

Geotechnical and Geo-Environmental Report

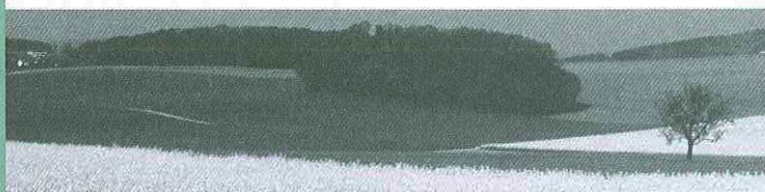
Proposed Residential Development, Builders
Yard, Elwyn Drive, Merthyr Tydfil

Prepared for:

Mr J. Cox

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terrafirma

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Executive Summary

Mr J Cox is proposing the construction of a pair of semi detached houses upon a builder's yard, at Elwyn Drive in Merthyr Tydfil. The site is centred at an approximate National Grid Reference of 305580, 205960 and occupies a plan area of 0.06 hectares.

Historical mapping indicates that the site has not been physically developed but has lain within the builder's yard since the late 1960's/early 1970's.

Geologically, the site is underlain by rocks of the South Wales Lower Coal Measures Formation, Carboniferous in age and comprising grey, (productive) coal-bearing mudstones/siltstones, with seatearths and minor sandstones. The site may be underlain by the Garw coal seam and the underlying Rosser Ironstone Veins. Superficial Deposits are indicated to overlie the bedrock comprising Boulder Clay (Till).

The site is at potential risk from possible abandoned mine workings. In order to determine the level of mining related risk, an intrusive drilling investigation is required.

No radon protection measures are necessary in the construction of new dwellings or extensions.

A geo-technical and geo-environmental site investigation was undertaken on the 14th of August 2015 comprising the installation of five windowless sampling boreholes using a tracked mini percussive rig.

The ground conditions encountered comprised Made Ground of (Loose) brown very clayey SAND / in places (soft) very sandy CLAY with some gravel of shale and occasional slag, with some coal and brick inclusions to between typically 0.20m / 0.40m, locally deeper in WS01 to a depth of 1.50m. The underlying Glacial Till/Boulder Clay comprises initially soft, becoming firm typically below 1m/1.5m, brown and tan brown with grey inclusions slightly sandy/sandy silty CLAY with many gravels and occasional cobbles, to the maximum investigated depth of >3.50m / >4.00m.

The Made Ground underlying the site may have the potential to generate gases such as methane and carbon dioxide. As an economical alternative to gas monitoring we consider it appropriate to install a 2000g DPM/reinforced gas membrane with passive under floor venting. In addition, all joints and penetrations should be sealed. These mitigation measures conform to gas characteristic 2 in accordance with CIRIA C665 (low risk).

Soil laboratory chemical analysis identified an elevated level of lead in WS05 and elevated PAHs in WS02 and WS05. In addition, asbestos containing tile fragments are occasionally evident, lying upon the site surface. Construction workers will come into contact with Made Ground beneath the site. The principal contractor should therefore ensure that an appropriate level of health and safety is put in place. All ACM present upon the surface of the site should be handpicked and suitably disposed of at licensed landfill. All garden and landscaped areas should be capped with at least 0.60m of imported inert Topsoil/Subsoil.

A Japanese Knotweed Management Plan should be prepared for the site detailing the proposed remediation measures to be put in place.

A reinforced raft foundation will be a suitable engineering solution for the development. The maximum load beneath the foundation should not exceed 50kN/m². Total settlement of the foundation should not exceed 30mm with angular distortions caused as a result of differential settlements should be less than 1:750.

If during the supplementary drilling exercise significant voids are encountered and the site needs to be stabilised by drilling and grouting, following successful ground stabilisation a reinforced raft capable of spanning a remnant void of 1.0m should be suitable. If workings are encountered but voids are residual in nature, then stabilisation may not be required. In this situation, the reinforced raft should be thickened beneath edge beams and load bearing walls and be designed to span a crown hole of 3.0m and a 1.5m cantilever effect at the edges.

All buried concrete should as a minimum conform to ACEC Class AC-1 of BRE Special Digest 1 (2001).

We recommend that a CBR design value of 2% is used for new roads, pavements and driveways.

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SECTION 1 Introduction and Proposed Development

Mr J Cox is proposing the redevelopment of a builder's yard at Elwyn Drive in Merthyr Tydfil, CF47 0NJ. The development will entail the construction of a pair of semi detached houses with associated road and driveway access and garden areas.

Terra Firma (Wales) Limited has been commissioned to undertake a desk study and geotechnical and geo-environmental ground investigation of the site.

The main objectives of the geo-environmental assessment programme were to:

- Identify the potential environmental liabilities at the site associated with any soil and groundwater contamination from past site uses.
- Provide a summary of the environmental conditions at the site.
- Provide recommendations with regard to any other geo-environmental aspects pertaining to the development.

The main objectives of the geotechnical site investigation were to:

- Determine the type, strength and bearing characteristics of the shallow soil deposits.
- Provide recommendations for road construction.
- Provide recommendations with regard to 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 review of existing data, followed by a field investigation to determine the prevailing ground conditions and also to collect and analyse soil samples from selected locations around the site.

1.1 Limitations and Exceptions of Investigation

The geo-environmental and geotechnical investigation was conducted and this report has been prepared for the sole internal reliance of Mr J Cox and his 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 geo-environmental and geo-technical consultants. Terra Firma (Wales) Limited does not provide legal advice and the advice of lawyers may also 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.

SECTION 2 Review of Existing Data

2.1 Physical Setting, Current Use and Site Conditions

The site is centred at an approximate National Grid Reference of 305580, 205960 and occupies a plan area of 0.06 hectares.

The site lies within a builder's yard and is accessed at its southern point via Elwyn Drive through a locked gate. Topographically, the site slopes from the east to the west and southeast. The northern, southern and south-western site margins are marked by retaining walls and fencing. Sections of the retaining walls are in a state of disrepair. To the east of the development area are a 'lock up' and offices associated with the builder's yard business.

Prior to the site visit by a Terra Firma Engineer, a partial site strip and cut exercise had been undertaken along the northern site area, reducing the ground level in this area by between typically 0.5m and 2m. We understand that the objective of removing the soil in this area was to remove Japanese Knotweed. Colliery spoil was seen within the cut along the northern boundary of the site, with, in areas, possible naturally occurring orange grey brown Boulder Clay at the base of the cutting. Asbestos containing tile fragments were noted on top of the cutting bank. Terra Firma did not visit the site prior to the site strip/cut exercise. The soil within the cutting exhibits localised slumping due to the over steepened slope and exposure to the weather etc.

Areas of scrub vegetation exist within the site, predominantly along site margins. Within the northern, southern and western site areas, new growth of Japanese Knotweed was evident. Knotweed growth is also evident outside of the western site boundary.

Made Ground was evident at ground level across the site in the form of colliery spoil with inclusions of building materials comprising concrete fragments and bricks. In addition, there were occasional fragments of asbestos containing tile fragments across the surface of the site. In the west of the site by the site entrance the ground is surfaced with tarmac.

Within the northwest corner of the site is a single storey outhouse building of breeze block construction. Building materials including timber, bricks and concrete are found here.

Site photographs are presented in **Annex D**.

The site location, existing and proposed site layouts are presented in **Drawings 01, 02 and 03**.

2.2 Site History

The history of the site has been traced using historical Ordnance Survey maps obtained from a Landmark Information Group Envirocheck Report. This report is presented in **Annex A**. A summary of the history of the site is given below. Distances are approximate.

1875 - 1876

The site sits upon undeveloped open ground within the wider area of a Brick Works. The map indicates that the surface of the site itself and immediate surrounding area is marked by batters possibly indicating the placement of fill materials such as colliery spoil or materials from the brick works. Some surface vegetation is also indicated. A Tramway locates 26m to the north of the site. The following features locate further afield; a cemetery 132m west/southwest, railway land 200m southeast and an old quarry 250m northwest. The most proximal housing locates 40m to the south of the site but the wider areas of Twyn-yr-Oden and Thomas Town locate 100m to the southwest and 220m to the northwest respectively.

1900

The site remains undeveloped land however the surface batters are no longer evident upon the site or within the immediate local area. The southern, western and eastern site margins are marked by linear features; a field boundary or a fence line for example. A slightly curved yet linear feature enters the eastern site area; this may represent a stream or spring line. The land surrounding the site is also parcelled into individual fields/plots. With exception to the cemetery to the west/southwest being disused, there is no discernible change to the local area.

1919 (partial map)

There is no discernible change to the study site from the previous map edition. The local area has been developed residentially with housing and associated roads locating to the immediate west of the site and 30m to the north of the site. The tramway to the north of the site remains. The Brick Works is still evident 140m to the west of the site. The Old Quarry to the far northwest of the site has been reinstated and landscaped into a park and playground.

1957

The possible stream feature entering the eastern site area is no longer evident. There is no other discernible change to the study site from the previous map edition. Three buildings, of unknown use, have been built upon land directly south of the site. Further residential development has taken place within the wider locality including redevelopment of the former Brick Works to the west of the site. The Tramway to the north of the site is no longer evident. The Railway Line to the far south of the site is no longer evident and has been partially infilled.

1969-1977

Two buildings have also been constructed directly east of the study area, what are believed to be the offices currently within the wider area of the builder's yard. The site itself lies within the builder's yard. The two buildings directly south of the site are no longer evident. Residential development has taken place east and north of the site including two houses built directly north of the site; Kibworth and Lyndale.

2.2 Site History (Continued)

1984 - 1989

There is no discernible change to the study site from the previous map edition. The land to the south of the site is no longer parcelled into individual plots but is now one large open space. A steep batter is still evident to the southeast of the site associated with the historical placement of fill as previously mentioned.

1993, 1994-1995

There is no discernible change to the study site from the previous map edition. Land directly south of the site has been residentially developed with housing at Elwyn Drive.

2006, 2015

There is no discernible change to the study site from the previous map edition.

2.3 Agency and Hydrological

2.3.1 Discharge Consents

There are no recorded discharge consents for sewerage or liquid effluent, within a 250m radius of the study site. The most proximal discharge consent positions 636m south of the site.

2.3.2 Integrated Pollution Controls

There are no businesses operating within 250m radius of the site which are monitored under environmental permit regulations. The most proximal is a petrol filling station locating 545m southwest of the site.

2.3.3 Nearest Surface Water Features

The most proximal surface water feature is recorded 300m east of the site. Between 300m and 1km east of the site are a number of issues, sinks and drains. Typically, the prevailing drainage direction is towards the south. The River Taff locates 640m to the west/southwest of the site and flows in a southerly direction.

2.3.4 Pollution Incidents to Controlled Waters

Within a 250m radius of the site there have been no recorded pollution incidents to controlled waters. The most proximal incident is recorded as occurring 652m east of the site.

2.3.5 River Quality

The local Rivers Taff and Morlais have been assessed by NRW as Grade A and Grade C respectively for both biological and chemical quality.

2.3.6 Water Abstractions

There are no recorded water abstractions within a 250m radius of the site. The most proximal abstraction point situates 865m west of the site.

2.3.7 Hydrogeology

The Bedrock beneath the site (Coal Measures) is defined as a Secondary A aquifer; 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.

Superficial Deposits are noted to comprise unproductive strata. In addition, the soils are classified as having a high leaching potential. This information is noted to be based upon fewer observations than elsewhere and therefore this worst case vulnerability is assumed, until proven otherwise.

2.3.8 Flood Risk

The site does not locate within a designated flood plain.

2.4 Waste

There are no recorded historic or current landfill sites or waste management facilities within a 250m radius of the site. The most proximal landfill site and waste management facility position at respective distances of 651m east and 600m east of the site.

2.5 Geological

2.5.1 Geology

The 1:10560 scale geological map (SO 00 NE) of the area was consulted. The site is underlain by rocks of the South Wales Lower Coal Measures Formation, Carboniferous in age and comprising grey, (productive) coal-bearing mudstones/siltstones, with seatearths and minor sandstones.

Approximately 190m east of the site is the conjectured north to south crop of the Gellideg coal seam (4 to 5 feet thick). Stratigraphically beneath this coal seam is the Garw coal seam (1 foot thick) and Rosser Ironstone Veins. The coal seam stratigraphy indicates that the strata dip away from the site and therefore the Gellideg seam will not underlie the site. The crop of the Garw coal seam is not illustrated on the geological map and is therefore unknown. The seam may therefore crop within influencing distance of the site. The coal mining setting is considered further in **Sections 2.5.2** and **Section 8**.

Superficial Deposits are indicated to overlie the bedrock comprising Boulder Clay (Till). Made Ground is expected to further overlie the natural geology.

2.5.2 Mining

A Coal Mining Report was procured from the Coal Authority, reference 51000967195001, see **Annex B**. The report provides the following information:

The site is not within the zone of likely influence on the surface from past underground workings. However, the site lies within an area where the Coal Authority believe there is coal at or close to the surface. This coal may have been worked at some time in the past. Referring to the coal stratigraphy described in **Section 2.5.1** (Geology), we conclude that this relates to the Garw coal seam and the underlying Rosser Ironstone Veins.

2.5.2 Mining (Continued)

There are no known coal mine shaft entries within, or within 20 metres of, the boundary of the property. However the Coal Authority note that records may be incomplete and that there may exist in the local area mine entries of which there is no knowledge.

There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.

The report adds the following; In view of the mining circumstances a prudent developer would seek appropriate technical advice before any works are undertaken. Therefore if development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply good engineering practice developed for mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or mines of coal without the permission of the Coal Authority.

The level of risk from coal mining and mine entries is discussed in **Section 8**.

2.5.3 Radon

British Geological Survey data confirms that the site lies within a lower probability radon area, as less than 1% of homes are above the radon action level. No radon protection measures are necessary in the construction of new dwellings or extensions.

2.5.4 Mineral Sites

The most proximal mineral site is recorded as 351m northwest of the site. This relates to an opencast quarry (Sandstone) the presence of which was identified in **Section 2.2** (Site History).

2.5.5 Ground Stability

The British Geological Survey data indicates the following *preliminary* levels of risk for ground instability:

- Very low risk from collapsible ground. (*Note that this does not include mining related ground instability*)
- No hazard from compressible ground
- No hazard from ground dissolution
- Very low risk from landslides
- Very low risk from running sand
- Very low risk from shrinking or swelling clay

With regards to landslips, the South Wales Coal Field Landslip Survey has been consulted. There are no documented landslips on site or within influencing distance of the site. The very low risk of landslips noted above relates to the topography of the area which together with constructional activities and redevelopment could combine to create slope instability. However this risk can be mitigated through appropriate construction techniques and the design of safe slopes.

SECTION 3 Preliminary Risk Assessment

The following sub-sections detail a preliminary risk assessment, based upon the desk study information.

3.1 General

The contaminated land regime is set out in Part IIA 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 IIA was introduced to achieve two aims:

- (1) The identification of contaminated land
- (2) The remediation of contaminated land that poses an unacceptable risk to human health and/or the environment

Under Part IIA 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."

For land to be classified as 'Contaminated Land' there must be a '**pollutant linkage**'. A pollutant linkage requires three essential elements:

- (1) A **CONTAMINANT** (hazard) – a substance that is in, on or under the land and has the potential to cause harm or to cause pollution of **controlled waters**
- (2) A **RECEPTOR** (target) – something which could be adversely affected by a contaminant
- (3) A **PATHWAY** – a route or means which either allows the contaminant to cause significant harm to that receptor, or that there is a significant possibility of such harm being caused to the receptor, or that pollution of controlled waters is being or likely to be caused.

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'.

A 'Hazard' is defined as '*a property or situation that in particular circumstances could lead to harm*'.

The classification of consequences and probability and determining the risk category are defined in the following sections.

3.2 Classification of Consequence

Table 3.1 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
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

3.3 Classification of Probability

Table 3.2 Classification of Probability	
Classification	Definition
High	• 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
Medium	• 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	• 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
Negligible	• There is a complete pollution linkage but circumstances are such that it is improbable that an event would occur even in the long term

3.4 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 3.3** below.

Table 3.3 Risk Assessment Matrix					
Increasing acceptability ↘		Consequence			
		Severe	Medium	Mild	Negligible
Probability	High	High	High	Medium / Low	Near zero
	Medium	High	Medium	Low	Near zero
	Low	High / medium	Medium / Low	Low	Near zero
	Negligible	High / medium / Low	Medium / Low	Low	Near zero

High Risk

There is a high probability that severe harm could risk a receptor, or there is evidence that a receptor is being 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.

3.5 Potential Sources and Types of Contamination

3.5.1 On-Site Sources

Historical mapping indicates the potential for Made Ground to underlie the site, possibly associated with placement of fill materials such as colliery spoil or materials from the former brick works that positioned to the west of the site historically. The presence of substances such as metals, hydrocarbons and asbestos within the Made Ground will depend upon its composition.

In addition, the site walk over survey identified the presence of asbestos containing tile fragments upon the site surface.

Made ground also has the potential to generate ground gases such as carbon dioxide and methane.

3.5.2 Off Site Sources

As mentioned above, historical mapping indicates the potential for Made Ground to underlie the local area too, similarly associated with the possible placement of fill materials such as colliery spoil or materials.

Historical land use within a 250m radius of the site has included a tramway 26m north, a cemetery 132m west/southwest, railway land 200m southeast and an old quarry 250m northwest.

Historical mapping suggests that the railway land and the quarry have been infilled (unknown material composition), the former only partially. As discussed above, Made Ground has the potential to generate ground gases such as carbon dioxide and methane.

Given the age of the cemetery (disused by 1900) and the distance between the cemetery and the study site (132m west/southwest), we do not consider this feature to be a potential source of ground contamination.

There are a number of potential contaminants associated with historical railway land (and tramway lines), including substations, running lines, workshops and depots. Substances include PAHs, fuels, PCBs, metals, asbestos and herbicides. Historical mapping does not identify any substations, depots or workshops within a 250m radius of the site. Given the distance between the study site and the identified features we do not consider these historic land uses to pose a potential source of ground contamination from spillages or leakages.

It is possible for contamination to occur through wind dispersal of airborne contaminants such as coal/ ash dust, metal particulates and asbestos fibres. Given the historical nature of the land use we consider this possibility to be negligible. However, these types of substances would be included within a traditional contamination analysis as standard.

3.6 Potential Pollution Linkages

The potential pollution linkages relating to human health, the aquatic environment, ecology and buildings are as follows:

3.6.1 Human Health

1. Ingestion of soil and soil dust
2. Ingestion of home-grown produce (vegetables, salads etc)
3. Inhalation of dust indoors and outdoors
4. Inhalation of ground gases such as radon, carbon dioxide, methane etc indoors and outdoors
5. Inhalation of asbestos
6. Dermal contact with soil and soil dust
7. Uptake of soil dust by eye contact
8. Contaminant permeation of drinking water pipes and ingestion of contaminated water supply

3.6.2 Aquatic Environment

1. Surface water runoff
2. Runoff during earth moving exercises
3. Migration of surface water into underlying soils and groundwater
4. Leaching of contaminants from soil into groundwater
5. Contaminant migration via groundwater transport into wider aquatic environment – rivers, streams, groundwater off site

3.6.3 Ecology

1. Phytotoxic substances may inhibit healthy plant growth
2. Surface runoff can introduce contamination/allow contamination to migrate

3.6.4 Buildings

1. Chemical attack of buried structures (concrete etc)

3.7 Potential Receptors

The potential receptors of any contamination and ground gas are considered to be:

3.7.1 During Construction

1. Construction workers
2. Neighbouring site users and passers-by
3. The aquatic environment - surface waters, groundwater within the superficial soils and the underlying bedrock
4. Flora and Fauna upon the site is potentially at risk from phytotoxic contaminants either introduced by construction traffic/processes or through surface runoff of materials/waters/soils

3.7.2 Following Construction

1. Site end users - residents and visitors
2. Neighbouring site users and passers-by
3. The aquatic environment - surface waters, groundwater within the superficial soils and the underlying bedrock
4. Building Materials - sulphates in the ground can damage buried concrete
5. Flora and Fauna upon the site is potentially at risk from phytotoxic contaminants

3.8 Preliminary Human Health and Environmental Risk Assessment

3.8.1 Construction Workers

The construction workers are potentially at risk from ingestion, inhalation and dermal contact with soil and/or soil dust in the short term. Airborne asbestos fibres may be a concern if the asbestos containing material is encountered on site and disturbed. There is a potential risk of ground gas migration into confined spaces such as excavations, in the short term. It is anticipated that all adverse health effects will be preventable by personal protection equipment and due diligence to health & safety and good site management.

3.8.2 Passersby / Neighbouring Site Users

Short term during the site construction phase, the passersby and/or neighbouring site users are potentially at risk from ingestion, inhalation and dermal contact with soil and/or soil dust. It is anticipated that adverse health effects will be preventable by due diligence to health & safety including dust suppression measures and screening off the site from the general public.

3.8.3 Future Site End Users

The future site end users, residents and visitors, are potentially at risk from ingestion, inhalation and dermal (including eye uptake) contact with soil and/or soil dust, exposure to ground gases and ingestion of unfit potable water.

Site investigation is required to determine the ground conditions, soil chemistry and any environmental liability associated with the land.

3.8.4 Aquatic Environment

Receptors such as adjacent land are potentially at risk from surface runoff of water, soils or materials during the site construction period. It is anticipated that any adverse effects will be preventable by due diligence to good construction practise in preventing surface runoff and the spillage of materials. Leaching from the soil and into ground leaching of substances and into the groundwater is a potential pathway into the aquatic environment (groundwater and the local river systems) that can lead to both short term and long term contamination issues depending upon the hydrogeological conditions and the physiochemical properties of the contaminant. Site investigation is required to determine the ground conditions, soil chemistry and any environmental liability associated with the land.

3.8.5 Ecosystems

Any new planting however may require imported suitable topsoil and subsoil. Soil sampling during the recommended ground investigation will identify the prevailing soil chemistry and possible reuse of site won soils.

3.8.6 Building Materials

Soil sampling during a site investigation should identify the presence of any aggressive substances of concern such as sulphates. Any buried concrete should conform to an appropriate concrete class in accordance with industry guidance.

3.9 Qualitative Preliminary Human Health and Environmental Risk Assessment

A Qualitative Preliminary Risk Assessment (QPRA) aims to make initial assumptions about potential risks posed towards the human health, the aquatic environment, ecology and buildings/materials, during all stages of the development. Where it is assumed that a potential pollution pathway exists, there is a potential source, a potential receptor and a likely pathway, which links the two. The QPRA can be refined into a qualitative and quantitative risk assessment once the site investigation and laboratory soil chemical testing/environmental assessment has been undertaken. The risk assessment is presented in **Table 3.4** on the following page.

3.9 Qualitative Preliminary Human Health and Environmental Risk Assessment (Continued)

Table 3.4 Preliminary Human Health and Environmental Risk Assessment

Source and potential contaminants	Receptor	Pathway	Viable pollution linkage	Mitigation
Made Ground is expected on site which may contain metals, organics and asbestos depending upon its composition and source.	Site end users	Ingestion of soil/dust, Inhalation of dust/asbestos, ingestion of home-grown produce Uptake of soil dust through the eye Dermal contact with soils Exposure to ground gases	This is a viable pollution linkage. However the development of the site offers the opportunity to mitigate any adverse health effects. Imported soils may be required for any planting/garden/landscaped areas.	Ground investigation, soil sampling and testing, quantitative risk assessment
	*** Construction workers	*** Ingestion of soil/dust, Inhalation of dust/asbestos Exposure to ground gases within excavations/confined spaces Uptake of soil dust through the eye Dermal contact with soils	*** This is a viable pollution linkage in the short term during construction. All adverse effects during construction should be controlled adequately through PPE, COSHH, and a good standard of site health and safety and hygiene.	
	*** Passers-by by and neighbouring site occupants	*** Inhalation of soil dust, fugitive asbestos Uptake of soil dust through the eye	*** This is a viable pollution linkage in the short term during construction. All adverse effects should be easily mitigated through dust suppression, site screening and good site management	
	*** Perched water / Groundwater / controlled waters	*** Leaching of contaminants into groundwater	*** This is a viable risk depending upon the presence of made ground. However the development of the site offers the opportunity to mitigate any risks.	
Soil/water/construction materials	Adjacent land	Runoff of materials and earth during construction	This is a viable pollution linkage in the short term during construction. All adverse effects should be easily mitigated through good site management, prevent surface runoff and prevent spillage of materials.	Good construction site management

SECTION 4 Field Investigation

4.1 Site Works

A geo-technical and geo-environmental site investigation was undertaken on the 14th of August 2015.

Five windowless sampling boreholes were installed across the study site using a tracked mini percussive drilling rig. In-situ penetration tests were performed at 1m intervals until refusal.

The fieldworks were attended by a Terra Firma Wales Ltd Chartered Geologist. The field works were undertaken and the soils were logged in general accordance with BS 5930: 1999 + Annex 2: 2010, BS EN 1997-1 and -2. The Window Sampling Borehole Logs are presented in **Annex C** and field photographs are illustrated in **Annex D**. The location of the exploratory holes is given in **Drawing 02**.

4.2 Ground Conditions

The ground conditions encountered are summarised as follows:

Table 4.1 Summary of Ground Conditions			
Depth from (m)	Depth to (m)	Thickness (m)	Stratum description
0.00	0.20/0.40	0.20/0.40	(Loose) brown very clayey SAND / in places (soft) very sandy CLAY with some gravel. Gravel is fine to coarse angular of shale and occasional black vesicular slag. Occasional brick fragment. Occasional fine roots. (MADE GROUND)
0.20/0.40	>3.5/>4.00	-	(Soft becoming firm typically below 1m/1.5m) brown and tan brown with grey inclusions slightly sandy/sandy silty CLAY with many gravels. Occasional cobble. Gravel is fine to coarse angular/subangular/subrounded of mudstone/shale/siltstone. Coal inclusions. (GLACIAL TILL)

WS01 encountered a thicker mantle of Made Ground comprising (soft to firm) grey brown sandy silty CLAY with gravels, cobbles and inclusions of brick and glass to 1.20m, underlain by Made Ground as described in the table, to a depth of 1.50m. Glacial Till, as described above, prevailed to the maximum investigated depth of 3.50m.

4.3 Excavation Stability

Trial pit excavations were not undertaken. Excavation stability is considered further in **Section 10**.

4.4 Groundwater

Groundwater was encountered during the drilling exercise within WS04 at a depth of 2.5m.

4.5 Visual / Olfactory Evidence of Contamination

The Made Ground contained coal, clinker and slag content which will typically exhibit elevated levels of metals and polyaromatic hydrocarbons.

4.6 Buried Obstructions

Buried obstructions were not encountered.

4.7 Laboratory Soil Chemical Testing

4.7.1 Soil Exploratory Strategy and Sampling Regime

During the intrusive investigation, small disturbed soil samples were collected. The soil sampling regime was conducted to provide a preliminary assessment of types and concentrations of contamination.

The six soil sample locations and depths are listed in the following table.

Table 4.2 Soil Sample Locations and Depths		
Sample	Depth (m)	Stratum
WS02	0.1	Dark brown very sandy GRAVEL (sample matrix outside MCERTS scope of accreditation)
WS01	1.2	Dark brown slightly gravelly, clayey SAND
WS01	0.5	Dark brown, gravelly, sandy CLAY
WS03	0.1	Dark brown, gravelly, sandy CLAY (Made ground -brick)
WS04	0.1	Brown, gravelly, sandy CLAY
WS05	0.2	Dark brown, gravelly, sandy CLAY

4.7.2 Soil Laboratory Analysis

The soil samples taken were despatched to the laboratories of Derwentside Environmental Testing (DETS) for laboratory chemical testing. The following chemical tests were undertaken:

Metals

Arsenic
Cadmium
Chromium
Chromium III
Hexavalent chromium
Copper
Lead
Mercury
Nickel
Selenium
Zinc

Inorganics

Cyanide
Sulphate

Others

pH
Asbestos (screen only)

Organics

Monohydric phenol
Polyaromatic hydrocarbons (priority 16)

The laboratory chemical test results are presented in **Annex E**.

4.8 Soil Geotechnical Testing

A small number of representative soil samples (disturbed) were sent to the laboratory of Apex Testing Services Ltd. The soil plasticity index has been determined in accordance with BS 1377: Part 2: 1990. The results are presented in **Annex F** and a summary is given below.

Table 4.3 Soil Plasticity Test Results			
Sample	Depth (m)	Stratum	Modified plasticity index (soil shrinkage potential)
WS01	0.80	Grey brown gravelly slightly sandy SILT	12.16 (low)
WS01	3.00	Brown slightly gravelly slightly sandy CLAY	8.64 (low)
WS02	1.50	Grey brown slightly gravelly slightly sandy CLAY	7.70 (low)
WS02	2.50	Grey brown slightly gravelly sandy CLAY	9.00 (low)
WS04	3.75	Grey brown slightly gravelly slightly sandy CLAY	10.27 (low)
WS05	1.80	Brown grey slightly gravelly sandy CLAY	14.04 (low)

SECTION 5 Soil Analytical Results

5.1 Soil Assessment Methodology

Environmental risk assessment evaluates the risk to receptors via an analysis of the 'source-pathway-target' linkage. In order for a risk to be present, there must be a contaminant source capable of causing a health risk, a vulnerable receptor, and a pathway linking the two.

This sort of risk assessment is usually conducted using a tiered approach. A tiered approach consists of a comparison of the analytical results obtained from the site investigation with Soil Guideline Values (SGV's) specific to the type of development obtained from The Environment Agency Contaminated Land Exposure Assessment (CLEA) Guidelines.

At the time of writing the most contemporary Soil Guideline Values will be used in the risk assessments.

Where SGV values are not available reference has been made to the Chartered Institute of Environmental Health (CIEH) Generic Assessment Criteria (GAC).

Should Tier 1 levels be exceeded, a choice is made either to remediate the site to conservative Tier 1 levels, or proceed to Tier 2.

Tier 2 makes use of site-specific data to evaluate acceptable concentrations of chemicals for the particular conditions present at the site.

At each tier, the amount and detail of investigation work increases as more site specific data are needed to refine the characterisation of the site. Conversely, as site conditions are better understood, a more site-specific remediation strategy can be determined.

The chemical test results have been compared to a residential land use.

It is however important to note that the guideline values/generic assessment criteria are not reflective of the occupational health of the construction workers. This should be assessed independently by the principal contractor.

5.2 Evaluation of Soil Analytical Results

For Tier 1, the site itself is considered to be the receptor. Therefore, attenuation of contaminants between the source and receptor is not considered. A summary of the chemical test results which include the regulatory soil guideline values used in the Tier 1 assessment are given in **Table 5.1**.

Table 5.1 Summary of Soil Chemical Test Results - Metals and Inorganics						
Substance	SGV/ GAC (mg/kg)	Source	Measured Concentrations of Tested Substances (mg/kg)		95% UCL	Number of exceedences
			Min	Max		
Metals						
Arsenic	32	CLEA	8.4	24	20.893	0
Cadmium	10	CLEA	0.6	1.1	0.9865	0
Chromium	-	-	14	23	21.261	-
Chromium III	910	CIEH	14	23	21.261	0
Hexavalent Chromium	6	CIEH	<1	<1	1	0
Copper	2400	CIEH	17	68	56.004	0
Lead	342	ATRISK	26	480	300	1
Mercury	170	CLEA	<0.05	0.33	0.23	0
Nickel	130	CLEA	20	38	35.775	0
Selenium	350	CLEA	<0.5	0.8	0.6508	0
Zinc	3700	CIEH	86	210	196.59	0
Inorganics						
pH	-	-	6.7	8.6	8.1452	-
Cyanide Total	8	CLEA	<0.1	<0.1	0.1	0
Organic matter	-	-	1.7	22	14.533	-
Total Sulphate as SO ₄	0.24 %	BRE	0.04	0.13	0.1075	0
PAHs						
Naphthalene	13	CIEH	<0.03	0.64	0.4519	0
Acenaphthylene	920	CIEH	<0.03	0.17	0.1004	0
Acenaphthene	1100	CIEH	0.85	1.7	1.0182	0
Fluorene	860	CIEH	0.78	1.5	0.9074	0
Phenanthrene	440	CIEH	0.05	12	6.9174	0
Anthracene	11000	CIEH	<0.03	1.9	1.3056	0
Fluoranthene	890	CIEH	0.07	28	15.621	0
Pyrene	2000	CIEH	0.07	23	12.83	0
Benzo(a)anthracene	13	CIEH	<0.03	9.8	6.0775	0
Chrysene	27	CIEH	<0.03	10	6.6666	0
Benzo(b)fluoranthene	3.7	CIEH	<0.03	13	9.5	2
Benzo(k)fluoranthene	100	CIEH	<0.03	4.7	3.2495	0
Benzo(a)pyrene	3	CIEH	<0.03	9.9	6.6041	2
Indeno(1,2,3-c,d)pyrene	41	CIEH	<0.03	5.2	3.6997	0
Dibenzo(a,h)anthracene	0.3	CIEH	<0.03	1.8	1.2283	2
Benzo(g,h,i)perylene	350	CIEH	<0.03	5.8	4.0146	0
Total PAH - USEPA 16	-	CIEH	0.18	120	77.145	-
Phenols						
Phenol - monohydric	420	CLEA	<0.3	<0.3	0.3	0
Others						
Asbestos	Nil	-	No asbestos detected			

5.2 Evaluation of Soil Analytical Results (Continued)

Table 5.1 Notes:

- CLEA - Soil Guideline Values (SGV) developed by the Contaminated Land Exposure Assessment - residential development
- CIEH - Chartered Institute for Environmental Health Land Quality Management (LQM) Generic Assessment Criteria (GAC) - residential development . 6% SOM used for organics.
- Atkins ATRISK^{soil} - soil screening value (SSV) for a residential development - 6% SOM
- C4SL - Category 4 Screening Levels
- BRE Building Research Establishment
- Six samples of soil were analysed

5.3 Contaminants of Concern in Soils

Contaminants of concern are those whose measured concentrations or 95% Upper Confidence Limit exceeds the relevant Generic Assessment Criteria for a residential land end use.

All measured concentrations of metals, metalloids, inorganics and organics were within acceptable limits with the following exceptions for samples collected from WS02 and WS05:

Table 5.2 Summary of Substances of Concern				
Substance	SGV/ GAC (mg/kg)	Source	Sample WS02 0.10m	Sample WS05 0.20m
Lead	342	ATRISK	-	480
Benzo(k)fluoranthene	3.7	CIEH	3.8	4.7
Benzo(a)Pyrene	3	CIEH	7.3	9.9
Dibenzo(ah)anthracene	0.3	CIEH	1.4	1.8

In addition, there was no asbestos identified within the soil matrix. However as described previously, asbestos containing tile fragments are occasionally evident, lying upon the site surface.

Please refer to **Section 7** for associated Risk Assessments and Mitigation Measures.

SECTION 6 Assessment of Ground Gas Risk

The Made Ground underlying the site may have the potential to generate gases such as methane and carbon dioxide. Inspection of the Made Ground and laboratory chemical analysis does not identify any risk from volatiles.

As an economical alternative to gas monitoring we consider it appropriate to install a 2000g DPM/reinforced gas membrane with passive under floor venting. In addition, all joints and penetrations should be sealed.

These mitigation measures are equivalent to gas characteristic 2 in accordance with CIRIA C665 (low risk).

The installation of the gas resistant membrane in accordance with manufacturer's specification must be validated.

SECTION 7 Quantitative Risk Assessment/Mitigation Measures

It should be noted that the following substances of concern are based upon a comparison of measured concentrations with Generic Assessment Criteria for a residential land use. These assessment criteria are not reflective of the occupational health of the construction workers. This should be assessed independently by the principal contractor.

7.1 Contaminants of Concern

7.1.1 Made Ground

The Made Ground sampled from WS05 contains an elevated level of lead. The 95% UCL indicates that the elevated level of lead may be an isolated hot spot.

The Made Ground in samples from WS05 and WS02 also contained elevated levels of benzo(k)fluoranthene, benzo(a)Pyrene and dibenzo(ah)anthracene. The 95% UCL indicates that the elevated PAHs are probably typical of the Made Ground as opposed to isolated hot spots.

Whilst asbestos was not identified within the soil matrix, asbestos containing tile fragments are occasionally evident, lying upon the site surface.

7.1.2 Volatiles

Whilst there are measurable levels of polyaromatic hydrocarbons within the subsurface Made Ground, none of the substances identified are volatile and there is therefore no risk from volatiles.

7.1.3 Radon Gas

Radon protection is not required.

7.1.4 Ground Gases

As discussed in **Section 6**, the Made Ground underlying the site may have the potential to generate gases such as methane and carbon dioxide. We consider the level of risk to be low and we recommend the installation of a 2000g DPM/reinforced gas membrane with passive under floor venting. In addition, all joints and penetrations should be sealed.

7.1.5 Japanese Knotweed

New growth of Japanese Knotweed locates within the northern, southern and western site areas. Knotweed poses a high risk to structures and the environment.

7.2 Potential Human Health Exposure Pathways

The relevant exposure pathways are as follows:

1. Ingestion of soil/soil dust/home-grown produce
2. Dermal contact with soil/dust
3. Inhalation of soil dust
4. Inhalation of ground gas
5. Ingestion and Inhalation of asbestos fibres
6. Ingestion of water

7.3 Potential Human Receptors

7.3.1 Construction Workers

Construction workers will come into contact with Made Ground beneath the site. The principal contractor should therefore ensure that an appropriate level of health and safety is put in place including but not limited to personal protection equipment (PPE), good site management, COSHH, a high standard of hygiene and regular and effective dust suppression.

The asbestos containing tile materials (ACM) identified upon the ground surface should be handpicked and suitably disposed of at a licensed landfill. It would be prudent to liaise with an asbestos specialist.

All service trenches should be backfilled with inert materials.

The principal contractor should prepare a Material Management Plan (MMP) for the site, which the contractor(s) must adhere to. This will control and document the import/export/moving of soils both within the site and off site.

A low risk from ground gases (carbon dioxide and methane etc) risk has been qualitatively assessed. Appropriate health and safety procedures should be in place when working in confined areas. As mentioned previously, there is no identified risk of volatile gases.

7.3.2 Neighbouring Site Users and Passers-by

Passersby and neighbouring site users will be at risk from the inhalation of dust and air borne asbestos fibres during construction activities. These risks should be managed by the Principal Contractor as previously outlined in **Section 7.3.1**.

7.3.3 Future Site Users of Residential Development

Site end users will come into contact with Made Ground beneath the site. However the development of the site offers the opportunity to mitigate any long term human health risks.

The proposed development largely comprises capping the site with the proposed properties, car parking and road access. The proposed infrastructure and hard-standing areas will effectively cap the site prevent exposure of the Made Ground to the site end users. All garden and landscaped areas must however be capped with cover soils. The minimum recommended capping thickness is 0.60m of imported inert Topsoil/Subsoil. This is likely to be achieved by excavating out 0.60m of Made Ground and replacing it with inert soils rather than raising the site ground levels. It is also recommended that all ACM present upon the surface of the site is handpicked and suitably disposed of at a licensed landfill.

There is no risk from radon gases exceeding the recommended Action Limit. As previously mentioned, gas mitigation measures are recommended comprising a 2000g damp proof membrane / reinforced gas membrane with under floor venting and all joints and penetrations sealed.

With regards to protection of the potable water supply, all pipes must be designed to appropriate UK Water Industry Research guidance; Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites, Report Ref: 10/WM/03/21. The local Water Authority should be consulted at this stage.

7.4 Remediation Strategy and Validation of Remediation

A formal Remediation Strategy may be required as part of the planning application. This report is a separate document that describes the proposed development plan and discusses in detail the proposed remediation methods. The Remediation Strategy should be agreed with the Local Environmental Health Department. Once the remediation has been undertaken a Validation Report should be submitted to the Local Environmental Health Department to confirm that the site is suitable for use and confirm that there are no remnant intact significant pollution linkages.

7.5 Unusual Occurrences

If during the development materials are encountered that are significantly different to those encountered in the investigation, the occurrence should be reported to Terra Firma (Wales) Ltd and appropriate action taken prior to continuing with the works.

7.6 Importation of Materials

All imported soils/materials will require validation of their suitability for use at a residential site. This should entail chemical testing of a representative volume of the soils at source and once imported to site. The Welsh Land Contamination Working Group provides guidance for the sampling rationale and methodology.

7.7 Off Site Disposal at Landfill

Any materials for offsite disposal will require comprehensive waste classification. In accordance with EC Regulation 1272/2008 and Environment Agency Guidance WM2 (v. 2/2011) soils and other materials destined for off-site disposal should be classified on the basis of their hazard phases prior to disposal. Soils are classified as a mirror entry waste and should be classified on the basis of their specific chemical properties.

7.8 Aquatic Environment

7.8.1 Short Term

During the construction period, there is a risk to the environment/adjacent sites from digging foundations, moving 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 etc. These risks should be prevented by due diligence to good construction practise and housekeeping in preventing surface runoff and the spillage of materials.

7.8.2 Long Term

An assessment of the groundwater quality has not been undertaken. However, we do not consider the soil contamination identified to be gross, and we don't expect the Made Ground to pose an unacceptable risk to water resources.

7.9 Japanese Knotweed

A Japanese Knotweed Management Plan should be prepared for the site detailing the proposed remediation measures to be put in place. This may include a combination of excavation dig and dump and an approved programme of herbicide treatment. We recommend that a specialist ecologist be consulted.

7.9 Japanese Knotweed (Continued)

All the knotweed areas should be isolated with fencing prior to any construction works on site to prevent the risk of knotweed spread by site traffic and personnel. Isolation zones should be at least 7m laterally from any visible knotweed growth to ensure rhizomes close to the surface are not disturbed.

All site personnel should receive training on the identification of knotweed and be familiarised with proper hygiene methods to prevent it spread. No material should leave the site from the knotweed areas except as part of the specially supervised knotweed treatment works. No material should be stored within or adjacent to the isolated knotweed areas. No contaminated knotweed material should be moved across the site unless using a designated route and all care should be given to ensure there is no spillage of material. Where there is a risk of reinfestation from adjacent land owners, the landowner should be contacted to agree a co-ordinated programme of treatment.

Following successful remediation, it would be prudent to undertake monitoring as necessary under the cover of a guarantee agreement to the site.

7.10 Summary of Human Health and Environmental Risk Assessment

Table 7.1 Human Health and Environmental Risk Assessment				
Source and potential contaminants	Receptor	Pathway	Viable pollution linkage	Mitigation
Made Ground at WS02 and WS05 – lead and (non volatile) PAHs	Site end users	Ingestion of soil/dust, Inhalation of dust/asbestos, ingestion of home-grown produce Uptake of soil dust through the eye Dermal contact with soils Exposure to ground gases	This is a viable pollution linkage with a low to medium level of risk	The proposed buildings, driveways and roads will cap the site and prevent physical exposure to the Made Ground./ All garden and landscaped areas should be capped with 0.60m inert suitable Topsoil/Subsoil.
	Construction workers	Ingestion of soil/dust, Inhalation of dust/asbestos Exposure to ground gases within excavations/confined spaces Uptake of soil dust through the eye Dermal contact with soils	This is a viable pollution linkage in the short term during construction with a low level of risk.	All adverse effects during construction should be controlled adequately through PPE, COSHH, and a good standard of site health and safety and hygiene.
	Passers-by and neighbouring site occupants	Inhalation of soil dust, fugitive asbestos Uptake of soil dust through the eye	This is a viable pollution linkage in the short term during construction with a low level of risk.	All adverse effects should be easily mitigated through dust suppression, site screening and good site management
	Perched water / Groundwater / controlled waters	Leaching of contaminants into groundwater	This is not considered to be a viable pollution linkage.	No further action is considered necessary
Soil/water/construction materials	Adjacent land	Runoff of materials and earth during construction	This is a viable pollution linkage in the short term during construction with a low level of risk.	All adverse effects should be easily mitigated through good site management, prevent surface runoff and prevent spillage of materials.
Japanese knotweed	Structures and adjacent land/water courses	Growth and spread	This is a viable pollution linkage with a high level of risk.	A specialist ecologist should be appointed to develop a knotweed management plan.

7.11 Site Conceptual Model

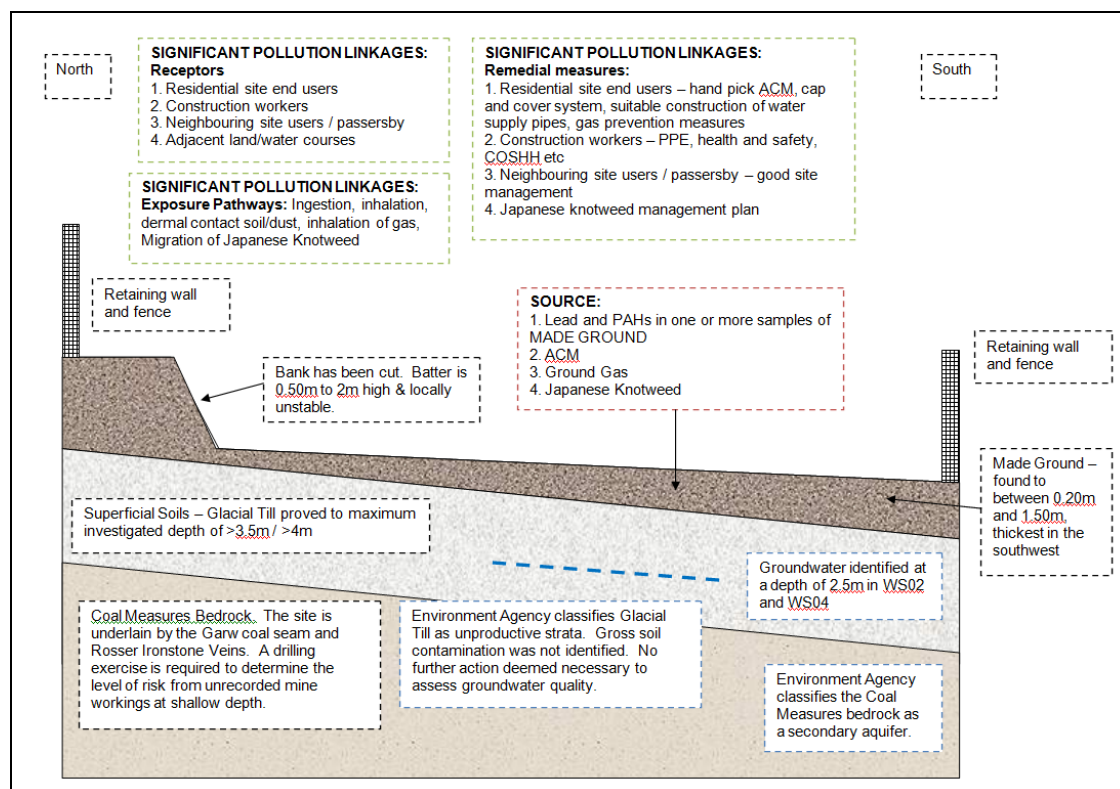


Figure 7.1 Conceptual Site Model (not to scale)

SECTION 8 Assessment of Potential Risks from Shallow Underground Coal Mining

8.1 Shallow Coal Mining Considerations

The site is not within the zone of likely influence on the surface from past underground workings. However, as discussed in **Sections 2.5.1 and 2.5.2**, the site lies within an area where the Coal Authority believe there is coal at or close to the surface; the Garw coal seam and the underlying Rosser Ironstone Veins. This coal and ironstone may have been worked at some time in the past. The crop of the Garw coal seam is not illustrated on the geological map and is therefore unknown. The seams may therefore crop within influencing distance of the site.

In view of the above, the site is considered to be at risk from possible abandoned mine workings. In order to determine the level of mining related risk, an intrusive investigation is required. A sufficient number of rotary open-hole boreholes will be required to confirm the presence and depth of the coal seams underlying the site and their thickness and condition. The boreholes should be drilled to a suitable depth into bedrock, typically between 30m.

Upon failure of abandoned mine workings by progressive roof collapse, crown holes may develop at the surface. The assessment of risk of crown hole development is based upon the ratio of rock head cover above the mined coal seam and the bulking properties of the overlying roof strata. For weak strata, CIRIA (1984) suggests a rock head cover to void ratio of 10:1. If the boreholes intercept significant mine workings at ratios of less than 10:1, then ground (void) stabilisation will be required by drilling and grouting to improve the ground bearing characteristics. This would entail the drilling of closely spaced boreholes around the footprint of the proposed houses and any outbuildings which would be grouted to form a grout curtain, down-dip side fist. The area inside the perimeter would then be drilled and grouted.

Depending upon the level of geotechnical risk a decision can be made as to the stabilisation of other site areas such as driveways/car parking/gardens or whether a suitable reinforced geomembrane is appropriate for lower risk areas. Alternatively bulk excavation and back filling could be undertaken for very shallow mine workings.

Where rock cover exceeds the 10:1 ratio, the potential for crown hole development at the surface as a result of mine working collapse is considered to be low. If workings are backfilled, or if the rock head cover to void ratio is equal to or greater than 10:1, then stabilisation may not be required and the engineering foundation solution may be designed to cater for any residual risks.

8.2 Mine Entry Considerations

The Coal Authority Mining Report does not identify any recorded mine shafts on site. However, the report states that records may be incomplete. Therefore, the possibility of unrecorded mine entries cannot be entirely discounted. During construction works, if any anomalous areas of fill, brick or stone work are identified, the occurrence should be reported immediately to Terra Firma and an appropriate investigation put in place.

8.3 Mine Gas Considerations

The Coal Authority Report confirms that there is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the study site.

8.4 Coal Authority Notifications

Permissions are required for all activities that intersect, disturb or access any of the Coal Authorities interests. It is therefore mandatory that the Coal Authority is notified of the proposal for ground investigation/rotary drilling exercise, mine entry investigation and proposals for gas and mine water monitoring. It is also mandatory to inform the Coal Authority of any proposals for stabilisation works and to undertake appropriate risk assessments.

SECTION 9 Geotechnical Risk Assessment

The following assessment of geotechnical risks is based upon the site investigation findings.

Table 9.1 Geotechnical Risk Assessment		
Hazard	Consequence	Comments and Design action required to reduce risk
Mining, quarrying		
Underground coal mining, surface subsidence, mine entries	Ground instability and geotechnical risk to proposed development.	The site is considered to be at risk from possible abandoned mine workings associated with the Garw coal seam and underlying Rosser Ironstone Veins. In order to determine the level of mining related risk, an intrusive investigation is required. There are no known mine entries but records may be incomplete. During construction works, if any anomalous areas of fill, brick or stone work are identified, the occurrence should be reported immediately to Terra Firma and an appropriate investigation put in place.
Structures / Foundations and Geotechnical Hazards		
Ground dissolution / karstic features	Ground instability could pose an unacceptable and catastrophic risk to the proposed infrastructure.	The geology beneath the site is not at risk from karstic features. No further action.
Landslides	Landslides pose an unacceptable and catastrophic risk to the proposed infrastructure.	The local area is unaffected by landslides. There was no evidence of ground instability on site during the walk over survey or ground investigation.
Weak and/or compressible ground	Unacceptable settlement causing design failure of the structure.	The Glacial Till (Clay) soils beneath the site are compressible when loaded. The foundation recommendations are appropriate to the ground conditions found and take into account anticipated bearing capacity and predicted total/differential settlements. All foundations should be constructed in accordance with these recommendations. During construction works, if variable/unexpected ground conditions are encountered, Terra Firma should be consulted immediately and appropriate design changes put in place if necessary.
Shrinking and swelling clay/silt	Shrinkable soils are subject to changes in volume as their moisture content is altered. Influenced by seasonal effects, tree roots. Soil movement can cause subsidence and heave, leading to failure of or disturbance to the infrastructure.	Samples of Glacial Till have been analysed and found to have a low shrinkage potential. The foundation depths must be constructed in accordance with soil shrinkage potential and with consideration to trees.
High water table / water logged soils	Buoyancy effects, ground loss and excessive settlements.	Groundwater was identified at a depth of 2.5m below ground level within WS02 and WS04. Allowances should be made for dewatering excavations and removal of soft spots. Foundations should be designed and constructed appropriately taking groundwater in to consideration.
Running sand	Difficult excavations, soil loss / ground collapse	Running sand conditions were not identified during the ground investigation. During construction works, if running sand is found, the occurrence should be reported immediately to Terra Firma and appropriate excavation stability measures put in place.
Expansive soils	Soil movement can cause subsidence and heave, leading to failure of or disturbance to the infrastructure.	The quantity of slag identified within the Made Ground is low and not expected to cause a risk from expansion. If any anomalous areas of Slag/unusual ground conditions are identified, the occurrence should be reported immediately to Terra Firma and an appropriate investigation put in place.
Unsuitable bearing stratum – soft, loose or weak soils	Excessive settlements, damage to structures, ultimate or serviceability state failure	The foundation recommendations are appropriate to the ground conditions found and take into account anticipated bearing capacity, predicted total/differential settlements and potential risk from mining. All foundations should be constructed in accordance with these recommendations. During construction works, if variable/unexpected ground conditions are encountered, Terra Firma should be consulted immediately and appropriate design changes put in place if necessary.

9.0 Geotechnical Risk Assessment (Continued)

Table 9.1 Geotechnical Risk Assessment (Continued)		
Hazard	Consequence	Comments and Design action required to reduce risk
Below ground obstructions		
Buried obstructions	Unsuitable strata for the chosen foundation solution / service installation (time and cost impact) and geotechnical risk	Buried obstructions have not been encountered. If identified, all buried structures should be broken out and removed from beneath the proposed structures. Foundations should be suitably designed; deeper foundations may be needed.
Cuttings and Embankments		
Cuttings and slope instability	Ultimate or serviceability state failure due to unsuitably designed cuttings	Further cutting of the site is not envisaged. The existing cutting bank requires support via a retaining structure. The retaining wall should be designed and constructed appropriately.
Embankment settlement and stability	Surface subsidence, unacceptable settlement exceeding design tolerances, ultimate or service state failure	Embankment construction is not anticipated.
Unexpected occurrences		
Unexpected and variable ground conditions	Slowing down of construction process, design changes required, project delayed, time and cost implications	The GI findings should be communicated to the principal contractor and site workers. Any unusual occurrences should be reported Terra Firma and design changes put into place as required.
Limited knowledge		
Limited knowledge of ground conditions	Unsuitable strata for the chosen foundation solution (time and cost impact) and geotechnical risk. Variable engineering properties and behaviour leading to unacceptable settlement. Obstructions in the ground leading to design changes, time and cost impact to project.	A ground investigation has been undertaken, the findings of which should be communicated to the principal contractor and site workers. All risk assessments and foundation /engineering recommendations have been based upon the ground conditions encountered. Any unusual occurrences or previously unidentified ground conditions must be reported immediately to Terra Firma and appropriate investigation/design checks put in place.
Contamination and chemical attack		
Aggressive ground	High sulphates, low pH which may lead to chemical attack buried concrete	All buried concrete should be designed to DS-1, AC-1.
Soil contamination	Contaminants of concern in soils which may pose a health, environmental or construction material risk	Soil laboratory analysis has identified elevated levels of lead and PAH within the Made Ground. ACM is also evident at ground level. The principal contractor should therefore ensure that an appropriate level of health and safety is put in place. ACM should be handpicked and suitably disposed of. A cap and Cover System is recommended for the site end users, entailing a thickness of 0.60m inert soils in all garden and landscaped areas. Any unusual occurrences or previously unidentified deleterious materials must be reported immediately to Terra Firma and appropriate investigation/remedial measures put in place.
Water contamination	Contaminants of concern in soils which may pose a health, environmental or construction material risk	An assessment of the groundwater quality has not been undertaken. The soil chemical testing has not identified levels of contamination expected to pose a risk to water resources and no further action is considered necessary. Any unusual occurrences or previously unidentified deleterious materials/water must be reported immediately to Terra Firma and appropriate investigation/remedial measures put in place.
Utilities		
Underground or overhead services	Physical damage to utility, physical injury/loss of life	The contractor should liaise with the statutory providers. All service runs should be located and marked to avoid accidental damage and injury to persons. Buried services may need rerouting.

9.0 Geotechnical Risk Assessment (Continued)

Table 9.1 Geotechnical Risk Assessment (Continued)		
Hazard	Consequence	Comments and Design action required to reduce risk
Neighbouring properties		
Damage to existing structures or services around the scheme due to ground deformation or vibration	Third party claims, increased cost of proposed development	The design and construction team should identify the location of existing structures and potential problems before construction. Foundations should be designed to limit ground deformation. Potential monitoring of nearby structures during construction.

SECTION 10 Preliminary Engineering Recommendations

10.1 General

The preliminary recommendations given in the following sections are based on the available desk study and ground investigation information. The foundation solution should be reviewed and if necessary amended following the recommended drilling exercise to determine the level of risk from past underground mining.

10.2 Site Preparation

All ACM upon the ground surface should be handpicked by a specialist asbestos consultant and disposed of safely at a licensed landfill.

A Japanese Knotweed specialist/ecologist should be consulted, a knotweed management plan prepared for the site and the knotweed suitably remediated prior to any site works commencing.

All other scrub vegetation including all roots should be grubbed up and removed from beneath the proposed houses, access road and car parking areas.

The reduced levels should be brought up to the required levels with well-compacted imported granular materials. Department of Transport (DoT) type 2 sub base or similar should be used and should be compacted in layers to the requirements of the Specification for Highway Works. Alternatively, appropriate selected inert imported fill could be used.

Allowances should be made for removing any soft spots/areas and their replacement with well-compacted imported granular materials as previously described.

Contingencies should be allowed for the diversion and/or protection of any underground services brought about as a result of the proposed works.

We understand that no further enabling works (cut and fill) are required at the site. The northern site margin has already been cut back, this batter will require retaining. See **Section 10.4**.

10.3 Foundation and Floor Slab Solution

A reinforced concrete raft type foundation/floor slab solution will be a suitable engineering solution for the development. The maximum load beneath the foundation should not exceed 50kN/m². Total settlement of the foundation should not exceed 30mm with angular distortions caused as a result of differential settlements should be less than 1:750.

If following the recommended drilling exercise, shallow workings are encountered in the form of collapsed workings/broken ground with only small voids then it is likely that a reinforced concrete raft foundation/floor slab solution be adopted for the development. The raft should be thickened beneath edge beams and load bearing walls and be designed to span a crown hole of 3.0m and a 1.5m cantilever effect at the edges. The maximum load beneath the foundation should not exceed 50kN/m².

10.3 Foundation and Floor Slab Solution (Continued)

However, if the recommended site investigation encounters significant voids then the old workings will need to be stabilised by drilling and grouting prior to construction of foundations. Following successful ground stabilisation, a modified raft capable of spanning a remnant void of 1.0m should be suitable. The maximum load beneath the foundation should not exceed 50kN/m².

To avoid damage from frost action, the depth to the underside of the foundation in frost susceptible ground should be at least 450mm (0.45m) below finished ground level.

Where trees are nearby, especially where soils are shrinkable, foundations should be designed accordingly. Chapter 4.2 of the NHBC Standards provides minimum founding depths in accordance with tree types and soil shrinkage potential.

As summarised in **Section 4.8**, soil geotechnical analysis demonstrated that the cohesive superficial deposits are of low shrinkage potential.

The Boulder Clay/Glacial Till is typically soft to a depth of 1m / 1.5m below which depth the clay consistency becomes 'firm'. The above quoted maximum foundation load is therefore a lower bound allowable bearing capacity taking into account the 'soft' consistency of the shallow Clay materials in order to limit foundation settlement.

For the above foundation solutions and bearing pressure total settlements should not exceed 30mm with angular distortions caused as a result of differential settlements being less than 1:750.

Allowances should be made for the treatment of / removal of soft spots as previously described. It is recommended that a Terra Firma Engineer inspect all foundation excavations before concreted and any unusual occurrences/ground conditions should be reported immediately.

10.4 Retaining Walls

A cut exercise has been performed along the northern site margin. The resultant batter is typically 0.5m to 2m in height and is near vertical. The soil exhibits localised slumping due to the over steepened slope and exposure to the weather etc. This batter will require the construction of a retaining wall to ensure long term stability. The effective angles of shearing resistance of the encountered materials have been determined based upon past experience of the materials. Laboratory testing of representative soil samples should be undertaken at a future date to confirm the quoted parameters.

Table 10.1 Effective Shear Stress Parameters				
Stratum Description	Bulk Weight kN/m ³	Unit (γ)	Effective Cohesion (c') kN/m ²	Effective Angle of Shearing Resistance (ϕ') degrees
Loose granular material (Made Ground)	18 – 19		0	<20
Soft cohesive material	18 - 20		0	<20
Firm to stiff cohesive material	18 - 20		0	25 - 30
Well compacted, granular materials, compacted as per Specification for Highway Works and other relevant guidance such as British Standards (BS) 6031: 2015. Code of Practise for Earthworks.	19 - 22		0	30 - 34

The design and construction of the retaining walls and cut and fill should be in accordance with BS 6031: 2015 Code of Practice for Earthworks and other relevant guidance. It is recommended that the construction of retaining walls be carried out in small sections.

Allowances should also be made for the removal of soft spots and their replacement with imported suitable selected inert granular materials or suitable inert site won materials. Any evidence of slope instability should be reported to a Terra Firma geotechnical engineer and appropriate remedial measure implemented. All retaining walls should have suitable drainage installed to the rear to prevent the build up of water pressure.

10.5 Excavations and Formations

Most of the shallow excavations should be possible with normal soil excavating machinery. Shallow excavations are likely to encounter groundwater flows. Any 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 1.0m should be supported by planking and strutting or other proprietary means.

The sub-formations/formations will be highly 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.

10.5 Excavations and Formations (Continued)

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.

It is recommended that approval be gained from a qualified engineer of the formation condition before covering them with any subsequent construction.

All materials to be removed from the site should be subject to Waste Acceptance Criteria Testing to allow classification for removal.

10.6 Protection of Buried Concrete

Laboratory chemical analysis identified pH (acidity) levels of between 6.7 and 8.6 pH units and total sulphate concentrations of between 0.04% and 0.13%. All buried concrete should as a minimum conform to ACEC Class AC-1 of BRE Special Digest 1 (2001).

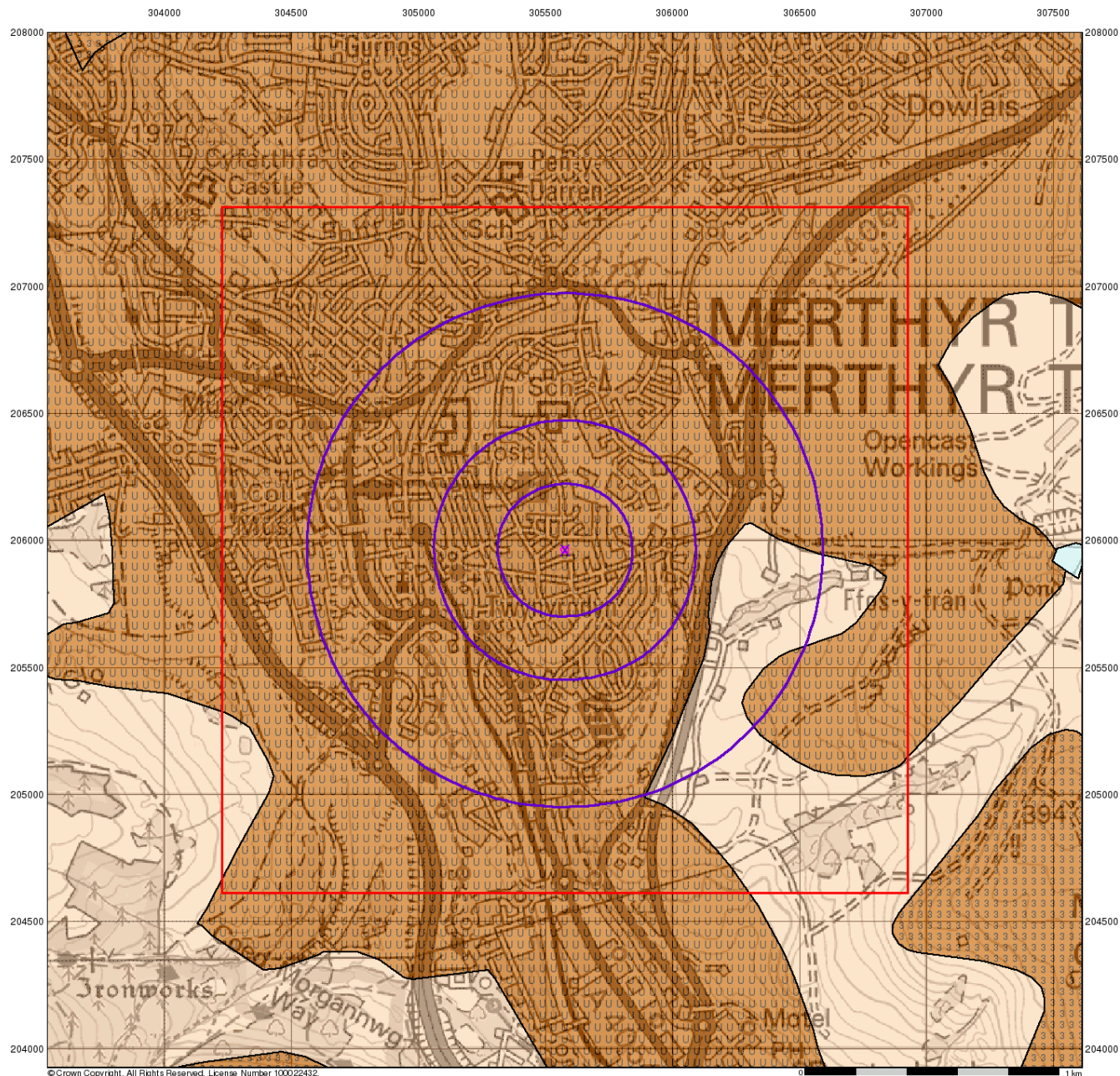
10.7 Soak Away Drainage

Field soakaway testing was not undertaken within this phase of ground investigation. The suitability of the Boulder Clay for drainage should be confirmed by excavating trial pits and performing soakaway tests in accordance with BRE 365. Any soak aways should be positioned a suitable distance away from below ground structures such as foundations. Based upon visual inspection of the Boulder Clay, we anticipate that this material will demonstrate poor drainage characteristics. Should the more granular Made Ground be targeted for soakaway drainage soakaway, we recommend further chemical analysis of the material to confirm contaminant leachability to demonstrate the risk level to groundwater from dissolved substances.

10.8 Roads, Pavements and Drive Ways

For new road, pavement and drive way formations, we recommend that a CBR design value of 2% is used. As previously described, allowances should be made for the removal of soft spots/areas and their replacement with well compacted granular materials.

ANNEX A
Landmark Envirocheck Report and Historical Maps



Groundwater Vulnerability

General

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

Agency and Hydrological

Geological Classes

Major Aquifer (Highly Permeable)

Minor Aquifer (Variably Permeable)

Non Aquifer (Negligibly Permeable)

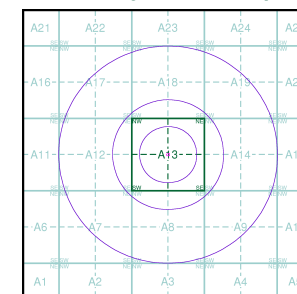
Water or Sea

Drift Deposit

Soil Classes

- High (H) 1, 2, 3, U
- Intermediate (I) 1, 2
- Low
- High (H) 1, 2, 3, U
- Intermediate (I) 1, 2
- Low

Site Sensitivity Context Map - Slice A



Order Details

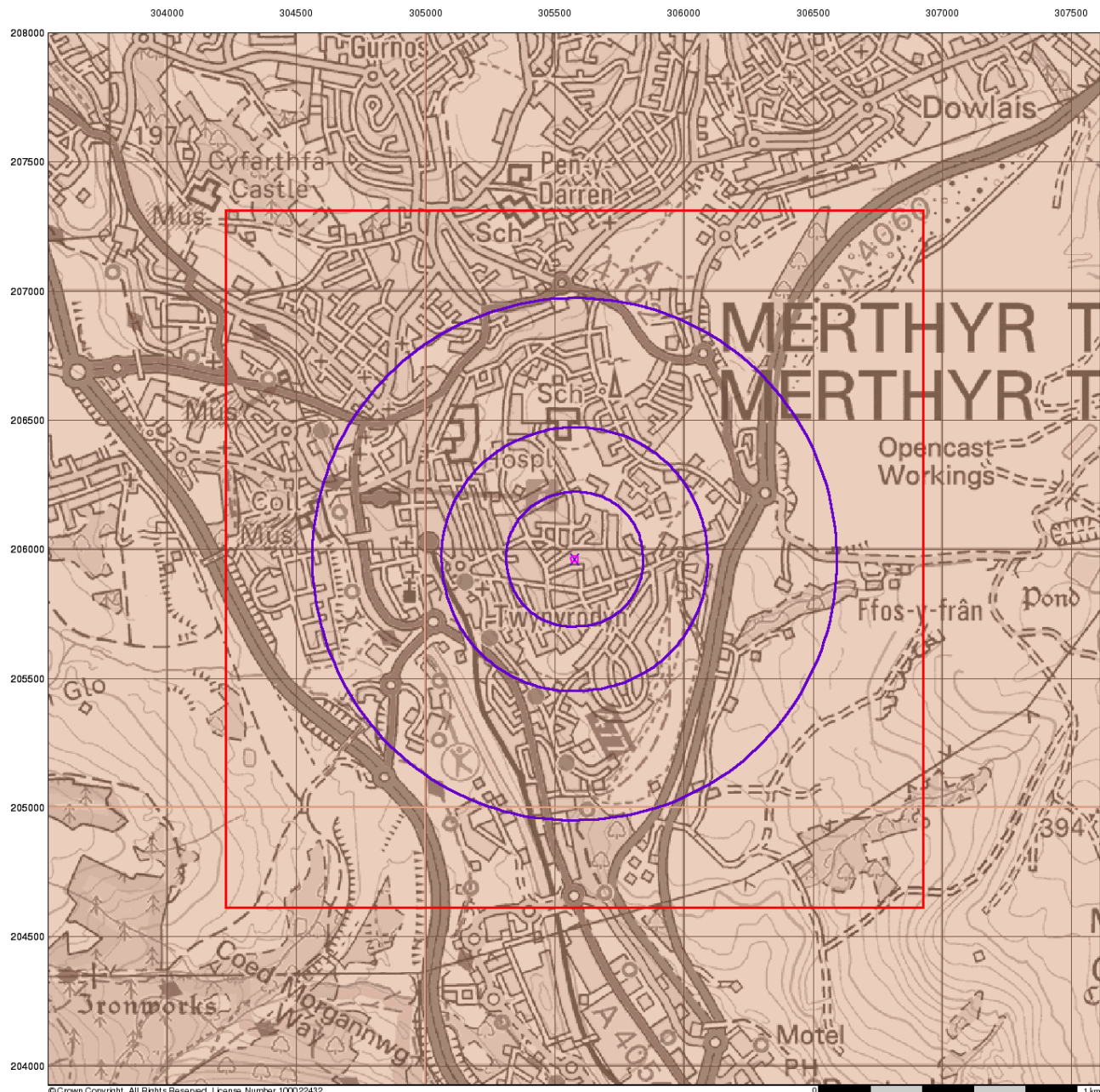
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 Site Area (Ha): 0.06
 Search Buffer (m): 1000

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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Bedrock Aquifer Designation

General

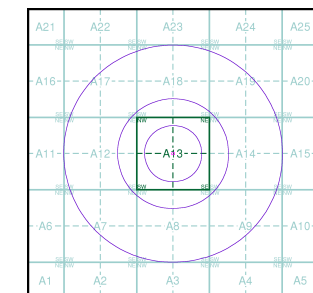
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice A



Order Details

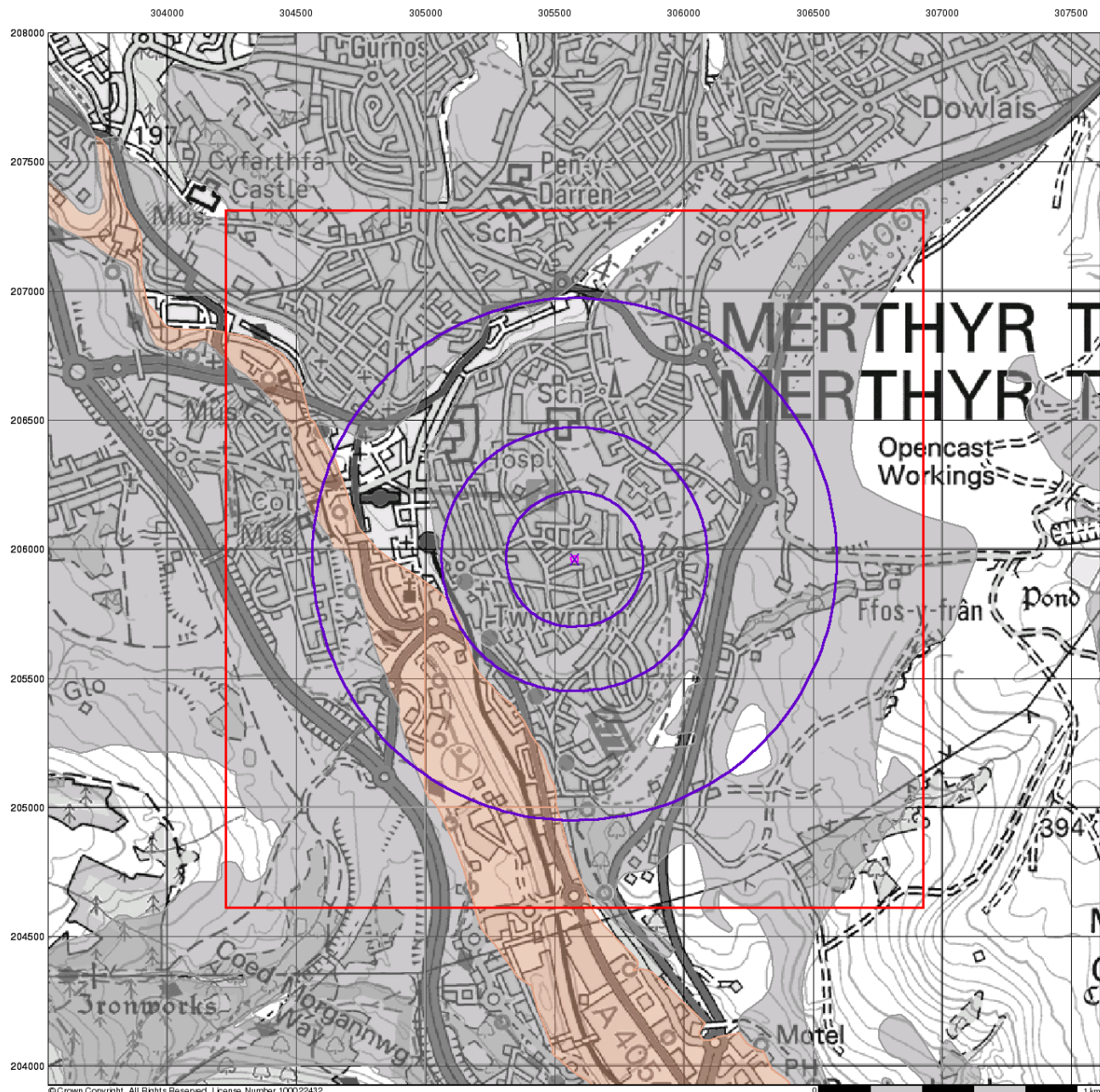
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Superficial Aquifer Designation

General

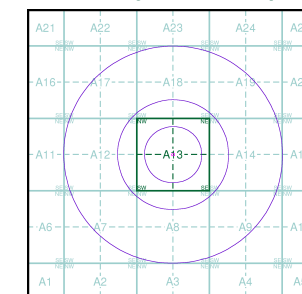
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Agency and Hydrological

Geological Classes

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- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice A



Order Details

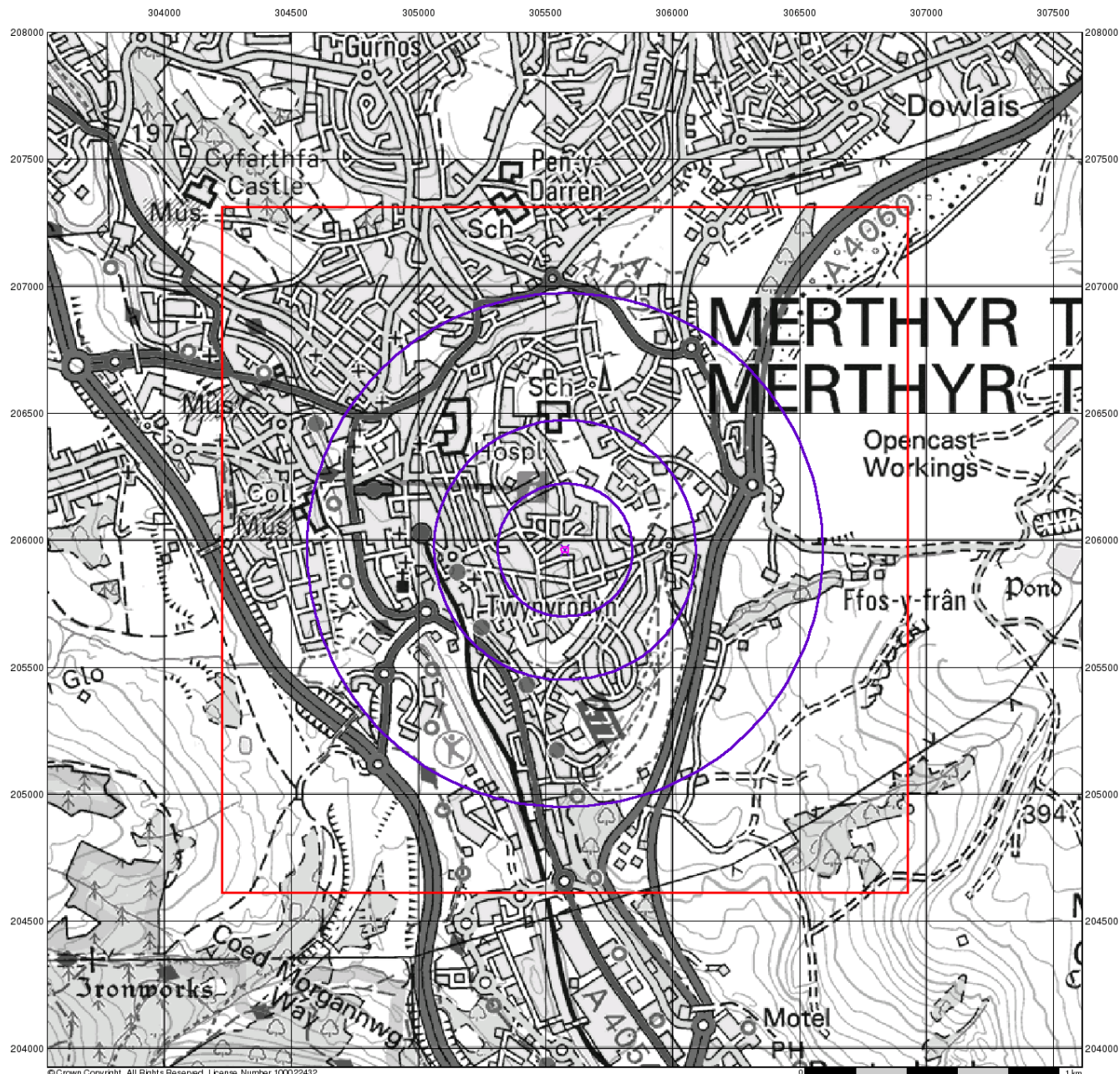
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Source Protection Zones

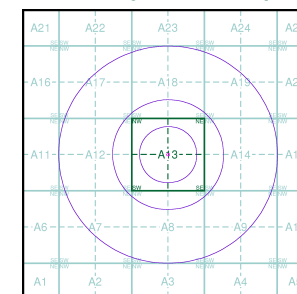
General

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

Agency and Hydrological

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

Site Sensitivity Context Map - Slice A



Order Details

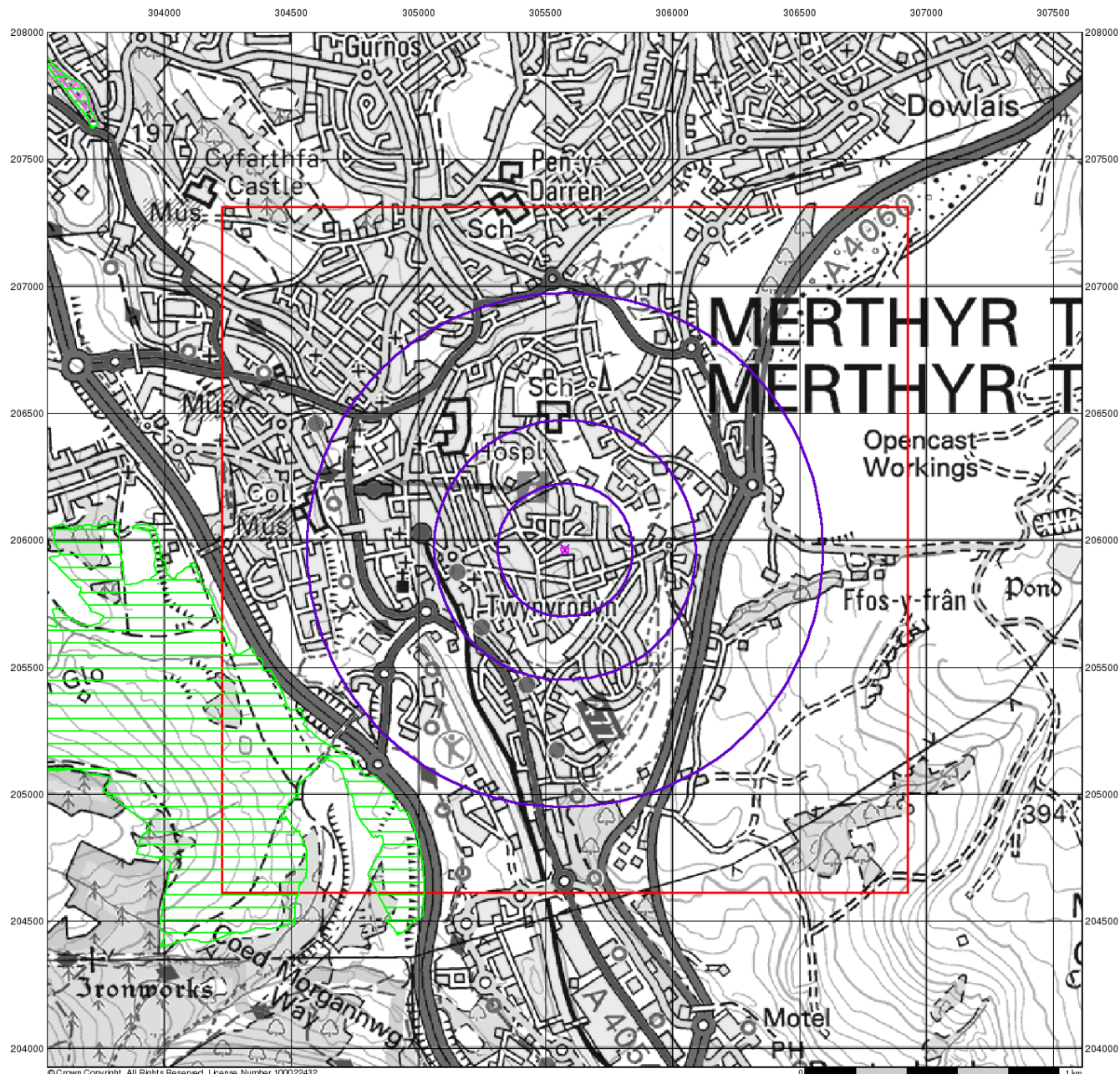
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Sensitive Land Uses

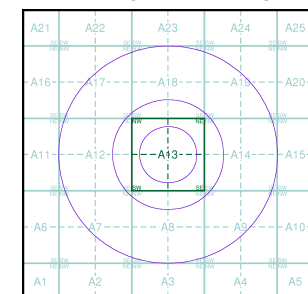
General

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

Sensitive Land Uses

- 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

Site Sensitivity Context Map - Slice A



Order Details

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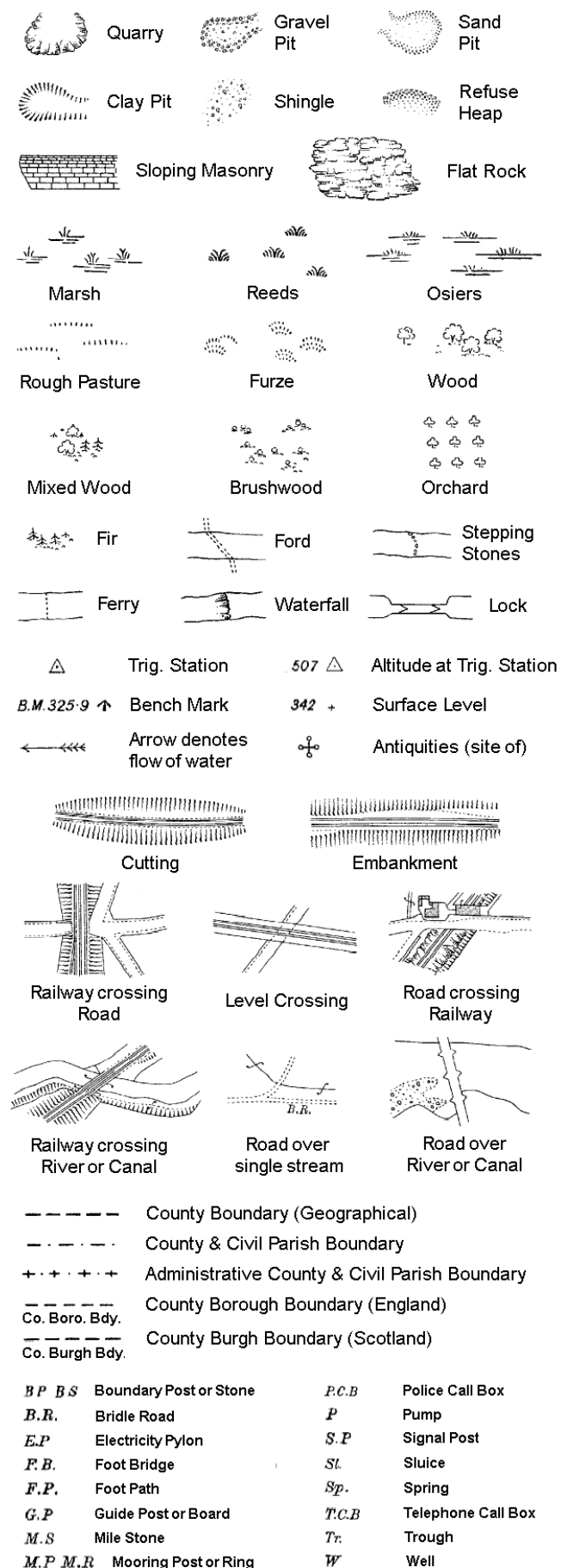
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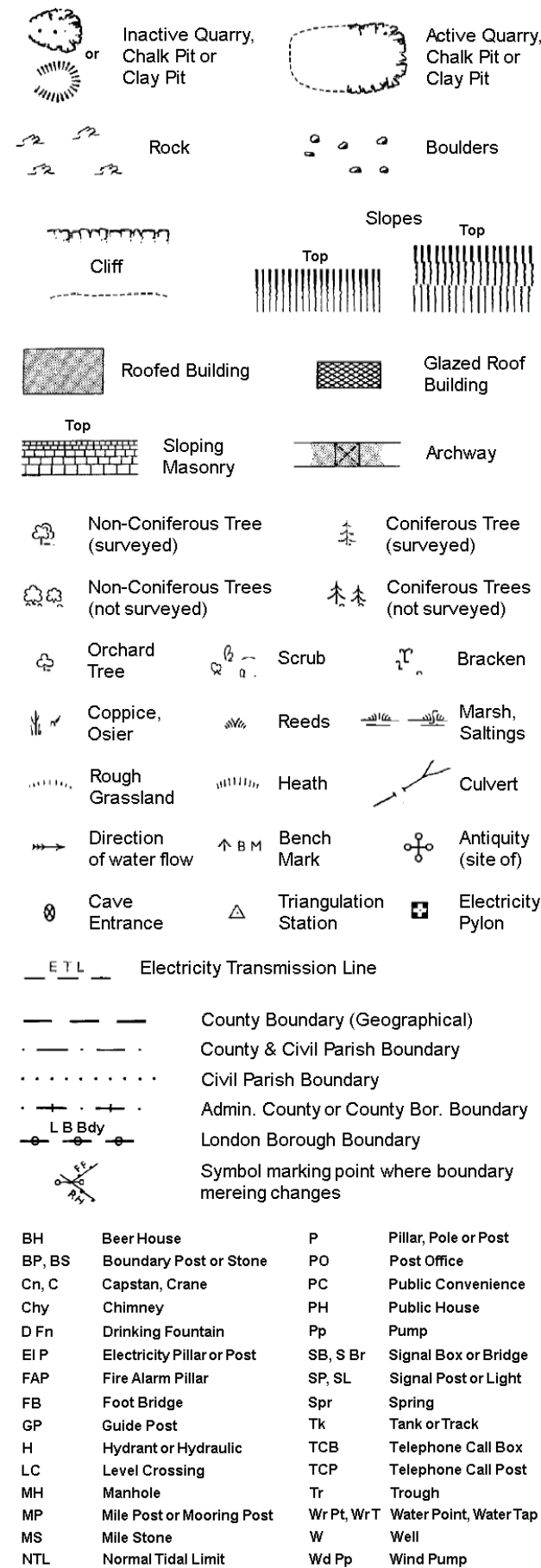
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Historical Mapping Legends

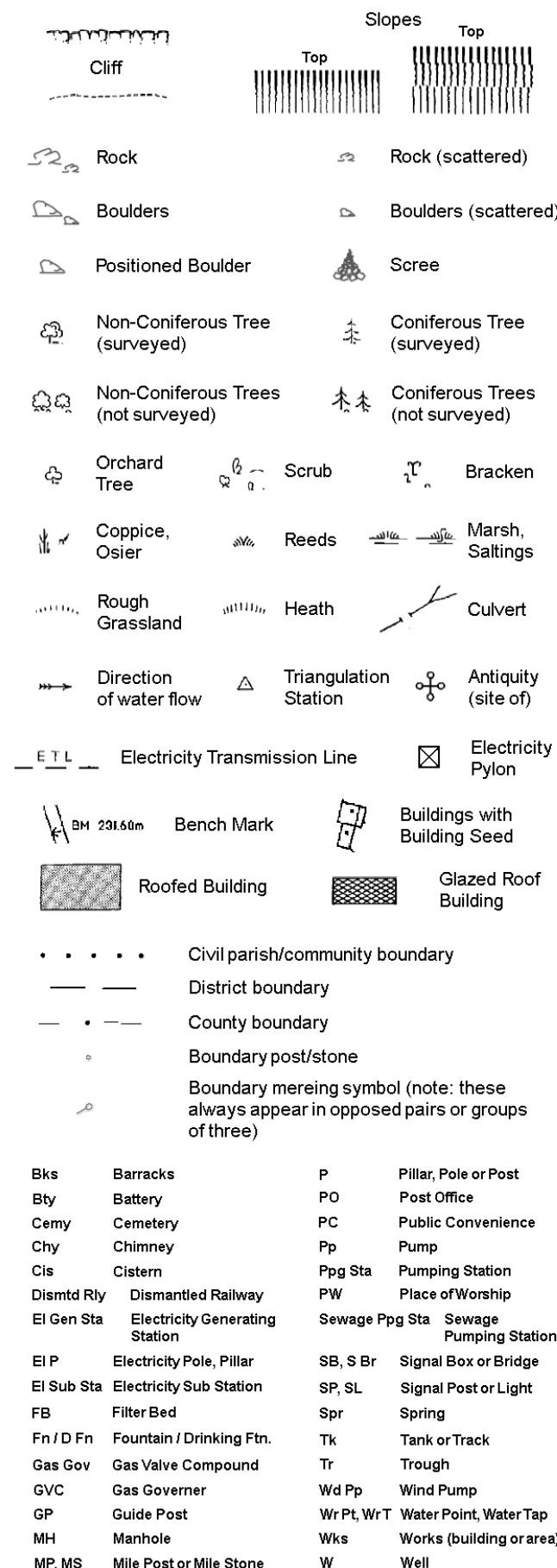
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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



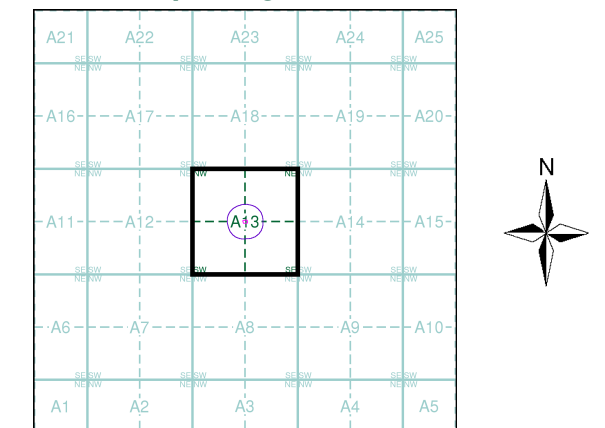
Large-Scale National Grid Data 1:2,500 and 1:1,250



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
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Glamorganshire	1:2,500	1900	3
Brecknockshire	1:2,500	1904	4
Glamorganshire	1:2,500	1919	5
Brecknockshire	1:2,500	1919	6
Ordnance Survey Plan	1:1,250	1957	7
Ordnance Survey Plan	1:2,500	1958	8
Ordnance Survey Plan	1:1,250	1969 - 1977	9
Supply of Unpublished Survey Information	1:1,250	1975	10
Additional SIMs	1:1,250	1984 - 1989	11
Additional SIMs	1:1,250	1989	12
Large-Scale National Grid Data	1:1,250	1993	13
Large-Scale National Grid Data	1:1,250	1994 - 1995	14
Large-Scale National Grid Data	1:1,250	1995	15
Large-Scale National Grid Data	1:1,250	1996	16
Large-Scale National Grid Data	1:1,250	1996	17

Historical Map - Segment A13



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Glamorganshire

Published 1875 - 1876

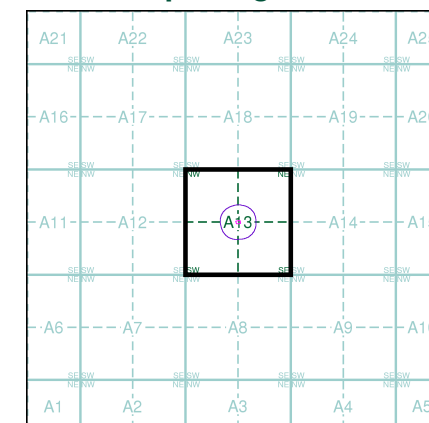
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered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

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1876
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Historical Map - Segment A13



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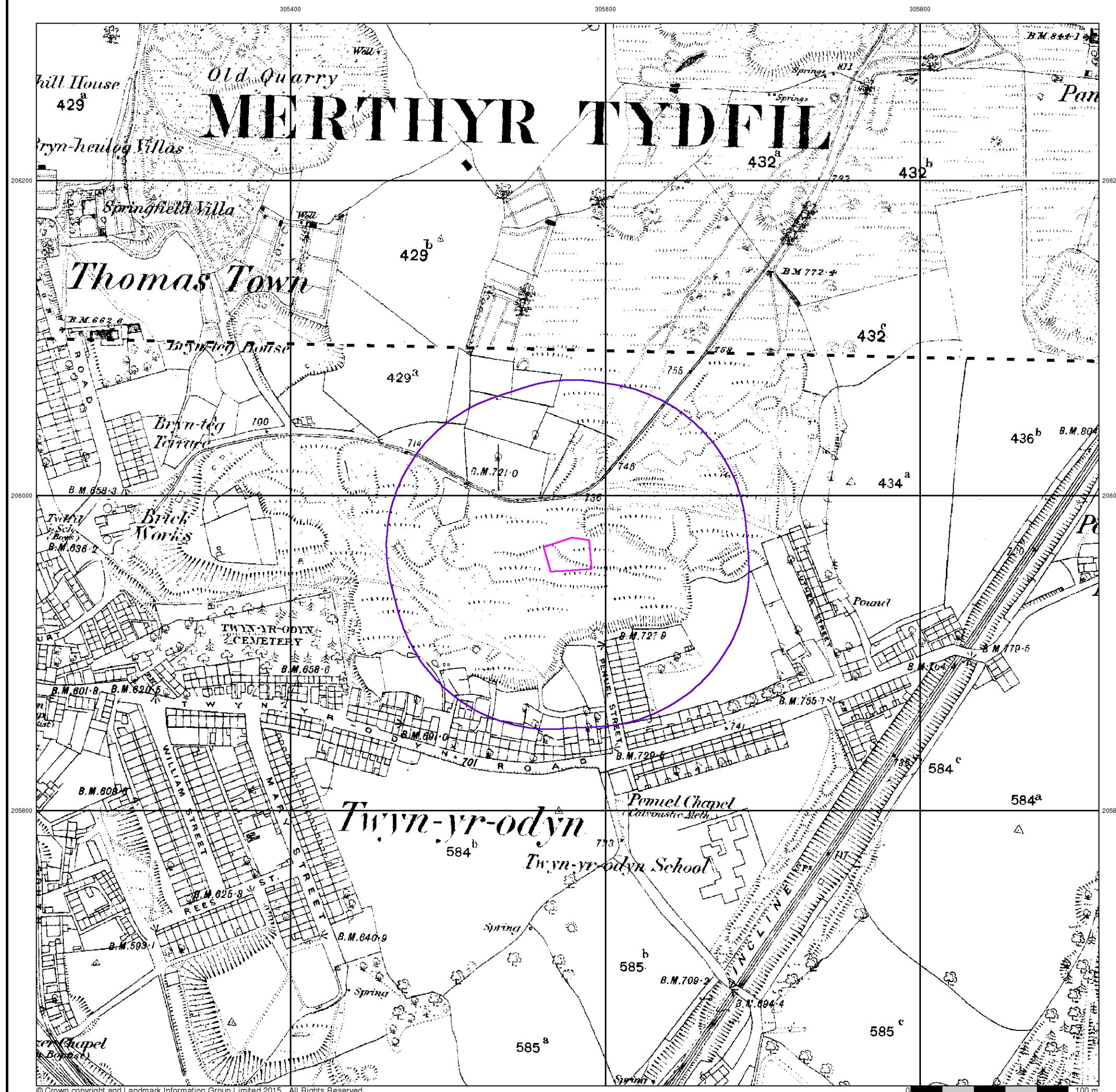
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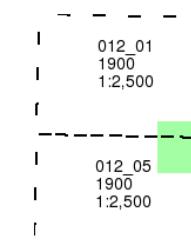
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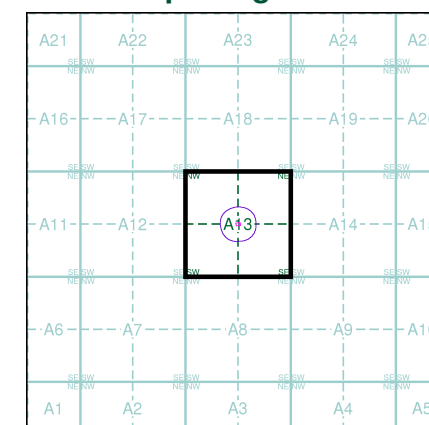
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Map Name(s) and Date(s)



Historical Map - Segment A13



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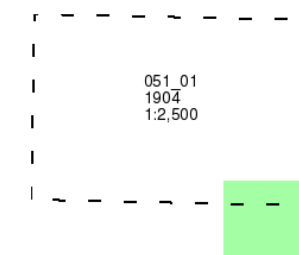
Brecknockshire

Published 1904

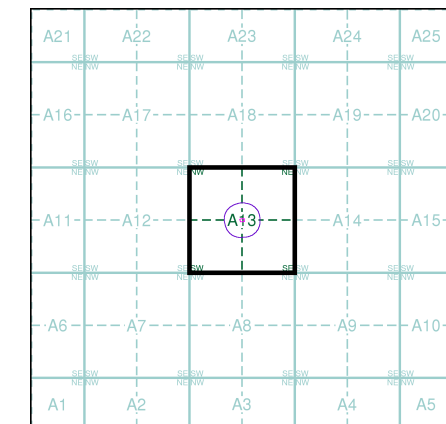
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Map Name(s) and Date(s)



Historical Map - Segment A13



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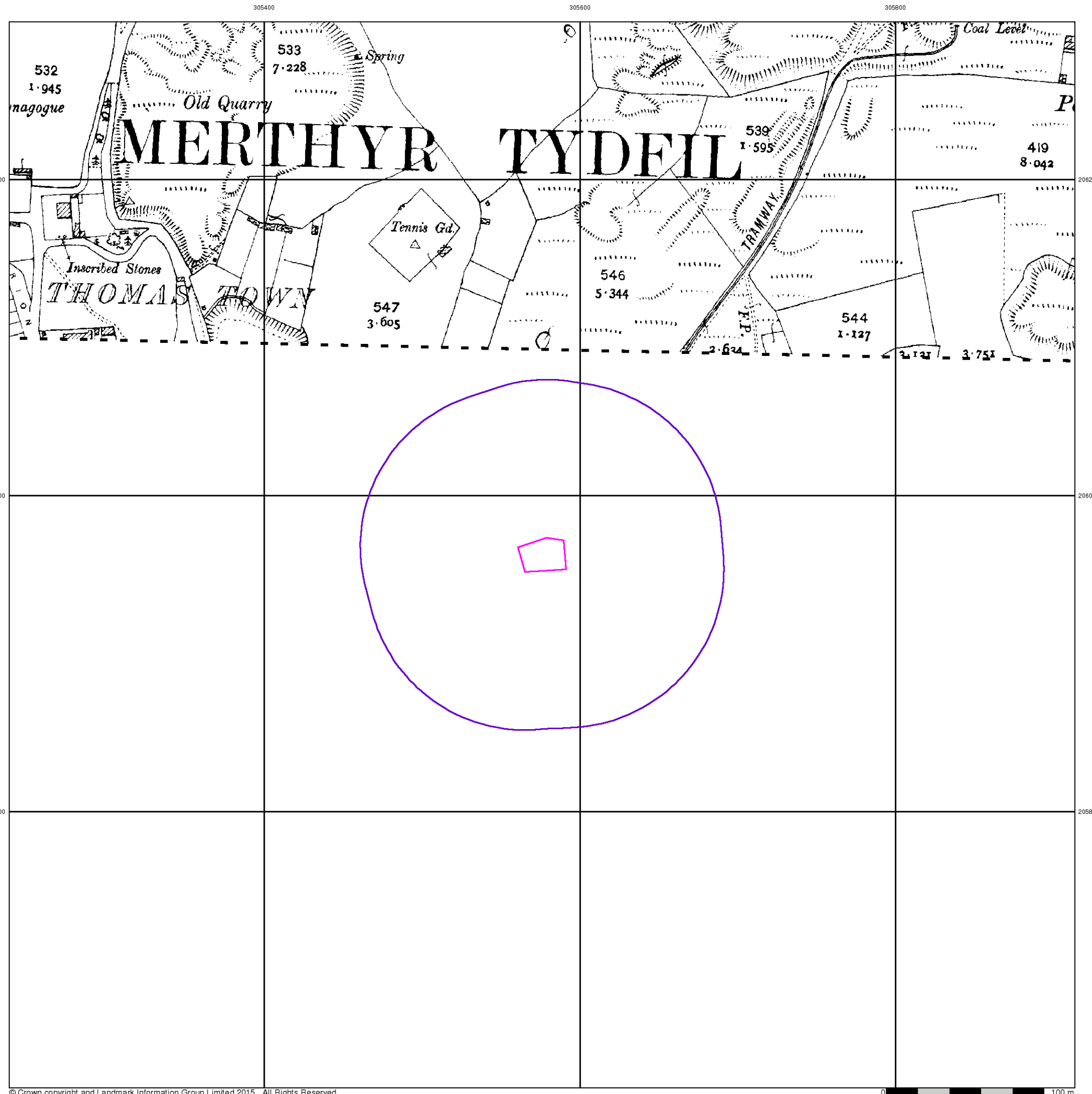
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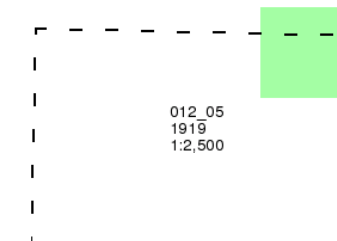
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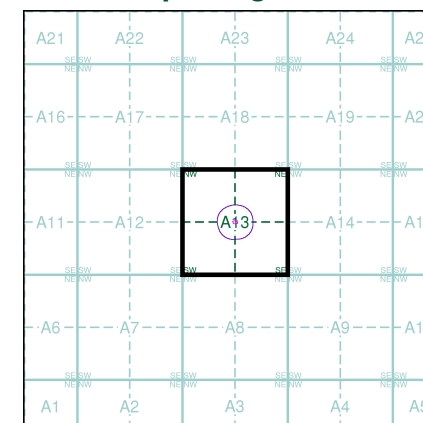
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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

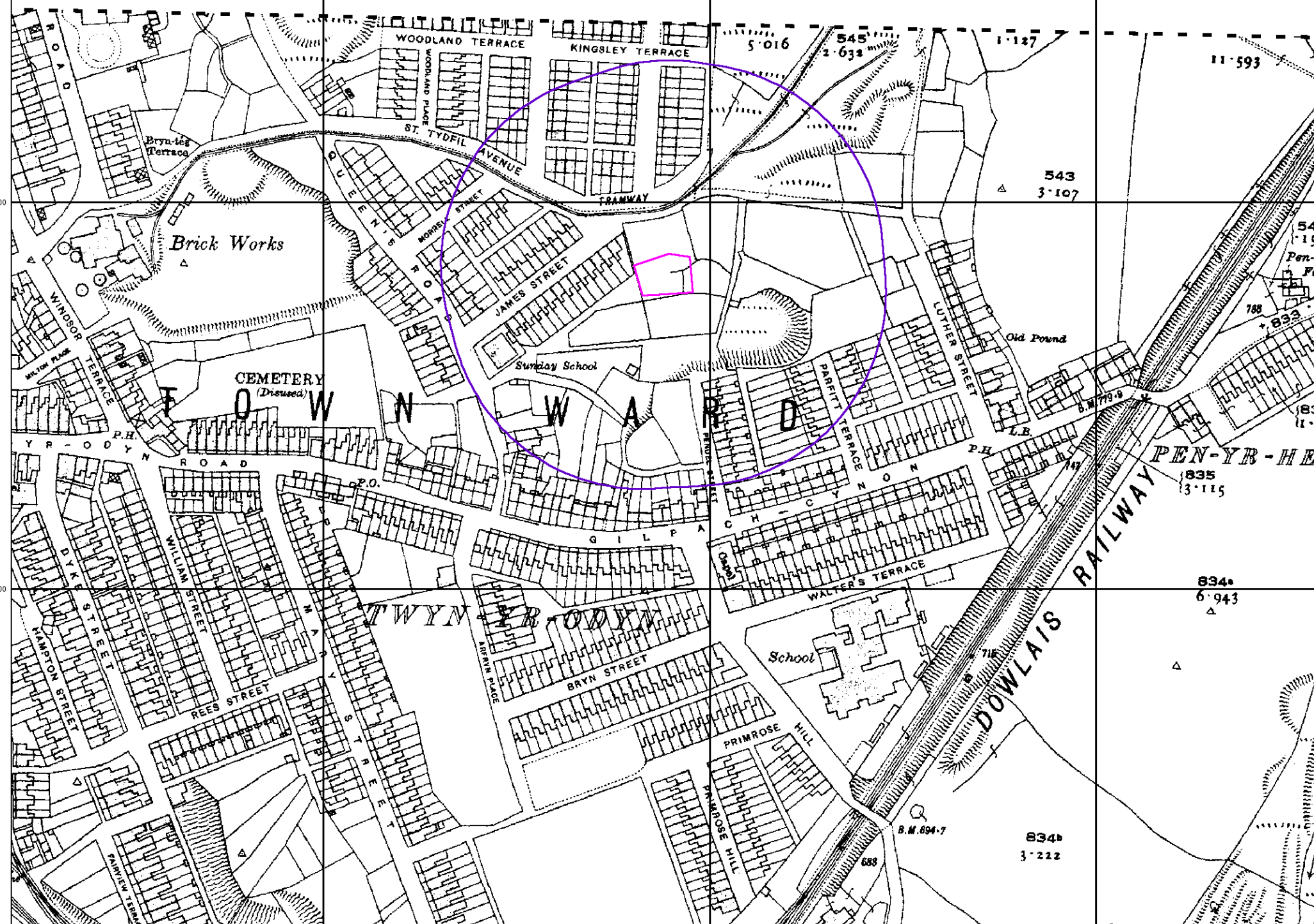
Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 100

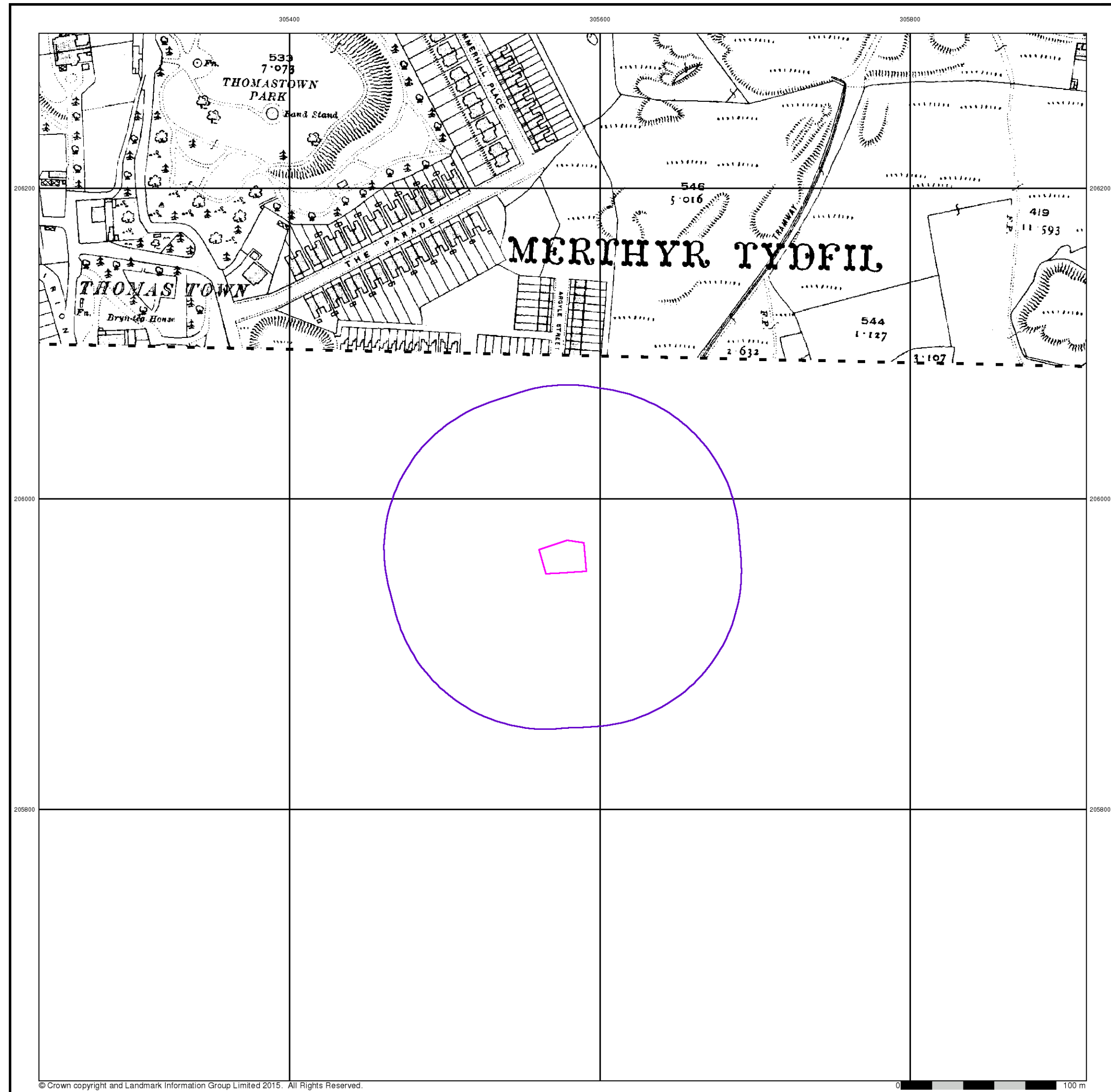
Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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

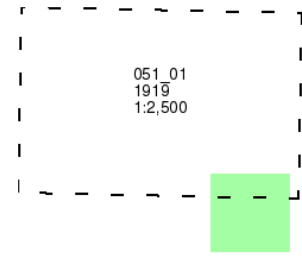




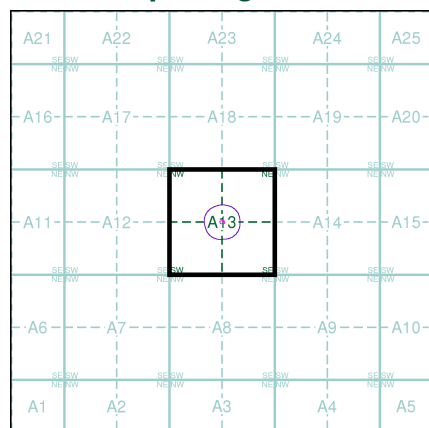
Brecknockshire
Published 1919
Source map scale - 1:2,500

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)



Historical Map - Segment A13



Order Details
Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details
Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



Ordnance Survey Plan

Published 1957

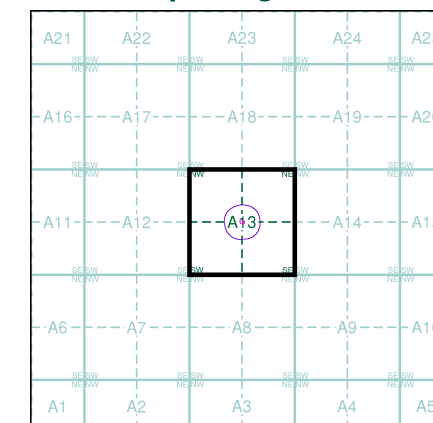
Source map scale - 1:1,250

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)

SO0506SW 1957 1:1,250	SO0506SE 1957 1:1,250
SO0505NW 1957 1:1,250	SO0505NE 1957 1:1,250

Historical Map - Segment A13



Order Details

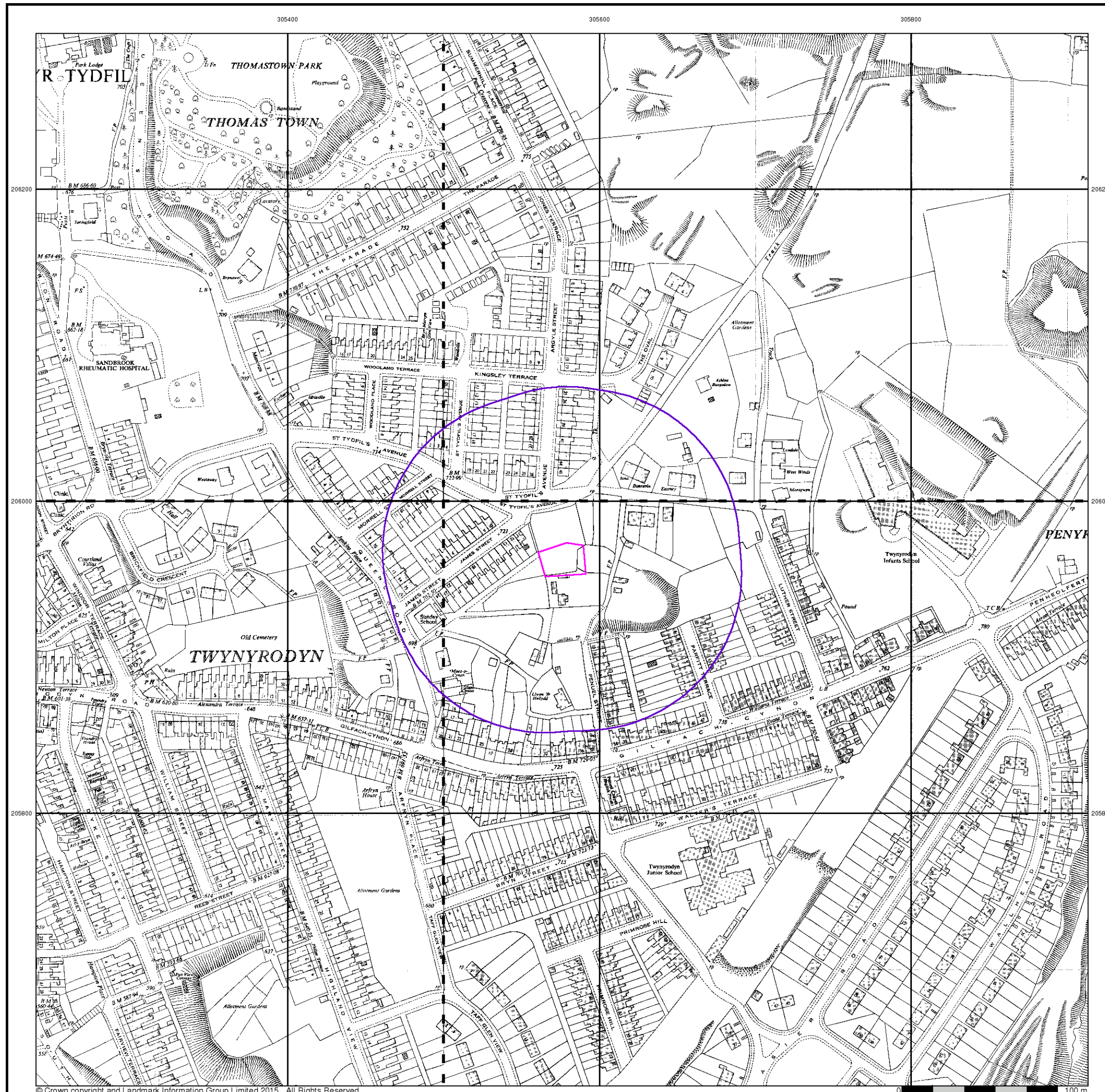
Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

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Ordnance Survey Plan

Published 1958

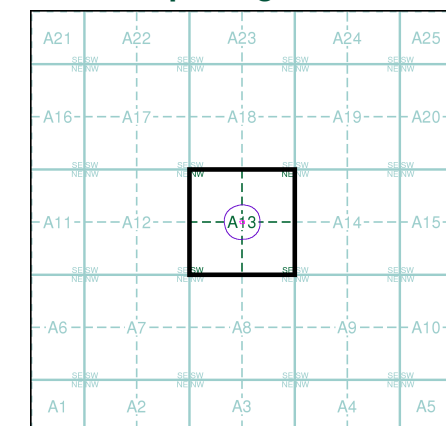
Source map scale - 1:2,500

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)

SO0506
1958
1:2,500
SO0505
1958
1:2,500

Historical Map - Segment A13



Order Details

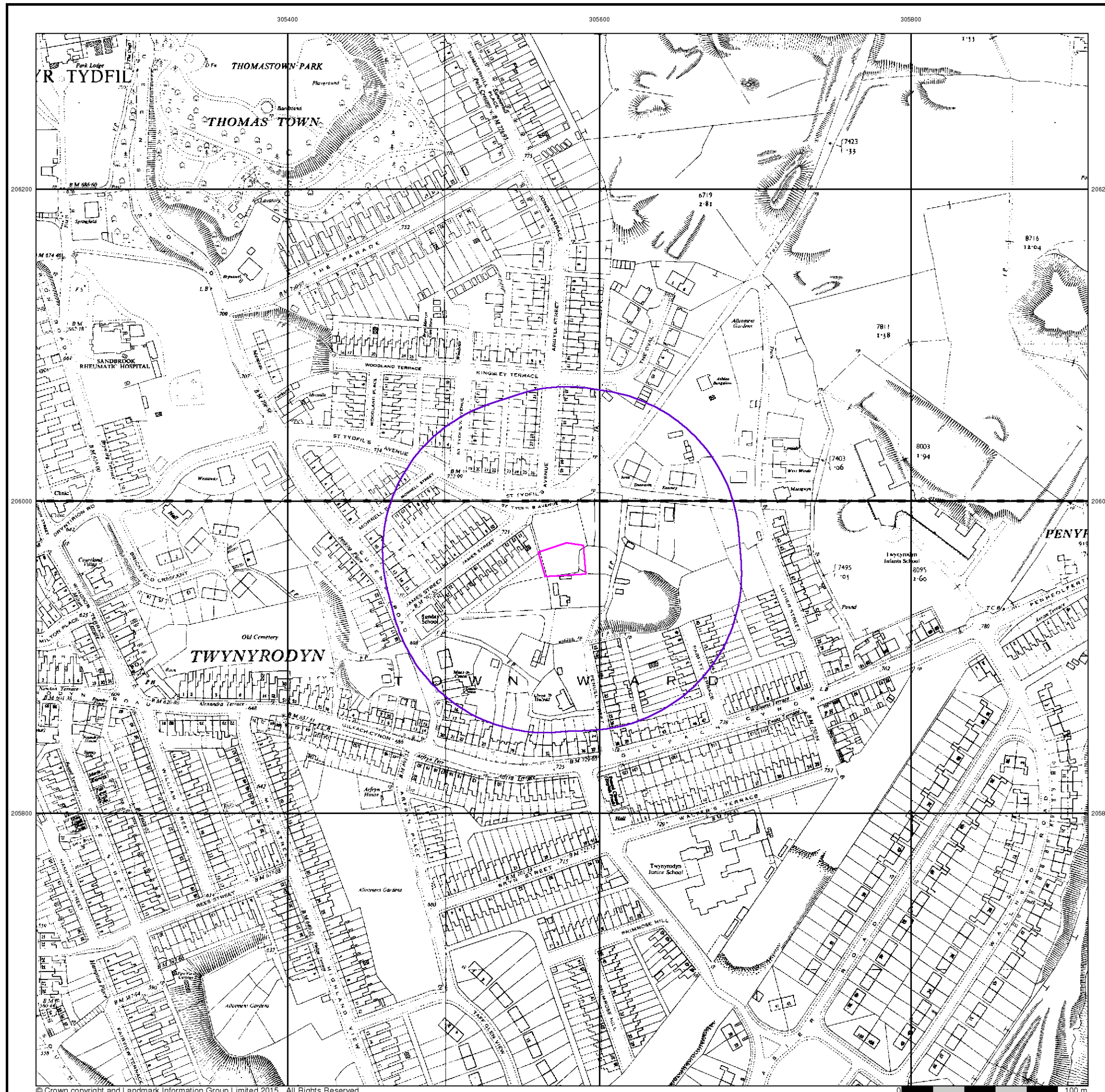
Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 100

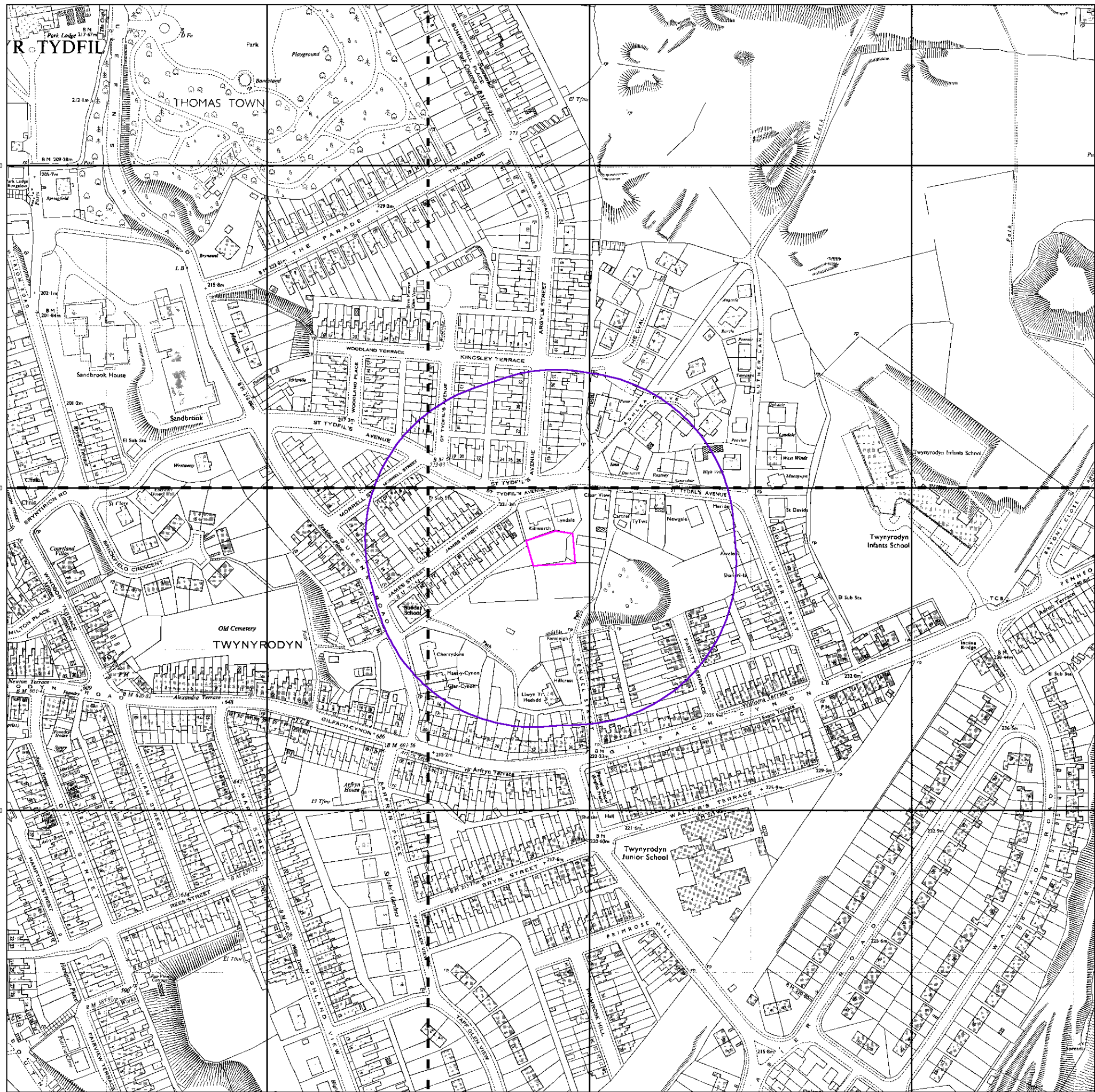
Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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Ordnance Survey Plan

Published 1969 - 1977

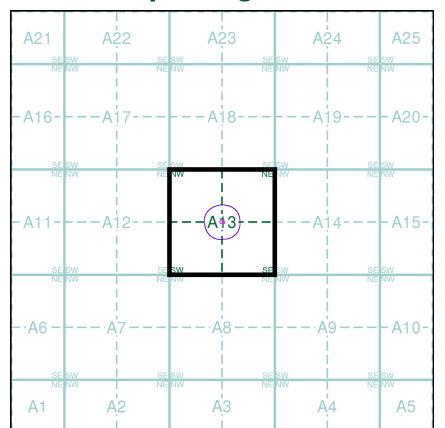
Source map scale - 1:1,250

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)

SO0506SW 1977 1:1,250	SO0506SE 1969 1:1,250
SO0505NW 1969 1:1,250	SO0505NE 1973 1:1,250

Historical Map - Segment A13



Order Details

Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

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Supply of Unpublished Survey Information

Published 1975

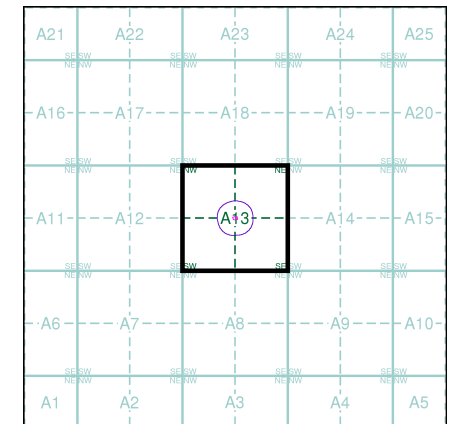
Source map scale - 1:1,250

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)

SO0506SW	SO0506SE
1975	1975
1:1,250	1:1,250
SO0505NW	SO0505NE
1975	1975
1:1,250	1:1,250

Historical Map - Segment A13



Order Details

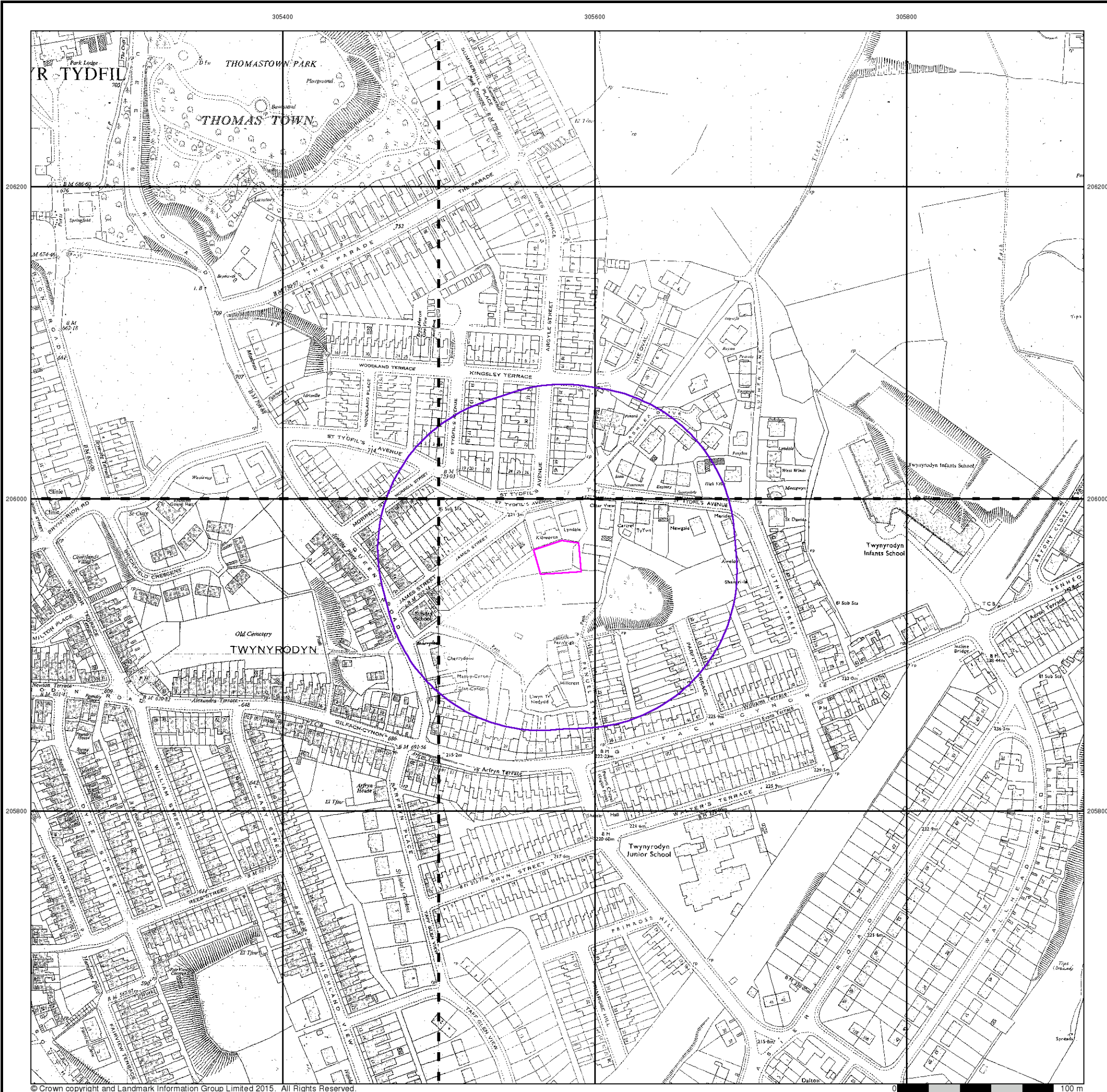
Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

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Additional SIMs

Published 1984 - 1989

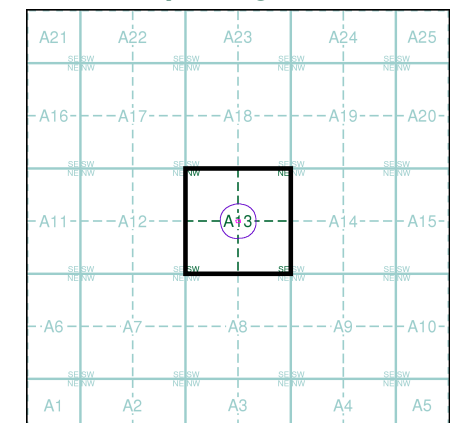
Source map scale - 1:1,250

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)

SO0506SW	1989	1:1,250
SO0505NW	1984	1:1,250
SO0505NE	1989	1:1,250

Historical Map - Segment A13



Order Details

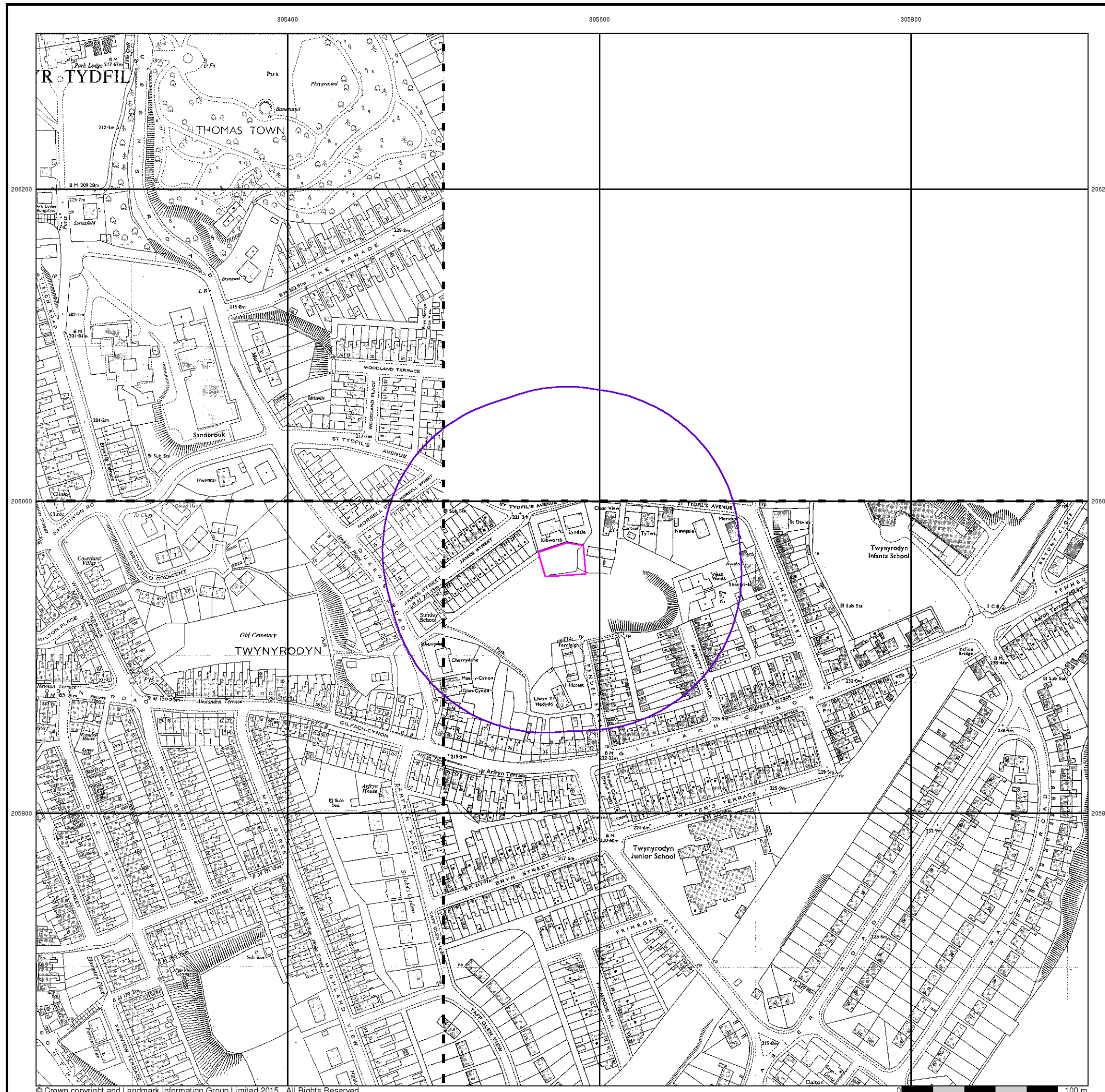
Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 100

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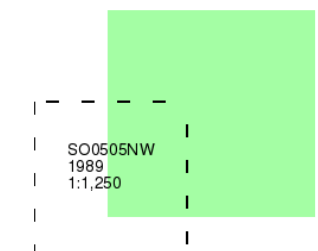
Additional SIMs

Published 1989

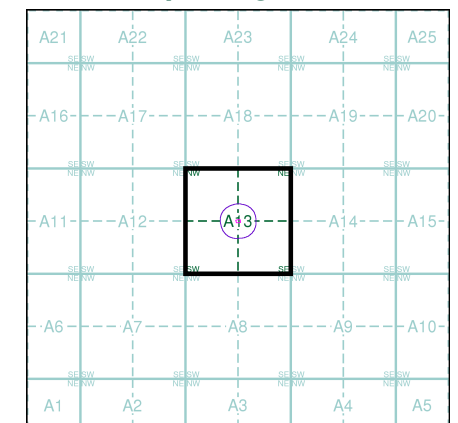
Source map scale - 1:1,250

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: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



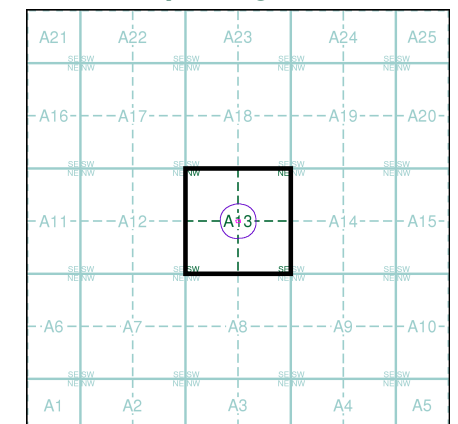
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Map Name(s) and Date(s)

SO0506SW 1993 1:1,250	SO0506SE 1993 1:1,250
SO0505NW 1993 1:1,250	SO0505NE 1993 1:1,250

Historical Map - Segment A13



Order Details

Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

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Large-Scale National Grid Data

Published 1994 - 1995

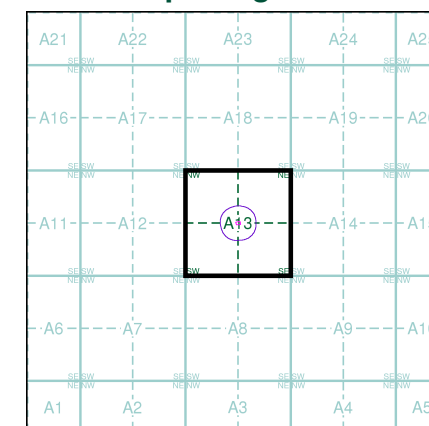
Source map scale - 1:1,250

'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)

SO0508SE	1995	1:1,250
SO0505NW	1995	1:1,250
SO0505NE	1994	1:1,250

Historical Map - Segment A13



Order Details

Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

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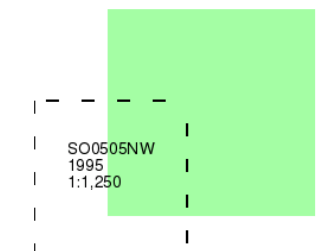
Large-Scale National Grid Data

Published 1995

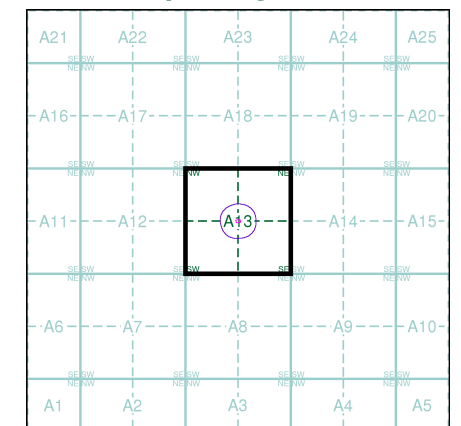
Source map scale - 1:1,250

'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)



Historical Map - Segment A13



Order Details

Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
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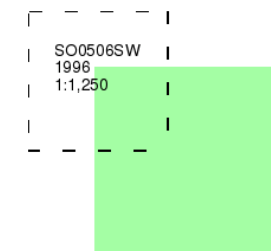
Large-Scale National Grid Data

Published 1996

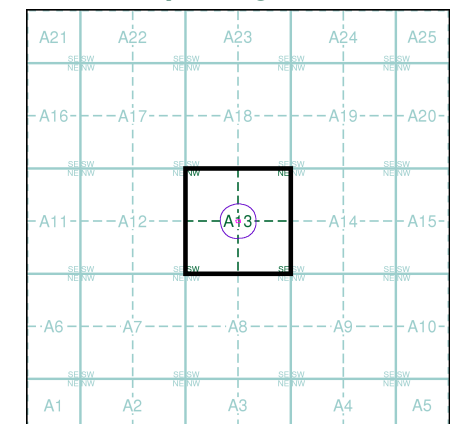
Source map scale - 1:1,250

'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)



Historical Map - Segment A13



Order Details

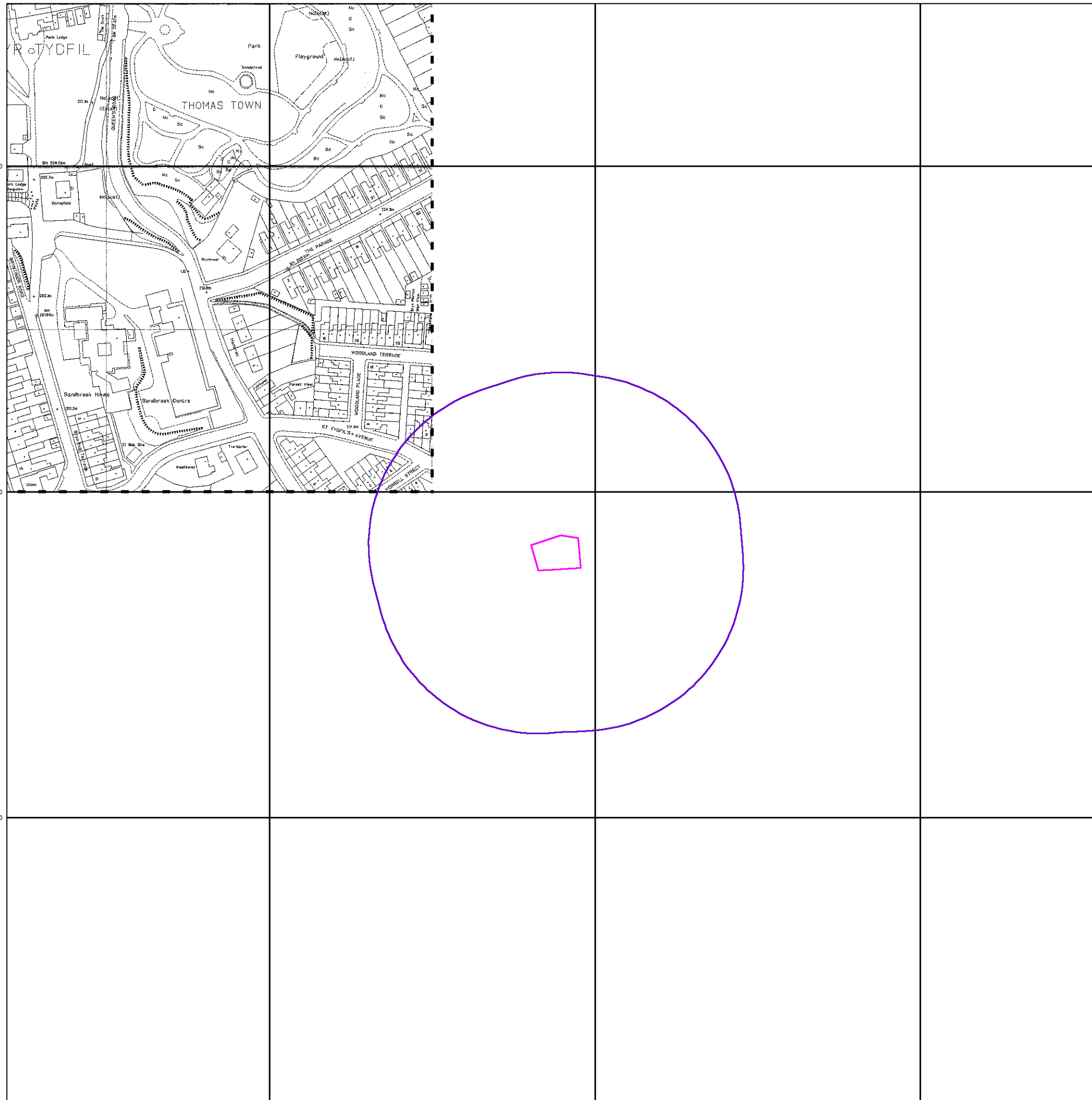
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Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 100

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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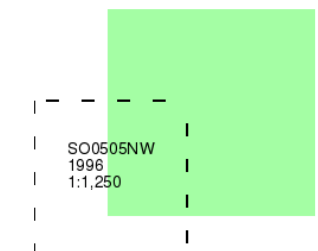
Large-Scale National Grid Data

Published 1996

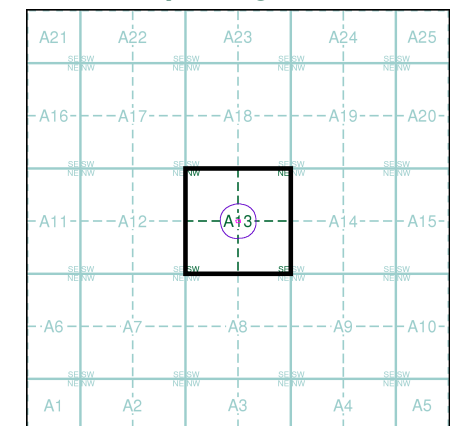
Source map scale - 1:1,250

'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)



Historical Map - Segment A13



Order Details

Order Number: 70905697_1_1
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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

	Gravel Pit		Sand Pit		Other Pits
	Quarry		Shingle		Orchard
	Osiers		Reeds		Marsh
	Mixed Wood		Deciduous		Brushwood
	Fir		Furze		Rough Pasture
	Arrow denotes flow of water		Trigonometrical Station		
	Site of Antiquities		Bench Mark		
	Pump, Guide Post, Signal Post		Well, Spring, Boundary Post		
	•285 Surface Level				
	Sketched Contour		Instrumental Contour		
	Main Roads		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 Boundary Post or Stone		Police Station
	Church		Post Office
	Club House		Public Convenience
	Fire Engine Station		Public House
	Foot Bridge		Signal Box
	Fountain		Spring
	Guide Post		Telephone Call Box
	Mile Post		Telephone Call Post
	Mile Stone		Well

1:10,000 Raster Mapping

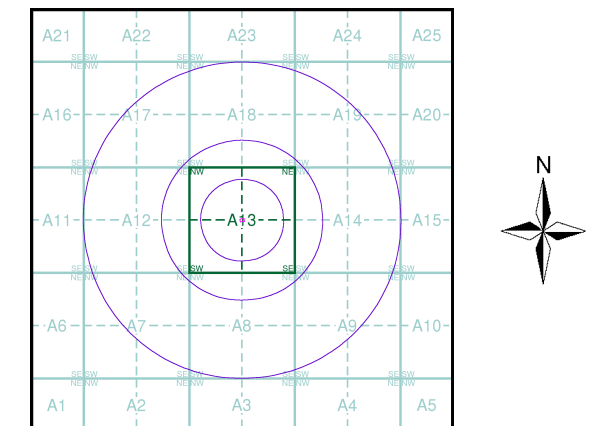
	Gravel Pit		Refuse tip or slag heap
	Rock		Rock (scattered)
	Boulders		Boulders (scattered)
	Shingle		Mud
	Sand		Sand Pit
	Slopes		Top of cliff
	General detail		Underground detail
	Overhead detail		Narrow gauge railway
	Multi-track railway		Single track railway
	County boundary (England only)		Civil, parish or community boundary
	District, Unitary, Metropolitan, London Borough boundary		Constituency boundary
	Area of wooded vegetation		Non-coniferous trees
	Non-coniferous trees (scattered)		Coniferous trees
	Coniferous trees (scattered)		Positioned tree
	Orchard		Coppice or Osiers
	Rough Grassland		Heath
	Scrub		Marsh, Salt Marsh or Reeds
	Water feature		Flow arrows
	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



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Brecknockshire	1:10,560	1884	2
Glamorganshire	1:10,560	1885	3
Glamorganshire	1:10,560	1901	4
Brecknockshire	1:10,560	1905	5
Brecknockshire	1:10,560	1922	6
Brecknockshire	1:10,560	1938	7
Historical Aerial Photography	1:10,560	1945	8
Brecknockshire	1:10,560	1951	9
Ordnance Survey Plan	1:10,000	1964 - 1965	10
Ordnance Survey Plan	1:10,000	1969	11
Ordnance Survey Plan	1:10,000	1970 - 1979	12
Ordnance Survey Plan	1:10,000	1982 - 1989	13
Ordnance Survey Plan	1:10,000	1990 - 1992	14
10K Raster Mapping	1:10,000	2006	15
VectorMap Local	1:10,000	2015	16

Historical Map - Slice A



Order Details

Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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



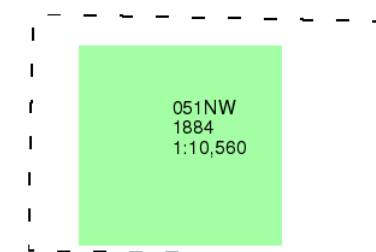
Brecknockshire

Published 1884

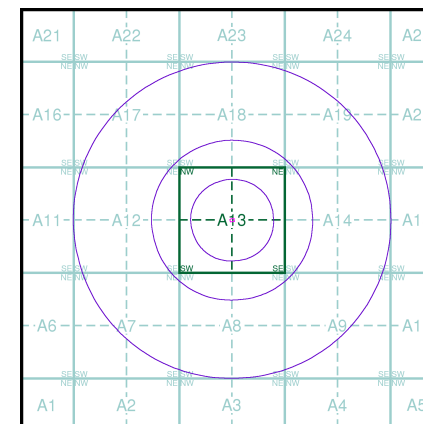
Source map scale - 1:10,560

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

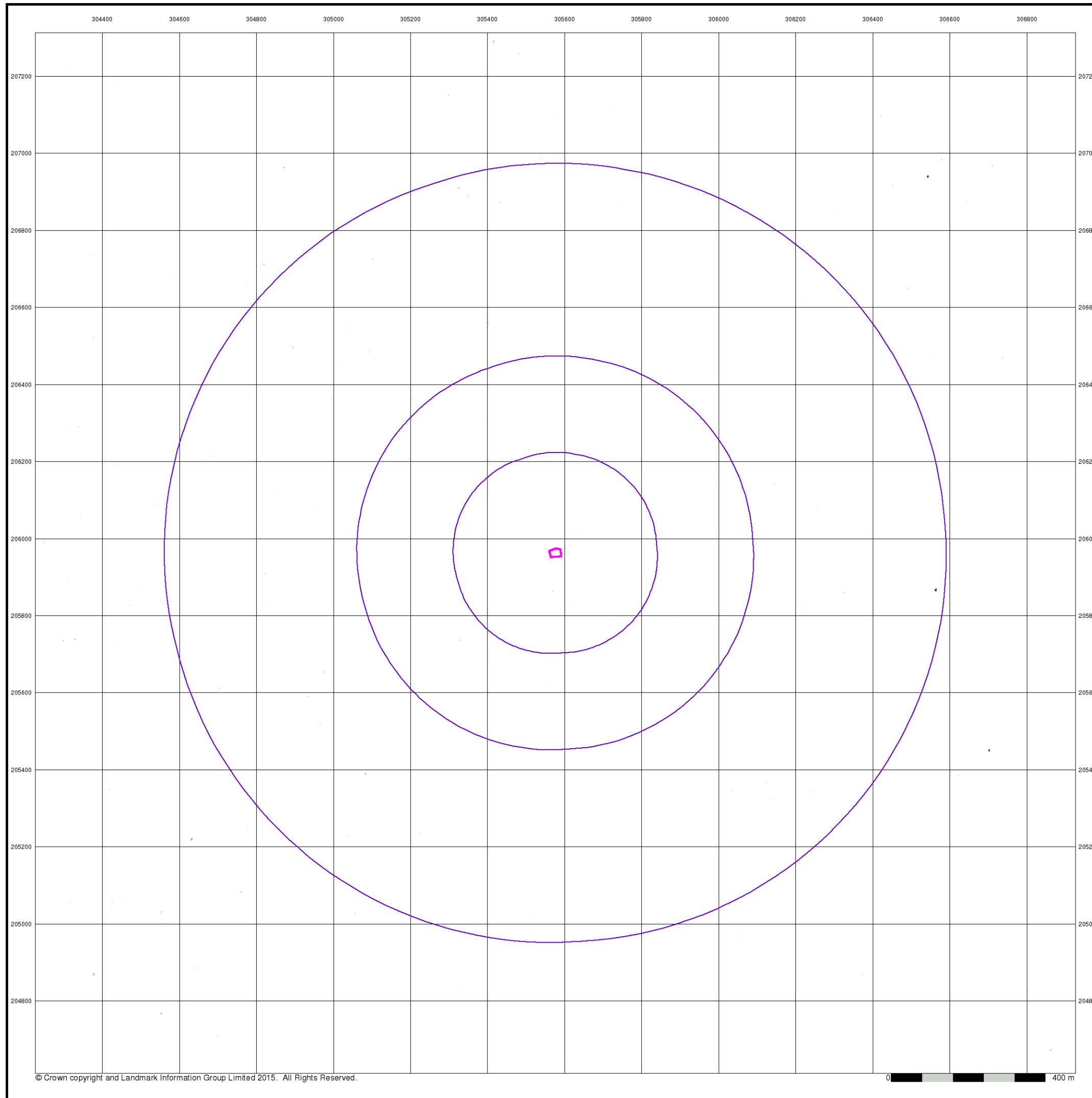
Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

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Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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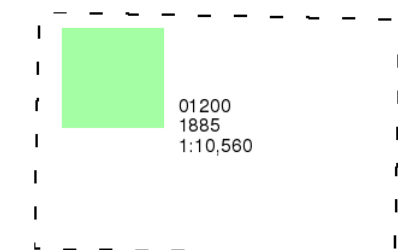
Glamorganshire

Published 1885

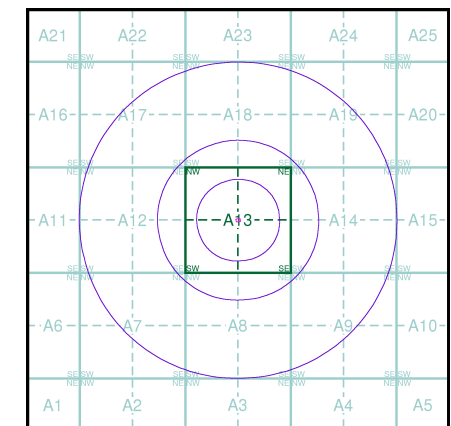
Source map scale - 1:10,560

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

Order Number: 70905697_1_1
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National Grid Reference: 305580, 205960
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Fax: 0844 844 9951
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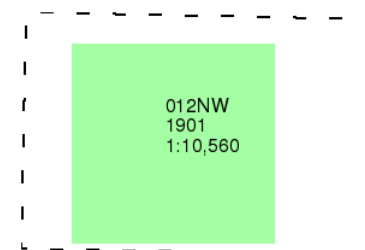
Glamorganshire

Published 1901

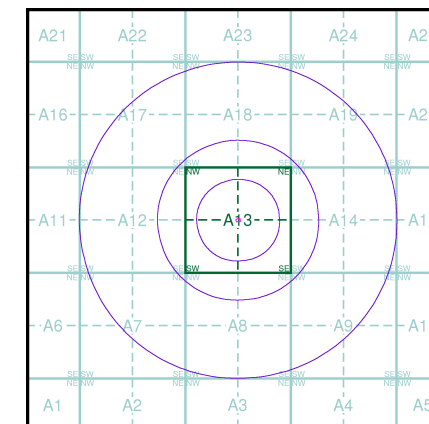
Source map scale - 1:10,560

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

Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

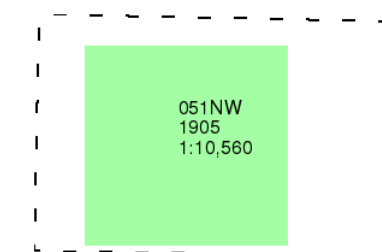
Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



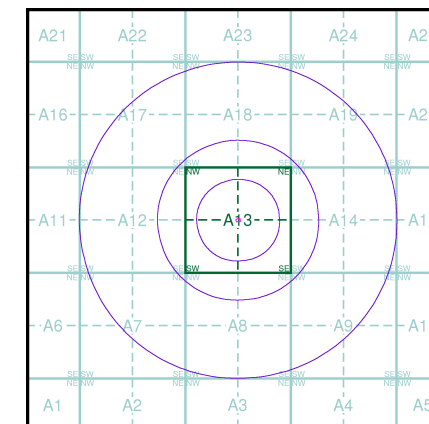
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

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

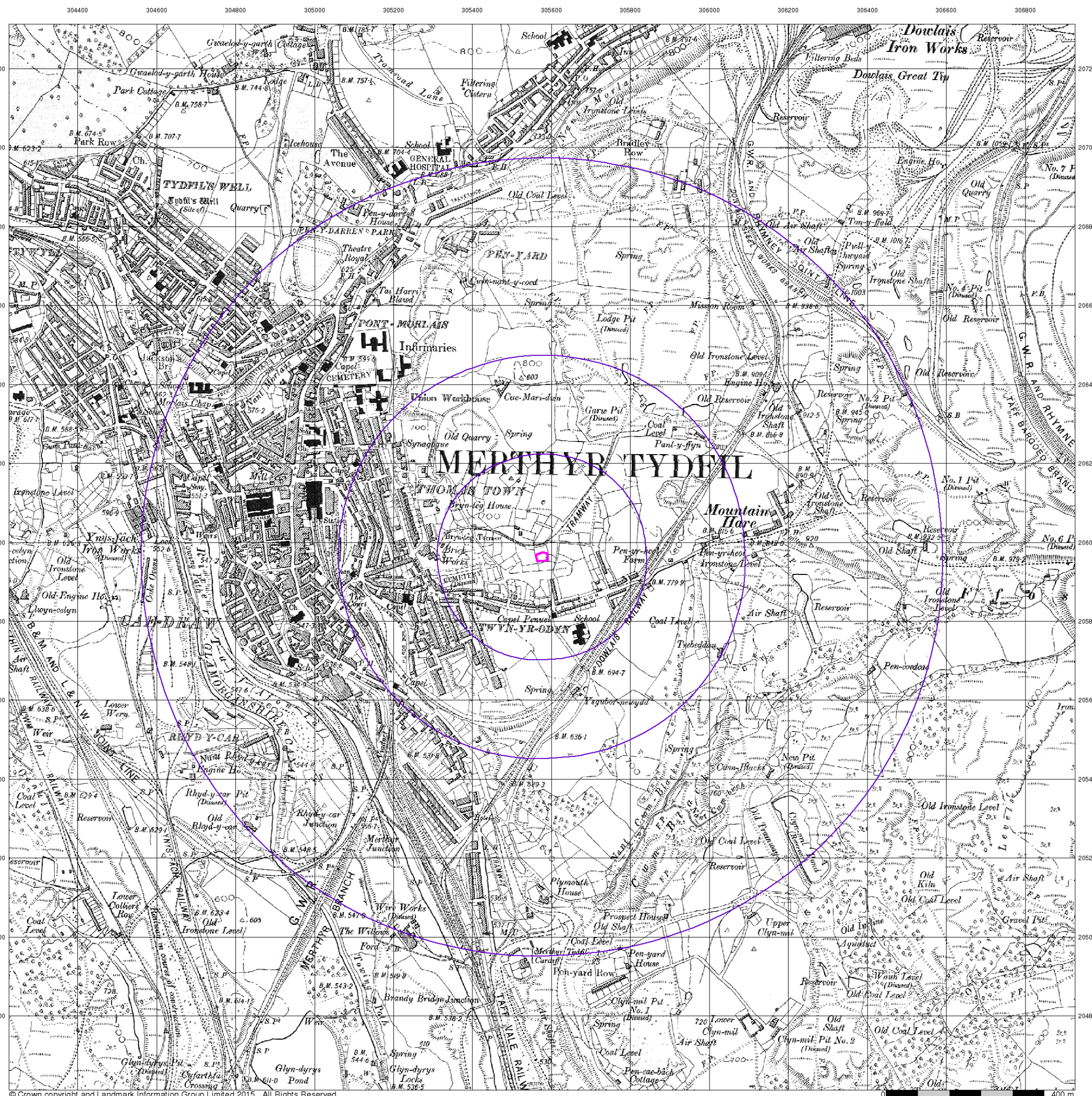


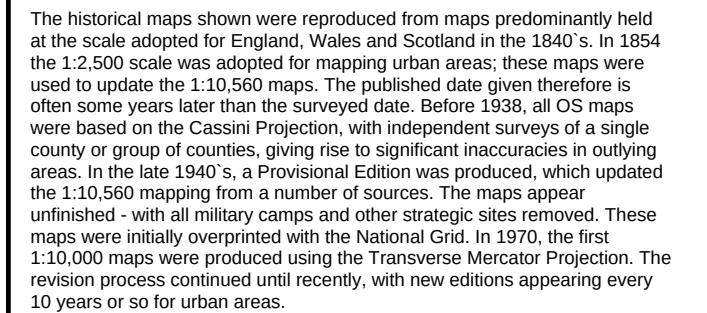
Order Details

Order Number: 70905697_1_1
 Customer Ref: 13319
 National Grid Reference: 305580, 205960
 Slice: A
 Site Area (Ha): 0.06
 Search Buffer (m): 1000

Site Details

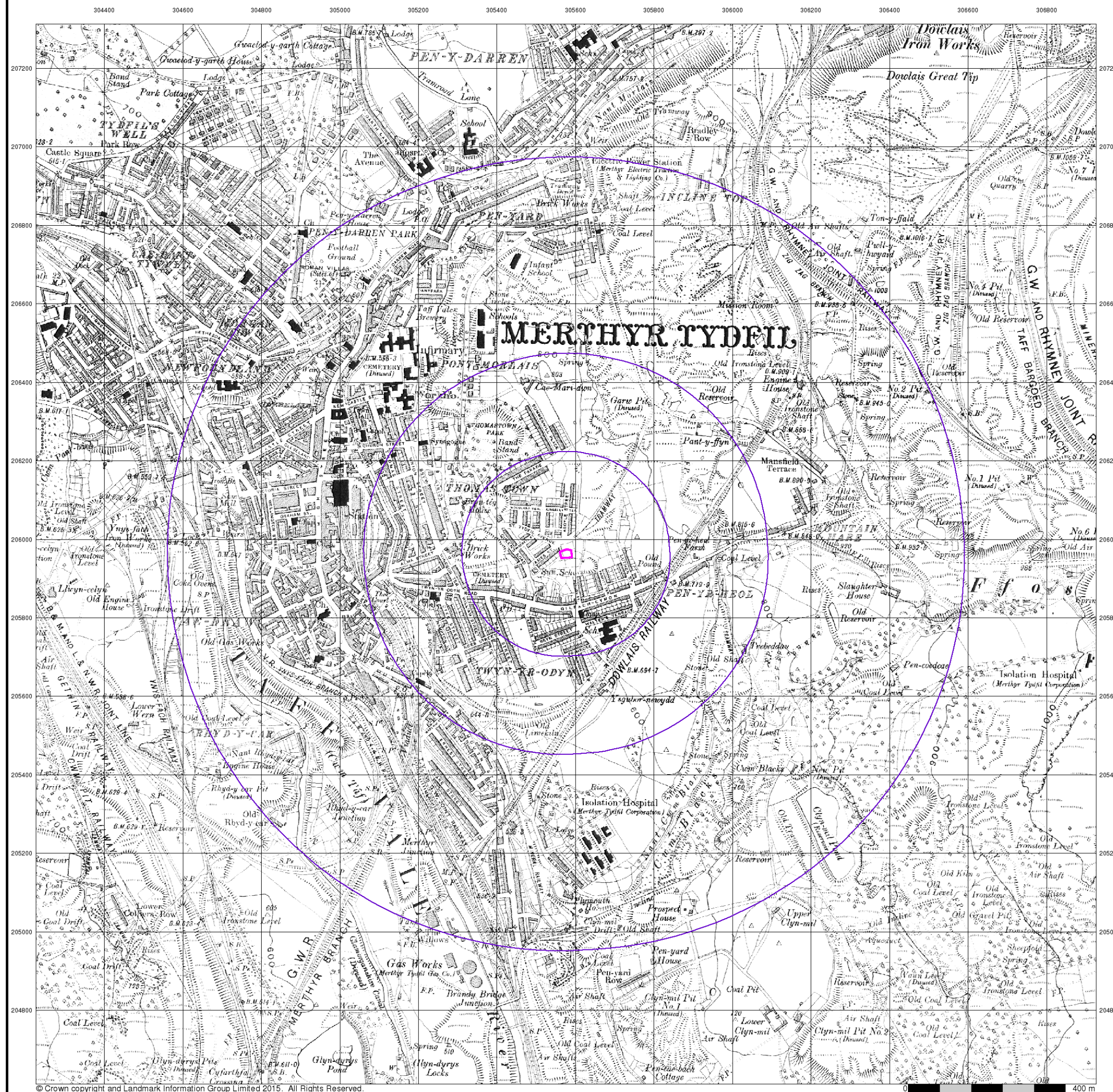
Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ

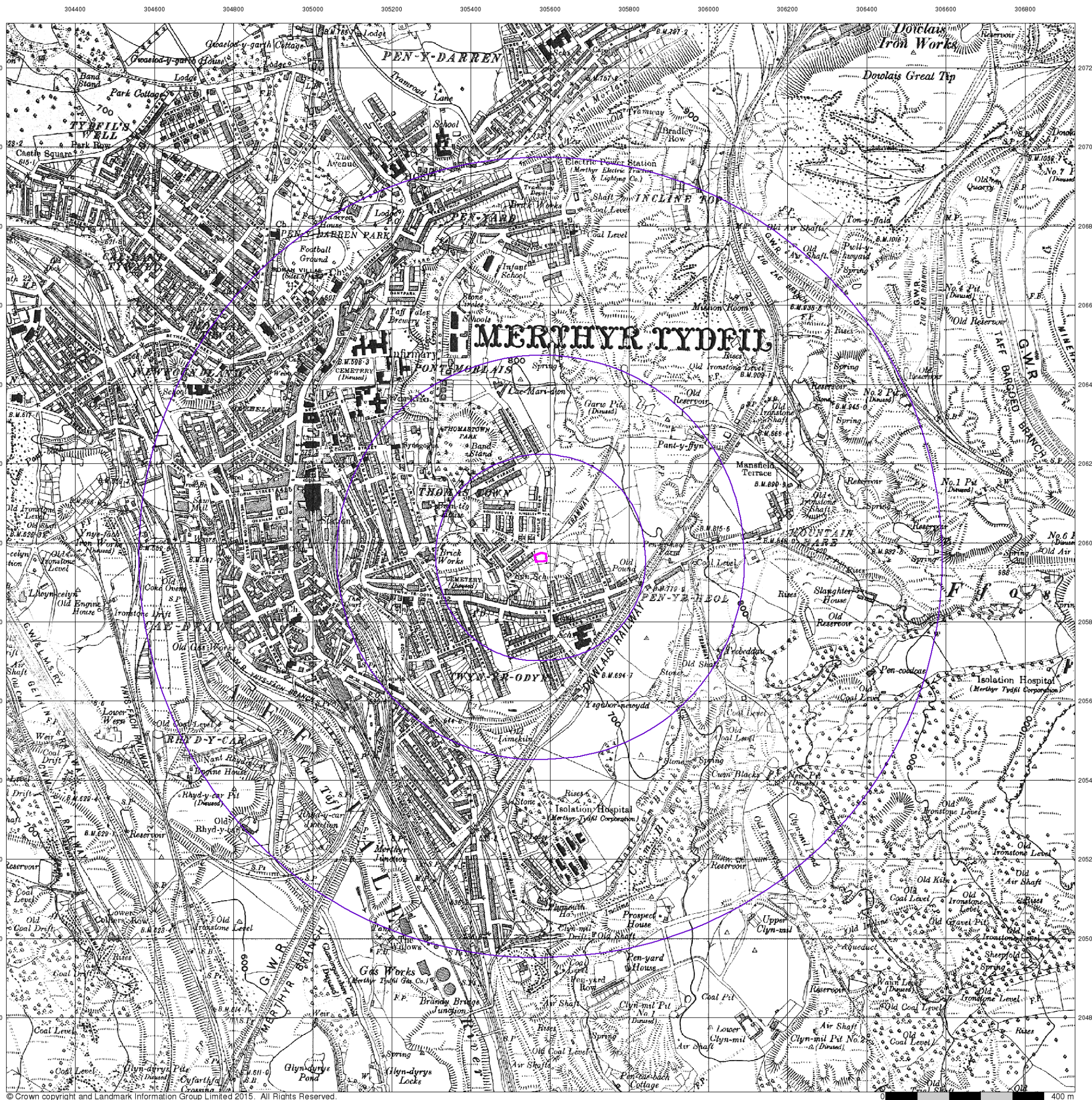




051NW
1922
1:10,560

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ





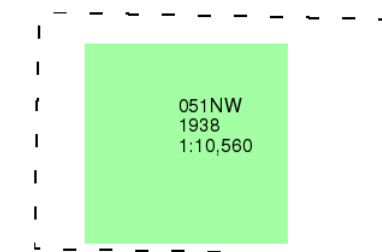
Brecknockshire

Published 1938

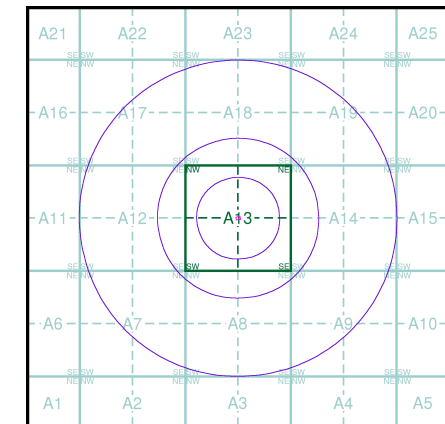
Source map scale - 1:10,560

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

Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

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Historical Aerial Photography

Published 1945

Source map scale - 1:10,560

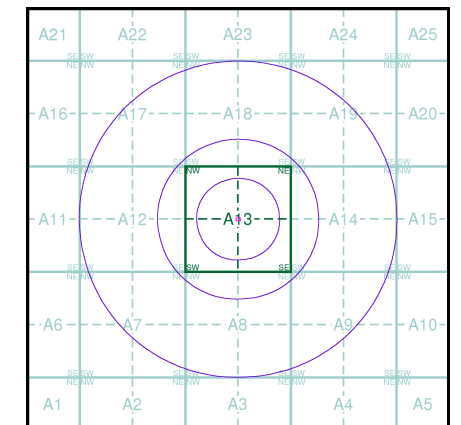
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 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)

SO00NW 1945 1:10,560	SO00NE 1945 1:10,560
SO00SW 1945 1:10,560	SO00SE 1945 1:10,560

Historical Aerial Photography - Slice A



Order Details

Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

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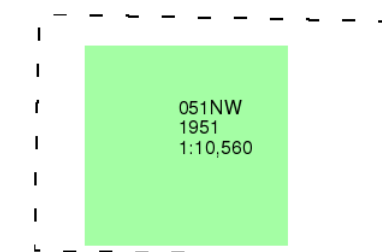
Brecknockshire

Published 1951

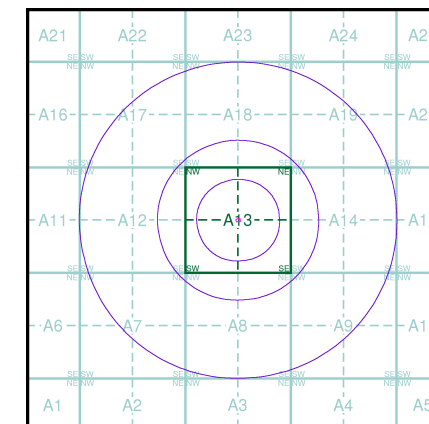
Source map scale - 1:10,560

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

Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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



Ordnance Survey Plan

Published 1964 - 1965

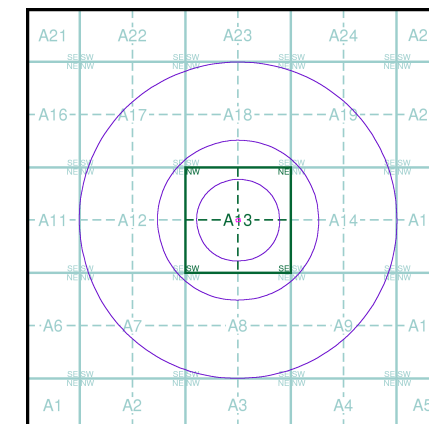
Source map scale - 1:10,000

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)

SO00NW	SO00NE
1965	1965
1:10,560	1:10,560
SO00SW	SO00SE
1964	1964
1:10,560	1:10,560

Historical Map - Slice A



Order Details

Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

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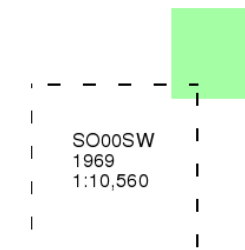
Ordnance Survey Plan

Published 1969

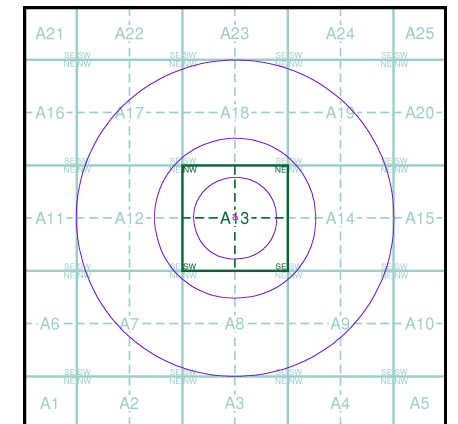
Source map scale - 1:10,000

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

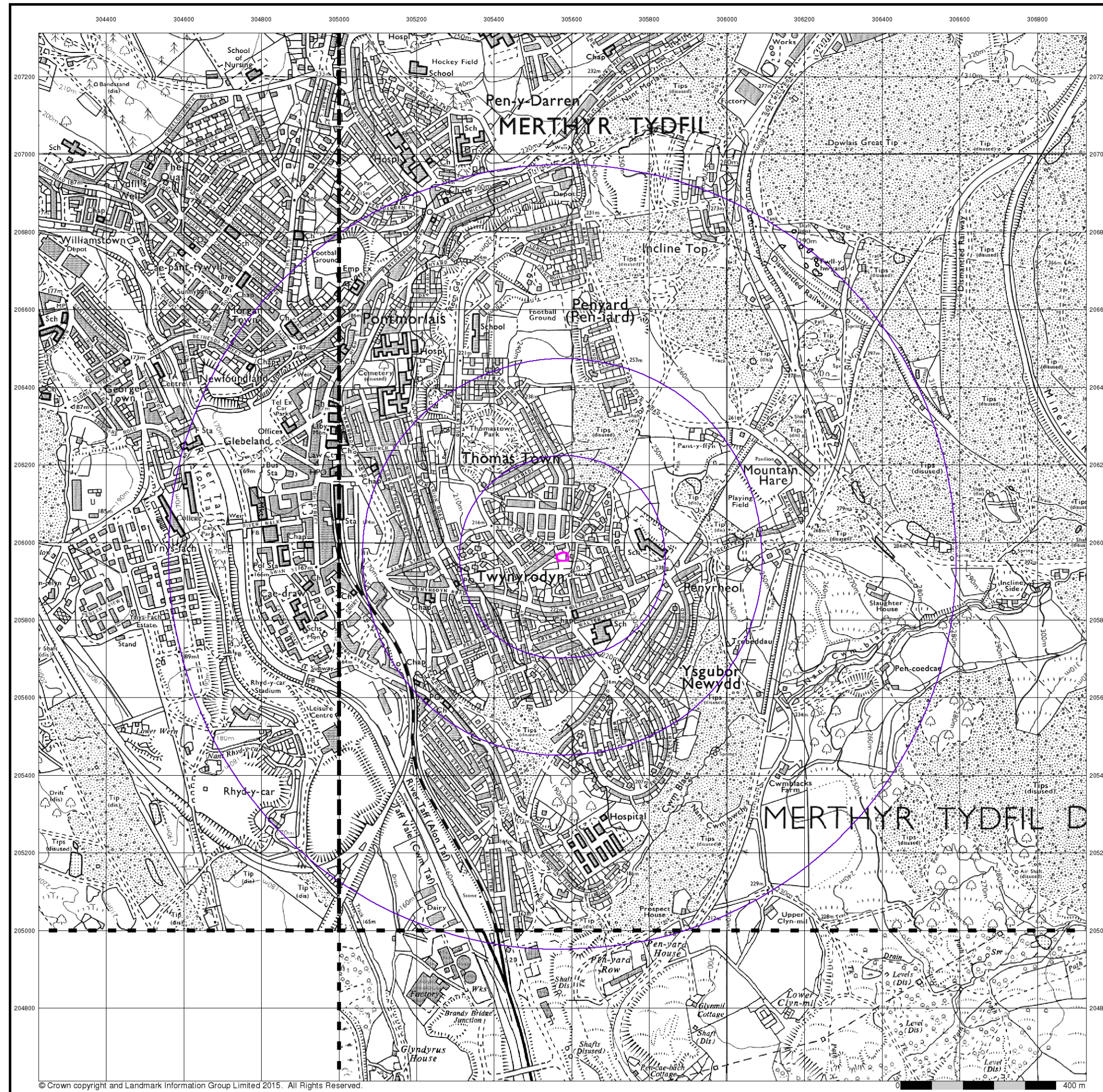
Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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terrafirma

Ordnance Survey Plan

Published 1970 - 1979

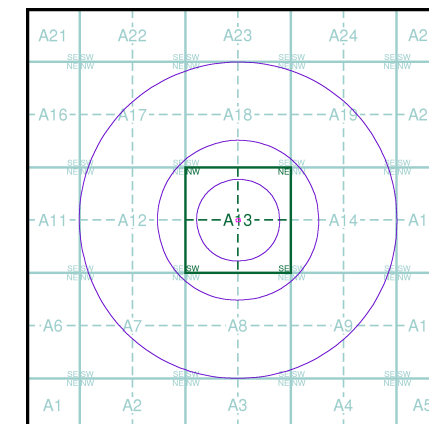
Source map scale - 1:10,000

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)

SO00NW	SO00NE
1979	1977
1:10,000	1:10,000
	SO00SE
	1970
	1:10,560

Historical Map - Slice A



Order Details

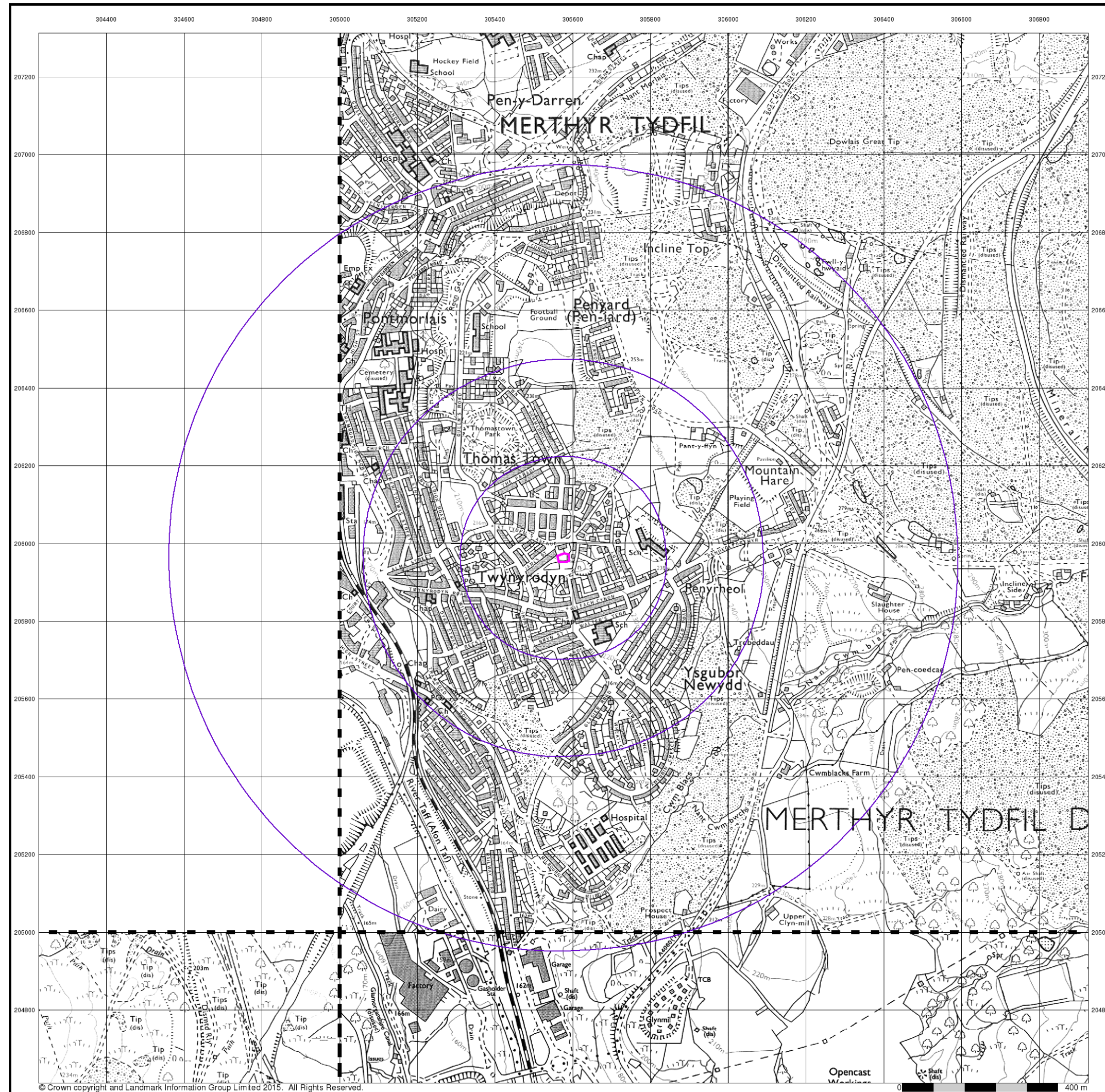
Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

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Ordnance Survey Plan

Published 1982 - 1989

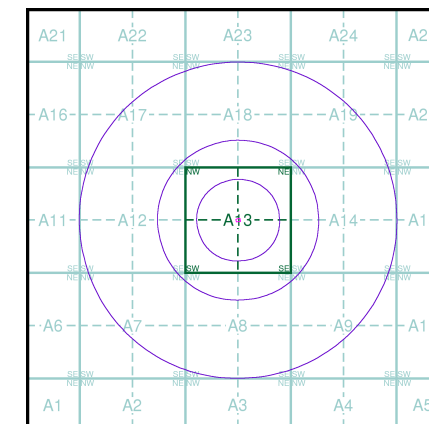
Source map scale - 1:10,000

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)

SO00NE	1983	1:10,000
SO00SW	1982	1:10,000
SO00SE	1989	1:10,000

Historical Map - Slice A



Order Details

Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

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Ordnance Survey Plan

Published 1990 - 1992

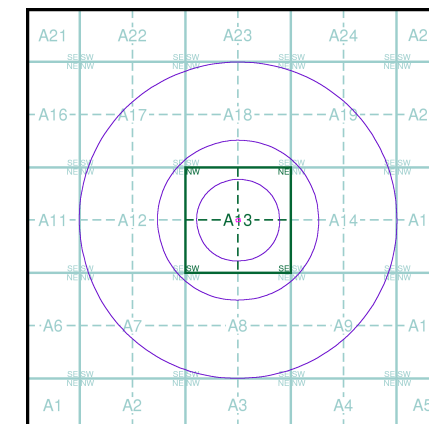
Source map scale - 1:10,000

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)

SO00NW	SO00NE
1992	1992
1:10,000	1:10,000
SO00SW	
1990	
1:10,000	

Historical Map - Slice A



Order Details

Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

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10k Raster Mapping

Published 2006

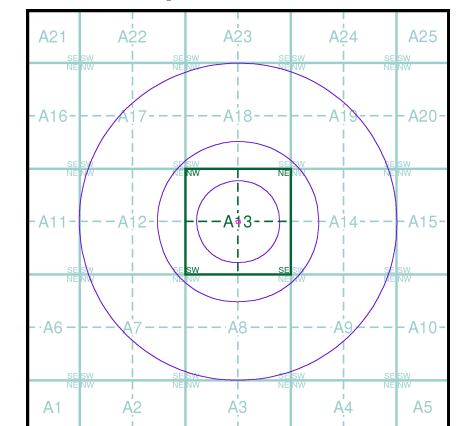
Source map scale - 1:10,000

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)

SO00NW	SO00NE
2006	2006
1:10,000	1:10,000
SO00SW	SO00SE
2006	2006
1:10,000	1:10,000

Historical Map - Slice A



Order Details

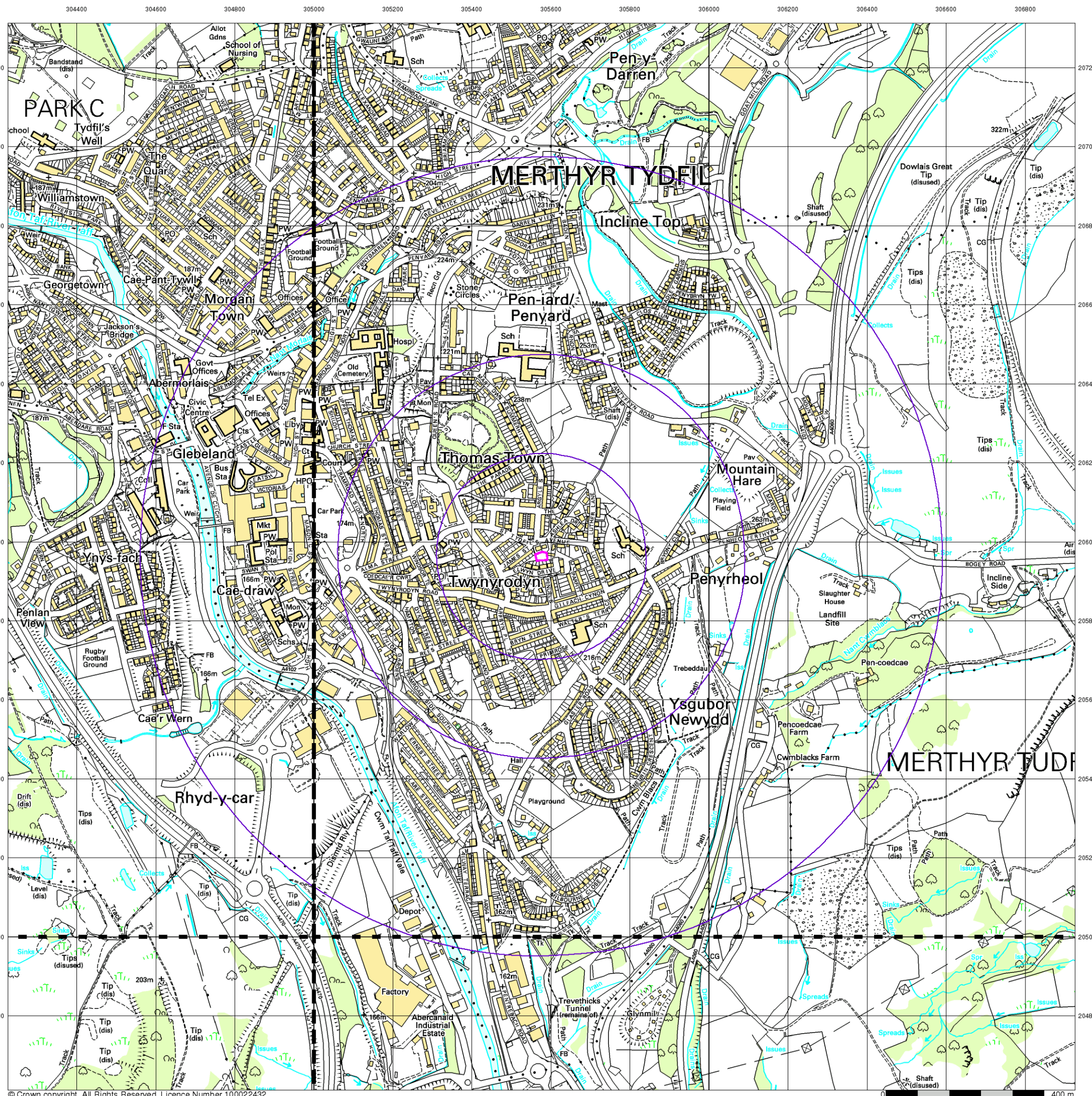
Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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VectorMap Local

Published 2015

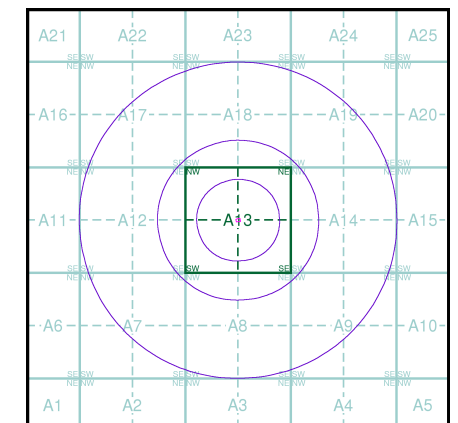
Source map scale - 1:10,000

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)

SO00NW 2015 Variable	SO00NE 2015 Variable
SO00SW 2015 Variable	SO00SE 2015 Variable

Historical Map - Slice A



Order Details

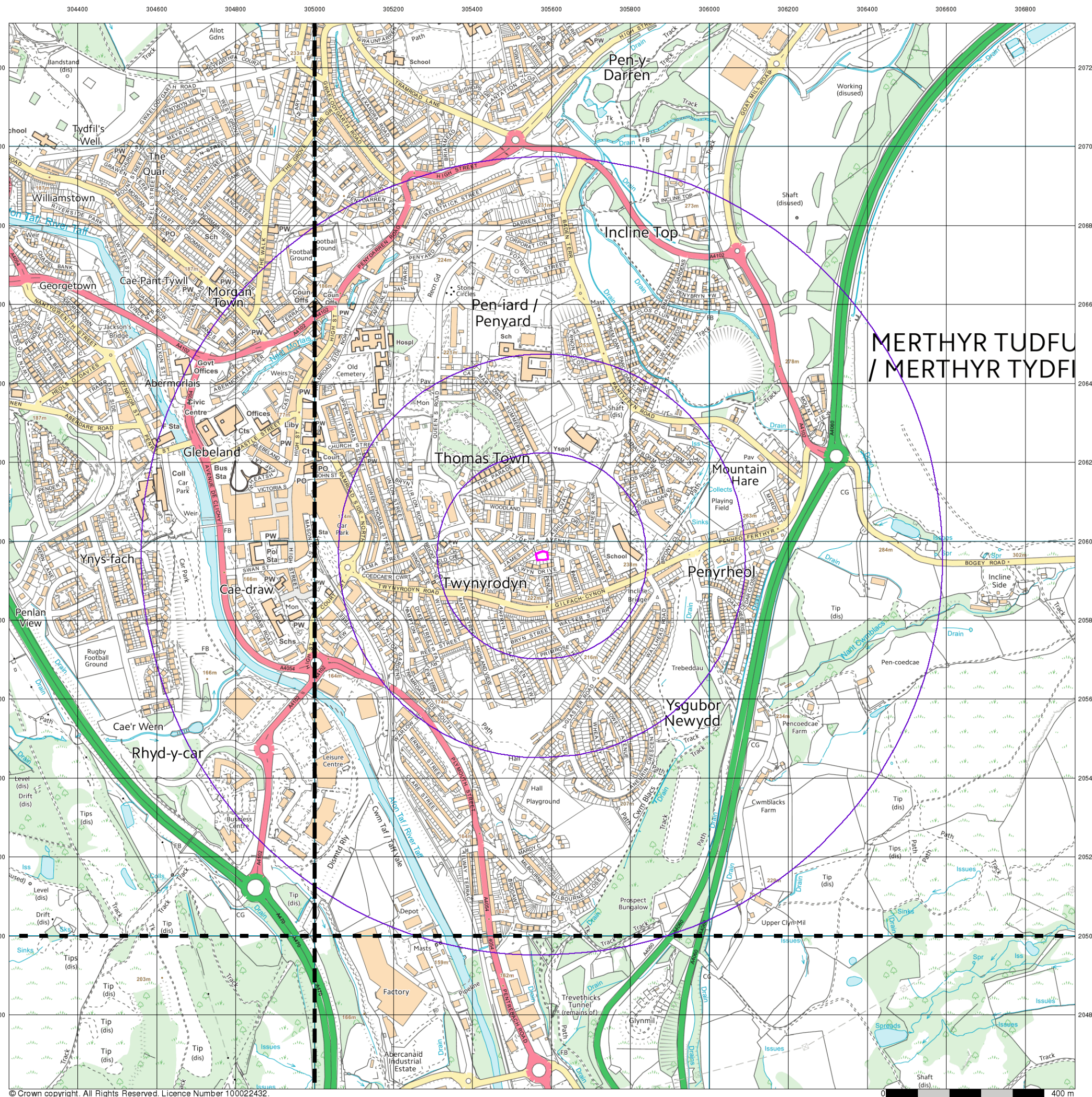
Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

70905697_1_1

Customer Reference:

13319

National Grid Reference:

305580, 205960

Slice:

A

Site Area (Ha):

0.06

Search Buffer (m):

1000

Site Details:

Builders Yard
Elwyn Drive
Merthyr Tydfil
CF47 0NJ

Client Details:

Ms L Dow
Terra Firma (Wales) Ltd
5 Deryn Court
Wharfdale Road
Pentwyn
Cardiff
CF23 7HB

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	20
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Introduction

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

In the attached 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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The cavity data presented has been extracted from the PBA enhanced version of the original DEFRA national cavity databases. PBA/DEFRA retain the copyright & intellectual property rights in the data. Whilst all reasonable efforts are made to check that the information contained in the cavity databases is accurate we do not warrant that the data is complete or error free. The information is based upon our own researches and those collated from a number of external sources and is continually being augmented and updated by PBA. In no event shall PBA/DEFRA or Landmark be liable for any loss or damage including, without limitation, indirect or consequential loss or damage arising from the use of this data.

Radon Potential dataset Copyright Notice

Information supplied from a joint dataset compiled by The British Geological Survey and Public Health England.

Report Version v49.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1				16
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 4				2
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 5			Yes	
Pollution Incidents to Controlled Waters	pg 5				33
Prosecutions Relating to Authorised Processes					
Prosecutions Relating to Controlled Waters					
Registered Radioactive Substances					
River Quality	pg 10				4
River Quality Biology Sampling Points	pg 11				2
River Quality Chemistry Sampling Points	pg 13				3
Substantiated Pollution Incident Register	pg 15			1	1
Water Abstractions	pg 16				1 (*3)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 16	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 17	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 17	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
Detailed River Network Lines	pg 17			Yes	n/a
Detailed River Network Offline Drainage					n/a

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 20				3
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 20				2
Licensed Waste Management Facilities (Locations)	pg 21				2
Local Authority Recorded Landfill Sites	pg 21				2
Registered Landfill Sites	pg 22				2
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 23	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 23	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 29			5	31
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas	pg 35	Yes	n/a	n/a	n/a
Mining Instability	pg 35	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 35	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 35	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 35		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 35	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 35	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 35	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

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries	pg 37		6	9	56
Fuel Station Entries	pg 43				1
Sensitive Land Use					
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					

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: Merthyr Tydfil - Willows Gas W Authority: Natural Resources Wales Catchment Area: River Taff Reference: AN0091001 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 20th December 2001 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Taff Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	A8NW (S)	636	2	305360 205350
2	Discharge Consents Operator: Merthyr Tydfil County Borough Council Property Type: Recreational & Cultural Location: Rhydyar Sports Complex Merthyr T, Merthyr Tydfil Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Af3031901 Permit Version: 1 Effective Date: 2nd October 1972 Issued Date: 2nd October 1972 Revocation Date: 6th May 2004 Discharge Type: Trade Discharges - Site Drainage Discharge: Freshwater Stream/River Environment: Receiving Water: Taff Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	674	2	305014 205565
3	Discharge Consents Operator: Atlantic Properties Ltd Property Type: Sewerage Network - Pumping Station - Others Location: Rhyd-Y-Car Leisure Centre Mt, Rhyd-Y-Car, Merthyr Tydfil, Cf48 1ut Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: An0413101 Permit Version: 1 Effective Date: 28th September 2007 Issued Date: 28th September 2007 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Taff Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	678	2	305112 205448
4	Discharge Consents Operator: Nmc (Uk) Ltd Property Type: Undefined Or Other Location: Afan Taff Htl Rhydyar Merthyr Tyd, Rhydyar Merthyr Tydfil Authority: Natural Resources Wales Catchment Area: River Taff Reference: An0115702 Permit Version: 1 Effective Date: 28th November 1988 Issued Date: 28th November 1988 Revocation Date: 16th January 1995 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Taff Status: Consent expired Positional Accuracy: Located by supplier to within 10m	A12SW (W)	696	2	304900 205750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	Discharge Consents Operator: Nmc (Uk) Ltd Property Type: Undefined Or Other Location: Afan Taff Htl Rhydyar Merthyr Tyd, Rhydyar Merthyr Tydfil Authority: Natural Resources Wales Catchment Area: River Taff Reference: An0115701 Permit Version: 1 Effective Date: 28th November 1988 Issued Date: 28th November 1988 Revocation Date: 3rd April 1995 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Taff Status: Consent expired Positional Accuracy: Located by supplier to within 100m	A12SW (W)	780	2	304800 205800
6	Discharge Consents Operator: Celtic Energy Ltd Property Type: Coal Extraction, Surface Location: Great White Tip Site Authority: Natural Resources Wales Catchment Area: River Taff Reference: An0238701 Permit Version: 1 Effective Date: 10th November 1992 Issued Date: 10th November 1992 Revocation Date: 1st November 1996 Discharge Type: Trade Effluent Discharge: Into And/Or Watercourse Environment: Receiving Water: Culvert To River Taff Status: Consent expired Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	794	2	306191 206489
7	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso Avenue De Clichy Merthyr, Merthyr Tydfil Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: An0315501 Permit Version: 1 Effective Date: 10th December 2001 Issued Date: 10th December 2001 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: River Taff Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12SW (W)	812	2	304750 205930
8	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: River Taff Reference: Ae2025307 Permit Version: 2 Effective Date: 8th December 2001 Issued Date: 7th December 2001 Revocation Date: Not Supplied 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	A17NE (NW)	821	2	305120 206660

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	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	A17NE (NW)	850	2	305130 206700
9	Discharge Consents Operator: Celtic Energy Ltd Property Type: Undefined Or Other Location: Water Tmnt Area Wa (Final) Rec Scme, E Merthyr Rec Scme Tmnt Area Wa, Phase 111a, Merthyr Tydfil Authority: Natural Resources Wales Catchment Area: River Taff Reference: AN0264401 Permit Version: 1 Effective Date: 23rd July 1996 Issued Date: 23rd July 1996 Revocation Date: 2nd October 1997 Discharge Type: Trade Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: Nant Cwm Blacs Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m	A14NE (E)	834	2	306420 206045
10	Discharge Consents Operator: Celtic Energy Ltd Property Type: Coal Extraction, Surface Location: Great White Tip Site Authority: Natural Resources Wales Catchment Area: River Taff Reference: An0238702 Permit Version: 1 Effective Date: 10th November 1992 Issued Date: 10th November 1992 Revocation Date: 1st November 1996 Discharge Type: Trade Effluent Discharge: Into And/Or Watercourse Environment: Receiving Water: Culvert And Hence To River Taf Status: Consent expired Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	853	2	306256 206503
11	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso College Car Pk Merthyr Tydfil, Cso College Car Park Authority: Natural Resources Wales Catchment Area: River Taff Reference: An0091401 Permit Version: 2 Effective Date: 31st March 2002 Issued Date: 17th July 2001 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Taff Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NW (W)	854	2	304710 206040

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Merthyr - Rear Of Eastfield Te Authority: Natural Resources Wales Catchment Area: River Taff Reference: AE2025309 Permit Version: 1 Effective Date: 15th April 1964 Issued Date: 15th April 1964 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Taff Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	A12SW (W)	854	2	304750 205700
13	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Merthyr Tydfil - Ave De Clichy Authority: Natural Resources Wales Catchment Area: River Taff Reference: AN0091501 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 28th March 2002 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Taff Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m	A12NW (W)	868	2	304720 206180
14	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Education Location: Merthyr Tydfil - Further Educa Carp, Carpk Authority: Natural Resources Wales Catchment Area: River Taff Reference: AN0091401 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 30th March 2002 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Taff Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	A12NW (W)	896	2	304680 206130
15	Discharge Consents Operator: Celtic Energy Ltd Property Type: Undefined Or Other Location: Water Tmnt Area Wa (Storm) Rec Scme, E Merthyr Rec Scme Tmnt Area Wa, Phase 111a, Merthyr Tydfil Authority: Natural Resources Wales Catchment Area: River Taff Reference: AN0264402 Permit Version: 1 Effective Date: 23rd July 1996 Issued Date: 23rd July 1996 Revocation Date: 2nd October 1997 Discharge Type: Trade Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: Nant Cwm Blacs Status: Authorisation revokedRevoked Positional Accuracy: Unknown	A14NE (E)	928	2	306515 206038
16	Local Authority Pollution Prevention and Controls Name: Star Texaco Location: 3-3a Lower High Street, Methyr Tydfil Authority: Merthyr Tydfil County Borough Council, Environmental Health Department Permit Reference: PPC/PG1.14/04/10 Dated: 1st March 1999 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station Status: Permitted Positional Accuracy: Manually positioned to the address or location	A12SE (SW)	545	3	305081 205703

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	Local Authority Pollution Prevention and Controls Name: British Coal Opencast Location: Incline Top Opencast Site, Goatmill Road, MERTHYR TYDFIL, Mid Glamorgan, CF48 3TD Authority: Merthyr Tydfil County Borough Council, Environmental Health Department Permit Reference: PG (3)/5(91)-1 Dated: 26th February 1993 Process Type: Local Authority Pollution Prevention and Control Description: PG3/5 Coal, coke and coal product processes Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	711	3	305920 206601
	Nearest Surface Water Feature	A13NE (E)	300	-	305886 206017
18	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Goat Mill Road Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 13th March 1997 Incident Reference: 31912 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NW (E)	652	4	306200 206200
19	Pollution Incidents to Controlled Waters Property Type: Not Given Location: At Footbridge, Near The Weir Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 28th May 1997 Incident Reference: 32500 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	A7NE (SW)	662	4	305200 205400
20	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Stream, Underneath, PENTREBACH Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Not Supplied Incident Date: 20th January 1992 Incident Reference: 1901 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	A7NE (SW)	665	4	305001 205601
21	Pollution Incidents to Controlled Waters Property Type: Not Given Location: St Tydfil Court Authority: Environment Agency, Welsh Region Pollutant: Rubble/Litter Or Solids Note: River Taff Incident Date: 5th February 1998 Incident Reference: 34791 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Neglect Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SW (W)	696	4	304900 205750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	Pollution Incidents to Controlled Waters Property Type: Road Location: A470 Roadscheme, ABERCANAID Authority: Environment Agency, Welsh Region Pollutant: Rubble/Litter Or Solids Note: Accidental Spillage/Leakage Incident Date: 2nd October 1995 Incident Reference: 26254 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SW (W)	712	4	304900 205700
22	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Up Stream Of Rhydyar, Road Bridge Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Not Supplied Incident Date: 23rd March 1995 Incident Reference: 24240 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	A7NE (SW)	704	4	305001 205531
22	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Rhydyar Leisure Centre Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Not Supplied Incident Date: 11th June 1997 Incident Reference: 32967 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	A7NE (SW)	719	4	304970 205550
22	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Rhydyar Leisure Centre Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: River Taff Incident Date: 11th June 1997 Incident Reference: 32967 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	A7NE (SW)	721	4	304970 205545
23	Pollution Incidents to Controlled Waters Property Type: Road (Lost Load) Location: Bogey Road, Roundabout, MERTHYR TYDFIL Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Accidental Spillage/Leakage Incident Date: 15th May 1995 Incident Reference: 24189 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Burst Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NE (E)	722	4	306300 206100
24	Pollution Incidents to Controlled Waters Property Type: Road Location: Merthyr Weir Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Deliberate Act Incident Date: 25th March 1995 Incident Reference: 23038 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	A12NW (W)	762	4	304800 206000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	Pollution Incidents to Controlled Waters Property Type: Industrial Premises Location: Bridge At, Technical Authority: Environment Agency, Welsh Region Pollutant: Miscellaneous - Fire water / Foam Note: Not Supplied Incident Date: 11th March 1995 Incident Reference: 23452 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	A12NW (W)	812	4	304750 206000
25	Pollution Incidents to Controlled Waters Property Type: Building Sites Location: Down Stream Of Glass Road, Bridge Opposite, Town Hall Authority: Environment Agency, Welsh Region Pollutant: Sewage - Septic Tank Effluent Note: Poor Operational Practise Incident Date: 4th April 1992 Incident Reference: 3478 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	862	4	304700 206000
25	Pollution Incidents to Controlled Waters Property Type: Building Sites Location: Weir Pool By, Glass Bridge Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Poor Operational Practise Incident Date: 4th April 1992 Incident Reference: 3478 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	862	4	304700 205995
26	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	A17NE (NW)	817	4	305200 206700
27	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Weir At Merthyr College Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Not Supplied Incident Date: 26th March 1997 Incident Reference: 31800 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	A12NW (W)	821	4	304750 206095
28	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Merthyr Below, Fire Station Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 18th April 1992 Incident Reference: 3837 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	A12NW (W)	822	4	304750 206100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
28	Pollution Incidents to Controlled Waters Property Type: Road Location: Opposite College, By Footbridge Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Inadequate Design/Capacity Incident Date: 20th March 1995 Incident Reference: 22990 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	A12NW (W)	866	4	304705 206095
28	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Weir In, MERTHYR Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Not Supplied Incident Date: 1st May 1996 Incident Reference: 28200 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	A12NW (W)	867	4	304705 206100
28	Pollution Incidents to Controlled Waters Property Type: Road Location: Opposite Fire Station Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Inadequate Design/Capacity Incident Date: 20th March 1995 Incident Reference: 22990 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	A12NW (W)	867	4	304705 206105
28	Pollution Incidents to Controlled Waters Property Type: Road Location: Merthyr Town Centre, Down Stream Of Weir Authority: Environment Agency, Welsh Region Pollutant: Cement/Mortar Note: Inadequate Design/Capacity Incident Date: 15th March 1995 Incident Reference: 23528 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	871	4	304700 206095
28	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Webley Hotel, MERTHYR Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Not Supplied Incident Date: 1st May 1996 Incident Reference: 28200 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	A12NW (W)	872	4	304700 206105
28	Pollution Incidents to Controlled Waters Property Type: Road Location: Merthyr College, Car Park Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Accidental Spillage/Leakage Incident Date: 27th March 1995 Incident Reference: 23459 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	A12NW (W)	872	4	304700 206100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	Pollution Incidents to Controlled Waters Property Type: Not Given Location: At Rear Of Caslte Cinema Car Park Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blockage Incident Date: 11th April 1997 Incident Reference: 32011 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	A17SW (NW)	876	4	304800 206400
30	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Near Rhydyar Leisure Centre Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Poor Management Control Incident Date: 4th July 1996 Incident Reference: 29076 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SW (W)	902	4	304700 205700
31	Pollution Incidents to Controlled Waters Property Type: Not Given Location: MERTHYR TYDFIL Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Inadequate Design/Capacity Incident Date: 7th April 1992 Incident Reference: 3973 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	915	4	304650 206050
32	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Confluence With Taff Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 1st January 1996 Incident Reference: 26989 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	A12NW (W)	922	4	304700 206295
32	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Storm Overflow Location: Below Fire Station, MERTHYR Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blocked Sewer Incident Date: 18th September 1995 Incident Reference: 26097 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	A12NW (W)	923	4	304700 206300
33	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Weir, MERTHYR Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Emergency Overflow Incident Date: 14th March 1995 Incident Reference: 23539 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	957	4	304605 205995

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Merthyr-College, Car Park Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Not Supplied Incident Date: 14th March 1995 Incident Reference: 23537 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	A12NW (W)	962	4	304600 206000
33	Pollution Incidents to Controlled Waters Property Type: Not Given Location: MERTHYR Authority: Environment Agency, Welsh Region Pollutant: Sewage - Treated Effluent Note: Emergency Overflow Incident Date: 14th March 1995 Incident Reference: 23539 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	962	4	304600 205995
34	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Opposite Fire Station Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Natural Occurrence Incident Date: 13th May 1997 Incident Reference: 32501 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	A17SW (NW)	964	4	304700 206400
35	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Down Stream Fire Station, MERTHYR Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Weather Incident Date: 26th March 1997 Incident Reference: 31900 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	970	4	304600 206100
36	Pollution Incidents to Controlled Waters Property Type: Land Location: Town Car Park Authority: Environment Agency, Welsh Region Pollutant: Contaminated Groundwater Note: Poor Operational Practise Incident Date: 15th April 1991 Incident Reference: 255 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17SW (W)	975	4	304660 206340
	River Quality Name: Taff GQA Grade: River Quality A Reach: Conf.Nant Rhyd'R-Conf.Morlais Estimated Distance (km): 1.1 Flow Rate: Flow less than 5 cumecs Flow Type: River Year: 2000	A7NE (SW)	607	4	305071 205600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	River Quality Name: Taff GQA Grade: River Quality A Reach: Conf.Nant Cannaid-Nant Rhyd Y Car Estimated Distance (km): 1.5 Flow Rate: Flow less than 5 cumecs Flow Type: River Year: 2000	A7NE (SW)	607	4	305071 205600
	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	A17NE (NW)	838	4	305193 206720
	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	A18NW (N)	875	4	305365 206821
37	River Quality Biology Sampling Points Name: Taff Reach: Confluence Nant Cannaid To Nant Rhyd Y Car Estimated Distance: 1.50 Positional Accuracy: Located by supplier to within 100m Year: 1990 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 1995 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2000 GQA Grade: River Quality Biology GQA Grade B - Good 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 B - Good Year: 2005 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2006 GQA Grade: River Quality Biology GQA Grade B - 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	A7NE (SW)	649	4	305100 205500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	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	A18NW (N)	873	4	305300 206800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
39	River Quality Chemistry Sampling Points Name: Taff Reach: Confluence Nant Rhyd'R To Confluence Morlais Estimated Distance: 1.10 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied	A7NE (SW)	666	4	304988 205621

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
40	River Quality Chemistry Sampling Points Name: Nant Morlais Reach: Confluence River Taff To Confluence Goitre Brook Estimated Distance: 1.00 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied	A17SE (NW)	817	4	304909 206459

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
40	River Quality Chemistry Sampling Points Name: Nant Morlais Reach: Confluence Goitre Brook To Headwaters Estimated Distance: 2.40 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied	A17SE (NW)	817	4	304909 206459
41	Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 5th February 2007 Incident Reference: 467094 Water Impact: Category 4 - No Impact Air Impact: Category 2 - Significant Incident Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Atmospheric Pollutants And Effects: Landfill Odour	A14SW (SE)	457	2	306007 205766
42	Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 4th September 2013 Incident Reference: 1155986 Water Impact: Category 4 - No Impact Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Inert : Construction / Demolition Material Pollutant: Inert Materials And Wastes: Soils And Clay Pollutant: Other Pollutant Pollutant: Specific Waste Materials: Household Waste Pollutant: Specific Waste Materials: Tyres	A14SE (E)	821	2	306409 205887

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	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	A12NW (W)	865	4	304700 206050
	Water Abstractions Operator: TBS (South Wales) Ltd Licence Number: 21/57/22/0035 Permit Version: 100 Location: Borehole At Tbs (South Wales) Ltd Authority: Environment Agency, Welsh Region Abstraction: Other Industrial/Commercial/Public Services: General Washing/Process Washing Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Borehole - Depth 93 M Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 14th October 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2NE (S)	1317	4	305190 204690
	Water Abstractions Operator: Hoover Plc Licence Number: 21/57/22/0025 Permit Version: 100 Location: Nant Canaid At Glyn-Dyrys Authority: Natural Resources Wales Abstraction: Machinery And Electronics: General Use (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Nant Canaid Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 30th October 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2NE (S)	1392	2	305160 204620
	Water Abstractions Operator: Hoover Plc Licence Number: 21/57/22/0025 Permit Version: 100 Location: Nant Canaid At Glyn-Dyrys Authority: Natural Resources Wales Abstraction: Machinery And Electronics: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Licenced from 01-Jan to 31-Dec Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 30th October 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2NE (S)	1397	2	305160 204615
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 36 Mid Glamorgan Scale: 1:100,000	A13SE (W)	0	4	305577 205962

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Drift Deposits Drift Deposit: Low permeability drift deposits occurring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints, brickearth, peat, river terrace deposits and marine and estuarine alluvium Map Sheet: Sheet 36 Mid Glamorgan Scale: 1:100,000	A13SE (W)	0	4	305577 205962
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SE (W)	0	5	305577 205962
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	A13SE (W)	0	5	305577 205962
	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				
44	Detailed River Network Lines River Type: Tertiary River River Name: Drain Hydrographic Area: D008 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk: Other Rivers Management Status: Water Course: Not Supplied Name: Water Course: Not Supplied Reference:	A13NE (E)	300	4	305886 206017
45	Detailed River Network Lines River Type: Extended Culvert (greater than 50m) River Name: Drain Hydrographic Area: D008 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk: Other Rivers Management Status: Water Course: Not Supplied Name: Water Course: Not Supplied Reference:	A13NE (E)	300	4	305886 206017
46	Detailed River Network Lines River Type: Extended Culvert (greater than 50m) River Name: Drain Hydrographic Area: D008 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk: Other Rivers Management Status: Water Course: Not Supplied Name: Water Course: Not Supplied Reference:	A13NE (E)	305	4	305892 206013

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
47	Detailed River Network Lines River Type: Extended Culvert (greater than 50m) River Name: Drain Hydrographic Area: D008 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk: Other Rivers Management Status: Water Course: Not Supplied Name: Water Course: Not Supplied Reference:	A13NE (E)	305	4	305892 206013
48	Detailed River Network Lines River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D008 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk: Other Rivers Management Status: Water Course: Not Supplied Name: Water Course: Not Supplied Reference:	A14NW (E)	353	4	305929 206067
49	Detailed River Network Lines River Type: Tertiary River River Name: Drain Hydrographic Area: D008 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk: Other Rivers Management Status: Water Course: Not Supplied Name: Water Course: Not Supplied Reference:	A14SW (E)	364	4	305942 205859
50	Detailed River Network Lines River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: D008 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk: Other Rivers Management Status: Water Course: Not Supplied Name: Water Course: Not Supplied Reference:	A14SW (E)	364	4	305942 205859
51	Detailed River Network Lines River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D008 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk: Other Rivers Management Status: Water Course: Not Supplied Name: Water Course: Not Supplied Reference:	A14NW (E)	374	4	305953 206059
52	Detailed River Network Lines River Type: Extended Culvert (greater than 50m) River Name: Drain Hydrographic Area: D008 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk: Other Rivers Management Status: Water Course: Not Supplied Name: Water Course: Not Supplied Reference:	A14SW (SE)	383	4	305938 205794

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
53	Detailed River Network Lines River Type: Tertiary River River Name: Drain Hydrographic Area: D008 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk: Other Rivers Management Status: Water Course: Not Supplied Name: Water Course: Not Supplied Reference:	A13SE (SE)	427	4	305890 205648
54	Detailed River Network Lines River Type: Extended Culvert (greater than 50m) River Name: Drain Hydrographic Area: D008 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk: Other Rivers Management Status: Water Course: Not Supplied Name: Water Course: Not Supplied Reference:	A13SE (SE)	427	4	305891 205649
55	Detailed River Network Lines River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D008 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk: Other Rivers Management Status: Water Course: Not Supplied Name: Water Course: Not Supplied Reference:	A14SW (E)	431	4	306021 205931
56	Detailed River Network Lines River Type: Extended Culvert (greater than 50m) River Name: Drain Hydrographic Area: D008 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Drain (ditch, Reen, Rhyne, Drain) Flood Risk: Other Rivers Management Status: Water Course: Not Supplied Name: Water Course: Not Supplied Reference:	A13SE (SE)	434	4	305882 205632
	Detailed River Network Offline Drainage None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
57	Historical Landfill Sites Licence Holder: Mr and Mrs Mahoney Location: Ysgubor Newydd, Merthyr Tydfil Name: Pencoedcae Farm Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14538 First Input Date: 31st December 1974 Last Input Date: 31st December 1992 Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6925/0023 BGS Ref: Not Supplied Other Ref: 4	A9NW (SE)	742	2	306247 205607
58	Historical Landfill Sites Licence Holder: Roy Thomas Location: Merthyr Tydfil Name: Bogey Road Tip Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14534 First Input Date: 31st December 1980 Last Input Date: 31st December 1985 Specified Waste: Deposited Waste included Inert, Industrial, Commercial, Household and Type: Special Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6925/0004 BGS Ref: Not Supplied Other Ref: Not Supplied	A14SE (E)	829	2	306418 205903
59	Historical Landfill Sites Licence Holder: Not Supplied Location: Bogey Road, Mountain Hare, Merthyr Tydfil Name: Incline Side Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14982 First Input Date: 31st December 1989 Last Input Date: 31st December 1990 Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6925/0018 BGS Ref: Not Supplied Other Ref: Not Supplied	A14SE (E)	978	2	306569 205937
60	Licensed Waste Management Facilities (Landfill Boundaries) Name: Ael Y Bryn Landfill Licence Number: 30017 Location: Ael Y Bryn Landfill, Mountain Hare Road, Mountain Hare, Merthyr Tydfil, Glamorgan, CF47 0LH Licence Holder: Hurley T Authority: Natural Resources Wales Site Category: Landfills Taking Other Wastes (Construction, Demolition, Dredgings) Max Input Rate: Not Supplied Licence Status: Closure Issued: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A14SW (E)	600	2	306189 205918
61	Licensed Waste Management Facilities (Landfill Boundaries) Name: Pencoedcae Farm Landfill Licence Number: 30126 Location: Pencoedcae Farm Landfill, Cwmblacs Slip Road, Cwmblacs, Merthyr Tydfil, Glamorgan, CF48 4AJ Licence Holder: Harris Andrew Authority: Natural Resources Wales Site Category: Landfills Taking Other Wastes (Construction, Demolition, Dredgings) Max Input Rate: Not Supplied Licence Status: Closure Issued: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A9NE (SE)	744	2	306257 205622

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
62	Licensed Waste Management Facilities (Locations) Licence Number: 30126 Location: Pencoedcae Farm Landfill, Cwmblacs Slip Road, Cwmblacs, Merthyr Tydfil, Glamorgan, CF48 4AJ Operator Name: Harris Andrew Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Landfills Taking Other Wastes (Construction, Demolition, Dredgings) Licence Status: Closed Issued: 18th May 1994 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	748	2	306260 205620
63	Licensed Waste Management Facilities (Locations) Licence Number: 30017 Location: Ael Y Bryn Landfill, Mountain Hare Road, Mountain Hare, Merthyr Tydfil, Glamorgan, CF47 0LH Operator Name: Hurley T Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Landfills Taking Other Wastes (Construction, Demolition, Dredgings) Licence Status: Closed Issued: 21st March 1987 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14SE (E)	796	2	306385 205908
	Local Authority Landfill Coverage Name: Merthyr Tydfil County Borough Council - Has supplied landfill data		0	3	305577 205962
64	Local Authority Recorded Landfill Sites Location: Cwmbargoed Lower Reference: 111 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	A14NW (E)	651	3	306233 206066
65	Local Authority Recorded Landfill Sites Location: Pencoedcae Farm, Cwmblacs Reference: 103 Authority: Merthyr Tydfil County Borough Council, Environmental Health Department Last Reported Status: Closed Types of Waste: Not Supplied Date of Closure: 31/12/1983 Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A14SE (E)	762	3	306306 205689

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
66	Registered Landfill Sites Licence Holder: T Hurley Licence Reference: 890056 Site Location: Ael Y Bryn Landfill, Mountain Hare, MERTHYR TYDFIL, Mid Glamorgan, CF47 0LH Licence Easting: 306300 Licence Northing: 205850 Operator Location: 20 Dyffryn Street, PONTLOTTYN, Mid Glamorgan, CF81 9RQ Authority: Environment Agency Wales, South East Area Site Category: Landfill Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Operational as far as is known Dated: 1st May 1990 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Brick Max.Waste Permitted By Licence Soil, Subsoil, Excav'N Waste Prohibited Waste: Any Substances In Eec Dir. 80/68 Biodegradable Waste Flammable Liquids Percussive/Explosive/Similar Waste Poisonous, Noxious, Polluting Wastes Pumpable Sludges (< 20% Dry Solids) Sub'S Control. Radioactive Subs Act'60 Waste In Sealed Drums Waste N.O.S.	A14SE (E)	717	4	306300 205850
67	Registered Landfill Sites Licence Holder: Mr & Mrs Mahoney Licence Reference: 4 Site Location: Pencoedcae Farm, Cwmlacks, Mountain Hare, Merthyr Tydfil, Mid Glamorgan Licence Easting: 306340 Licence Northing: 205680 Operator Location: As Site Address Authority: Environment Agency Wales, South East Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrendered Dated: 1st September 1979 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Commercial Waste Construction And Demolition Wastes Excavated Natural Materials \$ Ind. Non-Haz. Inert, Non-Flammable Ind. Non-Haz. Non-Toxic Waste Mine And Quarry Wastes	A14SE (E)	798	4	306340 205680

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)	A13SE (W)	0	5	305577 205962
	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: <150 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13SE (W)	0	5	305577 205962
	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: <150 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13NE (N)	27	5	305577 206000
	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: <150 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13SW (W)	235	5	305328 205944
	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: <150 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13NW (W)	241	5	305323 206000
	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: <150 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A14SW (E)	409	5	306000 205962
	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: <150 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A14NW (E)	412	5	306000 206000

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: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A12SE (SW)	491	5	305125 205736
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SE (W)	497	5	305077 205856
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12NE (W)	515	5	305048 206000
	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 - 2.2 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A7NE (SW)	561	5	305217 205512
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SE (W)	561	5	305000 205962
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12NE (W)	562	5	305000 206000

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: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A12SE (W)	569	5	305000 205873
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	604	5	306008 205517
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	609	5	306000 205503
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	680	5	306000 205411
	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: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A9NW (SE)	696	5	306195 205609
	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: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A12NW (W)	749	5	304814 206000

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 35 - 45 mg/kg Concentration: Cadmium 1.8 - 2.2 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A7NE (SW)	766	5	304972 205468
	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 - 2.2 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A7NE (SW)	767	5	305000 205434
	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: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A14NE (E)	778	5	306367 206000
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9SW (SE)	783	5	306000 205286
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	791	5	306018 205288
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9SW (SE)	809	5	306000 205255

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 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A9SW (SE)	822	5	305988 205234
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SW (W)	823	5	304773 205732
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SW (W)	823	5	304771 205737
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SE (NW)	830	5	304949 206527
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18NW (N)	846	5	305330 206781
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SE (NW)	855	5	305000 206612

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 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	863	5	306227 205371
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12NW (W)	915	5	304647 206000
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8SE (S)	952	5	305577 205000
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12NW (W)	953	5	304609 206000
	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 - 2.2 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8SW (S)	954	5	305509 205000
	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: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18NW (N)	959	5	305420 206919

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 35 - 45 mg/kg Concentration: Cadmium 1.8 - 2.2 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8SW (S)	970	5	305379 205000
	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: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8SE (S)	991	5	305862 205000
68	BGS Recorded Mineral Sites Site Name: Thomas Town Location: , Thomas Town, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 9029 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	351	5	305375 206265
69	BGS Recorded Mineral Sites Site Name: Trebeddau Level Location: , Mouontain Hare, Dowlais, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90895 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	400	5	305960 205800
70	BGS Recorded Mineral Sites Site Name: Pant-Y-Ffyn Coal Level Location: , Dowlais, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90899 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	416	5	305845 206300
71	BGS Recorded Mineral Sites Site Name: Garw Pit Location: , Dowlais, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90896 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	422	5	305785 206345

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
72	BGS Recorded Mineral Sites Site Name: Pen-Yr-Heol Ironstone Level Location: , Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125689 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A14SW (E)	454	5	306044 205940
73	BGS Recorded Mineral Sites Site Name: Trebeddau Location: , Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125688 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	511	5	306032 205696
74	BGS Recorded Mineral Sites Site Name: Trebeddau Location: , Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125690 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	583	5	306052 205597
75	BGS Recorded Mineral Sites Site Name: Lodge Pit Location: , Dowlais, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90897 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A18SE (N)	612	5	305790 206550
76	BGS Recorded Mineral Sites Site Name: Cwm Blacks Workings Location: Cwm Blacks, Pentrebach, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90894 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	621	5	306035 205520
76	BGS Recorded Mineral Sites Site Name: Cwm Blacks Workings Location: Cwm Blacks, Pentrebach, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90894 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	621	5	306035 205520

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
77	BGS Recorded Mineral Sites Site Name: Pant-Y-Ffyn Location: , Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125695 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	715	5	306198 206347
78	BGS Recorded Mineral Sites Site Name: Coslet Pit Location: , Mountain Hare, Dowlais, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90878 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A14NE (E)	730	5	306305 206115
79	BGS Recorded Mineral Sites Site Name: Cwm Blacks Level Location: Cwm Blacks, Pentrebach, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90891 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SE (SE)	748	5	305870 205260
79	BGS Recorded Mineral Sites Site Name: Cwm Blacks Workings Location: Cwm Blacks, Pentrebach, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90893 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SE (S)	764	5	305835 205230
79	BGS Recorded Mineral Sites Site Name: Cwm Blacks Workings Location: Cwm Blacks, Pentrebach, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90893 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A8SE (S)	764	5	305835 205230
80	BGS Recorded Mineral Sites Site Name: Pen-Yard Ironstone Workings Location: , Dowlais, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90898 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A18NE (NE)	754	5	305885 206665

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
81	BGS Recorded Mineral Sites Site Name: Penrheol Ironstone Level Location: , Mountain Hare, Dowlais, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90879 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	758	5	306160 206470
82	BGS Recorded Mineral Sites Site Name: Cwm Blacks Pit Location: Cwm Blacks, Pentrebach, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90881 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	777	5	306170 205435
83	BGS Recorded Mineral Sites Site Name: Cwm Blacks Workings Location: Cwm Blacks, Pentrebach, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90892 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A8SE (S)	808	5	305805 205175
83	BGS Recorded Mineral Sites Site Name: Cwm Blacks Workings Location: Cwm Blacks, Pentrebach, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90892 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SE (S)	808	5	305805 205175
84	BGS Recorded Mineral Sites Site Name: Pen-Yard Location: Baden Terrace, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125676 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NE (N)	816	5	305683 206782
85	BGS Recorded Mineral Sites Site Name: Merthyr Common Coal Level Location: , Pentrebach, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90919 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	846	5	305985 205205

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
86	BGS Recorded Mineral Sites Site Name: Pencoedcae Level Location: Pencoedcae, Pentrebach, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90882 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A14SE (E)	847	5	306375 205635
86	BGS Recorded Mineral Sites Site Name: Pencoedcae Level Location: Pencoedcae, Pentrebach, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90882 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14SE (E)	847	5	306375 205635
87	BGS Recorded Mineral Sites Site Name: Pen-Yard Location: Baden Terrace, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125679 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NE (N)	894	5	305700 206859
88	BGS Recorded Mineral Sites Site Name: Pen-Yard Location: Baden Terrace, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125678 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NE (N)	909	5	305696 206874
88	BGS Recorded Mineral Sites Site Name: Pen-Yard Location: , Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125673 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NE (N)	913	5	305650 206883
89	BGS Recorded Mineral Sites Site Name: Rhyd-Y-Car Location: , Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125648 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	912	5	304753 205539

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
90	BGS Recorded Mineral Sites Site Name: Prospect House Location: , Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125680 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SE (S)	939	5	305702 205021
90	BGS Recorded Mineral Sites Site Name: Clyn-Mil Drift Location: , Pentrebach, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90889 Type: Underground Status: Ceased Operator: Hill'S Plymouth Co Ltd Operator Location: Hill'S Plymouth Co Ltd, Plymouth House, Merthyr Tydfil, Glamorgan Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SE (S)	944	5	305630 205010
90	BGS Recorded Mineral Sites Site Name: Clyn-Mil Drift Location: , Pentrebach, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90888 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SE (S)	947	5	305670 205010
91	BGS Recorded Mineral Sites Site Name: Thomas Price Pit Location: , Mountain Hare, Dowlais, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90880 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A14NE (E)	960	5	306550 205990
92	BGS Recorded Mineral Sites Site Name: Ffros-Y-Fran Location: , Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125709 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A14SE (E)	964	5	306548 205843
93	BGS Recorded Mineral Sites Site Name: Penydarren No 2 Pit Location: , Dowlais, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90876 Type: Underground Status: Ceased Operator: Dowlais Iron Co Ltd Operator Location: Dowlais Iron Co Ltd, Dowlais, Merthyr Tydfil, Glamorgan Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	989	5	306490 206380

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
93	BGS Recorded Mineral Sites Site Name: Penydarren No 2 Pit Location: , Dowlais, Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 90876 Type: Underground Status: Ceased Operator: Dowlais Iron Co Ltd Operator Location: Dowlais Iron Co Ltd, Dowlais, Merthyr Tydfil, Glamorgan Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	989	5	306490 206380
94	BGS Recorded Mineral Sites Site Name: Rhyd-Y-Car Pit Location: , Merthyr Tydfil, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125650 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	989	5	304796 205331
	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.	A13SE (W)	0	6	305577 205962
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13SE (W)	0	-	305577 205962
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13SE (W)	0	5	305577 205962
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (W)	0	5	305577 205962
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (W)	0	5	305577 205962
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	201	5	305635 206167
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (W)	0	5	305577 205962
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (W)	0	5	305577 205962
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (W)	0	5	305577 205962
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (W)	0	5	305577 205962
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SE (W)	0	5	305577 205962

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Radon Potential - Radon Affected Areas Affected Area: The property is in a lower probability radon area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A13SE (W)	0	5	305577 205962

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
95	Contemporary Trade Directory Entries Name: Conservatory Shine Location: 2, Parfitt Terrace, Merthyr Tydfil, Mid Glamorgan, CF47 0PL Classification: Commercial Cleaning Services Status: Active Positional Accuracy: Automatically positioned to the address	A13SE (SE)	99	-	305657 205880
96	Contemporary Trade Directory Entries Name: S & A Motor Services Location: Rear of ,Kingsley Ter, Merthyr Tydfil, Mid Glamorgan, CF47 0NR Classification: Garage Services Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A13NW (N)	116	-	305534 206080
97	Contemporary Trade Directory Entries Name: P & L Autos Location: Rear Of Kingsley Ter, Merthyr Tydfil, Mid Glamorgan, CF47 0NR Classification: Car Body Repairs Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A13NW (N)	127	-	305541 206094
97	Contemporary Trade Directory Entries Name: A M R Motors Location: Woodland Terrace, Merthyr Tydfil, Mid Glamorgan, CF47 0NL Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A13NW (N)	164	-	305534 206131
97	Contemporary Trade Directory Entries Name: Ray Evans & Son Location: Woodland Terrace, Merthyr Tydfil, Mid Glamorgan, CF47 0NL Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A13NW (N)	164	-	305534 206131
98	Contemporary Trade Directory Entries Name: T M S Location: 12, Woodland Place, Merthyr Tydfil, Mid Glamorgan, CF47 0NH Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A13NW (NW)	136	-	305464 206062
99	Contemporary Trade Directory Entries Name: A Class Cleaning Location: 78, Twynyrodyn Road, Merthyr Tydfil, Mid Glamorgan, CF47 0PT Classification: Commercial Cleaning Services Status: Active Positional Accuracy: Automatically positioned to the address	A13SW (SW)	251	-	305334 205855
100	Contemporary Trade Directory Entries Name: Planet Wales Three Good Friends Location: 85, Glasier Road, Merthyr Tydfil, Mid Glamorgan, CF47 0SR Classification: Greeting Card Publishers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (SE)	266	-	305834 205845
101	Contemporary Trade Directory Entries Name: K.A.M. Cleaning Co Location: 1, Tydfil Villas, Courtland Terrace, Merthyr Tydfil, Mid Glamorgan, CF47 0DT Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	341	-	305221 205989
102	Contemporary Trade Directory Entries Name: Valley Pest Control Location: 16, Taff Glen View, Merthyr Tydfil, Mid Glamorgan, CF47 0TH Classification: Pest & Vermin Control Status: Active Positional Accuracy: Automatically positioned to the address	A8NW (S)	349	-	305527 205605
103	Contemporary Trade Directory Entries Name: Dw Railway Location: 31, Trevithick Gardens, Merthyr Tydfil, Mid Glamorgan, CF47 0RP Classification: Railways Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (SW)	426	-	305171 205791
104	Contemporary Trade Directory Entries Name: Scotts Autotrade Location: 21, Plymouth Street, Merthyr Tydfil, Mid Glamorgan, CF47 0TT Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NW (SW)	466	-	305302 205568

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
105	Contemporary Trade Directory Entries Name: James Boulton Ltd Location: Dan-yr-Haul, Mountain Hare, Merthyr Tydfil, Mid Glamorgan, CF47 0LH Classification: Waste Disposal Services Status: Inactive Positional Accuracy: Manually positioned to the address or location	A14NW (E)	468	-	306055 206021
105	Contemporary Trade Directory Entries Name: Full Cycle Recycle Location: Transfer Station, Mountain Hare, Merthyr Tydfil, Mid Glamorgan, CF47 0LH Classification: Reclaiming - Waste Products Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A14NW (E)	481	-	306071 205984
106	Contemporary Trade Directory Entries Name: Green Engineering Services Location: 17, Hawthorn Drive, Merthyr Tydfil, Mid Glamorgan, CF47 0LZ Classification: Engineers - General Status: Active Positional Accuracy: Automatically positioned to the address	A14SW (E)	478	-	306038 205784
107	Contemporary Trade Directory Entries Name: Ecas Systems Ltd Location: Unit 2, Plymouth Court, Warlow Street, Merthyr Tydfil, Mid Glamorgan, CF47 0YS Classification: Electrical Engineers Status: Active Positional Accuracy: Automatically positioned to the address	A7NE (SW)	509	-	305189 205609
107	Contemporary Trade Directory Entries Name: Rheidol Services Ltd Location: Unit 4-5, Plymouth Court, Warlow Street, Merthyr Tydfil, Mid Glamorgan, CF47 0YS Classification: Electrical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	520	-	305190 205592
107	Contemporary Trade Directory Entries Name: Advanced Engineering Services (Wales) Ltd Location: Unit 4-5, Plymouth Court, Warlow Street, Merthyr Tydfil, Mid Glamorgan, CF47 0YS Classification: Tool Design, Manufacturers & Makers Status: Active Positional Accuracy: Automatically positioned to the address	A7NE (SW)	520	-	305190 205592
107	Contemporary Trade Directory Entries Name: Read Industrial Doors Ltd Location: Unit 7-8, Plymouth Court, Warlow Street, Merthyr Tydfil, Mid Glamorgan, CF47 0YS Classification: Door Manufacturers - Industrial Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	538	-	305191 205565
107	Contemporary Trade Directory Entries Name: Read Industrial Doors Location: Unit 7-8, Plymouth Court, Warlow Street, Merthyr Tydfil, Mid Glamorgan, CF47 0YS Classification: Door Manufacturers - Industrial Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	538	-	305191 205565
108	Contemporary Trade Directory Entries Name: Twyn Launderette Location: Glasier Rd, Merthyr Tydfil, Mid Glamorgan, CF47 0TD Classification: Laundries & Launderettes Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A8NW (S)	515	-	305540 205438
109	Contemporary Trade Directory Entries Name: Jocks Joinery Location: Warlow St, Merthyr Tydfil, Mid Glamorgan, CF47 0YW Classification: Joinery Manufacturers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A8NW (SW)	522	-	305247 205538
110	Contemporary Trade Directory Entries Name: Tesco Petrol Filling Station Location: Tramroadside North, MERTHYR TYDFIL, Mid Glamorgan, CF47 0AL Classification: Petrol Filling Stations Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	542	-	305041 206117

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
111	Contemporary Trade Directory Entries Name: Simon Jones Cars Ltd Location: 3, Lower High Street, Merthyr Tydfil, Mid Glamorgan, CF47 8EB Classification: Car Dealers - Used Status: Active Positional Accuracy: Automatically positioned to the address	A12SE (SW)	548	-	305065 205729
111	Contemporary Trade Directory Entries Name: Merthyr Motor Co Location: Lower High Street, Merthyr Tydfil, Mid Glamorgan, CF47 8EB Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (SW)	570	-	305046 205719
111	Contemporary Trade Directory Entries Name: Car Care Location: Lower High St, Merthyr Tydfil, Mid Glamorgan, CF47 8EB Classification: Garage Services Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A12SE (SW)	595	-	305016 205723
111	Contemporary Trade Directory Entries Name: Ruggers Location: 19 Lower High St, Merthyr Tydfil, Mid Glamorgan, CF47 8EB Classification: Carpets & Rugs - Manufacturers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A12SE (W)	602	-	305002 205740
112	Contemporary Trade Directory Entries Name: Homestyle By Fads Location: 1, Court Street, Merthyr Tydfil, Mid Glamorgan, CF47 8DU Classification: Wallpapers & Wall Coverings Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (W)	553	-	305035 205795
113	Contemporary Trade Directory Entries Name: Russell Roberts Location: Ernest St, Merthyr Tydfil, Mid Glamorgan, CF47 0YP Classification: Garage Services Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A8NW (SW)	558	-	305256 205488
114	Contemporary Trade Directory Entries Name: Akwamasta Water Level - Bevan Products Location: Ty Coed, Penheolferthyr, Mountain Hare, Merthyr Tydfil, Mid Glamorgan, CF47 0LF Classification: Builders' Tools & Equipment Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A14NW (E)	579	-	306167 206014
115	Contemporary Trade Directory Entries Name: J C Plant Services Location: 30, Llwyn yr Eos Grove, Merthyr Tydfil, Mid Glamorgan, CF47 0GD Classification: Plant & Machinery Repairs Status: Active Positional Accuracy: Automatically positioned to the address	A18SE (NE)	584	-	305814 206510
116	Contemporary Trade Directory Entries Name: Fragrance Shop Location: Unit 7a, Beacons Place Shopping Centre, Merthyr Tydfil, Mid Glamorgan, CF47 8DF Classification: Perfume Suppliers Status: Active Positional Accuracy: Automatically positioned to the address	A12NE (W)	617	-	304958 206096
116	Contemporary Trade Directory Entries Name: Currys Location: 50, High Street, Merthyr Tydfil, Mid Glamorgan, CF47 8DE Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	620	-	304950 206070
117	Contemporary Trade Directory Entries Name: S A S Location: 28a, Ernest Street, Merthyr Tydfil, Mid Glamorgan, CF47 0YP Classification: Car Breakers & Dismantlers Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NW (SW)	627	-	305329 205371

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
118	Contemporary Trade Directory Entries Name: Qwik Print Location: 139, High Street, Merthyr Tydfil, Mid Glamorgan, CF47 8DN Classification: Printers Textile Status: Inactive Positional Accuracy: Manually positioned to the address or location	A12NE (W)	643	-	304918 205976
119	Contemporary Trade Directory Entries Name: Brighthouse Location: 126, High Street, Merthyr Tydfil, Mid Glamorgan, CF47 8BT Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Active Positional Accuracy: Automatically positioned to the address	A12NE (W)	660	-	304919 206118
119	Contemporary Trade Directory Entries Name: The Electronic Cigarette Shop Location: Unit 19 St. Tydfil Sq Shopping Centre, Graham Way, Merthyr Tydfil, Mid Glamorgan, CF47 8EG Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Active Positional Accuracy: Manually positioned to the address or location	A12NW (W)	701	-	304876 206115
119	Contemporary Trade Directory Entries Name: R Hooper Location: 29, Market Square, Merthyr Tydfil, Mid Glamorgan, CF47 8DA Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	701	-	304876 206115
119	Contemporary Trade Directory Entries Name: Stagecoach (South Wales) Location: 6, Victoria Street, Merthyr Tydfil, Mid Glamorgan, CF47 8ED Classification: Bus & Coach Operators & Stations Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	701	-	304876 206115
119	Contemporary Trade Directory Entries Name: Stagecoach Location: 6, Victoria Street, Merthyr Tydfil, Mid Glamorgan, CF47 8ED Classification: Bus & Coach Operators & Stations Status: Active Positional Accuracy: Automatically positioned to the address	A12NW (W)	701	-	304876 206115
119	Contemporary Trade Directory Entries Name: Cosmetics4u Location: 17, New Market Walk, St. Tydfil Square Shopping Centre, Merthyr Tydfil, Mid Glamorgan, CF47 8EL Classification: Cosmetic Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	736	-	304836 206090
120	Contemporary Trade Directory Entries Name: Jks Blinds Location: River Walk, Merthyr Tydfil, Mid Glamorgan, CF47 8EN Classification: Blinds, Awnings & Canopies Status: Active Positional Accuracy: Manually positioned within the geographical locality	A12NW (W)	670	-	304896 206044
120	Contemporary Trade Directory Entries Name: T & I Protheroe Location: 17 Graham Way, Merthyr Tydfil, Mid Glamorgan, CF47 8EG Classification: Hardware Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A12NW (W)	717	-	304850 206058
121	Contemporary Trade Directory Entries Name: Coolio Location: 45, Tramroad Terrace, Merthyr Tydfil, Mid Glamorgan, CF47 0BG Classification: Air Conditioning & Refrigeration Contractors Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	687	-	305017 206386
121	Contemporary Trade Directory Entries Name: 22 Seven Location: 94, Pontmorlais, Merthyr Tydfil, Mid Glamorgan, CF47 8UH Classification: Printers Status: Inactive Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	725	-	305003 206429

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
122	Contemporary Trade Directory Entries Name: Tribotics Location: The Archers, Clare St, Merthyr Tydfil, Mid Glamorgan, CF47 0YL Classification: Automation Systems & Equipment Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A8NW (SW)	694	-	305295 205313
123	Contemporary Trade Directory Entries Name: Kaykel Communications Location: 41, Clare Street, Merthyr Tydfil, Mid Glamorgan, CF47 0YN Classification: Telecommunications Equipment & Systems Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SW (S)	706	-	305359 205277
123	Contemporary Trade Directory Entries Name: W J Hughes Painters & Decorators Location: 47, Clare Street, Merthyr Tydfil, Mid Glamorgan, CF47 0YL Classification: Painting & Decorating Supplies Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SW (S)	720	-	305328 205272
124	Contemporary Trade Directory Entries Name: Welsh Country Foods Location: 50, Glebeland Street, Merthyr Tydfil, Mid Glamorgan, CF47 8AT Classification: Meat - Wholesale Status: Active Positional Accuracy: Automatically positioned to the address	A12NW (W)	722	-	304892 206238
124	Contemporary Trade Directory Entries Name: Merthyr Dry Cleaners Location: 13, Glebeland Street, Merthyr Tydfil, Mid Glamorgan, CF47 8AU Classification: Dry Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	745	-	304862 206224
125	Contemporary Trade Directory Entries Name: Dot Cotton'S Location: 4, Morlais Buildings, Merthyr Tydfil, Mid Glamorgan, CF47 8UL Classification: Laundries & Launderettes Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	730	-	305045 206484
125	Contemporary Trade Directory Entries Name: Pontmorlais Old Circus Location: 13 Pontmorlais, Merthyr Tydfil, Mid Glamorgan, CF47 8UB Classification: Antiques - Repairing & Restoring Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A17SE (NW)	753	-	305010 206480
125	Contemporary Trade Directory Entries Name: Www.Dais.Biz Location: 14-15, Pontmorlais, Merthyr Tydfil, Mid Glamorgan, CF47 8UB Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	761	-	305030 206512
126	Contemporary Trade Directory Entries Name: Merthyr Service Centre Location: Flat 7, Buckland House, Caedraw Road, Merthyr Tydfil, Mid Glamorgan, CF47 8HG Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SW (W)	738	-	304840 205812
127	Contemporary Trade Directory Entries Name: Oriel Blinds Ltd Location: 1, Corporation Street, Merthyr Tydfil, Mid Glamorgan, CF47 0HP Classification: Blinds, Awnings & Canopies Status: Active Positional Accuracy: Automatically positioned to the address	A18NW (N)	760	-	305549 206733
128	Contemporary Trade Directory Entries Name: Motofix Location: Plymouth Street, Merthyr Tydfil, Mid Glamorgan, CF47 0TT Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A8SW (S)	760	-	305447 205202

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
129	Contemporary Trade Directory Entries Name: D H M Services Location: Old Drill Hall, Pontmorlais West, Merthyr Tydfil, Mid Glamorgan, CF47 8UT Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	774	-	304963 206459
130	Contemporary Trade Directory Entries Name: Dip & Strip Location: Dan-y-Parc, Merthyr Tydfil, Mid Glamorgan, CF47 0AX Classification: Paint & Varnish Stripping Status: Inactive Positional Accuracy: Automatically positioned to the address	A17NE (NW)	781	-	305164 206640
131	Contemporary Trade Directory Entries Name: Hillarys Blinds Ltd Location: Castle Yard, Merthyr Tydfil, Mid Glamorgan, CF47 8JD Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	784	-	304903 206394
132	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	A17NE (NW)	826	-	305084 206641
133	Contemporary Trade Directory Entries Name: Andrew'S Commercial Vehicle Repairs Location: Unit 1, Bogey Road, Mountain Hare, Merthyr Tydfil, Mid Glamorgan, CF48 4AP Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories Status: Active Positional Accuracy: Automatically positioned to the address	A14SE (E)	836	-	306425 205900
134	Contemporary Trade Directory Entries Name: Clean Extreme Location: 14, Gladstone Terrace, Merthyr Tydfil, Mid Glamorgan, CF47 0UU Classification: Carpet, Curtain & Upholstery Cleaners Status: Active Positional Accuracy: Automatically positioned to the address	A8SW (S)	851	-	305448 205109
135	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	A17NE (NW)	854	-	305163 206723
136	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	A18NW (N)	862	-	305254 206772
137	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	A18NW (N)	900	-	305336 206840
138	Contemporary Trade Directory Entries Name: Ambassador Horse & Country Supplies Location: Unit 3 Trevethick Trading Est, Merthyr Tydfil, Mid Glamorgan, CF47 0HX Classification: Pet Foods & Animal Feeds Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A18NW (N)	912	-	305404 206868
139	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	A18NW (N)	929	-	305247 206842

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
140	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	A18NW (N)	952	-	305474 206919
141	Contemporary Trade Directory Entries Name: Forget Me Not Furniture Location: 110, Brecon Road, Merthyr Tydfil, Mid Glamorgan, CF47 8NG Classification: Furniture - Reproduction Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	953	-	304831 206580
142	Contemporary Trade Directory Entries Name: M & B Tarmac Location: Incline Top, Merthyr Tydfil, Mid Glamorgan, CF47 0TJ Classification: Asphalt & Coated Macadam Laying Contractors Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A19NW (N)	971	-	305945 206875
143	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	A18NW (N)	989	-	305247 206905
144	Fuel Station Entries Name: Merthyr Tydfil Service Station Location: 3a, Lower High Street, Merthyr Tydfil, Mid Glamorgan, CF47 8EB Brand: Unbranded Premises Type: Petrol Station Status: Open Positional Accuracy: Manually positioned to the address or location	A12SE (SW)	534	-	305098 205694

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

Agency & Hydrological	Version	Update Cycle
Water Industry Act Referrals Environment Agency - Welsh Region Natural Resources Wales	January 2015 January 2015	Quarterly Quarterly
Groundwater Vulnerability Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	October 2012	As notified
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	January 2015	As notified
Source Protection Zones Environment Agency - Head Office Natural Resources Wales	April 2015 May 2015	Quarterly Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office Natural Resources Wales	May 2015 May 2015	Quarterly Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office Natural Resources Wales	May 2015 May 2015	Quarterly Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	May 2015	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	May 2015	Quarterly
Flood Defences Environment Agency - Head Office	May 2015	Quarterly
Detailed River Network Lines Environment Agency - Head Office	March 2012	Annually
Detailed River Network Offline Drainage Environment Agency - Head Office	March 2012	Annually
Surface Water 1 in 30 year Flood Extent Natural Resources Wales	October 2013	As notified
Surface Water 1 in 100 year Flood Extent Natural Resources Wales	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent Natural Resources Wales	October 2013	As notified
Surface Water Suitability Natural Resources Wales	October 2013	As notified

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency Wales - South East Area Natural Resources Wales	May 2015 May 2015	Quarterly 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	August 2014 August 2014	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Natural Resources Wales Environment Agency Wales - South East Area	April 2015 August 2014	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	Not Applicable Not Applicable Not Applicable Not Applicable
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	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency Wales - South East Area	March 2003	Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	June 2015	Bi-Annually
Explosive Sites Health and Safety Executive	June 2015	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Brecon Beacons National Park Caerphilly County Borough Council - Planning Department Powys County Council - Planning Department Merthyr Tydfil County Borough Council - Planning Department Rhondda Cynon Taff County Borough Council - Planning Department	August 2008 March 2014 October 2014 September 2007 September 2014	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Planning Hazardous Substance Consents Brecon Beacons National Park Caerphilly County Borough Council - Planning Department Powys County Council - Planning Department Merthyr Tydfil County Borough Council - Planning Department Rhondda Cynon Taff County Borough Council - Planning Department	August 2008 March 2014 October 2014 September 2007 September 2014	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update

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	January 2010	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2015	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Mining Report Service	March 2014	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	July 2014	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	May 2015	Quarterly
Fuel Station Entries Catalist Ltd - Experian	May 2015	Quarterly

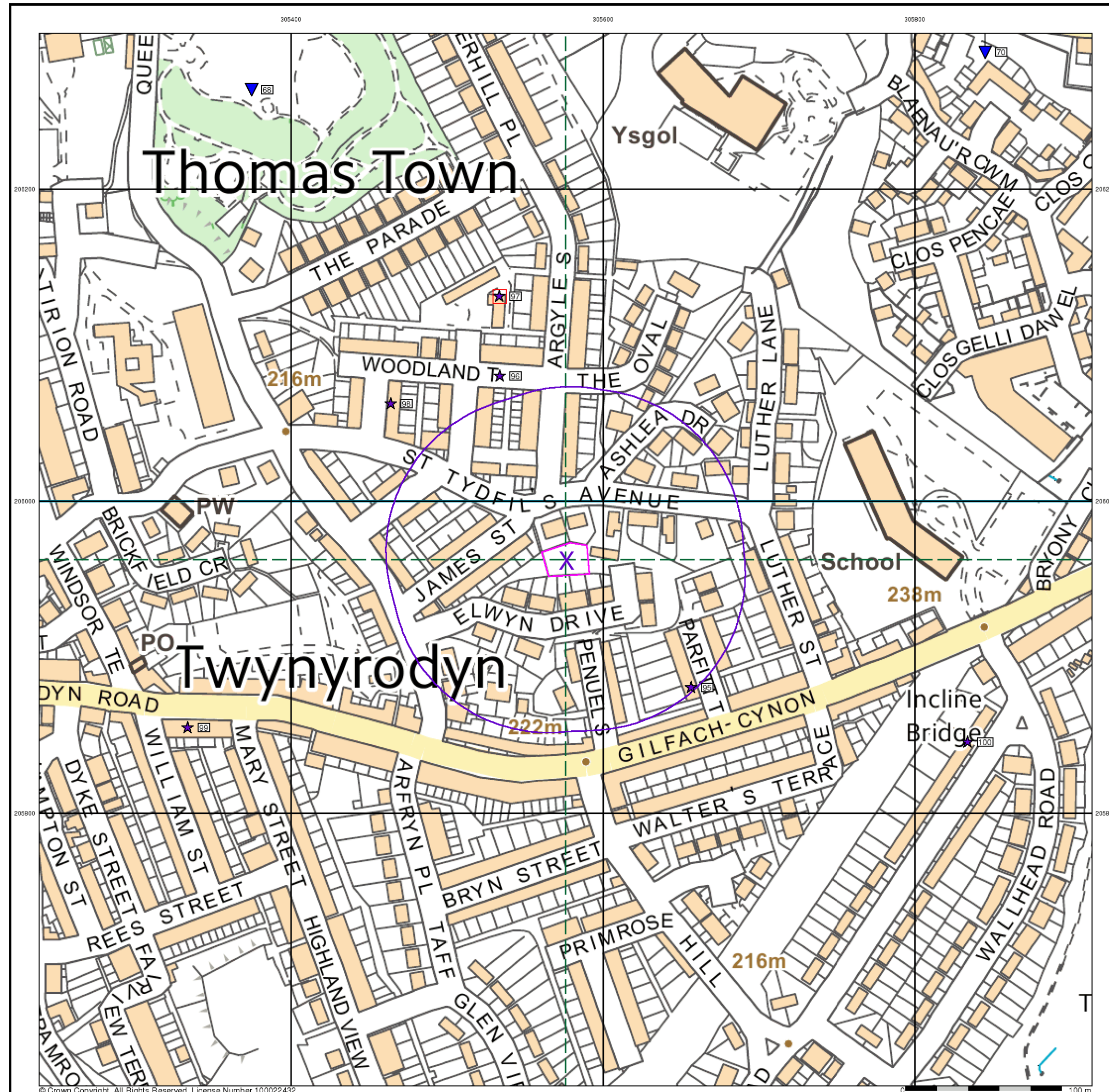
Sensitive Land Use	Version	Update Cycle
Areas of Outstanding Natural Beauty Natural Resources Wales	February 2015	Bi-Annually
Environmentally Sensitive Areas The National Assembly for Wales - GI Services (Department of Planning & Countryside)	August 2008	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Caerphilly County Borough Council Merthyr Tydfil County Borough Council Powys County Council Rhondda Cynon Taff County Borough Council	April 2015 April 2015 April 2015 April 2015	Bi-Annually Bi-Annually Bi-Annually Bi-Annually
Marine Nature Reserves Natural Resources Wales	September 2014	Bi-Annually
National Nature Reserves Natural Resources Wales	October 2014	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2012	Not Applicable
Nitrate Vulnerable Zones The National Assembly for Wales - GI Services (Department of Planning & Countryside)	October 2005	Annually
Ramsar Sites Natural Resources Wales	October 2014	Bi-Annually
Sites of Special Scientific Interest Natural Resources Wales	April 2015	Bi-Annually
Special Areas of Conservation Natural Resources Wales	March 2014	Bi-Annually
Special Protection Areas Natural Resources Wales	April 2015	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	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
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: 08708 506 506 Email: enquiries@environment-agency.gov.uk
5	British Geological Survey - Enquiry Service British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
6	The Coal Authority - Mining Report Service 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0845 7626848 Email: thecoalauthority@coal.gov.uk
7	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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General

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

Agency and Hydrological

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

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- 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

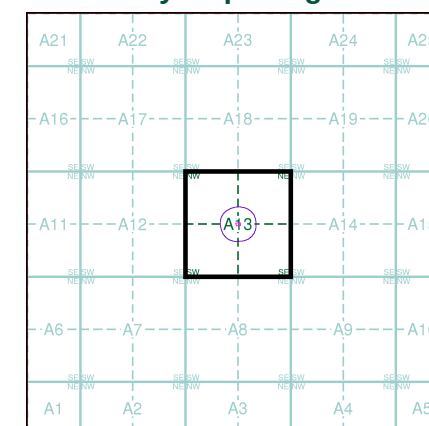
Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Segment A13



Order Details

Order Number: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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

General

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

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
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- BGS Recorded Landfill Site (Location)
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- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
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- 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

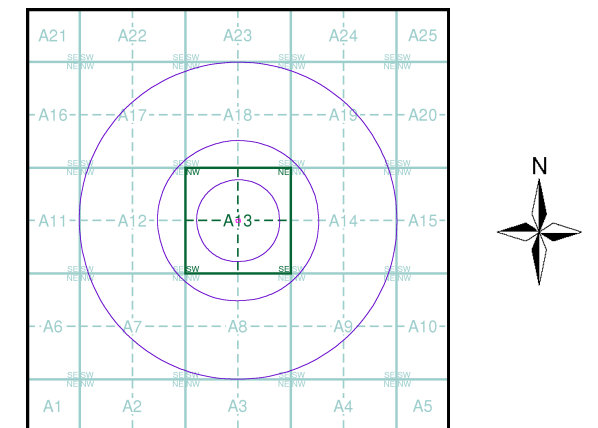
Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Slice A

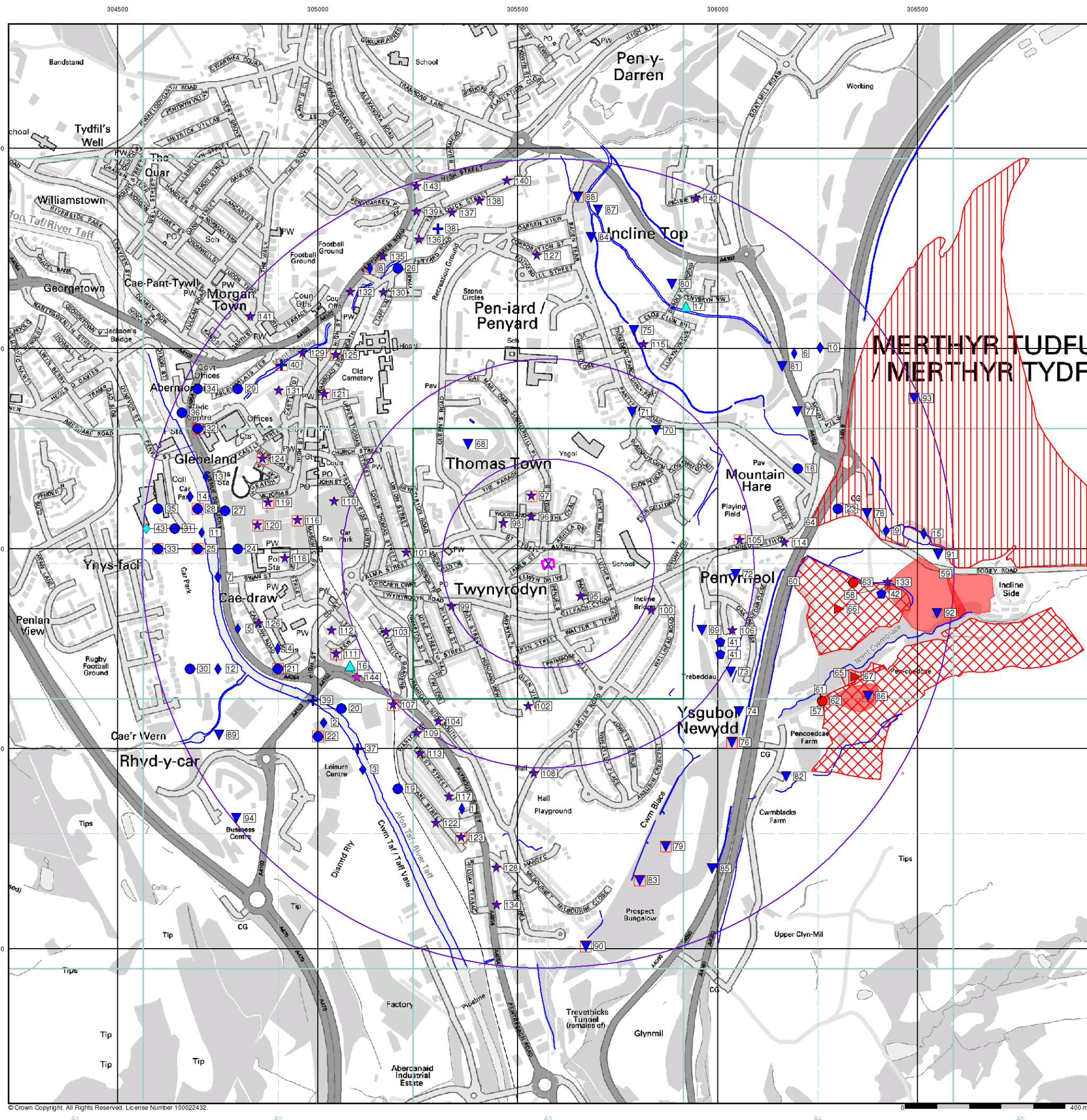


Order Details

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 Customer Ref: 13319
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 Slice: A
 Site Area (Ha): 0.06
 Search Buffer (m): 1000

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



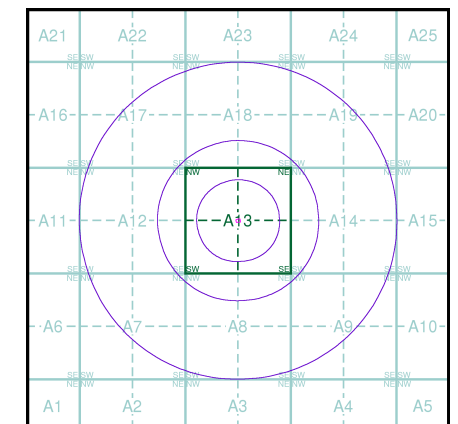
General

-  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

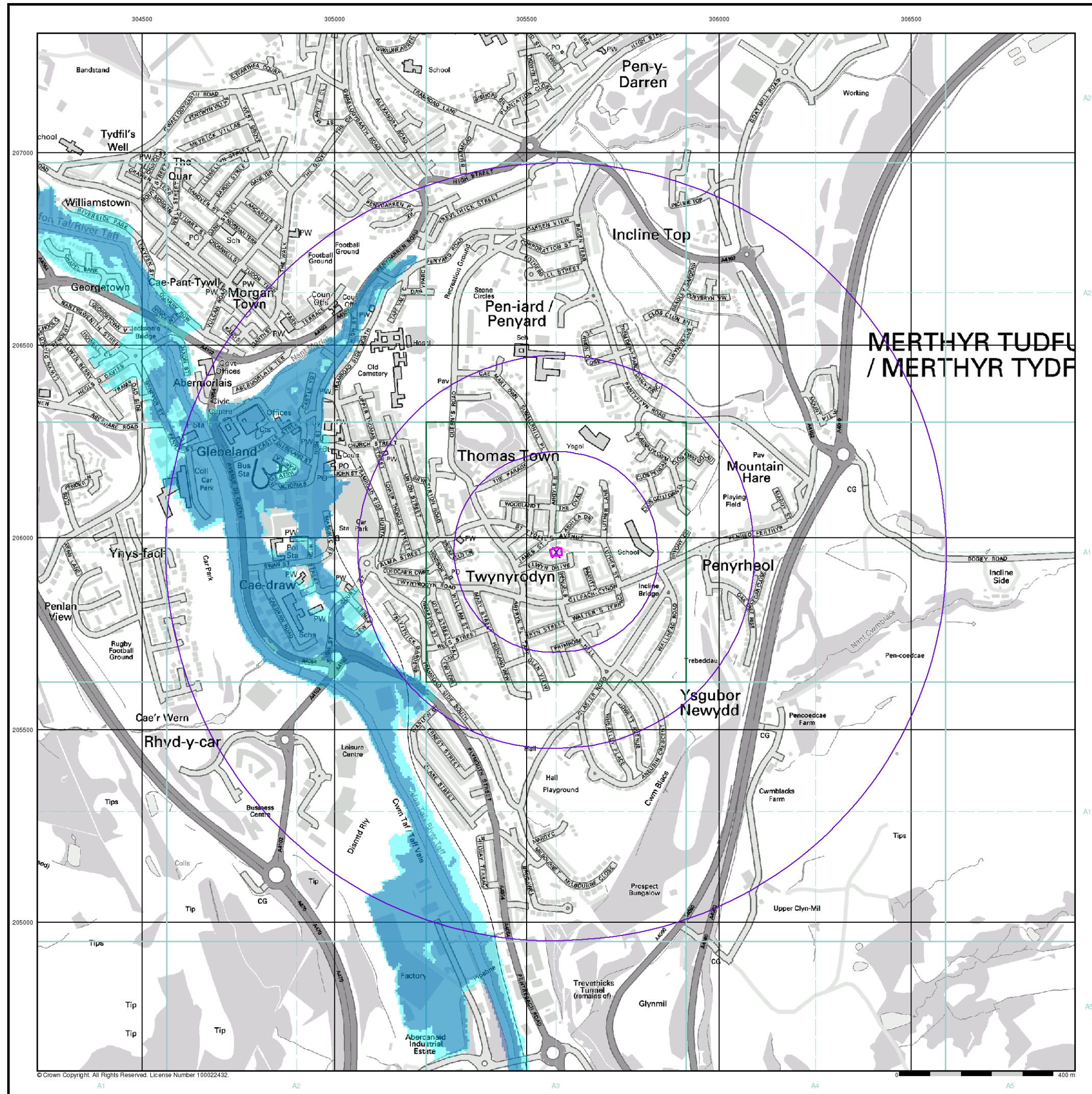


Order Details

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 Customer Ref: 13319
 National Grid Reference: 305580, 205960
 Slice: A
 Site Area (Ha): 0.06
 Search Buffer (m): 1000

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



General

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

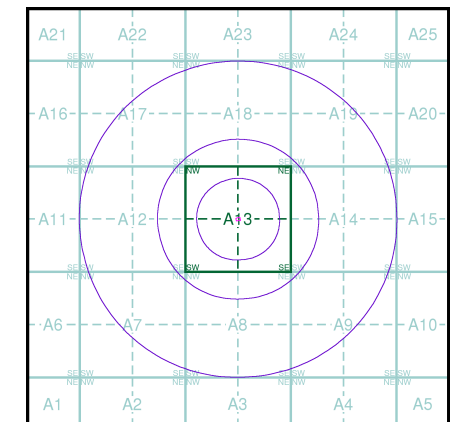
Agency and Hydrological (Boreholes)

-  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

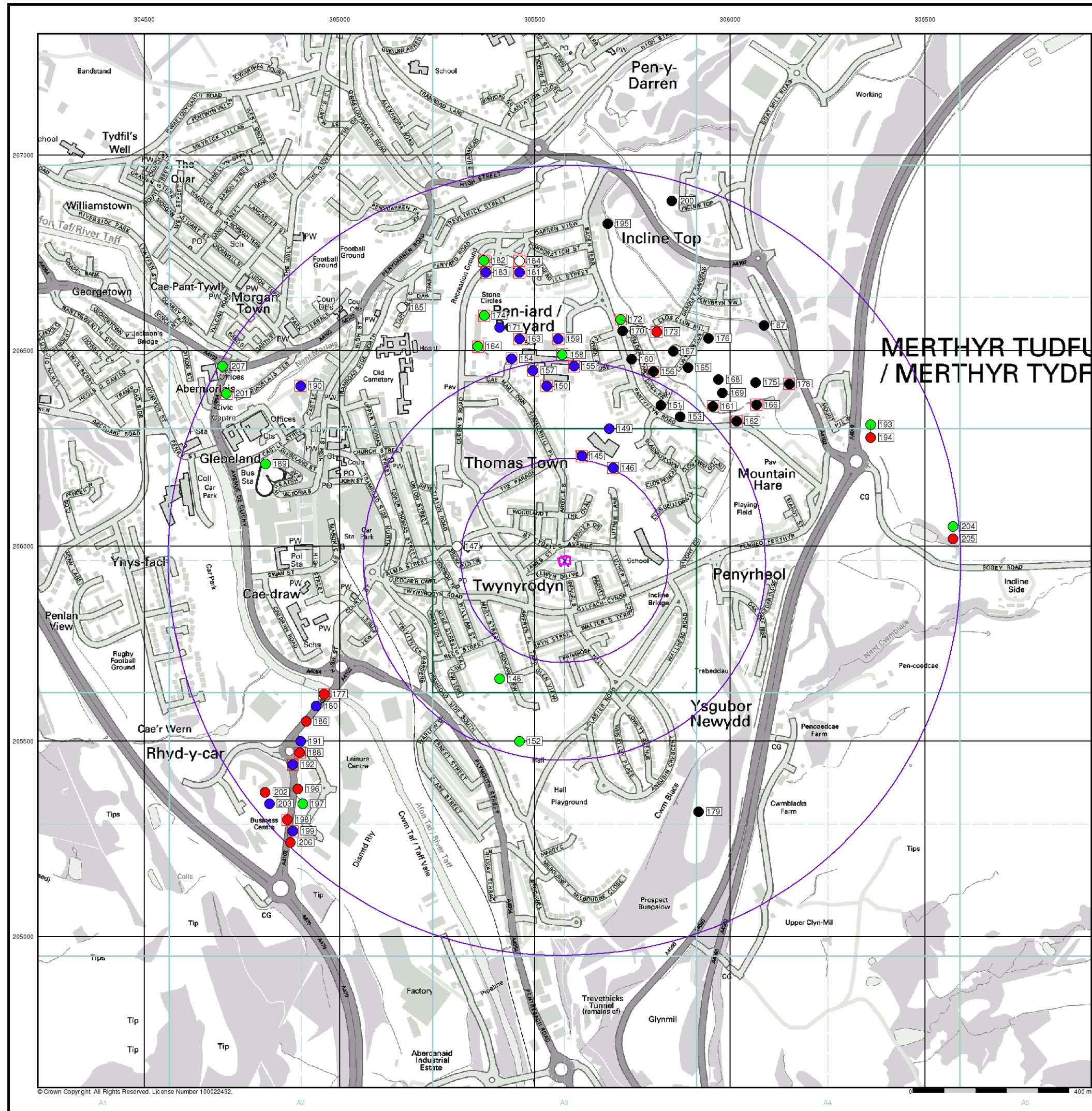


Order Details

Order Number: 70905697_1_1
 Customer Ref: 13319
 National Grid Reference: 305580, 205960
 Slice: A
 Site Area (Ha): 0.06
 Search Buffer (m): 1000

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



General

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

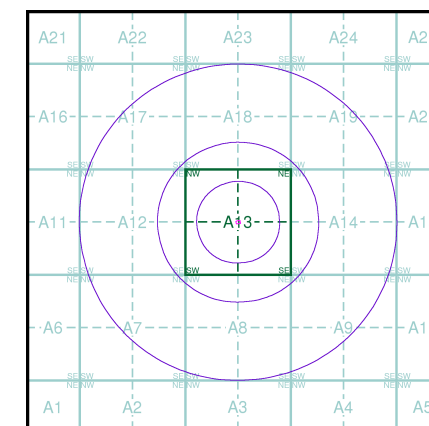
Detailed River Network Data

- | | |
|--|---|
|  Primary River |  Extended Culvert (greater than 50m) |
|  Secondary River |  Underground River (inferred) |
|  Tertiary River |  Underground River (local knowledge) |
|  Canal |  Downstream of High Water Mark |
|  Canal Tunnel |  Downstream of Seaward Extension |
|  Undefined River |  Not assigned River feature |
|  Lake/Reservoir | |
|  Offline Drainage Feature | |

Contours (height in metres)

- Standard Contour  105  MLW Mean Low Water
- Master Contour  100  MHW Mean High Water
- Spot Height  167.3

EAN/RW Detailed River Network Map - Slice A



Order Details

Order Number: 70905697_1_1
 Customer Ref: 13319
 National Grid Reference: 305580, 205960
 Slice: A
 Site Area (Ha): 0.06
 Search Buffer (m): 1000

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ





General

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

Risk of Flooding from Surface Water

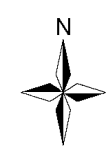
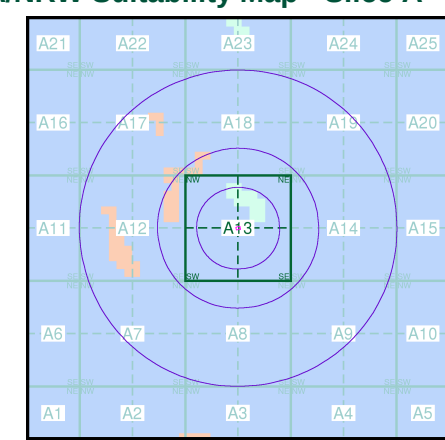
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

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

EA/NRW Suitability Map - Slice A



Order Details

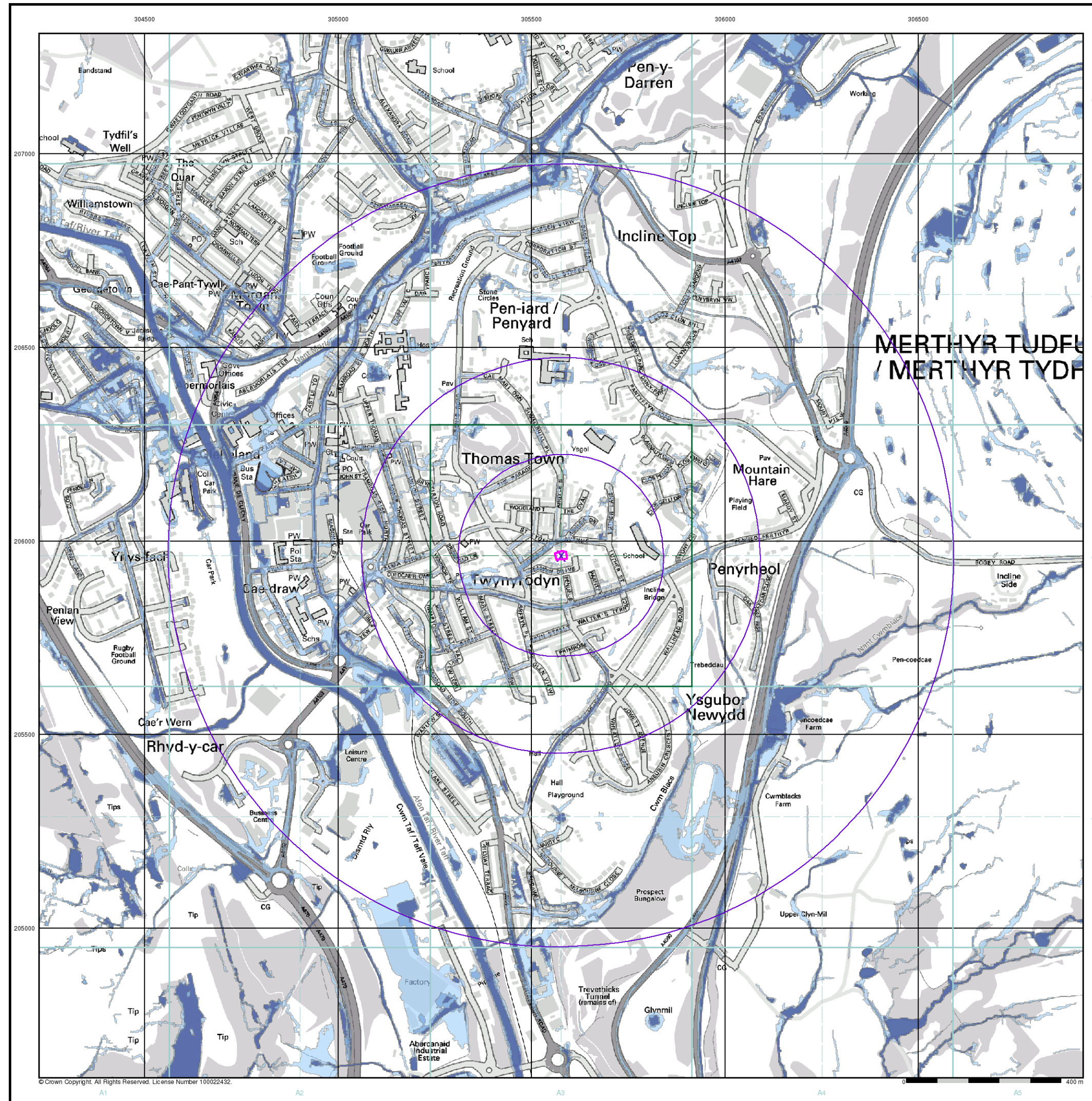
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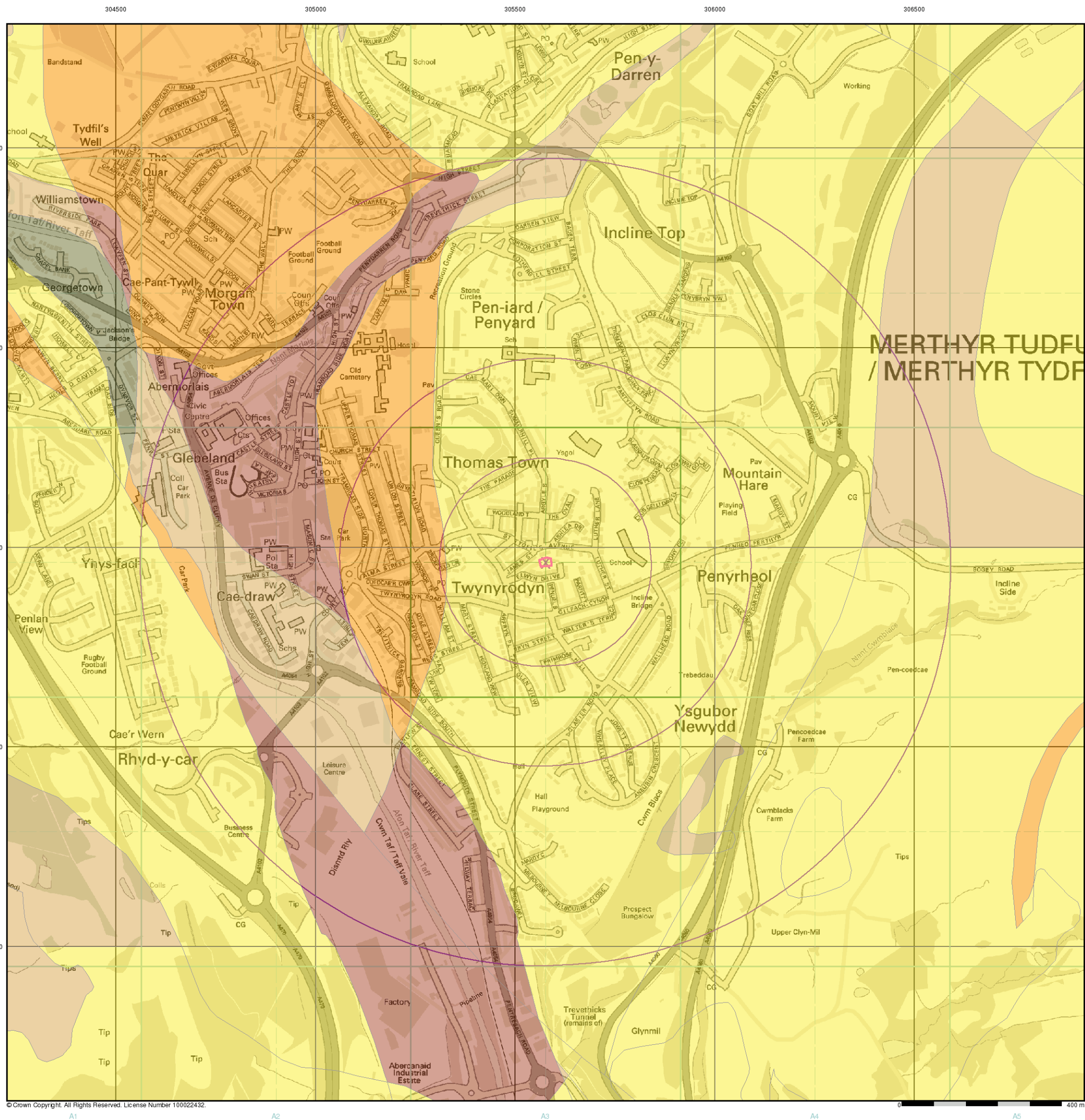
Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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



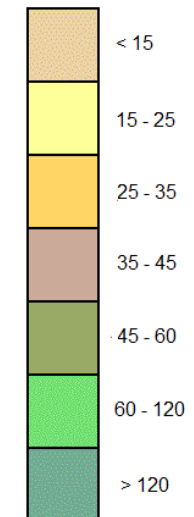


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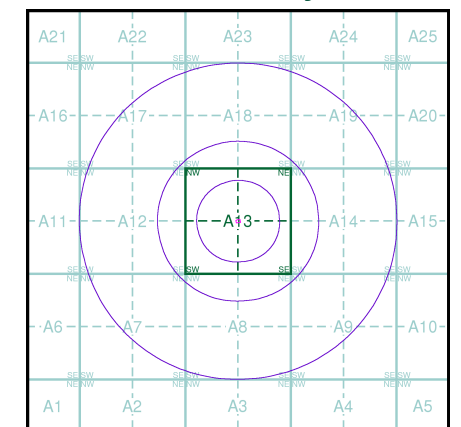
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice A



Order Details

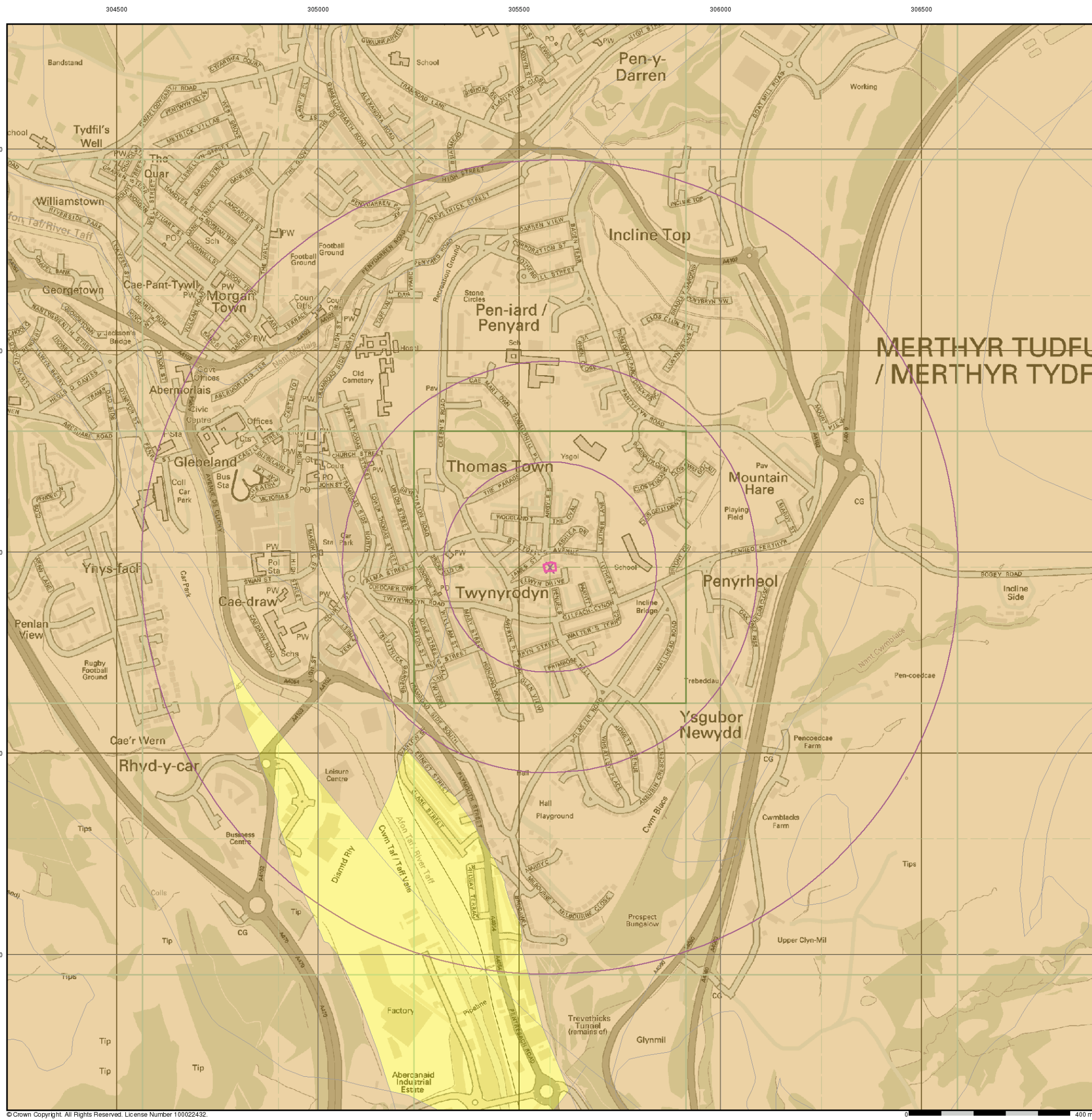
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Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

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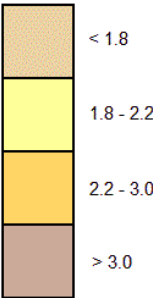


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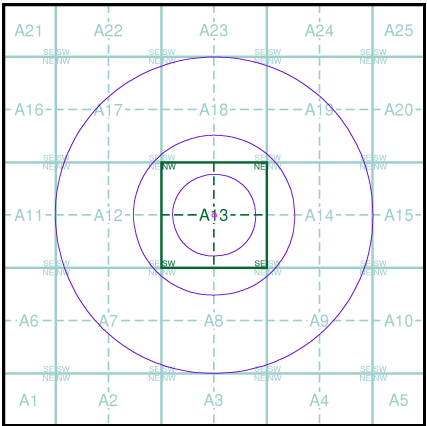
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A



Order Details

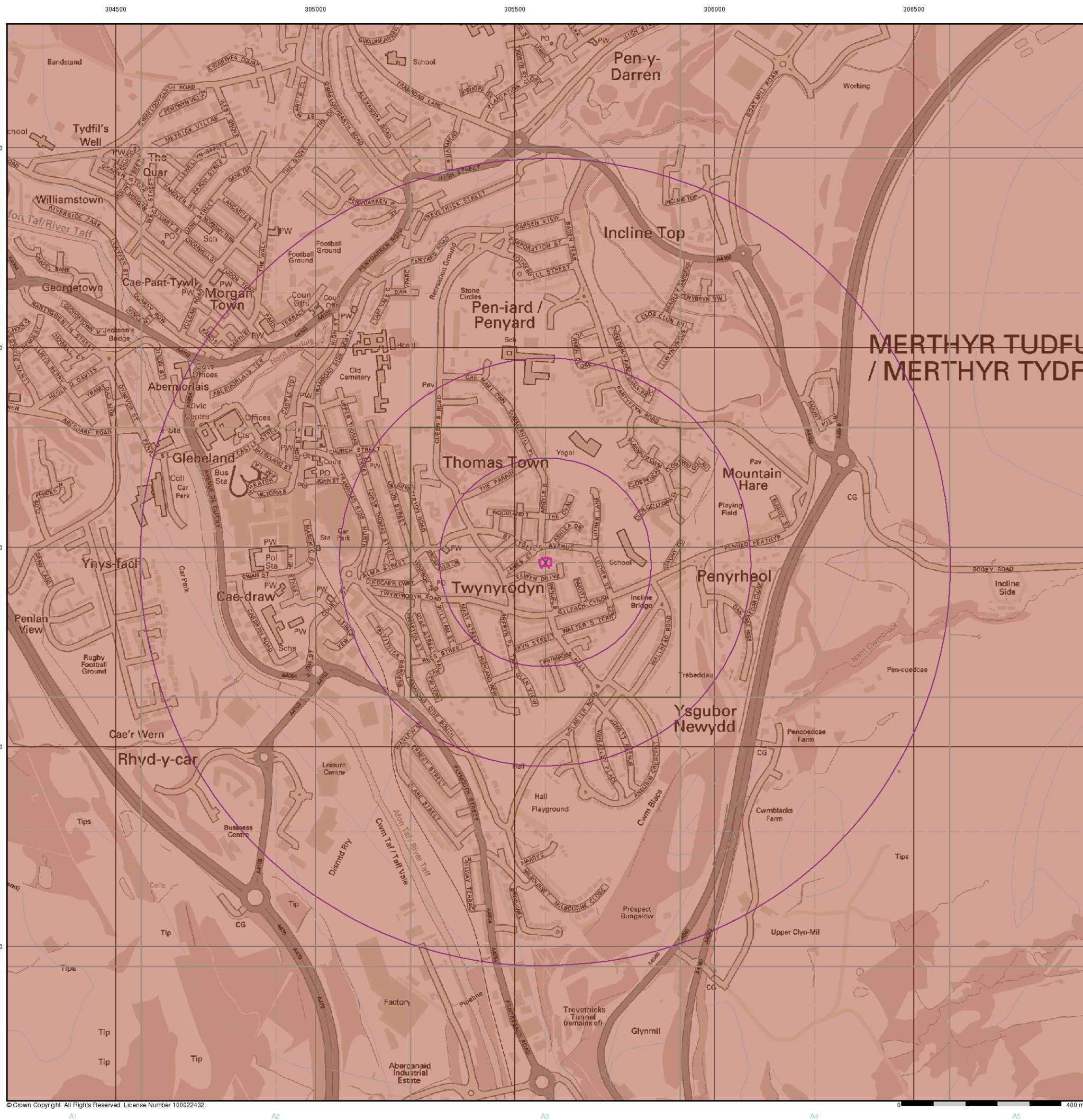
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Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

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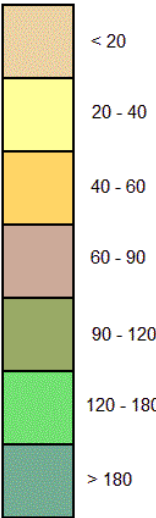


General

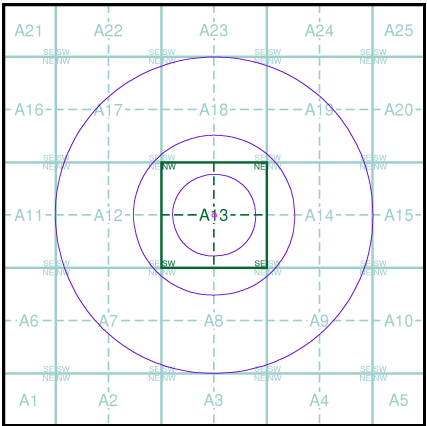
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice A



Order Details

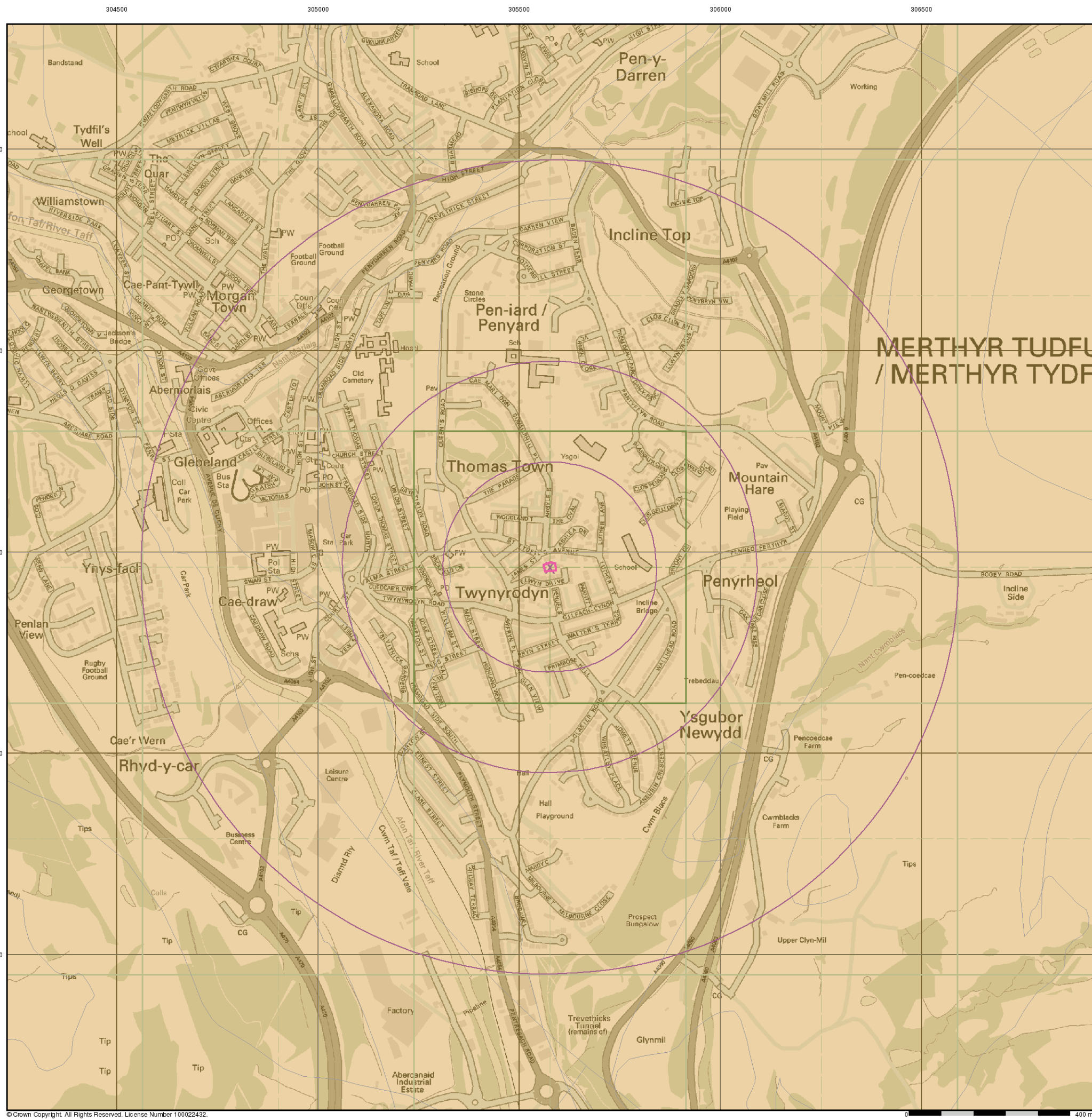
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Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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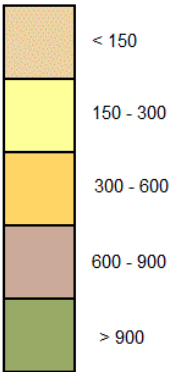


General

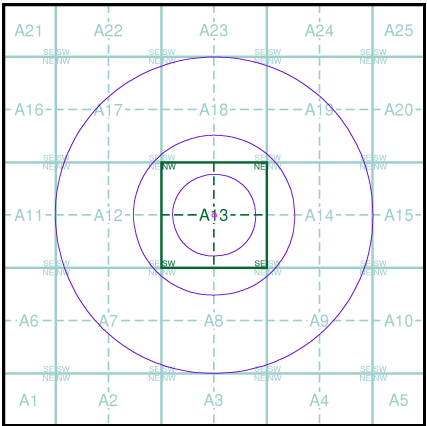
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A



Order Details

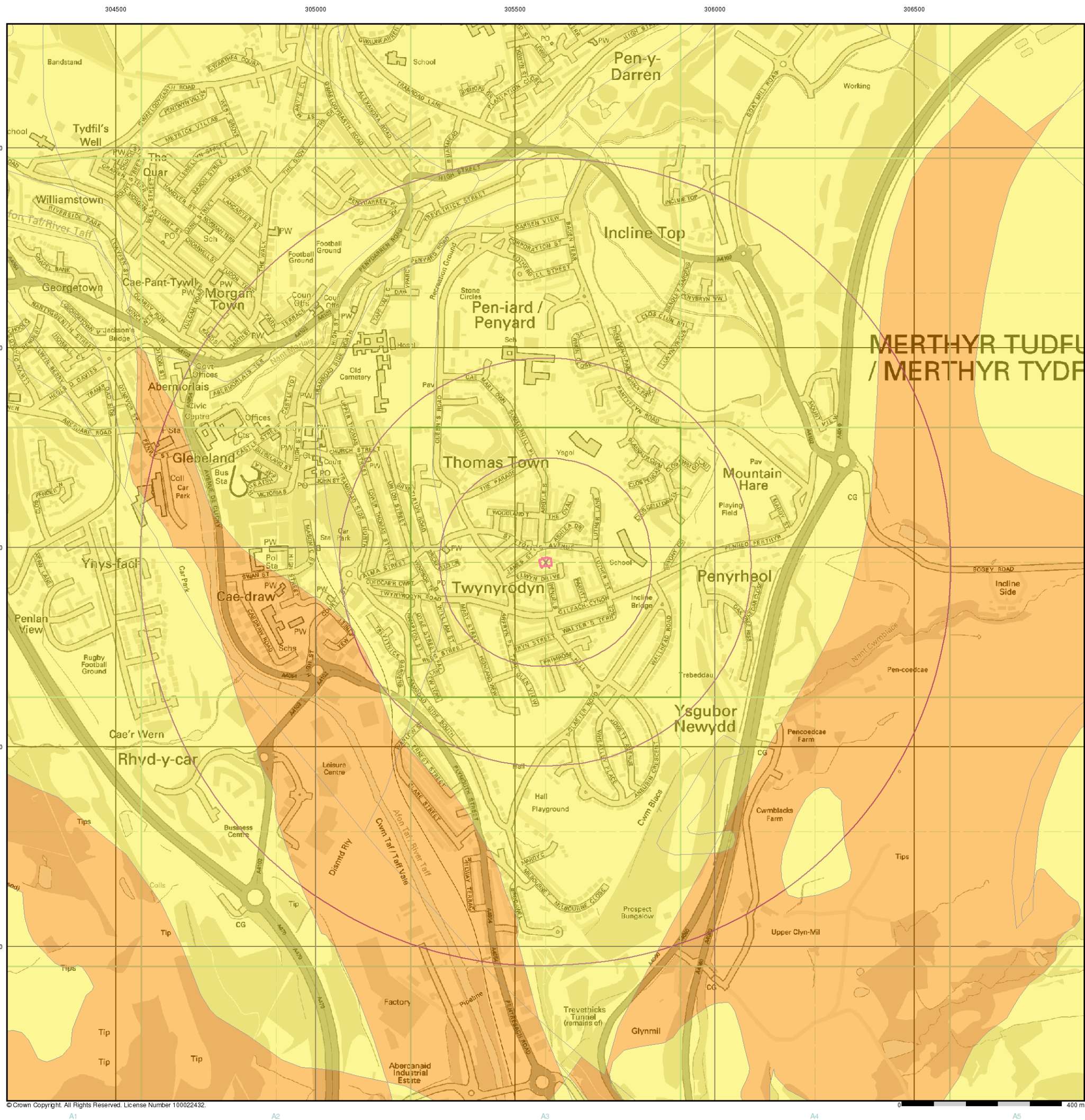
Order Details: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



Tel: 0844 844 9952
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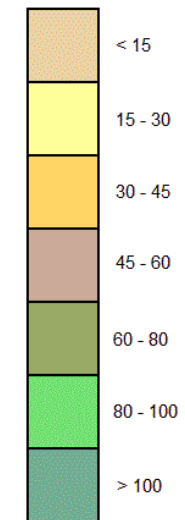


General

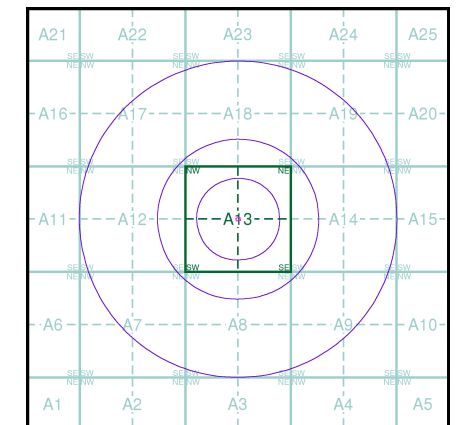
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A



Order Details

Order Details: 70905697_1_1
Customer Ref: 13319
National Grid Reference: 305580, 205960
Slice: A
Site Area (Ha): 0.06
Search Buffer (m): 1000

Site Details

Builders Yard, Elwyn Drive, Merthyr Tydfil, CF47 0NJ



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

ANNEX B
Coal Mining Report



Issued by:

The Coal Authority, Property Search Services, 200 Lichfield Lane, Berry Hill, Mansfield, Nottinghamshire, NG18 4RG
Website: www.groundstability.com Phone: 0345 762 6848 DX 716176 MANSFIELD 5

**LANDMARK INFORMATION GROUP
LIMITED
SOWTON INDUSTRIAL ESTATE
ABBAY COURT
UNIT 5/7 EAGLE WAY
EXETER
DEVON
EX2 7HY**

Our reference: **51000967195001**
Your reference: **70905697_2|**
Date of your enquiry: **05 August 2015**
Date we received your enquiry: **05 August 2015**
Date of issue: **05 August 2015**

This report is for the property described in the address below and the attached plan.

Non-Residential Coal Authority Mining Report

SITE AT BUILDERS YARD, ELWYN DRIVE, MERTHYR TYDFIL,

This report is based on and limited to the records held by, the Coal Authority, and the Cheshire Brine Subsidence Compensation Board's records, at the time we answer the search.

Coal mining	See comments below
Brine Compensation District	No

Information from the Coal Authority

Underground coal mining

Past

According to the records in our possession, the property is not within the zone of likely physical influence on the surface from past underground workings.

However the property is in an area where the Coal Authority believe there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered prior to any site works or future development activity. Your attention is drawn to the Comments on Coal Authority Information section of the report.

Present

The property is not in the likely zone of influence of any present underground coal workings.

Future

The property is not in an area for which the Coal Authority is determining whether to grant a licence to remove coal using underground methods.

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

The property is not in an area that is likely to be affected at the surface from any planned future workings.

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

No notice of the risk of the land being affected by subsidence has been given under section 46 of the Coal Mining Subsidence Act 1991.

Mine entries

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

Records may be incomplete. Consequently, there may exist in the local area mine entries of which the Coal Authority has no knowledge.

Coal mining geology

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

Opencast coal mining

Past

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

Present

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

Future

The property is not within 800 metres of the boundary of an opencast site for which the Coal Authority is determining whether to grant a licence to remove coal by opencast methods.

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.

Coal mining subsidence

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

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

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

Mine gas

There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.

Hazards related to coal mining

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

Withdrawal of support

The property is not in an area for which a notice of entitlement to withdraw support has been published.

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

Working facilities orders

The property is not in an area for which 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.

Payments to owners of former copyhold land

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

Comments on Coal Authority information

In view of the mining circumstances a prudent developer would seek appropriate technical advice before any works are undertaken.

Therefore if development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply good engineering practice developed for mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or mines of coal without the permission of the Coal Authority. Developers should be aware that the investigation of coal seams/former mines of coal may have the potential to generate and/or displace underground gases and these risks both under and adjacent to the development should be fully considered in developing any proposals. The need for effective measures to prevent gases entering into public properties either during investigation or after development also needs to be assessed and properly addressed. This is necessary due to the public safety implications of any development in these circumstances.

Information from the Cheshire Brine Subsidence Compensation Board

The property lies outside the Cheshire Brine Compensation District.

Additional Remarks

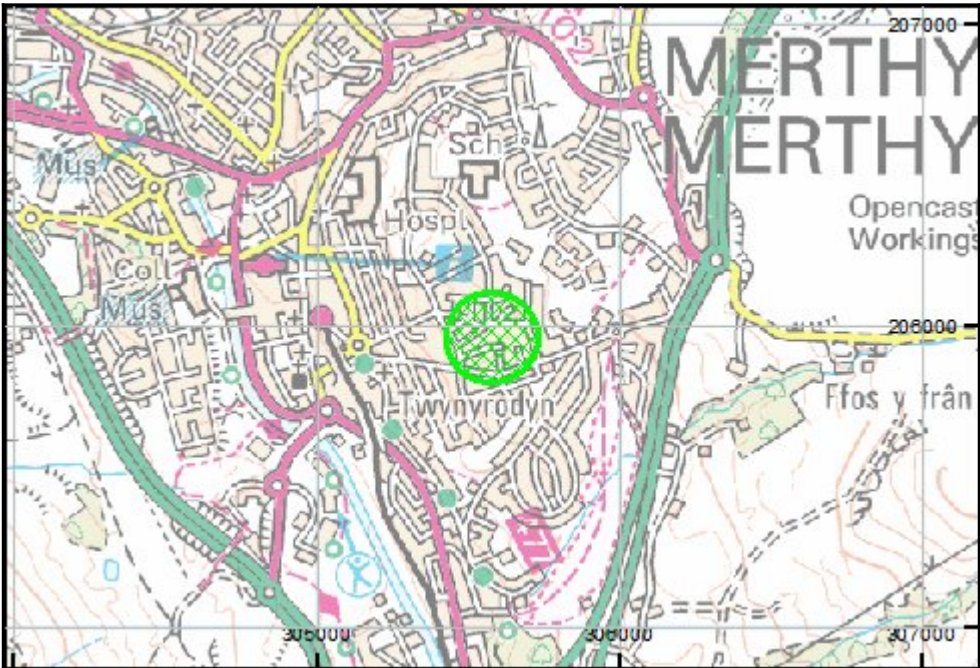
Information provided by the Coal Authority in this report is compiled in response to the Law Society's Con29M Coal Mining and Brine Subsidence Claim enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. Please note that Brine Subsidence Claim enquiries are only relevant for England and Wales. This report is prepared in accordance with the Law Society's Guidance Notes 2006, the User Guide 2006 and the Coal Authority and Cheshire Brine Board's Terms and Conditions applicable at the time the report was produced.

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Location map



Approximate position of property

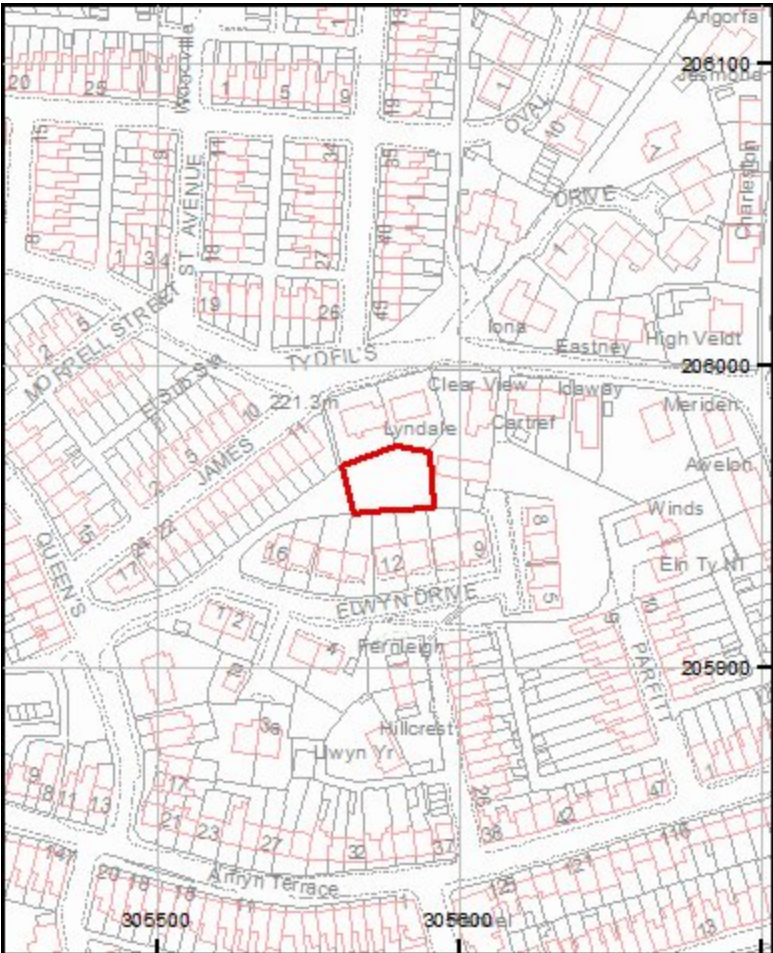


Enquiry boundary

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Key

Approximate position of enquiry boundary shown



ANNEX C
Windowless Sampling Borehole Logs

				Borehole Log				Borehole No. WS01 Sheet 1 of 1	
Project Name: Elwyn Drive				Project No. 13319		Co-ords: -		Hole Type WLS	
Location: Merthyr Tydfil				Level:		Scale 1:50		Logged By LJD	
Client: Mr J Cox				Dates: 14-08-2015 -					
Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.50	D	N=4 (1,1/1,1,1,1)	1.20		 (Soft to firm) grey and grey brown slightly sandy silty CLAY with many gravels and cobbles. Gravel is fine to coarse angular/subangular, cobbles are small angular, all of shale, brick and occasional black vesicular slag. Occasional glass. Occasional fine roots. (MADE GROUND) <u>Ash and coal inclusions</u>	1	
		0.80	D						
		1.00							
		1.20	D			1.50			
		1.80	D	N=8 (2,2/1,2,2,3)		 (Loose) dark/medium brown very clayey SAND / very sandy CLAY with many gravels. Gravel is fine to coarse angular/subangular of brick, shale and occasional slag. Occasional coal inclusions. Occasional fine roots. (MADE GROUND)	2		
		2.00							
		3.00	D	N=8 (2,2/2,2,2,2)		 (Firm) orange brown and tan brown with grey inclusions slightly sandy silty CLAY with many gravels. Gravel is fine to coarse angular/subangular/subrounded of mudstone, shale and occasional siltstone. Occasional angular/subangular cobble of mudstone/siltstone. (GLACIAL TILL) <u>Very gravelly</u> <u>Orange fine sand inclusions</u> <u>Coal inclusions</u>	3		
		3.00							
		3.50			50 (11,11/12,18,20,)			3.50	
End of borehole at 3.50 m									4
									5
									6
									7
									8
									9
									10
Remarks Sampler refused at 3.5m. CPT refused at 3.85m. No groundwater encountered.									

					Borehole Log			Borehole No. WS02 Sheet 1 of 1	
Project Name: Elwyn Drive					Project No. 13319		Co-ords: -		Hole Type WLS
Location: Merthyr Tydfil					Level:		Scale 1:50		Logged By LJD
Client: Mr J Cox					Dates: 14-08-2015 -				

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10	D		0.20		 (Loose) dark brown slightly clayey SAND with some gravel. Gravel is fine to coarse angular of shale and occasional slag. (MADE GROUND) (Firm becoming with depth stiff) orange tan brown with grey and rusty orange/purple inclusions, in places slightly sandy becoming sandy with depth, silty CLAY with some gravels and cobbles. Gravel is fine to medium of sandstone, mudstone and shale (discoloured orange from weathering). Cobbles are small angular of sandstone. (GLACIAL TILL) Wet End of borehole at 3.00 m		
		0.75	D					1	
		1.00		N=8 (1,1/2,4,1,1)					
		1.50	D					2	
		2.00		N=13 (2,3/4,3,3,3)					
		3.00		N=30 (3,5/5,6,6,13)	3.00			3	
		3.50		N=50 (11,10/10,10,15,15)			4		
							5		
							6		
							7		
							8		
							9		
							10		

Remarks
 Sampler refused at 3m. CPT refused at 3.95m. Groundwater encountered. at 2.5m.

					Borehole Log			Borehole No. WS03 Sheet 1 of 1	
Project Name: Elwyn Drive					Project No. 13319		Co-ords: -		Hole Type WLS
Location: Merthyr Tydfil					Level:		Scale 1:50		Logged By LJD
Client: Mr J Cox					Dates: 14-08-2015 -				
Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10	D		0.20		 Loose) dark/medium brown very clayey SAND / very sandy CLAY with many gravels. Gravel is fine to coarse angular/subangular of brick, shale and occasional slag. Occasional coal inclusions. Occasional fine roots. (MADE GROUND) (Soft becoming with depth firm) orange brown and tan brown with grey inclusions slightly sandy silty CLAY with many gravels. Gravel is fine to coarse angular/subangular/subrounded of mudstone, shale and occasional siltstone. Occasional angular/subangular cobble of mudstone/siltstone. (GLACIAL TILL) Very sandy Very gravelly End of borehole at 3.50 m		
		1.00	D	N=6 (1,1/1,1,1,3)				1	
		2.00		N=25 (3,3/5,8,6,6)				2	
		2.50	D						
		3.00		N=12 (2,2/3,3,3,3)				3	
		3.50		0 (50,/,...)	3.50			4	
								5	
								6	
								7	
								8	
								9	
								10	
Remarks Sampler refused at 3.5m. CPT refused at 3.575m. No groundwater encountered.									

					Borehole Log			Borehole No. WS04 Sheet 1 of 1	
Project Name: Elwyn Drive					Project No. 13319		Co-ords: -		Hole Type WLS
Location: Merthyr Tydfil					Level:		Scale 1:50		Logged By LJD
Client: Mr J Cox					Dates: 14-08-2015 -				

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10	D		0.20			Loose) dark/medium brown very clayey SAND / very sandy CLAY with many gravels. Gravel is fine to coarse angular/subangular of shale and occasional slag. Occasional coal inclusions. Occasional brick fragment. Occasional fine roots. (MADE GROUND) (Soft becoming with depth firm) orange brown with grey and rusty orange/purple inclusions, slightly sandy silty CLAY with some gravels and occasional cobbles. Gravel is fine to medium of sandstone, mudstone and shale (discoloured orange from weathering). Cobbles are small angular of sandstone. (GLACIAL TILL)	
		0.75	D						1
		1.00	D						
		1.00		N=7 (1,2/1,2,2,2)					
		1.75	D						2
		2.00		N=10 (1,2/4,2,1,3)					
		3.00		N=17 (4,6/5,4,4,4)					3
		3.75	D		3.70				
		4.00		N=35 (4,5/7,9,9,10)	4.00				4
		4.50		50 (13,11/13,17,20,)					5
								6	
								7	
								8	
								9	
								10	

Remarks
 Sampler refused at 4m. CPT refused at 4.875m. Groundwater encountered at 2.5m.

					Borehole Log			Borehole No. WS05 Sheet 1 of 1	
Project Name: Elwyn Drive					Project No. 13319		Co-ords: -		Hole Type WLS
Location: Merthyr Tydfil					Level:		Scale 1:50		Logged By LJD
Client: Mr J Cox					Dates: 14-08-2015 -				

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	D		0.40		 (Loose) dark brown slightly sandy fine to medium angular/subangular GRAVEL of shale/mudstone. Occasional coal inclusions. (MADE GROUND)		
		0.80	D				 (Firm) orange brown with grey and rusty orange/purple inclusions, slightly sandy silty CLAY with some gravels and occasional cobbles. Gravel is fine to medium of sandstone, mudstone and shale (discoloured orange from weathering). Cobbles are small angular of sandstone. (GLACIAL TILL)	1	
		1.00		N=11 (2,3/2,3,3,3)			 Very gravelly		
		1.80	D		2.00				
		2.00		N=14 (2,3/3,3,4,4)			End of borehole at 2.00 m	2	
								3	
								4	
								5	
								6	
								7	
								8	
								9	
								10	

Remarks Sampler terminated at 2m. CPT terminated at 2.45m. No groundwater encountered.							
---	--	--	--	--	--	--	--

ANNEX D
Field Photographs

14 August 2015































ANNEX E
Laboratory Soil Chemical Test Results



Certificate of Analysis

Certificate Number 15-43014

24-Aug-15

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

Our Reference 15-43014

Client Reference (not supplied)

Contract Title MERTHYR

Description 6 Soil samples.

Date Received 18-Aug-15

Date Started 18-Aug-15

Date Completed 24-Aug-15

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

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

Approved By

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

Rob Brown
Business Manager



Summary of Chemical Analysis

Matrix Descriptions

Our Ref 15-43014

Client Ref

Contract Title MERTHYR

Sample ID	Depth	Lab No	Completed	Matrix Description
WS02	0.1	855227	24/08/2015	Dark brown very sandy GRAVEL (sample matrix outside MCERTS scope of accreditation)
WS01	1.2	855228	24/08/2015	Dark brown slightly gravelly, clayey SAND
WS01	0.5	855229	24/08/2015	Dark brown, gravelly, sandy CLAY
WS03	0.1	855230	24/08/2015	Dark brown, gravelly, sandy CLAY (Made ground -brick)
WS04	0.1	855231	24/08/2015	Brown, gravelly, sandy CLAY
WS05	0.2	855232	24/08/2015	Dark brown, gravelly, sandy CLAY

Summary of Chemical Analysis

Soil Samples

Our Ref 15-43014

Client Ref

Contract Title MERTHYR

Lab No	855227	855228	855229	855230	855231	855232
Sample ID	WS02	WS01	WS01	WS03	WS04	WS05
Depth	0.10	1.20	0.50	0.10	0.10	0.20
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	14/08/15	14/08/15	14/08/15	14/08/15	14/08/15	14/08/15
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	8.4	22	14	16	9.2	24
Cadmium	DETSC 2301#	0.1	mg/kg	0.6	1.1	0.8	0.8	0.7	1.0
Chromium	DETSC 2301#	0.15	mg/kg	17	20	21	15	14	23
Chromium III	DETSC 2301*	0.15	mg/kg	17	20	21	15	14	23
Hexavalent Chromium	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	19	57	38	37	17	68
Lead	DETSC 2301#	0.3	mg/kg	36	250	53	58	26	480
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	0.33	0.15	0.10	< 0.05	0.18
Nickel	DETSC 2301#	1	mg/kg	22	34	38	31	20	34
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.8
Zinc	DETSC 2301#	1	mg/kg	100	210	170	140	86	210
Inorganics									
pH	DETSC 2008#			8.6	6.7	7.7	7.5	8.0	6.9
Cyanide Total	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Organic matter	DETSC 2002#	0.1	%	6.3	10	7.6	4.6	1.7	22
Total Sulphate as SO4	DETSC 2321#	0.01	%	0.09	0.10	0.05	0.07	0.04	0.13
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	0.64	< 0.03	< 0.03	0.07	< 0.03	0.52
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.30	< 0.03	< 0.03	< 0.03	< 0.03	0.17
Acenaphthene	DETSC 3303#	0.03	mg/kg	1.7	< 0.03	< 0.03	< 0.03	< 0.03	0.85
Fluorene	DETSC 3303	0.03	mg/kg	1.5	< 0.03	< 0.03	< 0.03	< 0.03	0.78
Phenanthrene	DETSC 3303#	0.03	mg/kg	12	0.16	0.05	0.27	0.07	5.0
Anthracene	DETSC 3303	0.03	mg/kg	1.9	< 0.03	< 0.03	0.06	< 0.03	1.5
Fluoranthene	DETSC 3303#	0.03	mg/kg	28	0.35	0.07	0.82	0.14	9.3
Pyrene	DETSC 3303#	0.03	mg/kg	23	0.29	0.07	0.72	0.13	7.6
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	9.8	0.12	< 0.03	0.27	0.08	5.7
Chrysene	DETSC 3303	0.03	mg/kg	10	0.18	< 0.03	0.35	0.10	7.3
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	12	0.13	< 0.03	0.36	0.15	13
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	3.8	< 0.03	< 0.03	0.09	0.05	4.7
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	7.3	0.05	< 0.03	0.18	0.09	9.9
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	4.5	0.04	< 0.03	0.10	0.07	5.2
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	1.4	< 0.03	< 0.03	< 0.03	< 0.03	1.8
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	4.7	0.04	< 0.03	0.12	0.07	5.8
Total PAH - USEPA 16	DETSC 3303	0.1	mg/kg	120	1.4	0.18	3.4	0.94	79
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Summary of Asbestos Analysis

Soil Samples

Our Ref 15-43014

Client Ref

Contract Title MERTHYR

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
855227	WS02 0.10	SOIL	NAD	none	Colin Patrick
855228	WS01 1.20	SOIL	NAD	none	Colin Patrick
855229	WS01 0.50	SOIL	NAD	none	Colin Patrick
855230	WS03 0.10	SOIL	NAD	none	Colin Patrick
855231	WS04 0.10	SOIL	NAD	none	Colin Patrick
855232	WS05 0.20	SOIL	NAD	none	Colin Patrick

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

Information in Support of the Analytical Results

Our Ref 15-43014
Client Ref
Contract MERTHYR

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
855227	WS02 0.10 SOIL	14/08/15	GJ 250ml, PT 1L		
855228	WS01 1.20 SOIL	14/08/15	GJ 250ml, PT 1L		
855229	WS01 0.50 SOIL	14/08/15	GJ 250ml, PT 1L		
855230	WS03 0.10 SOIL	14/08/15	GJ 250ml, PT 1L		
855231	WS04 0.10 SOIL	14/08/15	GJ 250ml, PT 1L		
855232	WS05 0.20 SOIL	14/08/15	GJ 250ml, PT 1L		

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

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

Soil Analysis Notes

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

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

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

Disposal

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

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

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETS 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETS 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETS 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETS 2024	Sulphide	mg/kg	10	Air Dried	No	Yes	Yes
DETS 2076	Sulphate Aqueous Extract as SO ₄	mg/l	10	Air Dried	No	Yes	Yes
DETS 2084	Total Carbon	%	0.5	Air Dried	No	Yes	Yes
DETS 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETS 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETS 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETS 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETS 2321	Total Sulphate as SO ₄	%	0.01	Air Dried	No	Yes	Yes
DETS 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETS 3049	Sulphur (free)	mg/kg	0.75	Air Dried	No	Yes	Yes
DETS 2123	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETS 2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETS 2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETS 2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETS 2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETS 2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETS 2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETS 2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETS 2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETS 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3072	Aliphatic C10-C12	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETS 3072	Aliphatic C12-C16	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3072	Aliphatic C16-C21	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETS 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETS 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETS 3072	Aromatic C10-C12	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETS 3072	Aromatic C12-C16	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETS 3072	Aromatic C16-C21	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETS 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETS 062	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETS 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETS 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETS 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

ANNEX F
Laboratory Soil Geotechnical Test Results

TEST REPORT
MOISTURE CONTENT
BS1377: Part 2: 1990 : Clause 3.2

Project No: D5298-15 Project Name: Merthyr ATS Sample No: 6803	Client: Terra Firma (Wales) Ltd Address: Unit 5, Deryn Court, Wharfedale Road, Cardiff, CF23 7HB
---	---

Site Ref / Hole ID: WS01 Sample No: Sampling Certificate Received: No Location in Works: Unknown Date Sampled: Unknown Sampled By: Client Date Received: 17 August 2015	Depth (m): 0.80 Sample Type: Disturbed Material Description: Grey brown gravelly slightly sandy SILT Material Source: N/A Material Supplier: N/A Specification: BS1377 Date Tested: 19 August 2015
--	---

Test Results

Moisture Content (%)	25
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Remarks:

TEST REPORT
MOISTURE CONTENT
BS1377: Part 2: 1990 : Clause 3.2

Project No:	D5298-15	Client:	Terra Firma (Wales) Ltd
Project Name:	Merthyr	Address:	Unit 5, Deryn Court, Wharfedale Road, Cardiff, CF23 7HB
ATS Sample No:	6804		

Site Ref / Hole ID:	WS01	Depth (m):	3.00
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Brown slightly gravelly slightly sandy CLAY
Location in Works:	Unknown	Material Source:	N/A
Date Sampled:	Unknown	Material Supplier:	N/A
Sampled By:	Client	Specification:	BS1377
Date Received:	17 August 2015	Date Tested:	19 August 2015

Test Results

Moisture Content (%)	12
----------------------	----

Remarks:

QA Ref.		Apex Testing Solutions Sturmi Way, Village Farm Industrial Est, Pyle, Bridgend, CF33 6BZ Tel: 01656 746762 Fax: 01656 749096		Approver	Date	Fig MC 2
BS1377-2 Rev. 2.0					26/08/2015	

TEST REPORT
MOISTURE CONTENT
BS1377: Part 2: 1990 : Clause 3.2

Project No:	D5298-15	Client:	Terra Firma (Wales) Ltd
Project Name:	Merthyr	Address:	Unit 5, Deryn Court, Wharfedale Road, Cardiff, CF23 7HB
ATS Sample No:	6805		

Site Ref / Hole ID:	WS02	Depth (m):	1.50
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Grey brown slightly gravelly slightly sandy CLAY
Location in Works:	Unknown	Material Source:	N/A
Date Sampled:	Unknown	Material Supplier:	N/A
Sampled By:	Client	Specification:	BS1377
Date Received:	17 August 2015	Date Tested:	19 August 2015

Test Results

Moisture Content (%)	14
----------------------	----

Remarks:

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BS1377-2 Rev. 2.0					26/08/2015	

TEST REPORT
MOISTURE CONTENT
BS1377: Part 2: 1990 : Clause 3.2

Project No:	D5298-15	Client:	Terra Firma (Wales) Ltd
Project Name:	Merthyr	Address:	Unit 5, Deryn Court, Wharfedale Road, Cardiff, CF23 7HB
ATS Sample No:	6806		

Site Ref / Hole ID:	WS02	Depth (m):	2.50
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Grey brown slightly gravelly sandy CLAY
Location in Works:	Unknown	Material Source:	N/A
Date Sampled:	Unknown	Material Supplier:	N/A
Sampled By:	Client	Specification:	BS1377
Date Received:	17 August 2015	Date Tested:	19 August 2015

Test Results

Moisture Content (%)	11
----------------------	----

Remarks:

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BS1377-2 Rev. 2.0					26/08/2015	

TEST REPORT
MOISTURE CONTENT
BS1377: Part 2: 1990 : Clause 3.2

Project No:	D5298-15	Client:	Terra Firma (Wales) Ltd
Project Name:	Merthyr	Address:	Unit 5, Deryn Court, Wharfedale Road, Cardiff, CF23 7HB
ATS Sample No:	6807		

Site Ref / Hole ID:	WS04	Depth (m):	3.75
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Grey brown slightly gravelly slightly sandy CLAY
Location in Works:	Unknown	Material Source:	N/A
Date Sampled:	Unknown	Material Supplier:	N/A
Sampled By:	Client	Specification:	BS1377
Date Received:	17 August 2015	Date Tested:	19 August 2015

Test Results

Moisture Content (%)	13
----------------------	----

Remarks:

QA Ref.		Apex Testing Solutions Sturmi Way, Village Farm Industrial Est, Pyle, Bridgend, CF33 6BZ Tel: 01656 746762 Fax: 01656 749096		Approver	Date	Fig MC 5
BS1377-2 Rev. 2.0					26/08/2015	

TEST REPORT
MOISTURE CONTENT
BS1377: Part 2: 1990 : Clause 3.2

Project No:	D5298-15	Client:	Terra Firma (Wales) Ltd
Project Name:	Merthyr	Address:	Unit 5, Deryn Court, Wharfedale Road, Cardiff, CF23 7HB
ATS Sample No:	6808		

Site Ref / Hole ID:	WS05	Depth (m):	1.80
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Brown grey slightly gravelly sandy CLAY
Location in Works:	Unknown	Material Source:	N/A
Date Sampled:	Unknown	Material Supplier:	N/A
Sampled By:	Client	Specification:	BS1377
Date Received:	17 August 2015	Date Tested:	19 August 2015

Test Results

Moisture Content (%)	12
----------------------	----

Remarks:

QA Ref.		Apex Testing Solutions Sturmi Way, Village Farm Industrial Est, Pyle, Bridgend, CF33 6BZ Tel: 01656 746762 Fax: 01656 749096		Approver	Date	Fig MC 6
BS1377-2 Rev. 2.0					26/08/2015	

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

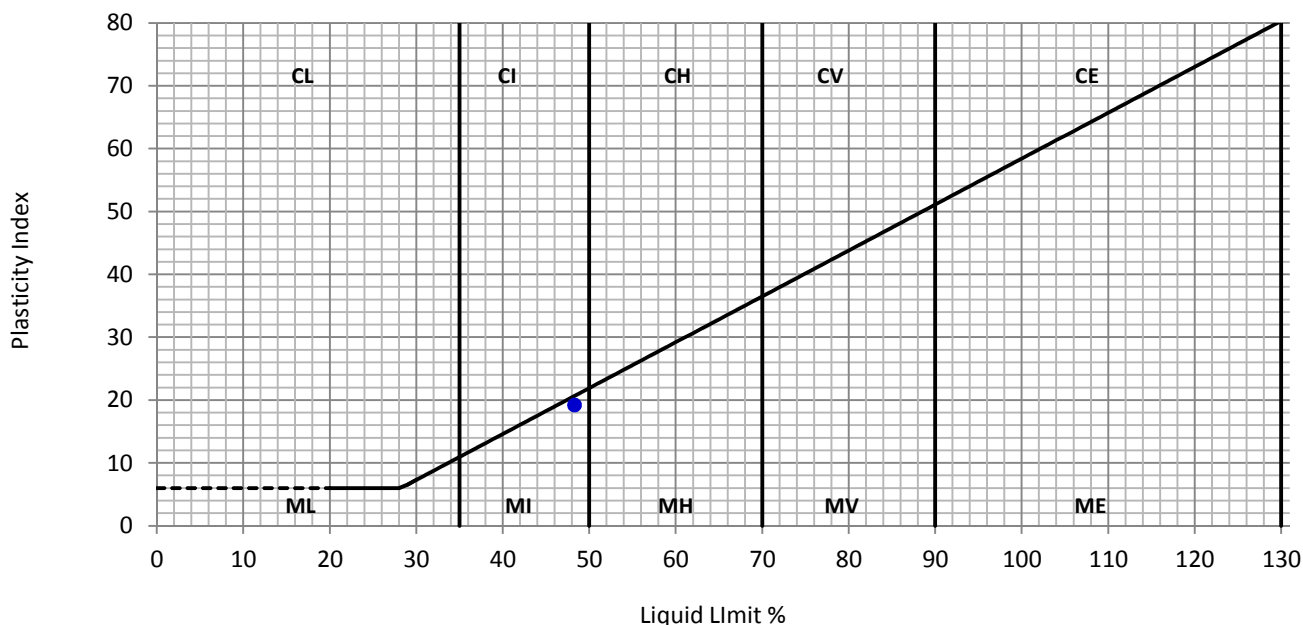
Project No:	D5298-15	Client:	Terra Firma (Wales) Ltd
Project Name:	Merthyr	Address:	Unit 5, Deryn Court, Wharfedale Road, Cardiff, CF23 7HB
ATS Sample No:	6803		

Site Ref / Hole ID:	WS01	Depth (m):	0.80
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Grey brown gravelly slightly sandy SILT
Location in Works:	Unknown	Material Source:	N/A
Date Sampled:	Unknown	Material Supplier:	N/A
Sampled By:	Client	Specification:	BS1377
Date Received:	17 August 2015	Date Tested:	25 August 2015

Test Results

Liquid Limit	48	%
Plastic Limit	29	%
Plasticity Index	19	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	36 %



Remarks:

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7771

Approver

K Maiden

L Maiden, Laboratory Supervisor

Date

26/08/2015

Fig.

ATT 1

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

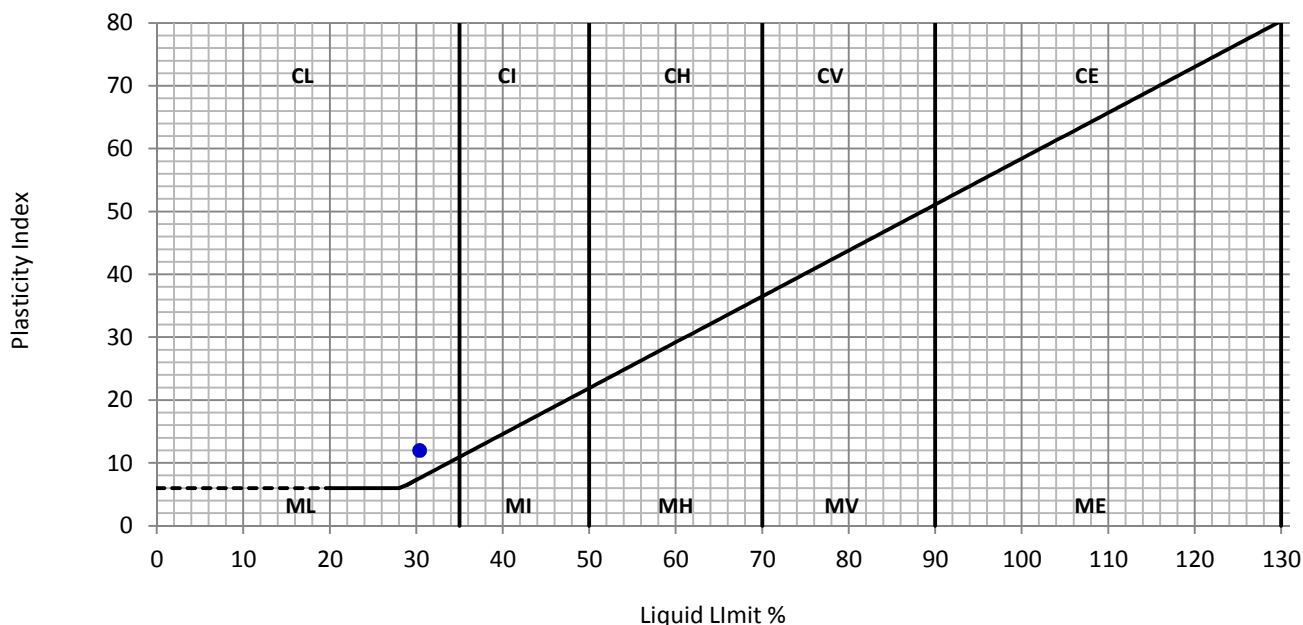
Project No:	D5298-15	Client:	Terra Firma (Wales) Ltd
Project Name:	Merthyr	Address:	Unit 5, Deryn Court, Wharfedale Road, Cardiff, CF23 7HB
ATS Sample No:	6804		

Site Ref / Hole ID:	WS01	Depth (m):	3.00
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Brown slightly gravelly slightly sandy CLAY
Location in Works:	Unknown	Material Source:	N/A
Date Sampled:	Unknown	Material Supplier:	N/A
Sampled By:	Client	Specification:	BS1377
Date Received:	17 August 2015	Date Tested:	24 August 2015

Test Results

Liquid Limit	30	%
Plastic Limit	18	%
Plasticity Index	12	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	28 %



Remarks:

QA Ref.

BS1377-2
Rev 3.0



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Approver

R Maiden

L Maiden, Laboratory Supervisor

Date

26/08/2015

Fig.

ATT 2

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

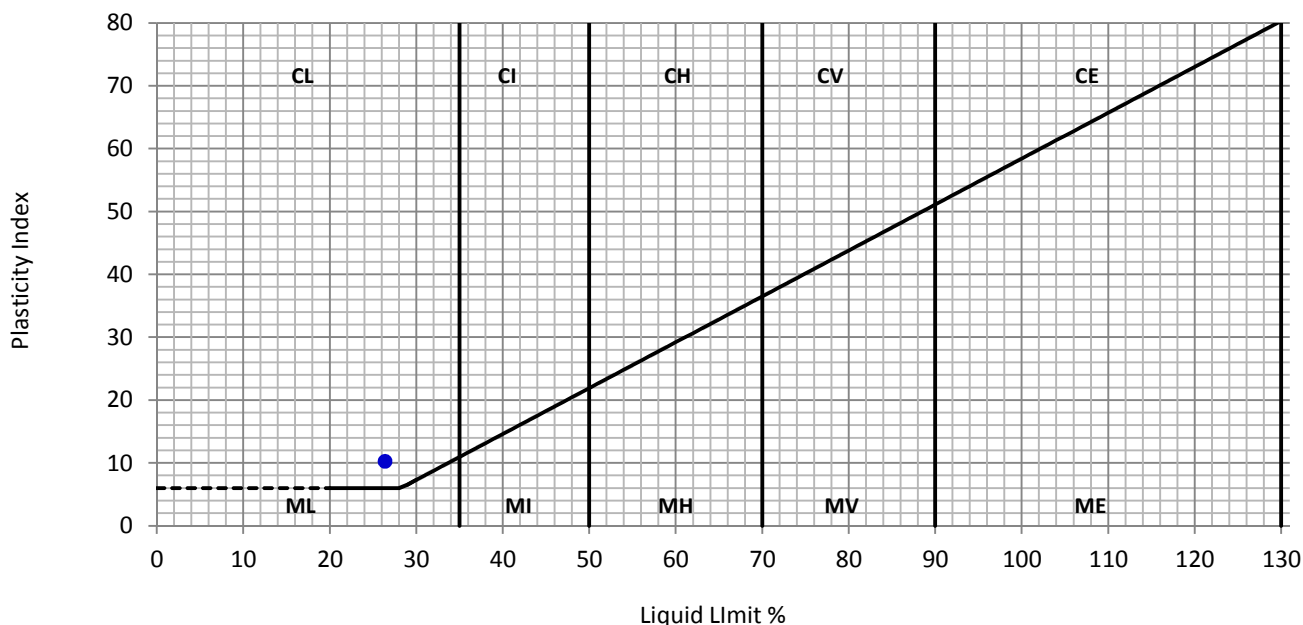
Project No:	D5298-15	Client:	Terra Firma (Wales) Ltd
Project Name:	Merthyr	Address:	Unit 5, Deryn Court, Wharfedale Road, Cardiff, CF23 7HB
ATS Sample No:	6805		

Site Ref / Hole ID:	WS02	Depth (m):	1.50
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Grey brown slightly gravelly slightly sandy CLAY
Location in Works:	Unknown	Material Source:	N/A
Date Sampled:	Unknown	Material Supplier:	N/A
Sampled By:	Client	Specification:	BS1377
Date Received:	17 August 2015	Date Tested:	25 August 2015

Test Results

Liquid Limit	26	%
Plastic Limit	16	%
Plasticity Index	10	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	23 %



Remarks:

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L Maiden, Laboratory Supervisor

Date

26/08/2015

Fig.

ATT 3

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

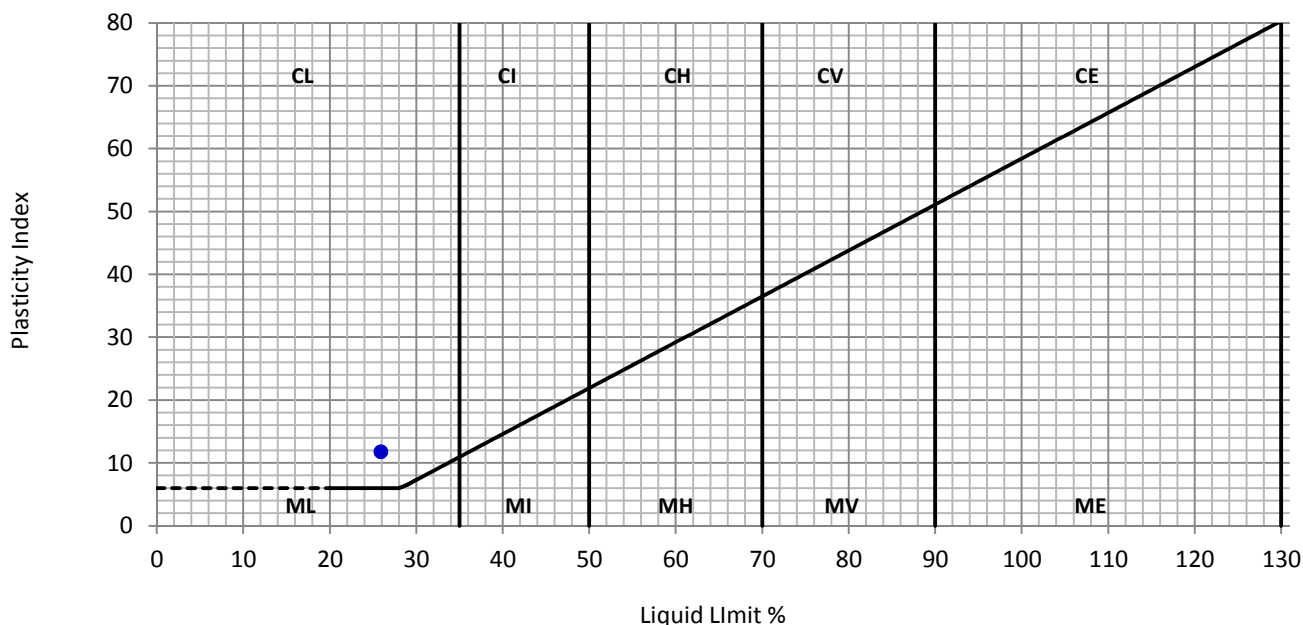
Project No:	D5298-15	Client:	Terra Firma (Wales) Ltd
Project Name:	Merthyr	Address:	Unit 5, Deryn Court, Wharfedale Road, Cardiff, CF23 7HB
ATS Sample No:	6806		

Site Ref / Hole ID:	WS02	Depth (m):	2.50
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Grey brown slightly gravelly sandy CLAY
Location in Works:	Unknown	Material Source:	N/A
Date Sampled:	Unknown	Material Supplier:	N/A
Sampled By:	Client	Specification:	BS1377
Date Received:	17 August 2015	Date Tested:	25 August 2015

Test Results

Liquid Limit	26	%
Plastic Limit	14	%
Plasticity Index	12	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	25 %



Remarks:

QA Ref.

BS1377-2
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R Maiden

L Maiden, Laboratory Supervisor

Date

26/08/2015

Fig.

ATT 4

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

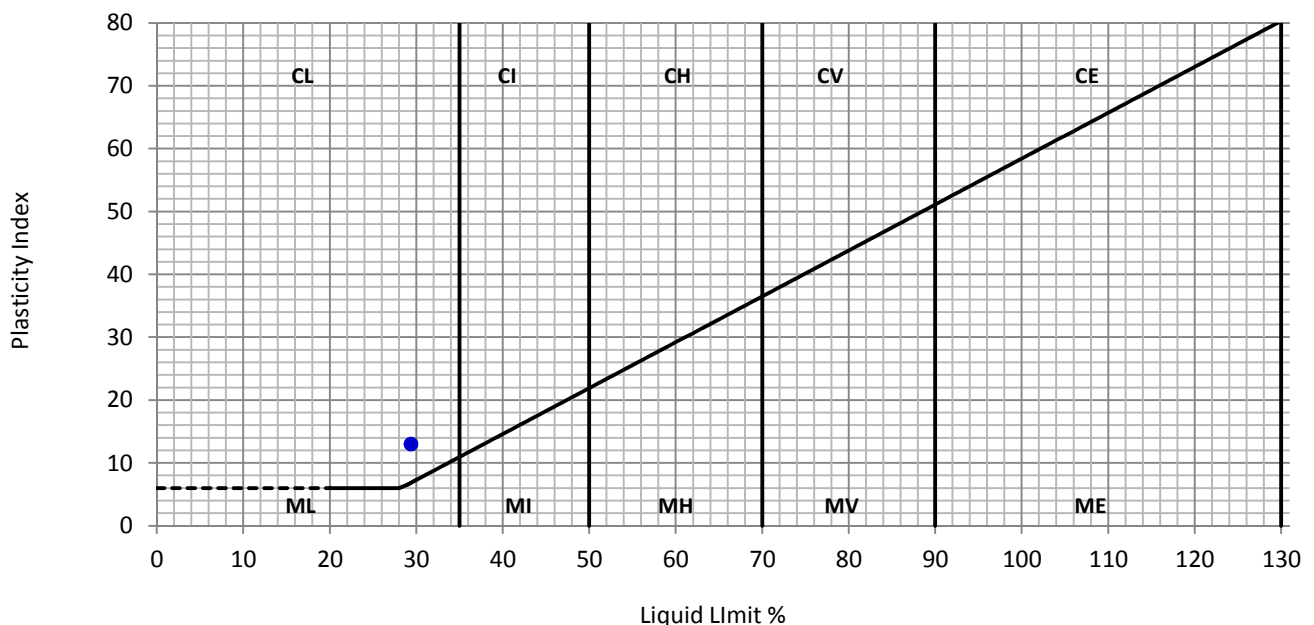
Project No:	D5298-15	Client:	Terra Firma (Wales) Ltd
Project Name:	Merthyr	Address:	Unit 5, Deryn Court, Wharfedale Road, Cardiff, CF23 7HB
ATS Sample No:	6807		

Site Ref / Hole ID:	WS04	Depth (m):	3.75
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Grey brown slightly gravelly slightly sandy CLAY
Location in Works:	Unknown	Material Source:	N/A
Date Sampled:	Unknown	Material Supplier:	N/A
Sampled By:	Client	Specification:	BS1377
Date Received:	17 August 2015	Date Tested:	25 August 2015

Test Results

Liquid Limit	29	%
Plastic Limit	16	%
Plasticity Index	13	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	21 %



Remarks:

QA Ref.

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Approver

R Maiden

L Maiden, Laboratory Supervisor

Date

26/08/2015

Fig.

ATT 5

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

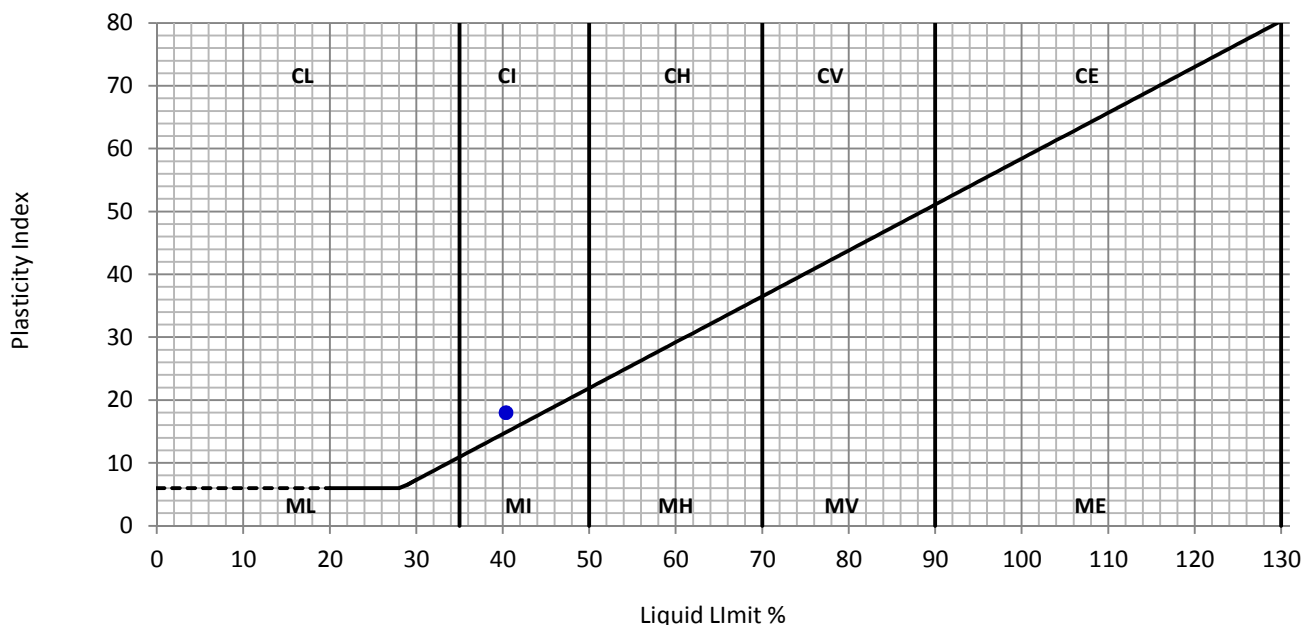
Project No:	D5298-15	Client:	Terra Firma (Wales) Ltd
Project Name:	Merthyr	Address:	Unit 5, Deryn Court, Wharfedale Road, Cardiff, CF23 7HB
ATS Sample No:	6808		

Site Ref / Hole ID:	WS05	Depth (m):	1.80
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Brown grey slightly gravelly sandy CLAY
Location in Works:	Unknown	Material Source:	N/A
Date Sampled:	Unknown	Material Supplier:	N/A
Sampled By:	Client	Specification:	BS1377
Date Received:	17 August 2015	Date Tested:	25 August 2015

Test Results

Liquid Limit	40	%
Plastic Limit	22	%
Plasticity Index	18	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	22 %



Remarks:

QA Ref.

BS1377-2
Rev 3.0



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Bridgend, CF33 6BZ
Tel: 01656 746762 Fax: 01656 749096



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Approver

K Maiden

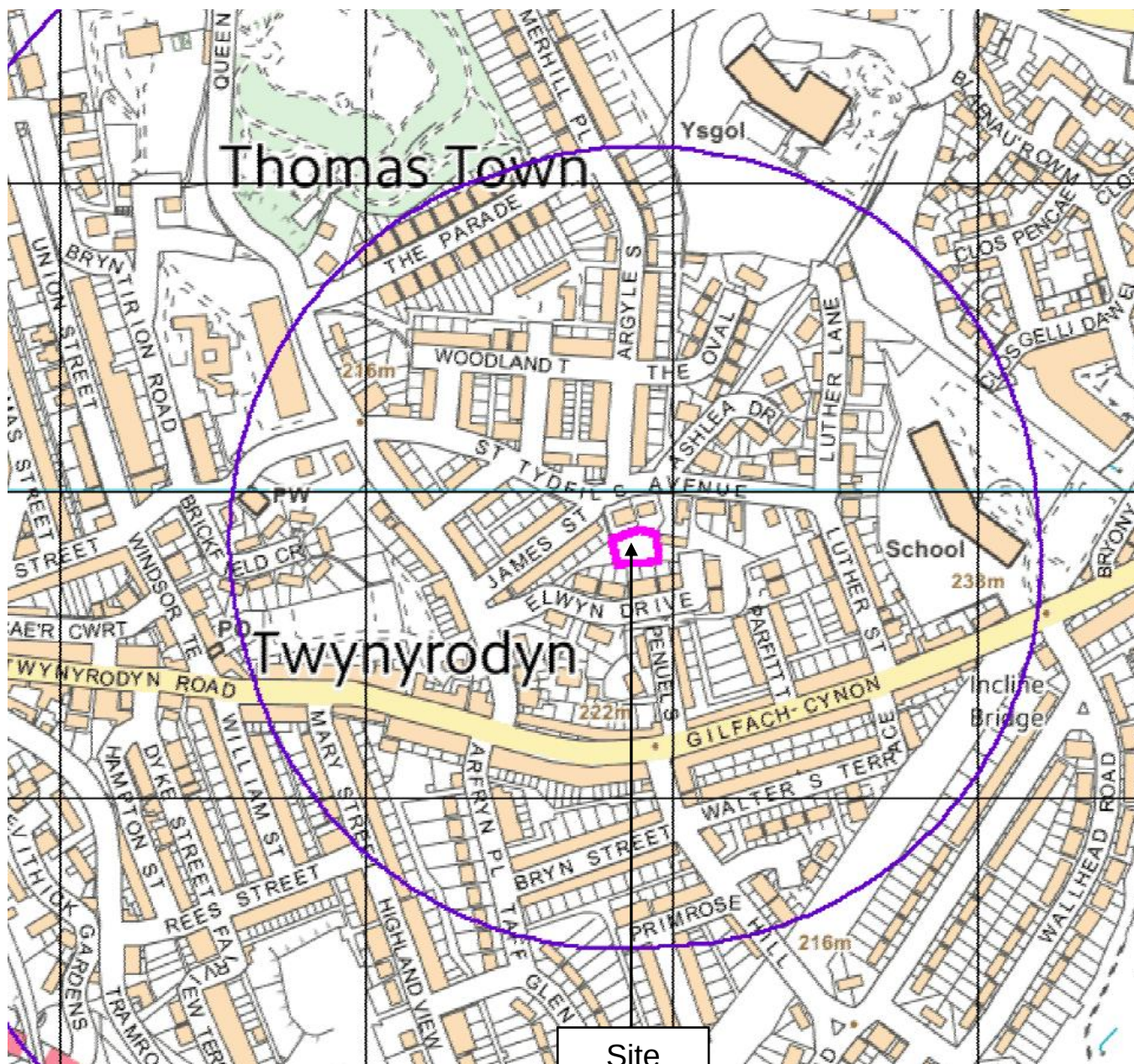
L Maiden, Laboratory Supervisor

Date

26/08/2015

Fig.

ATT 6



Job Number:

13319

Job Title:

Elwyn Drive, Merthyr

Drawing Title:

Site Location

Drawing Number:

01

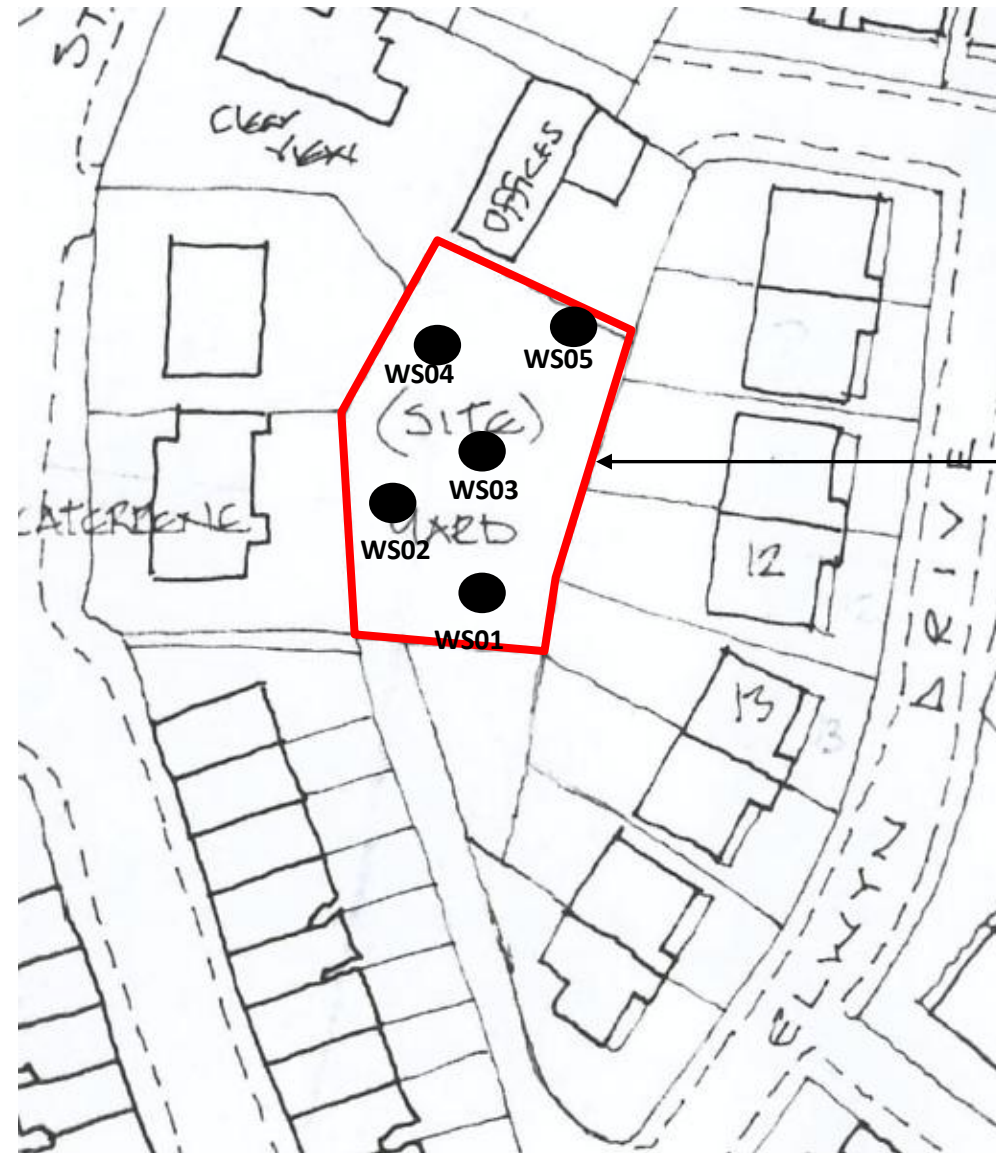
Scale:

Not To Scale

North



Site



Site



Job Number:

13319

Job Title:

Elwyn Drive, Merthyr

Drawing Title:

Site Layout

Drawing Number:

02

Scale:

Not To Scale

Legend:



WS01 – WS05 Location of windowless sampling boreholes

North



Job Number:

13319

Job Title:

Elwyn Drive, Merthyr

Drawing Title:

Proposed Site Layout

Drawing Number:

03

Scale:

Not To Scale

Legend:

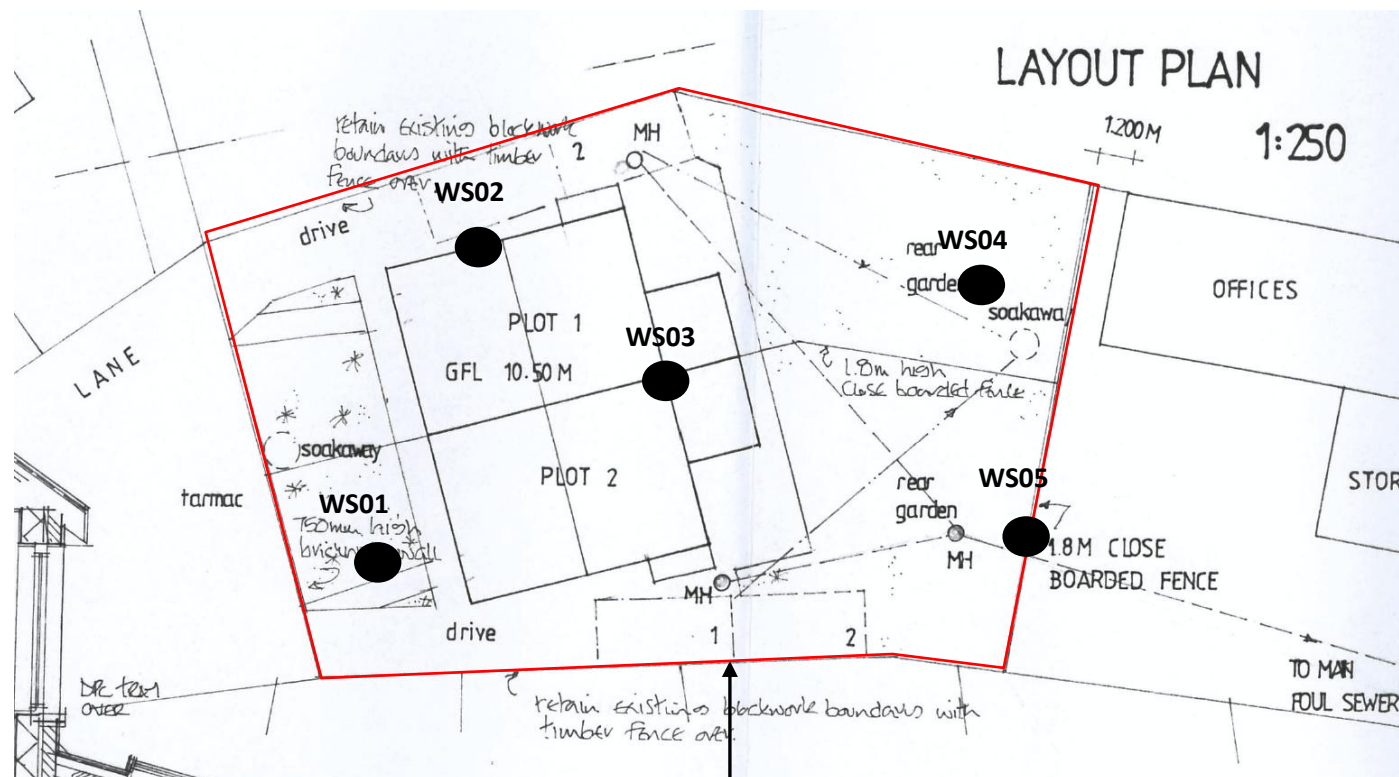
● WS01 – WS05 Location of windowless sampling boreholes

North



LAYOUT PLAN

1:250



Site