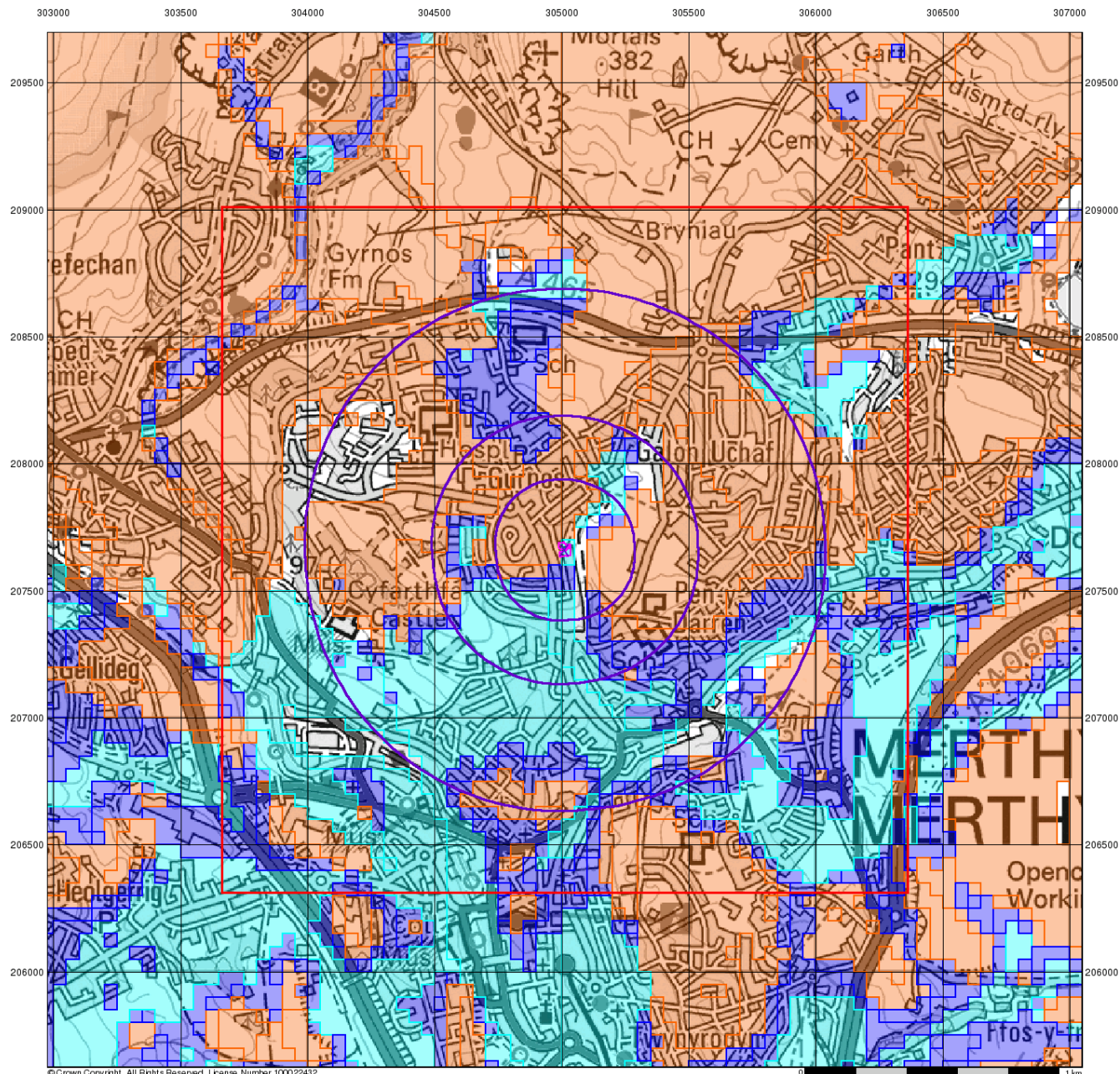
Order Number: 281311811_1_1
 Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
 National Grid Reference: 305010, 207660
 Slice: A
 Site Area (Ha): 0.18
 Search Buffer (m): 1000

Site Details

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BGS Flood GFS Data

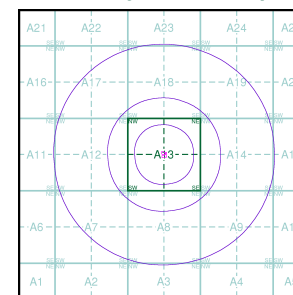
General

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

Agency and Hydrological (Flood)

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

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 281311811.1.1
 Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
 National Grid Reference: 305010, 207660
 Slice: A
 Site Area (Ha): 0.18
 Search Buffer (m): 1000

Site Details

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General

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

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral
- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

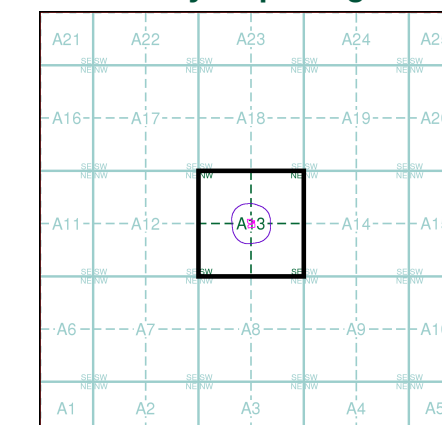
Hazardous Substances

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

Geological

- BGS Recorded Mineral Site

Site Sensitivity Map - Segment A13

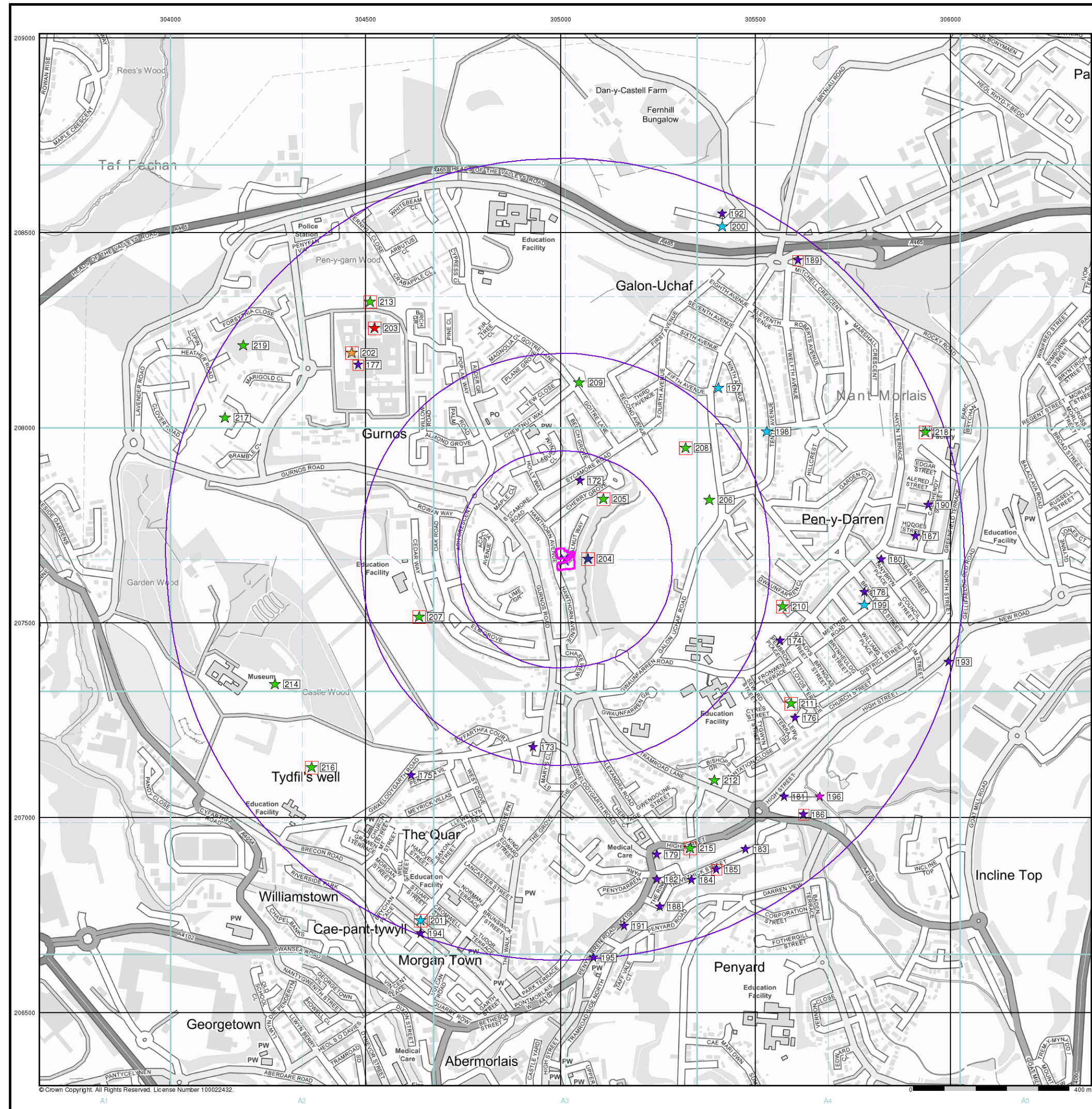


Order Details

Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Plot Buffer (m): 100

Site Details

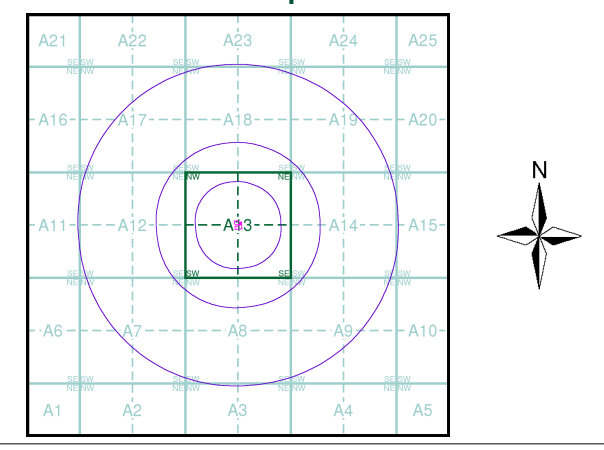
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- General**
 - Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Slice
 - Map ID
- Industrial Land Use**
 - Contemporary Trade Directory Entry
 - Fuel Station Entry
 - Gas Pipeline
 - Points of Interest - Commercial Services
 - Points of Interest - Education and Health
 - Points of Interest - Manufacturing and Production
 - Points of Interest - Public Infrastructure
 - Points of Interest - Recreational and Environmental
 - Underground Electrical Cables

Industrial Land Use Map - Slice A



Order Details

Order Number:

281311811_1_1

Customer Ref:

16811 - Walnut Way, Merthyr Tydfil

National Grid Reference:

305010, 207660

Slice:

A

Site Area (Ha):

0.18

Search Buffer (m):

1000

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS



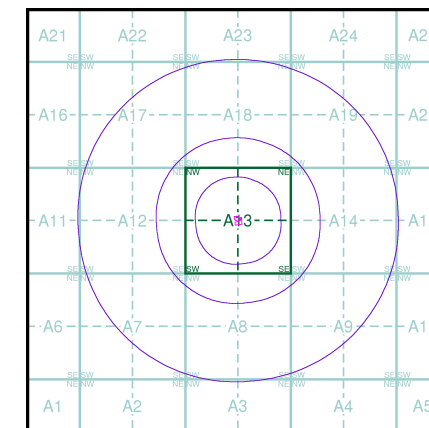
General

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

Agency and Hydrological (Flood)

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

Flood Map - Slice A

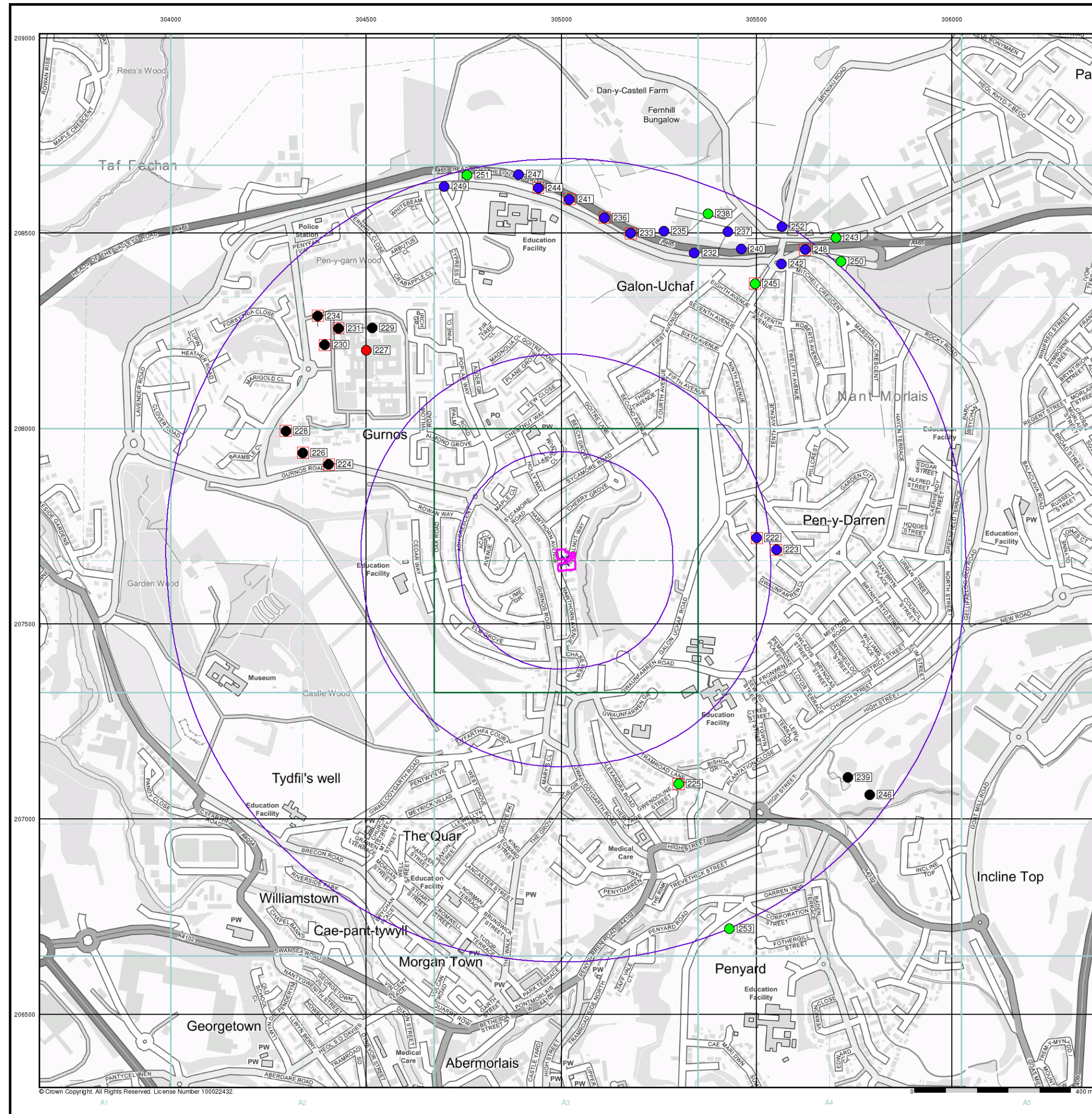


Order Details

Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 1000

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS



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General

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

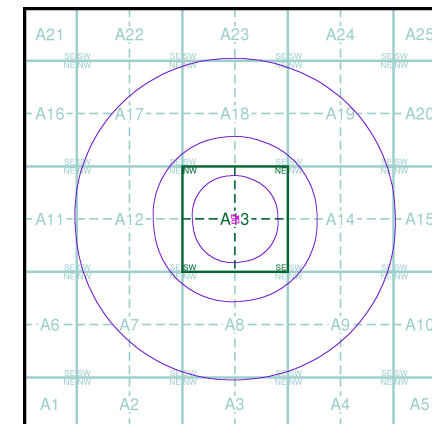
Agency and Hydrological (Boreholes)

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

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

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

Borehole Map - Slice A



Order Details

Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 1000

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS



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Fax: 0844 844 9951
Web: www.envirocheck.co.uk

General

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

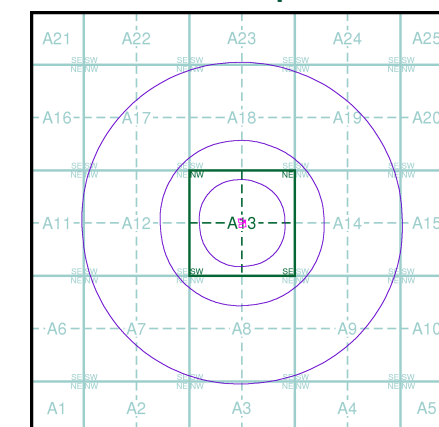
OS Water Network Data

- | | |
|--|---|
|  Canal |  Drain |
|  Reservoir |  Other |
|  Foreshore |  Lake |
|  Marsh |  Transfer |
|  Tidal River |  Lock Or Flight Of Locks |
|  Inland River |  Sea |

Contours (height in meters)

- Standard Contour   Mean Low Water
- Master Contour   Mean High Water
- Spot Height  167.3

OS Water Network Map - Slice A

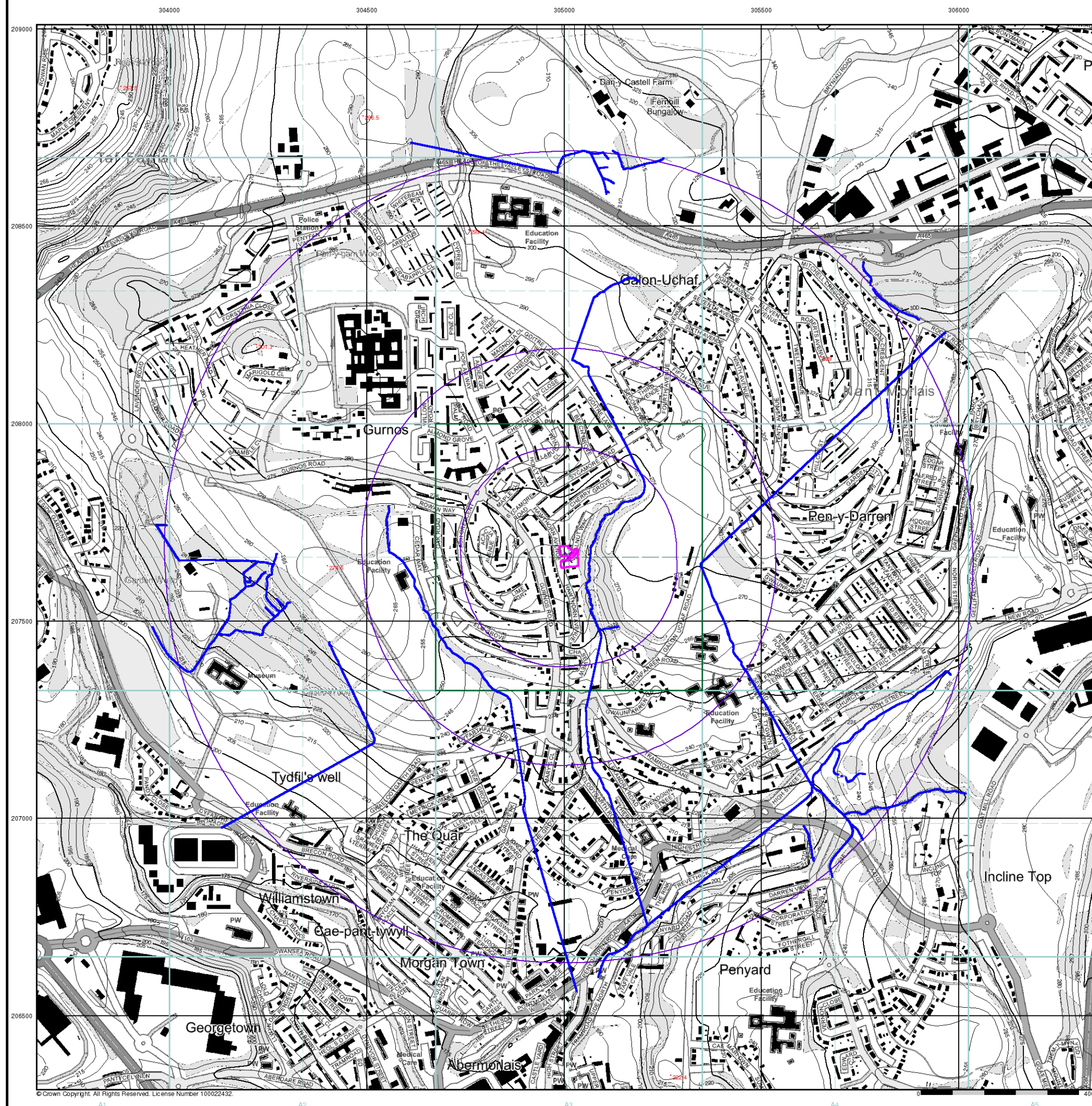


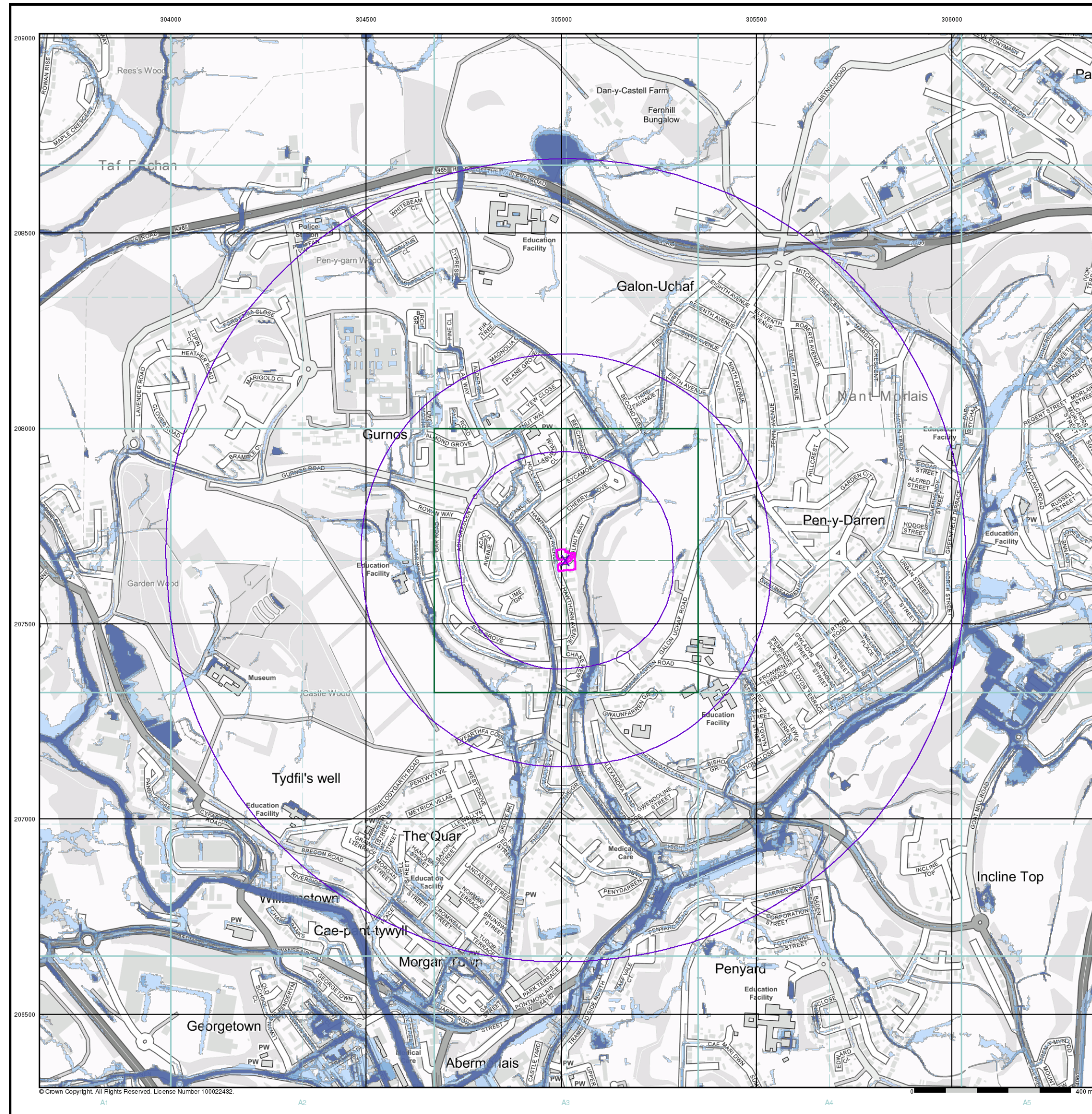
Order Details

Order Number: 281311811_1_1
 Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
 National Grid Reference: 305010, 207660
 Slice: A
 Site Area (Ha): 0.18
 Search Buffer (m): 1000

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS





General

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

Risk of Flooding from Surface Water

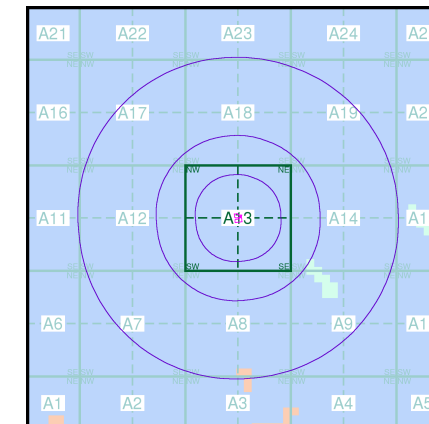
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

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

E/NRW Suitability Map - Slice A

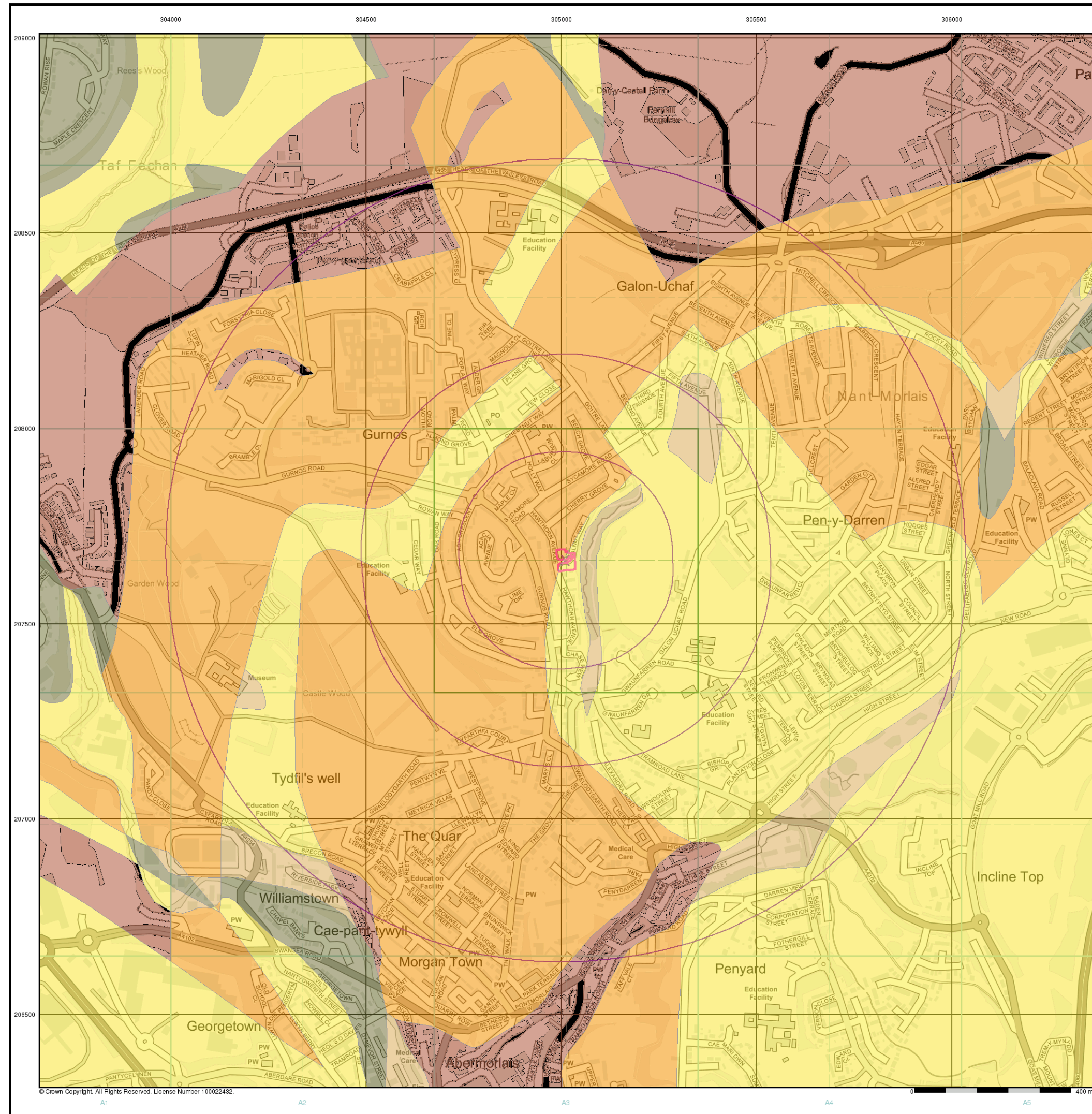


Order Details

Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 1000

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS

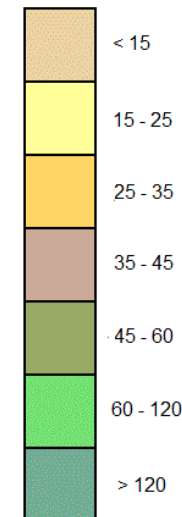


General

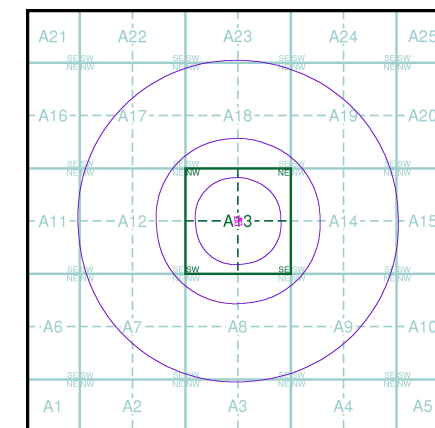
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice A

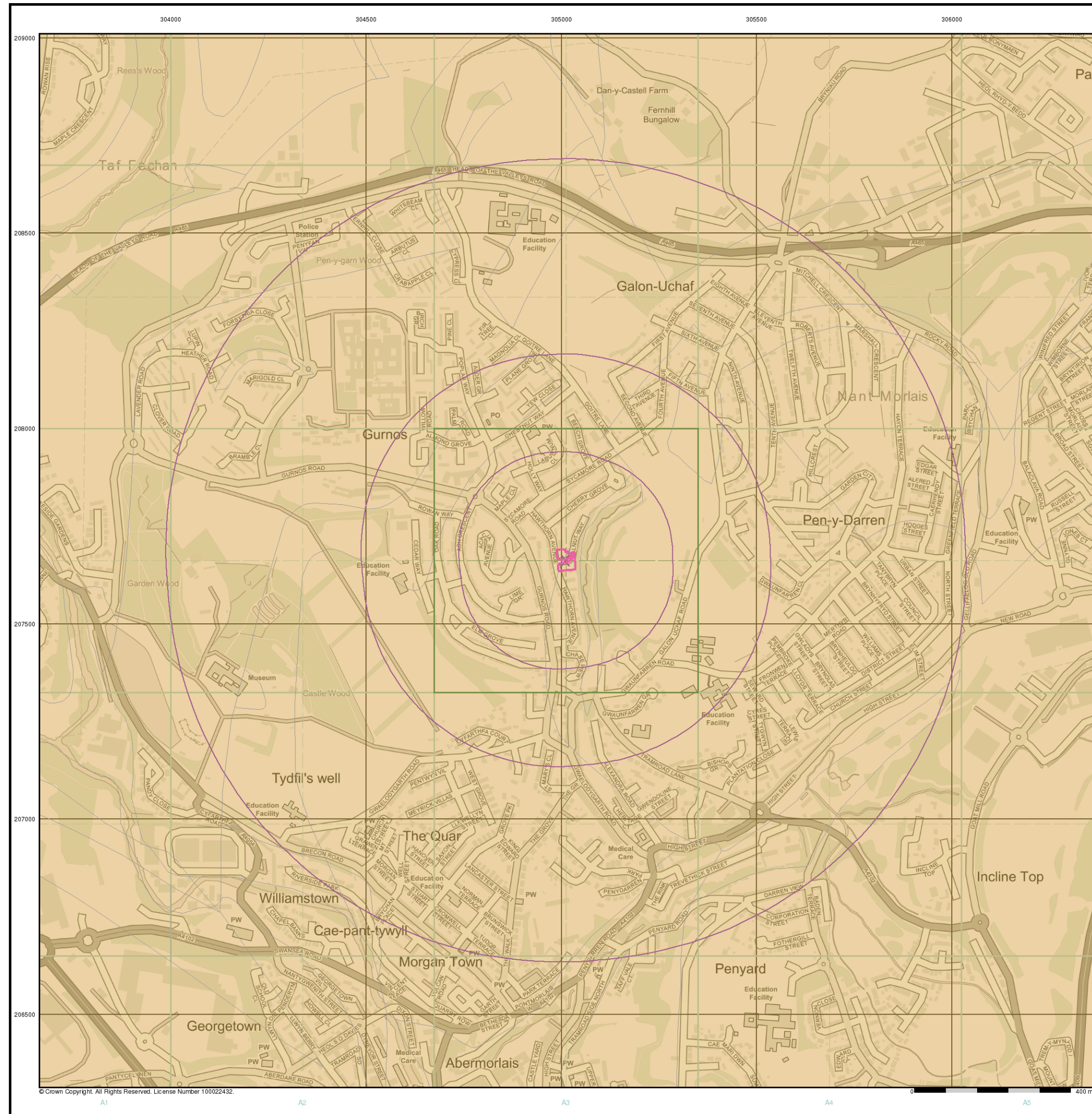


Order Details

Order Details: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 1000

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS



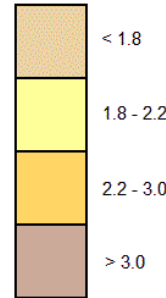
Geotechnical & Geoenvironmental Specialists

General

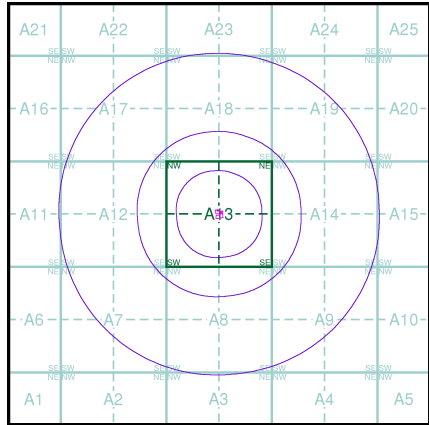
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A



Order Details

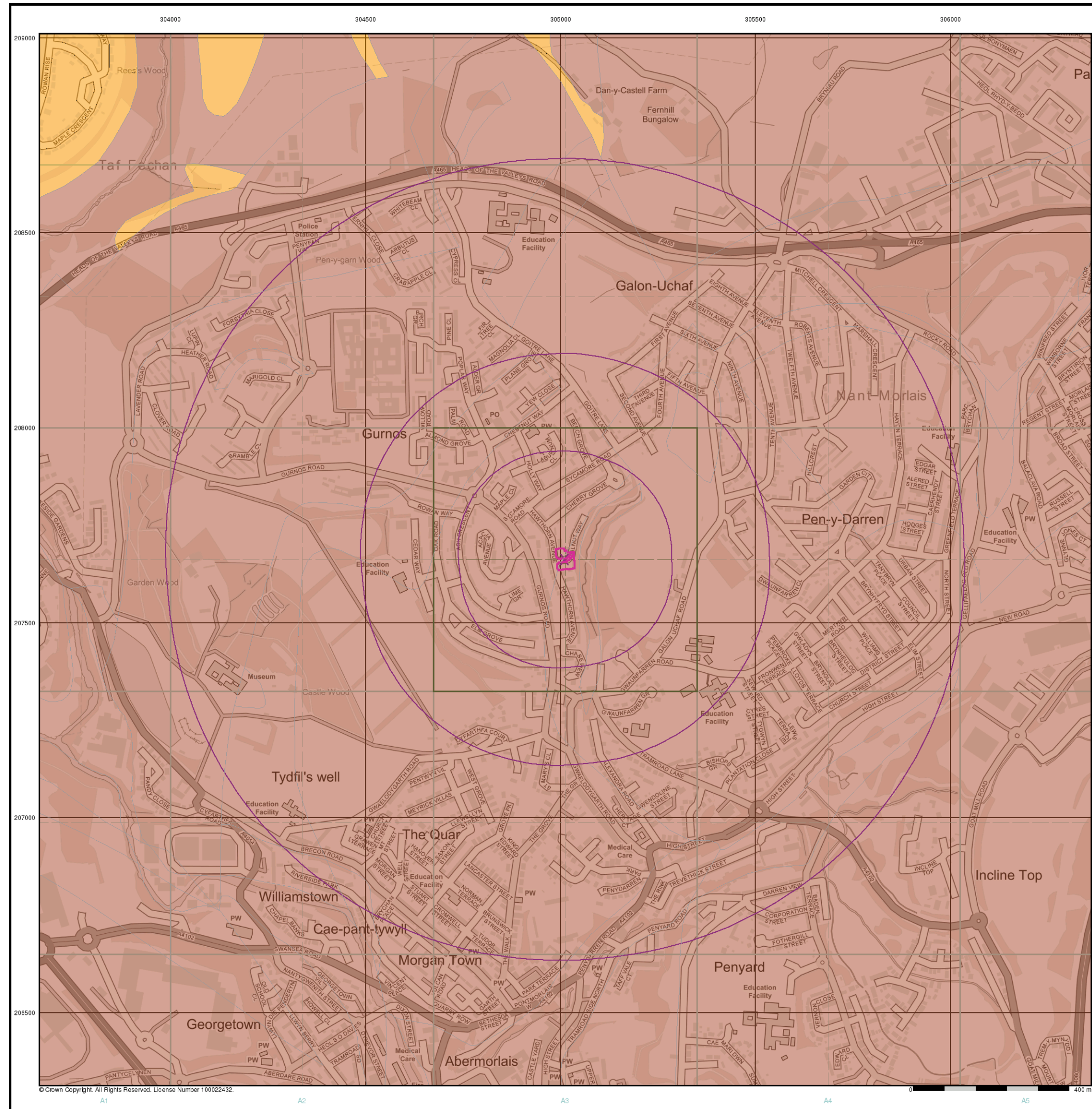
Order Details: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 1000

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS



Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

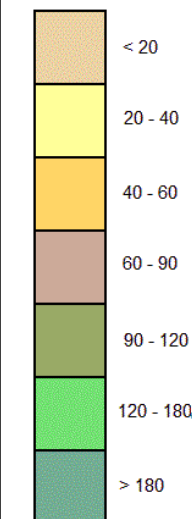


General

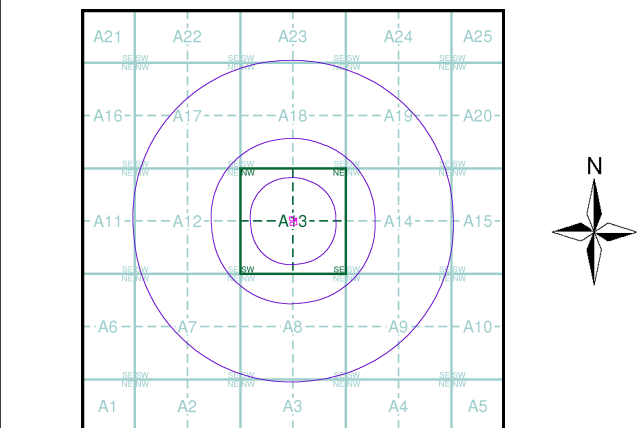
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice A

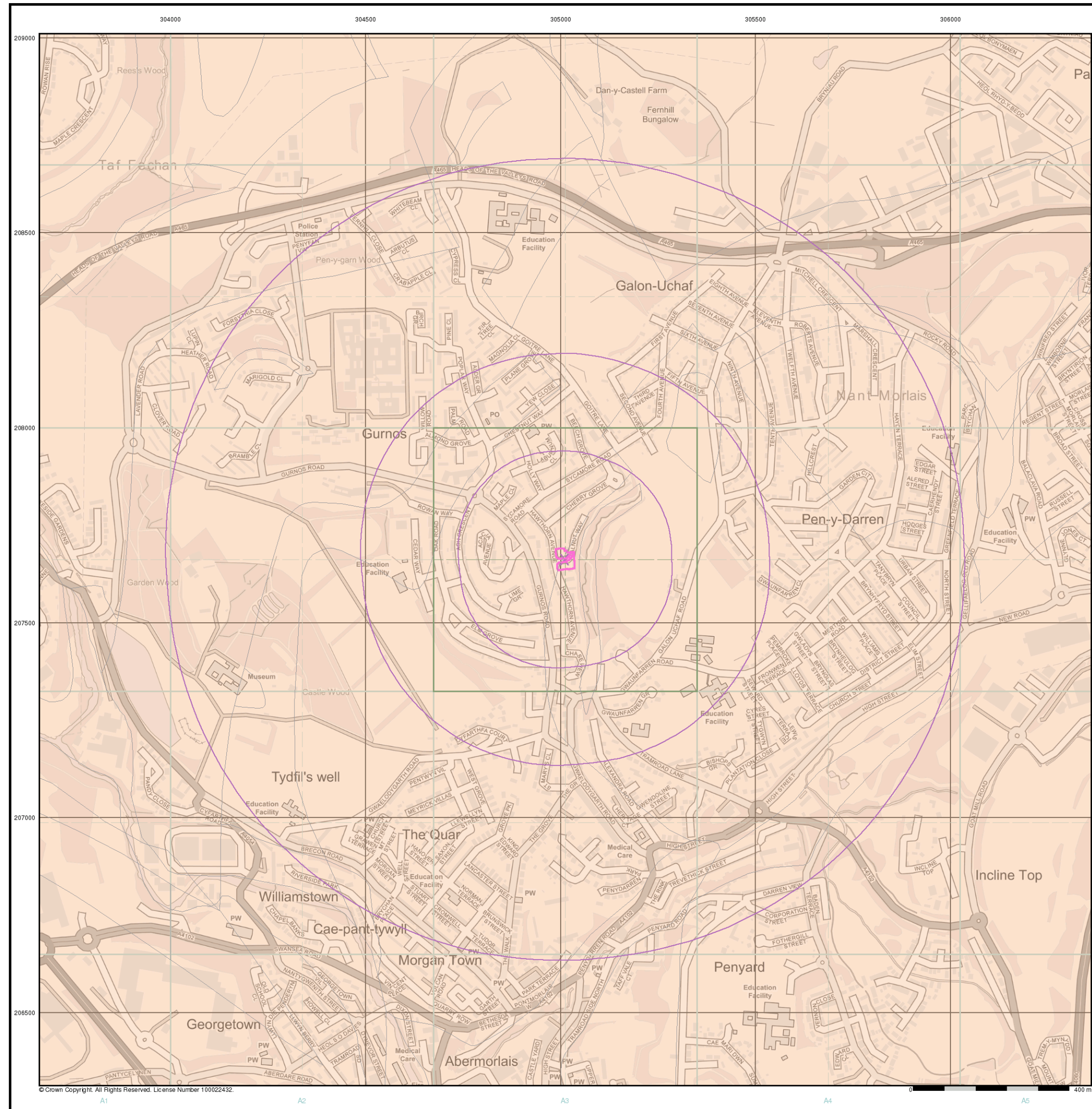


Order Details

Order Details: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 1000

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS

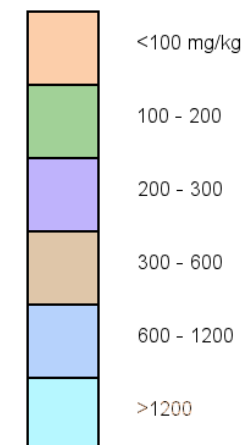


General

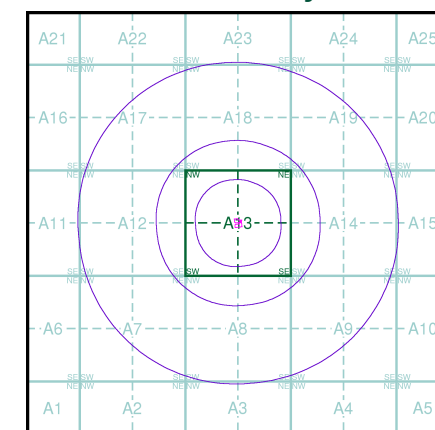
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A

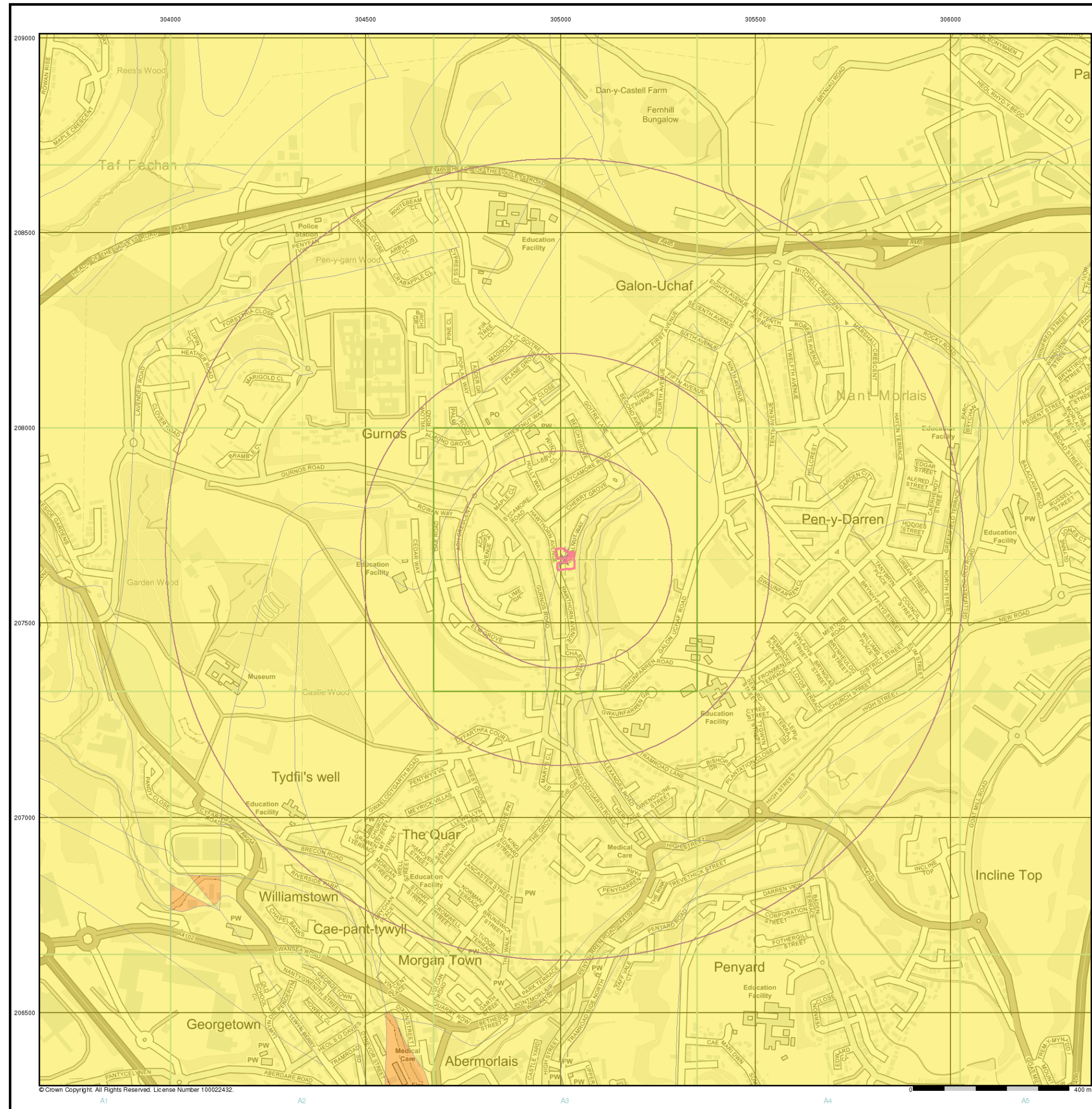


Order Details

Order Details: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 1000

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS



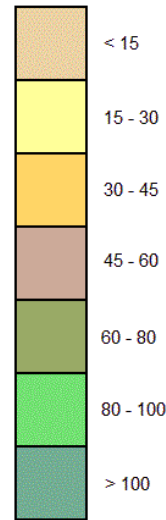
Geotechnical & Geoenvironmental Specialists

General

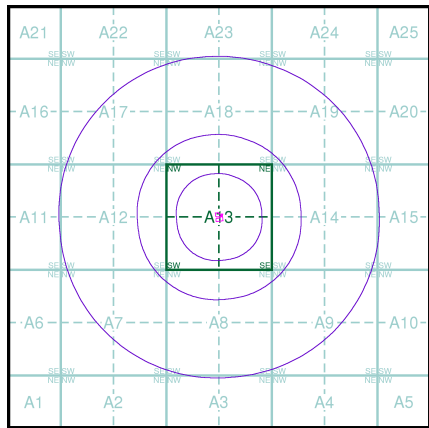
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A



Order Details

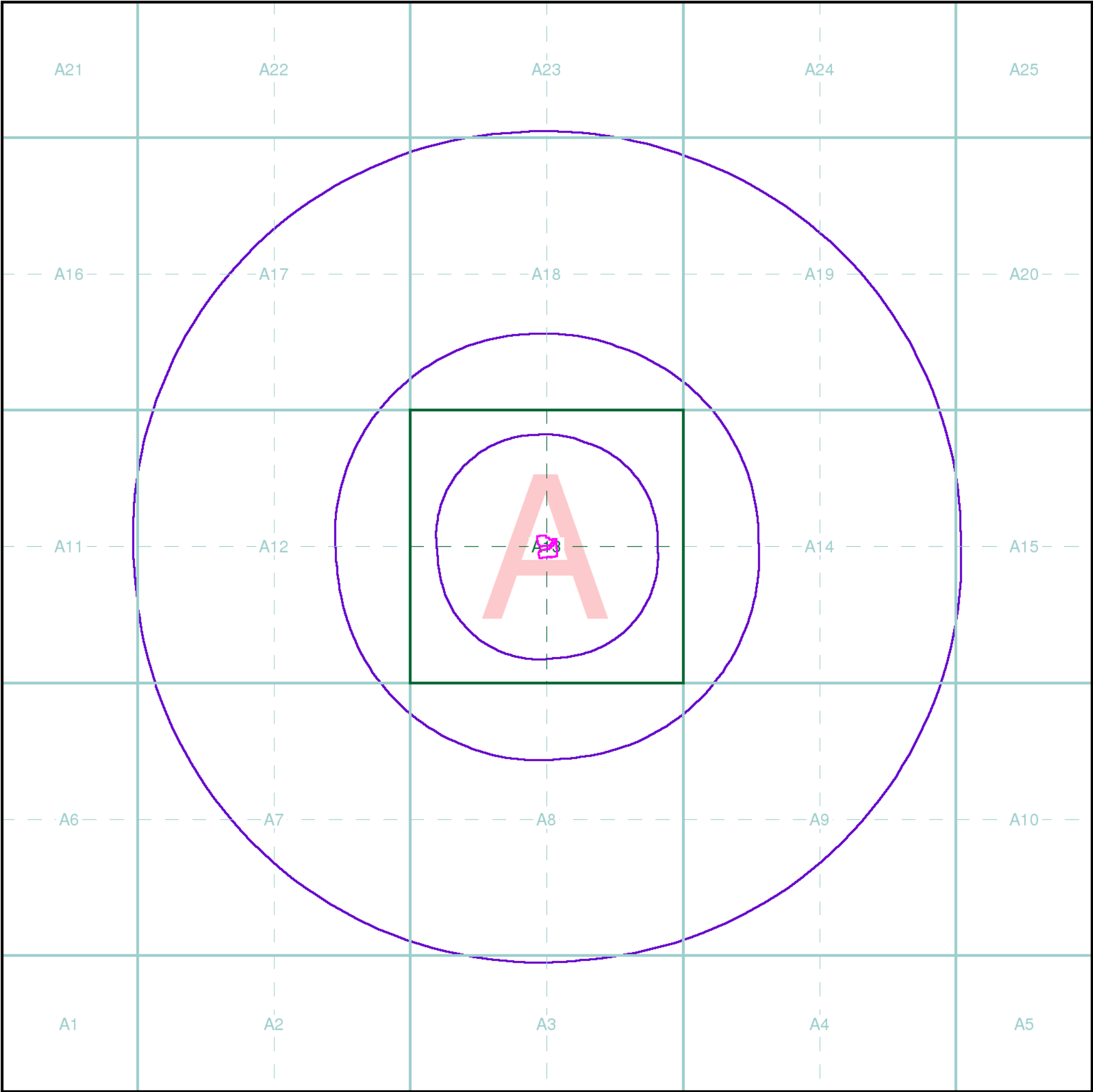
Order Details: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Slice: A
Site Area (Ha): 0.18
Search Buffer (m): 1000

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS



Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Geotechnical & Geoenvironmental Specialists

Index Map

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

Slice

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

Segment

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

Quadrant

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

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

Client Details

Mr A Beattie, Terra Firma (Wales) Ltd, 5 Deryn Court, Wharfdale Road, Pentwyn, Cardiff, CF23 7HB

Order Details

Order Number: 281311811_1_1
Customer Ref: 16811 - Walnut Way, Merthyr Tydfil
National Grid Reference: 305010, 207660
Site Area (Ha): 0.18
Search Buffer (m): 1000

Site Details

Walnut Way, MERTHYR TYDFIL, CF47 9RS

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



Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

ANNEX B
Coal Authority Report



The Coal
Authority

CON29M

coal mining report

WALNUT WAY, MERTHYR TYDFIL, CF47 9RS, VALE OF GLAMORGAN



Known or potential coal mining risks

Future underground coal mining

Page 3



Further action

No further reports from the Coal Authority are required. Further information on any next steps can be found in our Professional opinion.

For more information on our reports please visit
www.groundstability.com



Professional opinion

According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. It is unlikely that these features will impact on the stability of the enquiry boundary.

Your reference: **281311811_2**
Our reference: **51002541636001**
Date: **1 July 2021**

Client name:
NLIS Hub

If you require any further assistance please
contact our experts on:
0345 762 6848
groundstability@coal.gov.uk



The Law
Society

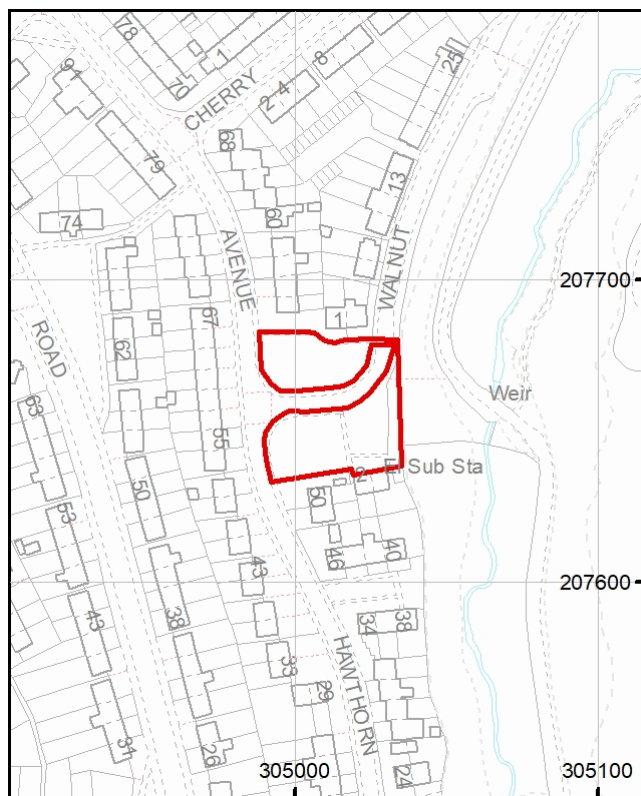
Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is
on the coalfield



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



Accessibility

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

Detailed findings

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

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1 Past underground coal mining

The property is not within a surface area that could be affected by any past recorded underground coal mining.

2 Present underground coal mining

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

3 Future underground coal mining

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

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

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

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

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

4 Mine entries

There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

5 Coal mining geology

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

6 Past opencast coal mining

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

7 Present opencast coal mining

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

8 Future opencast coal mining

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

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

9 Coal mining subsidence

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

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

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

10 Mine gas

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

11 Hazards related to coal mining

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

12 Withdrawal of support

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

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

13 Working facilities order

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

14 Payments to owners of former copyhold land

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

Statutory cover



Coal mining subsidence

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

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

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

www.gov.uk/government/publications/coal-mining-subsidence-damage-notice-form



Coal mining hazards

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

Glossary



Key terms

adit - horizontal or sloped entrance to a mine

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

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

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

coal seams - bed of coal of varying thickness

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

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

mine entries - collective name for shafts and adits

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

shaft - vertical entry into a mine

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

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

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

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

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

ANNEX C
Risk Assessment Definitions

The contaminated land regime is set out in Part 2A of the Environmental Protection Act (EPA) 1990 and was introduced on the 1st April 2000 in England and 1st July 2001 in Wales. A similar regime was introduced in Scotland on 14th July 2000.

Part 2A was introduced to achieve three overarching objectives:

- (a) To identify and remove unacceptable risks to human health and the environment.
- (b) To seek to ensure that contaminated land is made suitable for its current use.
- (c) To ensure that the burdens faced by individuals, companies and society as a whole are proportionate, manageable and compatible with the principles of sustainable development.

Under Part 2A the statutory definition of 'contaminated land' is:

"any land which appears to the local authority in whose area it is situated, to be in such a condition, by reason of substances in, on, or under the land, that:

- (a) Significant harm is being caused or there is a significant possibility of such harm being caused; or
- (b) Pollution of controlled waters is being, or is likely to be, caused."

Under Part 2A, for land to be classified as 'Contaminated Land' there must be one or more contaminant, pathway, receptor linkages, known as the '**Pollutant Linkage**'. A pollutant linkage requires three essential elements:

- (a) A **CONTAMINANT** (SOURCE) – a substance that is in, on or under the land and has the potential to cause harm or to cause pollution of controlled waters.
- (b) A **RECEPTOR** – something which could be adversely affected by a contaminant.
- (c) A **PATHWAY** – a route by which a receptor is or might be exposed to or affected by a contaminant.

The term 'Risk' is widely used in different contexts and situations, but a prescriptive definition is given by the Guidelines for Environmental Risk Assessment and Management (DEFRA *et al*, 2000):

'Risk is a combination of the probability, or frequency, of occurrence of a defined hazard and the magnitude of the consequences of the occurrence'.

Model Procedures for the Management of Land Contamination – Contamination Land Report 11 (2004) defines a 'Hazard' as

'a property or situation that in particular circumstances could lead to harm'.

A framework for qualitative risk assessment is provided in CIRIA publication C552 Contaminated Land Risk Assessment – A Guide to Good Practice (2001). The method requires an assessment of the magnitude of the probability of the risk occurring and the magnitude of the potential consequence. Classifications of consequences and probability, levels and descriptions of risk have been devised from the above publication and are defined in the following sections.

Classification of Consequence

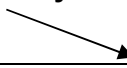
Table A Classification of Consequence	
Classification	Definition
Severe	• Short term (acute) risk to human health likely to result in significant harm • Short term risk to controlled waters • Catastrophic damage to buildings/structures • Short term risk to an ecosystem or organism within the particular ecosystem
Medium	• Chronic damage to human health (long term risk) • Pollution of a sensitive water resource • A significant change in an ecosystem or organism within the ecosystem
Mild	• Pollution of non-sensitive water resources • Significant damage to buildings/structures • Damage to sensitive buildings/structure/services or the environment
Negligible	• Harm (not necessarily significant) which may result in financial loss • Non-permanent health effects to humans (easily prevented by PPE for example) • Easily repairable effects of structural (building) damage

Classification of Probability

Table B Classification of Probability	
Classification	Definition
High Likelihood	• There is a complete pollution linkage and an event appears very likely to occur in the short term and is inevitable in the long term. • Evidence of harm to the receptor
Likely	• There is a complete pollution linkage which means that it is probable that an event will occur • The event is not inevitable but possible in short term and likely in the long term
Low Likelihood	• There is a complete pollution linkage and circumstances are possible under which an event could occur • It is not certain that an event will occur in the long term, and it is less likely to occur in the short term
Unlikely	• There is a complete pollution linkage but circumstances are such that it is improbable that an event would occur even in the long term

Risk Assessment Matrix

By comparing the consequences of a risk and the probability of the risk of a pollution linkage, the likely risk category can be determined as shown in **Table C** below.

Table C Risk Assessment Matrix					
Increasing acceptability 		Consequence			
		Severe	Medium	Mild	Negligible
Probability	High Likelihood	High risk	High risk	Medium risk	Low risk
	Likely	High risk	Medium risk	Low risk	Near zero risk
	Low Likelihood	Medium risk	Low risk	Low risk	Near zero risk
	Unlikely	Low risk	Near zero risk	Near zero risk	Near zero risk

Description of Risks and Likely Actions

High Risk

There is a high probability that severe harm could arise to a receptor, or there is evidence that a receptor is currently being severely harmed. The risk if realised is likely to result in liability, and urgent investigation or remediation will be required.

Medium Risk

It is probable that harm will arise to a receptor. However, it is relatively unlikely that such harm would be severe, or if harm does occur the harm is likely to be relatively mild. Investigation will be required to determine the liability, and some remedial works may be required in the long term.

Low Risk

It is possible that harm may arise to a receptor, but it is likely that the harm would be mild.

Near Zero Risk

There is a very low risk of harm to the receptor. In the event of harm being realised the harm is not likely to be severe.

**ANNEX D
Trial Pit Logs**

Trial Pit Log

Trial Pit No:
TP01
Sheet 1 of 1

Project Name: Walnut Way

Project No:
16811

Co-ords: -
Level:

Date:
12/11/2021

Location: Merthyr Tydfil

Dimensions:

1.50

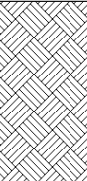
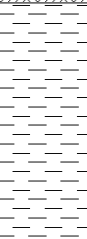
Depth
1.40

0.60

Scale:
1:25

Logged:
ES

Client: MV Homes

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.60			MADE GROUND. Brown slightly sandy slightly gravelly clayey silt with rare brick fragments (<30mm x 30mm x 30mm). sand is fine to coarse. Gravel is angular and subangular fine to coarse of mixed lithologies.	
				1.40			Stiff orangish brown slightly sandy CLAY. Sand is fine to coarse.	1
							End of Pit at 1.400m	2
								3
								4
								5

Stability: Stable

Remarks:

ANNEX E
Soakaway Results

SOAKAWAY TEST



Site Name: Walnut Way
Project Number: 16811
Date: 12/11/2021
Engineer: Elliot

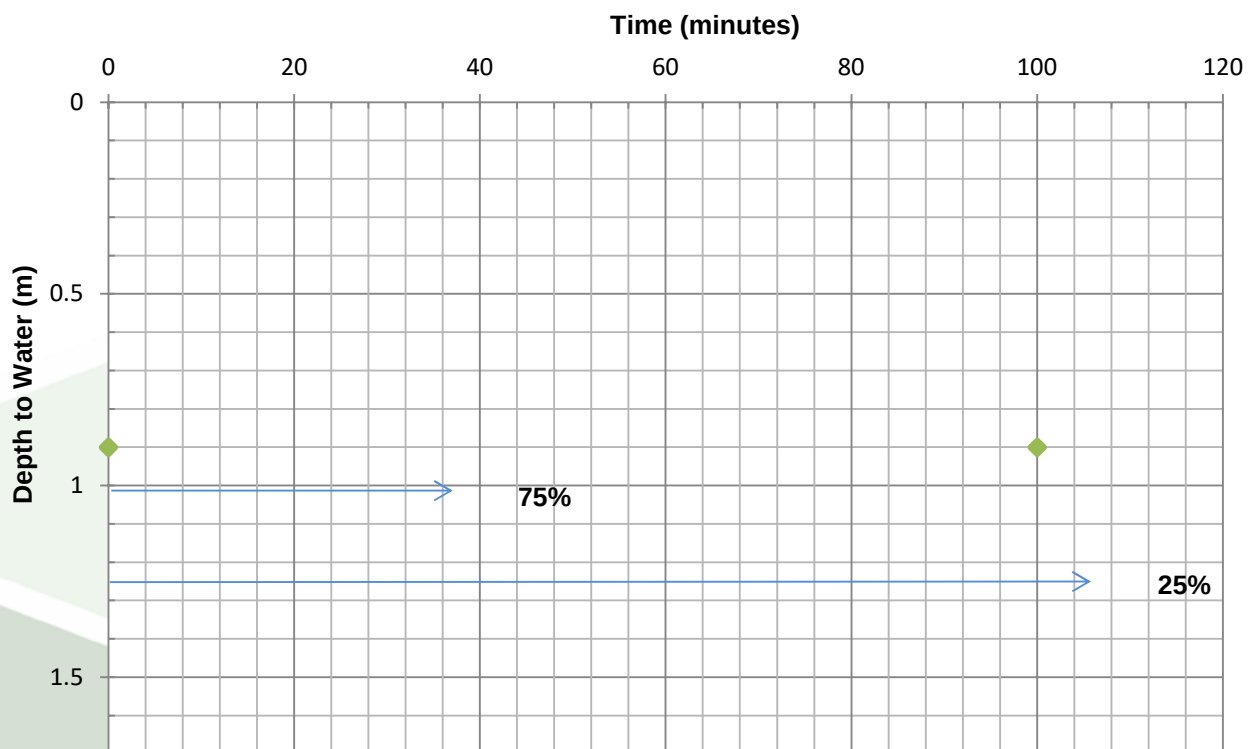
TrialPit: TP01

TEST 1

Length	2.00 m
Width	0.60 m
Depth	1.40 m
Fill Level	0.90

V_{p75-25}	0.071 m ³
a_{p50}	0.754 m ²
t_{p75-25}	0 minutes

Soil Infiltration Rate, f insufficient flow to calculate infiltration rate



REMARKS:

Test carried out in general accordance with BRE DIGEST 365 (2016)

**ANNEX F
Borehole Logs**

Borehole Log

Borehole No.

WS01

Sheet 1 of 1

Project Name:	Walnut Way	Project No:	16811	Co-ords:		Hole Type	WS
Location:	Merthyr Tydfil	Level:		Scale	1:50	Logged By	ES
Client:	MV Homes	Dates:	12/11/2021 - 12/11/2021				

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
	0.20 - 0.40	ES						MADE GROUND. Brown slightly sandy slightly gravelly clayey silt. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of mixed lithologies.	
	0.40 - 0.60	ES							
	0.80 - 1.00	D		0.60				Firm becoming stiff orangish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular and subangular fine and medium of mudstone.	1
	1.00	SPT	N=8 (1,1/1,2,2,3)						
	2.00	SPT	N=42 (1,1/4,10,12,16)	2.30					2
	2.60	SPT	50 (25 for 90mm/50 for 80mm)	2.60				Very stiff grey gravelly CLAY. Gravel is angular and subangular fine and medium of possible mudstone.	
								End of Borehole at 2.600m	3
									4
									5
									6
									7
									8
									9
									10

Remarks:

Borehole Log

Borehole No.

WS02

Sheet 1 of 1

Project Name: Walnut Way	Project No: 16811	Co-ords:	Hole Type WS
Location: Merthyr Tydfil	Level:	Scale 1:50	Logged By ES
Client: MV Homes	Dates: 12/11/2021 - 12/11/2021		

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
	0.60 - 0.80	ES		0.50				MADE GROUND. Brown slightly sandy slightly gravelly clayey silt. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of mixed lithologies.	
	0.80 - 1.00	ES						Soft becoming firm orangish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular and subangular fine and medium of mudstone.	1
	1.00	SPT	N=4 (1,1/1,1,1,1)						
	1.60 - 1.80	D		1.50				Stiff orangish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular and subangular fine and medium of mudstone.	2
	2.00	SPT	N=24 (1,1/3,5,7,9)	2.20					
	2.60	SPT	50 (25 for 110mm/50 for 105mm)	2.60				Very stiff grey gravelly CLAY. Gravel is angular and subangular fine and medium of possible mudstone.	
								End of Borehole at 2.600m	3
									4
									5
									6
									7
									8
									9
									10

Remarks:

Borehole Log

Borehole No.

WS03

Sheet 1 of 1

Project Name: Walnut Way	Project No: 16811	Co-ords:	Hole Type WS
Location: Merthyr Tydfil		Level:	Scale 1:50
Client: MV Homes		Dates: 12/11/2021 - 12/11/2021	Logged By ES

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
	0.50 - 0.70	ES		0.40				MADE GROUND. Brown slightly sandy slightly gravelly clayey silt. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of mixed lithologies.	
	1.00	SPT	N=2 (0,0/1,0,1,0)					Soft becoming firm orangish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular and subangular fine and medium of mudstone.	1
	1.60 - 1.80	ES		1.60					
	1.80 - 2.00	D						Very stiff grey gravelly CLAY. Gravel is angular and subangular fine and medium of possible mudstone.	
	2.00	SPT	50 (7,10/50 for 125mm)	2.00				End of Borehole at 2.000m	2
									3
									4
									5
									6
									7
									8
									9
									10

Remarks:

ANNEX G
Laboratory Soil Chemical Test Results



Final Report

Report No.: 21-40108-1
Initial Date of Issue: 23-Nov-2021
Client Terra Firma (Wales) Ltd
Client Address: 5 Deryn Court
Wharfedale Road
Pentwyn
Cardiff
CF23 7HA
Contact(s): elliot@terrafirmawales.co.uk
Project 16811 Walnut way
Quotation No.:
Order No.: 16811
No. of Samples: 6
Turnaround (Wkdays): 5
Date Approved: 23-Nov-2021

Date Received: 16-Nov-2021

Date Instructed: 16-Nov-2021

Results Due: 22-Nov-2021

Approved By:

Details: Glynn Harvey, Technical Manager

Results - Soil

Project: 16811 Walnut way

Client: Terra Firma (Wales) Ltd	Chemtest Job No.:		21-40108	21-40108	21-40108	21-40108	21-40108	21-40108
Quotation No.:	Chemtest Sample ID.:		1320183	1320184	1320185	1320186	1320187	1320188
	Client Sample ID.:		ES1	ES2	ES1	ES2	ES1	ES2
	Sample Location:		WS01	WS01	WS02	WS02	WS03	WS03
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		0.2	0.4	.6	.8	.5	1.6
	Bottom Depth (m):		0.4	.6	.8	1	.7	1.8
	Date Sampled:		15-Nov-2021	#####	15-Nov-2021	#####	15-Nov-2021	15-Nov-2021
	Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00
	Asbestos Lab:		DURHAM		DURHAM		DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD				
ACM Type	U	2192		N/A	-		-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	10	9.9	13	12
Soil Colour	N	2040		N/A	Brown		Brown	Brown
Other Material	N	2040		N/A	Stones		None	None
Soil Texture	N	2040		N/A	Loam		Clay	Clay
pH	M	2010		4.0	8.4	8.3	8.5	8.2
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40		0.54	
Magnesium (Water Soluble)	N	2120	g/l	0.010		< 0.010		< 0.010
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010		< 0.010		< 0.010
Total Sulphur	M	2175	%	0.010		0.018		< 0.010
Chloride (Water Soluble)	M	2220	g/l	0.010		< 0.010		< 0.010
Nitrate (Water Soluble)	N	2220	g/l	0.010		< 0.010		< 0.010
Cyanide (Complex)	M	2300	mg/kg	0.50	< 0.50		< 0.50	
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50		< 0.50	
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50		< 0.50	
Ammonium (Water Soluble)	M	2220	g/l	0.01		< 0.01		< 0.01
Sulphate (Acid Soluble)	U	2430	%	0.010	0.019	< 0.010	0.015	< 0.010
Arsenic	M	2450	mg/kg	1.0	9.3		10	
Beryllium	U	2450	mg/kg	1.0	< 1.0		< 1.0	
Cadmium	M	2450	mg/kg	0.10	0.18		0.21	
Chromium	M	2450	mg/kg	1.0	20		21	
Mercury Low Level	M	2450	mg/kg	0.05	< 0.05		< 0.05	
Manganese	M	2450	mg/kg	5.0	700		650	
Molybdenum	M	2450	mg/kg	2.0	< 2.0		< 2.0	
Antimony	N	2450	mg/kg	2.0	< 2.0		< 2.0	
Copper	M	2450	mg/kg	0.50	32		48	
Nickel	M	2450	mg/kg	0.50	28		24	
Lead	M	2450	mg/kg	0.50	43		33	
Selenium	M	2450	mg/kg	0.20	< 0.20		< 0.20	
Zinc	M	2450	mg/kg	0.50	76		65	
Chromium (Trivalent)	N	2490	mg/kg	1.0	20		21	
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50		< 0.50	
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0		< 1.0	
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0		< 1.0	
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0		< 1.0	
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0		< 1.0	
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0		< 1.0	

Results - Soil

Project: 16811 Walnut way

Client: Terra Firma (Wales) Ltd	Chemtest Job No.:				21-40108	21-40108	21-40108	21-40108	21-40108	21-40108
Quotation No.:	Chemtest Sample ID.:				1320183	1320184	1320185	1320186	1320187	1320188
	Client Sample ID.:				ES1	ES2	ES1	ES2	ES1	ES2
	Sample Location:				WS01	WS01	WS02	WS02	WS03	WS03
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.2	0.4	.6	.8	.5	1.6
	Bottom Depth (m):				0.4	.6	.8	1	.7	1.8
	Date Sampled:				15-Nov-2021	#####	15-Nov-2021	#####	15-Nov-2021	15-Nov-2021
	Time Sampled:				12:00	12:00	12:00	12:00	12:00	12:00
	Asbestos Lab:				DURHAM		DURHAM		DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD						
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0		< 1.0		< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0		< 1.0		< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0		< 1.0		< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0		< 5.0		< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0		< 1.0		< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0		< 1.0		< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0		< 1.0		< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0		< 1.0		< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0		< 1.0		< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0		< 1.0		< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0		< 1.0		< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0		< 1.0		< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0		< 5.0		< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10		< 10		< 10	< 10
Naphthalene	M	2700	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Fluorene	M	2700	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.10	< 0.10		0.21		< 0.10	< 0.10
Pyrene	M	2700	mg/kg	0.10	< 0.10		0.13		< 0.10	< 0.10
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Chrysene	M	2700	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2.0	< 2.0		< 2.0		< 2.0	< 2.0
Total Phenols	M	2920	mg/kg	0.10	< 0.10		< 0.10		< 0.10	< 0.10
Organic Matter BS1377	N	2930	%	0.10	0.40		0.30		0.30	2.0

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measurement by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenzo[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
2930	Organic Matter	Organic Matter	Acid Dichromate digestion/Titration

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

ANNEX H
Geotechnical Test Results

TEST REPORT
Determination Of Water Content
ISO 17892-1: 2014

Project No:	D21605	Client:	Terra Firma
Project Name:	16811 - Walnut Way	Address:	Deryn Court 5 Wharfdale Road Cardiff CF23 7HA
ATS Sample No:	26453		

Site Ref / Hole ID:	WS01	Depth (m):	0.80 - 1.00
Sample No:		Sample Type:	Window
Sampling Certificate Received:	No	Material Description:	Brown gravelly CLAY
Location in Works:	N/A	Material Source:	Unknown
Date Sampled:		Material Supplier:	Unknown
Sampled By:	Client	Specification:	ISO17892
Date Received:	19 November 2021	Date Tested:	22 November 2021

Test Results

Moisture Content (%)

16.8

Remarks:

QA Ref.

EN ISO 17892-1:2014 E



Apex Testing Solutions

Sturmi Way, Village Farm Industrial Est,
Pyle, Bridgend, CF33 6BZ

Tel: 01656 746762 Fax: 01656 749096



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Approver

A Grogan

A Grogan, Laboratory Manager

Date

24/11/2021

Fig

MC

TEST REPORT
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX
BS 1377:Part 2:1990. Clause 4.3/5.3/5.4

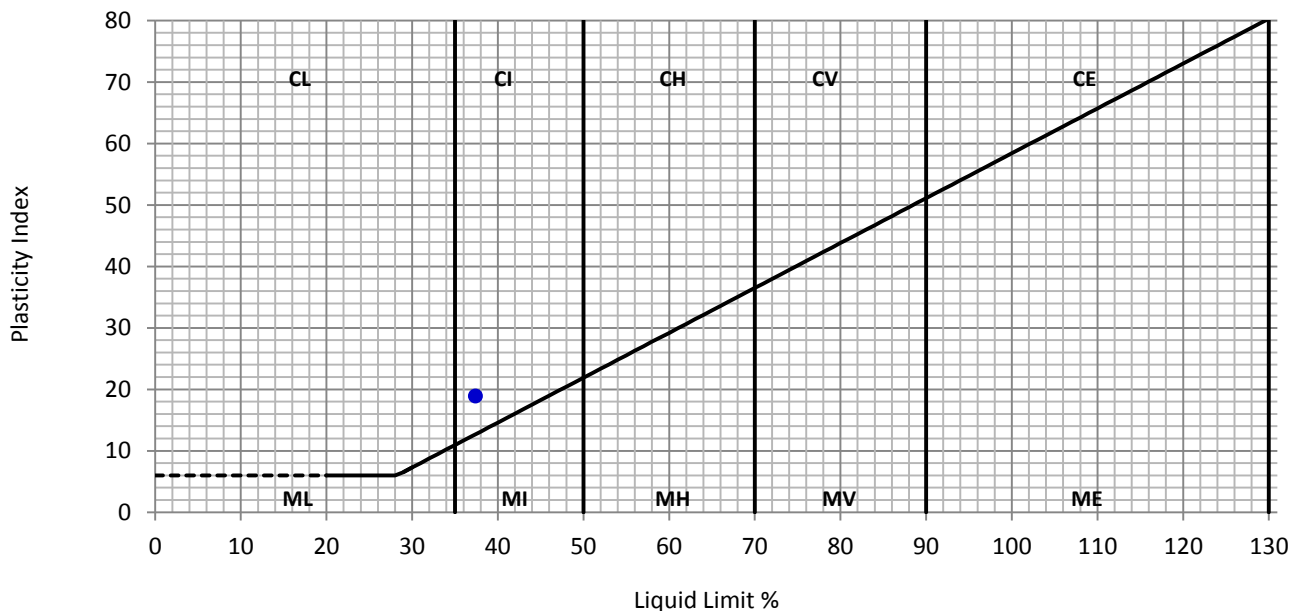
Project No:	D21605	Client:	Terra Firma
Project Name:	16811 - Walnut Way	Address:	Deryn Court 5 Wharfdale Road Cardiff CF23 7HA
ATS Sample No:	26453		

Site Ref / Hole ID:	WS01	Depth (m):	0.80 - 1.00
Sample No:		Sample Type:	Window
Sampling Certificate Received:	No	Material Description:	Brown gravelly CLAY
Location in Works:	N/A	Material Source:	Unknown
Date Sampled:		Material Supplier:	Unknown
Sampled By:	Client	Specification:	BS1377
Date Received:	19 November 2021	Date Tested:	23 November 2021

Test Results

Liquid Limit	37	%
Plastic Limit	18	%
Plasticity Index	19	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	17 %



Remarks:

QA Ref.

BS1377 - 2
Rev. 3.0



Apex Testing Solutions

Sturmi Way, Village Farm Industrial Est, Pyle,
Bridgend, CF33 6BZ
Tel: 01656 746762 Fax: 01656 749096



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Approver

L Davis

L Davis, Quality Manager

Date

24/11/2021

Fig.

ATT

TEST REPORT
Determination Of Water Content
ISO 17892-1: 2014

Project No:	D21605	Client:	Terra Firma
Project Name:	16811 - Walnut Way	Address:	Deryn Court 5 Wharfdale Road Cardiff CF23 7HA
ATS Sample No:	26454		

Site Ref / Hole ID:	WS02	Depth (m):	1.60 - 1.80
Sample No:		Sample Type:	Window
Sampling Certificate Received:	No	Material Description:	Brown sandy gravelly CLAY
Location in Works:	N/A	Material Source:	Unknown
Date Sampled:		Material Supplier:	Unknown
Sampled By:	Client	Specification:	ISO17892
Date Received:	19 November 2021	Date Tested:	24 November 2021

Test Results

Moisture Content (%)

23.3

Remarks:

QA Ref.

EN ISO 17892-
1:2014 E



Apex Testing Solutions

Sturmi Way, Village Farm Industrial Est,
Pyle, Bridgend, CF33 6BZ

Tel: 01656 746762 Fax: 01656 749096



7771

Approver

A Grogan

A Grogan, Laboratory Manager

Date

24/11/2021

Fig

MC

TEST REPORT
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX
BS 1377:Part 2:1990. Clause 4.3/5.3/5.4

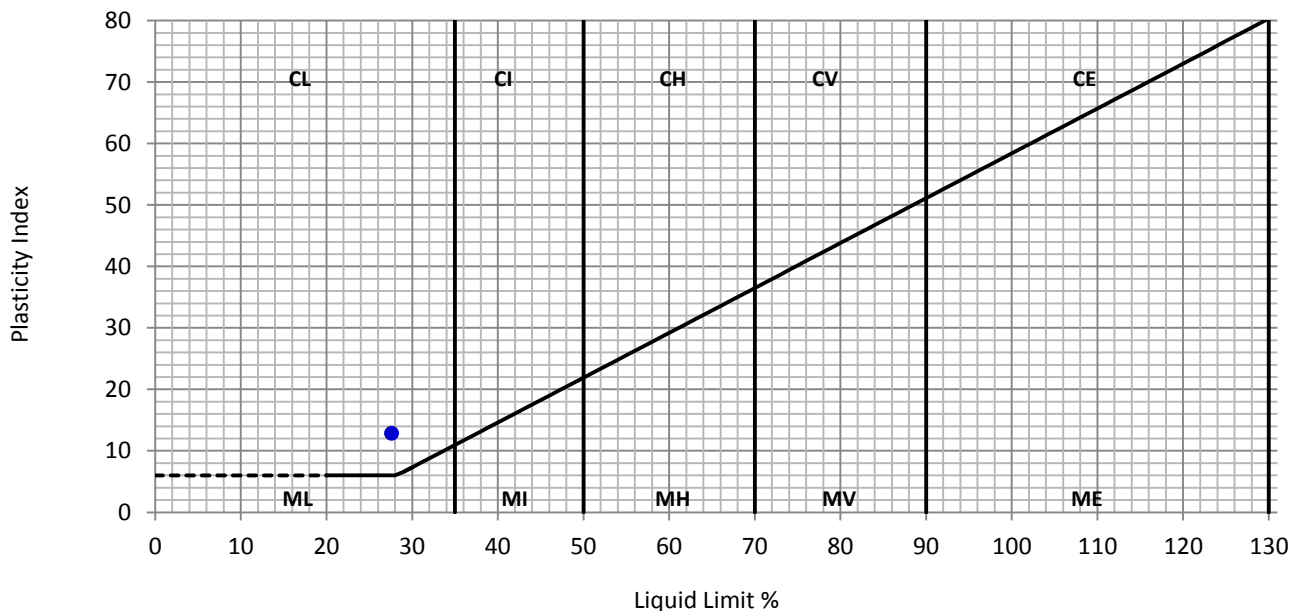
Project No:	D21605	Client:	Terra Firma
Project Name:	16811 - Walnut Way	Address:	Deryn Court 5 Wharfdale Road Cardiff CF23 7HA
ATS Sample No:	26454		

Site Ref / Hole ID:	WS02	Depth (m):	1.60 - 1.80
Sample No:		Sample Type:	Window
Sampling Certificate Received:	No	Material Description:	Brown sandy gravelly CLAY
Location in Works:	N/A	Material Source:	Unknown
Date Sampled:		Material Supplier:	Unknown
Sampled By:	Client	Specification:	BS1377
Date Received:	19 November 2021	Date Tested:	23 November 2021

Test Results

Liquid Limit	28	%
Plastic Limit	15	%
Plasticity Index	13	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	24 %



Remarks:

TEST REPORT
Determination Of Water Content
ISO 17892-1: 2014

Project No:	D21605	Client:	Terra Firma
Project Name:	16811 - Walnut Way	Address:	Deryn Court 5 Wharfdale Road Cardiff CF23 7HA
ATS Sample No:	26455		

Site Ref / Hole ID:	WS03	Depth (m):	1.80 - 2.00
Sample No:		Sample Type:	Window
Sampling Certificate Received:	No	Material Description:	Brown sandy gravelly CLAY
Location in Works:	N/A	Material Source:	Unknown
Date Sampled:		Material Supplier:	Unknown
Sampled By:	Client	Specification:	ISO17892
Date Received:	19 November 2021	Date Tested:	24 November 2021

Test Results

Moisture Content (%)

10.1

Remarks:

QA Ref.

EN ISO 17892-1:2014 E



Apex Testing Solutions

Sturmi Way, Village Farm Industrial Est,
Pyle, Bridgend, CF33 6BZ

Tel: 01656 746762 Fax: 01656 749096



7771

Approver

A Grogan

A Grogan, Laboratory Manager

Date

24/11/2021

Fig

MC

TEST REPORT
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX
BS 1377:Part 2:1990. Clause 4.3/5.3/5.4

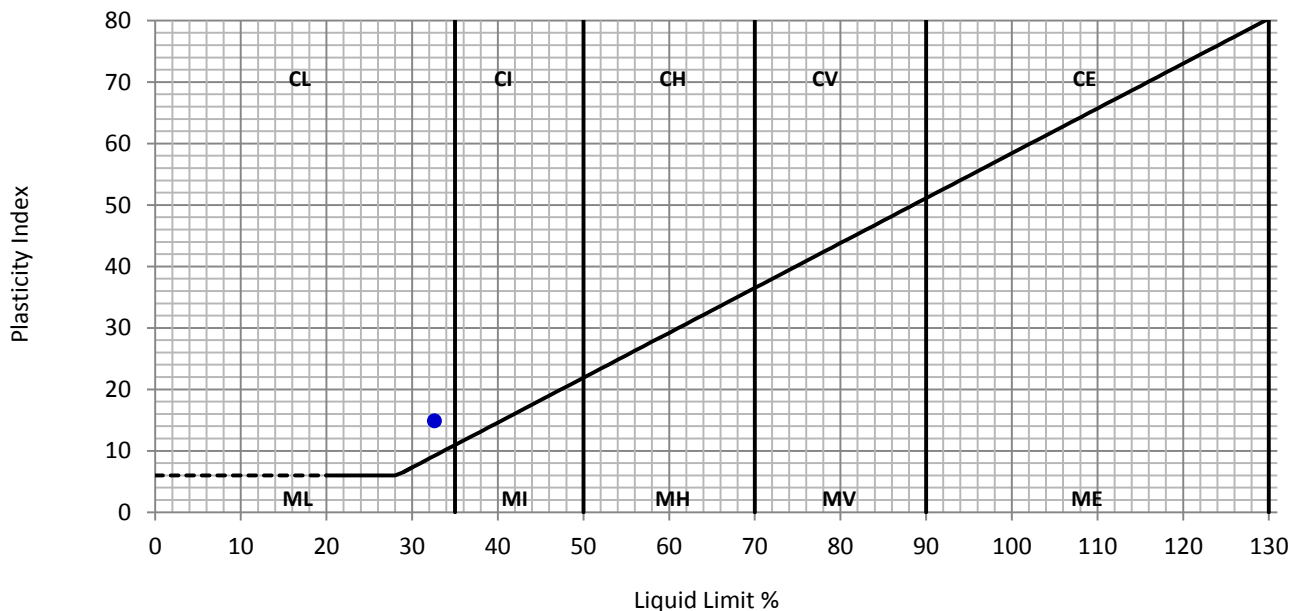
Project No:	D21605	Client:	Terra Firma
Project Name:	16811 - Walnut Way	Address:	Deryn Court 5 Wharfdale Road Cardiff CF23 7HA
ATS Sample No:	26455		

Site Ref / Hole ID:	WS03	Depth (m):	1.80 - 2.00
Sample No:		Sample Type:	Window
Sampling Certificate Received:	No	Material Description:	Brown sandy gravelly CLAY
Location in Works:	N/A	Material Source:	Unknown
Date Sampled:		Material Supplier:	Unknown
Sampled By:	Client	Specification:	BS1377
Date Received:	19 November 2021	Date Tested:	24 November 2021

Test Results

Liquid Limit	33	%
Plastic Limit	18	%
Plasticity Index	15	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	34 %



Remarks:

ANNEX I
Ground Gas Monitoring Results

In-Situ Gas Monitoring Results

Job Number 16811
Job Name Walnut Way



Round 1

Date: 10.11.2021

Barometric Pressure: 999mb

Weather: Sunny

Gas Well	Methane (CH ₄) %	Oxygen (O ₂) %	Carbon Dioxide (CO ₂) %	Carbon Monoxide (CO) ppm	Hydrogen Sulphide (H ₂ S) ppm	Flow (l/hr)	Water Level (m)
WS01	N/D	16.1	4.8	0	N/D	No Flow	NA
WS03	N/D	14.6	5.2	0	N/D	No Flow	NA

DRAWINGS



Terra Firma (Wales) Ltd. 5 Deryn Court, Wharfedale Road, Pentwyn, Cardiff CF23 7HA
Tel: 029 2073 5354 **Fax:** 029 2073 5433 **Email:** info@terrafirmawales.co.uk www.terrafirmawales.co.uk