
SITE AT VALE OF NEATH BUSINESS PARK, RESOLVEN
PRELIMINARY RISK ASSESSMENT/ DESK STUDY

Report No. Q0478/PRA



SITE AT VALE OF NEATH BUSINESS PARK, RESOLVEN, SA11 4SR

Phase I:

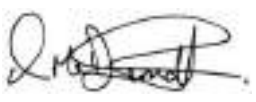
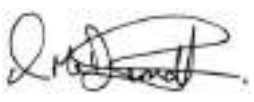
Assessment of Land Quality/ Preliminary Risk Assessment (Desk Study)

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FOREWORD

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

1.1 General

Upon the instructions of Scheme Architects, LW Design Ltd, 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 Vale of Neath Business Park, Resolven.

At time of writing the proposed development detail is unknown to Quantum, however is likely to comprise a new business unit in line with neighbouring properties.

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,
- Published Geological Map for the area: Sheet 231 'Merthyr Tydfil'.
- British Geological Survey Website.
- National Resources Wales

2.0 SITE DETAIL

2.1 Site Description

The site is located within the Vale of Neath Business Park which is some 300m southwest of the small town of Resolven in the Neath Valley. The site is currently an area of level grassland, unoccupied and sits to the immediate rear (north) of an existing business unit (gas engineers). Rectangular in shape and covering 0.79 hectares, the site is an open area, accessible directly off the access road that serves the business park.

Located beyond a treeline some 30m to the north, on an embankment feature (some 2-3m in height) lies the A465 dual carriageway. Lands to the west, east and south are occupied by other business units (steel portal framed structures) with associated access roads, paving and car parks.

Further east, approximately 70m, lies a sewage water treatment works and pumping station. Beyond the A465 carriageway to the north flows the River Neath in a northwest-southwest direction.

The approximate National Grid Reference of the site is E: 282314 N: 202464 with a nearby postcode SA11 4LD. The site location and extent of the development site is indicated on the site plans presented in Appendix I. An aerial view of the site from current on-line mapping is presented below with the assessment boundary shown in red;

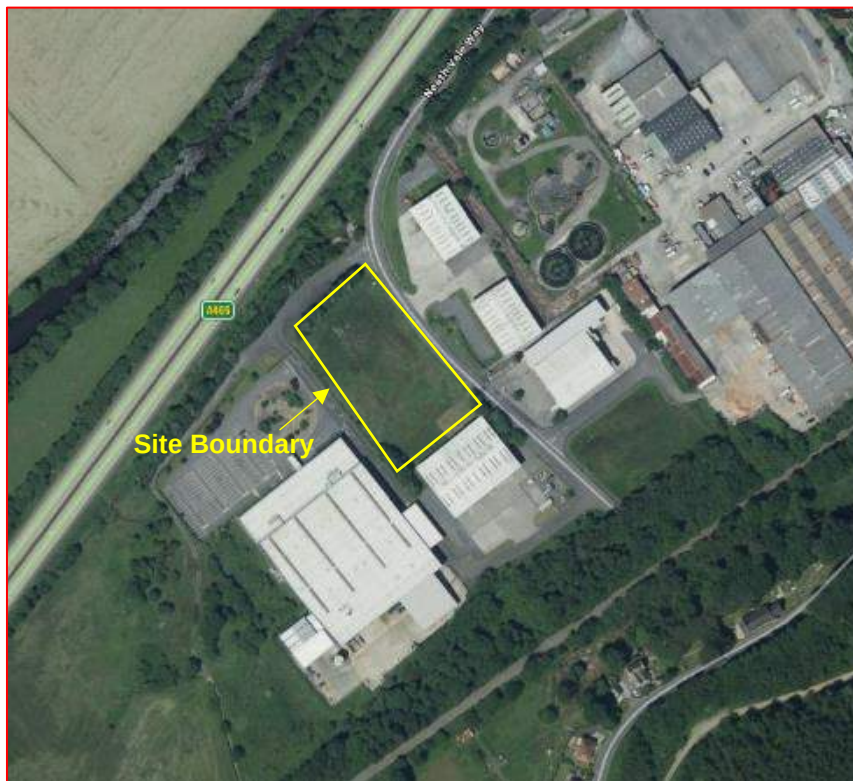


Figure 1: Aerial Image of Site ©GetMapping (image capture 2018)

2.3 Topography & Elevation

The whole site is fairly level with no distinct changes in topography.

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

2.4 Statutory Service Information

Service information was made available by the Scheme Engineers in preparation any intrusive ground investigation works deemed required by way of this PRA. 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 231 '*Merthyr Tydfil*', Solid and Drift edition at 1:50,000 scale, and BGS's online resource Geology of Britain Viewer.

The superficial geology mapped shows the site to be underlain by Alluvium deposits typically comprising a mix of clays, silts, sands and gravels.

The geological mapping indicates the solid geology beneath the site to be that of the South Wales Upper Coal Measures (Rhondda Beds) of Carboniferous age. Such strata comprise of grey, coal bearing mudstones/siltstones, with seatearths and minor sandstones.

There are numerous faults found on the BGS geological map that dominate the area. The map indicates a northeast-southwest trending Neath Disturbance fault that runs along the site's northern boundary. There are several northwest-southeast trending faults that have been dissected by the Neath Disturbance one of which appears to run close to the site's eastern boundary, possibly just inside the boundary.

The nearest dip shown of the bedrock records an angle of 15 degrees southeast direction.

3.2 Mining & Quarrying Activity

Geological Sheet SN-80-SW shows the geology of the site in greater detail at a scale of 6 Inch to 1 Mile. Whilst the site lies within a coal mining area of the South Wales Coalfield, the geological maps do not indicate any shallow mine workings to pass beneath the site. There are a number of coal seams shown in the wider area that generally crop southwest-northeast, the nearest being some 200-250m to the south, the No.1 Rhondda seam, which with a south-easterly dip indicates the coal seam to be dipping away from the site. A mine entry is also shown in relation to the coal seam on the down dip side. Glynmerthyr Colliery is shown on the plan indicated by a mine adit entry some 350m to the southwest.

A Coal Authority CON29M mining report (Report Reference; 51002402749001, March 2021) has been obtained by QGL for the site and is presented in Appendix II. The Report states that whilst the property is within a defined Coalfield region it is not within a surface area that could be affected by past, present or future planned coal mining. There are no mine entries within, or within 20m, of the site boundary. It is also in an area where coal mining by opencast methods has not taken place or is planned to take place.

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 31st 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.

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 scale

The site is part of an open field surrounded by several other fields in all directions. Some 90m to the north flows the River Neath, and 120m to the south west of site runs the Great Western Railway (Vale of Neath Section). A narrow land drainage ditch crosses the southern half of the site, towards the southern boundary. Located approximately 80m to the southwest is a premises called Dre-hir – which appears to be a farm.

1897 to 1918 County Series at 1:2,500 and 1:10,560 scales

There are no notable changes or features on-site itself or on neighbouring lands. However, located 90m to the northeast-east is a Sewage Works with an access track from the east leading off John Street.

The larger area of Resolven has shown infrastructure growth with the main high street and residential area continuing to develop 500m east of site. Ynys-arwed Colliery is located 490m west of site alongside the Neath Canal, which itself follows the alignment of the River Neath on the northern side.

1950 County Series 1:10,560 scale

By 1950 part of the north-eastern corner of the site is occupied by woodland. No structures or development of the site is shown. 120m to the east there is a large engineering works now shown which connects to the Great Western Railway. The larger area of Resolven continues to expand with increased residential dwellings and infrastructure. An overhead electrical transmission line is shown 30m north of site.

1962 to 1965 National Grid & County Series 1:2,500 & 1:10,560 scale

The site remains undeveloped, however 30m east and northeast of site a small 'L' shaped 'Refuse Tip' is now indicated located between the site and the nearby sewage works. A second 'Refuse Tip' is also shown east-southeast of site, at a distance of some 90m. A Recreation Ground is shown on the eastern side of the sewage works. Ynys-arwed Colliery is no longer shown, with many collieries in the larger area of Neath Vale showing as disused.

1982 to 1993 National Grid 1:2,500 & 1:10,000 scale

There are no notable changes within the site boundaries or immediately adjacent. The larger area continues to evolve and expand. The Great Western Railway is no longer labelled as such and is now a Mineral Railway

line.

2001 to 2003 National Grid & LandLine 1:10,000 & 1:1,250 scale

By 2003 several business units have been constructed surrounding the site with the Vale of Neath Business Park now established complete with new access roadways. The site remains undeveloped. The A465 Trunk Road has been constructed and runs southwest – northeast 30m north of site. The sewage works remain in place, however the 'Refuse Tips' are no longer mapped.

2010 to 2021 County Series, National Grid 1:10,000 scale

There are no notable changes to the site study area or lands immediately adjacent.

Summary:

The site has remained undeveloped grass land/ partial woodland since first edition Ordnance Survey mapping. However, the neighbouring lands have been developed over several decades, with a sewage treatment works established pre-1920s 90m east of site, engineering works unit 120m east of site in the 1950s and a number of business units surrounding the site in early 2000's. Two small refuse tips were first mapped in early 1960s, the closest being 30m northeast of site, content unknown. The larger area has seen the main Great Western Railway line continue up until 1980s whereby it became solely a Mineral Railway, 120m south of site, and the A465 dual carriageway that was constructed in the late 1990's-early 2000's on a marginally raised embankment feature 30m north of site.

4.0 GROUNDSURE DATA REVIEW

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-213-7604781) 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.

4.2.2 Superficial Ground/ Drift Geology & Landslips

There is superficial ground/ drift geology mapped across the site. The Groundsure report reflects Section 3.1 of this report with Alluvium Deposits mantling the site.

There are no records of any landslips within 500m of the site boundary.

4.2.3 Bedrock, Solid Geology & Faults

The report identifies the site to be underlain by the South Wales Upper Coal Measures Formation which comprises siltstone, sandstone and mudstone, interbedded.

Within 500m of the site, up to 14 geological faults are listed. Three of these are listed as being on site. However, these are not considered to impinge upon the site and its development.

The nearest coal seam crop line is listed as 189m north of 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 to be installed 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

The report shows two entries for surface workings on the site that are listed as Sewage Works, however, this may be inaccurate as the historical mapping and present day operational sewage works are both consistent and are located east of site.

There are no other entries shown within the site boundaries for this section.

There are no natural activities within 500m of the site, there are however 6 'Britpits' over 400m northwest of site, 24 entries for surface ground workings, the nearest being 415m northwest which is the Pant-Nedd-Fechan underground coal mine workings, long ceased.

The nearest underground workings relate to an un-named colliery 212m west of site dated 1921 (suspected to be the Ynys-arwed Colliery). In total 135 entries are listed in this category within 1km radius of the site including cold coal drifts, collieries, air shafts and coal levels which clearly shows the extensive coal mining operations that took place in this area of the South Wales Coalfield predominantly in the late 1800's and early 1900's timeframe.

The report only lists just one entry in relation to non-coal mining potential activity, referring to an Iron Ore vein mineral (371m northwest of site), however, these are unlikely to have ever been mined due to scale and localised nature and are at a level that need not be considered in this assessment.

There are no clay, tin, gypsum or any other 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	Very Low (On-Site)	Ground conditions predominantly low plasticity

Hazard	Hazard Rating	Details
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	Negligible (On-Site)	Deposits with potential to collapse when loaded and saturated are believed not to be present.
Compressible deposits	Moderate (On-Site)	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.
Running Sands	Low (On-Site)	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

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	15-25 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 21.4 of the Groundsure Report details historic railways. This lists 6 entries, the nearest being 105m southeast of site as railway sidings dated 1965, with active railway listed as a single track 137m southeast of site (mineral railway line).

There are no underground railways or tunnels either historically or present day.

4.3 Environmental Data Review

4.3.1 Historical Industrial Sites

The Groundsure combined report identifies 90 No. records of potentially contaminative past industrial land uses within 500m of the site boundary. These vary from railway sidings, graveyards, mine workings, sewage works and engineering works. The nearest is the sewage works dated 1921 which it shows is onsite in the north-eastern corner, however, this remains questionable as to whether it was located just offsite. An 'Unspecified Works' and a 'Refuse Heap' are both detailed as 33m northeast of site dated between 1965-1988.

A second sewage works is listed as 65m northeast of site which ties in with current day sewage works location.

All other entries are at such a distance not considered to pose a significant risk to the site or to have impinged upon the site historically.

10 historic tanks are listed, the closest being 104m northeast of site dated 1918, use, content and status unknown.

There are no records of any historical military sites, energy features, petrol stations or garages within 500m of the site boundary.

There are 5 historical landfill entries within 500m of the site. The nearest of these that may be considered a potential risk, are located 33m northeast of site and 106m east of site, dated 1962, content unknown.

4.3.2 Current Industrial Sites

The site is known to be openly accessible area of grass land with a number of business units surrounding to the west, south and east and the A465 trunk road to the north. The Groundsure Report lists a Pumping Station to be present on site and as such this will need confirming during a site walkover.

An electricity sub-station is located 11m northeast of site on the opposing side of the access road. With the exception of the business units all other entries are at a considerable distance from the site, significantly limiting any potential impact they may have of the site.

There are no current petrol or refuelling stations listed within 500m of the site.

There are also no gas pipelines, so hazardous substance storage or usage sites, or indeed sites determined as Contaminated Land.

4.3.3 Environmental Permits, Incidents and Registers

Three entries are listed for Licenced Pollutant Release (Part A(2)/B), the nearest being 197m east of site at TRW Steering Systems Ltd at SA11 4HN, no further details shown.

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 (PartA(1)) within 500m of the site study area.

There are 12 records of Licenced Discharges to Controlled Waters with the closest being 76m to the northeast relating to TRW Steering Systems Ltd – trade discharges into a tributary of the River Neath.

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

There are no records for List 1 or List 2 Dangerous Substances in Compliance with European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

There are 7 records of Substantiated Pollution Incidents (EA/NRW) within 500m of the site study area. The closest incident to the site study area is 188m northeast dated 24/07/2015 relating to Crude Sewage. This was classified as 'no impact' to land, 'minor impact' to Air. Impact to water not detailed.

The remaining records are over 250m from site and all recorded either 'no impact' or 'minor impact' on either water, land or air.

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

The report indicates that the superficial soil deposits mantling the site are classed as a Secondary A aquifer. Such aquifer designations of the superficial deposits infer that they have 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 formally classified as minor 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 'medium to high'.

There are 2 groundwater abstraction licences recorded within 2000m of site however these are both over 1km used for pollution remediation processes related to a mine adit at Ynys-arwed colliery.

There are 5 No. surface water abstraction licences, four of which are historic and just one active located 586m southwest of site, abstracting from the River Neath.

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 16m northeast of site, which is an un-named small stream, with the major River Neath 33m north of site.

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 'High Risk' in relation to Risk of Flooding from Rivers and Sea (RoFRaS) . A historic flood event occurred onsite in 1979 following the River Neath channel capacity being exceeded.

The site lies 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.

The highest risk from surface water flooding is shown in Table 3 below.

Table 3: Surface Water Flood Risk

Return Period	Maximum Modelled Depth (Within 50m)
1 in 1000 year	0.3 -1.0m
1 in 250 year	0.3 -1.0m
1 in 100 year	0.3 -1.0m
1 in 30 year	0.3 -1.0m

Groundwater risk on-site has been identified as Low with the highest risk within 50m also being a Low risk.

4.3.6 Designated Environmentally Sensitive Sites

According to the Groundsure report there are 97 records of Designated Ancient Woodland ranging between 207m southeast and 1974m east.

There are no other designated environmentally sensitive sites including Sites of Specific Scientific Interest (SSSI), Special Area of Conservation (SAC), National Nature Reserves (NNR), Special Protection Areas (SPA) or Local Nature Reserves (LNR) within 2000m of the site.

There are no records of 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

Upon review of the geotechnical and geo-environmental data collected from all sources (including geology, site history and the Groundsure report), a limited number of features regarding historical/ current land use within the locality have been identified that may have the potential to influence the development. A summary of these features and potential contaminants associated with each are as follows:

- Historical mapping has shown that the land has remained undeveloped grass, originally part of a larger field.
- Immediate neighbouring lands comprise the business park, including business units, access roads and associated car parks.
- The Groundsure Report has detailed a pumping station as possibly being onsite in the northeastern corner and the potential for the original sewage works possibly being present in the northeast corner, although the present-day sewage works are 33m east of site. The Groundsure and Historical Mapping has also confirmed two historic 'refuse tips' or 'unspecified heaps' to the northeast (30m) and to the east (106m).
- 30m to the north, the A465 resides on a raised embankment. Material from the construction of this carriageway may be present on nearby lands.
- The wider area of Neath Vale has undergone vast developments in late 19th century driven by coal mining (underground and opencast), iron, steel and tin plate works, served by canal and railways. By

1960s each of these industries had ceased production, and various other industries took over including manufacturing and processing industries.

- The environmental data review has identified risks from offsite potentially contaminative historical or current land uses, directly relating to sewage works/ pumping station, electricity sub-station, and refuse tips nearby.
- No underground or above ground coal mining or mineral extraction/ quarrying works are considered to have impinged upon the site as denoted by the Coal Authority Mining Report
- Unrecorded tipping and spreading of waste soils could have taken place in the confines of the site prior to the construction of the business park due to the significant development of the area and infrastructure in the 20th century, albeit a very low potential.
- The site is at high risk of flooding located in a Zone 2 and 3 flood area.
- Shrink Swell Clays -Very Low (On-Site)
- Running Sands – Low (On-Site)
- Compressible Deposits – Moderate (On-Site)
- Collapsible Deposits – Negligible (On-Site)
- Landslides – Very Low (On-Site)
- Ground Dissolution of Soluble Rocks – 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.

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. 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 (commercial) 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

Potential sources of contamination (on-site or off-site derived) were identified by the data review (see section 4.4) with consideration to the site and surrounding land's past, present and potential future uses. The review has highlighted the potential for contamination (including land gas form) associated with two small nearby historic refuse tips and potentially an historic sewage works towards the northeast corner of the site. In addition, construction waste generated from the formation of the A4675 trunk road to the north and the electricity sub-station 11m north of site.

In addition to the above, the coal mining review of the site (detailed in section 3.2) has identified the site to be at null to negligible risk from past, current or future proposed coal mining activity and therefore as a potential source of pollution including mine derived gases, waters or spoil can be discounted as part of this assessment.

➤ Receptors

Considering the current and future proposed continuing site end use (Commercial), 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:

<u>On-site</u>	<u>Off-site</u>
• Future site users – construction workers (during development), Commercial Employees. • Controlled waters – groundwater, ('Secondary A') aquifer • Narrow land drain at front of site • Possible services	• Local site users – residents and visitors • Nearby controlled waters – groundwater, low risk to unnamed stream 10m west of site and the major River Neath north of site • Nearby buildings and services – primarily commercial

➤ 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 is provided as Figure 2.

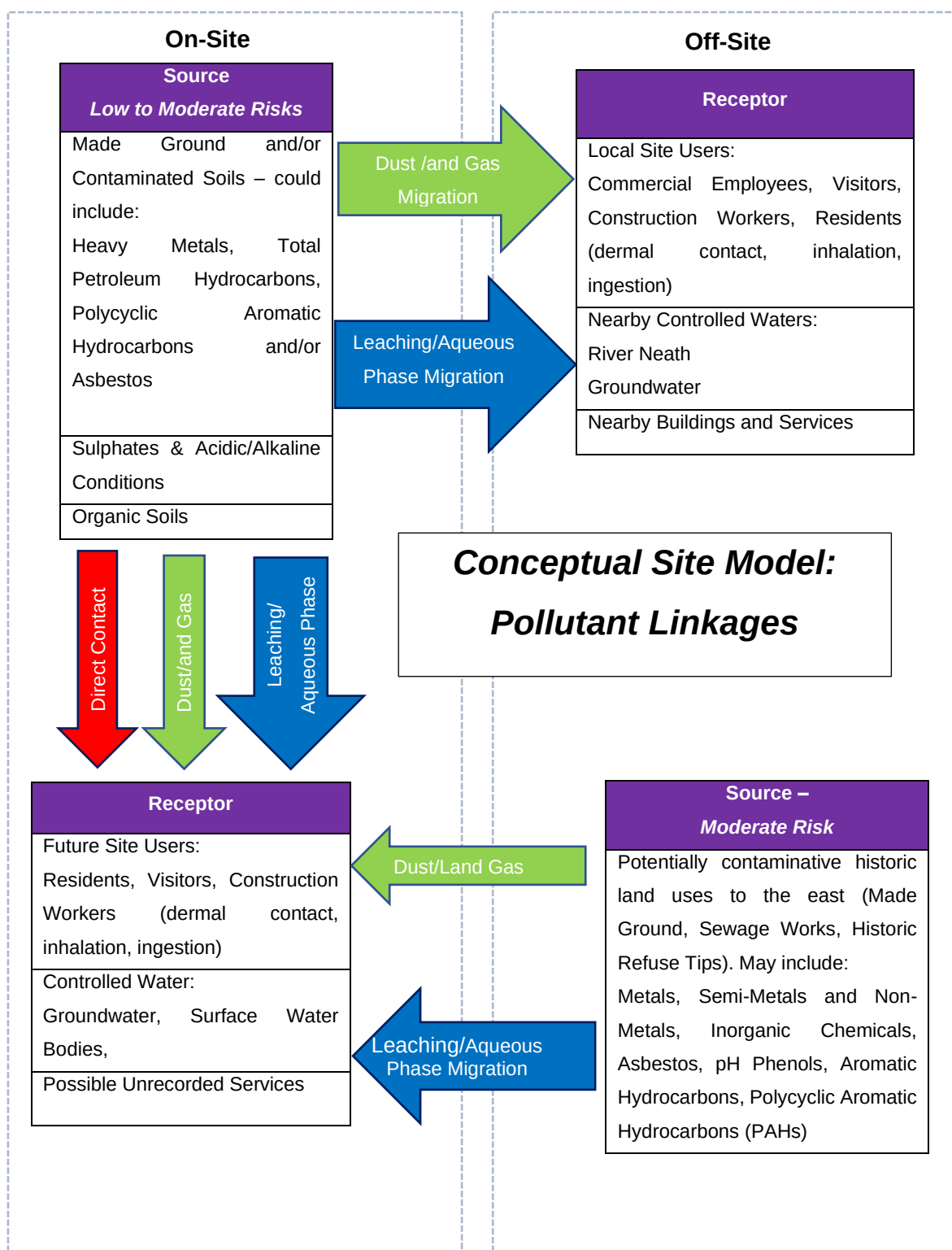


Figure 2: Conceptual Site Model: Pollutant Linkages

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 to be underlain by Alluvium deposits. The bedrock geology on the site study area is that of the South Wales Upper Coal Measures Formation.
- Review of past, current and future site use does not indicate any development on the site however, there is the possibility of an old sewage works that may have encroached the northeast corner of the site and as such remnant structures or construction debris may exist on site.
- Review of past, current and future proposed coal mining by underground or opencast methods has determined the site to be at none to negligible risk from such activities.
- Shrink Swell Clays -Very Low (On-Site)
- Running Sands – Low (On-Site)
- Compressible Deposits – Moderate (On-Site)
- Collapsible Deposits – Negligible (On-Site)
- Landslides – Very Low (On-Site)
- Ground Dissolution of Soluble Rocks – Negligible (On-Site)

Environmental:

- Whilst the historical map review has shown the site to have been undeveloped, the review of past and current land uses on both the site and the surrounding lands has identified potential sources of contamination. The onsite potential sources relate to the potential for an historic (1921) sewage works encroaching into the site's north-eastern boundary as well as potential construction ewaste material from the major A465 trunk road construction to the north. Any Made Ground that may be present could contain Heavy Metals, Total Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons and Asbestos. The presence of these deposits means a potential risk is present and should be considered. The potential for Made Ground to exist however is considered low to moderate.
- Potential for off-site sources of contamination to the site are considered moderate. Surrounding current land use is by business units to the west, east and south, with an active sewage works >30m east of site. There are also two historical (1962) 'refuse tips' identified as being in close proximity to the site which could give rise to migrated pollutants and potential landfill gases. However, it is important to note that the content and nature of these 'refuse tips' are unknown.
- Depending on the permeability of the ground on site, there is a possibility of leaching of contaminated soils into the groundwater.
- The GroundSure® report states that radon protective measures are not necessary.
- The closest watercourse is an un-named stream 10m west of site with the River Neath 90m north.

- The risk to groundwater and surface waters is considered very low.
- The Groundsure® report indicates high risk of flooding on-site.

6.2 Evaluation and Recommendations

A limited number of potential geotechnical and environmental issues have been identified within this study. The following evaluations and subsequent recommendations are made:

- In relation to any environmental/contaminated land issues, the desk study has identified a low to moderate potential for contaminative Sources to be present both on-site and off-site as summarised in Section 6.1 which should be investigated further.
- In addition, should any Made Ground be present on site and with the superficial geology dominated by Alluvium deposits in this area, geotechnical characterisation of the shallow ground for building foundations and infrastructure design is also considered necessary.
- 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 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 and Super Heavy Dynamic Probes should be suitable for this site to gain the soil/ groundwater samples required and permit assessment of the deeper lying soils, as well as enabling combined groundwater and land gas monitoring standpipes to be installed for post-fieldwork monitoring of water levels and any raised land gases (that may be attributable to historic refuse tips or sewage works).
- 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 that may have come to light. In addition, an assessment of human health risk and environmental risk should also be undertaken. The findings of the intrusive investigation will be used to assess the requirement for any further intrusive ground investigation.

7.0 REFERENCES

British Geological Survey:

- British Geological Survey (BGS) Sheet 231 'Merthyr Tydfil' 1:50,000.
- Geological Sheet SN-80-SW 1:10,560.
- BGS Lexicon of Named Rock Units (www.bgs.ac.uk/lexicon)
- BGS Geology of Britain Viewer (www.bgs.ac.uk)

Environmental and Ground Stability:

- GroundSure® Combined EnviroInsight and GeoInsight Report Ref; HMD-213-7604780, February 2021

Environmental Protection Act 1990

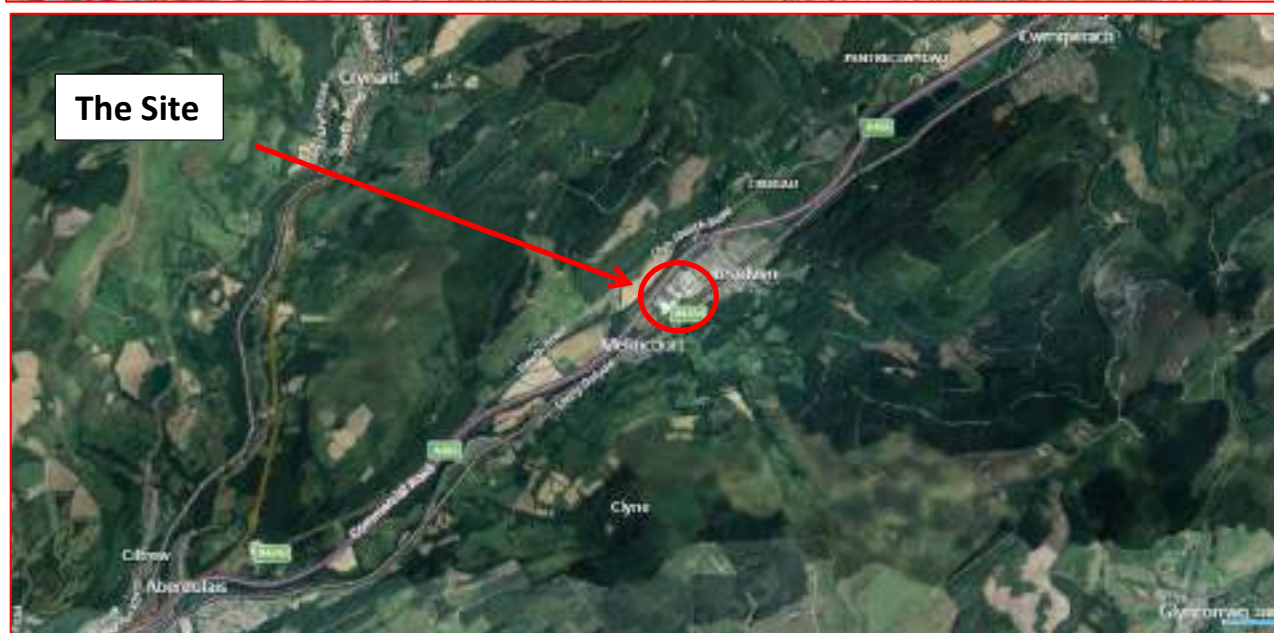
Ordnance Survey Plans:

- Collection of Historical Plans from 1887 to 2021, at 1:1,250, 1:2,500, 1:10,560 and 1:10,000 scale.

The Coal Authority:

- Coal Authority Mining Report CON29M, Reference; 51002402749001 Dated; 3rd March 2021

APPENDIX I – SITE PLANS



Mapping sourced from www.bing.com



Plas Newydd Farm
Llanedi, Swansea
SA4 0FQ
Tel: 01554 744880
Email: enquiries@quantumgeotech.co.uk

Drawing:

Figure 1

Project:

**Site at Vale of Neath Business Park,
Resolven**

Job No:

Q0478

Drawing Title:

Site Location Plan (*not to scale*)

APPENDIX II – COAL AUTHORITY MINING REPORT



The Coal
Authority

CON29M

coal mining report

LAND AT , VALE OF NEATH BUSINESS PARK, RESOLVEN, NEATH PORT TALBOT
SA11 4LD



Known or potential coal mining risks

Future underground coal mining

Page 3



Further action

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

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



Professional opinion

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

Your reference: **Q0478**
Our reference: **51002402749001**
Date: **3 March 2021**

Client name:
QUANTUM GEOTECHNICAL LTD

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



The Law
Society

Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is
on the coalfield



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



Accessibility

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

Detailed findings

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

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1 Past underground coal mining

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

2 Present underground coal mining

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

3 Future underground coal mining

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

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

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

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

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

4 Mine entries

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

5 Coal mining geology

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

6 Past opencast coal mining

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

7 Present opencast coal mining

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

8 Future opencast coal mining

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

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

9 Coal mining subsidence

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

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

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

10 Mine gas

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

11 Hazards related to coal mining

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

12 Withdrawal of support

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

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

13 Working facilities order

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

14 Payments to owners of former copyhold land

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

Statutory cover



Coal mining subsidence

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

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

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

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



Coal mining hazards

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

Glossary



Key terms

adit - horizontal or sloped entrance to a mine

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

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

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

coal seams - bed of coal of varying thickness

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

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

mine entries - collective name for shafts and adits

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

shaft - vertical entry into a mine

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

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

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

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

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

APPENDIX III – HISTORICAL ORDNANCE SURVEY MAPS

Site Details:

SITE AT NEATH VALE BUSINESS
PARK, RESOLVEN, SA11 4SR

Client Ref: Q0478
Report Ref: HMD-213-7604780
Grid Ref: 282327, 202445

Map Name: County Series

Map date: 1877

Scale: 1:2,500

Printed at: 1:2,500



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Revised 1877
Edition N/A
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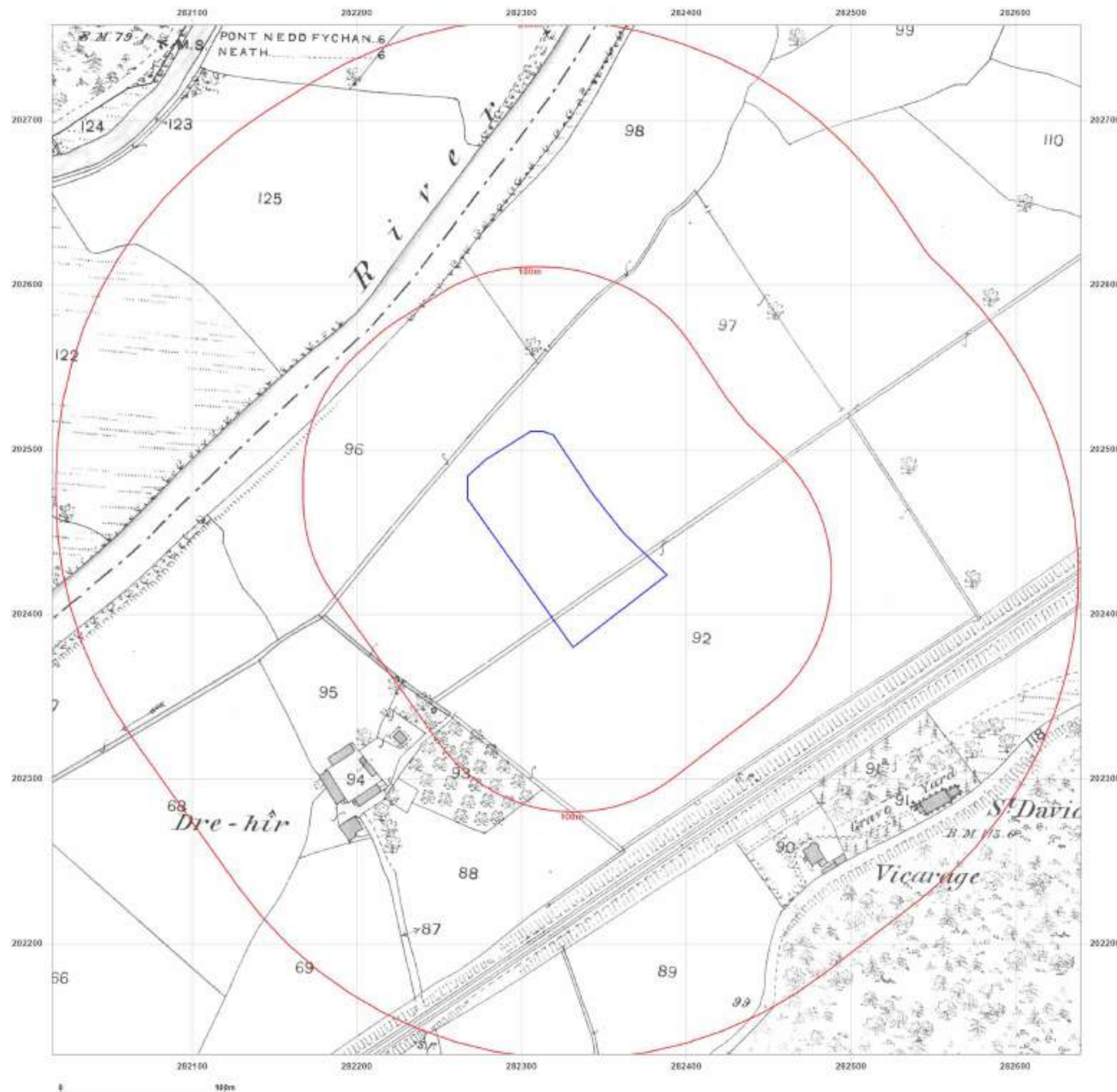


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Site Details:

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PARK, RESOLVEN, SA11 4SR

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Report Ref: HMD-213-7604780
Grid Ref: 282327, 202445

Map Name: County Series

Map date: 1899

Scale: 1:2,500

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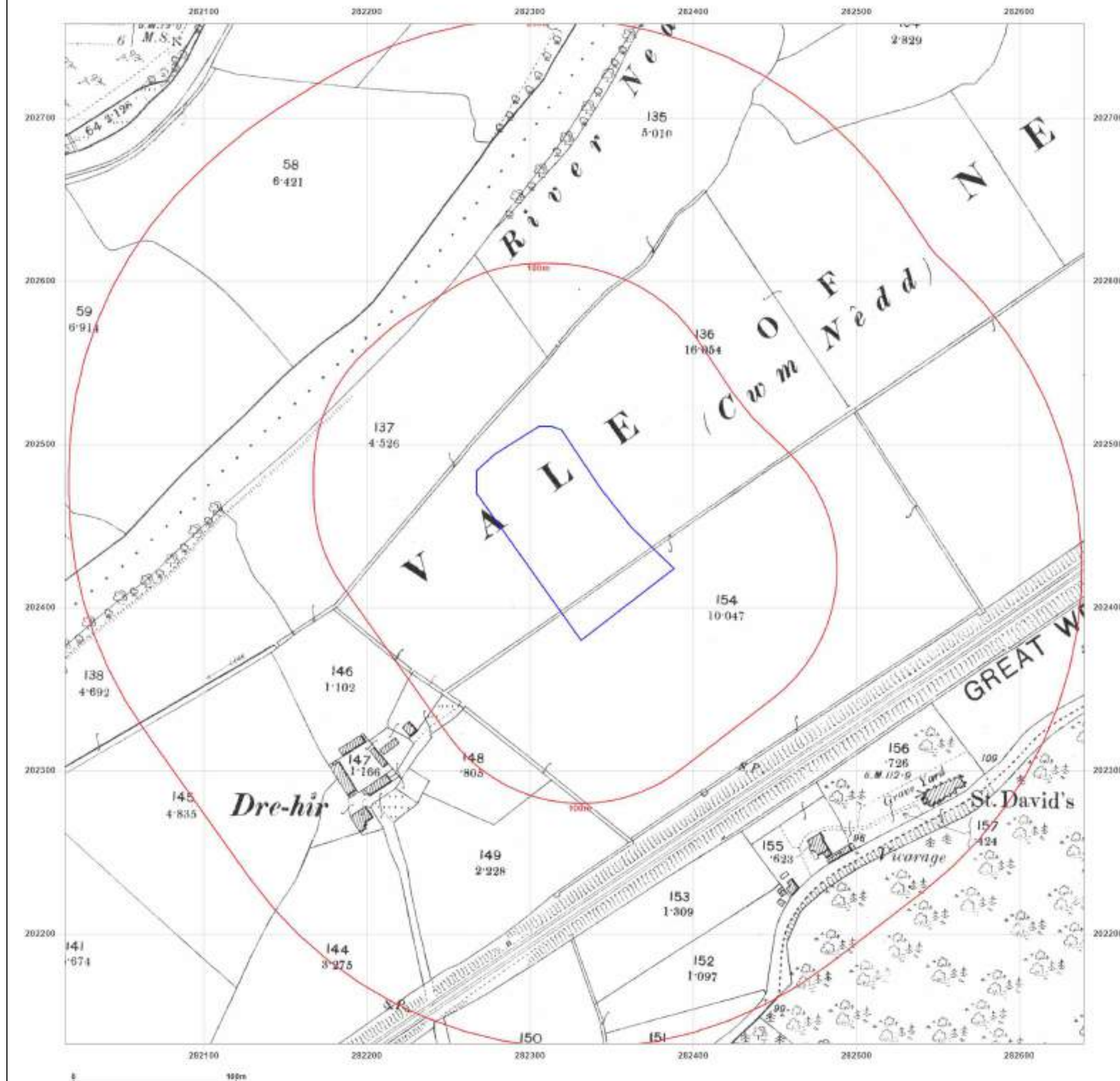


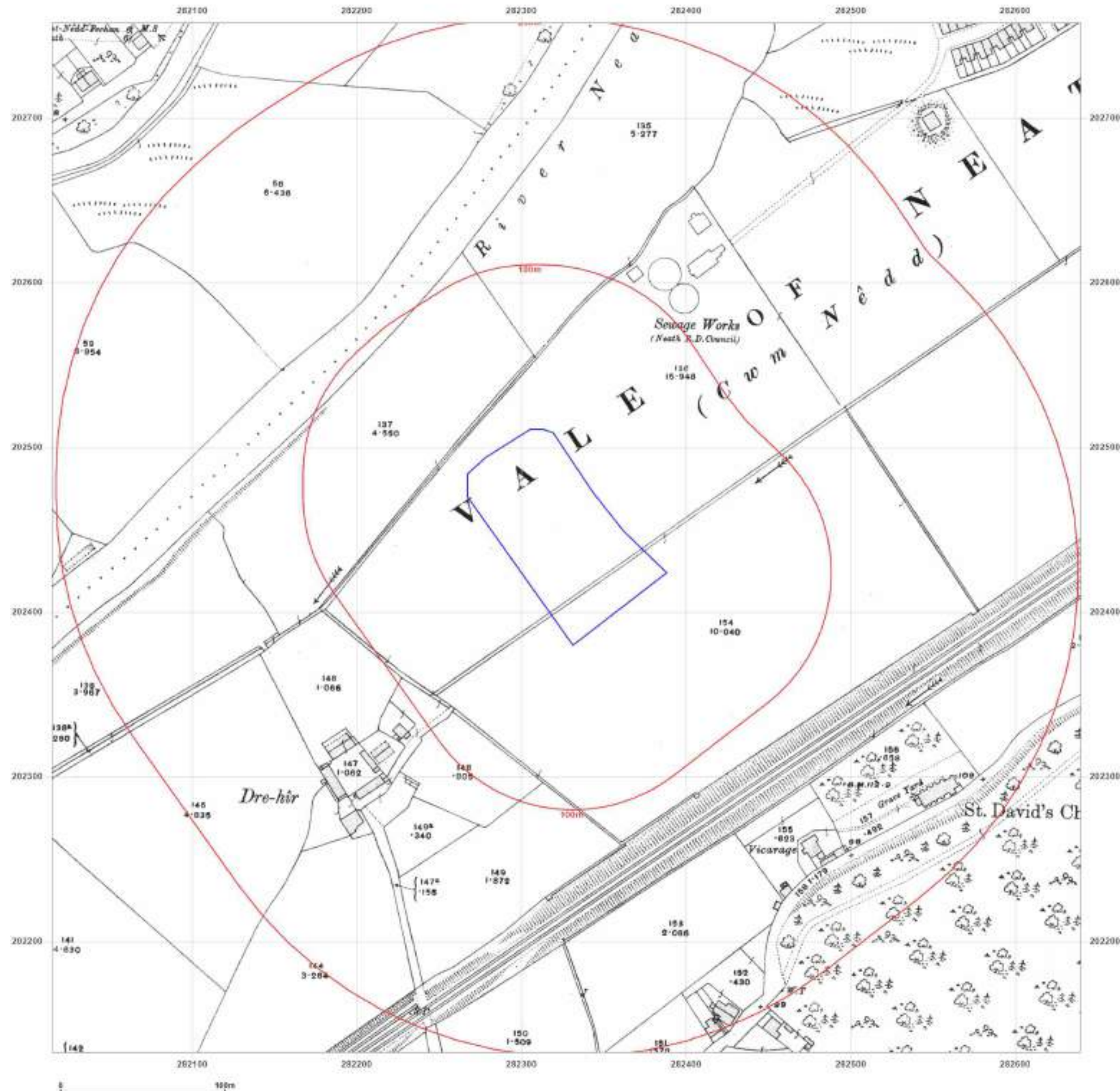
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Report Ref: HMD-213-7604780
Grid Ref: 282327, 202445

Map Name: National Grid

Map date: 1962

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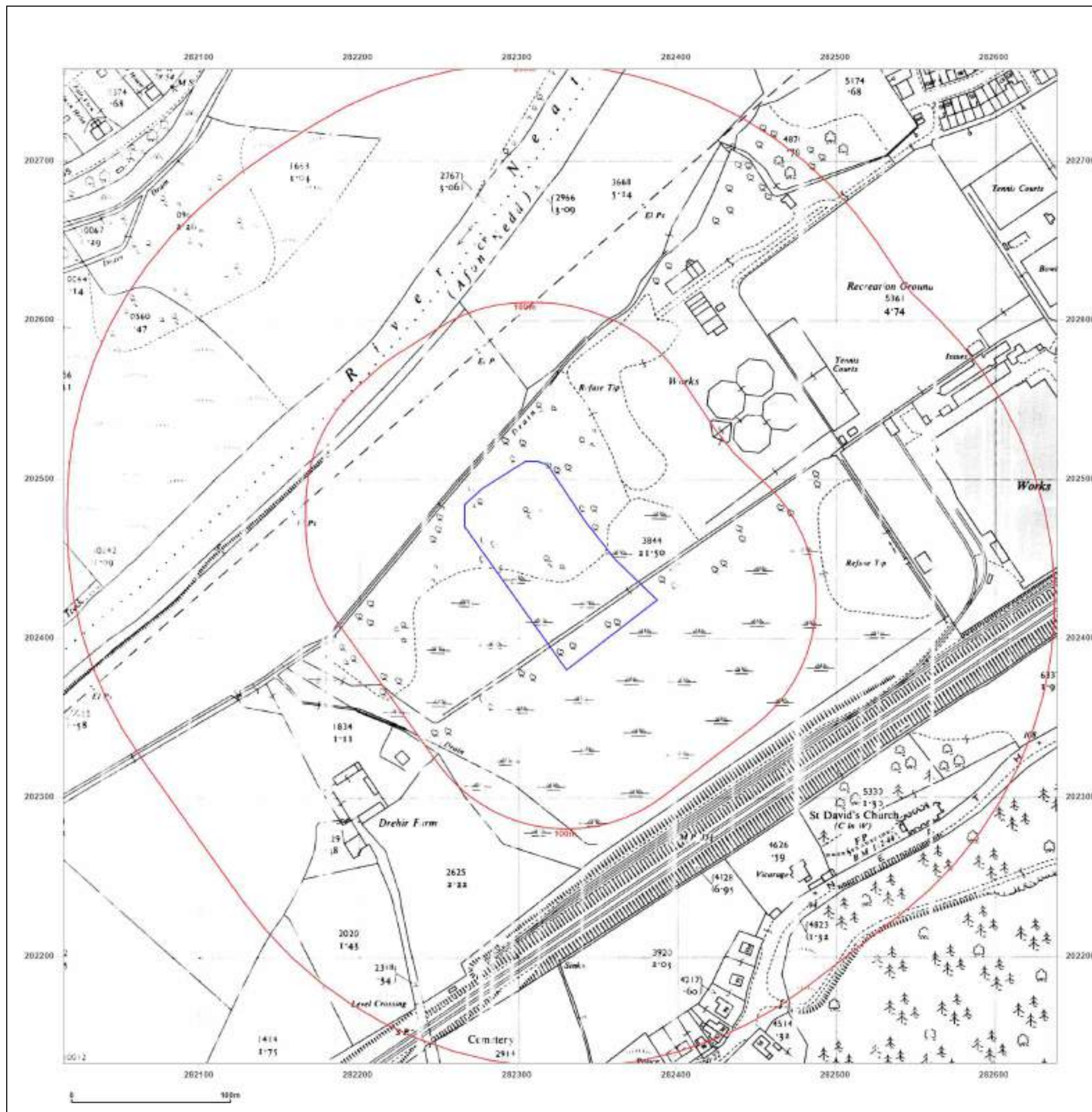


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Map Name: National Grid

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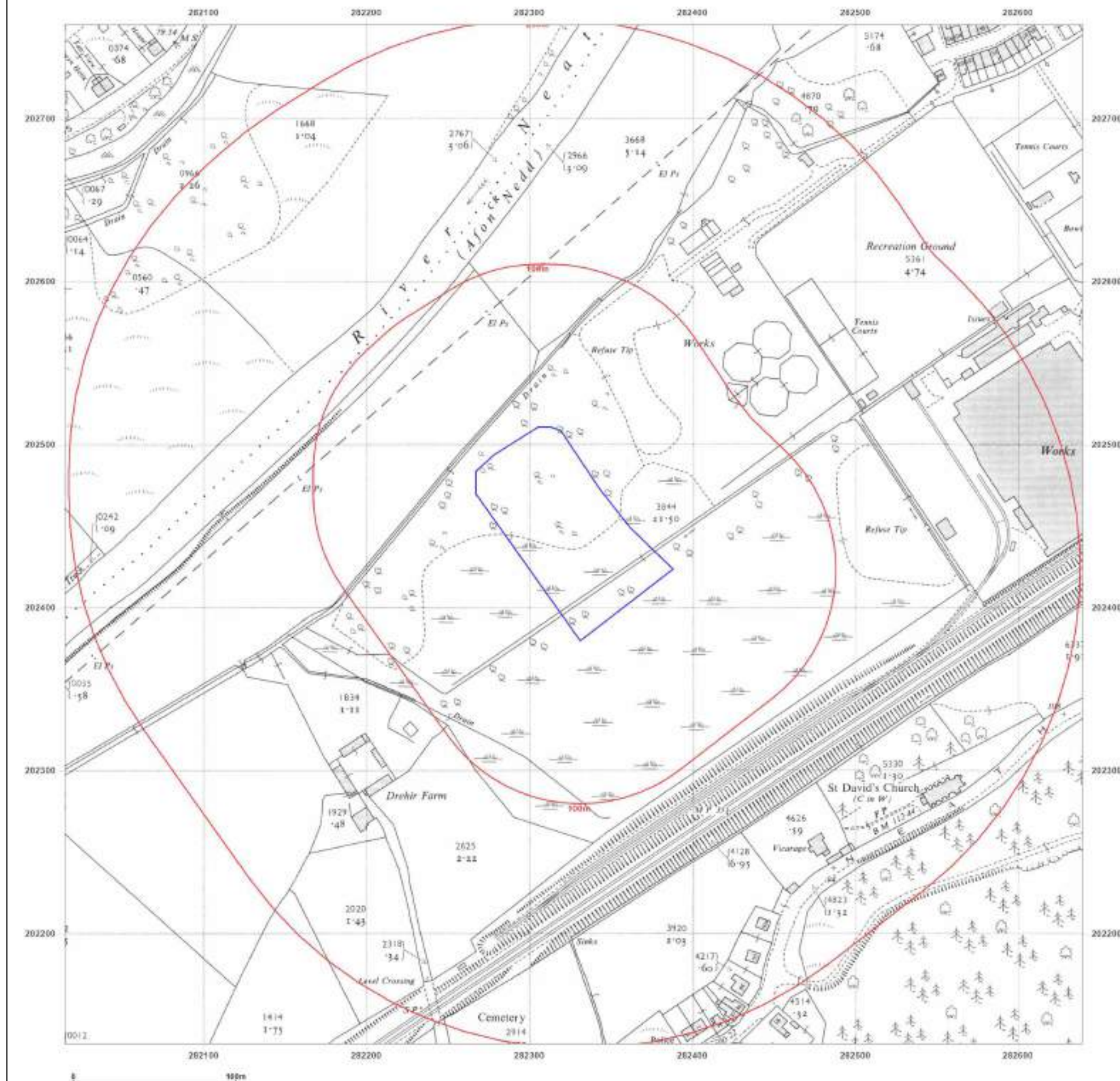


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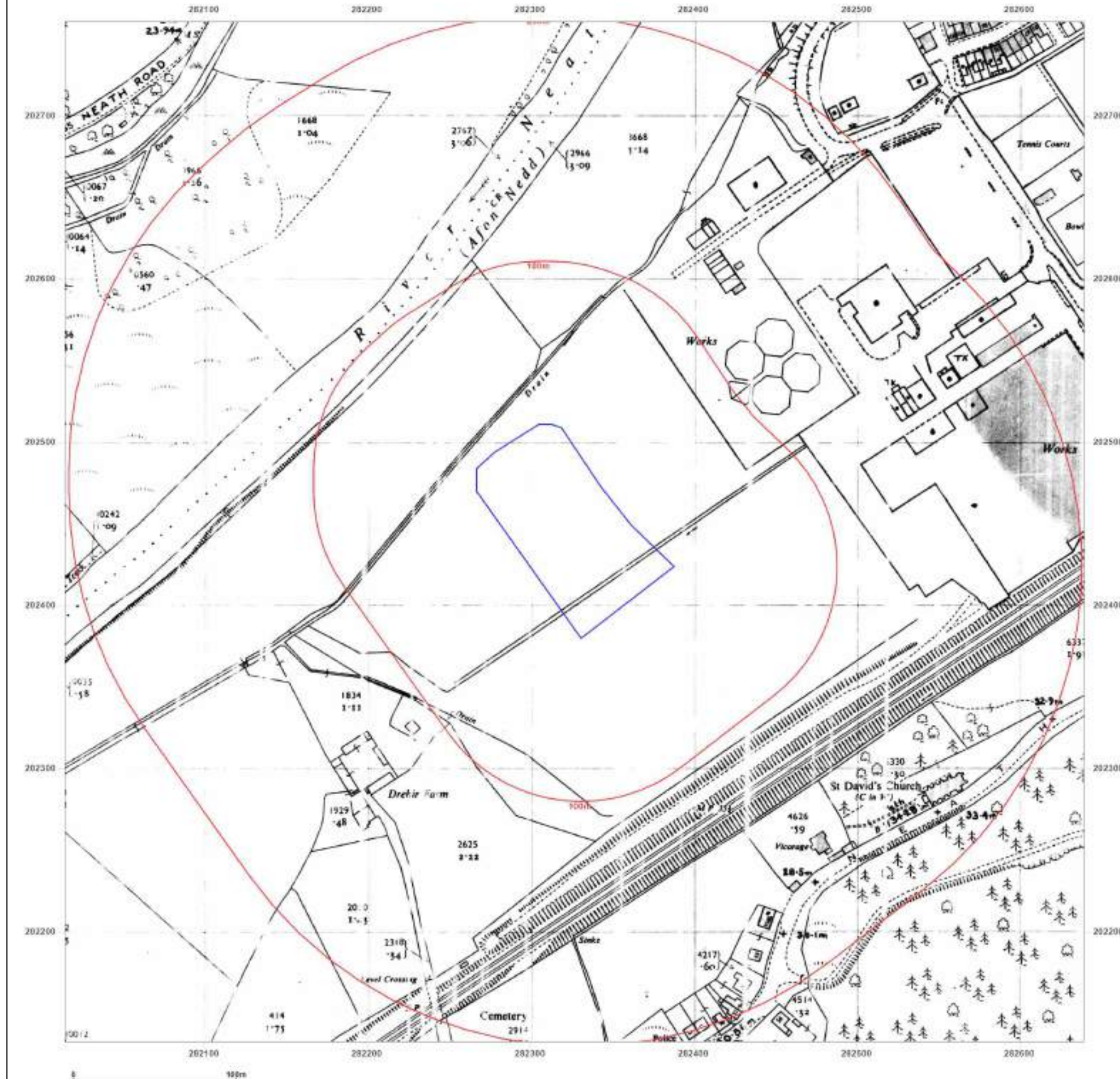


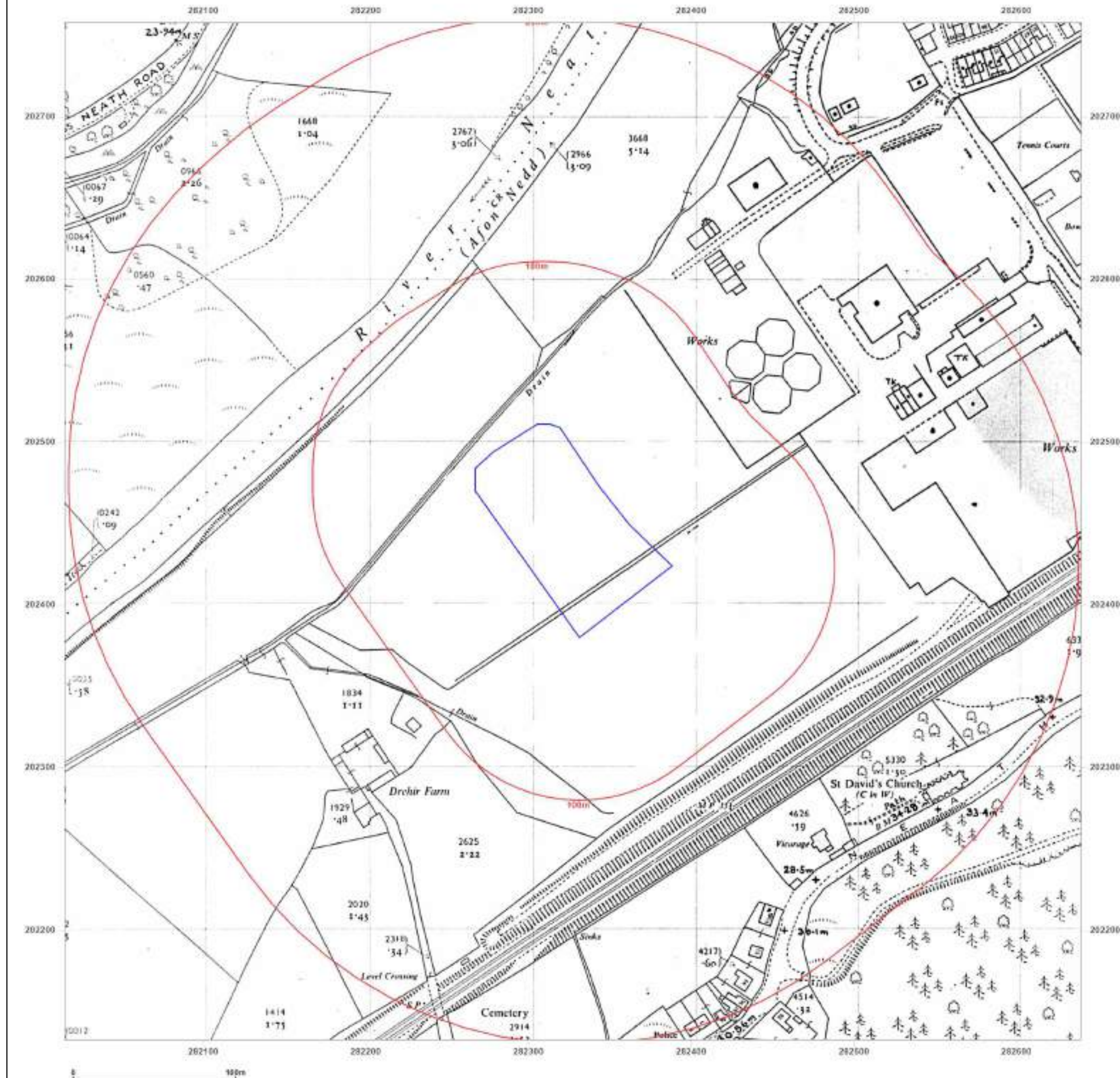
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Grid Ref: 282327, 202445

Map Name: National Grid

Map date: 1989

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Client Ref: Q0478
Report Ref: HMD-213-7604780
Grid Ref: 282327, 202445

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

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Client Ref: Q0478
Report Ref: HMD-213-7604780
Grid Ref: 282327, 202445

Map Name: County Series

Map date: 1877

Scale: 1:10,560

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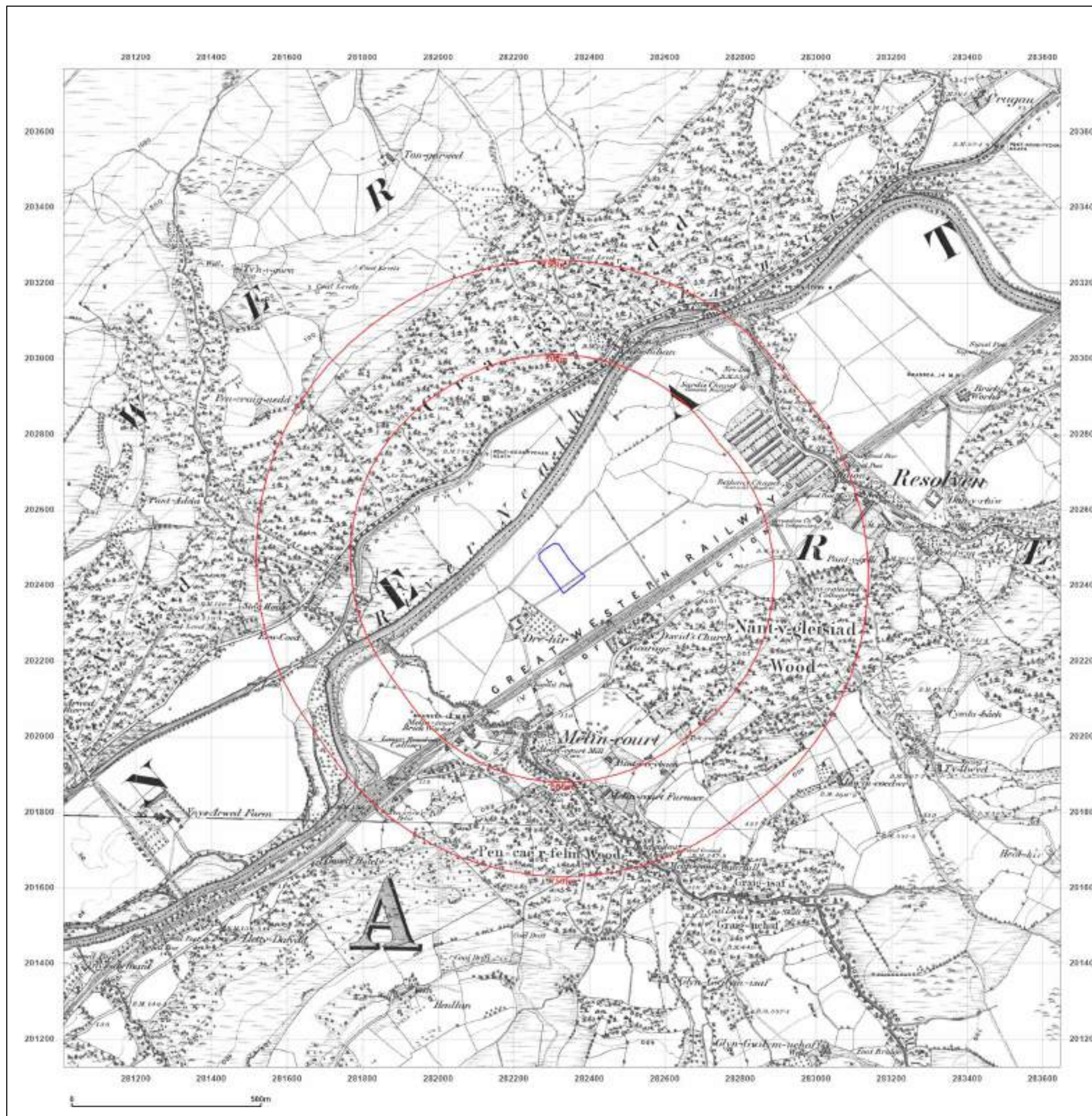


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Site Details:

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PARK, RESOLVEN, SA11 4SR

Client Ref: Q0478
Report Ref: HMD-213-7604780
Grid Ref: 282327, 202445

Map Name: County Series

Map date: 1921

Scale: 1:10,560

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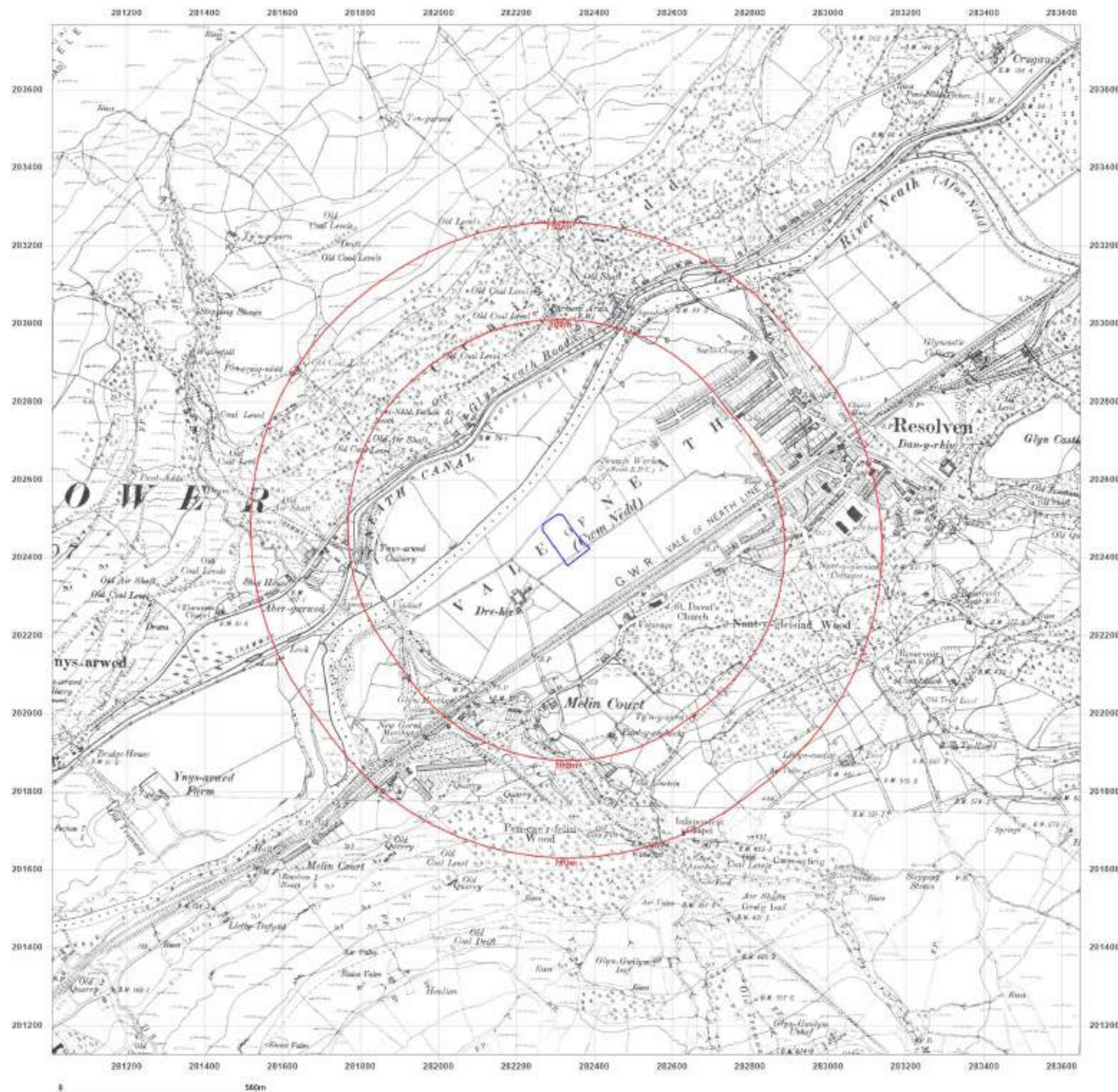


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Site Details:

SITE AT NEATH VALE BUSINESS
PARK, RESOLVEN, SA11 4SR

Client Ref: Q0478
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Grid Ref: 282327, 202445

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Map date: 1921

Scale: 1:10,560

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Revised 1921
Edition 1921
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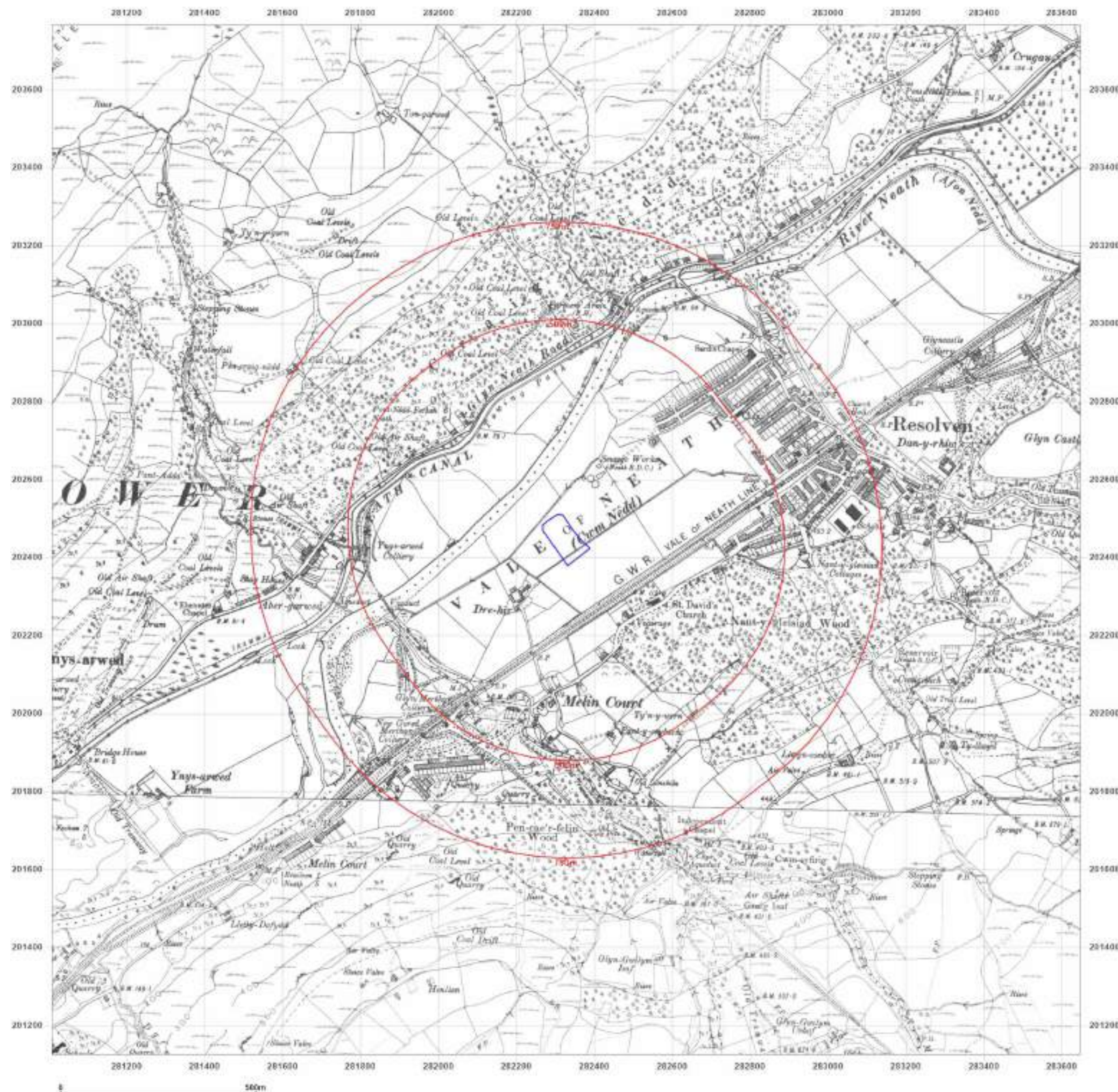


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Site Details:

SITE AT NEATH VALE BUSINESS
PARK, RESOLVEN, SA11 4SR

Client Ref: Q0478
Report Ref: HMD-213-7604780
Grid Ref: 282327, 202445

Map Name: County Series

Map date: 1948-1950

Scale: 1:10,560

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Revised 1948
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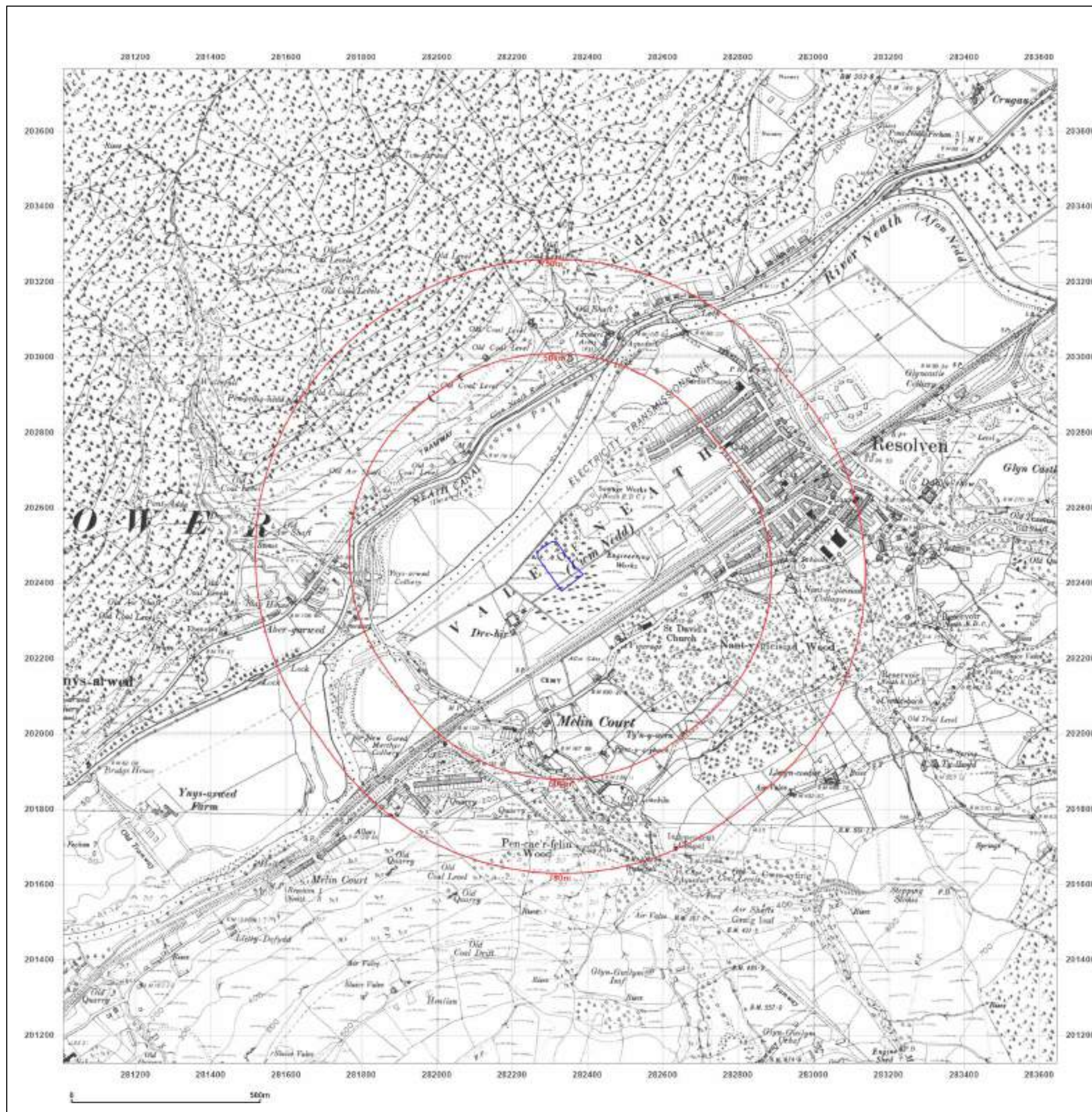


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SITE AT NEATH VALE BUSINESS
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Client Ref: Q0478
Report Ref: HMD-213-7604780
Grid Ref: 282327, 202445

Map Name: Provisional

Map date: 1965

Scale: 1:10,560

Printed at: 1:10,560



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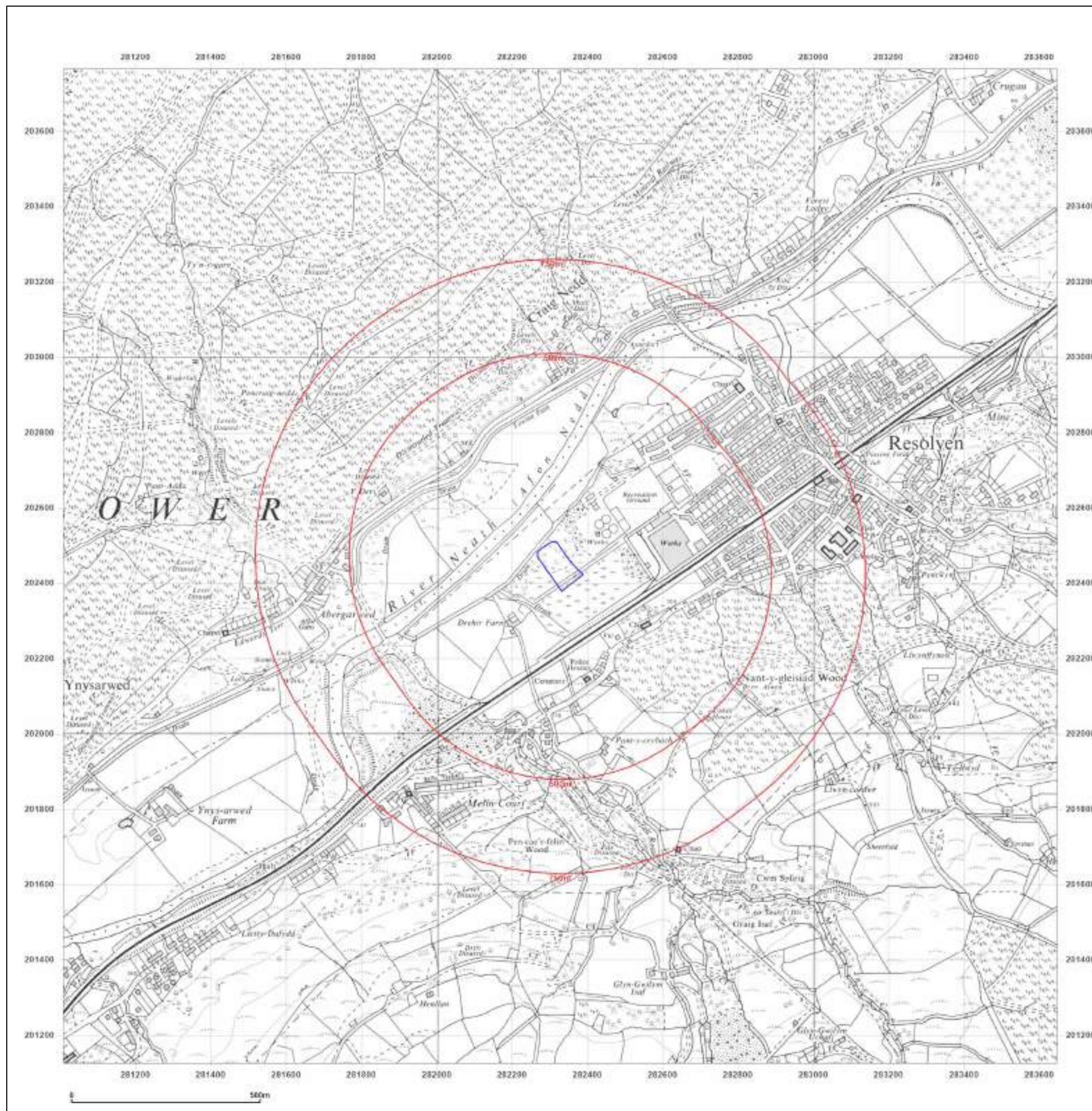


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Site Details:

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Client Ref: Q0478
Report Ref: HMD-213-7604780
Grid Ref: 282327, 202445

Map Name: National Grid

Map date: 1988

Scale: 1:10,000

Printed at: 1:10,000



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Revised 1988
Edition N/A
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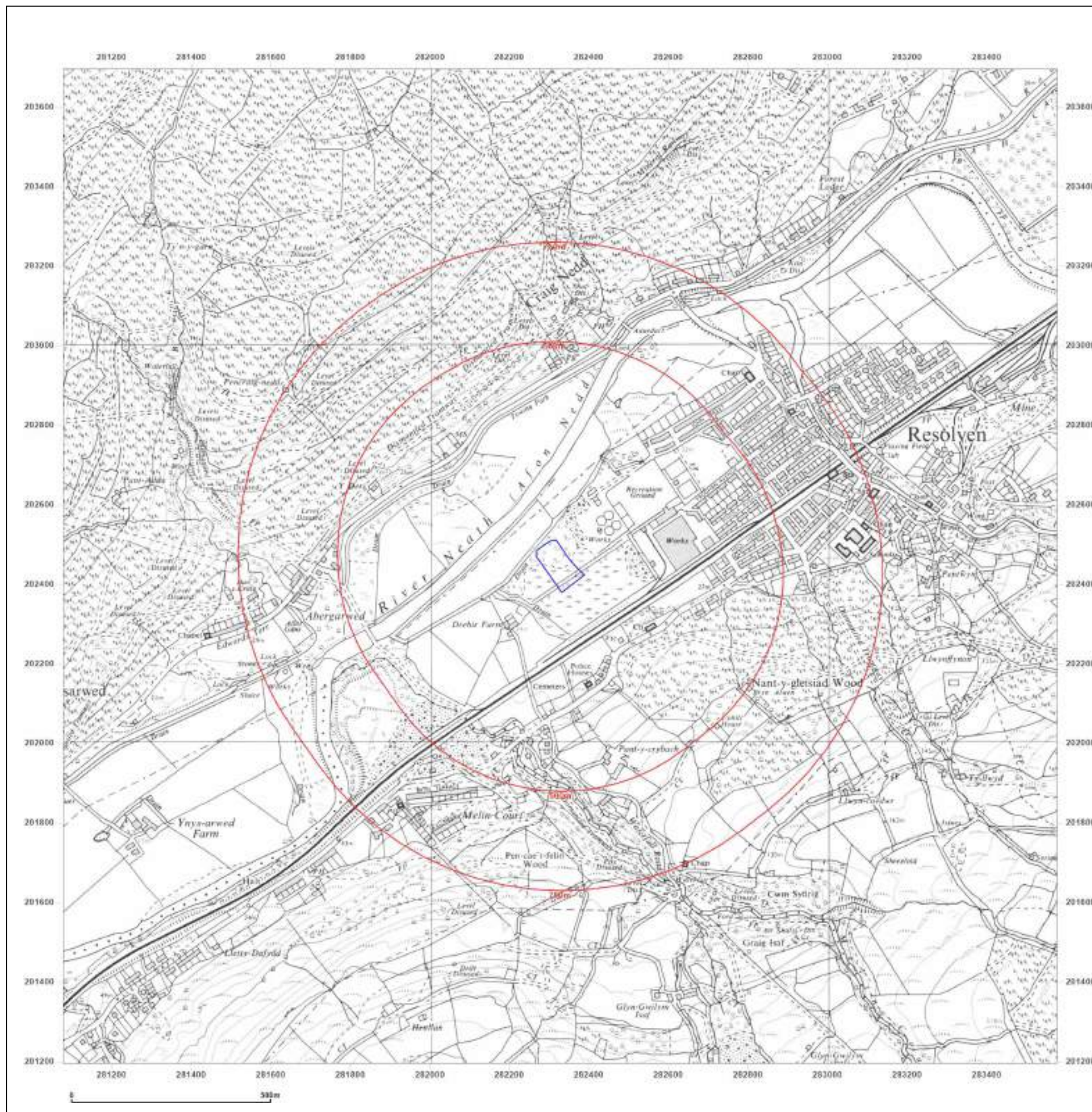


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Production date: 24 February 2021

Map legend available at:
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Site Details:

SITE AT NEATH VALE BUSINESS
PARK, RESOLVEN, SA11 4SR

Client Ref: Q0478
Report Ref: HMD-213-7604780
Grid Ref: 282327, 202445

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



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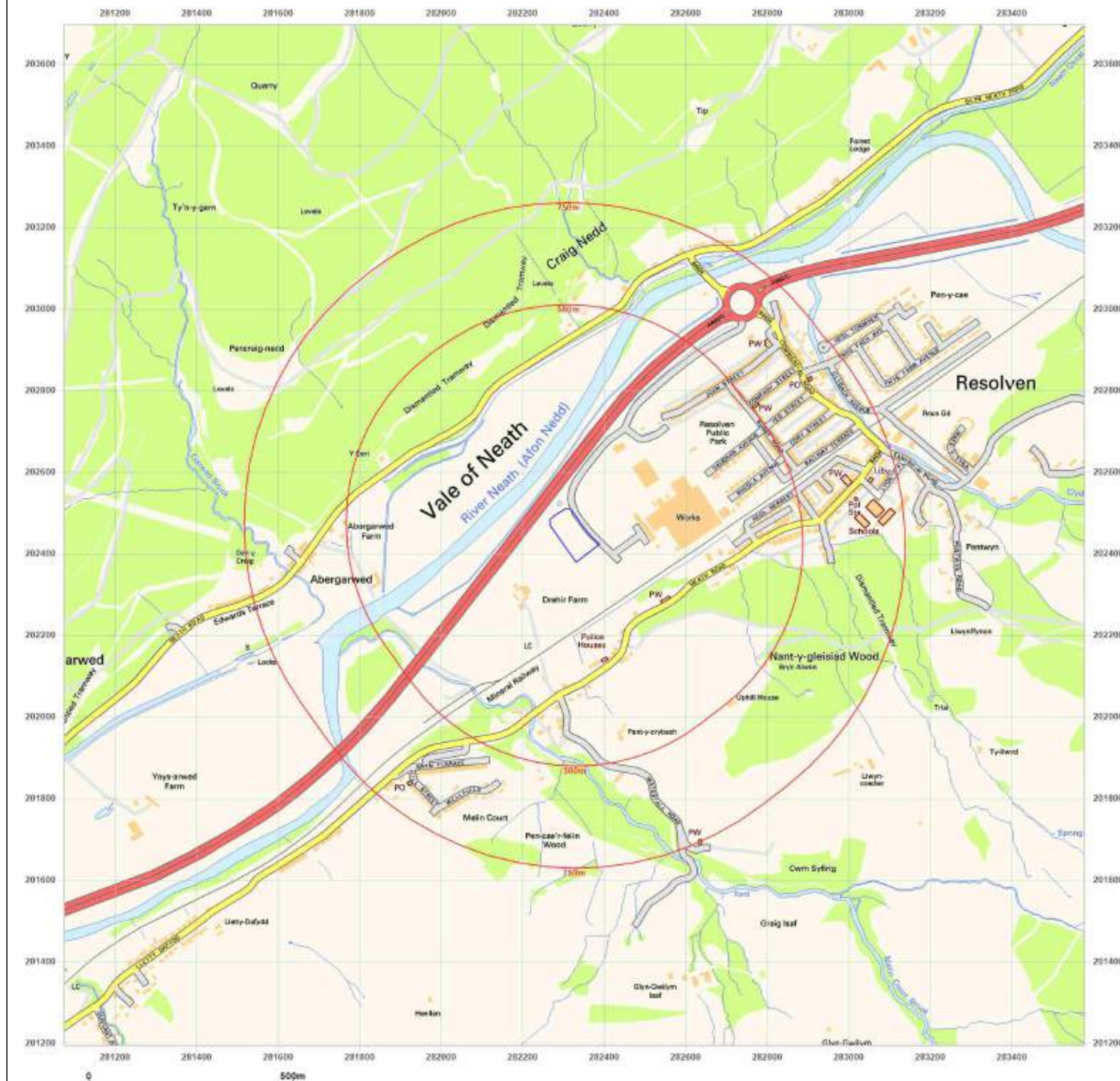


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Production date: 24 February 2021

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





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PARK, RESOLVEN, SA11 4SR

Client Ref: Q0478
Report Ref: HMD-213-7604780
Grid Ref: 282327, 202445

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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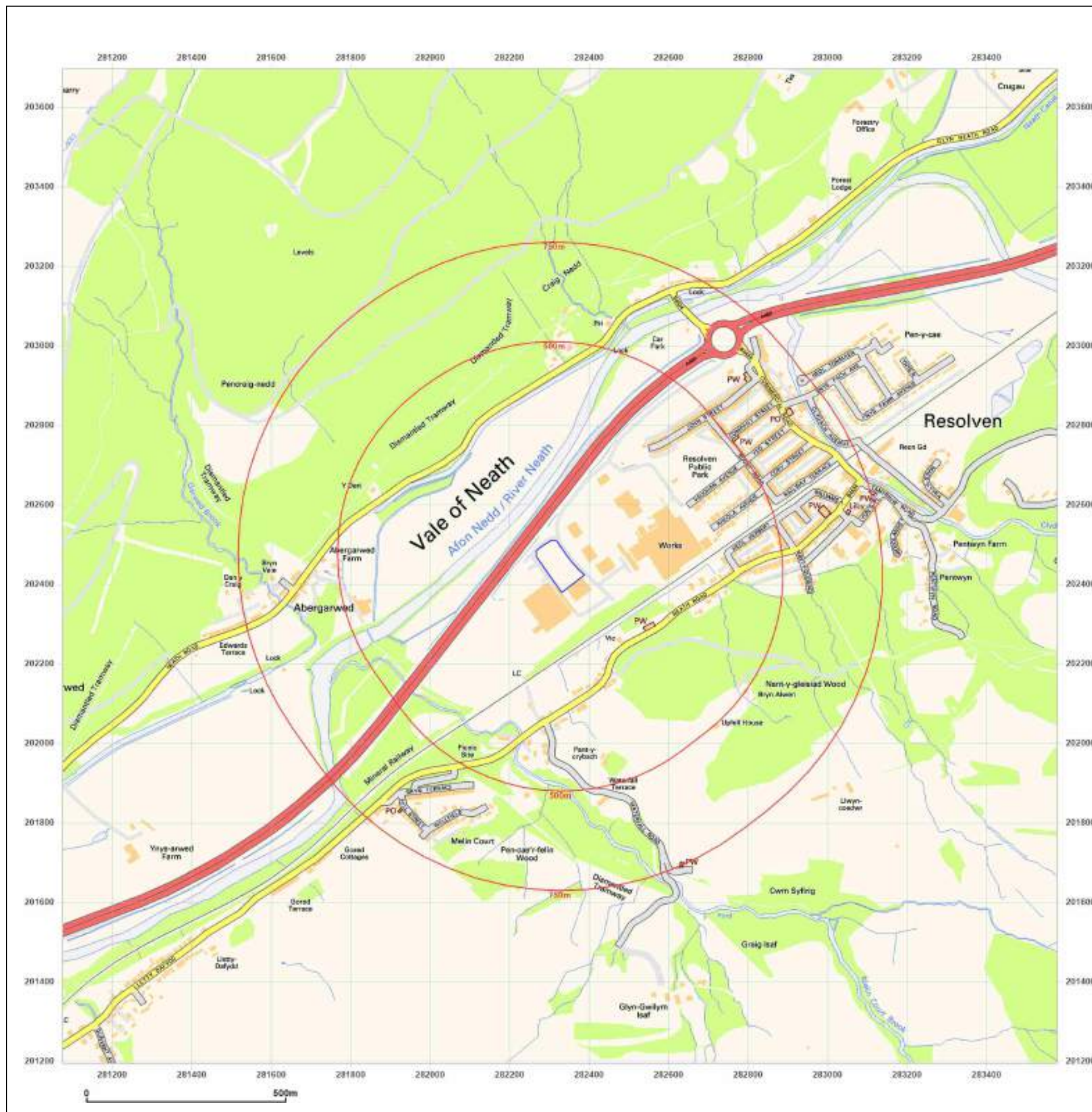


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Site Details:

SITE AT NEATH VALE BUSINESS
PARK, RESOLVEN, SA11 4SR

Client Ref: Q0478
Report Ref: HMD-213-7604780
Grid Ref: 282327, 202445

Map Name: National Grid

Map date: 2021

Scale: 1:10,000

Printed at: 1:10,000



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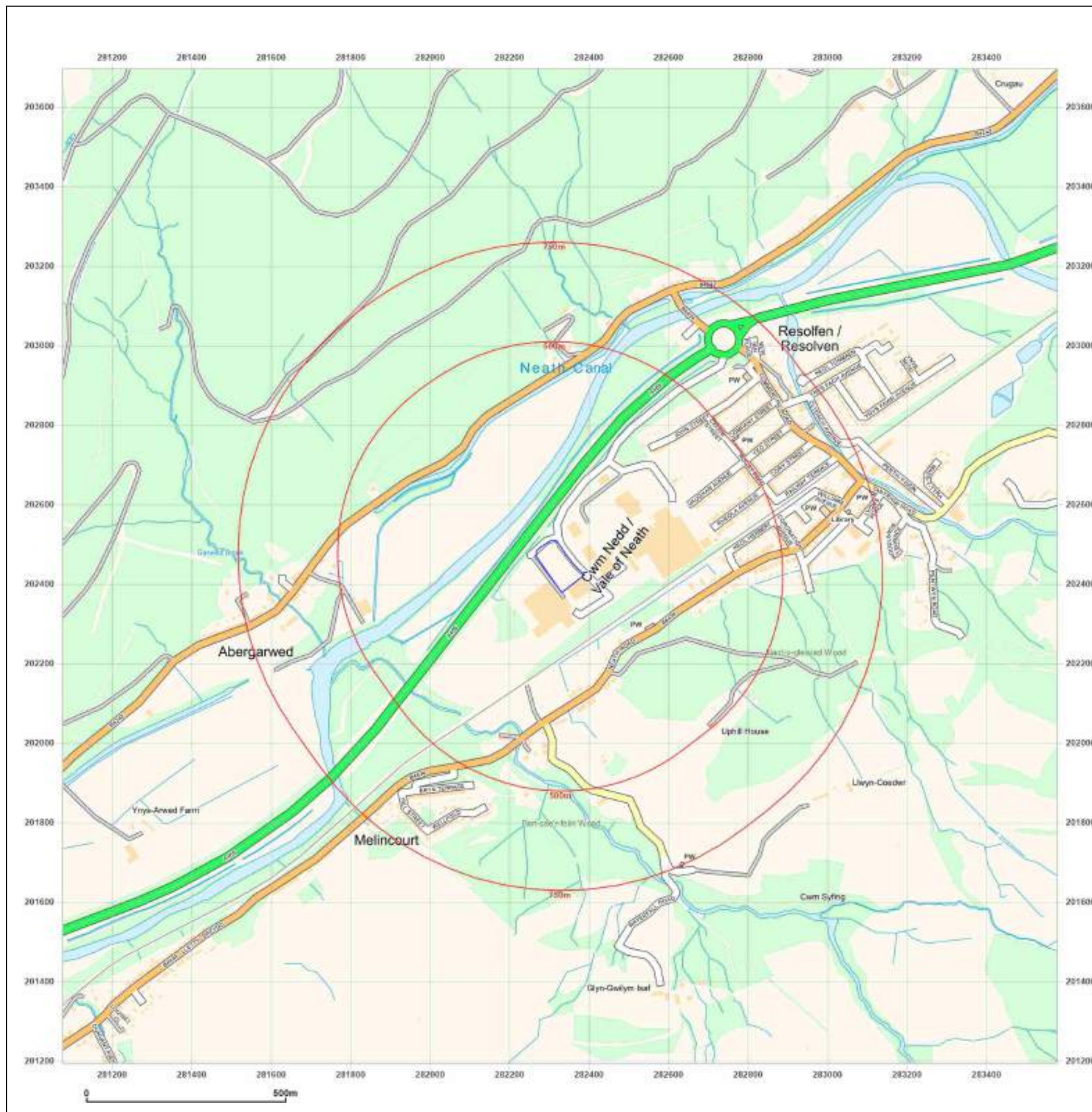


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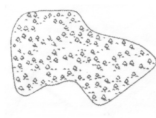
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COUNTY SERIES 1:10,560

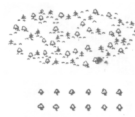
VEGETATION



Fir Wood



Deciduous Wood



Mixed Wood



Brushwood



Orchard



Reeds



Rough Pasture



Furze

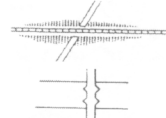


Marsh

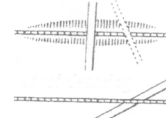


Osiers

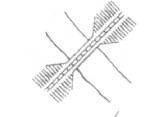
ROADS



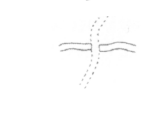
Railway over Road



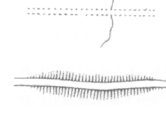
Road over Railway



Road over River or Canal



Level Crossing



Railway over River



Road over Stream



Road over Stream



Sunken 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

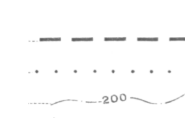


Arrow, showing direction of flow of water



Trigonometrical Station

BOUNDARIES



County Boundary



Parish Boundary



Contours



Parliamentary Division Boundary



Union Boundary



Rural District Boundary

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

HEIGHTS (METRES)

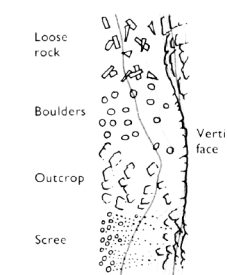
Values are given in metres above mean sea level at Newlyn.

Surface heights determined by ground survey 163m

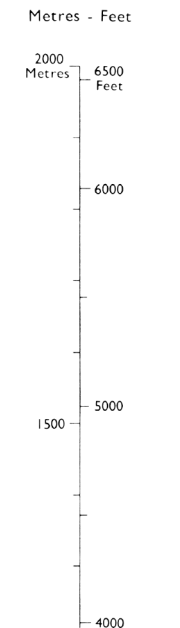
Bench marks and their values are shown on large scale maps, and bench mark lists containing fuller and possibly later levelling information are obtainable from the Director General, Ordnance Survey.

Contours are at 5 metres vertical interval.

ROCK FEATURES



CONVERSION SCALE

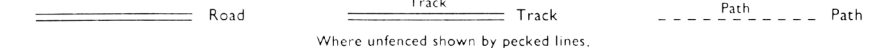


ABBREVIATIONS

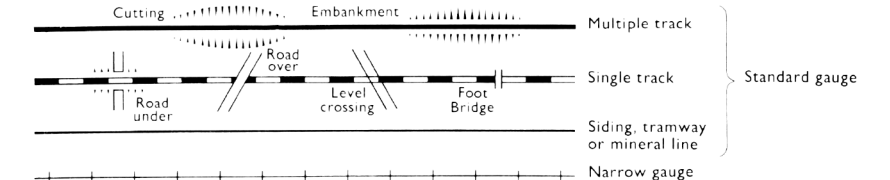
BP,BS Boundary Post or Stone
Ch Church
CH Club House
F Sta Fire Station
FB Foot Bridge
Fn Fountain
GP Guide Post
MP,MS Mile Post or Stone
P Pole or Post
Pol Sta Police Station

PO Post Office
PC Public Convenience
PH Public House
S Stone
Spr Spring
TCB Telephone Call Box
TCP Telephone Call Post
TH Town Hall
W Well
Y Youth hostel

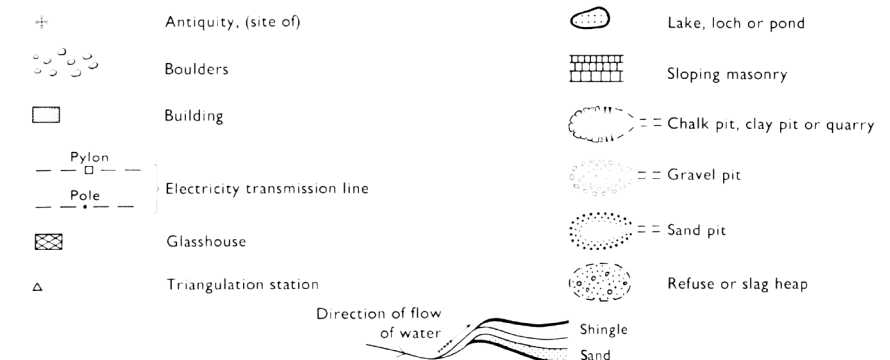
ROADS



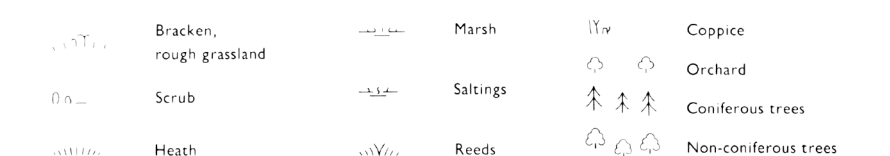
RAILWAYS



GENERAL FEATURES



VEGETATION



In some areas bracken () and rough grassland () are shown separately.



Groundsure

INSIGHTS

HISTORICAL MAP PACK LEGEND

COUNTY SERIES
1:1,2500
NATIONAL GRID
1:1,250 & 1:2,500

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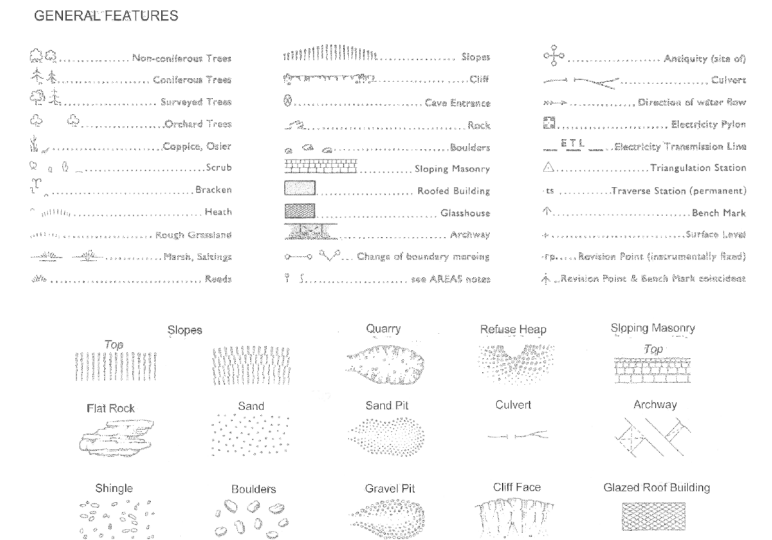
Technical Help
Tel 0800 028 0000

insight@groundsure.com
WWW.GROUNDSURE.COM

COUNTY SERIES 1:2,500



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



APPENDIX IV – GROUNDSURE GEOINSIGHT & ENVIROINSIGHT REPORT

SITE AT NEATH VALE BUSINESS PARK, RESOLVEN, SA11 4SR

Order Details

Date: 25/02/2021
Your ref: Q0478
Our Ref: HMD-213-7604781
Client: Quantum Geotechnic Ltd

Site Details

Location: 282317 202470
Area: 0.79 ha
Authority: [Castell-nedd Port Talbot - Neath Port Talbot County Borough](#)

**Summary of findings**

p. 2

Aerial image

p. 8

OS MasterMap site plan

p.12

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Contact us with any questions at:

info@groundsure.com

08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
13	1.1	<u>Historical industrial land uses</u>	2	2	17	69	-
17	1.2	<u>Historical tanks</u>	0	0	7	3	-
18	1.3	Historical energy features	0	0	0	0	-
18	1.4	Historical petrol stations	0	0	0	0	-
18	1.5	Historical garages	0	0	0	0	-
18	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
19	2.1	<u>Historical industrial land uses</u>	2	4	22	83	-
24	2.2	<u>Historical tanks</u>	0	0	9	3	-
24	2.3	Historical energy features	0	0	0	0	-
25	2.4	Historical petrol stations	0	0	0	0	-
25	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
26	3.1	Active or recent landfill	0	0	0	0	-
26	3.2	Historical landfill (BGS records)	0	0	0	0	-
27	3.3	<u>Historical landfill (LA/mapping records)</u>	0	1	1	3	-
27	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
27	3.5	Historical waste sites	0	0	0	0	-
27	3.6	Licensed waste sites	0	0	0	0	-
28	3.7	Waste exemptions	0	0	0	0	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
29	4.1	<u>Recent industrial land uses</u>	2	3	10	-	-
30	4.2	Current or recent petrol stations	0	0	0	0	-
31	4.3	Electricity cables	0	0	0	0	-
31	4.4	Gas pipelines	0	0	0	0	-
31	4.5	Sites determined as Contaminated Land	0	0	0	0	-



31	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
31	4.7	Regulated explosive sites	0	0	0	0	-
32	4.8	Hazardous substance storage/usage	0	0	0	0	-
32	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
32	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
32	4.11	<u>Licensed pollutant release (Part A(2)/B)</u>	0	0	3	0	-
33	4.12	Radioactive Substance Authorisations	0	0	0	0	-
33	4.13	<u>Licensed Discharges to controlled waters</u>	0	0	6	6	-
35	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
35	4.15	<u>Pollutant release to public sewer</u>	0	0	1	0	-
36	4.16	List 1 Dangerous Substances	0	0	0	0	-
36	4.17	List 2 Dangerous Substances	0	0	0	0	-
36	4.18	<u>Pollution Incidents (EA/NRW)</u>	0	0	1	6	-
37	4.19	Pollution inventory substances	0	0	0	0	-
37	4.20	Pollution inventory waste transfers	0	0	0	0	-
37	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
38	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
40	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
41	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
42	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
42	5.5	Groundwater vulnerability- local information	None (within 0m)				
43	5.6	<u>Groundwater abstractions</u>	0	0	0	0	2
44	5.7	<u>Surface water abstractions</u>	0	0	1	0	4
46	5.8	Potable abstractions	0	0	0	0	0
46	5.9	Source Protection Zones	0	0	0	0	-
46	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
47	6.1	<u>Water Network (OS MasterMap)</u>	0	3	12	-	-



49	6.2	<u>Surface water features</u>	0	3	7	-	-
49	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
49	6.4	<u>WFD Surface water bodies</u>	0	0	1	-	-
50	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
51	7.1	<u>Risk of Flooding from Rivers and Sea (RoFRaS)</u>	High (within 50m)				
52	7.2	<u>Historical Flood Events</u>	2	0	1	-	-
52	7.3	<u>Flood Defences</u>	0	0	1	-	-
53	7.4	<u>Areas Benefiting from Flood Defences</u>	1	0	0	-	-
53	7.5	Flood Storage Areas	0	0	0	-	-
54	7.6	<u>Flood Zone 2</u>	Identified (within 50m)				
55	7.7	<u>Flood Zone 3</u>	Identified (within 50m)				
Page	Section	Surface water flooding					
56	8.1	<u>Surface water flooding</u>	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding					
58	9.1	<u>Groundwater flooding</u>	Low (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
59	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
60	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
60	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
60	10.4	Special Protection Areas (SPA)	0	0	0	0	0
60	10.5	National Nature Reserves (NNR)	0	0	0	0	0
61	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
61	10.7	<u>Designated Ancient Woodland</u>	0	0	1	8	88
65	10.8	Biosphere Reserves	0	0	0	0	0
65	10.9	Forest Parks	0	0	0	0	0
65	10.10	Marine Conservation Zones	0	0	0	0	0
65	10.11	Green Belt	0	0	0	0	0
65	10.12	Proposed Ramsar sites	0	0	0	0	0



66	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
66	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
66	10.15	Nitrate Sensitive Areas	0	0	0	0	0
66	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
67	10.17	SSSI Impact Risk Zones	0	-	-	-	-
67	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
68	11.1	World Heritage Sites	0	0	0	-	-
68	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
68	11.3	National Parks	0	0	0	-	-
68	11.4	Listed Buildings	0	0	0	-	-
69	11.5	Conservation Areas	0	0	0	-	-
69	11.6	Scheduled Ancient Monuments	0	0	0	-	-
69	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
70	<u>12.1</u>	<u>Agricultural Land Classification</u>	Grade 4 (within 250m)				
71	<u>12.2</u>	<u>Open Access Land</u>	0	0	1	-	-
71	12.3	Tree Felling Licences	0	0	0	-	-
72	12.4	Environmental Stewardship Schemes	0	0	0	-	-
72	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
73	13.1	Priority Habitat Inventory	0	0	0	-	-
73	13.2	Habitat Networks	0	0	0	-	-
73	13.3	Open Mosaic Habitat	0	0	0	-	-
73	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
74	<u>14.1</u>	<u>10k Availability</u>	Identified (within 500m)				
75	14.2	Artificial and made ground (10k)	0	0	0	0	-
76	14.3	Superficial geology (10k)	0	0	0	0	-

76	14.4	Landslip (10k)	0	0	0	0	-
77	14.5	Bedrock geology (10k)	0	0	0	0	-
77	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
78	15.1	<u>50k Availability</u>	Identified (within 500m)				
79	15.2	<u>Artificial and made ground (50k)</u>	0	0	0	1	-
80	15.3	Artificial ground permeability (50k)	0	0	-	-	-
81	15.4	<u>Superficial geology (50k)</u>	1	0	2	4	-
82	15.5	<u>Superficial permeability (50k)</u>	Identified (within 50m)				
82	15.6	<u>Landslip (50k)</u>	0	0	0	1	-
82	15.7	Landslip permeability (50k)	None (within 50m)				
83	15.8	<u>Bedrock geology (50k)</u>	4	0	4	6	-
84	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
85	15.10	<u>Bedrock faults and other linear features (50k)</u>	3	0	3	8	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
86	16.1	<u>BGS Boreholes</u>	0	1	11	-	-
Page	Section	Natural ground subsidence					
88	17.1	<u>Shrink swell clays</u>	Very low (within 50m)				
89	17.2	<u>Running sands</u>	Low (within 50m)				
90	17.3	<u>Compressible deposits</u>	Moderate (within 50m)				
91	17.4	<u>Collapsible deposits</u>	Negligible (within 50m)				
92	17.5	<u>Landslides</u>	Very low (within 50m)				
93	17.6	<u>Ground dissolution of soluble rocks</u>	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
94	18.1	Natural cavities	0	0	0	0	-
95	18.2	<u>BritPits</u>	0	0	0	6	-
96	18.3	<u>Surface ground workings</u>	2	2	9	-	-
97	18.4	<u>Underground workings</u>	0	0	1	21	113
102	18.5	Historical Mineral Planning Areas	0	0	0	0	-



102	18.6	<u>Non-coal mining</u>	0	0	0	1	0
103	18.7	Mining cavities	0	0	0	0	0
103	18.8	JPB mining areas	None (within 0m)				
103	18.9	<u>Coal mining</u>	Identified (within 0m)				
103	18.10	Brine areas	None (within 0m)				
104	18.11	Gypsum areas	None (within 0m)				
104	18.12	Tin mining	None (within 0m)				
104	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
105	19.1	<u>Radon</u>	Less than 1% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
106	20.1	<u>BGS Estimated Background Soil Chemistry</u>	6	1	-	-	-
106	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
107	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
108	21.1	Underground railways (London)	0	0	0	-	-
108	21.2	Underground railways (Non-London)	0	0	0	-	-
109	21.3	Railway tunnels	0	0	0	-	-
109	21.4	<u>Historical railway and tunnel features</u>	0	0	6	-	-
109	21.5	Royal Mail tunnels	0	0	0	-	-
110	21.6	Historical railways	0	0	0	-	-
110	21.7	<u>Railways</u>	0	0	7	-	-
110	21.8	Crossrail 1	0	0	0	0	-
111	21.9	Crossrail 2	0	0	0	0	-
111	21.10	HS2	0	0	0	0	-



Recent aerial photograph



Capture Date: 17/06/2017

Site Area: 0.79ha



Recent site history - 2014 aerial photograph



Capture Date: 23/07/2014

Site Area: 0.79ha



Recent site history - 2010 aerial photograph



Capture Date: 23/05/2010

Site Area: 0.79ha



Recent site history - 2000 aerial photograph



Capture Date: 18/06/2000

Site Area: 0.79ha



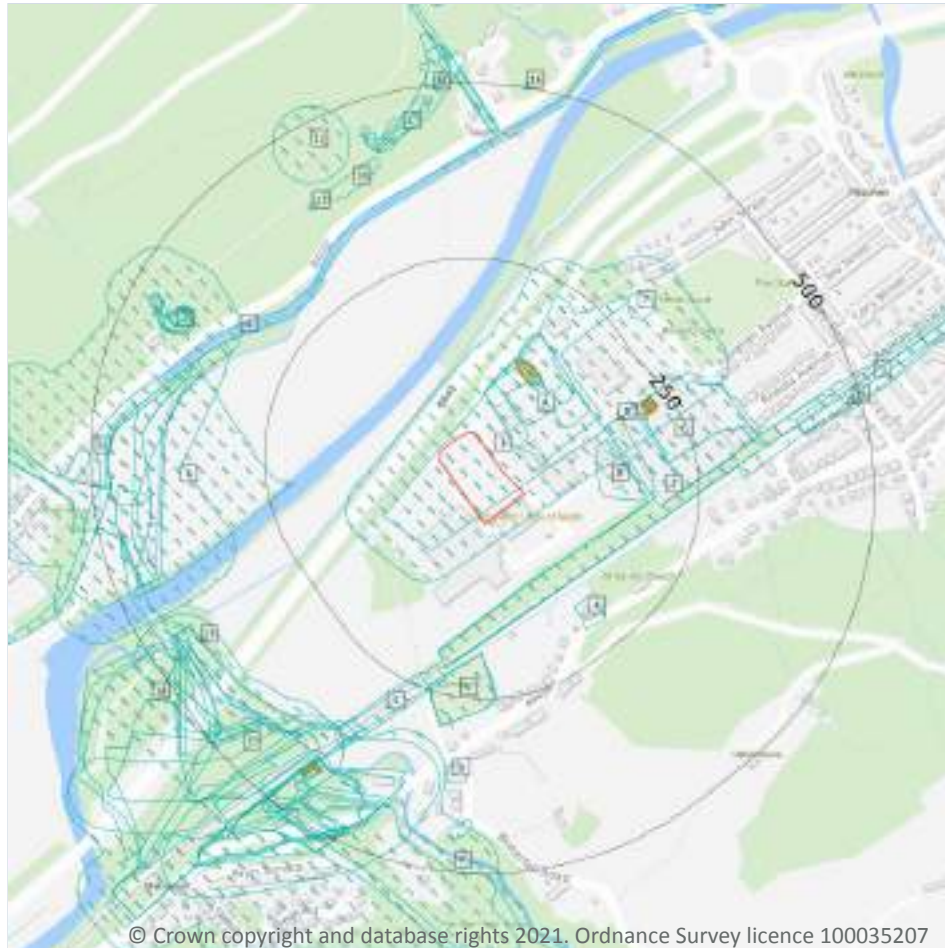
OS MasterMap site plan



Site Area: 0.79ha



1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

90

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 13**

ID	Location	Land use	Dates present	Group ID
1	On site	Sewage Works	1921	289226



ID	Location	Land use	Dates present	Group ID
A	On site	Sewage Works	1921	275765
A	33m NE	Unspecified Works	1965 - 1988	278734
A	33m NE	Refuse Heap	1965 - 1988	281073
A	65m NE	Sewage Works	1876	298663
A	104m NE	Unspecified Tanks	1876	311793
A	104m NE	Unspecified Tanks	1921	310133
2	105m SE	Railway Sidings	1965 - 1988	272292
A	106m NE	Unspecified Tank	1921	252825
3	106m SE	Railway Sidings	1876	275945
A	106m NE	Unspecified Tanks	1965 - 1988	294647
B	106m E	Refuse Heap	1965 - 1988	277746
A	109m NE	Unspecified Tank	1921	252824
C	150m NE	Unspecified Works	1965 - 1988	300433
4	171m SE	Grave Yard	1877	256024
E	185m S	Cemetery	1965 - 1988	309932
E	185m S	Cemetery	1876	302867
C	201m NE	Engineering Works	1876	266055
5	212m S	Cuttings	1877	269055
6	212m W	Colliery	1921	276163
F	233m SW	Railway Sidings	1921	293707
7	278m NE	Refuse Heap	1921	291512
8	286m NW	Disused Canal	1876	274178
F	314m S	Colliery	1921	290329
G	315m W	Colliery	1921	292876
F	330m S	Colliery	1921	302767
H	331m NW	Railway Sidings	1876	291644
9	341m S	Disused Corn Mill	1897	254005
F	348m SW	Railway Sidings	1965 - 1988	275351



ID	Location	Land use	Dates present	Group ID
G	358m W	Refuse Heap	1876	271286
G	358m W	Colliery	1876	290423
F	359m SW	Colliery	1921	279023
F	372m S	Brick Works	1877 - 1897	285862
G	374m W	Railway Sidings	1921	318509
10	379m NW	Refuse Heap	1876	271284
F	385m S	Colliery	1876 - 1877	282034
11	389m NW	Railway Building	1876	256668
F	390m SW	Colliery	1921	290288
F	390m SW	Railway Sidings	1921	312296
I	396m NW	Old Coal Level	1921	286478
J	400m E	Railway Sidings	1921	274497
I	401m NW	Old Coal Level	1921	312950
F	401m SW	Refuse Heap	1965 - 1988	299677
F	402m SW	Refuse Heap	1876	275223
I	403m NW	Old Coal Level	1876	276109
I	407m NW	Unspecified Heap	1877	281081
F	409m SW	Refuse Heap	1965	297404
F	409m SW	Refuse Heap	1988	310568
F	409m SW	Refuse Heap	1921	277390
I	410m NW	Old Coal Levels	1897	251464
I	412m NW	Unspecified Heap	1965 - 1988	295107
F	413m SW	Refuse Heap	1921	298557
12	414m NW	Old Coal Level	1921	264609
K	415m S	Tramway Sidings	1897	256986
F	418m SW	Unspecified Tank	1897 - 1921	314319
G	419m W	Railway Buildings	1876	251587
L	420m N	Refuse Heap	1921	271285



ID	Location	Land use	Dates present	Group ID
F	421m SW	Unspecified Tanks	1877	279481
F	422m SW	Unspecified Tanks	1921	290061
L	422m N	Old Coal Level	1921	311255
F	423m S	Railway Sidings	1877	288689
L	423m N	Railway Building	1876	256662
K	424m S	Corn Mill	1877	254405
13	426m SW	Railway Building	1876	256717
M	427m N	Tramway Sidings	1876	256972
H	429m SW	Refuse Heap	1921	309222
H	429m SW	Railway Building	1876	256718
M	429m N	Railway Sidings	1877	269734
H	431m SW	Refuse Heap	1921	294641
L	433m N	Old Coal Level	1876	273665
F	433m SW	Unspecified Tank	1897 - 1921	285086
M	434m N	Cuttings	1877	269043
F	434m S	Refuse Heap	1876	288221
F	434m S	Refuse Heap	1921	311681
G	435m W	Railway Sidings	1921	309654
L	444m N	Old Coal Level	1921	264610
I	446m NW	Old Coal Level	1921	279616
I	448m NW	Old Air Shaft	1897 - 1921	309150
L	448m N	Unspecified Disused Level	1965 - 1988	281270
I	450m NW	Unspecified Disused Level	1965 - 1988	315591
I	450m NW	Old Air Shaft	1876	269536
F	453m SW	Railway Sidings	1921	289421
14	466m SW	Unspecified Ground Workings	1965 - 1988	310721
F	476m SW	Cuttings	1877	269057
F	476m SW	Refuse Heap	1921	295694



ID	Location	Land use	Dates present	Group ID
15	479m E	Railway Building	1921	256716
J	479m E	Railway Sidings	1897	288621
M	491m N	Refuse Heap	1921	271281
M	495m N	Old Coal Level	1921	271751
16	497m N	Unspecified Old Pit	1897	262089

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 13**

ID	Location	Land use	Dates present	Group ID
A	104m NE	Tanks	1918	34904
B	163m E	Unspecified Tank	1996 - 1998	36540
D	173m NE	Unspecified Tank	1964	36454
D	173m NE	Unspecified Tank	1989	36668
D	207m NE	Unspecified Tank	1996 - 1998	36508
D	212m NE	Unspecified Tank	1989	34956
D	212m NE	Unspecified Tank	1964	36044
F	420m SW	Tanks	1918	34908
F	496m SW	Unspecified Tank	1918	36130
F	499m SW	Unspecified Tank	1962	36233

This data is sourced from Ordnance Survey / Groundsure.



1.3 Historical energy features

Records within 500m**0**

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'.

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**0**

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'.

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

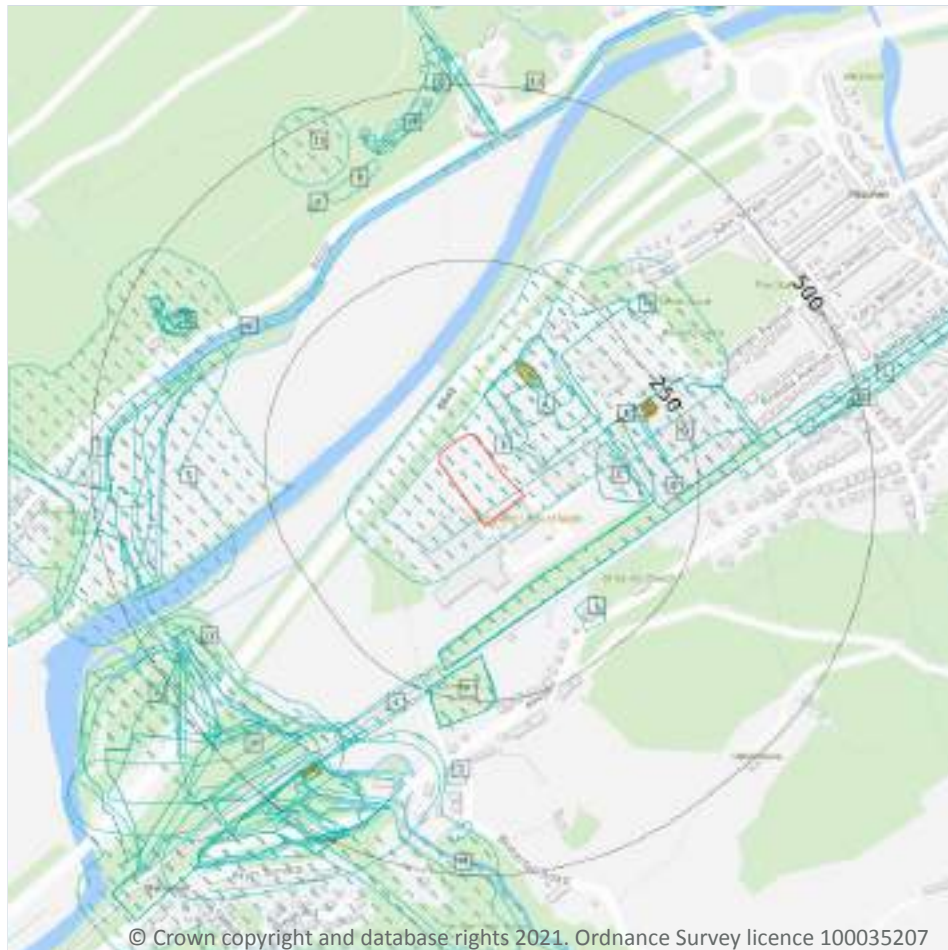
Records within 500m**0**

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

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



2 Past land use - un-grouped



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

2.1 Historical industrial land uses

Records within 500m

111

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 19**

ID	Location	Land Use	Date	Group ID
1	On site	Sewage Works	1921	289226
A	On site	Sewage Works	1921	275765
A	33m NE	Unspecified Works	1965	278734



ID	Location	Land Use	Date	Group ID
A	33m NE	Refuse Heap	1965	281073
A	33m NE	Unspecified Works	1988	278734
A	33m NE	Refuse Heap	1988	281073
A	65m NE	Sewage Works	1876	298663
A	104m NE	Unspecified Tanks	1876	311793
A	104m NE	Unspecified Tanks	1921	310133
B	105m SE	Railway Sidings	1965	272292
B	105m SE	Railway Sidings	1988	272292
A	106m NE	Unspecified Tank	1921	252825
2	106m SE	Railway Sidings	1876	275945
A	106m NE	Unspecified Tanks	1965	294647
A	106m NE	Unspecified Tanks	1988	294647
C	106m E	Refuse Heap	1965	277746
C	106m E	Refuse Heap	1988	277746
A	109m NE	Unspecified Tank	1921	252824
D	150m NE	Unspecified Works	1965	300433
D	150m NE	Unspecified Works	1988	300433
3	171m SE	Grave Yard	1877	256024
F	185m S	Cemetery	1965	309932
F	185m S	Cemetery	1988	309932
F	185m S	Cemetery	1876	302867
D	201m NE	Engineering Works	1876	266055
4	212m S	Cuttings	1877	269055
5	212m W	Colliery	1921	276163
G	233m SW	Railway Sidings	1921	293707
H	278m NE	Refuse Heap	1921	291512
H	283m NE	Refuse Heap	1921	291512
6	286m NW	Disused Canal	1876	274178



ID	Location	Land Use	Date	Group ID
G	314m S	Colliery	1921	290329
I	315m W	Colliery	1921	292876
G	330m S	Colliery	1921	302767
J	331m NW	Railway Sidings	1876	291644
7	341m S	Disused Corn Mill	1897	254005
G	348m SW	Railway Sidings	1965	275351
G	348m SW	Railway Sidings	1988	275351
I	358m W	Colliery	1876	290423
I	358m W	Refuse Heap	1876	271286
J	359m SW	Colliery	1921	279023
G	372m S	Brick Works	1897	285862
I	374m W	Railway Sidings	1921	318509
8	379m NW	Refuse Heap	1876	271284
G	380m S	Brick Works	1877	285862
J	385m S	Colliery	1876	282034
9	389m NW	Railway Building	1876	256668
J	390m SW	Railway Sidings	1921	312296
J	390m SW	Colliery	1921	290288
K	396m NW	Old Coal Level	1921	286478
L	400m E	Railway Sidings	1921	274497
K	401m NW	Old Coal Level	1921	312950
J	401m SW	Refuse Heap	1965	299677
J	401m SW	Refuse Heap	1988	299677
G	402m SW	Refuse Heap	1876	275223
K	403m NW	Old Coal Level	1876	276109
K	407m NW	Unspecified Heap	1877	281081
G	409m SW	Refuse Heap	1965	297404
G	409m SW	Refuse Heap	1988	310568



ID	Location	Land Use	Date	Group ID
G	409m SW	Refuse Heap	1921	277390
L	409m E	Railway Sidings	1921	274497
K	410m NW	Old Coal Levels	1897	251464
K	412m NW	Unspecified Heap	1965	295107
K	412m NW	Unspecified Heap	1988	295107
G	413m SW	Refuse Heap	1921	298557
10	414m NW	Old Coal Level	1921	264609
M	415m S	Tramway Sidings	1897	256986
G	418m SW	Unspecified Tank	1897	314319
I	419m W	Railway Buildings	1876	251587
N	420m N	Refuse Heap	1921	271285
G	421m SW	Unspecified Tanks	1877	279481
G	422m SW	Unspecified Tank	1921	314319
G	422m SW	Unspecified Tanks	1921	290061
N	422m N	Old Coal Level	1921	311255
G	423m S	Railway Sidings	1877	288689
G	423m S	Colliery	1877	282034
N	423m N	Railway Building	1876	256662
M	424m S	Corn Mill	1877	254405
11	426m SW	Railway Building	1876	256717
O	427m N	Tramway Sidings	1876	256972
J	429m SW	Refuse Heap	1921	309222
J	429m SW	Railway Building	1876	256718
O	429m N	Railway Sidings	1877	269734
J	431m SW	Refuse Heap	1921	294641
N	433m N	Old Coal Level	1876	273665
G	433m SW	Unspecified Tank	1897	285086
O	434m N	Cuttings	1877	269043



ID	Location	Land Use	Date	Group ID
G	434m S	Refuse Heap	1921	311681
G	434m S	Refuse Heap	1876	288221
I	435m W	Railway Sidings	1921	309654
G	436m SW	Unspecified Tank	1921	285086
N	444m N	Old Coal Level	1921	264610
K	446m NW	Old Coal Level	1921	279616
K	448m NW	Old Air Shaft	1921	309150
K	448m NW	Old Air Shaft	1897	309150
N	448m N	Unspecified Disused Level	1965	281270
N	448m N	Unspecified Disused Level	1988	281270
K	450m NW	Unspecified Disused Level	1965	315591
K	450m NW	Unspecified Disused Level	1988	315591
K	450m NW	Old Air Shaft	1876	269536
G	453m SW	Railway Sidings	1921	289421
J	460m SW	Refuse Heap	1921	309222
P	466m SW	Unspecified Ground Workings	1965	310721
P	466m SW	Unspecified Ground Workings	1988	310721
G	476m SW	Cuttings	1877	269057
G	476m SW	Refuse Heap	1921	295694
12	479m E	Railway Building	1921	256716
L	479m E	Railway Sidings	1897	288621
O	491m N	Refuse Heap	1921	271281
O	495m N	Old Coal Level	1921	271751
13	497m N	Unspecified Old Pit	1897	262089

This data is sourced from Ordnance Survey / Groundsure.



2.2 Historical tanks

Records within 500m

12

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 19**

ID	Location	Land Use	Date	Group ID
A	104m NE	Tanks	1918	34904
C	163m E	Unspecified Tank	1996	36540
C	163m E	Unspecified Tank	1998	36540
E	173m NE	Unspecified Tank	1964	36454
E	173m NE	Unspecified Tank	1989	36668
E	207m NE	Unspecified Tank	1996	36508
E	207m NE	Unspecified Tank	1998	36508
E	212m NE	Unspecified Tank	1964	36044
E	212m NE	Unspecified Tank	1989	34956
G	420m SW	Tanks	1918	34908
G	496m SW	Unspecified Tank	1918	36130
G	499m SW	Unspecified Tank	1962	36233

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

0

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'.

This data is sourced from Ordnance Survey / Groundsure.



2.4 Historical petrol stations

Records within 500m**0**

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m**0**

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'.

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



— Site Outline
Search buffers in metres (m)
□ Historical landfill (LA/OS)

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**5**

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

Features are displayed on the Waste and landfill map on **page 26**

ID	Location	Site address	Source	Data type
1	33m NE	Refuse Tip	1962 mapping	Polygon
2	106m E	Refuse Tip	1962 mapping	Polygon
3	402m SW	Refuse Tip	1962 mapping	Polygon
4	412m SW	Refuse Tip	1962 mapping	Polygon
5	420m S	Refuse Tip	1962 mapping	Polygon

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

3.4 Historical landfill (EA/NRW records)

Records within 500m**0**

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.

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

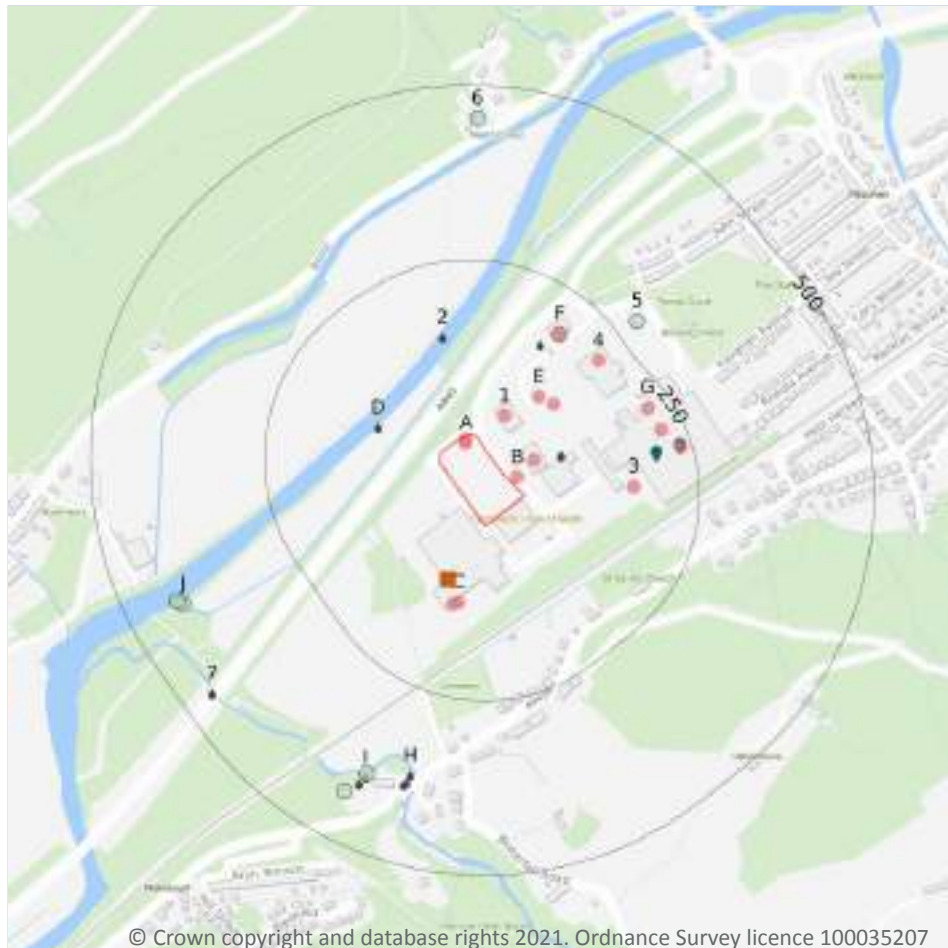
Records within 500m	0
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Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

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 pollutant release (Part A(2)/B)
- Licensed Discharges to controlled waters
- Pollutant release to public sewer
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

15

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 29**

ID	Location	Company	Address	Activity	Category
A	On site	Pumping Station	West Glamorgan, SA11	Water Pumping Stations	Industrial Features
A	On site	Sewage Pumping Station	West Glamorgan, SA11	Waste Storage, Processing and Disposal	Infrastructure and Facilities



ID	Location	Company	Address	Activity	Category
B	11m NE	Electricity Sub Station	West Glamorgan, SA11	Electrical Features	Infrastructure and Facilities
B	46m NE	Mollart	Neath Vale Supplier Park, Resolven, Neath, West Glamorgan, SA11 4SR	Precision Engineers	Engineering Services
1	49m NE	Magor Designs Ltd	Unit C, Neath Vale Supplier Park, Resolven, Neath, West Glamorgan, SA11 4SR	Precision Engineers	Engineering Services
E	105m NE	Works	West Glamorgan, SA11	Unspecified Works Or Factories	Industrial Features
C	115m S	Silo	West Glamorgan, SA11	Hoppers and Silos	Farming
E	117m NE	Works Sewage	West Glamorgan, SA11	Waste Storage, Processing and Disposal	Infrastructure and Facilities
C	121m S	Tank	West Glamorgan, SA11	Tanks (Generic)	Industrial Features
3	157m E	Tank	West Glamorgan, SA11	Tanks (Generic)	Industrial Features
F	189m NE	Jtekt Automotive UK Ltd	Neath Vale Supplier Park, Resolven, Neath, West Glamorgan, SA11 4SP	Vehicle Components	Industrial Products
4	206m NE	Recycle Direct	Unit 11, Neath Vale Supplier Park, Resolven, Neath, West Glamorgan, SA11 4SR	Industrial Engineers	Engineering Services
G	217m NE	Tank	West Glamorgan, SA11	Tanks (Generic)	Industrial Features
G	217m NE	Neath Vale Business Park	West Glamorgan, SA11	Business Parks and Industrial Estates	Industrial Features
G	235m E	A S W Scaffolding	Unit 8b Neath Vale Supplier Park, Resolven, Neath, West Glamorgan, SA11 4SR	Construction and Tool Hire	Hire Services

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0
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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

3

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

Features are displayed on the Current industrial land use map on **page 29**

ID	Location	Address	Details	
G	197m E	TRW Steering Systems Limited, Resolven Plant, Neath Port Talbot, SA11 4HN	Process: Process Unknown Status: Historical Permit Permit Type: Part A2	Enforcement: No enforcements issued Date of enforcement: No enforcements issued Comment: No enforcements issued
G	197m E	Trw Steering Systems Limited, Resolven Plant, Neath Port Talbot, SA11 4HN	Process: Process Unknown Status: Historical Permit Permit Type: Part B	Enforcement: No enforcements issued Date of enforcement: No enforcements issued Comment: No enforcements issued

ID	Location	Address	Details	
G	232m E	Minerals UK Ltd, Bwiche Ffos Mining Site, Mynydd Resolen, Neath Port Talbot, SA10 7AL	Process: Other Mineral Processes Status: Historical Permit Permit Type: Part B	Enforcement: No enforcements issued Date of enforcement: No enforcements issued Comment: No enforcements issued

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	0
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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
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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 29**

ID	Location	Address	Details	
B	76m NE	TRW STEERING SYSTEMS LTD SITE RESOL, TRW STEERING SYSTEMS LTD, RESOLVEN, NR NEATH, WALES	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: BA1016501 Permit Version: 1 Receiving Water: UNNAMED TRIBUTARY OF RIVER NEA	Status: REVOKED - UNSPECIFIED Issue date: 26/07/1962 Effective Date: 26/07/1962 Revocation Date: 19/01/1996
B	76m NE	TRW STEERING SYSTEMS LTD SITE RESOL, TRW STEERING SYSTEMS LTD, RESOLVEN, NR NEATH, WALES	Effluent Type: FRESHWATER - UNSPECIFIED Permit Number: BA1016501 Permit Version: 2 Receiving Water: UNNAMED TRIBUTARY OF RIVER NEA	Status: SURRENDERED UNDER EPR 2010 Issue date: 19/01/1996 Effective Date: 20/01/1996 Revocation Date: 12/10/2012
D	96m W	RESOLVEN STW STORM TANKS NEATH, RESOLVEN STW STORM TANKS, NEATH VALE SUPPLIER PARK RESOLVE, RESOLVEN, NEATH PORT TALBOT	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: BA2001301 Permit Version: 3 Receiving Water: RIVER NEATH	Status: Effective Issue date: 26/06/2009 Effective Date: 01/01/2010 Revocation Date: -



ID	Location	Address	Details	
D	96m W	RESOLVEN STW STORM TANKS NEATH, RESOLVEN STW STORM TANKS, NEATH VALE SUPPLIER PARK RESOLVE, RESOLVEN, NEATH PORT TALBOT	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: BP0341401 Permit Version: 1 Receiving Water: RIVER NEATH	Status: Effective Issue date: 31/03/2005 Effective Date: 31/03/2005 Revocation Date: -
2	143m N	RESOLVEN STW	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: BA2001301 Permit Version: 1 Receiving Water: RIVER NEATH	Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 01/03/1982 Effective Date: 01/03/1982 Revocation Date: 30/03/2005
F	158m NE	RESOLVEN STW STORM TANKS NEATH, Resolven WwTW, Melincourt, NEATH, SA11 4LD	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: BP0341401 Permit Version: 2 Receiving Water: RIVER NEATH	Status: Effective Issue date: 01/05/2020 Effective Date: 01/05/2020 Revocation Date: -
H	372m S	MOSES ROW CSO RESOLVEN NEATH, MOSES ROW CSO, RESOLVEN, NEATH	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BW2900301 Permit Version: 2 Receiving Water: MELINCOURT BROOK	Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 31/03/2005 Effective Date: 31/03/2005 Revocation Date: 19/09/2011
H	385m S	MOSES ROW CSO RESOLVEN NEATH, Nr Moses Row, RESOLVEN, Neath, SA11 4AP	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BW2900301 Permit Version: 4 Receiving Water: MELIN COURT BROOK	Status: Effective Issue date: 17/12/2019 Effective Date: 17/12/2019 Revocation Date: -
H	389m S	MOSES ROW CSO RESOLVEN NEATH, MOSES ROW CSO, RESOLVEN, NEATH	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BW2900301 Permit Version: 3 Receiving Water: MELINCOURT BROOK	Status: Effective Issue date: 20/09/2011 Effective Date: 01/10/2011 Revocation Date: -
I	398m SW	RESOLVEN SWO 4A (MOSES) MOSES ROW U, RESOLVEN SWO 4A (MOSES) MOSES RO, SWO 4A (MOSES) MOSES ROW UPPER	Effluent Type: UNSPECIFIED Permit Number: BW2900401 Permit Version: 1 Receiving Water: MELINCOURT BROOK	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 17/06/1963 Effective Date: 17/06/1963 Revocation Date: 14/03/1994



ID	Location	Address	Details	
I	411m SW	RESOLVEN SWO 4 (MOSES) MOSES ROW L, RESOLVEN SWO 4 (MOSES) MOSES RO, SWO 4 (MOSES) MOSES ROW LOWER	Effluent Type: UNSPECIFIED Permit Number: BW2900301 Permit Version: 1 Receiving Water: MELINCOURT BROOK	Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 17/06/1963 Effective Date: 17/06/1963 Revocation Date: 30/03/2005
7	457m SW	OLD YNYSARWED COLLIERY YARD MELINCO, OLD YNYSARWED COLLIERY YARD MELI, MELINCOURT	Effluent Type: UNSPECIFIED Permit Number: BB3020601 Permit Version: 1 Receiving Water: MELINCOURT BROOK	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 05/10/1970 Effective Date: 05/10/1970 Revocation Date: 07/12/1993

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	1
----------------------------	----------

Discharges of Special Category Effluents to the public sewer.

Features are displayed on the Current industrial land use map on **page 29**

ID	Location	Address	Details	
C	92m SW	TOYODA KOKI AUTOMOTIVE UK LTD, NEATH VALE SUPPLIER PARK, RESOLVEN, NEATH, WEST GLAMORGAN, SA11 4SP	Permission reference: BH6168 Local Authority: NEATH PORT TALBOT COUNTY BOROUGH COUNCIL First received date: 01/06/2001	Last received date: 01/07/2017 Status: RECEIVED

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

0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m

7

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 29**

ID	Location	Details	
F	188m NE	Incident Date: 24/07/2015 Incident Identification: 1358326 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
5	283m NE	Incident Date: 08/11/2013 Incident Identification: 1174831 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
I	392m SW	Incident Date: 15/04/2002 Incident Identification: 71740 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
J	419m SW	Incident Date: 06/02/2002 Incident Identification: 56865 Pollutant: Oils and Fuel Pollutant Description: Lubricating Oils	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

ID	Location	Details	
J	424m SW	Incident Date: 19/05/2002 Incident Identification: 79728 Pollutant: Oils and Fuel Pollutant Description: Cutting Oils	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
I	429m SW	Incident Date: 07/05/2002 Incident Identification: 76918 Pollutant: Sewage Materials Pollutant Description: Grey Water	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
6	453m N	Incident Date: 05/08/2013 Incident Identification: 1143863 Pollutant: Oils and Fuel Pollutant Description: Gas and Fuel Oils	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

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

4.19 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

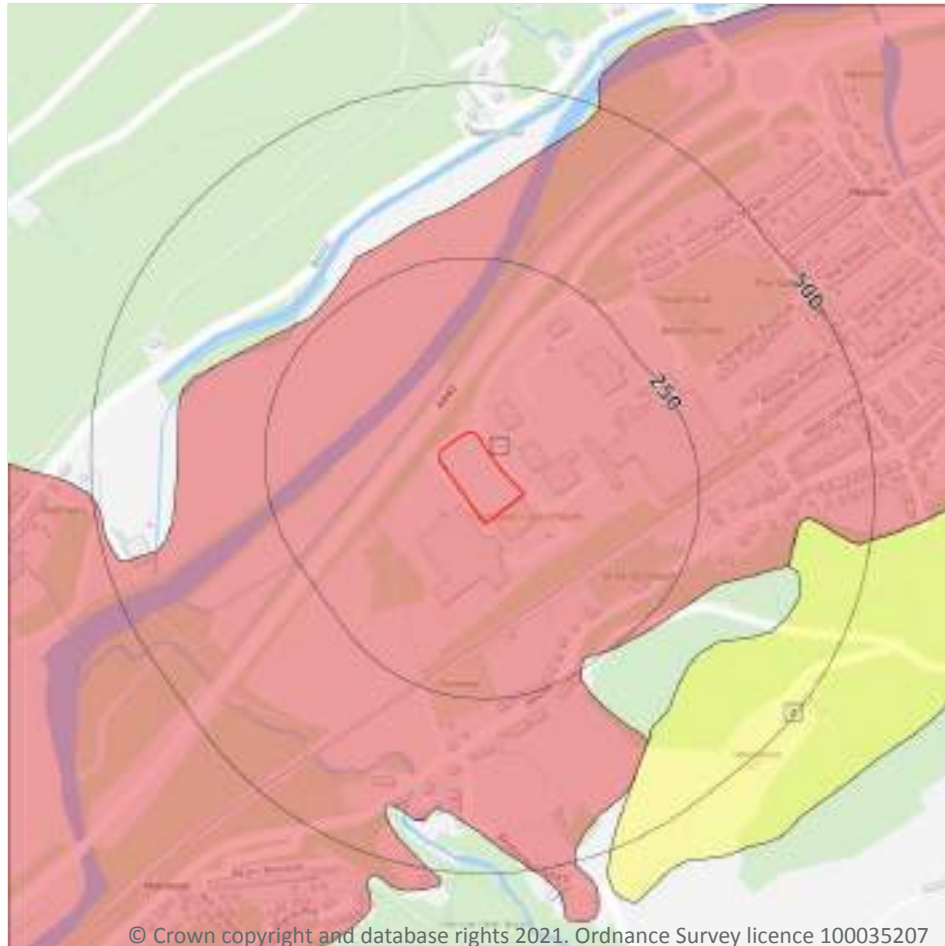
Records within 500m	0
----------------------------	----------

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

2

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 38**

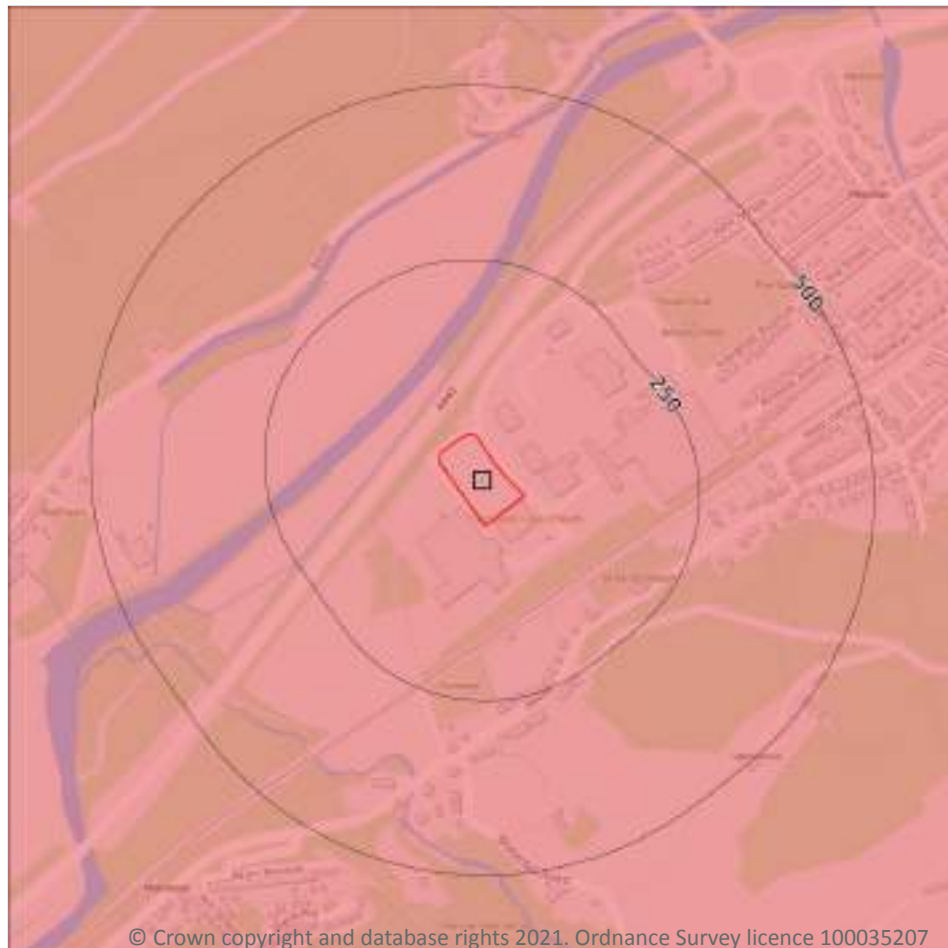
ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	338m SE	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type



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



Bedrock aquifer



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

5.2 Bedrock aquifer

Records within 500m

1

Aquifer status of groundwater held within bedrock geology.

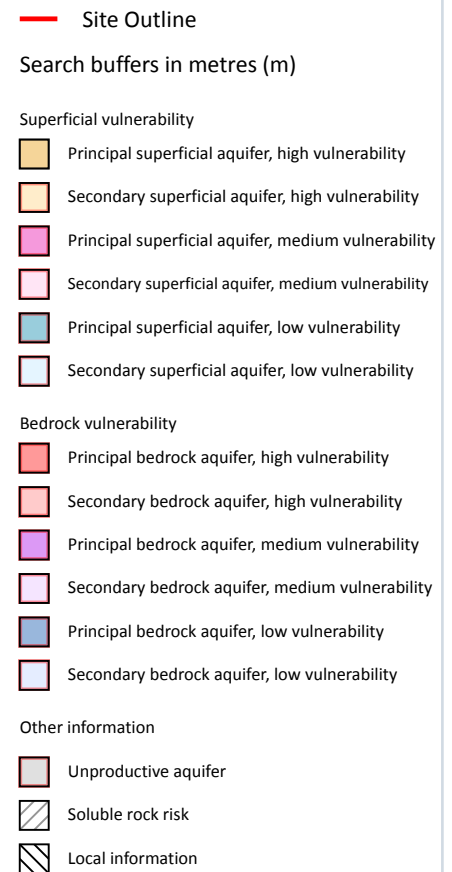
Features are displayed on the Bedrock aquifer map on **page 40**

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

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

1

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 41**

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

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site

0

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

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

5.5 Groundwater vulnerability- local information

Records on site

0

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

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

Abstractions and Source Protection Zones



- 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

2

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 43**

ID	Location	Details	
-	1582m SW	Status: Historical Licence No: WA/058/0072/001 Details: Pollution Remediation Direct Source: EAW Groundwater Point: MINE ADIT AT YNYSARWED Data Type: Point Name: The Coal Authority Easting: 280856 Northing: 201754	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 04/11/2009 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 04/11/2009 Version End Date: -
-	1582m SW	Status: Active Licence No: WA/058/0072/001 Details: Pollution Remediation - Very Low Direct Source: Groundwater - Coal Measures Point: - Data Type: Point Name: - Easting: 280856 Northing: 201754	Annual Volume (m ³): 0 Max Daily Volume (m ³): - Original Application No: - Original Start Date: Apr 19 2017 12:00AM Expiry Date: Mar 31 2029 12:00AM Issue No: - Version Start Date: - Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

5

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 43**

ID	Location	Details	
1	162m E	Status: Historical Licence No: 21/58/72/0018 Details: Non-Evaporative Cooling Direct Source: EAW Surface Water Point: NANT Y GLEISIAD Data Type: Point Name: Trw Cam Gears Ltd Easting: 282550 Northing: 202410	Annual Volume (m ³): 113650 Max Daily Volume (m ³): 288.035 Original Application No: - Original Start Date: 01/04/1976 Expiry Date: - Issue No: 100 Version Start Date: 11/11/1988 Version End Date: -



ID	Location	Details	
A	586m SW	Status: Active Licence No: WA/058/0072/0008 Details: Transfer between Sources (Post Water Act 2003) - Very Low Direct Source: River Neath Point: - Data Type: Point Name: - Easting: 281737 Northing: 202218	Annual Volume (m ³): 15,000 Max Daily Volume (m ³): - Original Application No: - Original Start Date: Jun 2 2017 12:00AM Expiry Date: Mar 31 2029 12:00AM Issue No: - Version Start Date: - Version End Date: -
A	592m SW	Status: Historical Licence No: 21/58/72/0035 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: EAW Surface Water Point: RIVER NEATH AT ABERGARWED Data Type: Point Name: Neath Canal Navigation Easting: 281730 Northing: 202220	Annual Volume (m ³): 15000 Max Daily Volume (m ³): 18170 Original Application No: - Original Start Date: 26/03/2008 Expiry Date: 31/03/2017 Issue No: 2 Version Start Date: 06/02/2009 Version End Date: -
B	641m SW	Status: Historical Licence No: 21/58/72/0007 Details: General use relating to Secondary Category (High Loss) Direct Source: EAW Surface Water Point: RIVER NEATH ADJACENT TO ABERGARWED WEIR Data Type: Point Name: Neath Canal Navigation Easting: 281690 Northing: 202190	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 11/09/2002 Expiry Date: - Issue No: 101 Version Start Date: 11/09/2002 Version End Date: 31/03/2005
B	641m SW	Status: Historical Licence No: 21/58/72/0007 Details: General use relating to Secondary Category (Medium Loss) Direct Source: EAW Surface Water Point: RIVER NEATH ADJACENT TO ABERGARWED WEIR Data Type: Point Name: Neath Canal Navigation Easting: 281690 Northing: 202190	Annual Volume (m ³): 1659323 Max Daily Volume (m ³): 4546 Original Application No: - Original Start Date: 11/09/2002 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2005 Version End Date: -

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



5.8 Potable abstractions

Records within 2000m	0
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Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

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

5.9 Source Protection Zones

Records within 500m	0
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Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m	0
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Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

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

6 Hydrology



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

6.1 Water Network (OS MasterMap)

Records within 250m

15

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 47**

ID	Location	Type of water feature	Ground level	Permanence	Name
B	16m NW	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	31m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	33m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
2	60m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
3	101m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Nedd
E	148m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	148m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	148m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
5	179m S	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
H	179m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	180m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
I	185m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	245m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	245m 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
K	246m NE	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	10
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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 47**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1
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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 47**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River WB catchment	Neath - conf with Nedd Fechan and Mellte to TL	GB110058032430	Neath	Tawe to Cadoxton

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

6.4 WFD Surface water bodies

Records identified	1
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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 47**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
4	102m NW	River	Neath - conf with Nedd Fechan and Mellte to TL	GB110058032430	Good	Good	Good	2016

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

6.5 WFD Groundwater bodies

Records on site

1

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

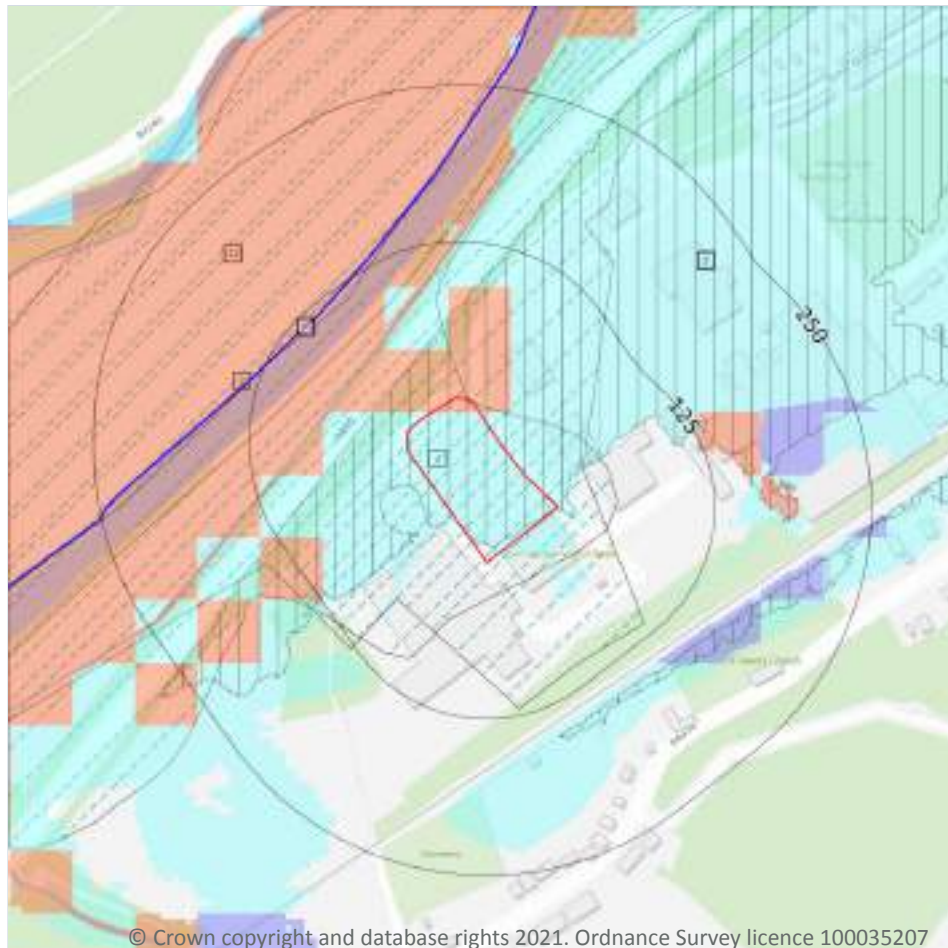
Features are displayed on the Hydrology map on **page 47**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	Swansea Carboniferous Coal Measures	GB41002G201000	Poor	Poor	Good	2016

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



7 River and coastal flooding



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

7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m

3

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; 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).

Features are displayed on the River and coastal flooding map on **page 51**

Distance	RoFRaS flood risk
On site	High
0 - 50m	High



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

7.2 Historical Flood Events

Records within 250m

3

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.

Features are displayed on the River and coastal flooding map on **page 51**

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
3	On site	Neath 1979	1979-12-27 1979-12-27	Main river	Channel capacity exceeded (no raised defences)	Fluvial
4	On site	Neath Valley Flooding	1938-01-01 1938-01-01	Main river	Channel capacity exceeded (no raised defences)	Fluvial
12	112m NW	Neath Valley Flooding	1938-01-01 1938-01-01	Main river	Channel capacity exceeded (no raised defences)	Fluvial

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

7.3 Flood Defences

Records within 250m

1

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.

Features are displayed on the River and coastal flooding map on **page 51**

ID	Location	Update
15	117m NW	15/02/2021

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



7.4 Areas Benefiting from Flood Defences

Records within 250m

1

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.

Features are displayed on the River and coastal flooding map on **page 51**

ID	Location	
2	On site	Area benefiting from flood defences

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

7.5 Flood Storage Areas

Records within 250m

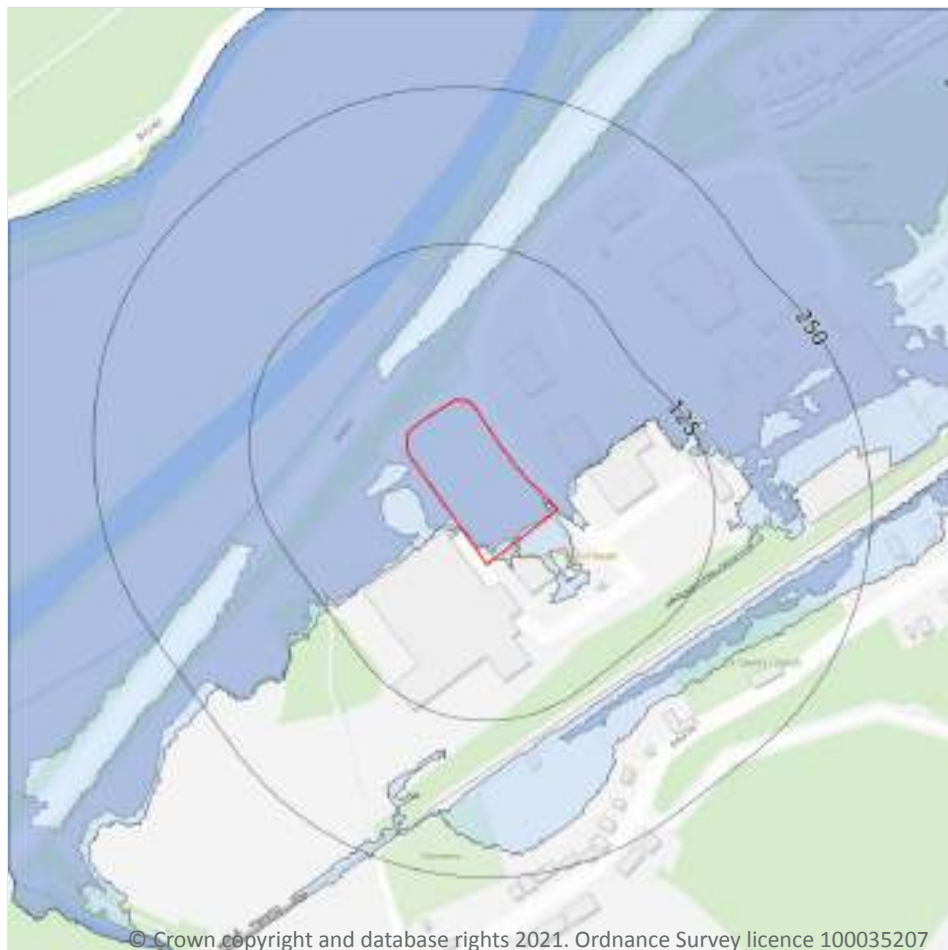
0

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

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



River and coastal flooding - Flood Zones



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

7.6 Flood Zone 2

Records within 50m

1

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

Features are displayed on the River and coastal flooding map on **page 51**

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

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

7.7 Flood Zone 3

Records within 50m

1

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

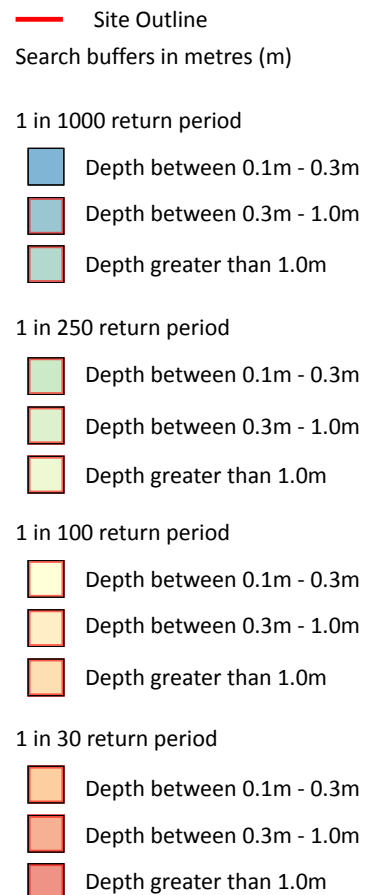
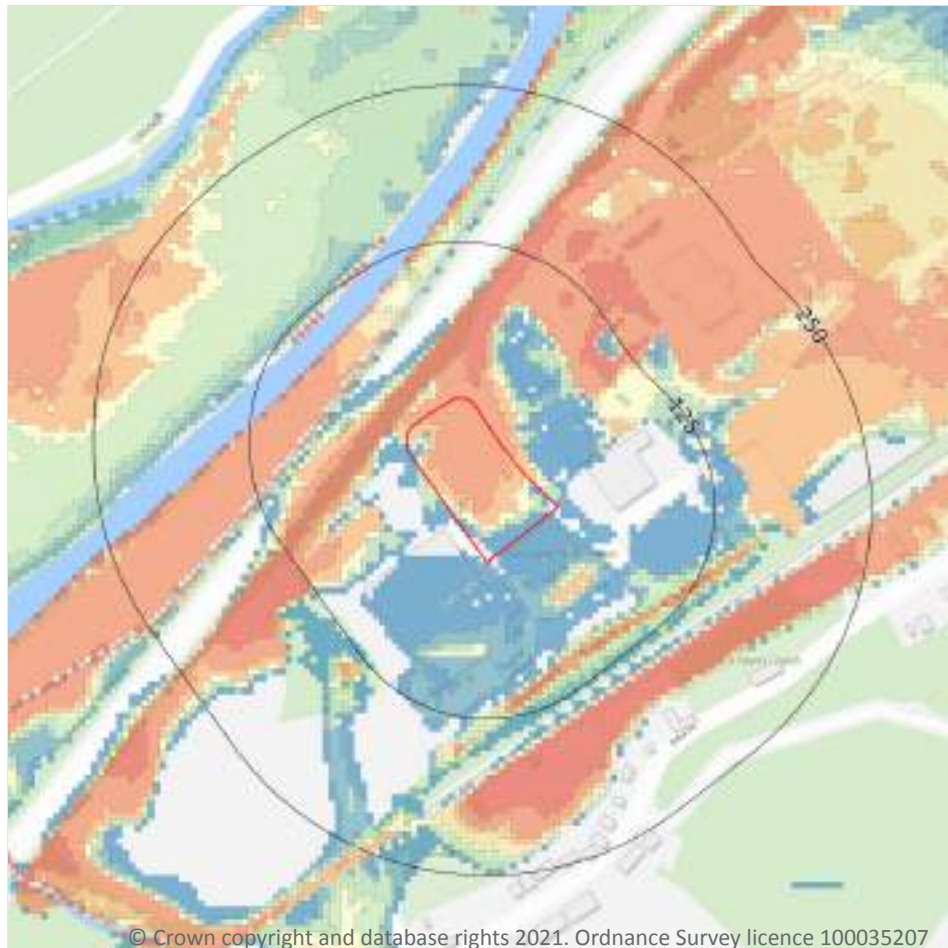
Features are displayed on the River and coastal flooding map on **page 51**

Location	Type
On site	Zone 3 - (Fluvial Models)

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

1 in 30 year, 0.3m - 1.0m

Highest risk within 50m

1 in 30 year, Greater than 1.0m

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

Features are displayed on the Surface water flooding map on **page 56**

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

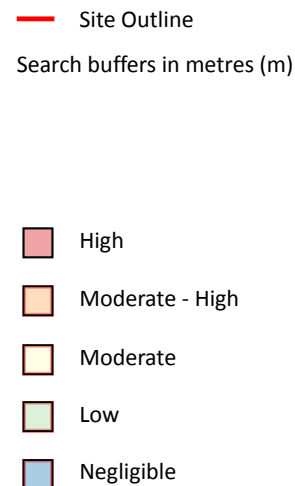
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Greater than 1.0m
1 in 250 year	Greater than 1.0m
1 in 100 year	Between 0.3m and 1.0m
1 in 30 year	Between 0.3m and 1.0m

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Low

Highest risk within 50m

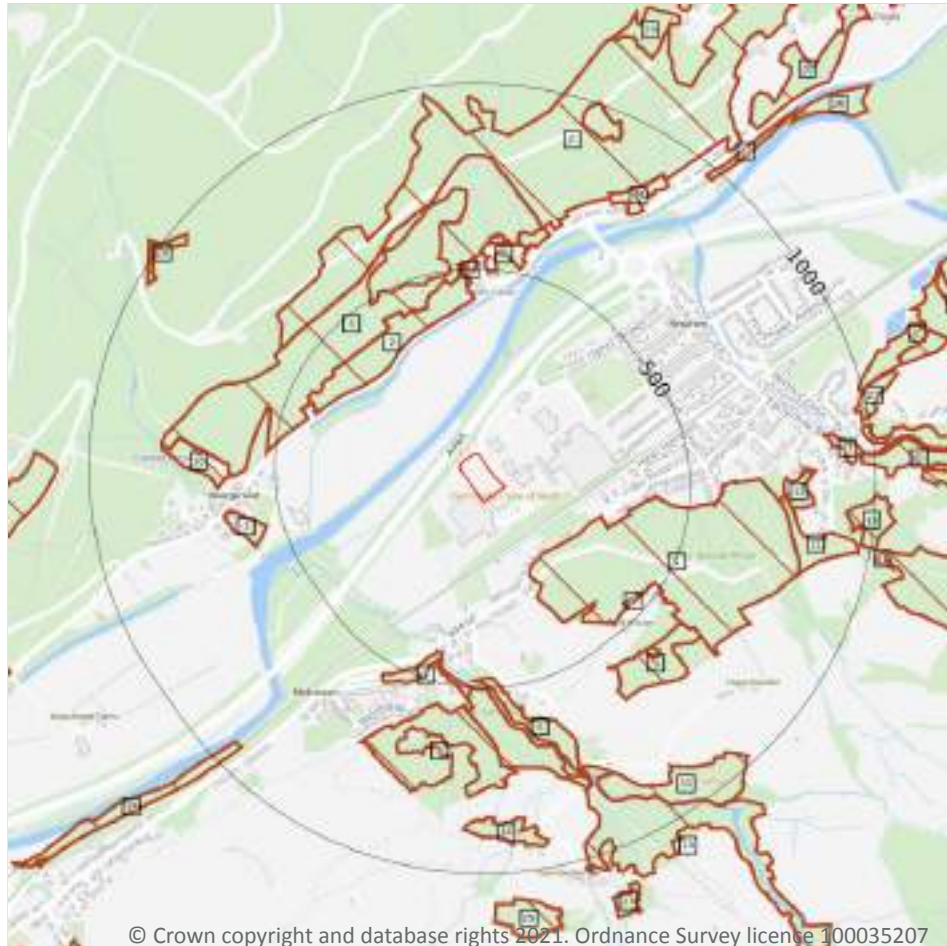
Low

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

Features are displayed on the Groundwater flooding map on **page 58**

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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.

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m**0**

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m**0**

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)

Records within 2000m**0**

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m**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

0

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

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

10.7 Designated Ancient Woodland

Records within 2000m

97

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 59**

ID	Location	Name	Woodland Type
1	207m SE	Unknown	Plantation on Ancient Woodland Site
2	322m NW	Unknown	Restored Ancient Woodland Site
3	405m NW	Unknown	Plantation on Ancient Woodland Site
4	420m S	Unknown	Ancient Semi Natural Woodland
5	450m SE	Unknown	Ancient Woodland Site of Unknown Category
6	455m N	Unknown	Restored Ancient Woodland Site
A	474m S	Unknown	Restored Ancient Woodland Site
B	491m N	Unknown	Restored Ancient Woodland Site
A	499m S	Unknown	Restored Ancient Woodland Site
7	543m W	Unknown	Ancient Semi Natural Woodland
8	549m S	Unknown	Restored Ancient Woodland Site
C	550m NW	Unknown	Plantation on Ancient Woodland Site
9	556m SE	Unknown	Plantation on Ancient Woodland Site
B	568m N	Unknown	Restored Ancient Woodland Site
B	573m N	Unknown	Restored Ancient Woodland Site
10	622m W	Unknown	Restored Ancient Woodland Site



ID	Location	Name	Woodland Type
11	744m E	Unknown	Plantation on Ancient Woodland Site
12	752m E	Unknown	Ancient Semi Natural Woodland
13	760m S	Unknown	Restored Ancient Woodland Site
14	762m NE	Unknown	Restored Ancient Woodland Site
15	804m SE	Unknown	Restored Ancient Woodland Site
16	849m S	Unknown	Restored Ancient Woodland Site
17	873m E	Unknown	Ancient Semi Natural Woodland
C	913m N	Unknown	Restored Ancient Woodland Site
18	923m E	Unknown	Ancient Woodland Site of Unknown Category
19	928m SW	Unknown	Ancient Semi Natural Woodland
20	947m NW	Unknown	Plantation on Ancient Woodland Site
D	964m E	Unknown	Restored Ancient Woodland Site
21	967m E	Unknown	Ancient Semi Natural Woodland
22	971m NE	Unknown	Ancient Semi Natural Woodland
D	976m E	Unknown	Ancient Semi Natural Woodland
E	989m E	Unknown	Restored Ancient Woodland Site
23	1020m E	Unknown	Restored Ancient Woodland Site
24	1046m E	Unknown	Plantation on Ancient Woodland Site
25	1071m S	Unknown	Restored Ancient Woodland Site
26	1087m W	Unknown	Plantation on Ancient Woodland Site
27	1101m S	Unknown	Ancient Semi Natural Woodland
E	1117m E	Unknown	Plantation on Ancient Woodland Site
D	1133m E	Unknown	Plantation on Ancient Woodland Site
D	1134m E	Unknown	Restored Ancient Woodland Site
F	1139m E	Unknown	Plantation on Ancient Woodland Site
28	1155m NE	Unknown	Plantation on Ancient Woodland Site
29	1167m NE	Unknown	Ancient Woodland Site of Unknown Category
30	1232m NE	Unknown	Restored Ancient Woodland Site



ID	Location	Name	Woodland Type
E	1271m E	Unknown	Plantation on Ancient Woodland Site
-	1278m E	Unknown	Ancient Semi Natural Woodland
-	1279m E	Unknown	Ancient Semi Natural Woodland
31	1283m E	Unknown	Plantation on Ancient Woodland Site
32	1284m NE	Unknown	Restored Ancient Woodland Site
-	1314m N	Unknown	Ancient Woodland Site of Unknown Category
34	1321m NE	Unknown	Plantation on Ancient Woodland Site
35	1332m SW	Unknown	Ancient Semi Natural Woodland
-	1353m E	Unknown	Plantation on Ancient Woodland Site
36	1481m NE	Unknown	Restored Ancient Woodland Site
-	1493m W	Unknown	Plantation on Ancient Woodland Site
-	1534m W	Unknown	Ancient Woodland Site of Unknown Category
-	1544m N	Unknown	Plantation on Ancient Woodland Site
-	1564m W	Unknown	Plantation on Ancient Woodland Site
-	1594m NE	Unknown	Restored Ancient Woodland Site
-	1608m NE	Unknown	Ancient Semi Natural Woodland
-	1609m NE	Unknown	Restored Ancient Woodland Site
42	1616m SW	Unknown	Ancient Semi Natural Woodland
-	1641m E	Unknown	Restored Ancient Woodland Site
I	1644m NE	Unknown	Plantation on Ancient Woodland Site
-	1675m SE	Unknown	Restored Ancient Woodland Site
-	1690m NE	Unknown	Restored Ancient Woodland Site
-	1700m E	Unknown	Plantation on Ancient Woodland Site
-	1710m NE	Unknown	Restored Ancient Woodland Site
44	1716m SW	Unknown	Restored Ancient Woodland Site
-	1716m E	Unknown	Plantation on Ancient Woodland Site
-	1725m E	Unknown	Restored Ancient Woodland Site
-	1742m SE	Unknown	Ancient Semi Natural Woodland

ID	Location	Name	Woodland Type
-	1746m NE	Unknown	Ancient Semi Natural Woodland
-	1750m SW	Unknown	Ancient Semi Natural Woodland
-	1757m NE	Unknown	Restored Ancient Woodland Site
-	1763m SW	Unknown	Ancient Semi Natural Woodland
-	1767m NE	Unknown	Restored Ancient Woodland Site
-	1768m NE	Unknown	Ancient Semi Natural Woodland
-	1774m NE	Unknown	Ancient Semi Natural Woodland
-	1775m NE	Unknown	Plantation on Ancient Woodland Site
-	1782m NE	Unknown	Ancient Semi Natural Woodland
-	1810m E	Unknown	Plantation on Ancient Woodland Site
-	1811m E	Unknown	Ancient Semi Natural Woodland
-	1853m E	Unknown	Plantation on Ancient Woodland Site
-	1872m E	Unknown	Ancient Semi Natural Woodland
-	1881m E	Unknown	Restored Ancient Woodland Site
-	1912m SE	Unknown	Restored Ancient Woodland Site
-	1922m NE	Unknown	Plantation on Ancient Woodland Site
-	1934m E	Unknown	Plantation on Ancient Woodland Site
-	1941m E	Unknown	Restored Ancient Woodland Site
-	1941m SW	Unknown	Ancient Semi Natural Woodland
-	1942m SW	Unknown	Plantation on Ancient Woodland Site
-	1945m NE	Unknown	Restored Ancient Woodland Site
-	1945m E	Unknown	Restored Ancient Woodland Site
-	1954m E	Unknown	Ancient Woodland Site of Unknown Category
-	1956m SW	Unknown	Plantation on Ancient Woodland Site
-	1974m E	Unknown	Plantation on Ancient Woodland Site

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



10.8 Biosphere Reserves

Records within 2000m

0

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

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

10.9 Forest Parks

Records within 2000m

0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

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

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

10.11 Green Belt

Records within 2000m

0

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

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

10.12 Proposed Ramsar sites

Records within 2000m

0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m**0**

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m**0**

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m**0**

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m**0**

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

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

SSSI Impact Zones and Units

10.17 SSSI Impact Risk Zones

Records on site	0
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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
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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 English Heritage, 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 English Heritage, 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 English Heritage, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m

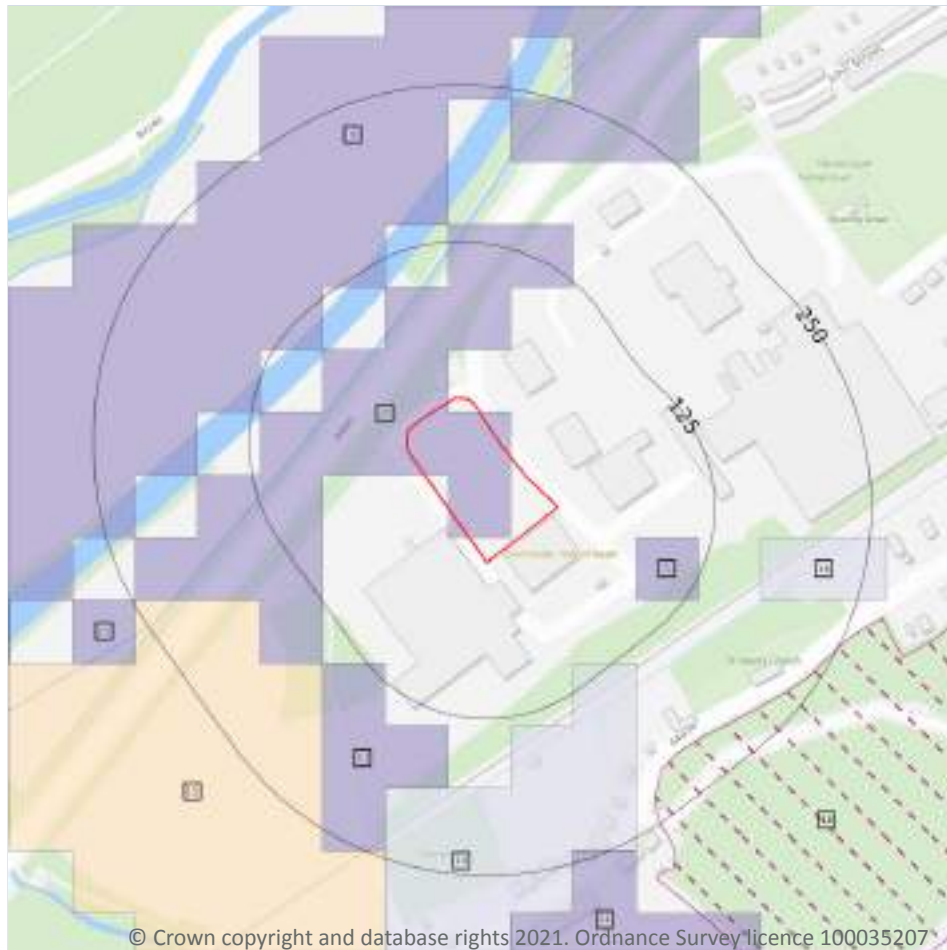
0

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 English Heritage, Cadw and Historic Environment Scotland.



12 Agricultural designations



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

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12.1 Agricultural Land Classification

Records within 250m

9

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 70**

ID	Location	Classification	Description
2	On site	Grade 4	Poor quality agricultural land
5	67m E	Grade 4	Poor quality agricultural land
9	94m NW	Grade 4	Poor quality agricultural land



ID	Location	Classification	Description
10	106m SE	Grade 3b	Moderate quality agricultural land
11	114m SW	Grade 4	Poor quality agricultural land
15	153m SW	Grade 3a	Good to moderate quality agricultural land
16	164m E	Grade 3b	Moderate quality agricultural land
21	240m S	Grade 4	Poor quality agricultural land
23	248m SW	Grade 4	Poor quality agricultural land

This data is sourced from Natural Resources Wales.

12.2 Open Access Land

Records within 250m

1

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.

Features are displayed on the Agricultural designations map on **page 70**

ID	Location	Name	Classification	Other relevant legislation
18	213m SE	-	NRW Public Forest 2014	-

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.

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

1

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 74**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	No coverage	No coverage	No coverage	NoCov

This data is sourced from the British Geological Survey.



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

14.2 Artificial and made ground (10k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m

0

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.

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock

14.5 Bedrock geology (10k)

Records within 500m

0

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.

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

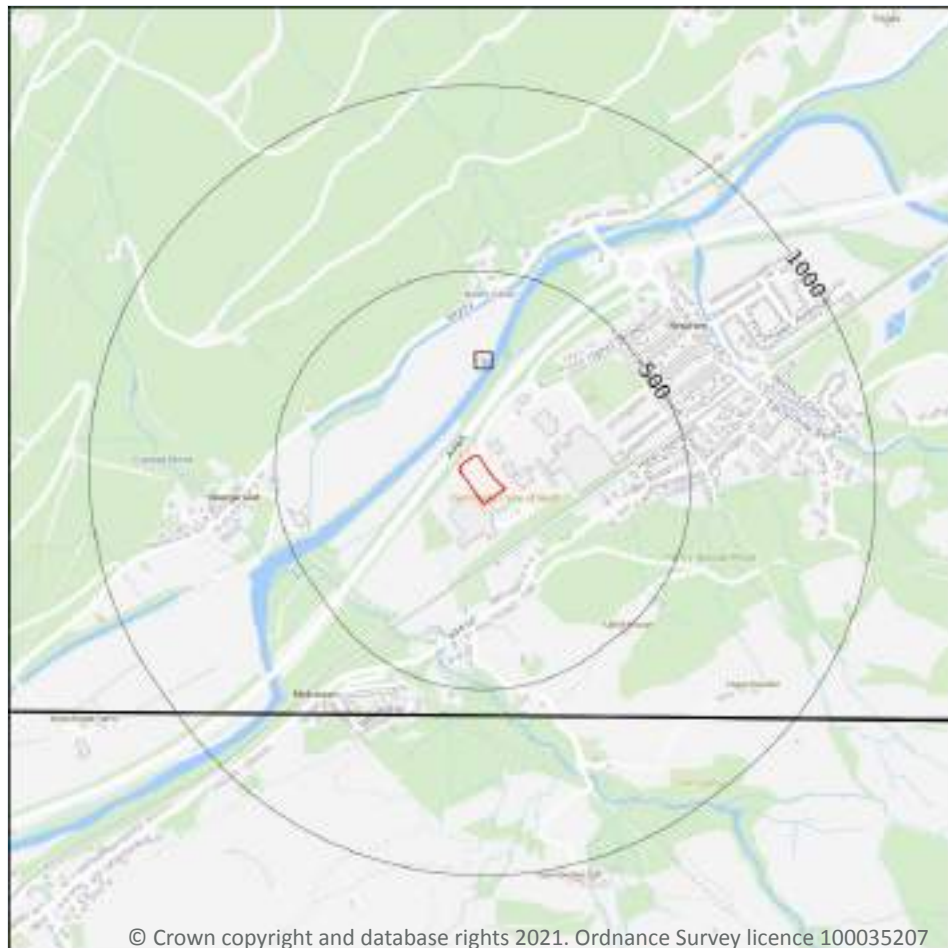
0

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

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline
Search buffers in metres (m)

☐ Geological map tile

15.1 50k Availability

Records within 500m

1

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

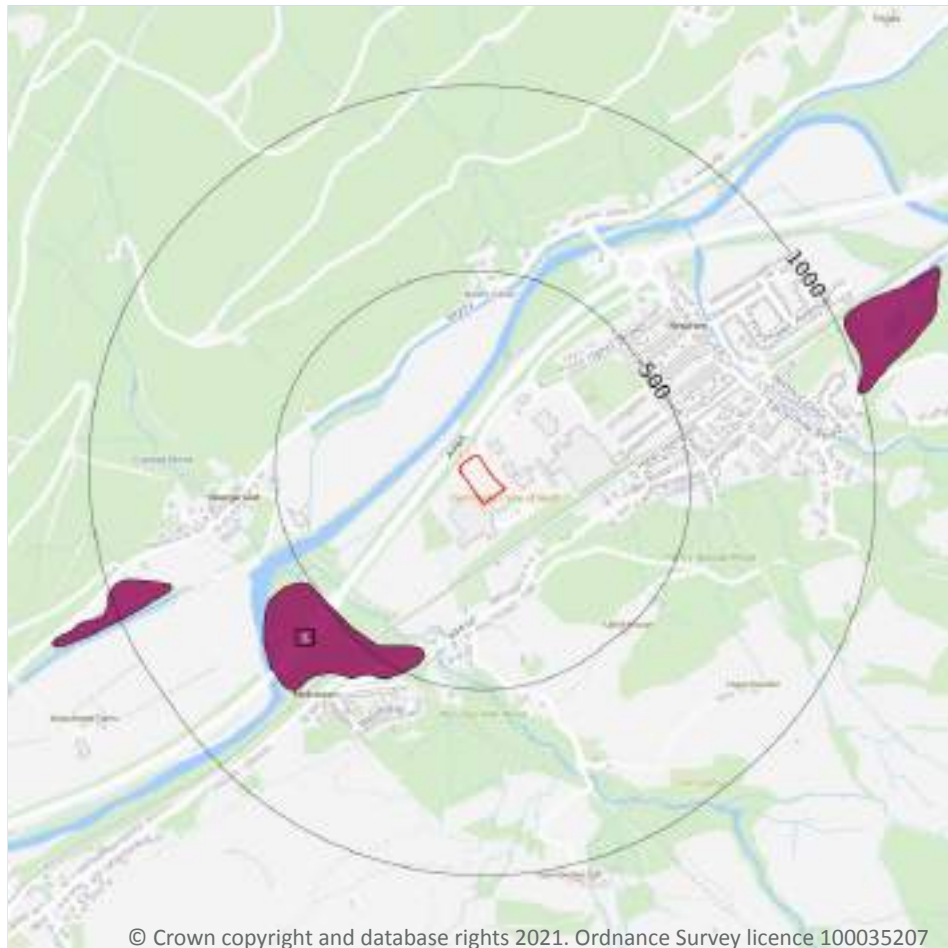
Features are displayed on the Geology 1:50,000 scale - Availability map on **page 78**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW231_merthyr_v4

This data is sourced from the British Geological Survey.



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



- 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

1

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 79**

ID	Location	LEX Code	Description	Rock description
1	424m SW	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

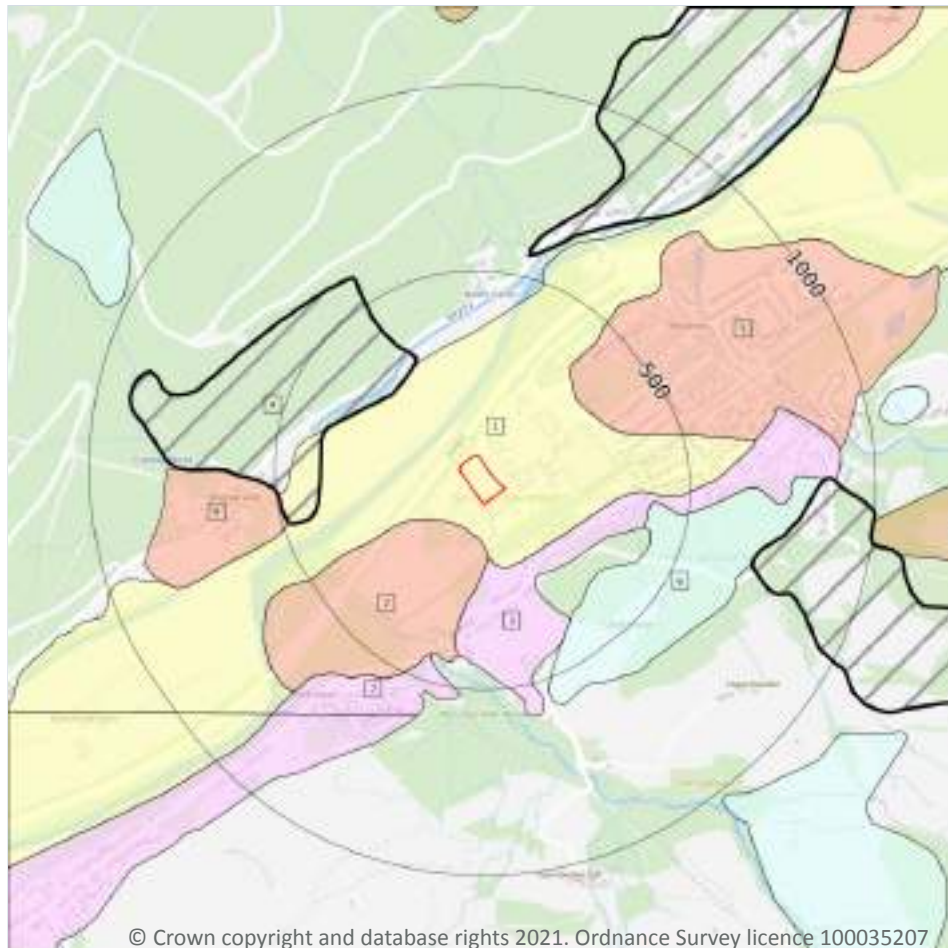
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m

7

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 81**

ID	Location	LEX Code	Description	Rock description
1	On site	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
2	82m SW	ALF-XSV	ALLUVIAL FAN DEPOSITS	SAND AND GRAVEL
3	145m S	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
5	305m NE	ALF-XSV	ALLUVIAL FAN DEPOSITS	SAND AND GRAVEL

ID	Location	LEX Code	Description	Rock description
6	338m SE	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
7	426m S	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
8	482m W	ALF-XSV	ALLUVIAL FAN DEPOSITS	SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial 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 superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	High	Very Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

1

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.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 81**

ID	Location	LEX Code	Description	Rock description
4	267m NW	SLIP-UNKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m

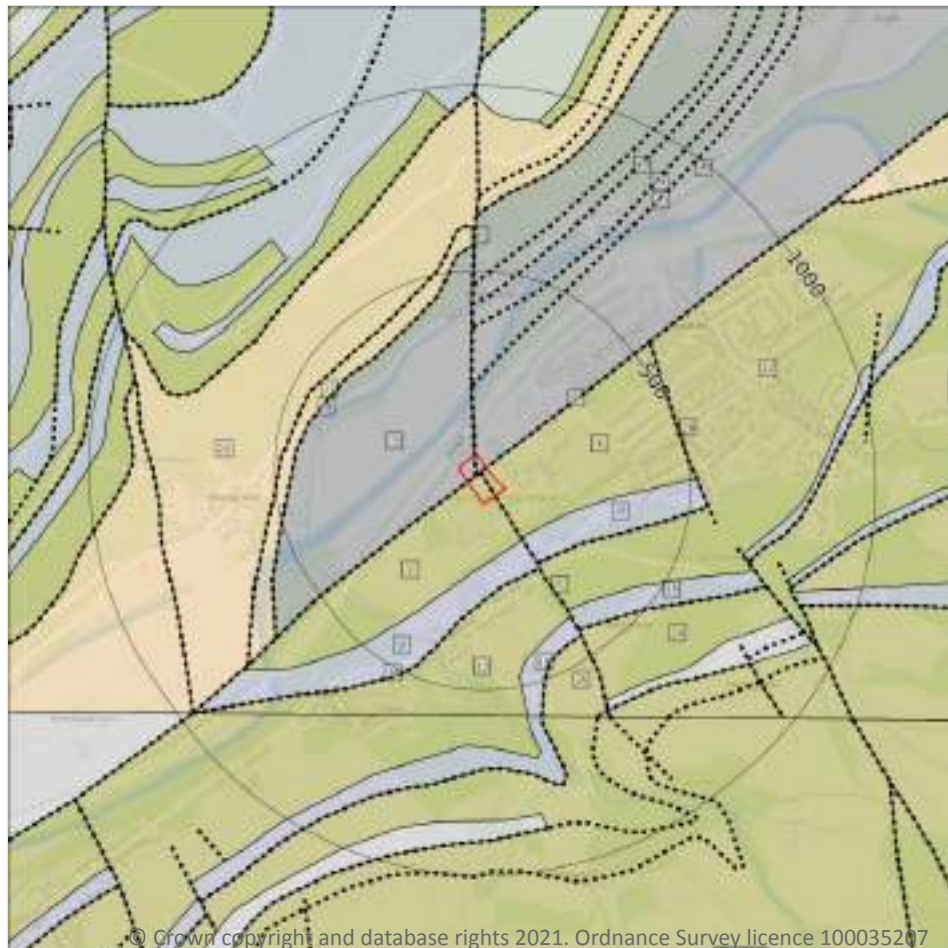
0

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

14

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 83**

ID	Location	LEX Code	Description	Rock age
2	On site	RA-SDST	RHONDDA MEMBER - SANDSTONE	WESTPHALIAN
3	On site	SWMCM-MDSS	SOUTH WALES MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
4	On site	SWMCM-MDSS	SOUTH WALES MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
6	On site	RA-SDST	RHONDDA MEMBER - SANDSTONE	WESTPHALIAN
8	131m SE	RA-MDSS	RHONDDA MEMBER - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
9	137m SE	RA-MDSS	RHONDDA MEMBER - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
12	213m SE	RA-SDST	RHONDDA MEMBER - SANDSTONE	WESTPHALIAN
13	220m SE	RA-SDST	RHONDDA MEMBER - SANDSTONE	WESTPHALIAN
16	363m SE	RA-MDSS	RHONDDA MEMBER - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
17	371m NW	SWUCM-MDSS	SOUTH WALES UPPER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
19	380m SE	RA-MDSS	RHONDDA MEMBER - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
22	420m NW	SWUCM-MDSS	SOUTH WALES UPPER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
24	423m SE	BD-SDST	BRITHDIR MEMBER - SANDSTONE	WESTPHALIAN
26	440m SE	BD-SDST	BRITHDIR MEMBER - SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	2
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A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	High	Moderate
On site	Fracture	Moderate	Low

This data is sourced from the British Geological Survey.



15.10 Bedrock faults and other linear features (50k)

Records within 500m

14

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 83**

ID	Location	Category	Description
1	On site	FAULT	Fault, inferred, displacement unknown
5	On site	FAULT	Fault, inferred, displacement unknown
7	On site	FAULT	Fault, inferred, displacement unknown
10	189m N	ROCK	Coal seam, inferred
11	213m SE	ROCK	Coal seam, inferred
14	220m SE	ROCK	Coal seam, inferred
15	347m N	FOSSIL_HORIZON	Marine band
18	371m NW	FOSSIL_HORIZON	Marine band
20	411m N	ROCK	Coal seam, inferred
21	420m NW	ROCK	Coal seam, inferred
23	423m SE	ROCK	Coal seam, inferred
25	440m SE	ROCK	Coal seam, inferred
27	462m N	FOSSIL_HORIZON	Marine band
28	493m E	FAULT	Fault, inferred, displacement unknown

This data is sourced from the British Geological Survey.



16 Boreholes



— Site Outline
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m

12

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

Features are displayed on the Boreholes map on **page 86**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	44m E	282431 202417	DEVELOPMENT RECORD PLAN	-2.0	N	258376
A	54m NW	282220 202510	ABERDULAI TO HIRWAUN TRUNK ROAD. 201	3.51	N	258322
A	57m W	282210 202490	ABERDULAI TO HIRWAUN TRUNK ROAD. 201A	1.37	N	258323



ID	Location	Grid reference	Name	Length	Confidential	Web link
2	73m N	282280 202580	ABERDULAI TO HIRWAUN TRUNK ROAD. 200	6.55	N	258321
3	88m W	282180 202460	ABERDULAI TO HIRWAUN TRUNK ROAD. 201B	1.98	N	258324
4	89m N	282300 202600	ABERDULAI TO HIRWAUN TRUNK ROAD. 199B	2.9	N	258320
5	114m W	282160 202430	ABERDULAI TO HIRWAUN TRUNK ROAD. 202	9.45	N	258325
6	139m N	282320 202650	ABERDULAI TO HIRWAUN TRUNK ROAD. 199A	1.9	N	258319
7	161m N	282340 202670	ABERDULAI TO HIRWAUN TRUNK ROAD. 199	11.13	N	258318
8	195m SW	282100 202370	ABERDULAI TO HIRWAUN TRUNK ROAD. 203	3.51	N	258326
9	222m SW	282080 202350	ABERDULAI TO HIRWAUN TRUNK ROAD. 203A	2.59	N	258327
10	235m N	282400 202730	ABERDULAI TO HIRWAUN TRUNK ROAD. 198,198/1	3.66	N	258317

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

1

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).

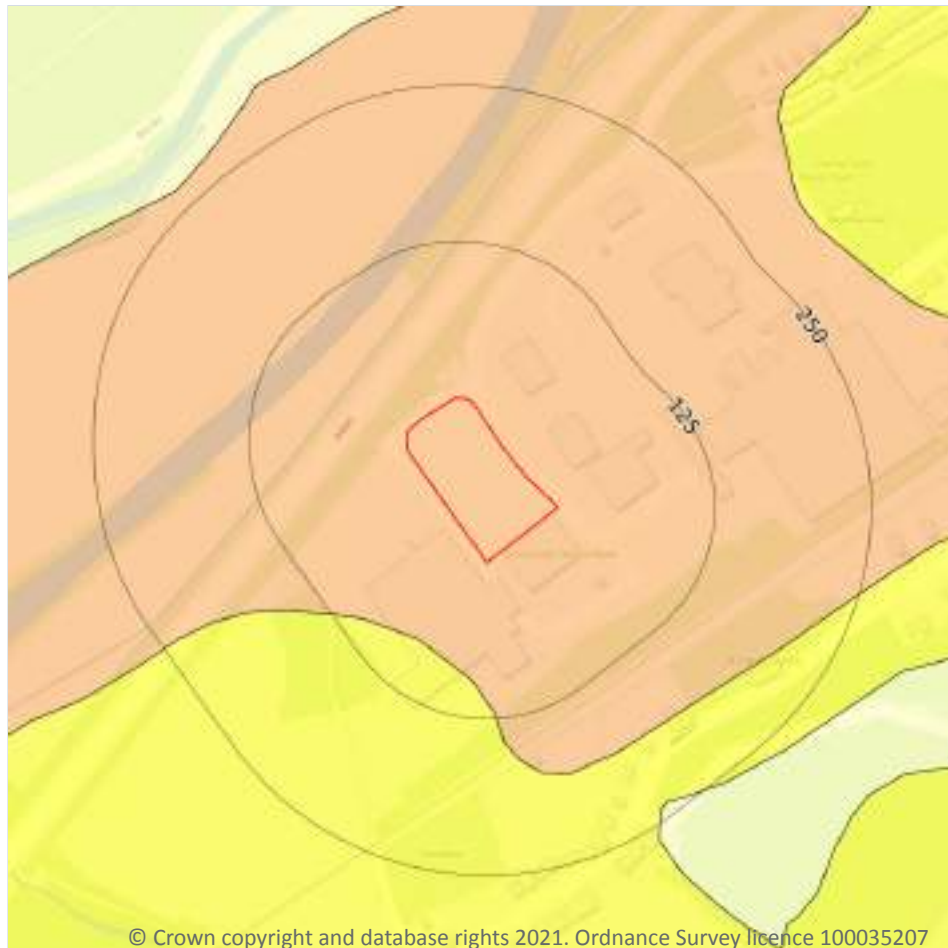
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 88**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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

17.2 Running sands

Records within 50m

1

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.

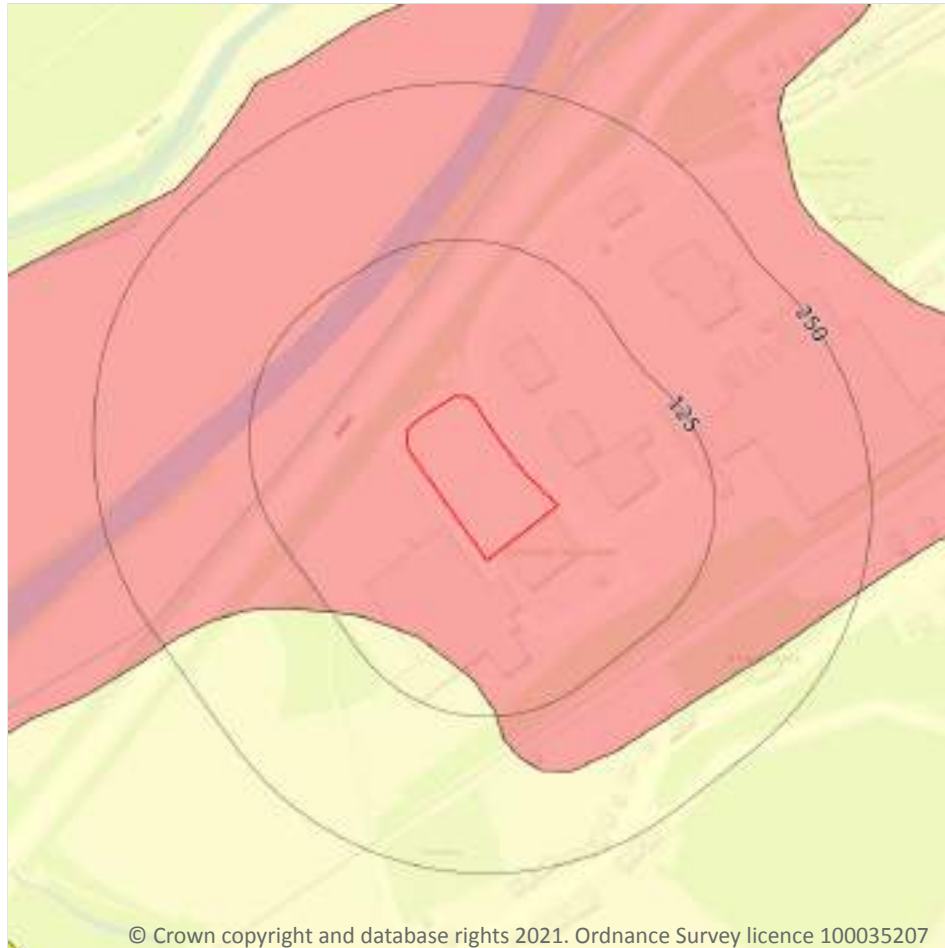
Features are displayed on the Natural ground subsidence - Running sands map on **page 89**

Location	Hazard rating	Details
On site	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

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

1

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 90**

Location	Hazard rating	Details
On site	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.

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

1

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 91**

Location	Hazard rating	Details
On site	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



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

17.5 Landslides

Records within 50m

1

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 92**

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.

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

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17.6 Ground dissolution of soluble rocks

Records within 50m

1

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.

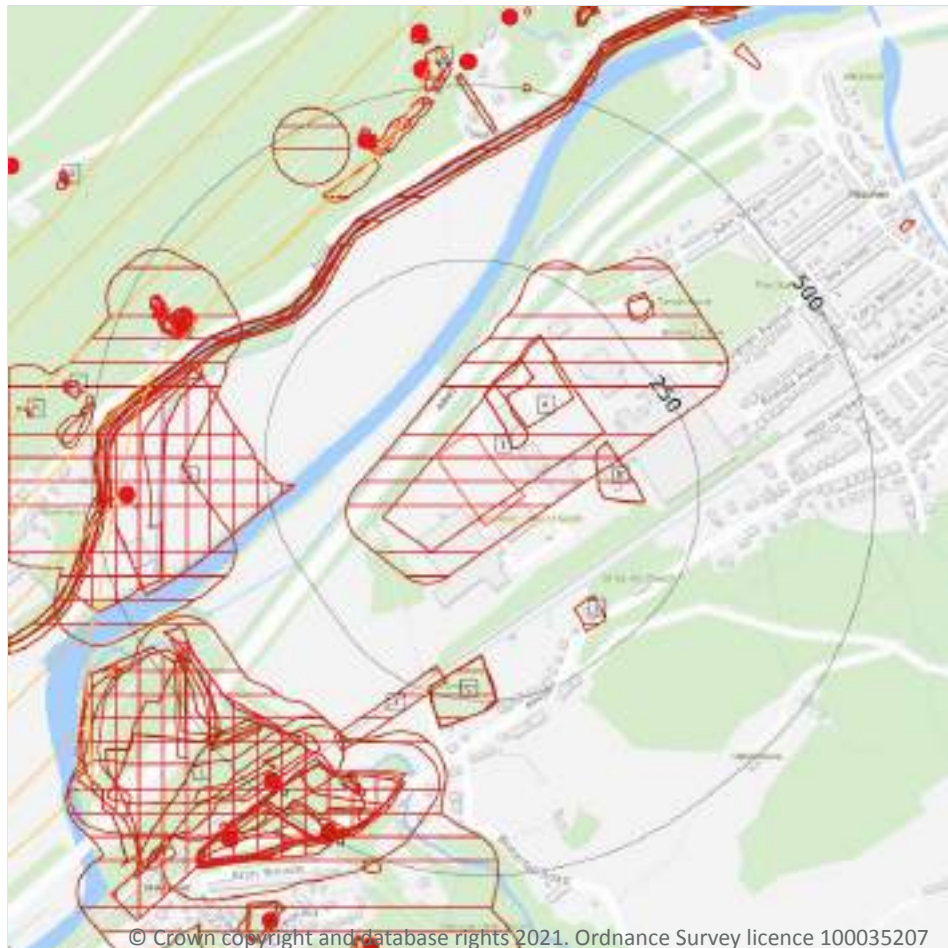
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 93**

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.

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 Peter Brett Associates (PBA).

18.2 BritPits

Records within 500m

6

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 94**

ID	Location	Details	Description
L	415m NW	Name: Pant-Nedd-Fechan Address: Resolven, NEATH, Glamorgan Commodity: Coal, Deep 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) 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
N	444m N	Name: Ynisarwed Drift Address: Abergarwed, GLYNNEATH, West Glamorgan Commodity: Coal, Deep 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) 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	447m NW	Name: Ynisarwed Drift Address: Abergarwed, GLYNNEATH, West Glamorgan Commodity: Coal, Deep 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) 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	450m W	Name: Ynys-arwed Address: Resolven, NEATH, Glamorgan Commodity: Coal, Deep 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) 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
M	475m SW	Name: Glyn Merthyr Address: Resolven, NEATH, Glamorgan Commodity: Coal, Deep 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) 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
H	490m SW	Name: Glyn Merthyr Colliery Address: Resolven, GLYNNEATH, West Glamorgan Commodity: Coal, Deep 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) 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	13
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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 94**

ID	Location	Land Use	Year of mapping	Mapping scale
1	On site	Sewage Works	1921	1:10560
A	On site	Sewage Works	1921	1:10560
A	33m NE	Refuse Heap	1965	1:10560
A	33m NE	Refuse Heap	1988	1:10000
A	65m NE	Sewage Works	1876	1:10560
B	106m E	Refuse Heap	1965	1:10560
B	106m E	Refuse Heap	1988	1:10000
2	171m SE	Grave Yard	1877	1:10560
C	185m S	Cemetery	1965	1:10560
C	185m S	Cemetery	1988	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
C	185m S	Cemetery	1876	1:10560
3	212m S	Cuttings	1877	1:10560
D	212m W	Colliery	1921	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

135

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 94**

ID	Location	Land Use	Year of mapping	Mapping scale
D	212m W	Colliery	1921	1:10560
I	358m W	Colliery	1876	1:10560
J	385m S	Colliery	1876	1:10560
J	390m SW	Colliery	1921	1:10560
L	396m NW	Old Coal Level	1921	1:10560
L	401m NW	Old Coal Level	1921	1:10560
L	403m NW	Old Coal Level	1876	1:10560
L	410m NW	Old Coal Levels	1897	1:10560
N	422m N	Old Coal Level	1921	1:10560
H	423m S	Colliery	1877	1:10560
N	433m N	Old Coal Level	1876	1:10560
L	439m NW	Air Shaft	1921	1:10560
L	443m NW	Air Shaft	1877	1:10560
L	446m NW	Old Coal Level	1921	1:10560
L	448m NW	Old Air Shaft	1921	1:10560
L	448m NW	Old Air Shaft	1897	1:10560
N	448m N	Unspecified Disused Level	1965	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
N	448m N	Unspecified Disused Level	1988	1:10000
L	450m NW	Unspecified Disused Level	1965	1:10560
L	450m NW	Unspecified Disused Level	1988	1:10000
L	450m NW	Old Air Shaft	1876	1:10560
Q	495m N	Old Coal Level	1921	1:10560
H	505m SW	Colliery	1897	1:10560
Q	512m N	Unspecified Disused Levels	1965	1:10560
Q	512m N	Unspecified Disused Levels	1988	1:10000
Q	513m N	Old Coal Level	1921	1:10560
K	521m W	Unspecified Disused Level	1965	1:10560
K	521m W	Unspecified Disused Level	1988	1:10000
Q	525m N	Old Coal Level	1876	1:10560
Q	562m N	Old Coal Level	1921	1:10560
Q	567m N	Unspecified Disused Levels	1965	1:10560
Q	567m N	Unspecified Disused Levels	1988	1:10000
Q	571m N	Old Coal Level	1921	1:10560
Q	572m N	Old Coal Level	1876	1:10560
R	587m W	Old Air Shaft	1921	1:10560
R	595m W	Old Air Shaft	1921	1:10560
S	597m N	Unspecified Old Shaft	1921	1:10560
S	601m N	Unspecified Disused Shaft	1965	1:10560
S	601m N	Unspecified Disused Shaft	1988	1:10000
R	604m W	Old Air Shaft	1876	1:10560
S	606m N	Unspecified Old Shaft	1921	1:10560
S	606m N	Unspecified Old Shaft	1921	1:10560
S	606m N	Unspecified Old Shaft	1897	1:10560
S	606m N	Unspecified Old Shaft	1876	1:10560
S	606m N	Unspecified Shaft	1877	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
X	658m NW	Old Coal Level	1921	1:10560
X	658m NW	Old Coal Level	1921	1:10560
X	664m NW	Old Coal Level	1876	1:10560
-	742m NW	Unspecified Disused Level	1965	1:10560
-	742m NW	Unspecified Disused Level	1988	1:10000
-	744m N	Old Coal Level	1876	1:10560
-	748m N	Old Coal Level	1921	1:10560
-	754m N	Unspecified Old Level	1921	1:10560
-	757m N	Old Coal Level	1921	1:10560
-	757m N	Old Coal Level	1897	1:10560
-	760m N	Unspecified Disused Level	1965	1:10560
-	760m N	Unspecified Disused Level	1988	1:10000
-	761m W	Unspecified Disused Level	1965	1:10560
-	761m W	Unspecified Disused Level	1988	1:10000
-	763m N	Coal Level	1877	1:10560
-	767m W	Old Coal Level	1921	1:10560
-	770m NE	Colliery	1921	1:10560
-	770m N	Unspecified Old Levels	1921	1:10560
-	778m W	Old Coal Level	1921	1:10560
-	779m N	Unspecified Old Level	1876	1:10560
-	811m SE	Old Coal Levels	1921	1:10560
-	815m SE	Unspecified Disused Levels	1965	1:10560
-	815m SE	Unspecified Disused Levels	1988	1:10000
-	816m W	Old Coal Level	1876	1:10560
-	827m S	Old Coal Level	1948	1:10560
-	829m SE	Old Coal Levels	1921	1:10560
-	830m SE	Old Coal Levels	1948	1:10560
-	831m SE	Unspecified Disused Levels	1965	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	831m SE	Unspecified Disused Levels	1988	1:10000
-	833m W	Coal Level	1877	1:10560
-	834m S	Old Coal Level	1921	1:10560
-	838m W	Old Coal Levels	1897	1:10560
-	847m S	Unspecified Disused Level	1965	1:10560
-	847m S	Unspecified Disused Level	1988	1:10000
-	855m SE	Old Trial Level	1921	1:10560
-	861m W	Coal Level	1876	1:10560
-	875m W	Coal Level	1921	1:10560
-	880m S	Coal Drift	1877	1:10560
-	881m W	Old Coal Levels	1921	1:10560
-	883m W	Old Coal Levels	1921	1:10560
-	883m W	Old Coal Levels	1921	1:10560
-	885m W	Old Coal Levels	1876	1:10560
-	885m W	Unspecified Disused Level	1965	1:10560
-	885m W	Unspecified Disused Level	1988	1:10000
-	890m W	Old Coal Levels	1921	1:10560
-	891m NW	Old Coal Levels	1921	1:10560
-	891m NW	Coal Levels	1877	1:10560
-	896m SE	Disused Trial Level	1965	1:10560
-	896m SE	Disused Trial Level	1988	1:10000
-	897m NW	Coal Levels	1877	1:10560
-	898m NW	Unspecified Drift	1921	1:10560
-	898m NW	Unspecified Drift	1897	1:10560
-	899m NW	Old Coal Levels	1921	1:10560
-	900m NW	Drift	1876	1:10560
-	902m NW	Coal Levels	1877	1:10560
-	904m SE	Coal Level	1877	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	907m SE	Old Coal Levels	1948	1:10560
-	908m NW	Old Coal Levels	1876	1:10560
-	908m N	Unspecified Level	1965	1:10560
-	908m N	Unspecified Level	1988	1:10000
-	909m NW	Old Coal Levels	1921	1:10560
-	909m NW	Old Coal Levels	1897	1:10560
-	912m NW	Old Coal Levels	1921	1:10560
-	912m NW	Coal Levels	1897	1:10560
-	912m NW	Old Coal Levels	1876	1:10560
-	912m NW	Old Coal Levels	1921	1:10560
-	914m NW	Unspecified Disused Levels	1965	1:10560
-	914m W	Unspecified Disused Level	1965	1:10560
-	914m NW	Unspecified Disused Levels	1988	1:10000
-	914m W	Unspecified Disused Level	1988	1:10000
-	916m W	Old Coal Levels	1921	1:10560
-	918m SE	Old Coal Levels	1921	1:10560
-	922m W	Old Coal Levels	1876	1:10560
-	924m NW	Coal Levels	1877	1:10560
-	924m NW	Unspecified Disused Levels	1965	1:10560
-	924m NW	Unspecified Disused Levels	1988	1:10000
-	929m NE	Unspecified Mine	1965	1:10560
-	929m NE	Unspecified Mines	1988	1:10000
-	952m NE	Colliery	1921	1:10560
-	988m SE	Air Shafts	1921	1:10560
-	989m SE	Air Shafts	1948	1:10560
-	989m E	Old Trial Level	1876	1:10560
-	991m SE	Air Shafts	1897	1:10560
-	995m SE	Air Shafts	1897	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	995m SE	Air Shaft	1877	1:10560
-	996m W	Old Air Shaft	1921	1:10560
-	996m SE	Disused Air Shaft	1965	1:10560
-	996m SE	Disused Air Shaft	1988	1:10000
-	996m W	Air Shaft	1877	1:10560
-	998m S	Old Coal Drift	1897	1:10560

This is 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

1

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 94**

ID	Location	Name	Commodity	Class	Likelihood
K	371m NW	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

0

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

This data is sourced from Peter Brett Associates (PBA).

18.8 JPB mining areas

Records on site

0

Areas which could be affected by former coal 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
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Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0
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Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

18.13 Clay mining

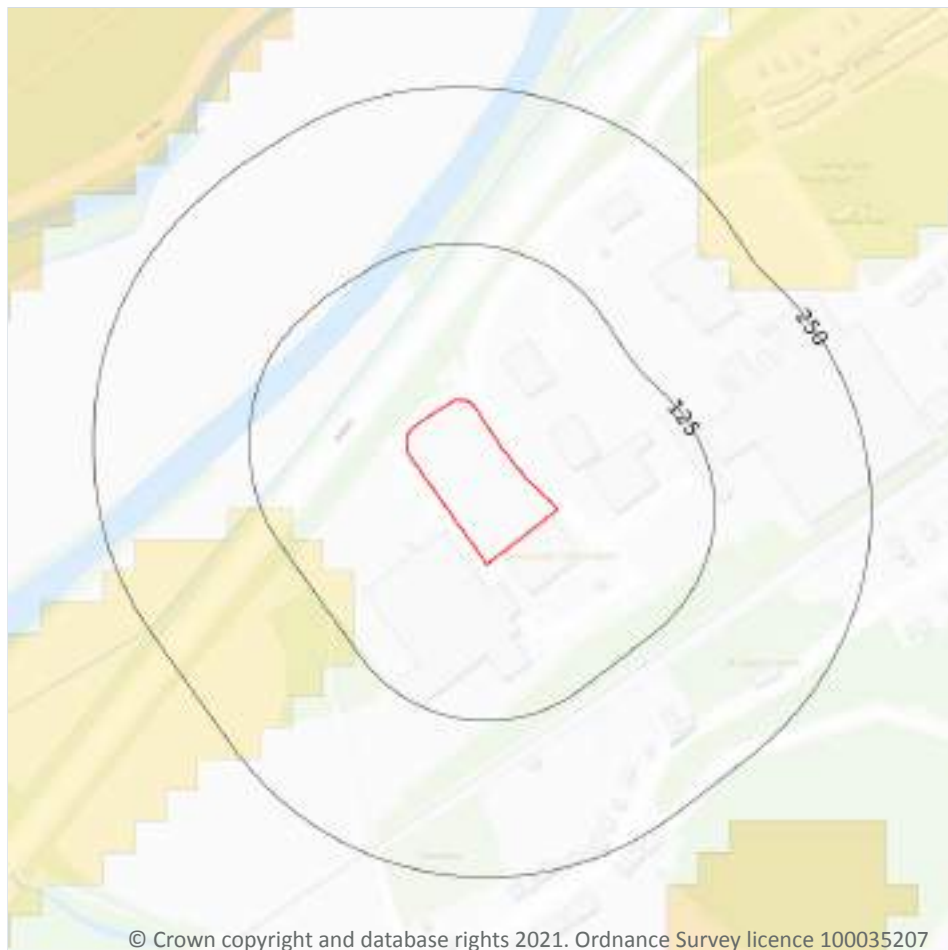
Records on site	0
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Generalised areas that may be affected by kaolin and ball clay extraction.

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



19 Radon



- Site Outline
- Search buffers in metres (m)
- Greater than 30%
 - Between 10% and 30%
 - Between 5% and 10%
 - Between 3% and 5%
 - Between 1% and 3%
 - Less than 1%

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 105**

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

7

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
32m NE	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.



20.3 BGS Measured Urban Soil Chemistry

Records within 50m

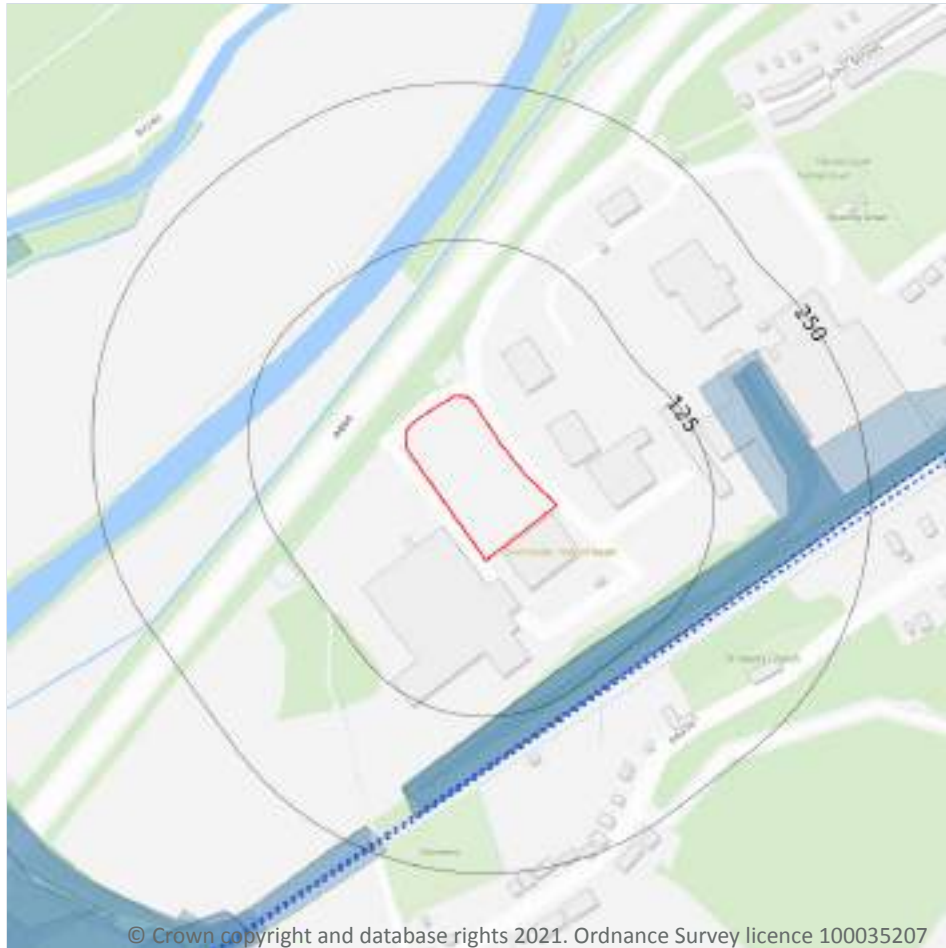
0

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

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects



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

21.1 Underground railways (London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m

0

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



This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m

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 108**

Location	Land Use	Year of mapping	Mapping scale
105m SE	Railway Sidings	1965	10560
105m SE	Railway Sidings	1988	10000
106m SE	Railway Sidings	1950	10560
116m SE	Railway Sidings	1962	2500
232m SW	Railway Sidings	1918	2500
233m SW	Railway Sidings	1921	10560

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

7

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways. Features are displayed on the Railway infrastructure and projects map on **page 108**

Location	Name	Type
137m SE	Not given	Single Track
138m SE	Not given	Single Track
139m SE	Not given	Single Track
140m SE	Vale of Neath Railway	rail
154m S	Not given	Single Track
160m S	Not given	Single Track
233m S	Not given	Single Track

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m

0

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

This data is sourced from publicly available information by Groundsure.



21.9 Crossrail 2

Records within 500m**0**

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m**0**

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

This data is sourced from HS2 Ltd.



Data providers

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

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