Pontardawe McDonald's Pipeline Connection

Phase 1 Desk Study

Stantec

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McDonald's Restaurants Limited

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Executive Summary

Project Information	
Site name and location	McDonald's Pontardawe pipeline connection, adjacent to the river Tawe, approximately 90m to the northwest of the A4067. The new proposed pipeline runs along the northern boundary of the existing Tesco car park.
Objectives	The objectives of the Phase 1 desk study are to identify key geoenvironmental and geotechnical risks concerning the proposed pipeline.
Proposed development	The site development proposals are understood to comprise the connection of an approximately 450m pipeline from the existing McDonald's to the local foul sewer.
Site Information	
Site Description	The site is long and narrow in shape, located adjacent to the existing Tesco Superstore car park, and river Tawe.
Topography	The area of the proposed pipeline mainly comprises reprofiled land forming a reinforced soil slope. Surrounding the pipeline, the land is generally flat at approximately 33 to 34m AOD.
Desk Study Data Review	
Site history	Historically, the site has been largely undeveloped due to its size. The adjacent areas had been used as a footpath, with the Tesco Superstore being built by 2009. Since 2009 much of the iste has been contained within the existing Tesco service road, with the connection point to the west of Tesco being undisturbed waste ground.
Geology	The site likely consists of Made Ground (although not confirmed), overlying Alluvium, Glaciofluvial Deposits, upon a bedrock geology of Brithdir member Sandstone. A fault line is present to the southern section of the site, with a coal seam adjacent to the site boundary. It is assumed that the construction of the Tesco Service Road included road buildup in line with DMRB guidance.
Hydrogeology	Groundwater us likely present between 1.0m and 4.0m bgl, in reference to historical investigation. The superficial and bedrock aquifers are all classified as Secondary A, with groundwater vulnerability considered moderate.
Hydrology	The River Tawe lies adjacent to the north of the site, following the pipeline alignment. The risk of flood is considered low.

Mining and Mineral Extraction	The site is in an historic coal mining area, however the Mining Remediation Authority Consultants report states: • There are no records of past underground mining within the site boundary; • There are no probable unrecorded shallow workings within the site boundary; • There are no outcrops recorded within the site boundary. There are three mine adits on/or immediately adjacent to the northeast boundary.
Waste Management	There are no current or historical waste management sites recorded within 250m of the site.
Regulatory Information	
UXO risk	A non-specialist UXO assessment indicates a low bomb risk.
Previous Reports	
McDonald's Pontardawe. 15297-HYD-XX-XX-RP-GE-1001. May 2020.	
Preliminary Ground Model	
Made Ground	Likely present beneath the Tesco service road, typically 0.5m to 1.0m thick
Alluvium	Likely present beneath Made Ground up to 2.0m bgk
Glaciofluvial Deposits	Potentially below Alluvium up to 3.0m bgl
Brithdir Member Mudstone/ Hughes Member Sandstone	3.0m bgl to unknown depth. Brithdir Mudstone is likely to underlay the majority of the site, with Hughes Member Sandstone present to the southern end.
Groundwater	Typically 1.0-4.0m bgl.
Initial Conceptual Site Model and Preliminary Geotechnical Hazard Identification	
Sources:	**Receptors:**
Metals, metalloids, PAH, petroleum hydrocarbons and asbestos in Made Ground below the site.	Site users Neighbours Groundwater Buildings
Hydrocarbon fuels, form adjacent petrol filling station migrating onto the site.	
Ground gases (carbon dioxide and methane) from organic materials in the Made Ground, Alluvium and Glaciofluvial Deposits beneath the site.	Site Users Buildings
Ground gases (carbon dioxide and methane) from adits adjacent to site and possible worked coal seams adjacent to site.	Site Users Buildings

Ground gases (carbon dioxide and methane) from adits adjacent to site and possible worked coal seams adjacent to site.	Site Users Buildings
Pontardawe Chemical Works (and associated tanks) including elevated concentrations of metals and metalloids, chlorides and sulphides, sulphuric acid, asbestos fibres and asbestos containing materials, petroleum hydrocarbons, polychlorinated biphenyls (PCBs) and coal/coke residues.	Site users Buildings Groundwater

Conclusions and Recommendations

Using the ground investigation works undertaken on the main restaurant site to date, the following information will need to be determined to inform future pipeline design:

- Depth and distribution of potential Made Ground across the alignment;
- Soil strength/ profile beneath the alignment;
- Depth/level of groundwater beneath the alignment;
- Assess trench stability;
- Allow sampling for chemical and geotechnical laboratory testing;
- Allow soil classification to allow geotechnical characterisation and determine suitability for reuse of soils within earthworks;
- Obtain information in terms of Aggressive Chemical Environment for Concrete Class (ACEC Class).

Following investigation, assessment will be required to:

- Update the Ground Model;
- Update the Geotechnical Risk Register;
- Provide Geotechnical Design recommendations;
- Update the Conceptual Site Model (CSM), including identification of plausible pollution linkages;
- Undertake generic quantitative risk assessment of potential chemical contaminants to establish ‘suitability for use’ under the current planning regime;

Discuss potential environmental liabilities associated with land contamination (soil, water and gas.

This Executive Summary forms part of Stantec Hydrock Limited report number 333702162-STN-XX-XX-RP-GE-1001. and should not be used as a separate document.

1 Introduction

1.1 Terms of reference

In November 2025, Stantec Hydrock Limited (Stantec) was commissioned by McDondald's Restaurants Limited (McDonald's) (the Client) to prepare a Phase 1 Ground Conditions Desk Study for the proposed foul sewer connection for the new McDonald's located at Pontardawe, SA8 3AZ. A site location plan (Stantec Drawing PNT-HYD-XX-XX-DR-3011) is presented in Appendix A.

The works have been undertaken in accordance with Stantec's proposal (333701268-STN-XX-XX-FP-0001, dated 21/11/25) and the Client's instructions to proceed.

1.2 Project background and Objectives

Stantec understands that the proposed development is to comprise a new pipeline connection to a foul sewer 450m to the west, adjacent to the existing Tesco Superstore, the site boundary follows the newly proposed pipeline. A proposed development layout (Stantec Hydrock Ltd Drawing PNT-HYD-XX-XX-DR-3011), is presented in Appendix A.

The works have been commissioned to support the planning application.

The Phase 1 Desk Study report will evaluate a variety of data sources to develop a preliminary Ground Model and an initial Conceptual Site Model (CSM) of the site. This will identify potential contaminant linkages and establish where there are potentially unacceptable risks in the context of the report objectives. It will also provide a preliminary assessment of geotechnical risks at the site.

1.3 Available information

The following documents have been provided to Stantec by the Client for use in the preparation of this report:

It has been assumed that the Client has commissioned or obtained assignment of the above documents and that Stantec Hydrock is entitled to full reliance upon their contents.

The following documents have been reviewed by Stantec Hydrock Ltd from the Neath Port Talbot County Borough Council Planning portal for use in the preparation of this report:

- SKM; 13th June 2008, Tesco Store, Gwyn's Drift Pontadawe Extension; Geotechnical Report Adoptable Works; Project No. SE1418,2 Issue A. Planning No. P2008/0708.
- John Grimes Partnership; Tesco Stores Limited Pontardawe; Areas of required excavation due to lead and arsenic exceedance, dated April 2005; Job No. 3920; Dwg No. 04; Planning No. P2005/0756.
- John Grimes Partnership; Tesco Stores Limited Pontardawe; Contoured surface lead concentrations, dated April 2005; Job No. 3920; Drawing No.03; Planning No. P2005/0756.

- John Grimes Partnership, Quantitative Risk Assessment for Contamination Land adjacent to A4067, Pontardawe. 28th April 2004 Job No. 3920.

The above documents have been referred to for information purposes but unless commissioned by, or assigned to the Client, Stantec has not placed formal reliance on them.

1.4 Regulatory context and guidance

This report has been prepared in accordance with relevant parts of BS 5930:2015+A1:2020 'Code of practice for ground investigations'.

The geo-environmental aspects of this report are written with reference to:

- Environment Agency (EA) guidance 'Land Contamination Risk Management' (LCRM), 2023;
- BS 10175:2011+A2:2017 'Investigation of potentially contaminated sites – Code of practice';
- BS EN ISO 21365:2020 'Soil quality – Conceptual site models for potentially contaminated sites;
- AGS (2006) 'AGS Guidelines for Good Practice in Site Investigations'; and
- R&D Publication 66: 2008 'Guidance for the Safe Development of Housing on Land Affected by Contamination' published by NHBC, the Environment Agency and CIEH.

The methods used follow a risk-based approach, with this report constituting the first stage, a Phase 1 Desk Study and Field Reconnaissance (also referred to as 'preliminary investigation'). The potential geo-environmental risks have been assessed qualitatively using the 'source-pathway-receptor (SPR) contaminant linkage' concept as introduced in the Environmental Protection Act 1990 (EPA, 1990).

The geotechnical aspects of this report are prepared in general accordance with:

- relevant parts of BS EN 1997-1:2004+A1:2013 'Eurocode 7: Geotechnical design. General rules' (EC7); and
- associated document NA+A2:2022 'UK National annex to Eurocode 7: Geotechnical design. General rules' and BS 8004:2015+A1:2020 Code of Practice for foundations.

Sections 4.1.2 to 4.1.4 of the NHBC Standards (2024), have also been adhered to.

1.5 Uncertainties and limitations

1.5.1 General comments

Stantec has prepared this report in accordance with the instructions of the Client, under the terms of appointment for Stantec. It is for the sole and specific use of the Client and parties to whom reliance has been agreed with Stantec.

Stantec shall not be responsible for use of the report or its contents for purposes other than that for which it was prepared or for use of the report by parties not defined in Stantec's appointment. Third parties who use the information contained herein do so at their own risk.

The report has been prepared by Stantec on the basis of available information obtained during the study period. Although every reasonable effort has been made to gather all relevant information, not all potential environmental constraints or liabilities associated with the site may have been revealed.

Stantec has used reasonable skill, care and diligence in its interpretation of the information obtained. The inherent variation of ground conditions however, means that significant extrapolation and inference may be made between data points. This could result in actual ground conditions not correlating with the assessment or conclusions of this report.

Information provided by third parties has been used in good faith and is taken at face value; however, Stantec do not guarantee its accuracy or completeness.

The work has been carried out in general accordance with recognised best practice. Unless otherwise stated, no assessment has been made for the presence of radioactive substances or unexploded ordnance. Where the phrase ‘suitable for use’ is used in this report, it is in keeping with the terminology used in planning control and does not imply specific warranty or guarantee offered by Stantec.

Please note that notwithstanding site observations concerning the presence or otherwise of archaeological sites, asbestos-containing materials or invasive weeds, this report does not constitute a formal survey of these potential constraints. Specialist advice should be sought.

Site boundary lines depicted on plans do not imply legal ownership of land.

2 Desk study and field reconnaissance

2.1 Site referencing

Table 2.1: Site referencing information

Item	Description
Site name	Foul Sewer Connection for McDonald's Pontardawe.
Site address	Tesco's Superstore, adjacent to A4067, Alltwen, Pontardawe, SA8 3AZ.
Site location	The site runs adjacent to the River Tawe and the Tesco Superstore. The National Grid Reference of the approximate centre of the site is 272207E, 203470N.
Site dimensions	The site is a long and narrow crica 450m in length and 20m in width with a slight curve in alignment once it passes the Tesco superstore.

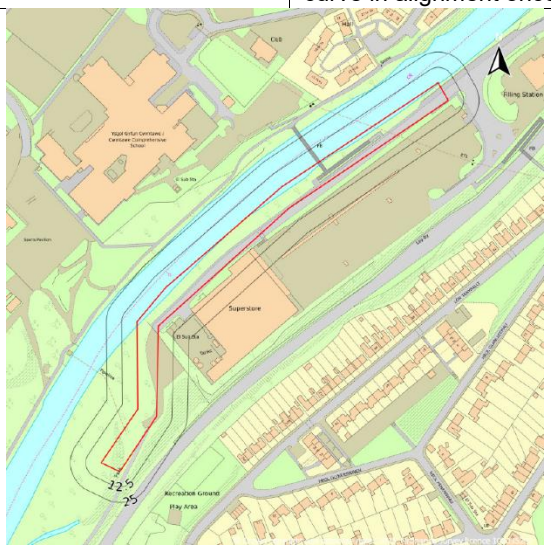


Figure 2-1: Site location



Figure 2-2: Aerial image

2.2 Site Description and field reconnaissance survey

The following information is based on online aerial imagery and maps.

Table 2.2: Site description

Item	Description
Site access	The site was accessed from the roundabout on the A4067 and the line of the site follows the deliveries access road for Tesco superstore along the River Tawe bank
Site area	The site is roughly rectangular in shape, measuring approximately 450m northeast to southwest and 20m northwest to southeast., with an area of approximately 0.75 ha.

Item	Description
Elevation and topography	The site gently slopes from the northeast to southwest dropping from roughly 34m AOD to 31m AOD. This mimics the nature fall of the site falling the elevation profile of the River Tawe adjacent to the site.
Site boundaries and surrounding land use	The northwest boundary is formed of the River Tawe. The southeast boundary is formed of the Tesco car park and superstore. To the northeast a petrol filling station is present and to the southwest there is overgrown vacant land.
Present land use	The site is currently comprises the delivery access road for the Tesco superstore in the northeast and central parts of the site and turns into a vacant area of scrubland in the southwest of the site behind the Tesco superstore.
Surface cover and vegetation	The northeast and central parts of the site are covered in asphalt with the southwest portion scrubland with no hard surfacing and bare ground in some places. There was no visible evidence of any invasive species, however a specialist should be sought to confirm this.
General site sensitivity	The site is generally within the residential area of Pontardawe, with an industrial park seen 370m to the northeast of the site. The nearest ecologically sensitive area near to the site is the River Tawe which is located 10m north of the site.

2.3 Data sources

The following sources of information have been reviewed as part of the Desk Study:

- Historical Ordnance Survey mapping (Appendix C).
- Third-party environmental report (Groundsure report, reference HYD-2E9-D9O-DWX-GPI) (Appendix D).
- British Geological Survey (BGS) GeoIndex Onshore (mapapps2.bgs.ac.uk/geoindex/home.html).
- BGS 1:50,000 geological map of Neath (Sheet 230).
- BGS Memoir for Sheet 230.
- BGS Lexicon (webapps.bgs.ac.uk/lexicon/).
- Coal Authority's Interactive Viewer (mapapps2.bgs.ac.uk/coalauthority/home.html).
- Coal Authority 'CON29 Consultants Coal Mining Report' (Reference: HYD-WX6-773-GQP-3EK).
- UK Health Security Agency's Interactive Radon Map (ukradon.org/information/ukmaps).
- BGS Radon Report (Reference: BGS_308501/11263).
- Unexploded bomb (UXB) Risk Maps (zeticauxo.com/downloads-and-resources/risk-maps/).

2.4 Site history

A study of historical maps (Appendix C) and aerial imagery has been undertaken to identify former land uses at the site and in the surrounding areas, which may have affected, or be affected by, the site.

2.4.1 On-site

Table 2.3: Site history

Reference	Key Features on-site
OS Map[1] 1877 -1884: 1:2,500 and 1:10,560	There are two buildings on the boundary of the site in the northeast of the site. The rest of the site comprises trees and the south riverbank of the river tawe. A railway track crosses the site north to south in the northeast part of the site. An old coal level is present in the northeast of the site just east of the railway.
OS Map 1898-1900: 1:2,500 and 1:10,560 (Part of the map around the north of the site is missing)	The buildings no longer present.
OS Map 1918 – 1921 1:2,500 and 1:10,560	*'No Significant change*
OS Map 1941– 1942 1:2,500 and 1:10,560	No significant change
OS Map 1953 1:10,560	No significant change
OS Map 1961-1965 1:2,500	Stockpiles of material appear on the site most likely due to some reprofiling works of the land to the south of the site.
OS Map 1968-1974: 1:2,500 (The map is missing sections to the west of the site)	Railway is dismantled.
OS Map 1982-1984: 1:2,500 and 1:10,000	No significant change
OS Map 1988-1989: 1:2,500	No significant change
OS Map 1992-1999: 1:10,000	Site remains unchanged.
Google Earth Imagery 2000	Site appears derelict, generally brown in colour, with a few trees along the northwest boundary.
OS Map 2009 1:10,000	Site has become a car park for Tesco superstore.
OS Map 2020 1:10,000	Site remains unchanged.

2.4.2 Off-site

The key off-site feature within 250m of the site are summarised in Table 2.4. All distances quoted are approximate.

Table 2.4: Key off-site historical features

Dates	Feature
1877 -1884	• Tramway, orientated northwest to southeast, located 20m northeast. • River Tawe, orientated northeast to southwest, and flowing towards the southwest, located 35m northwest.

[1] Ordnance Survey Historical Map Information provided by Envirocheck.

Dates	Feature
	• Tramway, orientated northwest to southeast and, located 25m southwest, • Swansea Vale Railway line, orientated northeast to southwest, and located 30m southeast. • Pontardawe Chemical works, 30m northeast. • Coke Ovens, 115m northwest. • Flour Mill, 120m northeast. • Pontardawe Tin Plate Works, 440m northwest.
1898-1900:	The Pontardawe Chemical Works, to the northeast, has grown in size and the adjacent flour mill no longer exists. The Pontardawe Tin Plate Works has now become the Pontardawe Steel and Tin Plate Works and has also increased in size and is located 210m northwest of the site with Tramways running from the chemical works to the steel and tin works. Swansea canal is shown to the north of the steel and tin works.
1918 – 1921	The Tramway northeast of the site is no longer labelled, and looks disused. The Tramway to the southwest has become part of the Swansea Vale Railway Line. More houses are recorded 250m southeast as the population of the area grows. A railway station is located 225m northeast of the site; a goods shed and cattle pen are located between this railway station and the chemical works. Sewage works are located 370m southwest of the site, owned by the Pontardawe Council.
1941– 1942	A tank is recorded 75m northeast in the chemical works. More residential houses have been built to the north and east of the site. Filter beds are shown to extend southwest out of the sewage works. '*New Sheet Mills'* is mapped 420m northeast of the site.
1953	The tramway to northeast no longer exists. The cattle pen is no longer labelled.
1961-1965	The Chemical works to the northeast has reduced in size and is formed of two buildings. The Swansea Valley Railway Line is now labelled as the mineral railway. The steal and tin works to the northwest are now labelled as disused; the tramway to the southwest of the site appears disused and no longer leads from the main railway line to the steel and tin works. The railway sidings around the steel and tin works are labelled as disused. The '*New Sheet Mills'* has been removed from mapping a bus depot is now located on a portion of the old site.
1968-1974	The chemical works site to the northeast has become a haulage contractors' yard. A factory is located 150m northeast of the site. The steel and tin plate works to the northwest has become an industrial estate. The mineral railway to the south has been removed and the station is no longer mapped northeast of the site. The location of '*New Sheet Mills*' is now an industrial estate including a bus depot, three engineering works, a refrigeration equipment factory and a fibreglass bathroom factory. The surrounding area has seen an increase in residential housing. The sewage works have become playing fields.
1982-1984	The Mineral railway to the southeast of the site is now labelled as a dismantled railway. An abattoir is now mapped on the industrial estate to the northeast of the site
1988-1989	The haulage contractors' yard and factory are no longer mapped to the northeast of the site. The A4067 is now mapped 30m southeast of the site with a roundabout mapped 120m northeast.

Dates	Feature
	The works is still recorded 150m northwest in the vicinity of the old steel and tin works.
1992-1999	A school is constructed approximately 300m west of the site on the opposite side of the River Tawe. Otherwise the surrounding area remains unchanged.
2000	Two buildings are shown to the northeast in the location of the haulage contractors' yard.
2009	An unnamed building has been built 130m southwest of the site, this is the Tesco superstore, with the Tesco petrol station 50m northeast of the site. An access road runs between the site and the River Tawe.
2020	Surrounding area is unchanged.

2.4.3 Site history summary

The site and the area immediately surrounding it have a history of coal mining and industrial use. The surrounding buildings expanded gradually before being removed entirely

2.5 Published Geology

The general geology of the site is shown on the BGS GeoIndex and 1:50,000 geological map of Neath (Sheet 230), with further information provided in the BGS map sheet SN7OSW, as summarised in Table 2.5. The 1:50,000 BGS map extracts are reproduced as part of the Groundsure Report in Appendix C.

Table 2.5: Published Geological Sequence

Reference	Location	Stratigraphic Name	Description
Superficial Deposits (Figure 2-4)			
Alluvium is recorded along the north boundary of the site following the course of the River Tawe it is considered unlikely that Alluvium will be recorded on site. Glaciofluvial is only recorded in the further north east of the site and is not expected across the majority of the rest of the site.			
Solid Geology (Figure 2-5)			
1 (BD-MDSS)	On site	Brithdir Member	Green grey Pennant sandstones with conglomerate lenses at bases of units of thin mudstone/siltstone and mainly thin coal.
2 (H-SDST)	On site	Hughes Member - Sandstone	
Geological Features			
The BGS map records the approximate line for the Swansea Valley Disturbance, which is mapped as a fault (break in the rock) on the electronic maps and is located north of the site. The fault is orientated northeast to southwest with the southeast side of the fault downthrown. Two coal seams are recorded to cross the site in the southwest of the site. These are named the Glyngwilym and Hughes seam both of which dip to the south at 12 degrees. The electronic maps do note record Made Ground on site however the 1:10,000 BGS paper maps recorded the entire site to have Made Ground on and this should be expected along the route of the Pipeline.			

Reference	Location	Stratigraphic Name	Description
Figures			

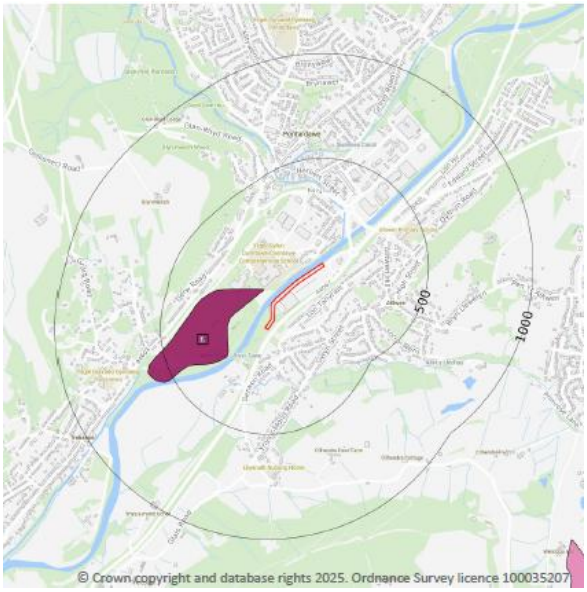


Figure 2-3: Artificial Deposits

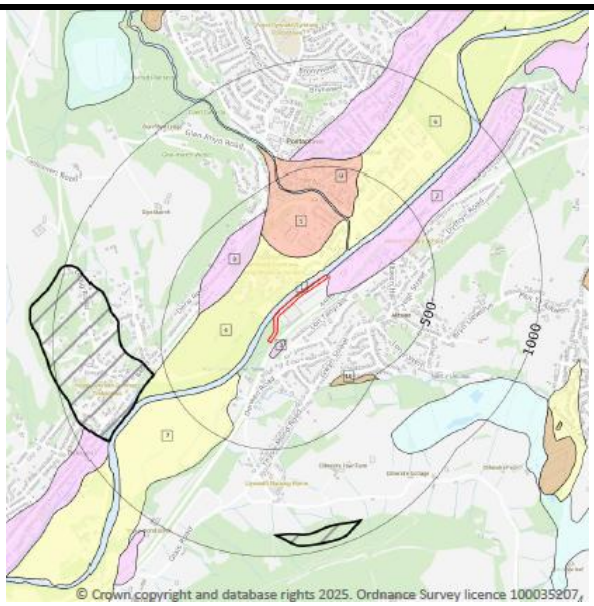


Figure 2-4: Superficial deposits

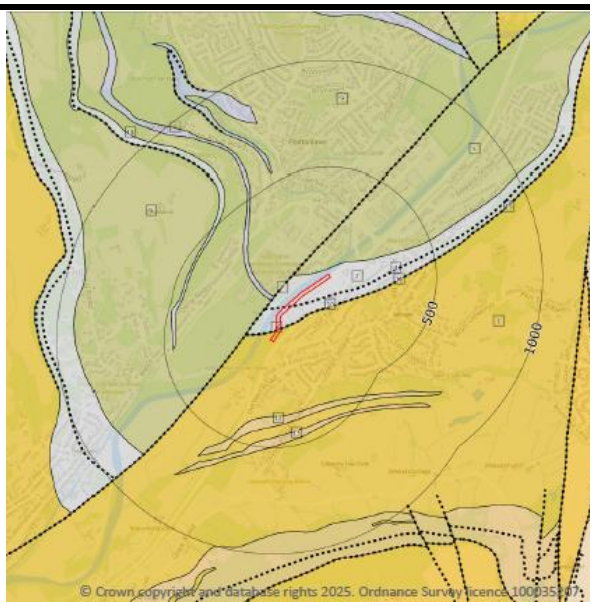


Figure 2-5: Solid geology

A number of borehole logs from the BGS archive (through GeoIndex) have been reviewed. Selected relevant records are summarised in Table 2.6.

Table 2.6: BGS archive borehole logs

Reference	Location	Strata and Groundwater Observations
BH59A	30m east	• Made Ground (ash and brick) between ground level and 1.00m bgl; • Hard grey Sandstone, between 1.00m and 4.00m bgl (Brithdir Member); and • Void (void possible workings) between 4.00m and 6.00m bgl. Void inspected by use of down the hole video camera.
BH59B	30 east	• Made Ground (ash and stone fill) between ground level and 1.00m bgl; • Weak to moderately strong grey yellow brown moderately weather siltstone, between 1.00m to 2.90m bgl; • Weak grey silty mudstone, between 2.90m and 3.75m bgl; • Weak light grey thinly bedded slightly weathered siltstone, between 3.75m and 4.60m bgl; • Weak to strong with depth grey thinly bedded mudstone, between 4.60m and 7.70m bgl; • Strong grey fine grained sandstone, between 7.70m and 9.20m bgl; and • Weak dark grey thinly laminated slightly weathered mudstone, between 9.20m and 9.50m bgl. • Groundwater seepage at 3.00m bgl.

The ground model is generally expected to be Made Ground over Strong sandstone/siltstone with limited superficial deposits being recorded.

2.6 Hydrogeology

Information relating to the hydrogeological setting of the site is summarised in Table 2.7 through to Table 2.8.

Table 2.7: Aquifer system

Stratum	Aquifer Designation	Comments
Artificial Deposits		
Made Ground	Unclassified	Artificial ground not included in the classification system. Likely to be moderate to high porosity because of unconsolidated nature, but permeability is likely to be constrained to low, or low to moderate because of poor sorting and clay content.
Superficial Deposits		
Alluvium	Secondary A Aquifer	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
Solid Geology		
Brithdir Member	Secondary A Aquifer	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases

Stratum	Aquifer Designation	Comments
		forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

2.6.1 Active licenced groundwater abstractions (within 250m)

There are no active licensed groundwater abstractions within 250m of the site.

2.6.2 Groundwater source protection zones and groundwater vulnerability

The site is not within a groundwater Source Protection Zone (SPZ).

Groundwater vulnerability is medium and is combined classification of superficial and bedrock.

2.6.3 Other groundwater information

Table 2.8: Other groundwater information

Item	Details
Groundwater levels	Groundwater levels have been recorded between 1.0m and 4.0m bgl from historical ground investigations within the Glaciofluvial Deposits, dependent on thickness of Made Ground.
Groundwater recharge	Three mine adits are recorded to adjacent to the proposed McDonalds in the north east of the site, one of which is culverted and drains the A4067 into the River Tawe. Two further adits are located underneath the Tesco's and have been treated following the construction of the Tesco's.
Groundwater flow	Groundwater levels are likely flowing southwest, in continuity with the River Tawe.
Groundwater quality	The groundwater body beneath the site (Swansea Carboniferous Coal Measures Water body ID: GB41002G201000) is currently (2018 Cycle 2) classified under the Water Framework Directive as 'poor'. The water body is currently given a 'poor' status due to 'chemical dependant surface water body' conditions. This is likely related to the industrial legacy in the surrounding area.
Groundwater flooding	Low risk of groundwater flooding on site, moderate risk within 50m.

2.7 Hydrology

Information relating to the hydrological setting of the site is summarised in Table 2.9 through to Table 2.10.

Table 2.9: Surface water features

Feature	Location relative to pipeline alignment
Afon Tawe	9m NW

2.7.1 Licenced surface water abstractions and discharges

There in one active licensed surface water discharges approximately 230m to the northeast, and two expired discharges, between 130m and 250m to the north/northeast of the new pipeline. There are no abstractions within 250m of the site.

Table 2.10: Other surface water information

Item	Details
Surface water quality	The River Quality of the River Tawe as measured by the Environment Agency's General Quality assessment (GQA) Scheme is Grade A. This means the quality of the River Tawe is very good.
Surface water drainage	Specialist flood risk advice should be sought with regard to drainage and flooding.
Surface water flooding	The desk study information indicates the proposed development is in a low flood risk area (a chance of flooding between 1 in 1000 (0.1%) and 1 in 100 (1%)).

2.8 Mining and mineral extraction

The Coal Authority online viewer (http://mapapps2.bgs.ac.uk/coalauthority/home.html) indicated that two coal seams (that have been worked) outcrop to the south of the site (both within the Tesco car park, and south of the A4067) and these off-site areas have been classified as development high risk areas. It also indicated that three mine entries are located on the northeast boundary of the site (Ref: 272203-007 'Ynysfechan Outfall; 272203-008 and; 272203-014 'Ynysfechan Colliery').

A 'Consultants Coal Mining Report' was obtained from The Coal Authority and is included in Appendix D**Error! Reference source not found.**. The reader is referred to this for further information, but the salient details are provided below:

There are no records of past underground mining;

There are no probable unrecorded shallow workings;

There are no outcrops recorded within the site boundary; and

There are three mine adits on/or immediately adjacent to the northeast boundary; these are listed in Table 2.9, below.

Table 2.9: Mine Entries

Entry Type	Reference	Grid Reference	Treatment Description	Mineral
Adit	2772203-007	272308E, 203538N	This adit was investigated by West Glamorgan County Council as part of the A4067 Swansea Valley Trunk Road Scheme in 1987. Drainage works were undertaken as part of the treatment works.	Coal
Adit	272203-008	272328E, 203512N	This adit was investigated by West Glamorgan County Council as part of the A4067 Swansea Valley Trunk Road Scheme in 1987. Drainage works were undertaken as part of the treatment works.	Coal
Adit	272203-014	272336E, 203545N	No Description.	Coal

The ***'SKM; 13th June 2008, Tesco Store, Gwyn's Drift Pontardawe Extension, Geotechnical Report Adoptable Works; Project No. SE14182; Issue A'*** report references several drawings obtained from the Neath Port Talbot County Borough Council (formerly West Glamorgan Council) for the A4067 Swansea Valley Route Glais to Pontardawe; these are as follows:

26.349/S.I.12 'Abandoned Coal workings' dated 02/1985; and

26:1349/Su/N1 'Treatment of N.C.B Adit' dated 11/1986.

These drawings have been obtained following protracted conversations with Neath Port Talbot County Borough Council. These drawings show that the adits in the northeast of the site have been lined as part of the A4067 construction. These adits do not pose a risk to the pipeline.

The BGS borehole record 'BH59A 'was drilled in 1985, prior to the A4067 trunk road scheme, in the vicinity of the A4067 roundabout, adjacent to the northeast of the site. This borehole located a void, between 4m and 6m below ground level, that is potentially related to either one of the adits or underground working.

The elevation of the void found in BH59A between 32.95m and 30.95m, is below the elevation of the site (33/34m OD), but given that we know the site has been worked, then reprofiled, we can conclude that this void (likely working and/or adit) is associated with the old coal level beneath the site.

BH103 from a previous ground investigation recorded Made Ground to a depth of 31.86m AOD on to sandstone bedrock on-site in the vicinity of the coal adits suggesting that significant reprofiling of the site has been undertaken on site and any shallow coal on site relating to the Glyngwilym seam has been removed and replaced with Made Ground.

The ground conditions described within the SKM report suggest that no coal seams were encountered beneath the site and that thick Made Ground and superficial deposits were encountered.

The Hughes seam only crosses the pipeline route in the southwest of the site and dips to the south. Given the thickness of Made Ground recorded on site and that the Glynwilym seam overlies the Hughes seam this coal seam is unlikely to affect this pipeline route due to and doesn't pose a risk to this development.

2.9 Natural ground instability

Alluvium is recorded to the northwest of the site. However, historical ground investigations have recorded Alluvium on site. These soils are compressible and have the potential, when loaded, to result in significant settlement of the ground resulting in damage to structures.

The BGS SuDs report indicates that compressible ground is recorded along the northwest boundary of the site and that increased on-site infiltration may cause unwanted settlement issues.

The Landmark Envirocheck report corroborates this, indicating that other than the risk of compressibility, which is designated as being of 'moderate' hazard potential, all other ground stability hazards are designated 'low', 'very low' or 'no hazard'.

2.10 Waste management

There are no current or historical waste management sites recorded within 250m of the site.

2.11 Regulatory information

Information in the Groundsure Report (Appendix D), relating to various regulatory controls has been reviewed, with a summary of key aspects not included in the above sections presented in Table 2.11. Refer to Appendix D for further information. All distances quoted are approximate.

Table 2.11: Regulatory information within 250m of the site

Regulatory Data	Location	Details	Potential Risk	Comment
Local Authority Pollution Prevention and Controls	50m north.	Authorised petrol filling station and associated car wash.	No	Provided it is operated correctly and in accordance with valid permits.
	188m northwest.	Authorisation has varied. Coating in drum manufacturing and reconditioning process.	No	Due to being positioned on the opposite side of the River Tawe, which is likely to form a barrier to migrating contamination, and pollution unlikely to affect the site.
Pollution Incidents	46m west.	March 1995; Crude Sewage; Category 3 – minor incident.	No	Due to age and the Category 3 classification of the incident.
	67m north.	September 1995; Crude Sewage; Category 3 – minor incident.	No	Due to age and the Category 3 classification of the incident.
	162m north.	September 1994; pollution unknown; Category 3 – minor incident.	No	Due to age and the Category 3 classification of the incident.
	199m northeast.	December 1991; blocked sewer;	No	Due to the age of this incident.

Regulatory Data	Location	Details	Potential Risk	Comment
		pollutant unknown; Category 2 – Significant incident.		
	188m northwest.	Inactive; Steel Manufacturers.	No	Due to distance and direction from the site.
	287m east.	Inactive; domestic appliances service and repair.	No	Given the distance from the site, small-scale industry and small volumes of potential contaminants.
	258m northwest.	Active; road haulage services.	No	Due to the small volumes of potential contaminants and its distance from the site.
Control of major accident hazards sites (COMAH)	N/A	No COMAH sites recorded within 500m of the site.	No	-
Registered radioactive substances	N/A	No entries on registered radioactive substances were recorded within 500m of the site.	No	
Notification of installations handling hazardous substances	N/A	No entries on notification of installations handling hazardous substances were recorded within 500m of the site.	No	

2.12 Radon

The radon risk is reported in the Groundsure report indicates that the southwestern section of the pipeline is within an area where estimated properties of 5 and10% are affected, with less than 1% for the rest of the site. Radon will not have an impact on the pipeline.

2.13 Unexploded ordnance

In general accordance with CIRIA Report C681 (Stone et al 2009) a non-specialist UXO screening exercise has been undertaken for the purposes of ground investigation and is presented in Table 2.12.

Table 2.12: Non-specialist UXO screening for ground investigation

Data	Comment	Further Assessment Required
Site History	There is no indication of former military use from the desk study.	No
Post War Development	Historical mapping shows no evidence of bomb damage on site or within the surrounding area.	No

Data	Comment	Further Assessment Required
Geology Type	The ground conditions potentially comprise Made Ground over Glaciofluvial Deposits on to the Brithdir Member. The superficial deposits would prevent bombs penetrating to significant depth below the surface without explosion	No
Surface Cover during WWI	The surface cover during WWII comprised one building and areas of spoil heaps. It is unlikely UXO would remain undetected. The site has been redeveloped since WWII and UXO would have been identified during the construction of the adjacent Tesco Superstore.	No
Indicator of Aerial Delivered UXO	Screening against the regional bomb risk map in Appendix D indicates the site to be in an area where the bomb risk is low	No

The non-specialist UXO screening exercise has indicated no further assessment is required with regard to UXO in relation to ground investigation. Further assessment may be considered prudent for construction activities.

3 Consultations and local knowledge

The Neath Port Talbot County Borough Council Environmental Health team was contacted on the 1st May 2020 and stated that:

They have records in relation to land contamination identified during the construction of the Tesco Superstore and associated car park;

John Grimes Partnership undertook the quantitative risk assessment and validation reports for the site; and

These reports were used to discharge associated contaminated land planning conditions for the Tesco Superstore. P2005/0756 Approval of details under condition 28 (contamination) of previous planning consent P2003/0825. Tesco Superstore.

John Grimes Partnership was contacted and the Quantitative Risk Assessment was made available to us; However, the Validation Report was not. This Quantitative Risk Assessment contained borehole and trial pit logs from the Structural Soils Limited site investigation, undertaken for the site (summarised in Section 2.6). Stantec Hydrock can use the above the information to give an indication of ground conditions beneath the site; however, no reliance can be placed upon this information and site investigation will have to be undertaken to confirm the levels of contamination beneath the site.

4 Preliminary Ground Model

The preliminary ground model is based on the information on the ground conditions presented in Section 2 and integrates site-specific data (where available) with regional geological desk-based information.

Table 4.1: Preliminary Ground Model

Strata	Expected Thickness (m)	Description	Comments
Artificial Ground/Topsoil			
Made Ground	N/A	Worked, infilled, disturbed and landscaped ground, likely ash, brick and stone fill in reference to local borehole logs.	It is indicated that Made Ground is expected to the west of the site, likely relayed to colliery spoil. Whilst not mapped as being present on site, there is a chance of Made Ground being present due to recent building activities related to the construction of the McDonald's
Superficial Deposits			
Alluvium	N/A to 2.0	Clay, silt, sand and gravel	Alluvium is present in the majority of the new alignment area, with small outcrops of Glaciofluvial deposits to the northern edge
Glaciofluvial Deposits	1.0 to 3.0	Sand and gravel	
Solid Geology			
Brithdir Member Mudstone	3.0 to unknown	Westphalian in age,	A bedrock fault runs through the southern section of the proposed pipeline, with Brithdir Member Mudstone underlying the majority of the alignment's northern section, with Hughes Member present at the Southern section.
Hughes Member Sandstone	3.0 to unknown	Westphalian in age,	

Two coal seams are mapped to the south of the site, the Glyngwilym Coal Seam is mapped within the Brithdir Member. The Hughes Coal Seam is mapped on the boundary between the Brithdir and Hughes Members. The Glyngwilym Coal Seam is approximately 0.45m thick and the Hughes Coal Seam is approximately 0.50m thick. Occasionally, the Hughes Coal Seam is shown to split into two seams, both approximately 0.5m thick, with a 2m parting between each seam.

Previous report have recorded shallow groundwater of between 1.0m and 4.0m bgl, likely present within the Glaciofluvial Deposits. BGS SuDs indicates there is a very high likelihood of groundwater being present less than 3.0m bgl.

5 Ground hazards

5.1 Preliminary geotechnical hazard identification

Potential geotechnical hazards have been assessed in accordance with the general requirements of ICE/DETR Document 'Managing Geotechnical Risk' and the HE documents CS 641 and CD 622. Table 5.1 sets out the identified geotechnical risks and hazards which are associated with the site.

Table 5.1: Preliminary geotechnical hazard identification

Hazard	Hazard Plausible	Hazard Unlikely	Comment
Uncontrolled Made Ground (variable strength and compressibility).	X		Made Ground is likely present on site.
Soft / loose compressible ground (low strength and high settlement potential).	X		Alluvium could be found on site and if it is could be moderate volume change potential.
Shrink swell of the clay fraction of soils under the influence of vegetation.	X		If Alluvium or Glaciofluvial Deposits are found on site, they are likely to contain clay that have a medium to high volume change potential.
Variable lateral and vertical changes in ground conditions.	X		Ground thickness changes were recorded in surrounding developments.
Attack of buried concrete by aggressive ground conditions	X		Coal mining activity in the area could present sulfates in the Made Ground
Adverse chemical ground conditions, (e.g. expansive slag).	X		Prior to the Tesco development
Obstructions.	X		Potential for obstructions from historical buildings.
Existing below ground structures to remain (on or off-site tunnels, foundations, basements, and adjacent sub-structures).	X		
Shallow groundwater.	X		Shallow groundwater is expected to be on site.
Changing groundwater conditions.		X	The area will only be affected by seasonal fluctuations.
Risk from erosion.		X	Due to the elevation of the site relative to the River Tawe, erosion is not considered a risk
Risk from flooding.	X		There is potential of groundwater flooding on site
Running sands and / or loose Made Ground, leading to difficulty with excavation and collapse of side walls.	X		The pipeline is likely to be constructed using a trench, making potential instability of side walls a risk.
Slope stability issues – general slopes.		X	There are no significant slopes on site.
Slope stability issues – retaining walls.	X		A reinforced soil wall is present to the northwest of the Tesco development, adjacent to the proposed site.

Hazard	Hazard Plausible	Hazard Unlikely	Comment
Earthworks – settlement (due to placement of fill on soft / loose ground).		X	Small amount of fill will be placed, settlement is unlikely.
Earthworks – poor bearing capacity of new fill.		X	New fill is unlikely to be required
Earthworks – unsuitability of site won material to be reused as fill.	X		Made Ground/ Alluvium/ Glaciofluvial deposits may be unsuitable to be used as fill, earthworks testing should be undertake to confirm suitability
Mining.	X		Coal seams are present just outside of the site boundary. Shallow worked coal seams are unlikely to be present or pose a risk. The adits are positioned to the northeast

6 Initial Conceptual Site Model and Preliminary Risk Assessment

6.1 Introduction

The initial Conceptual Site Model (CSM) and Preliminary Risk Assessment incorporates evidence from the site walkover, the Desk Study, and previous investigations carried out at the site. The formulation of an initial CSM is a key component of the LCRM methodology for assessing geoenvironmental risk, and incorporates the Preliminary Ground Model of the site physical conditions (Section 4) and the identification of potential contaminant linkages.

The available information has used to identify geo-environmental hazards and to establish potential contaminant linkages based on the source-pathway-receptor (S-P-R) approach. A viable contaminant linkage requires all the components of an S-P-R to be present. If only one or two are present, there is no linkage and no further assessment is required.

Health and safety risks to site development contractors and maintenance workers have not been assessed as part of this study and will need to be considered separately.

6.2 Potential contaminants

For the purpose of this assessment the potential contaminants have been separated according to whether they are likely to have originated from an on-site or off-site source.

6.2.1 Potential on-site sources of contamination

- Made Ground, associated with current and historical coal mining activities on site and old site buildings, including elevated concentrations of metals, metalloids, asbestos fibres, asbestos containing materials, polycyclic aromatic hydrocarbons (PAHs) and petroleum hydrocarbons (S1).
- Made Ground, associated with the construction of the Tesco car park (possible contaminated fill); contaminants could include metals, metalloids, asbestos fibres, asbestos containing materials, polycyclic aromatic hydrocarbons (PAHs) and petroleum hydrocarbons (S2)

6.3 Potential receptors

The following potential receptors in relation to the proposed land use have been identified.

- Development end use (utilities) (R1).
- Surface water: River Tawe 35m northwest of site. (R4).

6.4 Potential pathways

The following potential pathways have been identified.

- Ingestion, skin contact, inhalation of dust and outdoor air by people (P1).

- Migration of contaminant via leachate migration through the unsaturated zone in the Made Ground, Alluvium and/or Glaciofluvial Deposits (P5).
- Surface water via base flow from groundwater (P6).

Health and safety risks to site development contractors and maintenance workers have not been assessed as part of this study and will need to be considered separately.

The above sources, pathways and receptors have been considered as part of the Preliminary Risk Assessment in accordance with LCRM (2019), are considered to be plausible in the context of this site and have been carried forward for investigation and assessment. An assessment of the Source – Pathway – Receptor linkages is presented in Table 6.2.

6.5 Potential implications of climate change

Climate change has the potential to change the risk profile for conceptual site models and associated contaminant linkages. The impact of climate change on the CSM is site-specific, and a qualitative assessment of the potential impact of climate change on the CSM for this site is summarised below. The assessment has primarily utilised the guidance in Environment Agency (2010) and SoBRA (2022) which set out the UK context to climate change and land contamination. Both guidance documents advocate a “what if” scenario approach in the context of changes in ambient temperatures, an increase in the frequency of extreme rainfall/storm events and heatwaves/droughts, and long-term changes in groundwater and sea levels.

Those “what if” scenarios that are relevant to this CSM are:

- Increased long-term rainfall leading to increased infiltration and seasonally higher groundwater and water levels in surface waters.
- Rising sea-level leading to increased coastal erosion and/or coastal flooding.
- Rising sea-level leading to rise in groundwater levels and/or saline intrusion.
- Increased frequency and/or magnitude of extreme rainfall events leading to short-term surface flooding, surface water run-off, groundwater flooding, and/or land-based erosion.
- Increased frequency and/or magnitude of storm events leading to short-term drops in barometric pressure and/or high winds.
- Occurrence of extreme cold and hot weather events leading to changes in ground conditions such as soil temperature, evapo(trans)piration, and soil moisture (for example freeze-thaw effects and desiccation), decreased infiltration and fall in groundwater and surface water levels.
- Long-term decrease in rainfall leading to lower infiltration and fall in groundwater and surface water levels.

In considering the potential impact of climate change, the following factors have been considered:

- The design life of the proposed development is 80 years.
- The elevation of the site is 5m higher than the river Tawe,.
- The current depth to groundwater is 1.0 to 4.0m bgl.
- The superficial deposits and underlying geology at the site are unlikely to be physically adversely affected by, however the risk of subsidence is present in relation to historical mining activity.

- Potential changes in soil moisture levels and soil temperature are not likely to have a significant impact on contaminant fate and transport (mobility and degradation) noting that a rise in soil temperature will likely increase the volatility and solubility of contaminants and increase the microbial degradation of contaminants. A reduction in soil moisture may decrease microbial degradation and increase vapour and gas diffusion.

For further details on the considerations made, refer to Table E.1 in Appendix E.

6.6 Summary of potential contaminant linkages

The above sources, pathways and receptors have been considered as part of the Preliminary Risk Assessment in accordance with Stage 1 of LCRM (2023).

Table 6.2 lists the plausible contaminant linkages which have been identified. These are considered as potentially unacceptable risks in line with guidelines published in LCRM (2023) and additional risk assessment is required.

S-P-R linkages have been assessed in general accordance with guidance in CIRIA Report C552 (Rudland et al 2001) as modified to reflect changes made in Table A4.5 of NHBC/EA R&D66 (2008), to remove the ambiguous term “low/moderate risk”, and to adopt “Extremely low risk” for the lowest risk category (see Table 6.1).

Table 6.1: Consequences versus probability assessment

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High likelihood**	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Low risk	Very low risk
	Low likelihood	Moderate risk	Low risk	Low risk	Very low risk
	Unlikely	Low risk	Very low risk	Very low risk	Extremely low risk

Table 6.2: Initial CSM

Source	Pathway	Receptor	Probability	Consequence	Risk Level	Comment
Potential Made Ground along the new pipeline, associated with historical coal mining activities and possible contaminated fill associated with the construction of the Tesco car park. (metals, metalloids, asbestos fibres, asbestos containing materials, PAH and petroleum hydrocarbons).	Leaching through unsaturated zone.	Groundwater.	Low likelihood	Medium	Low	There is potential Made Ground along the pipeline. Although the planning condition relating to contaminated land for the Tesco development has been discharged by the Local Authority, Stantec Hydrock have not had sight of the verification plan or any of the quantitative risk assessments undertaken by John Grimes Partnership and the residual contamination levels beneath the site are unknown. It is anticipated that removal of material from beneath the road will occur to facilitate the construction of the foul sewer connection, with water pipelines typically being housed in clean imported shingle, which will mitigate the risk from any remaining contaminated soils.
	Surface run-off.	Aquatic ecosystems. Surface water.	Low likelihood	Medium	Low	

7 Preliminary development constraints

Based on the Desk Study information presented above, preliminary development constraints with regards to the development of the site, are presented in Table 7.1.

It should be noted that these recommendations are based on the limited data available from the Desk Study and Stantec's experience. All preliminary development constraint comments are subject to review and change in the light of the site investigation, assessment and design.

Table 7.1: Preliminary development constraints / recommendations

Element	Potential constraint and recommendation
Site Preparation, Earthworks and Groundworks	There is a risk to site works due to potentially variable Made Ground, compressible Alluvium, and shallow groundwater, leading to potential instability when digging the trench. Also due to the history of the adjacent area, there is a risk of encountering below ground obstructions. It is recommended that an intrusive ground investigation is undertaken to confirm the ground profile, determine any potential obstructions on site, and determine any potential aggressive ground associated with the Made Ground.
Installation of Pipeline	As mentioned above, potential trench instability due to saturated soils is a hazard, therefore temporary trench support will be necessary.

8 Conclusions and recommendations

8.1 Geotechnical conclusions

The following plausible geotechnical risks are identified:

- Variable Made Ground and Glaciofluvial Deposits - settlement or differential settlement of soil beneath the proposed alignment.
- Low strength, compressible Alluvium – settlement of surrounding material causing joint stress on the pipeline.
- Shrinkage/swelling of clay – settlement/heave of pipeline-bearing strata, causing joint stress.
- Variable lateral and vertical changes in ground conditions; potential for unforeseen ground conditions and the risks associated with limited data.
- Attack of pipeline material by aggressive ground conditions – the development site may contain Made Ground and potentially sulfate bearing soils.
- Adverse chemical ground conditions, (e.g. expansive slag).
- Below ground obstructions relating to historical buildings and mine adits and the risk of instability of excavations with the impact on construction staff, vehicles and plant operators.
- Loose Made Ground and shallow groundwater, leading to difficulty with excavation due to trench instability.
- Instability of slopes and impact on infrastructure and construction plant.
- Existing retaining features supporting car park potentially unsuitable to support additional loads.
- Earthworks – unsuitability of site-won material to be reused as fill.

These plausible risks require further investigation and assessment.

8.2 Geoenvironmental conclusions

Based on historical and current land uses:

- It is considered that it is unlikely that the site would be classified as Contaminated Land under Part 2A of the EPA 1990.
- The overall risk from land contamination at the site is considered to be low for the current development, as it is covered by hardstanding limiting the possibility of direct contact with the soils, as well as the risk of significant rainwater infiltration leading to leaching.
- The overall risk for the addition of the pipeline is low, but this would need to be confirmed by appropriate intrusive investigation, testing and assessment of the results of the investigation.

The possible contaminant linkages (for risk levels of moderate or greater) on an unremediated redeveloped site, as determined by the desk study and walk-over of adjacent site, are summarised in the table below:

Table 8.1: Possible Contaminant Linkages (for Risk Levels of Moderate or Greater)

Source(s)	Receptor(s)

Metals, metalloids, PAH, petroleum hydrocarbons and asbestos in Made Ground below the site.	Utilities

8.3 Recommendations

Using the ground investigation works undertaken to date, the following information will need to be determined to inform future pipeline design:

- Depth and distribution of potential Made Ground across the alignment;
- Soil strength/ profile beneath the alignment;
- Depth/level of groundwater beneath the alignment;
- Assess trench stability;
- Allow sampling for chemical and geotechnical laboratory testing;
- Allow soil classification to allow geotechnical characterisation and determine suitability for reuse of soils within earthworks;
- Obtain information in terms of Aggressive Chemical Environment for Concrete Class (ACEC Class).

Following investigation, assessment will be required to:

- Update the Ground Model;
- Update the Geotechnical Risk Register;
- Provide Geotechnical Design recommendations;
- Update the Conceptual Site Model (CSM), including identification of plausible pollution linkages;
- Undertake generic quantitative risk assessment of potential chemical contaminants to establish ‘suitability for use’ under the current planning regime;
- Discuss potential environmental liabilities associated with land contamination (soil, water and gas.

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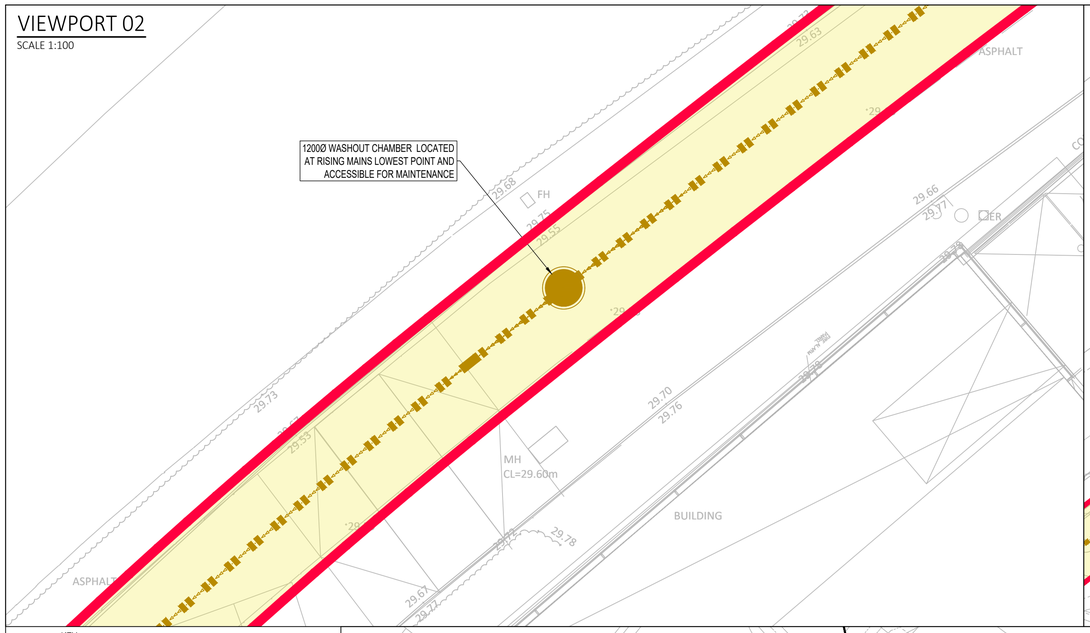
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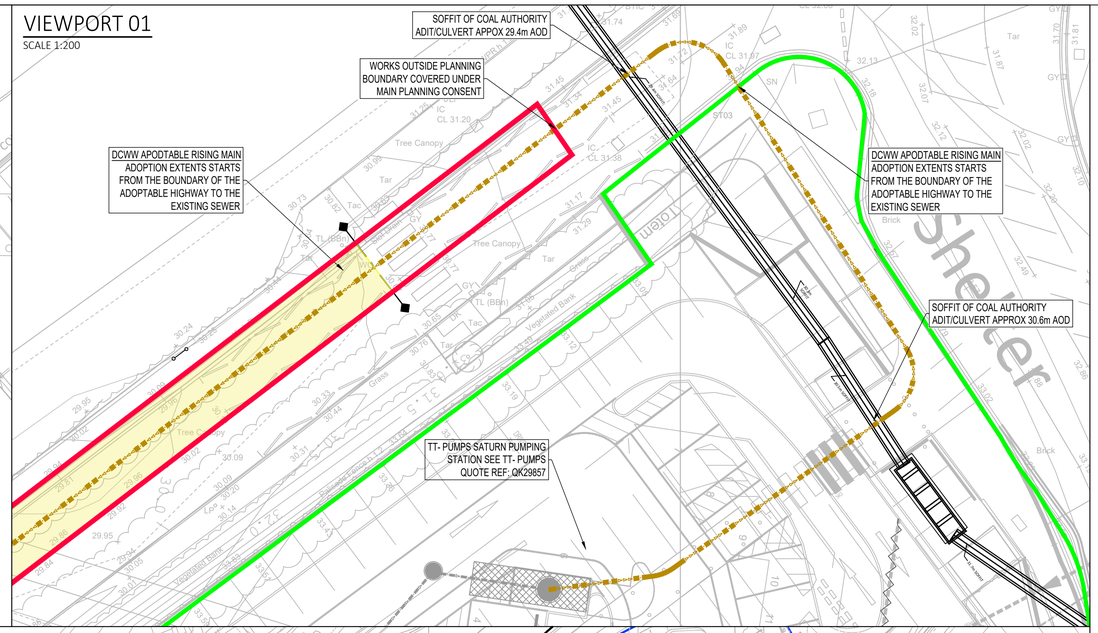
Appendices

Appendix A Drawings

VIEWPORT 02
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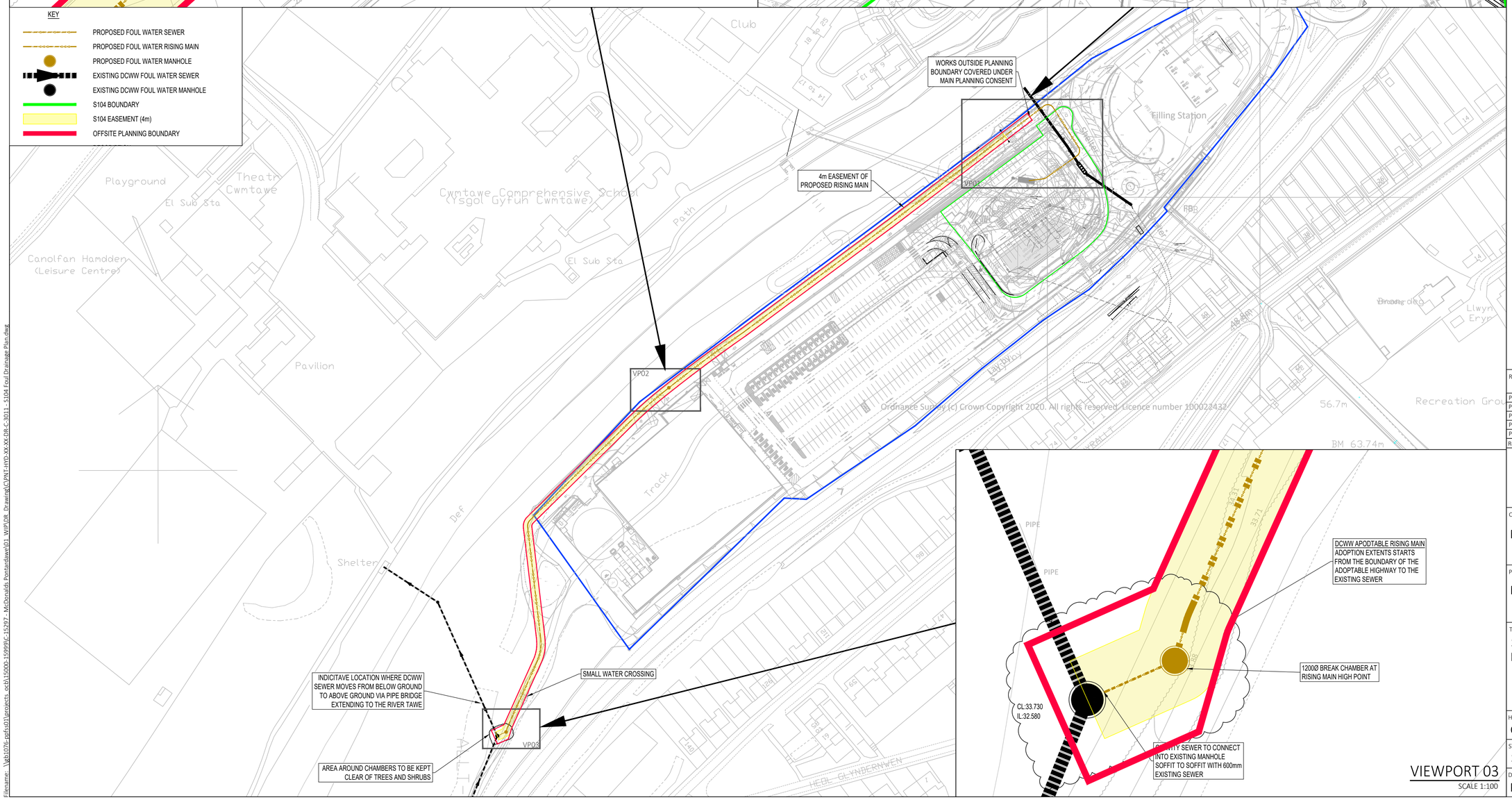


VIEWPORT 01
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KEY

- PROPOSED FOUL WATER SEWER
- PROPOSED FOUL WATER RISING MAIN
- PROPOSED FOUL WATER MANHOLE
- EXISTING DCWW FOUL WATER SEWER
- EXISTING DCWW FOUL WATER MANHOLE
- S104 BOUNDARY
- S104 EASEMENT (4m)
- OFFSITE PLANNING BOUNDARY



VIEWPORT 03
SCALE 1:100

S104 DRAINAGE NOTES:

1. DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT PROJECT DRAWINGS
2. THIS PROJECT HAS BEEN DESIGNED TO COMPLY WITH SEWERS FOR ADOPTION 7th EDITION STANDARDS.THE CONTRACTOR SHALL ENSURE THAT AN UP TO DATE COPY OF SEWERS FOR ADOPTION 7th EDITION TOGETHER WITH ALL ITS CURRENT DCWW ADDENDUM DOCUMENTS ARE AVAILABLE ON SITE FOR COMPLIANCE.
3. WHEN SEWERS ARE LOCATED WITHIN A PUBLIC HIGHWAY, THE OUTSIDE OF THE SEWER SHOULD BE IN THE VEHICLE CARRIAGEWAY (NOT FOOTPATH) AND BE AT LEAST 1m AWAY FROM THE KERBLINE. THE OUTSIDE OF MANHOLE CONSTRUCTIONS SHOULD BE AT LEAST 0.5m AWAY FROM THE KERBLINE.
4. THE DEVELOPER MUST SELF-VET AND CERTIFY THAT THE DESIGN CRITERIA, MATERIAL STANDARDS AND WORKMANSHIP SPECIFICATIONS FOR THE PROPOSED POTENTIALLY ADOPTABLE SEWERS ARE IN ACCORDANCE WITH THOSE SET OUT IN "SEWERS FOR ADOPTION - A DESIGN AND CONSTRUCTION GUIDE FOR DEVELOPERS" 7th EDITION AND THE REQUIREMENTS OF THE STATUTORY UNDERTAKER DCWW AND CONFIRM THE SAME IN WRITING TO THE ADOPTION AUTHORITY.
5. DEPTH AND LOCATION OF FOUL DRAINAGE CONNECTION POINT TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF WORKS
6. FOUL DRAINAGE OUTLETS FROM DWELLINGS TO BE CONFIRMED BY ARCHITECT PRIOR TO COMMENCEMENT OF WORKS
7. SURFACE WATER RWP LOCATIONS TO BE CONFIRMED BY ARCHITECT PRIOR TO COMMENCEMENT OF WORKS
8. ALL PRIVATE SWS DRAINS TO BE Ø150mm HDPE PIPEWORK LAID AT A MINIMUM FALL OF 1 in 100 UNLESS STATED.
9. ALL LINEAR DRAIN OUTLETS TO BE Ø100mm AT MINIMUM FALL OF 1 in 100 TO MAXIMUM FALL OF 1 in 10 UNLESS STATED.
10. ALL PRIVATE FWS DRAINS TO BE Ø100mm uPVC PIPEWORK LAID AT A MINIMUM SLOPE OF 1 in 40 UPSTREAM OF FIRST W.C. CONNECTION ON A RUN. AFTER CONNECTION OF 1st W.C. TO BE LAID AT MINIMUM SLOPE OF 1 in 80 UNLESS STATED.
11. PIPEWORK TO HAVE BED AND SURROUND AS FOLLOWS:
    - UNDERNEATH PRIVATE DRIVEWAYS, PARKING AREAS WITH RESTRICTIONS TO PREVENT ACCESS BY VEHICLES IN EXCESS OF 7.5T AND PATHWAYS ADJACENT TO VEHICLE ACCESS TO BE;
      - COVER TO TOP OF PIPE > 0.9m - TYPE S or TYPE T (PLASTIC)
      - COVER TO TOP OF PIPE < 0.9m - TYPE Z (CONCRETE SURROUND)
    - UNDERNEATH DOMESTIC GARDENS AND PATHWAYS WITH NO POSSIBILITY OF VEHICLE ACCESS TO BE;
      - COVER TO TOP OF PIPE > 0.35m - TYPE S or TYPE T (PLASTIC)
      - COVER TO TOP OF PIPE < 0.35m - TYPE Z (CONCRETE SURROUND)
12. ALL SIDE CONNECTIONS IN MANHOLES/INSPECTION CHAMBERS TO BE MADE AT HALF PIPE LEVEL.
13. CONNECTIONS MADE USING PRE-FORMED JUNCTIONS ARE TO BE IN ACCORDANCE WITH FIGURE B.24 SEWERS FOR ADOPTION 7TH.
14. ADOPTED PIPES WHICH PASS BETWEEN OR CLOSE TO BUILDINGS ARE TO BE IN ACCORDANCE WITH FIGURES B.1 AND B.2 SEWERS FOR ADOPTION 7TH.
15. ALL 100mm DIAMETER PLASTIC PIPE SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 1404-1, BS EN 1852 AND BS EN 12666-1 AND BE KITE MARKED. THERMOPLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598-1 AND BS EN 13598-2 AND BE KITED MARKED.
16. ALL PIPES AND FITTINGS FOR DIAMETER OF 100/110mm TO BE EITHER:
    - FLOLINE EN1401 DRAINAGE SYSTEM
    - HEPWORTH PLASTIDRAIN SYSTEM
    - MARLEY SOLID WALL UNDERGROUND DRAINAGE PIPE SYSTEM
    - OSMADRAIN BUILDING DRAINAGE SYSTEM
    - POLYPIPE EN1401-1 STANDARD UNDERGROUND DRAIN SYSTEM
    - OR SIMILAR APPROVED BY RELEVANT AUTHORITY AND/OR HYDROCK
17. ALL PIPES AND FITTINGS FOR DIAMETERS OF 150mm - 300mm TO BE EITHER:
    - MARLEY TWINWALL SYSTEM
    - UPONOR ULTRA-RIB SYSTEM
    - WAVIN OSMA ULTRA-RIB SYSTEM
    - POLYPIPE CIVILS POLYSEWER TWINWALL SYSTEM
    - OR SIMILAR APPROVED BY RELEVANT AUTHORITY AND/OR HYDROCK
18. 3m MAXIMUM LENGTH PVC-U PIPES INSTALLED BY BPF/PPG ACCREDITED CONTRACTOR - COPY OF CERTIFICATE REQUIRED.
19. USE OF DIFFERENT PIPE SUPPLIER OR SPECIFICATION MUST BE APPROVED BY STATUTORY UNDERTAKER - IF IN DOUBT ASK.
20. ALL PIPEWORK MANUFACTURED IN UNPLASTICIZED POLYVINYL CHLORIDE (PVC-U). PVC-U DRAINAGE SYSTEM WITH FLEXIBLE JOINTS TO BS EN1401-1:1998, BS 4660 OR BS 5481. PVC-U PIPES INSTALLED BY BRITISH PLASTICS FEDERATION - PLASTIC PIPES GROUP - MANUFACTURER APPROVED INSTALLERS. PLEASE PROVIDE COPY OF CERTIFICATION TO HYDROCK PRIOR TO LAYING ANY PIPEWORK.
21. PROPOSED ADOPTABLE SEWERS ARE ONLY PERMITTED TO HAVE OTHER SEWER/GULLY CONNECTIONS AND OTHER SERVICES LAID AT AN ANGLE OF BETWEEN 45° AND 90° ACROSS THE LINE WITH A VERTICAL CLEARANCE IN EXCESS OF 300mm.

1:1000 @ A1
1:2000 @ A3
0 10 20 30 40 50 60 m

REVISIONS

Rev.	Revision Notes	Date	Drawn By	Checked | Approved
P05	Planning Boundary Added	05/08/25	IMH	IMH | RB
P04	Notes amended	08/07/25	IMH	IMH | RB
P03	Route amended	02/07/25	IMH	IMH | RB
P02	Updated following further Topo	08/01/25	IMH	CD| RB
P01	First Issue	21/11/23	HV	JH | RB

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t: +44(0)2920 023665
e: cardiff@hydrock.com

CLIENT
MCDONALDS RESTAURANTS LTD

PROJECT
MCDONALDS PONTARDAWE

TITLE
SECTION 104
FOUL DRAINAGE LAYOUT

HYDROCK PROJECT NO.	SCALE @ A1
C-15297	1:1_1000
STATUS DESCRIPTION: SUITABLE FOR REVIEW & COMMENT	STATUS: S3
DRAWING NO.: PNT-HYD-XX-XX-DR-C-3011	REVISION: P05

Filename: \\gb1076-gpfs01\projects oc\15000-15999\C-15297 - McDonalds Pontardawe\01 WIP\DR Drawing\C\PNT-HYD-XX-XX-DR-C-3011 - S104 Foul Drainage Plan.dwg

Appendix B Field reconnaissance photographs

Desk Study Photograph 1	
Date: 21/04/2020	
Direction Photograph Taken: Looking north.	
Description: Existing Tesco car park.	

Desk Study Photograph 2	
Date: 21/04/2020	
Direction Photograph Taken: Looking east.	
Description: Photo of overhead powerlines crossing the site.	

Desk Study Photograph 3	
Date: 21/04/2020	
Direction Photograph Taken: Looking east.	
Description: Slope up to A4067. View of footbridge crossing A4067.	

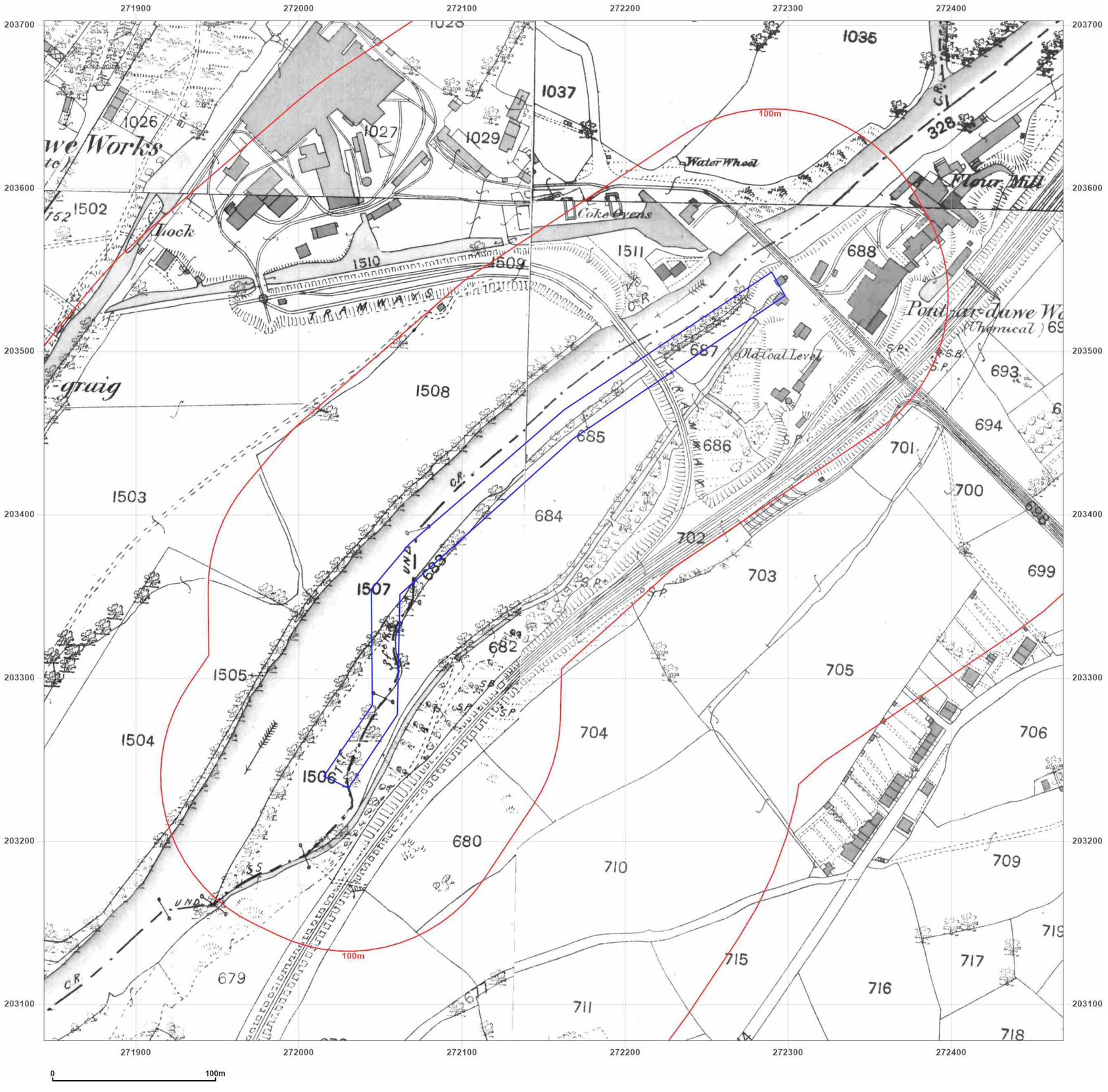
Desk Study Photograph 4	
Date: 21/04/2020	
Direction Photograph Taken: Looking north.	
Description: View of covers in the north of the site. Relating to onsite drainage?	

Desk Study Photograph 5	
Date: 21/04/2020	
Direction Photograph Taken: Looking north.	
Description: Photo of Tesco fuel station, north of the site.	

Desk Study Photograph 6	
Date: 21/04/2020	
Direction Photograph Taken: Looking southwest.	
Description: Reinforced soil slope, supporting the car park. In the right of the photo; access road for deliveries to Tesco.	

Desk Study Photograph 7	
Date: 21/04/2020	
Direction Photograph Taken: Looking northeast.	
Description: View of River Tawe, adjacent to the site.	

Appendix C Historical mapping



Groundsure INSIGHTS

Site Details:

333702162

Client Ref: EPL051081
Report Ref: HYD-CTJ-MM8-XOJ-V31_2500
Grid Ref: 272156, 203390

Map Name: County Series

Map date: **1877-1881**

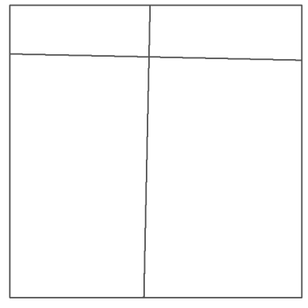
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Revised 1877
Edition N/A
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Levelled N/A

Surveyed 1878
Revised 1878
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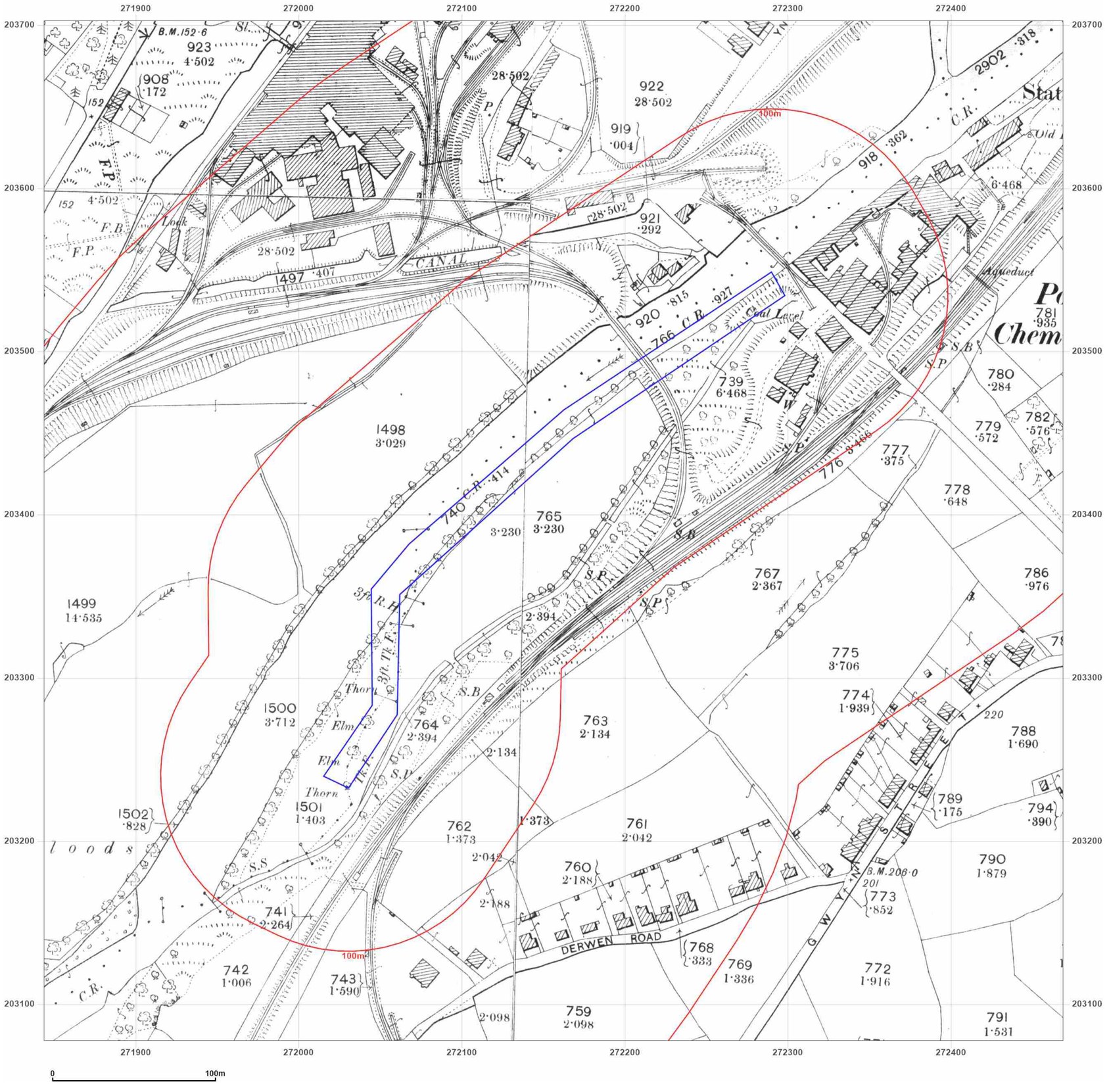
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Site Details:

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Report Ref: HYD-CTJ-MM8-XOJ-V31_2500
Grid Ref: 272156, 203390

Map Name: County Series

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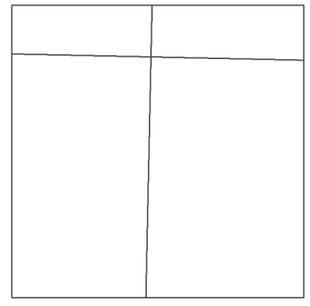
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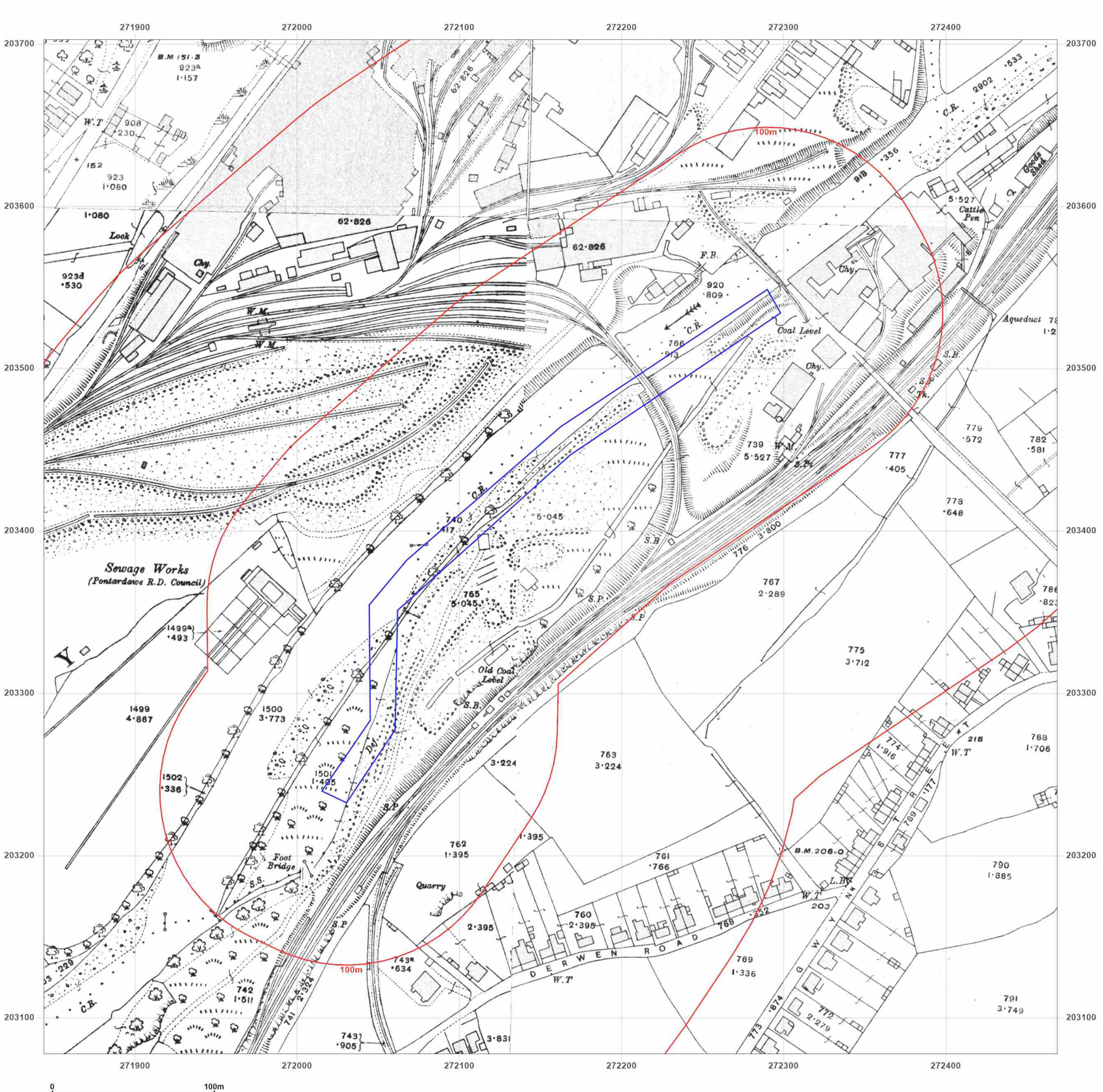
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Grid Ref: 272156, 203390

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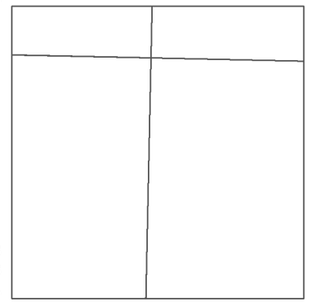
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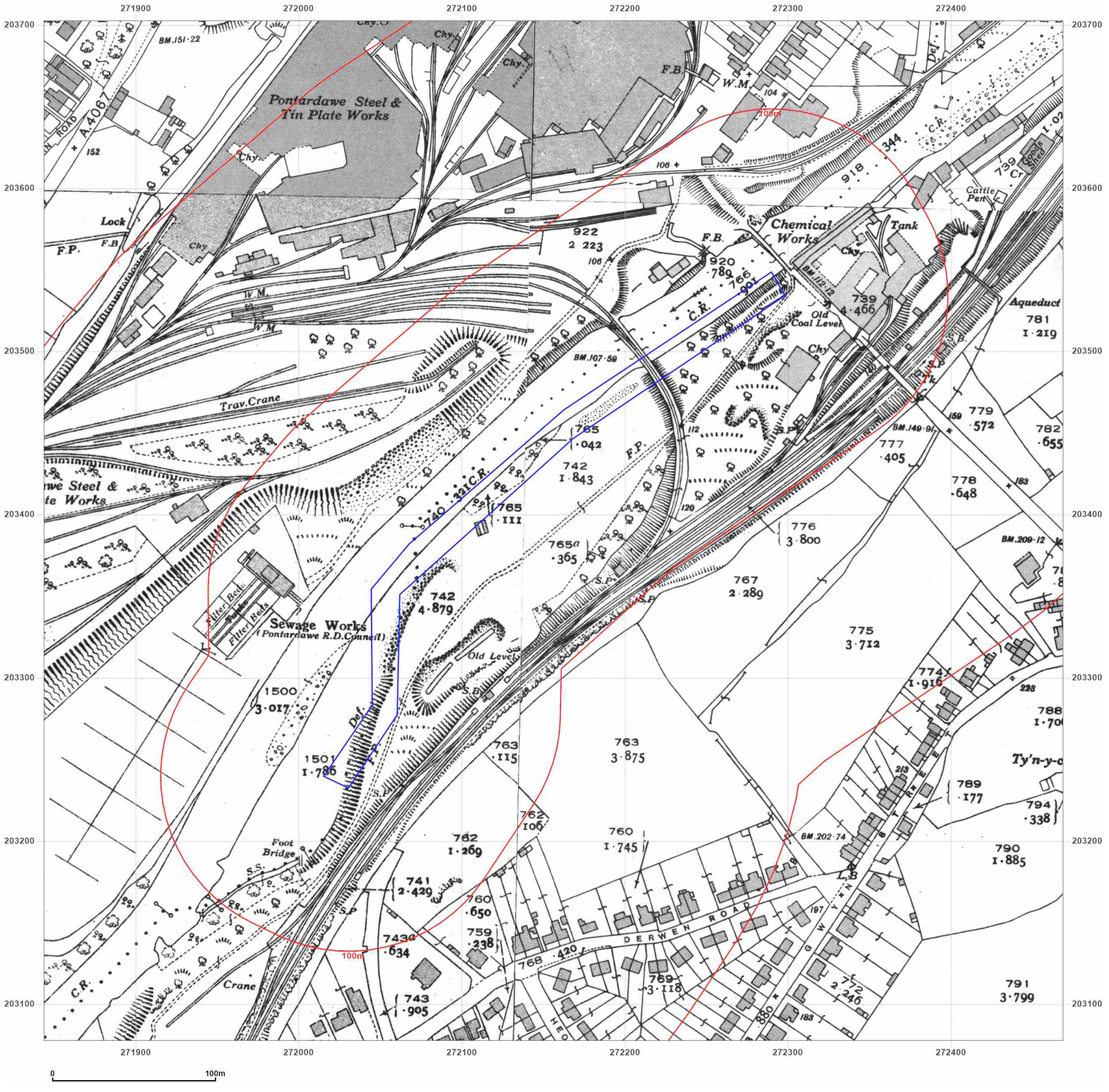
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Grid Ref: 272156, 203390

Map Name: County Series

Map date: **1941-1942**

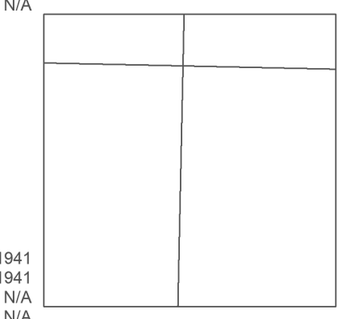
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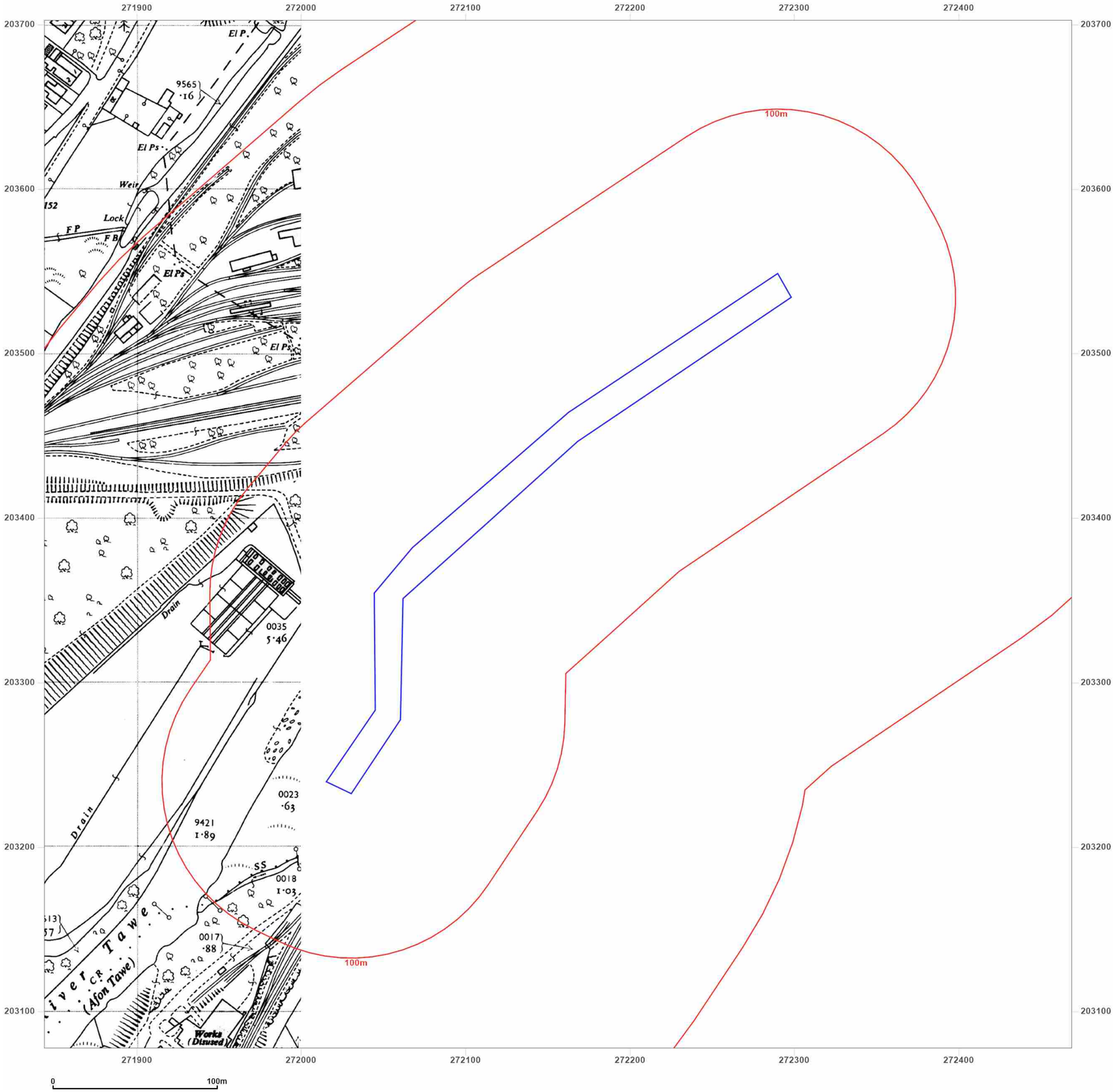
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Client Ref: EPL051081
Report Ref: HYD-CTJ-MM8-XOJ-V31_2500
Grid Ref: 272156, 203390

Map Name: National Grid

Map date: **1962**

Scale: 1:2,500

Printed at: 1:2,500

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Edition N/A
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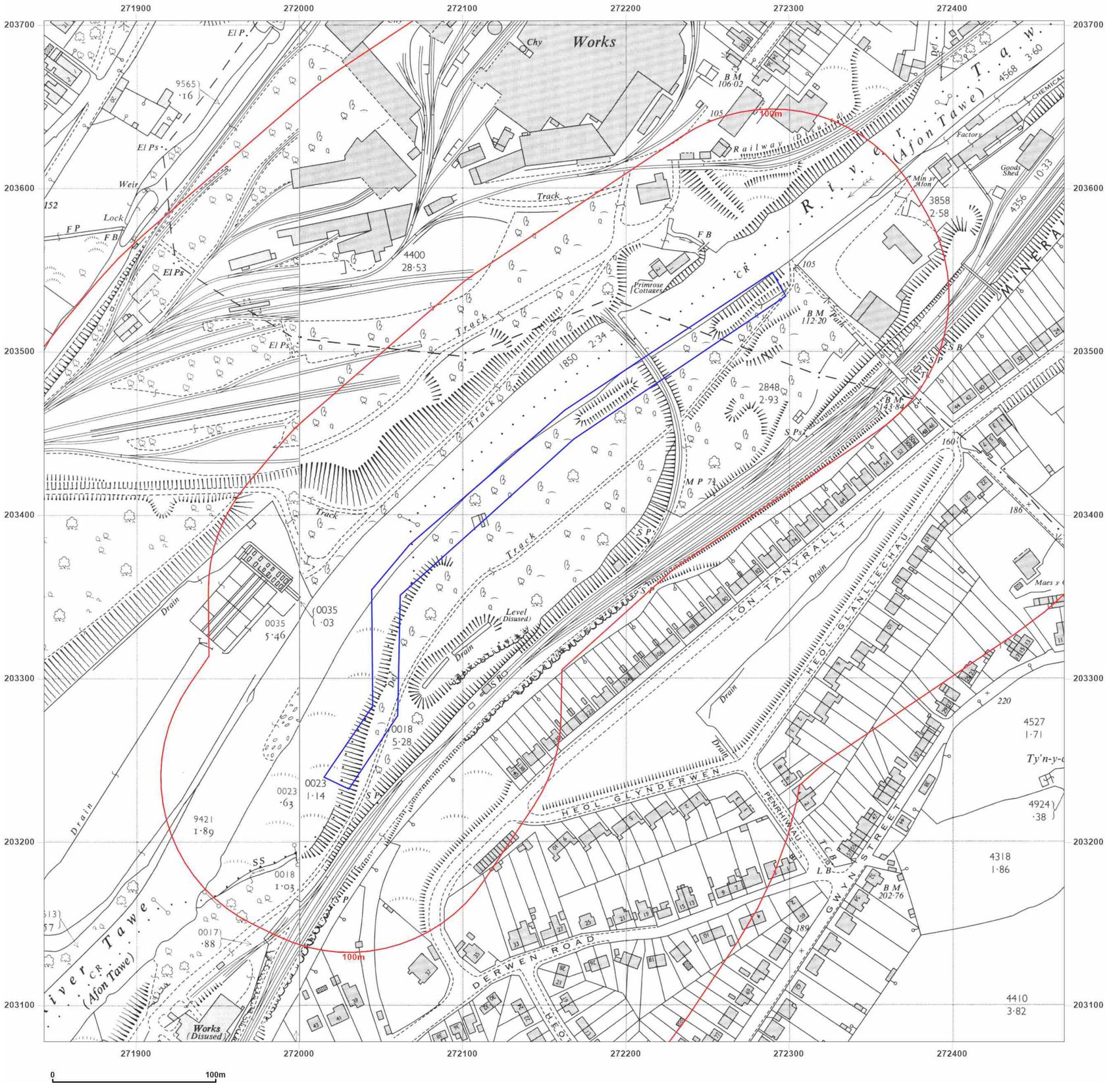
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Grid Ref: 272156, 203390

Map Name: National Grid

Map date: **1962-1964**

Scale: 1:2,500

Printed at: 1:2,500

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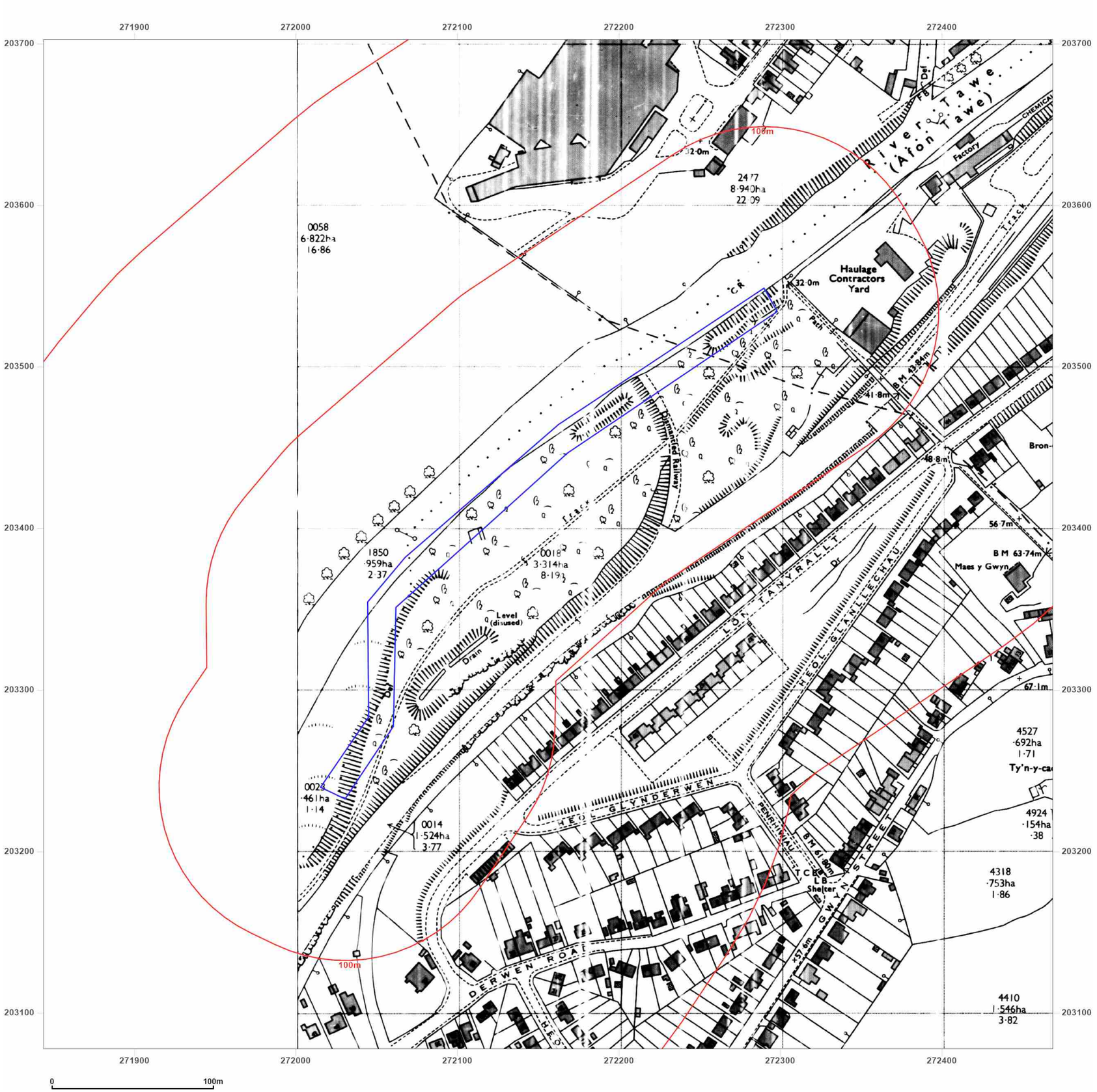
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Grid Ref: 272156, 203390

Map Name: National Grid

Map date: **1973**

Scale: 1:2,500

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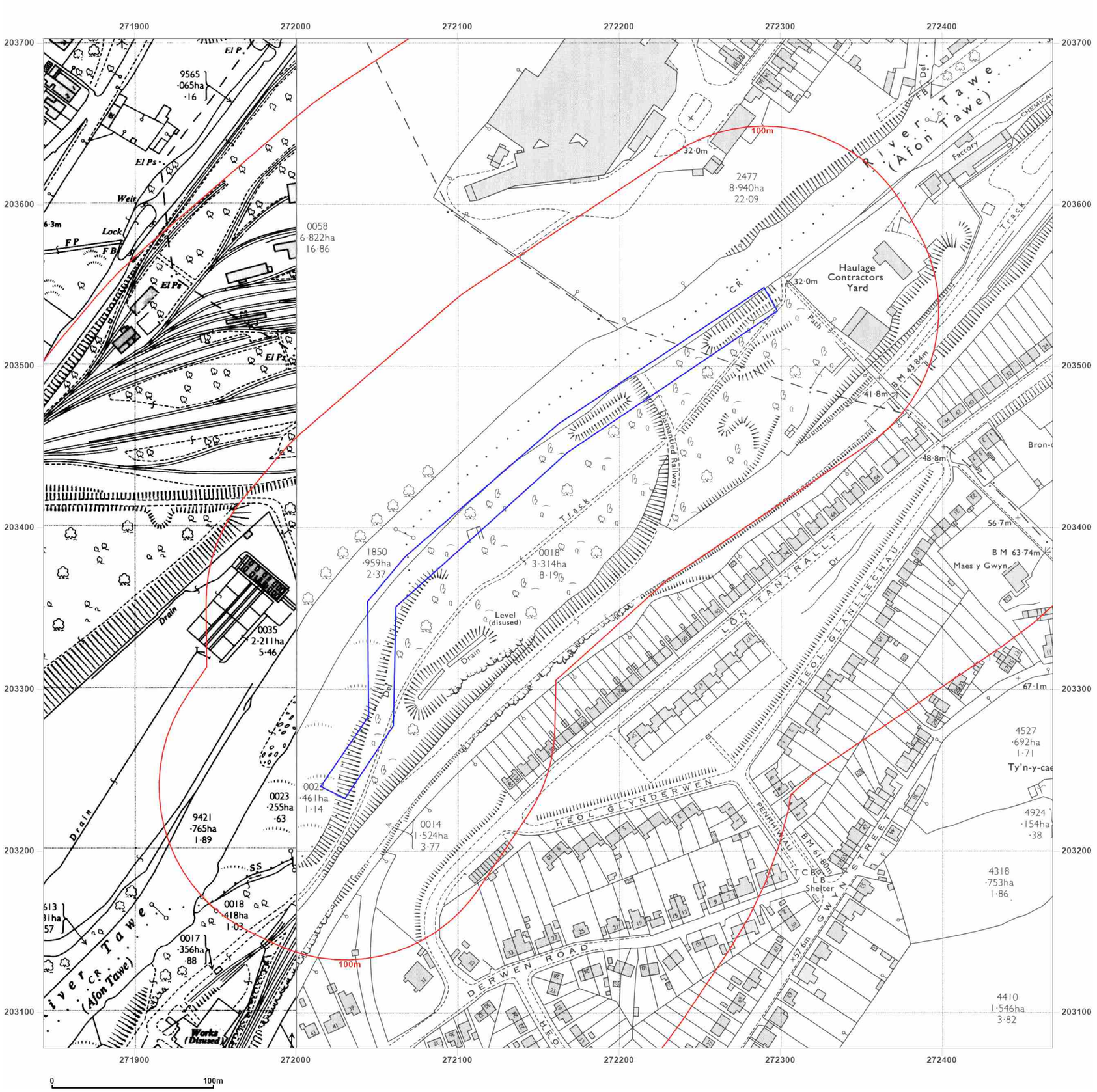
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Grid Ref: 272156, 203390

Map Name: National Grid

Map date: **1972-1977**

Scale: 1:2,500

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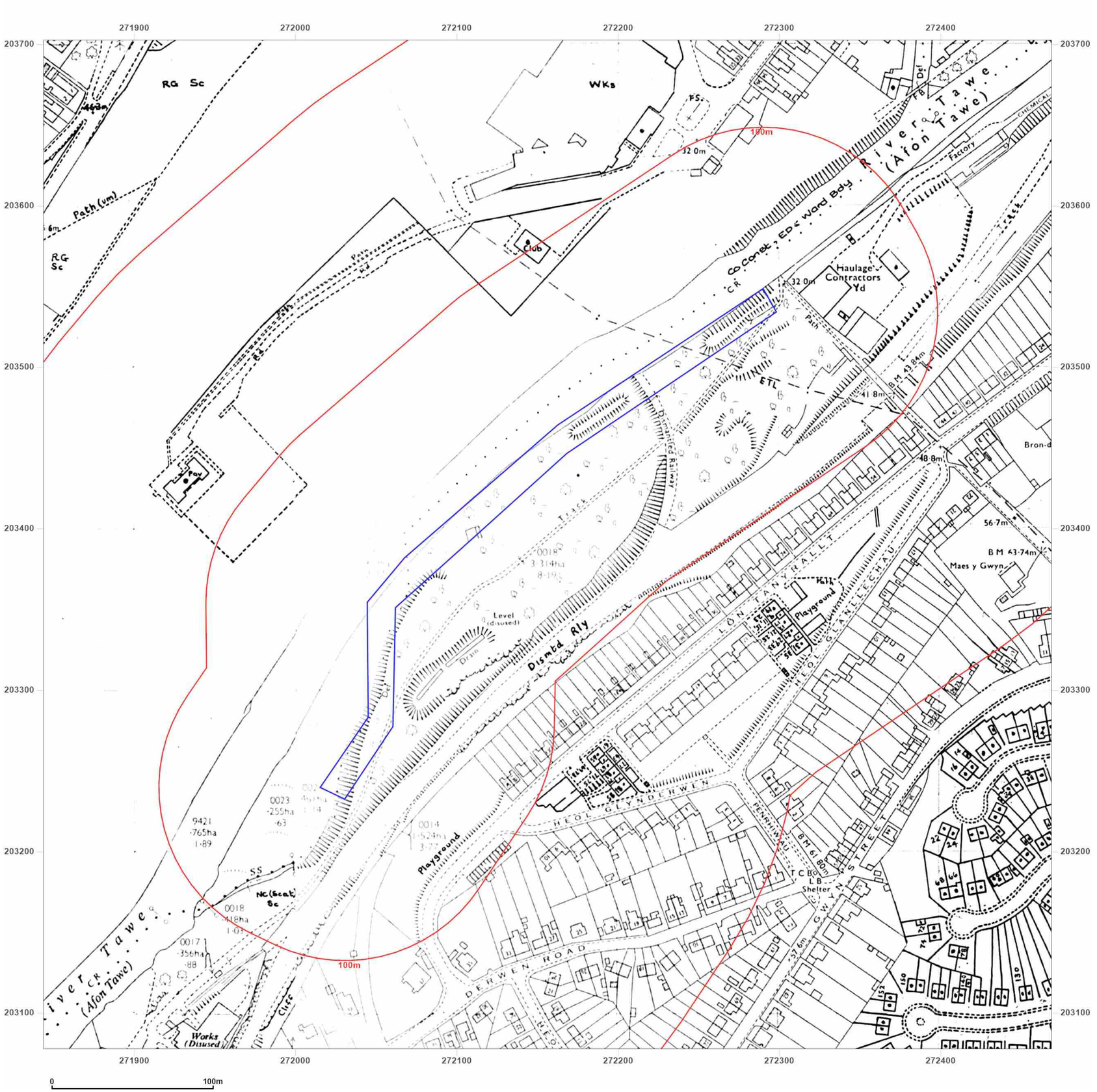
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Grid Ref: 272156, 203390

Map Name: National Grid

Map date: **1984**

Scale: 1:2,500

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Revised 1984	Revised N/A
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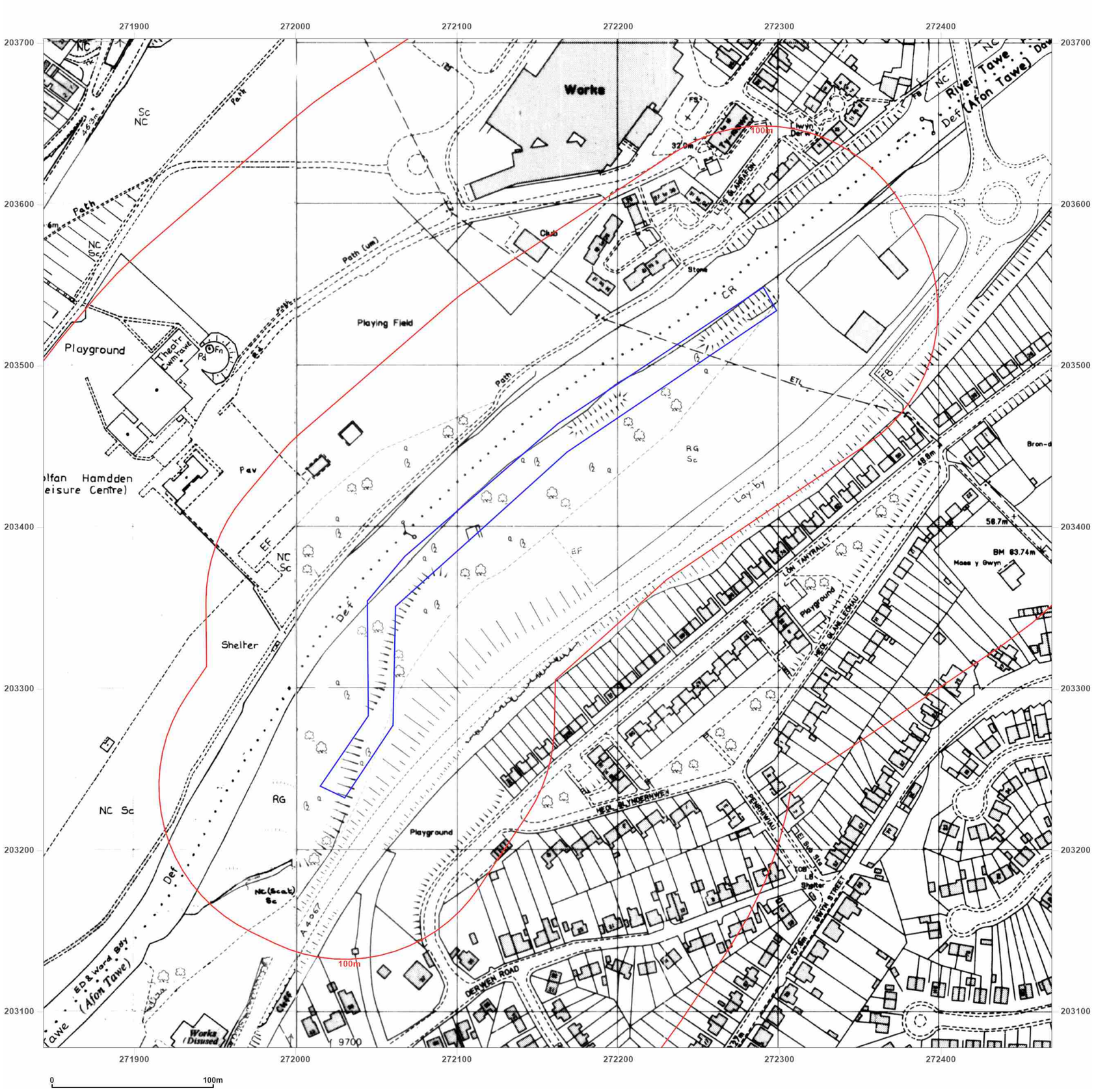
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Report Ref: HYD-CTJ-MM8-XOJ-V31_2500
Grid Ref: 272156, 203390

Map Name: National Grid

Map date: **1988-1989**

Scale: 1:2,500

Printed at: 1:2,500

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Revised 1989	Revised 1988
Edition N/A	Edition N/A
Copyright 1989	Copyright 1988
Levelled N/A	Levelled 1982

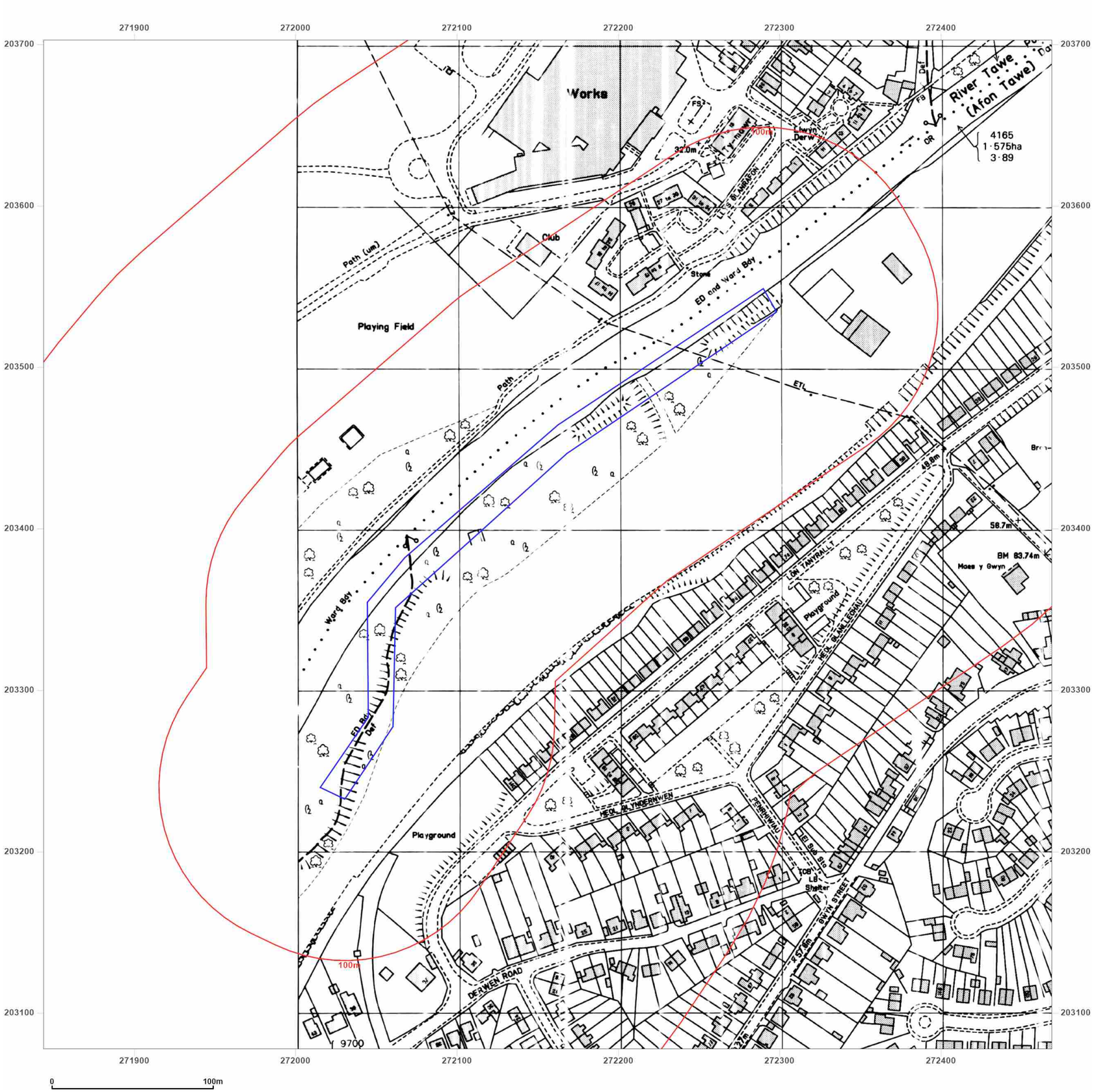
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Groundsure INSIGHTS

Site Details:

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Client Ref: EPL051081
Report Ref: HYD-CTJ-MM8-XOJ-V31_2500
Grid Ref: 272156, 203390

Map Name: National Grid

Map date: **1989**

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Edition N/A
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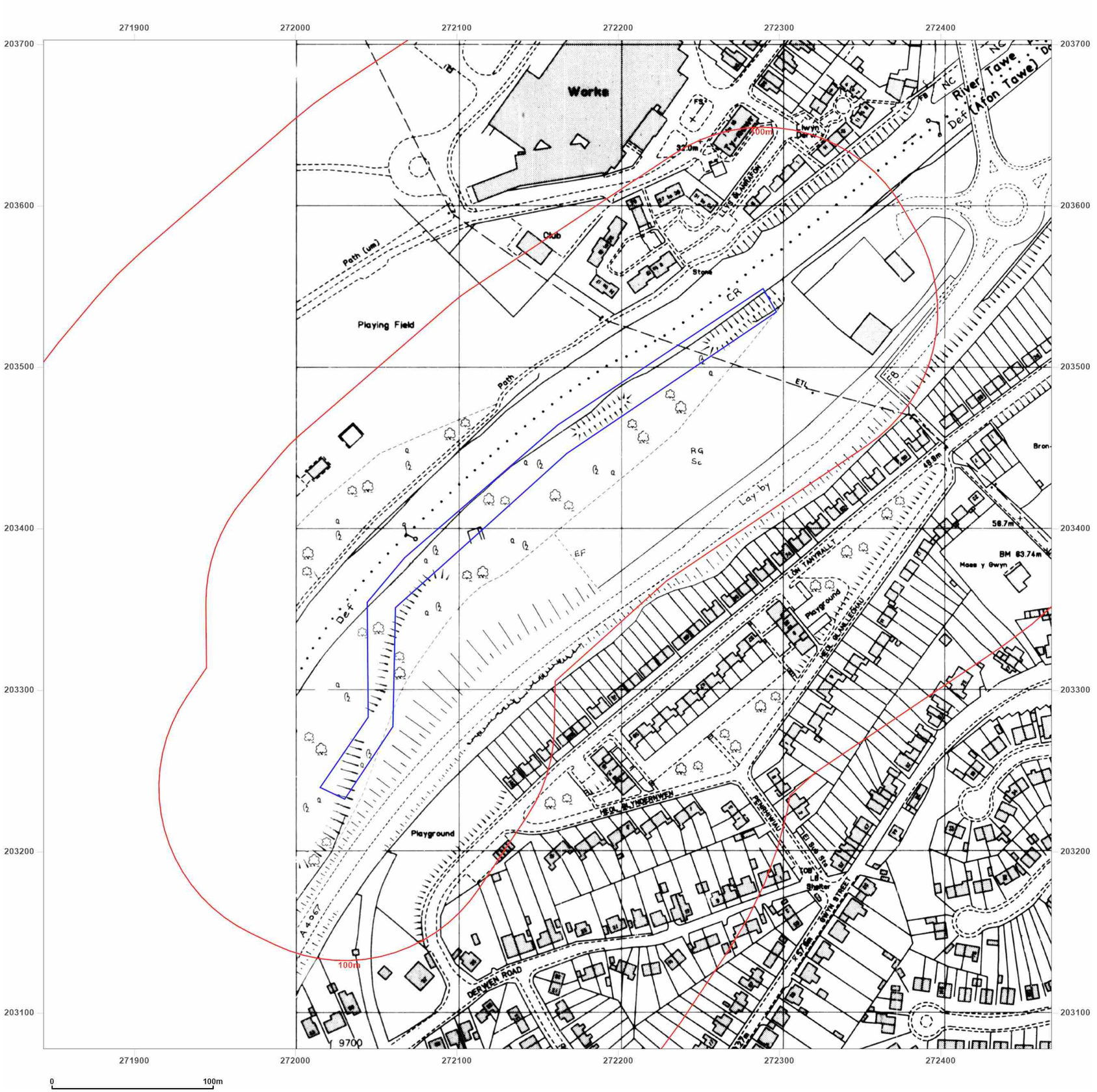
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Report Ref: HYD-CTJ-MM8-XOJ-V31_2500
Grid Ref: 272156, 203390

Map Name: National Grid

Map date: **1989**

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Edition N/A
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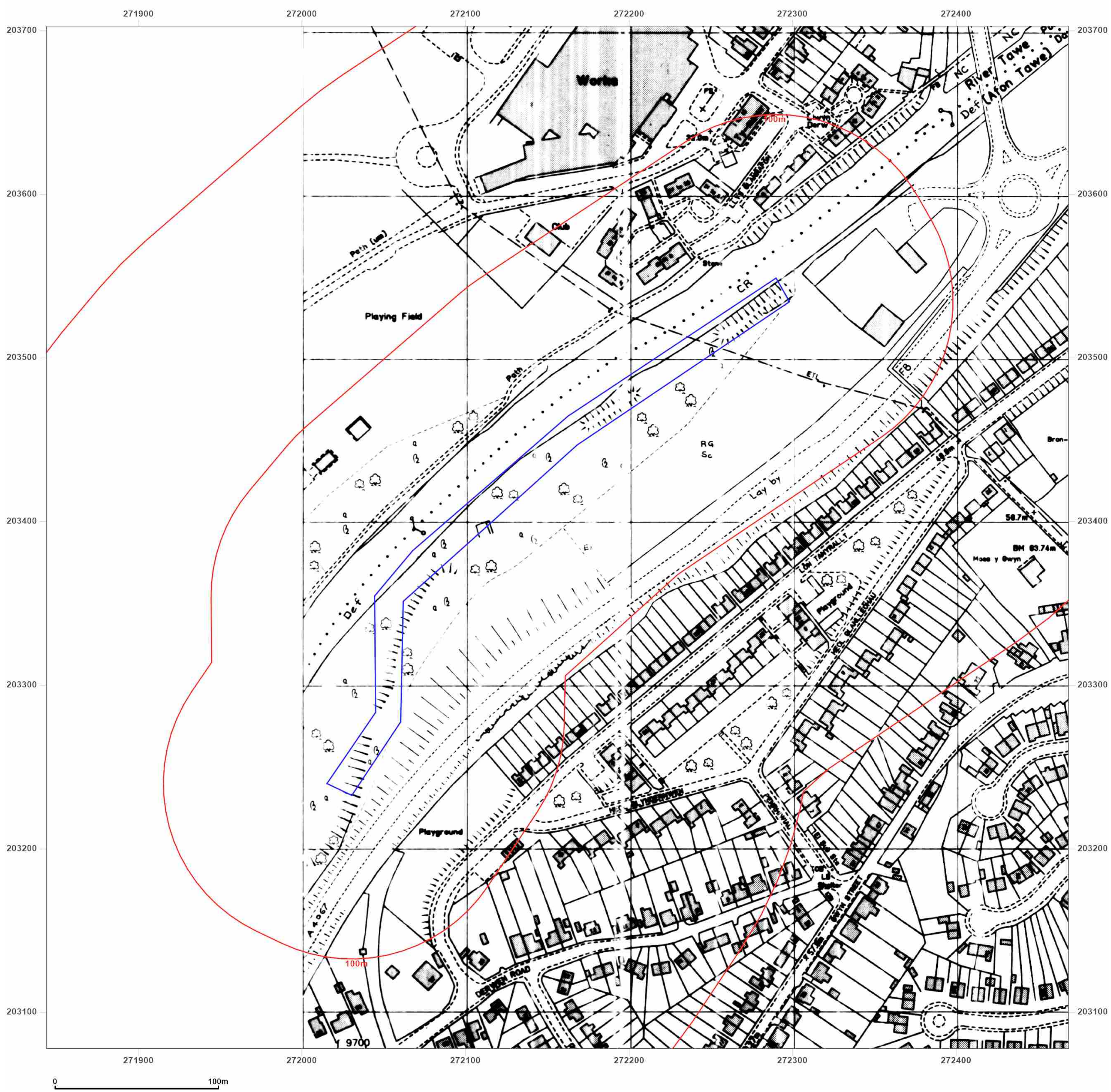
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Map date: **1990**

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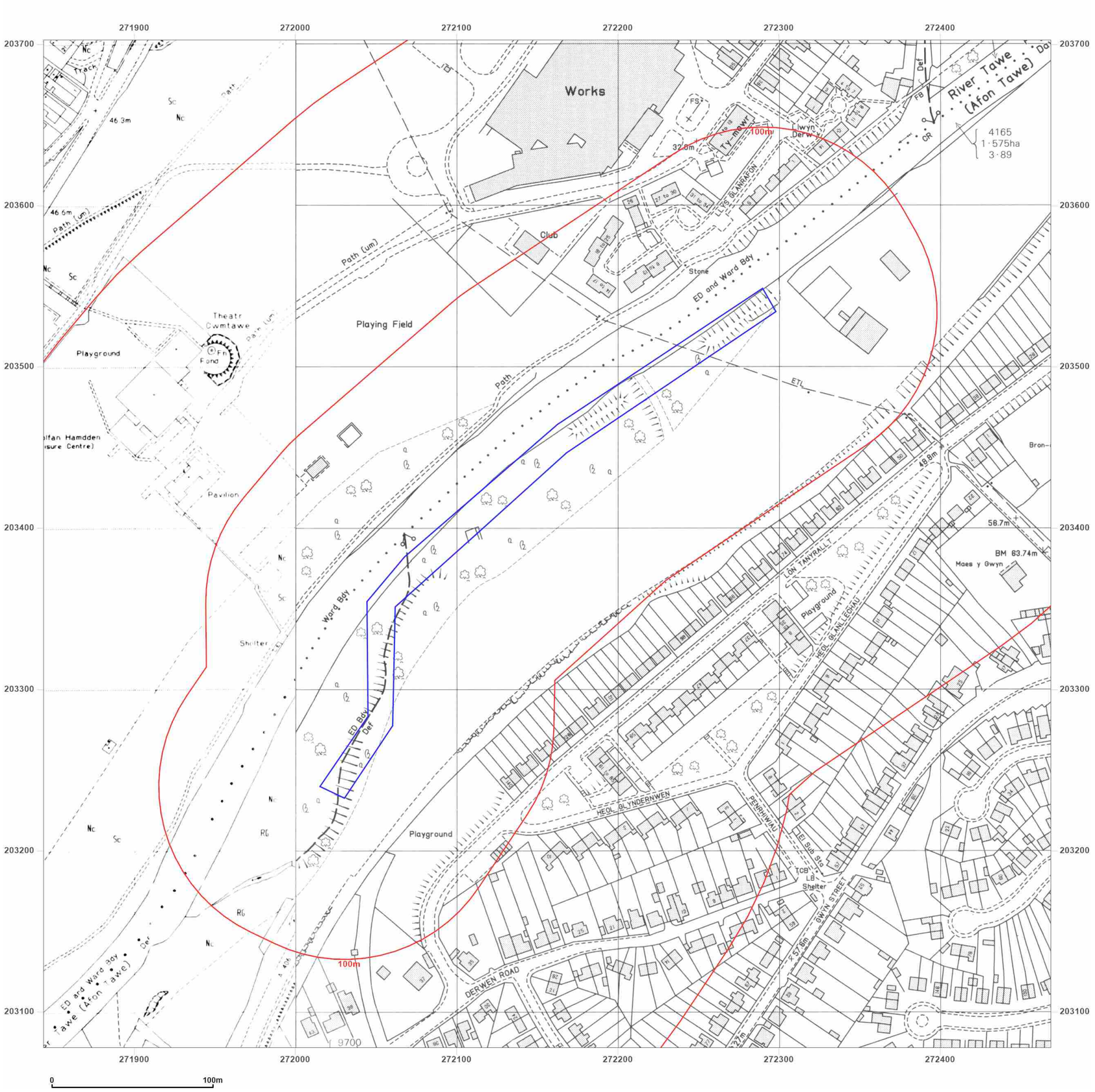
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Site Details:

333702162

Client Ref: EPL051081
Report Ref: HYD-CTJ-MM8-XOJ-V31_2500
Grid Ref: 272156, 203390

Map Name: National Grid

Map date: **1989-1993**

Scale: 1:2,500

Printed at: 1:2,500

N
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S

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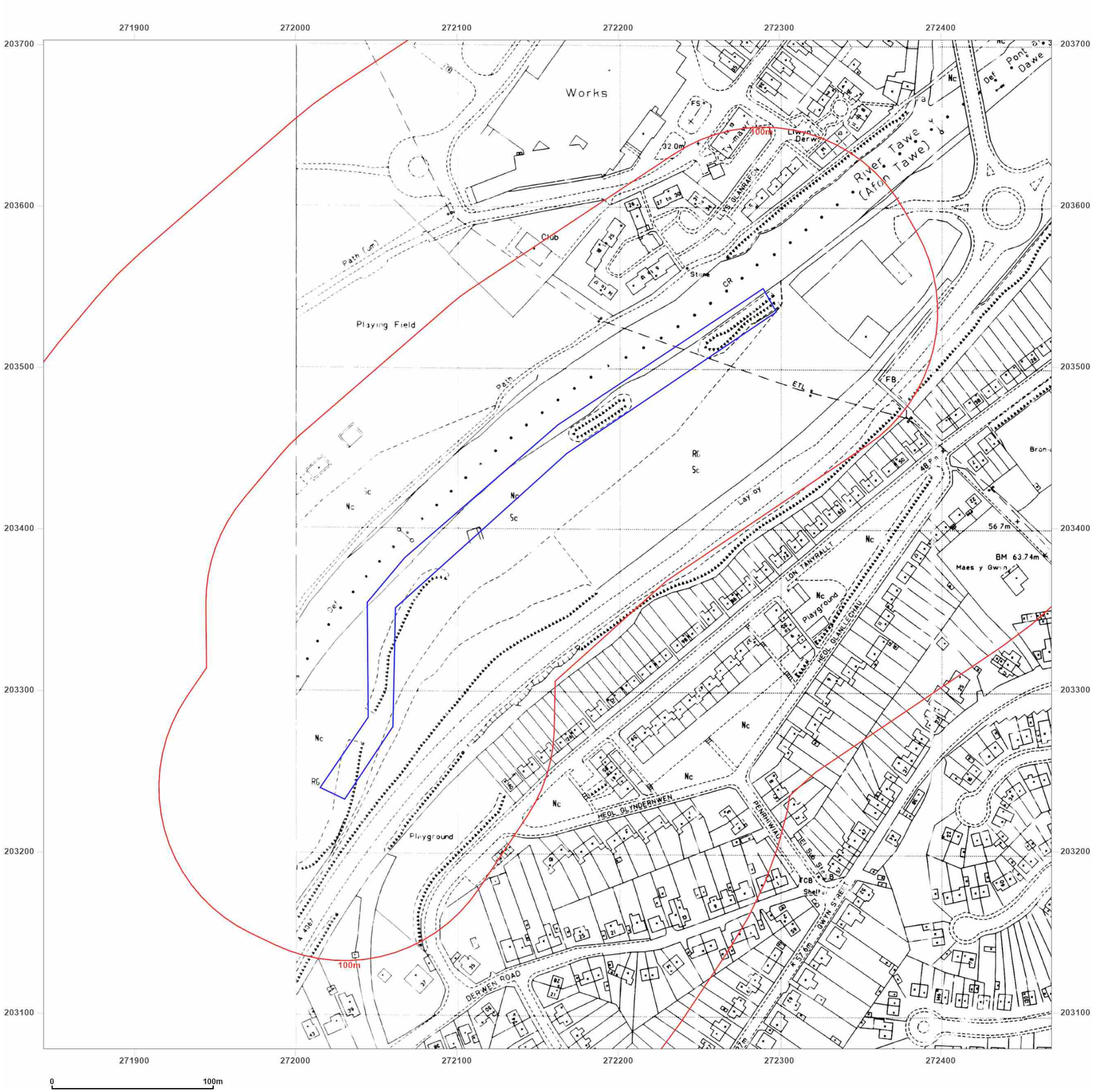
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Groundsure INSIGHTS

Site Details:

333702162

Client Ref: EPL051081
Report Ref: HYD-CTJ-MM8-XOJ-V31_2500
Grid Ref: 272156, 203390

Map Name: National Grid

Map date: **1993**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed N/A
Revised N/A
Edition N/A
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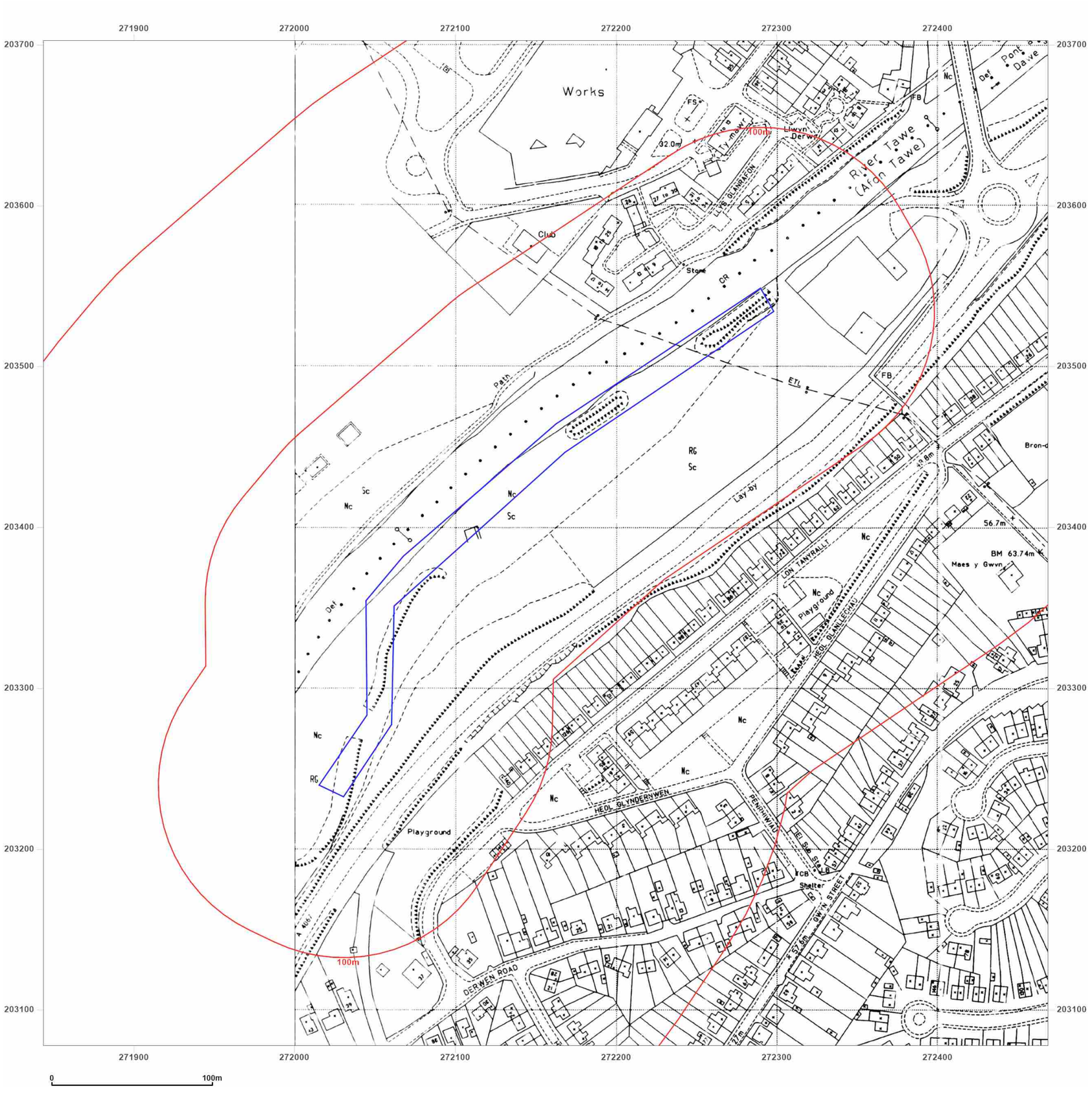
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Groundsure INSIGHTS

Site Details:

333702162

Client Ref: EPL051081
Report Ref: HYD-CTJ-MM8-XOJ-V31_2500
Grid Ref: 272156, 203390

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
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Revised N/A
Edition N/A
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Production date: 19 November 2025

Map legend available at:
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Groundsure INSIGHTS

Site Details:

333702162

Client Ref: EPL051081
Report Ref: HYD-CTJ-MM8-XOJ-V31_2500
Grid Ref: 272156, 203390

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1994
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

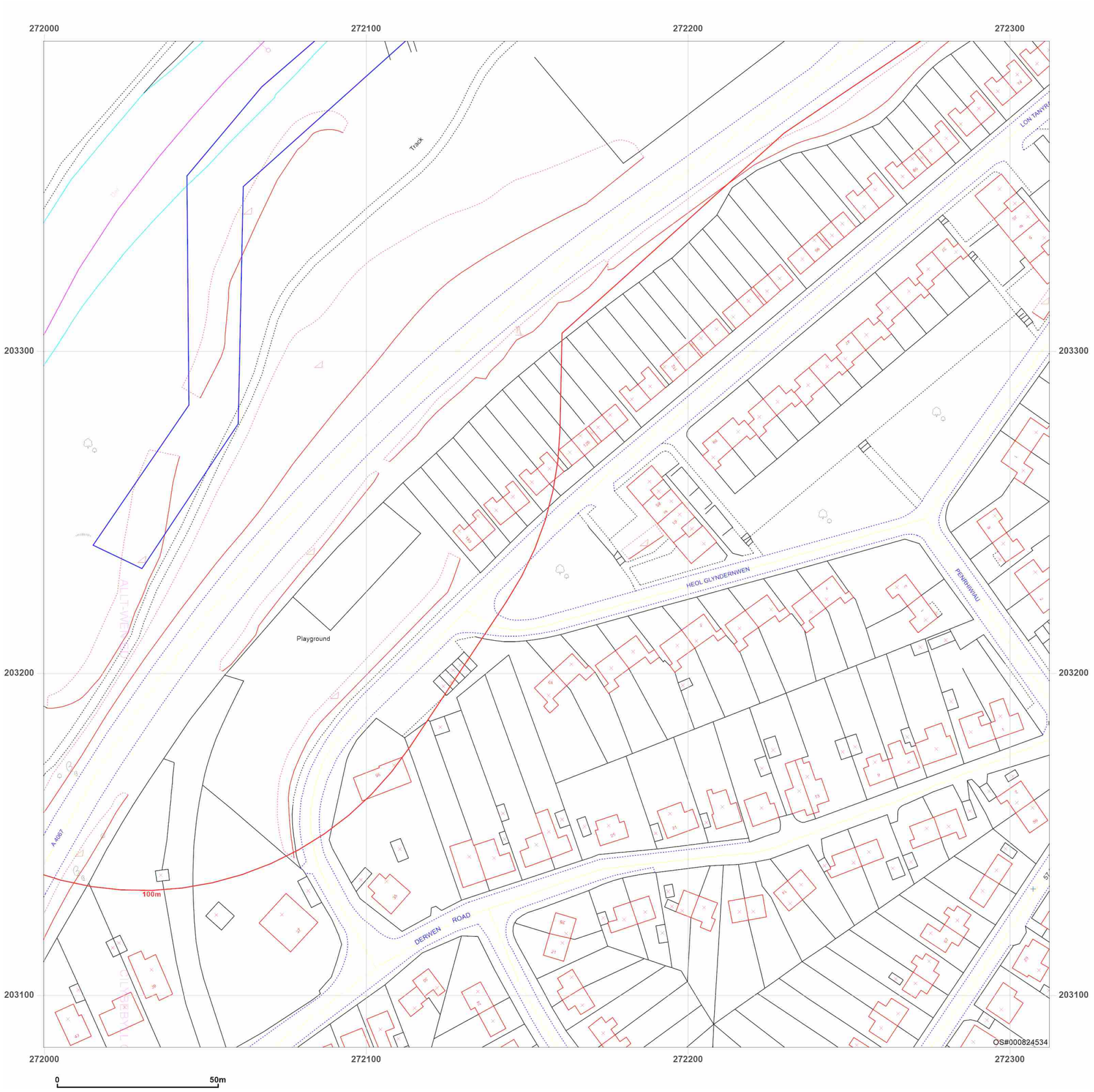
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Production date: 19 November 2025

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Groundsure INSIGHTS

Site Details:

333702162

Client Ref: EPL051081
Report Ref: HYD-CTJ-MM8-XOJ-V31_Landline_1_1
Grid Ref: 272156, 203240

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2003

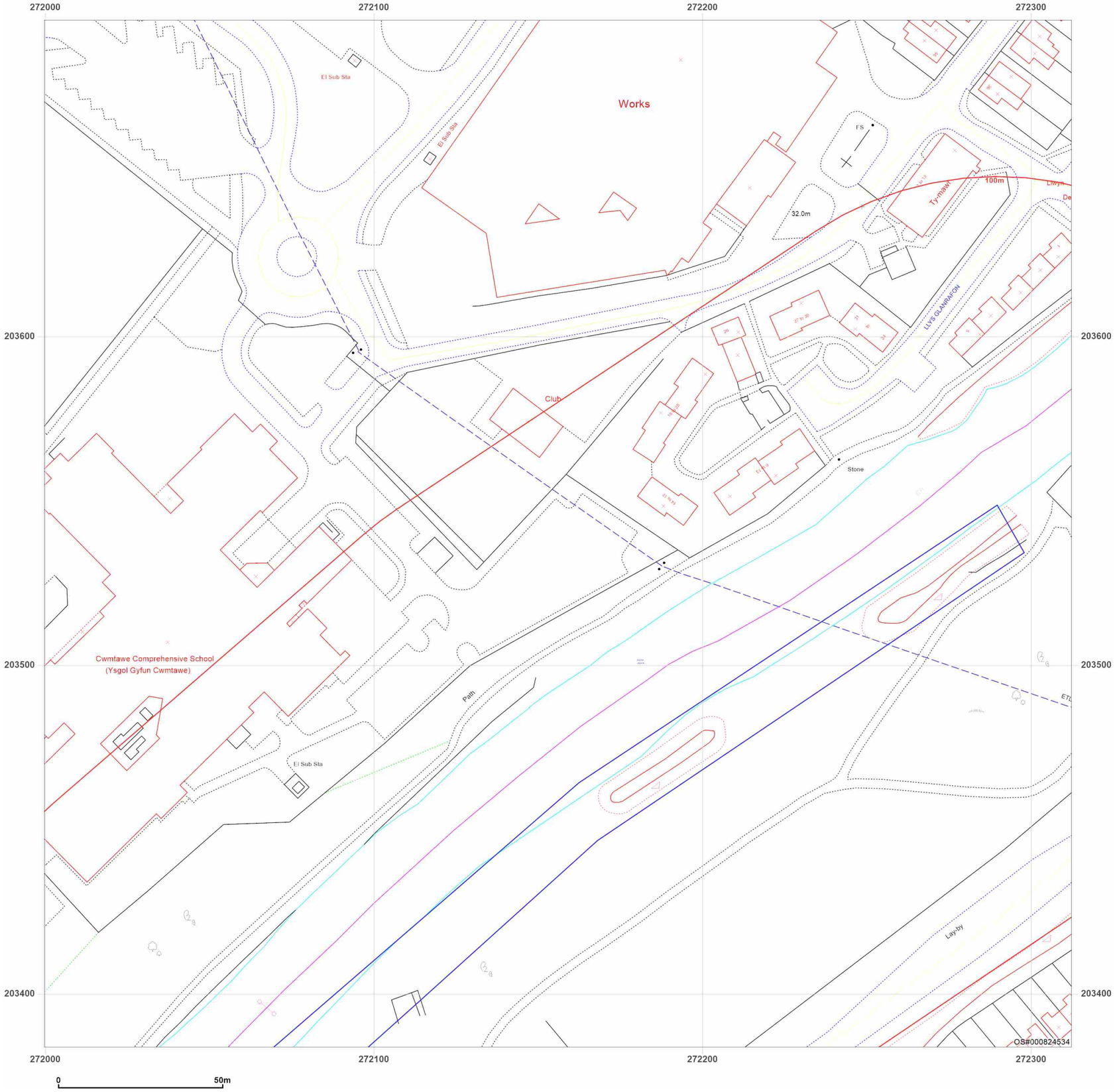
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Groundsure INSIGHTS

Site Details:

333702162

Client Ref: EPL051081
Report Ref: HYD-CTJ-MM8-XOJ-V31_Landline_1_2
Grid Ref: 272156, 203540

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

N
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S

2003

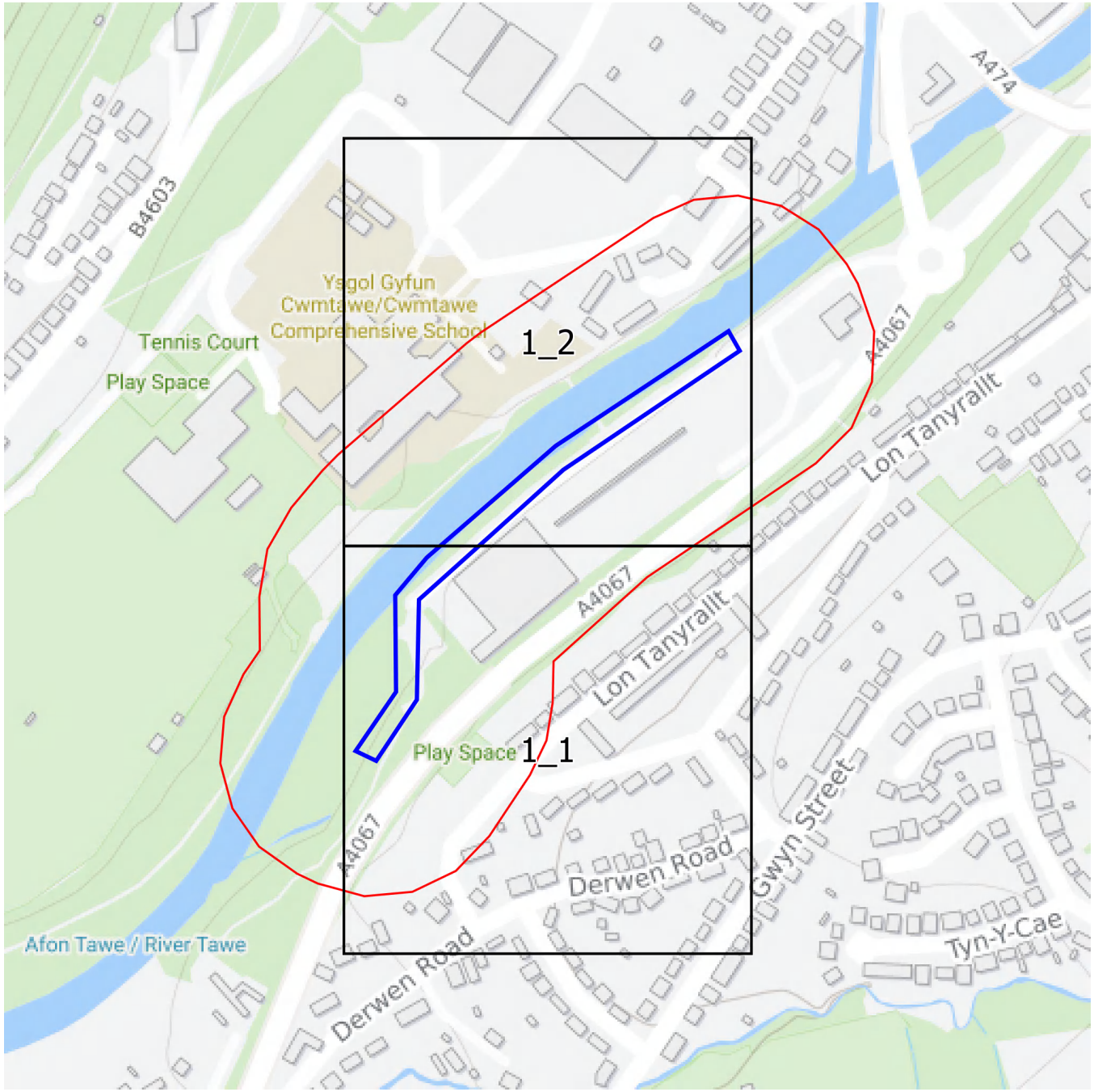
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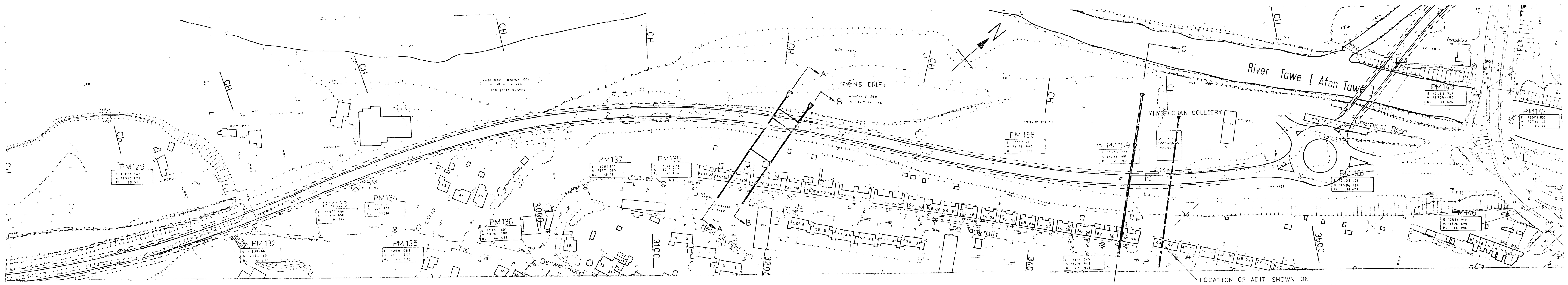


Groundsure INSIGHTS

Landline Scale Grid Index

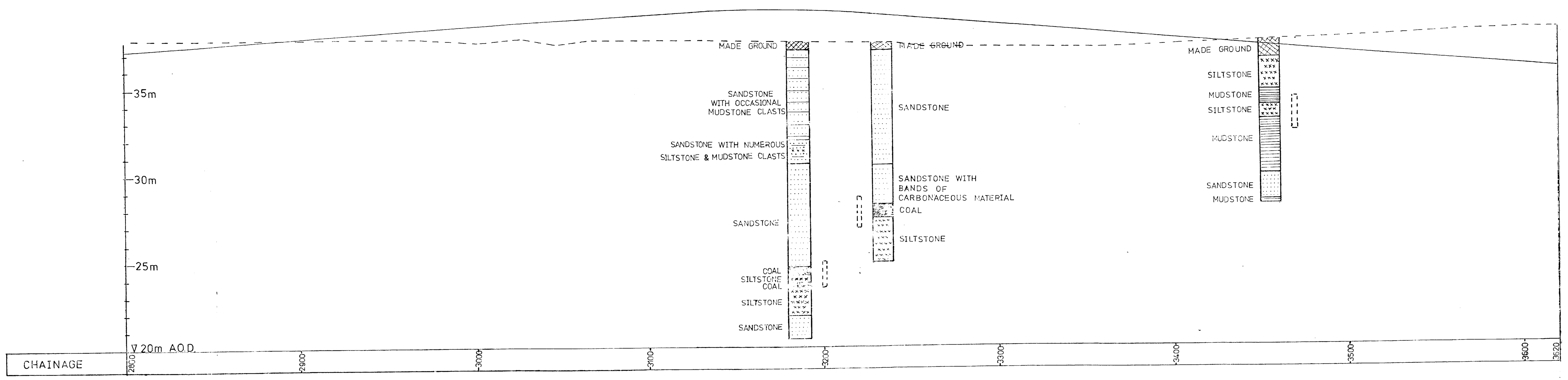


Appendix D Desk study research information



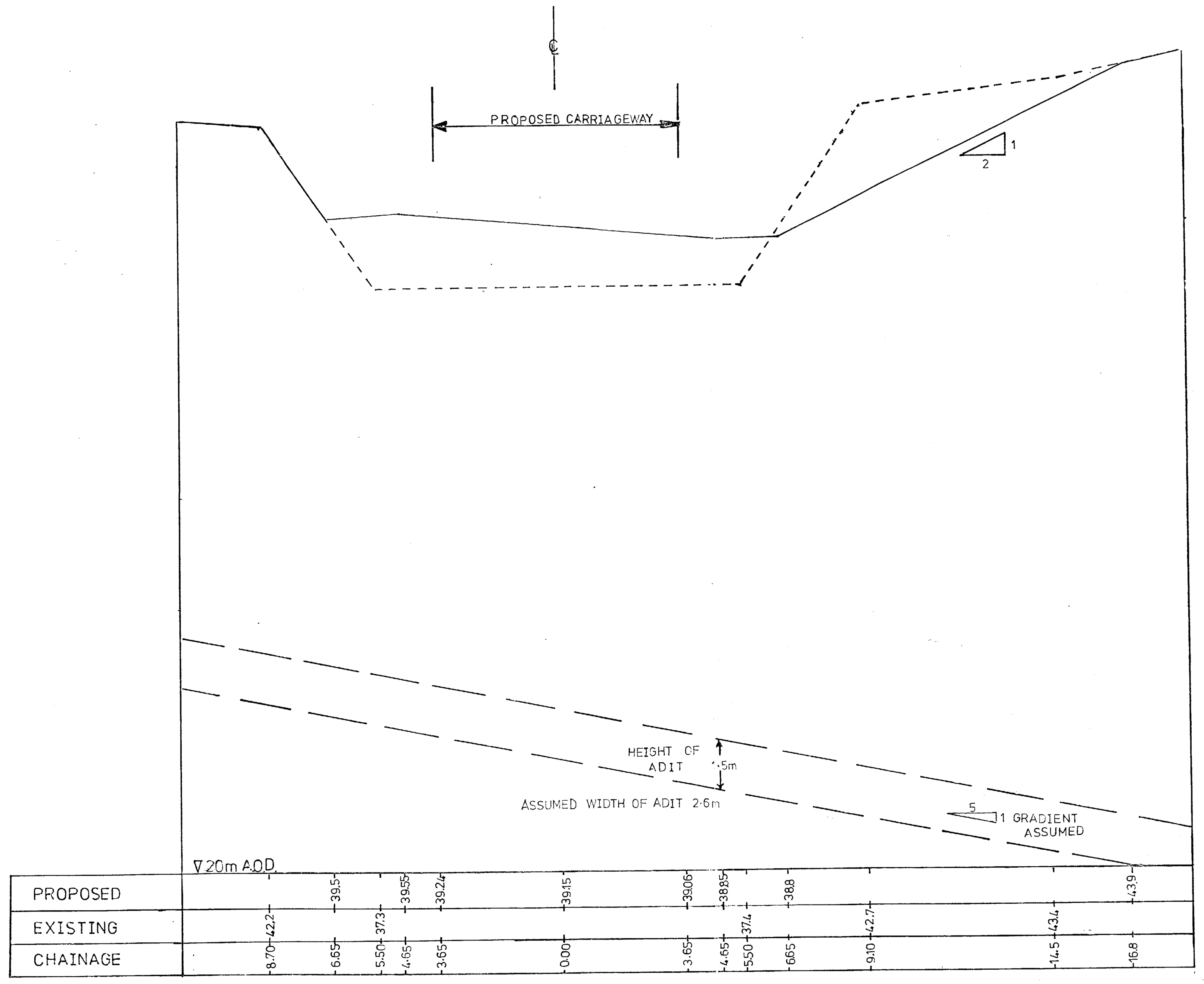
PLAN

SCALE 1:1250

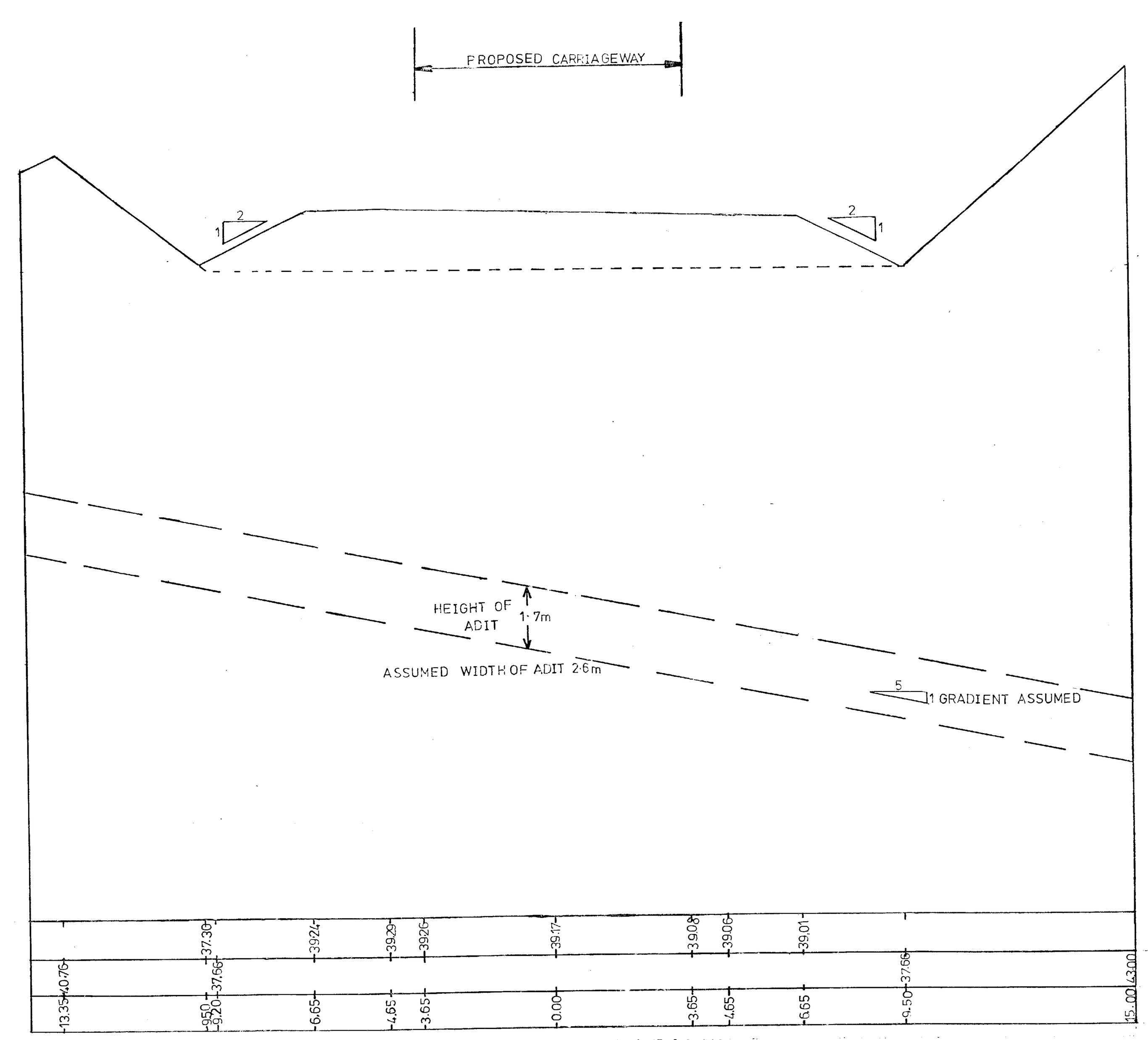


LONG SECTION

SCALES
Vert 1:125
Horiz 1:1250

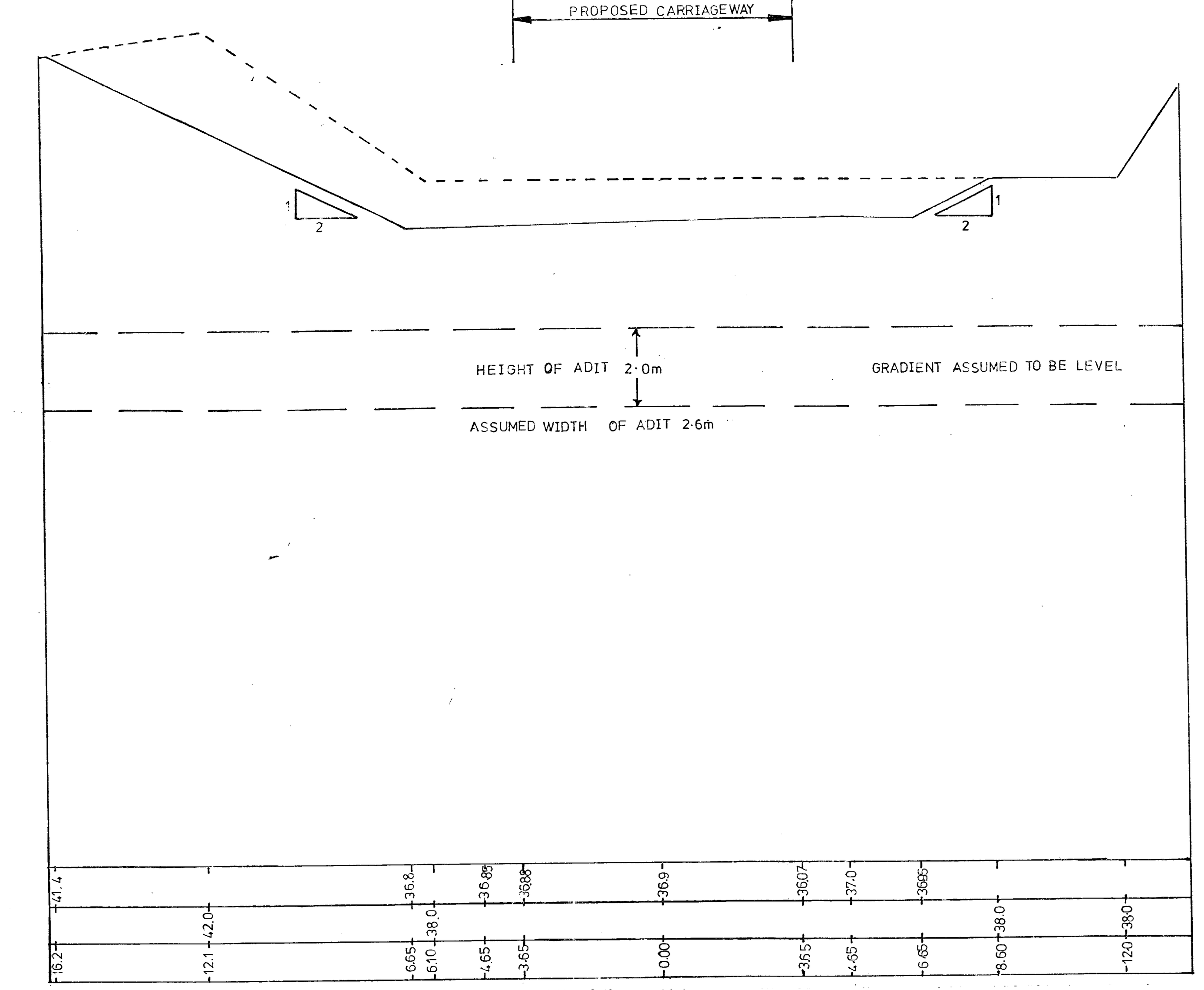


SECTION 'A-A'



SECTION 'B-B'

SCALES
VERT 1:10
HORIZ 1:100



SECTION 'C-C'

NOTES

1. All dimensions are in millimetres unless otherwise stated.

Suf'x	Amendments	Date	Init'l

WEST GLAMORGAN COUNTY COUNCIL

W.J. WARD, F.I.C.E., F.I.STRUCT.E., F.I.H.T., F.R.T.P.I.
COUNTY ENGINEER AND SURVEYOR
COUNTY HALL
SWANSEA SA1 3SN

Job Title

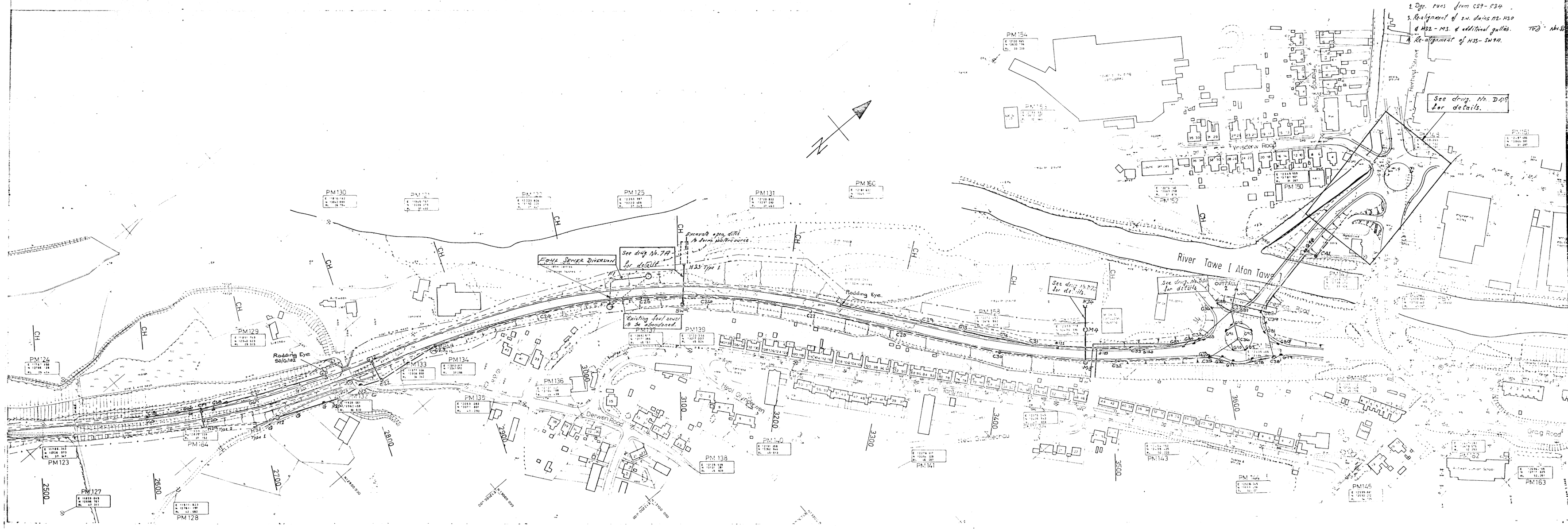
A4067 SWANSEA VALLEY ROUTE
GLAIS TO PONTARDAWE
ABANDONED COAL WORKINGS

File No. 26.349	Cost Code No.		
Drawn RHM	Traced		Checked
Date FEB '85	Date		Date
Scales AS SHOWN			
Drawing No. 26.349 / SI.12			

DS17

JOB No.		DRG. No.	261349/D3	A

AMENDMENTS	CHECK
'A' 1. Additional details to schedules. 2. Dge. runs from C29 - C34. 3. Realignment of s.w. drains M2 - M30 & M32 - M3. & additional gullies. 4. Re-alignment of M33 - SW49.	TED Nov 85



KEY

--- Open Ditch
—— French Drain
—— Surface water drain

GULLY				GULLY CONNECTING DRAIN	
Ref. No.	Location Chainage	Grating Type	Gully Group	Length	Drain Group
G69	2700 L	CL1. Grade A	GA1	1·5	DG3
G70	2740 L	" "	"	1·4	"
G71	2770 L	" "	"	1·2	"
G72	2810 L	" "	"	23·5	DG1
G73	3365 L	" "	"	5	"
G74	3405 L	" "	"	5	"
G75	3590 R	" "	"	1·5	"
G76	3600 R	" "	"	1·5	DG3
G77	23·0 OUTER CIRCLE CHGE.	" "	"	1·5	"
G78	3·0 " "	" "	"	1·5	"
G79	55 OR A4067/GLAIS CHGE	" "	"	6·0	DG2
G80	52 OL " "	" "	"	8·0	DG1
G81	116 OUTER CIRCLE CHGE.	" "	"	5·0	DG2
G82	53·0 PONTARDAWE LINK	" "	"	7·5	"
G83	3565 L	" "	"	2·0	"
G84	3575 L	" "	"	2·0	"
G85	3585	" "	"	4·0	"
G86	22 L ACCESS ROAD	" "	"	10·5	DG1
G87	2·3 R "	" "	"	16	DG2
G88	37 L PONTARDAWE LINK	" "	"	1·0	DG3
G89	4 INNER CIRCLE CHGE.	" "	"	14·0	DG2
G90	16 " "	" "	"	8·0	"
G91	34 " "	" "	"	11·0	"
G92	50 INNER CIRCLE CHGE.	" "	"	2·0	DG3
G93	665 " "	" "	"	16·0	DG2
G94	183 PONTARDAWE LINK	" "	"	18·0	DG1
G 122	3445 L	" "	"	1·5	DG3
G 123	3485 L	" "	"	1·5	DG3
G 124	3525 L	" "	"	1·5	DG3

CATCHPITS					
Ref. No.	Location Chainage	Design Group	Outlet Invert Level	Cover Level	Grating Type
C21	2700 L	CP1	34·89	36·03	CL1 Grade A
C22	2812 R	"	32·75	34·25	" "
C23	2880 R	"	36·22	37·27	" "
C24	2970 R	"	36·78	37·86	" "
C25	3003 R	"	37·30	38·42	" "
C26	3125 R	"	37·64	38·69	" "
C27	3220 R	"	37·17	38·22	" "
C28	3305 R	"	36·70	37·95	" "
C29	3323 L	"	36·41	37·46	" "
C30	3400 R	"	36·17	37·63	" "
C31	3427 L	"	35·77	36·82	" "
C32	3505 R	"	35·65	36·95	" "
C33	3517 L	"	35·15	36·22	" "
C34	3580 L	"	34·65	36·04	" "
C35	3590 R	"	34·40	36·03	" "
C36	TANYRALLT R'BOUT	"	34·20	36·25	" "
C37	" "	"	34·00	36·5	" "
C38	" "	"	34·88	36·85	" "
C39	" "	"	34·60	36·56	" "
C40	" "	"	28·78	30·66	" "
C 41	123·0 PONTARDAWE LINK	"	30·1	30·80	" "

FRENCH DRAINS							
Ref. No.	Length	Diameter	Design Group	Depth to Invert Average	Depth to Invert Maximum	Invert Levels Inlet	Invert Levels Outlet
C22-C23	68	225	Type G	1·60	2·20	36·21	32·76
C23-C24	90	"	"	1·06	1·08	36·775	36·225
C24-C25	94	"	"	1·77	1·25	37·295	36·785
C25-C26	61	"	"	1·22	1·28	37·835	37·305
C26-C27	95	"	"	1·06	1·15	37·635	37·175
C27-C28	85	"	"	1·15	1·25	37·165	36·705
RoEye-C29	75	"	"	1·05	1·08	37·57	36·415
C28-C30	95	"	"	1·26	1·48	36·695	36·175
~~C29-C31~~	~~102~~	"	"	1·05	1·09	36·465	35·915
C30-C32	105	"	"	1·39	1·48	36·165	35·655
~~C31-C33~~	~~90~~	"	"	1·06	1·08	35·715	35·185
~~C33-C34~~	~~63~~	"	"	1·25	1·28	35·135	34·655
C32-C35	85	"	"	1·39	1·50	35·645	34·965
C35-C38	55	"	"	1·66	1·68	35·00	34·50

SURFACE WATER DRAINS							
Ref. No.	Length	Diameter	Design Group	Depth to Invert Average	Depth to Invert Maximum	Invert Levels Inlet	Invert Levels Outlet
C19-C21	50	225	4	1·28	1·42	38·885	38·415
C21-RoEye	67	"	4	0·87	1·14	38·39	38·845
H31-M2	20	300	4	2·0	2·3	33·04	31·35
H32-M3	23	225	4	2·0	2·3	30·38	29·65
C34-C37	42	300	11	1·86	2·51	34·64	34·01
C35-C36	30	"	11	1·74	2·05	34·39	34·21
C36-C37	24	"	11	2·22	2·51	34·19	34·01
C37-C40	22	300	11	2·25	2·66	33·99	28·79
C40-OUTFALL	10	450	13	2·03	2·18	28·77	28·36
C38-C39	34	300	11	1·77	1·97	34·87	34·61
C39-C37	28	"	11	2·12	2·51	34·59	34·01
SW49-H33	35	"	15 Bd Type 2	0·8	2·20	36·10	33·02
M2-H30	63	300	2 Bd Type 2	1·41	1·6	31·25	29·65
M3-C22	12	375	4	1·5	1·8	32·75	30·38
H34-M4	16	900	4	2·6	3·8	31·91	31·85
M4-M5	30 17	900	4 AB of Type 2	4·8	5·4	32·10	31·91
C29-C31	102	225	AB of Type 2	1·05	1·09	36·495	35·775
C31-C33	90	"	4	1·06	1·08	35·765	35·155
C33-C34	63	"	4	1·25	1·23	35·145	34·685

KEY

--- Open Ditch
—— French Drain
—— Surface water drain

S.D. DRAWING Nos.	
SD/G/1	Manholes
SD/G/3E	"
SD/G/12D	Gully groups
SV/G/1	"
SD/G/13B	Gully Connecting Drains
SD/G/14E	French Drains
SD/G/15B	Pipe bedding details.
SD/G/102	Gully Connecting Drains
SD/G/103	Open ditches
SD/G/105C	Catchpits
SD/G/112	Rodding Eye
SD/G/107	Headwalls
SV/2/3	"
SV/6/2	"
SV/8/2	Open ditches exc. 750mm dp.
SV/3/5	Drain Group Schedule

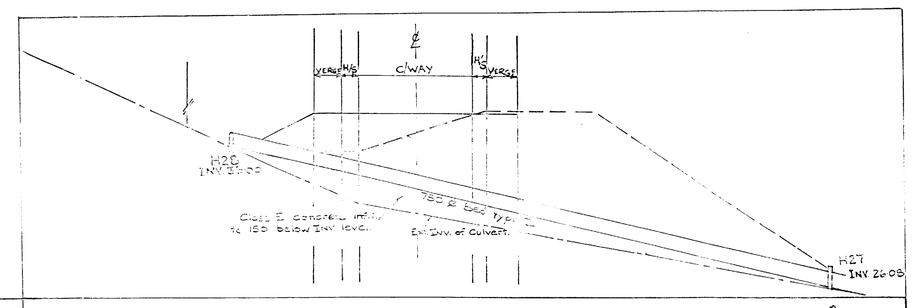
A4067 SWANSEA VALLEY ROUTE — GLAIS TO PONTARDAWE

DRAINAGE LAYOUT & SCHEDULES

DRAWN	T.E.D.	CHECKED	DATE	WELSH OFFICE — HIGHWAYS & TRANSPORTATION
TRACED	S.L.			COUNTY ENGINEER AND SURVEYOR
DATE	Oct. 85			WEST GLAMORGAN COUNTY COUNCIL
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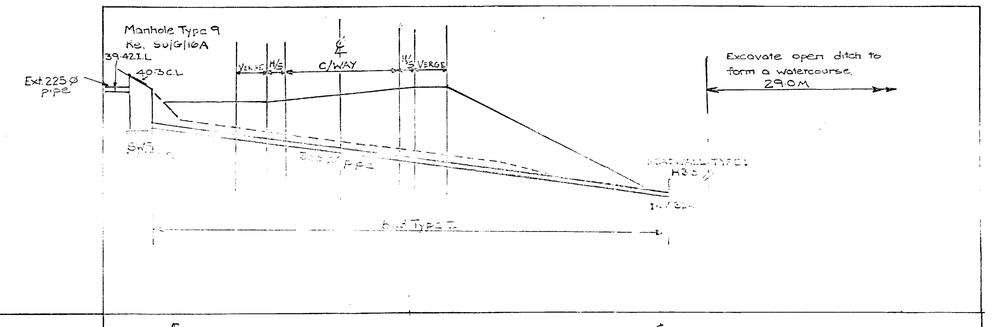
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1. All dimensions are in millimetres unless otherwise stated.
2. This drawing to be read in conjunction with drwgs D2, 3.03 and all other relevant drwgs.



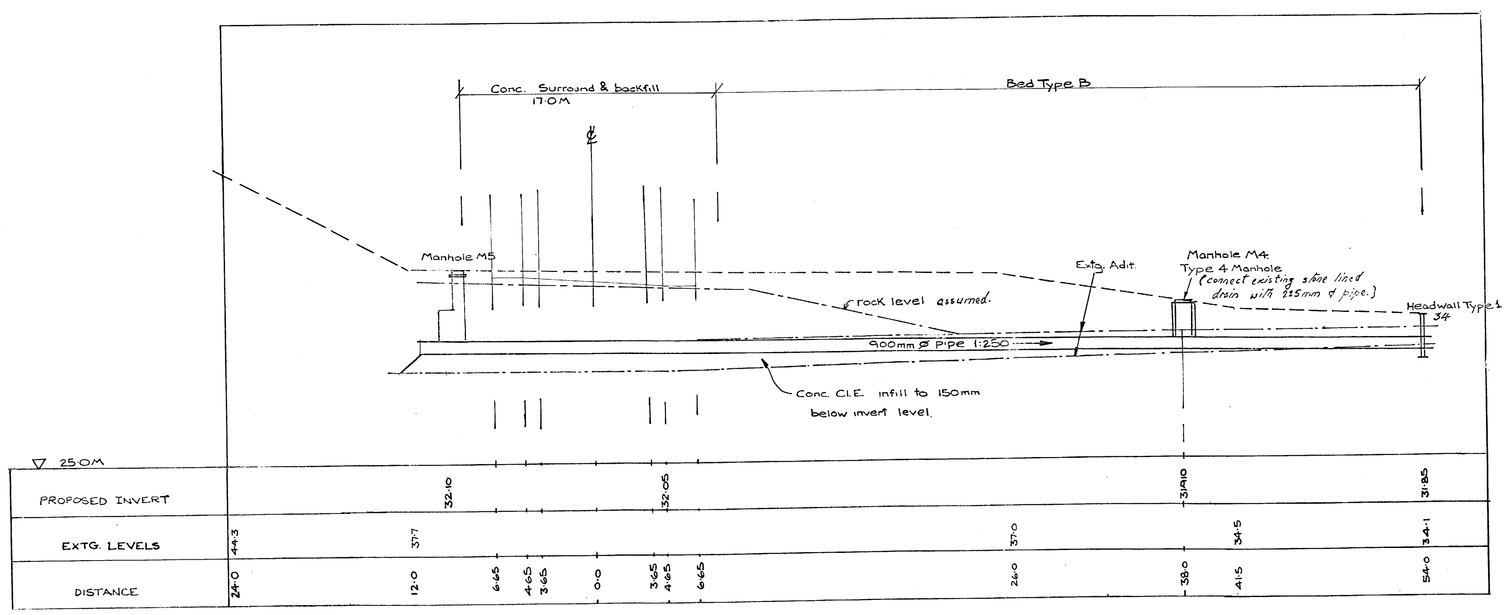
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PROP. INV. LEVELS		35.0		32.80				26.08
EXTG. LEVELS		35.0		34.45		37.12	35.15	26.35	24.35
CHGE.		12.0		3.70	0 0	4.65	11.64	24.0	27.8 24.0

SW. DRAIN CHGE. 2550



▽ 25.0M												
PROP. INV. LEVELS		34.9								32.4		
EXTG. LEVELS	41.00	37.5						34.8	33.5	33.0	32.5	
CHGE.	14.2	10.6	6.45	4.65 3.45	0	3.45	4.45	6.45	10.4	14.7	20.7	23.6

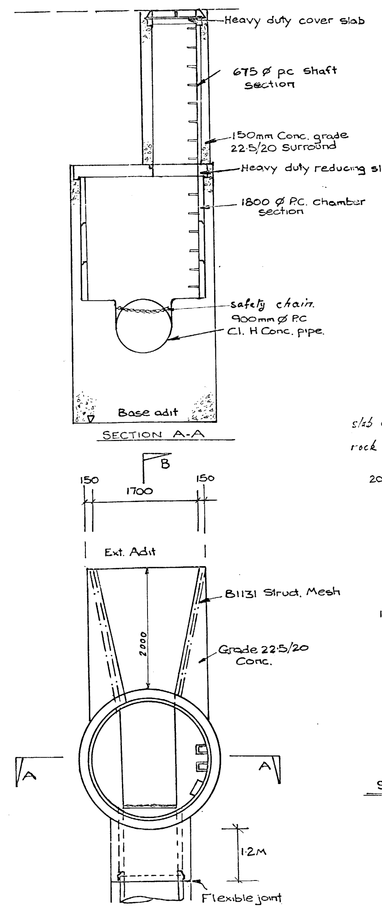
SW DRAIN CHGE. 3100

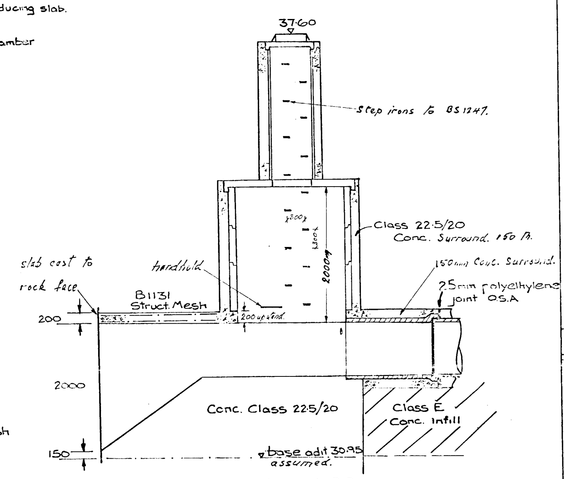


▽ 25.0M											
PROPOSED INVERT		32.10			32.05			31.40			31.85
EXTG. LEVELS	44.3	37.7					37.0			34.5	32.1
DISTANCE	24.0	12.0	6.45	4.65 3.45	0.0	3.45 3.45	6.45	26.0		38.0	41.5	54.0

CULVERT AT CHAINAGE 3470

SCALE 1:200





Invert levels are provisional only & final levels are to be as determined on site.
Refer to SD/8/10 for details of handhold & safety chain.

SCALE 1:50

Suf'x	Amendments	Date	Init'l
'A'	S.W. Drain at Ch.3100 realigned. Note of manhole details added.	Nov. 86.	TEJ.

WEST GLAMORGAN COUNTY COUNCIL

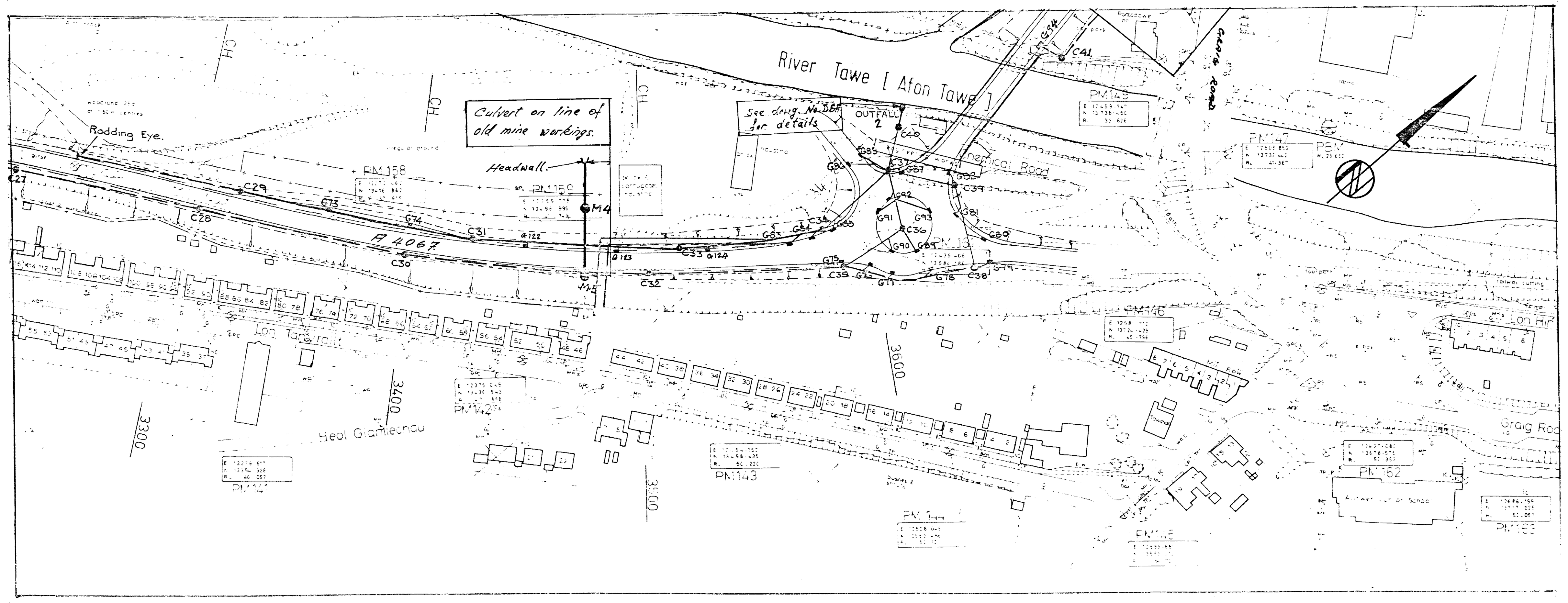
W.J. WARD, F.I.C.E., F.I.STRUCT.E., F.I.H.T., F.R.T.P.I.
COUNTY ENGINEER AND SURVEYOR
COUNTY HALL
SWANSEA SA1 3SN

Job Title
A4067 GLAIS TO PONTARDAWE
DRAINAGE DETAILS

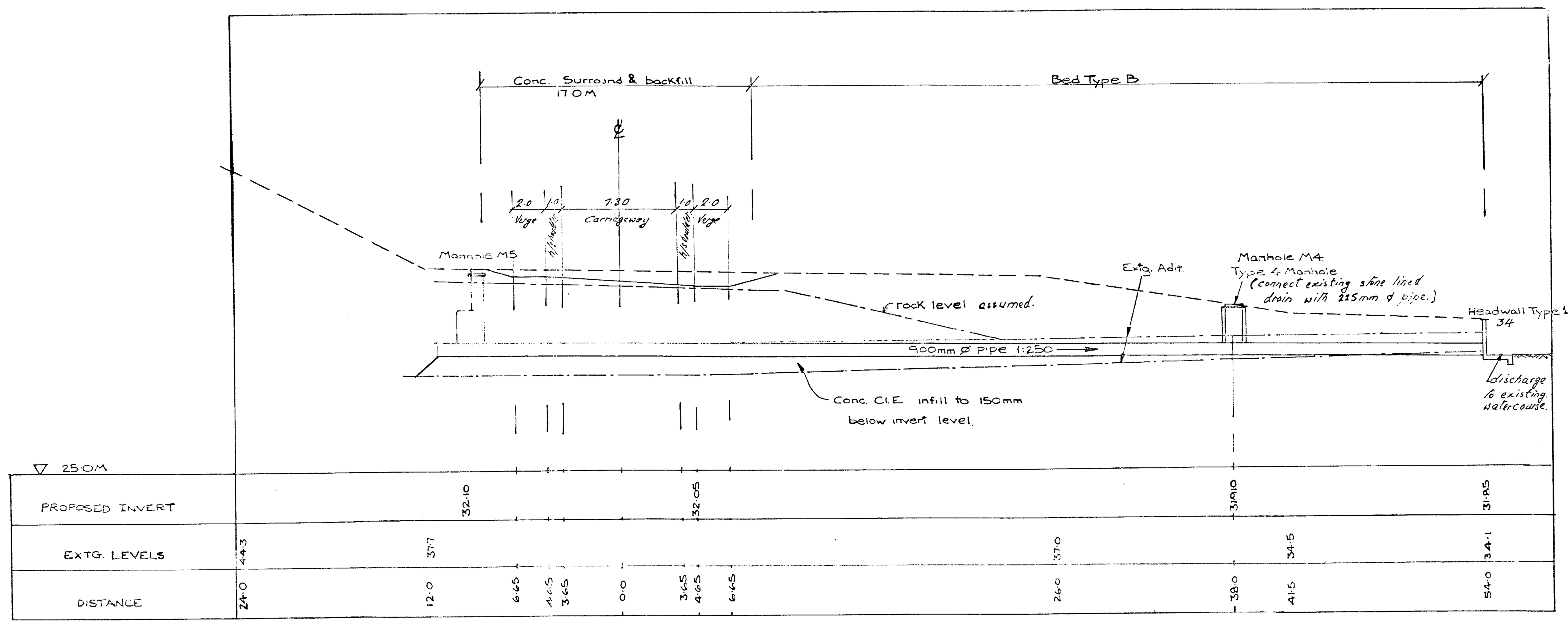
SHEET 3 OF 3

File No.		Cost Code No.			
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Scales	200;50				
Drawing No.	26/1349 / D7 A.				

DS17



—PLAN : Scale 1:1250—

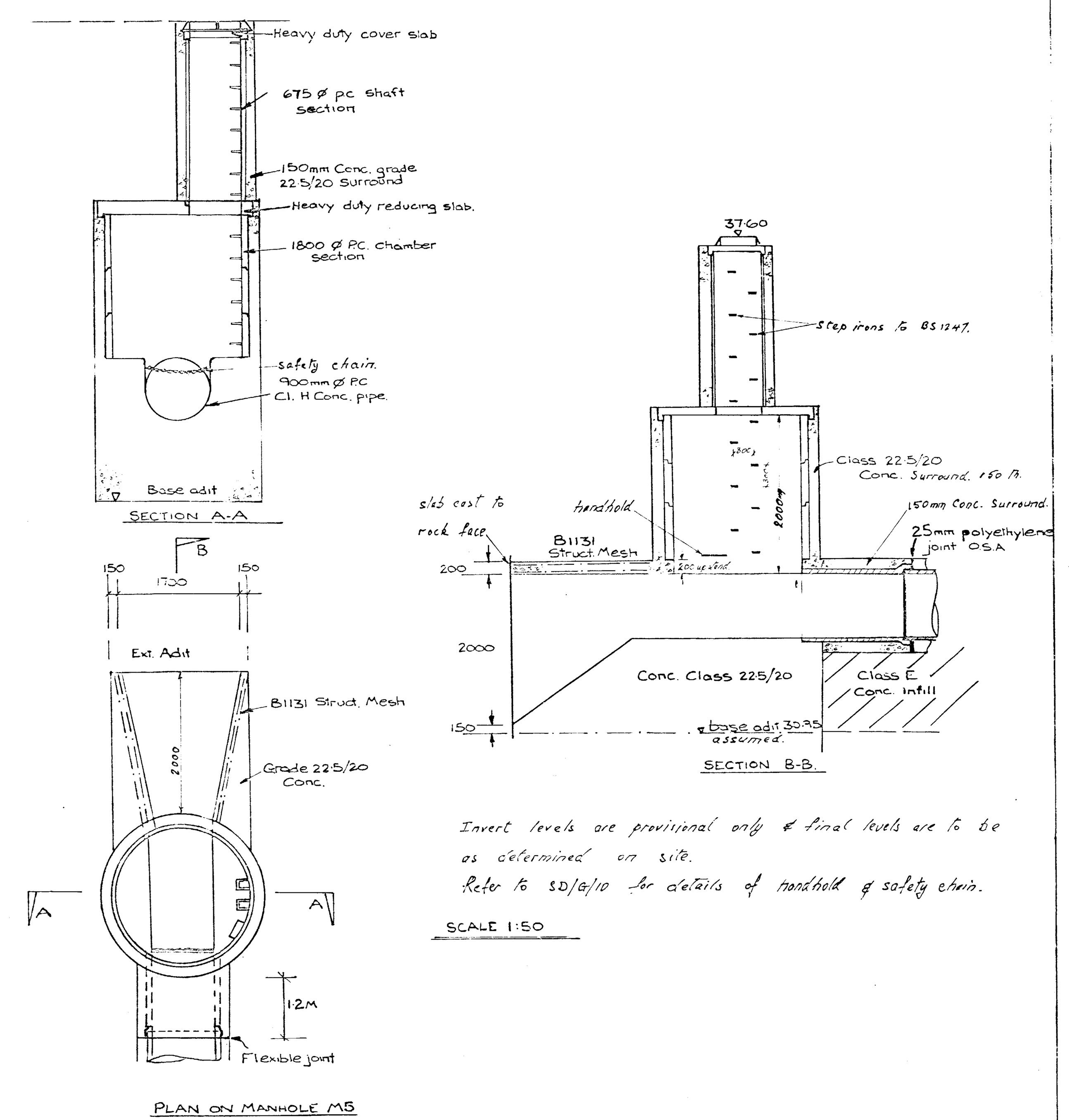


PROPOSED INVERT			32.10						32.05			31.910		31.85
EXTG. LEVELS	44.3	37.7									37.0		34.5	34.1
DISTANCE	24.0	12.0		6.65	4.65	3.65	0.0	3.65	4.65	6.65	26.0	38.0	41.5	54.0

CULVERT AT CHAINAGE 3470

SCALE 1:200

— SECTIONAL ELEVATION —



Invert levels are provisional only & final levels are to be as determined on site.
Refer to SD/G/10 for details of handhold & safety chain.

SCALE 1:50

— DETAILS OF MANHOLE M5 —

NOTES
1. All dimensions are in millimetres unless otherwise stated.

Suf'x	Amendments	Date	Init'l

WEST GLAMORGAN COUNTY COUNCIL
W.J. WARD, F.I.C.E.,F.I.STRUCT.E.,F.I.H.T.,F.R.T.P.I.
COUNTY ENGINEER AND SURVEYOR
COUNTY HALL
SWANSEA SA1 3SN

Job Title
A4067 SWANSEA VALLEY
ROUTE : GLAIS TO
PONTARDAWE.
[Treatment of N.C.B. Adit]

File No. 13/605		Cost Code No.			
Drawn	T.E.D.	Traced		Checked	
Date	NOV.86	Date		Date	
Scales	As Shown.				

Drawing No.
26:1349 / SU/N1

DS17

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

333702162

Order Details

Date: 19/11/2025

Your ref: EPL051081

Our Ref: HYD-2E9-D9O-DWX-GPI

Site Details

Location: 272134 203406

Area: 0.75 ha

Authority: Castell-nedd Port Talbot - Neath Port Talbot County Borough ↗



Summary of findings p. 2 >

Aerial image p. 9 >

OS MasterMap site plan p.14 >

Insight User Guide ↗

Contact us with any questions at:
info@groundsure.com ↗
01273 257 755

Certified B Corporation

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	19	47	55	72	-
23 >	1.2 >	Historical tanks >	0	0	13	10	-
24 >	1.3 >	Historical energy features >	0	0	5	27	-
25	1.4	Historical petrol stations	0	0	0	0	-
26 >	1.5 >	Historical garages >	0	0	0	8	-
26	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
27 >	2.1 >	Historical industrial land uses >	26	57	67	101	-
37 >	2.2 >	Historical tanks >	0	0	14	13	-
38 >	2.3 >	Historical energy features >	0	0	8	46	-
40	2.4	Historical petrol stations	0	0	0	0	-
40 >	2.5 >	Historical garages >	0	0	0	10	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
42	3.1	Active or recent landfill	0	0	0	0	-
42	3.2	Historical landfill (BGS records)	0	0	0	0	-
43	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
43 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	0	1	-
43 >	3.5 >	Historical waste sites >	0	1	0	0	-
44	3.6	Licensed waste sites	0	0	0	0	-
44 >	3.7 >	Waste exemptions >	0	0	7	6	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
46 >	4.1 >	Recent industrial land uses >	0	1	5	-	-
47 >	4.2 >	National Geographic Database (NGD) - Current or recent tanks >	0	2	0	-	-
47 >	4.3 >	Current or recent petrol stations >	0	1	0	2	-
48	4.4	Electricity cables	0	0	0	0	-
48 >	4.5 >	Gas pipelines >	0	0	0	1	-

48	4.6	Sites determined as Contaminated Land	0	0	0	0	-
48	4.7	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
49	4.8	Regulated explosive sites	0	0	0	0	-
49	4.9	Hazardous substance storage/usage	0	0	0	0	-
49	4.10	Historical licensed industrial activities (IPC)	0	0	0	0	-
49	4.11	Licensed industrial activities (Part A(1))	0	0	0	0	-
49 >	**4.12 >**	**Licensed pollutant release (Part A(2)/B) >**	0	0	1	1	-
50	4.13	Radioactive Substance Authorisations	0	0	0	0	-
50 >	**4.14 >**	**Licensed Discharges to controlled waters >**	0	3	11	6	-
53	4.15	Pollutant release to surface waters (Red List)	0	0	0	0	-
53	4.16	Pollutant release to public sewer	0	0	0	0	-
54	4.17	List 1 Dangerous Substances	0	0	0	0	-
54	4.18	List 2 Dangerous Substances	0	0	0	0	-
54 >	**4.19 >**	**Pollution Incidents (EA/NRW) >**	1	2	9	8	-
56	4.20	Pollution inventory substances	0	0	0	0	-
57	4.21	Pollution inventory waste transfers	0	0	0	0	-
57	4.22	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	**Hydrogeology >**	On site	0-50m	50-250m	250-500m	500-2000m
58 >	**5.1 >**	**Superficial aquifer >**	Identified (within 500m)				
59 >	**5.2 >**	**Bedrock aquifer >**	Identified (within 500m)				
60 >	**5.3 >**	**Groundwater vulnerability >**	Identified (within 50m)				
61	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
61	5.5	Groundwater vulnerability- local information	None (within 0m)				
62 >	**5.6 >**	**Groundwater abstractions >**	0	0	0	0	1
63 >	**5.7 >**	**Surface water abstractions >**	0	0	0	1	4
64	5.8	Potable abstractions	0	0	0	0	0
65	5.9	Source Protection Zones	0	0	0	0	-
65	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	**Hydrology >**	On site	0-50m	50-250m	250-500m	500-2000m

66 >	6.1 >	Water Network (OS MasterMap) >	0	1	6	-	-
67 >	6.2 >	Surface water features >	1	1	3	-	-
67 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
68 >	6.4 >	WFD Surface water bodies >	0	1	0	-	-
68 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	**River and coastal flooding** >	On site	0-50m	50-250m	250-500m	500-2000m
69 >	7.1 >	Risk of flooding from rivers and the sea >	High (within 50m)				
70 >	7.2 >	Historical Flood Events >	1	0	0	-	-
70	7.3	Flood Defences	0	0	0	-	-
70 >	7.4 >	Areas Benefiting from Flood Defences >	0	1	1	-	-
71	7.5	Flood Storage Areas	0	0	0	-	-
72 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
73 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				
Page	Section	**Surface water flooding** >					
74 >	8.1 >	Surface water flooding >	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	**Groundwater flooding** >					
76 >	9.1 >	Groundwater flooding >	Moderate (within 50m)				
Page	Section	**Environmental designations** >	On site	0-50m	50-250m	250-500m	500-2000m
77 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	0	0	0	0	1
78	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
78	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
78	10.4	Special Protection Areas (SPA)	0	0	0	0	0
78	10.5	National Nature Reserves (NNR)	0	0	0	0	0
79 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	1
79 >	10.7 >	Designated Ancient Woodland >	0	0	0	4	99
83	10.8	Biosphere Reserves	0	0	0	0	0
83	10.9	Forest Parks	0	0	0	0	0
83	10.10	Marine Conservation Zones	0	0	0	0	0
84	10.11	Green Belt	0	0	0	0	0

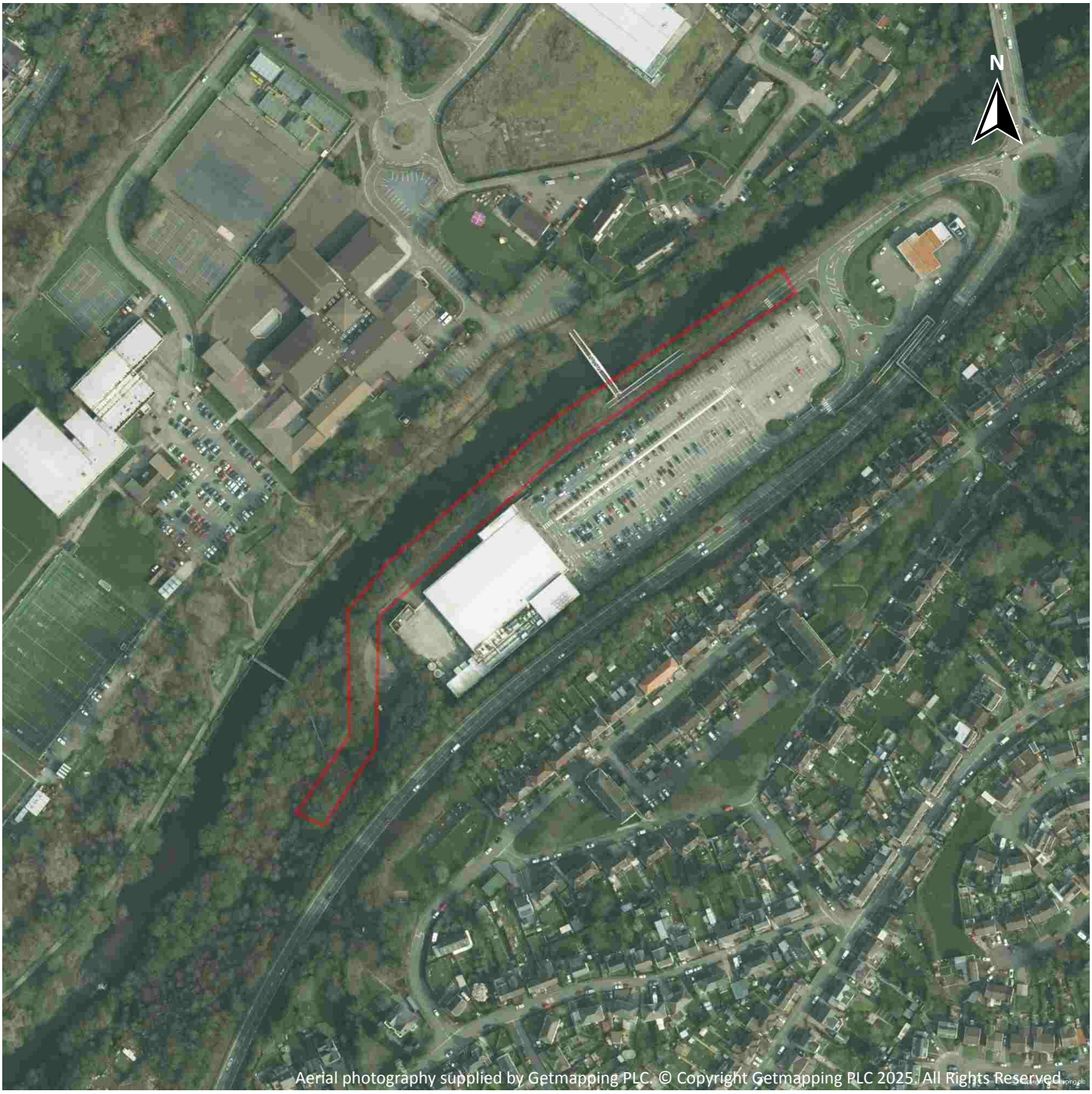
84	10.12	Proposed Ramsar sites	0	0	0	0	0
84	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
84	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
84	10.15	Nitrate Sensitive Areas	0	0	0	0	0
85	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
86	10.17	SSSI Impact Risk Zones	0	-	-	-	-
86	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
87	11.1	World Heritage Sites	0	0	0	-	-
87	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
87	11.3	National Parks	0	0	0	-	-
87	11.4	Listed Buildings	0	0	0	-	-
88	11.5	Conservation Areas	0	0	0	-	-
88	11.6	Scheduled Ancient Monuments	0	0	0	-	-
88	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	**Agricultural designations** >	On site	0-50m	50-250m	250-500m	500-2000m
89 >	**12.1** >	**Agricultural Land Classification** >	Grade 3b (within 250m)				
90	12.2	Open Access Land	0	0	0	-	-
90	12.3	Tree Felling Licences	0	0	0	-	-
90	12.4	Environmental Stewardship Schemes	0	0	0	-	-
90	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
92	13.1	Priority Habitat Inventory	0	0	0	-	-
92	13.2	Habitat Networks	0	0	0	-	-
92	13.3	Open Mosaic Habitat	0	0	0	-	-
92	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
93 >	**14.1** >	**10k Availability** >	Identified (within 500m)				
94 >	**14.2** >	**Artificial and made ground (10k)** >	1	1	4	10	-

96 >	14.3 >	Superficial geology (10k) >	1	3	4	2	-
97	14.4	Landslip (10k)	0	0	0	0	-
98 >	14.5 >	Bedrock geology (10k) >	2	1	3	3	-
99 >	14.6 >	Bedrock faults and other linear features (10k) >	2	0	3	1	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
100 >	15.1 >	50k Availability >	Identified (within 500m)				
101 >	15.2 >	Artificial and made ground (50k) >	0	0	1	0	-
102	15.3	Artificial ground permeability (50k)	0	0	-	-	-
103 >	15.4 >	Superficial geology (50k) >	2	0	2	0	-
104 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
104	15.6	Landslip (50k)	0	0	0	0	-
104	15.7	Landslip permeability (50k)	None (within 50m)				
105 >	15.8 >	Bedrock geology (50k) >	2	1	2	4	-
106 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
106 >	15.10 >	Bedrock faults and other linear features (50k) >	2	0	1	1	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
108 >	16.1 >	BGS Boreholes >	0	2	51	-	-
Page	Section	Natural ground subsidence >					
111 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
112 >	17.2 >	Running sands >	Low (within 50m)				
114 >	17.3 >	Compressible deposits >	Moderate (within 50m)				
116 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
117 >	17.5 >	Landslides >	Low (within 50m)				
119 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
121 >	18.1 >	BritPits >	0	0	3	5	-
124 >	18.2 >	Surface ground workings >	20	30	44	-	-
128 >	18.3 >	Underground workings >	3	3	1	0	29
129	18.4	Underground mining extents	0	0	0	0	-

129	18.5	Historical Mineral Planning Areas	0	0	0	0	-
130	18.6	Non-coal mining	0	0	0	0	0
130	18.7	JPB mining areas	None (within 0m)				
130	18.8	The Coal Authority non-coal mining	0	0	0	0	-
130	18.9	Researched mining	0	0	0	0	-
131	18.10	Mining record office plans	0	0	0	0	-
131	18.11	BGS mine plans	0	0	0	0	-
131 >	**18.12 >**	**Coal mining >**	Identified (within 0m)				
131	18.13	Brine areas	None (within 0m)				
132	18.14	Gypsum areas	None (within 0m)				
132	18.15	Tin mining	None (within 0m)				
132	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
133	19.1	Natural cavities	0	0	0	0	-
133	19.2	Mining cavities	0	0	0	0	0
133	19.3	Reported recent incidents	0	0	0	0	-
133	19.4	Historical incidents	0	0	0	0	-
Page	Section	**Radon >**					
135 >	**20.1 >**	**Radon >**	Between 5% and 10% (within 0m)				
Page	Section	**Soil chemistry >**	On site	0-50m	50-250m	250-500m	500-2000m
137 >	**21.1 >**	**BGS Estimated Background Soil Chemistry >**	4	7	-	-	-
138	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
138	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	**Railway infrastructure and projects >**	On site	0-50m	50-250m	250-500m	500-2000m
139	22.1	Underground railways (London)	0	0	0	-	-
139	22.2	Underground railways (Non-London)	0	0	0	-	-
140	22.3	Railway tunnels	0	0	0	-	-
140 >	**22.4 >**	**Historical railway and tunnel features >**	9	29	71	-	-
144	22.5	Royal Mail tunnels	0	0	0	-	-

144 >	22.6 >	Historical railways >	0	2	5	-	-
145	22.7	Railways	0	0	0	-	-
145	22.8	Crossrail 2	0	0	0	0	-
145	22.9	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 08/04/2023

Site Area: 0.75ha

Recent site history - 2020 aerial photograph



Capture Date: 14/04/2020

Site Area: 0.75ha

Recent site history - 2014 aerial photograph



Capture Date: 23/07/2014

Site Area: 0.75ha

Recent site history - 2010 aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2025. All Rights Reserved.

Capture Date: 22/05/2010

Site Area: 0.75ha

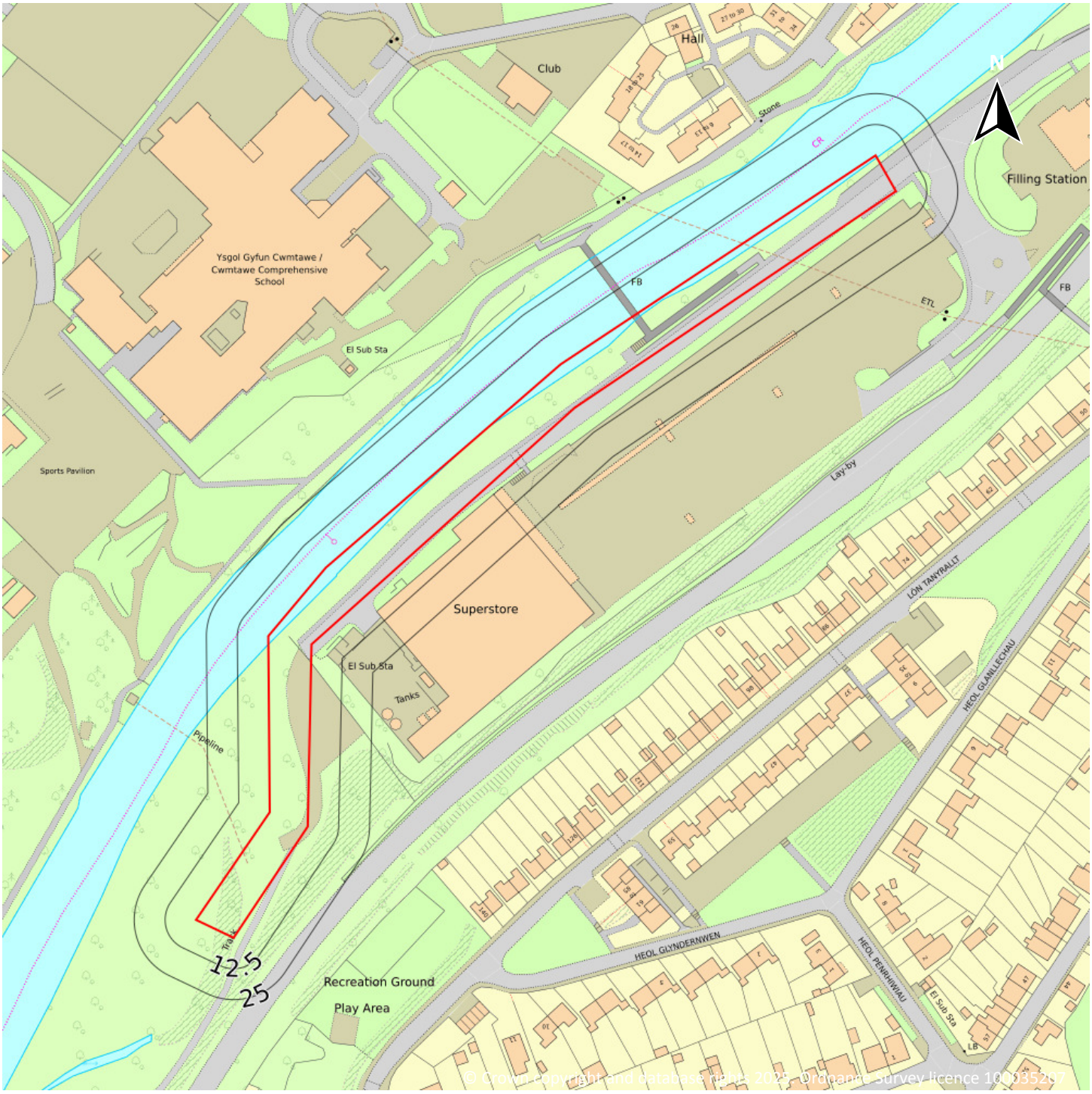
Recent site history - 2000 aerial photograph



Capture Date: 24/08/2000

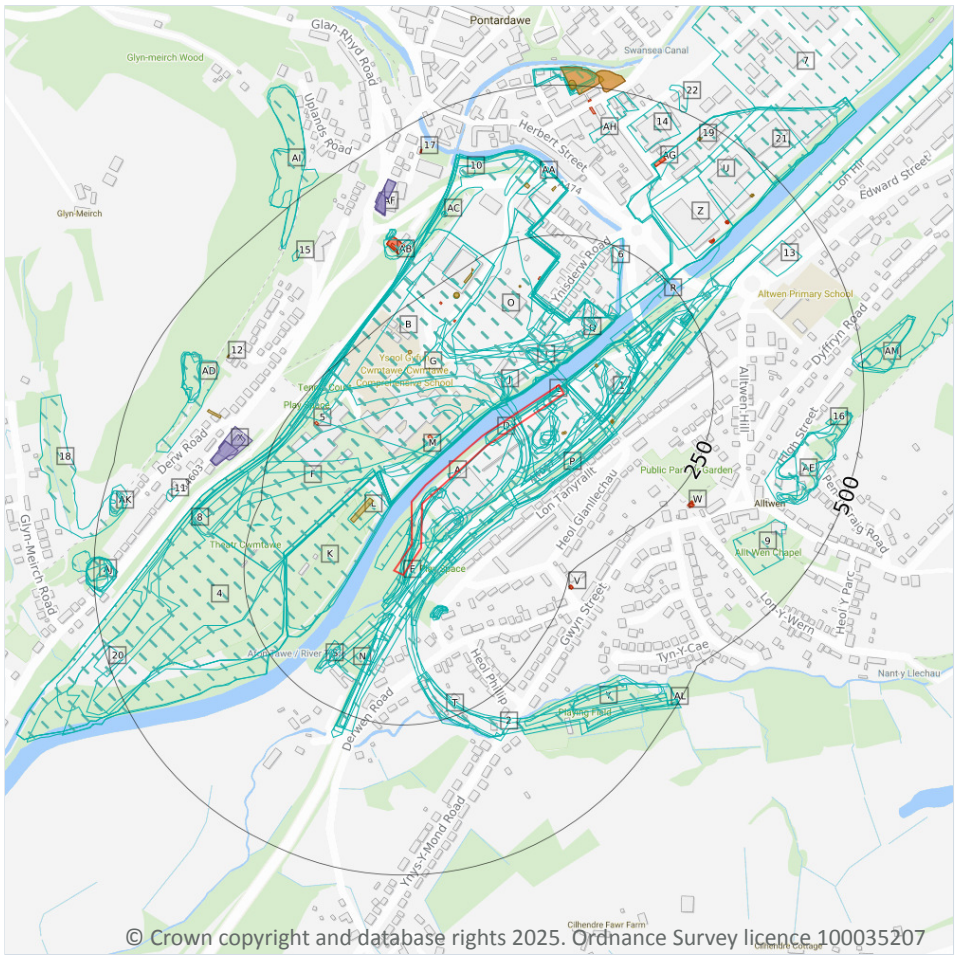
Site Area: 0.75ha

OS MasterMap site plan



Site Area: 0.75ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

1.1 Historical industrial land uses

Records within 500m	193

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 15 >**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Unspecified Disused Level**	**1980**	**268586**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Unspecified Ground Workings**	**1992**	**292825**
A	**On site**	**Refuse Heap**	**1921 - 1948**	**294022**
A	**On site**	**Refuse Heap**	**1913**	**297041**
A	**On site**	**Unspecified Ground Workings**	**1948**	**303185**
A	**On site**	**Refuse Heap**	**1921**	**304805**
A	**On site**	**Unspecified Ground Workings**	**1964**	**316529**
B	**On site**	**Tramway Sidings**	**1877**	**269673**
B	**On site**	**Railway Sidings**	**1913**	**317955**
C	**On site**	**Unspecified Heap**	**1897**	**289495**
C	**On site**	**Coal Level**	**1913**	**290461**
C	**On site**	**Chemical Works**	**1948**	**292560**
C	**On site**	**Chemical Works**	**1897 - 1913**	**298361**
C	**On site**	**Chemical Works**	**1913**	**303384**
C	**On site**	**Coal Level**	**1921**	**309103**
C	**On site**	**Unspecified Heap**	**1948 - 1966**	**319810**
D	**On site**	**Unspecified Heap**	**1992**	**304020**
D	**On site**	**Unspecified Heap**	**1966 - 1980**	**312277**
E	**On site**	**Unspecified Ground Workings**	**1948**	**320596**
C	2m SE	Coal Level	1913	312371
C	7m NE	Railway Sidings	1897	281776
C	7m NE	Chemical Works	1877	295887
A	7m E	Unspecified Pit	1966 - 1980	327444
C	7m SE	Unspecified Ground Workings	1897	326347
C	9m SE	Railway Sidings	1966	291238
C	10m SE	Refuse Heap	1913	319093
C	12m NE	Unspecified Works	1964	271083
1	15m NE	Railway Sidings	1921	297316
C	15m NE	Chemical Works	1921 - 1948	319028

ID	Location	Land use	Dates present	Group ID
A	15m E	Refuse Heap	1964	309898
C	18m SE	Refuse Heap	1913	320021
F	18m NW	Steel and Tin Plate Works	1913	290584
A	18m E	Old Coal Level	1948	297964
G	19m NW	Steel and Tin Plate Works	1948	313072
2	19m SE	Railway Sidings	1897	326287
C	19m SE	Railway Sidings	1964	306740
B	20m NW	Railway Sidings	1913 - 1921	326303
B	20m NW	Steel and Tin Plate Works	1913 - 1921	288306
G	21m NW	Steel and Tin Plate Works	1948	315195
H	21m NW	Railway Sidings	1948	297789
G	21m NW	Unspecified Works	1964 - 1966	281696
G	21m NW	Railway Sidings	1964	288955
G	23m NW	Railway Sidings	1966	294098
A	24m SE	Railway Sidings	1948	282924
B	25m NW	Railway Sidings	1897	285682
H	25m NW	Railway Sidings	1948	321124
I	27m NW	Refuse Heap	1921	301205
I	29m NW	Unspecified Heap	1948	308255
J	29m NW	Unspecified Ground Workings	1913	288402
J	30m NW	Unspecified Heap	1897	273881
J	30m NW	Unspecified Ground Workings	1948	308898
E	31m SE	Railway Sidings	1913	310496
K	32m W	Sewage Works	1913	304916
E	33m SE	Railway Sidings	1948	326907
K	33m W	Sewage Works	1948	299550
C	33m SE	Unspecified Ground Workings	1966	319971
C	35m SE	Refuse Heap	1948	322635

ID	Location	Land use	Dates present	Group ID
K	36m W	Sewage Works	1948	317440
C	37m SE	Refuse Heap	1964	320470
L	38m W	Sewage Works	1921	301361
M	38m NW	Unspecified Ground Workings	1964	261091
I	39m NW	Unspecified Heap	1966	293864
A	43m SE	Unspecified Disused Level	1964	268771
I	48m N	Refuse Heap	1897	295732
E	49m SE	Railway Sidings	1913	283608
A	50m SE	Old Coal Level	1921	318535
A	53m E	Old Coal Level	1913	310895
C	59m NE	Railway Sidings	1948	324338
C	67m SE	Unspecified Ground Workings	1897 - 1913	305139
C	67m SE	Unspecified Ground Workings	1948	329138
N	67m S	Railway Sidings	1948	291342
N	68m S	Railway Sidings	1913	327518
N	68m S	Railway Sidings	1913	296153
O	69m NW	Unspecified Works	1992	295331
E	76m SE	Unspecified Quarry	1964	282274
O	76m NW	Industrial Estate	1980	268083
E	77m SE	Unspecified Quarry	1913	313723
E	78m SE	Unspecified Quarry	1948	305652
E	79m SE	Unspecified Quarry	1948	308551
E	80m SE	Unspecified Quarry	1913	301056
E	82m SE	Unspecified Quarry	1921	314528
P	88m SE	Railway Sidings	1913	304764
P	88m SE	Railway Sidings	1948	323090
Q	89m NE	Unspecified Pit	1913	277487
A	96m SE	Old Coal Level	1948	282317

ID	Location	Land use	Dates present	Group ID
A	96m SE	Old Coal Level	1948	328229
C	99m E	Railway Sidings	1948	314998
C	99m E	Railway Sidings	1913	320493
F	100m NW	Cuttings	1964 - 1966	321970
Q	103m NE	Refuse Heap	1913 - 1921	327707
Q	109m NE	Unspecified Heap	1913	273879
3	110m NW	Steel and Tin Plate Works	1897	290293
N	113m S	Cuttings	1948	265839
R	114m NE	Refuse Heap	1964	269273
C	116m E	Unspecified Heap	1897	273880
C	135m NE	Flour Mill	1877	279511
C	146m NE	Railway Station	1877	281089
S	152m SW	Unspecified Old Quarry	1913 - 1921	297830
S	156m SW	Unspecified Old Quarry	1913	328546
B	160m NW	Tin and Plate Works	1877	270878
C	161m NE	Goods Shed	1964 - 1966	315361
C	163m NE	Goods Shed	1913 - 1921	304195
C	165m NE	Goods Shed	1948	325210
C	166m NE	Goods Shed	1913	294112
C	166m NE	Goods Shed	1948	302448
T	166m S	Railway Sidings	1913	289638
S	166m SW	Unspecified Ground Workings	1948	261726
U	177m NE	Railway Sidings	1964	308530
T	178m S	Railway Sidings	1913	289124
4	180m W	Refuse Heap	1948 - 1966	300396
C	182m E	Railway Building	1897	280106
T	193m S	Unspecified Ground Workings	1948	261727
6	210m NE	Unspecified Heap	1897	273803

ID	Location	Land use	Dates present	Group ID
B	214m NW	Chimney	1966	279884
B	223m NW	Electric Substation	1992	276308
C	227m NE	Railway Station	1964	309004
C	228m NE	Railway Station	1948	284968
C	228m NE	Railway Station	1913 - 1948	305040
C	230m NE	Railway Building	1966	280105
C	236m NE	Railway Station	1897	325321
R	238m NE	Smithy	1877	278595
U	251m NE	Unspecified Mills	1964	272873
U	254m NE	Sheet Mills	1948	312879
U	255m NE	Railway Sidings	1948	289864
C	281m NE	Railway Building	1964 - 1966	295627
U	301m NE	Railway Sidings	1948	297315
Y	309m SE	Railway Sidings	1913	312178
7	311m NE	Industrial Estate	1980 - 1992	326414
Z	311m NE	Unspecified Works	1980	271068
Y	316m SE	Railway Sidings	1913	326697
AA	323m N	Refuse Heap	1913	269242
AB	324m NW	Unspecified Ground Workings	1948 - 1964	290228
AB	328m NW	Unspecified Heap	1948	317217
AC	338m NW	Chimney	1966	279881
8	339m W	Coal Level	1913	279834
AC	342m NW	Lime Kiln	1877	275472
AA	346m N	Unspecified Pit	1964	277382
Y	355m SE	Unspecified Heap	1966	273882
Y	356m SE	Unspecified Ground Workings	1980	261728
AB	358m NW	Unspecified Pit	1948	321320
AB	359m NW	Unspecified Pit	1948	289923

ID	Location	Land use	Dates present	Group ID
AB	361m NW	Unspecified Pit	1964	310384
AE	365m SE	Unspecified Quarry	1897 - 1913	298778
9	373m SE	Burial Ground	1877	281410
AE	375m E	Unspecified Ground Workings	1964 - 1992	286072
10	378m N	Unspecified Heap	1913	273855
AE	380m E	Unspecified Quarry	1913 - 1921	292063
AE	380m E	Unspecified Quarry	1948	313687
AE	380m E	Unspecified Heap	1948	293951
11	381m W	Unspecified Quarry	1897	263770
AD	384m NW	Unspecified Quarry	1948	298386
13	392m NE	Smithy	1877	278568
Y	393m SE	Railway Sidings	1913	327537
U	393m NE	Unspecified Factory	1980	270157
AD	396m NW	Unspecified Quarry	1921 - 1948	327416
AD	398m NW	Unspecified Quarry	1913	322090
AD	400m NW	Unspecified Quarry	1913	297940
AH	408m N	Fire Station	1966	270455
14	414m N	Bus Depot	1966	265556
15	424m NW	Unspecified Pit	1980 - 1992	321598
16	439m E	Pumping House	1980 - 1992	284312
AH	451m N	Printing Works	1913 - 1921	302521
AI	451m NW	Unspecified Ground Workings	1964 - 1992	307693
AI	456m NW	Unspecified Old Quarry	1948	317749
18	458m W	Unspecified Quarry	1948	298905
AJ	460m W	Unspecified Quarry	1913 - 1921	286256
AK	462m W	Unspecified Quarry	1921	295357
AK	464m W	Unspecified Quarry	1913	307510
AJ	464m W	Unspecified Quarry	1913	326633

ID	Location	Land use	Dates present	Group ID
AK	465m W	Unspecified Quarry	1913	319774
AJ	467m W	Unspecified Quarry	1948	292323
AJ	467m W	Unspecified Quarry	1948	299040
AH	471m N	Printing Works	1913	265694
20	472m W	Gas Valve Compound	1992	279460
AJ	477m W	Unspecified Pit	1897	305187
AJ	478m W	Unspecified Pit	1964	287610
AJ	480m W	Unspecified Pit	1966 - 1992	313686
AL	482m SE	Railway Building	1913	307895
AL	482m SE	Railway Building	1897 - 1913	318782
AH	483m N	Gas Works	1913 - 1921	300140
AM	483m E	Unspecified Quarry	1921	313098
AM	484m E	Unspecified Quarry	1948	305138
AH	486m N	Gasometer	1921	302886
AH	487m N	Gas Works	1948	308763
21	490m NE	Unspecified Works	1980	271069
AH	491m N	Gasometer	1948	326250
AH	491m N	Gas Works	1913	324017
AH	491m N	Gas Works	1948	312193
AM	493m E	Unspecified Quarry	1913	316270
AH	494m N	Gasometer	1913	296685
AH	495m N	Gas Works	1877	291690
22	499m NE	Refuse Heap	1948	325399
AM	499m E	Unspecified Pit	1964 - 1966	287260

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	23

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 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 15 >**

ID	Location	Land use	Dates present	Group ID
C	52m SE	Unspecified Tank	1919	37182
C	53m SE	Unspecified Tank	1877	37228
L	63m W	Tanks	1941	35886
C	68m NE	Unspecified Tank	1942	34433
C	90m SE	Unspecified Tank	1964	34427
C	91m SE	Unspecified Tank	-	34280
C	92m SE	Unspecified Tank	1919 - 1942	37538
O	175m N	Unspecified Tank	-	34282
B	182m NW	Unspecified Tank	1877	34428
B	214m NW	Unspecified Tank	1964	34426
B	215m NW	Unspecified Tank	-	34279
B	228m NW	Unspecified Tank	1941	34429
B	238m NW	Unspecified Tank	1942	34297
AA	323m N	Unspecified Tank	1942	34432
AA	332m N	Unspecified Tank	1942	34431
AD	348m NW	Tanks	1881	35937
12	389m NW	Unspecified Tank	1881	34571
U	448m NE	Unspecified Tank	1972 - 1984	36843
U	449m NE	Unspecified Tank	-	34281
19	469m NE	Unspecified Tank	1942	35091
AH	485m N	Gas Works	1878 - 1898	37950

ID	Location	Land use	Dates present	Group ID
AH	494m N	Unspecified Tank	1942 - 1965	37648
AH	495m N	Gasholder Station	1973	36225

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	**32**

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 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 15 >**

ID	Location	Land use	Dates present	Group ID
M	52m NW	Electricity Substation	1998	18735
O	177m N	Electricity Substation	1984 - 1989	19660
B	183m NW	Electricity Substation	1998	18981
5	202m NW	Electricity Substation	1998	18733
B	221m NW	Electricity Substation	1998	18982
V	254m E	Electricity Substation	1988 - 1998	19745
V	256m E	Electricity Substation	1989	20100
W	277m SE	Electricity Substation	1984 - 1989	19170
W	277m SE	Electricity Substation	1989	19405
W	279m SE	Electricity Substation	-	18669
W	280m SE	Electricity Substation	1994 - 1998	19283
AB	329m NW	Electricity Substation	1989 - 1998	20313
AB	329m NW	Electricity Substation	-	18677
AB	332m NW	Electricity Substation	1972	20146
AB	338m NW	Electricity Substation	1984 - 1989	19560
Z	346m NE	Electricity Substation	1984 - 1989	20280

ID	Location	Land use	Dates present	Group ID
Z	348m NE	Electricity Substation	-	18676
Z	351m NE	Electricity Substation	1994 - 1998	19453
Z	352m NE	Electricity Substation	1989	19649
Z	388m NE	Electricity Substation	1988	19855
Z	388m NE	Electricity Substation	1989	20120
Z	389m NE	Electricity Substation	1998	19530
Z	389m NE	Electricity Substation	1994	19843
Z	390m NE	Electricity Substation	1989	19967
AG	399m NE	Electricity Substation	1998	19206
AG	399m NE	Electricity Substation	1984 - 1994	20231
AG	407m NE	Electricity Substation	1989	19532
17	450m NW	Electricity Substation	1998	18983
AH	455m N	Electricity Substation	1989	20076
AH	475m N	Electricity Substation	1993 - 1994	19315
AH	485m N	Gas Works	1878 - 1898	20062
AH	495m N	Gasholder Station	1973	19099

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 un-grouped 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	8

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 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 15 >**

ID	Location	Land use	Dates present	Group ID
X	284m W	Garage	1989 - 1998	6618
X	296m W	Garage	1984	6991
X	301m W	Garage	1962	7181
AF	396m NW	Garage	1998	6828
AF	396m NW	Garage	1989	6788
AF	396m NW	Garage	1984	6844
AF	399m NW	Garage	1962 - 1964	6644
AF	416m NW	Garage	1972	6525

This data is sourced from Ordnance Survey / Groundsure.

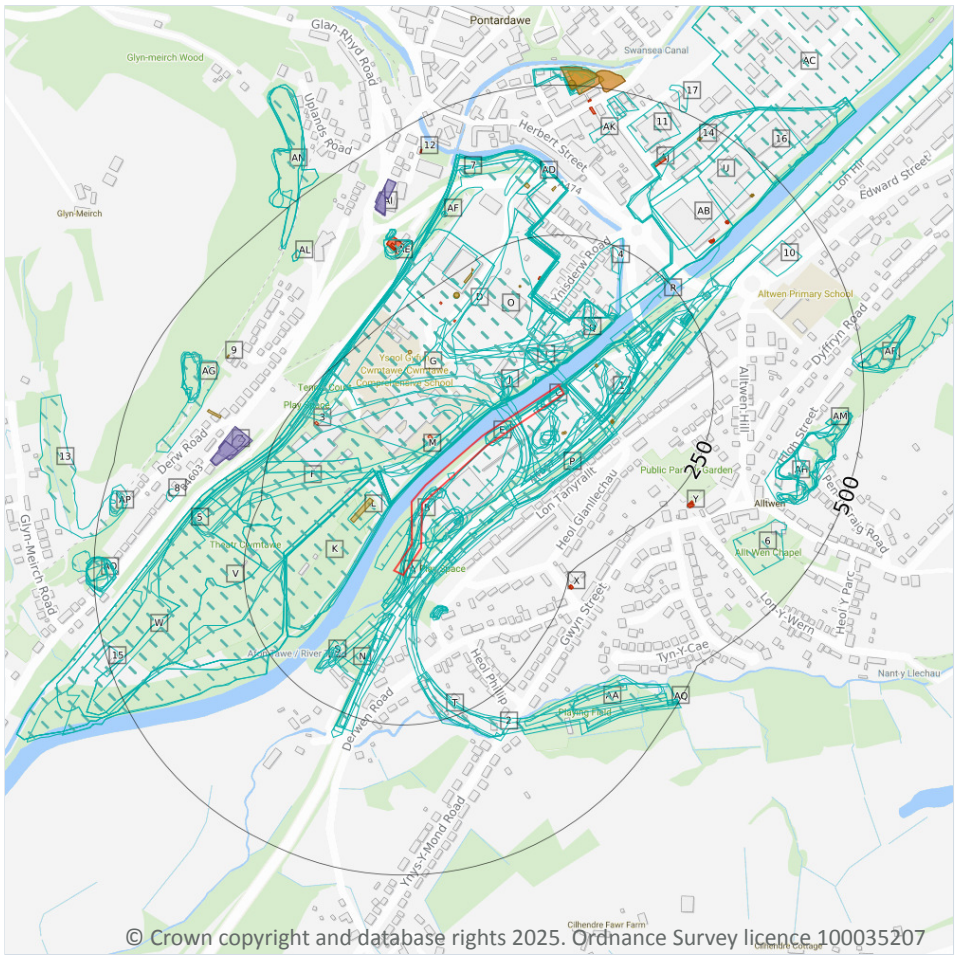
1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped



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Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

2.1 Historical industrial land uses

Records within 500m	251

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 27 >**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Unspecified Ground Workings**	**1948**	**320596**
B	**On site**	**Refuse Heap**	**1948**	**294022**
B	**On site**	**Refuse Heap**	**1913**	**297041**

ID	Location	Land Use	Date	Group ID
B	**On site**	**Unspecified Disused Level**	**1980**	**268586**
B	**On site**	**Unspecified Ground Workings**	**1992**	**292825**
B	**On site**	**Refuse Heap**	**1921**	**304805**
B	**On site**	**Refuse Heap**	**1921**	**294022**
B	**On site**	**Unspecified Ground Workings**	**1964**	**316529**
B	**On site**	**Unspecified Ground Workings**	**1948**	**303185**
B	**On site**	**Unspecified Ground Workings**	**1948**	**303185**
C	**On site**	**Coal Level**	**1913**	**290461**
C	**On site**	**Unspecified Heap**	**1897**	**289495**
C	**On site**	**Chemical Works**	**1948**	**292560**
C	**On site**	**Chemical Works**	**1913**	**298361**
C	**On site**	**Chemical Works**	**1897**	**298361**
C	**On site**	**Chemical Works**	**1913**	**303384**
C	**On site**	**Unspecified Heap**	**1966**	**319810**
C	**On site**	**Coal Level**	**1921**	**309103**
C	**On site**	**Unspecified Heap**	**1964**	**319810**
C	**On site**	**Unspecified Heap**	**1948**	**319810**
C	**On site**	**Unspecified Heap**	**1948**	**319810**
D	**On site**	**Railway Sidings**	**1913**	**317955**
D	**On site**	**Tramway Sidings**	**1877**	**269673**
E	**On site**	**Unspecified Heap**	**1980**	**312277**
E	**On site**	**Unspecified Heap**	**1992**	**304020**
E	**On site**	**Unspecified Heap**	**1966**	**312277**
C	2m SE	Coal Level	1913	312371
C	7m NE	Railway Sidings	1897	281776
C	7m NE	Chemical Works	1877	295887
B	7m E	Unspecified Pit	1980	327444
B	7m E	Unspecified Pit	1966	327444

ID	Location	Land Use	Date	Group ID
C	7m SE	Unspecified Ground Workings	1897	326347
C	9m SE	Railway Sidings	1966	291238
C	10m SE	Refuse Heap	1913	319093
C	12m NE	Unspecified Works	1964	271083
1	15m NE	Railway Sidings	1921	297316
C	15m NE	Chemical Works	1921	319028
B	15m E	Refuse Heap	1964	309898
C	16m NE	Chemical Works	1948	319028
C	18m SE	Refuse Heap	1913	320021
F	18m NW	Steel and Tin Plate Works	1913	290584
B	18m E	Old Coal Level	1948	297964
G	19m NW	Steel and Tin Plate Works	1948	313072
2	19m SE	Railway Sidings	1897	326287
C	19m SE	Railway Sidings	1964	306740
D	20m NW	Railway Sidings	1913	326303
D	20m NW	Steel and Tin Plate Works	1913	288306
D	21m NW	Railway Sidings	1921	326303
D	21m NW	Steel and Tin Plate Works	1921	288306
G	21m NW	Steel and Tin Plate Works	1948	315195
H	21m NW	Railway Sidings	1948	297789
G	21m NW	Unspecified Works	1964	281696
G	21m NW	Railway Sidings	1964	288955
G	23m NW	Railway Sidings	1966	294098
G	23m NW	Unspecified Works	1966	281696
B	24m SE	Railway Sidings	1948	282924
D	25m NW	Railway Sidings	1897	285682
H	25m NW	Railway Sidings	1948	321124
I	27m NW	Refuse Heap	1921	301205

ID	Location	Land Use	Date	Group ID
I	29m NW	Unspecified Heap	1948	308255
I	29m NW	Unspecified Heap	1948	308255
J	29m NW	Unspecified Ground Workings	1913	288402
J	30m NW	Unspecified Heap	1897	273881
J	30m NW	Unspecified Ground Workings	1948	308898
J	30m NW	Unspecified Ground Workings	1948	308898
A	31m SE	Railway Sidings	1913	310496
K	32m W	Sewage Works	1913	304916
A	33m SE	Railway Sidings	1948	326907
K	33m W	Sewage Works	1948	299550
C	33m SE	Unspecified Ground Workings	1966	319971
K	34m W	Sewage Works	1913	304916
C	35m SE	Refuse Heap	1948	322635
C	35m SE	Refuse Heap	1948	322635
K	36m W	Sewage Works	1948	317440
K	36m W	Sewage Works	1948	317440
C	37m SE	Refuse Heap	1964	320470
L	38m W	Sewage Works	1921	301361
M	38m NW	Unspecified Ground Workings	1964	261091
I	39m NW	Unspecified Heap	1966	293864
B	43m SE	Unspecified Disused Level	1964	268771
I	48m N	Refuse Heap	1897	295732
A	49m SE	Railway Sidings	1913	283608
B	50m SE	Old Coal Level	1921	318535
B	53m E	Old Coal Level	1913	310895
B	55m E	Old Coal Level	1913	310895
C	59m NE	Railway Sidings	1948	324338
C	67m SE	Unspecified Ground Workings	1948	329138

ID	Location	Land Use	Date	Group ID
C	67m SE	Unspecified Ground Workings	1913	305139
C	67m SE	Unspecified Ground Workings	1897	305139
N	67m S	Railway Sidings	1948	291342
N	68m S	Railway Sidings	1913	327518
N	68m S	Railway Sidings	1913	296153
O	69m NW	Unspecified Works	1992	295331
A	76m SE	Unspecified Quarry	1964	282274
O	76m NW	Industrial Estate	1980	268083
A	77m SE	Unspecified Quarry	1913	313723
A	78m SE	Unspecified Quarry	1948	305652
A	79m SE	Unspecified Quarry	1948	308551
A	80m SE	Unspecified Quarry	1913	301056
A	82m SE	Unspecified Quarry	1921	314528
P	88m SE	Railway Sidings	1948	323090
P	88m SE	Railway Sidings	1913	304764
Q	89m NE	Unspecified Pit	1913	277487
B	96m SE	Old Coal Level	1948	282317
B	96m SE	Old Coal Level	1948	328229
C	99m E	Railway Sidings	1948	314998
C	99m E	Railway Sidings	1913	320493
F	100m NW	Cuttings	1966	321970
F	100m NW	Cuttings	1964	321970
Q	103m NE	Refuse Heap	1921	327707
Q	109m NE	Unspecified Heap	1913	273879
Q	109m NE	Refuse Heap	1913	327707
D	110m NW	Steel and Tin Plate Works	1897	290293
N	113m S	Cuttings	1948	265839
R	114m NE	Refuse Heap	1964	269273

ID	Location	Land Use	Date	Group ID
C	116m E	Unspecified Heap	1897	273880
C	135m NE	Flour Mill	1877	279511
C	146m NE	Railway Station	1877	281089
S	152m SW	Unspecified Old Quarry	1913	297830
S	156m SW	Unspecified Old Quarry	1913	328546
S	159m SW	Unspecified Old Quarry	1921	297830
D	160m NW	Tin and Plate Works	1877	270878
C	161m NE	Goods Shed	1966	315361
C	161m NE	Goods Shed	1964	315361
C	163m NE	Goods Shed	1921	304195
C	165m NE	Goods Shed	1948	325210
C	166m NE	Goods Shed	1948	302448
C	166m NE	Goods Shed	1913	294112
T	166m S	Railway Sidings	1913	289638
C	166m NE	Goods Shed	1913	304195
S	166m SW	Unspecified Ground Workings	1948	261726
U	177m NE	Railway Sidings	1964	308530
T	178m S	Railway Sidings	1913	289124
V	180m W	Refuse Heap	1948	300396
V	180m W	Refuse Heap	1948	300396
C	182m E	Railway Building	1897	280106
T	193m S	Unspecified Ground Workings	1948	261727
W	207m NW	Refuse Heap	1966	300396
W	207m NW	Refuse Heap	1964	300396
4	210m NE	Unspecified Heap	1897	273803
D	214m NW	Chimney	1966	279884
D	223m NW	Electric Substation	1992	276308
C	227m NE	Railway Station	1964	309004

ID	Location	Land Use	Date	Group ID
C	228m NE	Railway Station	1948	284968
C	228m NE	Railway Station	1921	305040
C	230m NE	Railway Building	1966	280105
C	231m NE	Railway Station	1948	305040
C	231m NE	Railway Station	1913	305040
C	236m NE	Railway Station	1897	325321
R	238m NE	Smithy	1877	278595
U	251m NE	Unspecified Mills	1964	272873
U	254m NE	Sheet Mills	1948	312879
U	255m NE	Railway Sidings	1948	289864
U	255m NE	Sheet Mills	1948	312879
C	281m NE	Railway Building	1966	295627
C	281m NE	Railway Building	1964	295627
U	301m NE	Railway Sidings	1948	297315
AA	309m SE	Railway Sidings	1913	312178
AB	311m NE	Unspecified Works	1980	271068
AC	311m NE	Industrial Estate	1980	326414
AC	311m NE	Industrial Estate	1992	326414
AA	316m SE	Railway Sidings	1913	326697
AD	323m N	Refuse Heap	1913	269242
AE	324m NW	Unspecified Ground Workings	1948	290228
AE	328m NW	Unspecified Ground Workings	1964	290228
AE	328m NW	Unspecified Heap	1948	317217
AE	328m NW	Unspecified Heap	1948	317217
AF	338m NW	Chimney	1966	279881
5	339m W	Coal Level	1913	279834
AF	342m NW	Lime Kiln	1877	275472
AD	346m N	Unspecified Pit	1964	277382

ID	Location	Land Use	Date	Group ID
AA	355m SE	Unspecified Heap	1966	273882
AA	356m SE	Unspecified Ground Workings	1980	261728
AE	358m NW	Unspecified Pit	1948	321320
AE	359m NW	Unspecified Pit	1948	289923
AE	359m NW	Unspecified Pit	1948	289923
AE	361m NW	Unspecified Pit	1964	310384
AH	365m SE	Unspecified Quarry	1897	298778
6	373m SE	Burial Ground	1877	281410
AH	375m E	Unspecified Ground Workings	1980	286072
AH	375m E	Unspecified Ground Workings	1992	286072
AH	375m E	Unspecified Ground Workings	1966	286072
AH	375m E	Unspecified Ground Workings	1964	286072
7	378m N	Unspecified Heap	1913	273855
AH	380m E	Unspecified Quarry	1948	313687
AH	380m E	Unspecified Quarry	1913	292063
AH	380m E	Unspecified Heap	1948	293951
AH	380m E	Unspecified Heap	1948	293951
AH	381m E	Unspecified Quarry	1913	298778
8	381m W	Unspecified Quarry	1897	263770
AG	384m NW	Unspecified Quarry	1948	298386
AH	392m SE	Unspecified Quarry	1948	313687
10	392m NE	Smithy	1877	278568
AA	393m SE	Railway Sidings	1913	327537
U	393m NE	Unspecified Factory	1980	270157
AG	396m NW	Unspecified Quarry	1921	327416
AG	398m NW	Unspecified Quarry	1913	322090
AG	398m NW	Unspecified Quarry	1948	327416
AG	400m NW	Unspecified Quarry	1913	297940

ID	Location	Land Use	Date	Group ID
AH	401m E	Unspecified Quarry	1921	292063
AK	408m N	Fire Station	1966	270455
11	414m N	Bus Depot	1966	265556
AL	424m NW	Unspecified Pit	1980	321598
AL	424m NW	Unspecified Pit	1992	321598
AM	439m E	Pumping House	1980	284312
AM	439m E	Pumping House	1992	284312
AK	451m N	Printing Works	1921	302521
AN	451m NW	Unspecified Ground Workings	1966	307693
AN	451m NW	Unspecified Ground Workings	1964	307693
AN	456m NW	Unspecified Old Quarry	1948	317749
13	458m W	Unspecified Quarry	1948	298905
AK	459m N	Printing Works	1913	302521
AO	460m W	Unspecified Quarry	1913	286256
AP	462m W	Unspecified Quarry	1921	295357
AO	463m W	Unspecified Quarry	1921	286256
AP	464m W	Unspecified Quarry	1913	307510
AO	464m W	Unspecified Quarry	1913	326633
AP	465m W	Unspecified Quarry	1913	319774
AO	467m W	Unspecified Quarry	1948	292323
AO	467m W	Unspecified Quarry	1948	299040
AK	471m N	Printing Works	1913	265694
15	472m W	Gas Valve Compound	1992	279460
AO	477m W	Unspecified Pit	1897	305187
AO	478m W	Unspecified Pit	1964	287610
AO	480m W	Unspecified Pit	1980	313686
AO	480m W	Unspecified Pit	1992	313686
AO	480m W	Unspecified Pit	1966	313686

ID	Location	Land Use	Date	Group ID
AQ	482m SE	Railway Building	1913	307895
AQ	482m SE	Railway Building	1897	318782
AK	483m N	Gas Works	1921	300140
AR	483m E	Unspecified Quarry	1921	313098
AR	484m E	Unspecified Quarry	1948	305138
AQ	485m SE	Railway Building	1913	318782
AK	486m N	Gasometer	1921	302886
AK	487m N	Gas Works	1948	308763
16	490m NE	Unspecified Works	1980	271069
AK	491m N	Gasometer	1948	326250
AK	491m N	Gas Works	1913	300140
AK	491m N	Gas Works	1913	324017
AK	491m N	Gas Works	1948	312193
AR	493m E	Unspecified Quarry	1948	305138
AR	493m E	Unspecified Quarry	1913	316270
AR	493m E	Unspecified Quarry	1913	316270
AK	494m N	Gasometer	1948	326250
AK	494m N	Gasometer	1913	296685
AK	494m N	Gasometer	1913	296685
AK	495m N	Gas Works	1877	291690
AN	497m NW	Unspecified Ground Workings	1980	307693
AN	497m NW	Unspecified Ground Workings	1992	307693
17	499m NE	Refuse Heap	1948	325399
AR	499m E	Unspecified Pit	1966	287260

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	27

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 27 >**

ID	Location	Land Use	Date	Group ID
C	52m SE	Unspecified Tank	1919	37182
C	53m SE	Unspecified Tank	1877	37228
L	63m W	Tanks	1941	35886
C	68m NE	Unspecified Tank	1942	34433
C	90m SE	Unspecified Tank	1964	34427
C	91m SE	Unspecified Tank	-	34280
C	92m SE	Unspecified Tank	1919	37538
C	92m SE	Unspecified Tank	1942	37538
O	175m N	Unspecified Tank	-	34282
D	182m NW	Unspecified Tank	1877	34428
D	214m NW	Unspecified Tank	1964	34426
D	215m NW	Unspecified Tank	-	34279
D	228m NW	Unspecified Tank	1941	34429
D	238m NW	Unspecified Tank	1942	34297
AD	323m N	Unspecified Tank	1942	34432
AD	332m N	Unspecified Tank	1942	34431
AG	348m NW	Tanks	1881	35937
9	389m NW	Unspecified Tank	1881	34571
U	448m NE	Unspecified Tank	1984	36843
U	449m NE	Unspecified Tank	1972	36843
U	449m NE	Unspecified Tank	-	34281
14	469m NE	Unspecified Tank	1942	35091
AK	485m N	Gas Works	1878	37950

ID	Location	Land Use	Date	Group ID
AK	492m N	Gas Works	1898	37950
AK	494m N	Unspecified Tank	1942	37648
AK	495m N	Gasholder Station	1973	36225
AK	498m N	Unspecified Tank	1965	37648

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m **54**

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

Features are displayed on the Past land use - un-grouped map on **page 27 >**

ID	Location	Land Use	Date	Group ID
M	52m NW	Electricity Substation	1998	18735
O	177m N	Electricity Substation	1989	19660
O	177m N	Electricity Substation	1984	19660
O	177m N	Electricity Substation	1988	19660
O	177m N	Electricity Substation	1989	19660
D	183m NW	Electricity Substation	1998	18981
3	202m NW	Electricity Substation	1998	18733
D	221m NW	Electricity Substation	1998	18982
X	254m E	Electricity Substation	1988	19745
X	254m E	Electricity Substation	1989	19745
X	256m E	Electricity Substation	1989	20100
X	256m E	Electricity Substation	1994	19745
X	256m E	Electricity Substation	1998	19745
Y	277m SE	Electricity Substation	1984	19170
Y	277m SE	Electricity Substation	1988	19170
Y	277m SE	Electricity Substation	1989	19170

ID	Location	Land Use	Date	Group ID
Y	277m SE	Electricity Substation	1989	19405
Y	279m SE	Electricity Substation	-	18669
Y	280m SE	Electricity Substation	1994	19283
Y	280m SE	Electricity Substation	1998	19283
AE	329m NW	Electricity Substation	1994	20313
AE	329m NW	Electricity Substation	1998	20313
AE	329m NW	Electricity Substation	-	18677
AE	332m NW	Electricity Substation	1972	20146
AE	332m NW	Electricity Substation	1989	20313
AE	338m NW	Electricity Substation	1984	19560
AE	338m NW	Electricity Substation	1988	19560
AE	338m NW	Electricity Substation	1989	19560
AB	346m NE	Electricity Substation	1984	20280
AB	346m NE	Electricity Substation	1988	20280
AB	346m NE	Electricity Substation	1989	20280
AB	348m NE	Electricity Substation	-	18676
AB	351m NE	Electricity Substation	1994	19453
AB	351m NE	Electricity Substation	1998	19453
AB	352m NE	Electricity Substation	1989	19649
AB	388m NE	Electricity Substation	1988	19855
AB	388m NE	Electricity Substation	1989	20120
AB	389m NE	Electricity Substation	1994	19843
AB	389m NE	Electricity Substation	1998	19530
AB	390m NE	Electricity Substation	1989	19967
AJ	399m NE	Electricity Substation	1994	20231
AJ	399m NE	Electricity Substation	1998	19206
AJ	407m NE	Electricity Substation	1984	20231
AJ	407m NE	Electricity Substation	1988	20231

ID	Location	Land Use	Date	Group ID
AJ	407m NE	Electricity Substation	1989	20231
AJ	407m NE	Electricity Substation	1989	19532
12	450m NW	Electricity Substation	1998	18983
AK	455m N	Electricity Substation	1989	20076
AK	455m N	Electricity Substation	1989	20076
AK	475m N	Electricity Substation	1994	19315
AK	475m N	Electricity Substation	1993	19315
AK	485m N	Gas Works	1878	20062
AK	492m N	Gas Works	1898	20062
AK	495m N	Gasholder Station	1973	19099

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	**10**

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

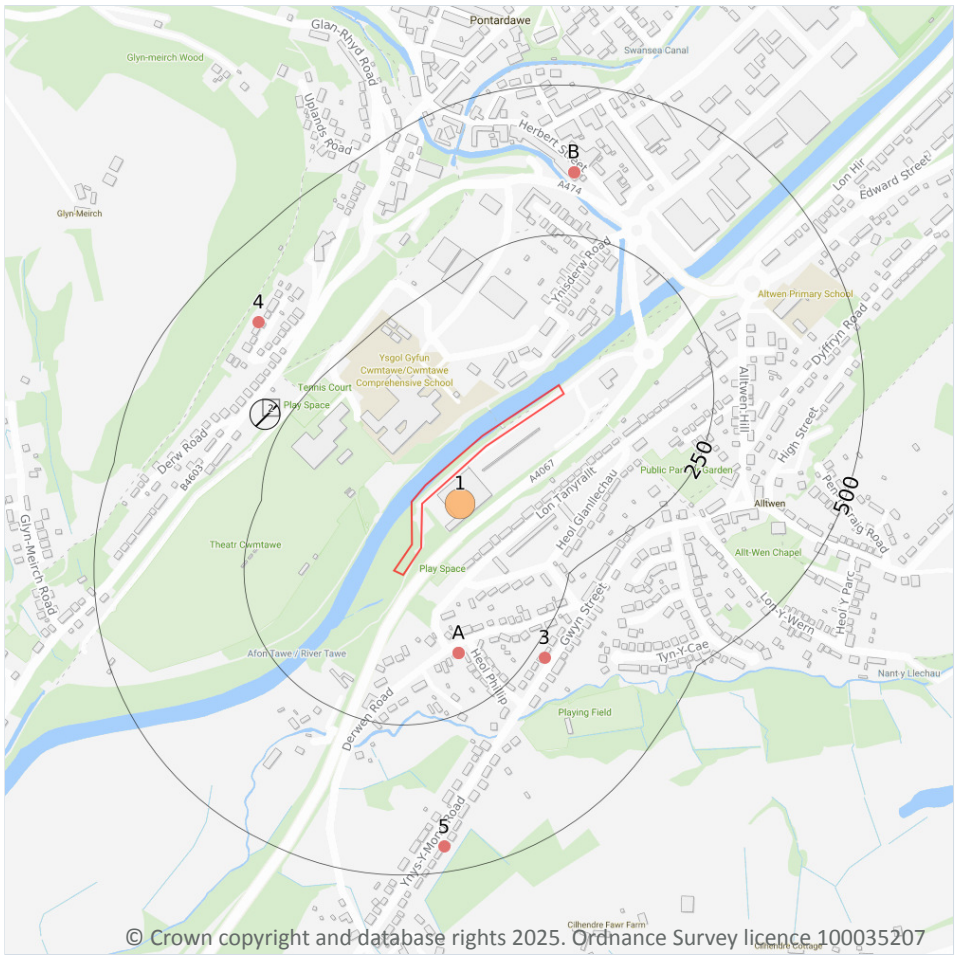
Features are displayed on the Past land use - un-grouped map on **page 27 >**

ID	Location	Land Use	Date	Group ID
Z	284m W	Garage	1998	6618
Z	287m W	Garage	1989	6618
Z	296m W	Garage	1984	6991

ID	Location	Land Use	Date	Group ID
Z	301m W	Garage	1962	7181
AI	396m NW	Garage	1998	6828
AI	396m NW	Garage	1989	6788
AI	396m NW	Garage	1984	6844
AI	399m NW	Garage	1962	6644
AI	416m NW	Garage	1964	6644
AI	416m NW	Garage	1972	6525

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



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Site Outline

Search buffers in metres (m)

Historical landfill (EA/NRW)

Historical waste sites

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	1

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

Features are displayed on the Waste and landfill map on **page 42 >**

ID	Location	Details		
2	259m NW	Site Address: Danygraig House, Trebanos Licence Holder Address: -	Waste Licence: Yes Site Reference: 1/84 Waste Type: Inert, Industrial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 31/12/1984 Licence Surrender: -	Operator: - Licence Holder: W H Edwards First Recorded 23/03/1984 Last Recorded: 30/06/1986

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

3.5 Historical waste sites

Records within 500m	1

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

Features are displayed on the Waste and landfill map on **page 42 >**

ID	Location	Address	Further Details	Date
1	17m SE	Site Address: River Tawe Rear Of Tesco Super, From Glais To Pontardawe, Swansea, West Glamorgan, SA8 3AZ	Type of Site: Sewer Treatment Works Planning application reference: P2013/0046 Description: Scheme comprises installation of above ground sewer connecting to pipe bridge across river. Data source: Historic Planning Application Data Type: Point	29/08/2013

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	13

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

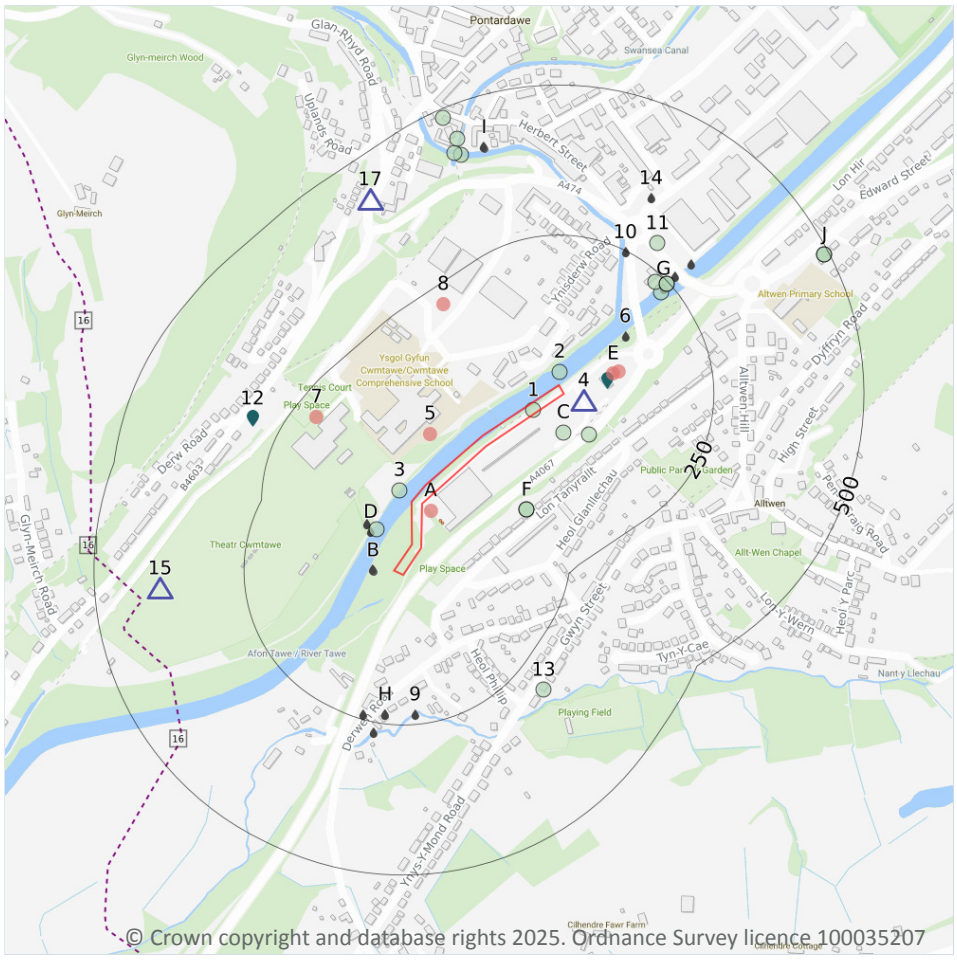
Features are displayed on the Waste and landfill map on **page 42 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	160m SE	Whispering Willows Sanctuary, Alltwen Isaf Farm, Sa83au	NRW-WME044432	Using waste exemption	On a farm	Use of waste in construction
A	160m SE	Llechau Farm, Derwen Road, Alltwen, Pontardawe, Abertawe, Sa83au	NRW-WME014096	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
A	160m SE	Llechau Farm, Derwen Road, Alltwen, Pontardawe, Abertawe, Sa83au	NRW-WME014096	Disposing of waste exemption	On a farm	Burning waste in the open
A	160m SE	Llechau Farm, Derwen Road, Alltwen, Pontardawe, Abertawe, Sa83au	NRW-WME014096	Using waste exemption	On a farm	Use of waste for a specified purpose
A	160m SE	Llechau Farm, Derwen Road, Alltwen, Pontardawe, Abertawe, Sa83au	NRW-WME014096	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
A	160m SE	Llechau Farm, Derwen Road, Alltwen, Pontardawe, Abertawe, Sa83au	NRW-WME014096	Using waste exemption	On a farm	Use of waste in construction
A	160m SE	Llechau Farm, Derwen Road, Alltwen, Pontardawe, Abertawe, Sa83au	NRW-WME014096	Treating waste exemption	On a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising

ID	Location	Site	Reference	Category	Sub-Category	Description
3	272m SE	Plot Adj To: 74 Gwyn Street, Pontardawe, Swansea, Castell-Nedd Port Talbot, Sa8 3an	NRW-WME001332	Using waste exemption	Waste exemption - non-agricultural	Use of waste in construction
B	355m N	Rico Logistics, A & M Transport, 73 Herbert Street, Pontardawe, Swansea, Sa84ed	NRW-WME024370	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	355m N	Rico Logistics, Phil Thomas Opticians, 73 Herbert Street, Pontardawe, Swansea, Castell-Nedd Port Talbot, Sa8 4ed	NRW-WME053380	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	355m N	A & M Transport, 73 Herbert Street, Pontardawe, Swansea, Sa8 4ed	NRW-WME073793	Storing waste exemption	Not on a farm	Storage of waste in a secure place
4	389m NW	45 Western Road, Pontardawe, Swansea, Castell-Nedd Port Talbot, Sa8 4aj	NRW-WME074169	Using waste exemption	Not on a farm	Use of waste in construction
5	459m S	33a Ynys Y Mond Road, Alltwen, Pontardawe, Swansea, Castell-Nedd Port Talbot, Sa83ba	NRW-WME032962	Using waste exemption	Not on a farm	Use of waste in construction

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

NGD current or recent tanks

Current or recent petrol stations

Gas pipelines

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

Licensed Discharges to controlled waters

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	6

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 46 >**

ID	Location	Company	Address	Activity	Category
A	15m E	Electricity Sub Station	West Glamorgan, SA8	Electrical Features	Infrastructure and Facilities
5	60m NW	Electricity Sub Station	West Glamorgan, SA8	Electrical Features	Infrastructure and Facilities

ID	Location	Company	Address	Activity	Category
E	89m E	Tesco Petrol Filling Station	Alltwen, Pontardawe, West Glamorgan, SA8 3AZ	Petrol and Fuel Stations	Road and Rail
E	98m E	Tesco Pontardawe	Gwyns Dryft, Pontadawe, Neath, West Glamorgan, SA8	Vehicle Cleaning Services	Personal, Consumer and Other Services
7	212m NW	Electricity Sub Station	West Glamorgan, SA8	Electrical Features	Infrastructure and Facilities
8	219m NW	Electricity Sub Station	West Glamorgan, SA8	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 National Geographic Database (NGD) - Current or recent tanks

Records within 250m **2**

Current or recent tanks identified from the Ordnance Survey NGD.

Features are displayed on the Current industrial land use map on **page 46 >**

ID	Location	Tank description	Activity	Date first identified
A	29m E	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	28/04/2011
A	32m E	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	28/04/2011

This data is sourced from Ordnance Survey.

4.3 Current or recent petrol stations

Records within 500m **3**

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 46 >**

ID	Location	Company	Address	LPG	Status
4	35m E	TESCO	Gwyns Dryft, Pontardawe, Neath, Neath Port Talbot, SA8 3AZ	No	Open
15	391m W	UK	Swansea Road, Pontardawe, Swansea, Neath Port Talbot, SA8 4AL	Not Applicable	Obsolete
17	432m NW	UNBRANDED	Swansea Road, Pontardawe, Neath, Neath Port Talbot, SA8 4AL	Not Applicable	Obsolete

This data is sourced from Experian.

4.4 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.5 Gas pipelines

Records within 500m	1

High pressure underground gas transmission pipelines.

Features are displayed on the Current industrial land use map on **page 46 >**

ID	Location	Pipe Name	Details	
16	409m SW	FELINDRE TO CILFREW	Pipe Number: - Pipeline Safety Regulations Number: - Ownership: National Grid Maximum Operating Pressure (Bar): -	Pipeline Diameter (mm): 1200 Wall Thickness (mm): - Year of commission: Not specified Abandonment Status: Not abandoned

This data is sourced from National Grid.

4.6 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.

4.7 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.

4.8 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.

4.9 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.

4.10 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.

4.11 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.

4.12 Licensed pollutant release (Part A(2)/B)

Records within 500m	2

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 46 >**

ID	Location	Address	Details	
E	76m E	Tesco Stores Limited, Tesco Petrol Filling Station, Gwyn's Drift, Pontardawe, SA8 4BZ	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No enforcements issued Comment: No enforcements issued
12	299m NW	D. W. M. Ltd, Avenue Garage, Swansea Road, Pontardawe, SA8 4AA	Process: Respraying of Road Vehicles Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No enforcements issued Comment: No enforcements issued

This data is sourced from Local Authority records.

4.13 Radioactive Substance Authorisations

Records within 500m	**0**

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

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

4.14 Licensed Discharges to controlled waters

Records within 500m	**20**

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 46 >**

ID	Location	Address	Details	
B	35m W	100MDSPONTARDAWELEISCENTRE NPT, 100MDSPONTARDAWELEISURECEN T, PONTARDAWE, NEATHPORTTALBOT	Effluent Type: UNSPECIFIED Permit Number: BW4108701 Permit Version: 1 Receiving Water: RIVER TAWE	Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 20/10/1989 Effective Date: 20/10/1989 Revocation Date: 06/03/2005
B	35m W	100MDSPONTARDAWELEISCENTRE NPT, 100MDSPONTARDAWELEISURECEN T, PONTARDAWE, NEATHPORTTALBOT	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BW4108701 Permit Version: 2 Receiving Water: RIVER TAWE	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 07/03/2005 Effective Date: 07/03/2005 Revocation Date: 30/03/2007

ID	Location	Address	Details	
B	36m W	SWOALLTWENSOC18	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BW2303001 Permit Version: 1 Receiving Water: RIVER TAWE	Status: Surrendered Issue date: 22/07/1966 Effective Date: 22/07/1966 Revocation Date: -
D	69m NW	PONTARDAWELEISCENTRECSOSWANSEA, PONTARRDAWELEISURECENTRE, YNYSDERWROAD, TREBANOS, Swansea, SA84EG	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BW4108701 Permit Version: 3 Receiving Water: RIVER TAWE	Status: Effective Issue date: 21/03/2007 Effective Date: 31/03/2007 Revocation Date: -
D	76m W	Pontardawe Leis Centre CSO Swansea, Rear Pontardawe Leisure Centre, Ynysderw Road, Pontardawe, Swansea, SA8 4EG	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BW4108701 Permit Version: 0 Receiving Water: AFON TAWE	Status: Effective Issue date: 21/10/2019 Effective Date: 21/10/2019 Revocation Date: -
6	137m NE	SWANSEAVALLEYA4067GLAISTOPONTA, SWANSEAVALLEYA4067GLAISTOPO, A4067GLAISTOPONTARDAWEOUTFAL, GLAISTOPONTARDAWEOUTFALLB, OUTFALLB	Effluent Type: UNSPECIFIED Permit Number: BP0032202 Permit Version: 1 Receiving Water: RIVER TAWE	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 01/12/1986 Effective Date: 01/12/1986 Revocation Date: 02/11/1992
9	233m S	46DERWENROADALLTWENSWANSEA, 46DERWENROAD, ALLTWEN, SWANSEA, SA83AU	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: BP0297001 Permit Version: 1 Receiving Water: NANT Y LLECHAU	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY Issue date: 11/04/2002 Effective Date: 11/04/2002 Revocation Date: -
H	235m S	48DERWENROAD, ALLTWEN, PONTARDAWE, SWANSEA, SA83AU	Effluent Type: UNSPECIFIED Permit Number: BP0141201 Permit Version: 1 Receiving Water: TO LAND	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 20/12/1988 Effective Date: 20/12/1988 Revocation Date: 10/10/1994
H	235m S	48DERWENROAD, ALLTWEN, PONTARDAWE, SWANSEA, SA83AU	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: BP0129401 Permit Version: 1 Receiving Water: TO LAND	Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 05/09/1989 Effective Date: 05/09/1989 Revocation Date: 25/11/2012

ID	Location	Address	Details	
H	235m S	48DERWENROAD, ALLTWEN, PONTARDAWE, SWANSEA, SA83AU	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: BP0129401 Permit Version: 2 Receiving Water: TO LAND	Status: VARIED UNDER EPR 2010 Issue date: 26/11/2012 Effective Date: 26/11/2012 Revocation Date: -
H	235m S	48 DERWEN ROAD, ALLTWEN, PONTARDAWE, SWANSEA, SA8 3AU	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: BP0129401 Permit Version: 0 Receiving Water: Groundwater via infiltration system	Status: Effective Issue date: 26/11/2012 Effective Date: 26/11/2012 Revocation Date: -
G	237m NE	SWOALLOYINDUSTRIALSITESOC19, SOC19	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BW2302901 Permit Version: 1 Receiving Water: RIVER TAWE	Status: Surrendered Issue date: 22/07/1966 Effective Date: 22/07/1966 Revocation Date: -
H	242m S	SEPTICTANKSERVING47DERWENROAD, ALLTWEN, PONTARDAWE, SWANSEA, SA83AU	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: NPSWQD006606 Permit Version: 1 Receiving Water: GW VIA SOAKAWAY	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY Issue date: 01/05/2009 Effective Date: 01/05/2009 Revocation Date: -
10	247m NE	SWANSEAVALLEYA4067GLAISTOPONTA, SWANSEAVALLEYA4067GLAISTOPO, A4067GLAISTOPONTARDAWEOUTFAL, GLAISTOPONTARDAWEOUTFALLC, OUTFALLC	Effluent Type: UNSPECIFIED Permit Number: BP0032203 Permit Version: 1 Receiving Water: UPPER CLYDACH	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 01/12/1986 Effective Date: 01/12/1986 Revocation Date: 02/11/1992
G	264m NE	PONTARDAWE2TORTAWECSOSWANSEA, PONTARDAWENO2INTORTAWECSO, TREBANOS, Swansea	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BC0016801 Permit Version: 2 Receiving Water: RIVER TAWE	Status: Effective Issue date: 21/03/2007 Effective Date: 31/03/2007 Revocation Date: -
H	267m S	50 DERWEN RD ALLTWEN PONTARDAWE, 50 DERWEN ROAD, ALLTWEN, PONTARDAWE, NEATH PORT TALBOT, SA8 3AU	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: BP0368101 Permit Version: 0 Receiving Water: NANT Y LLECHAU	Status: Effective Issue date: 16/11/2007 Effective Date: 16/11/2007 Revocation Date: -

ID	Location	Address	Details	
G	298m NE	SSOPONTARDAWENO2SWANSEA	Effluent Type: UNSPECIFIED Permit Number: BC0016801 Permit Version: 1 Receiving Water: RIVER TAWE	Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 22/07/1966 Effective Date: 22/07/1966 Revocation Date: 30/03/2007
14	347m NE	Pontardawe 2 To R Tawe CSO Swansea, In car park, End of Tawe Terrace, Pontardawe, Swansea, SA8 4EP	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BC0016801 Permit Version: 0 Receiving Water: RIVER TAWE	Status: Effective Issue date: 21/10/2019 Effective Date: 21/10/2019 Revocation Date: -
I	415m N	DILWYNARMSPONTARDAWECROSS NPT, DILWYNARMS, PONTARDAWECROSS, NEATHPORTTALBOT	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BP0343601 Permit Version: 2 Receiving Water: UPPER CLYDACH	Status: Effective Issue date: 06/03/2009 Effective Date: 31/03/2009 Revocation Date: -
I	417m N	CSO at Dilwyn Arms Pontardawe Cross NPT, Pat Chowan Court, Herbert Street, Pontardawe, Swansea, SA8 4EA	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BP0343601 Permit Version: 0 Receiving Water: UPPER CLYDACH	Status: Effective Issue date: 21/10/2019 Effective Date: 25/10/2019 Revocation Date: -

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

4.15 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.

4.16 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.17 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.

4.18 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.

4.19 Pollution Incidents (EA/NRW)

Records within 500m	20

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 46 >**

ID	Location	Details	
1	**On site**	**Incident Date: 06/03/2015** **Incident Identification: 1318611** **Pollutant: Contaminated Water** **Pollutant Description: Minewater**	**Water Impact: -** **Land Impact: Category 3 (Minor)** **Air Impact: Category 4 (No Impact)**
2	22m N	Incident Date: 14/04/2003 Incident Identification: 150829 Pollutant: Specific Waste Materials Pollutant Description: Metal Wastes	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
3	28m NW	Incident Date: 02/08/2001 Incident Identification: 21349 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
C	53m SE	Incident Date: 30/04/2001 Incident Identification: 3845 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)

ID	Location	Details	
D	59m W	Incident Date: 05/03/2003 Incident Identification: 141068 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
C	79m SE	Incident Date: 20/02/2014 Incident Identification: 1210468 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
F	124m SE	Incident Date: 27/07/2016 Incident Identification: 1604228 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: No Details Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	124m SE	Incident Date: 27/07/2016 Incident Identification: 1604228 Pollutant: - Pollutant Description: -	Water Impact: No Details Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
G	230m NE	Incident Date: 05/09/2001 Incident Identification: 29022 Pollutant: Organic Chemicals/Products Pollutant Description: Hydrocarbons	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
G	235m NE	Incident Date: 21/04/2002 Incident Identification: 73423 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
G	246m NE	Incident Date: 18/11/2002 Incident Identification: 121583 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
G	247m NE	Incident Date: 02/02/2003 Incident Identification: 134518 Pollutant: Contaminated Water Pollutant Description: Other Contaminated Water	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
11	288m NE	Incident Date: 05/06/2003 Incident Identification: 163429 Pollutant: Sewage Materials Pollutant Description: Other Sewage Material	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
13	302m SE	Incident Date: 12/01/2002 Incident Identification: 52053 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

ID	Location	Details	
I	417m NW	Incident Date: 23/07/2013 Incident Identification: 1137649 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
I	424m NW	Incident Date: 05/06/2002 Incident Identification: 82907 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
I	445m N	Incident Date: 13/04/2002 Incident Identification: 71242 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
I	486m NW	Incident Date: 20/12/2001 Incident Identification: 49193 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
J	492m NE	Incident Date: 09/05/2001 Incident Identification: 4951 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
J	492m NE	Incident Date: 09/05/2001 Incident Identification: 4951 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

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

4.20 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.

4.21 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.

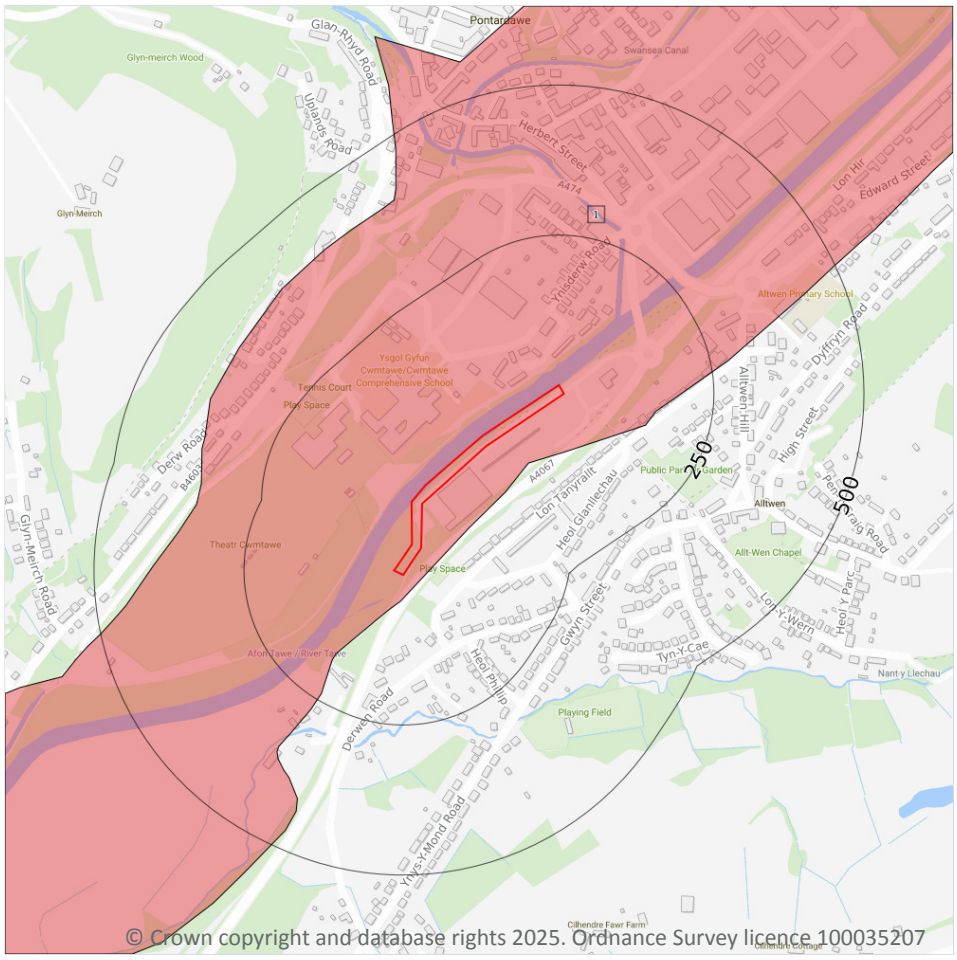
4.22 Pollution inventory radioactive waste

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



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Site Outline

Search buffers in metres (m)

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

5.1 Superficial aquifer

Records within 500m	1

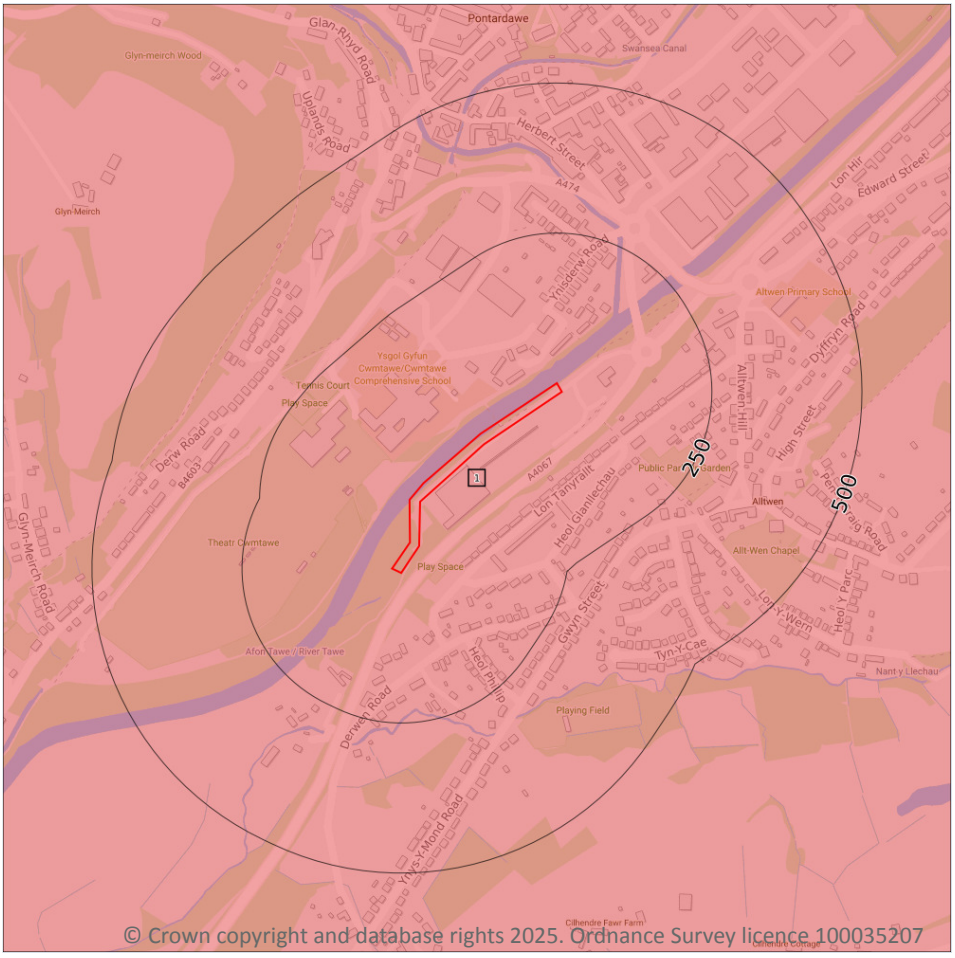
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 58 >**

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.

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

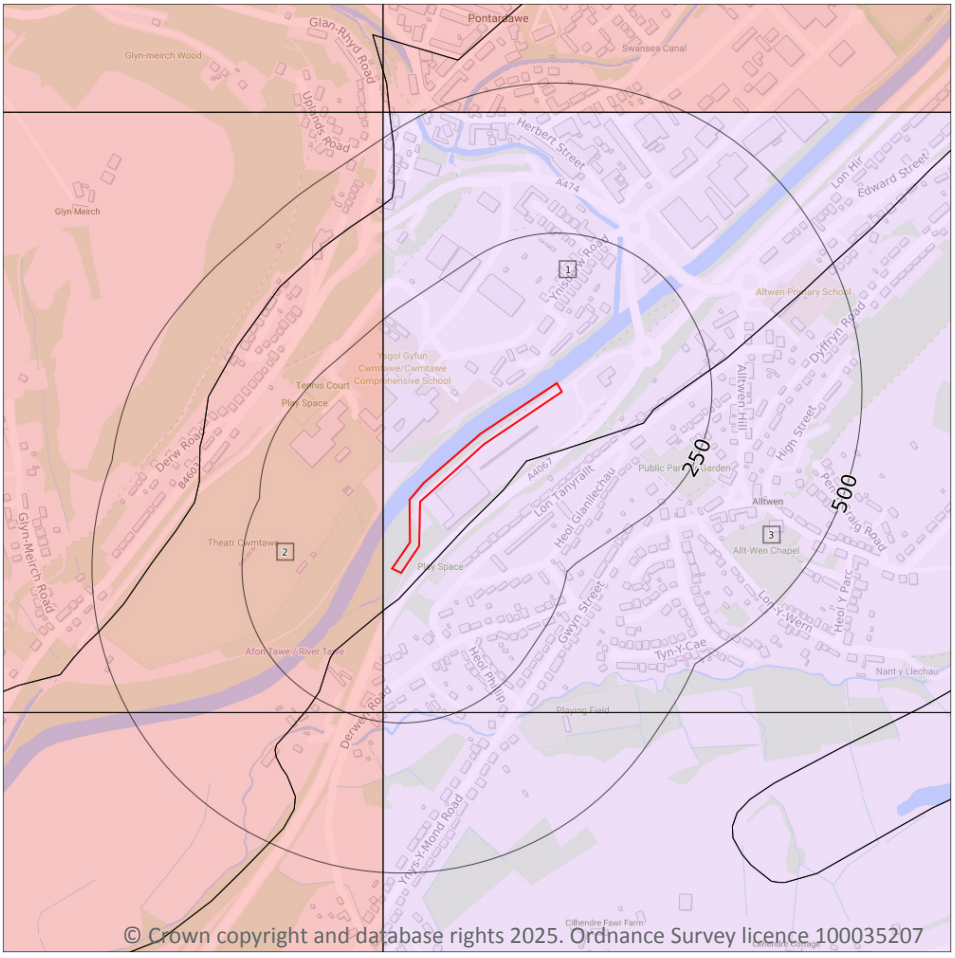
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 59 >**

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



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	3

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 60 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	**On site**	**Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year**	**Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: High**	**Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures**
2	15m W	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: 40-70% Dilution value: >550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
3	27m SE	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: High	Vulnerability: Medium 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.

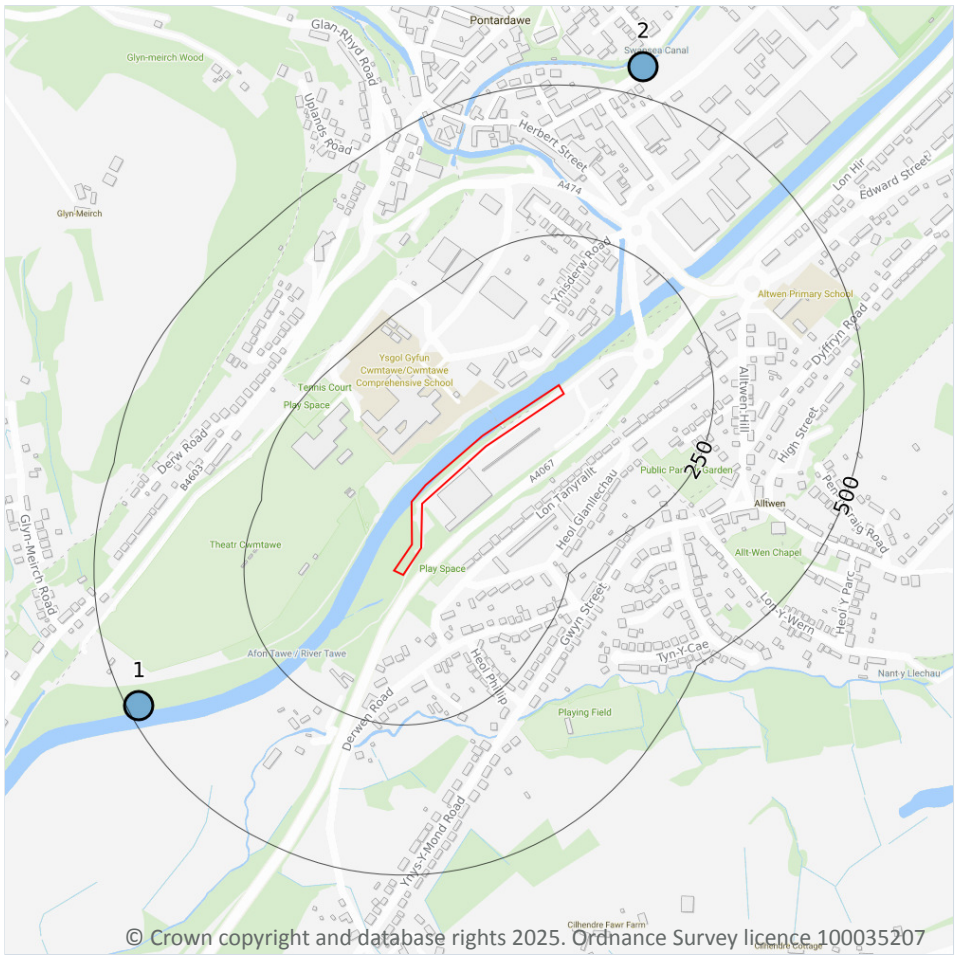
5.5 Groundwater vulnerability- local information

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



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- 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
- Drinking water abstraction licences — Polygon features
- Drinking water abstraction licences — Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m	1

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 62 >**

ID	Location	Details	
-	1762m SE	Status: Historical Licence No: 22/59/1/0049 Details: General Farming & Domestic Direct Source: EAW Groundwater Point: SPRING IN FIELD NO. 229 AT WERNDDU ISAF Data Type: Point Name: Jones Easting: 273270 Northing: 201980	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 30/03/1966 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 62 >**

ID	Location	Details	
1	481m SW	Status: Historical Licence No: 22/59/1/0129 Details: Hydraulic Testing Direct Source: EAW Surface Water Point: RIVER TAWE AT PONTARDAWE Data Type: Point Name: NACAP Land & Marine Easting: 271590 Northing: 203015	Annual Volume (m^3): 15000 Max Daily Volume (m^3): 4800 Original Application No: - Original Start Date: 06/03/2007 Expiry Date: 31/08/2007 Issue No: 1 Version Start Date: 06/03/2007 Version End Date: -
2	550m N	Status: Historical Licence No: 22/59/1/0107 Details: Effluent/Slurry Dilution Direct Source: EAW Surface Water Point: SWANSEA CANAL SWANSEA VALLEY Data Type: Point Name: British Waterways Board Easting: 272430 Northing: 204080	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 11/08/1992 Version End Date: -

ID	Location	Details	
-	1657m N	Status: Historical Licence No: 22/59/1/0111 Details: Spray Irrigation - Storage Direct Source: EAW Surface Water Point: TRIB OF THE UPPER CLYDACH Data Type: Point Name: Pontardawe Golf Club Easting: 272060 Northing: 205190	Annual Volume (m^3): 600 Max Daily Volume (m^3): 86.4 Original Application No: - Original Start Date: 11/08/1994 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1673m N	Status: Active Licence No: 22/59/1/0111 Details: Spray Irrigation - Storage - High Direct Source: - Point: - Data Type: Point Name: - Easting: 272090 Northing: 205210	Annual Volume (m^3): 600 Max Daily Volume (m^3): 86.4 Original Application No: - Original Start Date: 29/08/2008 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1673m N	Status: Historical Licence No: 22/59/1/0111 Details: Spray Irrigation - Storage Direct Source: EAW Surface Water Point: TRIB OF THE UPPER CLYDACH Data Type: Point Name: Pontardawe Golf Club Easting: 272090 Northing: 205210	Annual Volume (m^3): 600 Max Daily Volume (m^3): 86.4 Original Application No: - Original Start Date: 11/08/1994 Expiry Date: - Issue No: 101 Version Start Date: 29/08/2008 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	0

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

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.

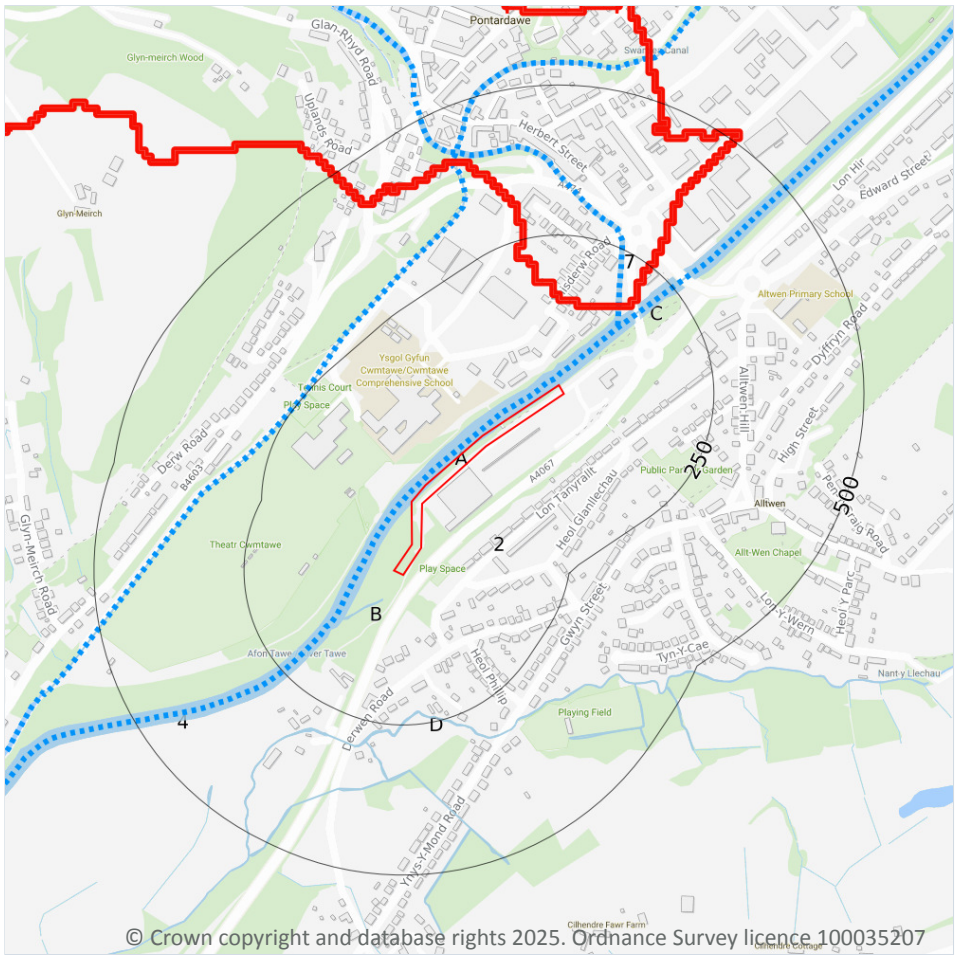
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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	**7**

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 66 >**

ID	Location	Type of water feature	Ground level	Permanence	Name
A	9m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Tawe

ID	Location	Type of water feature	Ground level	Permanence	Name
B	52m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	99m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
4	127m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Tawe
7	140m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Upper Clydach River
C	140m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Tawe
D	230m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant y Llechau

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	5

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 66 >**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

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

Features are displayed on the Hydrology map on **page 66 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	**On site**	**River WB catchment**	**Tawe -confluence with Twrch to tidal limit**	**GB110059032180**	**Tawe**	**Tawe to Cadoxton**

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

6.4 WFD Surface water bodies

Records identified	**1**

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

Features are displayed on the Hydrology map on **page 66 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
3	9m NW	River	Tawe -confluence with Twrch to tidal limit	GB110059032180	Moderate	Fail	Good	2016

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

6.5 WFD Groundwater bodies

Records on site	**1**

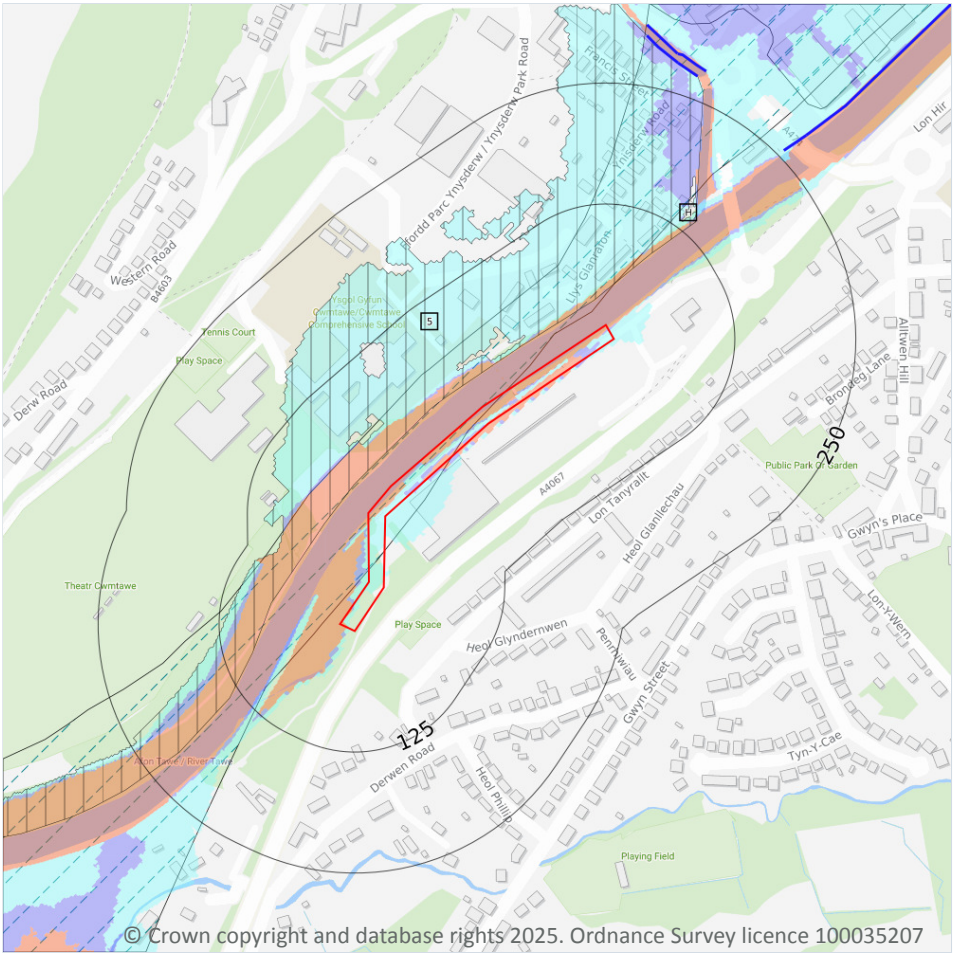
Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place.

Features are displayed on the Hydrology map on **page 66 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	**On site**	**Swansea Carboniferous Coal Measures**	**GB41002G201000**	**Poor**	**Poor**	**Good**	**2017**

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

7 River and coastal flooding



Site Outline

Search buffers in metres (m)

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 the sea

Records within 50m	68

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

Features are displayed on the River and coastal flooding map on **page 69 >**

Distance	Flood risk category
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	**1**

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 69 >**

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
B	**On site**	**Tawe 1979**	**1979-12-27 1979-12-27**	**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	**0**

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	**2**

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 69 >**

ID	Location	
5	28m NW	Area benefiting from flood defences
H	144m NE	Area benefiting from flood defences

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

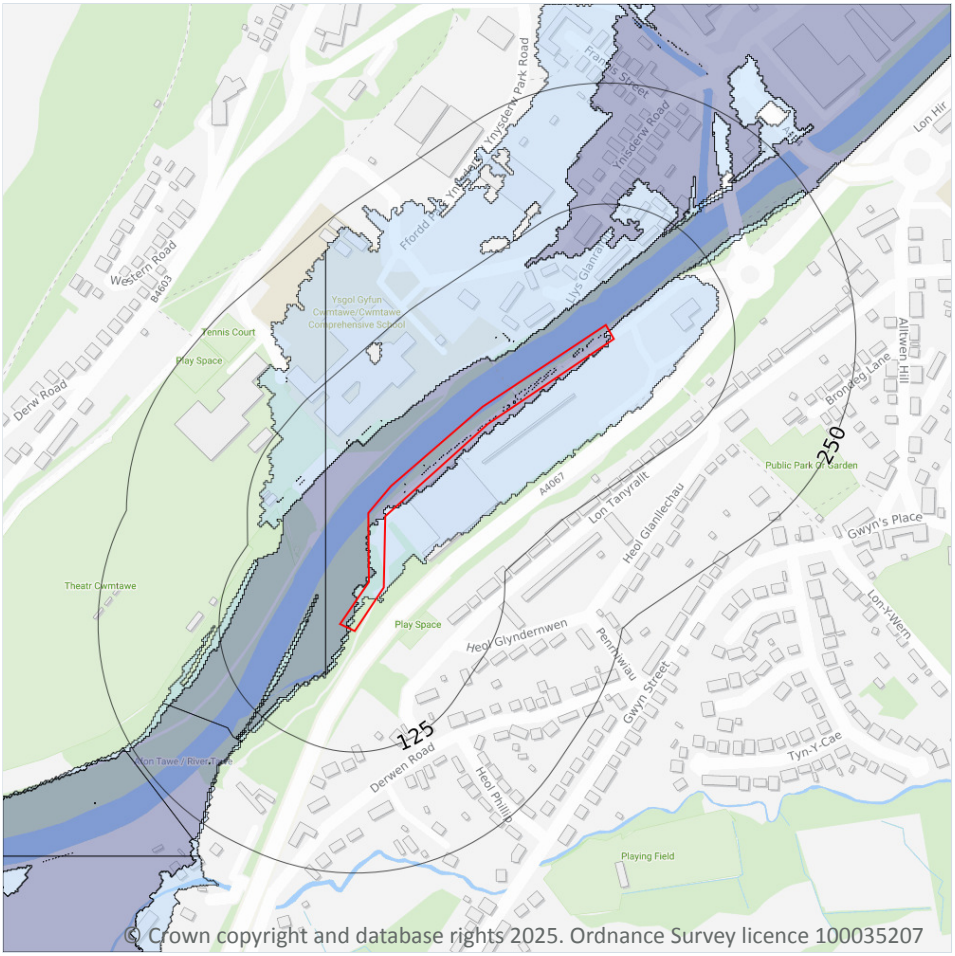
7.5 Flood Storage Areas

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



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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 69 >**

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

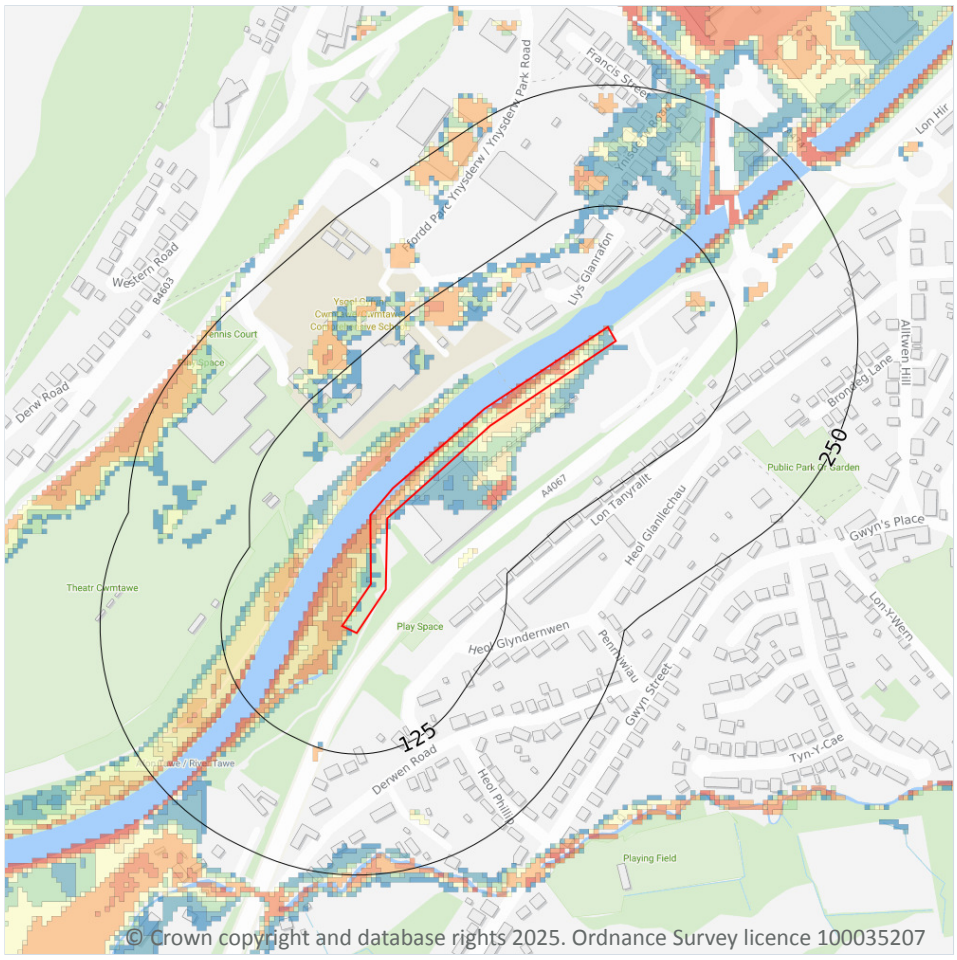
Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on **page 69 >**

Location	Type
On site	**Zone 3 - (Fluvial /Tidal 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, Greater than 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 74 >**

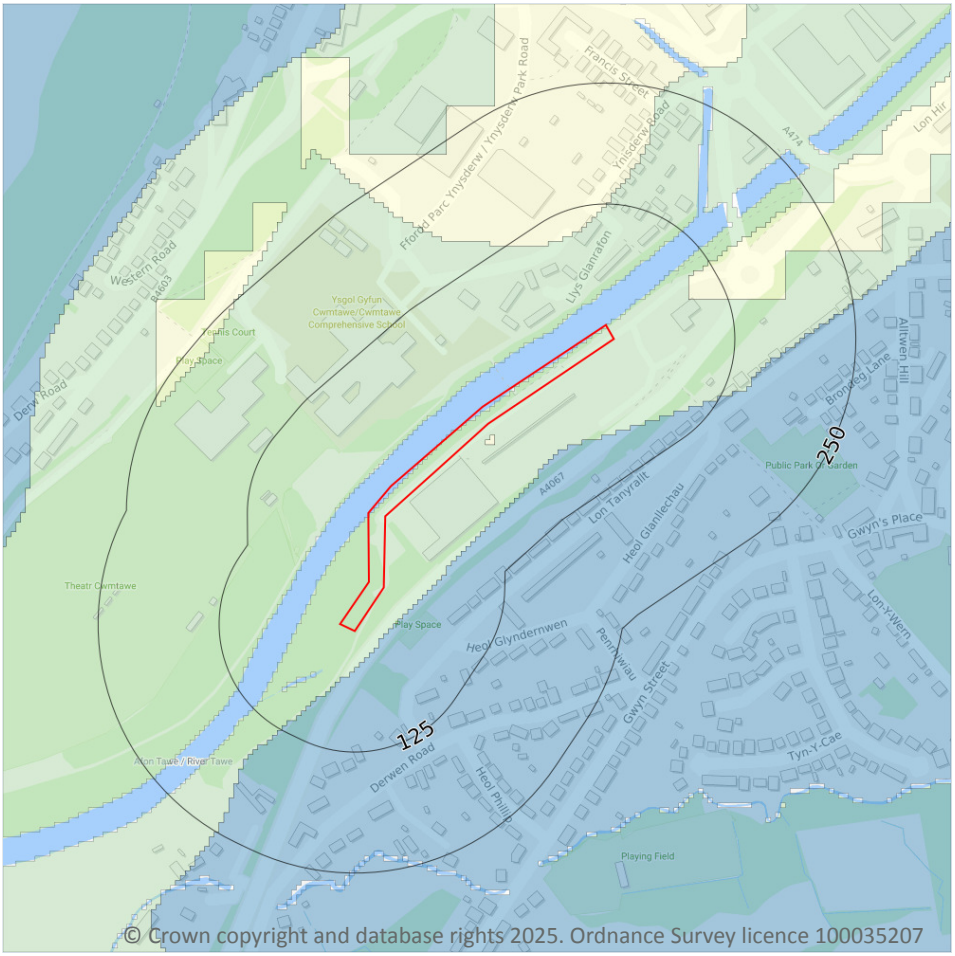
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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	Greater than 1.0m
1 in 30 year	Greater than 1.0m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



9.1 Groundwater flooding

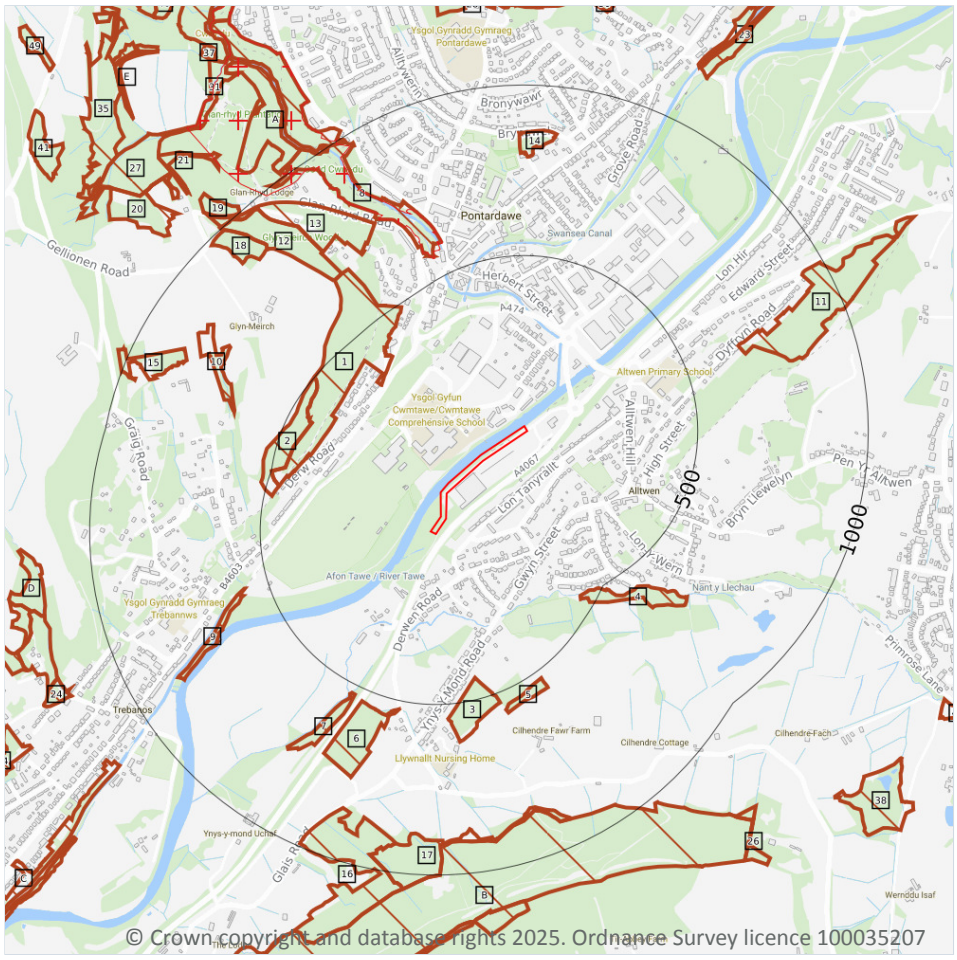
Highest risk on site	**Low**
Highest risk within 50m	**Moderate**

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 76 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



Site Outline

Search buffers in metres (m)

Sites of Special Scientific Interest (SSSI)

Local Nature Reserves (LNR)

Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	1

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

Features are displayed on the Environmental designations map on **page 77 >**

ID	Location	Name	Data source
-	1676m SE	Fforest Goch Bog	Natural Resources Wales

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	1

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

Features are displayed on the Environmental designations map on **page 77 >**

ID	Location	Name	Data source
A	557m NW	Cwm Du Glen & Glanrhyd Plantation	Natural Resources Wales

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

10.7 Designated Ancient Woodland

Records within 2000m	103

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 77 >**

ID	Location	Name	Woodland Type
1	346m NW	Unknown	Restored Ancient Woodland Site
2	429m NW	Unknown	Ancient Woodland Site of Unknown Category
3	436m S	Unknown	Ancient Semi Natural Woodland
4	454m SE	Unknown	Ancient Semi Natural Woodland
5	523m SE	Unknown	Ancient Semi Natural Woodland
6	526m S	Unknown	Ancient Semi Natural Woodland
7	526m SW	Unknown	Ancient Semi Natural Woodland
8	563m NW	Unknown	Ancient Semi Natural Woodland
9	570m W	Unknown	Ancient Semi Natural Woodland
10	650m W	Unknown	Ancient Semi Natural Woodland
11	667m E	Unknown	Ancient Semi Natural Woodland
12	668m NW	Unknown	Ancient Semi Natural Woodland

ID	Location	Name	Woodland Type
13	683m NW	Unknown	Ancient Semi Natural Woodland
14	790m N	Unknown	Ancient Semi Natural Woodland
15	839m NW	Unknown	Restored Ancient Woodland Site
16	848m S	Unknown	Restored Ancient Woodland Site
17	850m S	Unknown	Ancient Semi Natural Woodland
18	858m NW	Unknown	Ancient Semi Natural Woodland
B	861m S	Unknown	Restored Ancient Woodland Site
A	983m NW	Unknown	Restored Ancient Woodland Site
19	999m NW	Unknown	Restored Ancient Woodland Site
A	1012m NW	Unknown	Ancient Semi Natural Woodland
20	1095m NW	Unknown	Restored Ancient Woodland Site
B	1107m S	Unknown	Plantation on Ancient Woodland Site
21	1138m NW	Unknown	Ancient Semi Natural Woodland
C	1141m SW	Unknown	Ancient Semi Natural Woodland
22	1142m S	Unknown	Restored Ancient Woodland Site
D	1146m W	Unknown	Ancient Semi Natural Woodland
23	1151m NE	Unknown	Ancient Semi Natural Woodland
D	1152m W	Unknown	Ancient Semi Natural Woodland
24	1155m SW	Unknown	Ancient Semi Natural Woodland
25	1171m NE	Unknown	Restored Ancient Woodland Site
D	1196m W	Unknown	Restored Ancient Woodland Site
A	1198m NW	Unknown	Ancient Semi Natural Woodland
26	1205m SE	Unknown	Ancient Semi Natural Woodland
27	1220m NW	Unknown	Restored Ancient Woodland Site
28	1228m N	Unknown	Restored Ancient Woodland Site
29	1228m N	Unknown	Restored Ancient Woodland Site
30	1239m N	Unknown	Ancient Semi Natural Woodland
D	1256m W	Unknown	Restored Ancient Woodland Site

ID	Location	Name	Woodland Type
31	1263m NW	Unknown	Ancient Semi Natural Woodland
32	1265m S	Unknown	Restored Ancient Woodland Site
-	1301m N	Unknown	Ancient Semi Natural Woodland
34	1331m SW	Unknown	Restored Ancient Woodland Site
35	1348m NW	Unknown	Ancient Semi Natural Woodland
36	1375m NW	Unknown	Ancient Semi Natural Woodland
C	1376m SW	Unknown	Ancient Semi Natural Woodland
37	1396m NW	Unknown	Ancient Semi Natural Woodland
38	1400m SE	Unknown	Ancient Semi Natural Woodland
-	1414m N	Unknown	Ancient Woodland Site of Unknown Category
E	1414m NW	Unknown	Ancient Semi Natural Woodland
40	1454m SE	Unknown	Ancient Semi Natural Woodland
41	1463m NW	Unknown	Ancient Semi Natural Woodland
42	1470m NW	Unknown	Ancient Semi Natural Woodland
-	1499m N	Unknown	Restored Ancient Woodland Site
-	1506m N	Unknown	Ancient Semi Natural Woodland
-	1515m SW	Unknown	Restored Ancient Woodland Site
E	1516m NW	Unknown	Ancient Semi Natural Woodland
-	1547m N	Unknown	Ancient Semi Natural Woodland
-	1552m SW	Unknown	Ancient Semi Natural Woodland
E	1557m NW	Unknown	Ancient Semi Natural Woodland
E	1557m NW	Unknown	Ancient Semi Natural Woodland
46	1582m NW	Unknown	Ancient Semi Natural Woodland
-	1598m SW	Unknown	Ancient Semi Natural Woodland
47	1600m NW	Unknown	Ancient Semi Natural Woodland
E	1605m NW	Unknown	Ancient Semi Natural Woodland
E	1666m NW	Unknown	Ancient Semi Natural Woodland
49	1682m NW	Unknown	Ancient Semi Natural Woodland

ID	Location	Name	Woodland Type
-	1696m SW	Unknown	Ancient Semi Natural Woodland
-	1697m NW	Unknown	Ancient Semi Natural Woodland
-	1703m S	Unknown	Restored Ancient Woodland Site
-	1704m NE	Unknown	Ancient Semi Natural Woodland
-	1705m SW	Unknown	Ancient Semi Natural Woodland
-	1707m S	Unknown	Ancient Semi Natural Woodland
-	1716m W	Unknown	Restored Ancient Woodland Site
-	1717m NE	Unknown	Ancient Semi Natural Woodland
-	1718m NW	Unknown	Ancient Semi Natural Woodland
-	1750m NW	Unknown	Ancient Semi Natural Woodland
-	1789m W	Unknown	Ancient Semi Natural Woodland
-	1797m N	Unknown	Ancient Semi Natural Woodland
-	1807m S	Unknown	Restored Ancient Woodland Site
-	1825m NE	Unknown	Ancient Semi Natural Woodland
-	1827m N	Unknown	Ancient Semi Natural Woodland
-	1832m SW	Unknown	Restored Ancient Woodland Site
-	1841m S	Unknown	Restored Ancient Woodland Site
-	1845m S	Unknown	Ancient Woodland Site of Unknown Category
-	1864m NE	Unknown	Restored Ancient Woodland Site
-	1870m NW	Unknown	Ancient Semi Natural Woodland
-	1873m S	Unknown	Ancient Semi Natural Woodland
-	1878m W	Unknown	Ancient Semi Natural Woodland
-	1884m SW	Unknown	Restored Ancient Woodland Site
-	1890m N	Unknown	Restored Ancient Woodland Site
-	1892m NW	Unknown	Ancient Semi Natural Woodland
-	1906m NW	Unknown	Restored Ancient Woodland Site
-	1909m SE	Unknown	Ancient Semi Natural Woodland
-	1918m S	Unknown	Ancient Woodland Site of Unknown Category

ID	Location	Name	Woodland Type
-	1918m S	Unknown	Plantation on Ancient Woodland Site
-	1945m S	Unknown	Ancient Semi Natural Woodland
-	1954m NE	Unknown	Restored Ancient Woodland Site
-	1954m SW	Unknown	Ancient Semi Natural Woodland
-	1991m S	Unknown	Ancient Semi Natural Woodland
-	1991m NE	Unknown	Restored Ancient Woodland Site
-	1991m SE	Unknown	Ancient Semi Natural Woodland

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

10.8 Biosphere Reserves

Records within 2000m	0

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

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

10.9 Forest Parks

Records within 2000m	0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

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

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

10.11 Green Belt

Records within 2000m	0

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

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

10.12 Proposed Ramsar sites

Records within 2000m	0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was

closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m	0

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

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

SSSI Impact Zones and Units

10.17 SSSI Impact Risk Zones

Records on site	0

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

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	0

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

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

11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	0

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

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

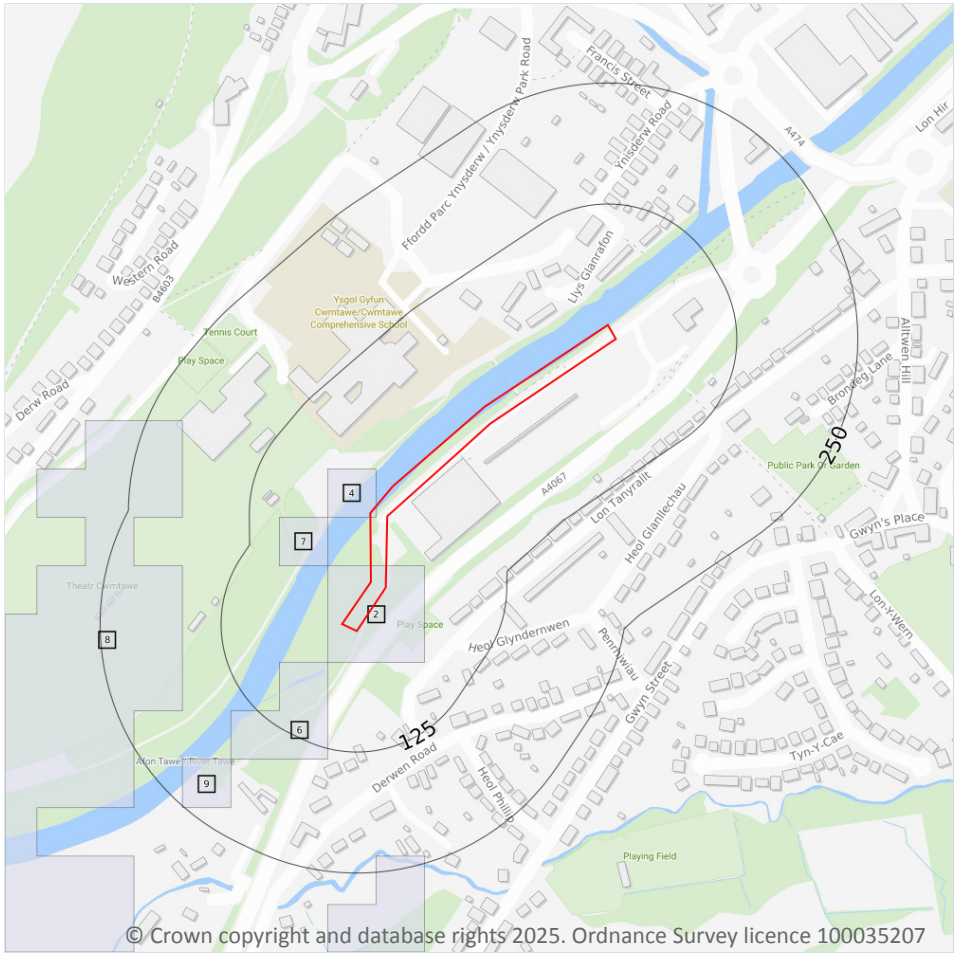
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



12.1 Agricultural Land Classification

Records within 250m	6

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 89 >**

ID	Location	Classification	Description
2	**On site**	**Grade 3b**	**Moderate quality agricultural land**
4	**On site**	**Grade 3b**	**Moderate quality agricultural land**
6	42m SW	Grade 3b	Moderate quality agricultural land

ID	Location	Classification	Description
7	44m W	Grade 3b	Moderate quality agricultural land
8	165m W	Grade 3b	Moderate quality agricultural land
9	181m SW	Grade 3b	Moderate quality agricultural land

This data is sourced from Natural Resources Wales.

12.2 Open Access Land

Records within 250m	0

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

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

12.3 Tree Felling Licences

Records within 250m	0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m	0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

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

This data is sourced from Natural England.

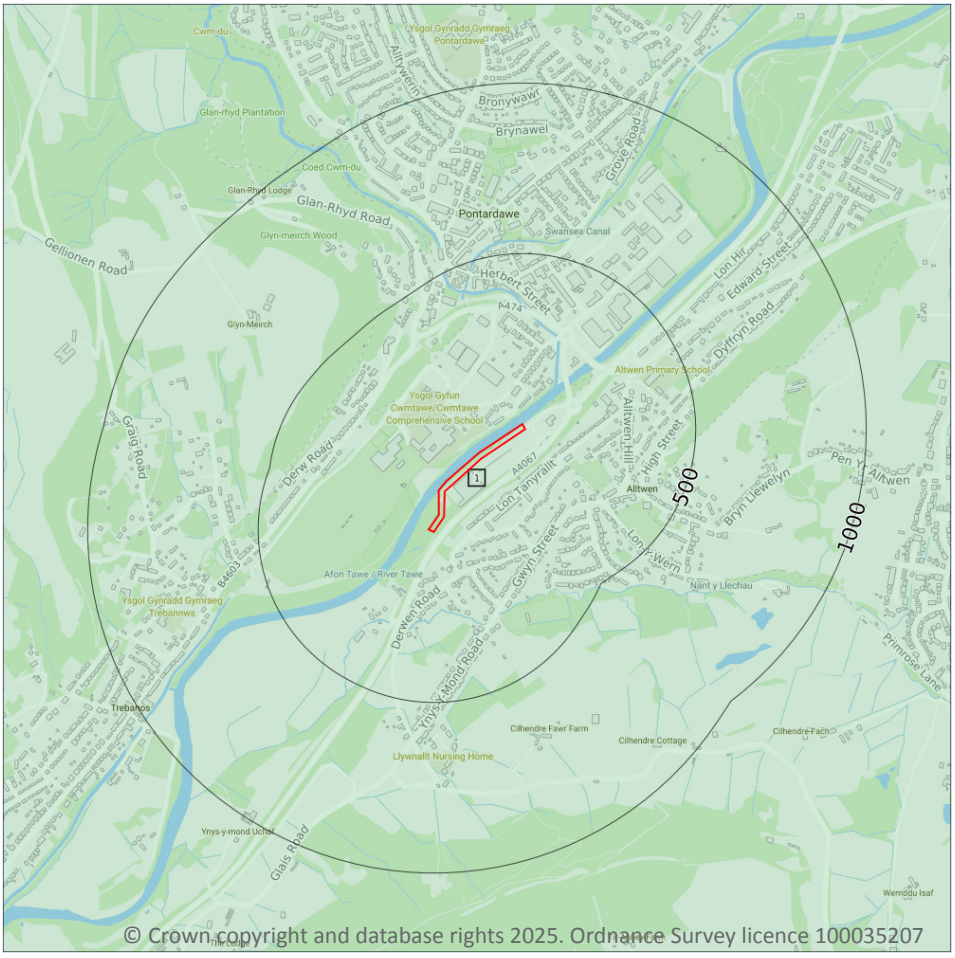
13.4 Limestone Pavement Orders

Records within 250m	0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



14.1 10k Availability

Records within 500m	1

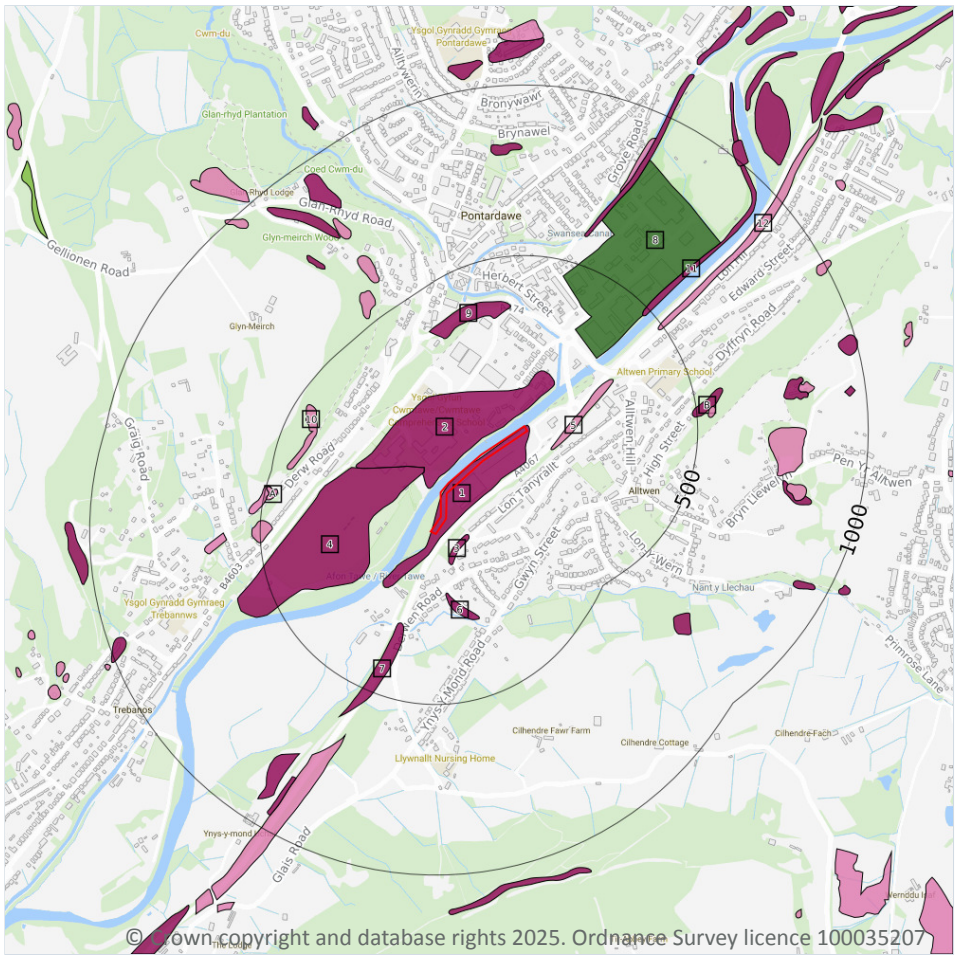
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 93 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**SN70SW**

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	16

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

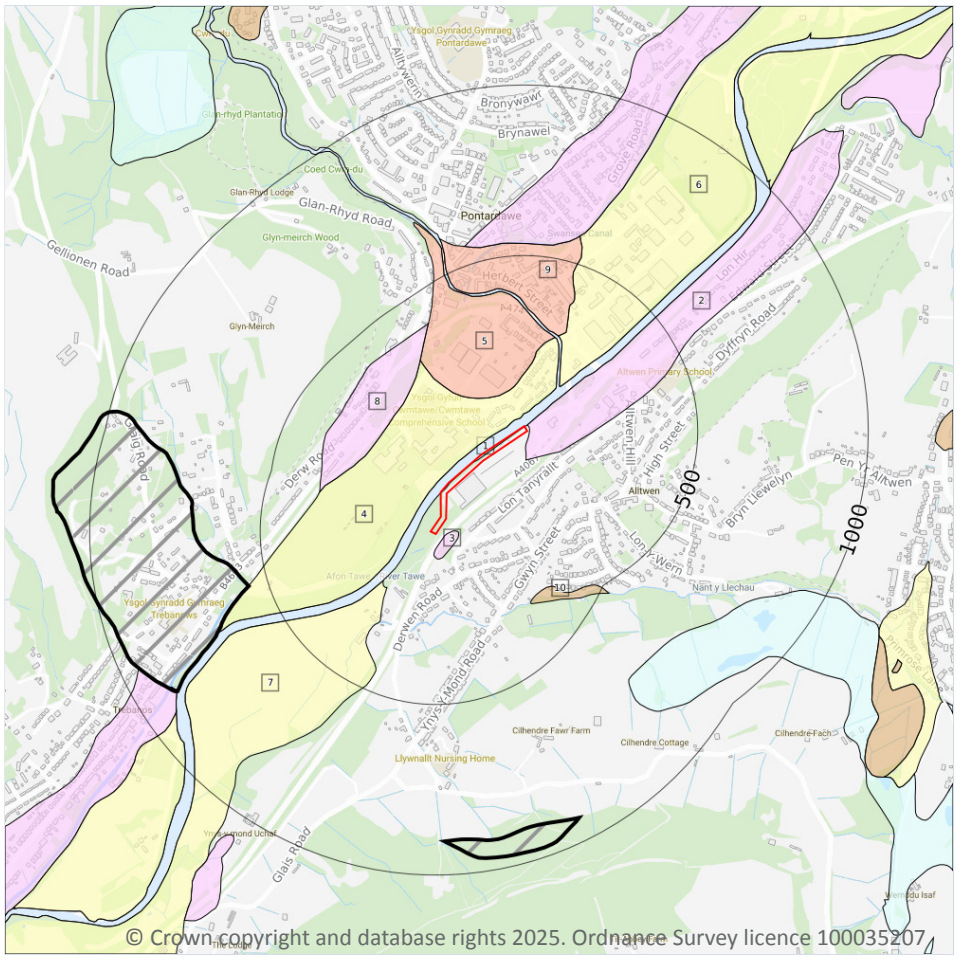
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 94 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**MGR-ARTDP**	**Made Ground (Undivided)**	**Artificial deposit**
2	29m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
3	65m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
4	75m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit

ID	Location	LEX Code	Description	Rock description
5	86m SE	WGR-VOID	Worked Ground (Undivided)	Void
6	176m S	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
7	280m S	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
8	290m NE	LSGR-ARTGR	Landscaped Ground (Undivided)	Artificially modified ground
9	328m N	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
10	402m NW	WGR-VOID	Worked Ground (Undivided)	Void
A	463m W	WGR-VOID	Worked Ground (Undivided)	Void
A	464m W	WGR-VOID	Worked Ground (Undivided)	Void
11	475m NE	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
12	484m NE	WGR-VOID	Worked Ground (Undivided)	Void
A	487m W	WGR-VOID	Worked Ground (Undivided)	Void
B	487m E	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m	10

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 96 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**SUPNM-UKNOWN**	**Superficial Theme Not Mapped [For Digital Map Use Only]-Unknown/unclassified Entry**	**Unknown/unclassified entry**
2	7m E	GFDUD-XSV	Glaciofluvial Deposits, Devensian-Sand And Gravel	Sand and gravel
3	24m SE	GFDUD-XSV	Glaciofluvial Deposits, Devensian-Sand And Gravel	Sand and gravel

ID	Location	LEX Code	Description	Rock description
4	25m NW	ALV-XCZSV	Alluvium-Clay, Silt, Sand And Gravel	Clay, silt, sand and gravel
5	113m NW	ALF-XSV	Alluvial Fan Deposits-Sand And Gravel	Sand and gravel
6	156m NE	ALV-XCZSV	Alluvium-Clay, Silt, Sand And Gravel	Clay, silt, sand and gravel
7	200m SW	ALV-XCZSV	Alluvium-Clay, Silt, Sand And Gravel	Clay, silt, sand and gravel
8	240m NW	GFDUD-XSV	Glaciofluvial Deposits, Devensian-Sand And Gravel	Sand and gravel
9	282m N	ALF-XSV	Alluvial Fan Deposits-Sand And Gravel	Sand and gravel
10	341m SE	PEAT-P	Peat-Peat	Peat

This data is sourced from the British Geological Survey.

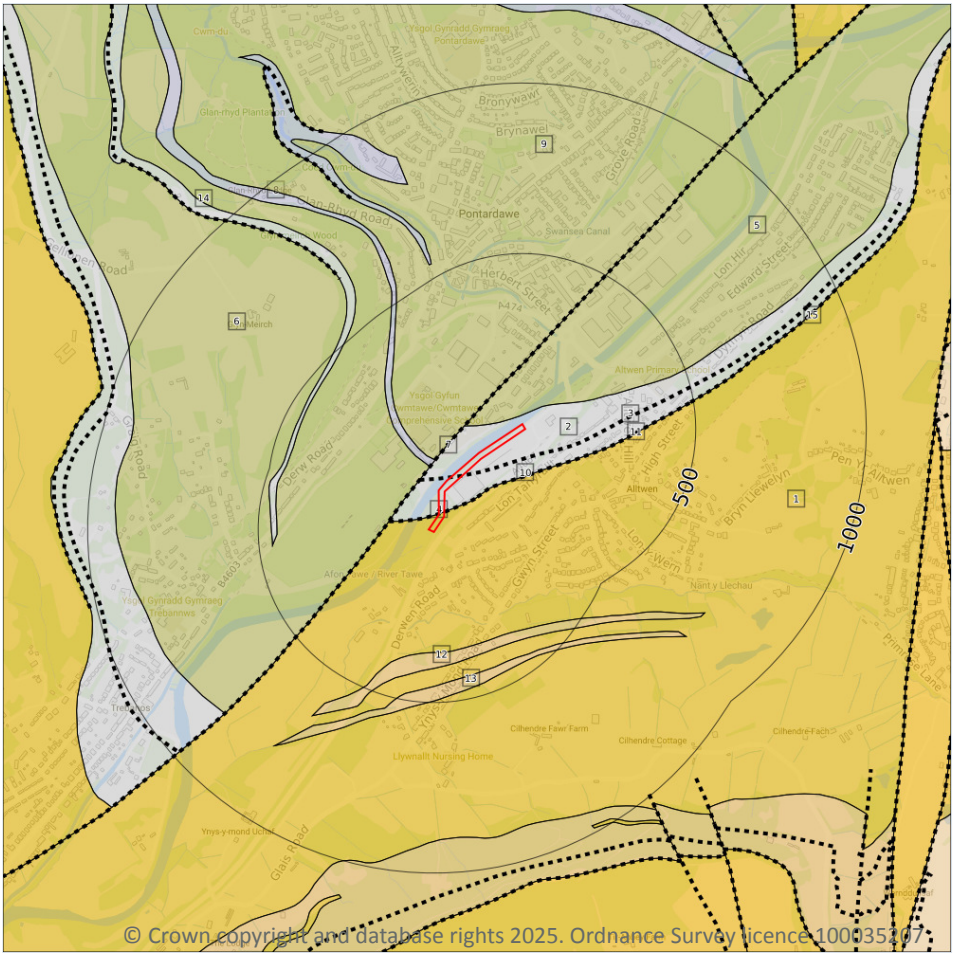
14.4 Landslip (10k)

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



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

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

14.5 Bedrock geology (10k)

Records within 500m	9

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 98 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**H-SDST**	**Hughes Member-Sandstone**	**Westphalian**
2	**On site**	**BD-MDSS**	**Brithdir Member-Mudstone, Siltstone And Sandstone**	**Westphalian**
5	25m N	BD-SDST	Brithdir Member-Sandstone	Westphalian
6	63m NW	BD-SDST	Brithdir Member-Sandstone	Westphalian

ID	Location	LEX Code	Description	Rock age
8	64m NW	RA-MDSS	Rhondda Member-Mudstone, Siltstone And Sandstone	Westphalian
9	69m NW	RA-SDST	Rhondda Member-Sandstone	Westphalian
12	351m S	H-MDSS	Hughes Member-Mudstone, Siltstone And Sandstone	Westphalian
13	433m S	H-MDSS	Hughes Member-Mudstone, Siltstone And Sandstone	Westphalian
14	445m W	BD-MDSS	Brithdir Member-Mudstone, Siltstone And Sandstone	Westphalian

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m **6**

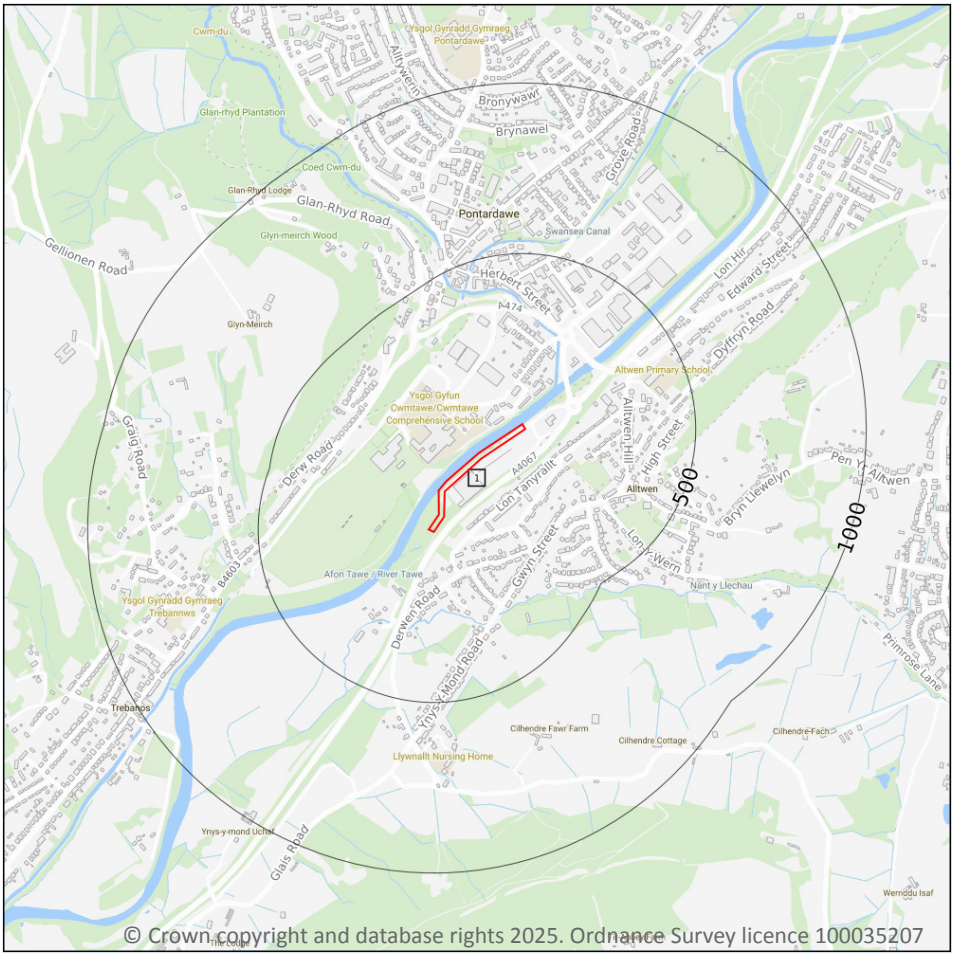
Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 98 >**

ID	Location	Category	Description
3	**On site**	**ROCK**	**Coal seam, inferred**
4	**On site**	**ROCK**	**Coal seam, inferred**
7	63m NW	FAULT	Fault, inferred, displacement unknown
10	75m SE	ROCK	Coal seam, observed
11	147m SE	ROCK	Coal seam, inferred
15	488m E	ROCK	Coal seam, observed

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

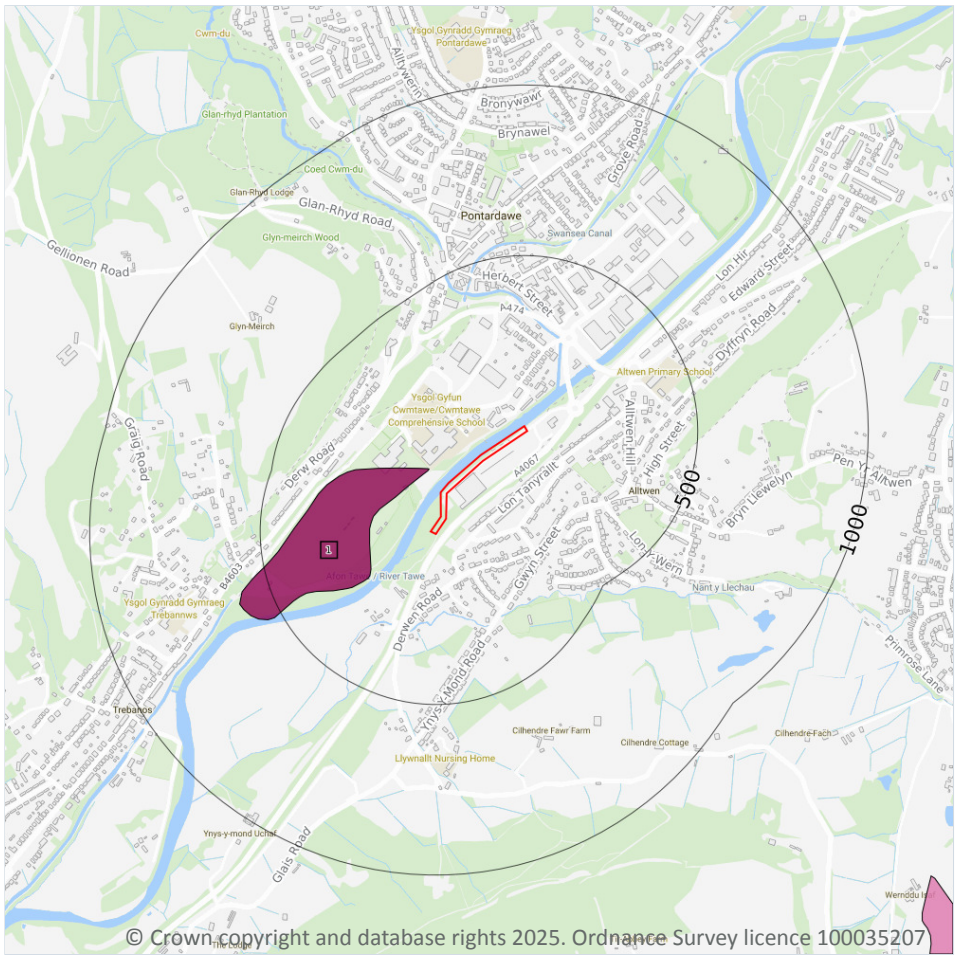
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme. Where 50k data is not available, this area has been filled in with 625k scale data.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 100 >**

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

This data is sourced from the British Geological Survey.

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



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 101 >**

ID	Location	LEX Code	Description	Rock description
1	69m NW	MGR-ARTDP	Made Ground	Artificial deposit

This data is sourced from the British Geological Survey.

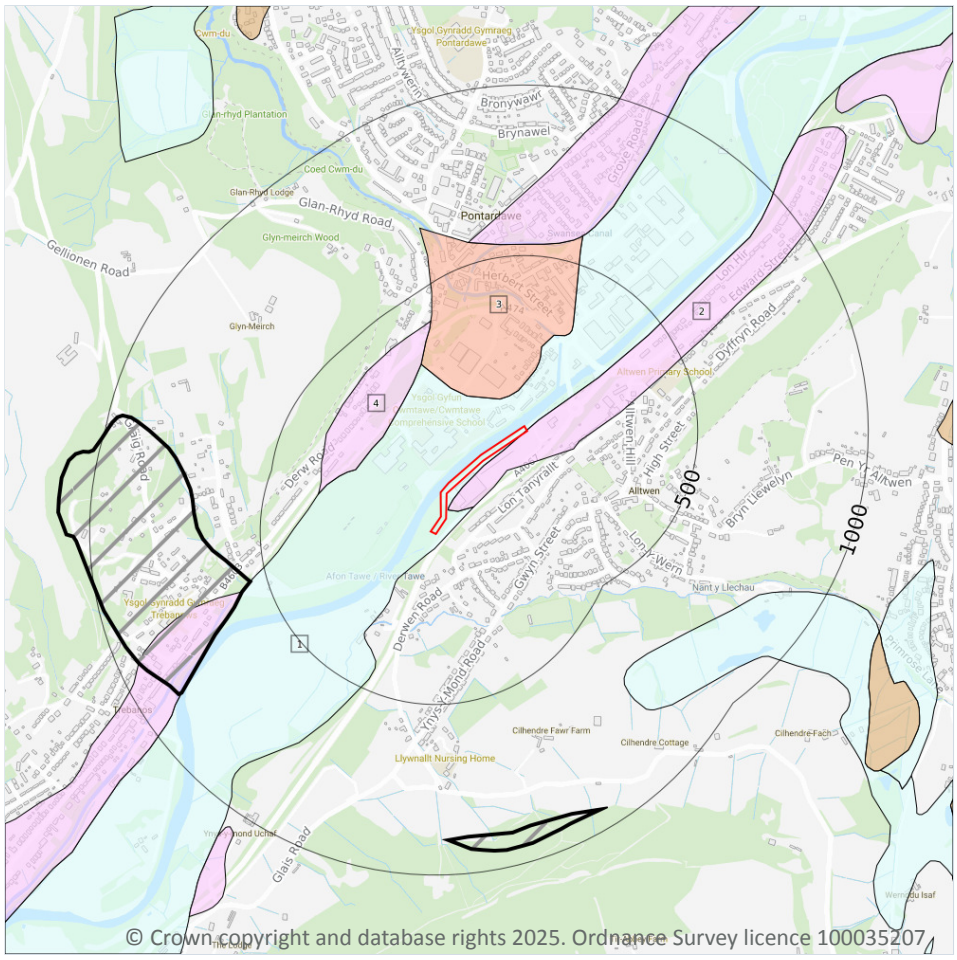
15.3 Artificial ground permeability (50k)

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 **4**

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 103 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**ALV-XCZSV**	**Alluvium**	**Clay, silt, sand and gravel**
2	**On site**	**GFDUD-XSV**	**Glaciofluvial deposits, Devensian**	**Sand and gravel**
3	99m NW	ALF-XSV	Alluvial fan deposits	Sand and gravel
4	234m NW	GFDUD-XSV	Glaciofluvial deposits, Devensian	Sand and gravel

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	2

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**
On site	**Intergranular**	**Very High**	**High**

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

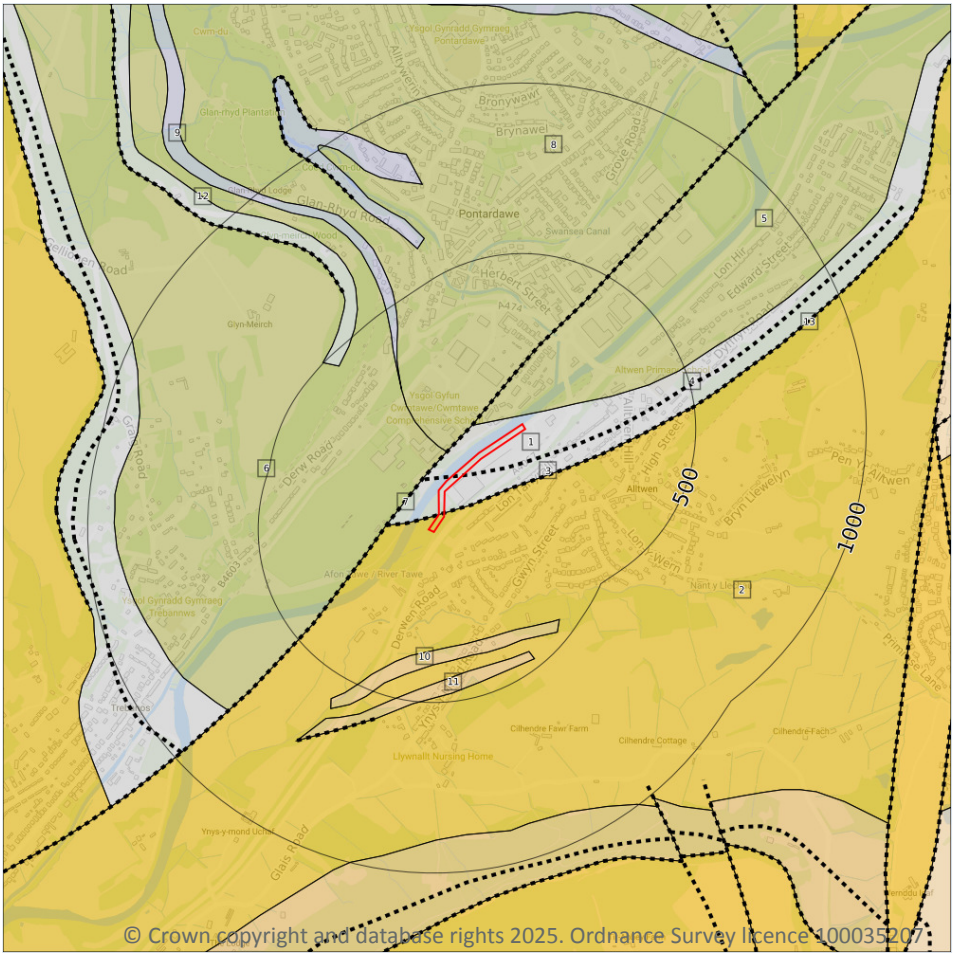
15.7 Landslip permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m	9

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 105 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**BD-MDSS**	**Brithdir Member-Mudstone, siltstone and sandstone**	**Westphalian**
2	**On site**	**H-SDST**	**Hughes Member-Sandstone**	**Westphalian**
5	25m N	BD-SDST	Brithdir Member-Sandstone	Westphalian
6	57m NW	BD-SDST	Brithdir Member-Sandstone	Westphalian

ID	Location	LEX Code	Description	Rock age
8	65m NW	RA-SDST	Rhondda Member-Sandstone	Westphalian
9	291m NW	RA-MDSS	Rhondda Member-Mudstone, siltstone and sandstone	Westphalian
10	340m S	H-MDSS	Hughes Member-Mudstone, siltstone and sandstone	Westphalian
11	420m S	H-MDSS	Hughes Member-Mudstone, siltstone and sandstone	Westphalian
12	462m NW	BD-MDSS	Brithdir Member-Mudstone, siltstone and sandstone	Westphalian

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m **3**

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**
25m N	Fracture	High	Moderate

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m **4**

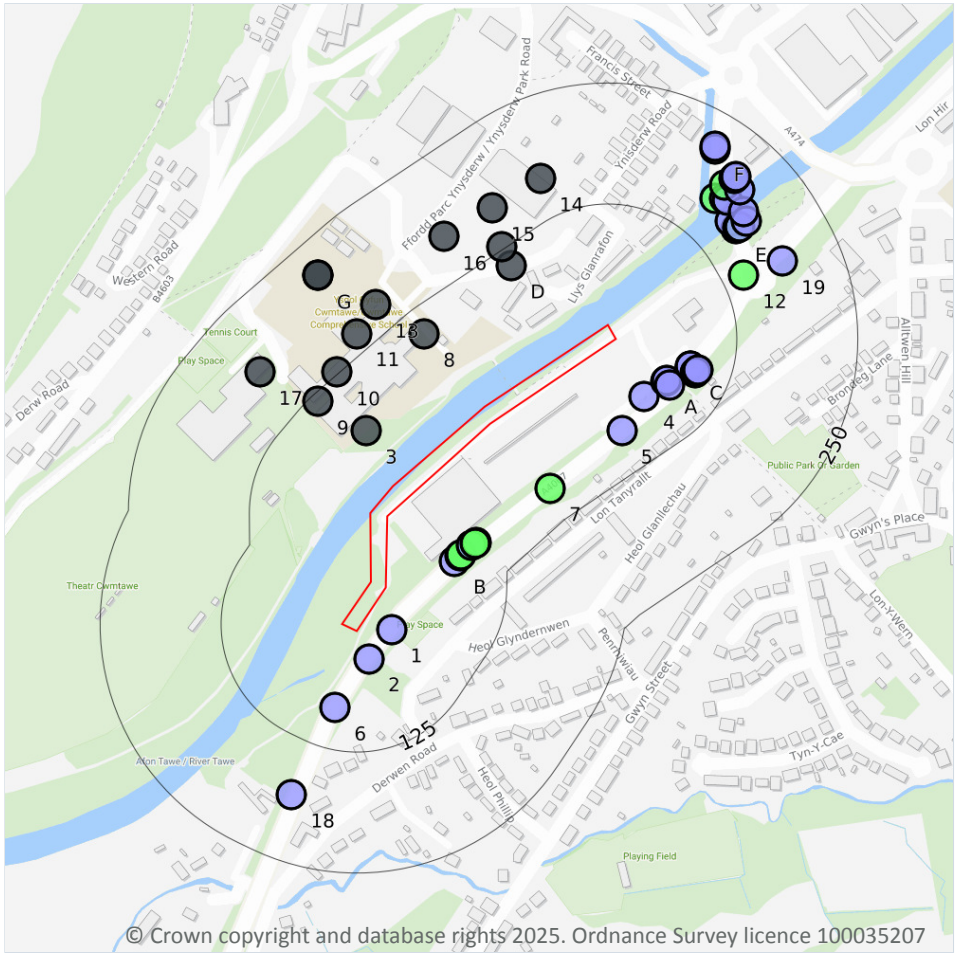
Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 105 >**

ID	Location	Category	Description
3	**On site**	**ROCK**	**Coal seam, inferred**
4	**On site**	**ROCK**	**Coal seam, inferred**
7	57m NW	FAULT	Fault, inferred, displacement unknown
13	491m E	ROCK	Coal seam, observed

This data is sourced from the British Geological Survey.

16 Boreholes



16.1 BGS Boreholes

Records within 250m	53

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 108 >**

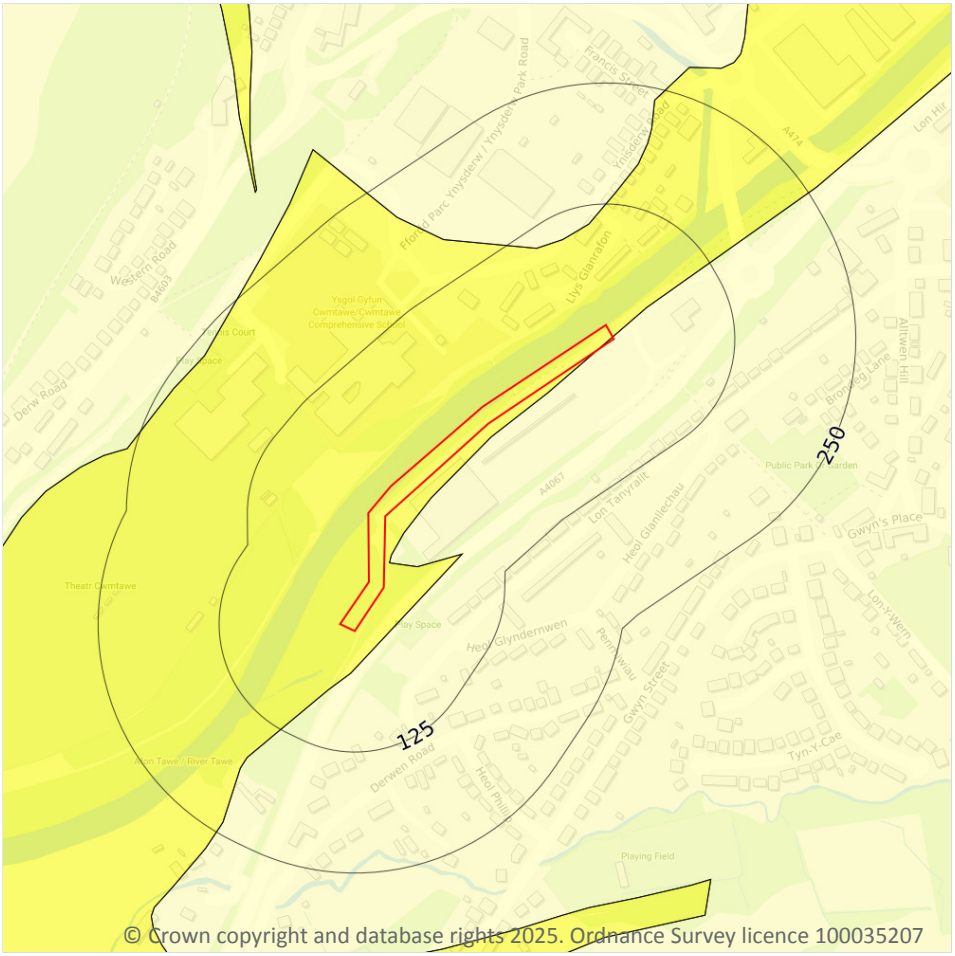
ID	Location	Grid reference	Name	Length	Confidential	Web link
1	29m SE	272066 203234	A4067 GLAIS TO PONTARDAWE 52	3.7	N	257203 ↗
2	31m SE	272043 203204	A4067 GLAIS TO PONTARDAWE TP 2	3.5	N	257242 ↗

ID	Location	Grid reference	Name	Length	Confidential	Web link
3	62m NW	272040 203440	PROPOSED PONTARDAWE COMPREHENSIVE SCHOOL J	-	Y	N/A
4	66m SE	272327 203475	A4067 GLAIS TO PONTARDAWE TP 3	3.0	N	257243 ↗
A	67m SE	272349 203491	A4067 GLAIS TO PONTARDAWE 59A	6.0	N	257213 ↗
A	67m SE	272350 203492	A4067 GLAIS TO PONTARDAWE 59B	9.5	N	257214 ↗
B	70m E	272131 203305	A4067 GLAIS TO PONTARDAWE 53	0.6	N	257204 ↗
A	73m SE	272353 203487	A4067 GLAIS TO PONTARDAWE 59	2.0	N	257212 ↗
B	76m E	272137 203310	A4067 GLAIS TO PONTARDAWE 53R	17.0	N	257205 ↗
B	77m E	272138 203311	A4067 GLAIS TO PONTARDAWE 55	15.4	N	257208 ↗
B	81m SE	272149 203321	A4067 GLAIS TO PONTARDAWE 54	0.6	N	257206 ↗
5	82m SE	272304 203440	A4067 GLAIS TO PONTARDAWE 58	1.7	N	257211 ↗
6	82m S	272008 203154	A4067 GLAIS TO PONTARDAWE 51	0.6	N	257202 ↗
B	82m SE	272154 203324	A4067 GLAIS TO PONTARDAWE 56	10.6	N	257209 ↗
B	82m SE	272153 203323	A4067 GLAIS TO PONTARDAWE 54R	12.5	N	257207 ↗
C	82m E	272375 203506	A4067 GLAIS TO PONTARDAWE 60	1.5	N	257215 ↗
C	82m E	272375 203506	A4067 GLAIS TO PONTARDAWE 60R	9.5	N	257216 ↗
C	89m SE	272380 203499	A4067 GLAIS TO PONTARDAWE 61A	8.0	N	257218 ↗
7	90m SE	272230 203380	A4067 GLAIS TO PONTARDAWE 57	10.95	N	257210 ↗
C	90m E	272381 203500	A4067 GLAIS TO PONTARDAWE 61	9.5	N	257217 ↗
C	91m E	272383 203502	A4067 GLAIS TO PONTARDAWE 61B	8.0	N	257219 ↗
8	98m NW	272100 203540	PROPOSED PONTARDAWE COMPREHENSIVE SCHOOL L	-	Y	N/A
D	106m NW	272190 203610	YNYSDERW ROAD PONTARDAWE 5	-	Y	N/A
9	117m NW	271990 203470	PROPOSED PONTARDAWE COMPREHENSIVE SCHOOL E	-	Y	N/A
10	127m NW	272010 203500	PROPOSED PONTARDAWE COMPREHENSIVE SCHOOL F	-	Y	N/A
D	128m NW	272180 203630	YNYSDERW ROAD PONTARDAWE 4	-	Y	N/A
11	144m NW	272030 203540	PROPOSED PONTARDAWE COMPREHENSIVE SCHOOL G	-	Y	N/A
12	148m NE	272430 203600	A4067 GLAIS TO PONTARDAWE 63	12.5	N	257220 ↗

ID	Location	Grid reference	Name	Length	Confidential	Web link
13	153m NW	272050 203570	PROPOSED PONTARDAWE COMPREHENSIVE SCHOOL H	-	Y	N/A
E	165m NE	272422 203648	A4067 GLAIS TO PONTARDAWE 65	5.7	N	257222 ↗
E	166m NE	272416 203656	A4067 GLAIS TO PONTARDAWE 67	3.5	N	257226 ↗
14	167m NW	272220 203700	YNYSDERW ROAD PONTARDAWE 1	-	Y	N/A
15	167m NW	272170 203670	YNYSDERW ROAD PONTARDAWE 3	-	Y	N/A
E	168m NE	272424 203649	A4067 GLAIS TO PONTARDAWE 65B	11.0	N	257224 ↗
16	170m NW	272120 203640	YNYSDERW ROAD PONTARDAWE 2	-	Y	N/A
E	170m NE	272426 203650	A4067 GLAIS TO PONTARDAWE 65A	4.55	N	257223 ↗
E	172m NE	272400 203680	A4067 SWANSEA VALLEY ROAD PONTARDAWE 3	11.25	N	257351 ↗
E	178m NE	272410 203680	A4067 SWANSEA VALLEY ROAD PONTARDAWE 4	9.32	N	257352 ↗
E	179m NE	272413 203678	A4067 GLAIS TO PONTARDAWE 69	7.5	N	257228 ↗
E	179m NE	272433 203656	A4067 GLAIS TO PONTARDAWE 66	10.0	N	257225 ↗
17	181m NW	271930 203500	PROPOSED PONTARDAWE COMPREHENSIVE SCHOOL A	-	Y	N/A
18	182m S	271963 203064	A4067 GLAIS TO PONTARDAWE 50	0.5	N	257201 ↗
E	183m NE	272430 203666	A4067 GLAIS TO PONTARDAWE 68	2.5	N	257227 ↗
E	188m NE	272410 203693	A4067 GLAIS TO PONTARDAWE 71	23.5	N	257230 ↗
19	190m NE	272470 203615	A4067 GLAIS TO PONTARDAWE 64	3.5	N	257221 ↗
E	195m NE	272426 203688	A4067 GLAIS TO PONTARDAWE 70	5.0	N	257229 ↗
E	200m NE	272420 203700	A4067 GLAIS TO PONTARDAWE 72B	28.6	N	257233 ↗
E	201m NE	272421 203701	A4067 GLAIS TO PONTARDAWE 72A	5.0	N	257232 ↗
E	203m NE	272422 203702	A4067 GLAIS TO PONTARDAWE 72	5.5	N	257231 ↗
F	213m NE	272400 203731	A4067 GLAIS TO PONTARDAWE 73	4.0	N	257234 ↗
F	215m NE	272400 203733	A4067 GLAIS TO PONTARDAWE 73A	7.5	N	257235 ↗
G	215m NW	271990 203600	PROPOSED PONTARDAWE COMPREHENSIVE SCHOOL C1	-	Y	N/A
G	215m NW	271990 203600	PROPOSED PONTARDAWE COMPREHENSIVE SCHOOL C2	-	Y	N/A

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



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17.1 Shrink swell clays

Records within 50m	2

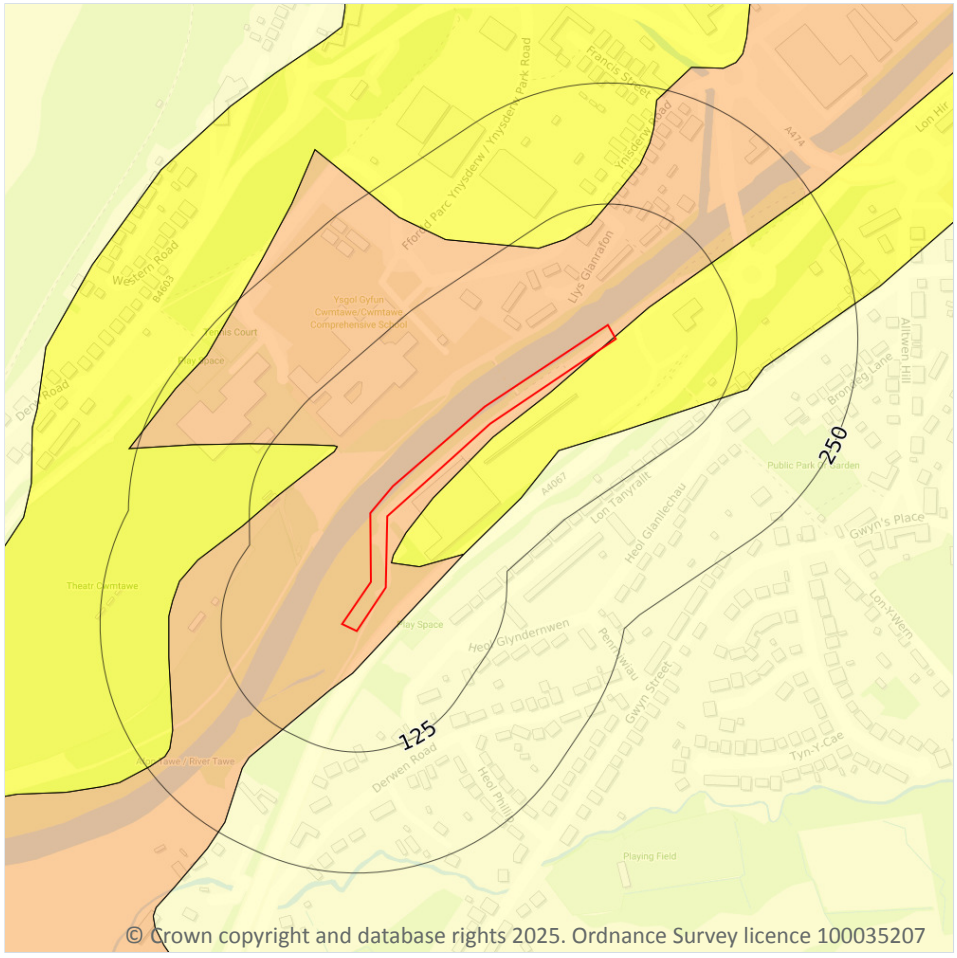
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 111 >**

Location	Hazard rating	Details
On site	**Negligible**	**Ground conditions predominantly non-plastic.**
On site	**Very low**	**Ground conditions predominantly low plasticity.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



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17.2 Running sands

Records within 50m	3

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

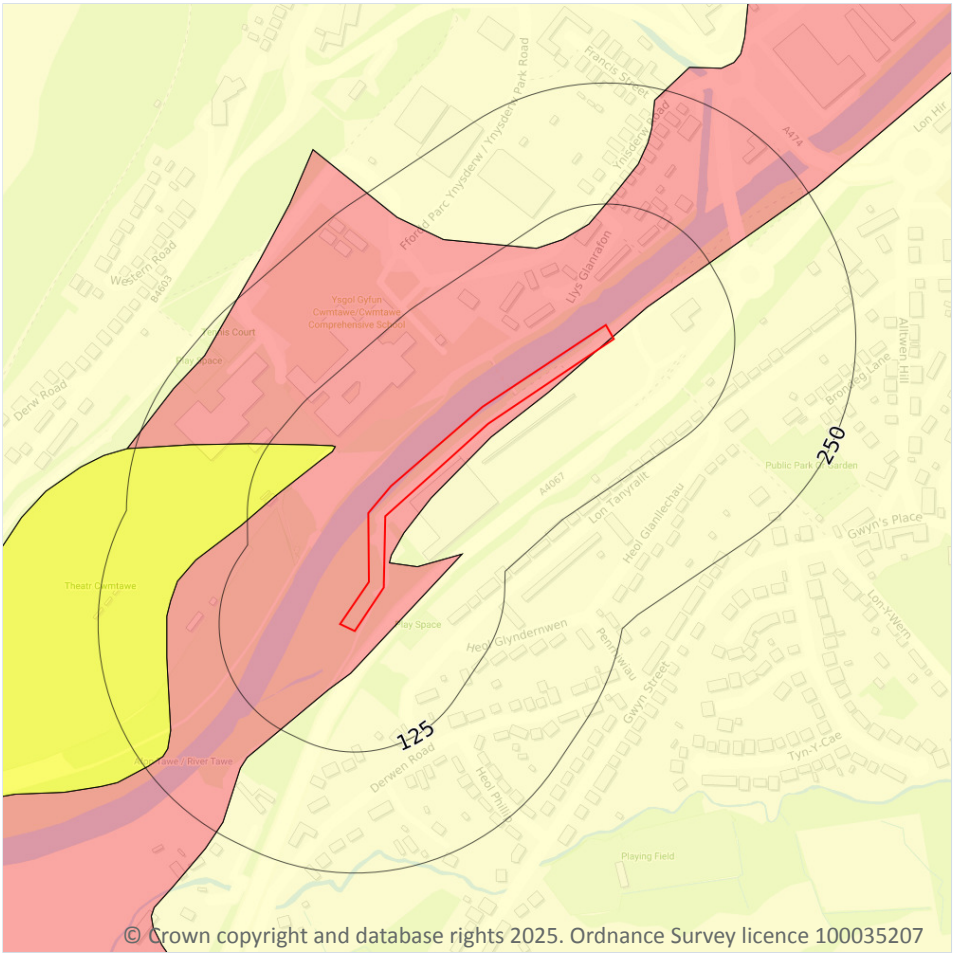
Features are displayed on the Natural ground subsidence - Running sands map on **page 112 >**

Location	Hazard rating	Details
On site	**Very low**	**Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.**

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.**
27m SE	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



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17.3 Compressible deposits

Records within 50m	2

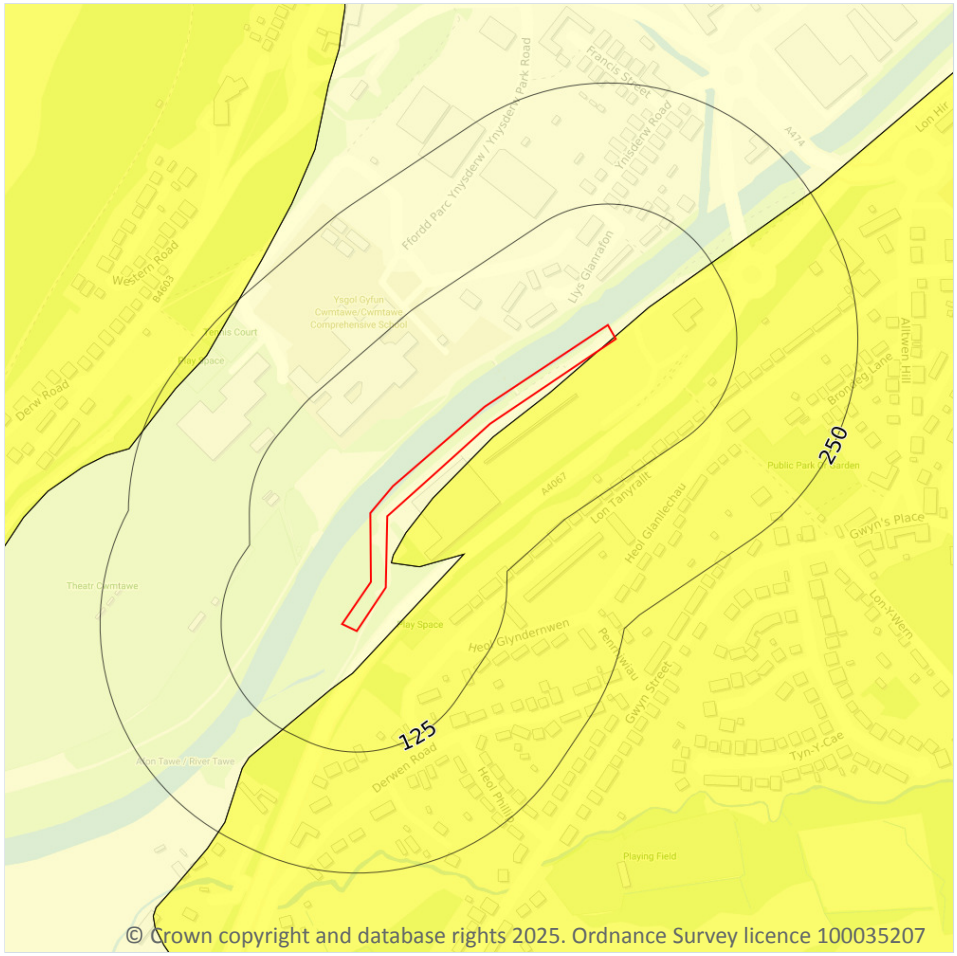
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 114 >**

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**
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	2

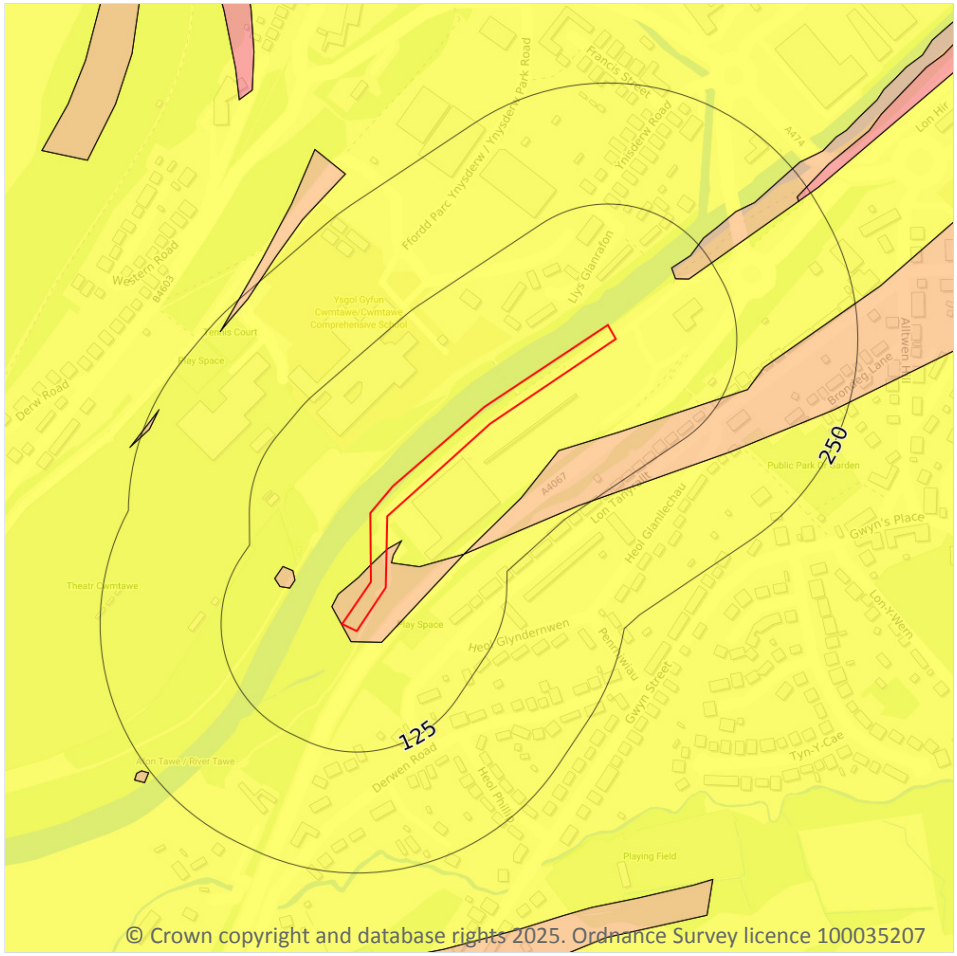
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 116 >**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



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17.5 Landslides

Records within 50m	2

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

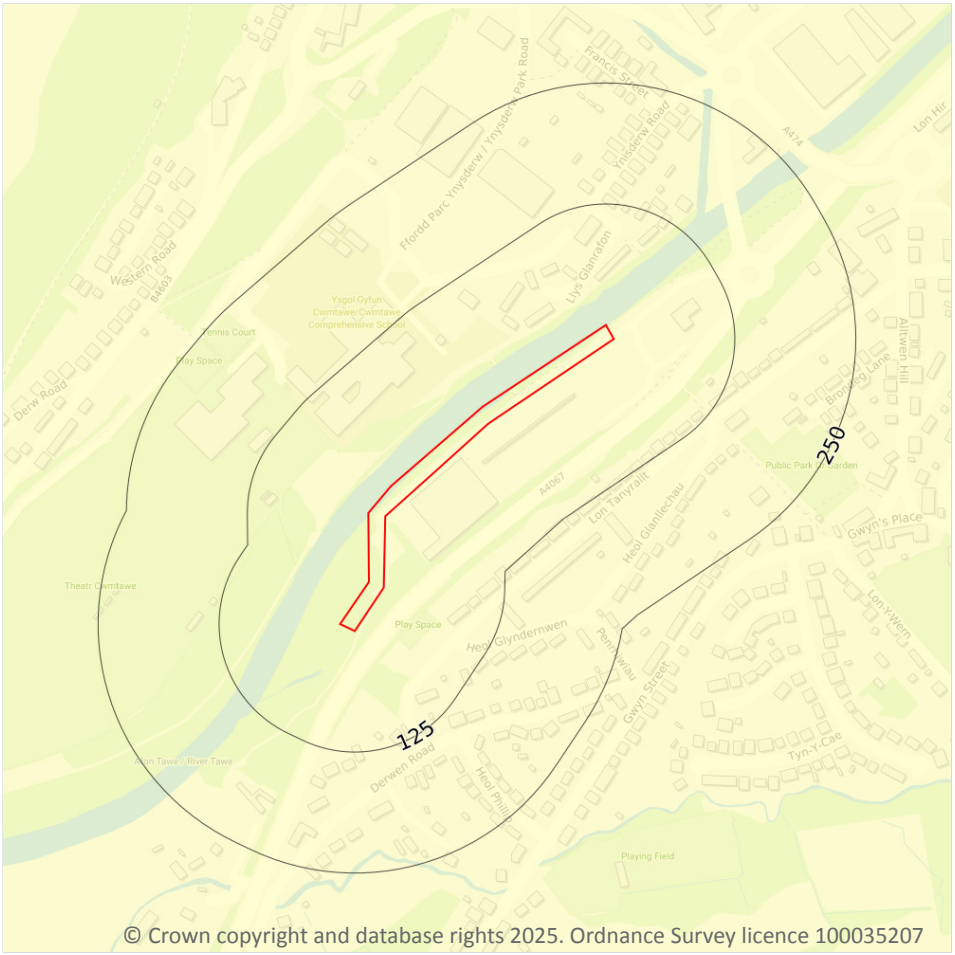
Features are displayed on the Natural ground subsidence - Landslides map on **page 117 >**

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

Location	Hazard rating	Details
On site	**Low**	**Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



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Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.6 Ground dissolution of soluble rocks

Records within 50m	1

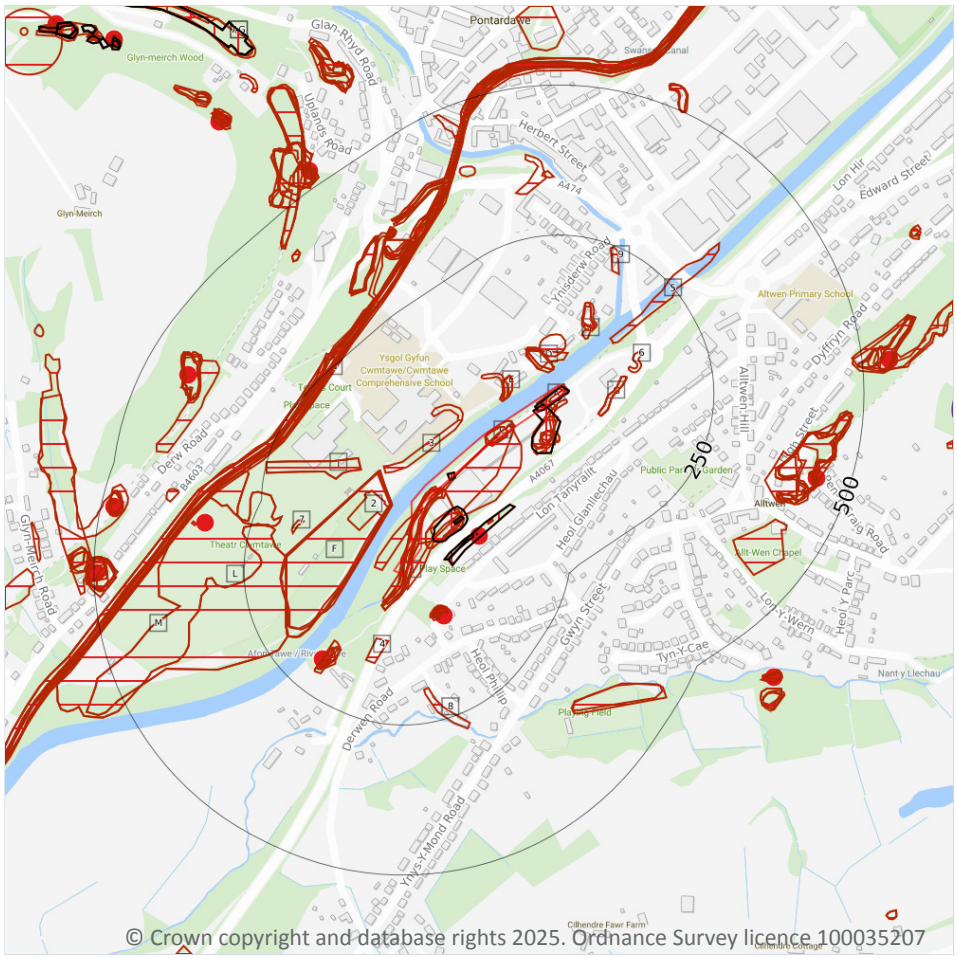
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 119 >**

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 and ground workings



Site Outline

Search buffers in metres (m)

- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining

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 BritPits

Records within 500m	8

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 and ground workings map on **page 121 >**

ID	Location	Details	Description
H	95m SE	Name: Alltwen-isaf Address: Pontardawe, SWANSEA, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
B	96m E	Name: Craig-glyn-meirch Address: Pontardawe, SWANSEA, Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit, drift or incline. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun' Ee' - Scots). May also be locally termed `Quarry' or `Underground Quarry' when referring to sites extracting building stone (e.g. in Dorset and Wiltshire). The location given is that of the mine entrance and may be approximate for older sites shown on contemporaneous mapping by the Geological Survey used as the source document. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
K	190m SW	Name: Alltwen-isaf Address: Pontardawe, SWANSEA, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

ID	Location	Details	Description
R	325m W	Name: Craig-glyn-meirch Address: Pontardawe, SWANSEA, Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit, drift or incline. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun' Ee' - Scots). May also be locally termed `Quarry' or `Underground Quarry' when referring to sites extracting building stone (e.g. in Dorset and Wiltshire). The location given is that of the mine entrance and may be approximate for older sites shown on contemporaneous mapping by the Geological Survey used as the source document. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
U	428m NW	Name: Craig-glyn-meirch Address: Pontardawe, SWANSEA, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
T	443m E	Name: Alltwen Address: Pontardawe, SWANSEA, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
Z	478m W	Name: Craig-glyn-meirch Address: Pontardawe, SWANSEA, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

ID	Location	Details	Description
Y	497m W	Name: Craig-glyn-meirch Address: Pontardawe, SWANSEA, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m **94**

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 and ground workings map on **page 121 >**

ID	Location	Land Use	Year of mapping	Mapping scale
1	**On site**	**Unspecified Ground Workings**	**1948**	**1:10560**
A	**On site**	**Unspecified Heap**	**1964**	**1:10560**
A	**On site**	**Coal Level**	**1913**	**1:10560**
A	**On site**	**Unspecified Heap**	**1897**	**1:10560**
A	**On site**	**Unspecified Heap**	**1948**	**1:10560**
A	**On site**	**Unspecified Heap**	**1948**	**1:10560**
A	**On site**	**Unspecified Heap**	**1966**	**1:10560**
A	**On site**	**Coal Level**	**1921**	**1:10560**
B	**On site**	**Unspecified Ground Workings**	**1964**	**1:10560**
B	**On site**	**Refuse Heap**	**1948**	**1:10560**
B	**On site**	**Refuse Heap**	**1913**	**1:10560**
B	**On site**	**Unspecified Ground Workings**	**1948**	**1:10560**
B	**On site**	**Unspecified Ground Workings**	**1948**	**1:10560**
B	**On site**	**Unspecified Disused Level**	**1980**	**1:10000**

ID	Location	Land Use	Year of mapping	Mapping scale
B	**On site**	**Unspecified Ground Workings**	**1992**	**1:10000**
B	**On site**	**Refuse Heap**	**1921**	**1:10560**
B	**On site**	**Refuse Heap**	**1921**	**1:10560**
C	**On site**	**Unspecified Heap**	**1980**	**1:10000**
C	**On site**	**Unspecified Heap**	**1992**	**1:10000**
C	**On site**	**Unspecified Heap**	**1966**	**1:10560**
A	2m SE	Coal Level	1913	1:10560
A	7m SE	Unspecified Ground Workings	1897	1:10560
B	7m E	Unspecified Pit	1980	1:10000
B	7m E	Unspecified Pit	1966	1:10560
A	10m SE	Refuse Heap	1913	1:10560
B	15m E	Refuse Heap	1964	1:10560
A	18m SE	Refuse Heap	1913	1:10560
B	18m E	Old Coal Level	1948	1:10560
D	27m NW	Refuse Heap	1921	1:10560
D	29m NW	Unspecified Heap	1948	1:10560
D	29m NW	Unspecified Heap	1948	1:10560
E	29m NW	Unspecified Ground Workings	1913	1:10560
E	30m NW	Unspecified Heap	1897	1:10560
E	30m NW	Unspecified Ground Workings	1948	1:10560
E	30m NW	Unspecified Ground Workings	1948	1:10560
F	32m W	Sewage Works	1913	1:10560
F	33m W	Sewage Works	1948	1:10560
A	33m SE	Unspecified Ground Workings	1966	1:10560
F	34m W	Sewage Works	1913	1:10560
A	35m SE	Refuse Heap	1948	1:10560
A	35m SE	Refuse Heap	1948	1:10560
F	36m W	Sewage Works	1948	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
F	36m W	Sewage Works	1948	1:10560
A	37m SE	Refuse Heap	1964	1:10560
2	38m W	Sewage Works	1921	1:10560
3	38m NW	Unspecified Ground Workings	1964	1:10560
D	39m NW	Unspecified Heap	1966	1:10560
B	43m SE	Unspecified Disused Level	1964	1:10560
D	48m N	Refuse Heap	1897	1:10560
B	50m SE	Old Coal Level	1921	1:10560
B	53m E	Old Coal Level	1913	1:10560
B	55m E	Old Coal Level	1913	1:10560
G	67m SE	Unspecified Ground Workings	1948	1:10560
G	67m SE	Unspecified Ground Workings	1913	1:10560
G	67m SE	Unspecified Ground Workings	1897	1:10560
H	76m SE	Unspecified Quarry	1964	1:10560
H	77m SE	Unspecified Quarry	1913	1:10560
H	78m SE	Unspecified Quarry	1948	1:10560
H	79m SE	Unspecified Quarry	1948	1:10560
H	80m SE	Unspecified Quarry	1913	1:10560
H	82m SE	Unspecified Quarry	1921	1:10560
I	89m NE	Unspecified Pit	1913	1:10560
B	96m SE	Old Coal Level	1948	1:10560
B	96m SE	Old Coal Level	1948	1:10560
J	100m NW	Cuttings	1964	1:10560
J	100m NW	Cuttings	1966	1:10560
I	103m NE	Refuse Heap	1921	1:10560
I	109m NE	Unspecified Heap	1913	1:10560
I	109m NE	Refuse Heap	1913	1:10560
4	113m S	Cuttings	1948	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
5	114m NE	Refuse Heap	1964	1:10560
6	116m E	Unspecified Heap	1897	1:10560
K	152m SW	Unspecified Old Quarry	1913	1:10560
K	156m SW	Unspecified Old Quarry	1913	1:10560
K	159m SW	Unspecified Old Quarry	1921	1:10560
K	166m SW	Unspecified Ground Workings	1948	1:10560
7	172m NW	Pond	1897	1:10560
L	180m W	Refuse Heap	1948	1:10560
L	180m W	Refuse Heap	1948	1:10560
8	193m S	Unspecified Ground Workings	1948	1:10560
M	207m NW	Refuse Heap	1964	1:10560
M	207m NW	Refuse Heap	1966	1:10560
9	210m NE	Unspecified Heap	1897	1:10560
N	230m NW	Canal	1921	1:10560
N	232m NW	Canal	1913	1:10560
N	233m NW	Canal	1948	1:10560
N	233m NW	Canal	1913	1:10560
N	233m NW	Canal	1897	1:10560
N	235m NW	Canal	1948	1:10560
N	239m NW	Canal	1877	1:10560
N	240m NW	Canal	1964	1:10560
N	240m NW	Canal	1980	1:10000
N	240m NW	Canal	1992	1:10000
N	240m NW	Canal	1966	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	36

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 and ground workings map on **page 121 >**

ID	Location	Land Use	Year of mapping	Mapping scale
A	**On site**	**Coal Level**	**1913**	**1:10560**
A	**On site**	**Coal Level**	**1921**	**1:10560**
B	**On site**	**Unspecified Disused Level**	**1980**	**1:10000**
B	18m E	Old Coal Level	1948	1:10560
B	43m SE	Unspecified Disused Level	1964	1:10560
B	50m SE	Old Coal Level	1921	1:10560
B	53m E	Old Coal Level	1913	1:10560
AG	747m NW	Unspecified Disused Levels	1980	1:10000
AG	747m NW	Unspecified Disused Levels	1992	1:10000
AH	883m NW	Old Coal Levels	1921	1:10560
AH	886m NW	Coal Levels	1913	1:10560
AH	899m NW	Unspecified Disused Levels	1980	1:10000
AH	899m NW	Unspecified Disused Levels	1992	1:10000
-	909m W	Colliery	1948	1:10560
-	914m W	Coal Level	1948	1:10560
-	914m W	Coal Levels	1913	1:10560
-	914m W	Old Coal Levels	1897	1:10560
AH	914m NW	Old Coal Levels	1921	1:10560
AH	931m NW	Unspecified Disused Levels	1980	1:10000
AH	931m NW	Unspecified Disused Levels	1992	1:10000
-	947m W	Unspecified Disused Mine	1980	1:10000
-	947m W	Unspecified Disused Mine	1992	1:10000
-	947m W	Unspecified Mine	1966	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
-	947m W	Unspecified Mine	1964	1:10560
AH	947m NW	Old Coal Levels	1913	1:10560
AH	954m NW	Unspecified Disused Levels	1980	1:10000
AH	954m NW	Unspecified Disused Levels	1992	1:10000
AH	954m NW	Unspecified Disused Levels	1964	1:10560
-	975m W	Unspecified Mine	1964	1:10560
-	989m W	Coal Level	1913	1:10560
-	989m W	Old Coal Levels	1921	1:10560
-	989m W	Coal Level	1921	1:10560
-	989m S	Unspecified Disused Mine	1980	1:10000
-	989m S	Unspecified Disused Mine	1992	1:10000
-	990m W	Old Coal Levels	1913	1:10560
-	999m W	Unspecified Disused Level	1992	1:10000

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from 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	0

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).

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 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.

18.13 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.

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

19.2 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 Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

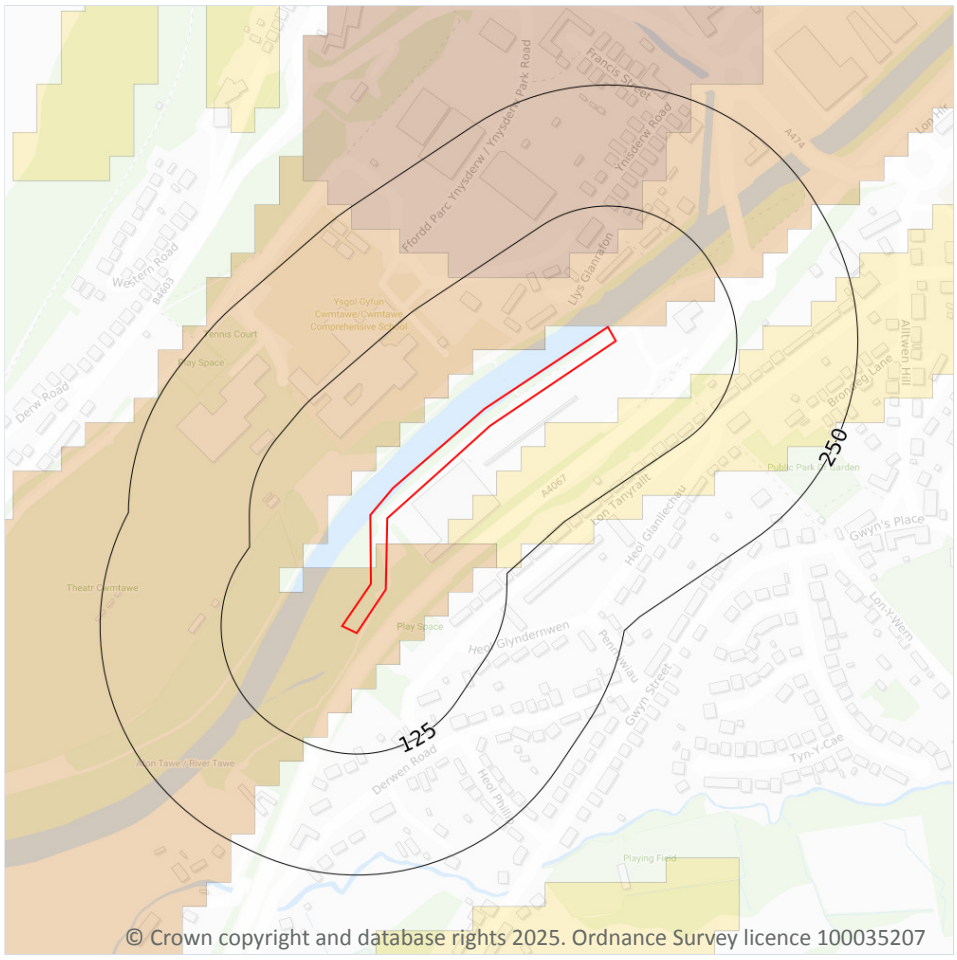
Records within 500m	0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.

This data is sourced from Groundsure.

20 Radon



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20.1 Radon

Records on site	2

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on **page 135 >**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Between 5% and 10%**	**Basic**

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

This data is sourced from the British Geological Survey and UK Health Security Agency.

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m	11

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km^2. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km^2; 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**	**2.2 - 3.0 mg/kg**	**60 - 90 mg/kg**	**30 - 45 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 - 2.2 mg/kg**	**60 - 90 mg/kg**	**30 - 45 mg/kg**
On site	**25 - 35 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 - 2.2 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**25 - 35 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**2.2 - 3.0 mg/kg**	**60 - 90 mg/kg**	**30 - 45 mg/kg**
4m SE	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 - 2.2 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
15m W	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	2.2 - 3.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
15m W	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	2.2 - 3.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
25m N	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	2.2 - 3.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
27m SE	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 - 2.2 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
30m NW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	2.2 - 3.0 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
30m NW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	2.2 - 3.0 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

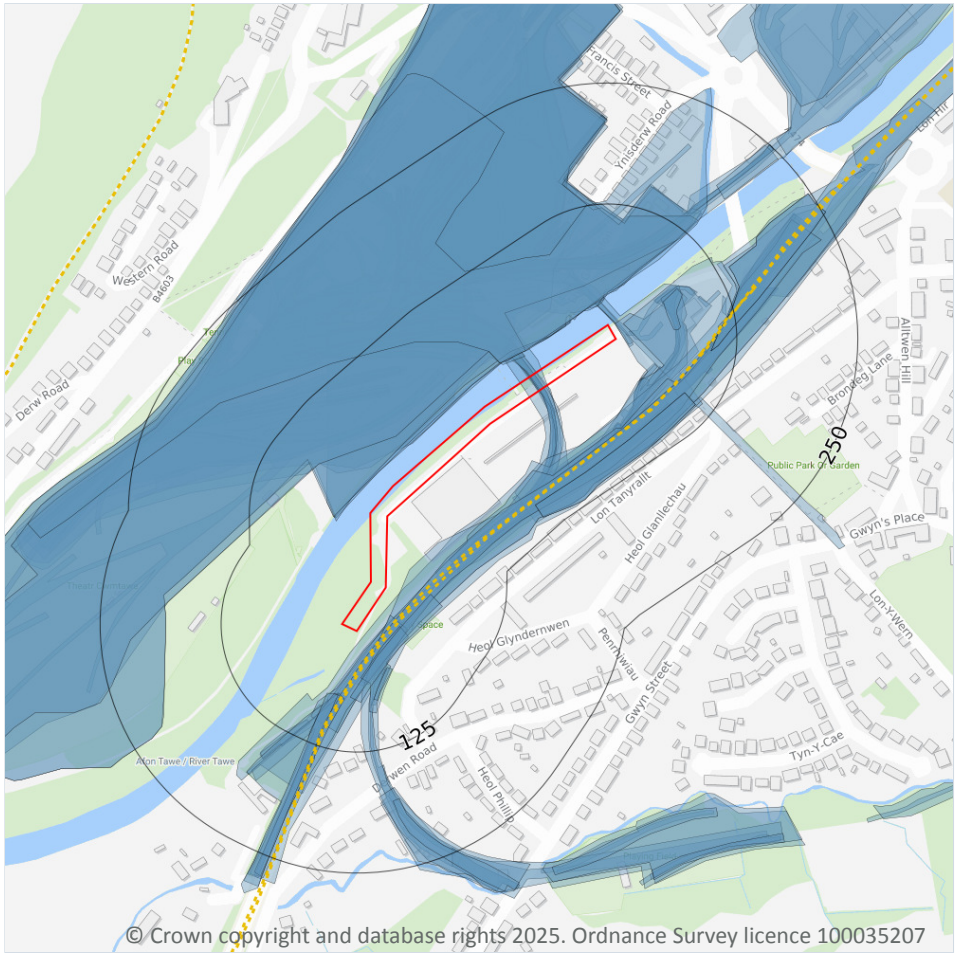
21.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects



Site Outline

Search buffers in metres (m)

- 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

22.1 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.

22.2 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.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m	109

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 139 >**

Location	Land Use	Year of mapping	Mapping scale
On site	**Railway Sidings**	**1913**	**10560**
On site	**Tramway Sidings**	**1877**	**10560**
On site	**Mineral Railway Sidings**	**1964**	**2500**
On site	**Railway Sidings**	**1964**	**-**
On site	**Railway Sidings**	**1898**	**2500**
On site	**Railway Sidings**	**1919**	**2500**
On site	**Tramway Sidings**	**1877**	**2500**
On site	**Railway Sidings**	**1964**	**2500**
On site	**Railway Sidings**	**1942**	**2500**
6m NE	Railway Sidings	1898	2500
7m NE	Railway Sidings	1919	2500
7m NE	Railway Sidings	1897	10560
9m SE	Railway Sidings	1966	10560
15m NE	Railway Sidings	1921	10560
16m NE	Railway Sidings	1877	2500
19m SE	Railway Sidings	1964	10560
19m SE	Railway Sidings	1897	10560

Location	Land Use	Year of mapping	Mapping scale
20m NW	Railway Sidings	1913	10560
21m NW	Railway Sidings	1921	10560
21m NW	Railway Sidings	1948	10560
21m NW	Railway Sidings	1964	10560
22m SE	Railway Sidings	1941	2500
23m NW	Railway Sidings	1966	10560
24m NW	Disused Railway Sidings	1964	2500
24m SE	Railway Sidings	1948	10560
25m NW	Railway Sidings	1948	10560
25m NW	Railway Sidings	1897	10560
30m SE	Railway Sidings	1918	2500
31m SE	Railway Sidings	1913	10560
33m SE	Railway Sidings	1948	10560
34m SE	Railway Sidings	1898	2500
35m SE	Railway Sidings	1918	2500
46m NW	Railway Sidings	1877	2500
47m NW	Railway Sidings	1898	2500
49m NW	Railway Sidings	1918	2500
49m SE	Railway Sidings	1913	10560
49m NW	Railway Sidings	1941	2500
50m NW	Railway Sidings	1918	2500
52m E	Railway Sidings	1898	2500
54m NE	Railway Sidings	1898	2500
58m N	Railway Sidings	1942	2500
59m NE	Railway Sidings	1948	10560
62m N	Railway Sidings	1964	2500
62m N	Railway Sidings	1964	-
63m N	Railway Sidings	1964	2500

Location	Land Use	Year of mapping	Mapping scale
65m E	Railway Sidings	1881	2500
65m E	Railway Sidings	1918	2500
67m S	Railway Sidings	1948	10560
68m S	Railway Sidings	1913	10560
68m S	Railway Sidings	1913	10560
73m S	Railway Sidings	1918	2500
74m SE	Railway Sidings	1964	-
74m SE	Railway Sidings	1964	2500
76m SW	Railway Sidings	1962	2500
76m NW	Railway Sidings	1898	2500
76m NW	Railway Sidings	1964	2500
77m NW	Railway Sidings	1964	2500
77m NW	Railway Sidings	1964	-
77m NW	Tramways Sidings	1881	2500
83m NW	Railway Sidings	1962	2500
84m NW	Railway Sidings	1964	-
84m NW	Railway Sidings	1964	2500
86m NW	Railway Sidings	1964	2500
86m SE	Railway Sidings	1964	2500
86m SE	Railway Sidings	1964	-
88m SE	Railway Sidings	1877	2500
88m SE	Railway Sidings	1948	10560
88m SE	Railway Sidings	1913	10560
92m NW	Railway Sidings	1919	2500
92m E	Railway Sidings	1964	2500
92m E	Railway Sidings	1964	-
92m NW	Railway Sidings	1919	2500
95m NE	Railway Sidings	1919	2500

Location	Land Use	Year of mapping	Mapping scale
99m E	Railway Sidings	1948	10560
99m E	Railway Sidings	1913	10560
101m NW	Railway Sidings	1898	2500
105m SW	Railway Sidings	1984	2500
112m NW	Railway Sidings	1919	2500
113m E	Railway Sidings	1919	2500
123m NW	Tramway Sidings	1877	2500
131m N	Railway Sidings	1918	2500
138m E	Railway Sidings	1918	2500
138m NW	Railway Sidings	1877	2500
139m E	Railway Sidings	1942	2500
144m NW	Railway Sidings	1898	2500
153m NW	Railway Sidings	1941	2500
153m NW	Railway Sidings	1918	2500
165m E	Railway Sidings	1878	2500
166m S	Railway Sidings	1913	10560
167m S	Railway Sidings	1918	2500
168m NW	Railway Sidings	1898	2500
170m NW	Railway Sidings	1964	2500
171m NW	Railway Sidings	1964	-
171m NW	Railway Sidings	1964	2500
175m NW	Railway Sidings	1964	2500
177m NE	Railway Sidings	1964	10560
178m NW	Railway Sidings	1964	-
178m NW	Railway Sidings	1964	2500
178m S	Railway Sidings	1913	10560
184m NW	Railway Sidings	1877	2500
209m NW	Railway Sidings	1918	2500

Location	Land Use	Year of mapping	Mapping scale
209m NW	Railway Sidings	1898	2500
212m NW	Railway Sidings	1942	2500
223m NW	Railway Sidings	1918	2500
223m NW	Railway Sidings	1941	2500
230m NW	Railway Sidings	1898	2500
241m NW	Railway Sidings	1898	2500
245m SE	Railway Sidings	1898	2500
245m SE	Railway Sidings	1919	2500

This data is sourced from Ordnance Survey/Groundsure.

22.5 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.

22.6 Historical railways

Records within 250m	7

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

Features are displayed on the Railway infrastructure and projects map on **page 139 >**

Location	Description
25m SE	Abandoned
28m SE	Historical OSM
90m E	Historical OSM
117m E	Historical OSM
151m E	Historical OSM

Location	Description
169m NE	Historical OSM
198m NE	Historical OSM

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	**0**

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 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.

22.9 HS2

Records within 500m	**0**

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

This data is sourced from HS2 ltd.

Data providers

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

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-and-conditions-april-2023/ ↗.

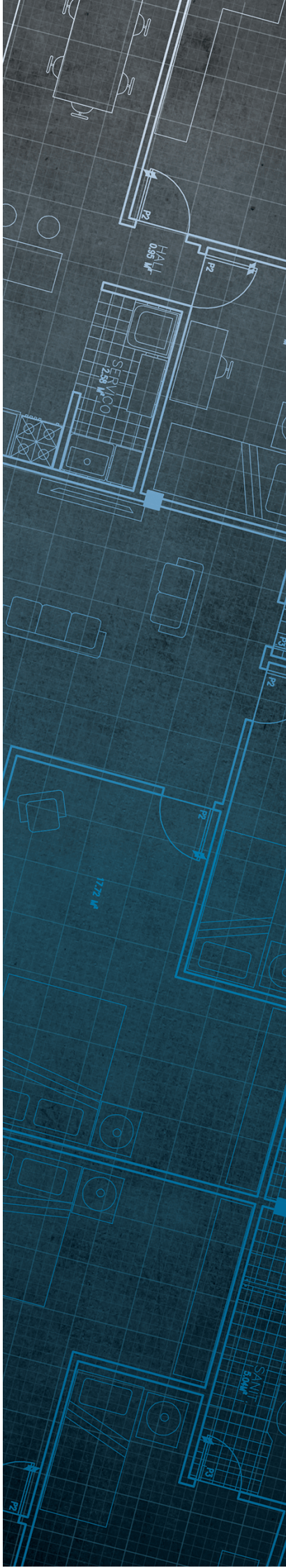
The Coal Authority

Consultants

Coal Mining Report

333702162
Neath Port Talbot

Date of enquiry:	**19 November 2025**
Date enquiry received:	**19 November 2025**
Issue date:	**19 November 2025**
Our reference:	**51003539047001**
Your reference:	**HYD-WX6-773-GQP-3EK**



Consultants

Coal Mining Report

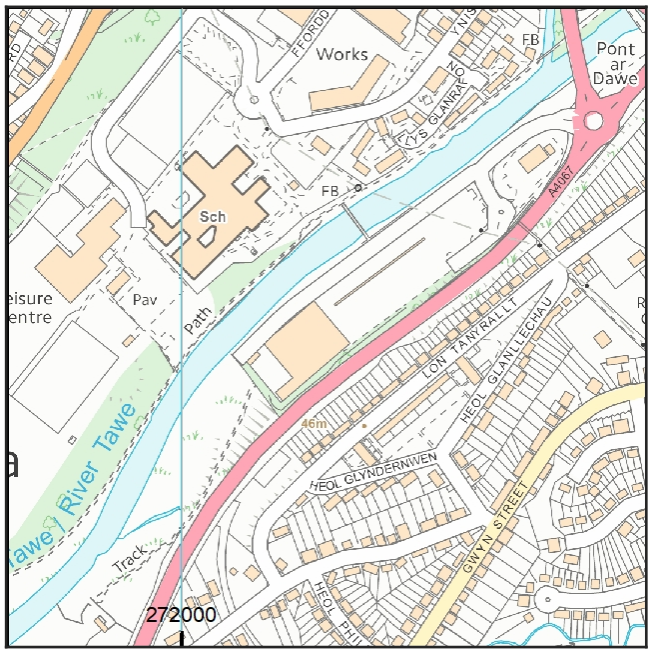
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

GROUNDSURE LIMITED

Enquiry address

333702162
Neath Port Talbot



Approximate position of property

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Mansfield
Nottinghamshire
NG18 4RG

reports@miningremediation.gov.uk

Section 1 – Mining activity and geology

Past underground mining
No past mining recorded.

Probable unrecorded shallow workings
None.

Spine roadways at shallow depth
No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Adit	272203-001	272131 203325	The entrance to this adit was sealed by West Glamorgan County Council as part of the A4067 Swansea Valey Trunk Road Scheme in 1987.	Coal	
Adit	272203-007	272313 203531	This adit was investigated by West Glamorgan County Council as part of the A4067 Swansea Valley Trunk Road Scheme in 1987. Drainage works were undertaken as part of the treatment works.	Coal	
Adit	272203-008	272336 203502	This adit was investigated by West Glamorgan County Council as part of the A4067 Swansea Valey Trunk Road Scheme in 1987. Drainage works were undertaken as part of the treatment works.	Coal	
Adit	272203-010	272145 203348	The entrance to this adit was sealed by West Glamorgan County Council as part of the A4067 Swansea Valey Trunk Road Scheme in 1987.	Coal	
Adit	272203-014	272336 203545	Treatment details unknown.*	Coal	
Adit	272203-017	272035 203140	Treatment details unknown.*	Coal	

*For your information, before the coal industry was nationalised in 1947, there was no requirement for a mine operator to record mine entry treatment details when a mine was abandoned. Therefore, it is not unusual for us to have no treatment details for many of the 176,000 recorded mine entries on our database. Despite this lack of information, please be assured that the fact we have no treatment recorded does not necessarily mean that the mine entries were left untreated when abandoned.

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Abandoned mine plan catalogue numbers

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

R12044	SWR1666	9259
5995	6067	

For assistance in identifying the specific abandoned mine plans relevant to your requirements, **please contact us at InformationManagers@MiningRemediation.gov.uk**.

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
HUGHES	Coal	Yes	Within	N/A	67
UNNAMED	Coal	No	Within	N/A	62

Geological faults, fissures and breaklines

Please refer to the 'Summary of findings' map (on separate sheet) for details of any geological faults, fissures or breaklines either within or intersecting the enquiry boundary.

Fault under or close to the property recorded.

Opencast mines

None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

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Section 2 – Investigative or remedial activity

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

Site investigations
None recorded within 50 metres of the enquiry boundary.

Remediated sites
None recorded within 50 metres of the enquiry boundary.

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

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

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

Mine gas
None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes
None recorded within 500 metres of the enquiry boundary.

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Section 3 – Licensing and future mining activity

Future underground mining
None recorded.

Coal mining licensing
None recorded within 200 metres of the enquiry boundary.

Court orders
None recorded.

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

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

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

Payments to owners of former copyhold land
The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

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Section 4 – Further information

Based on the responses in this report, no further information has been highlighted.

Future development

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

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

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Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **email us at reports@miningremediation.gov.uk.**

Past underground coal mining

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

Probable unrecorded shallow workings

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

Spine roadways at shallow depth

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

Mine entries

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

Abandoned mine plan catalogue numbers

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

Outcrops

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

Geological faults, fissures and breaklines

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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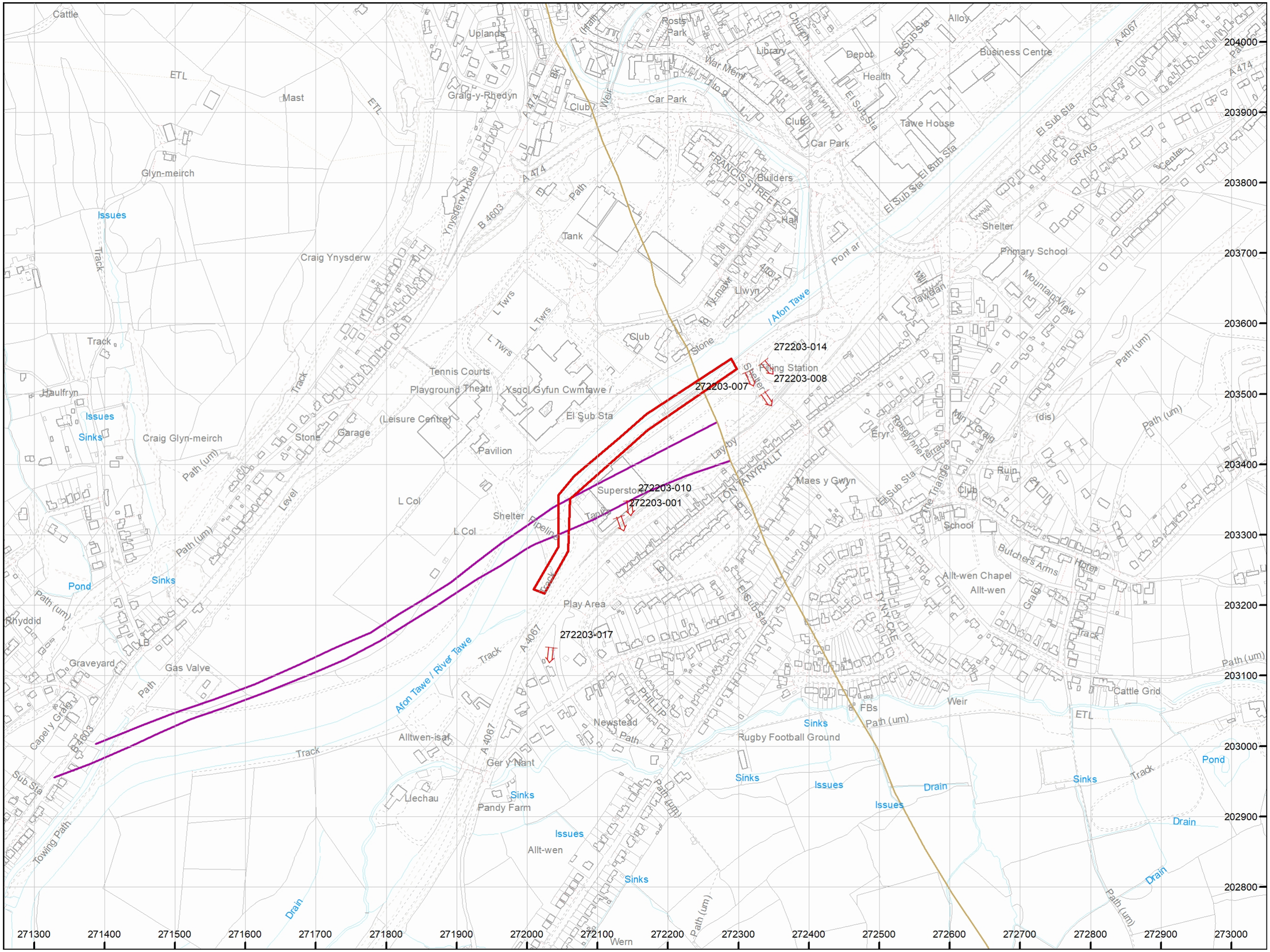
Summary of findings

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

Key

- Approximate position of the enquiry boundary shown
- Disused adit
- Outcrop (Proven)
- Geological faults



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Appendix E Climate change considerations for CSM

Table E.1 summarises the considerations that have been made in relation the possible implications of predicted climate change. These considerations have been made with reference to prevailing guidance on climate change and land contamination (SoBRA (2022), CL:AIRE)2022), Environment Agency (2010)), and climate change information published by the Met Office and the Environment Agency.

Table E.1: Possible CSM considerations related to climate change.

Climate change type	Potential climate change induced effect	Possible considerations on CSM
Increase in frequency and severity of extreme rainfall events	Temporary increasing in groundwater levels	An increase in groundwater could potentially reduce strength of the surrounding soils, leading to trench instability and settlement along the pipeline.
	River flooding	The pipeline is positioned adjacent to the River Tawe. Flooding may wash away the infilled material, exposing the pipeline, leaving it susceptible to external damage
Increase in frequency and severity of extreme cold and hot weather events	Soil desiccation/shrinkage	Shrinkage of soil can destabilise the clay-rich soils, causing settlement, leading to joint stress
	Temporary drop in water levels (GW and/or SW) due to lower rainfall.	Changes in groundwater level can interfere with soil stability, causing differential settlement along the proposed alignment.
Long-term increase in rainfall	Increase in groundwater levels	
Long-term decrease in rainfall	Decrease in groundwater levels	

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