

**LAND ADJACENT No.189 CRAIG ROAD,  
GODRERGRAIG**

**PHASE I ASSESSMENT OF LAND QUALITY/  
PRELIMINARY RISK ASSESSMENT (PRA)**

**Report No. Q0823\_DS**

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# LAND ADJACENT TO 189, CRAIG ROAD, GODRERGRAIG

## Phase I:

## Assessment of Land Quality/ Preliminary Risk Assessment (Desk Study)

Report No. Q0823/DS

May 2022

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## FOREWORD

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

The recommendations made and opinions expressed in the report are based upon the study of historical Ordnance Survey maps of the area, GroundSure® reports, and geological maps where available.

Where other plan sources, and published data are considered, these are specifically referred to in the text.

We regret that no responsibility can be held for conditions, which have not been revealed by the plan sources referred to. Whilst the report may suggest the likely configuration of strata below the site, this is only indicative, and no liability can be accepted for its accuracy.

## **1.0 INTRODUCTION**

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### **1.1 General**

Upon the instructions of Mr & Mrs Williams (hereafter referred to as the Client), Quantum Geotechnic Ltd (QGL) has been commissioned to undertake a Phase I Assessment of Land Quality/ Desk Study on a plot of land located within the village of Godrergraig, Swansea.

At time of writing the proposed development entails a single detached dwelling at the rear of the plot complete with a new access and off-road parking area at the front and immediately off Craig Road.

This report presents an assessment of both geotechnical and environmental ground conditions to provide information on any potential risks or hazards that may be posed to the development of the site.

General notes on the techniques employed by Quantum Geotechnic Ltd are described in the Foreword together with the limitations inherent in this type of work. This site has not been visited as part of this desk-based study.

### **1.2 Purpose**

The purpose of the desk study is to provide a preliminary assessment of the land quality and assess the site's suitability for development in terms of its geotechnical and geo-environmental setting. This report aims to achieve this by providing the following:

- An early indication of possible land quality issues that could impact on the development proposals
- A conceptual model of the site detailing potential contamination source pathways and receptors
- A geotechnical and geo-environmental appraisal of any issue highlighted and its significance
- The relevant information to allow the of design an appropriate intrusive (phase 2) ground investigation  
*(if deemed necessary)*

### **1.3 Scope**

In order to achieve its objectives, this study compiles a range of information pertinent to the development site. This typically targets its locality and includes archival and current data from the following sources.

- Site specific database searches provided by Groundsure: GeoInsight and EnviroInsight,
- Historical and recent ordnance survey maps, geological maps and environmental information,
- Coal Authority database searches,
- Published Geological Map for the area: Sheet 230 'Ammanford',
- British Geological Survey Website,
- National Resources Wales.

## 2.0 SITE DETAIL

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### 2.1 Site Description

The site is located within the village of Godrergraig, some 1.5km south along the A4067 trunk road from the nearby town of Ystalyfera, in the county of Swansea. The site itself covers an area of 0.05 hectares and is located immediately off Craig Road, located on the northern side. Craig road is aligned southwest – northeast and runs along the south facing Mynydd Allt-y-Grug mountainside of the Swansea Valley.

At time of writing the site is understood to be an existing maintained garden and lawn area and was, or still is, part of the east lying neighbouring No. 189 Craig Road property. It displays a stepped profile and has been landscaped into several plateaux's, generally ascending steeply to the north-northwest. Drawings provided by the Client plus online and published imagery suggests no direct access, including vehicular and pedestrian is available directly off Craig Road and onto site, with foot access only possible through the neighbouring property.

Neighbouring lands to the west, east and south comprise of semi-detached and detached houses with lands to the north appearing to be a mix of woodland and farmland. The locality is generally a rural residential setting with much agricultural lands further north and south of Craig Road. The approximate National Grid Reference of the site centre is E: 275042 N: 206798 with a nearby postcode SA9 2NZ. The site location and extent of the development site is indicated on the site plans presented in Appendix I provided by the Client's Designers and Architects, including existing and proposed layouts. An aerial view of the site from current on-line mapping is presented below with the assessment boundary shown in yellow;



**Figure 1:** Aerial Image of Site ©GetMapping (image capture 2020) (not to scale)

### **2.3 Topography & Elevation**

OS mapping and online imagery indicates the site to be set back into the mountainside, displaying a steep profile ascending northwards from Craig Road at the toe of the slope. The site has been benched and landscaped, most likely to enable use of the land and make accessible by foot. A height difference of up to 14m is recorded on the proposed layout plan which is overlain on a recent topographic survey drawing. Craig Rd typically resides at 86mAOD with the northern boundary (rear) of the site typically at 100m AOD.

Aerial photographs of the site are included in the Groundsure reports presented in Appendix IV.

### **2.4 Statutory Service Information**

No information has been made available by the Client to Quantum regarding statutory services serving or crossing the site at this stage. During any future excavation works on site, utility plans should be requested from appropriate providers whilst also ensuring safe digging practices in accordance with to HS(G)47 are employed.

### 3.0 GEOLOGY, MINING & SITE HISTORY

#### 3.1 Published Geology

Details of the geology of the site are provided by British Geological Survey (BGS) Sheet 230 'Ammanford', Solid and Drift edition at 1:50,000 scale, and BGS's online resource Geology of Britain Viewer.

There is no superficial geology mapped on the site.

The geological mapping indicates the solid geology of the site to be represented by the Lower Pennant Measures of the Upper Coal Measures (Carboniferous in Age) comprising sandstone with interbedded siltstone, mudstone and productive coal seams. An extract of BGS Sheet 230 solid edition is presented below as Figure 2.



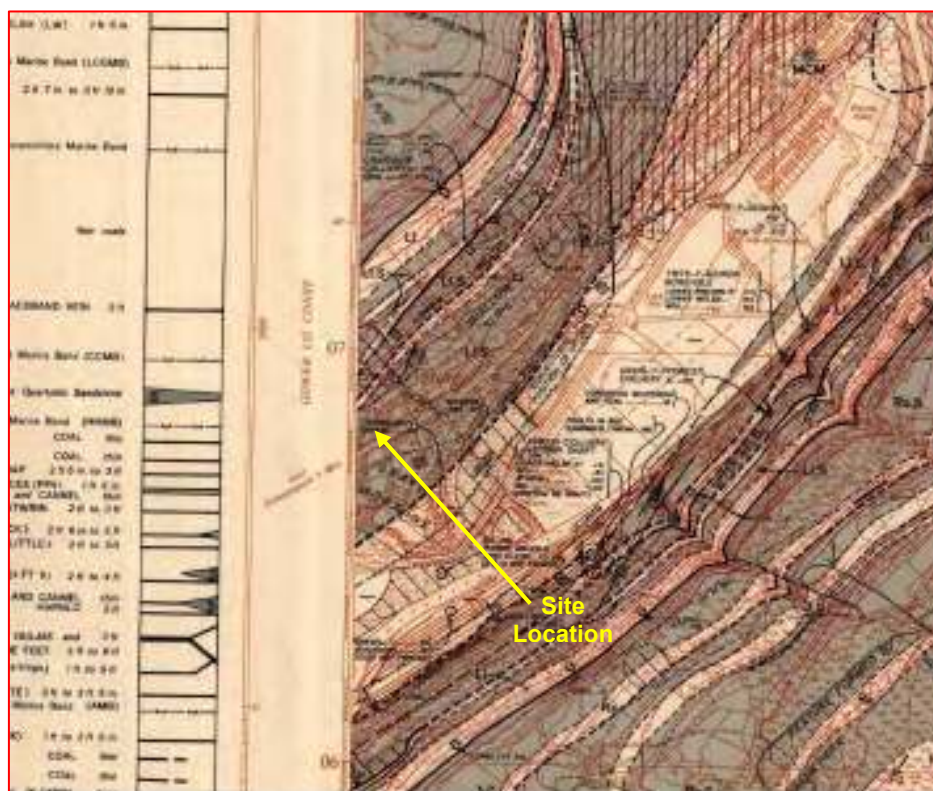
**Figure 2:** Extract from BGS Sheet 230 – Solid Geology edition (*not to scale*)

There lies a southwest-northeast trending fault along the opposing southern side of the Swansea Valley known as the Tawe Valley Disturbance. However, no faults are shown to impinge upon the site. The nearest dips shown of the bedrock record angles of approximately 5 degrees in a southerly direction. Geological Sheet SN-70-NE shows the geology of the site in greater detail at a scale of 1: 10,560 or 6 Inches to 1 Mile. This map highlights a large area along the mountainside/ valley side located northeast of site (0.3km) at a significantly higher elevation where mapped landslips have taken place marked by vertical hatching symbol. Some 150m east-northeast of site, and along Craig Road, it also notes 'shallow slips'.

### 3.2 Mining & Quarrying Activity

The site lies within a coal mining area, namely the South Wales Coalfield. The geological maps indicate a number of coal seams within the immediate area and evidence of significant underground and surface coal mining activity having taken place. The Upper Welsh coal seam is shown to outcrop 100m north of site, higher up the mountain side, towards Mynydd Allt-y-Grug, trending in a southwest-northeast alignment, with the general dip of the bedrock typically between 3-5degrees in a southern direction. across the centre of the site, striking west-east with a northerly dip. Further north lies the crop line of the Upper Pinchin coal seam and several other coal seams. To the south of the site, some 200m away, crops the Lower Pinchin coal seam also orientated southwest-northeast.

In the wider area, there are several Collieries and opencast workings indicated on the geological 1:10,560 map, with the nearest colliery being the Tarreni Colliery: Gleision Shaft located 0.5km southeast of site on the opposing side of the Swansea Valley structure. This records the surface level as +192 feet/ 59 m with the shallowest coal seam recorded being the Lower Welsh at +31 feet/ 9.5 m (some 161 feet/ 49 m below surface level). The Valley floor, within which the Tawe River meanders, shows historic borehole on the map, proving at least 225 feet/ 69 m of sands, gravels and clays. In the larger area there are numerous mine adits all orientated northwards and perpendicular to the crop line of various coal seams. The nearest adits shown are to the north, some 200m from site and higher up the mountainside associated with the Upper Pinchin. It is notable that no adits are shown in the locality immediate adjacent the Lower Welsh coal seam. A colliery tip is also mapped (indicated by diagonal left hatching) approximately 100-150m north-northwest of site on the valley side associated with old disused coal levels. An extract of Sheet SN-70-NE is presented as Figure 3 below;



**Figure 3:** Extract from Geological Sheet SN-70-NE – (not to scale)

A Coal Authority Consultants Coal Mining Report (Report Reference; 51003103848001, May 2022) was obtained by QGL for the site. A copy of which is presented in Appendix II.

The Reports state that the property is within a defined Coalfield region with past underground coal mining of two seams of coal at depths of between 440m and 447m, and last worked in 1924. The Report continues by stating that there are no probable unrecorded shallow workings and no spine roadways at shallow depth.

There are no mine entries within 100m of the site boundary. There are also no outcrops of geological faults crossing the site with no opencast mine workings within 500m.

The report continues by stating that the Coal Authority have not received a damage notice or claim for the site or within 50m of the site since 31<sup>st</sup> October 1994 relating to coal mining related subsidence issues. There are also no records of mine gas emissions requiring action. The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out Procedures.

There are no licenses held for any existing or future underground coal mining within 200m of the site boundary.

In summary, whilst the site lies in a coalfield where significant historic coal mining, both underground and at surface, has taken place, the site itself is not impacted by such past activities. The nearest coal seam, Lower Welsh coal seam, outcrops southwest-northeast, located north of site and dips c.5 degrees southwards. Due to the relief of the land and the Swansea Valley, this coal seam would have been eroded away as the Tawe River created the valley structure and therefore this nearest coal seam does not extend beneath the site. All other mining activity was at significant depth thereby placing the site at very low risk from historic coal mining activity.

### **3.3 Site History**

A review of the site history has been undertaken based on archive and recent maps provided by GroundSure and presented in Appendix III. A summary of the details contained within the Ordnance Survey maps is provided as follows.

#### ***1877 County Series at 1:2,500 and 1:10,560 scale***

The site exists as a field with the main road serving the village of Godrergrraig along the southern boundary. There does appear to be a small rectangular structure in the southwestern corner and northeastern corner of the site, which itself is demarcated by hedgerows. Trackways are shown across the southern end of the site and to the northeast of the site which appear to be related to an old gravel pit on neighbouring lands to the west. The site is surrounded by fields to the west, north and south (on the opposing side of the main road). Neighbouring lands to the east comprise a field and two dwellings.

Further north of site (some 100-150m) climbing up the mountain there appears to be an area of made ground

or potential colliery tip associated with the large Cwar Pentwyn quarry. Further west and south woodland dominate as the valley side descends down to wards Swansea Canal located 400m south and Tawe River some 500m south of site. Located 100-150m east-northeast is a large Cemetery. The focal point of the village i.e., dwellings, shops and a school are located 20-250m east of site.

#### ***1897 to 1899 County Series at 1:2,500 and 1:10,560 scales***

There are no significant changes on-site apart from the trackways are no longer shown or indeed the very small structure in the northeast corner of the site.

A coal level is mapped adjacent Cwar Pentwyn quarry. The larger area shows an increase in coal mining activity further up the valley sides and towards the top of Mynydd Allt-y-Grug mountain. An increase in housing along the main road through the village is also observed.

#### ***1913 to 1921 County Series & National Grid 1:2,500 & 1:10,560 scale***

By 1921, there is nothing shown on site and the site is shown as a field. The small structure that was shown in the southwestern corner towards the main road is no longer showing. Elsewhere, a large school has been built by 1913 further east along the main road that serves Godrergrai community. To the southeast of site and lower down the valley side, large areas of woodland have been replaced by new housing estates. The quarries to the north remain active and likewise the Swansea Canal to the south.

#### ***1948 to 1972 County Series & National Grid 1:1,250, 1:2,500 & 1:10,000 scale***

During this period the site remains a vacant plot of land. Notable changes in the wider area include closure of the Cwae Pentwyn quarry by 1962 and closure of several coal levels to the north and northwest. By 1948, the main road that serves the village is now labelled as Craig Road. Housing continues to grow along Craig Road on both sides. A large 'tip' or area of made ground is shown southeast of the site, downslope, related to both the small quarry nearby and the housing development to the west of the tip.

#### ***1980 to Present Day National Grid & Landline 1:1,250, 1:2,500 & 1:10,000 scale***

There are no changes to the site observed or to the immediately neighbouring property during this time period. At time of writing it is known, and visible of satellite and street view online imagery that the land is being maintained as an extended garden area to No. 189 Craig Road and has been terraced and lawned.

#### ***Summary:***

Apart from two very small shed-like structures in the southwest corner and northeast corner of site and connecting narrow tracks associated with a small gravel pit on western lying lands up until 1921, there has been nothing onsite. The site has remained a steeply sloping plot of land up until relatively recent years, at which time it has been a maintained terraced garden area.

## **4.0 GROUNDSURE DATA REVIEW**

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### **4.1 General**

As part of the desk study, environmental and combined geological/ ground stability reports have been obtained from GroundSure® which compile the results of online database searches using a range of national resources.

The combined GeoInsight® and EnviroInsight® report (Report Ref: HMD-213-8714137) provides details on the geology of the site as well as information relating to ground workings in the area of the site, mining, extraction, natural cavities and natural ground subsidence. It also provides details on site specific environmental issues including pollution incidents, discharge consents, flooding issues and any areas of significant contamination potential as well the risk to any existing or planned properties from the underlying ground conditions.

A summary and review of the data collected from within this report is detailed in the following sections. Full copies of the documents provided by GroundSure® are included in Appendix IV.

### **4.2 Geology and Ground Stability - Data Review**

#### **4.2.1 Artificial Ground**

The geology section of the combined geological/ground stability GroundSure® report has identified no presence of both Artificial Ground or Made Ground within the site study area but there are isolated areas some 48m north of site, which relate to former quarries and colliery spoil.

#### **4.2.2 Superficial Ground/ Drift Geology & Landslips**

There is no superficial ground/ drift geology mapped across the site. The Groundsure report therefore reflects the findings of Section 3.1 of this report

There is a single record of a superficial deposit landslip located 356m northwest of site.

#### **4.2.3 Bedrock, Solid Geology & Faults**

The report identifies the site to be underlain by the Llynfi Member comprising sandstone with productive coal seams. Within 500m of the site, up to 20 geological faults or linear features are listed. One of these listed is noted as a coal seam (inferred and likely to be the Lower Welsh coal seam) located 72m northwest of site. All other entries are over 100m from site and are mainly coal seams. No faults are recorded within 500m of the site.

#### **4.2.4 Radon Data**

The report states that less than 1% of properties within the area are above the Radon Action Level. Based on this, if planning on building an extension or a new build property, no radon protective measures will be needed

in accordance with the Building Research Establishment guidance on radon protective measures for new dwellings (BR211 2015).

#### 4.2.5 Mining, Ground Workings & Natural Cavities

There are 78 entries for surface workings listed in this section within 250m radius of the site, mainly relating to refuse heaps (likely to be related to old colliery spoils and quarrying spoil heaps), coal levels, quarries, cemeteries and unspecified ground workings. The nearest entry to site is shown as 59m southwest of site for a refuse heap dated 1948.

13 No. 'Britpits' are listed between 161m and 483m from site, with the nearest one being the Godrergraig Level – a deep underground coal working (ceased).

There are 126 entries for underground workings in 1000m of the site, each related to the former coal mining industry in the region. The nearest entry is 120m northwest of site for an old coal level dated 1913. All entries are either listed as air shaft, pit, level, colliery or mine. Each being disused/ ceased operation.

There are no brine, clay, tin or gypsum mining or quarrying entries listed.

#### 4.2.6 Natural Ground Subsidence

The Groundsure report identifies a range of 'Natural Ground Subsidence' datasets supplied by the British Geological Survey (BGS). Each hazard has a 'hazard rating' and corresponding description which are summarised in Table 1.

**Table 1:** Natural Ground Hazard Summary

| Hazard                | Hazard Rating        | Details                                                                                                                                                         |
|-----------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shrink - Swell Clays  | Negligible (On-Site) | Ground conditions predominantly non-plastic                                                                                                                     |
| Landslides            | Very Low (On-Site)   | Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered. |
| Soluble Rocks         | Negligible (On-Site) | Soluble rocks either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.                 |
| Collapsible ground    | Very Low (On-Site)   | Deposits with potential to collapse when loaded and saturated are unlikely to be present.                                                                       |
| Compressible deposits | Negligible (On-Site) | Compressible strata are not thought to occur.                                                                                                                   |
| Running Sands         | Negligible (On-Site) | Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on land use due to running conditions.     |

#### 4.2.7 Estimated Background Soil Chemistry

The report identifies three records of the estimated background soil chemistry either on site or within 250m of the site boundary. A summary of these records is presented in Table 2.

**Table 2:** Estimated Geometric Mean Soil Concentrations (all figures in mg/kg)

| Location | Arsenic (As) | Bio accessible Arsenic | Cadmium (Cd) | Chromium (Cr) | Nickel (Ni) | Lead (Pb) | Bio accessible Lead |
|----------|--------------|------------------------|--------------|---------------|-------------|-----------|---------------------|
| On site  | 35-45 mg/kg  | No Data                | 1.8 mg/kg    | 60-90 mg/kg   | 15-30 mg/kg | 100 mg/kg | 60 mg/kg            |

#### 4.2.8 Railways and Tunnels

Section 21 of the Groundsure Report details any historic and current railways, underground railways and tunnels typically within 250m of site boundary. There are six entries for historic railways or tunnel features within 250m. The nearest entry is located 193m east of site for a railway sidings dated 1948 likely to be related to former mining activity in the area. There are no other entries in this section.

### 4.3 Environmental Data Review

#### 4.3.1 Historical Industrial Sites

The Groundsure combined report identifies 138 No. records of potentially contaminative past industrial land uses within 500m of the site boundary. These all relate to the areas coal mining and quarrying legacy. Each entry is either a refuse heap, colliery, coal level, sewage works, filter beds, unspecified tanks, railway sidings, cemetery or railway buildings. The nearest entries are for refuse heaps located 59m, 63m and 66m southwest of site, down Craig Road dated between 1913 and 1948, likely to be related to colliery spoil material storage.

There are 10 records of historical tank structures however these are all over 100m from site.

There is one historical garage located 244m southeast of site last dated 1993, with no military sites or petrol stations within 500m of the site boundary.

There are 2 historical energy features noted, 86m and 90m east for electricity substations dated 1993 and 1971 respectively.

There are 3 historical landfill entries within 500m of the site. The nearest is 104m southwest of site which is Cilmaengwyn Waste Tip – no further details supplied.

#### 4.3.2 Current or Recent Industrial Sites

The site does not lie within a commercially or industrially dominant area. There are just 3 entries in this category; disused mine workings 157m west of site, disused quarry 210m north of site and Sunnyvale General Construction supplier 235m northeast of site.

There are also no refuelling stations, gas pipelines, hazardous substance storage or usage sites, or indeed sites determined as Contaminated Land within 500m of the site.

#### **4.3.3 Environmental Permits, Incidents and Registers**

There are no entries listed for Licenced Pollutant Release (Part A(2)/B).

There are no records of radioactive substance authorisations within 500m of the site.

There are no records of Integrated Pollution Control (IPC) within 500m of the site study area.

There are no records of both Licenced Industrial Activities (Part A(1)) within 500m of the site study area.

There are 12 records of Licenced Discharges to Controlled Waters within 500m of the site. Nearest is 26m west of site at a residential dwelling. The discharge type is not specified onto land and into Swansea Canal since 1973.

No records of Pollutant Release to Surface Waters (Red List) under the environmental protection regulations 1991.

There are no records for List 1 Dangerous Substances in Compliance with European Directive E 2006/11/EC and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015. However, there is one record for List 2 Dangerous Substances – this is for Iron at Pentwyn Colliery (No. 3) 478m northeast of site.

There are 3 records of Substantiated Pollution Incidents (EA/NRW) within 500m of the site study area. The nearest is 321m southeast of site for diesel spillage dated 10/08/2016 onto land with no impact.

No Pollution Inventory Waste Transfers/ Radioactive Waste data sets recorded within 500m of the site study area.

There are no records of Control of Major Accident Hazards (COMAH). This includes upper and lower tier sites and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS).

There are no records of National Grid High Voltage Underground Electricity Transmission Cables or High-Pressure Gas Transmission Pipeline within 500m of the site.

#### 4.3.4 Hydrogeology and Hydrology

There are no mapped superficial deposits onsite. The nearest mapped superficial deposits some 65m southeast are recorded as Secondary A aquifers.

Bedrock on-site has also been identified as 'Secondary A' aquifer which is described predominantly lower permeability layers which may store/ yield limited amounts of groundwater due to localised features such as fissures, thin permeable-horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.

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

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

The onsite characterisation of vulnerability to groundwater by a pollutant discharged at ground level is recorded in the Groundsure report as 'high'.

A single entry for groundwater abstraction licences recorded within 2000m of site, located 314m southwest for farming and domestic use which is classed as historical.

There are 3 surface water abstraction licences. All over 1000m from site.

There are no potable water abstraction licenses are noted.

There are no designated source protection zones (SPZ) within the area.

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning.

The nearest controlled surface water way is 31m southwest of site and this relates to an inland river, un-named.

#### 4.3.5 Flooding

Information on surface water flooding, flood defences, flood storage and groundwater flood are provided in this section with a radius of 250m of the site study area.

The site is listed as being 'Negligible Risk' in relation to Risk of Flooding from Rivers and Sea (RoFRaS) and also groundwater.

The site does not lie within a Zone 2 and Zone 3 flood risk.

The report states the area within 250m of the site study area does benefit from flood defences.

#### **4.3.6 Designated Environmentally Sensitive Sites**

According to the Groundsure report there are the following;

- 48 records of Designated Ancient Woodland ranging between 49m north and 1978m northwest of site.
- 1 record for Local Nature Reserve at Swansea Canal 284m south of site.
- 5 records for Sites of Special Scientific Interest (SSSI) the nearest being 1023m west at Coed Cwm Du, Cilmaengwyn.

There are no records of Special Protection Areas (SPA), Special Areas of Conservation (SAC), Conserved Wetland Sites (Ramsar sites), Biosphere Reserves, Forest Parks, Marine Conservation Reserves, Proposed Ramsar Sites, Possible Special Areas of Conservation (pSAC), Potential Special Protection Areas (pSPA), Nitrate Sensitive Areas, Nitrate Vulnerable Zones and Green Belt Land within 2000m of the site study area.

#### **4.4 Data Review Summary**

The geotechnical and geo-environmental data collected from all sources (including geology, site history and the Groundsure report), has revealed the following;

- Site history review shows that with the exception of two very small shed like structures that resided onsite from at least 1878 until 1921, there has been no development on the site, which now exists as a well-maintained terrace garden.
- All past or current/ recent potentially contaminative land uses listed within the Groundsure report are all at a distance (and taking the relief of the land into account) considered not to impact upon the site.
- The coal mining review has also revealed that the site is at very low risk from historical underground or surface coal mining activity.
- The site itself is currently terraced as it climbs steeply to the north from Craig Road. There are recorded incidents of land slips further east of site recorded on geological maps however, the Groundsure review has not flagged up any concerns for the site itself. However, a prudent developer would seek a specialist geotechnical consultant to provide as a minimum a visual assessment of the slope stability.
- The site is at negligible risk of flooding
- Shrink Swell Clays - Negligible (On-Site)
- Running Sands – Negligible (On-Site)
- Collapsible Deposits – Very Low (On-Site)

- Landslides – Very Low (On-Site)
- Ground Dissolution of Soluble Rocks – Negligible (On-Site)
- Compressible deposits - Negligible (On-Site)

## 5.0 CONCEPTUAL SITE MODEL

---

### 5.1 Legal Framework for Contaminated Land

Part 2A of the Environmental Protection Act 1990 created a regime for the identification and remediation of contaminated land. Contaminated land is defined by the potential to cause significant harm to human health and/or the environment. It establishes that responsibility for deciding when land is contaminated lies solely with local authorities.

Part 2A of the Environmental Protection Act 1990, Section 78A (2) defines “Contaminated Land” as:

*“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.”*

The definition is subject to statutory guidance issued by the Secretary of State which defines significant harm and a significant possibility of such harm with respect to the definition of contaminated land. The statutory guidance sets the definition of contaminated land within the context of Government policy including the “suitable for use” approach.

In Wales, the governing guidance used within this study is that of the ‘2007 No.2 Environmental Protection, Wales, Part 2A Statutory Guidance on Contaminated Land (2006)’ and The Contaminated Land (Wales) Regulations 2006. This is further supplemented by the Welsh Local Government Association & Environment Agency Wales (*now Natural Resource Wales (NRW)*) document “Development of Land Affected by Contamination: A Guide for Developers” 2012.

Under the planning regime, land contamination is also a material consideration. A local authority has the duty to consider potential implications of contamination when it is considering applications for planning permission. A planning authority may require investigations to be undertaken where there is potential contamination or contamination is known to exist at a site before granting planning permission. Alternatively, planning permission may be conditional requiring appropriate investigation and, if necessary, remediation.

### 5.2 Conceptual Site Model

The Conceptual Site Model (CSM) is a representation of the current understanding of the site and its surrounding environment with regards to geology, groundwater, surface waters, and potential contamination on-site and adjacent off-site and any migration pathways.

The potential risks to the proposed development and adjacent land have been assessed by consideration of the potential pollution linkages determined via the geo-environmental data appraisal in Section 4 and the

historic land use in Section 3. For a risk to exist there must be a source of contamination, a receptor that may be harmed, and a pathway by which the receptor could be exposed to the contaminant. Only when all three factors are present (i.e. source, pathway, and receptor) can a pollution linkage, and consequently an unacceptable risk, exist. The CSM considers all three elements and the potential for pollution linkages that may exist. If no linkage is identified, then there is considered to be no or negligible risk.

The CSM has been developed for the proposed end use (residential) and each factor has been assessed in terms of its relative position (on-site/off-site). A visual representation of the model is provided as Figure 2.

#### ➤ Sources

The geo-environmental data review along with historical land use mapping review has identified several past and fairly recent land uses within the larger area that may have given rise to potential contaminated land however, all uses are considered to be at a distance or a type that are unlikely to have impacted the site itself or the immediate lands. With the exception of two very small, shed structures that once resided onsite and a small track/ footpath pre-1921 which allowed foot access stop a small gravel pit some 50m west of site, no other development has taken place onsite. Whilst the specific use of the two small building structures cannot be ascertained, their size suggests that they were probably access points for checking into the gravel pit of storage bays for the generated gravel itself. The risk of contamination from such use is considered low.

#### ➤ Receptors

Considering the current and future proposed site end use (Residential), a number of receptors have been identified at risk during and subsequent to the proposed development (on-site), and in the surrounding areas (off-site). These are summarised as follows:

##### On-site

- Future site users – construction workers (during development), Residents
- Controlled waters – groundwater, ('Secondary A') aquifer
- Possible services

##### Off-site

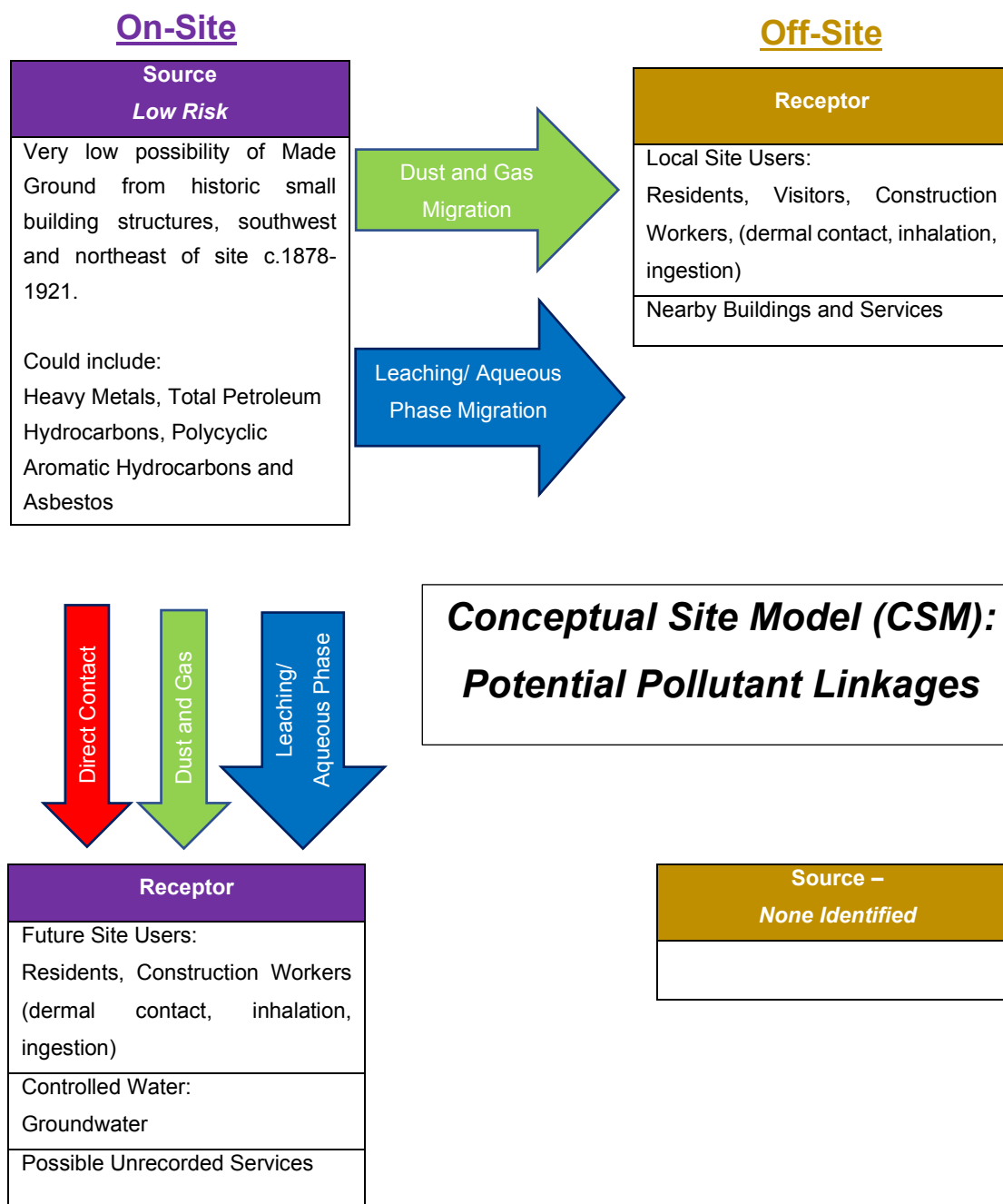
- Local site users – residents
- Nearby controlled waters – groundwater, ('Secondary A') aquifer
- Nearby buildings and services – primarily residential

#### ➤ Pathways

Completing the pollutant linkage between source and receptor are pathways – the way in which they are connected. The type of sources identified have a range of ways of contaminating the receptors, and typically fall into the following categories:

- Direct contact – including dermal contact and ingestion
- Dust or land-gas migration through air (above or below ground level) and subsequent inhalation
- Leaching of contaminants into groundwater and aqueous phase migration into areas of direct contact
- Consumption of plant material (vegetable patch etc) grown on site

Considering sources and receptors both on-site and off-site, pathways exist in three forms: on-site to on-site, on-site to off-site, and off-site to on-site. A visual representation of the complete model and each pollutant linkage identified from this desk study for the site is provided as Figure 2.



**Figure 2:** Conceptual Site Model (CSM): Pollutant Linkages

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

---

### 6.1 Summary of Findings

Following the Phase I Land Quality Assessment/Desk Study the following highlights have been identified:

#### Geotechnical:

- The geological map for the area indicates the site is directly underlain by bedrock from the Upper Coal Measures (Carboniferous age) typically comprising sandstone with interbedded coal seams. No superficial or soil deposits are mapped, however, some soil cover can be expected due to lawned/ garden area sporadic grass noted from aerial and street view imagery.
- Review of past, current and future site use indicates some small structures to have been present in the southwest and northeast corner of the site pre-1921, likely to be related to the small gravel pit working that once existed some 50m west of site.
- The site is terraced due to the original profile being very steep south facing. Assessment of the site's overall stability should be taken prior to any development commencing.
- The site lies within the South Wales Coalfield in a high-risk development area as defined by the Coal Authority. The general area has been extensively mined for over a century with a number of collieries and mine entries nearby, however, an in-depth review of the area indicates that the site is considered at very low risk from such historic mining activity both at surface and underground workings.
- The site is at negligible risk of flooding
- Shrink Swell Clays - Negligible (On-Site)
- Running Sands – Negligible (On-Site)
- Collapsible Deposits – Very Low (On-Site)
- Landslides – Very Low (On-Site)
- Ground Dissolution of Soluble Rocks – Negligible (On-Site)
- Compressible deposits - Negligible (On-Site)

#### Environmental:

- Review of past, current and future site use indicates some small structures to have been present in the southwest and northeast corner of the site pre-1921, likely to be related to the small gravel pit working that once existed some 50m west of site. Since 1921 the site has been undeveloped and has been a steep area of grass/ vegetation and later to become a terraced garden area.
- Searches have not revealed any onsite potential contaminative uses that may have led to the site becoming contaminated. Similarly, there have been no offsite land uses within a distance considered to pose a risk to the site. However, because of the small shed like structures that once stood onsite and given the overall area's coal mining and quarrying legacy it is considered good practice to undertake minimal sampling of any shallow soils for a general suite of contaminants to demonstrate that the site is suitable for the proposed end use as residential and garden area.

- The risk to any controlled waters including aquifers from site is considered negligible.
- The GroundSure® report states that no radon protective measures are necessary.
- The Groundsure® report indicates negligible risk of flooding on-site.

## **6.2 Evaluation and Recommendations**

The following evaluations and subsequent recommendations are made based on this study:

- In relation to any environmental/contaminated land issues, the desk study has identified a very low risk potential for contamination to be present on-site and from potentially offsite sources, as summarised in Section 6.1, and as such it is considered and advised, in line with good practice and as a prudent developer, to undertake a basic and minimal ground investigation on site in terms of contaminated land sampling and testing to ensure no contamination and risks are present.
- Geotechnical assessment of the overall site and slope stability is advised in context of the proposed development of quantify any risk and any significant earthworks or cuttings, along with investigation of the shallow ground for general geotechnical parameter derivation to assist with foundation design.
- The risk from underground coal mine workings is discounted due to the significant depth below the site (>400m). The risk associated with landgas derived from underground coal workings is also considered very low. However, if attending site to undertake some form of ground investigation it would be worthwhile exercise to install at least one landgas monitoring standpipe to provide accurate site-based readings and allow an assessment of landgas risk which will dictate floor slab design criteria for the new build.
- In light of the above it is recommended that a combined intrusive Phase II Geo-Environmental and Geotechnical Ground Investigation be undertaken.
- The Investigation should include basic in-situ tests, soil sampling, and subsequent laboratory testing in order to gather the geotechnical and geo-environmental data required for design recommendations and environmental assessments to be made. A combination of Windowless Sampling Boreholes (possibly hand-held version due to access) and Super Heavy Dynamic Probes should be suitable for this site to gain the soil samples required and permit assessment of the deeper lying soils, as well as enabling land gas monitoring standpipe to be installed for post-fieldwork monitoring of any raised land gases.
- Optional extras which the Client would need to consider is in-situ testing in the form of California Bearing Ratio (CBR) tests for road pavement design and Soakaway Testing for drainage design may also be required based on the current development proposals.
- The laboratory test results, and in-situ test results should then be utilised in an Interpretative Report detailing the site findings, recommendations of foundation design and other geotechnical issues including mine related, that may have come to light. In addition, an assessment of human health risk and environmental risk should also be undertaken.

## 7.0 REFERENCES

---

### British Geological Survey:

- British Geological Survey (BGS) Sheet 230 'Ammanford' 1:50,000.
- Geological Sheet SN-70-NE 1:10,560.
- BGS Lexicon of Named Rock Units ([www.bgs.ac.uk/lexicon](http://www.bgs.ac.uk/lexicon))
- BGS Geology of Britain Viewer ([www.bgs.ac.uk](http://www.bgs.ac.uk))

### Environmental and Ground Stability:

- GroundSure® Combined EnviroInsight and GeoInsight Report Ref; HMD-213-8714137, May 2022

### Environmental Protection Act 1990

### Ordnance Survey Plans:

- Collection of Historical Plans from 1879 to 2021, at 1:1,250, 1:2,500, 1:10,560 and 1:10,000 scale.

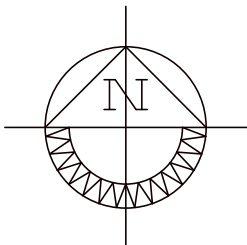
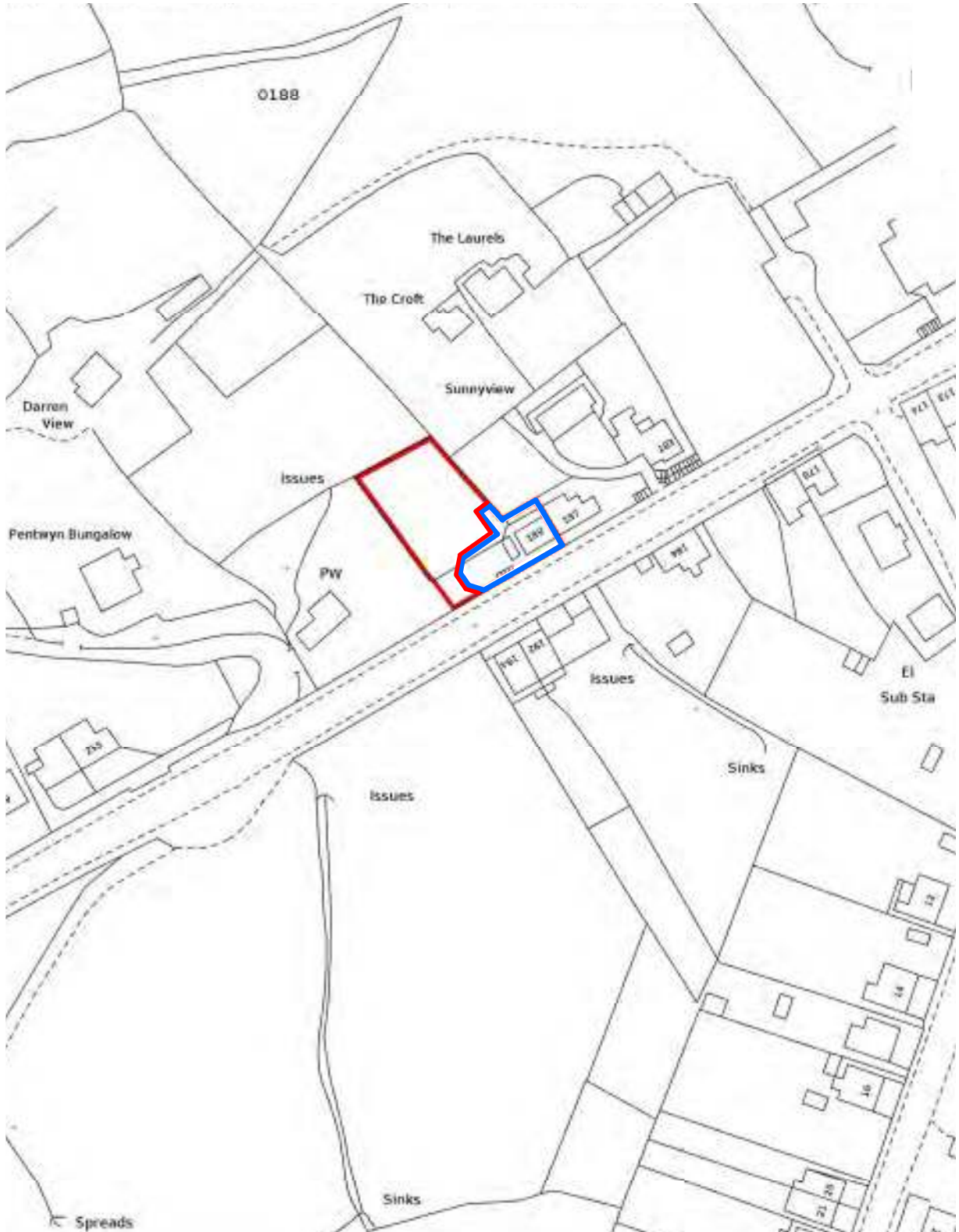
### The Coal Authority:

- Coal Authority Consultants Coal Mining Report, Reference; 51003103848001 Dated; 3<sup>rd</sup> May 2022

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## APPENDIX I – SITE PLANS

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LAND ADJACENT TO 189, GRAIG ROAD, GODRERGRAIG  
YSTALYFERA, SWANSEA  
Mr & Mrs Williams

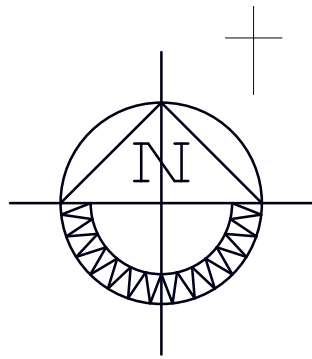
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2129-10

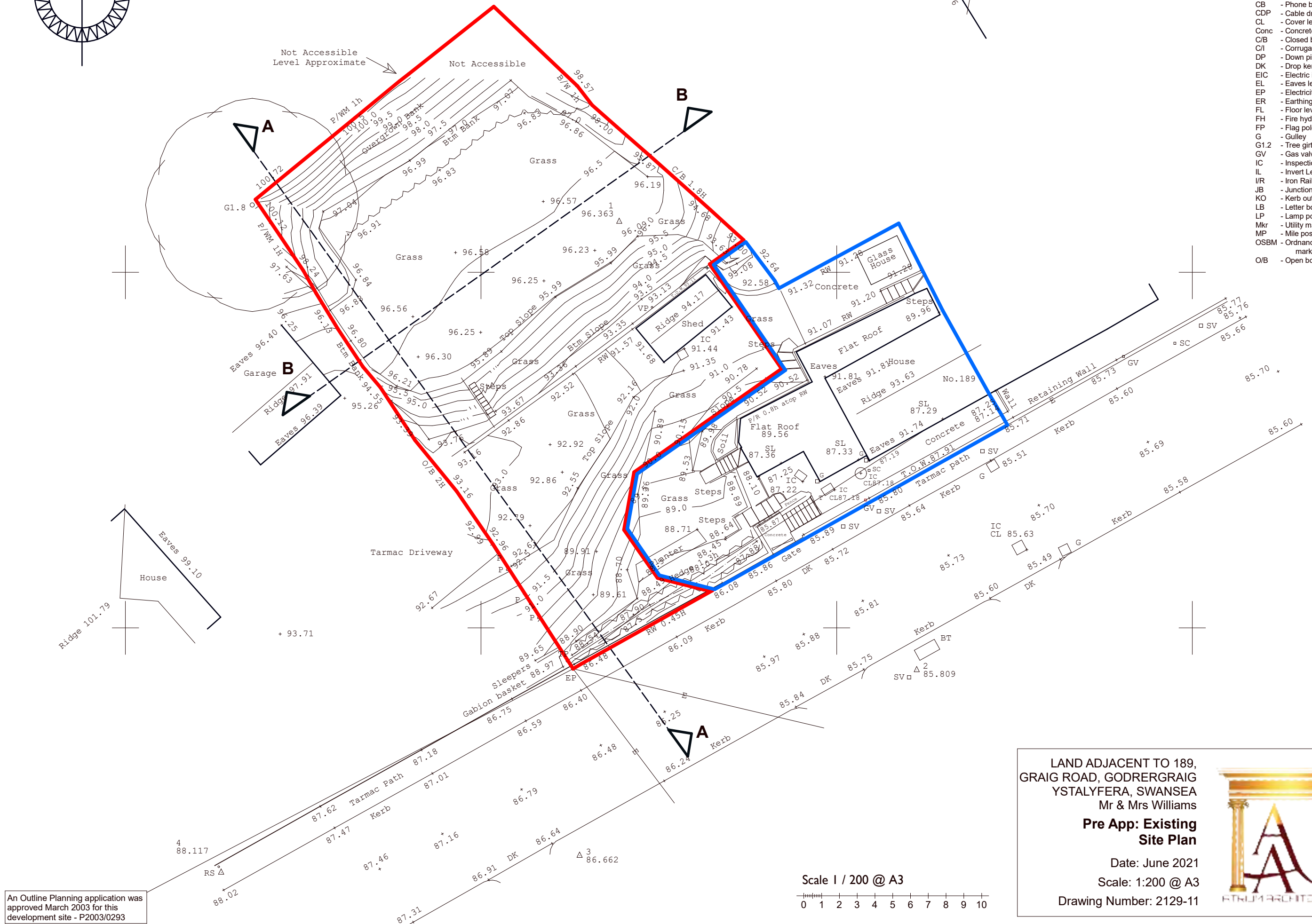
1:1250 @ A4

May 2021





| ABBREVIATIONS |                              |
|---------------|------------------------------|
| AV            | - Air valve                  |
| B             | - Bollard                    |
| BB            | - Belisha beacon             |
| BH            | - Bore hole                  |
| BM            | - Site bench mark            |
| BT            | - British telecom            |
| B/W           | - Barbed wire fence          |
| CAM           | - Camera                     |
| CB            | - Phone box                  |
| CDP           | - Cable draw pit             |
| CL            | - Cover level                |
| Conc          | - Concrete                   |
| C/B           | - Closed board fence         |
| C/I           | - Corrugated fence           |
| DP            | - Down pipe                  |
| DK            | - Drop kerb                  |
| EIC           | - Electric inspection cover  |
| EL            | - Eaves level                |
| EP            | - Electricity pole           |
| ER            | - Earthing rod               |
| FL            | - Floor level                |
| FH            | - Fire hydrant               |
| FP            | - Flag pole                  |
| G             | - Gully                      |
| G1.2          | - Tree girth (m)             |
| GV            | - Gas valve                  |
| IC            | - Inspection cover           |
| IL            | - Invert Level               |
| I/R           | - Iron Railings              |
| JB            | - Junction box               |
| KO            | - Kerb outlet                |
| LB            | - Letter box                 |
| LP            | - Lamp post                  |
| Mkr           | - Utility marker             |
| MP            | - Mile post                  |
| OSBM          | - Ordnance Survey bench mark |
| O/B           | - Open board fence           |



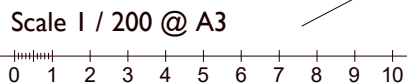
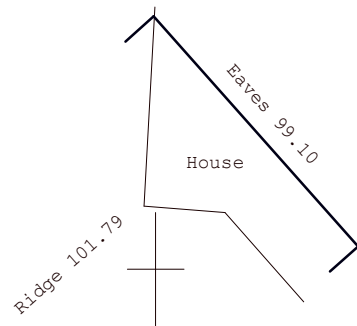
An Outline Planning application was approved March 2003 for this development site - P2003/0293

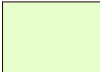
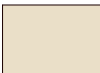
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LAND ADJACENT TO 189,  
GRAIG ROAD, GODRERGRAIG  
YSTALYFERA, SWANSEA  
Mr & Mrs Williams

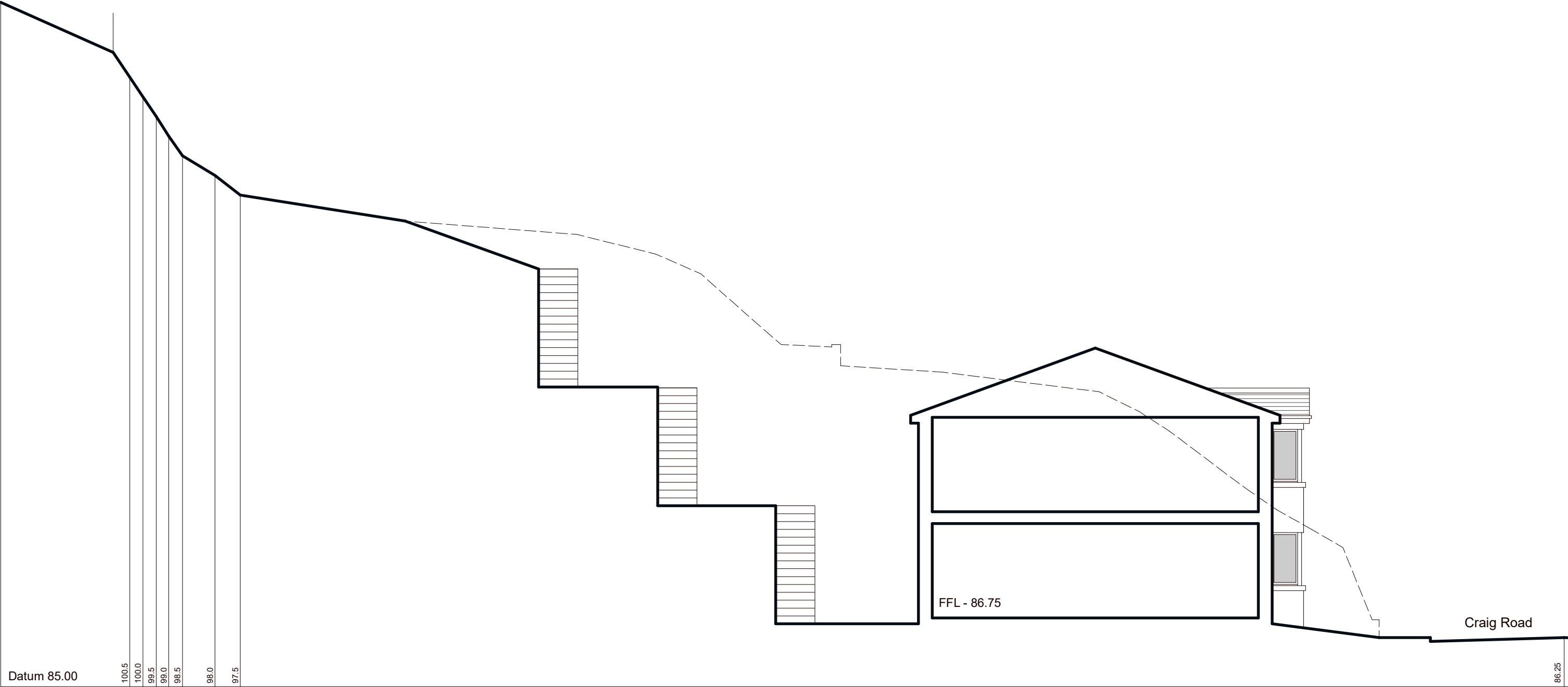
**Pre App: Existing  
Site Plan**

Date: June 2021  
Scale: 1:200 @ A3  
Drawing Number: 2129-11



|                                                                                     |                                                            |
|-------------------------------------------------------------------------------------|------------------------------------------------------------|
|  | Turf / grass seed                                          |
|  | Permeable tarmacadam                                       |
|  | Permeable precast concrete paving                          |
| <h2>Boundary Types</h2>                                                             |                                                            |
|  | Masonry retaining wall with 1.1m high metal railings above |
|  | 2000mm high timber close boarded fencing                   |





Proposed Site Section A-A

Scale 1 / 100 @ A3



LAND ADJACENT TO 189,  
GRAIG ROAD, GODRERGRAIG  
YSTALYFERA, SWANSEA  
Mr & Mrs Williams  
**Scheme Design : Proposed  
Site Section**  
Date: May 2022  
Scale: 1:100 @ A3  
Drawing Number: 2231-06

## Land Adjacent to 189 Craig Road, Godrergraig Swansea



Photograph 1



Photograph 2



Photograph 3



Photograph 4



Photograph 5

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## APPENDIX II – COAL AUTHORITY MINING REPORT

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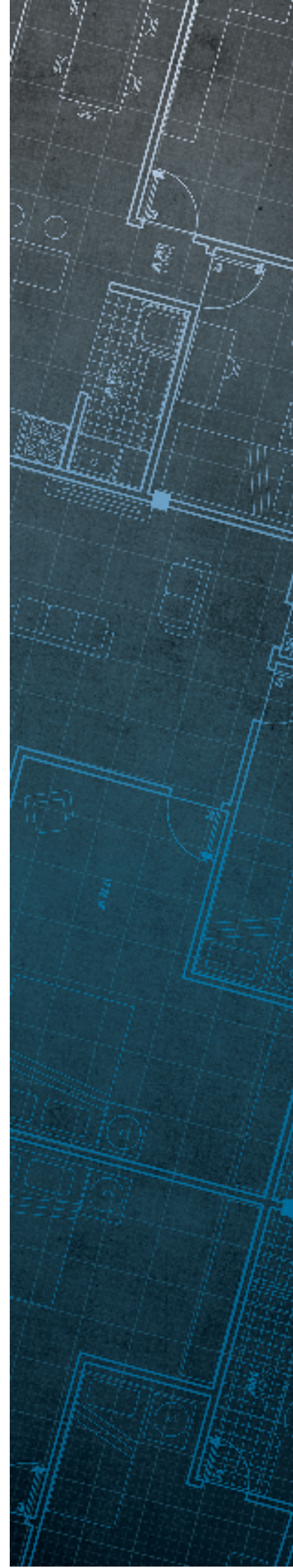
The Coal  
Authority

# Consultants Coal Mining Report

Land Adjacent 189, Graig Road,  
Godre'r Graig, Sa9 2nz  
Swansea

|                        |            |
|------------------------|------------|
| Date of enquiry:       | 3 May 2022 |
| Date enquiry received: | 3 May 2022 |
| Issue date:            | 3 May 2022 |

|                 |                 |
|-----------------|-----------------|
| Our reference:  | 51003103848001  |
| Your reference: | HMD-213-8714136 |



# Consultants

## Coal Mining Report

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

### Client name

GROUNDSURE LIMITED

### Enquiry address

Land Adjacent 189, Graig Road, Godre'r Graig, Sa9  
2nz  
Swansea

### How to contact us

0345 762 6848 (UK)  
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200 Lichfield Lane  
Mansfield  
Nottinghamshire  
NG18 4RG

[www.groundstability.com](http://www.groundstability.com)

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



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# Section 1 – Mining activity and geology

## Past underground mining

| Colliery | Seam | Mineral | Coal Authority reference | Depth (m) | Direction to working | Dipping rate of seam worked (degrees) | Dipped direction of seam worked | Extraction thickness (cm) | Year last mined |
|----------|------|---------|--------------------------|-----------|----------------------|---------------------------------------|---------------------------------|---------------------------|-----------------|
| unnamed  | BUTE | Coal    | 49C4                     | 440       | North                | 0.0                                   | East                            | 79                        | 1919            |
| unnamed  | BUTE | Coal    | 49T9                     | 447       | Beneath Property     | 3.2                                   | South-West                      | 79                        | 1924            |

## Probable unrecorded shallow workings

None.

## Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

## Mine entries

None recorded within 100 metres of the enquiry boundary.

## Abandoned mine plan catalogue numbers

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

|      |        |         |
|------|--------|---------|
| 8384 | SW2018 | 12424   |
| 9034 | SW1556 | SWR1538 |
| PO0  | 16922  | sw1555  |

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

## Outcrops

No outcrops recorded.

## Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

## Opencast mines

None recorded within 500 metres of the enquiry boundary.

## Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

## Section 2 – Investigative or remedial activity

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

### Site investigations

None recorded within 50 metres of the enquiry boundary.

### Remediated sites

None recorded within 50 metres of the enquiry boundary.

### Coal mining subsidence

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

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

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

### Mine gas

None recorded within 500 metres of the enquiry boundary.

### Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

## Section 3 – Licensing and future mining activity

### Future underground mining

None recorded.

### Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

### Court orders

None recorded.

### Section 46 notices

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

### Withdrawal of support notices

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

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

### Payments to owners of former copyhold land

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

## Section 4 – Further information

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

### Development advice

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

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

## Section 5 – Data definitions

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

### Past underground coal mining

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

### Probable unrecorded shallow workings

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

### Spine roadways at shallow depth

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

### Mine entries

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

### Abandoned mine plan catalogue numbers

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

### Outcrops

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

### Geological faults, fissures and breaklines

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

### **Opencast mines**

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

### **Coal Authority managed tips**

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

### **Site investigations**

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

### **Remediated sites**

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

### **Coal mining subsidence**

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

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

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

### **Mine gas**

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission.

### **Mine water treatment schemes**

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

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

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

### **Future underground mining**

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

### **Coal mining licensing**

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

### **Court orders**

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

### **Section 46 notices**

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

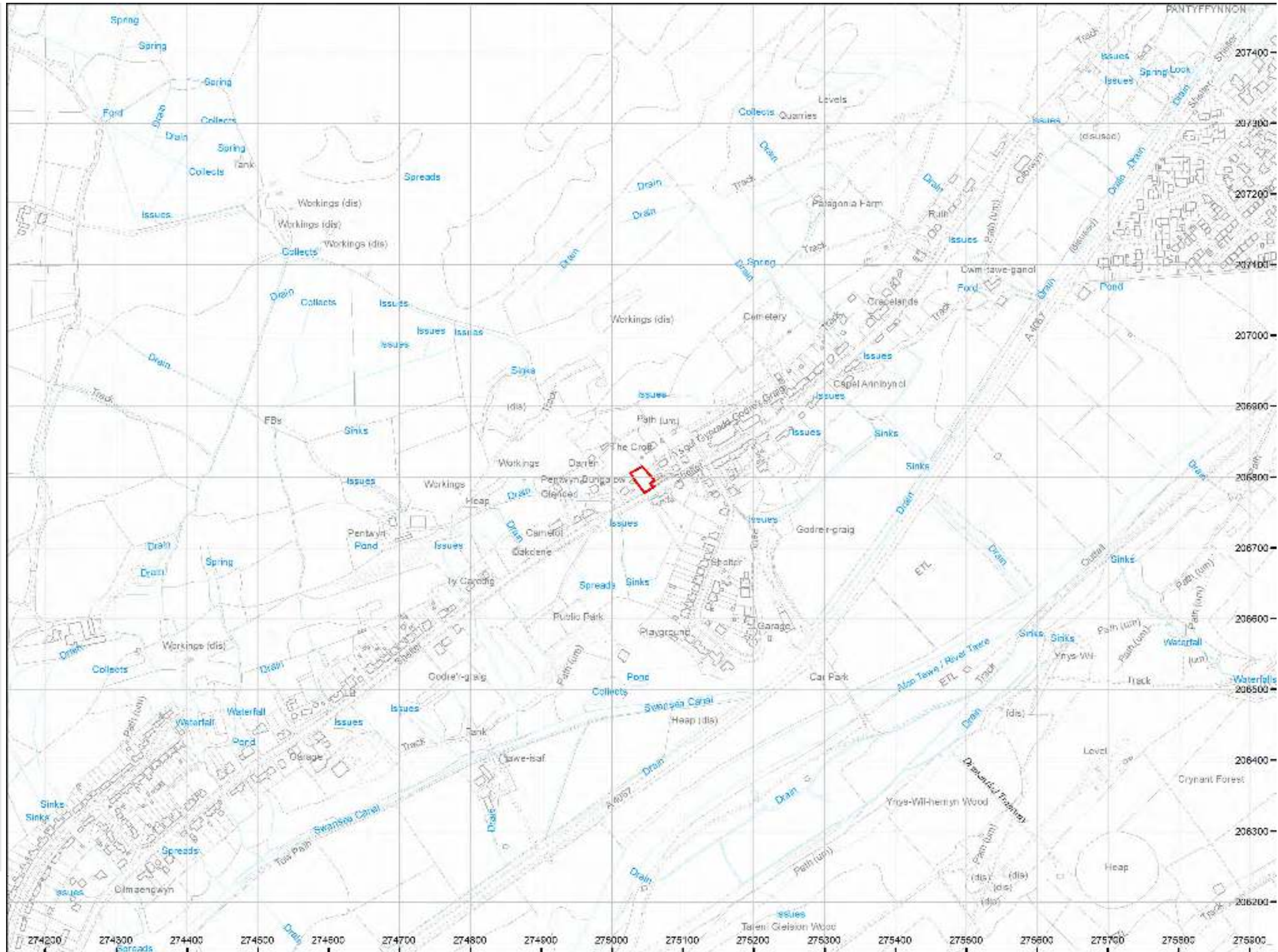
### **Withdrawal of support notices**

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

### **Payment to owners of former copyhold land**

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

## Key



0345 762 6848 (UK)  
+44 (0)1623 637 000 (International)  
[www.groundstability.com](http://www.groundstability.com)

---

## APPENDIX III – HISTORICAL ORDNANCE SURVEY MAPS

---

#### Site Details:

LAND ADJACENT 189, GRAIG  
ROAD, GODRE'R GRAIG, SA9  
2NZ

**Client Ref:** Q0823  
**Report Ref:** HMD-213-8714135  
**Grid Ref:** 275041, 206797

**Map Name:** County Series

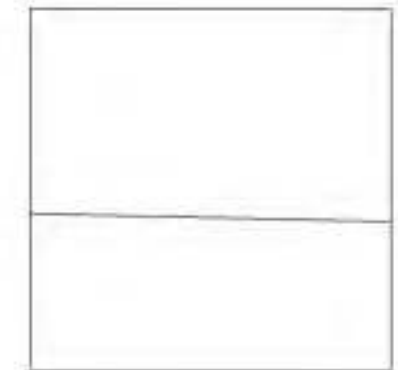
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**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1877  
Revised 1877  
Edition N/A  
Copyright N/A  
Levelled N/A



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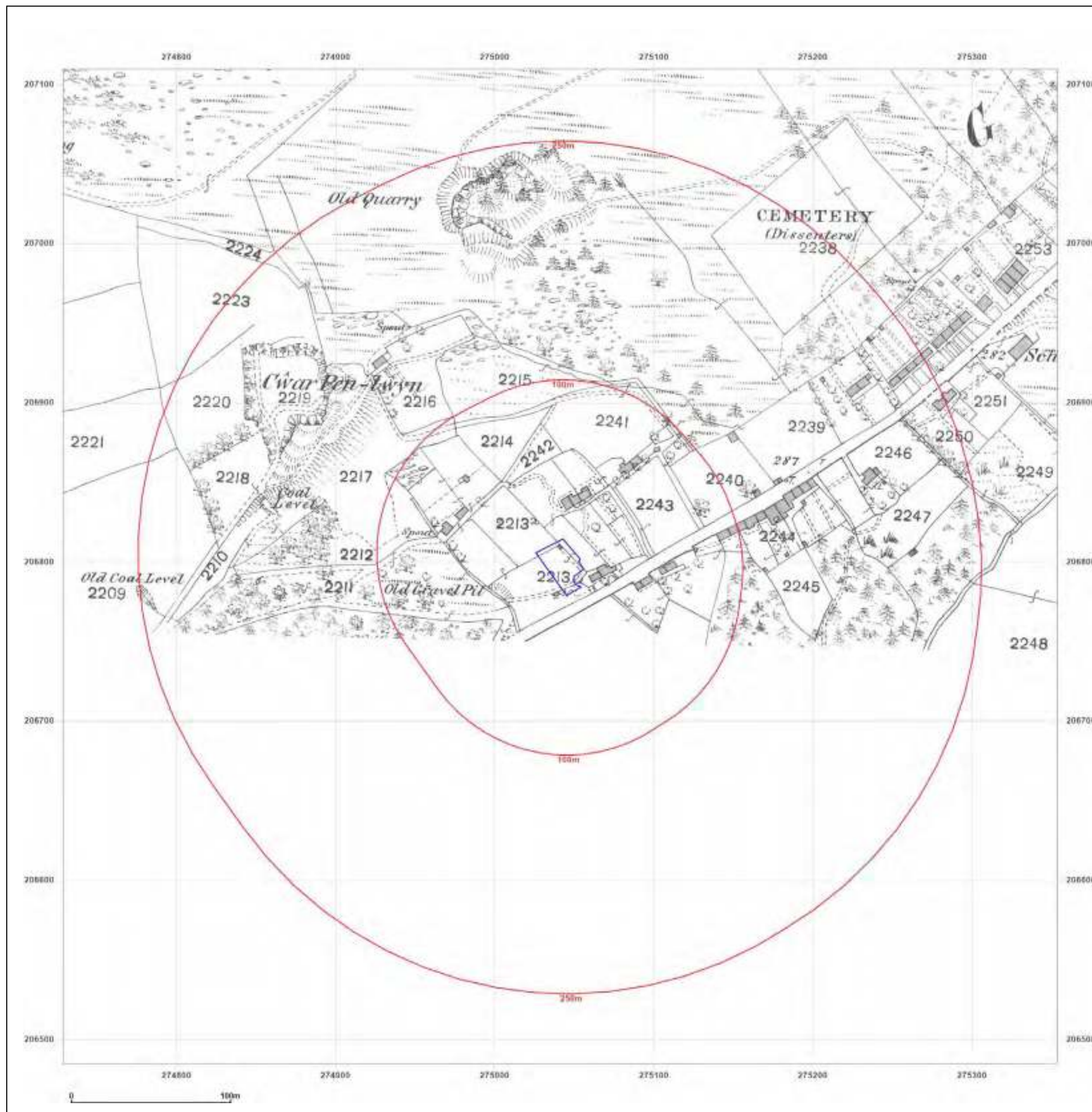


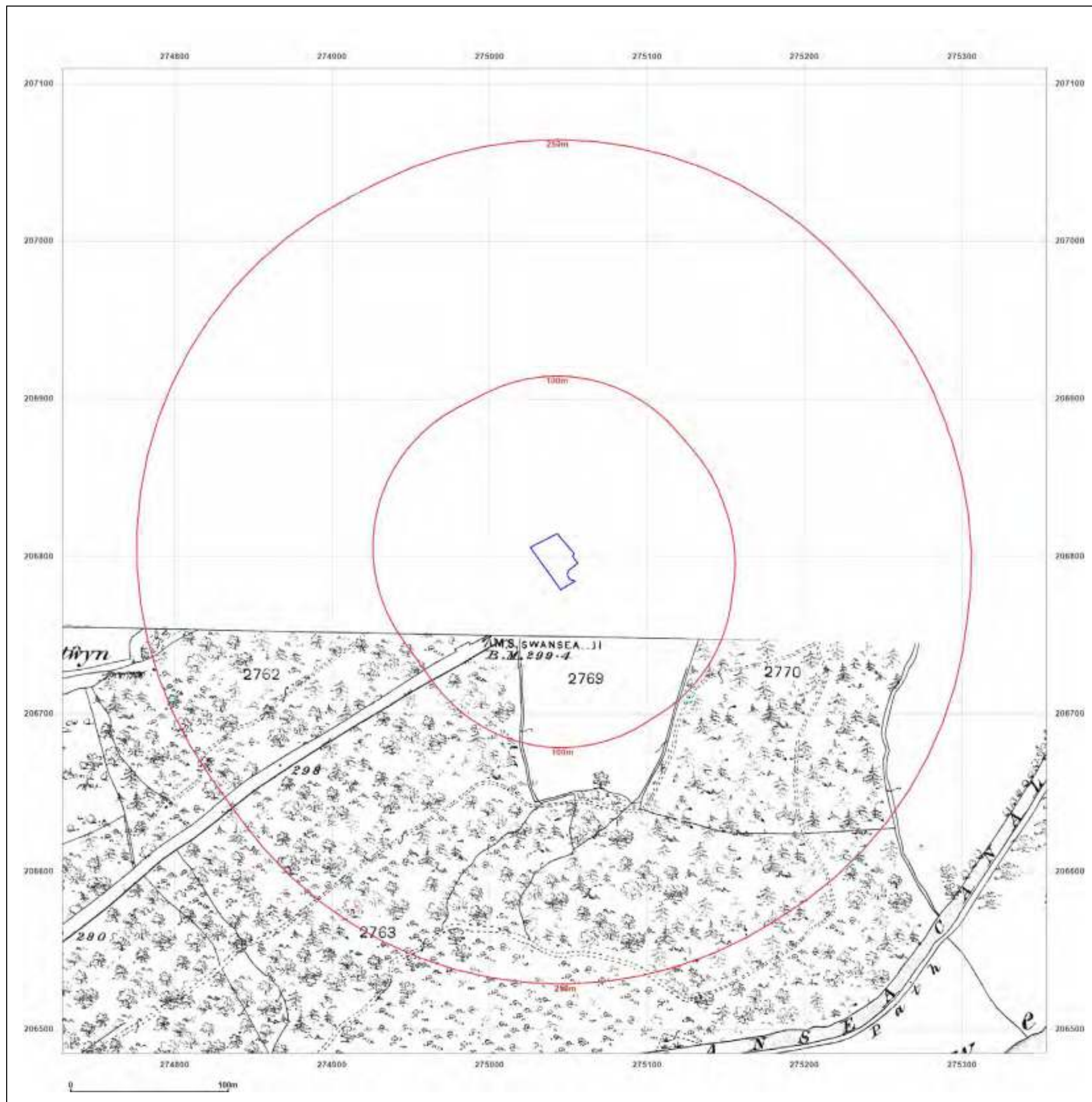
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#### Site Details:

LAND ADJACENT 189, GRAIG  
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2NZ

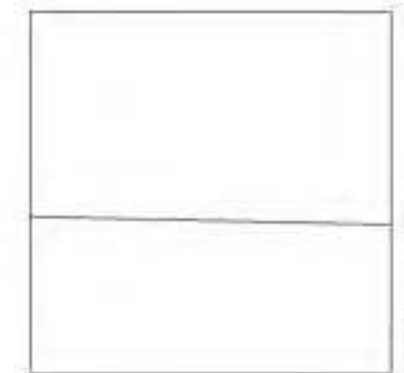
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**Report Ref:** HMD-213-8714135  
**Grid Ref:** 275041, 206797

**Map Name:** County Series

**Map date:** 1887

**Scale:** 1:2,500

**Printed at:** 1:2,500



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Map Name: County Series

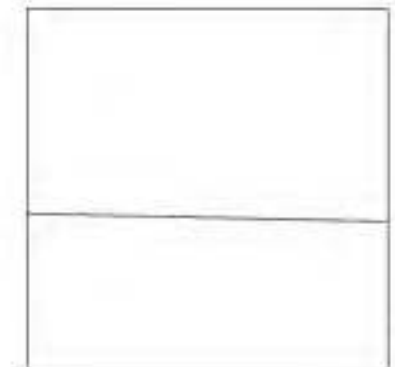
Map date: 1899

Scale: 1:2,500

Printed at: 1:2,500



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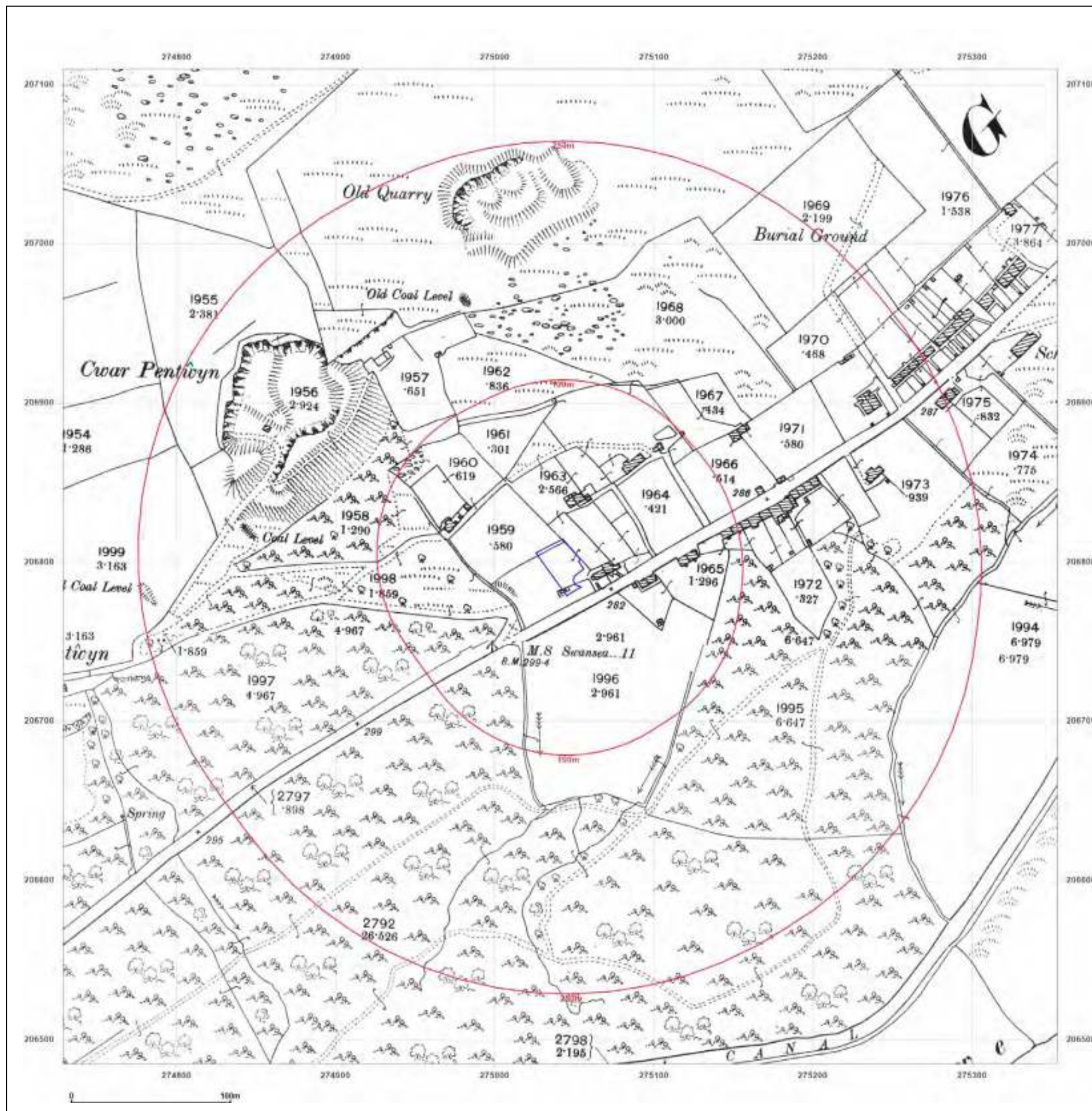


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2NZ

Client Ref: Q0823  
Report Ref: HMD-213-8714135  
Grid Ref: 275041, 206797

Map Name: County Series

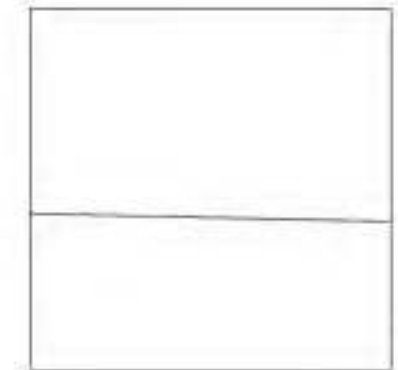
Map date: 1918

Scale: 1:2,500

Printed at: 1:2,500



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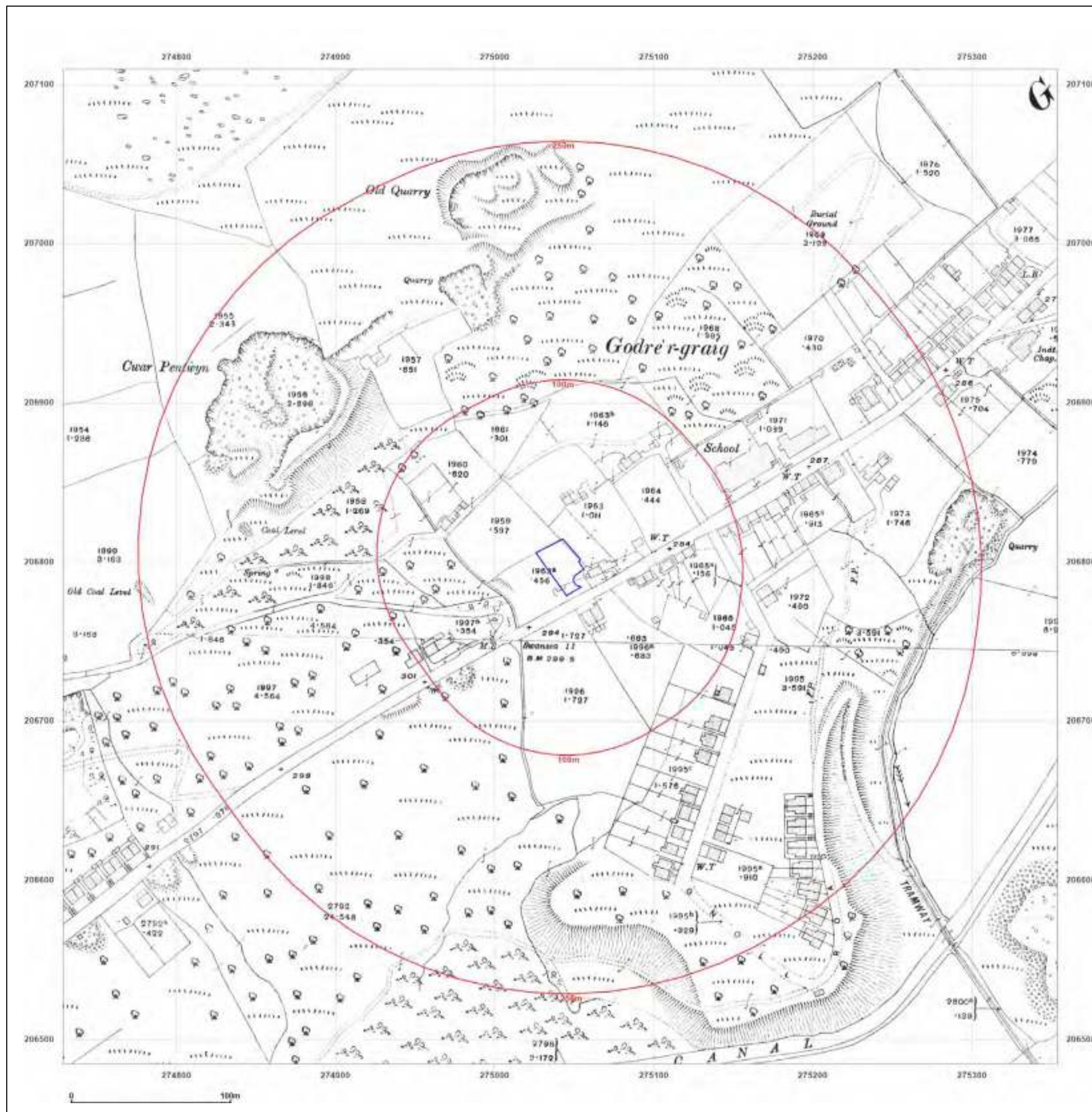


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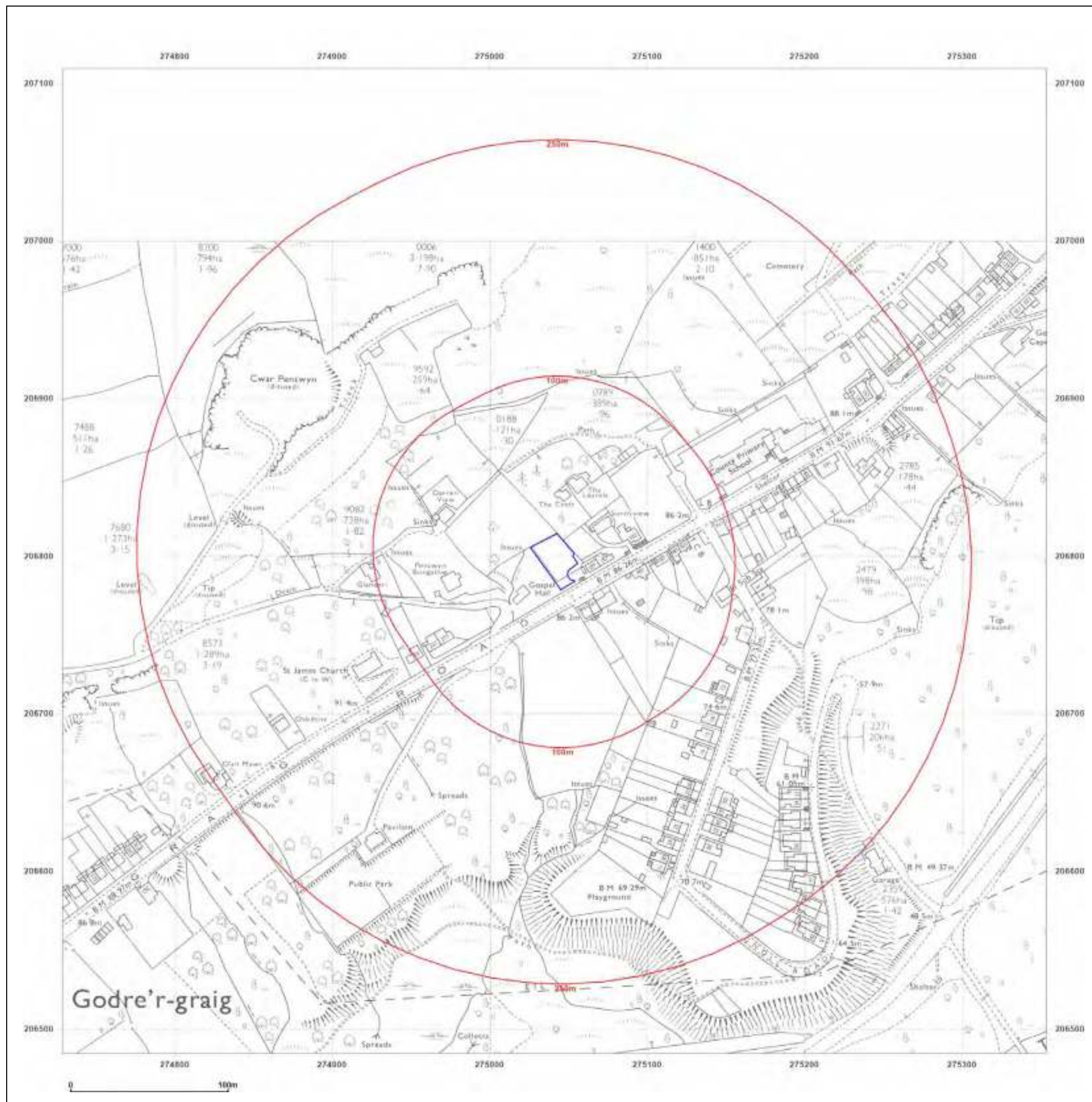
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ROAD, GODRE'R GRAIG, SA9  
2NZ

**Client Ref:** Q0823  
**Report Ref:** HMD-213-8714135  
**Grid Ref:** 275041, 206797

**Map Name:** National Grid

**Map date:** 1972

**Scale:** 1:2,500

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2NZ

**Client Ref:** Q0823  
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**Grid Ref:** 275041, 206797

**Map Name:** National Grid

**Map date:** 1972

**Scale:** 1:2,500

**Printed at:** 1:2,500



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ROAD, GODRE'R GRAIG, SA9  
2NZ

**Client Ref:** Q0823  
**Report Ref:** HMD-213-8714135  
**Grid Ref:** 275041, 206797

**Map Name:** National Grid

**Map date:** 1993

**Scale:** 1:2,500

**Printed at:** 1:2,500



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#### Site Details:

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2NZ

**Client Ref:** Q0823  
**Report Ref:** HMD-213-8714135  
**Grid Ref:** 275041, 206797

**Map Name:** LandLine

**Map date:** 2003

**Scale:** 1:1,250

**Printed at:** 1:1,250



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2NZ

**Client Ref:** Q0823  
**Report Ref:** HMD-213-8714135  
**Grid Ref:** 275041, 206797

**Map Name:** County Series

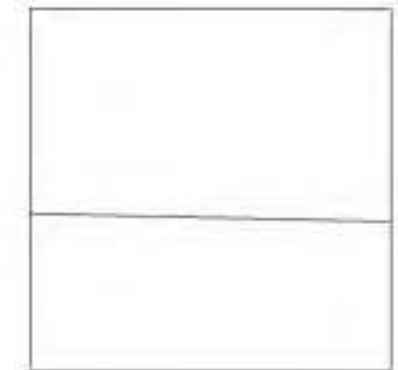
**Map date:** 1877

**Scale:** 1:2,500

**Printed at:** 1:2,500



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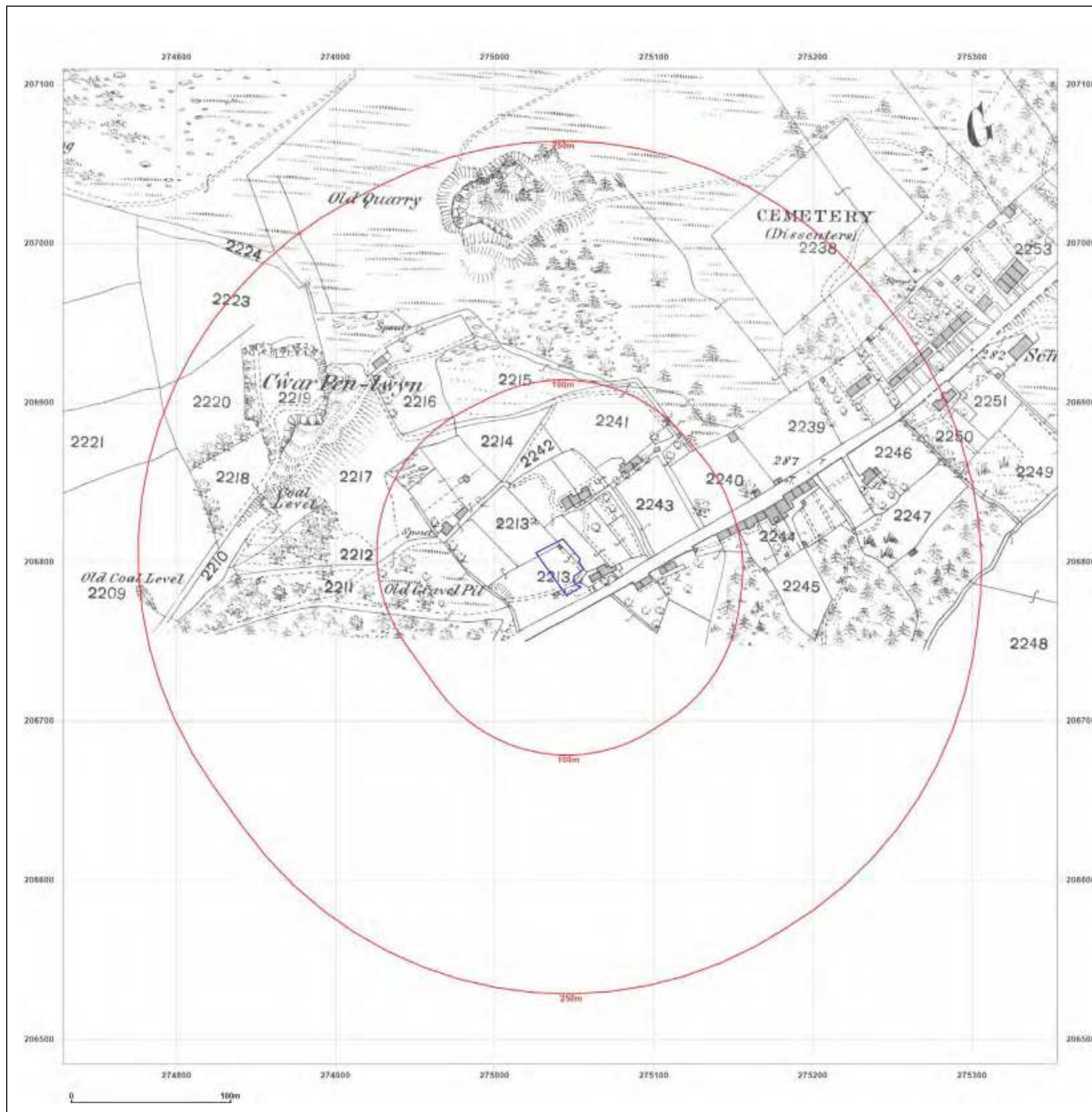


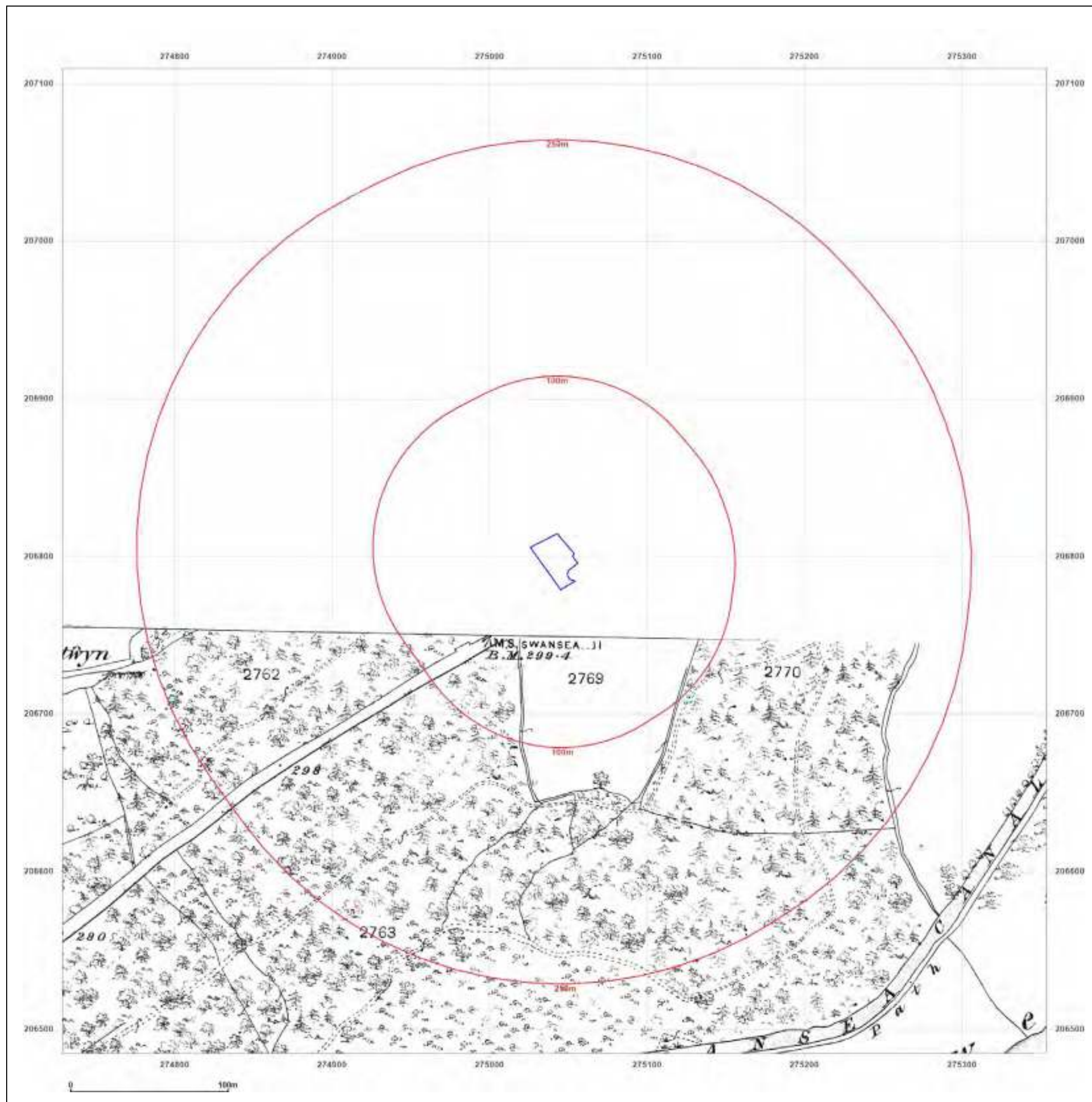
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2NZ

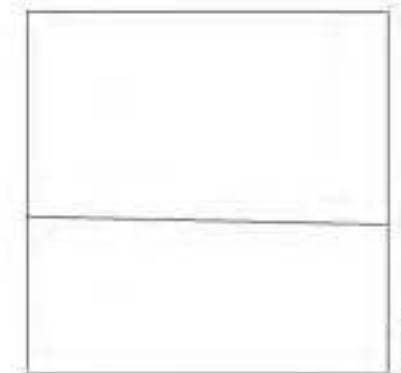
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**Report Ref:** HMD-213-8714135  
**Grid Ref:** 275041, 206797

**Map Name:** County Series

**Map date:** 1887

**Scale:** 1:2,500

**Printed at:** 1:2,500



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2NZ

Client Ref: Q0823  
Report Ref: HMD-213-8714135  
Grid Ref: 275041, 206797

Map Name: County Series

Map date: 1899

Scale: 1:2,500

Printed at: 1:2,500



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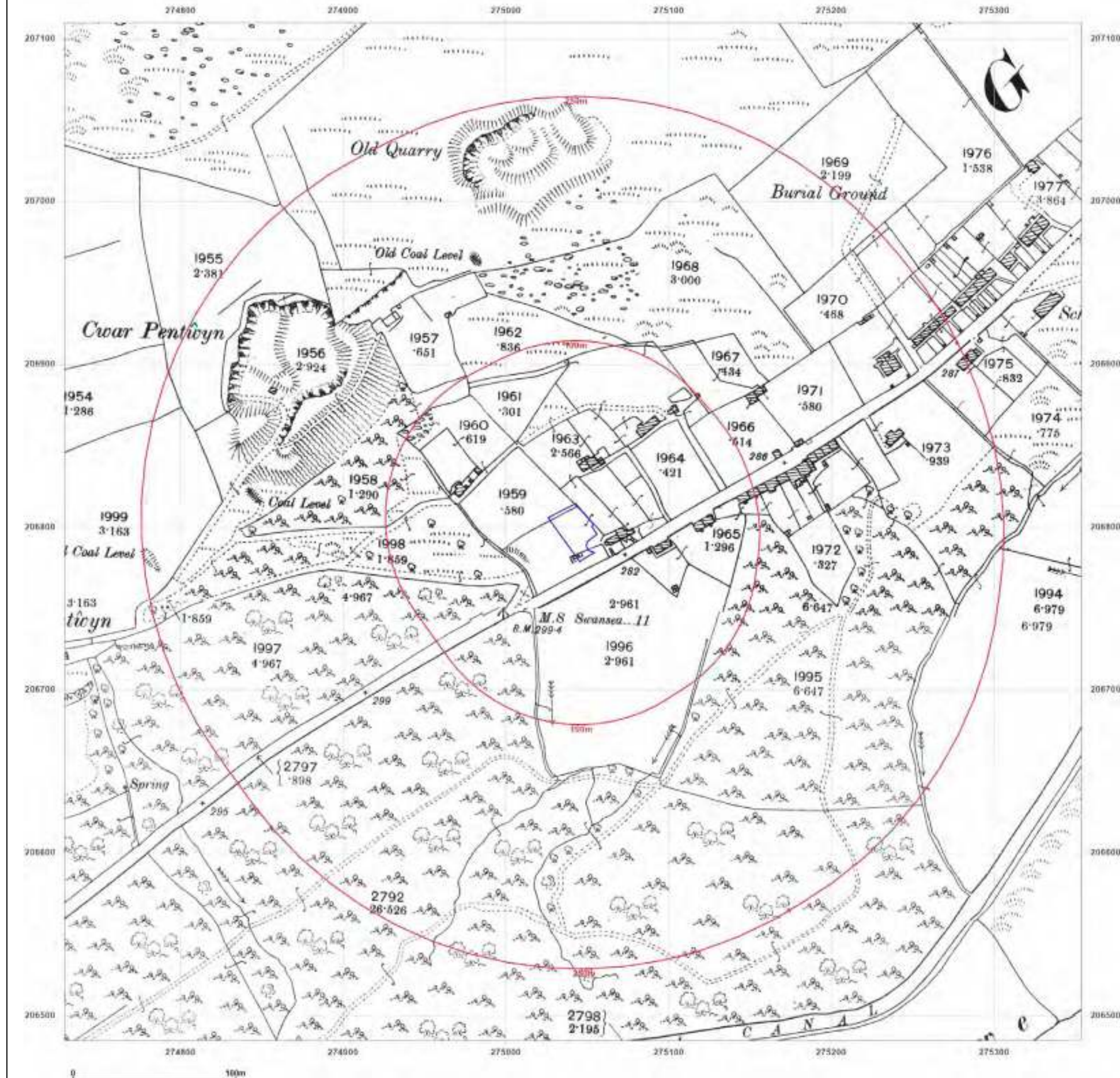


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2NZ

Client Ref: Q0823  
Report Ref: HMD-213-8714135  
Grid Ref: 275041, 206797

Map Name: County Series

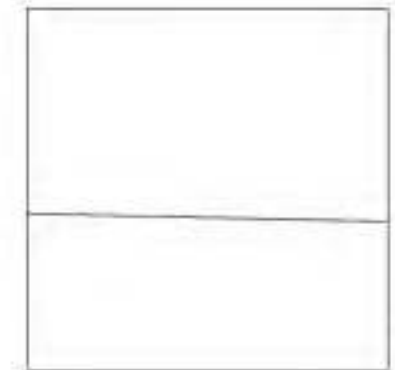
Map date: 1918

Scale: 1:2,500

Printed at: 1:2,500



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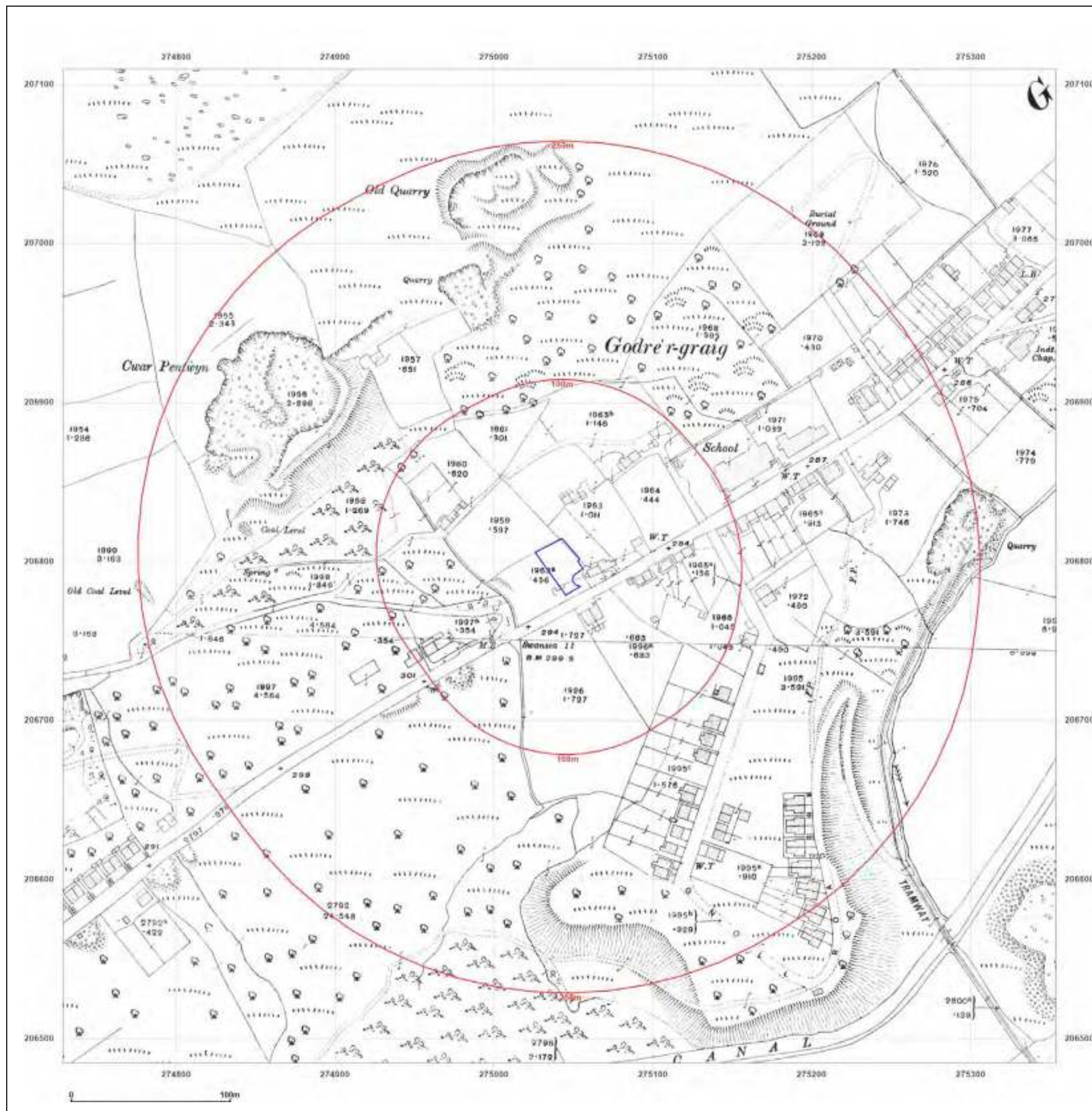


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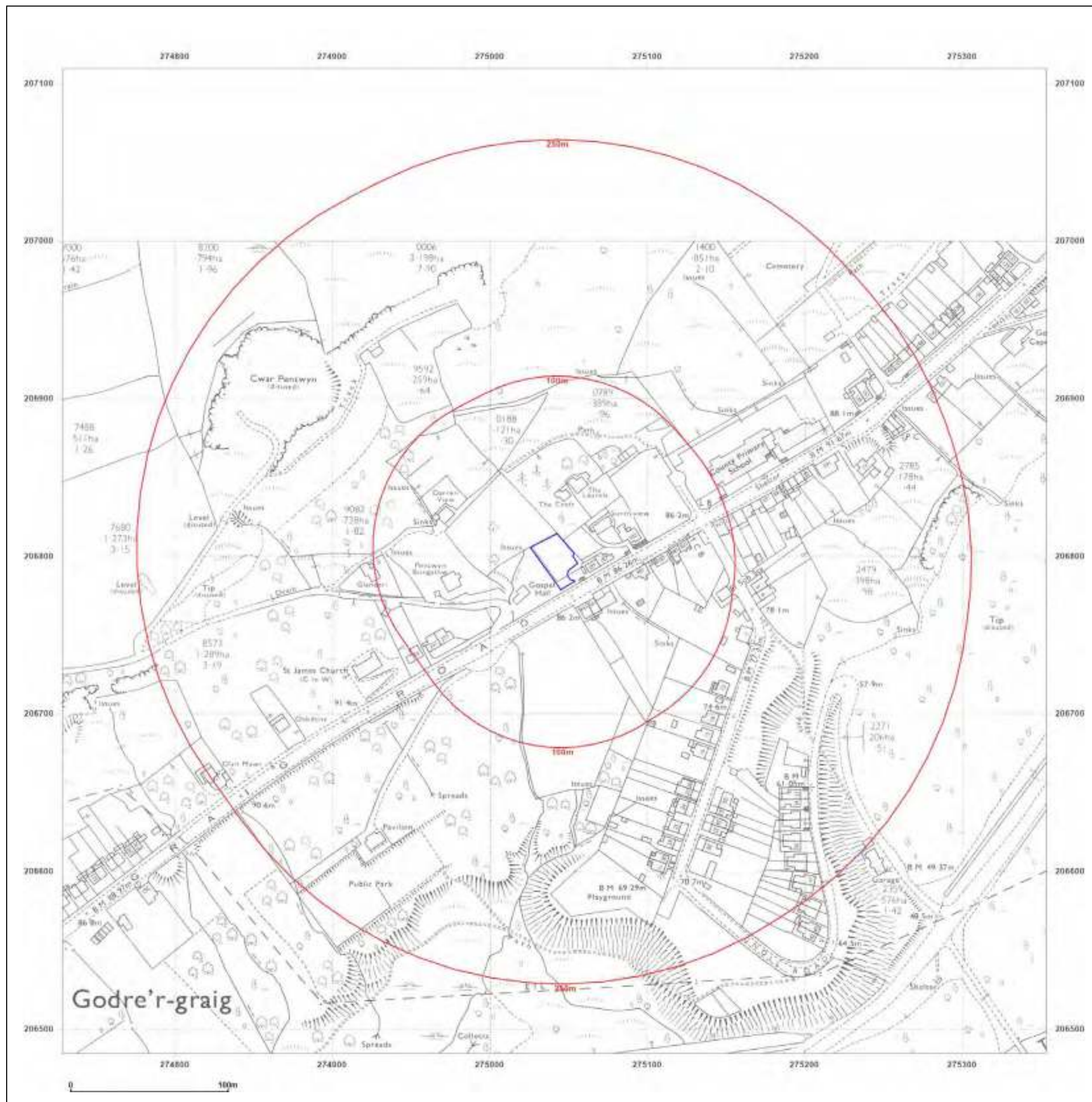
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2NZ

**Client Ref:** Q0823  
**Report Ref:** HMD-213-8714135  
**Grid Ref:** 275041, 206797

**Map Name:** National Grid

**Map date:** 1972

**Scale:** 1:2,500

**Printed at:** 1:2,500



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Map date: 1972

Scale: 1:2,500

Printed at: 1:2,500



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ROAD, GODRE'R GRAIG, SA9  
2NZ

Client Ref: Q0823  
Report Ref: HMD-213-8714135  
Grid Ref: 275041, 206797

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

Printed at: 1:2,500



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2NZ

**Client Ref:** Q0823  
**Report Ref:** HMD-213-8714135  
**Grid Ref:** 275041, 206797

**Map Name:** LandLine

**Map date:** 2003

**Scale:** 1:1,250

**Printed at:** 1:1,250



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# Groundsure

## INSIGHTS

# HISTORICAL MAP PACK LEGEND

## COUNTY SERIES & NATIONAL GRID 1:10,560 & 1:10,000

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## COUNTY SERIES 1:10,560

| VEGETATION       |                          |  |                                           |
|------------------|--------------------------|--|-------------------------------------------|
|                  | Fir Wood                 |  | Deciduous Wood                            |
|                  | Mixed Wood               |  | Brushwood                                 |
|                  | Orchard                  |  | Reeds                                     |
|                  | Rough Pasture            |  | Furze                                     |
|                  | Marsh                    |  | Owens                                     |
| ROADS            |                          |  |                                           |
|                  | Railway over Road        |  | Road over Railway                         |
|                  | Road over River or Canal |  | Level Crossing                            |
|                  | Railway over River       |  | Road over Stream                          |
|                  | Road over Stream         |  | Sunk Road                                 |
|                  | Raised Road              |  |                                           |
| RAILWAYS         |                          |  |                                           |
|                  | Double Lines of Railway  |  | Single Lines of Railway and Tramway       |
| GENERAL FEATURES |                          |  |                                           |
|                  | Gravel Pit               |  | Sand Pit                                  |
|                  | Quarry                   |  | Shingle                                   |
|                  | Other Pits               |  | Antiquities, Site of                      |
|                  |                          |  | Arrow, showing direction of flow of water |
|                  |                          |  | Trigonometrical Station                   |
| BOUNDARIES       |                          |  |                                           |
|                  | County Boundary          |  | Parliamentary Division Boundary           |
|                  | Parish Boundary          |  | Union Boundary                            |
|                  | Contours                 |  | Rural District Boundary                   |

## NATIONAL GRID 1:10,000 & 1:10,560

## HEIGHTS (METRES)

Values are given in metres above mean sea level at Newlyn.

Surface heights:  
ground survey  
air survey

Bench marks and their values are shown on large scale maps, and bench mark lists containing fuller and partially bench levelling information are obtainable from the Director General, Ordnance Survey.

Contours are at 5 metres vertical interval.

## ROCK FEATURES

## CONVERSION SCALE

Metres - Feet

|             |           |
|-------------|-----------|
| 2000 Metres | 6500 Feet |
| 4000        | 13000     |
| 6000        | 19500     |
| 8000        | 26000     |
| 10000       | 32500     |

## ABBREVIATIONS

|       |                        |
|-------|------------------------|
| BPBS  | Boundary Post or Stone |
| CH    | Church                 |
| CH    | Club House             |
| F Sta | Fire Station           |
| FB    | Foot Bridge            |
| F     | Fountain               |
| GP    | Guide Post             |
| HPMS  | Hole Post or Stone     |
| P     | Pole or Post           |
| PS    | Police Station         |

|     |                     |
|-----|---------------------|
| PO  | Post Office         |
| PC  | Public Convenience  |
| PH  | Public House        |
| S   | Stone               |
| SP  | Spring              |
| TCB | Telephone Call Box  |
| TCR | Telephone Call Post |
| TH  | Town Hall           |
| W   | Well                |
| Y   | Youth Hostel        |

## ROADS

## RAILWAYS

## GENERAL FEATURES

## VEGETATION

In some areas bracken [ ] and rough grassland [ ] are shown separately.



# HISTORICAL MAP PACK LEGEND

**COUNTY SERIES**  
1:1,2500

**NATIONAL GRID**  
1:1,250 & 1:2,500

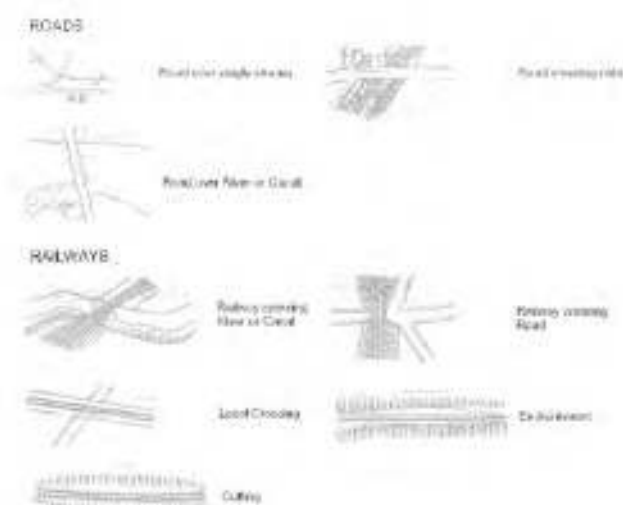
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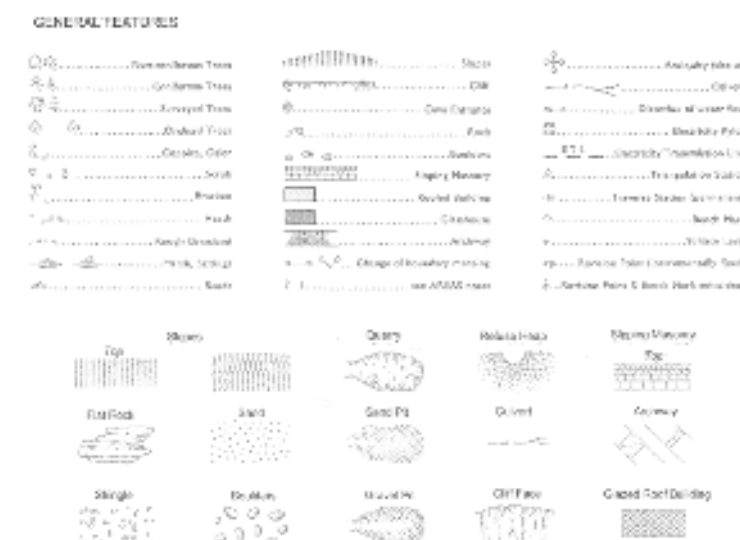
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## COUNTY SERIES 1:2,500



## NATIONAL GRID 1:2,500 & 1:1,250



## BOUNDARIES

## England &amp; Wales

- \_\_\_\_\_ County Boundary (geographical)  
 \_\_\_\_\_ County & Civil Parish Boundary (administrative)  
 \_\_\_\_\_ Admin County or County Borough Boundary  
 \_\_\_\_\_ London Borough Boundary  
 M6 DfP, U DfP, R DfP \_\_\_\_\_ County District Boundaries  
 based on civil parish

## England, Wales &amp; Scotland

- |                                            |                          |
|--------------------------------------------|--------------------------|
| .....                                      | Old French Boundary      |
| <u>Baro for Barghi Curve &amp; Ward Rd</u> | Partly & Ward Boundaries |
| <u>Co Creek Rd</u>                         | based on old survey      |
| <u>Baro for Barghi Curve &amp; Ward Rd</u> | Partly & Ward Boundaries |
| <u>Co Creek Rd</u>                         | based on old survey      |

## Scotland

- |                                |   |
|--------------------------------|---|
| County Boundary (geographical) | 1 |
| County Council Boundary        | 2 |
| County of the City Boundary    | 3 |
| Borough Boundary               | 4 |
| District Council Boundary      | 5 |

\* Not with parish. † Coincident with parish.

#### ABBREVIATIONS

- |         |       |                          |       |       |                             |
|---------|-------|--------------------------|-------|-------|-----------------------------|
| B H     | ..... | Bent House               | N P U | ..... | Mail Mailing                |
| B M     | ..... | Bent Place               | N S   | ..... | Mail Station                |
| B P     | ..... | Boundary Post            | N T   | ..... | National Trust              |
| B S     | ..... | Boundary Stone           | N T L | ..... | National Trust List         |
| C       | ..... | Cane                     | N T S | ..... | National Trust for Scotland |
| C M     | ..... | Cake House               | P     | ..... | Police, Police or Post      |
| C S     | ..... | Chimney                  | P C   | ..... | Public Conveniences         |
| C O     | ..... | Causeway                 | P C B | ..... | Police Club, Box            |
| C H     | ..... | Charming House           | P H   | ..... | Public House                |
| D       | ..... | Dead                     | P O   | ..... | Post Office                 |
| D P     | ..... | Dining Room or Porch     | P P   | ..... | Police, Telephone or Police |
| D T     | ..... | Daily Transmission Use   | P T P | ..... | Police, Telephone or Police |
| E A     | ..... | Fire Alarm               | R     | ..... | Road House                  |
| E A P   | ..... | Fire Alarm Post          | R S   | ..... | Road House                  |
| E B     | ..... | End of Road, Post Bridge | S     | ..... | Signal, Signal or Station   |
| F B     | ..... | Footway or Road Mark     | S L   | ..... | Signal Light                |
| F S     | ..... | Footway                  | S P   | ..... | Signal Post                 |
| F S L   | ..... | Footway                  | S P   | ..... | Signal Post                 |
| G P     | ..... | Gate Post                | S P   | ..... | Signal Post                 |
| G V C   | ..... | Gate Valve Compound      | S P   | ..... | Signal Post                 |
| H       | ..... | Hydraulic or Hydraulic   | S P   | ..... | Signal Post                 |
| H       | ..... | Hydraulic                | S P   | ..... | Signal Post                 |
| L B     | ..... | Ladder Box               | T C B | ..... | Telephone Call Box          |
| L B S   | ..... | Ladder Box               | T C P | ..... | Telephone Call Post         |
| L C     | ..... | Lined Crossing           | T C   | ..... | Tank or Train               |
| L O     | ..... | Load of Goods            | T     | ..... | Through                     |
| L P     | ..... | Light House              | T S   | ..... | Train Station               |
| L T     | ..... | Lighting Tower           | W     | ..... | Wall                        |
| L W     | ..... | Lighting Tower           | W B   | ..... | Wall Bridge                 |
| M H W   | ..... | Mass High Water          | W P   | ..... | Wind Pump                   |
| M H W S | ..... | Mass High Water Gauge    | W S   | ..... | Wind                        |
| M L W   | ..... | Mass Low Water           | W S   | ..... | Wind                        |
| M L W S | ..... | Mass Low Water Gauge     | W T   | ..... | Water Tower                 |
| M P     | ..... | Mile or Mailing Post     | W T   | ..... | Water Tap                   |

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## **APPENDIX IV – GROUNDSURE GEOINSIGHT & ENVIROINSIGHT REPORT**

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LAND ADJACENT 189, GRAIG ROAD, GODRE'R GRAIG, SA9 2NZ

## Order Details

**Date:** 03/05/2022  
**Your ref:** Q0823  
**Our Ref:** HMD-213-8714137  
**Client:** Ross McDermott

## Site Details

**Location:** 275042 206798  
**Area:** 0.05 ha  
**Authority:** [Castell-nedd Port Talbot - Neath Port Talbot County Borough](#)



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**Summary of findings**

p. 2

**Aerial image**

p. 8

**OS MasterMap site plan**

p.13

[groundsure.com/insightuserguide](https://groundsure.com/insightuserguide)

Contact us with any questions at:

[info@groundsure.com](mailto:info@groundsure.com)

08444 159 000

## Summary of findings

| Page      | Section    | Past land use                                      | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
|-----------|------------|----------------------------------------------------|---------|-------|---------|----------|-----------|
| <b>14</b> | <b>1.1</b> | <b><u>Historical industrial land uses</u></b>      | 0       | 0     | 55      | 83       | -         |
| <b>20</b> | <b>1.2</b> | <b><u>Historical tanks</u></b>                     | 0       | 0     | 2       | 8        | -         |
| <b>20</b> | <b>1.3</b> | <b><u>Historical energy features</u></b>           | 0       | 0     | 2       | 0        | -         |
| 21        | 1.4        | Historical petrol stations                         | 0       | 0     | 0       | 0        | -         |
| <b>21</b> | <b>1.5</b> | <b><u>Historical garages</u></b>                   | 0       | 0     | 1       | 0        | -         |
| 21        | 1.6        | Historical military land                           | 0       | 0     | 0       | 0        | -         |
| Page      | Section    | Past land use - un-grouped                         | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>22</b> | <b>2.1</b> | <b><u>Historical industrial land uses</u></b>      | 0       | 0     | 84      | 125      | -         |
| <b>30</b> | <b>2.2</b> | <b><u>Historical tanks</u></b>                     | 0       | 0     | 2       | 9        | -         |
| <b>31</b> | <b>2.3</b> | <b><u>Historical energy features</u></b>           | 0       | 0     | 2       | 0        | -         |
| 31        | 2.4        | Historical petrol stations                         | 0       | 0     | 0       | 0        | -         |
| <b>31</b> | <b>2.5</b> | <b><u>Historical garages</u></b>                   | 0       | 0     | 2       | 0        | -         |
| Page      | Section    | Waste and landfill                                 | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| 33        | 3.1        | Active or recent landfill                          | 0       | 0     | 0       | 0        | -         |
| 33        | 3.2        | Historical landfill (BGS records)                  | 0       | 0     | 0       | 0        | -         |
| 34        | 3.3        | Historical landfill (LA/mapping records)           | 0       | 0     | 0       | 0        | -         |
| <b>34</b> | <b>3.4</b> | <b><u>Historical landfill (EA/NRW records)</u></b> | 0       | 0     | 2       | 1        | -         |
| 35        | 3.5        | Historical waste sites                             | 0       | 0     | 0       | 0        | -         |
| 35        | 3.6        | Licensed waste sites                               | 0       | 0     | 0       | 0        | -         |
| <b>35</b> | <b>3.7</b> | <b><u>Waste exemptions</u></b>                     | 0       | 0     | 0       | 4        | -         |
| Page      | Section    | Current industrial land use                        | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>36</b> | <b>4.1</b> | <b><u>Recent industrial land uses</u></b>          | 0       | 0     | 3       | -        | -         |
| 37        | 4.2        | Current or recent petrol stations                  | 0       | 0     | 0       | 0        | -         |
| 37        | 4.3        | Electricity cables                                 | 0       | 0     | 0       | 0        | -         |
| 37        | 4.4        | Gas pipelines                                      | 0       | 0     | 0       | 0        | -         |
| 37        | 4.5        | Sites determined as Contaminated Land              | 0       | 0     | 0       | 0        | -         |



| 37        | 4.6         | Control of Major Accident Hazards (COMAH)              | 0                        | 0     | 0       | 0        | -         |
|-----------|-------------|--------------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| 38        | 4.7         | Regulated explosive sites                              | 0                        | 0     | 0       | 0        | -         |
| 38        | 4.8         | Hazardous substance storage/usage                      | 0                        | 0     | 0       | 0        | -         |
| 38        | 4.9         | Historical licensed industrial activities (IPC)        | 0                        | 0     | 0       | 0        | -         |
| 38        | 4.10        | Licensed industrial activities (Part A(1))             | 0                        | 0     | 0       | 0        | -         |
| 38        | 4.11        | Licensed pollutant release (Part A(2)/B)               | 0                        | 0     | 0       | 0        | -         |
| 39        | 4.12        | Radioactive Substance Authorisations                   | 0                        | 0     | 0       | 0        | -         |
| <b>39</b> | <b>4.13</b> | <b><u>Licensed Discharges to controlled waters</u></b> | 0                        | 2     | 0       | 10       | -         |
| 41        | 4.14        | Pollutant release to surface waters (Red List)         | 0                        | 0     | 0       | 0        | -         |
| 41        | 4.15        | Pollutant release to public sewer                      | 0                        | 0     | 0       | 0        | -         |
| 41        | 4.16        | List 1 Dangerous Substances                            | 0                        | 0     | 0       | 0        | -         |
| <b>41</b> | <b>4.17</b> | <b><u>List 2 Dangerous Substances</u></b>              | 0                        | 0     | 0       | 1        | -         |
| <b>41</b> | <b>4.18</b> | <b><u>Pollution Incidents (EA/NRW)</u></b>             | 0                        | 0     | 0       | 3        | -         |
| 42        | 4.19        | Pollution inventory substances                         | 0                        | 0     | 0       | 0        | -         |
| 42        | 4.20        | Pollution inventory waste transfers                    | 0                        | 0     | 0       | 0        | -         |
| 42        | 4.21        | Pollution inventory radioactive waste                  | 0                        | 0     | 0       | 0        | -         |
| Page      | Section     | Hydrogeology                                           | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>43</b> | <b>5.1</b>  | <b><u>Superficial aquifer</u></b>                      | Identified (within 500m) |       |         |          |           |
| <b>45</b> | <b>5.2</b>  | <b><u>Bedrock aquifer</u></b>                          | Identified (within 500m) |       |         |          |           |
| <b>47</b> | <b>5.3</b>  | <b><u>Groundwater vulnerability</u></b>                | Identified (within 50m)  |       |         |          |           |
| 48        | 5.4         | Groundwater vulnerability- soluble rock risk           | None (within 0m)         |       |         |          |           |
| 48        | 5.5         | Groundwater vulnerability- local information           | None (within 0m)         |       |         |          |           |
| <b>49</b> | <b>5.6</b>  | <b><u>Groundwater abstractions</u></b>                 | 0                        | 0     | 0       | 1        | 0         |
| <b>50</b> | <b>5.7</b>  | <b><u>Surface water abstractions</u></b>               | 0                        | 0     | 0       | 0        | 3         |
| 51        | 5.8         | Potable abstractions                                   | 0                        | 0     | 0       | 0        | 0         |
| 51        | 5.9         | Source Protection Zones                                | 0                        | 0     | 0       | 0        | -         |
| 51        | 5.10        | Source Protection Zones (confined aquifer)             | 0                        | 0     | 0       | 0        | -         |
| Page      | Section     | Hydrology                                              | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>52</b> | <b>6.1</b>  | <b><u>Water Network (OS MasterMap)</u></b>             | 0                        | 1     | 25      | -        | -         |



| <b>55</b> | <b>6.2</b>  | <b><u>Surface water features</u></b>                      | 0                       | 1     | 17      | -        | -         |
|-----------|-------------|-----------------------------------------------------------|-------------------------|-------|---------|----------|-----------|
| <b>55</b> | <b>6.3</b>  | <b><u>WFD Surface water body catchments</u></b>           | 1                       | -     | -       | -        | -         |
| <b>55</b> | <b>6.4</b>  | <b><u>WFD Surface water bodies</u></b>                    | 0                       | 0     | 0       | -        | -         |
| <b>56</b> | <b>6.5</b>  | <b><u>WFD Groundwater bodies</u></b>                      | 1                       | -     | -       | -        | -         |
| Page      | Section     | River and coastal flooding                                | On site                 | 0-50m | 50-250m | 250-500m | 500-2000m |
| 57        | 7.1         | Risk of flooding from rivers and the sea                  | None (within 50m)       |       |         |          |           |
| 57        | 7.2         | Historical Flood Events                                   | 0                       | 0     | 0       | -        | -         |
| 57        | 7.3         | Flood Defences                                            | 0                       | 0     | 0       | -        | -         |
| 58        | 7.4         | Areas Benefiting from Flood Defences                      | 0                       | 0     | 0       | -        | -         |
| 58        | 7.5         | Flood Storage Areas                                       | 0                       | 0     | 0       | -        | -         |
| 59        | 7.6         | Flood Zone 2                                              | None (within 50m)       |       |         |          |           |
| 59        | 7.7         | Flood Zone 3                                              | None (within 50m)       |       |         |          |           |
| Page      | Section     | Surface water flooding                                    |                         |       |         |          |           |
| 60        | 8.1         | Surface water flooding                                    | Negligible (within 50m) |       |         |          |           |
| Page      | Section     | Groundwater flooding                                      |                         |       |         |          |           |
| <b>61</b> | <b>9.1</b>  | <b><u>Groundwater flooding</u></b>                        | Negligible (within 50m) |       |         |          |           |
| Page      | Section     | Environmental designations                                | On site                 | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>62</b> | <b>10.1</b> | <b><u>Sites of Special Scientific Interest (SSSI)</u></b> | 0                       | 0     | 0       | 0        | 5         |
| 63        | 10.2        | Conserved wetland sites (Ramsar sites)                    | 0                       | 0     | 0       | 0        | 0         |
| 63        | 10.3        | Special Areas of Conservation (SAC)                       | 0                       | 0     | 0       | 0        | 0         |
| 63        | 10.4        | Special Protection Areas (SPA)                            | 0                       | 0     | 0       | 0        | 0         |
| 64        | 10.5        | National Nature Reserves (NNR)                            | 0                       | 0     | 0       | 0        | 0         |
| <b>64</b> | <b>10.6</b> | <b><u>Local Nature Reserves (LNR)</u></b>                 | 0                       | 0     | 0       | 1        | 0         |
| <b>64</b> | <b>10.7</b> | <b><u>Designated Ancient Woodland</u></b>                 | 0                       | 1     | 2       | 2        | 43        |
| 66        | 10.8        | Biosphere Reserves                                        | 0                       | 0     | 0       | 0        | 0         |
| 66        | 10.9        | Forest Parks                                              | 0                       | 0     | 0       | 0        | 0         |
| 67        | 10.10       | Marine Conservation Zones                                 | 0                       | 0     | 0       | 0        | 0         |
| 67        | 10.11       | Green Belt                                                | 0                       | 0     | 0       | 0        | 0         |
| 67        | 10.12       | Proposed Ramsar sites                                     | 0                       | 0     | 0       | 0        | 0         |



| 67        | 10.13       | Possible Special Areas of Conservation (pSAC)  | 0                               | 0     | 0       | 0        | 0         |
|-----------|-------------|------------------------------------------------|---------------------------------|-------|---------|----------|-----------|
| 67        | 10.14       | Potential Special Protection Areas (pSPA)      | 0                               | 0     | 0       | 0        | 0         |
| 68        | 10.15       | Nitrate Sensitive Areas                        | 0                               | 0     | 0       | 0        | 0         |
| 68        | 10.16       | Nitrate Vulnerable Zones                       | 0                               | 0     | 0       | 0        | 0         |
| 69        | 10.17       | SSSI Impact Risk Zones                         | 0                               | -     | -       | -        | -         |
| 69        | 10.18       | SSSI Units                                     | 0                               | 0     | 0       | 0        | 0         |
| Page      | Section     | Visual and cultural designations               | On site                         | 0-50m | 50-250m | 250-500m | 500-2000m |
| 70        | 11.1        | World Heritage Sites                           | 0                               | 0     | 0       | -        | -         |
| 70        | 11.2        | Area of Outstanding Natural Beauty             | 0                               | 0     | 0       | -        | -         |
| 70        | 11.3        | National Parks                                 | 0                               | 0     | 0       | -        | -         |
| 70        | 11.4        | Listed Buildings                               | 0                               | 0     | 0       | -        | -         |
| 71        | 11.5        | Conservation Areas                             | 0                               | 0     | 0       | -        | -         |
| 71        | 11.6        | Scheduled Ancient Monuments                    | 0                               | 0     | 0       | -        | -         |
| 71        | 11.7        | Registered Parks and Gardens                   | 0                               | 0     | 0       | -        | -         |
| Page      | Section     | Agricultural designations                      | On site                         | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>72</b> | <b>12.1</b> | <b><u>Agricultural Land Classification</u></b> | <b>Grade 4 (within 250m)</b>    |       |         |          |           |
| 73        | 12.2        | Open Access Land                               | 0                               | 0     | 0       | -        | -         |
| 73        | 12.3        | Tree Felling Licences                          | 0                               | 0     | 0       | -        | -         |
| 73        | 12.4        | Environmental Stewardship Schemes              | 0                               | 0     | 0       | -        | -         |
| 74        | 12.5        | Countryside Stewardship Schemes                | 0                               | 0     | 0       | -        | -         |
| Page      | Section     | Habitat designations                           | On site                         | 0-50m | 50-250m | 250-500m | 500-2000m |
| 75        | 13.1        | Priority Habitat Inventory                     | 0                               | 0     | 0       | -        | -         |
| 75        | 13.2        | Habitat Networks                               | 0                               | 0     | 0       | -        | -         |
| 75        | 13.3        | Open Mosaic Habitat                            | 0                               | 0     | 0       | -        | -         |
| 75        | 13.4        | Limestone Pavement Orders                      | 0                               | 0     | 0       | -        | -         |
| Page      | Section     | Geology 1:10,000 scale                         | On site                         | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>76</b> | <b>14.1</b> | <b><u>10k Availability</u></b>                 | <b>Identified (within 500m)</b> |       |         |          |           |
| <b>77</b> | <b>14.2</b> | <b><u>Artificial and made ground (10k)</u></b> | 0                               | 2     | 1       | 2        | -         |
| <b>79</b> | <b>14.3</b> | <b><u>Superficial geology (10k)</u></b>        | 0                               | 0     | 6       | 1        | -         |



| <b>80</b>  | <b>14.4</b>  | <b><u>Landslip (10k)</u></b>                                 | 0                        | 0     | 0       | 1        | -         |
|------------|--------------|--------------------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| <b>81</b>  | <b>14.5</b>  | <b><u>Bedrock geology (10k)</u></b>                          | 1                        | 3     | 7       | 8        | -         |
| <b>82</b>  | <b>14.6</b>  | <b><u>Bedrock faults and other linear features (10k)</u></b> | 0                        | 0     | 8       | 12       | -         |
| Page       | Section      | Geology 1:50,000 scale                                       | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>84</b>  | <b>15.1</b>  | <b><u>50k Availability</u></b>                               | Identified (within 500m) |       |         |          |           |
| <b>85</b>  | <b>15.2</b>  | <b><u>Artificial and made ground (50k)</u></b>               | 0                        | 1     | 1       | 1        | -         |
| <b>86</b>  | <b>15.3</b>  | <b><u>Artificial ground permeability (50k)</u></b>           | 0                        | 1     | -       | -        | -         |
| <b>87</b>  | <b>15.4</b>  | <b><u>Superficial geology (50k)</u></b>                      | 0                        | 0     | 3       | 1        | -         |
| 88         | 15.5         | Superficial permeability (50k)                               | None (within 50m)        |       |         |          |           |
| 88         | 15.6         | Landslip (50k)                                               | 0                        | 0     | 0       | 0        | -         |
| 88         | 15.7         | Landslip permeability (50k)                                  | None (within 50m)        |       |         |          |           |
| <b>89</b>  | <b>15.8</b>  | <b><u>Bedrock geology (50k)</u></b>                          | 1                        | 0     | 3       | 2        | -         |
| <b>90</b>  | <b>15.9</b>  | <b><u>Bedrock permeability (50k)</u></b>                     | Identified (within 50m)  |       |         |          |           |
| <b>90</b>  | <b>15.10</b> | <b><u>Bedrock faults and other linear features (50k)</u></b> | 0                        | 0     | 4       | 4        | -         |
| Page       | Section      | Boreholes                                                    | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| 92         | 16.1         | BGS Boreholes                                                | 0                        | 0     | 0       | -        | -         |
| Page       | Section      | Natural ground subsidence                                    |                          |       |         |          |           |
| <b>93</b>  | <b>17.1</b>  | <b><u>Shrink swell clays</u></b>                             | Negligible (within 50m)  |       |         |          |           |
| <b>94</b>  | <b>17.2</b>  | <b><u>Running sands</u></b>                                  | Very low (within 50m)    |       |         |          |           |
| <b>96</b>  | <b>17.3</b>  | <b><u>Compressible deposits</u></b>                          | Very low (within 50m)    |       |         |          |           |
| <b>98</b>  | <b>17.4</b>  | <b><u>Collapsible deposits</u></b>                           | Very low (within 50m)    |       |         |          |           |
| <b>99</b>  | <b>17.5</b>  | <b><u>Landslides</u></b>                                     | Very low (within 50m)    |       |         |          |           |
| <b>101</b> | <b>17.6</b>  | <b><u>Ground dissolution of soluble rocks</u></b>            | Negligible (within 50m)  |       |         |          |           |
| Page       | Section      | Mining, ground workings and natural cavities                 | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| 103        | 18.1         | Natural cavities                                             | 0                        | 0     | 0       | 0        | -         |
| <b>104</b> | <b>18.2</b>  | <b><u>BritPits</u></b>                                       | 0                        | 0     | 7       | 6        | -         |
| <b>106</b> | <b>18.3</b>  | <b><u>Surface ground workings</u></b>                        | 0                        | 0     | 78      | -        | -         |
| <b>109</b> | <b>18.4</b>  | <b><u>Underground workings</u></b>                           | 0                        | 0     | 17      | 17       | 92        |
| 114        | 18.5         | Historical Mineral Planning Areas                            | 0                        | 0     | 0       | 0        | -         |



|                   |                    |                                                       |                          |       |         |          |           |
|-------------------|--------------------|-------------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| <b><u>114</u></b> | <b><u>18.6</u></b> | <b><u>Non-coal mining</u></b>                         | 0                        | 0     | 1       | 2        | 0         |
| <b><u>115</u></b> | <b><u>18.7</u></b> | <b><u>Mining cavities</u></b>                         | 0                        | 0     | 0       | 0        | 1         |
| 115               | 18.8               | JPB mining areas                                      | None (within 0m)         |       |         |          |           |
| <b><u>116</u></b> | <b><u>18.9</u></b> | <b><u>Coal mining</u></b>                             | Identified (within 0m)   |       |         |          |           |
| 116               | 18.10              | Brine areas                                           | None (within 0m)         |       |         |          |           |
| 116               | 18.11              | Gypsum areas                                          | None (within 0m)         |       |         |          |           |
| 116               | 18.12              | Tin mining                                            | None (within 0m)         |       |         |          |           |
| 116               | 18.13              | Clay mining                                           | None (within 0m)         |       |         |          |           |
| Page              | Section            | Radon                                                 |                          |       |         |          |           |
| <b><u>117</u></b> | <b><u>19.1</u></b> | <b><u>Radon</u></b>                                   | Less than 1% (within 0m) |       |         |          |           |
| Page              | Section            | Soil chemistry                                        | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b><u>118</u></b> | <b><u>20.1</u></b> | <b><u>BGS Estimated Background Soil Chemistry</u></b> | 1                        | 1     | -       | -        | -         |
| 118               | 20.2               | BGS Estimated Urban Soil Chemistry                    | 0                        | 0     | -       | -        | -         |
| 118               | 20.3               | BGS Measured Urban Soil Chemistry                     | 0                        | 0     | -       | -        | -         |
| Page              | Section            | Railway infrastructure and projects                   | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| 119               | 21.1               | Underground railways (London)                         | 0                        | 0     | 0       | -        | -         |
| 119               | 21.2               | Underground railways (Non-London)                     | 0                        | 0     | 0       | -        | -         |
| 120               | 21.3               | Railway tunnels                                       | 0                        | 0     | 0       | -        | -         |
| <b><u>120</u></b> | <b><u>21.4</u></b> | <b><u>Historical railway and tunnel features</u></b>  | 0                        | 0     | 6       | -        | -         |
| 120               | 21.5               | Royal Mail tunnels                                    | 0                        | 0     | 0       | -        | -         |
| 121               | 21.6               | Historical railways                                   | 0                        | 0     | 0       | -        | -         |
| 121               | 21.7               | Railways                                              | 0                        | 0     | 0       | -        | -         |
| 121               | 21.8               | Crossrail 1                                           | 0                        | 0     | 0       | 0        | -         |
| 121               | 21.9               | Crossrail 2                                           | 0                        | 0     | 0       | 0        | -         |
| 121               | 21.10              | HS2                                                   | 0                        | 0     | 0       | 0        | -         |

## Recent aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2022. All Rights Reserved.

Capture Date: 14/04/2020

Site Area: 0.05ha



## Recent site history - 2017 aerial photograph



Capture Date: 17/06/2017

Site Area: 0.05ha



## Recent site history - 2013 aerial photograph



Capture Date: 14/07/2013

Site Area: 0.05ha



## Recent site history - 2010 aerial photograph



Capture Date: 22/05/2010

Site Area: 0.05ha



## Recent site history - 2000 aerial photograph

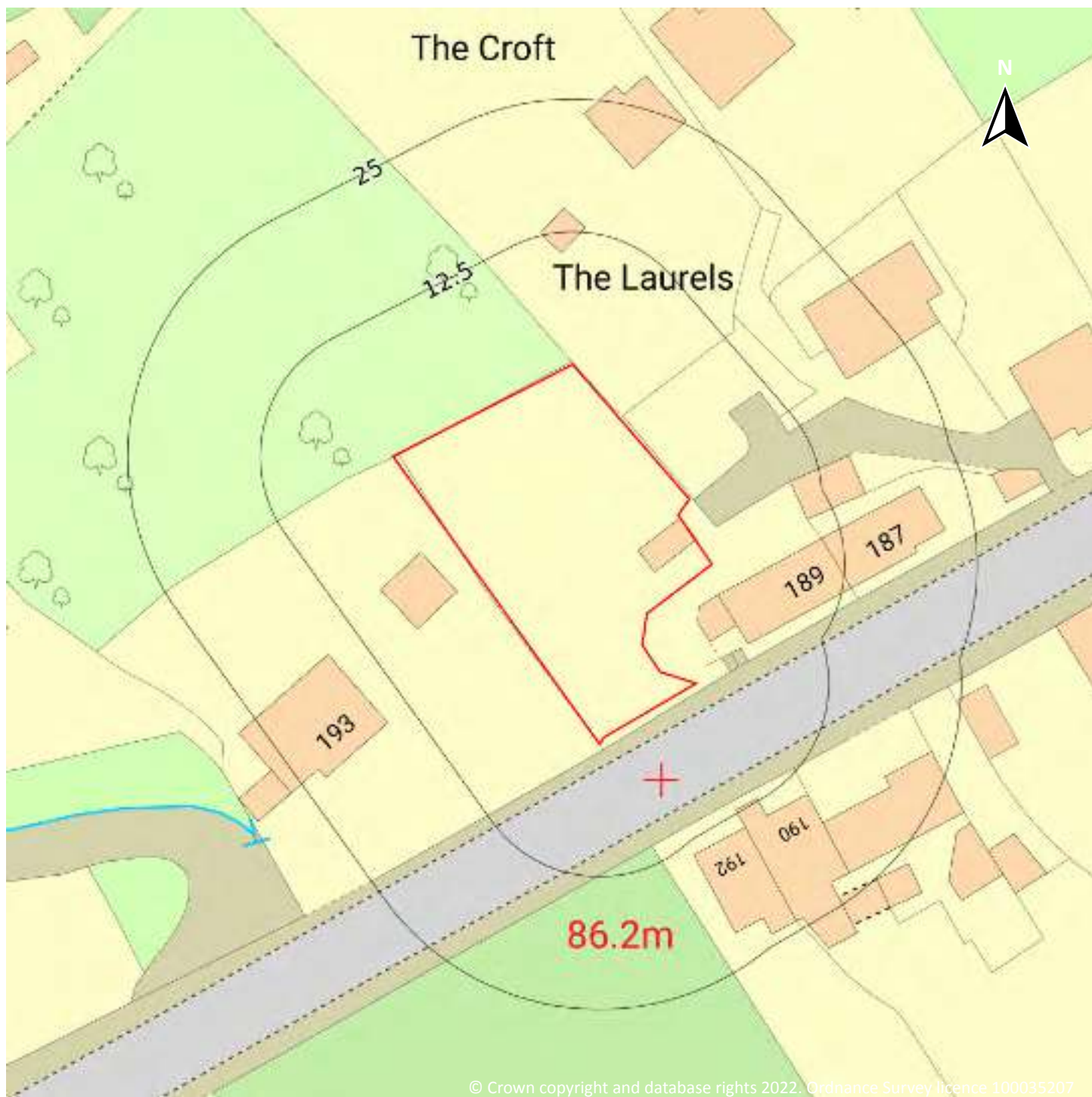


Capture Date: 18/06/2000

Site Area: 0.05ha



## OS MasterMap site plan



Site Area: 0.05ha

## 1 Past land use



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

### 1.1 Historical industrial land uses

Records within 500m

138

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

Features are displayed on the Past land use map on **page 14**

| ID | Location | Land use    | Dates present | Group ID |
|----|----------|-------------|---------------|----------|
| A  | 59m SW   | Refuse Heap | 1948          | 295912   |

| ID | Location | Land use                    | Dates present | Group ID |
|----|----------|-----------------------------|---------------|----------|
| A  | 59m SW   | Refuse Heap                 | 1921          | 271477   |
| A  | 63m SW   | Refuse Heap                 | 1913          | 309449   |
| A  | 66m SW   | Refuse Heap                 | 1948          | 281351   |
| C  | 120m NW  | Coal Level                  | 1913          | 305245   |
| C  | 120m NW  | Coal Level                  | 1897          | 313818   |
| C  | 121m NW  | Coal Level                  | 1921          | 275843   |
| C  | 121m NW  | Unspecified Quarry          | 1913          | 278563   |
| C  | 126m NW  | Unspecified Disused Levels  | 1964          | 250784   |
| D  | 135m N   | Unspecified Old Quarry      | 1913 - 1948   | 306931   |
| D  | 137m N   | Unspecified Old Quarry      | 1948          | 294569   |
| D  | 138m N   | Unspecified Old Quarry      | 1913          | 316434   |
| C  | 144m NW  | Unspecified Quarry          | 1948          | 286085   |
| C  | 146m NW  | Unspecified Quarry          | 1897 - 1913   | 282681   |
| D  | 148m N   | Unspecified Disused Quarry  | 1983          | 252270   |
| C  | 149m NW  | Unspecified Ground Workings | 1921          | 266489   |
| 1  | 155m S   | Unspecified Heap            | 1980 - 1983   | 297224   |
| 2  | 158m N   | Old Coal Level              | 1897          | 264518   |
| C  | 158m NW  | Unspecified Quarry          | 1877          | 288346   |
| D  | 168m N   | Unspecified Ground Workings | 1877          | 266492   |
| F  | 170m W   | Coal Level                  | 1948          | 287120   |
| F  | 172m W   | Coal Level                  | 1948          | 271788   |
| F  | 172m W   | Coal Level                  | 1948          | 274636   |
| F  | 174m W   | Coal Level                  | 1913          | 276091   |
| F  | 174m W   | Coal Level                  | 1913          | 278790   |
| D  | 176m N   | Unspecified Old Quarry      | 1897          | 307782   |
| F  | 178m W   | Refuse Heap                 | 1948          | 313813   |
| F  | 179m W   | Refuse Heap                 | 1948          | 284701   |
| G  | 188m E   | Refuse Heaps                | 1965 - 1983   | 290436   |



| ID | Location | Land use                    | Dates present | Group ID |
|----|----------|-----------------------------|---------------|----------|
| D  | 190m N   | Unspecified Pit             | 1990          | 268461   |
| H  | 193m NE  | Cemetery                    | 1965 - 1983   | 313435   |
| I  | 193m E   | Railway Sidings             | 1948          | 272480   |
| H  | 193m NE  | Burial Ground               | 1897 - 1913   | 310405   |
| G  | 194m SE  | Railway Sidings             | 1948          | 305948   |
| H  | 196m NE  | Burial Ground               | 1921 - 1948   | 277351   |
| H  | 196m NE  | Cemetery                    | 1877          | 296633   |
| D  | 196m N   | Unspecified Quarry          | 1964          | 258633   |
| H  | 196m NE  | Burial Ground               | 1948          | 293770   |
| 3  | 197m S   | Unspecified Ground Workings | 1990          | 266491   |
| J  | 200m E   | Railway Sidings             | 1913          | 283463   |
| I  | 200m E   | Railway Sidings             | 1913          | 290838   |
| I  | 201m E   | Railway Sidings             | 1921          | 299092   |
| D  | 205m N   | Unspecified Disused Levels  | 1965 - 1980   | 280563   |
| K  | 219m E   | Unspecified Quarry          | 1913          | 309666   |
| K  | 222m E   | Unspecified Quarry          | 1948          | 291115   |
| K  | 222m E   | Unspecified Quarry          | 1921 - 1948   | 312244   |
| K  | 224m E   | Unspecified Quarry          | 1913          | 300528   |
| G  | 227m E   | Refuse Heap                 | 1948          | 317166   |
| F  | 228m W   | Old Coal Level              | 1921          | 281665   |
| 4  | 232m N   | Unspecified Disused Levels  | 1965 - 1983   | 302713   |
| F  | 233m W   | Old Coal Level              | 1897 - 1913   | 282342   |
| F  | 233m W   | Old Coal Level              | 1948          | 297290   |
| F  | 234m W   | Old Coal Level              | 1948          | 295538   |
| F  | 234m W   | Unspecified Disused Levels  | 1964 - 1990   | 311565   |
| G  | 238m SE  | Refuse Heap                 | 1948          | 275846   |
| L  | 269m SW  | Unspecified Heap            | 1921          | 285864   |
| L  | 277m SW  | Refuse Heap                 | 1913          | 296187   |



| ID | Location | Land use                    | Dates present | Group ID |
|----|----------|-----------------------------|---------------|----------|
| M  | 277m NE  | Colliery                    | 1948          | 281709   |
| L  | 277m SW  | Refuse Heap                 | 1948          | 317175   |
| L  | 279m SW  | Unspecified Heap            | 1948          | 287246   |
| N  | 288m W   | Unspecified Quarry          | 1921          | 294498   |
| N  | 291m W   | Unspecified Quarry          | 1913          | 281388   |
| N  | 292m W   | Unspecified Quarry          | 1948          | 278173   |
| L  | 293m SW  | Refuse Heap                 | 1948          | 287479   |
| N  | 294m W   | Unspecified Quarry          | 1913          | 287041   |
| N  | 294m W   | Unspecified Quarry          | 1897          | 283785   |
| N  | 296m W   | Unspecified Quarry          | 1948          | 280683   |
| O  | 307m S   | Refuse Heap                 | 1948          | 290715   |
| O  | 308m S   | Refuse Heap                 | 1948          | 279919   |
| P  | 315m S   | Unspecified Ground Workings | 1983          | 266490   |
| P  | 315m S   | Refuse Heaps                | 1965 - 1980   | 279269   |
| Q  | 322m SE  | Sewage Works                | 1913          | 274893   |
| Q  | 323m SE  | Sewage Works                | 1948          | 314928   |
| Q  | 328m E   | Sewage Works                | 1913          | 307646   |
| Q  | 330m E   | Sewage Works                | 1948          | 304956   |
| R  | 331m SE  | Refuse Heap                 | 1913          | 273851   |
| Q  | 332m E   | Sewage Works                | 1921          | 314675   |
| R  | 340m SE  | Refuse Heap                 | 1948          | 295818   |
| R  | 340m SE  | Refuse Heap                 | 1948          | 292426   |
| R  | 342m SE  | Refuse Heap                 | 1913 - 1921   | 281799   |
| P  | 345m SE  | Railway Sidings             | 1948          | 305995   |
| S  | 351m SW  | Refuse Heap                 | 1921 - 1948   | 313531   |
| S  | 354m SW  | Refuse Heap                 | 1913          | 310187   |
| Q  | 355m E   | Unspecified Works           | 1965 - 1980   | 309784   |
| S  | 355m SW  | Refuse Heap                 | 1948          | 314957   |



| ID | Location | Land use                   | Dates present | Group ID |
|----|----------|----------------------------|---------------|----------|
| Q  | 364m E   | Filter Beds                | 1921 - 1948   | 310098   |
| Q  | 364m E   | Filter Beds                | 1948          | 310965   |
| Q  | 364m E   | Filter Beds                | 1913          | 312227   |
| Q  | 370m E   | Filter Beds                | 1913          | 284216   |
| Q  | 371m E   | Unspecified Tanks          | 1965 - 1980   | 301009   |
| Q  | 372m E   | Unspecified Tank           | 1948          | 252783   |
| Q  | 372m E   | Unspecified Tanks          | 1913 - 1921   | 301341   |
| Q  | 373m E   | Filter Beds                | 1948          | 283837   |
| Q  | 381m E   | Unspecified Tank           | 1948          | 252780   |
| T  | 388m N   | Unspecified Disused Levels | 1983          | 250786   |
| Q  | 391m E   | Unspecified Tank           | 1948          | 252779   |
| T  | 401m NE  | Old Coal Level             | 1897 - 1913   | 285669   |
| T  | 401m NE  | Old Coal Level             | 1948          | 305085   |
| T  | 402m NE  | Old Coal Level             | 1913 - 1948   | 281238   |
| Q  | 403m E   | Unspecified Tank           | 1948          | 252796   |
| I  | 407m SE  | Railway Sidings            | 1897 - 1913   | 286076   |
| I  | 408m SE  | Railway Sidings            | 1965          | 305345   |
| T  | 412m NE  | Coal Level                 | 1897          | 292828   |
| T  | 412m NE  | Coal Level                 | 1913          | 302687   |
| T  | 412m NE  | Coal Level                 | 1948          | 279406   |
| T  | 412m N   | Unspecified Disused Levels | 1983          | 250788   |
| T  | 412m NE  | Coal Level                 | 1913 - 1921   | 306449   |
| I  | 423m SE  | Colliery                   | 1913          | 274540   |
| I  | 424m SE  | Railway Sidings            | 1948          | 286918   |
| 5  | 425m SE  | Unspecified Quarry         | 1948          | 258635   |
| I  | 428m SE  | Railway Buildings          | 1948          | 251580   |
| I  | 429m SE  | Railway Building           | 1913          | 308452   |
| I  | 432m SE  | Railway Buildings          | 1921          | 251579   |

| ID | Location | Land use                    | Dates present | Group ID |
|----|----------|-----------------------------|---------------|----------|
| I  | 432m SE  | Railway Building            | 1948          | 274261   |
| I  | 434m SE  | Railway Building            | 1965          | 289314   |
| I  | 434m SE  | Railway Building            | 1965          | 291281   |
| I  | 434m SE  | Railway Building            | 1913          | 303293   |
| I  | 436m SE  | Railway Building            | 1948          | 312902   |
| I  | 441m SE  | Railway Building            | 1913          | 281298   |
| I  | 441m SE  | Railway Building            | 1921 - 1948   | 276217   |
| I  | 443m SE  | Railway Building            | 1965          | 256652   |
| 6  | 445m NE  | Unspecified Heap            | 1983          | 260073   |
| I  | 445m SE  | Unspecified Heap            | 1965 - 1983   | 293365   |
| 7  | 451m SE  | Colliery                    | 1921 - 1948   | 296770   |
| I  | 452m SE  | Railway Building            | 1948          | 275960   |
| I  | 454m SE  | Railway Building            | 1913 - 1921   | 288766   |
| I  | 454m SE  | Unspecified Ground Workings | 1913          | 266512   |
| W  | 457m NW  | Unspecified Disused Levels  | 1964 - 1990   | 300871   |
| I  | 457m SE  | Railway Building            | 1948          | 283630   |
| I  | 457m SE  | Unspecified Heap            | 1921          | 297674   |
| I  | 458m SE  | Railway Building            | 1948 - 1965   | 297992   |
| W  | 461m NW  | Old Coal Level              | 1897 - 1921   | 274030   |
| W  | 462m NW  | Old Coal Level              | 1948          | 284414   |
| W  | 462m NW  | Old Coal Level              | 1948          | 299139   |
| I  | 468m SE  | Railway Building            | 1913 - 1921   | 298235   |
| X  | 491m NE  | Coal Level                  | 1948          | 270716   |
| X  | 491m NE  | Unspecified Old Quarries    | 1913          | 304618   |
| M  | 496m NE  | Unspecified Old Quarries    | 1921          | 299126   |

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



## 1.2 Historical tanks

### Records within 500m

**10**

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

Features are displayed on the Past land use map on **page 14**

| ID | Location | Land use         | Dates present | Group ID |
|----|----------|------------------|---------------|----------|
| E  | 137m E   | Tank or Trough   | 1877          | 34509    |
| E  | 152m E   | Tank or Trough   | 1877          | 34507    |
| Q  | 360m E   | Tanks            | 1918          | 34862    |
| Q  | 372m E   | Tanks            | 1960          | 34863    |
| Q  | 381m E   | Tanks            | 1918          | 34861    |
| U  | 404m SW  | Unspecified Tank | 1993          | 35326    |
| V  | 404m W   | Unspecified Tank | 1993          | 35337    |
| V  | 404m W   | Unspecified Tank | 1971          | 35963    |
| V  | 404m W   | Unspecified Tank | 1960          | 36306    |
| U  | 404m SW  | Unspecified Tank | 1960 - 1971   | 35363    |

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

## 1.3 Historical energy features

### Records within 500m

**2**

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

Features are displayed on the Past land use map on **page 14**

| ID | Location | Land use               | Dates present | Group ID |
|----|----------|------------------------|---------------|----------|
| B  | 86m E    | Electricity Substation | 1993          | 18649    |



| ID | Location | Land use               | Dates present | Group ID |
|----|----------|------------------------|---------------|----------|
| B  | 90m E    | Electricity Substation | 1971          | 18692    |

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

## 1.4 Historical petrol stations

### Records within 500m

0

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

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

## 1.5 Historical garages

### Records within 500m

1

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

Features are displayed on the Past land use map on **page 14**

| ID | Location | Land use | Dates present | Group ID |
|----|----------|----------|---------------|----------|
| J  | 244m SE  | Garage   | 1971 - 1993   | 6526     |

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

## 1.6 Historical military land

### Records within 500m

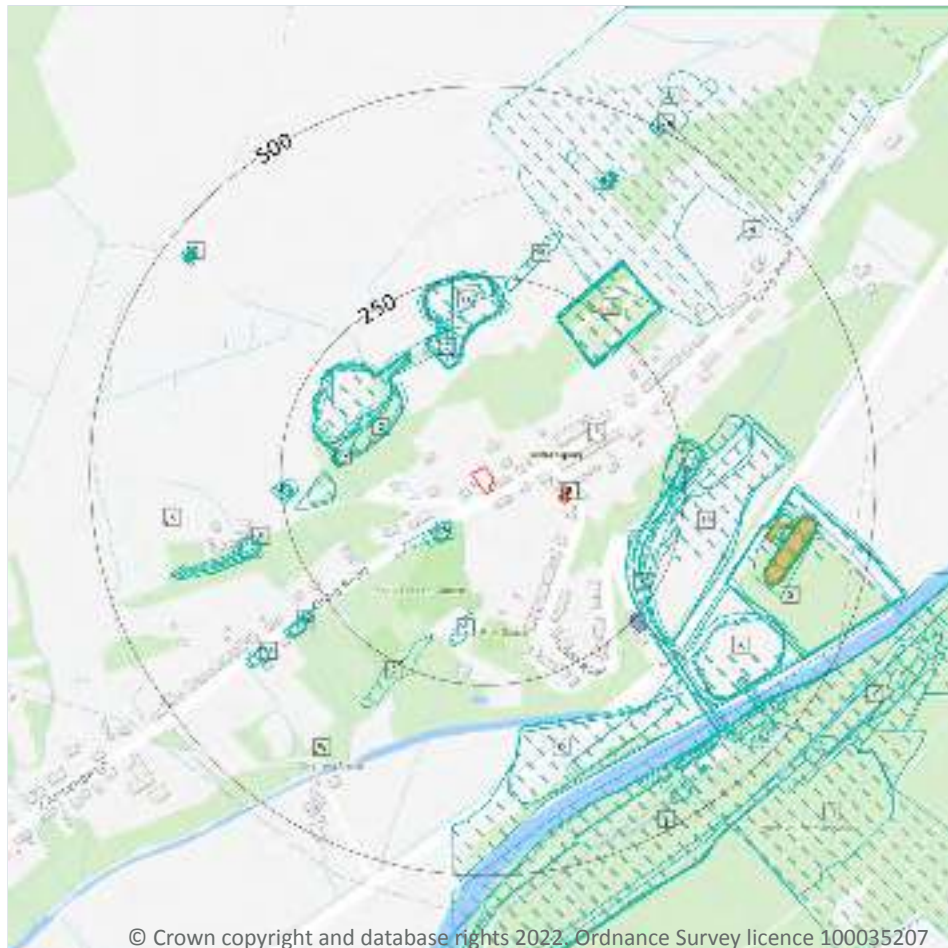
0

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

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



## 2 Past land use - un-grouped



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

### 2.1 Historical industrial land uses

Records within 500m

209

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

Features are displayed on the Past land use - un-grouped map on **page 22**

| ID | Location | Land Use    | Date | Group ID |
|----|----------|-------------|------|----------|
| A  | 59m SW   | Refuse Heap | 1948 | 295912   |
| A  | 59m SW   | Refuse Heap | 1921 | 271477   |
| A  | 63m SW   | Refuse Heap | 1913 | 309449   |

| ID | Location | Land Use                    | Date | Group ID |
|----|----------|-----------------------------|------|----------|
| A  | 66m SW   | Refuse Heap                 | 1948 | 281351   |
| A  | 66m SW   | Refuse Heap                 | 1948 | 281351   |
| C  | 120m NW  | Coal Level                  | 1913 | 305245   |
| C  | 120m NW  | Coal Level                  | 1897 | 313818   |
| C  | 121m NW  | Coal Level                  | 1921 | 275843   |
| C  | 121m NW  | Unspecified Quarry          | 1913 | 278563   |
| C  | 121m NW  | Unspecified Quarry          | 1913 | 278563   |
| C  | 126m NW  | Unspecified Disused Levels  | 1964 | 250784   |
| D  | 135m N   | Unspecified Old Quarry      | 1948 | 306931   |
| D  | 137m N   | Unspecified Old Quarry      | 1948 | 294569   |
| D  | 138m N   | Unspecified Old Quarry      | 1913 | 316434   |
| D  | 138m N   | Unspecified Old Quarry      | 1913 | 316434   |
| D  | 138m N   | Unspecified Old Quarry      | 1913 | 306931   |
| D  | 139m N   | Unspecified Old Quarry      | 1921 | 306931   |
| C  | 144m NW  | Unspecified Quarry          | 1948 | 286085   |
| C  | 144m NW  | Unspecified Quarry          | 1948 | 286085   |
| C  | 146m NW  | Unspecified Quarry          | 1897 | 282681   |
| C  | 147m NW  | Unspecified Quarry          | 1913 | 282681   |
| D  | 148m N   | Unspecified Disused Quarry  | 1983 | 252270   |
| C  | 149m NW  | Unspecified Ground Workings | 1921 | 266489   |
| F  | 155m S   | Unspecified Heap            | 1980 | 297224   |
| F  | 155m S   | Unspecified Heap            | 1983 | 297224   |
| 1  | 158m N   | Old Coal Level              | 1897 | 264518   |
| C  | 158m NW  | Unspecified Quarry          | 1877 | 288346   |
| D  | 168m N   | Unspecified Ground Workings | 1877 | 266492   |
| G  | 170m W   | Coal Level                  | 1948 | 287120   |
| G  | 172m W   | Coal Level                  | 1948 | 274636   |
| G  | 172m W   | Coal Level                  | 1948 | 271788   |

| ID | Location | Land Use                    | Date | Group ID |
|----|----------|-----------------------------|------|----------|
| G  | 174m W   | Coal Level                  | 1913 | 276091   |
| G  | 174m W   | Coal Level                  | 1913 | 278790   |
| D  | 176m N   | Unspecified Old Quarry      | 1897 | 307782   |
| G  | 178m W   | Refuse Heap                 | 1948 | 313813   |
| G  | 179m W   | Refuse Heap                 | 1948 | 284701   |
| G  | 179m W   | Refuse Heap                 | 1948 | 284701   |
| H  | 188m E   | Refuse Heaps                | 1965 | 290436   |
| H  | 188m E   | Refuse Heaps                | 1980 | 290436   |
| H  | 188m E   | Refuse Heaps                | 1983 | 290436   |
| D  | 190m N   | Unspecified Pit             | 1990 | 268461   |
| I  | 193m NE  | Cemetery                    | 1965 | 313435   |
| I  | 193m NE  | Cemetery                    | 1980 | 313435   |
| I  | 193m NE  | Cemetery                    | 1983 | 313435   |
| J  | 193m E   | Railway Sidings             | 1948 | 272480   |
| I  | 193m NE  | Burial Ground               | 1913 | 310405   |
| I  | 193m NE  | Burial Ground               | 1897 | 310405   |
| H  | 194m SE  | Railway Sidings             | 1948 | 305948   |
| I  | 196m NE  | Burial Ground               | 1921 | 277351   |
| I  | 196m NE  | Cemetery                    | 1877 | 296633   |
| I  | 196m NE  | Burial Ground               | 1913 | 310405   |
| I  | 196m NE  | Burial Ground               | 1913 | 310405   |
| D  | 196m N   | Unspecified Quarry          | 1964 | 258633   |
| I  | 196m NE  | Burial Ground               | 1948 | 293770   |
| 2  | 197m S   | Unspecified Ground Workings | 1990 | 266491   |
| I  | 197m NE  | Burial Ground               | 1948 | 277351   |
| K  | 200m E   | Railway Sidings             | 1913 | 283463   |
| J  | 200m E   | Railway Sidings             | 1913 | 290838   |
| J  | 200m E   | Railway Sidings             | 1913 | 290838   |

| ID | Location | Land Use                   | Date | Group ID |
|----|----------|----------------------------|------|----------|
| J  | 201m E   | Railway Sidings            | 1921 | 299092   |
| D  | 205m N   | Unspecified Disused Levels | 1965 | 280563   |
| D  | 205m N   | Unspecified Disused Levels | 1980 | 280563   |
| L  | 219m E   | Unspecified Quarry         | 1913 | 309666   |
| L  | 219m E   | Unspecified Quarry         | 1913 | 309666   |
| L  | 222m E   | Unspecified Quarry         | 1921 | 312244   |
| L  | 222m E   | Unspecified Quarry         | 1948 | 291115   |
| L  | 223m E   | Unspecified Quarry         | 1948 | 312244   |
| L  | 224m E   | Unspecified Quarry         | 1913 | 300528   |
| H  | 227m E   | Refuse Heap                | 1948 | 317166   |
| G  | 228m W   | Old Coal Level             | 1921 | 281665   |
| M  | 232m N   | Unspecified Disused Levels | 1965 | 302713   |
| M  | 232m N   | Unspecified Disused Levels | 1980 | 302713   |
| M  | 232m N   | Unspecified Disused Levels | 1983 | 302713   |
| G  | 233m W   | Old Coal Level             | 1913 | 282342   |
| G  | 233m W   | Old Coal Level             | 1897 | 282342   |
| G  | 233m W   | Old Coal Level             | 1948 | 297290   |
| G  | 233m W   | Old Coal Level             | 1948 | 297290   |
| G  | 234m W   | Old Coal Level             | 1948 | 295538   |
| G  | 234m W   | Unspecified Disused Levels | 1990 | 311565   |
| G  | 235m W   | Old Coal Level             | 1913 | 282342   |
| G  | 235m W   | Old Coal Level             | 1913 | 282342   |
| H  | 238m SE  | Refuse Heap                | 1948 | 275846   |
| H  | 238m SE  | Refuse Heap                | 1948 | 275846   |
| G  | 238m W   | Unspecified Disused Levels | 1964 | 311565   |
| N  | 269m SW  | Unspecified Heap           | 1921 | 285864   |
| N  | 277m SW  | Refuse Heap                | 1913 | 296187   |
| O  | 277m NE  | Colliery                   | 1948 | 281709   |



| ID | Location | Land Use                    | Date | Group ID |
|----|----------|-----------------------------|------|----------|
| N  | 277m SW  | Refuse Heap                 | 1948 | 317175   |
| N  | 279m SW  | Unspecified Heap            | 1948 | 287246   |
| N  | 279m SW  | Unspecified Heap            | 1948 | 287246   |
| P  | 288m W   | Unspecified Quarry          | 1921 | 294498   |
| P  | 291m W   | Unspecified Quarry          | 1913 | 281388   |
| P  | 291m W   | Unspecified Quarry          | 1913 | 281388   |
| P  | 292m W   | Unspecified Quarry          | 1948 | 278173   |
| N  | 293m SW  | Refuse Heap                 | 1948 | 287479   |
| N  | 293m SW  | Refuse Heap                 | 1948 | 287479   |
| P  | 294m W   | Unspecified Quarry          | 1913 | 287041   |
| P  | 294m W   | Unspecified Quarry          | 1897 | 283785   |
| P  | 296m W   | Unspecified Quarry          | 1948 | 280683   |
| Q  | 307m S   | Refuse Heap                 | 1948 | 290715   |
| Q  | 308m S   | Refuse Heap                 | 1948 | 279919   |
| Q  | 308m S   | Refuse Heap                 | 1948 | 279919   |
| R  | 315m S   | Refuse Heaps                | 1965 | 279269   |
| R  | 315m S   | Refuse Heaps                | 1980 | 279269   |
| R  | 315m S   | Unspecified Ground Workings | 1983 | 266490   |
| S  | 322m SE  | Sewage Works                | 1913 | 274893   |
| S  | 323m SE  | Sewage Works                | 1948 | 314928   |
| S  | 328m E   | Sewage Works                | 1913 | 307646   |
| S  | 328m E   | Sewage Works                | 1913 | 307646   |
| S  | 330m E   | Sewage Works                | 1948 | 304956   |
| S  | 330m E   | Sewage Works                | 1948 | 304956   |
| T  | 331m SE  | Refuse Heap                 | 1913 | 273851   |
| T  | 331m SE  | Refuse Heap                 | 1913 | 273851   |
| S  | 332m E   | Sewage Works                | 1921 | 314675   |
| T  | 340m SE  | Refuse Heap                 | 1948 | 295818   |



| ID | Location | Land Use                   | Date | Group ID |
|----|----------|----------------------------|------|----------|
| T  | 340m SE  | Refuse Heap                | 1948 | 295818   |
| T  | 340m SE  | Refuse Heap                | 1948 | 292426   |
| T  | 342m SE  | Refuse Heap                | 1913 | 281799   |
| T  | 342m SE  | Refuse Heap                | 1921 | 281799   |
| R  | 345m SE  | Railway Sidings            | 1948 | 305995   |
| U  | 351m SW  | Refuse Heap                | 1921 | 313531   |
| U  | 352m SW  | Refuse Heap                | 1948 | 313531   |
| U  | 354m SW  | Refuse Heap                | 1913 | 310187   |
| S  | 355m E   | Unspecified Works          | 1965 | 309784   |
| S  | 355m E   | Unspecified Works          | 1980 | 309784   |
| U  | 355m SW  | Refuse Heap                | 1948 | 314957   |
| U  | 355m SW  | Refuse Heap                | 1948 | 314957   |
| S  | 364m E   | Filter Beds                | 1948 | 310098   |
| S  | 364m E   | Filter Beds                | 1948 | 310098   |
| S  | 364m E   | Filter Beds                | 1948 | 310965   |
| S  | 364m E   | Filter Beds                | 1913 | 312227   |
| S  | 365m E   | Filter Beds                | 1921 | 310098   |
| S  | 370m E   | Filter Beds                | 1913 | 284216   |
| S  | 370m E   | Filter Beds                | 1913 | 284216   |
| S  | 371m E   | Unspecified Tanks          | 1965 | 301009   |
| S  | 371m E   | Unspecified Tanks          | 1980 | 301009   |
| S  | 372m E   | Unspecified Tank           | 1948 | 252783   |
| S  | 372m E   | Unspecified Tanks          | 1913 | 301341   |
| S  | 373m E   | Unspecified Tanks          | 1921 | 301341   |
| S  | 373m E   | Filter Beds                | 1948 | 283837   |
| S  | 373m E   | Filter Beds                | 1948 | 283837   |
| S  | 381m E   | Unspecified Tank           | 1948 | 252780   |
| V  | 388m N   | Unspecified Disused Levels | 1983 | 250786   |



| ID | Location | Land Use                   | Date | Group ID |
|----|----------|----------------------------|------|----------|
| S  | 391m E   | Unspecified Tank           | 1948 | 252779   |
| V  | 401m NE  | Old Coal Level             | 1913 | 285669   |
| V  | 401m NE  | Old Coal Level             | 1897 | 285669   |
| V  | 401m NE  | Old Coal Level             | 1948 | 305085   |
| V  | 402m NE  | Old Coal Level             | 1913 | 281238   |
| V  | 402m NE  | Old Coal Level             | 1913 | 281238   |
| V  | 402m NE  | Old Coal Level             | 1948 | 281238   |
| V  | 402m NE  | Old Coal Level             | 1948 | 281238   |
| S  | 403m E   | Unspecified Tank           | 1948 | 252796   |
| V  | 406m NE  | Old Coal Level             | 1921 | 281238   |
| J  | 407m SE  | Railway Sidings            | 1913 | 286076   |
| J  | 408m SE  | Railway Sidings            | 1965 | 305345   |
| V  | 412m NE  | Coal Level                 | 1913 | 302687   |
| V  | 412m NE  | Coal Level                 | 1897 | 292828   |
| V  | 412m NE  | Coal Level                 | 1948 | 279406   |
| V  | 412m NE  | Coal Level                 | 1948 | 279406   |
| V  | 412m NE  | Coal Level                 | 1948 | 279406   |
| V  | 412m NE  | Coal Level                 | 1913 | 306449   |
| V  | 412m NE  | Coal Level                 | 1913 | 306449   |
| V  | 412m N   | Unspecified Disused Levels | 1983 | 250788   |
| V  | 417m NE  | Coal Level                 | 1921 | 306449   |
| J  | 423m SE  | Colliery                   | 1913 | 274540   |
| J  | 423m SE  | Colliery                   | 1913 | 274540   |
| J  | 424m SE  | Railway Sidings            | 1948 | 286918   |
| 3  | 425m SE  | Unspecified Quarry         | 1948 | 258635   |
| J  | 428m SE  | Railway Buildings          | 1948 | 251580   |
| J  | 429m SE  | Railway Building           | 1913 | 308452   |
| J  | 432m SE  | Railway Buildings          | 1921 | 251579   |



| ID | Location | Land Use                    | Date | Group ID |
|----|----------|-----------------------------|------|----------|
| J  | 432m SE  | Railway Building            | 1948 | 274261   |
| J  | 434m SE  | Railway Building            | 1965 | 291281   |
| J  | 434m SE  | Railway Building            | 1965 | 289314   |
| J  | 434m SE  | Railway Building            | 1913 | 303293   |
| J  | 436m SE  | Railway Building            | 1948 | 312902   |
| J  | 441m SE  | Railway Building            | 1913 | 281298   |
| J  | 441m SE  | Railway Building            | 1948 | 276217   |
| J  | 443m SE  | Railway Building            | 1965 | 256652   |
| J  | 443m SE  | Railway Building            | 1921 | 276217   |
| 4  | 445m NE  | Unspecified Heap            | 1983 | 260073   |
| J  | 445m SE  | Unspecified Heap            | 1965 | 293365   |
| J  | 445m SE  | Unspecified Heap            | 1980 | 293365   |
| J  | 445m SE  | Unspecified Heap            | 1983 | 293365   |
| Y  | 451m SE  | Colliery                    | 1948 | 296770   |
| Y  | 451m SE  | Colliery                    | 1948 | 296770   |
| J  | 452m SE  | Railway Building            | 1948 | 275960   |
| J  | 454m SE  | Railway Building            | 1913 | 288766   |
| J  | 454m SE  | Unspecified Ground Workings | 1913 | 266512   |
| Z  | 457m NW  | Unspecified Disused Levels  | 1990 | 300871   |
| J  | 457m SE  | Railway Building            | 1921 | 288766   |
| J  | 457m SE  | Railway Building            | 1948 | 283630   |
| J  | 457m SE  | Unspecified Heap            | 1921 | 297674   |
| J  | 458m SE  | Railway Building            | 1948 | 297992   |
| Z  | 461m NW  | Old Coal Level              | 1921 | 274030   |
| Z  | 461m NW  | Unspecified Disused Levels  | 1964 | 300871   |
| J  | 461m SE  | Railway Building            | 1965 | 297992   |
| Z  | 461m NW  | Old Coal Level              | 1913 | 274030   |
| Z  | 461m NW  | Old Coal Level              | 1897 | 274030   |



| ID | Location | Land Use                 | Date | Group ID |
|----|----------|--------------------------|------|----------|
| Z  | 462m NW  | Old Coal Level           | 1948 | 284414   |
| Z  | 462m NW  | Old Coal Level           | 1948 | 284414   |
| Z  | 462m NW  | Old Coal Level           | 1948 | 299139   |
| Z  | 465m NW  | Old Coal Level           | 1913 | 274030   |
| Z  | 465m NW  | Old Coal Level           | 1913 | 274030   |
| J  | 468m SE  | Railway Building         | 1913 | 298235   |
| J  | 473m SE  | Railway Building         | 1921 | 298235   |
| AA | 491m NE  | Coal Level               | 1948 | 270716   |
| AA | 491m NE  | Unspecified Old Quarries | 1913 | 304618   |
| O  | 496m NE  | Unspecified Old Quarries | 1921 | 299126   |

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

## 2.2 Historical tanks

### Records within 500m

11

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

Features are displayed on the Past land use - un-grouped map on **page 22**

| ID | Location | Land Use         | Date | Group ID |
|----|----------|------------------|------|----------|
| E  | 137m E   | Tank or Trough   | 1877 | 34509    |
| E  | 152m E   | Tank or Trough   | 1877 | 34507    |
| S  | 360m E   | Tanks            | 1918 | 34862    |
| S  | 372m E   | Tanks            | 1960 | 34863    |
| S  | 381m E   | Tanks            | 1918 | 34861    |
| W  | 404m SW  | Unspecified Tank | 1993 | 35326    |
| X  | 404m W   | Unspecified Tank | 1960 | 36306    |
| X  | 404m W   | Unspecified Tank | 1971 | 35963    |
| X  | 404m W   | Unspecified Tank | 1993 | 35337    |
| W  | 404m SW  | Unspecified Tank | 1960 | 35363    |



| ID | Location | Land Use         | Date | Group ID |
|----|----------|------------------|------|----------|
| W  | 404m SW  | Unspecified Tank | 1971 | 35363    |

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

## 2.3 Historical energy features

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>2</b> |
|----------------------------|----------|

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

Features are displayed on the Past land use - un-grouped map on **page 22**

| ID | Location | Land Use               | Date | Group ID |
|----|----------|------------------------|------|----------|
| B  | 86m E    | Electricity Substation | 1993 | 18649    |
| B  | 90m E    | Electricity Substation | 1971 | 18692    |

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

## 2.4 Historical petrol stations

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>0</b> |
|----------------------------|----------|

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

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

## 2.5 Historical garages

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>2</b> |
|----------------------------|----------|

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

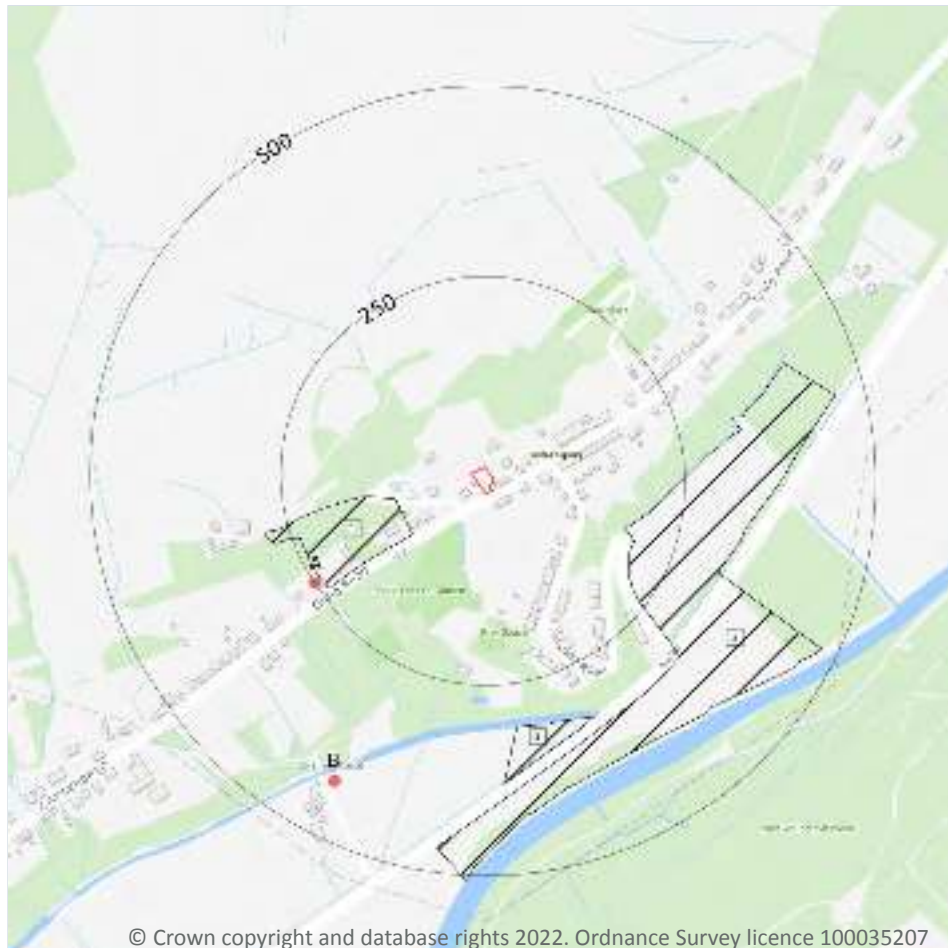
Features are displayed on the Past land use - un-grouped map on **page 22**

| ID | Location | Land Use | Date | Group ID |
|----|----------|----------|------|----------|
| K  | 244m SE  | Garage   | 1993 | 6526     |
| K  | 246m SE  | Garage   | 1971 | 6526     |

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



## 3 Waste and landfill



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

### 3.1 Active or recent landfill

Records within 500m

0

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

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

### 3.2 Historical landfill (BGS records)

Records within 500m

0

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

*This data is sourced from the British Geological Survey.*

### 3.3 Historical landfill (LA/mapping records)

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

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

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

### 3.4 Historical landfill (EA/NRW records)

|                     |   |
|---------------------|---|
| Records within 500m | 3 |
|---------------------|---|

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

Features are displayed on the Waste and landfill map on **page 33**

| ID | Location | Details                                                                      |                                                                                                                                                                    |                                                                           |
|----|----------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| 1  | 104m SW  | Site Address: Cilmaengwyn<br>Waste Tip<br>Licence Holder Address: -          | Waste Licence: -<br>Site Reference: -<br>Waste Type: -<br>Environmental Permitting Regulations (Waste)<br>Reference: -<br>Licence Issue: -<br>Licence Surrender: - | Operator: -<br>Licence Holder: -<br>First Recorded: -<br>Last Recorded: - |
| 2  | 181m E   | Site Address: Tip off A4067 at<br>Godre r-graig<br>Licence Holder Address: - | Waste Licence: -<br>Site Reference: -<br>Waste Type: -<br>Environmental Permitting Regulations (Waste)<br>Reference: -<br>Licence Issue: -<br>Licence Surrender: - | Operator: -<br>Licence Holder: -<br>First Recorded: -<br>Last Recorded: - |
| 3  | 307m S   | Site Address: Disused Tip of<br>A4067<br>Licence Holder Address: -           | Waste Licence: -<br>Site Reference: -<br>Waste Type: -<br>Environmental Permitting Regulations (Waste)<br>Reference: -<br>Licence Issue: -<br>Licence Surrender: - | Operator: -<br>Licence Holder: -<br>First Recorded: -<br>Last Recorded: - |

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

### 3.5 Historical waste sites

Records within 500m

0

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

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

### 3.6 Licensed waste sites

Records within 500m

0

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

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

### 3.7 Waste exemptions

Records within 500m

4

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

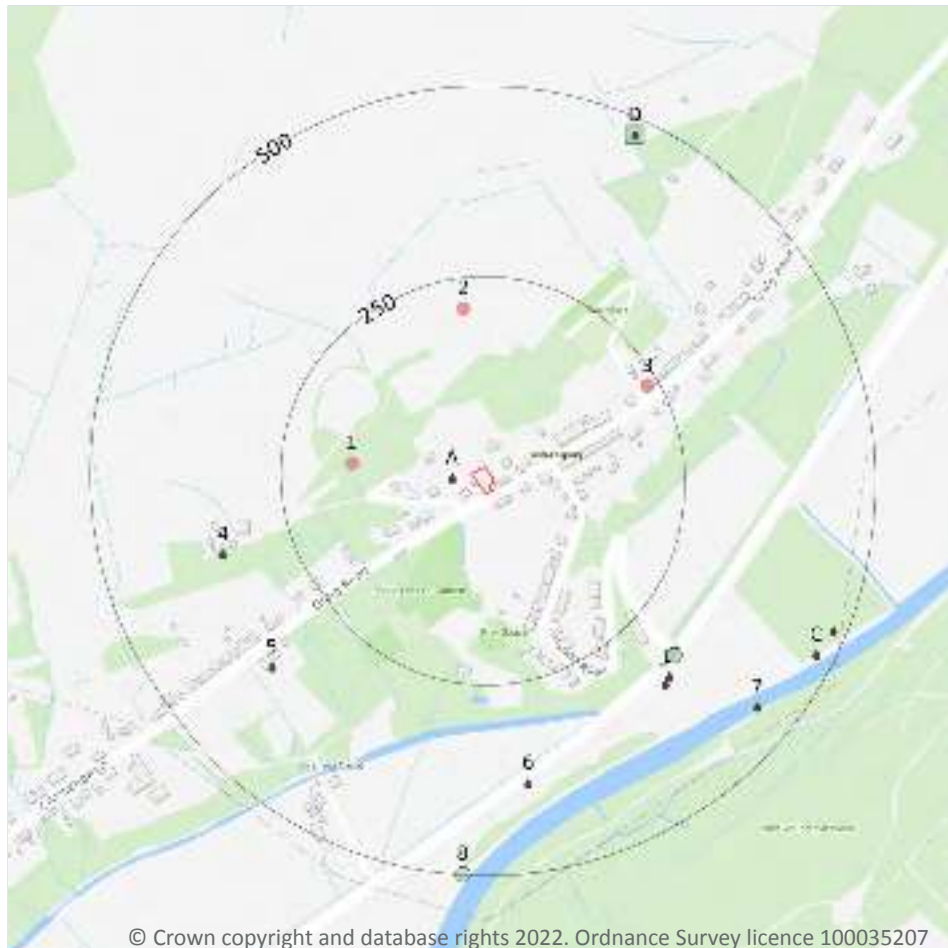
Features are displayed on the Waste and landfill map on **page 33**

| ID | Location | Site                                                                                   | Reference         | Category                   | Sub-Category                                               | Description                     |
|----|----------|----------------------------------------------------------------------------------------|-------------------|----------------------------|------------------------------------------------------------|---------------------------------|
| A  | 250m SW  | 279 Graig Road<br>Godrergrraig Abertawe<br>SA92NZ                                      | NRW-<br>WME019305 | Using waste<br>exemption   | Waste Exemption -<br>Agricultural and Non-<br>Agricultural | Use of waste in<br>construction |
| A  | 251m SW  | 258 Graig Road,<br>Godrergrraig, Swansea,<br>Castell-nedd Port Talbot,<br>SA9 2NZ      | NRW-<br>WME040049 | Using waste<br>exemption   | Not on a farm                                              | Use of waste in<br>construction |
| B  | 426m SW  | DCWW, Cwm Tawe Isaf,<br>Godrergrraig, Swansea,<br>Castell-nedd Port Talbot,<br>SA9 2PD | NRW-<br>WME039450 | Storing waste<br>exemption | Not on a farm                                              | Storage of<br>sludge            |
| B  | 426m SW  | DCWW, Cwm Tawe Isaf,<br>Godrergrraig, Swansea,<br>Castell-nedd Port Talbot,<br>SA92PD  | NRW-<br>WME033660 | Storing waste<br>exemption | Not on a farm                                              | Storage of<br>sludge            |

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



## 4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- Licensed Discharges to controlled waters
- List 2 Dangerous Substances
- Pollution Incidents (EA/NRW)

### 4.1 Recent industrial land uses

Records within 250m

3

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 36**

| ID | Location | Company          | Address                                                         | Activity                      | Category              |
|----|----------|------------------|-----------------------------------------------------------------|-------------------------------|-----------------------|
| 1  | 157m W   | Workings (Dis)   | West Glamorgan, SA9                                             | Unspecified Quarries Or Mines | Extractive Industries |
| 2  | 210m N   | Quarry (Disused) | West Glamorgan, SA9                                             | Unspecified Quarries Or Mines | Extractive Industries |
| 3  | 235m NE  | Sunnyvale        | 147, Graig Road, Godrergrraig, Swansea, West Glamorgan, SA9 2NY | General Construction Supplies | Industrial Products   |



*This data is sourced from Ordnance Survey.*

## 4.2 Current or recent petrol stations

Records within 500m

0

Open, closed, under development and obsolete petrol stations.

*This data is sourced from Experian.*

## 4.3 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

*This data is sourced from National Grid.*

## 4.4 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

*This data is sourced from National Grid.*

## 4.5 Sites determined as Contaminated Land

Records within 500m

0

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

*This data is sourced from Local Authority records.*

## 4.6 Control of Major Accident Hazards (COMAH)

Records within 500m

0

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

*This data is sourced from the Health and Safety Executive.*



## 4.7 Regulated explosive sites

Records within 500m

0

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

*This data is sourced from the Health and Safety Executive.*

## 4.8 Hazardous substance storage/usage

Records within 500m

0

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

*This data is sourced from Local Authority records.*

## 4.9 Historical licensed industrial activities (IPC)

Records within 500m

0

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

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

## 4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

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

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

## 4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m

0

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

*This data is sourced from Local Authority records.*

## 4.12 Radioactive Substance Authorisations

Records within 500m

0

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

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

## 4.13 Licensed Discharges to controlled waters

Records within 500m

12

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

Features are displayed on the Current industrial land use map on **page 36**

| ID | Location | Address                                                                                                                            | Details                                                                                                                                                 |                                                                                                                                        |
|----|----------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| A  | 26m W    | 191 GRAIG RD GODRERGRAIG YSTALYFERA, 191 GRAIG RD GODRERGRAIG YSTALYF, GODRERGRAIG YSTALYFERA SWANSEA, YSTALYFERA SWANSEA, SWANSEA | Effluent Type: UNSPECIFIED<br>Permit Number: BF0102701<br>Permit Version: 1<br>Receiving Water: TO LAND NR SWANSEA CANAL                                | Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88)<br>Issue date: 12/12/1973<br>Effective Date: 12/12/1973<br>Revocation Date: - |
| A  | 26m W    | 191 GRAIG RD GODRERGRAIG YSTALYFERA, 191 GRAIG RD GODRERGRAIG YSTALYF, GODRERGRAIG YSTALYFERA SWANSEA, YSTALYFERA SWANSEA, SWANSEA | Effluent Type: UNSPECIFIED<br>Permit Number: BF0102701<br>Permit Version: 1<br>Receiving Water: TO LAND NR SWANSEA CANAL                                | Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88)<br>Issue date: 12/12/1973<br>Effective Date: 12/12/1973<br>Revocation Date: - |
| B  | 336m SE  | CSO Godre'r Graig SOC 20. Godre'r, A4067 Opp Gnoll Road, Godrergrraig, Swansea, SA9 2PA                                            | Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY<br>Permit Number: BW2302801<br>Permit Version: 4<br>Receiving Water: River Tawe | Status: Effective<br>Issue date: 24/10/2019<br>Effective Date: 24/10/2019<br>Revocation Date: -                                        |
| B  | 340m SE  | SWO. GODRE'R GRAIG SOC 20. GODRE'R, GODRE'R GRAIG, YSTALYFERA, NEATH PORT TALBOT                                                   | Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY<br>Permit Number: BW2302801<br>Permit Version: 3<br>Receiving Water: RIVER TAWE | Status: Effective<br>Issue date: 24/08/2005<br>Effective Date: 24/08/2015<br>Revocation Date: -                                        |
| 4  | 342m W   | PENTWYN FARM GODRER GRAIG SWANSEA V, PENTWYN FARM GODRER GRAIG SWANSE, GODRER GRAIG SWANSEA VALLEY., SWANSEA VALLEY.               | Effluent Type: UNSPECIFIED<br>Permit Number: BP0136501<br>Permit Version: 1<br>Receiving Water: TO LAND                                                 | Status: CONSENT EXPIRED - TIME LIMIT<br>Issue date: 14/04/1989<br>Effective Date: 14/04/1989<br>Revocation Date: 16/09/1994            |



| ID | Location | Address                                                                                                                                                                    | Details                                                                                                                                                                                        |                                                                                                                                                       |
|----|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5  | 361m SW  | 258 Graig Road, Godrergrraig,<br>Swansea, SA9 2NZ                                                                                                                          | Effluent Type: SEWAGE<br>DISCHARGES - FINAL/TREATED<br>EFFLUENT - NOT WATER COMPANY<br>Permit Number: AB3897CA<br>Permit Version: 1<br>Receiving Water: Groundwater via<br>infiltration system | Status: Effective<br>Issue date: 22/06/2018<br>Effective Date: 22/06/2018<br>Revocation Date: -                                                       |
| 6  | 382m S   | CWMTAWE ISAF GODREGRAIG<br>SWANSEA, GODREGRAIG<br>SWANSEA, SWANSEA                                                                                                         | Effluent Type: UNSPECIFIED<br>Permit Number: BC0021801<br>Permit Version: 1<br>Receiving Water: CATCH PIT TO<br>R/BANK SWANSEA VA                                                              | Status: CONSENT EXPIRED - TIME<br>LIMIT<br>Issue date: 23/12/1964<br>Effective Date: 23/12/1964<br>Revocation Date: 08/02/1994                        |
| 7  | 447m SE  | PONTARDAWE TARENI SITE GODRE-<br>GRAIG, PONTARDAWE TARENI SITE<br>GODRE-GRA, TARENI SITE GODRE-<br>GRAIG SWANSEA, GODRE-GRAIG<br>SWANSEA W GLAM, SWANSEA W<br>GLAM, W GLAM | Effluent Type: UNSPECIFIED<br>Permit Number: BP0009901<br>Permit Version: 1<br>Receiving Water: RIVER TAWE                                                                                     | Status: CONSENT EXPIRED - TIME<br>LIMIT<br>Issue date: 07/02/1986<br>Effective Date: 07/02/1986<br>Revocation Date: 29/09/1992                        |
| C  | 475m SE  | SWO. GODRE'R GRAIG SOC 20.<br>GODRE'R, GODRE'R GRAIG,<br>YSTALYFERA, NEATH PORT TALBOT                                                                                     | Effluent Type: UNSPECIFIED<br>Permit Number: BW2302801<br>Permit Version: 1<br>Receiving Water: RIVER TAWE                                                                                     | Status: NEW CONSENT, BY<br>APPLICATION (WRA 91, SECTION<br>88)<br>Issue date: 20/10/1989<br>Effective Date: 20/10/1989<br>Revocation Date: 30/03/2008 |
| C  | 475m SE  | SWO. GODRE'R GRAIG SOC 20.<br>GODRE'R, GODRE'R GRAIG,<br>YSTALYFERA, NEATH PORT TALBOT                                                                                     | Effluent Type: SEWAGE<br>DISCHARGES - SEWER STORM<br>OVERFLOW - WATER COMPANY<br>Permit Number: BP0343701<br>Permit Version: 1<br>Receiving Water: RIVER TAWE                                  | Status: Surrendered<br>Issue date: 07/03/2005<br>Effective Date: 31/03/2008<br>Revocation Date: -                                                     |
| D  | 478m NE  | PENTWYN (NO 3) COLLIERY GRAIG<br>ROAD, PENTWYN (NO 3) COLLIERY<br>GRAIG RO, GRAIG ROAD GODRE<br>GRAIG YSTALYFER, GODRE GRAIG<br>YSTALYFERA, Ystalyfera                     | Effluent Type: TRADE DISCHARGES -<br>UNSPECIFIED<br>Permit Number: BP0071101<br>Permit Version: 2<br>Receiving Water: RIVER TAWE<br>TRIBUTARY                                                  | Status: Effective<br>Issue date: 26/10/1992<br>Effective Date: 26/01/1993<br>Revocation Date: -                                                       |
| C  | 482m E   | PONTARDAWE TARENI SITE GODRE-<br>GRAIG., PONTARDAWE TARENI SITE<br>GODRE-GRA, TARENI SITE GODRE-<br>GRAIG. SWANSEA, GODRE-GRAIG.<br>SWANSEA W GLAM                         | Effluent Type: UNSPECIFIED<br>Permit Number: BP0009902<br>Permit Version: 1<br>Receiving Water: RIVER TAWE                                                                                     | Status: CONSENT EXPIRED - TIME<br>LIMIT<br>Issue date: 07/02/1986<br>Effective Date: 13/02/1986<br>Revocation Date: 29/09/1992                        |

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



#### 4.14 Pollutant release to surface waters (Red List)

**Records within 500m****0**

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

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

#### 4.15 Pollutant release to public sewer

**Records within 500m****0**

Discharges of Special Category Effluents to the public sewer.

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

#### 4.16 List 1 Dangerous Substances

**Records within 500m****0**

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

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

#### 4.17 List 2 Dangerous Substances

**Records within 500m****1**

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

Features are displayed on the Current industrial land use map on **page 36**

| ID | Location | Name                    | Status | Receiving Water | Authorised Substances |
|----|----------|-------------------------|--------|-----------------|-----------------------|
| D  | 478m NE  | Pentwyn Colliery (no 3) | Active | None            | Iron                  |

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

#### 4.18 Pollution Incidents (EA/NRW)

**Records within 500m****3**

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

Features are displayed on the Current industrial land use map on **page 36**



| ID | Location | Details                                                                                                                             |                                                                                           |
|----|----------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| B  | 321m SE  | Incident Date: 10/08/2016<br>Incident Identification: 1700077<br>Pollutant: Oils and Fuels<br>Pollutant Description: Diesel         | Water Impact: No Details<br>Land Impact: Category 4 (No Impact)<br>Air Impact: No Details |
| B  | 321m SE  | Incident Date: 10/08/2016<br>Incident Identification: 1700077<br>Pollutant: -<br>Pollutant Description: -                           | Water Impact: No Details<br>Land Impact: Category 4 (No Impact)<br>Air Impact: No Details |
| 8  | 498m S   | Incident Date: 17/10/2014<br>Incident Identification: 1287703<br>Pollutant: Sewage Materials<br>Pollutant Description: Crude Sewage | Water Impact: -<br>Land Impact: Category 3 (Minor)<br>Air Impact: Category 4 (No Impact)  |

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

#### 4.19 Pollution inventory substances

**Records within 500m**

**0**

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

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

#### 4.20 Pollution inventory waste transfers

**Records within 500m**

**0**

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

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

#### 4.21 Pollution inventory radioactive waste

**Records within 500m**

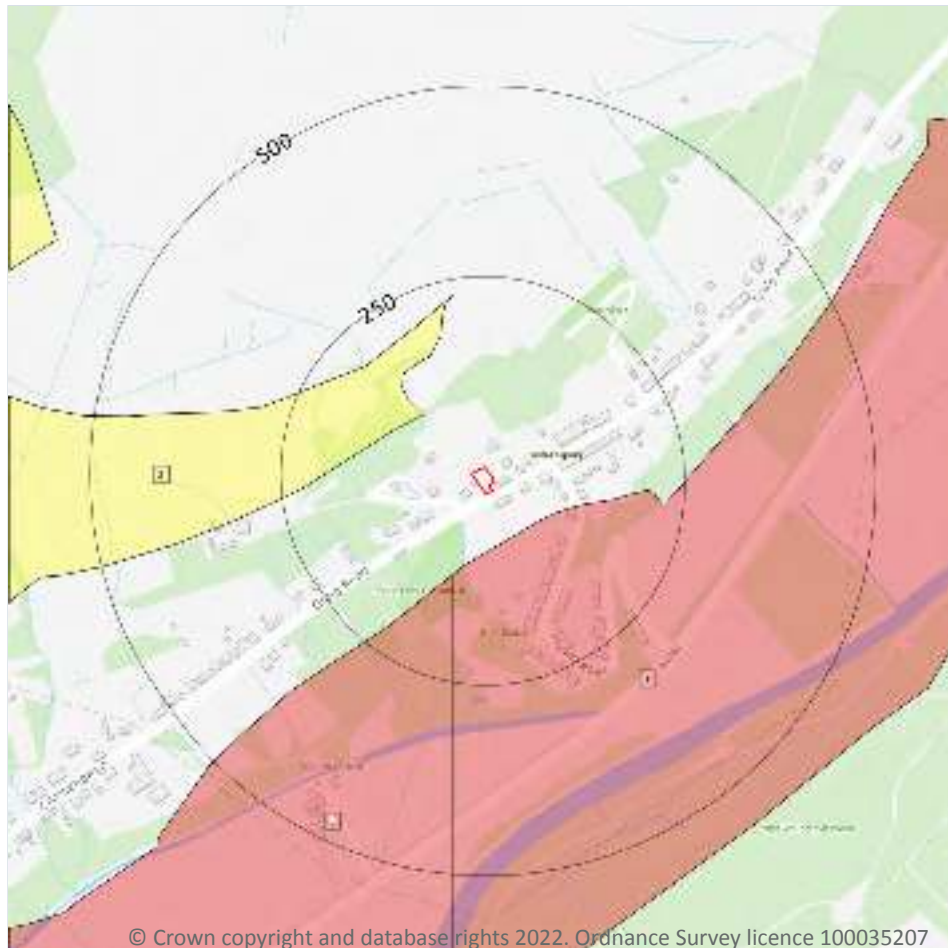
**0**

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

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



## 5 Hydrogeology - Superficial aquifer



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

### 5.1 Superficial aquifer

Records within 500m

3

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 43**

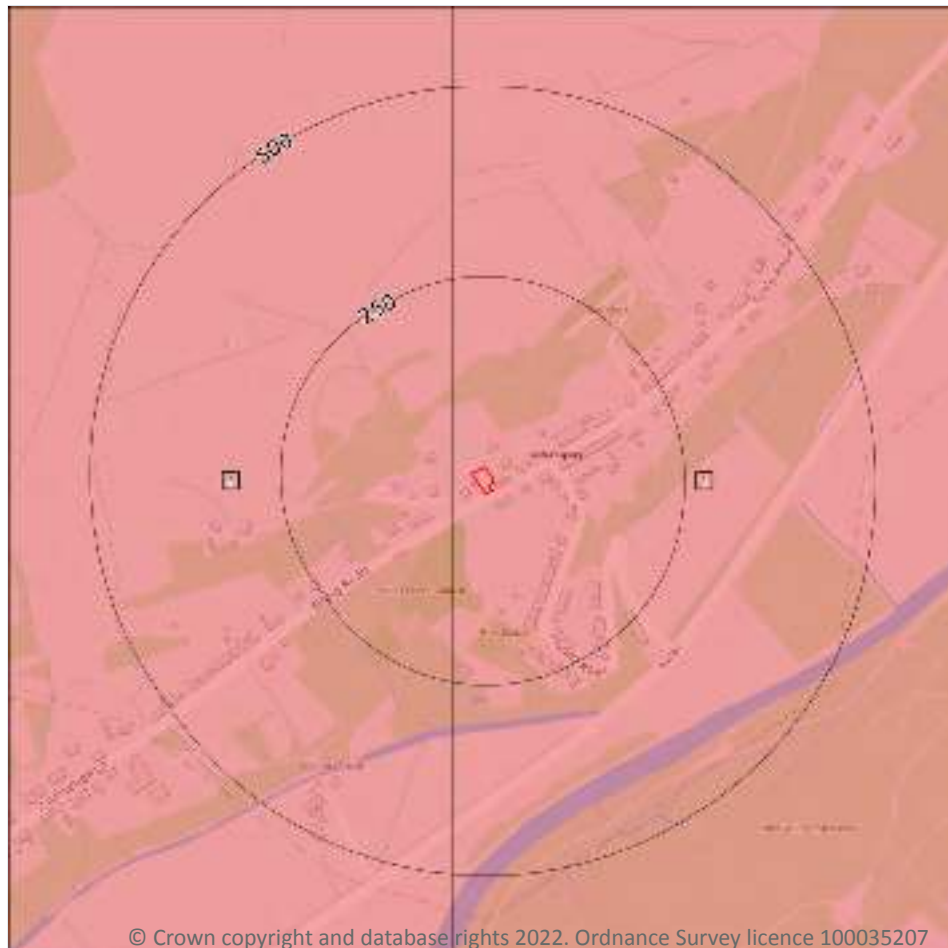
| ID | Location | Designation                | Description                                                                                                                                                                                                                                             |
|----|----------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | 65m SE   | Secondary A                | Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers                  |
| 2  | 99m NW   | Secondary Undifferentiated | Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type |

| ID | Location | Designation | Description                                                                                                                                                                                                                            |
|----|----------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3  | 115m SW  | Secondary A | Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers |

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



## Bedrock aquifer



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

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### 5.2 Bedrock aquifer

#### Records within 500m

2

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 45**

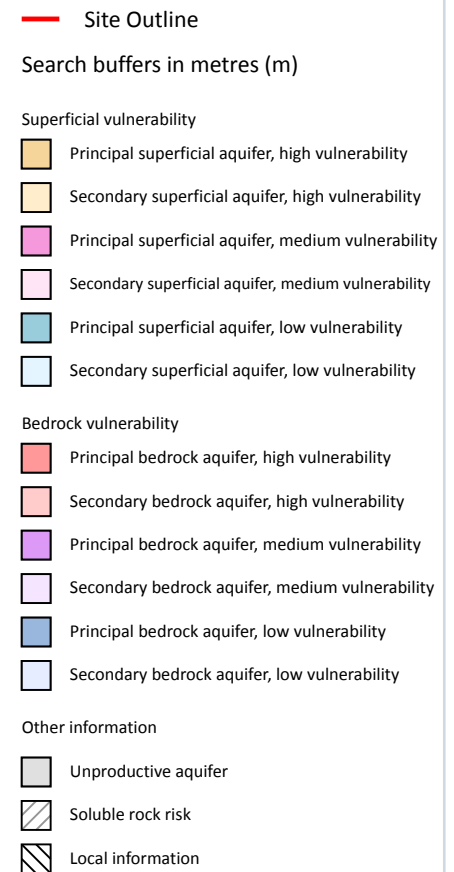
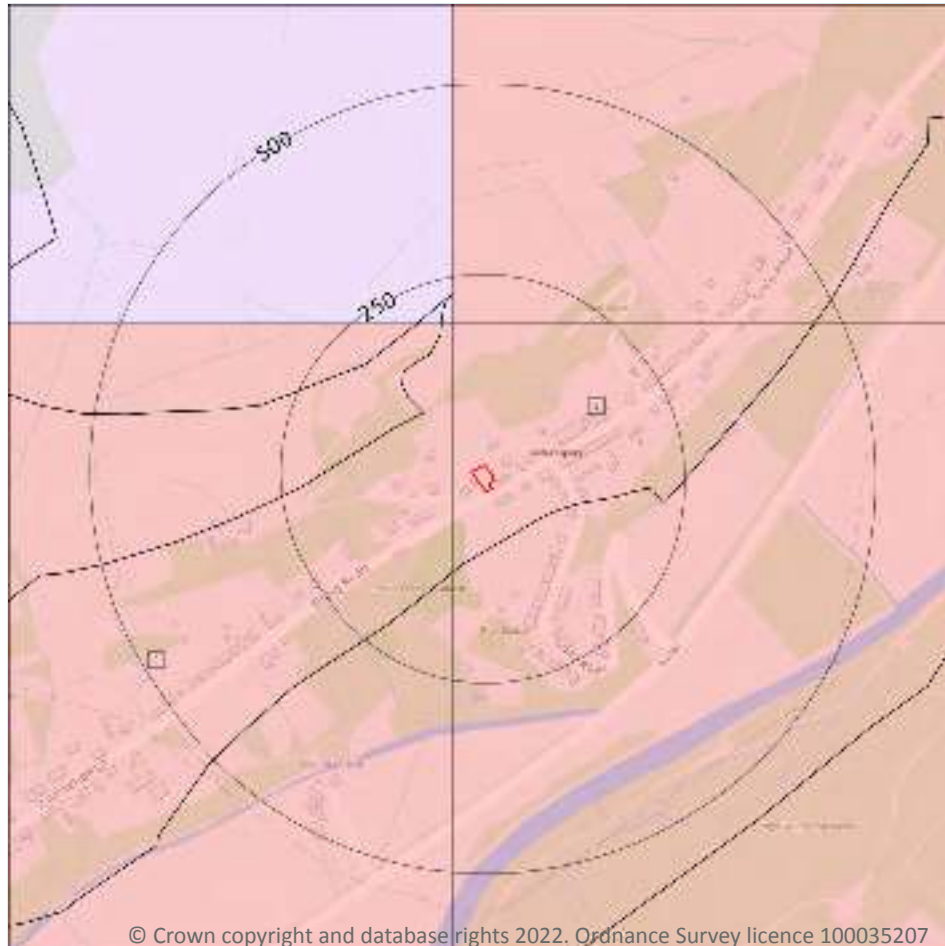
| ID | Location | Designation | Description                                                                                                                                                                                                                                   |
|----|----------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | On site  | Secondary A | <b>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</b> |
| 2  | 26m W    | Secondary A | Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers        |



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



## Groundwater vulnerability



### 5.3 Groundwater vulnerability

#### Records within 50m

2

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

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

Features are displayed on the Groundwater vulnerability map on **page 47**

| ID | Location | Summary                                                                                                                                                                   | Soil / surface                                                                                         | Superficial geology                                                                                                                                 | Bedrock geology                                                                                                 |
|----|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| 1  | On site  | <b>Summary Classification:</b><br>Secondary bedrock aquifer - High Vulnerability<br><b>Combined classification:</b><br>Productive Bedrock Aquifer, No Superficial Aquifer | <b>Leaching class:</b> High<br><b>Infiltration value:</b> 40-70%<br><b>Dilution value:</b> >550mm/year | <b>Vulnerability:</b> -<br><b>Aquifer type:</b> -<br><b>Thickness:</b> <3m<br><b>Patchiness value:</b> <90%<br><b>Recharge potential:</b> High      | <b>Vulnerability:</b> High<br><b>Aquifer type:</b> Secondary<br><b>Flow mechanism:</b> Well connected fractures |
| 2  | 25m W    | <b>Summary Classification:</b><br>Secondary bedrock aquifer - High Vulnerability<br><b>Combined classification:</b><br>Productive Bedrock Aquifer, No Superficial Aquifer | <b>Leaching class:</b> High<br><b>Infiltration value:</b> 40-70%<br><b>Dilution value:</b> >550mm/year | <b>Vulnerability:</b> -<br><b>Aquifer type:</b> -<br><b>Thickness:</b> 3-10m<br><b>Patchiness value:</b> <90%<br><b>Recharge potential:</b> No Data | <b>Vulnerability:</b> High<br><b>Aquifer type:</b> Secondary<br><b>Flow mechanism:</b> Well connected fractures |

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

## 5.4 Groundwater vulnerability- soluble rock risk

### Records on site

0

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

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

## 5.5 Groundwater vulnerability- local information

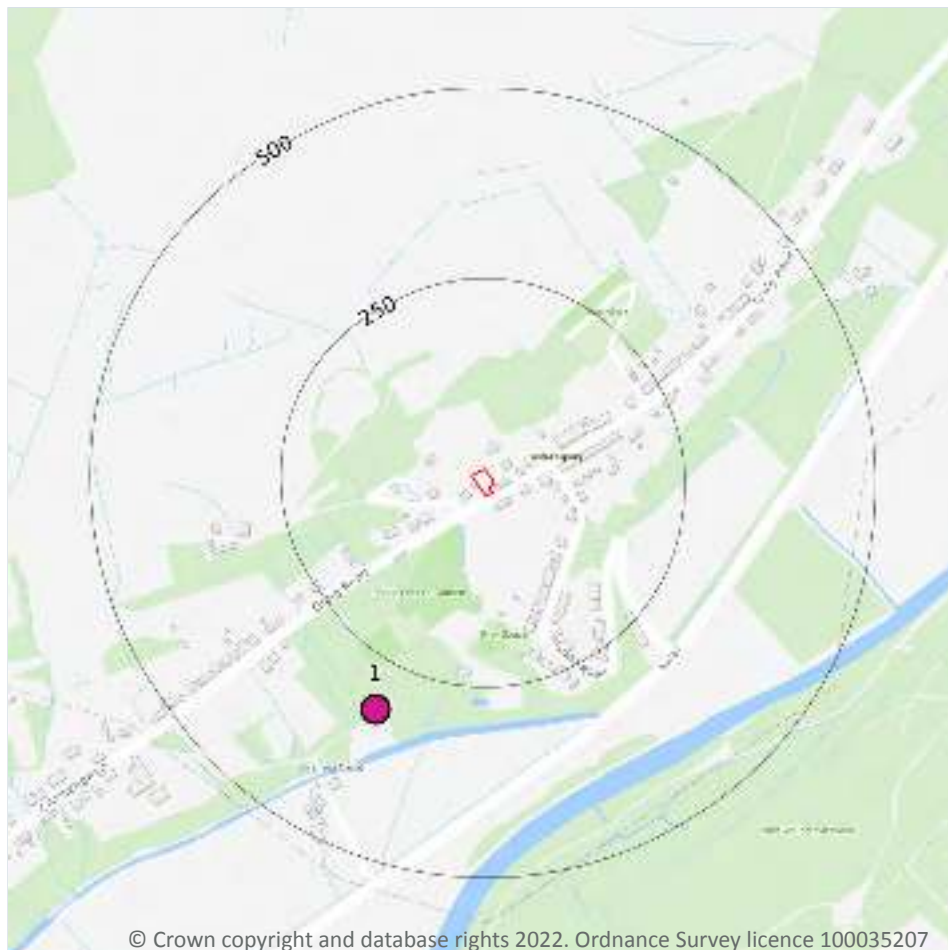
### Records on site

0

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

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

## Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)
- Source Protection Zone 1  
Inner catchment
- Source Protection Zone 2  
Outer catchment
- Source Protection Zone 3  
Total catchment
- Source Protection Zone 4  
Zone of Special Interest
- Source Protection Zone 1c  
Inner catchment - confined aquifer
- Source Protection Zone 2c  
Outer catchment - confined aquifer
- Source Protection Zone 3c  
Total catchment - confined aquifer
- Drinking water abstraction licences  
Polygon features
- Drinking water abstraction licences  
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

### 5.6 Groundwater abstractions

#### Records within 2000m

1

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 49**

| ID | Location | Details                                                                                                                                                                                                                             |                                                                                                                                                                                                                                 |
|----|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | 314m SW  | Status: Historical<br>Licence No: 22/59/1/0022<br>Details: General Farming & Domestic<br>Direct Source: EAW Groundwater<br>Point: SPRING AT CWMTAWE ISAF<br>Data Type: Point<br>Name: Morris<br>Easting: 274900<br>Northing: 206500 | Annual Volume (m <sup>3</sup> ): -<br>Max Daily Volume (m <sup>3</sup> ): -<br>Original Application No: -<br>Original Start Date: -<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 31/01/1966<br>Version End Date: - |

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

## 5.7 Surface water abstractions

### Records within 2000m

3

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 49**

| ID | Location | Details                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                |
|----|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -  | 1435m NW | Status: Historical<br>Licence No: 22/59/1/0117<br>Details: Dust Suppression<br>Direct Source: EAW Surface Water<br>Point: INLAND WATER KNOWN AS CWM DU RIVER<br>Data Type: Point<br>Name: Aggregate Industries UK Ltd<br>Easting: 273830<br>Northing: 207600 | Annual Volume (m <sup>3</sup> ): 20000<br>Max Daily Volume (m <sup>3</sup> ): 88<br>Original Application No: -<br>Original Start Date: 06/07/1996<br>Expiry Date: 31/08/2017<br>Issue No: 101<br>Version Start Date: 20/05/2013<br>Version End Date: -         |
| -  | 1442m NW | Status: Active<br>Licence No: WA/059/0001/0024<br>Details: Dust Suppression - High<br>Direct Source: Cwm Du<br>Point: -<br>Data Type: Point<br>Name: -<br>Easting: 273823<br>Northing: 207602                                                                | Annual Volume (m <sup>3</sup> ): 20,000<br>Max Daily Volume (m <sup>3</sup> ): 192<br>Original Application No: -<br>Original Start Date: Sep 1 2017 12:00AM<br>Expiry Date: Mar 31 2029 12:00AM<br>Issue No: -<br>Version Start Date: -<br>Version End Date: - |



| ID | Location | Details                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                 |
|----|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -  | 1741m NE | Status: Historical<br>Licence No: 22/59/1/0107<br>Details: Effluent/Slurry Dilution<br>Direct Source: EAW Surface Water<br>Point: SWANSEA CANAL SWANSEA VALLEY<br>Data Type: Point<br>Name: British Waterways Board<br>Easting: 276250<br>Northing: 208070 | Annual Volume (m <sup>3</sup> ): -<br>Max Daily Volume (m <sup>3</sup> ): -<br>Original Application No: -<br>Original Start Date: -<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 11/08/1992<br>Version End Date: - |

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

## 5.8 Potable abstractions

|                             |          |
|-----------------------------|----------|
| <b>Records within 2000m</b> | <b>0</b> |
|-----------------------------|----------|

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

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

## 5.9 Source Protection Zones

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>0</b> |
|----------------------------|----------|

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

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

## 5.10 Source Protection Zones (confined aquifer)

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>0</b> |
|----------------------------|----------|

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

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

## 6 Hydrology



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

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### 6.1 Water Network (OS MasterMap)

Records within 250m

26

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

Features are displayed on the Hydrology map on **page 52**

| ID | Location | Type of water feature                               | Ground level      | Permanence                                                      | Name |
|----|----------|-----------------------------------------------------|-------------------|-----------------------------------------------------------------|------|
| B  | 31m SW   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |

| ID | Location | Type of water feature                               | Ground level      | Permanence                                                      | Name |
|----|----------|-----------------------------------------------------|-------------------|-----------------------------------------------------------------|------|
| B  | 75m SW   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| B  | 75m SW   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| 2  | 91m W    | Inland river not influenced by normal tidal action. | Not provided      | Watercourse contains water year round (in normal circumstances) | -    |
| D  | 102m N   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| E  | 133m S   | Inland river not influenced by normal tidal action. | Not provided      | Watercourse contains water year round (in normal circumstances) | -    |
| F  | 140m SW  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| G  | 142m W   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| G  | 142m W   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| F  | 153m SW  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| E  | 154m SW  | Inland river not influenced by normal tidal action. | Not provided      | Watercourse contains water year round (in normal circumstances) | -    |
| G  | 180m W   | Lake, loch or reservoir.                            | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| C  | 182m E   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| H  | 185m SW  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |

| ID | Location | Type of water feature                               | Ground level      | Permanence                                                      | Name |
|----|----------|-----------------------------------------------------|-------------------|-----------------------------------------------------------------|------|
| C  | 192m E   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| H  | 194m SW  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| I  | 200m NW  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| C  | 207m E   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| C  | 214m E   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| H  | 215m SW  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| H  | 215m SW  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| J  | 221m S   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| H  | 232m SW  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| C  | 237m E   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| K  | 240m NW  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| L  | 241m SW  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |

*This data is sourced from the Ordnance Survey.*



## 6.2 Surface water features

### Records within 250m

**18**

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

Features are displayed on the Hydrology map on **page 52**

*This data is sourced from the Ordnance Survey.*

## 6.3 WFD Surface water body catchments

### Records on site

**1**

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

Features are displayed on the Hydrology map on **page 52**

| ID | Location | Type               | Water body catchment | Water body ID  | Operational catchment | Management catchment |
|----|----------|--------------------|----------------------|----------------|-----------------------|----------------------|
| A  | On site  | River WB catchment | Cwm Du               | GB110059032181 | Tawe                  | Tawe to Cadoxton     |

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

## 6.4 WFD Surface water bodies

### Records identified

**1**

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

Features are displayed on the Hydrology map on **page 52**

| ID | Location | Type  | Name   | Water body ID  | Overall rating | Chemical rating | Ecological rating | Year |
|----|----------|-------|--------|----------------|----------------|-----------------|-------------------|------|
| -  | 1136m W  | River | Cwm Du | GB110059032181 | Moderate       | Good            | Moderate          | 2016 |

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



## 6.5 WFD Groundwater bodies

### Records on site

**1**

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

Features are displayed on the Hydrology map on **page 52**

| ID | Location | Name                                      | Water body ID  | Overall rating | Chemical rating | Quantitative | Year |
|----|----------|-------------------------------------------|----------------|----------------|-----------------|--------------|------|
| 1  | On site  | Swansea<br>Carboniferous Coal<br>Measures | GB41002G201000 | Poor           | Poor            | Good         | 2017 |

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



## 7 River and coastal flooding

### 7.1 Risk of flooding from rivers and the sea

Records within 50m

0

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

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

### 7.2 Historical Flood Events

Records within 250m

0

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

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

### 7.3 Flood Defences

Records within 250m

0

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

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

## 7.4 Areas Benefiting from Flood Defences

Records within 250m

0

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

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

## 7.5 Flood Storage Areas

Records within 250m

0

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

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



## River and coastal flooding - Flood Zones

### 7.6 Flood Zone 2

Records within 50m

0

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

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

### 7.7 Flood Zone 3

Records within 50m

0

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

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

## 8 Surface water flooding

### 8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

Negligible

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

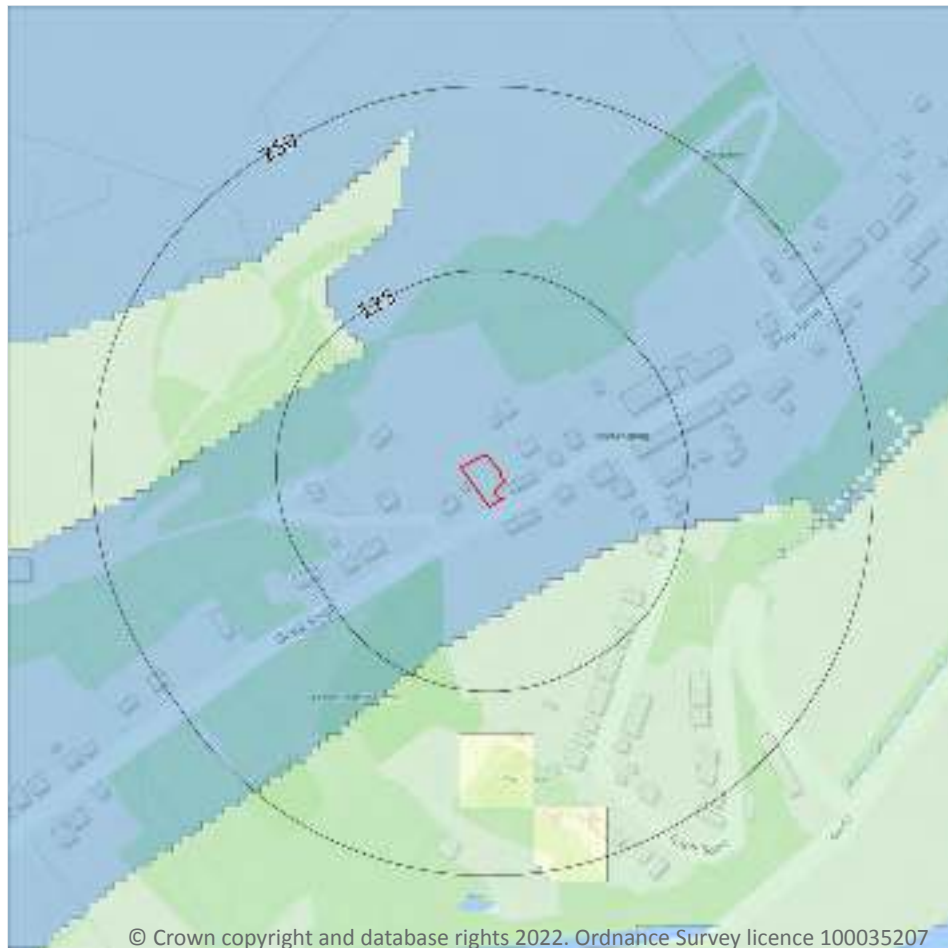
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site. The table below shows the maximum flood depths for a range of return periods for the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

| Return period  | Maximum modelled depth |
|----------------|------------------------|
| 1 in 1000 year | Negligible             |
| 1 in 250 year  | Negligible             |
| 1 in 100 year  | Negligible             |
| 1 in 30 year   | Negligible             |

*This data is sourced from Ambiental Risk Analytics.*



## 9 Groundwater flooding



- Site Outline
- Search buffers in metres (m)
- High
  - Moderate - High
  - Moderate
  - Low
  - Negligible

### 9.1 Groundwater flooding

**Highest risk on site**

**Negligible**

**Highest risk within 50m**

**Negligible**

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

Features are displayed on the Groundwater flooding map on **page 61**

*This data is sourced from Ambiantal Risk Analytics.*

## 10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- + Local Nature Reserves (LNR)
- Designated Ancient Woodland

### 10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

5

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

Features are displayed on the Environmental designations map on **page 62**

| ID | Location | Name                     | Data source             |
|----|----------|--------------------------|-------------------------|
| E  | 1023m W  | COED CWM DU, CILMAENGWYN | Natural Resources Wales |

| ID | Location | Name           | Data source             |
|----|----------|----------------|-------------------------|
| -  | 1213m S  | CILYBEBYLL     | Natural Resources Wales |
| -  | 1307m S  | CILYBEBYLL     | Natural Resources Wales |
| 25 | 1417m NW | GWRHYD MEADOWS | Natural Resources Wales |
| -  | 1479m S  | CILYBEBYLL     | Natural Resources Wales |

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

## 10.2 Conserved wetland sites (Ramsar sites)

|                             |          |
|-----------------------------|----------|
| <b>Records within 2000m</b> | <b>0</b> |
|-----------------------------|----------|

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

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

## 10.3 Special Areas of Conservation (SAC)

|                             |          |
|-----------------------------|----------|
| <b>Records within 2000m</b> | <b>0</b> |
|-----------------------------|----------|

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

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

## 10.4 Special Protection Areas (SPA)

|                             |          |
|-----------------------------|----------|
| <b>Records within 2000m</b> | <b>0</b> |
|-----------------------------|----------|

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

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

## 10.5 National Nature Reserves (NNR)

Records within 2000m

0

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

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

## 10.6 Local Nature Reserves (LNR)

Records within 2000m

1

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

Features are displayed on the Environmental designations map on **page 62**

| ID | Location | Name          | Data source             |
|----|----------|---------------|-------------------------|
| 4  | 284m S   | SWANSEA CANAL | Natural Resources Wales |

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

## 10.7 Designated Ancient Woodland

Records within 2000m

48

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

Features are displayed on the Environmental designations map on **page 62**

| ID | Location | Name    | Woodland Type                  |
|----|----------|---------|--------------------------------|
| 1  | 49m SW   | Unknown | Restored Ancient Woodland Site |
| 2  | 74m SW   | Unknown | Restored Ancient Woodland Site |
| 3  | 160m S   | Unknown | Restored Ancient Woodland Site |
| 5  | 485m SW  | Unknown | Restored Ancient Woodland Site |
| 6  | 499m E   | Unknown | Ancient Semi Natural Woodland  |
| 7  | 535m SE  | Unknown | Restored Ancient Woodland Site |



| ID | Location | Name    | Woodland Type                             |
|----|----------|---------|-------------------------------------------|
| 8  | 545m SE  | Unknown | Restored Ancient Woodland Site            |
| A  | 569m SE  | Unknown | Ancient Semi Natural Woodland             |
| B  | 600m SW  | Unknown | Restored Ancient Woodland Site            |
| B  | 628m SW  | Unknown | Restored Ancient Woodland Site            |
| 9  | 634m SE  | Unknown | Ancient Semi Natural Woodland             |
| A  | 655m SE  | Unknown | Ancient Semi Natural Woodland             |
| C  | 869m SE  | Unknown | Plantation on Ancient Woodland Site       |
| C  | 873m SE  | Unknown | Ancient Woodland Site of Unknown Category |
| 10 | 902m SW  | Unknown | Ancient Semi Natural Woodland             |
| 11 | 916m S   | Unknown | Ancient Semi Natural Woodland             |
| D  | 916m E   | Unknown | Ancient Woodland Site of Unknown Category |
| 12 | 988m W   | Unknown | Ancient Semi Natural Woodland             |
| D  | 1001m E  | Unknown | Ancient Semi Natural Woodland             |
| D  | 1029m E  | Unknown | Ancient Woodland Site of Unknown Category |
| E  | 1041m W  | Unknown | Ancient Semi Natural Woodland             |
| 13 | 1087m SW | Unknown | Ancient Semi Natural Woodland             |
| 14 | 1106m S  | Unknown | Ancient Semi Natural Woodland             |
| 15 | 1119m S  | Unknown | Ancient Semi Natural Woodland             |
| 16 | 1146m SW | Unknown | Ancient Semi Natural Woodland             |
| 17 | 1148m SE | Unknown | Ancient Semi Natural Woodland             |
| 19 | 1250m S  | Unknown | Ancient Semi Natural Woodland             |
| 20 | 1280m SW | Unknown | Ancient Semi Natural Woodland             |
| -  | 1339m W  | Unknown | Ancient Semi Natural Woodland             |
| 23 | 1377m NW | Unknown | Ancient Semi Natural Woodland             |
| 24 | 1379m NW | Unknown | Ancient Semi Natural Woodland             |
| -  | 1462m W  | Unknown | Ancient Semi Natural Woodland             |
| 28 | 1484m SW | Unknown | Restored Ancient Woodland Site            |
| 29 | 1495m SW | Unknown | Ancient Semi Natural Woodland             |

| ID | Location | Name    | Woodland Type                       |
|----|----------|---------|-------------------------------------|
| -  | 1511m W  | Unknown | Ancient Semi Natural Woodland       |
| -  | 1585m N  | Unknown | Plantation on Ancient Woodland Site |
| -  | 1586m SW | Unknown | Ancient Semi Natural Woodland       |
| -  | 1641m SW | Unknown | Ancient Semi Natural Woodland       |
| -  | 1657m S  | Unknown | Restored Ancient Woodland Site      |
| -  | 1687m NE | Unknown | Ancient Semi Natural Woodland       |
| -  | 1709m SW | Unknown | Restored Ancient Woodland Site      |
| -  | 1721m SW | Unknown | Restored Ancient Woodland Site      |
| -  | 1728m W  | Unknown | Ancient Semi Natural Woodland       |
| -  | 1797m NW | Unknown | Ancient Semi Natural Woodland       |
| -  | 1842m SW | Unknown | Ancient Semi Natural Woodland       |
| -  | 1889m S  | Unknown | Ancient Semi Natural Woodland       |
| -  | 1973m SW | Unknown | Ancient Semi Natural Woodland       |
| -  | 1978m NW | Unknown | Ancient Semi Natural Woodland       |

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

## 10.8 Biosphere Reserves

**Records within 2000m**

**0**

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

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

## 10.9 Forest Parks

**Records within 2000m**

**0**

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

*This data is sourced from the Forestry Commission.*



## 10.10 Marine Conservation Zones

Records within 2000m

0

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

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

## 10.11 Green Belt

Records within 2000m

0

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

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

## 10.12 Proposed Ramsar sites

Records within 2000m

0

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

*This data is sourced from Natural England.*

## 10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

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

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

## 10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

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

*This data is sourced from Natural England.*



## 10.15 Nitrate Sensitive Areas

Records within 2000m

0

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

*This data is sourced from Natural England.*

## 10.16 Nitrate Vulnerable Zones

Records within 2000m

0

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

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

## SSSI Impact Zones and Units

### 10.17 SSSI Impact Risk Zones

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

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

*This data is sourced from Natural England.*

### 10.18 SSSI Units

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

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

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

## 11 Visual and cultural designations

### 11.1 World Heritage Sites

Records within 250m

0

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

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

### 11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

### 11.3 National Parks

Records within 250m

0

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

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

### 11.4 Listed Buildings

Records within 250m

0

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



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

## 11.5 Conservation Areas

**Records within 250m**

**0**

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

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

## 11.6 Scheduled Ancient Monuments

**Records within 250m**

**0**

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

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

## 11.7 Registered Parks and Gardens

**Records within 250m**

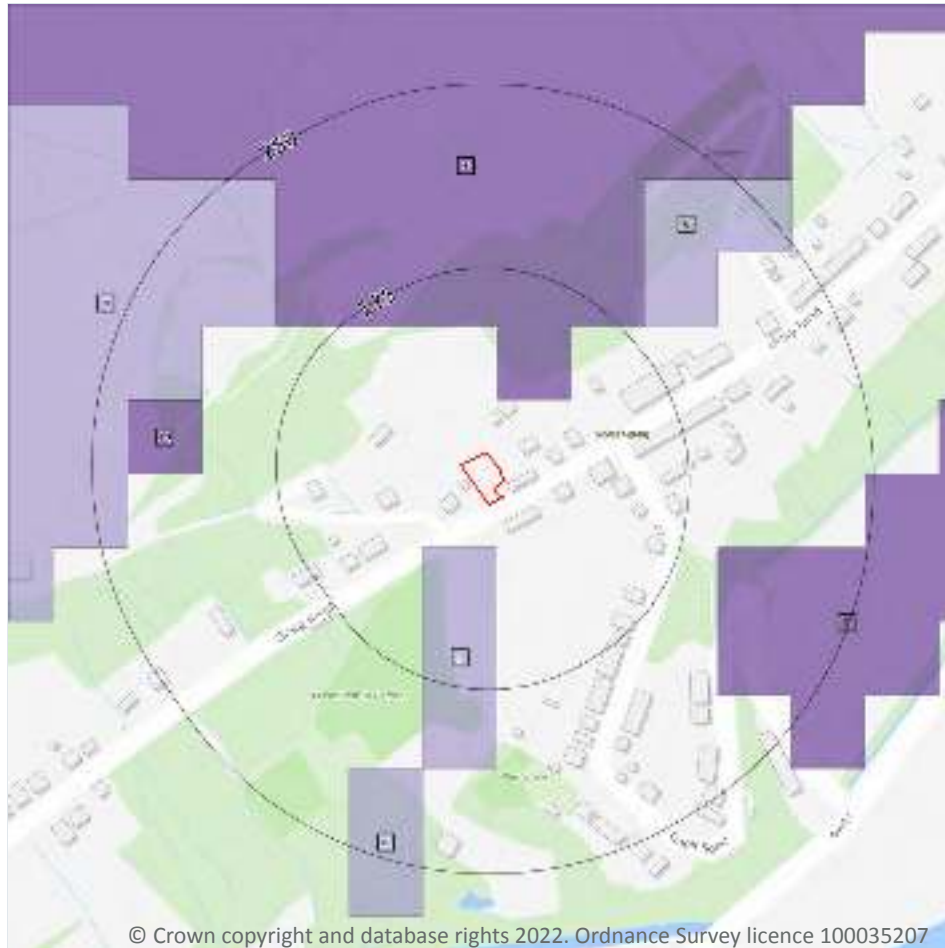
**0**

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

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



## 12 Agricultural designations



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

### 12.1 Agricultural Land Classification

Records within 250m

7

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

Features are displayed on the Agricultural designations map on **page 72**

| ID | Location | Classification | Description                         |
|----|----------|----------------|-------------------------------------|
| 2  | 29m S    | Grade 4        | Poor quality agricultural land      |
| 3  | 36m N    | Grade 5        | Very poor quality agricultural land |
| 6  | 137m NE  | Grade 4        | Poor quality agricultural land      |



| ID | Location | Classification | Description                         |
|----|----------|----------------|-------------------------------------|
| 8  | 150m E   | Grade 5        | Very poor quality agricultural land |
| 9  | 157m NW  | Grade 4        | Poor quality agricultural land      |
| 10 | 176m W   | Grade 5        | Very poor quality agricultural land |
| 11 | 184m S   | Grade 4        | Poor quality agricultural land      |

*This data is sourced from Natural Resources Wales.*

## 12.2 Open Access Land

**Records within 250m**

**0**

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

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

## 12.3 Tree Felling Licences

**Records within 250m**

**0**

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

*This data is sourced from the Forestry Commission.*

## 12.4 Environmental Stewardship Schemes

**Records within 250m**

**0**

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

*This data is sourced from Natural England.*



## 12.5 Countryside Stewardship Schemes

Records within 250m

0

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

*This data is sourced from Natural England.*



## 13 Habitat designations

### 13.1 Priority Habitat Inventory

Records within 250m

0

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

*This data is sourced from Natural England.*

### 13.2 Habitat Networks

Records within 250m

0

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

*This data is sourced from Natural England.*

### 13.3 Open Mosaic Habitat

Records within 250m

0

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

*This data is sourced from Natural England.*

### 13.4 Limestone Pavement Orders

Records within 250m

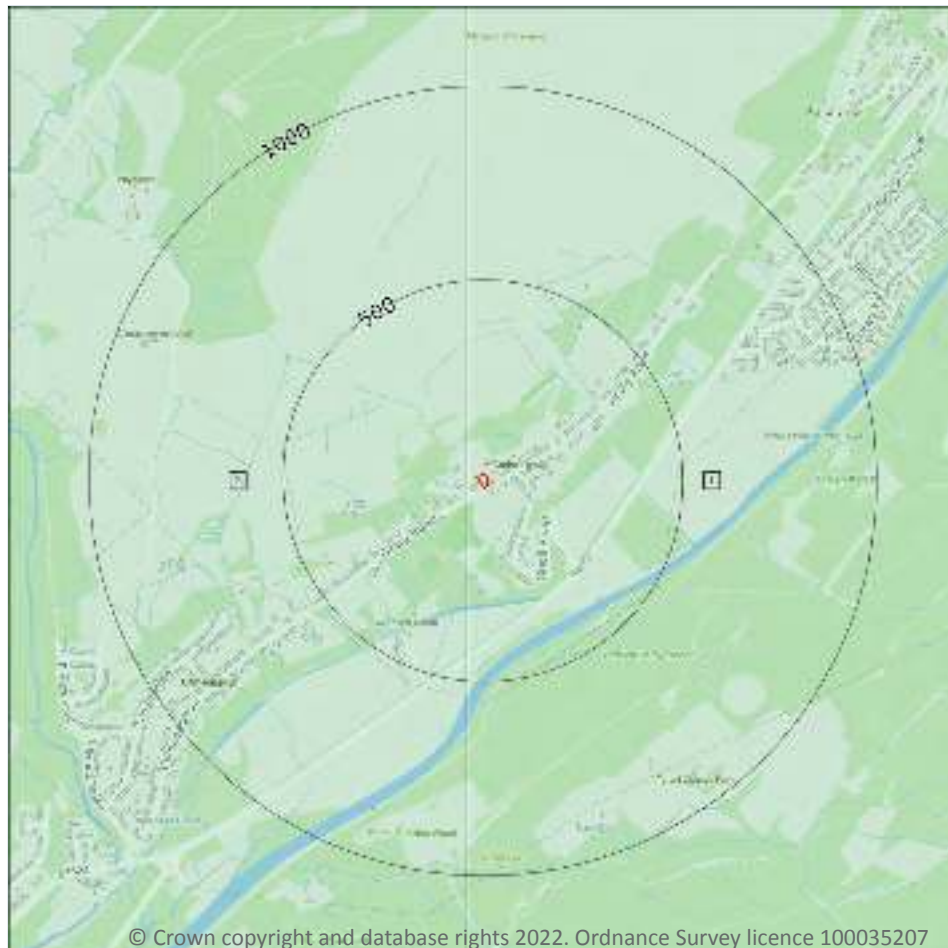
0

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

*This data is sourced from Natural England.*



## 14 Geology 1:10,000 scale - Availability



- Site Outline
- Search buffers in metres (m)
- Full coverage
  - Partial coverage
  - No coverage

### 14.1 10k Availability

#### Records within 500m

2

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

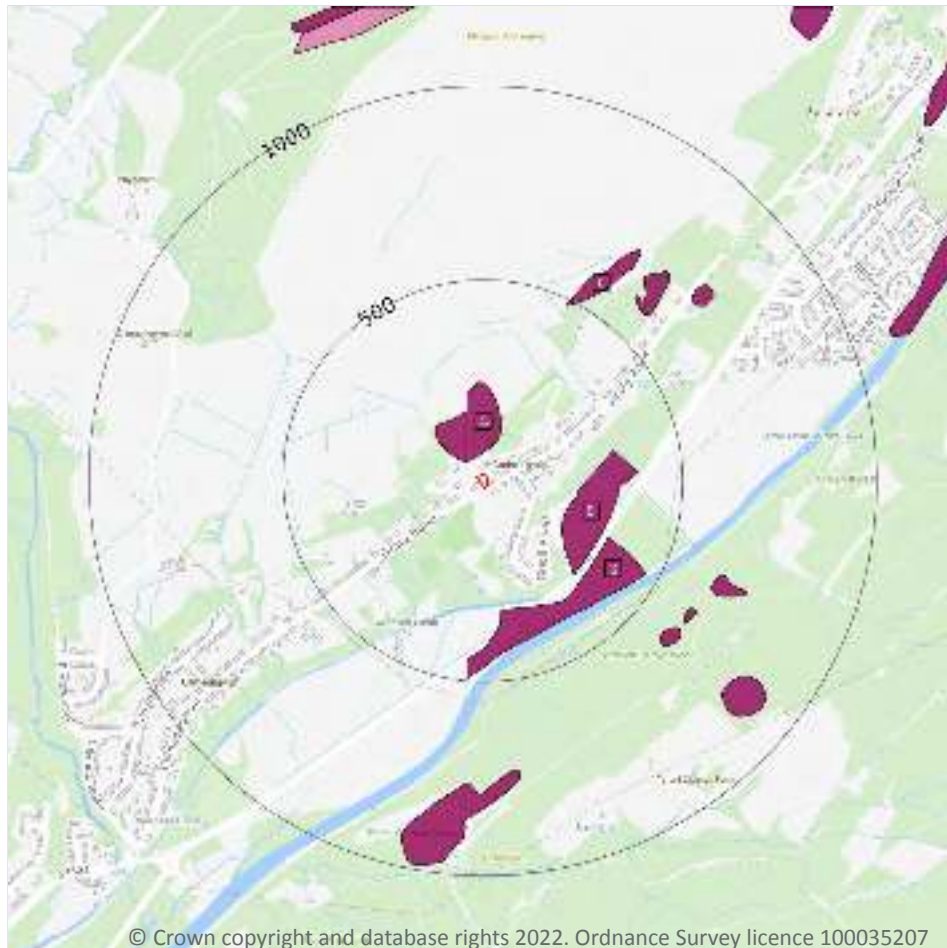
Features are displayed on the Geology 1:10,000 scale - Availability map on **page 76**

| ID | Location | Artificial | Superficial | Bedrock | Mass movement | Sheet No. |
|----|----------|------------|-------------|---------|---------------|-----------|
| 1  | On site  | Full       | Full        | Full    | Full          | SN70NE    |
| 2  | 26m W    | Full       | Full        | Full    | Full          | SN70NW    |

*This data is sourced from the British Geological Survey.*



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



- Site Outline
- Search buffers in metres (m)
- Reclaimed ground
  - Made ground
  - Worked ground
  - Infilled ground
  - Disturbed ground
  - Landscaped ground

### 14.2 Artificial and made ground (10k)

#### Records within 500m

5

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

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 77**

| ID | Location | LEX Code  | Description             | Rock description   |
|----|----------|-----------|-------------------------|--------------------|
| A  | 48m NW   | MGR-ARTDP | Made Ground (Undivided) | Artificial Deposit |
| A  | 48m NW   | MGR-ARTDP | Made Ground (Undivided) | Artificial Deposit |
| 1  | 211m SE  | MGR-ARTDP | Made Ground (Undivided) | Artificial Deposit |
| 2  | 319m S   | MGR-ARTDP | Made Ground (Undivided) | Artificial Deposit |

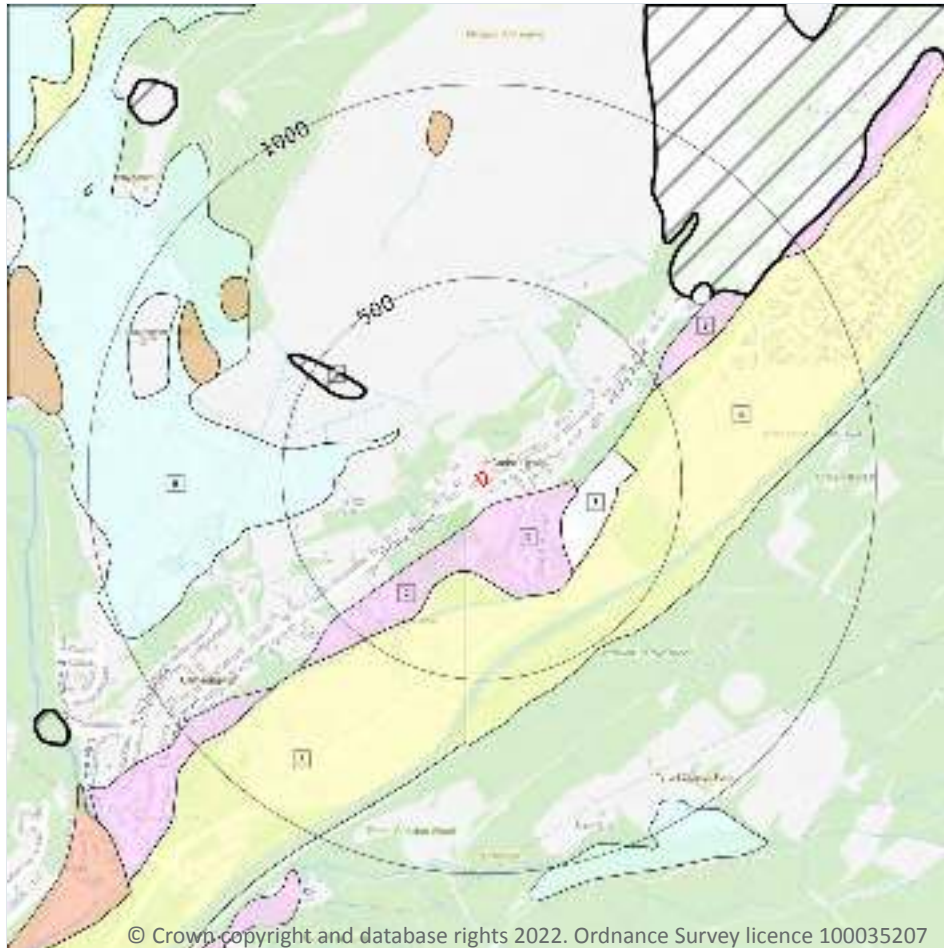


| ID | Location | LEX Code  | Description             | Rock description   |
|----|----------|-----------|-------------------------|--------------------|
| 3  | 483m NE  | MGR-ARTDP | Made Ground (Undivided) | Artificial Deposit |

*This data is sourced from the British Geological Survey.*



## Geology 1:10,000 scale - Superficial



**Site Outline**

Search buffers in metres (m)

**Landslip (10k)**

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

### 14.3 Superficial geology (10k)

#### Records within 500m

7

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 79**

| ID | Location | LEX Code      | Description                                                                          | Rock description           |
|----|----------|---------------|--------------------------------------------------------------------------------------|----------------------------|
| 1  | 53m SE   | GFDUD-XSV     | Glaciofluvial Deposits, Devensian - Sand And Gravel                                  | Sand And Gravel            |
| 2  | 114m SW  | GFDUD-XSV     | Glaciofluvial Deposits, Devensian - Sand And Gravel                                  | Sand And Gravel            |
| 3  | 211m SE  | SUPNM-UNKNOWN | Superficial Theme Not Mapped [for Digital Map Use Only] - Unknown/unclassified Entry | Unknown/unclassified Entry |

| ID | Location | LEX Code   | Description                                         | Rock description            |
|----|----------|------------|-----------------------------------------------------|-----------------------------|
| 4  | 224m S   | ALV-XCZSV  | Alluvium - Clay, Silt, Sand And Gravel              | Clay, Silt, Sand And Gravel |
| 5  | 226m S   | ALV-XCZSV  | Alluvium - Clay, Silt, Sand And Gravel              | Clay, Silt, Sand And Gravel |
| 6  | 226m NW  | TILLD-DMTN | Till, Devensian - Diamicton                         | Diamicton                   |
| 8  | 473m NE  | GFDUD-XSV  | Glaciofluvial Deposits, Devensian - Sand And Gravel | Sand And Gravel             |

*This data is sourced from the British Geological Survey.*

## 14.4 Landslip (10k)

### Records within 500m

**1**

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 79**

| ID | Location | LEX Code     | Description        | Rock description           |
|----|----------|--------------|--------------------|----------------------------|
| 7  | 356m NW  | SLIP-UNKNOWN | Landslide Deposits | Unknown/unclassified Entry |

*This data is sourced from the British Geological Survey.*



## Geology 1:10,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- Bedrock faults and other linear features (10k)
- Bedrock geology (10k)  
Please see table for more details.

### 14.5 Bedrock geology (10k)

Records within 500m

19

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 81**

| ID | Location | LEX Code  | Description                                       | Rock age         |
|----|----------|-----------|---------------------------------------------------|------------------|
| 1  | On site  | LLFB-SDST | Llynfi Member - Sandstone                         | Bolsovia Sub-age |
| 2  | 26m W    | LLFB-SDST | Llynfi Member - Sandstone                         | Bolsovia Sub-age |
| 3  | 47m NW   | LLFB-MDSS | Llynfi Member - Mudstone, Siltstone And Sandstone | Bolsovia Sub-age |
| 4  | 48m NW   | LLFB-MDSS | Llynfi Member - Mudstone, Siltstone And Sandstone | Bolsovia Sub-age |



| ID | Location | LEX Code   | Description                                                                    | Rock age                                    |
|----|----------|------------|--------------------------------------------------------------------------------|---------------------------------------------|
| 5  | 66m NW   | LLFB-SDST  | Llynfi Member - Sandstone                                                      | Bolsoviaian Sub-age                         |
| 7  | 72m NW   | LLFB-SDST  | Llynfi Member - Sandstone                                                      | Bolsoviaian Sub-age                         |
| 10 | 109m NW  | LLFB-MDSS  | Llynfi Member - Mudstone, Siltstone And Sandstone                              | Bolsoviaian Sub-age                         |
| 11 | 127m NW  | LLFB-SDST  | Llynfi Member - Sandstone                                                      | Bolsoviaian Sub-age                         |
| 13 | 153m N   | LLFB-SDST  | Llynfi Member - Sandstone                                                      | Bolsoviaian Sub-age                         |
| 14 | 179m SE  | SWUCM-MDSS | South Wales Upper Coal Measures Formation - Mudstone, Siltstone And Sandstone  | Westphalian D Sub-age - Bolsoviaian Sub-age |
| 17 | 205m NW  | LLFB-SDST  | Llynfi Member - Sandstone                                                      | Bolsoviaian Sub-age                         |
| 20 | 250m N   | LLFB-SDST  | Llynfi Member - Sandstone                                                      | Bolsoviaian Sub-age                         |
| 21 | 252m NW  | LLFB-MDSS  | Llynfi Member - Mudstone, Siltstone And Sandstone                              | Bolsoviaian Sub-age                         |
| 22 | 265m SE  | SWMCM-MDSS | South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone | Bolsoviaian Sub-age - Duckmantian Sub-age   |
| 25 | 266m S   | SWUCM-MDSS | South Wales Upper Coal Measures Formation - Mudstone, Siltstone And Sandstone  | Westphalian D Sub-age - Bolsoviaian Sub-age |
| 29 | 334m NW  | RA-SDST    | Rhondda Member - Sandstone                                                     | Westphalian D Sub-age - Bolsoviaian Sub-age |
| 31 | 362m S   | SWMCM-MDSS | South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone | Bolsoviaian Sub-age - Duckmantian Sub-age   |
| 33 | 384m N   | RA-SDST    | Rhondda Member - Sandstone                                                     | Westphalian D Sub-age - Bolsoviaian Sub-age |
| 39 | 488m SE  | SWUCM-MDSS | South Wales Upper Coal Measures Formation - Mudstone, Siltstone And Sandstone  | Westphalian D Sub-age - Bolsoviaian Sub-age |

*This data is sourced from the British Geological Survey.*

## 14.6 Bedrock faults and other linear features (10k)

**Records within 500m**

**20**

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 81**

| ID | Location | Category | Description         |
|----|----------|----------|---------------------|
| 6  | 66m NW   | ROCK     | Coal seam, inferred |

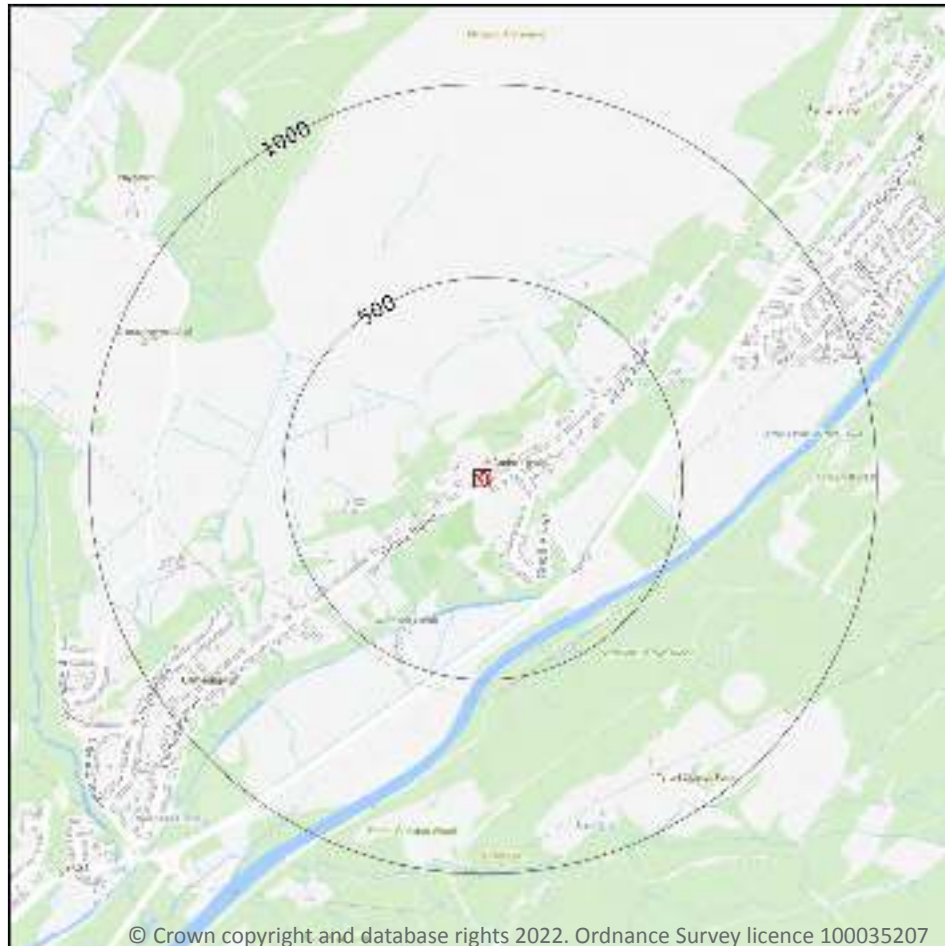


| ID | Location | Category       | Description                 |
|----|----------|----------------|-----------------------------|
| 8  | 72m NW   | ROCK           | Coal seam, inferred         |
| 9  | 109m NW  | ROCK           | Coal seam, inferred         |
| 12 | 128m N   | ROCK           | Coal seam, inferred         |
| 15 | 179m SE  | ROCK           | Coal seam, inferred         |
| 16 | 181m W   | ROCK           | Coal seam, observed         |
| 18 | 216m N   | ROCK           | Coal seam, observed         |
| 19 | 232m E   | ROCK           | Coal seam, inferred         |
| 23 | 265m SE  | FOSSIL_HORIZON | Fossil horizon, marine band |
| 24 | 266m S   | ROCK           | Coal seam, inferred         |
| 26 | 277m W   | ROCK           | Coal seam, inferred         |
| 27 | 331m E   | ROCK           | Coal seam, inferred         |
| 28 | 334m NW  | ROCK           | Coal seam, inferred         |
| 30 | 338m NW  | ROCK           | Coal seam, observed         |
| 32 | 362m S   | FOSSIL_HORIZON | Fossil horizon, marine band |
| 34 | 384m N   | ROCK           | Coal seam, observed         |
| 35 | 410m NW  | ROCK           | Coal seam, observed         |
| 36 | 473m NE  | ROCK           | Coal seam, inferred         |
| 37 | 483m NE  | ROCK           | Coal seam, observed         |
| 38 | 488m SE  | FOSSIL_HORIZON | Fossil horizon, marine band |

*This data is sourced from the British Geological Survey.*



## 15 Geology 1:50,000 scale - Availability



— Site Outline  
Search buffers in metres (m)

☐ Geological map tile

### 15.1 50k Availability

#### Records within 500m

1

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

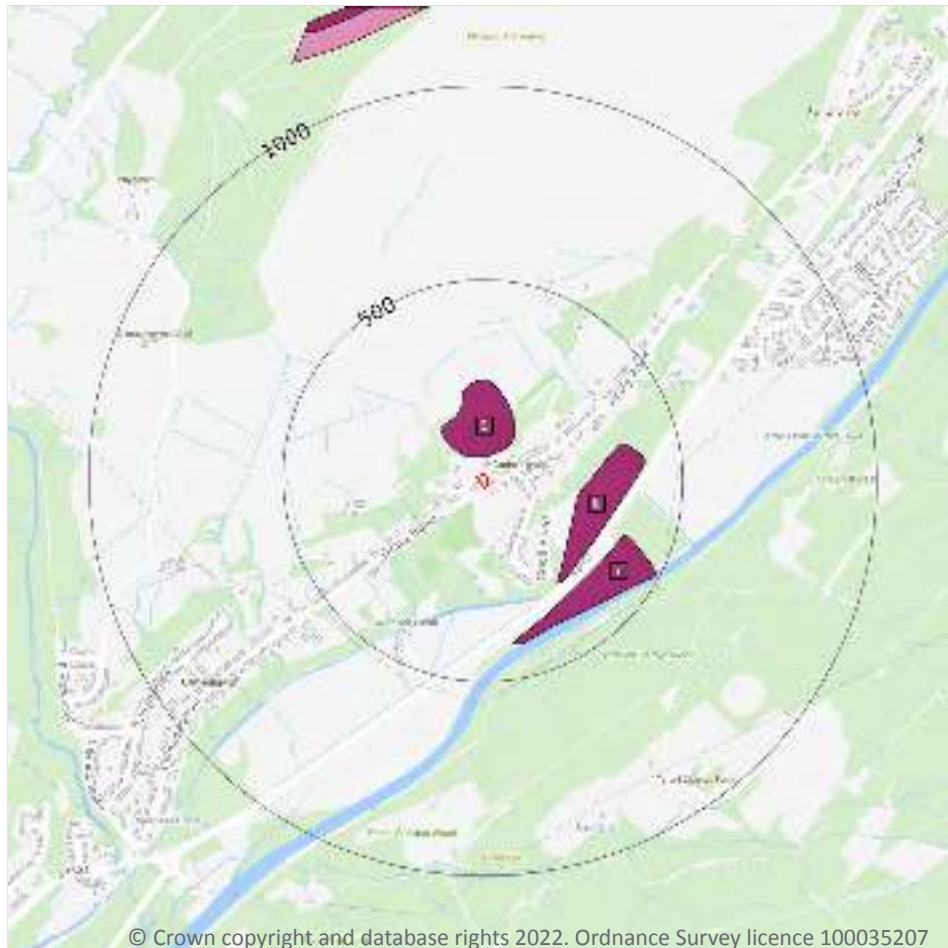
Features are displayed on the Geology 1:50,000 scale - Availability map on **page 84**

| ID | Location | Artificial | Superficial | Bedrock | Mass movement | Sheet No.          |
|----|----------|------------|-------------|---------|---------------|--------------------|
| 1  | On site  | Full       | Full        | Full    | Full          | EW230_ammanford_v4 |

*This data is sourced from the British Geological Survey.*



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



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- Site Outline
- Search buffers in metres (m)
- Made ground
  - Worked ground
  - Infilled ground
  - Disturbed ground
  - Landscaped ground

### 15.2 Artificial and made ground (50k)

#### Records within 500m

3

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

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 85**

| ID | Location | LEX Code  | Description             | Rock description   |
|----|----------|-----------|-------------------------|--------------------|
| 1  | 46m N    | MGR-ARTDP | MADE GROUND (UNDIVIDED) | ARTIFICIAL DEPOSIT |
| 2  | 231m E   | MGR-ARTDP | MADE GROUND (UNDIVIDED) | ARTIFICIAL DEPOSIT |
| 3  | 345m SE  | MGR-ARTDP | MADE GROUND (UNDIVIDED) | ARTIFICIAL DEPOSIT |

*This data is sourced from the British Geological Survey.*



### 15.3 Artificial ground permeability (50k)

#### Records within 50m

**1**

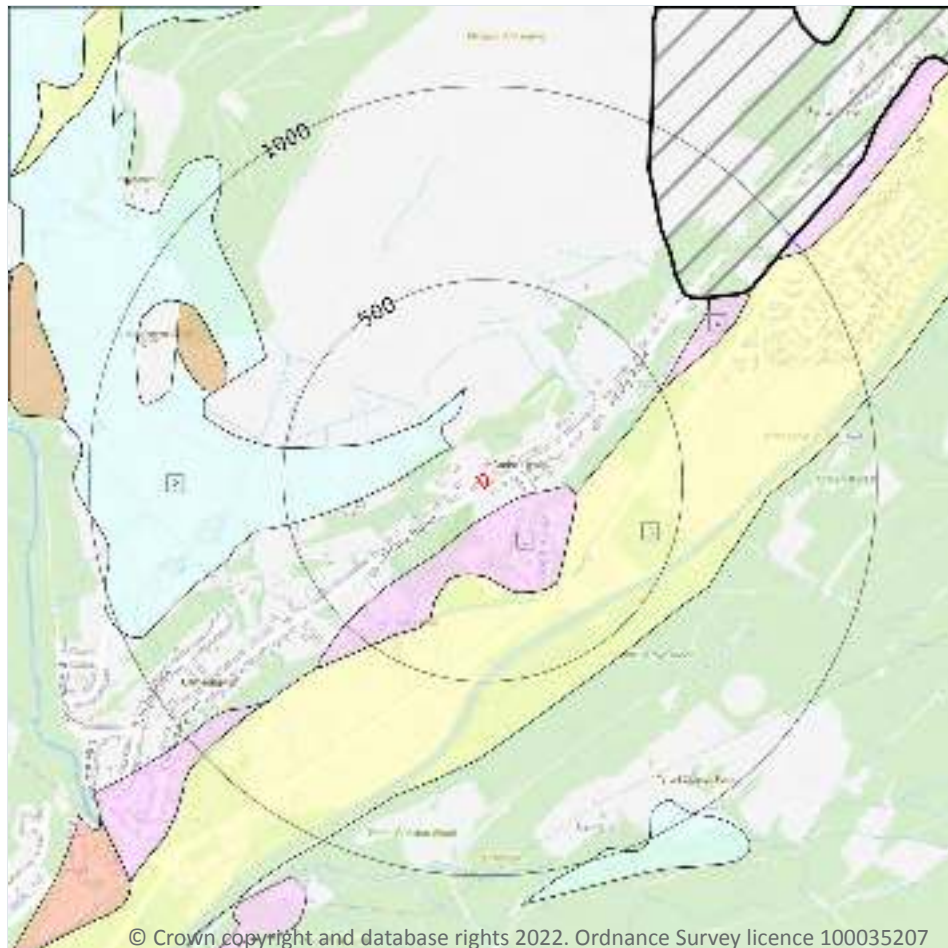
A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

| Location | Flow type | Maximum permeability | Minimum permeability |
|----------|-----------|----------------------|----------------------|
| 46m N    | Mixed     | Very High            | Low                  |

*This data is sourced from the British Geological Survey.*



## Geology 1:50,000 scale - Superficial



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### 15.4 Superficial geology (50k)

#### Records within 500m

4

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 87**

| ID | Location | LEX Code   | Description                       | Rock description            |
|----|----------|------------|-----------------------------------|-----------------------------|
| 1  | 65m SE   | GFDUD-XSV  | GLACIOFLUVIAL DEPOSITS, DEVENSIAN | SAND AND GRAVEL             |
| 2  | 99m NW   | TILLD-DMTN | TILL, DEVENSIAN                   | DIAMICTON                   |
| 3  | 224m E   | ALV-XCZSV  | ALLUVIUM                          | CLAY, SILT, SAND AND GRAVEL |
| 4  | 494m NE  | GFDUD-XSV  | GLACIOFLUVIAL DEPOSITS, DEVENSIAN | SAND AND GRAVEL             |



*This data is sourced from the British Geological Survey.*

### 15.5 Superficial permeability (50k)

**Records within 50m**

**0**

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

*This data is sourced from the British Geological Survey.*

### 15.6 Landslip (50k)

**Records within 500m**

**0**

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

*This data is sourced from the British Geological Survey.*

### 15.7 Landslip permeability (50k)

**Records within 50m**

**0**

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

*This data is sourced from the British Geological Survey.*



## Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

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

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

### 15.8 Bedrock geology (50k)

Records within 500m

6

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 89**

| ID | Location | LEX Code   | Description                                                                   | Rock age    |
|----|----------|------------|-------------------------------------------------------------------------------|-------------|
| 1  | On site  | LLFB-SDST  | LLYNFI MEMBER - SANDSTONE                                                     | WESTPHALIAN |
| 3  | 99m NW   | LLFB-MDSS  | LLYNFI MEMBER - MUDSTONE, SILTSTONE AND SANDSTONE                             | WESTPHALIAN |
| 6  | 175m SE  | SWUCM-MDSS | SOUTH WALES UPPER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |

| ID | Location | LEX Code   | Description                                                                    | Rock age    |
|----|----------|------------|--------------------------------------------------------------------------------|-------------|
| 8  | 246m NW  | LLFB-MDSS  | LLYNFI MEMBER - MUDSTONE, SILTSTONE AND SANDSTONE                              | WESTPHALIAN |
| 9  | 254m SE  | SWMCM-MDSS | SOUTH WALES MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 12 | 338m NW  | RA-SDST    | RHONDDA MEMBER - SANDSTONE                                                     | WESTPHALIAN |

*This data is sourced from the British Geological Survey.*

## 15.9 Bedrock permeability (50k)

|                           |          |
|---------------------------|----------|
| <b>Records within 50m</b> | <b>2</b> |
|---------------------------|----------|

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

| Location       | Flow type       | Maximum permeability | Minimum permeability |
|----------------|-----------------|----------------------|----------------------|
| <b>On site</b> | <b>Fracture</b> | <b>High</b>          | <b>Moderate</b>      |
| 26m SW         | Fracture        | High                 | Moderate             |

*This data is sourced from the British Geological Survey.*

## 15.10 Bedrock faults and other linear features (50k)

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>8</b> |
|----------------------------|----------|

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 89**

| ID | Location | Category       | Description         |
|----|----------|----------------|---------------------|
| 2  | 58m NW   | ROCK           | Coal seam, inferred |
| 4  | 99m NW   | ROCK           | Coal seam, inferred |
| 5  | 175m SE  | ROCK           | Coal seam, inferred |
| 7  | 201m N   | ROCK           | Coal seam, observed |
| 10 | 254m SE  | FOSSIL_HORIZON | Marine band         |
| 11 | 338m NW  | ROCK           | Coal seam, inferred |



| ID | Location | Category | Description         |
|----|----------|----------|---------------------|
| 13 | 339m NW  | ROCK     | Coal seam, observed |
| 14 | 448m NW  | ROCK     | Coal seam, observed |

*This data is sourced from the British Geological Survey.*



## 16 Boreholes

### 16.1 BGS Boreholes

Records within 250m

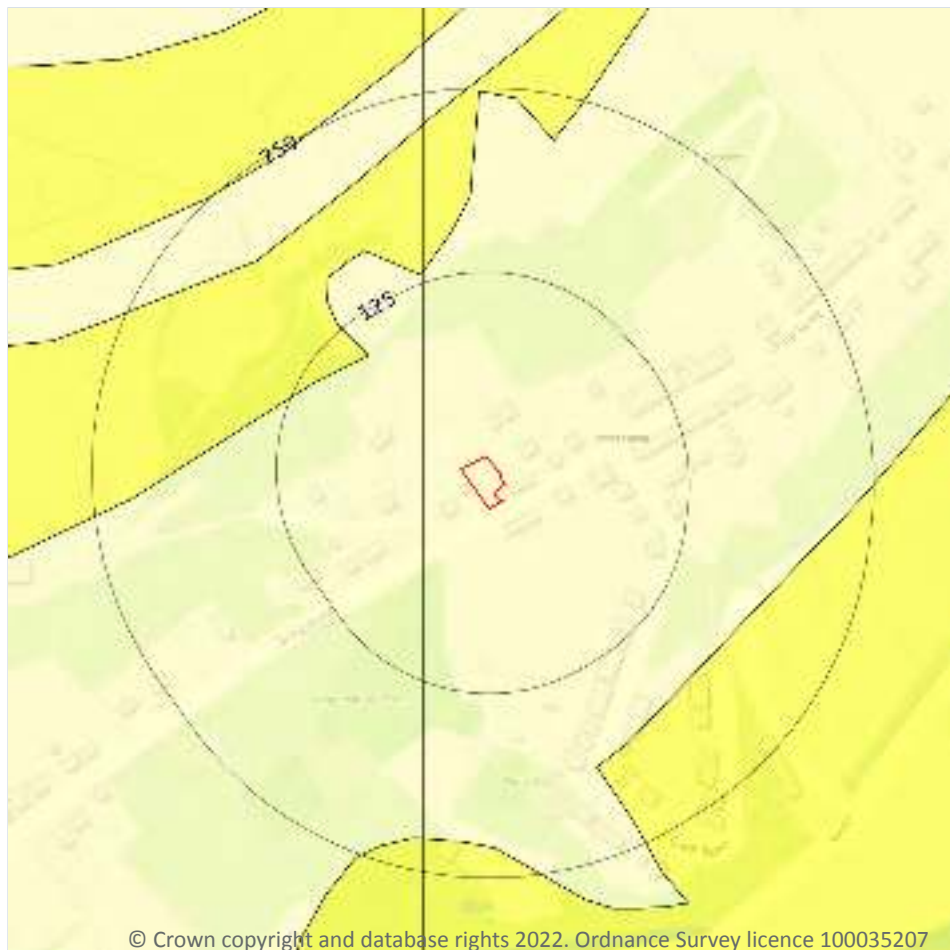
0

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

*This data is sourced from the British Geological Survey.*



## 17 Natural ground subsidence - Shrink swell clays



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

### 17.1 Shrink swell clays

#### Records within 50m

2

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

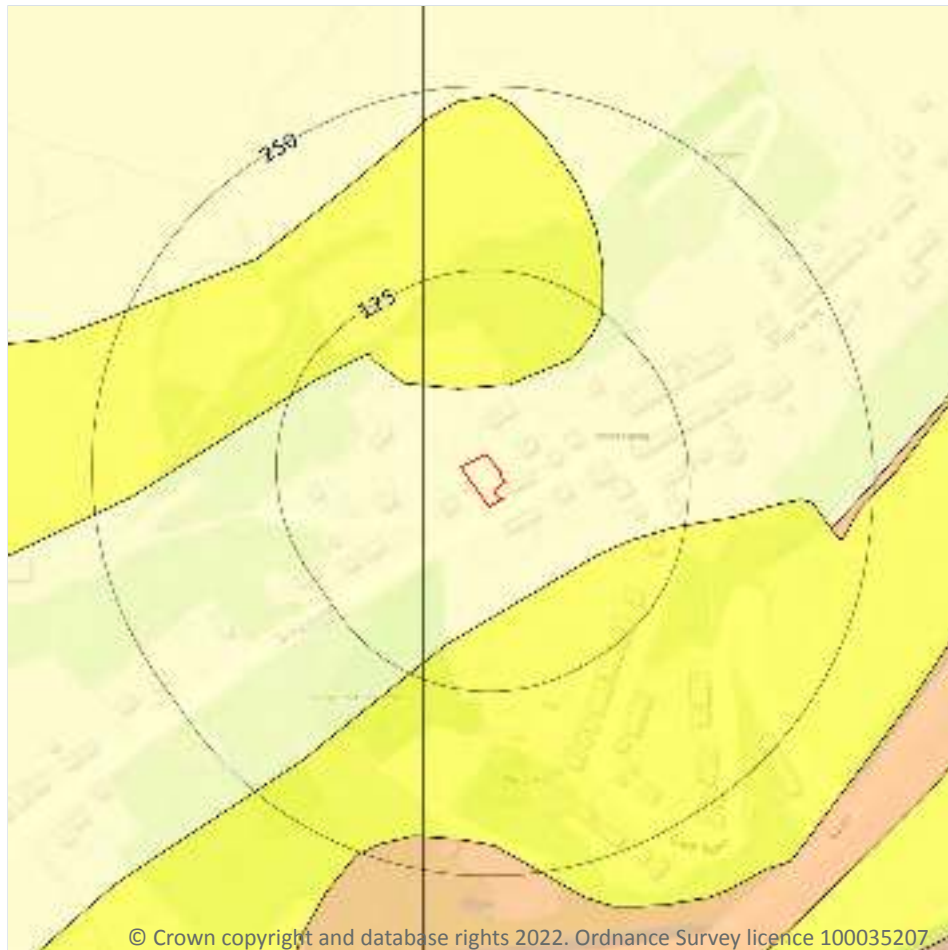
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 93**

| Location       | Hazard rating     | Details                                             |
|----------------|-------------------|-----------------------------------------------------|
| <b>On site</b> | <b>Negligible</b> | <b>Ground conditions predominantly non-plastic.</b> |
| 26m W          | Negligible        | Ground conditions predominantly non-plastic.        |

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Running sands



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

### 17.2 Running sands

#### Records within 50m

3

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

Features are displayed on the Natural ground subsidence - Running sands map on **page 94**

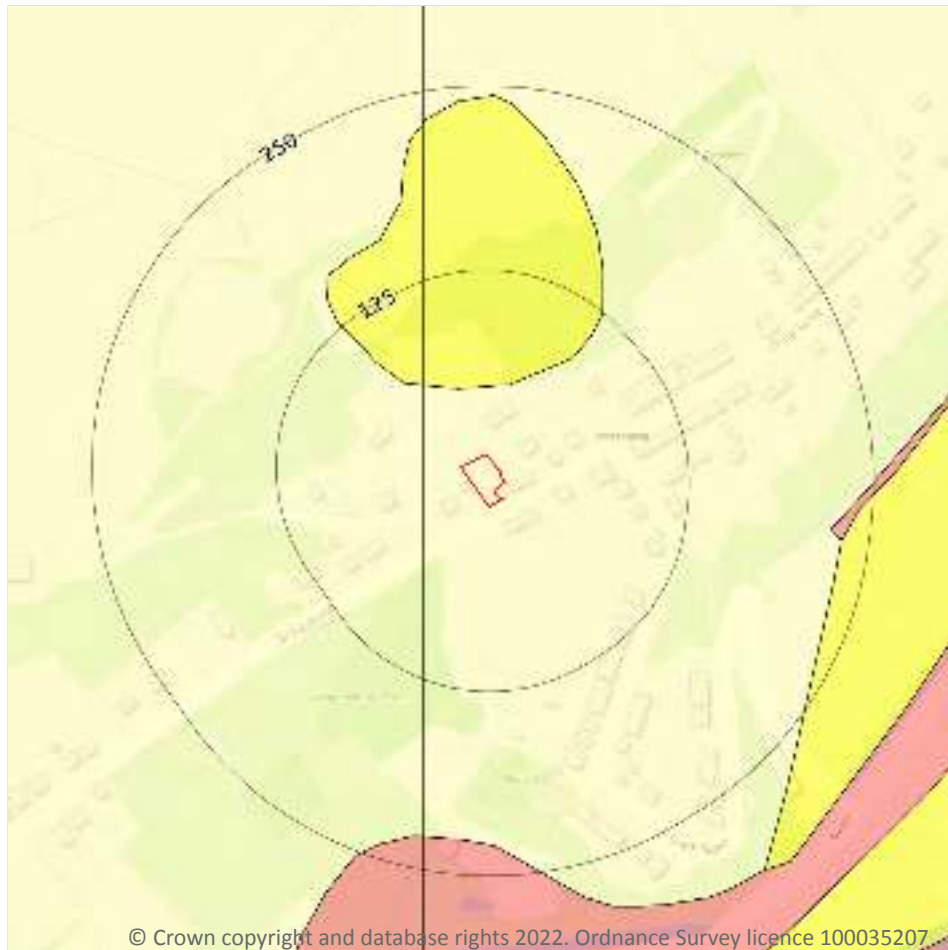
| Location | Hazard rating | Details                                                                                                                                                      |
|----------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| On site  | Negligible    | Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions. |

| Location | Hazard rating | Details                                                                                                                                                      |
|----------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 26m W    | Negligible    | Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions. |
| 46m N    | Very low      | Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.                      |

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Compressible deposits



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

### 17.3 Compressible deposits

#### Records within 50m

3

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

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 96**

| Location | Hazard rating | Details                                       |
|----------|---------------|-----------------------------------------------|
| On site  | Negligible    | Compressible strata are not thought to occur. |
| 26m W    | Negligible    | Compressible strata are not thought to occur. |

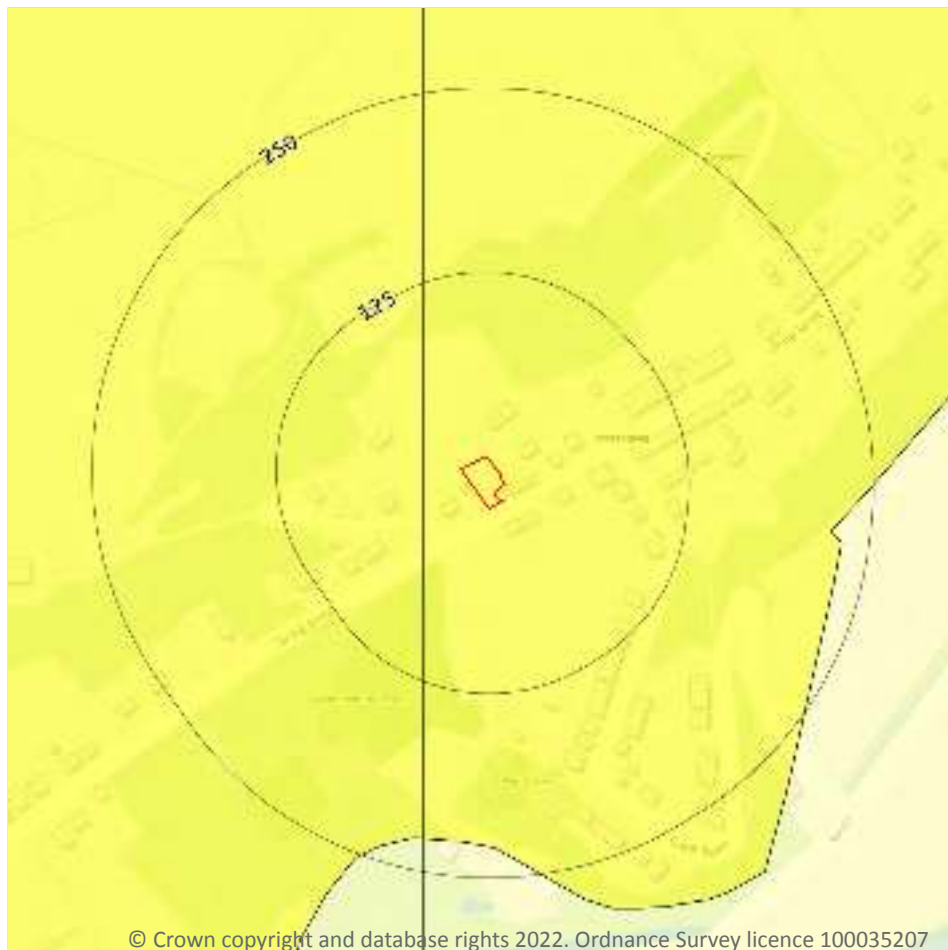


| Location | Hazard rating | Details                                                                                                         |
|----------|---------------|-----------------------------------------------------------------------------------------------------------------|
| 46m N    | Very low      | Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses. |

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Collapsible deposits



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

### 17.4 Collapsible deposits

#### Records within 50m

2

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

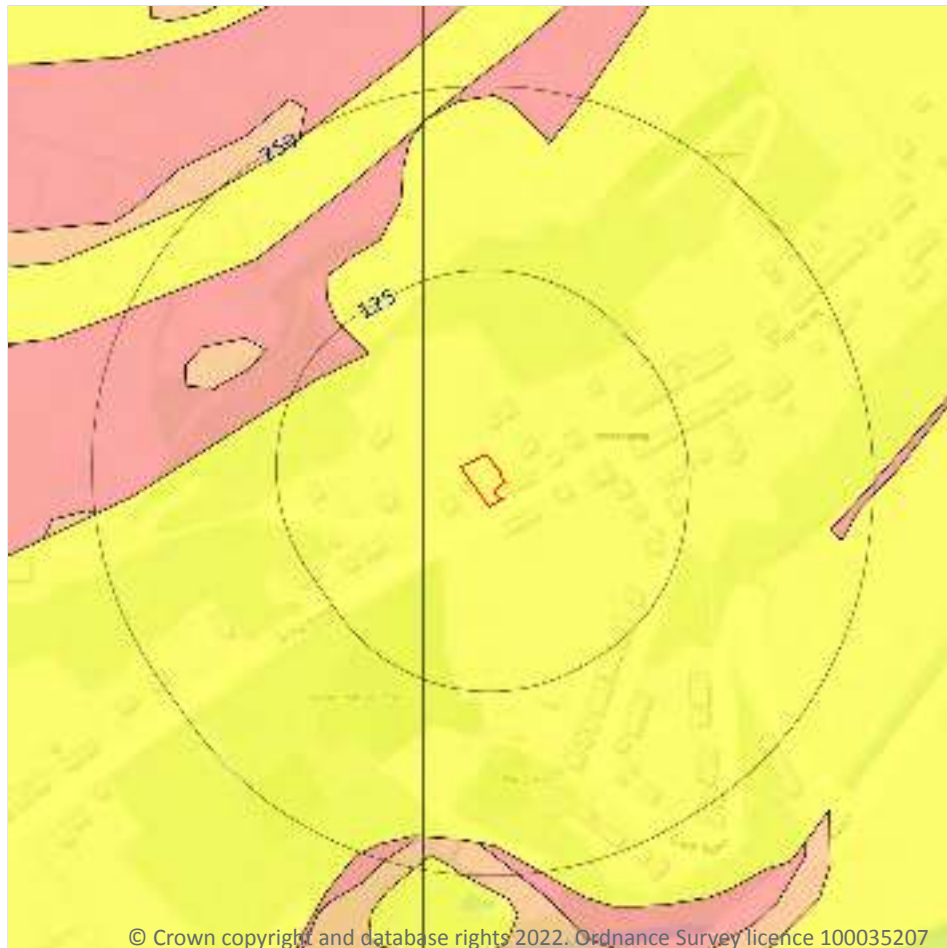
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 98**

| Location | Hazard rating | Details                                                                                   |
|----------|---------------|-------------------------------------------------------------------------------------------|
| On site  | Very low      | Deposits with potential to collapse when loaded and saturated are unlikely to be present. |
| 26m W    | Very low      | Deposits with potential to collapse when loaded and saturated are unlikely to be present. |

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Landslides



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

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### 17.5 Landslides

#### Records within 50m

2

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

Features are displayed on the Natural ground subsidence - Landslides map on **page 99**

| Location | Hazard rating | Details                                                                                                                                                         |
|----------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| On site  | Very low      | Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered. |

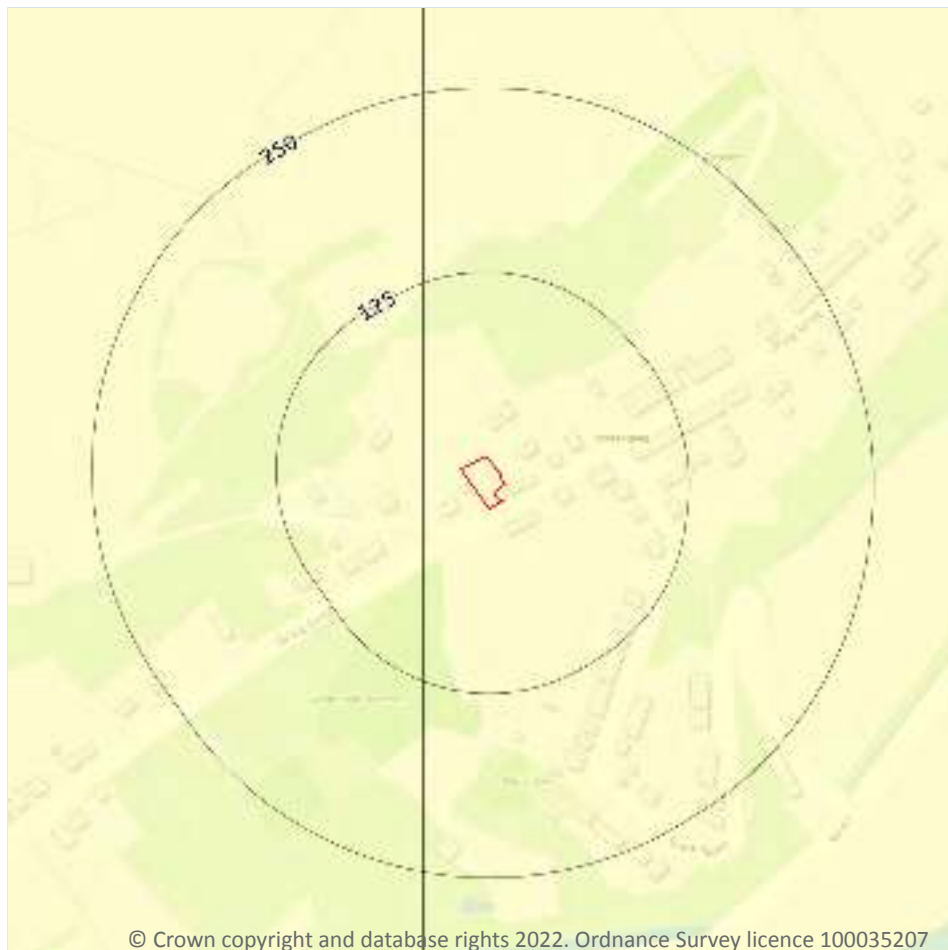


| Location | Hazard rating | Details                                                                                                                                                         |
|----------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 26m W    | Very low      | Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered. |

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Ground dissolution of soluble rocks



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

### 17.6 Ground dissolution of soluble rocks

#### Records within 50m

2

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

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 101**

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

| Location | Hazard rating | Details                                                                                                                                             |
|----------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 26m W    | Negligible    | Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present. |

*This data is sourced from the British Geological Survey.*



## 18 Mining, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
  - Natural cavities (Point)
  - BritPits
  - Surface ground workings
  - Underground workings
  - Historical Mineral Planning Areas
  - Mining Cavities
- Non Coal Mining
  - Sporadic underground mining of restricted extent possible
  - Localised small scale underground mining possible
  - Small scale mining possible
  - Underground mining known or likely within or in close proximity
  - Underground mining known within or in very close proximity

### 18.1 Natural cavities

Records within 500m

0

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

*This data is sourced from Stantec UK Ltd.*

## 18.2 BritPits

### Records within 500m

**13**

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 103**

| ID | Location | Details                                                                                                          | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|----|----------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| E  | 161m N   | Name: Godre'r-graig Level<br>Address: Godre'r-graig, NEATH, Glamorgan<br>Commodity: Coal, Deep<br>Status: Ceased | Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| F  | 169m W   | Name: Godre'r-graig Level<br>Address: Godre'r-graig, NEATH, Glamorgan<br>Commodity: Coal, Deep<br>Status: Ceased | Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| B  | 179m NW  | Name: Chwar Pentwyn<br>Address: Godre'r-graig, SWANSEA, West Glamorgan<br>Commodity: Sandstone<br>Status: Ceased | Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority                                                                           |
| B  | 203m NW  | Name: Chwar Pentwyn<br>Address: Godre'r-graig, SWANSEA, West Glamorgan<br>Commodity: Sandstone<br>Status: Ceased | Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority                                                                           |



| ID | Location | Details                                                                                                                 | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|----|----------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C  | 215m N   | Name: Godre'r-graig Quarry<br>Address: Godre'r-graig, NEATH, Glamorgan<br>Commodity: Sandstone<br>Status: Ceased        | Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority                                                                           |
| 3  | 231m N   | Name: Godre'r-graig Level<br>Address: Godre'r-graig, SWANSEA, West Glamorgan<br>Commodity: Coal, Deep<br>Status: Ceased | Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| F  | 242m W   | Name: Pentwyn<br>Address: Ystalyfera, NEATH, Glamorgan<br>Commodity: Coal, Deep<br>Status: Ceased                       | Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| I  | 270m E   | Name: Godre'r-graig<br>Address: Ystalyfera, NEATH, Glamorgan<br>Commodity: Coal, Deep<br>Status: Ceased                 | Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| M  | 302m W   | Name: Pentwyn<br>Address: Ystalyfera, NEATH, Glamorgan<br>Commodity: Sandstone<br>Status: Ceased                        | Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority                                                                           |

| ID | Location | Details                                                                                                                | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|----|----------|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U  | 367m N   | Name: Godre'r-graig Level<br>Address: Godre'r-graig, NEATH, Glamorgan<br>Commodity: Coal, Deep<br>Status: Ceased       | Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| U  | 412m NE  | Name: Godre'r-graig Level<br>Address: Godre'r-graig, NEATH, Glamorgan<br>Commodity: Coal, Deep<br>Status: Ceased       | Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| Z  | 458m NW  | Name: Godre'r-graig Level<br>Address: Godre'r-graig, NEATH, Glamorgan<br>Commodity: Coal, Deep<br>Status: Ceased       | Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| L  | 483m NE  | Name: Pentwyn No. 3 Mine<br>Address: Godre'r-graig, SWANSEA, West Glamorgan<br>Commodity: Coal, Deep<br>Status: Ceased | Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |

*This data is sourced from the British Geological Survey.*

## 18.3 Surface ground workings

**Records within 250m**

**78**

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 103**



| ID | Location | Land Use                    | Year of mapping | Mapping scale |
|----|----------|-----------------------------|-----------------|---------------|
| A  | 59m SW   | Refuse Heap                 | 1948            | 1:10560       |
| A  | 59m SW   | Refuse Heap                 | 1921            | 1:10560       |
| A  | 63m SW   | Refuse Heap                 | 1913            | 1:10560       |
| A  | 66m SW   | Refuse Heap                 | 1948            | 1:10560       |
| A  | 66m SW   | Refuse Heap                 | 1948            | 1:10560       |
| B  | 120m NW  | Coal Level                  | 1913            | 1:10560       |
| B  | 120m NW  | Coal Level                  | 1897            | 1:10560       |
| B  | 121m NW  | Coal Level                  | 1921            | 1:10560       |
| B  | 121m NW  | Unspecified Quarry          | 1913            | 1:10560       |
| B  | 121m NW  | Unspecified Quarry          | 1913            | 1:10560       |
| B  | 126m NW  | Unspecified Disused Levels  | 1964            | 1:10560       |
| C  | 135m N   | Unspecified Old Quarry      | 1948            | 1:10560       |
| C  | 137m N   | Unspecified Old Quarry      | 1948            | 1:10560       |
| C  | 138m N   | Unspecified Old Quarry      | 1913            | 1:10560       |
| C  | 138m N   | Unspecified Old Quarry      | 1913            | 1:10560       |
| C  | 138m N   | Unspecified Old Quarry      | 1913            | 1:10560       |
| C  | 139m N   | Unspecified Old Quarry      | 1921            | 1:10560       |
| B  | 144m NW  | Unspecified Quarry          | 1948            | 1:10560       |
| B  | 144m NW  | Unspecified Quarry          | 1948            | 1:10560       |
| B  | 146m NW  | Unspecified Quarry          | 1897            | 1:10560       |
| B  | 147m NW  | Unspecified Quarry          | 1913            | 1:10560       |
| C  | 148m N   | Unspecified Disused Quarry  | 1983            | 1:10000       |
| B  | 149m NW  | Unspecified Ground Workings | 1921            | 1:10560       |
| D  | 155m S   | Unspecified Heap            | 1980            | 1:10560       |
| D  | 155m S   | Unspecified Heap            | 1983            | 1:10000       |
| E  | 158m N   | Old Coal Level              | 1897            | 1:10560       |
| B  | 158m NW  | Unspecified Quarry          | 1877            | 1:10560       |
| C  | 168m N   | Unspecified Ground Workings | 1877            | 1:10560       |



| ID | Location | Land Use                    | Year of mapping | Mapping scale |
|----|----------|-----------------------------|-----------------|---------------|
| F  | 170m W   | Coal Level                  | 1948            | 1:10560       |
| F  | 172m W   | Coal Level                  | 1948            | 1:10560       |
| F  | 172m W   | Coal Level                  | 1948            | 1:10560       |
| F  | 174m W   | Coal Level                  | 1913            | 1:10560       |
| F  | 174m W   | Coal Level                  | 1913            | 1:10560       |
| C  | 176m N   | Unspecified Old Quarry      | 1897            | 1:10560       |
| F  | 178m W   | Refuse Heap                 | 1948            | 1:10560       |
| F  | 179m W   | Refuse Heap                 | 1948            | 1:10560       |
| F  | 179m W   | Refuse Heap                 | 1948            | 1:10560       |
| G  | 188m E   | Refuse Heaps                | 1965            | 1:10560       |
| G  | 188m E   | Refuse Heaps                | 1980            | 1:10560       |
| G  | 188m E   | Refuse Heaps                | 1983            | 1:10000       |
| C  | 190m N   | Unspecified Pit             | 1990            | 1:10000       |
| H  | 193m NE  | Cemetery                    | 1965            | 1:10560       |
| H  | 193m NE  | Cemetery                    | 1980            | 1:10560       |
| H  | 193m NE  | Cemetery                    | 1983            | 1:10000       |
| H  | 193m NE  | Burial Ground               | 1913            | 1:10560       |
| H  | 193m NE  | Burial Ground               | 1897            | 1:10560       |
| H  | 196m NE  | Burial Ground               | 1921            | 1:10560       |
| H  | 196m NE  | Cemetery                    | 1877            | 1:10560       |
| H  | 196m NE  | Burial Ground               | 1913            | 1:10560       |
| H  | 196m NE  | Burial Ground               | 1913            | 1:10560       |
| C  | 196m N   | Unspecified Quarry          | 1964            | 1:10560       |
| H  | 196m NE  | Burial Ground               | 1948            | 1:10560       |
| 2  | 197m S   | Unspecified Ground Workings | 1990            | 1:10000       |
| H  | 197m NE  | Burial Ground               | 1948            | 1:10560       |
| C  | 205m N   | Unspecified Disused Levels  | 1965            | 1:10560       |
| C  | 205m N   | Unspecified Disused Levels  | 1980            | 1:10560       |



| ID | Location | Land Use                   | Year of mapping | Mapping scale |
|----|----------|----------------------------|-----------------|---------------|
| I  | 219m E   | Unspecified Quarry         | 1913            | 1:10560       |
| I  | 219m E   | Unspecified Quarry         | 1913            | 1:10560       |
| I  | 222m E   | Unspecified Quarry         | 1921            | 1:10560       |
| I  | 222m E   | Unspecified Quarry         | 1948            | 1:10560       |
| I  | 223m E   | Unspecified Quarry         | 1948            | 1:10560       |
| I  | 224m E   | Unspecified Quarry         | 1913            | 1:10560       |
| G  | 227m E   | Refuse Heap                | 1948            | 1:10560       |
| F  | 228m W   | Old Coal Level             | 1921            | 1:10560       |
| J  | 232m N   | Unspecified Disused Levels | 1965            | 1:10560       |
| J  | 232m N   | Unspecified Disused Levels | 1980            | 1:10560       |
| J  | 232m N   | Unspecified Disused Levels | 1983            | 1:10000       |
| F  | 233m W   | Old Coal Level             | 1913            | 1:10560       |
| F  | 233m W   | Old Coal Level             | 1897            | 1:10560       |
| F  | 233m W   | Old Coal Level             | 1948            | 1:10560       |
| F  | 233m W   | Old Coal Level             | 1948            | 1:10560       |
| F  | 234m W   | Old Coal Level             | 1948            | 1:10560       |
| F  | 234m W   | Unspecified Disused Levels | 1990            | 1:10000       |
| F  | 235m W   | Old Coal Level             | 1913            | 1:10560       |
| F  | 235m W   | Old Coal Level             | 1913            | 1:10560       |
| G  | 238m SE  | Refuse Heap                | 1948            | 1:10560       |
| G  | 238m SE  | Refuse Heap                | 1948            | 1:10560       |
| F  | 238m W   | Unspecified Disused Levels | 1964            | 1:10560       |

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

## 18.4 Underground workings

### Records within 1000m

**126**

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 103**



| ID | Location | Land Use                   | Year of mapping | Mapping scale |
|----|----------|----------------------------|-----------------|---------------|
| B  | 120m NW  | Coal Level                 | 1913            | 1:10560       |
| B  | 120m NW  | Coal Level                 | 1897            | 1:10560       |
| B  | 121m NW  | Coal Level                 | 1921            | 1:10560       |
| B  | 126m NW  | Unspecified Disused Levels | 1965            | 1:10560       |
| E  | 158m N   | Old Coal Level             | 1897            | 1:10560       |
| F  | 170m W   | Coal Level                 | 1948            | 1:10560       |
| C  | 205m N   | Unspecified Disused Levels | 1965            | 1:10560       |
| C  | 205m N   | Unspecified Disused Levels | 1980            | 1:10560       |
| F  | 228m W   | Old Coal Level             | 1921            | 1:10560       |
| J  | 232m N   | Unspecified Disused Levels | 1965            | 1:10560       |
| J  | 232m N   | Unspecified Disused Levels | 1980            | 1:10560       |
| J  | 232m N   | Unspecified Disused Levels | 1983            | 1:10000       |
| F  | 233m W   | Old Coal Level             | 1913            | 1:10560       |
| F  | 233m W   | Old Coal Level             | 1897            | 1:10560       |
| F  | 234m W   | Old Coal Level             | 1948            | 1:10560       |
| F  | 234m W   | Unspecified Disused Levels | 1990            | 1:10000       |
| F  | 238m W   | Unspecified Disused Levels | 1965            | 1:10560       |
| U  | 388m N   | Unspecified Disused Levels | 1983            | 1:10000       |
| U  | 401m NE  | Old Coal Level             | 1913            | 1:10560       |
| U  | 401m NE  | Old Coal Level             | 1897            | 1:10560       |
| U  | 401m NE  | Old Coal Level             | 1948            | 1:10560       |
| U  | 406m NE  | Old Coal Level             | 1921            | 1:10560       |
| U  | 412m NE  | Coal Level                 | 1913            | 1:10560       |
| U  | 412m NE  | Coal Level                 | 1897            | 1:10560       |
| U  | 412m NE  | Coal Level                 | 1948            | 1:10560       |
| U  | 412m N   | Unspecified Disused Levels | 1983            | 1:10000       |
| U  | 417m NE  | Coal Level                 | 1921            | 1:10560       |
| Z  | 457m NW  | Unspecified Disused Levels | 1990            | 1:10000       |



| ID | Location | Land Use                   | Year of mapping | Mapping scale |
|----|----------|----------------------------|-----------------|---------------|
| Z  | 461m NW  | Old Coal Level             | 1921            | 1:10560       |
| Z  | 461m NW  | Unspecified Disused Levels | 1965            | 1:10560       |
| Z  | 461m NW  | Old Coal Level             | 1913            | 1:10560       |
| Z  | 461m NW  | Old Coal Level             | 1897            | 1:10560       |
| Z  | 462m NW  | Old Coal Level             | 1948            | 1:10560       |
| L  | 491m NE  | Coal Level                 | 1948            | 1:10560       |
| L  | 502m NE  | Coal Level                 | 1948            | 1:10560       |
| L  | 516m NE  | Unspecified Disused Levels | 1965            | 1:10560       |
| L  | 516m NE  | Unspecified Disused Levels | 1980            | 1:10560       |
| AB | 532m NW  | Unspecified Disused Levels | 1990            | 1:10000       |
| AB | 533m NW  | Old Coal Level             | 1913            | 1:10560       |
| AB | 536m NW  | Old Coal Level             | 1948            | 1:10560       |
| AB | 536m NW  | Old Coal Level             | 1921            | 1:10560       |
| AB | 537m NW  | Unspecified Disused Levels | 1965            | 1:10560       |
| AB | 539m NW  | Old Coal Level             | 1897            | 1:10560       |
| L  | 544m NE  | Disused Coal Level         | 1877            | 1:10560       |
| Y  | 549m SE  | Colliery                   | 1921            | 1:10560       |
| AA | 572m N   | Unspecified Mine           | 1965            | 1:10560       |
| AA | 572m N   | Unspecified Mine           | 1980            | 1:10560       |
| L  | 573m NE  | Coal Level                 | 1913            | 1:10560       |
| L  | 573m NE  | Coal Level                 | 1897            | 1:10560       |
| L  | 576m NE  | Coal Level                 | 1877            | 1:10560       |
| L  | 583m NE  | Coal Level                 | 1948            | 1:10560       |
| Y  | 586m SE  | Unspecified Disused Mine   | 1965            | 1:10560       |
| Y  | 586m SE  | Unspecified Disused Mine   | 1980            | 1:10560       |
| Y  | 586m SE  | Unspecified Disused Mine   | 1983            | 1:10000       |
| L  | 590m NE  | Unspecified Disused Mine   | 1965            | 1:10560       |
| L  | 590m NE  | Unspecified Disused Mine   | 1980            | 1:10560       |



| ID | Location | Land Use                   | Year of mapping | Mapping scale |
|----|----------|----------------------------|-----------------|---------------|
| L  | 590m NE  | Unspecified Mine           | 1983            | 1:10000       |
| AD | 592m NW  | Coal Level                 | 1948            | 1:10560       |
| AD | 594m NW  | Coal Level                 | 1913            | 1:10560       |
| AD | 600m NW  | Coal Level                 | 1921            | 1:10560       |
| AA | 600m N   | Unspecified Disused Level  | 1983            | 1:10000       |
| AD | 600m NW  | Unspecified Disused Levels | 1990            | 1:10000       |
| AD | 602m NW  | Unspecified Disused Levels | 1965            | 1:10560       |
| L  | 606m NE  | Old Coal Level             | 1921            | 1:10560       |
| L  | 616m NE  | Coal Level                 | 1921            | 1:10560       |
| AD | 641m NW  | Unspecified Disused Levels | 1990            | 1:10000       |
| AD | 644m NW  | Unspecified Disused Levels | 1965            | 1:10560       |
| L  | 651m NE  | Unspecified Disused Level  | 1983            | 1:10000       |
| L  | 652m NE  | Unspecified Disused Level  | 1965            | 1:10560       |
| L  | 652m NE  | Unspecified Disused Level  | 1980            | 1:10560       |
| AH | 664m NE  | Unspecified Disused Level  | 1983            | 1:10000       |
| AK | 726m SE  | Unspecified Mines          | 1965            | 1:10560       |
| AK | 726m SE  | Unspecified Level          | 1983            | 1:10000       |
| AJ | 734m SE  | Old Coal Level             | 1948            | 1:10560       |
| AJ | 736m SE  | Old Coal Level             | 1913            | 1:10560       |
| AJ | 736m SE  | Coal Level                 | 1897            | 1:10560       |
| AJ | 737m SE  | Old Coal Level             | 1921            | 1:10560       |
| AJ | 742m SE  | Unspecified Disused Levels | 1983            | 1:10000       |
| AL | 760m NE  | Unspecified Mine           | 1965            | 1:10560       |
| AL | 760m NE  | Unspecified Mine           | 1980            | 1:10560       |
| AL | 760m NE  | Unspecified Mine           | 1983            | 1:10000       |
| -  | 769m E   | Unspecified Disused Level  | 1965            | 1:10560       |
| -  | 769m E   | Unspecified Disused Level  | 1980            | 1:10560       |
| -  | 792m NE  | Disused Coal Pit           | 1877            | 1:10560       |



| ID | Location | Land Use                   | Year of mapping | Mapping scale |
|----|----------|----------------------------|-----------------|---------------|
| -  | 819m S   | Colliery                   | 1877            | 1:10560       |
| -  | 834m N   | Unspecified Disused Levels | 1965            | 1:10560       |
| -  | 834m N   | Unspecified Disused Levels | 1980            | 1:10560       |
| -  | 834m N   | Unspecified Disused Levels | 1983            | 1:10000       |
| -  | 862m NE  | Old Coal Levels            | 1913            | 1:10560       |
| -  | 862m NE  | Old Coal Levels            | 1897            | 1:10560       |
| -  | 870m NE  | Old Coal Levels            | 1921            | 1:10560       |
| -  | 874m E   | Unspecified Mine           | 1965            | 1:10560       |
| -  | 874m E   | Unspecified Mine           | 1980            | 1:10560       |
| -  | 876m S   | Old Air Shaft              | 1921            | 1:10560       |
| -  | 878m S   | Old Air Shaft              | 1948            | 1:10560       |
| -  | 879m S   | Old Air Shaft              | 1913            | 1:10560       |
| -  | 879m S   | Air Shaft                  | 1897            | 1:10560       |
| -  | 879m S   | Disused Air Shaft          | 1965            | 1:10560       |
| -  | 879m S   | Disused Air Shaft          | 1980            | 1:10560       |
| -  | 879m S   | Disused Air Shaft          | 1983            | 1:10000       |
| -  | 888m S   | Air Shaft                  | 1877            | 1:10560       |
| -  | 913m E   | Coal Levels                | 1913            | 1:10560       |
| -  | 913m E   | Coal Levels                | 1897            | 1:10560       |
| -  | 916m E   | Old Coal Level             | 1948            | 1:10560       |
| -  | 927m E   | Old Coal Level             | 1921            | 1:10560       |
| -  | 929m W   | Unspecified Disused Levels | 1990            | 1:10000       |
| -  | 929m W   | Unspecified Disused Levels | 1965            | 1:10560       |
| -  | 932m NE  | Unspecified Disused Level  | 1965            | 1:10560       |
| -  | 932m NE  | Unspecified Disused Level  | 1980            | 1:10560       |
| -  | 932m NE  | Unspecified Disused Level  | 1983            | 1:10000       |
| -  | 949m NE  | Old Coal Levels            | 1948            | 1:10560       |
| -  | 949m NE  | Old Coal Levels            | 1913            | 1:10560       |



| ID | Location | Land Use                  | Year of mapping | Mapping scale |
|----|----------|---------------------------|-----------------|---------------|
| -  | 949m NE  | Old Coal Levels           | 1897            | 1:10560       |
| -  | 951m NE  | Old Coal Level            | 1948            | 1:10560       |
| -  | 951m S   | Old Coal Level            | 1921            | 1:10560       |
| -  | 951m NE  | Old Coal Levels           | 1921            | 1:10560       |
| -  | 951m NE  | Old Coal Level            | 1913            | 1:10560       |
| -  | 951m NE  | Coal Levels               | 1897            | 1:10560       |
| -  | 954m S   | Old Coal Level            | 1913            | 1:10560       |
| -  | 955m NE  | Unspecified Disused Level | 1983            | 1:10000       |
| -  | 956m NE  | Old Coal Level            | 1921            | 1:10560       |
| -  | 960m S   | Old Coal Level            | 1948            | 1:10560       |
| -  | 973m E   | Coal Levels               | 1913            | 1:10560       |
| -  | 973m E   | Coal Levels               | 1897            | 1:10560       |
| -  | 977m S   | Old Coal Level            | 1897            | 1:10560       |
| -  | 978m S   | Coal Level                | 1877            | 1:10560       |

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

## 18.5 Historical Mineral Planning Areas

### Records within 500m

0

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

*This data is sourced from the British Geological Survey.*

## 18.6 Non-coal mining

### Records within 1000m

3

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 103**



| ID | Location | Name          | Commodity         | Class | Likelihood                                                                                                                                                                           |
|----|----------|---------------|-------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | 175m SE  | Not available | Iron Ore (Bedded) | B     | Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered |
| 4  | 269m S   | Not available | Iron Ore (Bedded) | B     | Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered |
| 6  | 484m SE  | Not available | Iron Ore (Bedded) | B     | Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered |

*This data is sourced from the British Geological Survey.*

## 18.7 Mining cavities

### Records within 1000m

1

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 103**

| ID | Location | Mine Address                       | Mineral | Data source | Publisher |
|----|----------|------------------------------------|---------|-------------|-----------|
| -  | 816m NE  | Frampton On Severn, West Glamorgan | Unknown | -           | -         |

*This data is sourced from Stantec UK Ltd.*

## 18.8 JPB mining areas

### Records on site

0

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

*This data is sourced from Johnson Poole and Bloomer.*



## 18.9 Coal mining

|                 |   |
|-----------------|---|
| Records on site | 1 |
|-----------------|---|

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

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

*This data is sourced from the Coal Authority.*

## 18.10 Brine areas

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

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

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

## 18.11 Gypsum areas

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

Generalised areas that may be affected by gypsum extraction.

*This data is sourced from British Gypsum.*

## 18.12 Tin mining

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

Generalised areas that may be affected by historical tin mining.

*This data is sourced from Groundsure.*

## 18.13 Clay mining

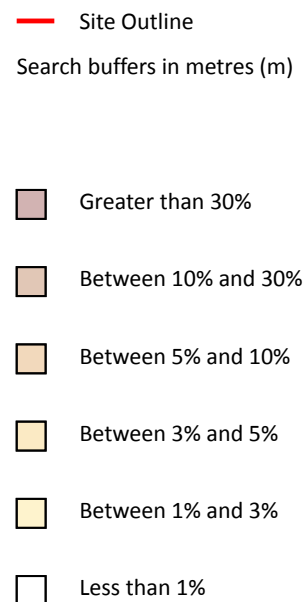
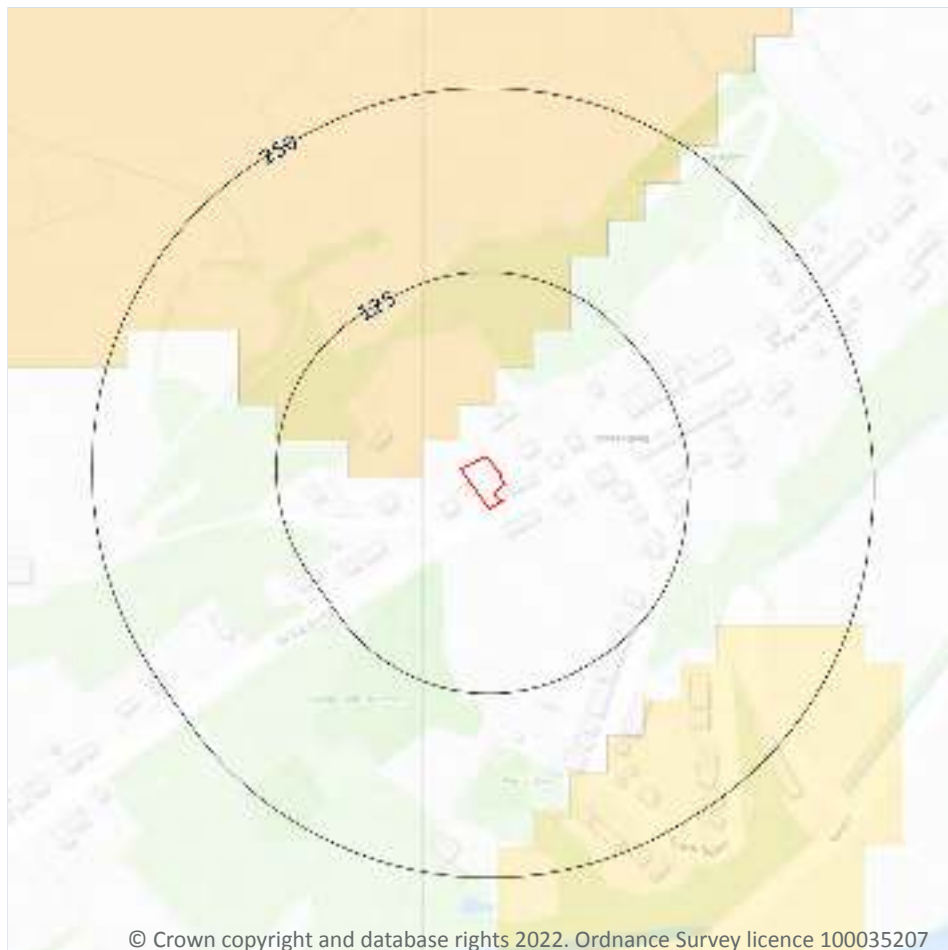
|                 |   |
|-----------------|---|
| Records on site | 0 |
|-----------------|---|

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

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



## 19 Radon



### 19.1 Radon

#### Records on site

1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 117**

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

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



## 20 Soil chemistry

### 20.1 BGS Estimated Background Soil Chemistry

Records within 50m

2

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

| Location | Arsenic       | Bioaccessible Arsenic | Lead      | Bioaccessible Lead | Cadmium   | Chromium      | Nickel        |
|----------|---------------|-----------------------|-----------|--------------------|-----------|---------------|---------------|
| On site  | 35 - 45 mg/kg | No data               | 100 mg/kg | 60 mg/kg           | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |
| 26m SW   | 35 - 45 mg/kg | No data               | 100 mg/kg | 60 mg/kg           | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |

*This data is sourced from the British Geological Survey.*

### 20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km<sup>2</sup>).

*This data is sourced from the British Geological Survey.*

### 20.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km<sup>2</sup>.

*This data is sourced from the British Geological Survey.*



## 21 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C1 Crossrail 1 Stations
- Crossrail 1 Route
- Crossrail 1 Worksites
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- ... Active railways
- ... Active tunnels
- ... Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

### 21.1 Underground railways (London)

Records within 250m

0

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

*This data is sourced from publicly available information by Groundsure.*

### 21.2 Underground railways (Non-London)

Records within 250m

0

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

*This data is sourced from publicly available information by Groundsure.*

### 21.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

*This data is sourced from the Ordnance Survey.*

### 21.4 Historical railway and tunnel features

Records within 250m

6

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

Features are displayed on the Railway infrastructure and projects map on **page 119**

| Location | Land Use        | Year of mapping | Mapping scale |
|----------|-----------------|-----------------|---------------|
| 193m E   | Railway Sidings | 1948            | 10560         |
| 194m SE  | Railway Sidings | 1948            | 10560         |
| 200m E   | Railway Sidings | 1913            | 10560         |
| 200m E   | Railway Sidings | 1913            | 10560         |
| 201m E   | Railway Sidings | 1921            | 10560         |
| 213m E   | Tramway Sidings | 1918            | 2500          |

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

### 21.5 Royal Mail tunnels

Records within 250m

0

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

*This data is sourced from Groundsure/the Postal Museum.*



## 21.6 Historical railways

**Records within 250m****0**

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

*This data is sourced from OpenStreetMap.*

## 21.7 Railways

**Records within 250m****0**

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

*This data is sourced from Ordnance Survey and OpenStreetMap.*

## 21.8 Crossrail 1

**Records within 500m****0**

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

*This data is sourced from publicly available information by Groundsure.*

## 21.9 Crossrail 2

**Records within 500m****0**

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

*This data is sourced from publicly available information by Groundsure.*

## 21.10 HS2

**Records within 500m****0**

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

*This data is sourced from HS2 Ltd.*



## Data providers

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

## Terms and conditions

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