

Llangatwg

784-B068800



Phase 1 Geoenvironmental Assessment Desk Top Study



FINAL

Morgan Sindall

December 2024

Document prepared by Tetra Tech Limited. Registered in England number: 01959704



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DOCUMENT CONTROL

Document:	Phase 1 Geoenvironmental Assessment Desk Top Study
Project:	Llangatwg
Client:	Morgan Sindall
Project Number:	784-B068800
File Origin:	\\Lds-dc-vm-101\Data\Projects\784-B068800_Llangatwg_\60_Output\61_WIP\DTS\784-B068800_Llangatwg_DTS_Rpt_FINAL_Dec-24.docx

Revision:	1	Prepared by:	James Craddock
Date:	18/09/2024	Checked by:	Paul Vincent
Status:	Draft	Approved By:	Sarah Roberts
Description of Revision:	First Draft		

Revision:	2	Prepared by:	James Craddock
Date:	02/12/2024	Checked by:	Paul Vincent
Status:	Final	Approved By:	Sarah Roberts
Description of Revision:	Final Draft		

Revision:		Prepared by:	
Date:		Checked by:	
Status:		Approved By:	
Description of Revision:			

Revision:		Prepared by:	
Date:		Checked by:	
Status:		Approved By:	
Description of Revision:			

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ACRONYMS/ABBREVIATIONS

Acronyms/Abbreviations	Definition
AOD	above Ordnance Datum
bgl	below ground level
BGS	British Geological Survey
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
C4SL	Category 4 Screening Levels
CIEH	Chartered Institute of Environmental Health
CLEA	Contaminated Land Exposure Assessment
CoC	Constituent of Concern
CSM	Conceptual Site Model
DEFRA	Department of Environment, food and Rural Affairs
DQRA	Detailed Quantitative Risk Assessment
DTS	Desktop Study
DRO	Diesel Range Organics
DWS	Drinking Water Standard
EA	Environment Agency (England)
EPH	Extractable Petroleum Hydrocarbons
EQS	Environmental Quality Standards
FOC	Fraction Organic Carbon
GPR	Ground Penetrating Radar
LOD	Limit of detection
LQM	Land Quality Management
NRW	Natural Resources Wales
OS	Ordnance Survey
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PPE	Personal Protection Equipment
ppm	parts per million
PRO	Petroleum Range Organics
SGV	Soil Guideline Values
SOM	Soil Organic Matter
SVOC	Semi-volatile organic compounds
TPH	Total Petroleum Hydrocarbon
TSV	Tier 1 Screening Values
VOC	Volatile Organic Carbon
VPH	Volatile Petroleum Hydrocarbons

1.0 INTRODUCTION

1.1 INSTRUCTION

Tetra Tech Environment Planning Transport Ltd (Tetra Tech) was commissioned by Morgan Sindall (the client) to undertake a Geo-Environmental Desk Top Study for a site known as Llangatwg (known hereafter as “the site”).

The location of the site is shown on Figure 1.

1.2 BRIEF

The brief was to provide a Phase 1 Geo-environmental Desk Study assessment report including a preliminary qualitative geotechnical and contamination risk assessment to support a planning application for redevelopment at the site.

1.3 PROPOSED DEVELOPMENT

The objective of the ground investigation is to provide information to produce a detailed ground model of the site and parameters of the ground materials, to assess the current site for redevelopment of the existing school. Current proposals are for the demolition of the current school, to facilitate construction of a new school on the current soft-landscaped area.

A final design is not yet available for Tetra Tech to review and as such details herein may be subject to review following final design confirmation.

1.4 REPORT SCOPE

This report includes the following key elements:

A record of the site visit and visual inspection walkover;

A discussion of the current site status and key associated environmental influences observable by general visual inspection around the site;

An historical site and area review, primarily referring to past editions of Ordnance Survey Maps;

A discussion of the general expected ground and groundwater conditions within the topographical and area context referring to our own geological and hydrogeological maps library;

Details of an Environmental database search (Groundsure report) of key relevant agencies, including Local and Statutory Authorities such as the Environment Agency/Natural Resources Wales;

A geotechnical and ground contamination assessment discussing the results of the research above not only concerning potential on-site conditions/constraints and contamination but also an overview of the potential for migration onto or off-site with respect to the surrounding neighbouring sites;

A baseline UXO risk assessment using on-line databases to classify the site with regards to UXO risk;

Development of a preliminary conceptual site model;

Preliminary geotechnical hazard assessment;

Qualitative ground contamination risk assessment (compliant with CIRIA 552 (CIRIA, 2001) methodology);

An executive summary of the report to allow a rapid, layman's overview.

1.5 LIMITATIONS

The recommendations and opinions expressed in this report are based on information obtained as part of the desk study or provided by others. Information provided from other sources is taken in good faith and Tetra Tech cannot guarantee its accuracy.

This report is subject to the report conditions presented in Appendix A.

The information contained in this report is intended for the use of the Morgan Sindall and Tetra Tech can take no responsibility for the use of this information by any third party or for uses other than that described in this report or detailed within the terms of our engagement.

2.0 SITE INFORMATION

2.1 LOCATION

The site is located situated at Llangatwg Community School within the area of Neath in South Wales. The site is approximately 4.82ha in area and is centred on National Grid Reference (NGR) 276707 199304. The approximate postcode of the site is SA10 8DB.

The nearest site address is: Llangatwg Community School, Aberdulais, Neath SA10 8DB

A site location plan is presented in Figure 1.

2.2 GENERAL AREA CONTEXT

Table 2-1 - Surrounding land uses

Direction	Description
North	The site is bound to the north by dense forestry and to the north-east by residential dwellings and industrial and commercial land uses.
East	The site is bound to the east by Pencynor road and residential dwellings beyond.
South	The site is bound to the south by the A4230.
West	The site is bound to the west by residential dwellings.

2.2.1 Site Description

A site walkover inspection was undertaken by Tetra Tech. A series of photographs are presented at the end of this report and are cross referenced in the following section. The general site layout and photograph locations are shown in Figure 2.

2.2.2 Current Site Usage

The site is currently utilised as Ysgol Gyfun Cymunedol Llangatwg Community Comprehensive School and Sensitive Water Solutions Swim School centrally and to the south-west with associated car parking to the south and south-west, playgrounds to the west and south-east and undeveloped amenity grasslands utilised as a playing field to the north-east.

2.2.3 Access and Boundaries

Access to the site is gained via the A4230 to the south-west and Pencynor road on the southern boundary.

2.2.4 Topography

The site is topographically higher in the north-east and generally slopes to the south-west with a maximum change in elevation of 5m across site (based on on-line aerial photography).

2.2.5 Ground Cover and Vegetation

The surface of the site generally comprises tarmacadam hardstanding with localised areas of soft landscaping, shrubbery and mature trees centrally, to the south, south-west, north and east of site with a large area of amenity grasslands to the north-east.

2.2.6 Drainage

The site has existing drainage systems in place across the site, particularly in areas of hardstanding. The areas of grass covered throughout show no signs of existing drainage, with sporadic volumes of standing water.

2.2.7 Services

Numerous utility services will be located on site, with multiple manholes covers and drainage runs being observed in both sections of the site. Given the nature of the site, freely available utility plans don't portray service routes. A full PAS128 survey is recommended to be undertaken prior Tetra Tech arrival or as part of the pre-construction information.

2.2.8 On-Site Structures and Fuel Tanks

No on-site structures or fuel tanks are reported to be located on site.

2.2.9 Electrical Substations

An electrical substation is shown to be present, via BGS mapping, on site within the north-western corner of the current school development.

2.2.10 Asbestos Containing Materials

Based on the site's previous land use and the history around the site, the presence of asbestos cannot be discounted, however no contemporary on site sources are noted.

2.2.11 Signs of Contamination

No obvious signs of olfactory or visual contamination. However, given the age of the development and the developments in the surrounding area, the risk posed of the potential presence of contaminated soils in the working area cannot be discounted.

2.3 PREVIOUS INVESTIGATIONS

No previous geo-environmental assessment reports relating to the site have been provided to Tetra Tech for review as part of this desk-based study. There is little information on a previous Ground Investigation within the area of the site.

However, the BGS Groundsure Report indicates a total of twenty-nine boreholes were drilled within 250m of the site, with none located on site. Details of the nearest exploratory locations are summarised in section 3.1.4.

Tetra Tech understands that Morgan Sindall do not have reliance on the information outlined below and as such the data is presented for information only.

3.0 GEOLOGY, HYDROGEOLOGY, HYDROLOGY & RADON

3.1 GEOLOGY

Details of the geology underlying the site have been obtained from the following sources:

British Geological Survey (BGS) Sheet No. 247 (Swansea) Solid and Drift Edition / Solid Edition etc, 1:50 000 scale;

BGS website (British Geological Survey, 2024), accessed 19/09/2024.

Environmental database (Groundsure™) presented in Appendix B.

BR211 Indicative Radon Mapping (Scivyer, 2015)

Coal Authority Interactive Mapper (The Coal Authority, 2023), accessed 19/09/2024;

3.1.1 Made Ground

Artificial Ground, such as Made Ground, is shown to be present on published BGS mapping. The Groundsure report records the entirety of the site to be underlain by Made Ground which is later classified as Landscaped Ground;

The BGS mapping defines Made Ground as *'an area where the pre-existing (natural or artificial) land surface is raised by artificial deposits. The purpose of the made ground is unspecified.'* The Made Ground across the area is anticipated to be associated with the historic unspecified workings and historical activities within the immediate vicinity.

The BGS mapping define Landscaped Ground as Landscaped Ground as *'an area where the land surface (natural or artificial) has been extensively remodelled, but where it is impracticable or impossible to delineate separate zones of Made Ground, Worked Ground, or Disturbed Ground.'* The ground conditions are often variable in their composition.

3.1.2 Superficial Geology

BGS mapping indicates much of the site, to the west, is underlain by Glaciofluvial sheet deposits (Devensian in Age) comprising of Sand and Gravel.

The Glaciofluvial Deposits are defined as *'deposits deposited by meltwater streams. Includes mostly coarse-grained sediments (i.e. sand and gravel) with some finer-grained layers (i.e. clay and silt). Sand and gravel, locally with lenses of silt, clay or organic material.'*

These superficial deposits will typically be overlying bedrock and are identified in Plate 2.

3.1.3 Solid Geology

BGS mapping, plate 1, indicates that the solid geology underlying the site is comprised of the Brithdir Member comprised of sandstone. The Brithdir Member is typically described as *'green-grey, lithic arenites ('Pennant sandstones') with conglomerate lenses at bases of units; thin mudstone/siltstone and seatearth interbeds and mainly thin coals.'*

The Groundsure Report (GS-FUY-AXJ-GIB-LB1) and BGS mapping also records the presence of Brithdir Member comprising of mudstone, siltstone and sandstone located to the immediate north-west of the site and has the same BGS lexicon definition as Brithdir Member of Sandstone.

The geological map does not indicate the presence of any faults at rockhead which potentially intersect the site. The closest linear feature is located 37m west of the site and is classified as an inferred coal seam (Glyngwilym).

Plate 1 – BGS Solid Geology



Plate 2 – BGS Superficial Geology



3.1.4 Historical Borehole Logs

British Geological Survey (BGS) logs have been referred to for information only. A summary of reported ground conditions is presented in the table below with copies of the borehole logs presented in Appendix C.

Although no previous site investigations have been provided to Tetra Tech, the local BGS borehole logs indicate twenty-nine boreholes to be drilled within 250m of the site. These boreholes are associated within A465 Aberdulais Slip Roads, A465 Neat Trunk Road and Cilfrew Land Adjacent to Bryn Amlwg and show varying thicknesses of Made Ground, over either Glacial Till (Diamicton) or Glaciofluvial Sheet Deposits and underlain by the Brithdir Members.

A summary of logs, to give a general overview of expected ground conditions within the surrounding area, are presented in table 3-1 below.

Table 3-1 – Summary of BGS Borehole Logs

Reference Number	Hole Type and Depth	Distance and Direction from Site	Details			
BH80	Light Cable Percussive E276866 N199101	151m SE	GL – 2.80m bgl Soft grey sandy very gravelly silty organic CLAY with many cobbles and occasional boulder (MADE GROUND). 2.80m – 4.80m bgl. Soft brown very peaty gravelly silty organic CLAY with occasional cobbles 4.80m – 4.90m bgl Soft to firm grey silty CLAY 4.90m – 5.85m bgl. Very dense grey, brown sandy subangular to rounded sandstone GRAVEL and COBBLES with occasional boulder. 5.85m – 7.05m Medium dense grey slightly clayey very sandy SILT with occasional gravelly bands. 7.05 – 15.00m (E.O.H) Dense to very dense grey, brown clayey silty subangular to subrounded sandstone GRAVEL and COBBLES with occasional boulder.			
TP02-TP05	Trial Pits E276920 N199540	162m NE	TP02 GL – 0.20m bgl Topsoil 0.20 – 0.60m bgl Soft light brown silty clay with cobbles and boulders 0.60 – 1.40m bgl Soft dark brown silty CLAY	TP03 GL – 0.20m bgl Topsoil 0.20 – 0.60m bgl Soft light brown clayey SILT with cobbles 0.60 – 1.60m bgl (E.O.H)	TP04 GL – 0.20m bgl Topsoil 0.20 – 1.70m bgl (E.O.H) Greyish brown sandy silt with lenses of brown clayey stiff and	TP05 GL – 0.15m bgl Topsoil 0.15m – 0.60m bgl Light brown sandy SILT with cobbles and gravels

			1.40m – E.O.H Loose flaggy Sandstone	Soft dark brown silty CLAY with broken sandstone pieces	subrounded cobbles and gravel.	0.60 – 1.00m bgl Light brown sandy SILT with cobbles and gravels 1.00 - 1.20m bgl (E.O.H) Sandstone
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Boreholes within proximity to the site include both public boreholes ranging between 0 – 30m+ bgl in depths. Most of the boreholes, over 150m from site, are associated with the redevelopment of the A465 slip roads and Land Adjacent to Bryn Amlwg School. Full details on individual boreholes and their locations can be found within Appendix B and the Groundsure Report (GS-7RP-CTZ-J25-UOP) section 16.1.

3.1.5 BGS Soil Chemistry

The Groundsure Report also provides Urban Soil Chemistry Averages for the site (source: Urban Soil and Soil Chemistry data provided by the British Geological Survey). The information is summarised in the table below.

Table 3-2 – Urban Soil Chemistry Averages

Determinand	Soil Concentration Range	
	Minimum (mg/kg)	Max (mg/kg)
Arsenic	15	60
Cadmium	1.80	1.80
Chromium	60	90
Lead	100	100
Nickel	15	45
Bio-accessible Lead	60	60
Bio-accessible Arsenic	No data available	

3.2 HYDROGEOLOGY

3.2.1 Aquifer Classification

The Brithdir Member bedrock and Superficial Deposits (underlying the south-western area of the site - Glaciofluvial Sheet Deposits) are designated as a Secondary A Aquifer. These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

3.2.2 Groundwater Vulnerability

Guidance released by the EA (Environment Agency, March 2017) states that activities that have the potential to affect the quality or quantity of groundwater must prevent groundwater pollution. All ground

water is vulnerable to pollution, and some geological formations are more vulnerable than others. The risks of groundwater pollution from any given activity depend in part on:

The physical, chemical and biological properties of the underlying soil and rocks;

Depth and quality of soil;

The presence of glacial sediment and other materials – known as ‘drift’ deposits; and,

Depth of the unsaturated zone.

All of the above affect how groundwater is more or less vulnerable to pollution, with type of vulnerability generally one of the following:

Intrinsic vulnerability – this relates to the physical characteristics, it includes soil type, presence of superficial soils, or rock type; and,

Specific vulnerability – this relates to the effect of the proposed activity including any contaminant and consequent risk to groundwater.

A review of the Groundwater Vulnerability Maps for England has revealed that the combined classification is categorised as ‘Secondary Aquifer – Medium.

Medium vulnerability aquifers are defined as being able to *“areas that offer some groundwater protection and are intermediate between high and low vulnerability areas”*. EA guidance document¹ goes on to state that Medium vulnerability aquifers *“...areas between a high overall pollution risk to groundwater from surface activities and between areas that provide the greatest protections from pollutions.”*

3.2.3 Groundwater Source Protection Zones

The EA defines groundwater Source Protection Zones (SPZs) around identified abstractions to aid the assessment of risk to groundwater or abstraction sources from development. SPZs have three subdivisions and bespoke SPZs are defined for all major abstraction sources intended for human consumption or food use, e.g. boreholes and springs. These sub-divisions are defined as follows:

SPZ1 – Inner protection zone - defined as the 50-day travel time from any point below the water table to the abstraction source. This zone has a minimum radius of 50 metres;

SPZ2 – Outer protection zone - defined by a 400-day travel time from a point below the water table. This zone has a minimum radius of 250 or 500 metres around the abstraction source, depending on the size of the abstraction;

SPZ3 – Source catchment protection zone - defined as the area around an abstraction source within which all groundwater recharge is presumed to be discharged at the abstraction source.

The site is not shown to be situated within an EA/NRW defined groundwater SPZ.

3.2.4 Depth to Groundwater and Anticipated Groundwater Flow Direction

Given the little information with regards to previous site investigations and boreholes drilled within the vicinity of the site, coupled with the site history and the depth of anticipated Made Ground, it is assumed that the groundwater depth is likely to be present within the superficial deposits. It may be possible that perched water levels are present within the Made Ground. The nearest borehole records show the following groundwater strikes don’t clearly identify a water strike and due to drilling methods implemented on site (cable percussive) an accurate groundwater strike may not have been identified.

Given the history of the site and the River Neath being located directly within proximity to the site, coupled with the BGS classifying the site with the presence of 'Made Ground', and given the relatively flat topography of the site it is difficult to ascertain the accurate direction of groundwater flow. It is assumed, that the groundwater flow would be in the direction of the River Neath catchment. However, this should be confirmed with an intrusive investigation.

3.2.5 Groundwater Abstractions

There are no groundwater abstractions recorded within 500m of the site within the Environmental Database (Groundsure™). The Groundsure Report records a single Groundwater Abstraction is located 644m west of the site, associated with the Neath Golf Club, with full details presented in Appendix B within the Groundsure Report.

It should be noted that abstractions of less than 20m³/d do not require an abstraction licence from the Environment Agency. Therefore, smaller abstraction boreholes may not be recorded.

3.3 HYDROLOGY

Details of the hydrology of the area have been obtained from the following sources:

MAGIC interactive mapping website (DEFRA, 2024), accessed 25/09/2024; and, Environmental database (Groundsure™).

3.3.1 Watercourses

The River Neath (Afon Neath) runs in a south-westerly direction and is located immediately to the east and south of the site, alongside the Tennant Canal. There are series of other onsite watercourses that are classified as an inland river which is not influenced by normal tidal action these on ground surface level with one located underground. They were a watercourse that contains water year-round (in normal circumstances).

3.3.2 Surface Water Abstractions

There are no surface water abstractions within 250m of the site boundary, with the closest being located 283m west of the site and is classified has historical.

A further twenty-three records are summarised within the Groundsure Report which is presented in Appendix B. It is however unclear if these boreholes are still active.

3.3.3 Discharge Consents

The table below outlines the surface water discharge consents recorded within 250m. A further nineteen records are recorded within the Groundsure Report, with details summarised in Appendix B.

Table 3-3 – Summary of Surface Water Discharge Consents within 250m of the site.

Location	Address	Details	
Onsite	CSO 49 LLANGATWG SCHOOL ABERDULIAS, Nr Llangatwg School,	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BW2902801 Permit Version: 0	Status: Effective Issue date: 11/10/2019 Effective Date: 11/10/2019

	Caewern, Neath, SA10 8DA	Receiving Water: Tributary of the Tennant Canal.	
51m SW	1 YNYSLLYNLLADD COTTAGES CADOXTON, 1 YNYSLLYNLLADD COTTAGES, CADOXTON, NEATH, WALES, SA10 8DA	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: BP0325801 Permit Version: 1 Receiving Water: TRIB OF RIVER NEATH	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY Issue date: 06/08/2004 Effective Date: 06/08/2004 Revocation Date: -
58m S	LLANGATWG SCHOOL (STORM) CADOXTON, LLANGATWG SCHOOL (STORM), CADOXTON, NEATH	Effluent Type: UNSPECIFIED Permit Number: BM0010801 Permit Version: 1 Receiving Water: UNNAMED TRIB. NEATH	Status: REVOKED - UNSPECIFIED Issue date: 18/02/1982 Effective Date: 18/02/1982 Revocation Date: 10/11/1986
234m SE	CANAL SIDE NEATH WEST GLAMORGA, CANAL SIDE, NEATH, NEATH PORT TALBOT, WALES	Effluent Type: UNSPECIFIED Permit Number: BB4028001 Permit Version: 1 Receiving Water: CANAL SIDE NEATH	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 06/10/1978 Effective Date: 06/10/1978 Revocation Date: 31/10/1996

3.3.4 Pollution Incidents and Prosecutions

There are no pollution incidents or prosecutions within 250m of the site. A summary of the twenty-three recorded Pollution Incidents and Prosecutions are outlined in the Groundsure Report in Appendix B.

3.4 RADON

The BRE document 211 (Scivyer, 2015) mapping coverage for the site area was consulted and indicates that the site is located within an area where no radon protection measures are required for new developments. This statement is supported by the Groundsure Report (Appendix B) which confirms that the site is in a low probability radon area as less than 1-3% of homes are above the action level.

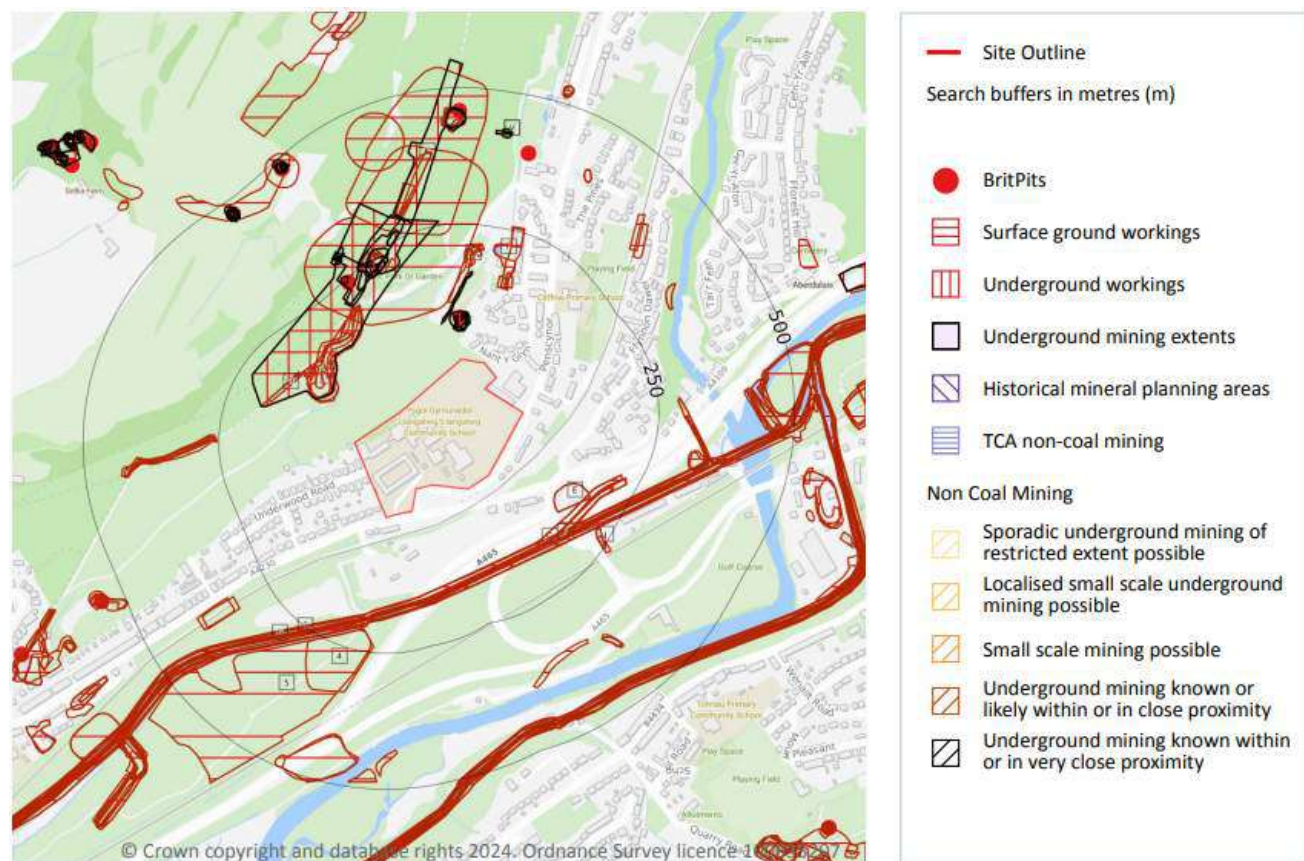
Given the findings here, it a site-specific radon report is deemed not necessary.

3.5 HISTORICAL MINING

According to the Coal Authority Interactive Viewer (The Coal Authority, 2023) the site is located within the South Wales Coal Mining Reporting Area, but not a Development High Risk Area. As such, a site-specific Coal Authority Report has not been obtained for the site and is not required.

3.5.1 Non-Coal Related Mining

Insert 2, below, abstracted from the Groundsure Report, summarises the findings with regards to mining and ground workings on site and within the surrounding area:



The Groundsure Report records the presence of surface ground workings within the surrounding area predominantly relating to the nearby Gelliau Colliery (77m N) with other surface ground workings being heavily related to coal mining with old air shafts, old coal levels, unspecified coal levels, disused levels,

3.6 BGS RECORDED MINERAL SITES

The Environmental Database (Groundsure™) and the BGS GeoIndex database records no mineral sites are within 500m of the site.

Table 3-4 – Summary of BGS Recorded Mineral Sites within 250m of the site.

Site Name	Reference and Status	Commodity	Description
77m N	Name: Gelliau Colliery Address: Aberdulais, NEATH, West Glamorgan Status: Ceased	Coal, Deep	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
244m NW	Name: Gelliau Colliery Address: Aberdulais, NEATH, West Glamorgan Status: Ceased	Coal, Deep	
394m N	Name: Gelliau Colliery Address: Aberdulais, NEATH, West Glamorgan Status: Ceased	Coal, Deep	

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Site Name	Reference and Status	Commodity	Description
457m N	Name: Gelliau Colliery Address: Aberdulais, NEATH, West Glamorgan Status: Ceased	Coal, Deep	
474m NW	Name: Gelliau Colliery Address: Aberdulais, NEATH, West Glamorgan Status: Ceased	Coal, Deep	
482m NW	Name: Gelliau Colliery Address: Aberdulais, NEATH, West Glamorgan Status: Ceased	Coal, Deep	

4.0 UNEXPLODED ORDNANCE

Based on freely available mapping data from Zetica UXO (Zetica UXO, 2008), the site is located within a Low-Risk Area, shown in Appendix E, with regards to Unexploded Ordnance (UXO). A 'Low Risk' area is defined by Zetica as:

'Low risk regions are those with a bomb density of up to 10 bombs per 1000 acres. These areas are considered to not have a significant but low UXB risk.

Due to the site being classified as a low risk a site specific UXO Pre-Desk Study Assessment (PDSA) is not deemed necessary.

5.0 SITE HISTORY

5.1 INTRODUCTION

The historical development of the site and surrounding area has been assessed using information available from historical Ordnance Survey (OS) maps within the Groundsure Report for the site which is presented in Appendix B of this report.

In the context of the summary of historical development of the surrounding area, the descriptions are limited to within approximately 250m of the site boundary, unless specified in the following section.

5.2 SITE HISTORY

5.2.1 Detailed Analysis of Site History

The table below provides a detailed account of the review of available OS mapping coverage and historical aerial imagery for the site and general area dating back to 1877.

Table 5-1 – Summary of Historical Data

Map Date & Scale	Within Site Boundary	Surrounding Area
1877 – 1881 1:2500 & 1:10560	The site comprises undeveloped fields with an assumed roadway running across site from the south-west to the north-east.	The surrounding area comprises forestry directly to the north-west, sporadic undeveloped grassland directly to the north-east, south-east and south-west, Neath and Brecon railway from approximately 15m to the south-east, a malthouse and well approximately 35m to the north-east, an old coal level approximately 50m to the north, a tin works approximately 75m to the north-north-east, Tennat canal is located approximately 150m to the south-east, a railway and railway sidings approximately 195m to the north-west, Gelliau Colliery approximately 280m to the north-west, an air shaft approximately 280m to the north-west, the Great Western Railway approximately 260m to the south-east, the River Neath approximately 400m to the south-east and a tin works approximately 600m to the south-east-east.
1897 - 1899 1:2500 & 1:10560	The site remains unchanged.	Residential development has occurred approximately 20m to the east and from approximately 525m to the south-west
1914 – 1921 1:2500 & 1:10560	The site remains unchanged.	Residential development has occurred approximately 50m to the south-east and from approximately 300m to the south-west.

1935 - 1936 1:2500 & 1:10560	A school has been constructed to the south-west of the site with associated access infrastructure and playing field to the north-east of site.	Residential development has occurred directly to the south-west and within the wider surrounding area. The tin works located approximately 75m to the north-north-east is now listed as a works and Gelliau Colliery approximately 280m to the north-west is no longer present.
1948 - 1951 1:10560	The site has undergone further development to the west of the site with the construction of new school buildings.	Residential development has continued to occur in the immediate and wider surrounding area. The tin works located approximately 600m to the south-east is no longer present and has undergone new industrial redevelopment.
1962 - 1964 1:2500 & 1:10000	The site remains unchanged.	Further residential development has occurred directly to the south-west and within the wider surrounding area.
1973 - 1984 1:2500 & 1:10000	The site has undergone further development comprising the construction of new school buildings centrally on site.	Major road infrastructure has undergone development from approximately 100m to the south-east comprising a roundabout and A465 dual carriageway. Further residential and commercial development has occurred within the wider surrounding area.
1985 - 1994 1:2500 & 1:10000	Further development of school buildings and associated infrastructure has occurred on site.	Residential and commercial development has occurred in the wider surrounding area.
2001 - 2024 1:10000	No further significant changes.	Minor residential and commercial developments have occurred within the surrounding area.

5.2.2 Summary of Site History

The site comprised undeveloped fields with an assumed roadway/track running across site from the south-west to the north-east from 1877, with no mapping available prior to this. The site remained relatively unchanged, until 1935, when a school was first developed, and the school has undergone progressive development and expansion from 1935 to present.

The surrounding area has undergone vast expansions since 1877 with the presence of Gelliau Colliery situated 280m to the northwest, along with other surface workings including a tin works 600m to the south-east and railway infrastructure located 15m to the south-east. Preceding this, much of the surrounding area has undergone residential development with the Colliery being no longer present in 1935 with the tin works becoming ceased and undergone industrial development between 1948-1951. From 1951 to the present day much of the surrounding area has been developed for residential and commercial purposed with the construction of a major road infrastructure 100m to the south-east of the site, which is associated with the A465.

6.0 ENVIRONMENTAL DATABASE SEARCH

6.1 INTRODUCTION

Regulatory authority information relevant to the site and its surroundings has been obtained from the undertaking of an environmental database search (Groundsure™). The information is summarised below, and the environmental database records are enclosed in Appendix B. Distances stated are approximate and are taken from the boundary of the site to the database recorded entries.

The following summary is generally limited to locations within 250m of the site boundaries unless it is considered that installations or activities beyond that range could potentially have an impact on the site or be affected by the redevelopment of the site.

6.2 POLLUTION CONTROLS

The Groundsure report does not identify any Pollution Controls within 250m of the site.

6.3 WASTE

A summary of records pertaining to waste disposal, management and transfer facilities are presented in the table below.

Table 6-1- Summary of Waste Facilities within 250m of the Site

Facility Type	Location	Details
BGS Recorded Landfill	None	
Historical Landfill	212m SW	Site Address: Cadoxton, Neath, West Glamorgan Licence Holder Address: - Waste Licence: Yes Site Reference: - Waste Type: Inert, Industrial, Commercial, Household, Special Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 14/06/1977 Licence Surrender: 01/04/1985 Operator: - Licence Holder: Neath Borough Council First Recorded 31/12/1971 Last Recorded: 01/04/1985
Registered Landfill	None	
Licensed Waste Management Facility	None	
Registered Waste Treatment or Disposal Sites	None	
Local Authority Recorded Landfill	None	
Active Registered Waste Transfer Stations	None	

6.4 HAZARDOUS SUBSTANCES

The following table outlines records relating to the storage and use of Hazardous Substances within 250m of the site boundary.

Table 6-2 – Summary of Hazardous Substances within 250m of the Site

Type	Details
Control of Major Hazards Sites (COMAH)	None recorded
Explosive Sites	None recorded
Notification of Installations Handling Hazardous Substances (NIHHS)	None recorded

6.5 ENVIRONMENTALLY SENSITIVE AREAS

Table 6-3 – Summary of Environmentally Sensitive Areas

Designation	Details
Nitrate Vulnerable Zone (Surface Waters)	None recorded
Nitrate Vulnerable Zone (Groundwater)	None recorded
Special Protected Areas	None recorded
Sites of Special Scientific Interest	None recorded
Special Areas of Conservation	None recorded
Adopted green belt	None recorded
Green belt	None recorded
Nature Reserve	None recorded
Designated Ancient Woodland	On site

6.6 FLOODING

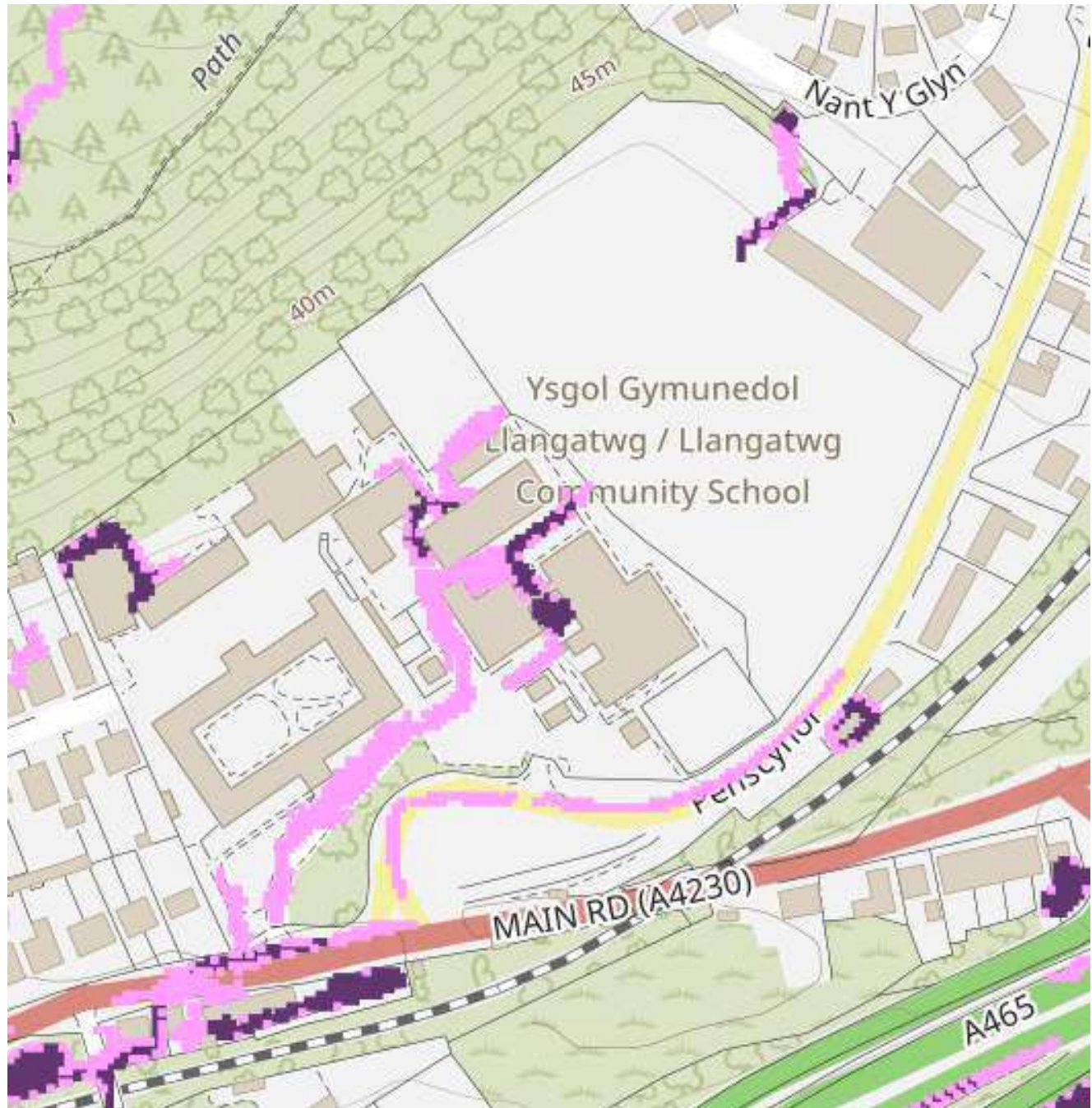
The absence or presence of flooding potential at the site is summarised in the table below.

Table 6-4 - Summary of Flooding Potential

Designation	On Site	Detail
Flooding at Surface (from Groundwater)	Yes	Moderate risk (south and south-west corner of site) Negligible to low (remainder of site)
Flooding below Ground Level (from Groundwater)	Yes	Moderate risk (across southern boundary of site) Negligible to low (remainder of site)
Flooding from Surface Waters	Yes	1 in 30 year, 0.3 -1.0m

On consulting Natural Resources Wales's (NRW) Flood Risk Map Viewer, it is apparent that the site is located within an area where the site is considered to be at little or no risk of fluvial or coastal/tidal flooding.

Plate 3 – Surface Water Flooding Map



6.7 INDUSTRIAL LAND USE

The following section outlines the surrounding industrial land use within 250m and considered to be relevant to the site and the proposed development.

Table 6-5 - Summary of Industrial Land Use

Land Use	Detail	
Contemporary Trade Directory Entries (on site)	Chimneys Electricity Substation	
Contemporary Trade Directory Entries (surrounding area)	11m W	Cedryn James of Neath – Fences, Gates and Railings
	24m W	A P Mobile Car Valeting – Vehicle Cleaning Services
	30m NE	Works – Unspecified Works/Factories
	181m SW	Electricity Substation
Fuel Station Entries	None recorded	

6.8 SUMMARY OF ENVIRONMENTAL SETTING

According to the Groundsure Report, there are no pollution controls, waste, or hazardous substance locations within the 250m of the site boundary. There are no present or BGS recorded landfills, however a historic landfill is noted to be situated at Cadoxton, Neath, West Glamorgan 212m to the southwest of the site. There are no licensed waste treatment facilities within 250m of the site.

Whilst the Groundsure Report records a total of twenty-three pollution incidents within 500m of the site, with the closest recorded incident being located 341m east of the site and was related to sewage materials with only a minor impact on the water. Due to the distance this is considered to not have an impact on the site.

Furthermore, the Groundsure also highlighted a number of areas of potentially landscaped ground, with surface workings, within the surrounding areas, which is possibly associated with the former Colliery and Coal mining within the area. No other sensitive land uses are recorded with the exception of a designated ancient woodland, which has been classified as unknown and detailed as a restored ancient woodland site, which is present on site.

As the site is located adjacent to the River Neath, the Groundsure report indicates that there is moderate risk of flooding from the river across the southern part of the site and within the south-west corner of the site. The NRW Flood Risk Map indicates some areas of elevated surface water flooding risk in a number of areas on site, with the risk being deemed to be moderate based on the current site condition.

7.0 PRELIMINARY GEOTECHNICAL ASSESSMENT

Based on the information identified in the preceding sections, the table below summarises the anticipated ground conditions and associated geotechnical assessment for the site, including highlighting the potential constraints for future development. Actual ground conditions may need to be confirmed through ground investigation in due course.

7.1 ANTICIPATED GROUND CONDITIONS

The following ground conditions are anticipated underlying the site:

Made Ground

Glaciofluvial Sheet Deposits (Sand & Gravel)

Brithdir Member (Sandstone)

The ground stability hazards highlighted in Table 8 below are sourced from the British Geological Survey and National Geoscience Information Service, and are provided within the Groundsure report included in Appendix B. However, based on the site-specific information provided in preceding sections, a revised hazard potential has also been included within Table 8.

Table 8 - Summary of Flooding Potential

Hazard	Hazard Potential	
	Groundsure	Revised
Shrinking or Swelling Clay	Negligible to Very low	Low
Running Sand	Negligible to Very low	Low to Moderate
Dissolution Features	Negligible	Negligible
Collapsible Ground	Very low	Low to Moderate.
Compressible Ground	Negligible	Low to Moderate
Landslide	Very low to low	Low to Moderate

7.1.1 Shrinking and Swelling Clay

Given the anticipated ground conditions, mainly the potential for clays with a high swelling potential is considered to be negligible to very low.

7.1.2 Running Sands

Given the anticipated ground conditions, the potential for running sands to be present is considered to be negligible to very low.

7.1.3 Dissolution Features

Given the anticipated ground conditions, the potential for dissolution features to be present is considered to be negligible.

7.1.4 Collapsible Ground

Given the anticipated ground conditions, the potential for collapsible ground to be present is considered to be very low.

7.1.5 Compressible Ground

Given the anticipated ground conditions, the potential for compressible ground to be present is considered to be negligible.

7.2 SLOPE STABILITY

The site was noted to be predominantly flat during and as such no issues in relation to slope stability are anticipated. Should the final design include changes to the site topography then a slope assessment should be considered.

7.3 ENABLING WORKS

7.3.1 Anticipated Cut and Fill

The main proposed development area is predominantly flat and as such limited cut and fill is considered likely to facilitate the proposed development. Site won materials are expected to comprise colliery spoil and its re-use potential should be considered as part of any further assessment.

7.3.2 Ground Improvement

The historical association of the site within an area of past mining and recorded Made Ground across the site indicates the potential for variable ground conditions which may require improvement. It is not clear whether the site has been subject to engineering during re-profiling.

7.4 ANTICIPATED FOUNDATION REQUIREMENTS

7.4.1 Foundations

Based on the complex nature of the development, a ground investigation will be required to confirm a suitable founding stratum. Suitable founding strata are likely to be identified within competent layers of the weathered bedrock or overlying superficial deposits.

7.4.2 Pavements

Based on the assumed ground conditions, ground improvement may be required prior to the construction of pavements. However, ground improvement may be required prior to the construction of pavements, depending on the thickness, composition and CBR value of any Made Ground soils which may be present.

7.5 TEMPORARY WORKS

7.5.1 Excavations

Due to the anticipated ground conditions, which are expected to be granular and non-cohesive in nature, excavations may exhibit some degree of instability and may require battering or site protection to facilitate the proposed development.

7.5.2 Groundwater

Shallow groundwater is likely to be encountered at shallow depths and dewatering of excavations is likely to be required, especially in the winter months. Due to the variable nature of the anticipated ground conditions, with potential for fine-grained content of the anticipated shallow site soils, coupled with low flow of seepages, it is likely that dewatering of excavations could be conducted by simple sump pumping arrangements.

7.5.3 Inground Obstructions

Due to the previous developments and expansions of the school on the site, inground obstructions may be anticipated across the site, these may require excavation prior to the development.

7.6 DRAINAGE

The shallow Superficial soils underlying the site are anticipated to exhibit low permeability, with the underlying Made Ground being variable in permeability rates. Soakaways or infiltration features may a suitable option for designing the sustainable drainage aspects of the development.

7.7 POTENTIAL CONSTRAINTS

Within the context of this geotechnical assessment and based on the information above, the following potential constraints have been identified with respect to the proposed development.

Potential presence of Made Ground of unknown depth and composition.

Potential for inground obstructions.

Shallow groundwater.

Excavation instability

Collapsible ground associated with a potentially previous landscaped ground;

It should, however, be noted that the actual ground conditions will need to be confirmed through intrusive investigation and laboratory testing in due course to inform foundation design.

8.0 CONCEPTUAL SITE MODEL & PRELIMINARY GROUND CONTAMINATION RISK ASSESSMENT

8.1 OVERVIEW

The information presented in the previous sections of this report have been collated and evaluated to establish an initial qualitative risk assessment for the site. A conceptual model of the site has been generated based on information derived from this Phase 1 Geo-environmental Assessment, supplemented by information attained during the Tetra Tech site walkover.

The site has been considered with regard to current UK legislation and guidance, namely Part 2A of the Environmental Protection Act 1990 and the Contaminated Land (England) Regulations 2006, as amended, and in accordance with current UK good practice guidelines (for example BS10175:2011).

In general, ground contamination can occur through several causes, particularly from historical operations and activities. Contamination can result from either on-site sources or from on-site migration from off-site sources, leading to long term liabilities under recent legislation for any site owner.

For a risk of pollution or environmental harm to occur as a result of ground contamination, all of the following elements must be present:

Source, i.e. a substance that is capable of causing pollution or harm;

Pathway, i.e. a route by which the contaminant can reach a target; and

Receptor (target), i.e. something which could be adversely affected by the contaminant.

If one of these elements is absent there can be no significant risk. If all are present then the magnitude of the risk is a function of the magnitude and mobility of the source, the sensitivity of the receptor and the nature of the migration pathway.

8.2 CURRENT SITE USAGE AND PROPOSED DEVELOPMENT

Currently the site is utilised as a School with areas of both soft and landscaped areas. The concern is the currently the underlying ground conditions and the assumption that the site has been classed as entirely being 'artificial ground' by BGS and the aim of the ground investigations is to provide ground conditions parameters on feasibility to construct a new school on site. However, finalised development plans are not available at the time of writing the report.

8.3 CONCEPTUAL SITE MODEL

The key source, pathways and receptor model is outlined below within the context of potential development of the site.

As the proposed development is for a new school, the following risk assessment is undertaken in the context of a residential with plant uptake end use scenario to provide a conservative approach.

8.3.1 Potential Sources of Contamination

The main potential sources of contamination on the site are associated with existing features as well as historical land uses on the site as summarised below.

On site Sources

Made Ground associated with former development on the site;

Made Ground associated with previous cut and fill development;

Ground gas generation associated with made ground deposits beneath the site;

Potential fuel/lubrication spillages associated with cars and moving vehicles.

Asbestos containing materials (ACMs)

Off Site Sources

Ground gas associated with Made Ground recorded on site;

Mobile contamination associated with the Made Ground;

Historical nearby industrial sources.

Table 8-1 -- Potential Sources of Contamination

Potential Hazard	Associated Contaminants	Does hazard form a plausible pollutant linkage?
Made Ground associated with: Previous developments (including former school development area)	Heavy metals, hydrocarbons, PAH	Yes – made ground previously identified in the wider site.
	Asbestos containing materials	Yes – possibility for ACM to be present associated with former developments.
	Ground gas - CO ₂ , CH ₄ , Low O ₂	Yes - potential for land gas generation within made ground.
Fuel / lubrication spillages associated with vehicles frequently using the site	Hydrocarbons – TPH, PAH, BTEX	Yes – forms plausible linkage due to length of usage of site and frequency of vehicles, including buses utilising site.
Off Site Sources		
Historical nearby industrial uses	Heavy Metals, VOCs, pH, Hydrocarbons	Yes - but likelihood of presence or migration of contamination thought to be low due to scale of features.
Electrical sub-stations and gas governor station	PCBs	Yes – age of adjacent ESS is 1978-1993 and 1985, and the gas governor station is dated to 1985 which is 24m south of the site. However, the ESS are located within a secure compound and unlikely to be disturbed during the development process. Immobility of PCBs indicate any contamination will be highly localised.

8.3.2 Potential Contaminant Pathways

The following contaminant pathways are considered to potentially be active based on the current site use and proposed development:

Human Exposure Pathways

Direct dermal contact or ingestion of soils, or inhalation of dust and/or vapours (i.e. human interaction with surface and sub-surface materials).

Environmental Pathways

Leaching and horizontal or vertical migration through the unsaturated ground, either through permeable sub-surface materials and/or preferential pathways;

Lateral and vertical migration of groundwater through permeable sub-surface materials and/ or preferential pathways;

Leaching to surface water run-off/drainage;

The migration and accumulation of gases or vapours through permeable sub-surface materials and/ or preferential pathways.

8.3.3 Potential Receptors at Risk

The following potential receptors have been identified:

Human Health

Current site users (school setting);

Future site users (school development);

Site workers during the redevelopment of the site;

Adjacent site users (residential/commercial)

Wider Environment

Secondary A aquifer within superficial deposits;

Secondary A aquifer within bedrock deposits;

Surface waters (River Neath);

Plant uptake; and

Building Infrastructure and supply pipes.

Adjacent Properties

8.4 GROUND CONDITIONS RISK ASSESSMENT

The source, pathway, receptor linkages identified in the previous section are outlined and a qualitative risk assessment shown in the following tables.

The risk assessment considers the site within an area context and assesses potential risks to identified receptors in relation to the existing site setting and the proposed development. CIRIA C552 has been used to define the risk rating presented in the Qualitative Risk Assessment matrix, the methodology for which is presented in Appendix D.

Table 8-2 – CIRIA C552 Qualitative Risk Assessment

This matrix is based on CIRIA C552 risk evaluation methodology, definitions for risk ratings is presented in Appendix D.						
Source	Pathway	Receptor	Consequence of risk being realised	Probability of risk being realised	Risk Classification	Potential risk management requirements
General contamination associated with Made Ground and re-worked materials on site	Direct dermal contact or ingestion of soils, or inhalation of dust or vapours	Current site users	Medium	Unlikely (due to limited interaction)	Low Risk	Due to the nature of the site, current interaction on site is limited. Ground investigation will be required to assess the presence of contamination within the near surface soils and the suitability of the materials for retention on site. Consideration will need to be given to the anticipated reprofiling of the site, whereby deeper soils may be placed within the top 1m of the soil profile.
		Future site users		Likely	Moderate Risk	
		Construction workers		Likely	Moderate Risk	
	Leaching and horizontal or vertical migration	Building Infrastructure and supply pipes.	Medium	Low	Low to Moderate Risk	Additional risks to construction workers can be controlled through the use of appropriate PPE and good on-site hygiene practices.
		Surface Water Groundwater				
						Risks to the wider environment are defined by the potential for contaminants to become mobilised into shallow groundwaters, with a reduced risk rating with regards to surface waters due to the distance to the nearest surface waters.

						Site investigation will be required to determine the extent and composition of made ground. Despite the previous investigations within the surrounding area, no assessment has been made of the potential for the Made Ground deposits to impact local controlled waters, as such, further ground investigation will be required to assess the potential for mobile contamination to be present on the site.
Asbestos containing materials (ACMs) within Made Ground	Inhalation of fibres	Current site users	Medium	Unlikely (due to limited site access)	Low Risk	The potential for ACM to be present within the made ground cannot be discounted, either entrained within the made ground deposits. Ground investigation, including the screening for asbestos fibres will be required to support any future planning application. Risks to construction workers will need to be controlled through the use of appropriate PPE/RPE and good on-site hygiene practices.
		Future site users		Low	Moderate Risk	
		Site workers during the redevelopment of the site		Likely	Moderate Risk	
Ground Gas generation from Made Ground,	The migration and accumulation of	Current site users	Severe	Likely	Moderate Risk	The site is located in an area of historical development with numerous surface workings surrounding the site, with

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and off-site infilled ground.	gases or vapours through permeable sub- surface materials and/ or preferential pathways.	Future site users				industrial land use. A Ground investigation, including the installation of gas monitoring boreholes will be required to facilitate a CIRIA 662 compliant risk assessment for the site. The potential presence of made ground indicates the potential for ground gas generation on the site.
		Building infrastructure				
Mobile contamination associated with off-site sources	Leaching and horizontal or vertical migration through the unsaturated ground	Groundwater: Secondary A Aquifer within superficial deposits and bedrock deposits	Medium	Low Likelihood	Low to moderate risk	Migration of contaminants within groundwater from off-site sources cannot be discounted however based on the anticipated groundwater flow directions and understanding of the historical development of the wider area this is not considered to pose a significant risk to groundwater below the site.

9.0 CONCLUSIONS AND RECOMMENDATIONS

9.1 CONCLUSIONS

9.1.1 Ground Contamination

Based on the information provided above, potentially significant thickness of Made Ground and re-worked strata are anticipated on the site associated with developments of the school and given the significant surface workings within the surrounding area. As such there is the potential for contaminants to be present within the near surface materials, which may pose a theoretical risk to future site users, the presence of such material would need to be confirmed through a ground investigation. If the site is too likely to require significant areas of cut and fill within the context of any future development, deeper Made Ground / re-worked materials may also require assessment in the event that the final design involves this material being placed within the top 1m of the final soil profile.

Given the previous history and works undertaken on the site and the potential reprofiling works, the potential for asbestos containing materials to be present within the Made Ground and demolition material cannot be discounted. Associated risks to human receptors (site users and constructors) have therefore been highlighted and screening of near soil samples will be required to confirm the risk assessment process prior to any future development on the site. The current risk to site users is deemed low to due limited interaction with near surface soils.

Additional risks to site construction workers would need to be managed through the use of PPE/RPE and the adoption of good hygiene practices on site.

Recent published information by UK HAS, in 2022, shows the site to be within an area where no radon protection measures are required for new developments. This statement is supported by the Groundsure Report (Appendix B) which confirms that the site is in a low probability radon area as less than 1-3% of homes are above the action level.

Analysis of available UXO data confirmed a detailed UXO risk assessment is not required for the site as the site is classified as a 'low risk'.

In terms of the risk posed to the wider environment (the underlying Secondary A aquifers and the River Neath) the risks are considered to be of a low to moderate order of magnitude, largely based on the unknown nature of the made ground materials on the site and the assumption that groundwater is present in the shallow strata beneath the site.

9.1.2 Geotechnical

The site is underlain by superficial Glaciofluvial Sheet Deposits which comprise of sand and gravel, underlain in turn by the bedrock of the Brithdir Member comprising of sandstone, siltstone and mudstone. The superficial Deposits are likely to be groundwater bearing.

The superficial Deposits tend to provide good founding conditions for traditional shallow foundations. Piling down to the Brithdir Member is another feasible foundation option for the site, although at this stage is not considered likely. The site is not considered to be 'high risk' with respect to any of the BGS

geohazard ratings, but a high-risk development area, relating to coal mining, is located to the north of the site.

Due to the long history of usage of the site and its location in a highly industrialised area, Made Ground is likely to be present across the site. The extent, thickness and composition of the Made Ground, in addition to in ground obstructions from previous phases of development, are likely to form the main geotechnical constraints on the site. The BGS classifies the site as entirely Landscaped Ground (Artificial Modified Ground).

9.2 RECOMMENDATIONS

9.2.1 Potential Constraints

Prior to development proceeding, ground investigation will be required to facilitate the following:

- Investigation, logging and sampling of general ground conditions (superficial deposits and made ground soils) to assess the variability of soils and assess the depth to competent strata and/ or bedrock;

- Installation of land gas and groundwater monitoring wells;

- Geotechnical testing of soils (in situ and laboratory);

- Chemical laboratory testing of soils, soil derived leachate and groundwater chemistry for a range of contaminants including heavy metals, polycyclic aromatic hydrocarbons (PAHs), speciated hydrocarbons and PCBs.

- Return visits to monitor land gas (in line with CIRIA 665 guidance) and groundwater;

- An interpretive land quality assessment including development of a refined conceptual site model (based on site specific data) and a qualitative risk assessment (compliant with UK CLR guidance and CIRIA 552 methodology) within the context of a commercial land use scenario;

- An interpretive geotechnical assessment of ground properties with respect to the proposed development of the site, including assessment of likely solutions for foundations, floor slabs and hard surface areas, feasibility of soakaway drainage, sulphate chemical attack and other salient matters such as potential requirements for ground stabilisation.

10.0 PHASE 2 INTRUSIVE INVESTIGATION

10.1 RATIONALE FOR GROUND INVESTIGATION

Based on the findings of the Desk Top Study presented above, ground investigation is considered necessary to support the assessment process. The rationale for the intrusive phase of investigation in terms of geotechnical and ground contamination assessments is presented below.

10.1 GROUND CONTAMINATION

The UK procedure for the assessment of potential ground contamination considered the likely Source-Pathway-Receptor linkages between potential contamination on the site and proposed receptors in terms of both human health and the risks to the wider environment.

Based on the information presented in the proceeding sections the following sources have been identified on site which require further assessment through intrusive ground investigation.

- Made ground associated with the existing development on site.
- Reworked deposits and potential Made Ground associated with the landscaped ground identified across the entire site and surrounding area.

The proposed development includes the construction of a new school facility, with associated areas of hard and soft standing; play areas, sports pitches, car parking and associated road and pathways and as such the following potential receptors at risk are highlighted, both within the context of the current land use and the proposed development.

- Existing site users (Students and staff)
- Site workers (construction and demolition phase)
- Site end users (Students and staff)

10.2 GEOTECHNICAL CONSIDERATIONS

Based on the anticipated ground conditions and the proposed development the following elements are considered to require ground investigation in terms of ground conditions and potentials geotechnical constraints.

- Depth to competent strata;
- Presence of soft and unsuitable materials;
- Depth to groundwater;
- Soil infiltration rates;

10.3 PROPOSED GROUND INVESTIGATION

Based on the information summarised above a ground investigation was designed to assess the following elements:

- Investigation, logging and sampling of general ground conditions (superficial deposits and Made Ground soils) to assess the variability of soils and assess the depth to competent strata and/or bedrock;
- Installation of land gas and groundwater monitoring wells;
- Geotechnical testing of soils (in-situ and laboratory);
- Chemical laboratory testing of soils, soil derived leachate and groundwater chemistry for a range of contaminants including heavy metals, polycyclic aromatic hydrocarbons (PAHs), speciated hydrocarbons and asbestos testing of soils;
- Return visits to monitor land gas (In line with CIRIA 665 guidance) and groundwater;
- An interpretive land quality assessment including development of a refined conceptual site model (based on site specific data) and a qualitative risk assessment (compliant with UK CLR guidance and CIRIA 552 methodology) within the context of a commercial land use scenario;
- An interpretive geotechnical assessment of ground properties with respect to the proposed development of the site, including assessment of likely solutions for foundations, floor slabs and hard surface areas. Feasibility of soakaway drainage, sulphate chemical attack and other salient matters such as potential requirements for ground stabilisation.

11.0 REFERENCES

- British Geological Survey. (2023). *GeoIndex*. Retrieved from <http://www.bgs.ac.uk/GeoIndex/>
- CIRIA. (2001). *Contaminated land risk assessment A guide to good practice*.
- DEFRA. (2023). *MAGIC*. Retrieved from Magic Map: <http://magic.defra.gov.uk/MagicMap.aspx>
- Environment Agency . (March 2017). *New Groundwater Vulnerability Mapping Methodology in England and Wales. Reference SC040016/R*. Environment Agency .
- Scivyer, C. (2015). *BRE 211. Radon: Guidance on protective measures for new buildings (including supplementary advice for extensions, conversions and refurbishment projects). Fifth Edition.* . BRE.
- The Coal Authority. (2023). *Coal Authority Interactive Viewer*. Retrieved from <http://mapapps2.bgs.ac.uk/coalauthority/home.html>
- Zetica UXO. (2008). *Zetica UXO Risk Maps*. Retrieved from <https://zeticauxo.com/downloads-and-resources/risk-maps/>

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FIGURES

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Figure 1 – Site Location Plan



~~S2 - INFORMATION~~

Issuing Office	
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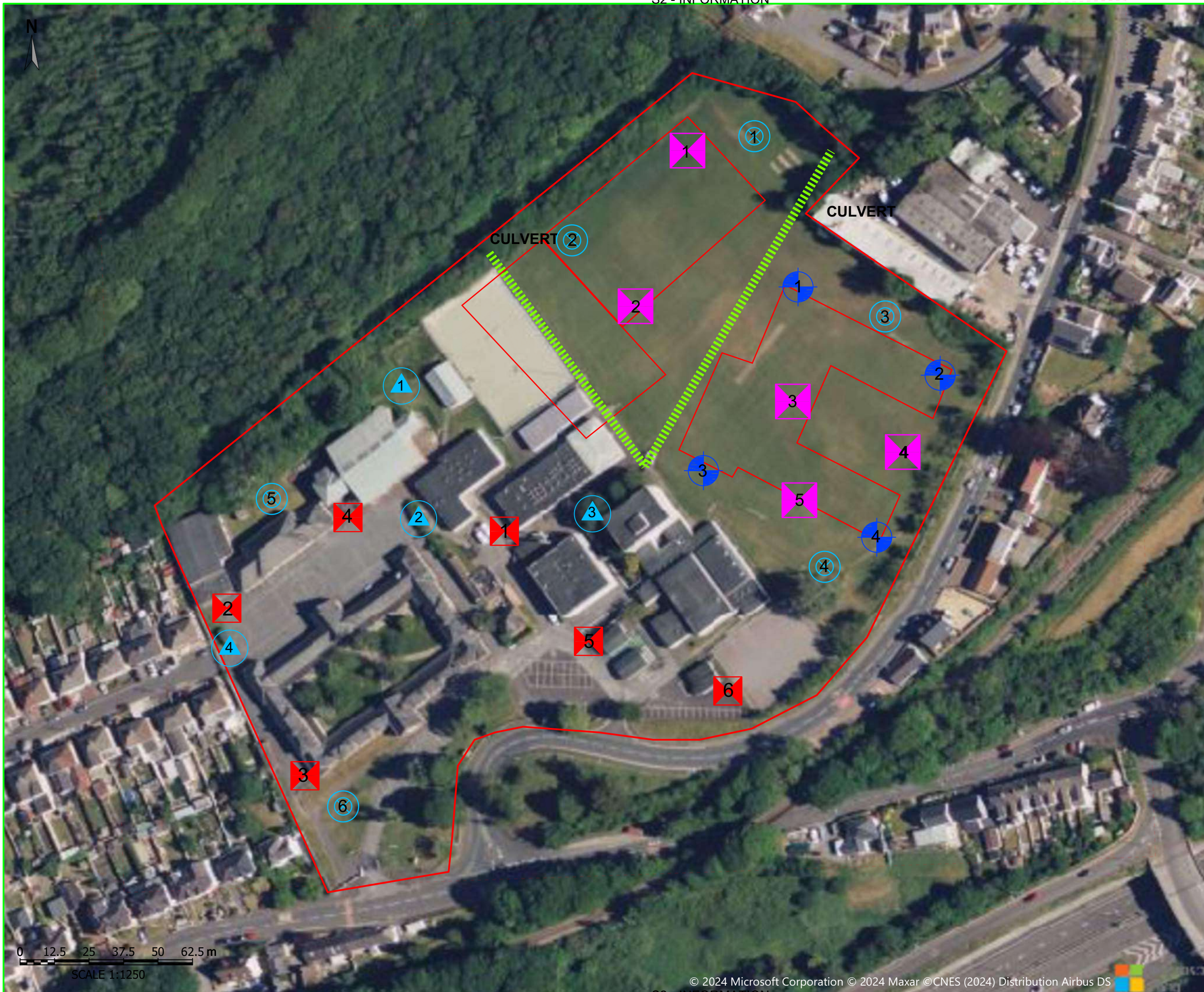
MORGAN SINDALL

LLANGATWG

SITE LOCATION PLAN

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Figure 2 – Site Layout Plan



 SITE BOUNDARY
(REFERENCE:
GROUNDSURE REPORT)



HAND PITS



ASPHALT CORE



BOREHOLE



WINDOW SAMPLE



SOAKAWAY

PRELIMINARY ISSUE

[illegible]

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MORGAN SINDALL

Project Name

LLANGATWGW

Sheet Title

SITE LAYOUT PLAN

TTE Project Number	Drawn By	Date	Checked By	Date	Approved By	Date	Scale @ A3	Suitability
784-B068800	PP	08.10.24	JC	08.10.24	PV	08.10.24	As Shown	S0
Client Project Number	Originator	Volume/System	Level/Location	Type/Code	Role	Number	Revision	
B068800 - TTE	- 00	- XX	- DR	- U	- 0002	P01		

Llangatwg

Phase 1 Geoenvironmental Assessment Desk Top Study

APPENDIX A: REPORT CONDITIONS

APPENDIX A – REPORT CONDITIONS
GEO-ENVIRONMENTAL DESK TOP REVIEW

This report is produced solely for the benefit of Morgan Sindall and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the site.

This report is based on a study of readily accessible referenced historical records. Some of the opinions are based on unconfirmed data and information and are presented in good faith without exhaustive clarification. Where ground conditions are discussed but no physical site test results are available to confirm this, the report must be regarded as initial advice only, and further assessment should be undertaken prior to detailed activities related to the site. Where test results undertaken by others have been made available these can only be regarded as a limited sample.

Whilst confident in the findings detailed within this report because there are no exact UK definitions of these matters, we are unable to give categorical assurances that they will be accepted by Authorities or Funds etc. without question, as such bodies may have unpublished, often more stringent objectives. This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to Tetra Tech. In time improved practices or amended guidance may necessitate a re-assessment. The opinions expressed cannot be absolute due to the limitations of time and resources within the context of the agreed brief and the possibility of unrecorded previous use and abuse of the site and adjacent sites. The report concentrates on the site as defined in the report and provides an opinion on surrounding sites.

Llangatwg

Phase 1 Geoenvironmental Assessment Desk Top Study

APPENDIX B: GROUNDSURE REPORT

Llangatwg School

Order Details

Date: 19/09/2024

Your ref: 7017066

Our Ref: GS-FUY-AXJ-GIB-LB1

Site Details

Location: 276707 199304

Area: 4.82 ha

Authority: [Castell-nedd Port Talbot - Neath Port Talbot County Borough](#) ↗



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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

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 >	1	4	38	78	-
20 >	1.2 >	Historical tanks >	0	1	2	2	-
21 >	1.3 >	Historical energy features >	2	5	1	7	-
21 >	1.4 >	Historical petrol stations >	0	0	0	2	-
22 >	1.5 >	Historical garages >	0	1	0	0	-
22	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
23 >	2.1 >	Historical industrial land uses >	2	5	47	96	-
29 >	2.2 >	Historical tanks >	0	1	2	2	-
29 >	2.3 >	Historical energy features >	6	5	3	12	-
31 >	2.4 >	Historical petrol stations >	0	0	0	3	-
31 >	2.5 >	Historical garages >	0	1	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
32	3.1	Active or recent landfill	0	0	0	0	-
32	3.2	Historical landfill (BGS records)	0	0	0	0	-
33 >	3.3 >	Historical landfill (LA/mapping records) >	0	0	3	0	-
33 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	1	0	-
33	3.5	Historical waste sites	0	0	0	0	-
34	3.6	Licensed waste sites	0	0	0	0	-
34 >	3.7 >	Waste exemptions >	0	0	0	7	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
36 >	4.1 >	Recent industrial land uses >	2	3	1	-	-
37	4.2	Current or recent petrol stations	0	0	0	0	-
37	4.3	Electricity cables	0	0	0	0	-
37	4.4	Gas pipelines	0	0	0	0	-
37	4.5	Sites determined as Contaminated Land	0	0	0	0	-



38 >	4.6 >	Control of Major Accident Hazards (COMAH) >	0	0	0	2	-
38	4.7	Regulated explosive sites	0	0	0	0	-
38	4.8	Hazardous substance storage/usage	0	0	0	0	-
38	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
39	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
39 >	4.11 >	Licensed pollutant release (Part A(2)/B) >	0	2	0	0	-
39	4.12	Radioactive Substance Authorisations	0	0	0	0	-
39 >	4.13 >	Licensed Discharges to controlled waters >	1	0	4	19	-
43	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
43	4.15	Pollutant release to public sewer	0	0	0	0	-
43	4.16	List 1 Dangerous Substances	0	0	0	0	-
43	4.17	List 2 Dangerous Substances	0	0	0	0	-
44 >	4.18 >	Pollution Incidents (EA/NRW) >	0	0	0	23	-
46	4.19	Pollution inventory substances	0	0	0	0	-
46	4.20	Pollution inventory waste transfers	0	0	0	0	-
47	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
48 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
50 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
51 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
52	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
52	5.5	Groundwater vulnerability- local information	None (within 0m)				
53 >	5.6 >	Groundwater abstractions >	0	0	0	0	5
55 >	5.7 >	Surface water abstractions >	0	0	0	12	12
60	5.8	Potable abstractions	0	0	0	0	0
60	5.9	Source Protection Zones	0	0	0	0	-
60	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
61 >	6.1 >	Water Network (OS MasterMap) >	6	4	41	-	-



66 >	6.2 >	Surface water features >	1	1	22	-	-
66 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
66 >	6.4 >	WFD Surface water bodies >	0	0	1	-	-
67 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
68	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
69 >	7.2 >	Historical Flood Events >	0	0	2	-	-
69	7.3	Flood Defences	0	0	0	-	-
69 >	7.4 >	Areas Benefiting from Flood Defences >	0	0	1	-	-
70	7.5	Flood Storage Areas	0	0	0	-	-
71	7.6	Flood Zone 2	None (within 50m)				
71	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
72 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
74 >	9.1 >	Groundwater flooding >	Moderate (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
75	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
76	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
76	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
76	10.4	Special Protection Areas (SPA)	0	0	0	0	0
76	10.5	National Nature Reserves (NNR)	0	0	0	0	0
77	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
77 >	10.7 >	Designated Ancient Woodland >	1	1	3	11	109
82	10.8	Biosphere Reserves	0	0	0	0	0
82	10.9	Forest Parks	0	0	0	0	0
82	10.10	Marine Conservation Zones	0	0	0	0	0
82	10.11	Green Belt	0	0	0	0	0
82	10.12	Proposed Ramsar sites	0	0	0	0	0



83	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
83	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
83	10.15	Nitrate Sensitive Areas	0	0	0	0	0
83	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
84	10.17	SSSI Impact Risk Zones	0	-	-	-	-
84	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
85	11.1	World Heritage Sites	0	0	0	-	-
85	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
85	11.3	National Parks	0	0	0	-	-
85	11.4	Listed Buildings	0	0	0	-	-
86	11.5	Conservation Areas	0	0	0	-	-
86	11.6	Scheduled Ancient Monuments	0	0	0	-	-
86	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
87 >	12.1 >	Agricultural Land Classification >	Grade 3b (within 250m)				
88	12.2	Open Access Land	0	0	0	-	-
88	12.3	Tree Felling Licences	0	0	0	-	-
89	12.4	Environmental Stewardship Schemes	0	0	0	-	-
89	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
90	13.1	Priority Habitat Inventory	0	0	0	-	-
90	13.2	Habitat Networks	0	0	0	-	-
90	13.3	Open Mosaic Habitat	0	0	0	-	-
90	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
91 >	14.1 >	10k Availability >	Identified (within 500m)				
92 >	14.2 >	Artificial and made ground (10k) >	1	1	2	3	-
94 >	14.3 >	Superficial geology (10k) >	1	0	4	4	-



95	14.4	Landslip (10k)	0	0	0	0	-
96 >	14.5 >	Bedrock geology (10k) >	2	1	3	4	-
97 >	14.6 >	Bedrock faults and other linear features (10k) >	0	1	4	6	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
98 >	15.1 >	50k Availability >	Identified (within 500m)				
99 >	15.2 >	Artificial and made ground (50k) >	1	0	2	1	-
100 >	15.3 >	Artificial ground permeability (50k) >	1	0	-	-	-
101 >	15.4 >	Superficial geology (50k) >	1	0	4	1	-
102 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
102	15.6	Landslip (50k)	0	0	0	0	-
102	15.7	Landslip permeability (50k)	None (within 50m)				
103 >	15.8 >	Bedrock geology (50k) >	2	1	2	4	-
104 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
104 >	15.10 >	Bedrock faults and other linear features (50k) >	0	1	4	6	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
106 >	16.1 >	BGS Boreholes >	0	0	29	-	-
Page	Section	Natural ground subsidence >					
108 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
109 >	17.2 >	Running sands >	Very low (within 50m)				
111 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
112 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
113 >	17.5 >	Landslides >	Low (within 50m)				
115 >	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
117 >	18.1 >	BritPits >	0	0	2	4	-
119 >	18.2 >	Surface ground workings >	0	0	60	-	-
121 >	18.3 >	Underground workings >	0	0	21	30	64
126	18.4	Underground mining extents	0	0	0	0	-
126	18.5	Historical Mineral Planning Areas	0	0	0	0	-

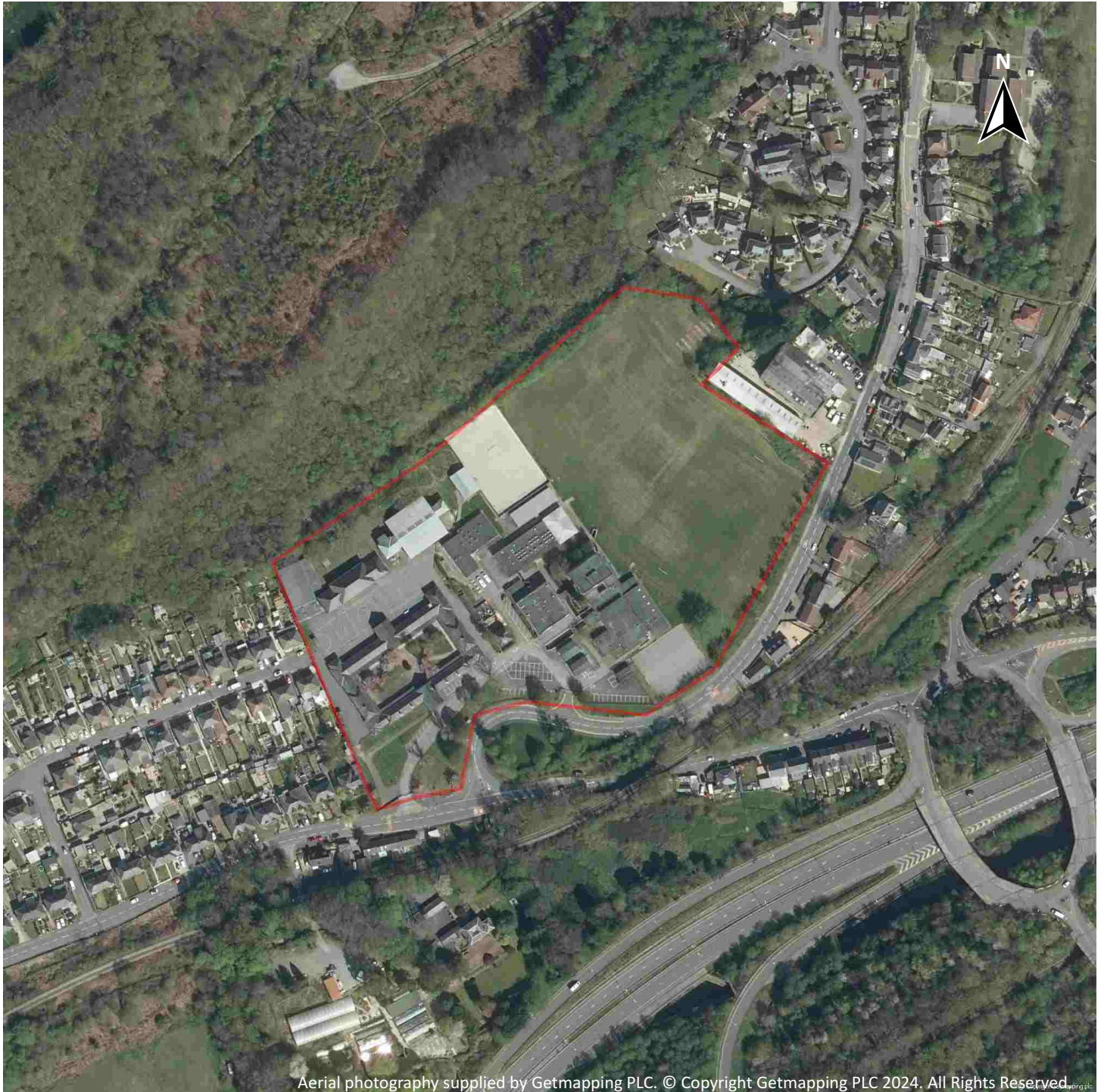


126	18.6	Non-coal mining	0	0	0	0	0
126	18.7	JPB mining areas	None (within 0m)				
126	18.8	The Coal Authority non-coal mining	0	0	0	0	-
127	18.9	Researched mining	0	0	0	0	-
127	18.10	Mining record office plans	0	0	0	0	-
127	18.11	BGS mine plans	0	0	0	0	-
127 >	18.12 >	Coal mining >	Identified (within 0m)				
128	18.13	Brine areas	None (within 0m)				
128	18.14	Gypsum areas	None (within 0m)				
128	18.15	Tin mining	None (within 0m)				
128	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
129	19.1	Natural cavities	0	0	0	0	-
129	19.2	Mining cavities	0	0	0	0	0
129	19.3	Reported recent incidents	0	0	0	0	-
129	19.4	Historical incidents	0	0	0	0	-
130	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
131 >	20.1 >	Radon >	Between 1% and 3% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
133 >	21.1 >	BGS Estimated Background Soil Chemistry >	2	3	-	-	-
133	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
134	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
135	22.1	Underground railways (London)	0	0	0	-	-
135	22.2	Underground railways (Non-London)	0	0	0	-	-
136	22.3	Railway tunnels	0	0	0	-	-
136 >	22.4 >	Historical railway and tunnel features >	0	1	2	-	-
136	22.5	Royal Mail tunnels	0	0	0	-	-



136	22.6	Historical railways	0	0	0	-	-
137 >	22.7 >	Railways >	0	7	5	-	-
137	22.8	Crossrail 1	0	0	0	0	-
138	22.9	Crossrail 2	0	0	0	0	-
138	22.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 14/04/2020

Site Area: 4.82ha



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

Date: 19 September 2024

Recent site history - 2017 aerial photograph



Capture Date: 17/06/2017

Site Area: 4.82ha



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

Date: 19 September 2024

10

Recent site history - 2010 aerial photograph



Capture Date: 23/05/2010

Site Area: 4.82ha



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

Date: 19 September 2024

11

Recent site history - 2009 aerial photograph



Capture Date: 12/10/2009

Site Area: 4.82ha



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

Date: 19 September 2024

12

Recent site history - 2000 aerial photograph



Capture Date: 18/06/2000

Site Area: 4.82ha

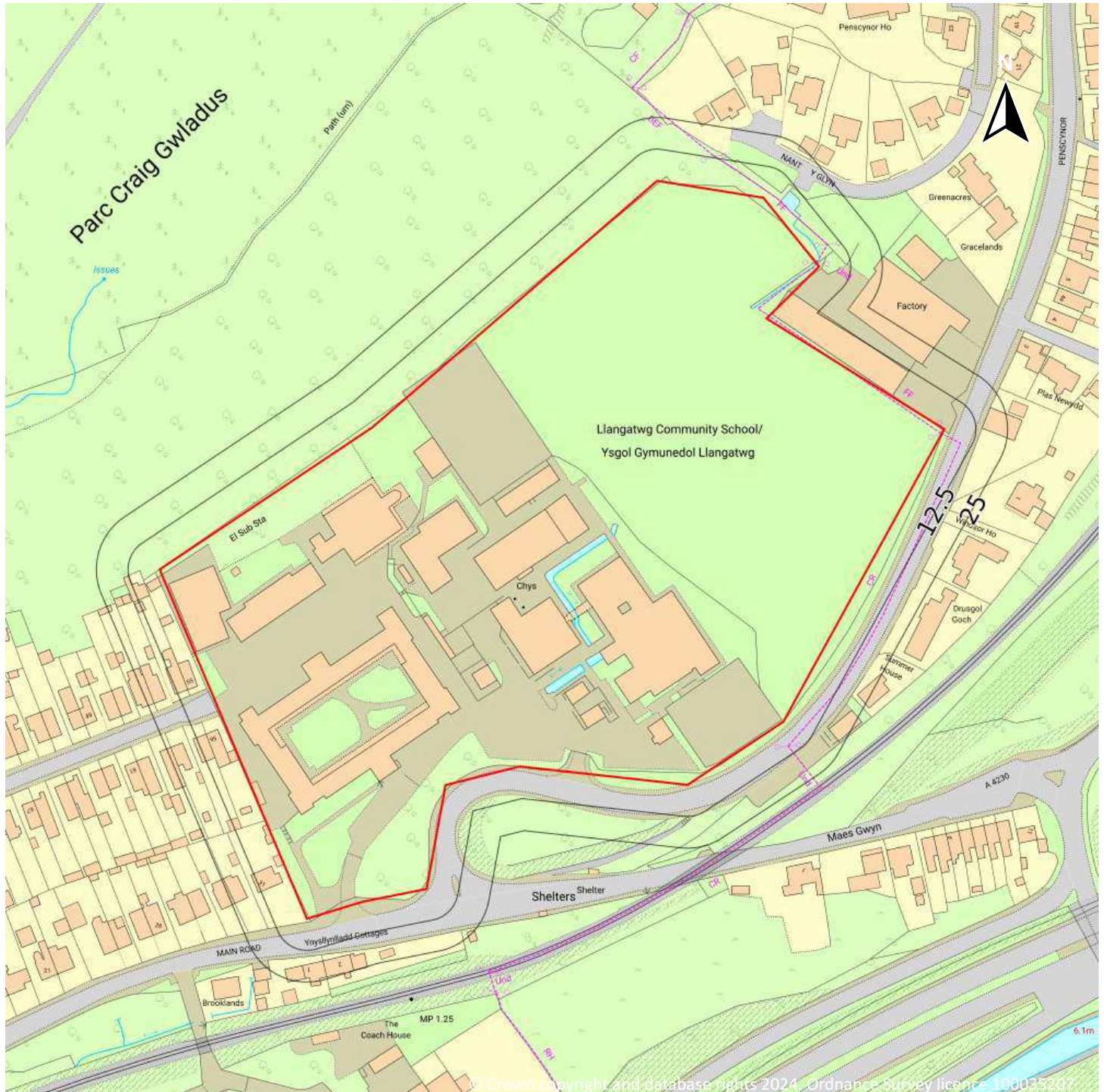


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13

OS MasterMap site plan



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Site Area: 4.82ha



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Date: 19 September 2024

14

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

Records within 500m	121
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Features are displayed on the Past land use map on [page 15](#) >

ID	Location	Land use	Dates present	Group ID
A	On site	Unspecified Works	1982 - 1991	366757

ID	Location	Land use	Dates present	Group ID
A	9m NE	Unspecified Malthouse	1897 - 1914	379336
2	15m SE	Railway Sidings	1877	334443
A	22m NE	Malthouse	1921	355618
A	22m NE	Malthouse	1877	363117
C	52m N	Old Coal Level	1914 - 1921	372318
C	53m N	Unspecified Heap	1962	339402
C	53m N	Unspecified Disused Level	1982 - 1991	357065
C	53m N	Unspecified Disused Level	1973	385197
C	56m N	Unspecified Old Level	1935 - 1948	374664
C	60m N	Old Coal Level	1897	359296
C	76m N	Unspecified Old Level	1962	334532
D	86m W	Unspecified Heap	1948	372812
D	91m W	Unspecified Ground Workings	1935	357300
D	99m NW	Unspecified Ground Workings	1897 - 1914	351389
4	99m NW	Disused Colliery	1921	361477
D	99m NW	Unspecified Heap	1921	354996
E	102m N	Colliery	1877	376856
F	107m N	Unspecified Old Quarry	1897	387000
G	124m SE	Unspecified Pit	1982 - 1991	354418
G	156m E	Unspecified Old Kiln	1897 - 1914	391041
5	158m NW	Unspecified Quarry	1948	329731
G	162m SE	Unspecified Old Kiln	1921	331758
F	172m N	Unspecified Old Quarry	1914 - 1921	373869
E	195m NW	Railway Sidings	1877	334298
E	204m NW	Disused Colliery	1897 - 1914	383187
8	208m S	Refuse Heap	1973	381629
E	209m N	Unspecified Heap	1921	339401
9	212m SW	Refuse Heap	1982	366472



ID	Location	Land use	Dates present	Group ID
E	212m NW	Unspecified Old Levels	1935 - 1948	354376
E	215m NW	Unspecified Pit	1914	342691
E	219m N	Unspecified Disused Levels	1973	350679
E	219m N	Unspecified Old Levels	1962	363999
E	219m N	Unspecified Disused Levels	1982	370286
E	220m N	Unspecified Heap	1921	379057
E	220m N	Unspecified Heap	1877	384212
E	222m N	Unspecified Heap	1914	355435
E	229m N	Unspecified Disused Levels	1991	366685
E	229m N	Unspecified Ground Workings	1897	345505
H	233m N	Colliery	1921	351477
E	244m NW	Old Coal Level	1897	329330
E	245m N	Unspecified Disused Levels	1973	356054
E	245m N	Unspecified Disused Levels	1982	374681
I	253m W	Unspecified Ground Workings	1935 - 1948	389759
I	259m W	Refuse Heap	1877	335005
H	267m N	Colliery	1914	2404157
J	277m E	Railway Sidings	1877	334450
K	280m N	Unspecified Ground Workings	1935	391465
E	281m NW	Old Air Shaft	1921	335781
E	282m NW	Unspecified Old Levels	1962	336061
E	282m NW	Disused Air Shaft	1973	376622
E	283m NW	Disused Air Shaft	1982	371100
E	284m NW	Unspecified Disused Levels	1991	349921
I	285m W	Railway Sidings	1877	334299
K	287m N	Unspecified Ground Workings	1914 - 1921	371091
E	287m NW	Disused Air Shaft	1991	365614
E	289m NW	Old Air Shaft	1897 - 1914	389831



ID	Location	Land use	Dates present	Group ID
10	313m E	Disused Tin Plate Works	1897 - 1914	351418
J	313m E	Tramway Sidings	1897	335667
L	316m E	Unspecified Heap	1914 - 1921	369509
M	317m SW	Cuttings	1877	374441
J	318m E	Tin Works	1877	342151
M	326m SW	Cuttings	1914	378388
N	331m NE	Unspecified Ground Workings	1935	366146
N	331m NE	Unspecified Ground Workings	1914	369357
O	337m NE	Cuttings	1877	385747
J	338m E	Disused Tin Plate Works	1921	350736
O	340m NE	Cuttings	1921	378669
J	345m NE	Unspecified Tank	1962	376889
11	348m SE	Unspecified Ground Workings	1914	345504
L	350m E	Smithy	1897 - 1914	373701
L	354m E	Smithy	1877	353348
L	354m E	Smithy	1921	366403
P	359m E	Railway Station	1897	349698
N	360m NE	Unspecified Tank	1948	366567
N	361m NE	Unspecified Tank	1935	391081
I	365m W	Smithy	1877	344811
12	370m N	Tramway Sidings	1914 - 1921	2405203
13	377m N	Colliery	1921	391302
P	393m E	Railway Station	1948 - 1962	384497
P	396m E	Railway Station	1914	362998
P	396m E	Railway Station	1935	374845
Q	409m E	Unspecified Heap	1914 - 1921	373988
R	410m S	Unspecified Ground Workings	1935	345414
R	414m S	Unspecified Quarry	1948	329696



ID	Location	Land use	Dates present	Group ID
R	414m S	Railway Sidings	1948	334444
Q	415m E	Unspecified Heap	1935	385740
14	416m N	Old Coal Level	1897 - 1914	357465
S	418m N	Unspecified Heap	1962	377926
S	422m N	Old Coal Level	1921	329329
S	422m N	Unspecified Heap	1935 - 1948	356685
S	422m N	Unspecified Heap	1877	370138
S	427m N	Unspecified Heap	1914	372570
S	428m N	Unspecified Disused Tip	1991	332161
T	429m S	Refuse Heap	1948	335453
S	429m N	Unspecified Heap	1897	351242
S	430m N	Unspecified Heap	1982	376758
U	434m E	Unspecified Heap	1921	388410
U	436m E	Unspecified Ground Workings	1897	346828
U	440m E	Refuse Heap	1935	370306
U	440m E	Refuse Heap	1914	379563
U	442m E	Unspecified Heap	1948	374999
V	445m NW	Unspecified Quarry	1948	329732
W	447m NW	Unspecified Old Level	1962	351348
V	460m NW	Unspecified Old Level	1948 - 1962	387897
V	461m NW	Unspecified Old Level	1935	355898
V	461m NW	Old Coal Level	1914 - 1921	387483
V	461m NW	Unspecified Pit	1877	386098
T	464m S	Refuse Heap	1948	334977
V	465m NW	Unspecified Pit	1973	363941
V	465m NW	Unspecified Disused Level	1982 - 1991	386297
X	468m E	Tin Plate Works	1935	378519
X	468m E	Tin Plate Works	1897 - 1914	386022



ID	Location	Land use	Dates present	Group ID
V	470m NW	Old Coal Level	1897	358708
W	473m NW	Unspecified Old Level	1935 - 1948	369043
W	473m NW	Old Coal Level	1897 - 1914	387492
W	475m NW	Old Coal Level	1921	357264
W	477m NW	Unspecified Disused Level	1982	334656
X	478m E	Unspecified Works	1982 - 1991	351273
X	478m E	Unspecified Works	1973	376576
16	500m SW	Unspecified Quarry	1897 - 1914	373357

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

5

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
3	41m E	Unspecified Tank	1978	39645
7	200m E	Unspecified Tank	1880	39630
E	228m N	Tank or Trough	1881	41312
N	358m NE	Unspecified Tank	1935	40212
15	452m N	Unspecified Tank	1964	39629

This data is sourced from Ordnance Survey / Groundsure.



1.3 Historical energy features

Records within 500m
15

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
1	On site	Electricity Substation	1978 - 1993	24326
A	On site	Electricity Substation	1985	24607
A	3m NE	Electricity Substation	1984	22647
A	5m NE	Electricity Substation	1993	24942
B	24m S	Gas Governor	1985	22880
B	26m S	Gas Governor	1984	24806
B	28m SW	Gas Governor	1993	21440
6	173m SW	Electricity Substation	1984 - 1993	25395
J	316m E	Electricity Substation	1984	22185
J	318m E	Electricity Substation	1984	22194
J	319m E	Electricity Substation	1994 - 1998	25460
Y	483m E	Electricity Substation	1984	24919
Y	486m E	Electricity Substation	1984 - 1998	24948
Z	489m NE	Electricity Substation	1984	23680
Z	490m NE	Electricity Substation	1984 - 1998	22245

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m
2

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'.

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
J	357m E	Filling Station	1978 - 1984	830
J	359m E	Filling Station	1984	801

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m

1

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original 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	1m E	Garage	1964	7411

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

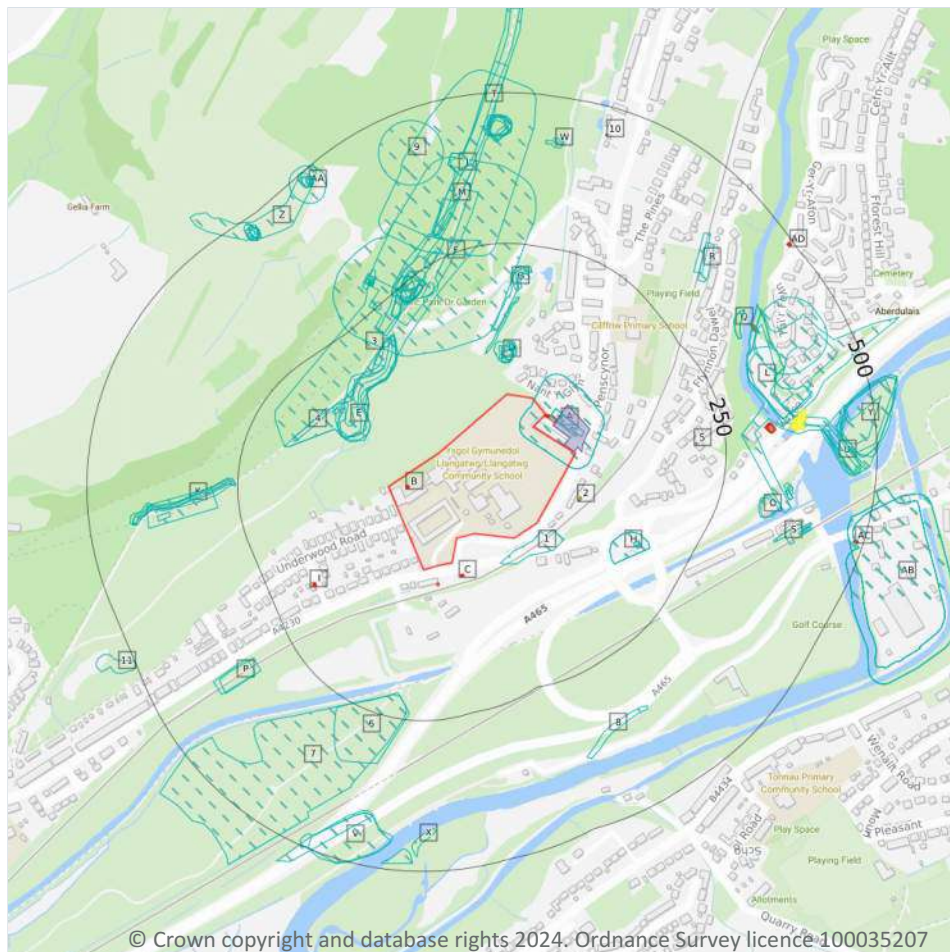
0

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

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



2 Past land use - un-grouped



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

2.1 Historical industrial land uses

Records within 500m

150

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 23](#) >

ID	Location	Land Use	Date	Group ID
A	On site	Unspecified Works	1991	366757
A	On site	Unspecified Works	1982	366757
A	9m NE	Unspecified Malthouse	1914	379336

ID	Location	Land Use	Date	Group ID
A	9m NE	Unspecified Malthouse	1897	379336
1	15m SE	Railway Sidings	1877	334443
A	22m NE	Malthouse	1921	355618
A	22m NE	Malthouse	1877	363117
D	52m N	Old Coal Level	1921	372318
D	53m N	Unspecified Disused Level	1991	357065
D	53m N	Unspecified Disused Level	1982	357065
D	53m N	Unspecified Disused Level	1973	385197
D	53m N	Unspecified Heap	1962	339402
D	56m N	Old Coal Level	1914	372318
D	56m N	Unspecified Old Level	1935	374664
D	58m N	Unspecified Old Level	1948	374664
D	60m N	Old Coal Level	1897	359296
D	76m N	Unspecified Old Level	1962	334532
E	86m W	Unspecified Heap	1948	372812
E	91m W	Unspecified Ground Workings	1935	357300
E	99m NW	Unspecified Ground Workings	1914	351389
3	99m NW	Disused Colliery	1921	361477
E	99m NW	Unspecified Heap	1921	354996
F	102m N	Colliery	1877	376856
E	103m NW	Unspecified Ground Workings	1897	351389
G	107m N	Unspecified Old Quarry	1897	387000
H	124m SE	Unspecified Pit	1991	354418
H	124m SE	Unspecified Pit	1982	354418
H	156m E	Unspecified Old Kiln	1914	391041
H	156m E	Unspecified Old Kiln	1897	391041
4	158m NW	Unspecified Quarry	1948	329731
H	162m SE	Unspecified Old Kiln	1921	331758



ID	Location	Land Use	Date	Group ID
G	172m N	Unspecified Old Quarry	1921	373869
G	176m N	Unspecified Old Quarry	1914	373869
F	195m NW	Railway Sidings	1877	334298
F	204m NW	Disused Colliery	1914	383187
6	208m S	Refuse Heap	1973	381629
F	209m N	Unspecified Heap	1921	339401
F	210m NW	Disused Colliery	1897	383187
7	212m SW	Refuse Heap	1982	366472
F	212m NW	Unspecified Old Levels	1935	354376
F	215m NW	Unspecified Pit	1914	342691
F	219m N	Unspecified Disused Levels	1982	370286
F	219m N	Unspecified Disused Levels	1973	350679
F	219m N	Unspecified Old Levels	1962	363999
F	220m N	Unspecified Heap	1921	379057
F	220m N	Unspecified Heap	1877	384212
F	220m N	Unspecified Old Levels	1948	354376
F	222m N	Unspecified Heap	1914	355435
F	229m N	Unspecified Disused Levels	1991	366685
F	229m N	Unspecified Ground Workings	1897	345505
J	233m N	Colliery	1921	351477
F	244m NW	Old Coal Level	1897	329330
F	245m N	Unspecified Disused Levels	1982	374681
F	245m N	Unspecified Disused Levels	1973	356054
K	253m W	Unspecified Ground Workings	1935	389759
K	254m W	Unspecified Ground Workings	1948	389759
K	259m W	Refuse Heap	1877	335005
J	267m N	Colliery	1914	2404157
L	277m E	Railway Sidings	1877	334450



ID	Location	Land Use	Date	Group ID
M	280m N	Unspecified Ground Workings	1935	391465
F	281m NW	Old Air Shaft	1921	335781
F	282m NW	Unspecified Old Levels	1962	336061
F	282m NW	Disused Air Shaft	1973	376622
F	283m NW	Disused Air Shaft	1982	371100
F	284m NW	Unspecified Disused Levels	1991	349921
K	285m W	Railway Sidings	1877	334299
M	287m N	Unspecified Ground Workings	1914	371091
F	287m NW	Disused Air Shaft	1991	365614
M	287m N	Unspecified Ground Workings	1921	371091
F	289m NW	Old Air Shaft	1914	389831
F	289m NW	Old Air Shaft	1897	389831
L	313m E	Tramway Sidings	1897	335667
N	313m E	Disused Tin Plate Works	1914	351418
N	313m E	Disused Tin Plate Works	1897	351418
O	316m E	Unspecified Heap	1921	369509
P	317m SW	Cuttings	1877	374441
L	318m E	Tin Works	1877	342151
O	319m E	Unspecified Heap	1914	369509
P	326m SW	Cuttings	1914	378388
Q	331m NE	Unspecified Ground Workings	1935	366146
Q	331m NE	Unspecified Ground Workings	1914	369357
R	337m NE	Cuttings	1877	385747
L	338m E	Disused Tin Plate Works	1921	350736
R	340m NE	Cuttings	1921	378669
L	345m NE	Unspecified Tank	1962	376889
8	348m SE	Unspecified Ground Workings	1914	345504
O	350m E	Smithy	1897	373701



ID	Location	Land Use	Date	Group ID
O	354m E	Smithy	1921	366403
O	354m E	Smithy	1877	353348
O	355m E	Smithy	1914	373701
S	359m E	Railway Station	1897	349698
Q	360m NE	Unspecified Tank	1948	366567
Q	361m NE	Unspecified Tank	1935	391081
K	365m W	Smithy	1877	344811
T	370m N	Tramway Sidings	1921	2405203
9	377m N	Colliery	1921	391302
T	382m N	Tramway Sidings	1914	2405203
S	393m E	Railway Station	1962	384497
S	396m E	Railway Station	1935	374845
S	396m E	Railway Station	1914	362998
S	396m E	Railway Station	1948	384497
U	409m E	Unspecified Heap	1921	373988
V	410m S	Unspecified Ground Workings	1935	345414
U	413m E	Unspecified Heap	1914	373988
V	414m S	Railway Sidings	1948	334444
V	414m S	Unspecified Quarry	1948	329696
U	415m E	Unspecified Heap	1935	385740
W	416m N	Old Coal Level	1897	357465
T	418m N	Unspecified Heap	1962	377926
T	422m N	Old Coal Level	1921	329329
T	422m N	Unspecified Heap	1877	370138
T	422m N	Unspecified Heap	1948	356685
W	424m N	Old Coal Level	1914	357465
T	427m N	Unspecified Heap	1935	356685
T	427m N	Unspecified Heap	1914	372570



ID	Location	Land Use	Date	Group ID
T	428m N	Unspecified Disused Tip	1991	332161
X	429m S	Refuse Heap	1948	335453
T	429m N	Unspecified Heap	1897	351242
T	430m N	Unspecified Heap	1982	376758
Y	434m E	Unspecified Heap	1921	388410
Y	436m E	Unspecified Ground Workings	1897	346828
Y	440m E	Refuse Heap	1935	370306
Y	440m E	Refuse Heap	1914	379563
Y	442m E	Unspecified Heap	1948	374999
Z	445m NW	Unspecified Quarry	1948	329732
AA	447m NW	Unspecified Old Level	1962	351348
Z	460m NW	Unspecified Old Level	1962	387897
Z	461m NW	Old Coal Level	1914	387483
Z	461m NW	Unspecified Old Level	1935	355898
Z	461m NW	Old Coal Level	1921	387483
Z	461m NW	Unspecified Pit	1877	386098
Z	461m NW	Unspecified Old Level	1948	387897
X	464m S	Refuse Heap	1948	334977
Z	465m NW	Unspecified Disused Level	1991	386297
Z	465m NW	Unspecified Disused Level	1982	386297
Z	465m NW	Unspecified Pit	1973	363941
AB	468m E	Tin Plate Works	1935	378519
AB	468m E	Tin Plate Works	1914	386022
AB	468m E	Tin Plate Works	1897	386022
Z	470m NW	Old Coal Level	1897	358708
AA	473m NW	Unspecified Old Level	1948	369043
AA	473m NW	Old Coal Level	1914	387492
AA	474m NW	Unspecified Old Level	1935	369043



ID	Location	Land Use	Date	Group ID
AA	475m NW	Old Coal Level	1921	357264
AA	477m NW	Unspecified Disused Level	1982	334656
AA	477m NW	Old Coal Level	1897	387492
AB	478m E	Unspecified Works	1991	351273
AB	478m E	Unspecified Works	1982	351273
AB	478m E	Unspecified Works	1973	376576
11	500m SW	Unspecified Quarry	1914	373357

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

5

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 23 >](#)

ID	Location	Land Use	Date	Group ID
2	41m E	Unspecified Tank	1978	39645
5	200m E	Unspecified Tank	1880	39630
F	228m N	Tank or Trough	1881	41312
Q	358m NE	Unspecified Tank	1935	40212
10	452m N	Unspecified Tank	1964	39629

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

26

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 23 >](#)



ID	Location	Land Use	Date	Group ID
A	On site	Electricity Substation	1985	24607
B	On site	Electricity Substation	1984	24326
B	On site	Electricity Substation	1978	24326
B	On site	Electricity Substation	1985	24326
B	On site	Electricity Substation	1978	24326
B	On site	Electricity Substation	1993	24326
A	3m NE	Electricity Substation	1984	22647
A	5m NE	Electricity Substation	1993	24942
C	24m S	Gas Governor	1985	22880
C	26m S	Gas Governor	1984	24806
C	28m SW	Gas Governor	1993	21440
I	173m SW	Electricity Substation	1984	25395
I	174m SW	Electricity Substation	1993	25395
I	175m SW	Electricity Substation	1985	25395
L	316m E	Electricity Substation	1984	22185
L	318m E	Electricity Substation	1984	22194
L	319m E	Electricity Substation	1994	25460
L	319m E	Electricity Substation	1998	25460
AC	483m E	Electricity Substation	1984	24919
AC	486m E	Electricity Substation	1994	24948
AC	486m E	Electricity Substation	1998	24948
AC	486m E	Electricity Substation	1984	24948
AD	489m NE	Electricity Substation	1984	23680
AD	490m NE	Electricity Substation	1984	22245
AD	491m NE	Electricity Substation	1994	22245
AD	491m NE	Electricity Substation	1998	22245

This data is sourced from Ordnance Survey / Groundsure.



2.4 Historical petrol stations

Records within 500m

3

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'.

Features are displayed on the Past land use - un-grouped map on [page 23 >](#)

ID	Location	Land Use	Date	Group ID
L	357m E	Filling Station	1978	830
L	357m E	Filling Station	1984	830
L	359m E	Filling Station	1984	801

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m

1

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. 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'.

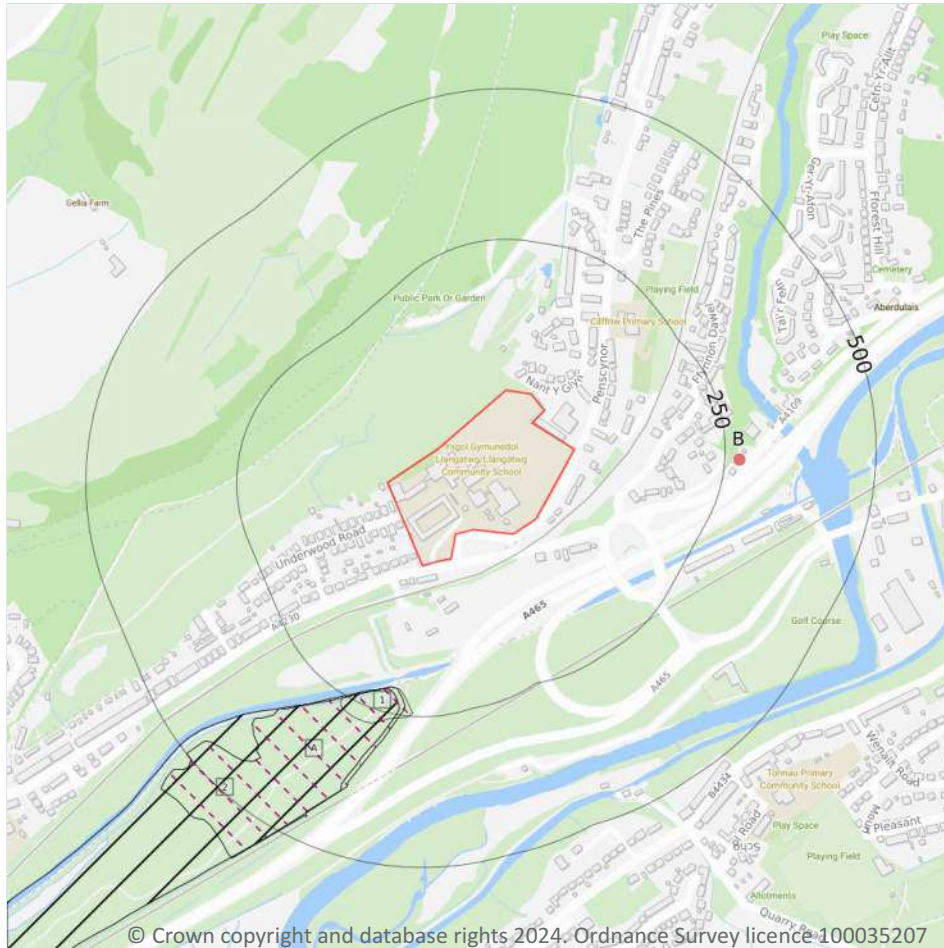
Features are displayed on the Past land use - un-grouped map on [page 23 >](#)

ID	Location	Land Use	Date	Group ID
A	1m E	Garage	1964	7411

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (EA/NRW)
- Historical landfill (LA/OS)
- 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

3

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

Features are displayed on the Waste and landfill map on [page 32 >](#)

ID	Location	Site address	Source	Data type
1	207m SW	Refuse Tip	1963 mapping	Polygon
A	208m S	Refuse Tip	1978 mapping	Polygon
A	208m S	Refuse Tip	1987 mapping	Polygon

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

3.4 Historical landfill (EA/NRW records)

Records within 500m

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 32 >](#)

ID	Location	Details		
2	212m SW	Site Address: Cadoxton, Neath, West Glamorgan Licence Holder Address: -	Waste Licence: Yes Site Reference: - Waste Type: Inert, Industrial, Commercial, Household, Special Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 14/06/1977 Licence Surrender: 01/04/1985	Operator: - Licence Holder: Neath Borough Council First Recorded 31/12/1971 Last Recorded: 01/04/1985

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

3.5 Historical waste sites

Records within 500m

0

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

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



3.6 Licensed waste sites

Records within 500m
0

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

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

3.7 Waste exemptions

Records within 500m
7

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 32 >](#)

ID	Location	Site	Reference	Category	Sub-Category	Description
B	272m E	The Bungalow, Dulais Farm, Aberdulais, Neath, Castell-Nedd Port Talbot, Sa108eu	NRW-WME030025	Using waste exemption	Not on a farm	Use of waste in construction
B	272m E	National Trust Aberdulais Tinworks And Waterfall, The National Trust, Aberdulais Falls, Aberdulais, Neath, Castell-Nedd Port Talbot, Sa10 8eu	NRW-WME062222	Using waste exemption	Not on a farm	Use of waste derived biodiesel as fuel
B	272m E	National Trust Aberdulais Tinworks And Waterfall, The National Trust, Aberdulais Falls, Aberdulais, Neath, Castell-Nedd Port Talbot, Sa10 8eu	NRW-WME062222	Treating waste exemption	Not on a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
B	272m E	National Trust Aberdulais Tinworks And Waterfall, The National Trust, Aberdulais Falls, Aberdulais, Neath, Castell-Nedd Port Talbot, Sa10 8eu	NRW-WME062222	Storing waste exemption	Not on a farm	Storage of waste in secure containers
B	272m E	National Trust Aberdulais Tinworks And Waterfall, The National Trust, Aberdulais Falls, Aberdulais, Neath, Castell-Nedd Port Talbot, Sa10 8eu	NRW-WME062222	Treating waste exemption	Not on a farm	Recovery of scrap metal

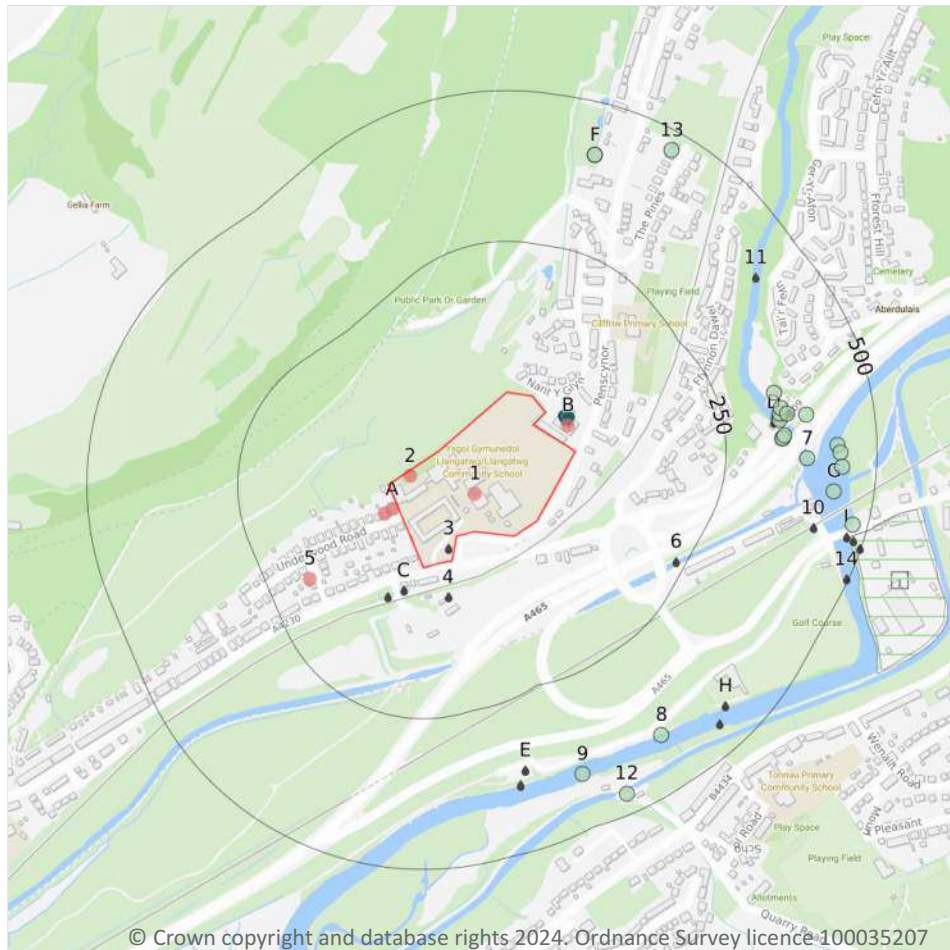


ID	Location	Site	Reference	Category	Sub-Category	Description
B	272m E	National Trust Aberdulais Tinworks And Waterfall, The National Trust, Aberdulais Falls, Aberdulais, Neath, Castell-Nedd Port Talbot, Sa10 8eu	NRW-WME062222	Treating waste exemption	Not on a farm	Manual treatment of waste
B	272m E	National Trust Aberdulais Tinworks And Waterfall, The National Trust, Aberdulais Falls, Aberdulais, Neath, Castell-Nedd Port Talbot, Sa10 8eu	NRW-WME062222	Disposing of waste exemption	Not on a farm	Disposal by incineration

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
- Control of Major Accident Hazards
- 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 36 >](#)

ID	Location	Company	Address	Activity	Category
1	On site	Chimney	West Glamorgan, SA10	Chimneys	Industrial Features
2	On site	Electricity Sub Station	West Glamorgan, SA10	Electrical Features	Infrastructure and Facilities
A	11m W	Cedryn James of Neath	54, Underwood Road, Cadoxton, West Glamorgan, SA10 8BY	Fences, Gates and Railings	Industrial Products



ID	Location	Company	Address	Activity	Category
A	24m W	A P Mobile Car Valeting	52, Underwood Road, Cadoxton, West Glamorgan, SA10 8BY	Vehicle Cleaning Services	Personal, Consumer and Other Services
B	30m NE	Works	West Glamorgan, SA10	Unspecified Works Or Factories	Industrial Features
5	181m SW	Electricity Sub Station	West Glamorgan, SA10	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0
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Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0
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High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0
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High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0
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Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.



4.6 Control of Major Accident Hazards (COMAH)

Records within 500m**2**

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.

Features are displayed on the Current industrial land use map on [page 36](#) >

ID	Location	Company	Address	Operational status	Tier
J	477m E	Calor Gas Ltd	Calor Gas Ltd, Scapa Works, Aberdulais, Neath, SA10 8ER	Historical NIHHS Site	-
J	480m E	Calor Gas Limited	Calor Gas Limited, Neath Operations Centre, Neath Operations Centre, Neath, West Glamorgan, SA10 8ER	Current COMAH Site	COMAH Upper Tier Operator

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m**0**

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m**0**

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m**0**

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

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



4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

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

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

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

Records within 500m

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 36 >](#)

ID	Location	Address	Details	
B	31m NE	Neath Coachbuilders Limited, Pencynnor, Cilfrew, Neath, Neath Port Talbot, SA10 8LF	Process: Coating Processes Status: Historical Permit Permit Type: Part B	Enforcement: No enforcements issued Date of enforcement: No enforcements issued Comment: No enforcements issued
B	39m NE	Neath Coachbuilders Limited, Pencynnor, Cilfrew, Neath, Neath Port Talbot, SA10 8LF	Process: Respraying of Road Vehicles Status: Current Permit Permit Type: Part B	Enforcement: No enforcements issued Date of enforcement: No enforcements issued Comment: No enforcements issued

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m

0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m

24

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

Features are displayed on the Current industrial land use map on [page 36 >](#)



ID	Location	Address	Details	
3	On site	CSO 49 LLANGATWG SCHOOL ABERDULIAS, Nr Llangatwg School, Caewern, Neath, SA10 8DA	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BW2902801 Permit Version: 0 Receiving Water: Tributary of the Tennant Canal	Status: Effective Issue date: 11/10/2019 Effective Date: 11/10/2019 Revocation Date: -
C	51m SW	1 YNYSLLYNLLADD COTTAGES CADOXTON, 1 YNYSLLYNLLADD COTTAGES, CADOXTON, NEATH, WALES, SA10 8DA	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: BP0325801 Permit Version: 1 Receiving Water: TRIB OF RIVER NEATH	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY Issue date: 06/08/2004 Effective Date: 06/08/2004 Revocation Date: -
4	58m S	LLANGATWG SCHOOL (STORM) CADOXTON, LLANGATWG SCHOOL (STORM), CADOXTON, NEATH	Effluent Type: UNSPECIFIED Permit Number: BM0010801 Permit Version: 1 Receiving Water: UNNAMED TRIB. NEATH	Status: REVOKED - UNSPECIFIED Issue date: 18/02/1982 Effective Date: 18/02/1982 Revocation Date: 10/11/1986
C	77m SW	LLANGATWG SCHOOL (STORM) CADOXTON, LLANGATWG SCHOOL (STORM), CADOXTON, NEATH	Effluent Type: UNSPECIFIED Permit Number: BM0010801 Permit Version: 2 Receiving Water: UNNAMED TRIB. NEATH	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 11/11/1986 Effective Date: 11/11/1986 Revocation Date: 14/03/1994
6	234m SE	CANAL SIDE NEATH WEST GLAMORGA, CANAL SIDE, NEATH, NEATH PORT TALBOT, WALES	Effluent Type: UNSPECIFIED Permit Number: BB4028001 Permit Version: 1 Receiving Water: CANAL SIDE NEATH	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 06/10/1978 Effective Date: 06/10/1978 Revocation Date: 31/10/1996
D	332m E	A'DULAI MAESGWYN SWO5A, MAESGWYN SWO5A	Effluent Type: UNSPECIFIED Permit Number: BW2900201 Permit Version: 1 Receiving Water: RIVER DULAI	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 17/06/1963 Effective Date: 17/06/1963 Revocation Date: 14/03/1994
D	347m E	CSO 17 UNDER OLD RD BRDGE ABRDULAI, CSO 17 UNDER OLD ROAD BRIDGE, ABERDULAI, NEATH, WALES	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BP0316401 Permit Version: 1 Receiving Water: RIVER DULAI	Status: Effective Issue date: 31/03/2004 Effective Date: 31/03/2004 Revocation Date: -
D	347m E	CSO Outside Visitor Centre, Aberdulais, Outside Aberdulais Tin Works Visitor Centre, Main Rd (A4109), ABERDULAI, NEATH, SA10 8EU	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BP0316401 Permit Version: 0 Receiving Water: RIVER DULAI	Status: Effective Issue date: 18/09/2019 Effective Date: 18/09/2019 Revocation Date: -



ID	Location	Address	Details	
D	362m E	CSO Outside Visitor Centre Aberdulais, Outside Aberdulais Tin Works Visitor Centre Main Rd (A4109), Aberdulais, NEATH, SA10 8EU	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BP0316401 Permit Version: 2 Receiving Water: RIVER DULAIS	Status: Effective Issue date: 18/09/2019 Effective Date: 18/09/2019 Revocation Date: -
E	368m S	ABERDULAIS SPS, R/O Riverside Golf Range, Aberdulais, SA11 3DZ	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: BP0224802 Permit Version: 3 Receiving Water: Neath Estuary	Status: Effective Issue date: 17/12/2019 Effective Date: 17/12/2019 Revocation Date: -
E	368m S	ABERDULAIS SPS, R/O Riverside Golf Range, Aberdulais, SA11 3DZ	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: BP0224802 Permit Version: 3 Receiving Water: Neath Estuary	Status: Effective Issue date: 17/12/2019 Effective Date: 17/12/2019 Revocation Date: -
E	388m S	ABERDULAIS SPS, ABERDULAIS SPS, ABERDULAIS, NEATH, NEATH PORT TALBOT	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BP0224801 Permit Version: 0 Receiving Water: NEATH ESTUARY	Status: Effective Issue date: 09/02/1993 Effective Date: 09/02/1993 Revocation Date: -
E	388m S	ABERDULAIS SPS, ABERDULAIS, NEATH, NEATH PORT TALBOT	Effluent Type: UNSPECIFIED Permit Number: BW0202801 Permit Version: 2 Receiving Water: SWANSEA BAY VIA BETSI LAGOON	Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 10/05/1993 Effective Date: 10/05/1993 Revocation Date: 01/12/2000
E	388m S	ABERDULAIS SPS, ABERDULAIS, NEATH, NEATH PORT TALBOT	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BP0224802 Permit Version: 2 Receiving Water: NEATH ESTUARY	Status: Effective Issue date: 31/03/2005 Effective Date: 31/03/2008 Revocation Date: -
E	390m S	Aberdulais SPS, R/O Riverside Golf Range, Aberdulais, SA11 3DZ	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: BP0224802 Permit Version: 0 Receiving Water: Neath Estuary	Status: Effective Issue date: 17/12/2019 Effective Date: 17/12/2019 Revocation Date: -



ID	Location	Address	Details	
E	390m S	Aberdulais SPS, R/O Riverside Golf Range, Aberdulais, SA11 3DZ	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: BP0224802 Permit Version: 0 Receiving Water: Neath Estuary	Status: Effective Issue date: 17/12/2019 Effective Date: 17/12/2019 Revocation Date: -
10	414m E	CALOR GAS OPS CENTRE ABERDULAIS, CALOR GAS OPERATIONS CENTRE, ABERDULAIS, NEATH, NEATH PORT TALBOT CBC	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE (CONTAM SURFACE WATER, NOT WASTE SIT Permit Number: BP0299501 Permit Version: 0 Receiving Water: AFON NEDD	Status: Effective Issue date: 20/08/2002 Effective Date: 20/08/2002 Revocation Date: -
11	414m NE	SWO BELOW BRYNAMLWG HSE.CILFRE	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BW2903501 Permit Version: 1 Receiving Water: RIVER DULAIS	Status: Surrendered Issue date: 30/10/1961 Effective Date: 30/10/1961 Revocation Date: -
H	438m SE	ABERDULAIS SS77119893, SS77119893	Effluent Type: UNSPECIFIED Permit Number: BP0064312 Permit Version: 1 Receiving Water: RIVER NEATH - TIDAL	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 09/10/1987 Effective Date: 09/10/1987 Revocation Date: 28/08/1992
H	452m SE	CANAL SIDE SEWER OVERFLOW SWO	Effluent Type: UNSPECIFIED Permit Number: BW2901801 Permit Version: 1 Receiving Water: RIVER NEATH	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 08/11/1972 Effective Date: 08/11/1972 Revocation Date: 21/12/1992
I	471m E	DULAIS FACH ROAD SWO.5B AT RIV	Effluent Type: UNSPECIFIED Permit Number: BW2900101 Permit Version: 1 Receiving Water: RIVER NEATH	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 20/10/1989 Effective Date: 20/10/1989 Revocation Date: 14/03/1994
I	483m E	CALOR GAS OPS CENTRE ABERDULAIS, CALOR GAS OPERATIONS CENTRE, ABERDULAIS, NEATH, NEATH PORT TALBOT CBC, SA10 8ER	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: BP0299601 Permit Version: 0 Receiving Water: AFON NEDD	Status: Effective Issue date: 20/08/2002 Effective Date: 20/08/2002 Revocation Date: -
14	496m E	SWO. POINT Y.D/S WEIR TONNA	Effluent Type: UNSPECIFIED Permit Number: BB4000512 Permit Version: 1 Receiving Water: RIVER NEATH	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 08/11/1972 Effective Date: 08/11/1972 Revocation Date: 16/12/1992



ID	Location	Address	Details	
I	499m E	CSO 48 NEATH RIVER BRIDGE ADJ CALOR, Adj to Calor Gas, Tonna, Neath, SA10 8EP	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BP0316601 Permit Version: 0 Receiving Water: RIVER NEATH	Status: Effective Issue date: 11/10/2019 Effective Date: 11/10/2019 Revocation Date: -

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0
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Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

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

4.15 Pollutant release to public sewer

Records within 500m	0
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Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0
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Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

4.17 List 2 Dangerous Substances

Records within 500m	0
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Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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



4.18 Pollution Incidents (EA/NRW)

Records within 500m
23

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

Features are displayed on the Current industrial land use map on [page 36](#) >

ID	Location	Details	
D	341m E	Incident Date: 17/03/2003 Incident Identification: 143765 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
D	342m E	Incident Date: 03/09/2016 Incident Identification: 1605277 Pollutant: - Pollutant Description: -	Water Impact: Other Land Impact: Other Air Impact: Other
D	344m E	Incident Date: 04/08/2001 Incident Identification: 21956 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
D	344m E	Incident Date: 23/09/2003 Incident Identification: 191954 Pollutant: Sewage Materials Pollutant Description: Grey Water	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
D	345m E	Incident Date: 17/01/2003 Incident Identification: 131614 Pollutant: Contaminated Water:Oils and Fuel Pollutant Description: Suspended Solids:Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
D	345m E	Incident Date: 17/01/2003 Incident Identification: 131614 Pollutant: Contaminated Water Pollutant Description: Suspended Solids	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
D	345m E	Incident Date: 17/01/2003 Incident Identification: 131614 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
D	348m E	Incident Date: 25/05/2001 Incident Identification: 6682 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	
D	348m E	Incident Date: 14/08/2003 Incident Identification: 181997 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
D	357m E	Incident Date: 15/04/2015 Incident Identification: 1329103 Pollutant: Sewage Materials Pollutant Description: Other Sewage Material	Water Impact: - Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
7	385m E	Incident Date: 06/08/2014 Incident Identification: 1265533 Pollutant: Inert Materials and Wastes Pollutant Description: Soils and Clay	Water Impact: - Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
D	388m E	Incident Date: 03/06/2003 Incident Identification: 162944 Pollutant: Oils and Fuel Pollutant Description: Petrol	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
8	410m SE	Incident Date: 29/06/2001 Incident Identification: 12375 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)
9	411m S	Incident Date: 16/01/2003 Incident Identification: 131447 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)
F	413m N	Incident Date: 20/06/2002 Incident Identification: 86101 Pollutant: Organic Chemicals/Products Pollutant Description: Surfactants and Detergents	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	413m N	Incident Date: 20/06/2002 Incident Identification: 86101 Pollutant: Organic Chemicals/Products Pollutant Description: Surfactants and Detergents	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
G	434m E	Incident Date: 16/12/2014 Incident Identification: 1301331 Pollutant: - Pollutant Description: -	Water Impact: - Land Impact: - Air Impact: -
G	435m E	Incident Date: 16/08/2002 Incident Identification: 100903 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)



ID	Location	Details	
G	439m E	Incident Date: 18/07/2002 Incident Identification: 92690 Pollutant: Inert Materials and Wastes Pollutant Description: Soils and Clay	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
G	443m E	Incident Date: 25/04/2003 Incident Identification: 153984 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
12	466m SE	Incident Date: 29/06/2001 Incident Identification: 18720 Pollutant: Oils and Fuel Pollutant Description: Gas and Fuel Oils	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
13	469m NE	Incident Date: 08/07/2013 Incident Identification: 1130371 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
I	475m E	Incident Date: 16/07/2002 Incident Identification: 91984 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m	0
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The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

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

4.20 Pollution inventory waste transfers

Records within 500m	0
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The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

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



4.21 Pollution inventory radioactive waste

Records within 500m

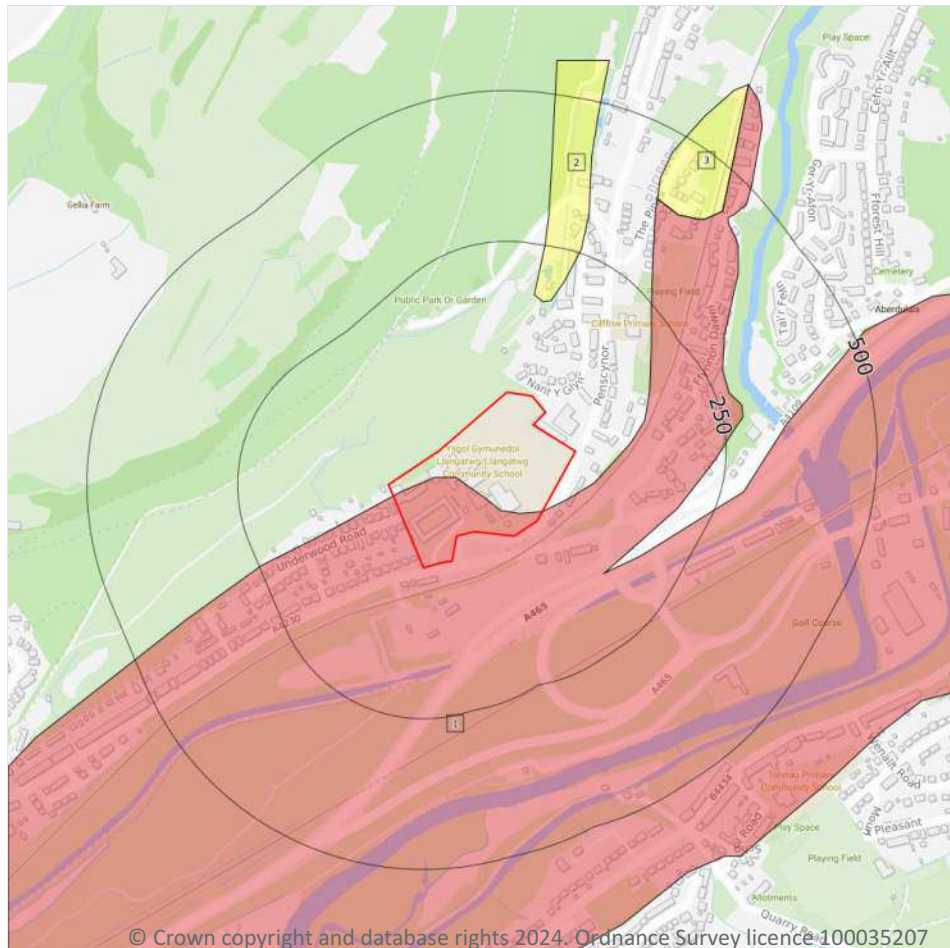
0

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

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



5 Hydrogeology - Superficial aquifer



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

5.1 Superficial aquifer

Records within 500m

3

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 48](#) >

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	157m N	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

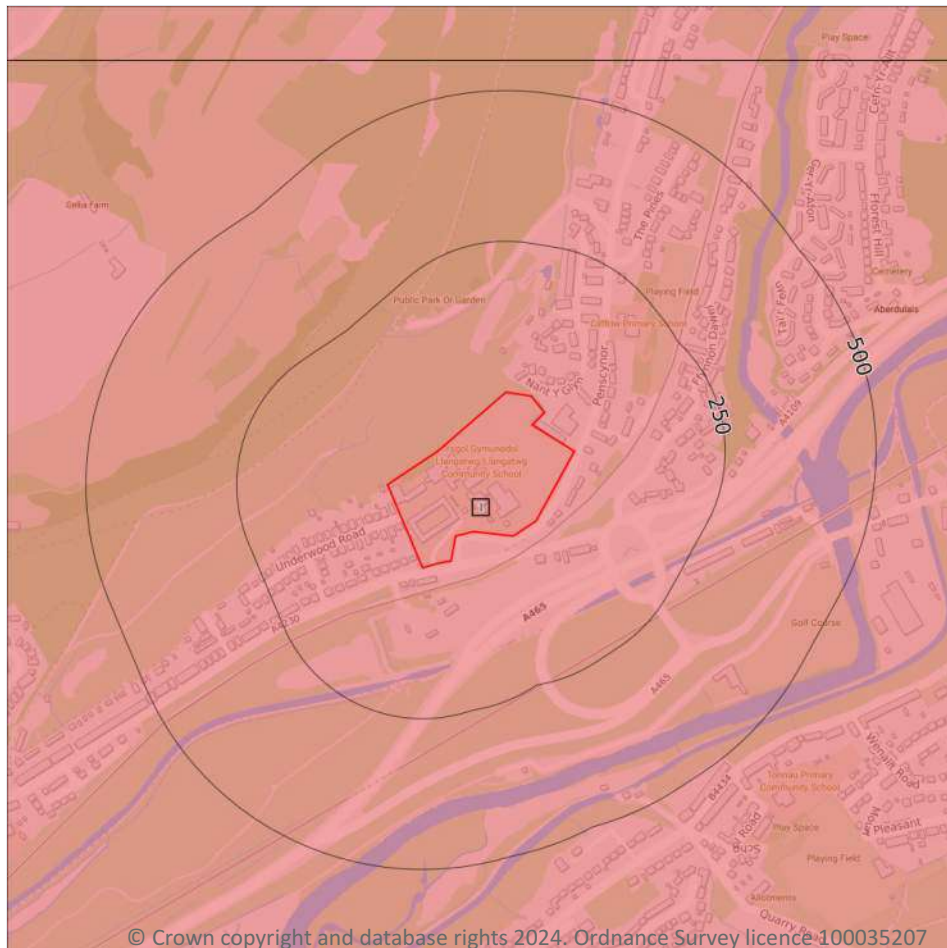


ID	Location	Designation	Description
3	386m NE	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

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



Bedrock aquifer



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

5.2 Bedrock aquifer

Records within 500m

1

Aquifer status of groundwater held within bedrock geology.

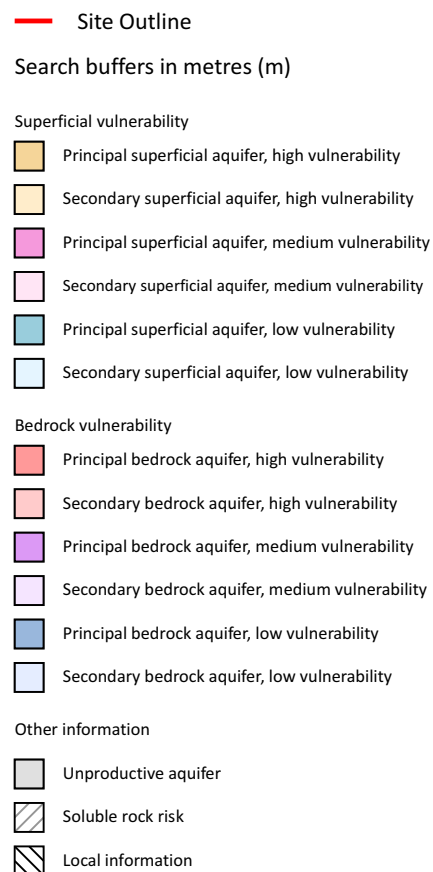
Features are displayed on the Bedrock aquifer map on [page 50](#) >

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

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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

2

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid.

Groundwater vulnerability is described as High, Medium or Low as follows:

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

Features are displayed on the Groundwater vulnerability map on [page 51](#) >



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

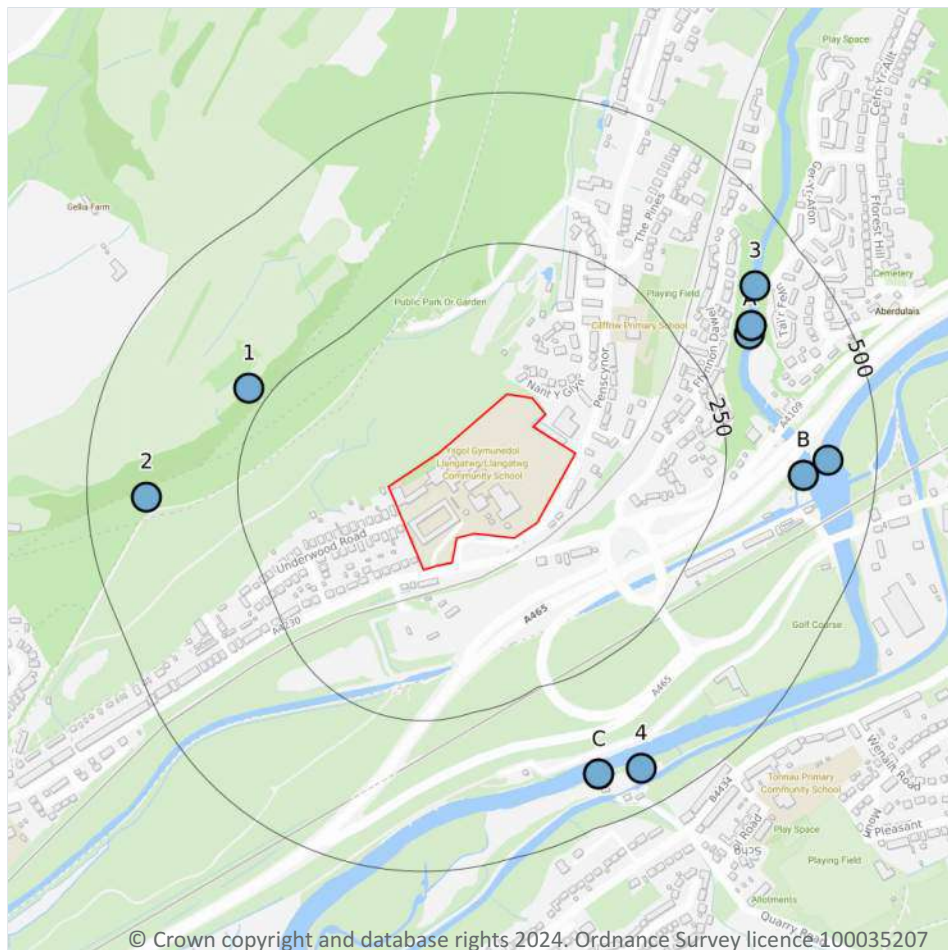
0

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



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

5.6 Groundwater abstractions

Records within 2000m

5

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 53 >](#)

ID	Location	Details	
-	644m W	Status: Historical Licence No: 21/58/74/0027 Details: Spray Irrigation - Direct Direct Source: EAW Groundwater Point: U/G STRATA, PENNANT MEASURES SANDSTONE AT NEATH GOLF CLUB Data Type: Point Name: Neath Golf Club Easting: 275910 Northing: 199240	Annual Volume (m ³): 3500 Max Daily Volume (m ³): 35 Original Application No: - Original Start Date: 27/09/2004 Expiry Date: 31/03/2017 Issue No: 2 Version Start Date: 04/09/2008 Version End Date: -
-	645m W	Status: Historical Licence No: WA/058/0074/0010 Details: Spray Irrigation - Storage - High Direct Source: Borehole G1 Point: - Data Type: Point Name: - Easting: 275909 Northing: 199239	Annual Volume (m ³): 3500 Max Daily Volume (m ³): 84 Original Application No: - Original Start Date: 14/03/2018 Expiry Date: 31/03/2029 Issue No: - Version Start Date: - Version End Date: -
-	645m W	Status: Historical Licence No: WA/058/0074/0010 Details: General Washing / Process Washing - Medium Direct Source: Borehole G1 Point: - Data Type: Point Name: - Easting: 275909 Northing: 199239	Annual Volume (m ³): 146 Max Daily Volume (m ³): 4.8 Original Application No: - Original Start Date: 14/03/2018 Expiry Date: 31/03/2029 Issue No: - Version Start Date: - Version End Date: -
-	645m W	Status: Active Licence No: WA/058/0074/0010 Details: Spray Irrigation - Storage - High Direct Source: Borehole G1 Point: - Data Type: Point Name: - Easting: 275909 Northing: 199239	Annual Volume (m ³): 3500 Max Daily Volume (m ³): 35 Original Application No: - Original Start Date: 14/03/2018 Expiry Date: 31/03/2029 Issue No: - Version Start Date: - Version End Date: -
-	645m W	Status: Active Licence No: WA/058/0074/0010 Details: General Washing / Process Washing - Medium Direct Source: Borehole G1 Point: - Data Type: Point Name: - Easting: 275909 Northing: 199239	Annual Volume (m ³): 146 Max Daily Volume (m ³): 0.4 Original Application No: - Original Start Date: 14/03/2018 Expiry Date: 31/03/2029 Issue No: - Version Start Date: - Version End Date: -

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



5.7 Surface water abstractions

Records within 2000m

24

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 53 >](#)

ID	Location	Details	
1	283m W	Status: Historical Licence No: 21/58/74/0018 Details: Spray Irrigation - Direct Direct Source: EAW Surface Water Point: SPRING 2 Data Type: Point Name: Neath Golf Club Easting: 276320 Northing: 199460	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
A	350m NE	Status: Historical Licence No: 21/58/73/0014 Details: Hydroelectric Power Generation Direct Source: EAW Surface Water Point: AFON DULAIS AT ABERDULAIS FALLS Data Type: Point Name: National Trust Easting: 277150 Northing: 199550	Annual Volume (m³): 45000000 Max Daily Volume (m³): 300000 Original Application No: - Original Start Date: 27/11/1991 Expiry Date: 31/05/2011 Issue No: 100 Version Start Date: 01/04/2004 Version End Date: -
A	360m NE	Status: Active Licence No: WA/058/0073/001 Details: Hydro-electric Power Generation - Very Low Direct Source: Abderdulais Falls Point: - Data Type: Point Name: - Easting: 277152 Northing: 199564	Annual Volume (m³): 58000000 Max Daily Volume (m³): 319680 Original Application No: - Original Start Date: 11/01/2018 Expiry Date: 31/03/2029 Issue No: - Version Start Date: - Version End Date: -
A	360m NE	Status: Historical Licence No: WA/058/0073/001 Details: Hydroelectric Power Generation Direct Source: EAW Surface Water Point: AFON DULAIS Data Type: Point Name: The National Trust Easting: 277152 Northing: 199564	Annual Volume (m³): 58000000 Max Daily Volume (m³): 319680 Original Application No: - Original Start Date: 01/06/2011 Expiry Date: 31/03/2017 Issue No: 2 Version Start Date: 28/03/2014 Version End Date: -



ID	Location	Details	
B	380m E	Status: Historical Licence No: 21/58/74/0001 Details: Raw Water Supply - Medium Direct Source: River Neath Point: - Data Type: Point Name: - Easting: 277239 Northing: 199316	Annual Volume (m ³): 7300000 Max Daily Volume (m ³): 60000 Original Application No: - Original Start Date: Sep 24 2014 12:00AM Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
B	380m E	Status: Historical Licence No: 21/58/74/0001 Details: Raw Water Supply Direct Source: EAW Surface Water Point: RIVER NEATH TO TENNANT CANAL AT ABERDULAI Data Type: Point Name: Port Tennant Co Ltd Easting: 277239 Northing: 199316	Annual Volume (m ³): 7300000 Max Daily Volume (m ³): 30000 Original Application No: - Original Start Date: 28/03/1966 Expiry Date: - Issue No: 103 Version Start Date: 24/09/2014 Version End Date: -
2	402m W	Status: Historical Licence No: 21/58/74/0018 Details: Spray Irrigation - Direct Direct Source: EAW Surface Water Point: SPRING 1 Data Type: Point Name: Neath Golf Club Easting: 276150 Northing: 199280	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
3	407m NE	Status: Historical Licence No: WA/058/0073/001 Details: Hydroelectric Power Generation Direct Source: EAW Surface Water Point: AFON DULAI AT ABERDULAI FALLS Data Type: Point Name: The National Trust Easting: 277159 Northing: 199630	Annual Volume (m ³): 58000000 Max Daily Volume (m ³): 300000 Original Application No: - Original Start Date: 01/06/2011 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 01/06/2011 Version End Date: -
C	416m S	Status: Historical Licence No: 21/58/72/0007 Details: General use relating to Secondary Category (High Loss) Direct Source: EAW Surface Water Point: INLAND WATER RIVER NEATH IN THE COMMUNITY OF TONNA Data Type: Point Name: Neath Canal Navigation Easting: 276900 Northing: 198820	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 11/09/2002 Expiry Date: - Issue No: 101 Version Start Date: 11/09/2002 Version End Date: 31/03/2005



ID	Location	Details	
C	416m S	Status: Historical Licence No: 21/58/72/0007 Details: General use relating to Secondary Category (Medium Loss) Direct Source: EAW Surface Water Point: INLAND WATER RIVER NEATH IN THE COMMUNITY OF TONNA Data Type: Point Name: Neath Canal Navigation Easting: 276900 Northing: 198820	Annual Volume (m ³): 1659323 Max Daily Volume (m ³): 4546 Original Application No: - Original Start Date: 11/09/2002 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2005 Version End Date: -
B	419m E	Status: Historical Licence No: 21/58/74/0001 Details: Raw Water Supply Direct Source: EAW Surface Water Point: RIVER NEATH TO TENNANT CANAL AT ABERDULAIS Data Type: Point Name: Port Tennant Co Ltd Easting: 277280 Northing: 199340	Annual Volume (m ³): 7300000 Max Daily Volume (m ³): 30000 Original Application No: - Original Start Date: 28/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/04/2006 Version End Date: -
4	436m SE	Status: Historical Licence No: 21/58/72/0035 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: EAW Surface Water Point: RIVER NEATH AT TONNA LOCK Data Type: Point Name: Neath Canal Navigation Easting: 276970 Northing: 198830	Annual Volume (m ³): 15000 Max Daily Volume (m ³): 18170 Original Application No: - Original Start Date: 26/03/2008 Expiry Date: 31/03/2017 Issue No: 2 Version Start Date: 06/02/2009 Version End Date: -
-	1180m NW	Status: Active Licence No: 21/58/74/0025 Details: Unknown (Impounding) - Direct Source: - Point: - Data Type: Point Name: - Easting: 276210 Northing: 200500	Annual Volume (m ³): 0 Max Daily Volume (m ³): - Original Application No: - Original Start Date: 25/07/1996 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -



ID	Location	Details	
-	1180m NW	Status: Historical Licence No: 21/58/74/0026 Details: Spray Irrigation - Storage Direct Source: EAW Surface Water Point: LAND DRAINS IN THE CATCHMENT OF THE RIVER NEATH Data Type: Point Name: Neath Golf Club Easting: 276210 Northing: 200500	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 25/07/1996 Version End Date: -
-	1634m W	Status: Historical Licence No: 21/58/74/0017 Details: Mineral Washing - Low Direct Source: - Point: - Data Type: Point Name: - Easting: 274950 Northing: 199620	Annual Volume (m ³): 36368 Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/06/2008 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1634m W	Status: Historical Licence No: 21/58/74/0017 Details: Mineral Washing Direct Source: EAW Surface Water Point: STREAM WEST OF GILFACH QUARRY, NEATH Data Type: Point Name: CEMEX UK Materials Ltd Easting: 274950 Northing: 199620	Annual Volume (m ³): 36368 Max Daily Volume (m ³): 204.6 Original Application No: - Original Start Date: 01/02/1975 Expiry Date: - Issue No: 101 Version Start Date: 13/06/2008 Version End Date: -
-	1634m W	Status: Active Licence No: 21/58/74/0017 Details: Mineral Washing - Low Direct Source: unnamed stream Point: - Data Type: Point Name: - Easting: 274950 Northing: 199620	Annual Volume (m ³): 36368 Max Daily Volume (m ³): 204.6 Original Application No: - Original Start Date: 23/11/2023 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1653m NE	Status: Active Licence No: WA/058/0074/008 Details: Hydro-electric Power Generation - Very Low Direct Source: - Point: - Data Type: Point Name: - Easting: 277815 Northing: 200740	Annual Volume (m ³): 59918400 Max Daily Volume (m ³): 164160 Original Application No: - Original Start Date: 06/03/2015 Expiry Date: 31/03/2029 Issue No: - Version Start Date: - Version End Date: -



ID	Location	Details	
-	1653m NE	Status: Active Licence No: WA/058/0074/009 Details: Hydro-electric Power Generation - Very Low Direct Source: - Point: - Data Type: Point Name: - Easting: 277815 Northing: 200740	Annual Volume (m ³): 0 Max Daily Volume (m ³): - Original Application No: - Original Start Date: 06/03/2015 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1653m NE	Status: Historical Licence No: WA/058/0074/008 Details: Hydroelectric Power Generation Direct Source: EAW Surface Water Point: TAN Y RHIW FARM Data Type: Point Name: Jones and Jones Renewables Ltd Easting: 277815 Northing: 200740	Annual Volume (m ³): 59918400 Max Daily Volume (m ³): 164160 Original Application No: - Original Start Date: 05/11/2013 Expiry Date: 31/03/2029 Issue No: 2 Version Start Date: 06/03/2015 Version End Date: -
-	1653m NE	Status: Historical Licence No: WA/058/0074/008 Details: Hydro-electric Power Generation - Very Low Direct Source: - Point: - Data Type: Point Name: - Easting: 277815 Northing: 200740	Annual Volume (m ³): 59918400 Max Daily Volume (m ³): - Original Application No: - Original Start Date: 06/03/2015 Expiry Date: 31/03/2029 Issue No: - Version Start Date: - Version End Date: -
-	1929m N	Status: Active Licence No: WA/058/0074/004 Details: Hydro-electric Power Generation - Very Low Direct Source: - Point: - Data Type: Point Name: - Easting: 277155 Northing: 201338	Annual Volume (m ³): 0 Max Daily Volume (m ³): - Original Application No: - Original Start Date: 22/06/2011 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1929m N	Status: Active Licence No: WA/058/0074/002 Details: Hydro-electric Power Generation - Very Low Direct Source: - Point: - Data Type: Point Name: - Easting: 277155 Northing: 201338	Annual Volume (m ³): 1491401 Max Daily Volume (m ³): 7344 Original Application No: - Original Start Date: 22/06/2011 Expiry Date: 31/03/2029 Issue No: - Version Start Date: - Version End Date: -



ID	Location	Details	
-	1929m N	Status: Historical Licence No: WA/058/0074/002 Details: Hydroelectric Power Generation Direct Source: EAW Surface Water Point: NANT Y RHOS Data Type: Point Name: Tan y Rhiw Hydroelectric Limited Easting: 277155 Northing: 201338	Annual Volume (m ³): 1491401 Max Daily Volume (m ³): 7344 Original Application No: - Original Start Date: 22/06/2011 Expiry Date: 31/03/2029 Issue No: 1 Version Start Date: 22/06/2011 Version End Date: -

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

5.8 Potable abstractions

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

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

5.9 Source Protection Zones

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

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

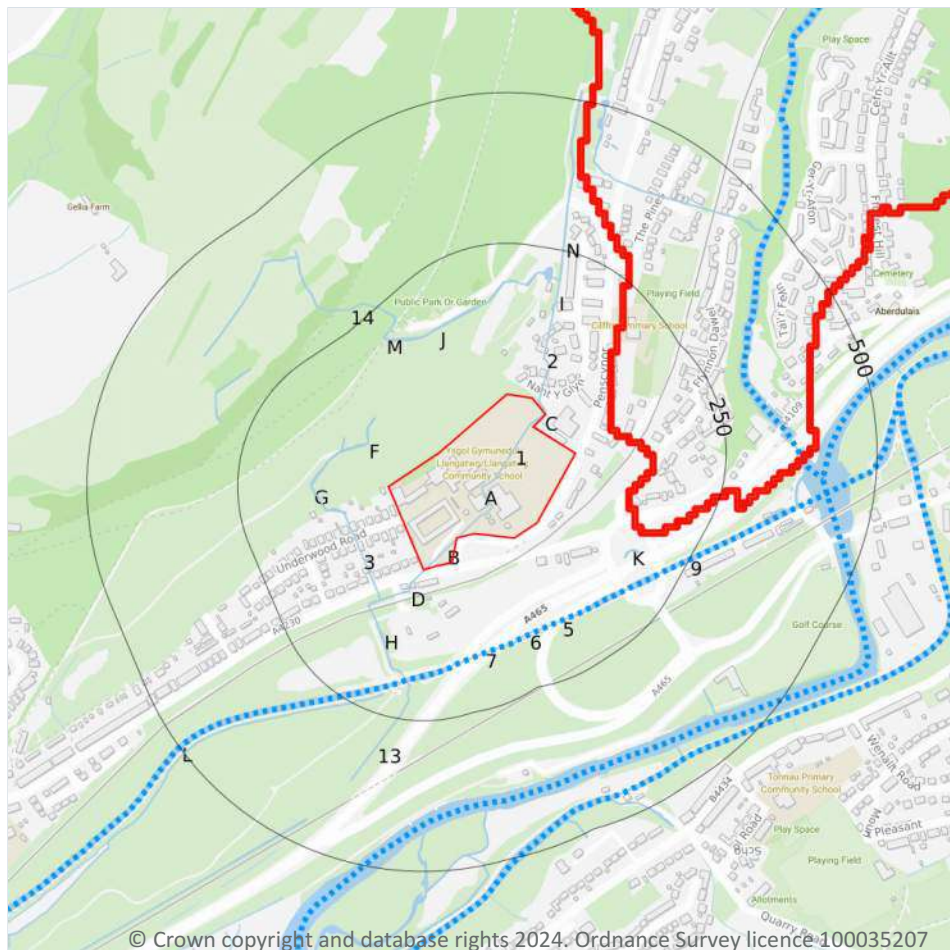
5.10 Source Protection Zones (confined aquifer)

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

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

6 Hydrology



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

6.1 Water Network (OS MasterMap)

Records within 250m

51

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 61](#) >

ID	Location	Type of water feature	Ground level	Permanence	Name
1	On site	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
A	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
B	On site	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	6m NE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	11m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
2	15m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	32m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	54m SW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
D	62m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	78m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	82m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
3	84m SW	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
D	85m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	88m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	99m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
I	150m NE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	152m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
K	154m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
5	157m SE	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Tennant Canal
I	157m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
6	157m S	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Tennant Canal
7	159m S	Canal. A manmade watercourse for inland navigation.	Underground	Watercourse contains water year round (in normal circumstances)	Tennant Canal
I	159m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
9	163m SE	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Tennant Canal



ID	Location	Type of water feature	Ground level	Permanence	Name
H	166m S	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Tennant Canal
H	175m SW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
H	178m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	180m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
I	184m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
I	184m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
I	184m N	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	185m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
L	185m S	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Tennant Canal
I	187m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
H	191m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
M	200m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
I	200m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
N	200m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
M	203m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
I	203m N	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
I	206m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
M	210m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
M	210m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
L	216m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
M	216m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	217m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
13	243m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
14	247m NW	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.



6.2 Surface water features

Records within 250m

24

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 61](#) >

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 61](#) >

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

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

6.4 WFD Surface water bodies

Records identified

2

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 61](#) >

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
4	157m SE	Canal	Neath and Tennant	GB71010012				2018



ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
21	400m S	River	Neath - conf with Nedd Fechan and Mellte to TL	GB110058032430	Good	Good	Good	2016

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

6.5 WFD Groundwater bodies

Records on site **1**

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

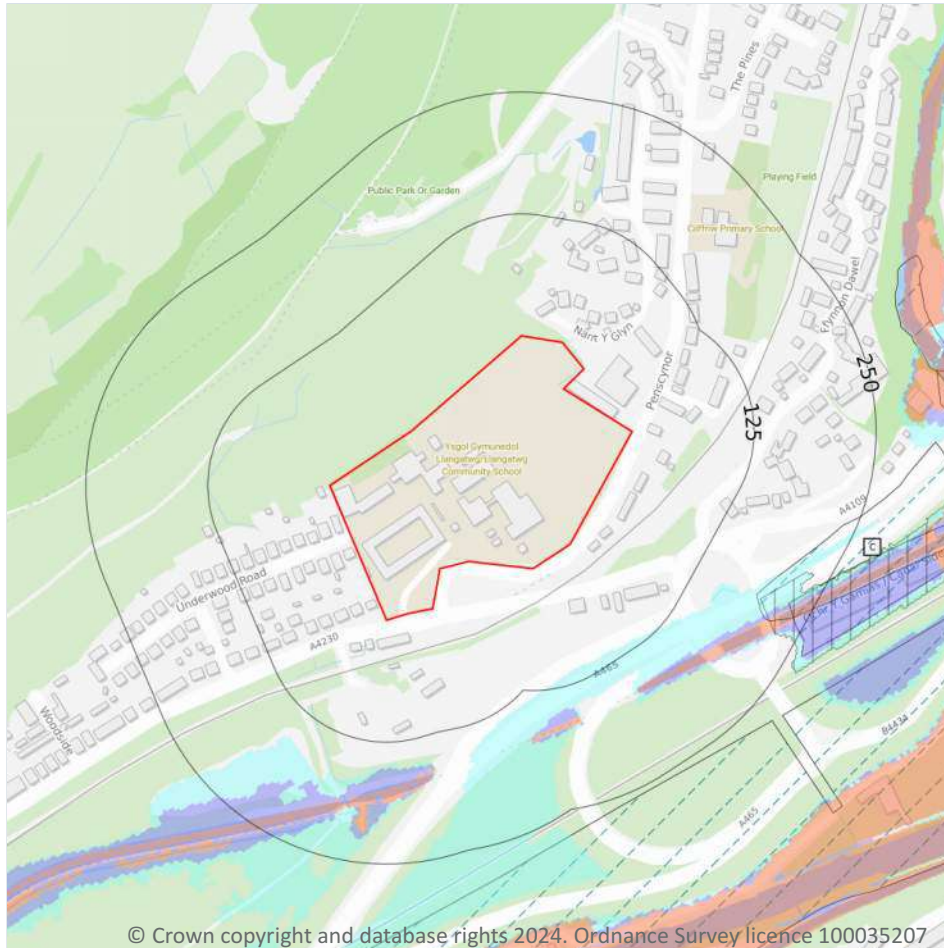
Features are displayed on the Hydrology map on [page 61](#) >

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

0

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

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



7.2 Historical Flood Events

Records within 250m
2

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 68 >](#)

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
C	193m SE	Neath 1979	1979-12-27 1979-12-27	Main river	Channel capacity exceeded (no raised defences)	Fluvial
C	226m E	Aberdulais October 1998 01	1998-10-22 1998-10-23	Unknown	Unknown	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
1

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

Features are displayed on the River and coastal flooding map on [page 68 >](#)

ID	Location	
C	198m SE	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

7.6 Flood Zone 2

Records within 50m

0

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

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

7.7 Flood Zone 3

Records within 50m

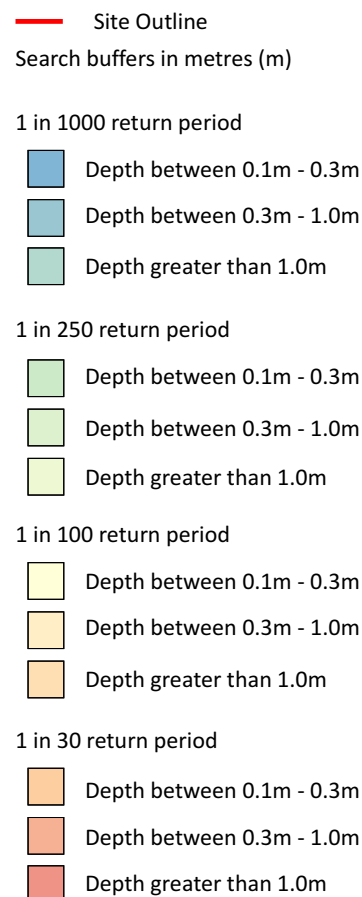
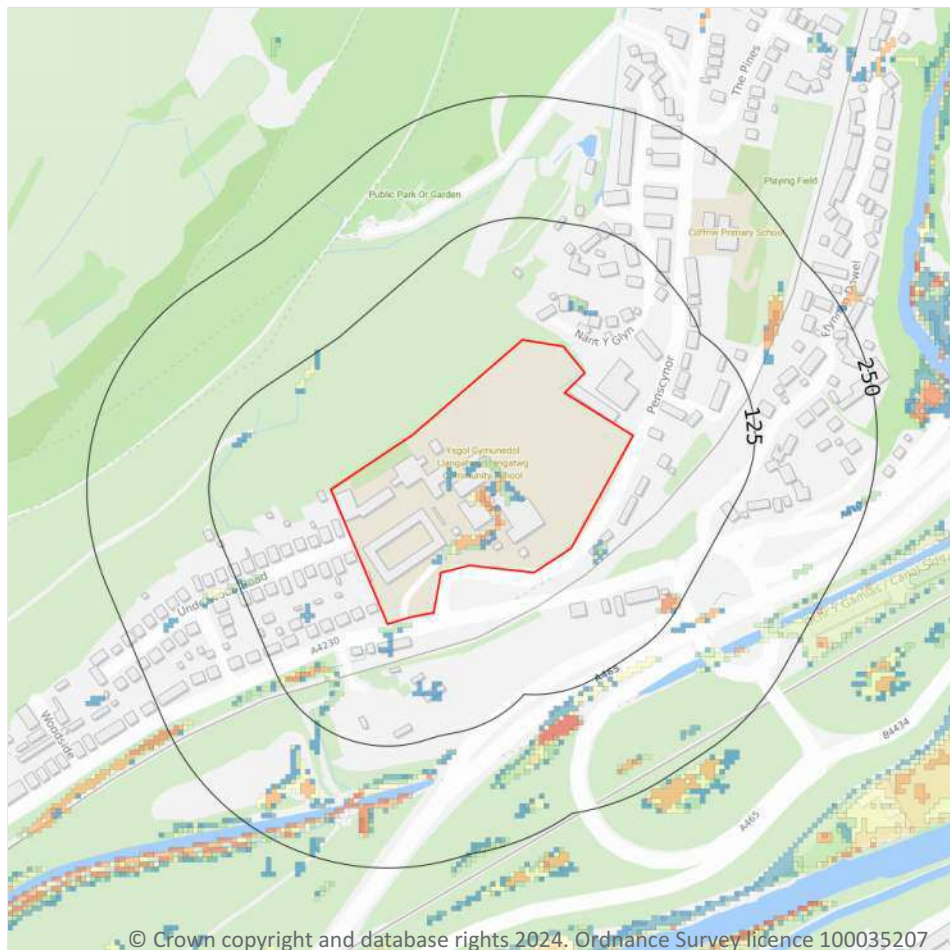
0

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

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



8 Surface water flooding



8.1 Surface water flooding

Highest risk on site

1 in 30 year, 0.3m - 1.0m

Highest risk within 50m

1 in 30 year, 0.3m - 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 72 >](#)

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

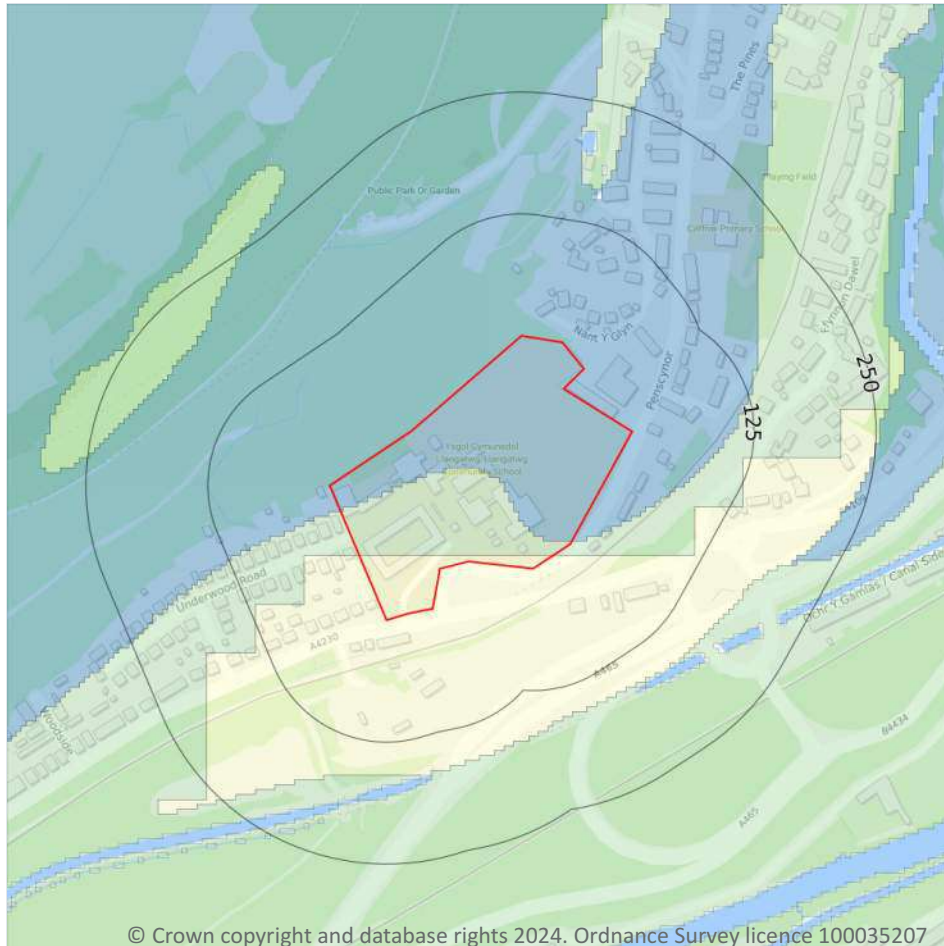
a site. The table below shows the maximum flood depths for a range of return periods for the site.

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

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



— Site Outline
Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

Moderate

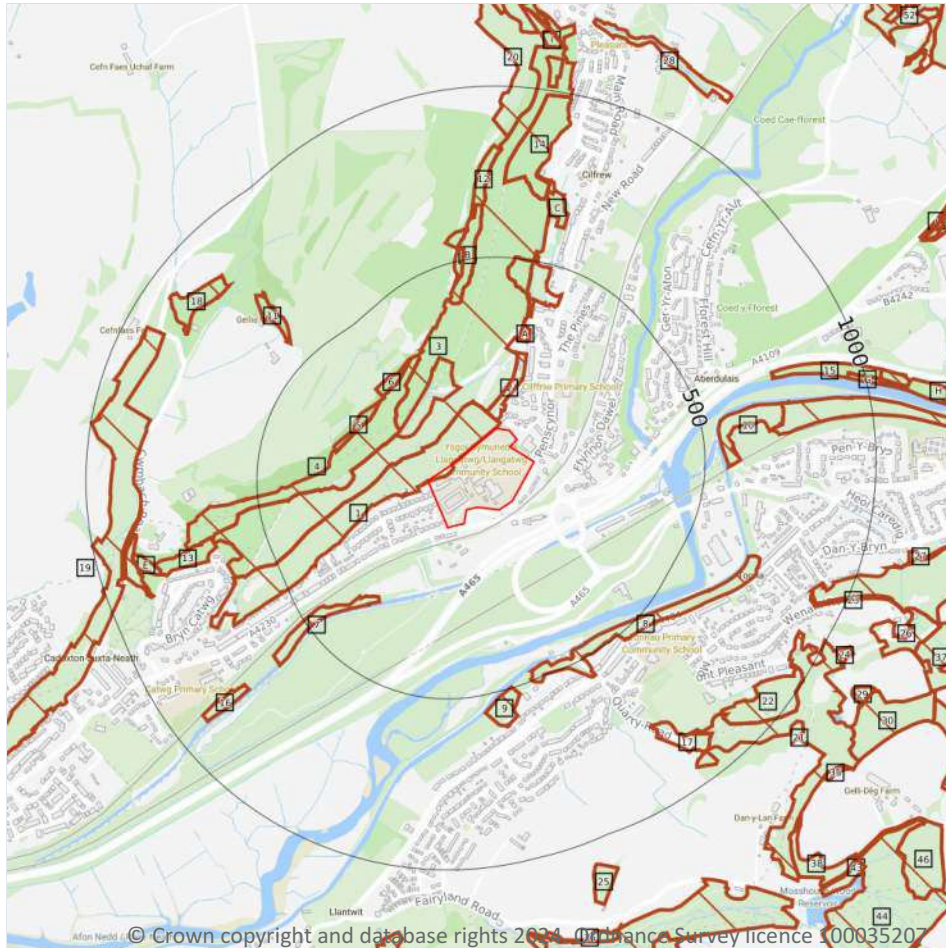
Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks 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 74 >](#)

This data is sourced from Ambiantal Risk Analytics.



10 Environmental designations



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

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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

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



10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m**0**

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m**0**

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m**0**

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m**0**

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

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



10.6 Local Nature Reserves (LNR)

Records within 2000m
0

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

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

10.7 Designated Ancient Woodland

Records within 2000m
125

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 75 >](#)

ID	Location	Name	Woodland Type
1	On site	Unknown	Restored Ancient Woodland Site
2	23m N	Unknown	Plantation on Ancient Woodland Site
3	53m N	Unknown	Plantation on Ancient Woodland Site
4	162m NW	Unknown	Restored Ancient Woodland Site
5	246m NW	Unknown	Restored Ancient Woodland Site
A	264m N	Unknown	Plantation on Ancient Woodland Site
6	276m NW	Unknown	Restored Ancient Woodland Site
7	286m SW	Unknown	Restored Ancient Woodland Site
A	339m N	Unknown	Plantation on Ancient Woodland Site
B	381m N	Unknown	Ancient Woodland Site of Unknown Category
A	381m N	Unknown	Ancient Woodland Site of Unknown Category
A	404m N	Unknown	Ancient Woodland Site of Unknown Category
B	434m N	Unknown	Ancient Woodland Site of Unknown Category
8	463m SE	Unknown	Ancient Semi Natural Woodland
9	497m S	Unknown	Restored Ancient Woodland Site



ID	Location	Name	Woodland Type
A	500m N	Unknown	Plantation on Ancient Woodland Site
B	537m N	Unknown	Restored Ancient Woodland Site
10	547m E	Unknown	Ancient Semi Natural Woodland
11	568m NW	Unknown	Plantation on Ancient Woodland Site
C	613m N	Unknown	Plantation on Ancient Woodland Site
12	618m N	Unknown	Restored Ancient Woodland Site
13	648m W	Unknown	Ancient Semi Natural Woodland
14	683m N	Unknown	Restored Ancient Woodland Site
D	695m E	Unknown	Restored Ancient Woodland Site
C	701m N	Unknown	Ancient Semi Natural Woodland
15	739m E	Unknown	Plantation on Ancient Woodland Site
16	749m SW	Unknown	Ancient Semi Natural Woodland
17	771m SE	Unknown	Ancient Semi Natural Woodland
18	813m NW	Unknown	Ancient Semi Natural Woodland
E	825m W	Unknown	Ancient Semi Natural Woodland
19	831m W	Unknown	Ancient Semi Natural Woodland
E	841m W	Unknown	Ancient Semi Natural Woodland
20	851m N	Unknown	Ancient Semi Natural Woodland
21	855m SE	Unknown	Restored Ancient Woodland Site
E	868m W	Unknown	Ancient Semi Natural Woodland
22	868m SE	Unknown	Restored Ancient Woodland Site
F	893m E	Unknown	Restored Ancient Woodland Site
23	900m E	Unknown	Restored Ancient Woodland Site
G	950m E	Unknown	Ancient Semi Natural Woodland
H	1038m E	Unknown	Restored Ancient Woodland Site
24	1041m SE	Unknown	Ancient Semi Natural Woodland
G	1042m E	Unknown	Plantation on Ancient Woodland Site
25	1068m S	Unknown	Ancient Semi Natural Woodland



ID	Location	Name	Woodland Type
26	1100m E	Unknown	Restored Ancient Woodland Site
27	1113m E	Unknown	Restored Ancient Woodland Site
I	1125m N	Unknown	Ancient Semi Natural Woodland
I	1130m N	Unknown	Ancient Semi Natural Woodland
28	1135m NE	Unknown	Ancient Semi Natural Woodland
29	1137m SE	Unknown	Plantation on Ancient Woodland Site
30	1180m SE	Unknown	Plantation on Ancient Woodland Site
I	1183m N	Unknown	Ancient Semi Natural Woodland
31	1191m S	Unknown	Ancient Semi Natural Woodland
H	1201m E	Unknown	Restored Ancient Woodland Site
32	1209m S	Unknown	Plantation on Ancient Woodland Site
33	1213m N	Unknown	Ancient Semi Natural Woodland
34	1213m S	Unknown	Plantation on Ancient Woodland Site
35	1216m SE	Unknown	Ancient Semi Natural Woodland
36	1220m S	Unknown	Plantation on Ancient Woodland Site
37	1245m E	Unknown	Restored Ancient Woodland Site
38	1245m SE	Unknown	Restored Ancient Woodland Site
-	1283m E	Unknown	Plantation on Ancient Woodland Site
-	1300m E	Unknown	Restored Ancient Woodland Site
J	1306m NE	Unknown	Restored Ancient Woodland Site
J	1309m NE	Unknown	Restored Ancient Woodland Site
39	1313m E	Unknown	Restored Ancient Woodland Site
J	1318m NE	Unknown	Ancient Semi Natural Woodland
40	1331m S	Unknown	Plantation on Ancient Woodland Site
-	1354m N	Unknown	Ancient Semi Natural Woodland
-	1355m E	Unknown	Ancient Woodland Site of Unknown Category
42	1361m SE	Unknown	Restored Ancient Woodland Site
-	1429m NE	Unknown	Plantation on Ancient Woodland Site



ID	Location	Name	Woodland Type
43	1448m SE	Unknown	Restored Ancient Woodland Site
44	1454m SE	Unknown	Restored Ancient Woodland Site
-	1462m E	Unknown	Plantation on Ancient Woodland Site
46	1506m SE	Unknown	Plantation on Ancient Woodland Site
-	1509m E	Unknown	Restored Ancient Woodland Site
-	1510m E	Unknown	Restored Ancient Woodland Site
-	1515m NE	Unknown	Plantation on Ancient Woodland Site
-	1516m NE	Unknown	Ancient Semi Natural Woodland
-	1526m NW	Unknown	Plantation on Ancient Woodland Site
-	1544m E	Unknown	Restored Ancient Woodland Site
-	1548m NE	Unknown	Restored Ancient Woodland Site
-	1554m NE	Unknown	Plantation on Ancient Woodland Site
52	1575m NE	Unknown	Ancient Semi Natural Woodland
-	1591m S	Unknown	Ancient Semi Natural Woodland
-	1592m E	Unknown	Restored Ancient Woodland Site
-	1604m NE	Unknown	Ancient Semi Natural Woodland
-	1616m E	Unknown	Ancient Semi Natural Woodland
M	1637m NE	Unknown	Plantation on Ancient Woodland Site
-	1640m NW	Unknown	Plantation on Ancient Woodland Site
-	1649m E	Unknown	Restored Ancient Woodland Site
-	1651m N	Unknown	Ancient Semi Natural Woodland
-	1663m NE	Unknown	Restored Ancient Woodland Site
-	1666m NE	Unknown	Restored Ancient Woodland Site
-	1669m S	Unknown	Plantation on Ancient Woodland Site
-	1669m E	Unknown	Ancient Semi Natural Woodland
-	1673m SE	Unknown	Plantation on Ancient Woodland Site
-	1682m NE	Unknown	Ancient Semi Natural Woodland
-	1684m SE	Unknown	Restored Ancient Woodland Site



ID	Location	Name	Woodland Type
-	1686m E	Unknown	Ancient Semi Natural Woodland
-	1693m E	Unknown	Plantation on Ancient Woodland Site
-	1696m E	Unknown	Restored Ancient Woodland Site
-	1696m E	Unknown	Ancient Semi Natural Woodland
-	1705m NW	Unknown	Restored Ancient Woodland Site
-	1719m NE	Unknown	Ancient Semi Natural Woodland
-	1737m NE	Unknown	Ancient Semi Natural Woodland
-	1746m NE	Unknown	Plantation on Ancient Woodland Site
68	1748m SE	Unknown	Restored Ancient Woodland Site
-	1758m NE	Unknown	Ancient Semi Natural Woodland
-	1788m S	Unknown	Restored Ancient Woodland Site
-	1789m NE	Unknown	Ancient Semi Natural Woodland
-	1789m S	Unknown	Ancient Semi Natural Woodland
-	1793m S	Unknown	Ancient Semi Natural Woodland
-	1817m S	Unknown	Restored Ancient Woodland Site
-	1818m S	Unknown	Ancient Semi Natural Woodland
-	1836m S	Unknown	Restored Ancient Woodland Site
-	1847m E	Unknown	Restored Ancient Woodland Site
-	1901m NE	Unknown	Ancient Semi Natural Woodland
-	1902m E	Unknown	Ancient Semi Natural Woodland
-	1916m N	Unknown	Ancient Semi Natural Woodland
-	1933m E	Unknown	Restored Ancient Woodland Site
-	1943m E	Unknown	Ancient Semi Natural Woodland
-	1947m NE	Unknown	Restored Ancient Woodland Site
-	1954m S	Unknown	Ancient Semi Natural Woodland
-	1972m S	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
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Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	0
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Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

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



11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

0

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



This data is sourced from 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

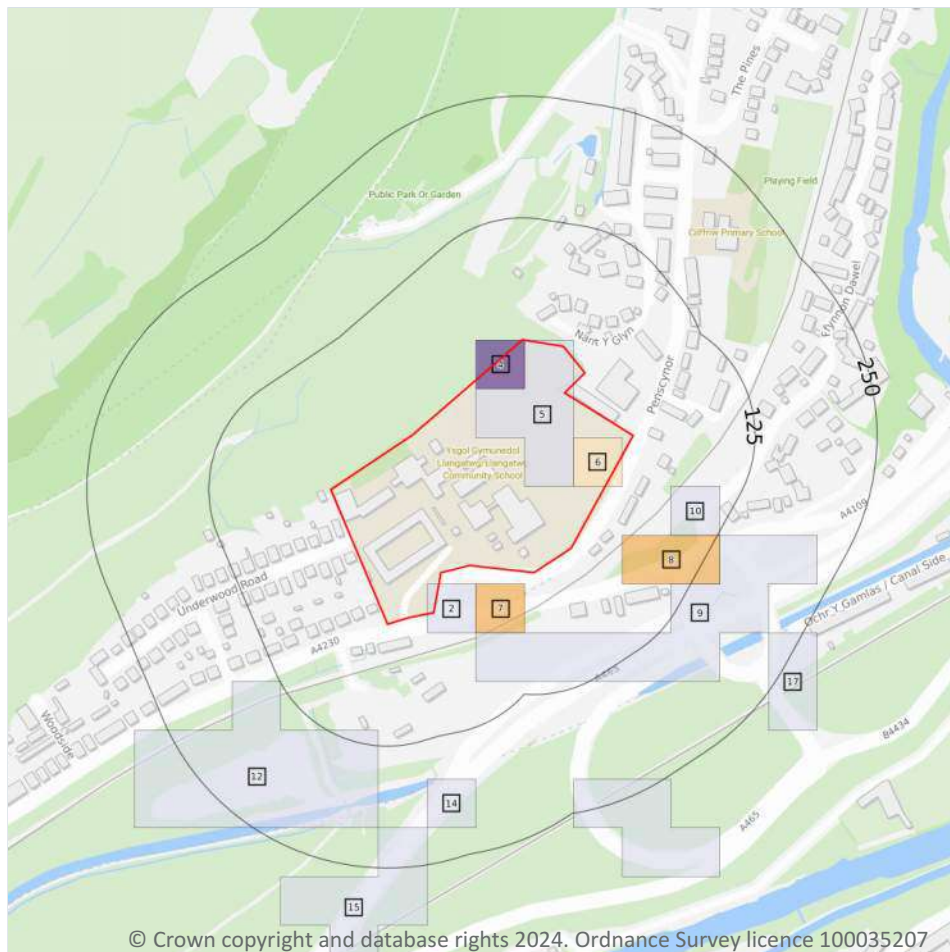
0

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



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

12.1 Agricultural Land Classification

Records within 250m

13

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 87](#) >

ID	Location	Classification	Description
2	On site	Grade 3b	Moderate quality agricultural land
4	On site	Grade 5	Very poor quality agricultural land
5	On site	Grade 3b	Moderate quality agricultural land



ID	Location	Classification	Description
6	On site	Grade 3a	Good to moderate quality agricultural land
7	13m S	Grade 2	Good quality agricultural land
8	39m E	Grade 2	Good quality agricultural land
9	48m S	Grade 3b	Moderate quality agricultural land
10	59m E	Grade 3b	Moderate quality agricultural land
12	109m SW	Grade 3b	Moderate quality agricultural land
14	164m S	Grade 3b	Moderate quality agricultural land
15	209m S	Grade 3b	Moderate quality agricultural land
A	215m S	Grade 3b	Moderate quality agricultural land
17	219m SE	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

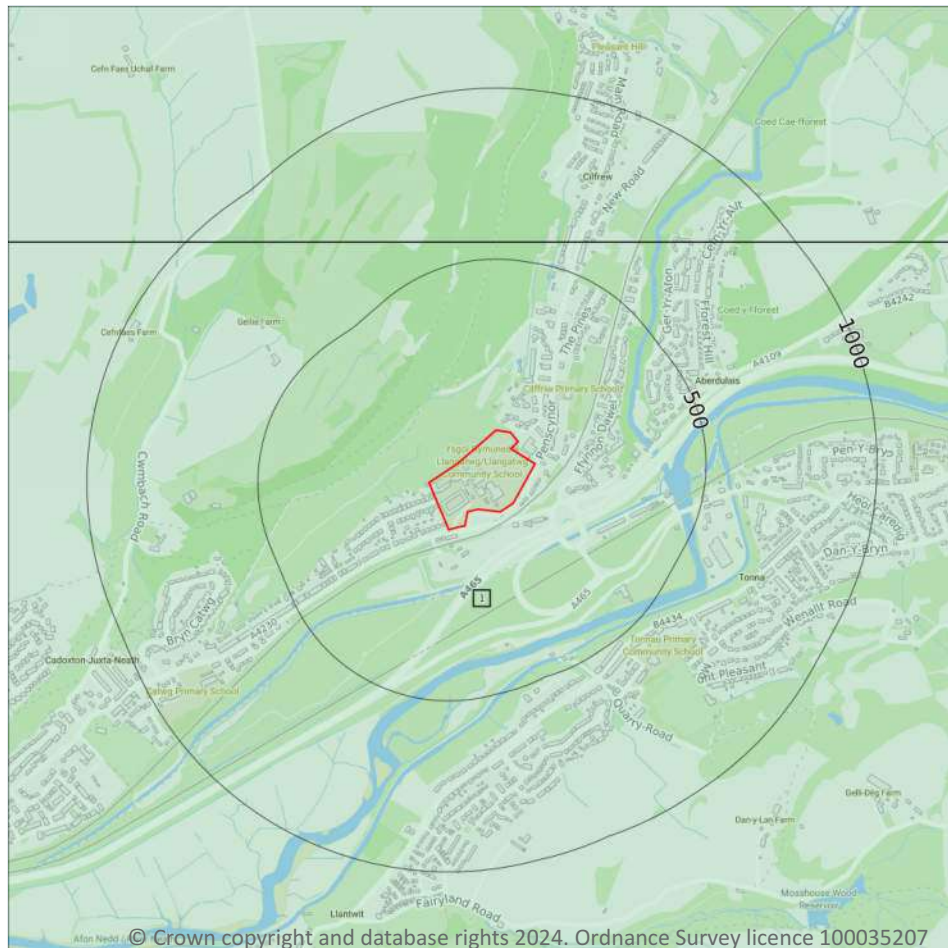
Records within 250m**0**

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



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

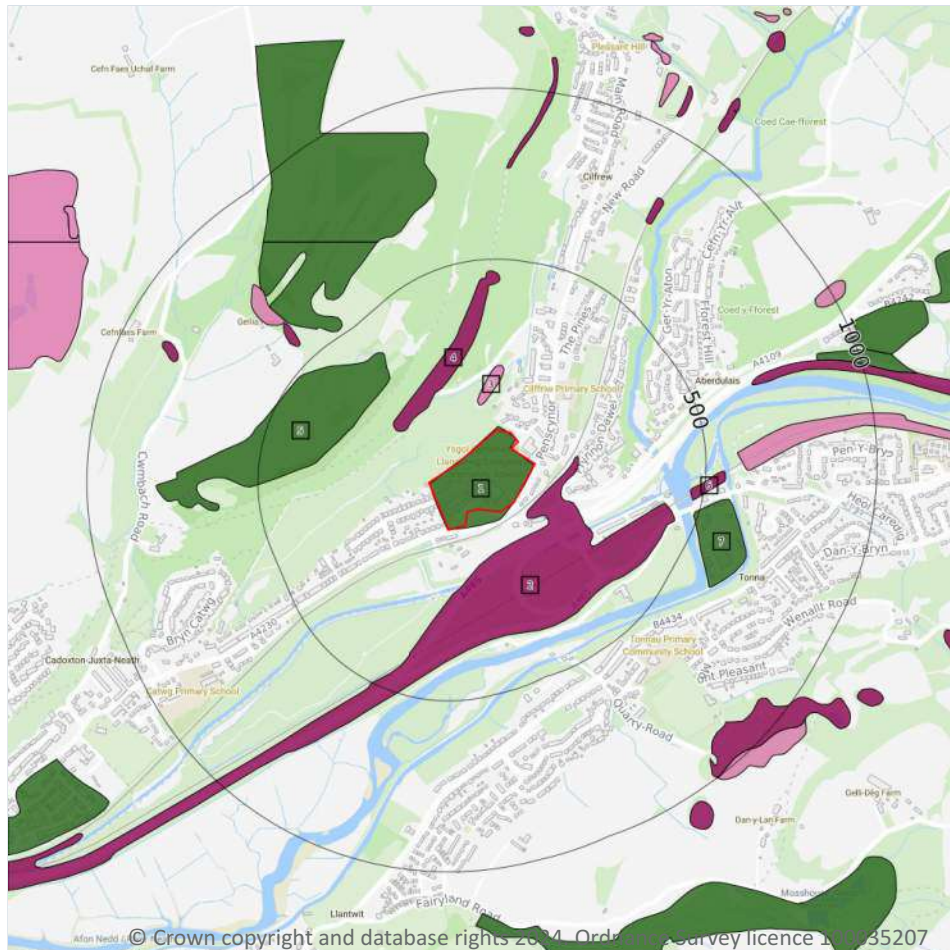
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme. Features are displayed on the Geology 1:10,000 scale - Availability map on [page 91](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SS79NE

This data is sourced from the British Geological Survey.



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



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

14.2 Artificial and made ground (10k)

Records within 500m

7

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 92](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	LSGR-UNKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
2	48m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	86m N	WGR-VOID	Worked Ground (Undivided)	Void
4	166m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

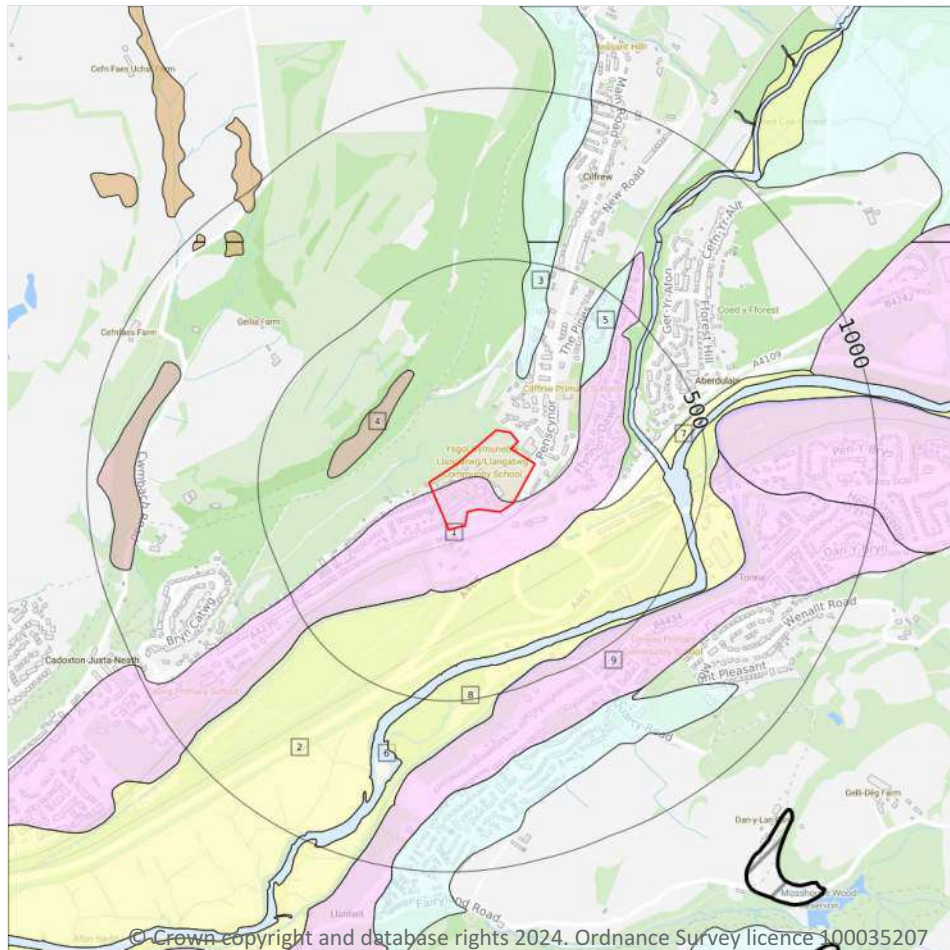


ID	Location	LEX Code	Description	Rock description
5	275m W	LSGR-UNKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
6	461m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
7	488m E	LSGR-UNKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry

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

9

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 94](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	GFSDX-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
2	154m SE	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
3	161m N	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton



ID	Location	LEX Code	Description	Rock description
4	199m W	HEAD-XCZSV	Head - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
5	241m NE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
6	299m E	SUPNM-UNKNOWN	Superficial Theme Not Mapped [for Digital Map Use Only] - Unknown/unclassified Entry	Unknown/unclassified Entry
7	369m E	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
8	412m S	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
9	449m SE	GFSDDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

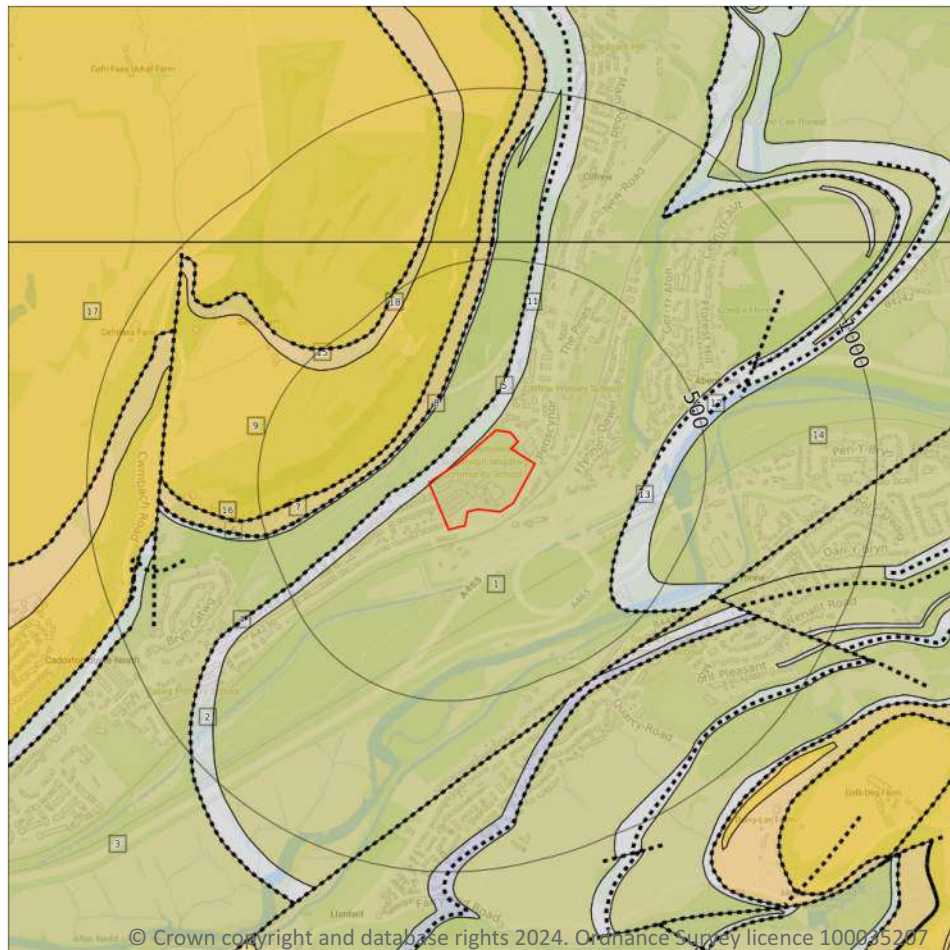
0

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

10

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 96](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	BD-SDST	Brithdir Member - Sandstone	Westphalian D Sub-age
2	On site	BD-MDSS	Brithdir Member - Mudstone, Siltstone And Sandstone	Westphalian D Sub-age
3	37m W	BD-SDST	Brithdir Member - Sandstone	Westphalian D Sub-age
6	125m W	BD-MDSS	Brithdir Member - Mudstone, Siltstone And Sandstone	Westphalian D Sub-age



ID	Location	LEX Code	Description	Rock age
7	135m W	H-MDSS	Hughes Member - Mudstone, Siltstone And Sandstone	Westphalian D Sub-age
9	161m W	H-SDST	Hughes Member - Sandstone	Westphalian D Sub-age
12	313m E	BD-MDSS	Brithdir Member - Mudstone, Siltstone And Sandstone	Westphalian D Sub-age
14	389m E	BD-SDST	Brithdir Member - Sandstone	Westphalian D Sub-age
15	414m NW	H-MDSS	Hughes Member - Mudstone, Siltstone And Sandstone	Westphalian D Sub-age
17	457m NW	H-SDST	Hughes Member - Sandstone	Westphalian D Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

11

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.

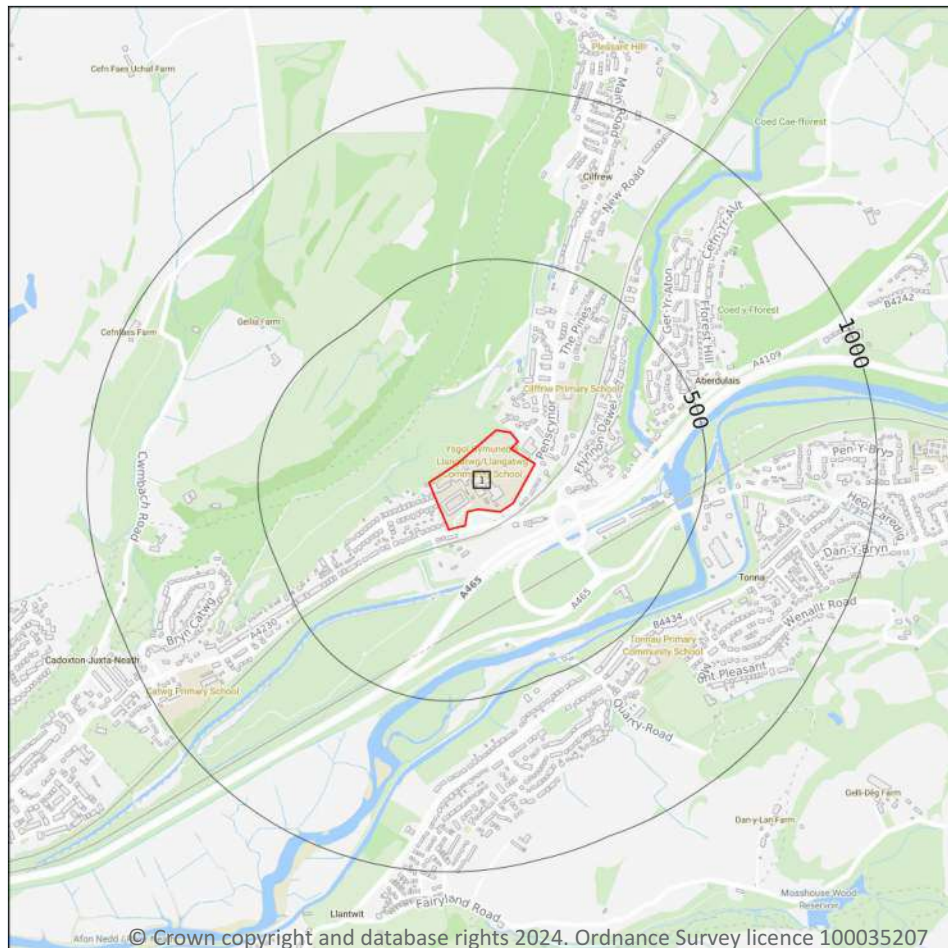
Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 96 >](#)

ID	Location	Category	Description
4	37m W	ROCK	Coal seam, inferred (GLYNGWILYM)
5	71m N	ROCK	Coal seam, observed ()
8	135m W	ROCK	Coal seam, inferred (HUGHES OR WENALLT)
10	161m W	ROCK	Coal seam, inferred (GARLANT)
11	173m N	ROCK	Coal seam, inferred ()
13	313m E	ROCK	Coal seam, inferred (THIN COAL (BELIEVED BdR))
A	411m W	ROCK	Coal seam, inferred ()
A	411m W	ROCK	Coal seam, inferred ()
16	419m W	ROCK	Coal seam, inferred ()
18	457m NW	ROCK	Coal seam, observed (MANY OLD LEVELS)
19	465m NW	ROCK	Coal seam, inferred ()

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.

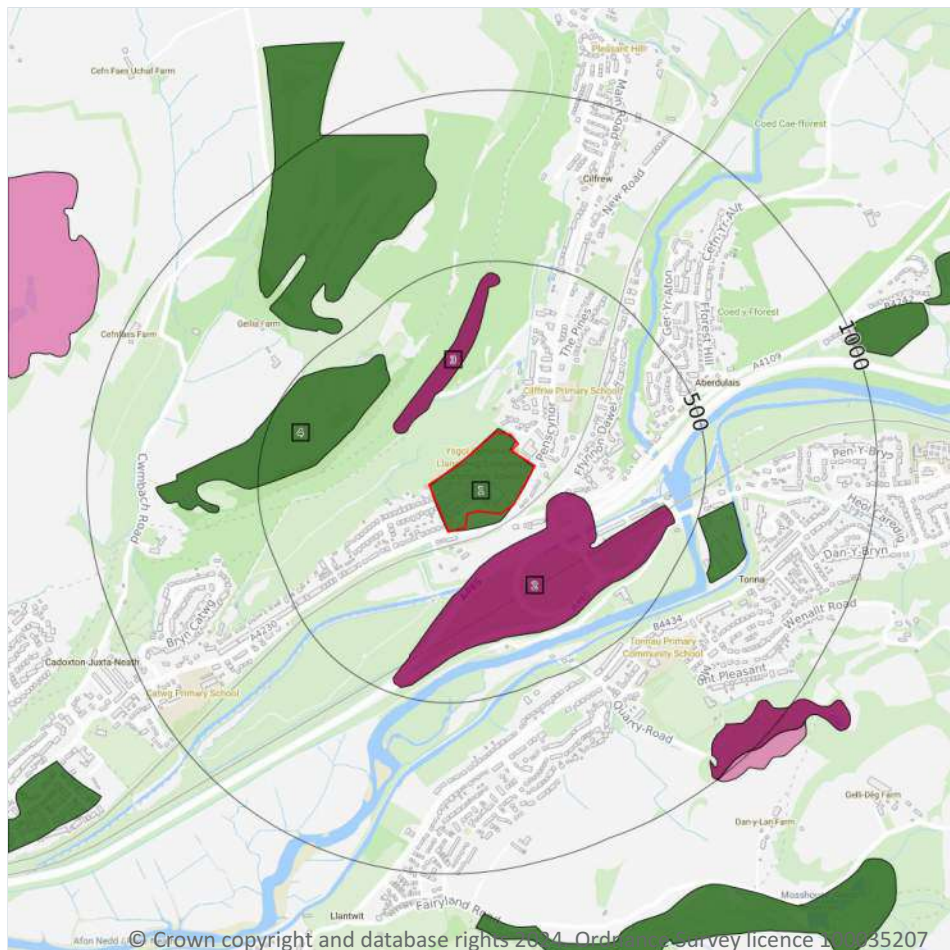
Features are displayed on the Geology 1:50,000 scale - Availability map on [page 98](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW247_swansea_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

4

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 99](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	LSGR-ARTGR	LANDSCAPED GROUND (UNDIVIDED)	ARTIFICIALLY MODIFIED GROUND
2	86m E	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	166m NW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	275m W	LSGR-ARTGR	LANDSCAPED GROUND (UNDIVIDED)	ARTIFICIALLY MODIFIED GROUND



This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

1

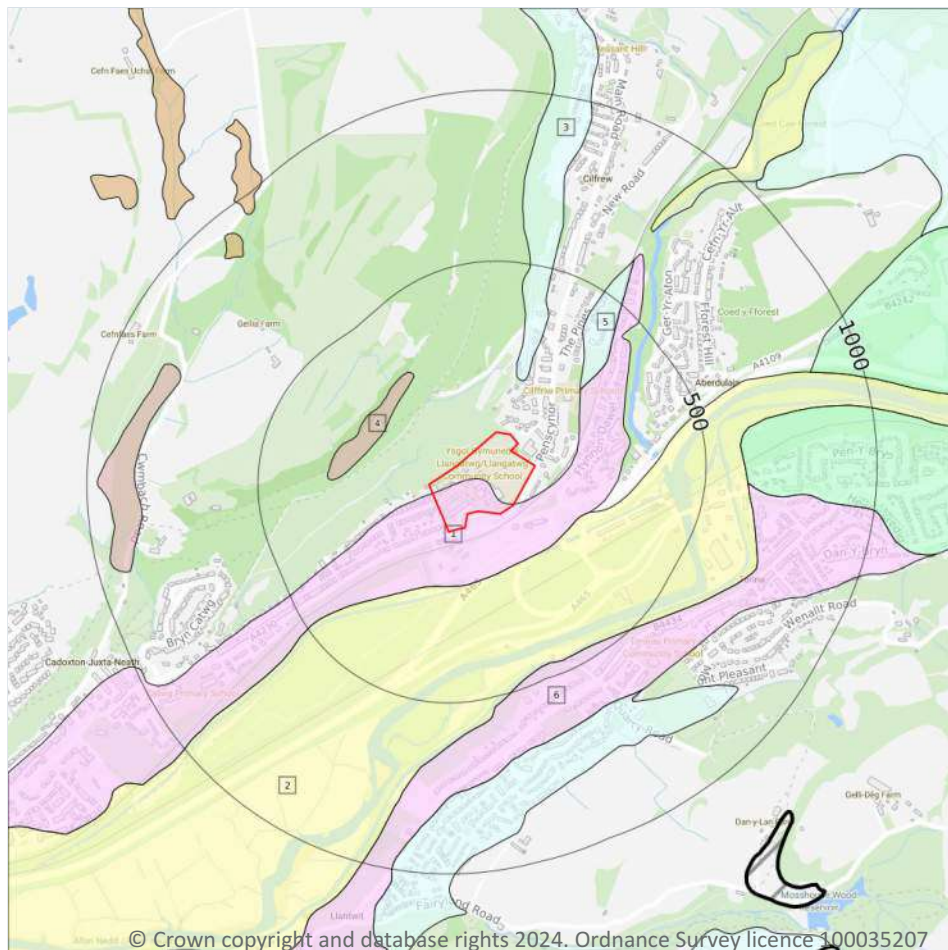
A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

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

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

6

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 101](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
2	153m SE	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
3	161m N	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

ID	Location	LEX Code	Description	Rock description
4	199m W	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL
5	241m NE	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
6	459m S	GFSDDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m **1**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	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)

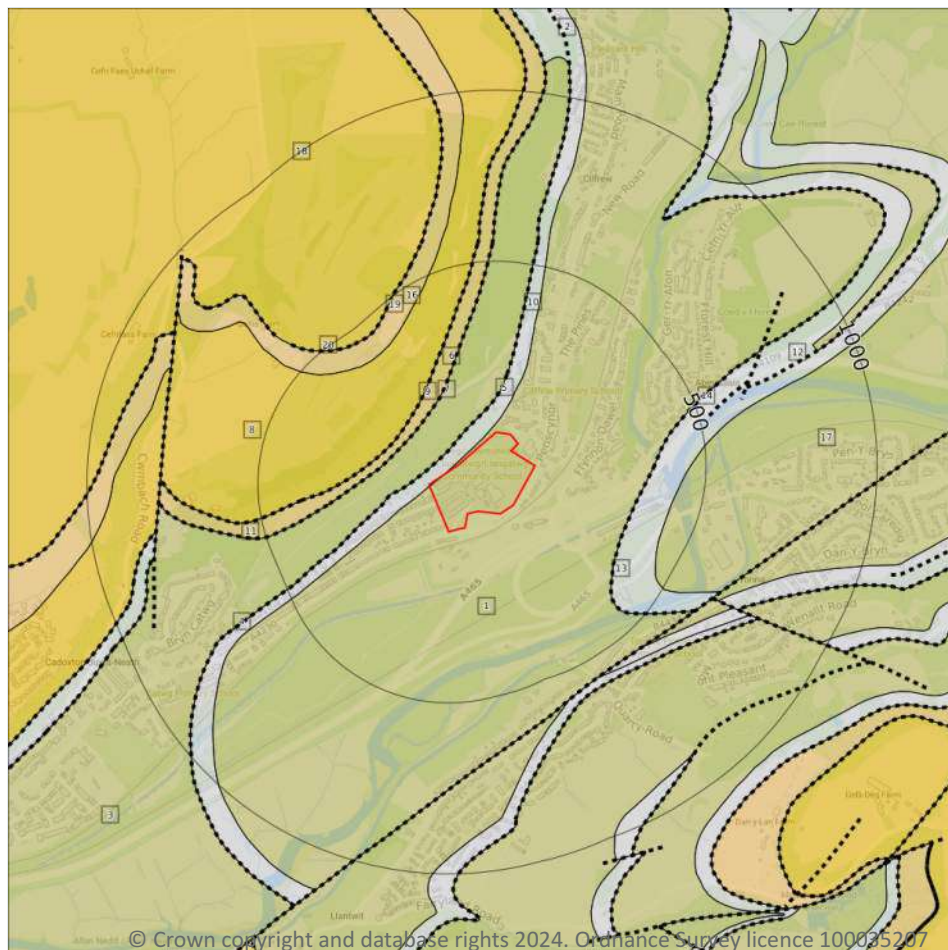
Records within 50m **0**

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 103](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	BD-SDST	BRITHDIR MEMBER - SANDSTONE	WESTPHALIAN
2	On site	BD-MDSS	BRITHDIR MEMBER - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
3	37m W	BD-SDST	BRITHDIR MEMBER - SANDSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
6	135m W	H-MDSS	HUGHES MEMBER - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
8	161m W	H-SDST	HUGHES MEMBER - SANDSTONE	WESTPHALIAN
12	313m E	BD-MDSS	BRITHDIR MEMBER - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
16	394m NW	H-MDSS	HUGHES MEMBER - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
17	413m E	BD-SDST	BRITHDIR MEMBER - SANDSTONE	WESTPHALIAN
18	457m NW	H-SDST	HUGHES MEMBER - SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock 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 bedrock (the zone between the land surface and the water table).

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

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

11

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 103 >](#)

ID	Location	Category	Description
4	37m W	ROCK	Coal seam, inferred
5	71m N	ROCK	Coal seam, observed
7	135m W	ROCK	Coal seam, inferred

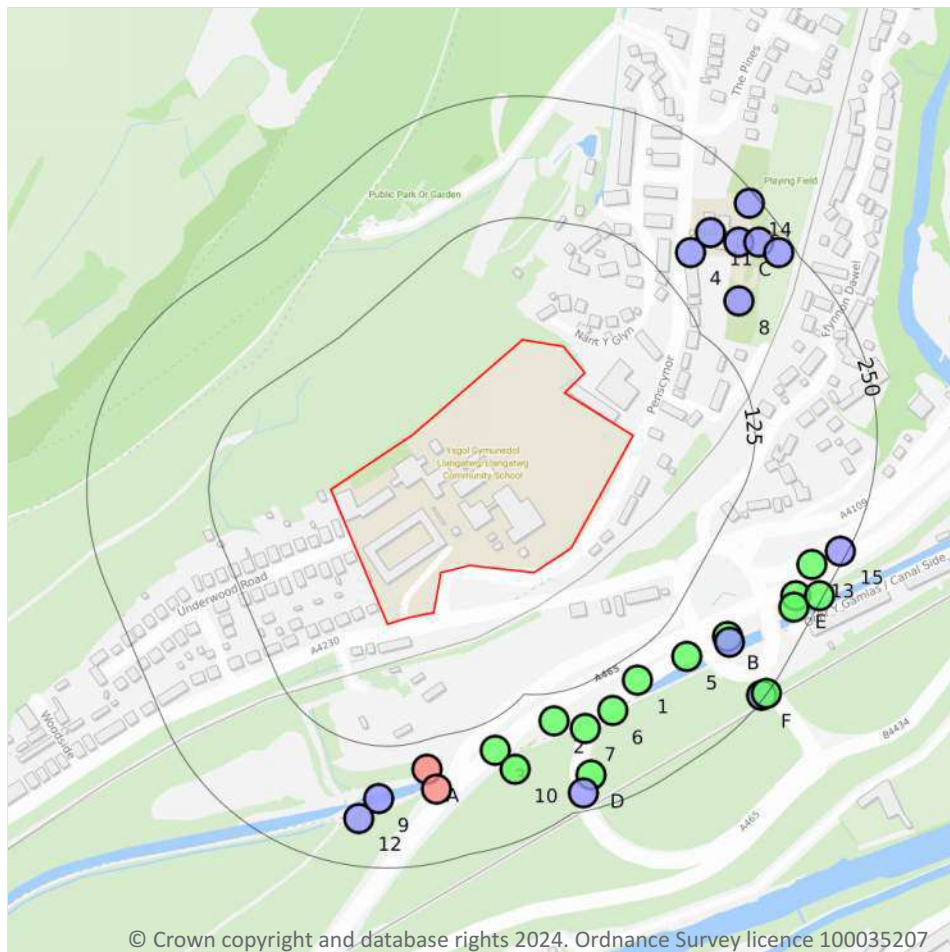


ID	Location	Category	Description
9	161m W	ROCK	Coal seam, inferred
10	173m N	ROCK	Coal seam, inferred
11	303m W	ROCK	Coal seam, inferred
13	313m E	ROCK	Coal seam, inferred
14	346m E	ROCK	Coal seam, inferred
15	377m W	ROCK	Coal seam, inferred
19	457m NW	ROCK	Coal seam, observed
20	465m NW	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



16 Boreholes



— Site Outline
Search buffers in metres (m)

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

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16.1 BGS Boreholes

Records within 250m

29

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 106](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	151m SE	276866 199101	A465 ABERDULAI SLIP ROADS 80	15.0	N	371176 ↗
2	153m S	276780 199060	A465 ADDITIONAL BOREHOLES 48	25.0	N	371222 ↗

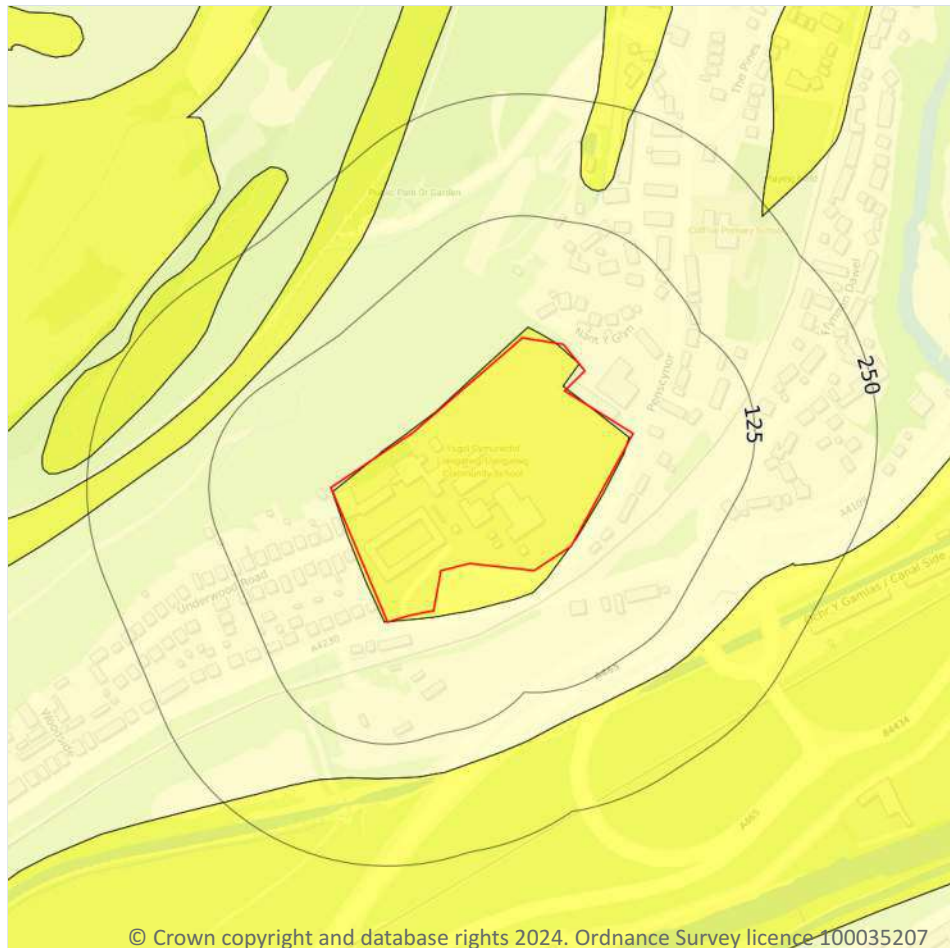


ID	Location	Grid reference	Name	Length	Confidential	Web link
3	154m S	276720 199030	A465 ADDITIONAL BOREHOLES 50	26.8	N	371224 ↗
A	154m S	276650 199010	NURSERY BOREHOLES 39	40.2	N	371199 ↗
4	162m NE	276920 199540	CILFREW LAND ADJACENT TO BRYN AMLWG TH 2	1.4	N	371185 ↗
5	162m SE	276916 199126	A465 ABERDULAI SLIP ROADS 81	25.0	N	371177 ↗
6	163m SE	276840 199070	NURSERY BOREHOLES 40	25.0	N	371200 ↗
7	168m SE	276812 199052	A465 ABERDULAI SLIP ROADS 78	25.0	N	371175 ↗
8	175m NE	276970 199490	CILFREW LAND ADJACENT TO BRYN AMLWG TH 8	1.5	N	371191 ↗
A	176m S	276660 198990	A465 ADDITIONAL BOREHOLES 49	52.0	N	371223 ↗
9	179m S	276600 198980	ROBERTSON RESEARCH. H.A.B	2.44	N	371020 ↗
10	181m S	276740 199010	A465 ABERDULAI - GLYNNEATH 33	20.0	N	371218 ↗
B	184m SE	276958 199146	A465 ABERDULAI SLIP ROADS 82	15.0	N	371178 ↗
B	189m SE	276960 199140	ROBERTSON RESEARCH. 31	5.49	N	371021 ↗
11	190m NE	276940 199560	CILFREW LAND ADJACENT TO BRYN AMLWG TH 3	1.6	N	371186 ↗
12	201m S	276580 198960	ROBERTSON RESEARCH 30	7.62	N	371019 ↗
C	207m NE	276970 199550	CILFREW LAND ADJACENT TO BRYN AMLWG TH 4	1.7	N	371187 ↗
D	216m S	276818 199004	A465 ABERDULAI SLIP ROADS 77	22.85	N	371174 ↗
C	223m NE	276990 199550	CILFREW LAND ADJACENT TO BRYN AMLWG TH 6	1.75	N	371189 ↗
13	224m E	277044 199220	A465 NEATH TRUNK ROAD. 1P	27.5	N	371086 ↗
E	225m E	277028 199188	A465 NEATH TRUNK ROAD. 12	20.6	N	371101 ↗
E	229m E	277026 199176	A465 ABERDULAI SLIP ROADS 83	10.45	N	371179 ↗
D	231m S	276810 198986	A465 ABERDULAI SLIP ROADS TP 3	1.45	N	371184 ↗
C	234m NE	277010 199540	CILFREW LAND ADJACENT TO BRYN AMLWG TH 7	1.7	N	371190 ↗
14	240m NE	276980 199590	CILFREW LAND ADJACENT TO BRYN AMLWG TH 5	1.2	N	371188 ↗
15	243m E	277074 199234	A465 NEATH TRUNK ROAD. 2P	5.75	N	371087 ↗
E	246m E	277052 199188	A465 NEATH TRUNK ROAD. 15	29.95	N	371102 ↗
F	247m SE	276993 199086	A465 NEATH TRUNK ROAD. 1	5.25	N	371089 ↗
F	249m SE	276998 199088	A465 NEATH TRUNK ROAD. 1A	11.2	N	371090 ↗

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



Site Outline
Search buffers in metres (m)

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

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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).

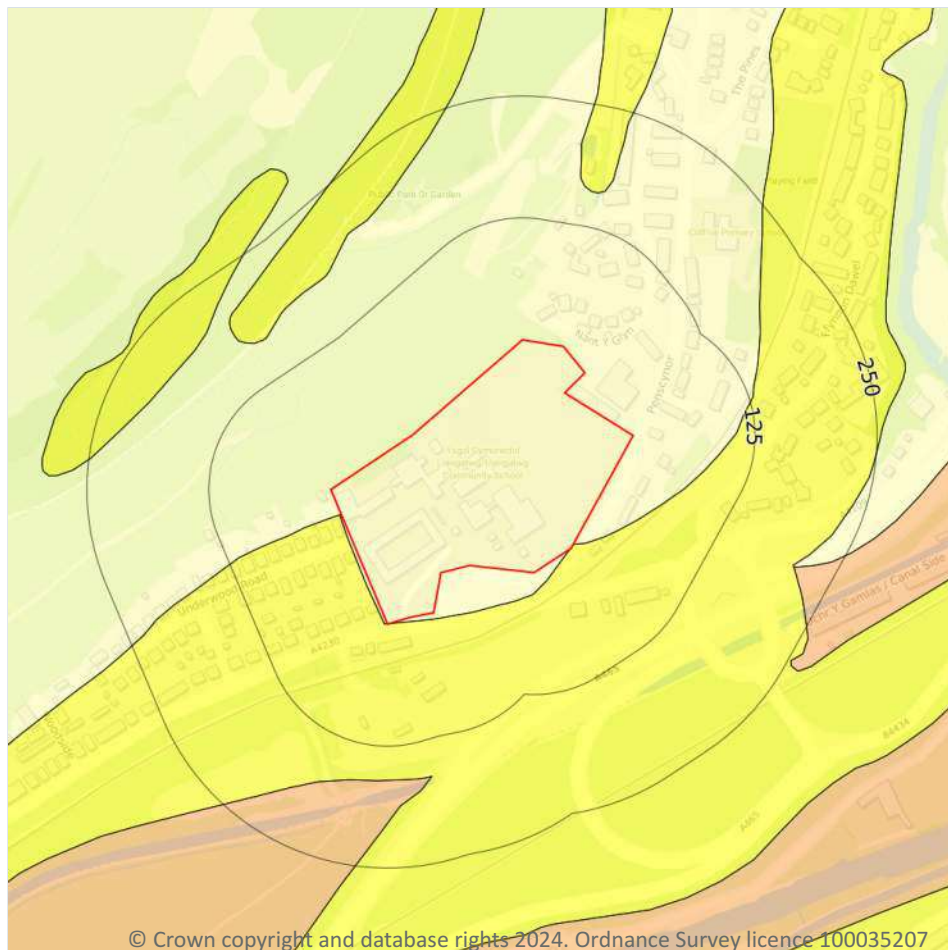
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 108 >](#)

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



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

17.2 Running sands

Records within 50m

2

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 109](#) >

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

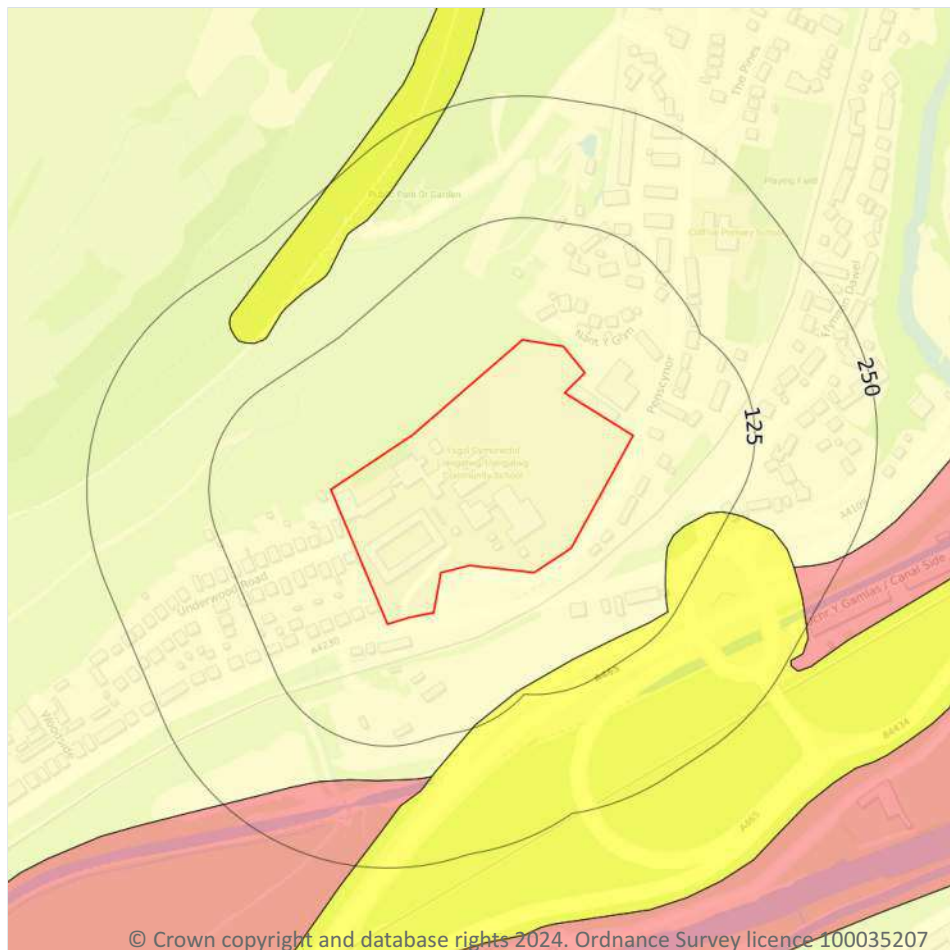


Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



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

17.3 Compressible deposits

Records within 50m

1

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

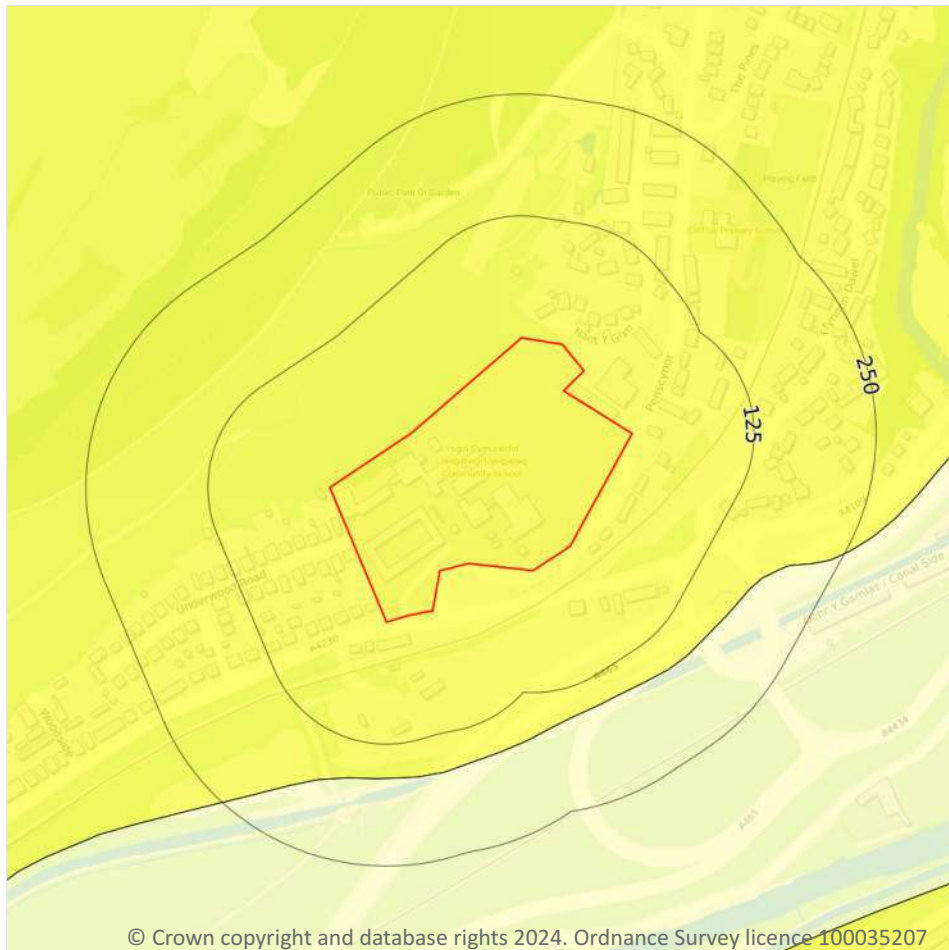
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 111](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



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

17.4 Collapsible deposits

Records within 50m

1

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

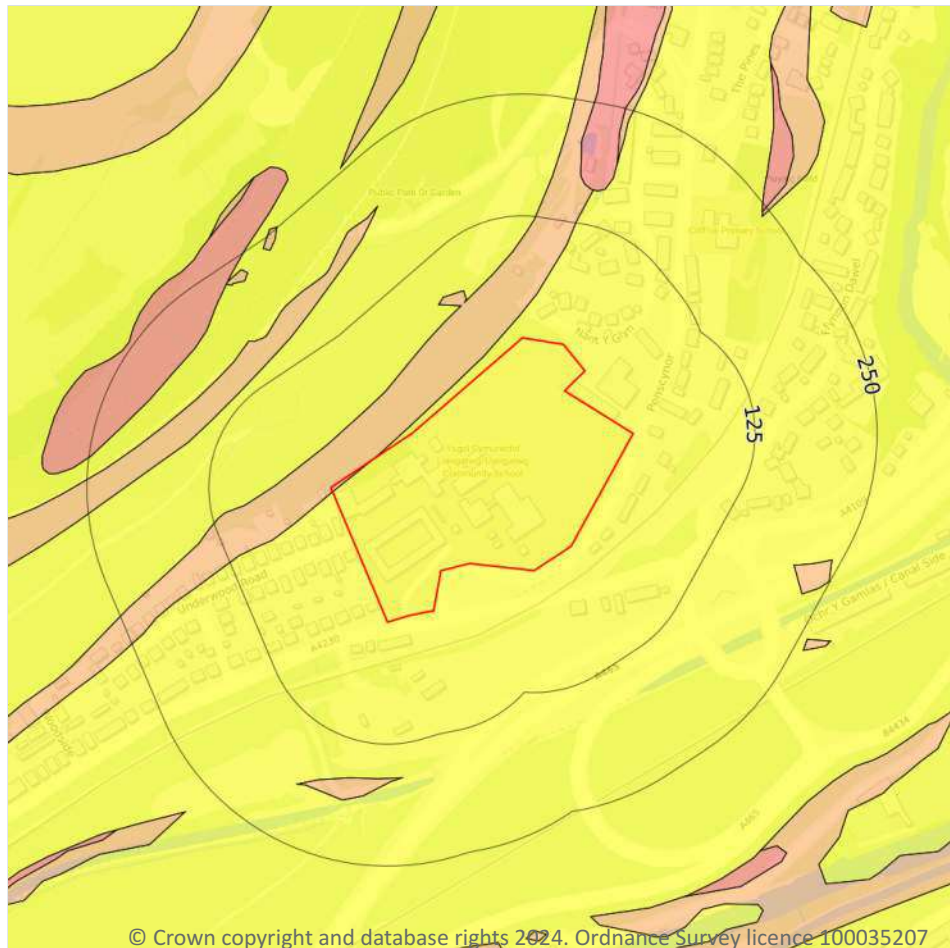
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 112 >](#)

Location	Hazard rating	Details
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



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

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 113](#) >

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.

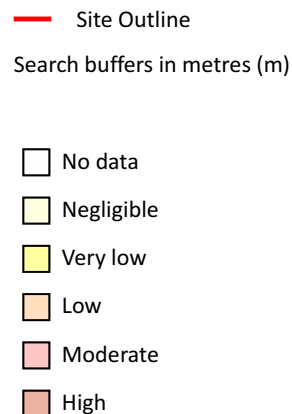
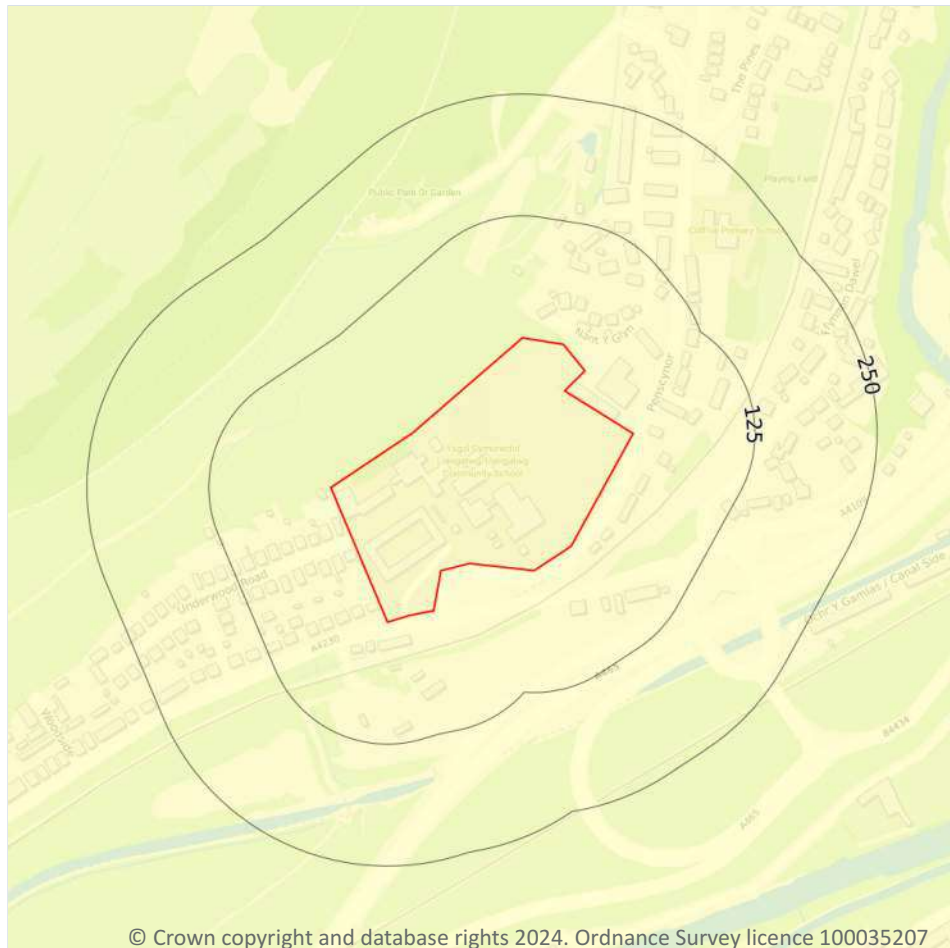


Location	Hazard rating	Details
On site	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



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 115 >](#)

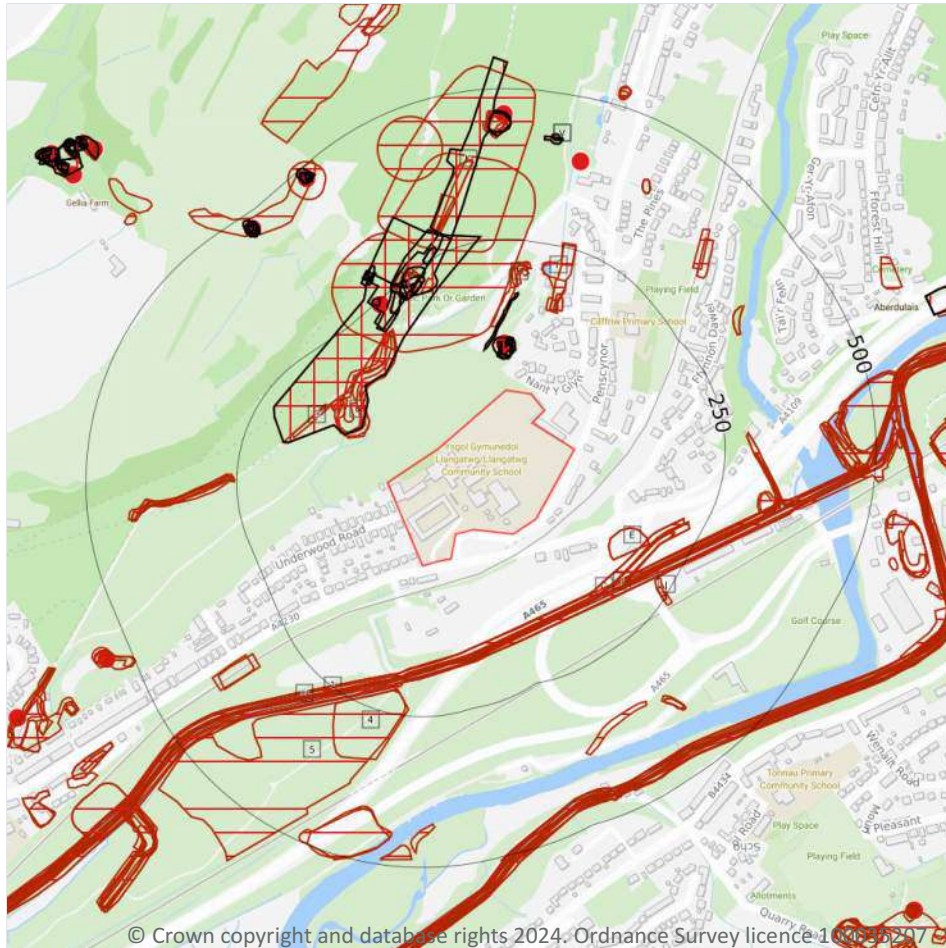
Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.



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

6

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

Features are displayed on the Mining and ground workings map on [page 117](#) >

ID	Location	Details	Description
A	77m N	Name: Gelliau Colliery Address: Aberdulais, NEATH, West Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
C	244m NW	Name: Gelliau Colliery Address: Aberdulais, NEATH, West Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
8	394m N	Name: Gelliau Colliery Address: Aberdulais, NEATH, West Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
W	457m N	Name: Graig-Cilfrew Colliery Address: Cilfrew, Aberdulais, NEATH, West Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
Y	474m NW	Name: Gelliau Address: Aberdulais, NEATH, West Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority



ID	Location	Details	Description
AA	482m NW	Name: Gelliau Colliery Address: Aberdulais, NEATH, West Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m

60

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 117 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
A	52m N	Old Coal Level	1921	1:10560
A	53m N	Unspecified Disused Level	1973	1:10000
A	53m N	Unspecified Heap	1962	1:10560
A	53m N	Unspecified Disused Level	1991	1:10000
A	53m N	Unspecified Disused Level	1982	1:10000
A	56m N	Old Coal Level	1914	1:10560
A	56m N	Unspecified Old Level	1935	1:10560
A	58m N	Unspecified Old Level	1948	1:10560
A	60m N	Old Coal Level	1897	1:10560
A	76m N	Unspecified Old Level	1962	1:10560
B	86m W	Unspecified Heap	1948	1:10560
B	91m W	Unspecified Ground Workings	1935	1:10560
B	99m NW	Unspecified Ground Workings	1914	1:10560
B	99m NW	Unspecified Heap	1921	1:10560
C	99m NW	Disused Colliery	1921	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
C	102m N	Colliery	1877	1:10560
B	103m NW	Unspecified Ground Workings	1897	1:10560
D	107m N	Unspecified Old Quarry	1897	1:10560
E	124m SE	Unspecified Pit	1991	1:10000
E	124m SE	Unspecified Pit	1982	1:10000
F	141m NE	Ponds	1982	1:10000
F	141m NE	Ponds	1991	1:10000
F	142m N	Pond	1897	1:10560
1	144m SE	Canal	1897	1:10560
G	144m SE	Canal	1935	1:10560
G	144m SE	Canal	1914	1:10560
H	145m SE	Canal	1991	1:10000
F	147m NE	Pond	1935	1:10560
F	147m NE	Pond	1914	1:10560
H	150m SE	Canal	1973	1:10000
I	151m SE	Canal	1921	1:10560
I	151m SE	Canal	1877	1:10560
I	157m SE	Canal	1962	1:10560
I	157m SE	Canal	1982	1:10000
2	158m SE	Canal	1948	1:10560
3	158m NW	Unspecified Quarry	1948	1:10560
D	172m N	Unspecified Old Quarry	1921	1:10560
D	176m N	Unspecified Old Quarry	1914	1:10560
C	204m NW	Disused Colliery	1914	1:10560
4	208m S	Refuse Heap	1973	1:10000
C	209m N	Unspecified Heap	1921	1:10560
C	210m NW	Disused Colliery	1897	1:10560
5	212m SW	Refuse Heap	1982	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
C	212m NW	Unspecified Old Levels	1935	1:10560
C	215m NW	Unspecified Pit	1914	1:10560
C	219m N	Unspecified Disused Levels	1973	1:10000
C	219m N	Unspecified Old Levels	1962	1:10560
C	219m N	Unspecified Disused Levels	1982	1:10000
C	220m N	Unspecified Old Levels	1948	1:10560
C	220m N	Unspecified Heap	1921	1:10560
C	220m N	Unspecified Heap	1877	1:10560
J	222m SE	Pond	1877	1:10560
C	222m N	Unspecified Heap	1914	1:10560
C	229m N	Unspecified Disused Levels	1991	1:10000
C	229m N	Unspecified Ground Workings	1897	1:10560
J	231m SE	Pond	1897	1:10560
K	233m N	Colliery	1921	1:10560
C	244m NW	Old Coal Level	1897	1:10560
C	245m N	Unspecified Disused Levels	1973	1:10000
C	245m N	Unspecified Disused Levels	1982	1:10000

This data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

115

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 117 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
A	52m N	Old Coal Level	1921	1:10560
A	53m N	Unspecified Disused Level	1991	1:10000
A	53m N	Unspecified Disused Level	1982	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
A	53m N	Unspecified Disused Level	1973	1:10000
A	56m N	Old Coal Level	1914	1:10560
A	56m N	Unspecified Old Level	1935	1:10560
A	58m N	Unspecified Old Level	1948	1:10560
A	60m N	Old Coal Level	1897	1:10560
A	76m N	Unspecified Old Level	1962	1:10560
C	99m NW	Disused Colliery	1921	1:10560
C	204m NW	Disused Colliery	1914	1:10560
C	210m NW	Disused colliery	1897	1:10560
C	212m NW	Unspecified Old Levels	1935	1:10560
C	219m N	Unspecified Disused Levels	1982	1:10000
C	219m N	Unspecified Disused Levels	1973	1:10000
C	219m N	Unspecified Old Levels	1962	1:10560
C	220m N	Unspecified Old Levels	1948	1:10560
C	229m N	Unspecified Disused Levels	1991	1:10000
C	244m NW	Old Coal Level	1897	1:10560
C	245m N	Unspecified Disused Levels	1982	1:10000
C	245m N	Unspecified Disused Levels	1973	1:10000
K	267m N	Colliery	1914	1:10560
C	280m NW	Air Shaft	1962	1:10560
C	281m NW	Air Shaft	1948	1:10560
C	281m NW	Old Air Shaft	1921	1:10560
C	281m NW	Air Shaft	1877	1:10560
C	282m NW	Unspecified Old Levels	1962	1:10560
C	282m NW	Disused Air Shaft	1973	1:10000
C	283m NW	Disused Air Shaft	1982	1:10000
C	284m NW	Unspecified Disused Levels	1991	1:10000
C	287m NW	Disused Air Shaft	1991	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
C	289m NW	Old Air Shaft	1914	1:10560
C	289m NW	Old Air Shaft	1897	1:10560
C	289m NW	Air Shaft	1935	1:10560
V	416m N	Old Coal Level	1897	1:10560
W	422m N	Old Coal Level	1921	1:10560
V	424m N	Old Coal Level	1914	1:10560
Y	460m NW	Unspecified Old Level	1962	1:10560
Y	461m NW	Old Coal Level	1914	1:10560
Y	461m NW	Unspecified Old Level	1935	1:10560
Y	461m NW	Unspecified Old Level	1948	1:10560
Y	461m NW	Old Coal Level	1921	1:10560
Y	465m NW	Unspecified Disused Level	1991	1:10000
Y	465m NW	Unspecified Disused Level	1982	1:10000
Y	470m NW	Old Coal Level	1897	1:10560
AA	473m NW	Unspecified Old Level	1948	1:10560
AA	473m NW	Old Coal Level	1914	1:10560
AA	474m NW	Unspecified Old Level	1935	1:10560
AA	475m NW	Old Coal Level	1921	1:10560
AA	477m NW	Unspecified Disused Level	1982	1:10000
AA	477m NW	Old Coal Level	1897	1:10560
AQ	635m E	Disused Colliery	1914	1:10560
AQ	635m E	Disused Colliery	1897	1:10560
-	692m E	Coal Level	1877	1:10560
-	713m W	Unspecified Old Level	1948	1:10560
AR	722m NW	Unspecified Old Levels	1935	1:10560
AR	728m NW	Unspecified Old Levels	1948	1:10560
AR	736m NW	Unspecified Old Level	1897	1:10560
AR	740m NW	Unspecified Old Levels	1935	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
AR	740m NW	Unspecified Old Levels	1914	1:10560
-	744m W	Old Air Shaft	1914	1:10560
AR	746m NW	Unspecified Disused Level	1982	1:10000
AR	746m NW	Unspecified Disused Level	1973	1:10000
AR	746m NW	Unspecified Old Levels	1914	1:10560
-	747m W	Old Air Shaft	1921	1:10560
AR	748m NW	Unspecified Old Levels	1921	1:10560
AR	748m NW	Unspecified Old Levels	1962	1:10560
AR	749m NW	Unspecified Disused Level	1991	1:10000
AR	756m NW	Unspecified Old Levels	1914	1:10560
AR	760m NW	Unspecified Old Levels	1962	1:10560
AR	767m NW	Unspecified Old Levels	1935	1:10560
AR	767m NW	Unspecified Old Levels	1914	1:10560
AR	770m NW	Unspecified Old Level	1897	1:10560
-	795m NE	Disused Colliery	1921	1:10560
-	797m W	Old Coal Level	1914	1:10560
-	797m W	Old Coal Level	1921	1:10560
-	814m W	Old Coal Level	1914	1:10560
-	823m W	Unspecified Disused Level	1991	1:10000
-	823m W	Unspecified Disused Level	1982	1:10000
-	823m W	Unspecified Disused Level	1973	1:10000
-	823m W	Unspecified Old Level	1962	1:10560
-	824m W	Old Coal Level	1897	1:10560
-	827m W	Unspecified Old Level	1935	1:10560
-	827m W	Coal Level	1914	1:10560
-	832m W	Unspecified Old Level	1935	1:10560
-	877m NW	Unspecified Old Level	1948	1:10560
-	877m NW	Unspecified Old Level	1948	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	877m NW	Unspecified Old Level	1962	1:10560
-	878m NW	Unspecified Old Level	1935	1:10560
-	886m NW	Unspecified Disused Level	1991	1:10000
-	886m NW	Unspecified Disused Level	1982	1:10000
-	886m NW	Unspecified Disused Level	1973	1:10000
-	887m NW	Old Coal Level	1921	1:10560
-	887m NW	Coal Level	1921	1:10560
-	889m N	Old Coal Level	1921	1:10560
-	892m N	Old Coal Level	1914	1:10560
-	902m N	Old Coal Level	1897	1:10560
-	915m NW	Old Coal Level	1914	1:10560
-	915m NW	Coal Level	1897	1:10560
-	936m W	Unspecified Old Drift	1935	1:10560
-	938m W	Unspecified Old Drift	1948	1:10560
-	939m W	Unspecified Old Drift	1962	1:10560
-	942m W	Old Coal Drift	1914	1:10560
-	942m W	Old Coal Drift	1897	1:10560
-	946m W	Unspecified Disused Drift	1991	1:10000
-	946m W	Unspecified Disused Drift	1982	1:10000
-	946m W	Unspecified Disused Drift	1973	1:10000
-	968m W	Air Shaft	1877	1:10560
-	968m W	Old Air Shaft	1921	1:10560
-	970m W	Old Air Shaft	1897	1:10560
-	976m SW	Unspecified Old Shaft	1935	1:10560
-	978m SW	Old Coal Pit	1914	1:10560
-	980m SW	Old Coal Pit	1921	1:10560
-	981m SW	Old Coal Pit	1897	1:10560
-	997m W	Coal Pit	1897	1:10560

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.

19.5 National karst database

Records within 500m

0

This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

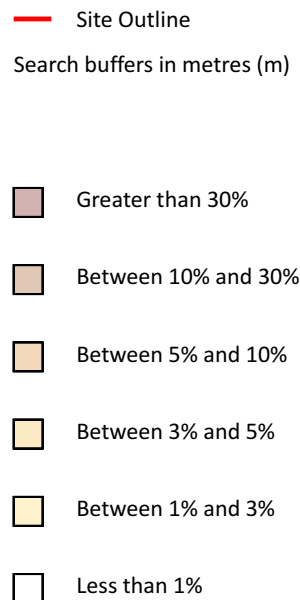
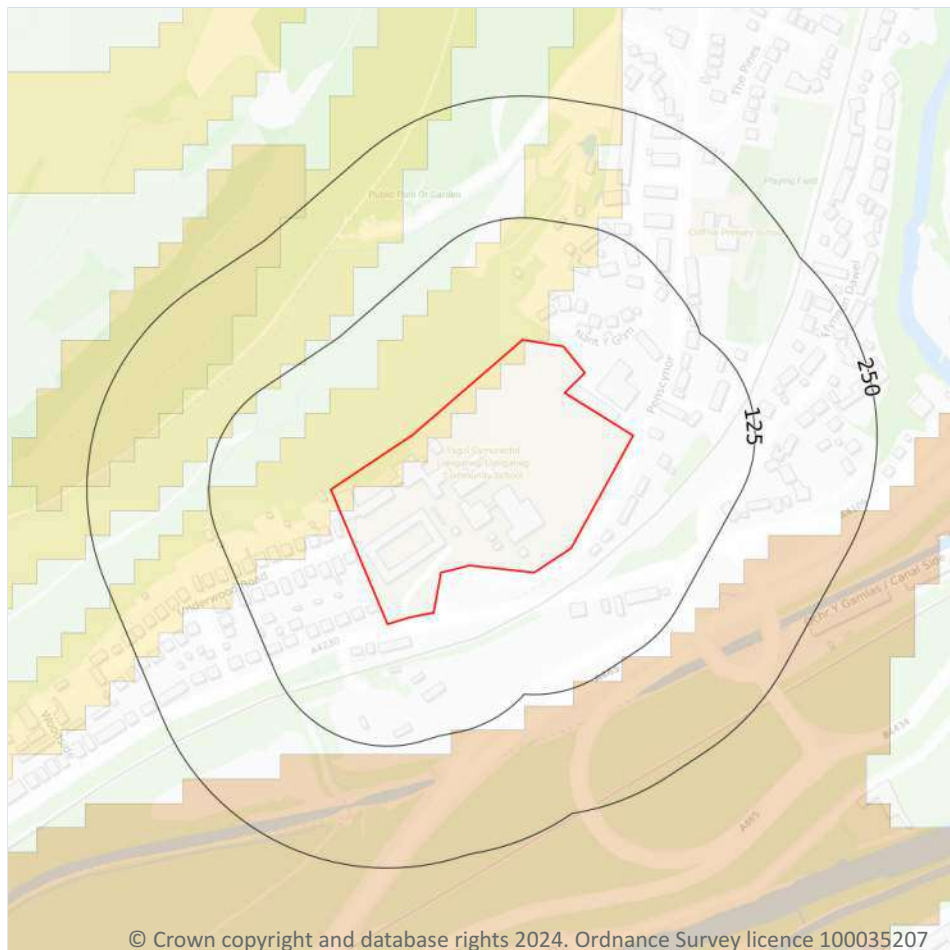
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.



20 Radon



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 131](#) >

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 1% and 3%	None



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

5

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	45 - 60 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 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 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
44m W	45 - 60 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
50m N	45 - 60 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 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 km²).

This data is sourced from the British Geological Survey.



21.3 BGS Measured Urban Soil Chemistry

Records within 50m

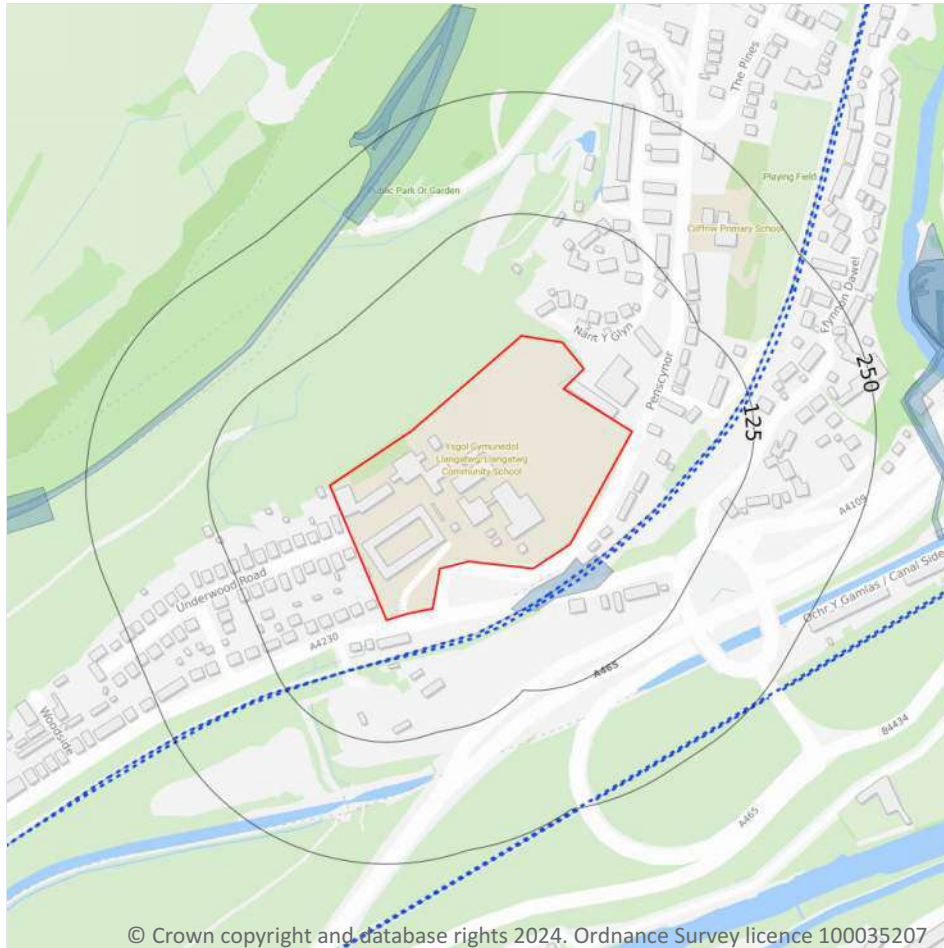
0

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 km².

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects



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

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

3

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 135 >](#)

Location	Land Use	Year of mapping	Mapping scale
15m SE	Railway Sidings	1877	10560
161m NW	Tramway Sidings	1881	2500
195m NW	Railway Sidings	1877	10560

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

0

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

This data is sourced from OpenStreetMap.



22.7 Railways

Records within 250m
12

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

Features are displayed on the Railway infrastructure and projects map on [page 135 >](#)

Location	Name	Type
29m SE	Not given	Single Track
31m SE	Not given	Single Track
34m SE	Neath and Brecon Line	rail
34m SE	Neath and Brecon Line	rail
36m SE	Neath and Brecon Line	rail
37m S	Not given	Single Track
41m S	Not given	Single Track
60m E	Not given	Single Track
126m E	Not given	Single Track
219m NE	Not given	Single Track
235m SE	Vale of Neath Railway	rail
237m SE	Not given	Single Track

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 1

Records within 500m
0

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

This data is sourced from publicly available information by Groundsure.



22.9 Crossrail 2

Records within 500m**0**

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

This data is sourced from publicly available information by Groundsure.

22.10 HS2

Records within 500m**0**

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

This data is sourced from HS2 Ltd.



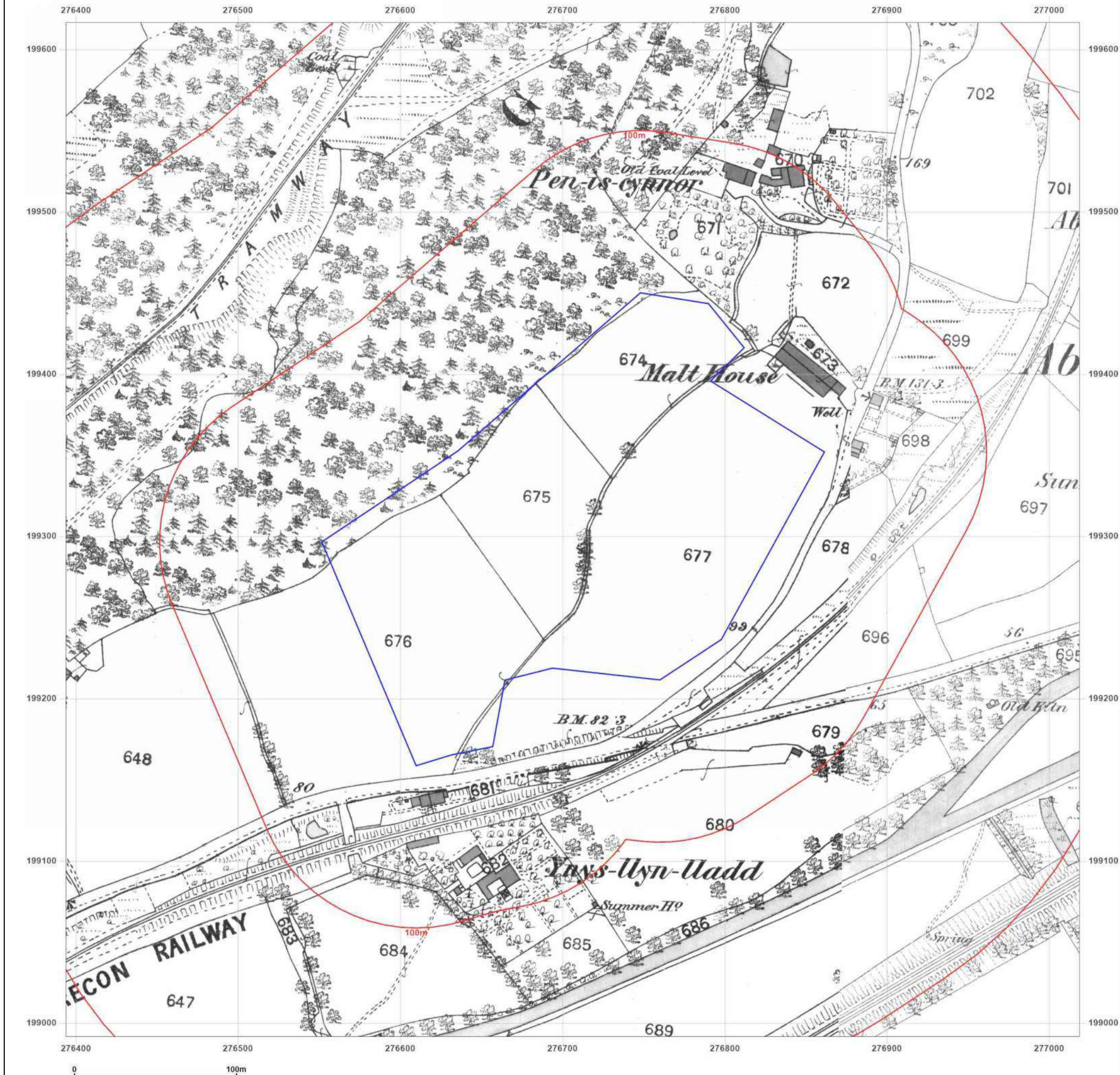
Data providers

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

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Site Details:

Llangatwg School

Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI_2500
Grid Ref: 276706, 199304

Map Name: County Series

Map date: 1880-1881

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1881
Revised 1881
Edition N/A
Copyright N/A
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Surveyed 1880
Revised 1880
Edition N/A
Copyright N/A
Levelled N/A

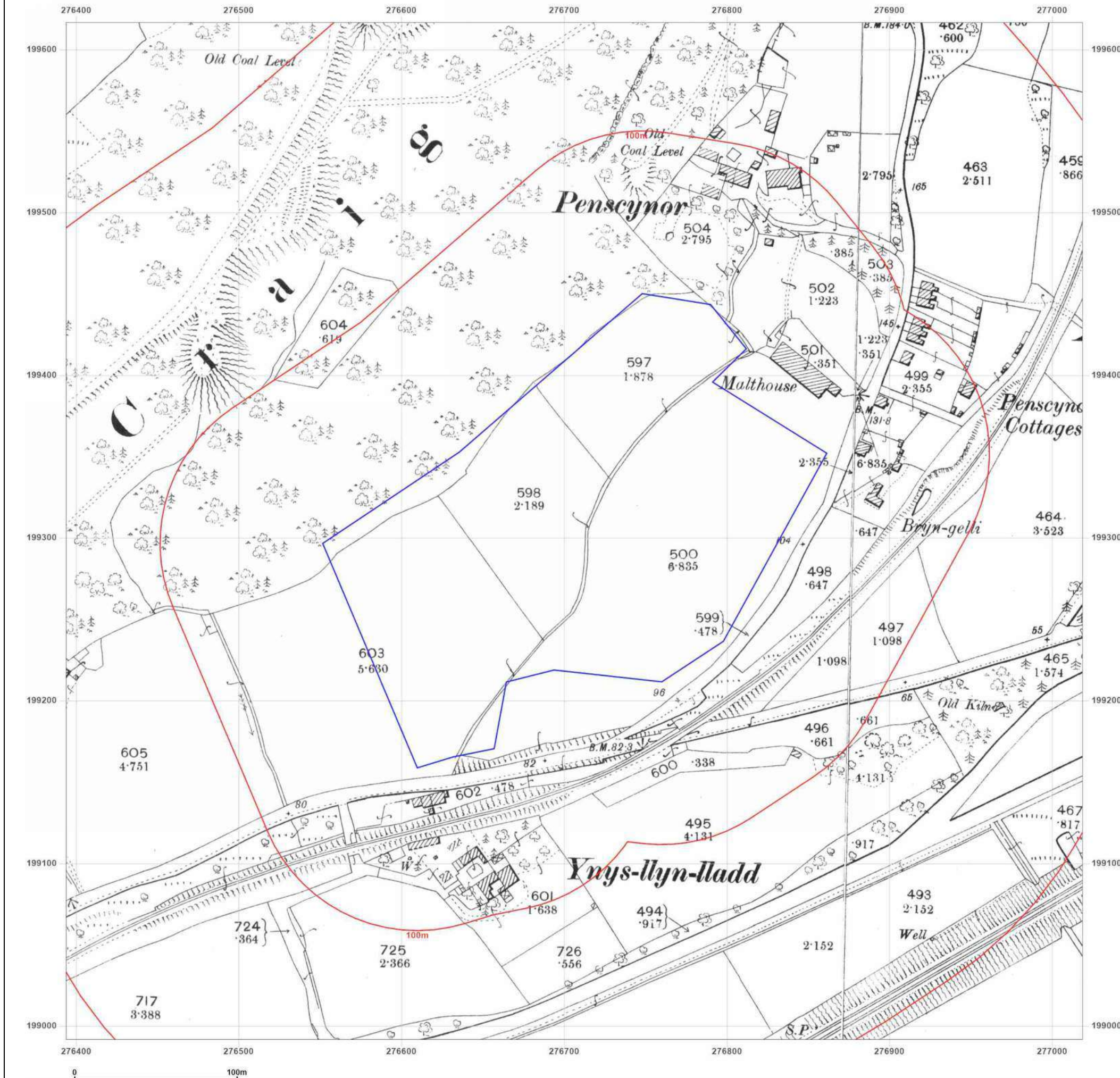


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Map legend available at:
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Site Details:

Llangatwg School

Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI_2500
Grid Ref: 276706, 199304

Map Name: County Series

Map date: 1899

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1899
Revised 1899
Edition N/A
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Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

Site Details:

Llangatwg School

Client Ref: 7017066
 Report Ref: GS-LHD-WVI-IKZ-TRI_2500
 Grid Ref: 276706, 199304

Map Name: County Series

Map date: 1918-1919

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1918
 Revised 1918
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1919
 Revised 1919
 Edition N/A
 Copyright N/A
 Levelled N/A

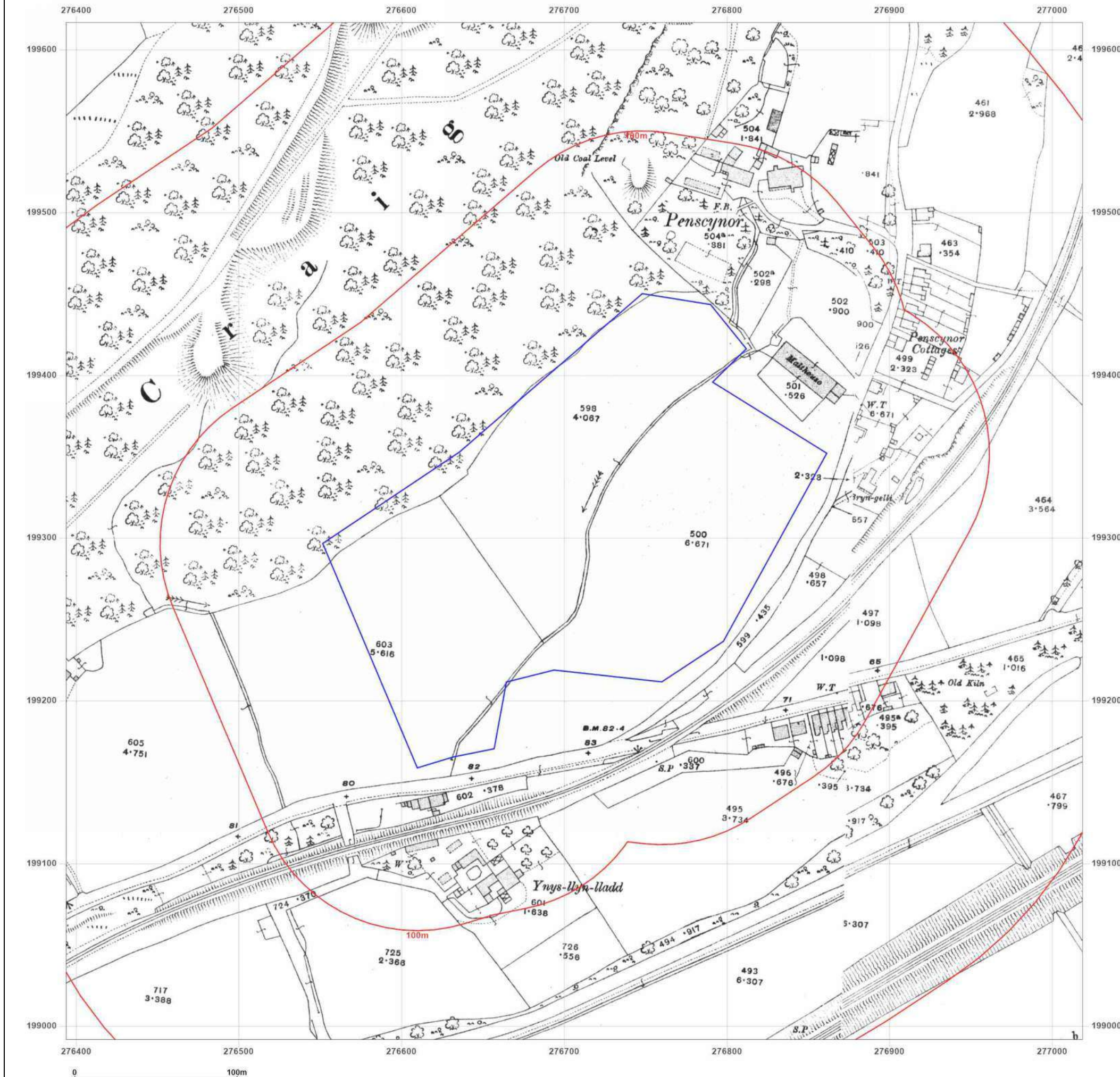


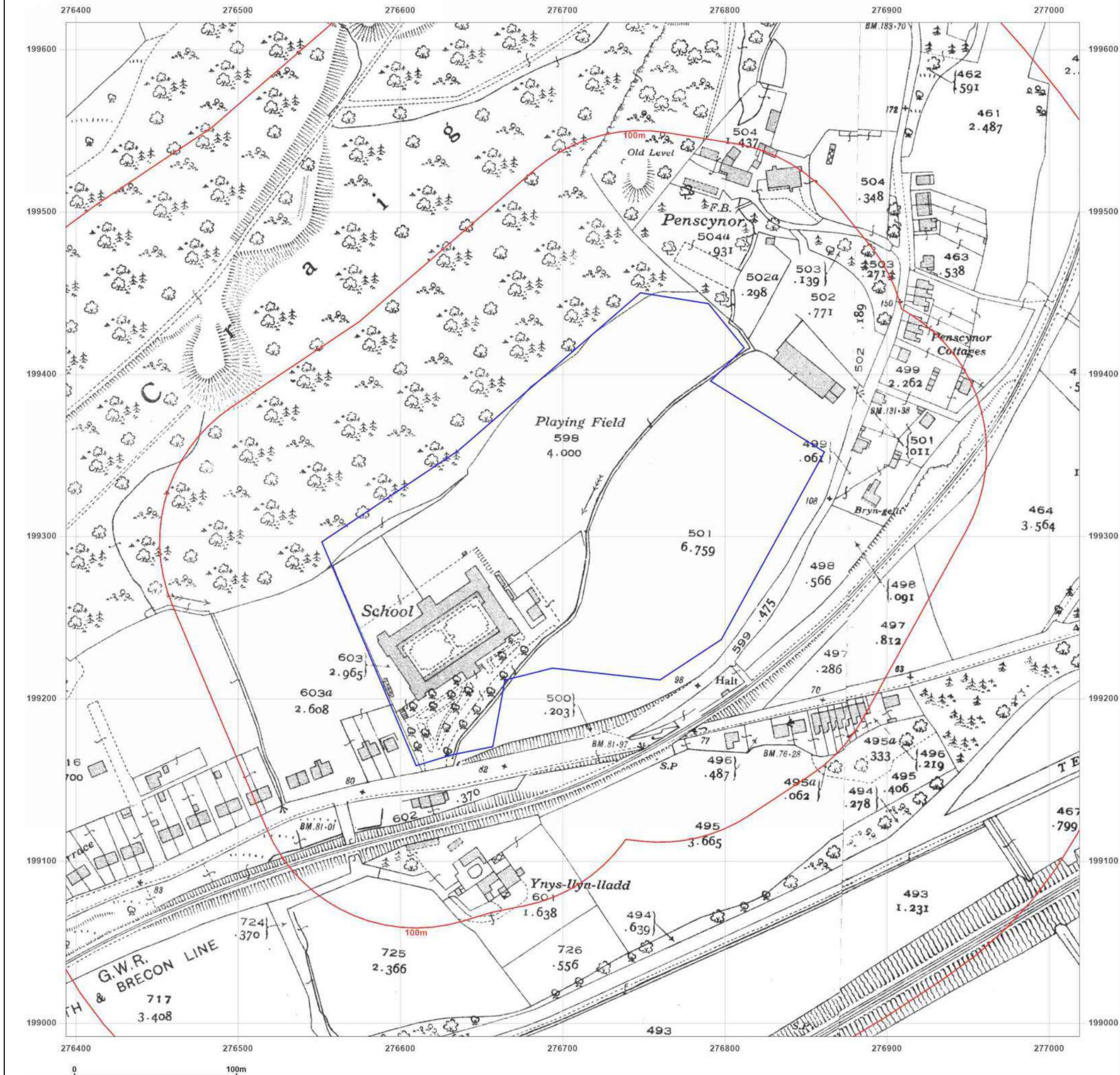
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Site Details:

Llangatwg School

Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI_2500
Grid Ref: 276706, 199304

Map Name: County Series

Map date: 1935

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1935
Revised 1935
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1935
Revised 1935
Edition N/A
Copyright N/A
Levelled N/A



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Site Details:

Llangatwg School

Client Ref: 7017066
 Report Ref: GS-LHD-WVI-IKZ-TRI_2500
 Grid Ref: 276706, 199304

Map Name: National Grid

Map date: 1964

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1962
 Revised 1962
 Edition N/A
 Copyright 1964
 Levelled 1956

Surveyed 1963
 Revised 1963
 Edition N/A
 Copyright 1964
 Levelled 1956

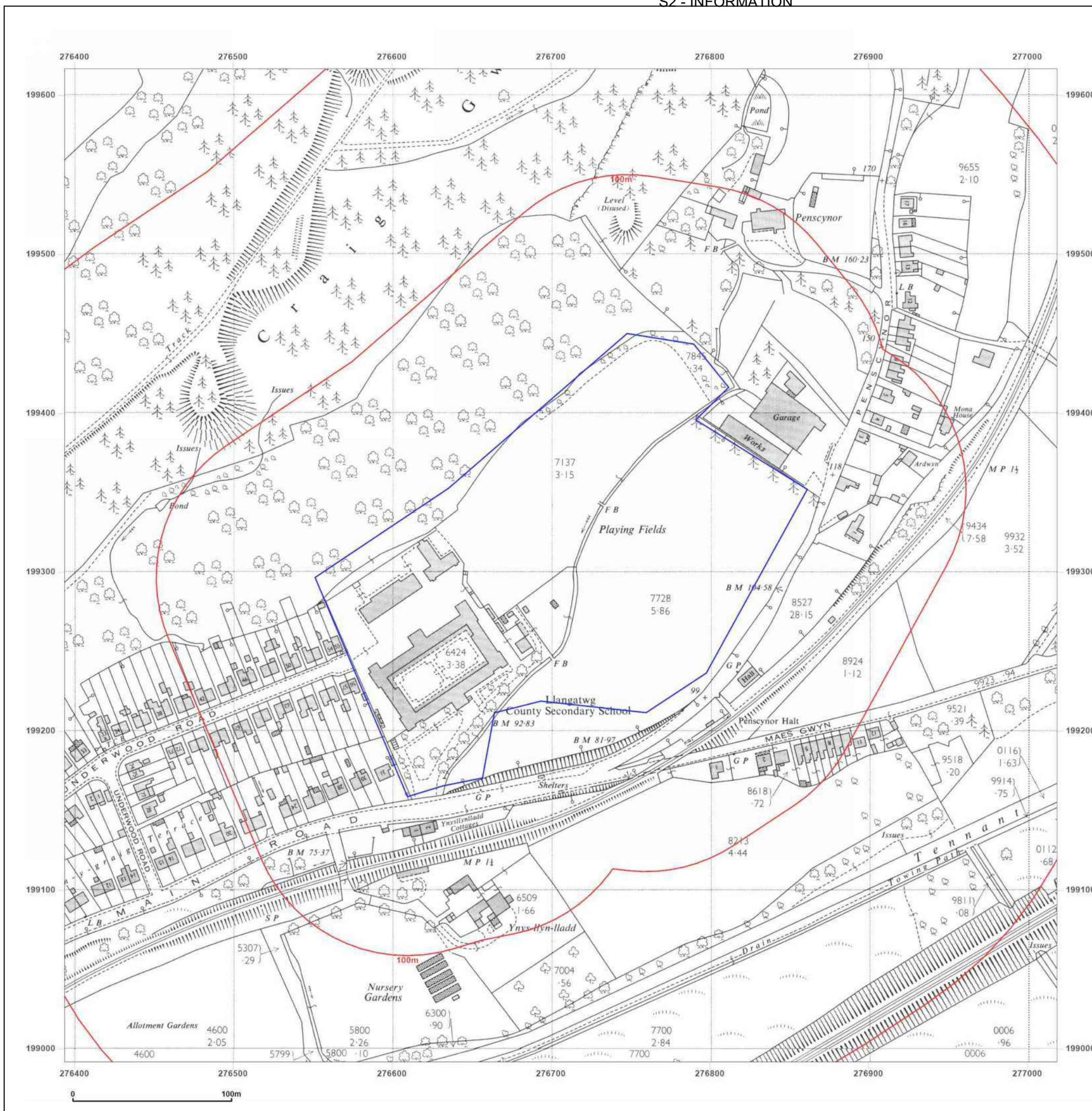


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Site Details:

Llangatwg School

Client Ref: 7017066
 Report Ref: GS-LHD-WVI-IKZ-TRI_2500
 Grid Ref: 276706, 199304

Map Name: National Grid

Map date: 1964

Scale: 1:2,500

Printed at: 1:2,500



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

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

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

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

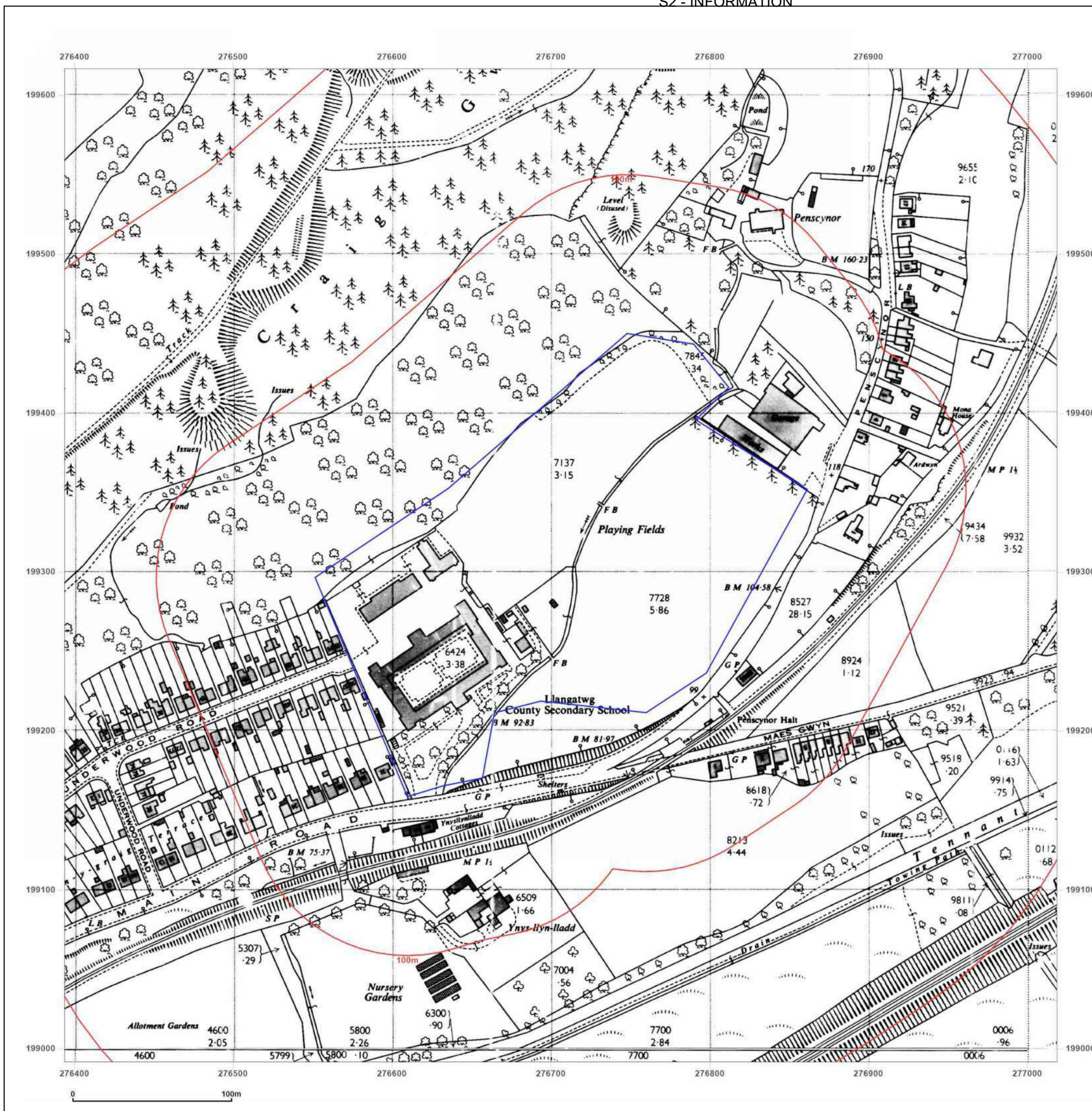


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Site Details:

Llangatwg School

Client Ref: 7017066
 Report Ref: GS-LHD-WVI-IKZ-TRI_2500
 Grid Ref: 276706, 199304

Map Name: National Grid

Map date: 1978-1980

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1978
 Levelled 1956

Surveyed 1963
 Revised 1978
 Edition N/A
 Copyright 1978
 Levelled 1963

Surveyed 1964
 Revised 1978
 Edition N/A
 Copyright 1978
 Levelled 1964

Surveyed 1963
 Revised 1980
 Edition N/A
 Copyright 1980
 Levelled 1963

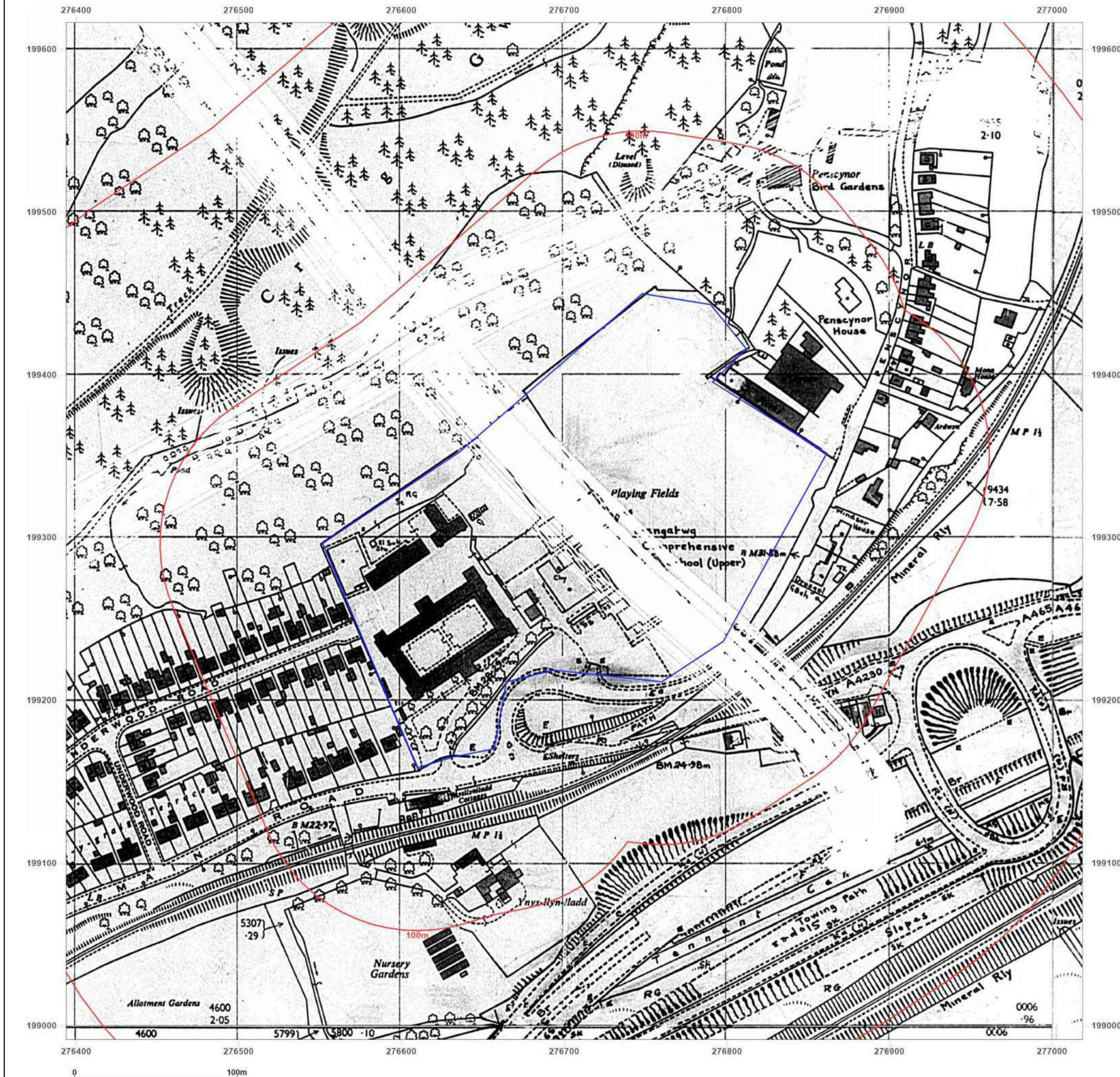


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Site Details:

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Client Ref: 7017066
 Report Ref: GS-LHD-WVI-IKZ-TRI_2500
 Grid Ref: 276706, 199304

Map Name: National Grid

Map date: 1978-1981

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1956
 Revised 1978
 Edition N/A
 Copyright 1978
 Levelled 1956

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

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

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



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Surveyed N/A
Revised N/A
Edition N/A
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Site Details:

Llangatwg School

Client Ref: 7017066
 Report Ref: GS-LHD-WVI-IKZ-TRI_2500
 Grid Ref: 276706, 199304

Map Name: National Grid

Map date: 1979-1984

Scale: 1:2,500

Printed at: 1:2,500



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

Surveyed 1963
 Revised 1982
 Edition N/A
 Copyright 1984
 Levelled 1963

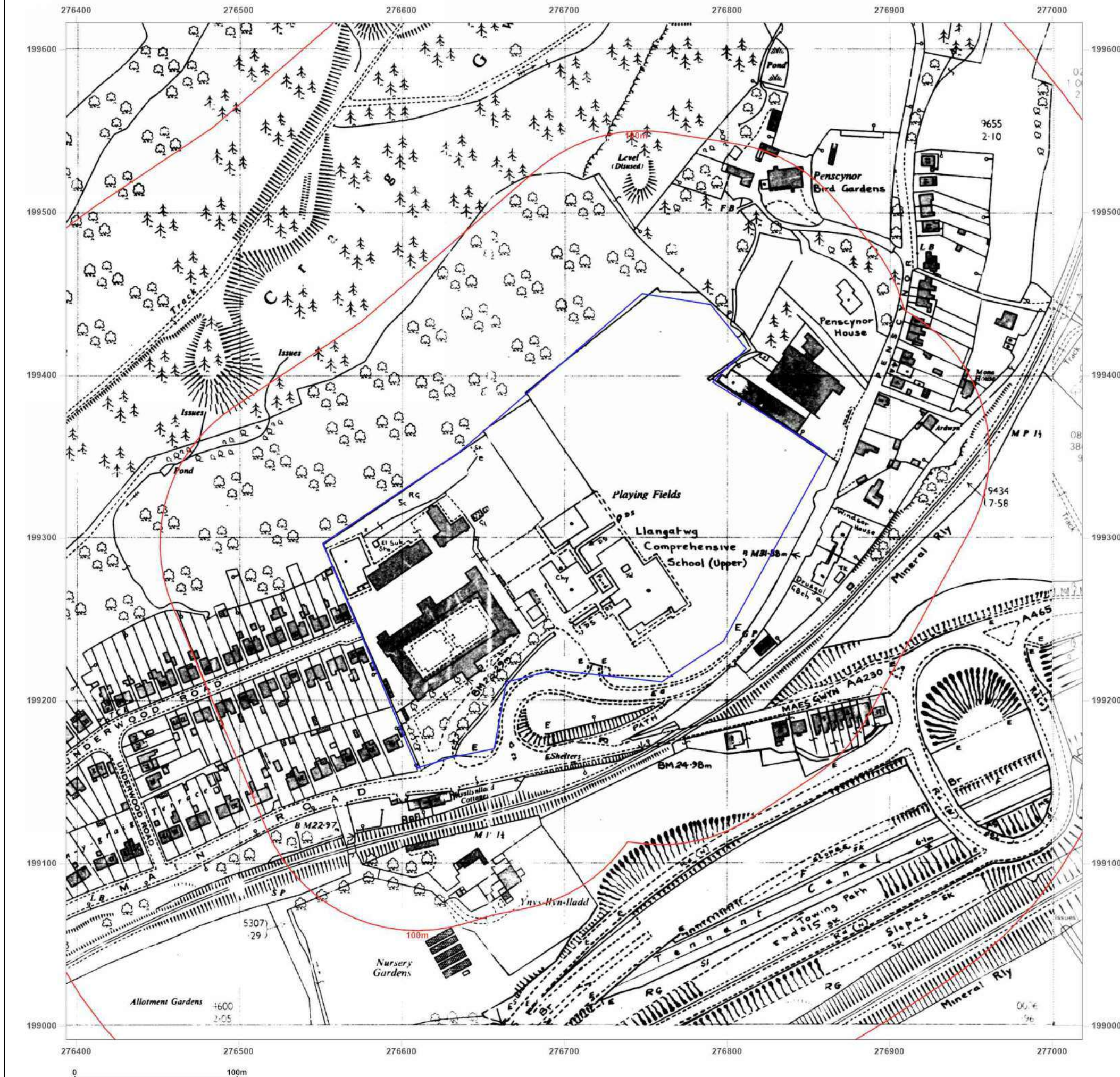


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Site Details:

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Client Ref: 7017066
 Report Ref: GS-LHD-WVI-IKZ-TRI_2500
 Grid Ref: 276706, 199304

Map Name: National Grid

Map date: 1984-1987

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1982
 Revised 1982
 Edition N/A
 Copyright 1984
 Levelled 1956

Surveyed 1964
 Revised 1987
 Edition N/A
 Copyright 1987
 Levelled 1964

Surveyed 1963
 Revised 1986
 Edition N/A
 Copyright 1986
 Levelled 1963

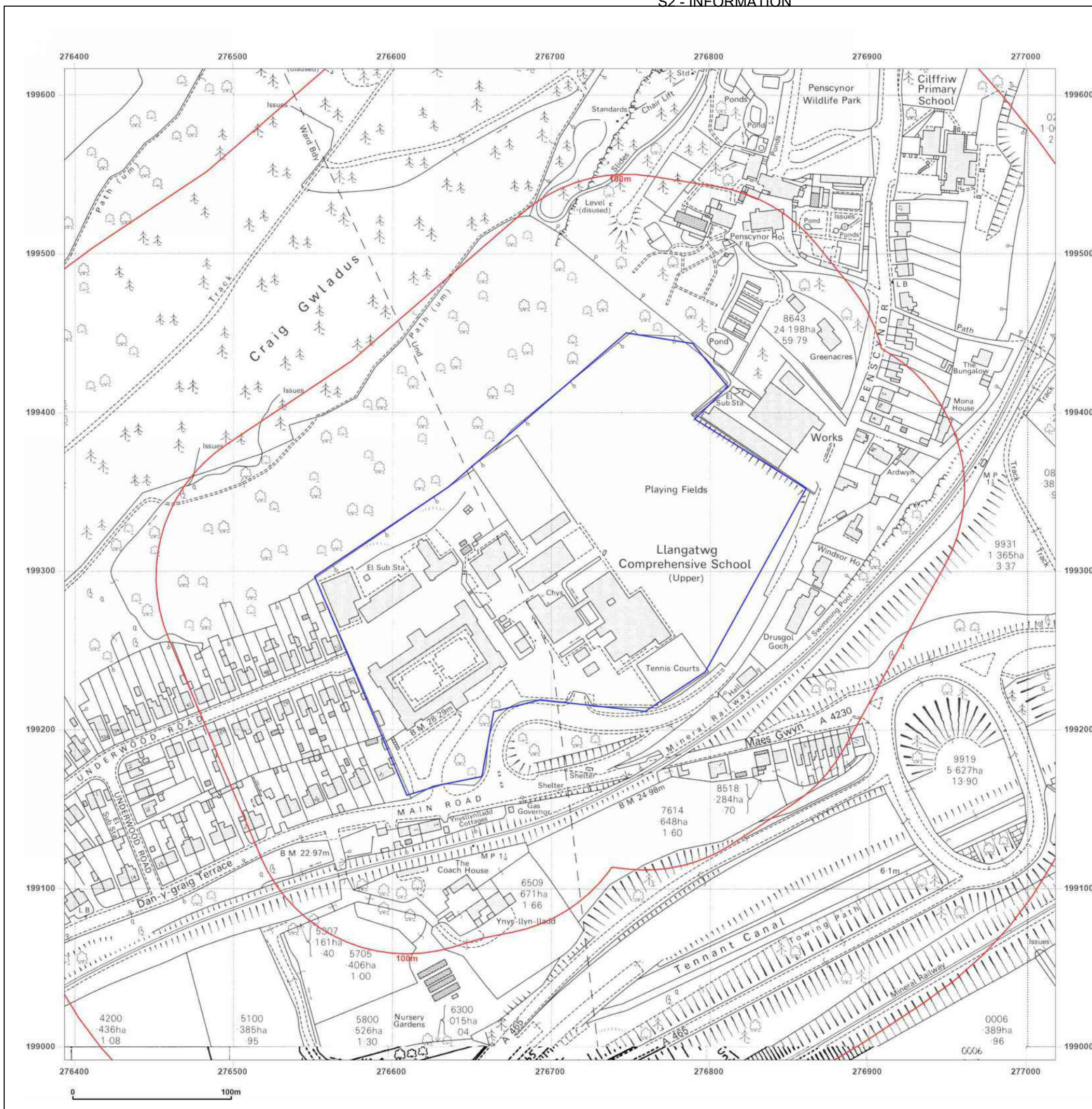


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Site Details:

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Client Ref: 7017066
 Report Ref: GS-LHD-WVI-IKZ-TRI_2500
 Grid Ref: 276706, 199304

Map Name: National Grid

Map date: 1985-1990

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1956
 Revised 1985
 Edition N/A
 Copyright 1985
 Levelled 1956

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



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Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI_2500
Grid Ref: 276706, 199304

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1993
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1993
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1993
Levelled N/A

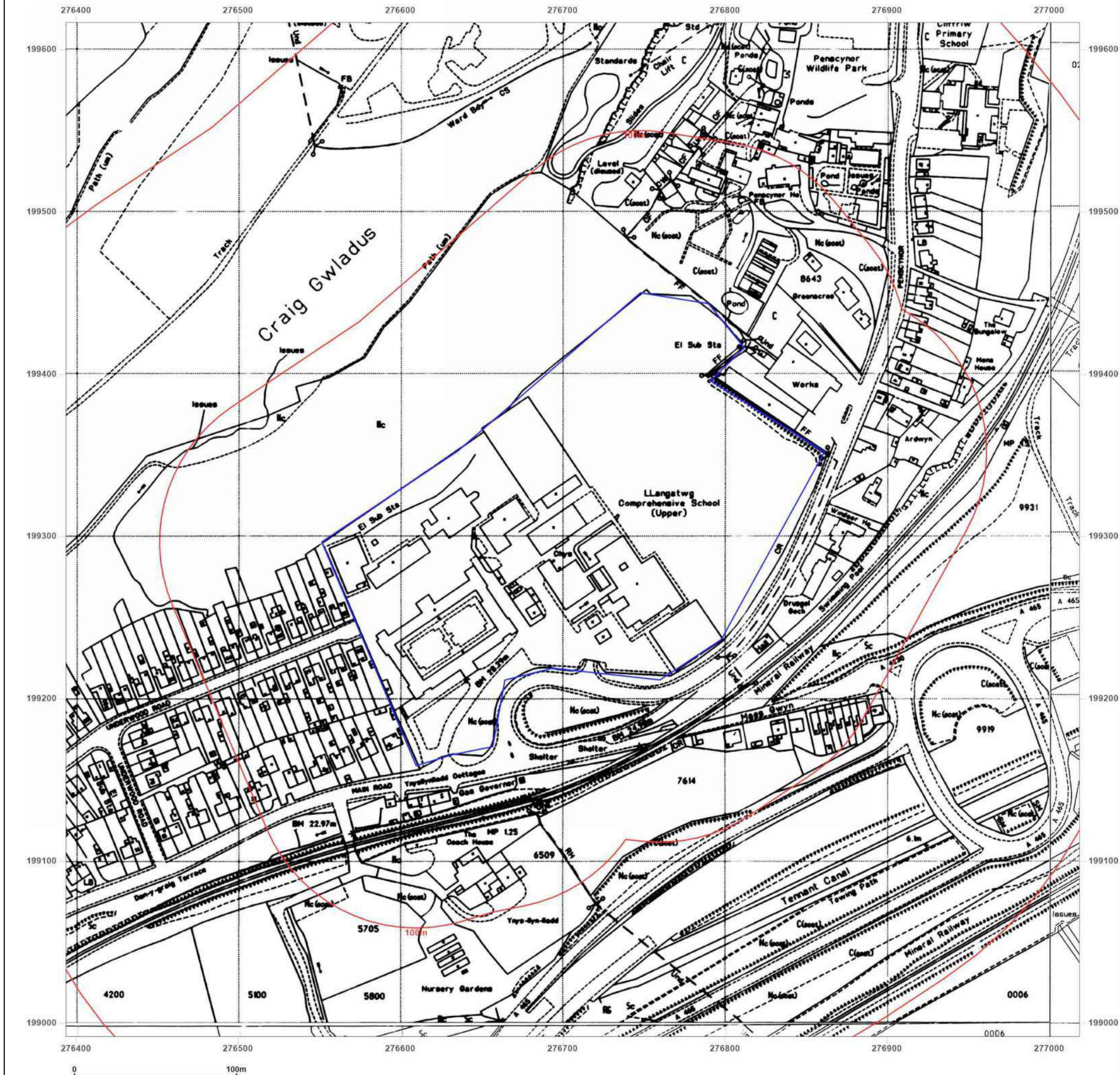


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Site Details:

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Client Ref: 7017066
 Report Ref: GS-LHD-WVI-IKZ-TRI_2500
 Grid Ref: 276706, 199304

Map Name: National Grid

Map date: 1993-1994

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1993
 Levelled N/A

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

Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1993
 Levelled N/A

Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1993
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Client Ref: 7017066
 Report Ref: GS-LHD-WVI-IKZ-TRI_2500
 Grid Ref: 276706, 199304

Map Name: National Grid

Map date: 1993-1994

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1993
 Levelled N/A

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

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

Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1993
 Levelled N/A

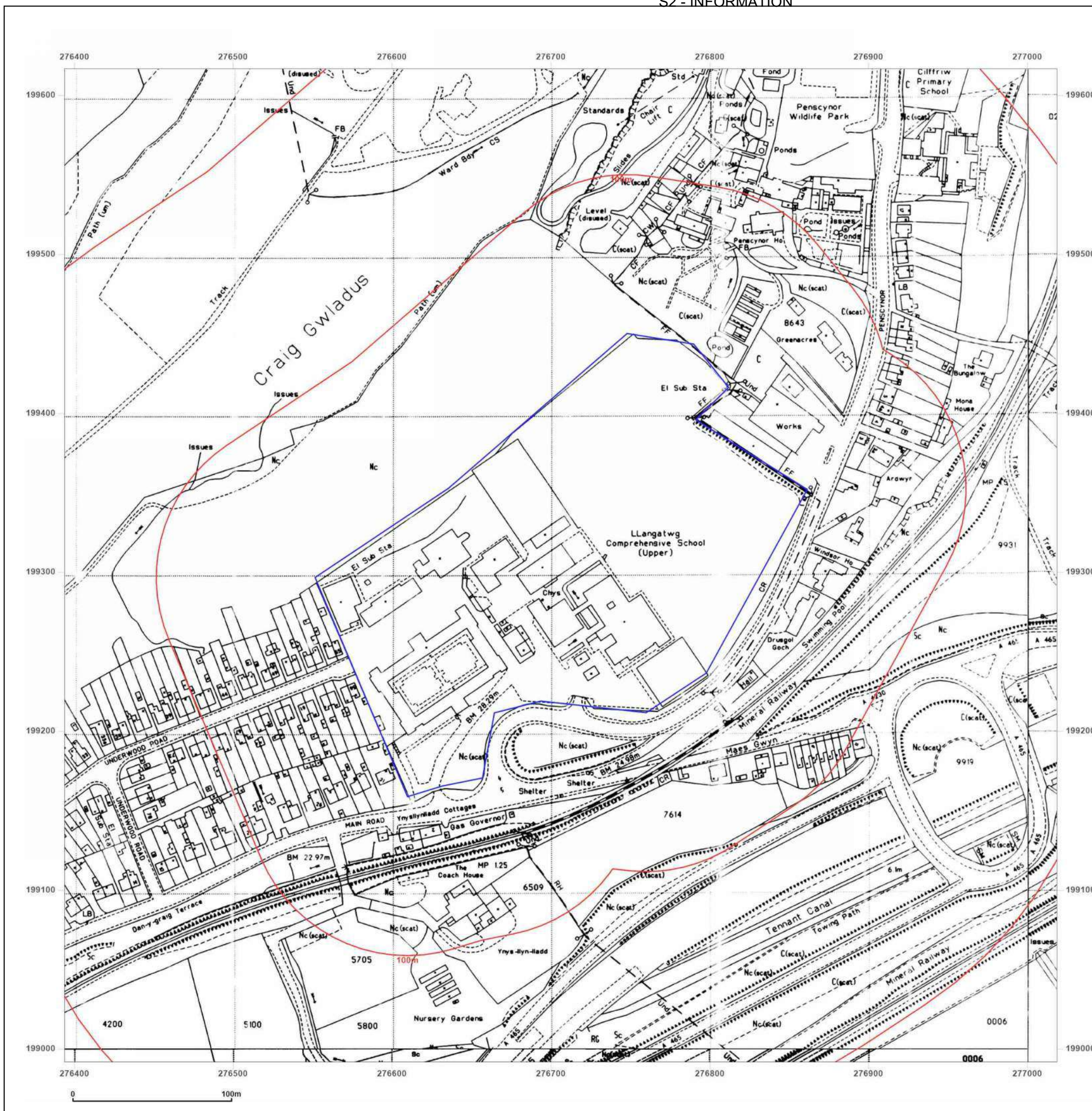


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**Site Details:**

Llangatwg School

Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI_Landline_1_1
Grid Ref: 276556, 199304

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

2003



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**Site Details:**

Llangatwg School

Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI_Landline_2_1
Grid Ref: 276856, 199304

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

2003

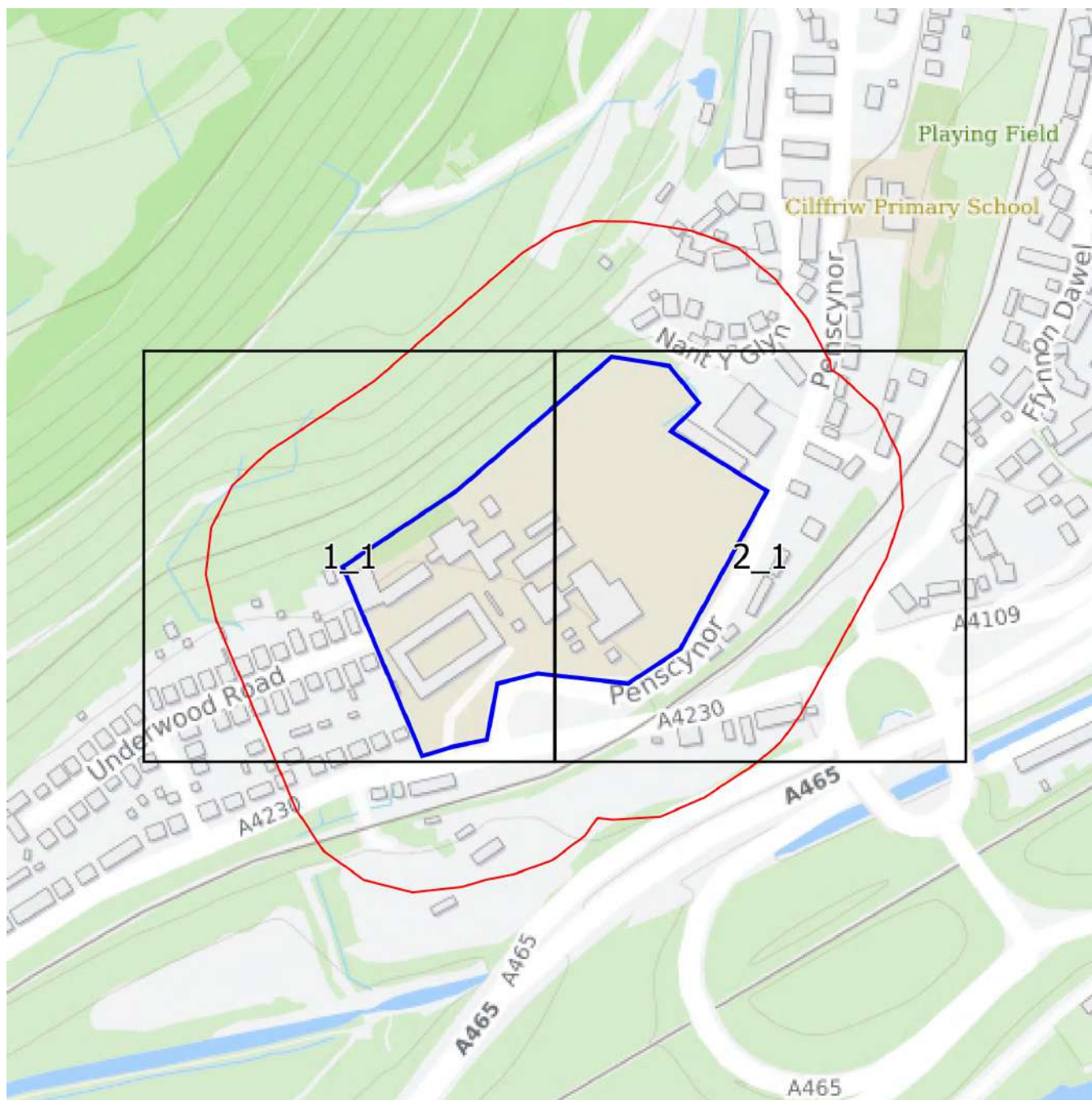


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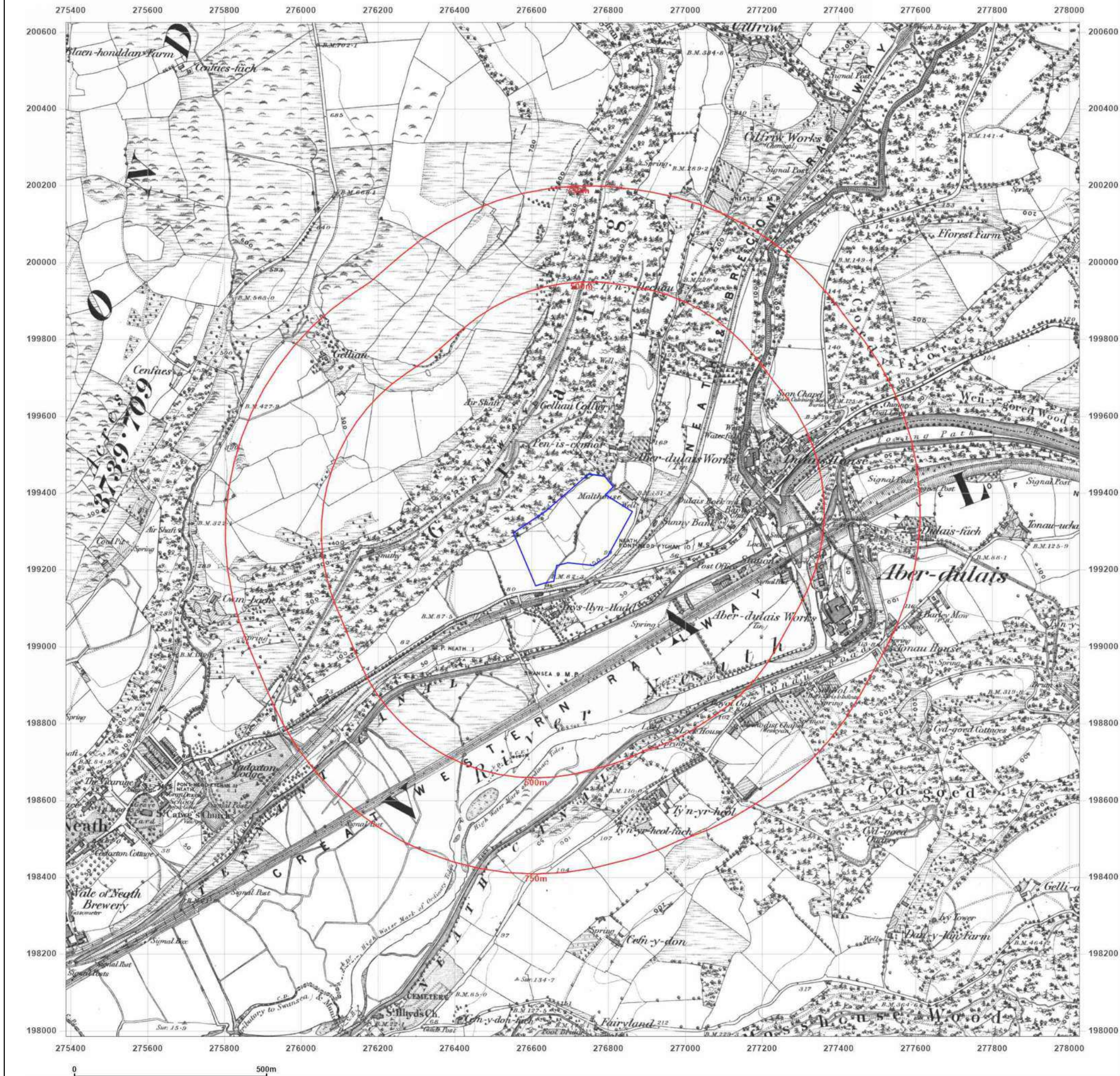
Production date: 19 September 2024

Map legend available at:
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Landline Scale Grid Index



**Site Details:**

Llangatwg School

Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI
Grid Ref: 276706, 199304

Map Name: County Series

Map date: 1877

Scale: 1:10,560

Printed at: 1:10,560



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

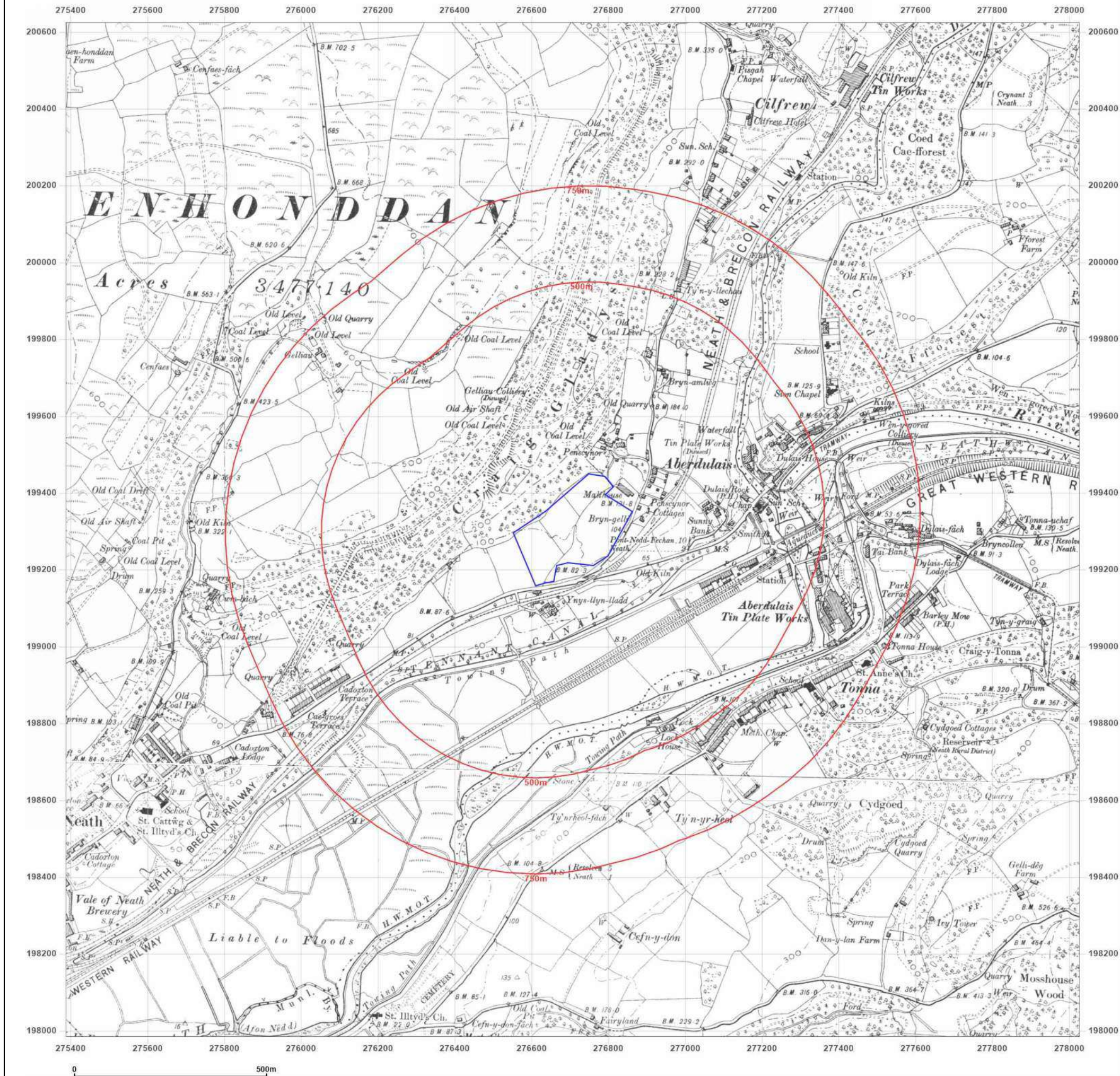


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Production date: 19 September 2024

Map legend available at:
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Site Details:

Llangatwg School

Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI
Grid Ref: 276706, 199304

Map Name: County Series

Map date: 1897

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1877
Revised 1897
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1877
Revised 1897
Edition N/A
Copyright N/A
Levelled N/A

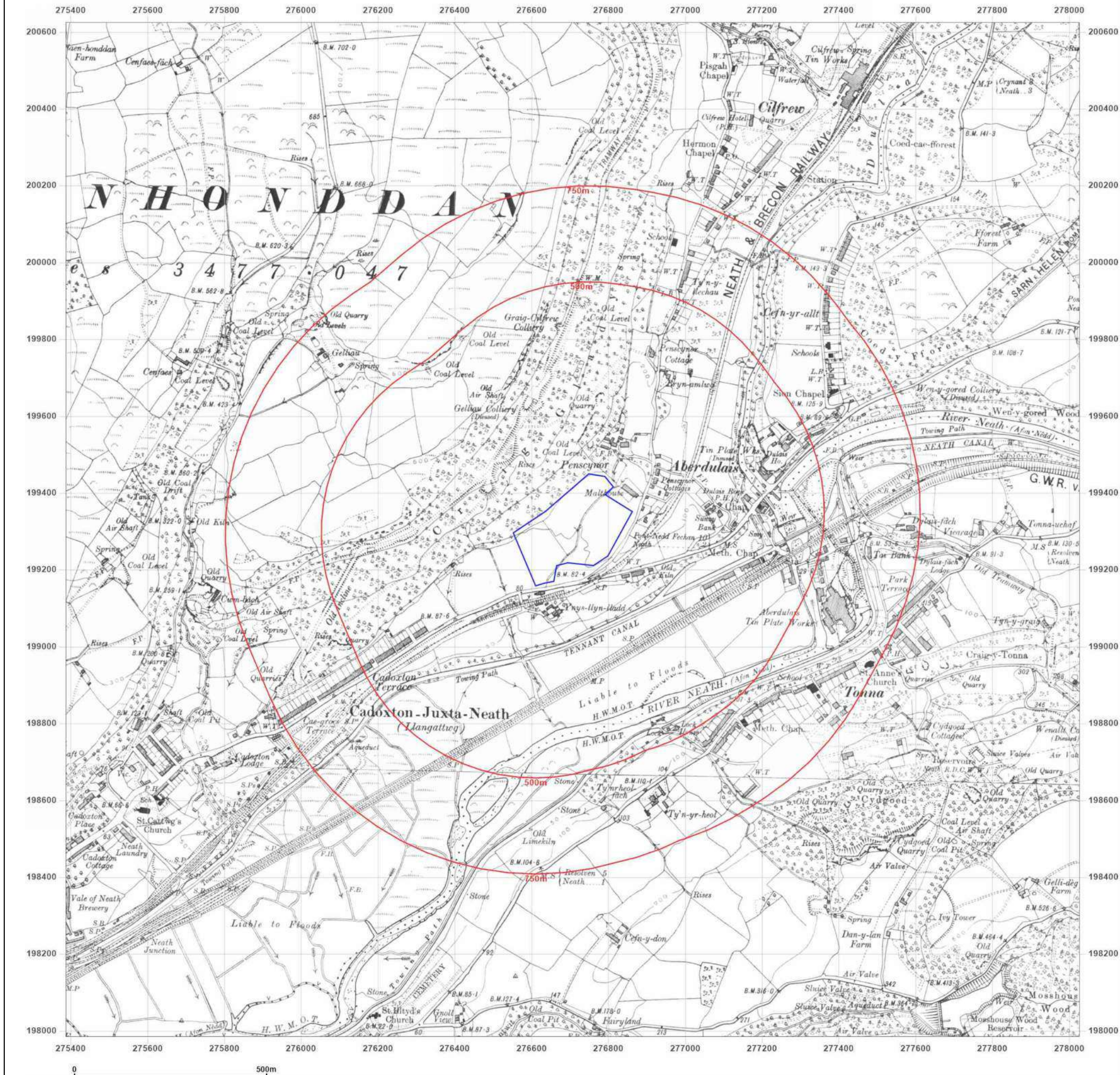


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Site Details:

Llangatwg School

Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI
Grid Ref: 276706, 199304

Map Name: County Series

Map date: 1914

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1875
Revised 1914
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1876
Revised 1914
Edition N/A
Copyright N/A
Levelled N/A



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Site Details:

Llangatwg School

Client Ref: 7017066
 Report Ref: GS-LHD-WVI-IKZ-TRI
 Grid Ref: 276706, 199304

Map Name: County Series

Map date: 1921

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1876
 Revised 1921
 Edition N/A
 Copyright N/A
 Levelled N/A

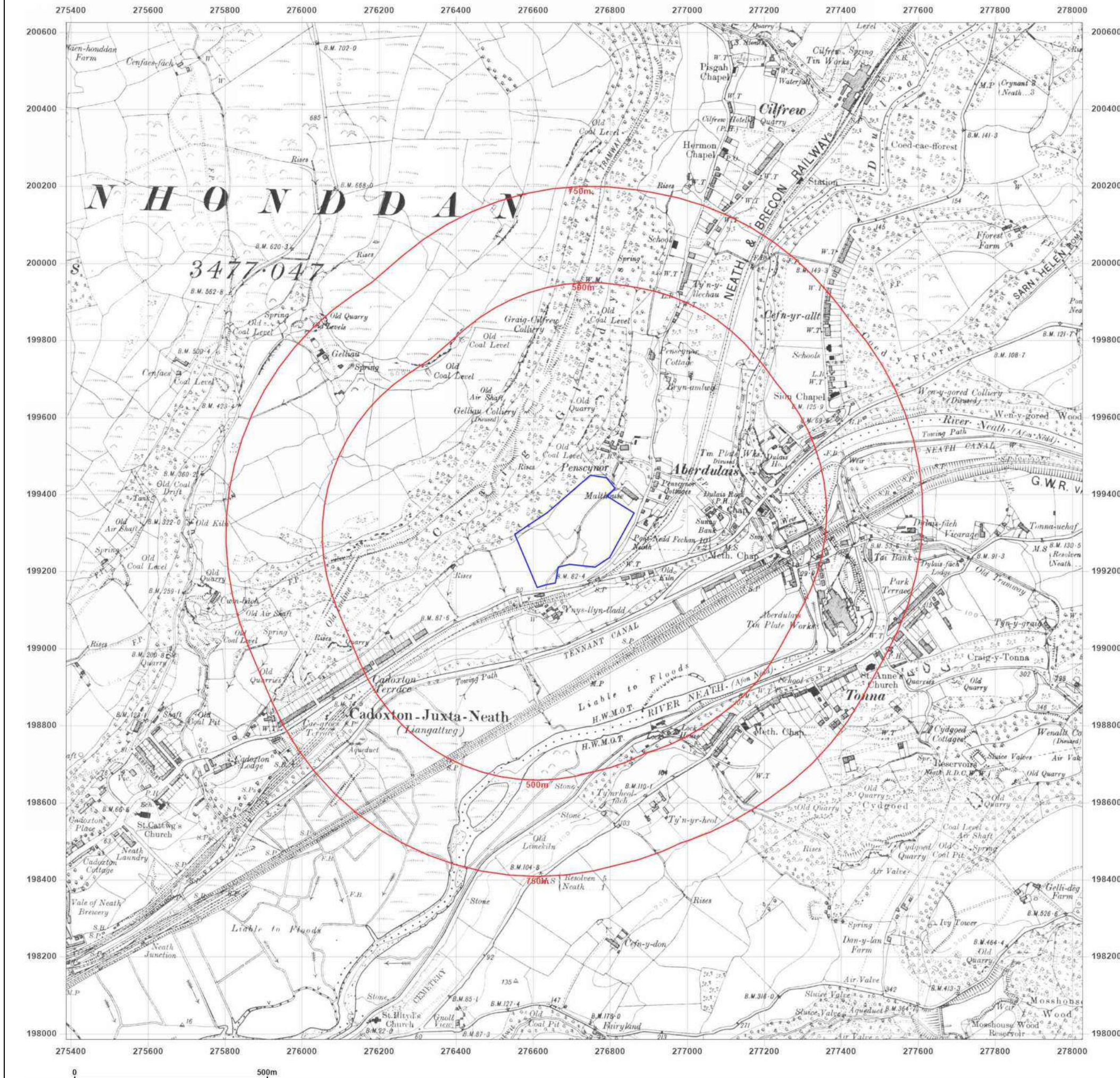


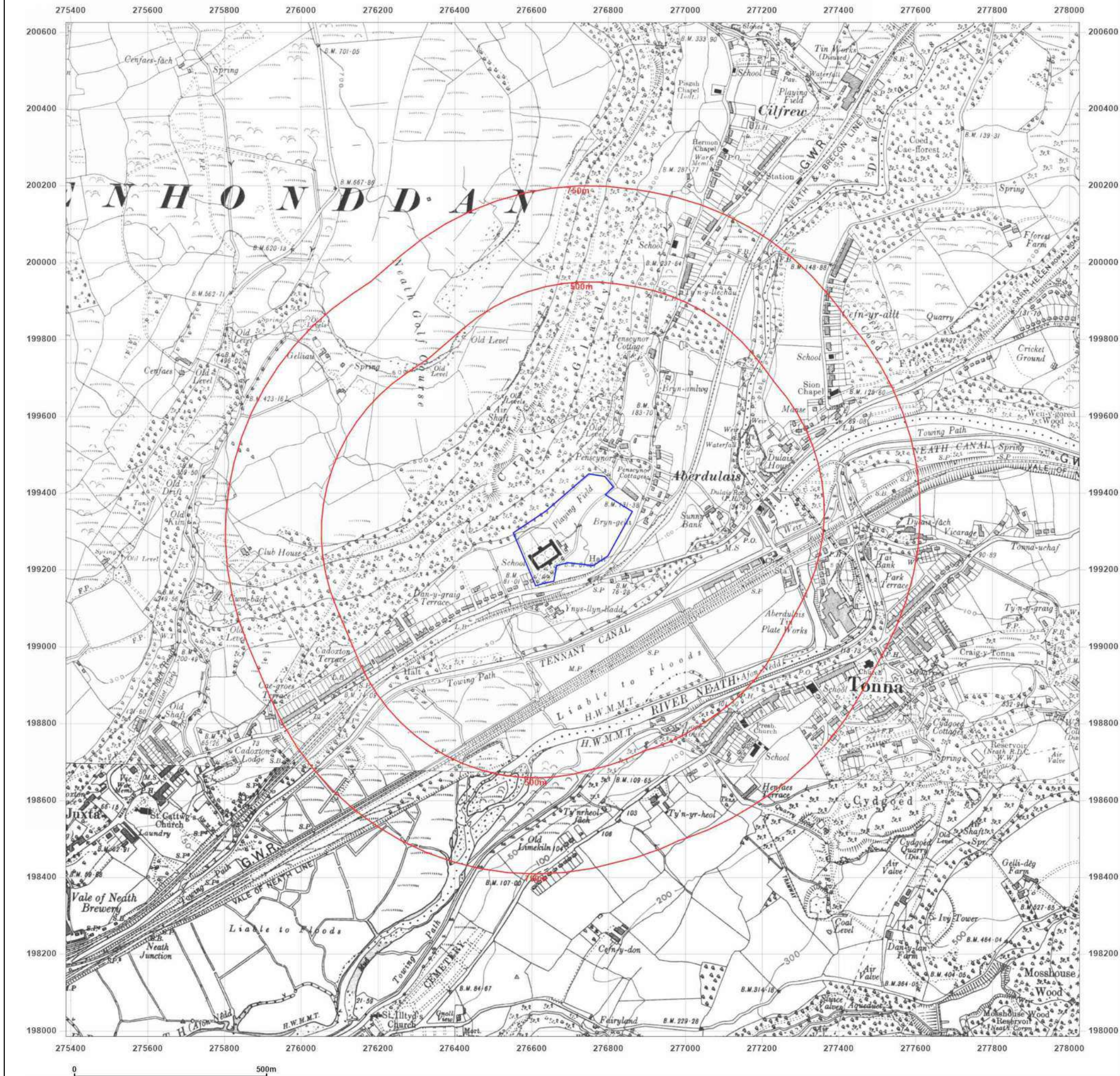
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**Site Details:**

Llangatwg School

Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI
Grid Ref: 276706, 199304

Map Name: County Series**Map date:** 1935-1936**Scale:** 1:10,560**Printed at:** 1:10,560

Surveyed 1875
Revised 1935
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1876
Revised 1936
Edition N/A
Copyright N/A
Levelled N/A

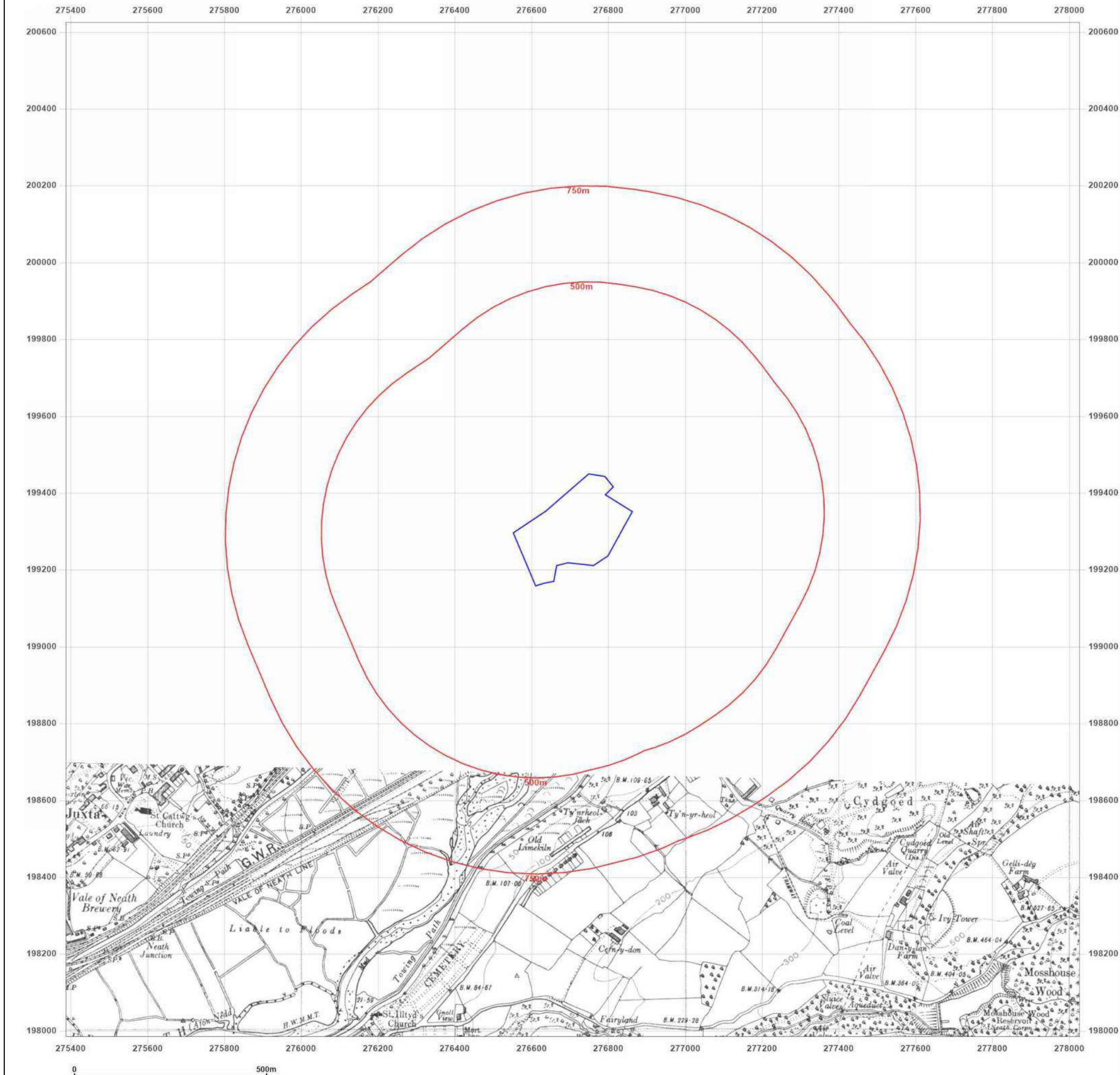


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Site Details:

Llangatwg School

Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI
Grid Ref: 276706, 199304

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1876
 Revised 1938
 Edition N/A
 Copyright N/A
 Levelled 1936

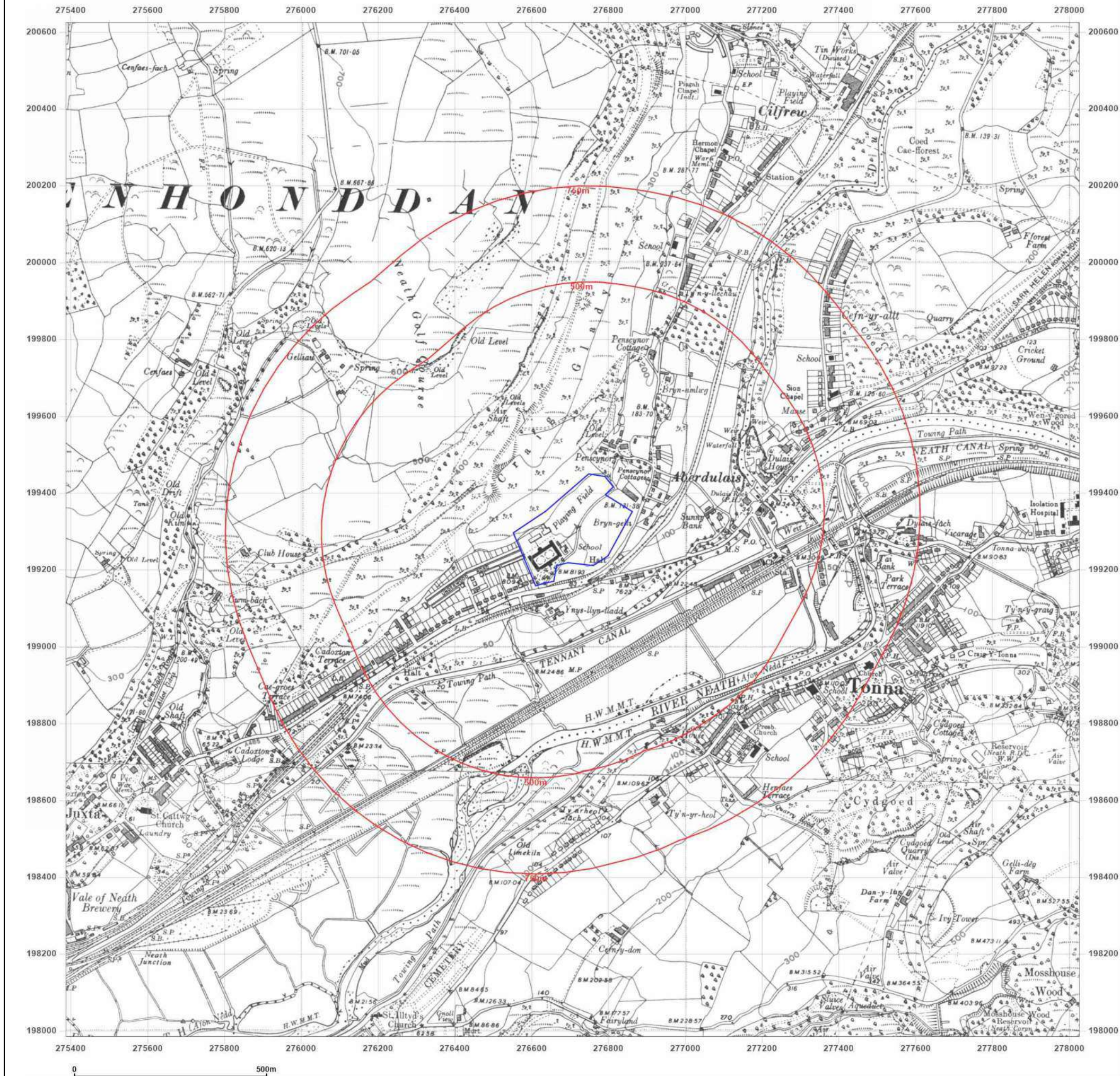


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Site Details:

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Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI
Grid Ref: 276706, 199304

Map Name: County Series

Map date: 1948-1951

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1875
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1876
Revised 1948
Edition 1951
Copyright N/A
Levelled 1950

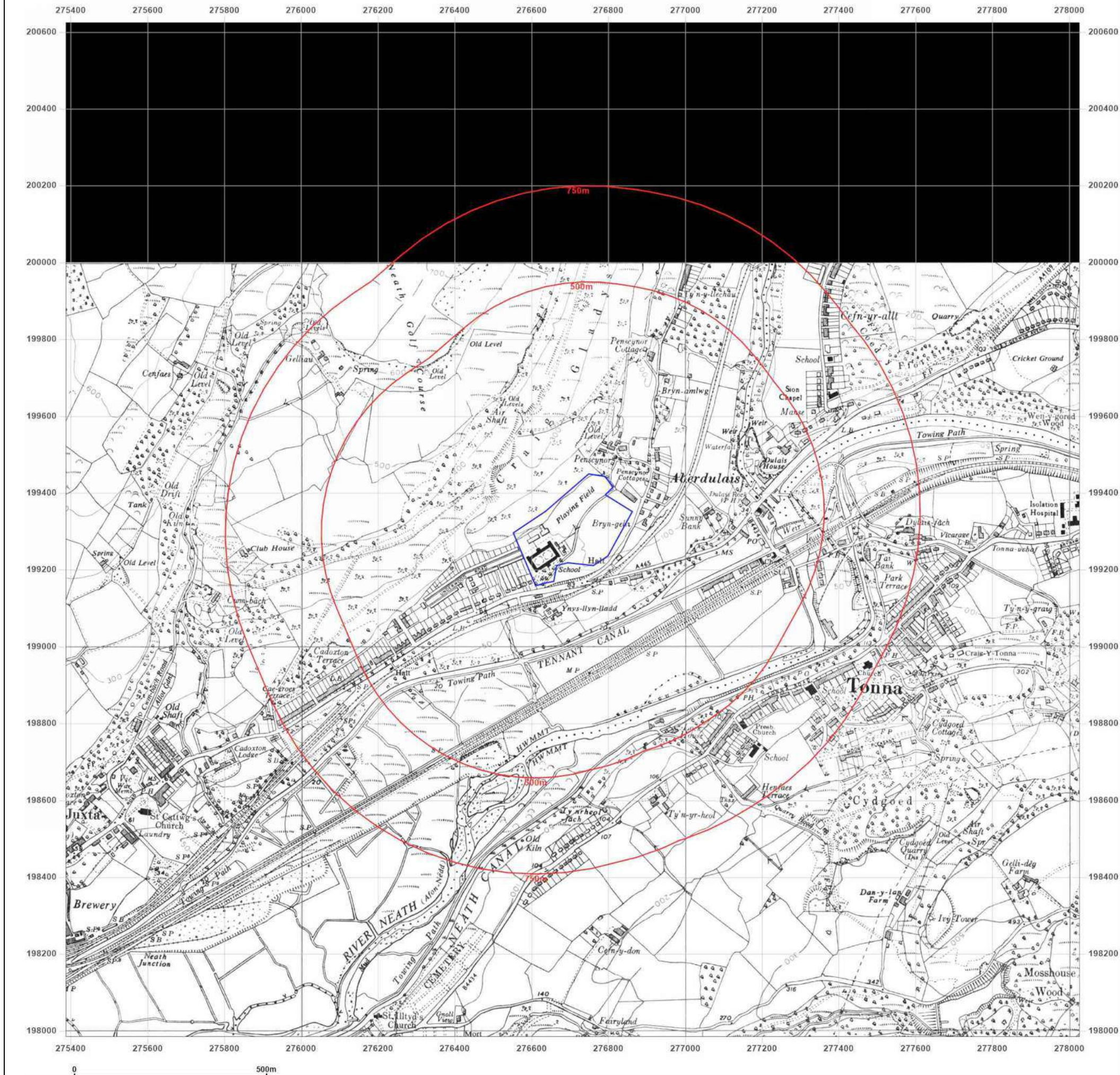


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**Site Details:**

Llangatwg School

Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI
Grid Ref: 276706, 199304

Map Name: Provisional**Map date:** 1962-1964**Scale:** 1:10,560**Printed at:** 1:10,560

Surveyed 1964
Revised 1964
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1962
Revised 1962
Edition N/A
Copyright N/A
Levelled N/A



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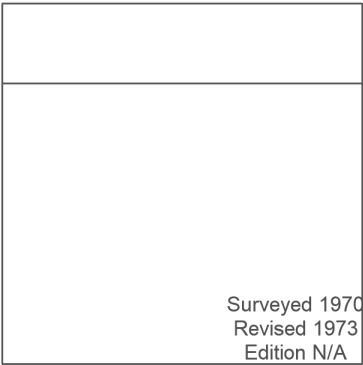
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Report Ref: GS-LHD-WVI-IKZ-TRI
Grid Ref: 276706, 199304

Map Name: National Grid

Map date: 1973

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1970
Revised 1973
Edition N/A
Copyright 1973
Levelled 1964

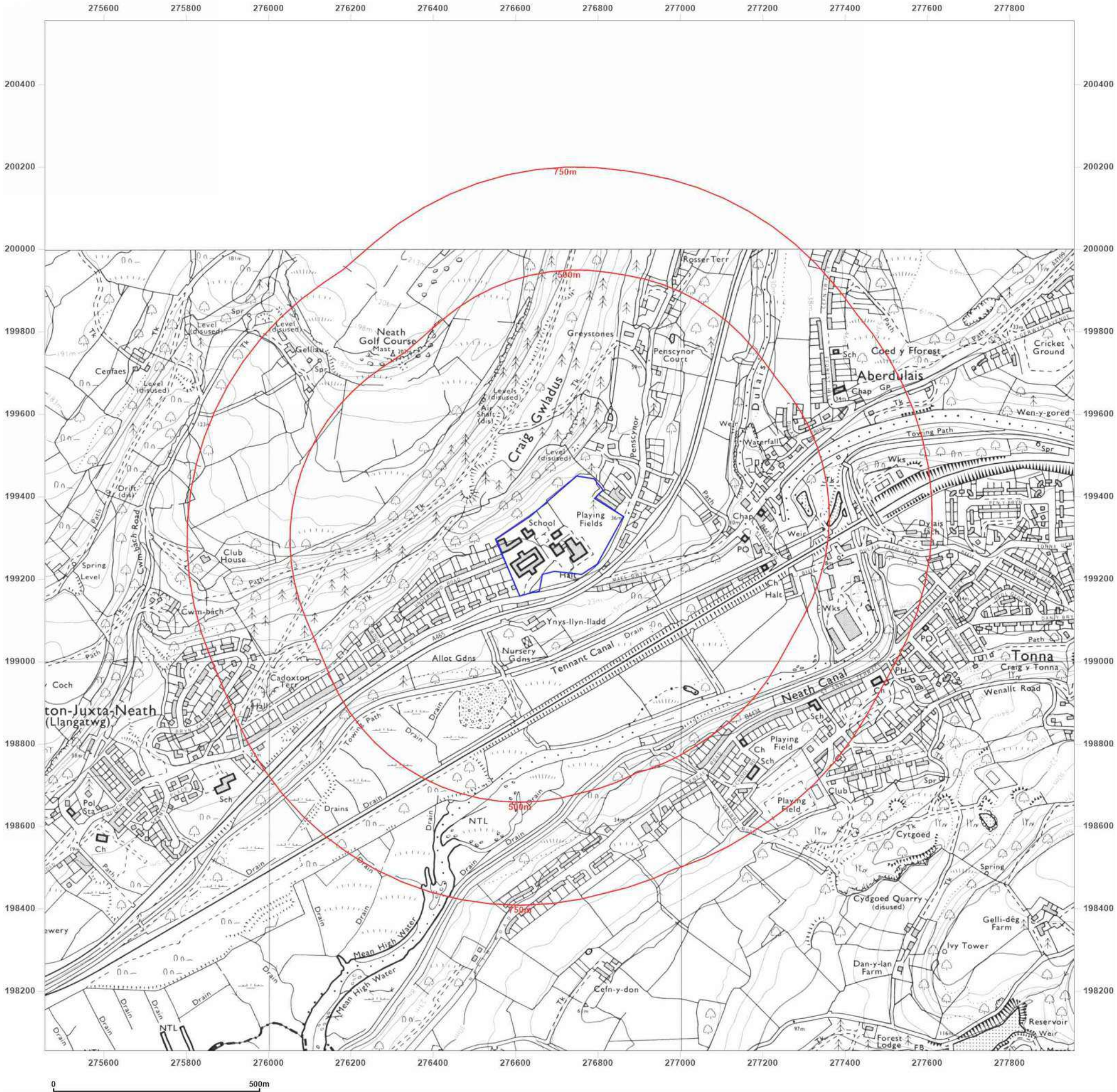


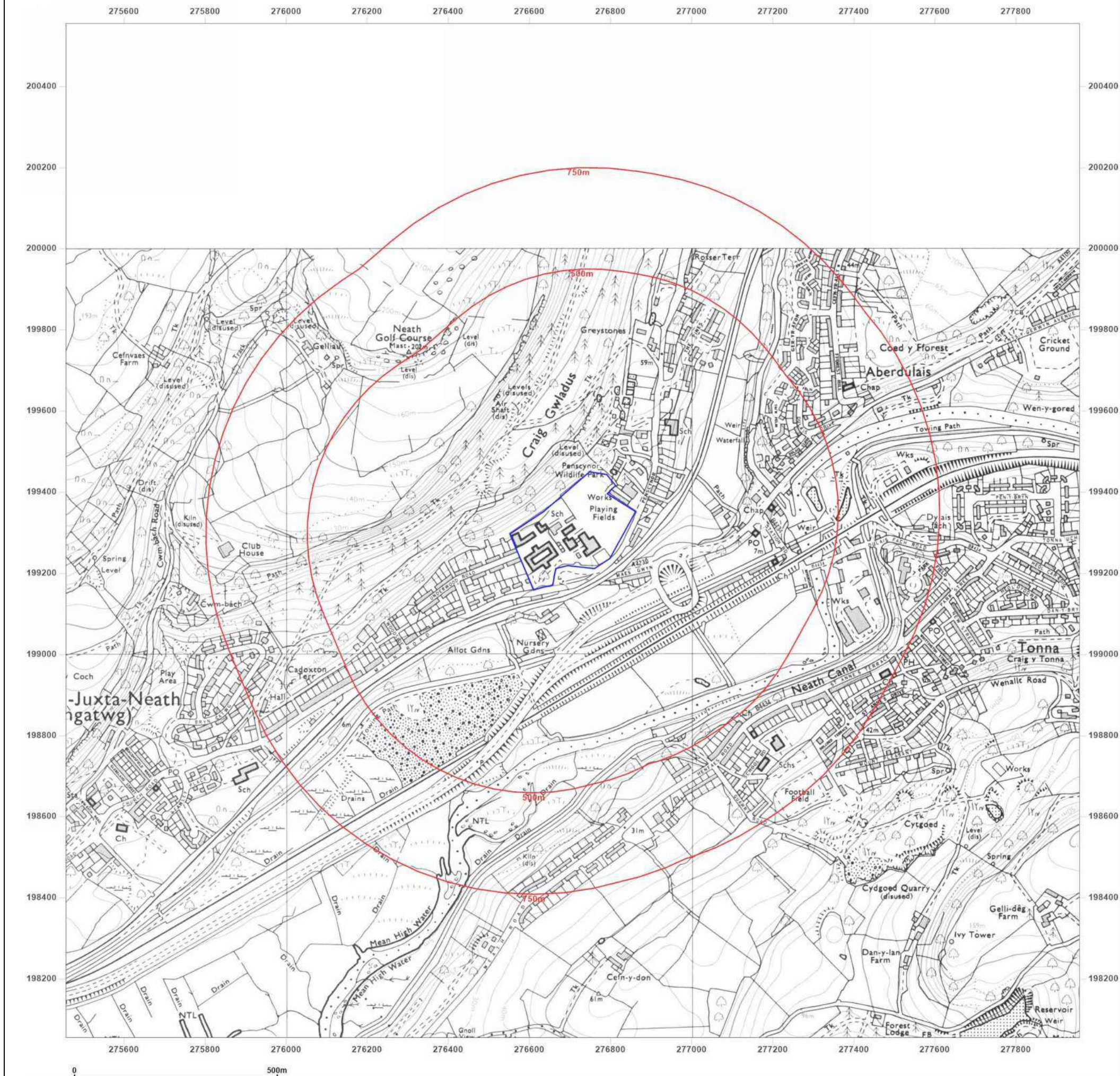
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**Site Details:**

Llangatwg School

Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI
Grid Ref: 276706, 199304

Map Name: National Grid**Map date:** 1982**Scale:** 1:10,000**Printed at:** 1:10,000

Surveyed 1976
Revised 1982
Edition N/A
Copyright N/A
Levelled N/A

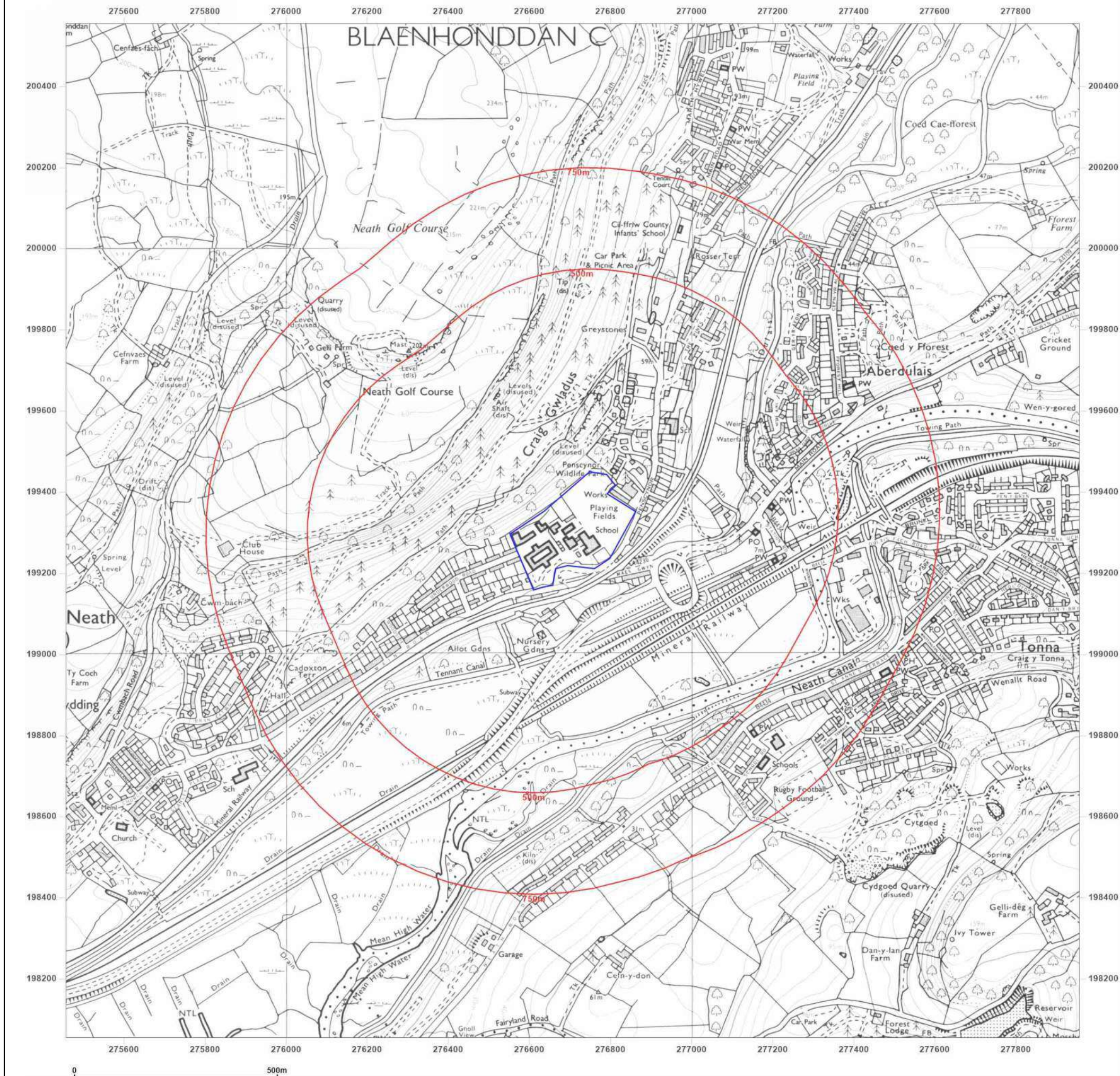


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Client Ref: 7017066
Report Ref: GS-LHD-WVI-IKZ-TRI
Grid Ref: 276706, 199304

Map Name: National Grid**Map date:** 1987-1991**Scale:** 1:10,000**Printed at:** 1:10,000

Surveyed 1977
Revised 1987
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1989
Revised 1991
Edition N/A
Copyright N/A
Levelled N/A



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Site Details:

Llangatwg School

Client Ref: 7017066
 Report Ref: GS-LHD-WVI-IKZ-TRI
 Grid Ref: 276706, 199304

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



2001

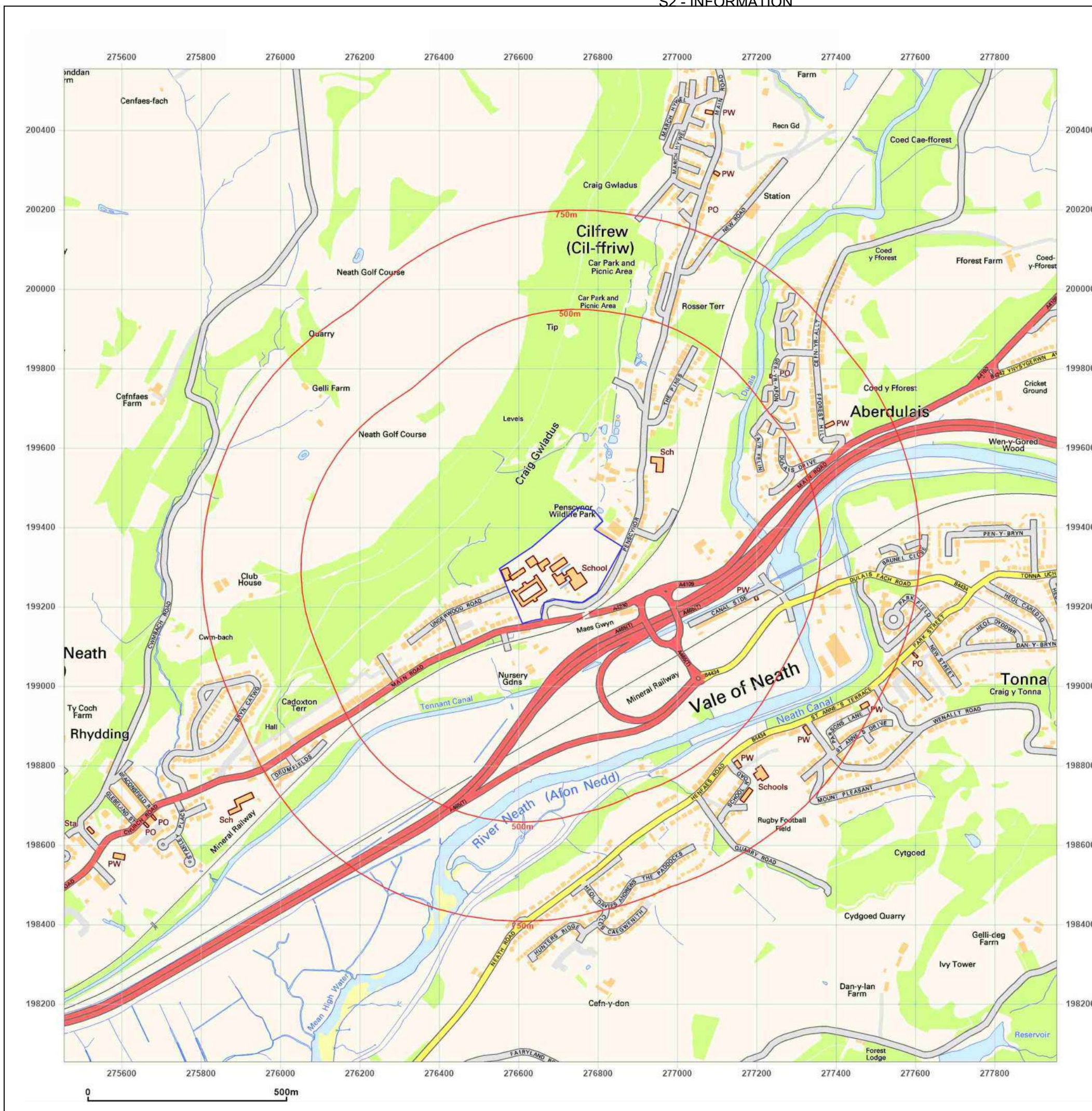


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Site Details:

Llangatwg School

Client Ref: 7017066
 Report Ref: GS-LHD-WVI-IKZ-TRI
 Grid Ref: 276706, 199304

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



2010

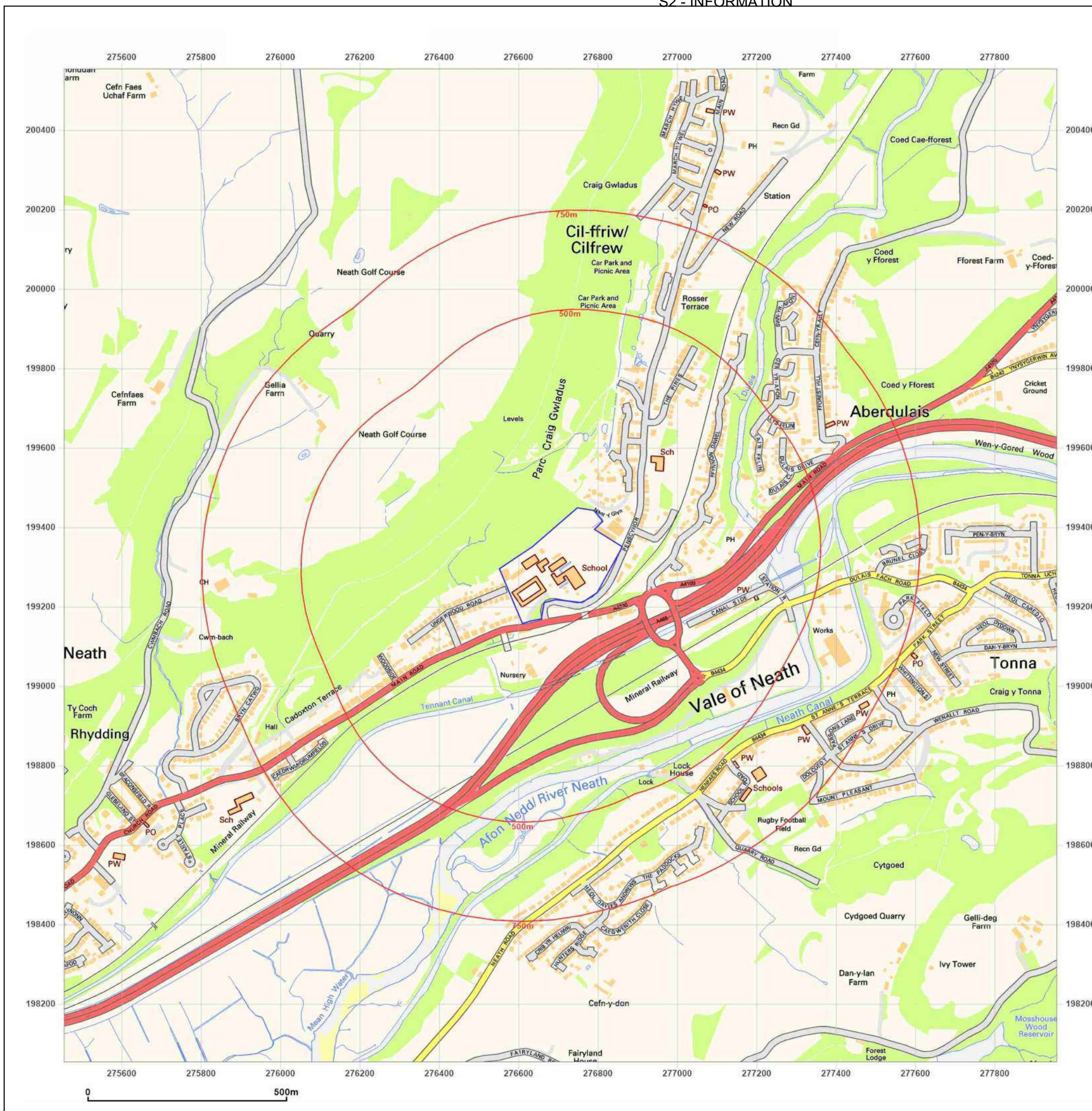


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Site Details:

Llangatwg School

Client Ref: 7017066
 Report Ref: GS-LHD-WVI-IKZ-TRI
 Grid Ref: 276706, 199304

Map Name: National Grid

Map date: 2024

Scale: 1:10,000

Printed at: 1:10,000



2024

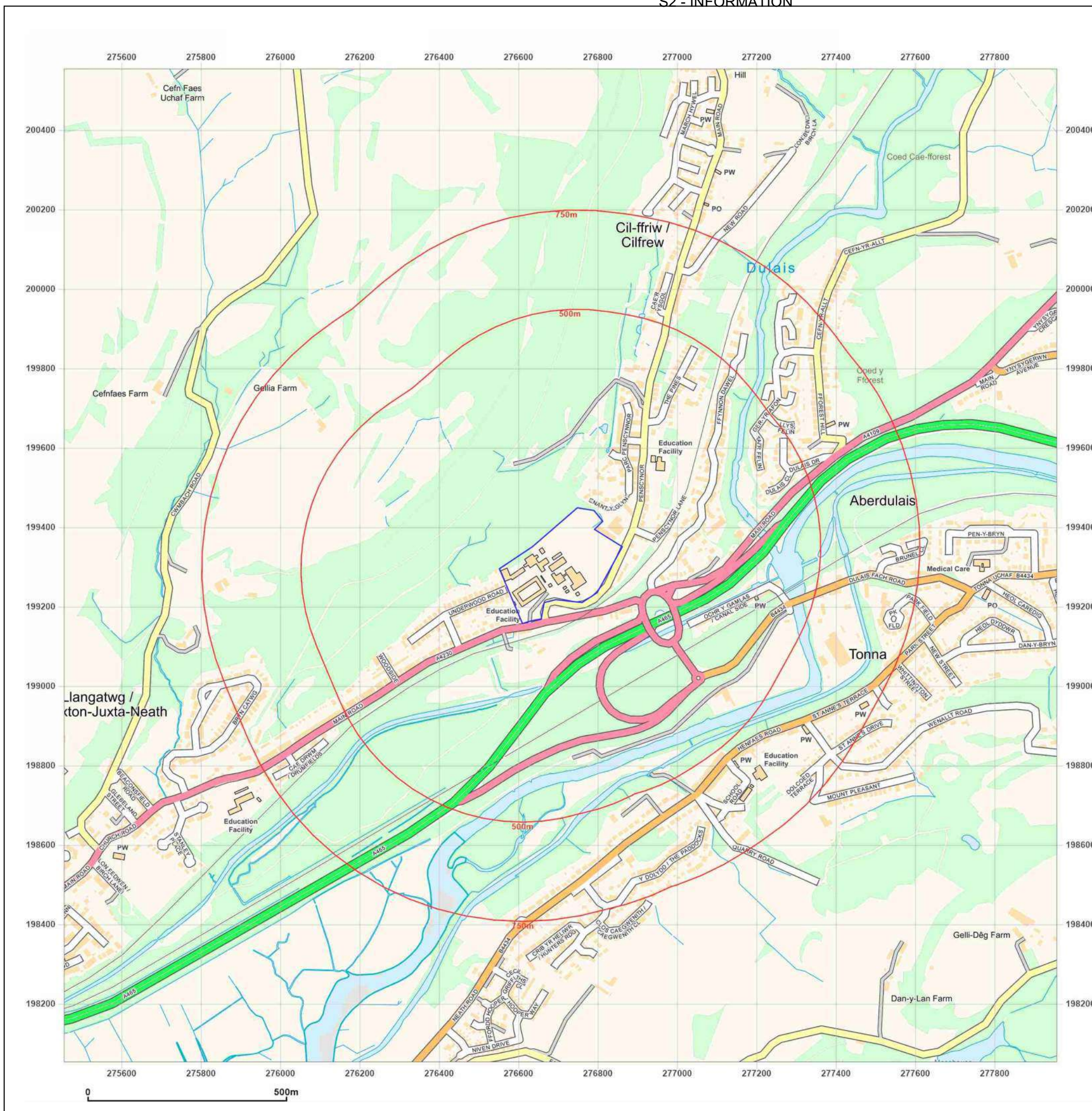


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Phase 1 Geoenvironmental Assessment Desk Top Study

APPENDIX C: HISTORICAL BOREHOLE LOGS



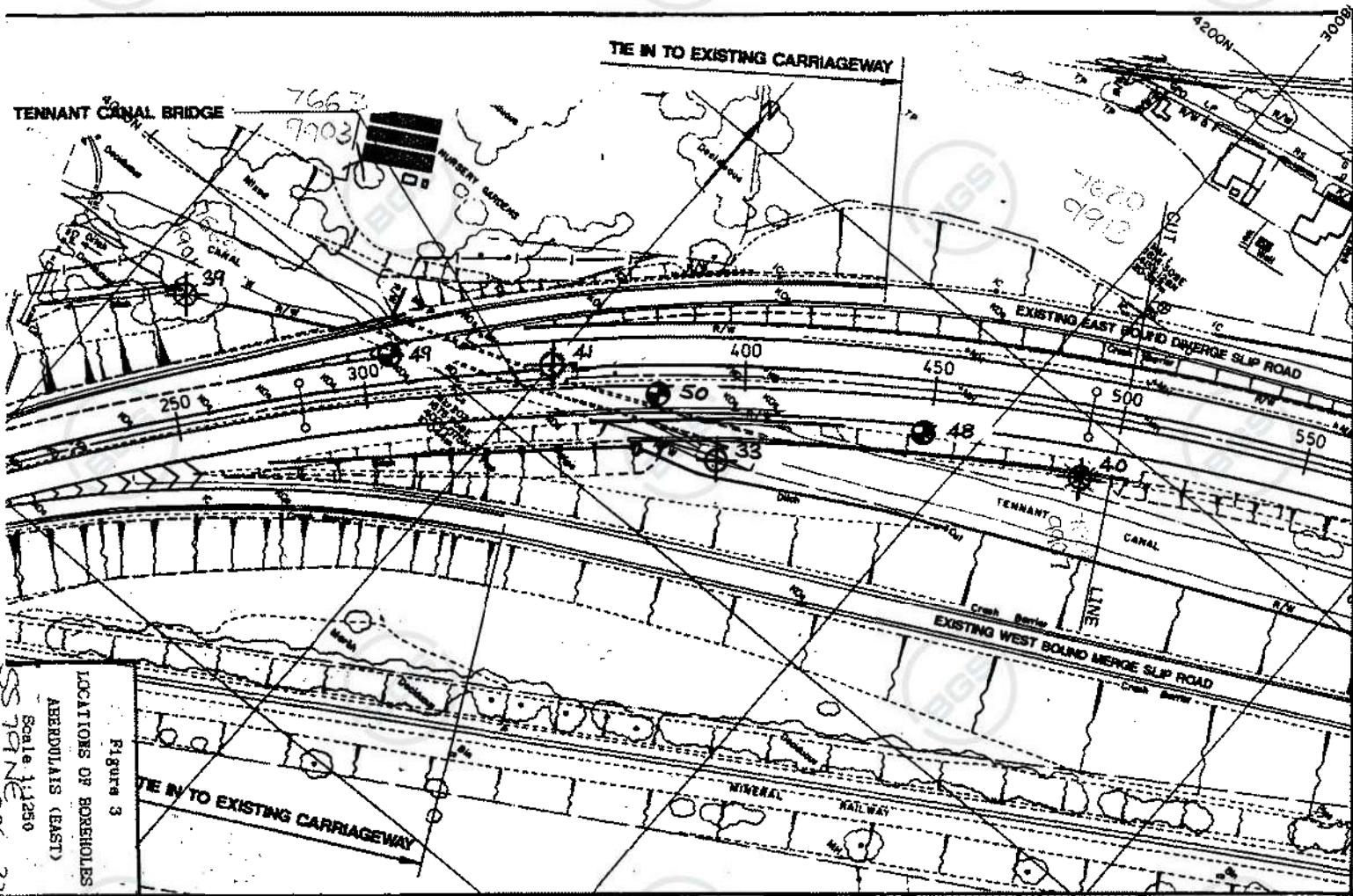
Earlswood Materials Laboratory		Lab. Ref. 429/91		Borehole No. 48						
Equipment and Methods Hand dug inspection pit to 1.2m depth. Light cable percussion : 300mm diameter to 16.0m; 250mm to 25.0m		Job : A465 ADDITIONAL BOREHOLES SS79NE 226								
Ground Level m. A.O.D. 7.98		Coordinates 4787E-4869N 7678 9906		Dates 19/3/92 to 27/3/92						
Strata Descriptions	Ref. Level	Legend	Depth m	Sample Depth m	Type/ Core Run	In-situ Liquidity	SCN	SCN	SCN	Remarks
Brown very clayey fine to coarse angular GRAVEL with many cobbles and boulders (MADE GROUND).	S.L.		0.00	0.00 - 1.00	B-1					
			(1.40)							
Soft brown, grey, brownish yellow and black sandy gravelly CLAY with some Sandstone cobbles, timber, and plant remains (MADE GROUND).	0.00		1.40	1.00 - 1.95	B-2	C 67				1100 sample attempted no recovery
			(0.00)	2.00 - 2.30	B-3					
Medium dense orange and grey very clayey sandy fine to coarse GRAVEL with pockets of orange silty sand and many cobbles and boulders (MADE GROUND).	0.60		2.30	2.30 - 2.95	B-4	C 52				
				3.00 - 3.30	B-5					
				3.30 - 3.95	B-6	C 10				
			(2.00)	4.00 - 4.30	B-7					
				4.30 - 4.95	B-8	C 34				
Soft brown sandy gravelly CLAY with cobbles (MADE GROUND).	2.70		5.20	5.20 - 5.40	B-9					
			(0.00)	5.40 - 5.95	B-10	C 20				
Medium dense to dense brown sandy subangular to subrounded GRAVEL with many subrounded cobbles (Fluvio-glacial Gravels).	1.00		6.30	6.30 - 6.70	B-11					
				7.00 - 7.45	B-12	C 46				
			(2.00)	7.50 - 8.20	B-13					
				8.30 - 8.70	B-14	C 16				
Soft brown and grey sandy gravelly SILT with many cobbles (Fluvio-glacial Deposits?)	-0.72		8.70	8.70 - 9.05	B-15					
Soft orange, grey brown, and dark grey gravelly sandy SILT with some cobbles and some boulders; Gravel includes occasional fragments of Coal; in places, the sand fraction is dominant (Glacial fill?).	-1.12		(1.30)	9.30 - 9.70	B-16					
			9.80							
Borehole Continued										
General Remarks Chiselling: 1.5 to 1.4m (0.00m); 2.5 to 2.4m (0.00m); 10.5 to 10.4m (1.20m); 13.5 to 13.4m (0.00m); 15.5 to 15.4m (0.00m); 16.5 to 16.4m (1.00m); 17.5 to 17.4m (0.00m); 20.5 to 20.4m (1.00m); 21.5 to 21.4m (0.00m); 23.5 to 23.4m (1.20m); 24.5 to 24.4m (1.20m). Standpipe piezometer installed top seal 7.5m to 8.0m sand filter 8.0m to 10.0m porous element at 9.0m remainder of borehole backfilled with groutings.		Key Sample Types U Undisturbed D Disturbed B Bulk Disturbed W Water J Jar		In-Situ Tests S SPT Value C CPT Value N No Penetration V Vane Test L Point Load Index		Logged by RLS		Scale 10m/sheet		

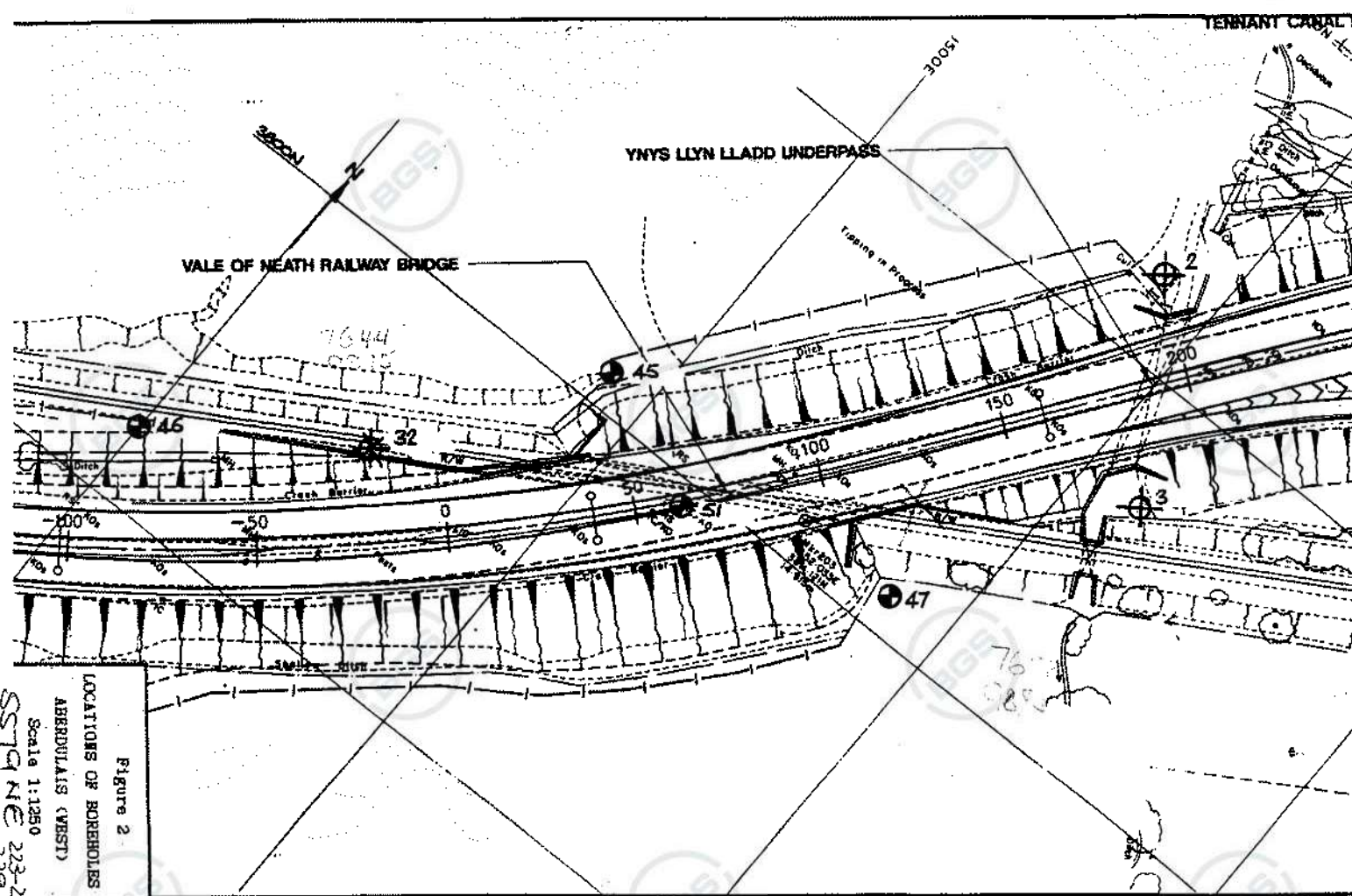


Earlswood Materials Laboratory		Lab. Ref. 429/91		Borehole No. 48							
Equipment and Methods Hand dug inspection pit to 1.2m depth. Light cable percussion : 300mm diameter to 18.0m; 250mm to 26.0m		Job : A465 ADDITIONAL BOREHOLES SS79NE 226									
Ground Level m. A.O.D. 7.98		Coordinates -4767E-4069N 7678 9906		Dates 19/3/92 to 27/3/92							
Strata Descriptions		Ref. Level	Legend	Depth m	Sample Depth m	Type/ Core Ref	In-situ Tests	JCH	SCN	MSD	Remarks
Soft orange, grey brown, and dark grey gravelly sandy SILT with some cobbles and some boulders. Gravel includes occasional fragments of Coal; in places, the sand fraction is dominant (Glacial Till?).				10.00	10.00 - 10.45	S 17	C 51				
					10.80 - 11.20	S 18					
					11.50 - 11.95	U 19					
				(4.00)	12.00 - 12.80	S 21	V 27				
					12.80 - 13.00	S 22	V 28				
					13.00 - 13.30	S 23					piston sample attempted no recovery
					13.50 - 13.85	U 25					
		-6.92		13.80	13.80 - 14.00	S 26					
					14.00 - 14.45	S 27	C 74				WFO sample refused at 13.8m on obstruction
Very stiff grey sandy gravelly CLAY of low plasticity with many subrounded cobbles and boulders of grey Sandstone (Glacial Till).					14.80 - 15.20	S 28					
				(2.30)	15.50 - 16.05	S 29	C 68				
					16.50 - 16.95	S 30					
		-6.12		16.10	16.50 - 16.90	S 31	C 60/40				
					17.00 - 17.45	S 32					van test attempted refused on obstruction
					17.50 - 18.00	S 33					
				(3.40)	18.00 - 18.30	S 34	C 52				
					18.50 - 19.00	S 35					van test attempted refused on obstruction
					19.00 - 19.50	S 36					
					19.50 - 20.00	S 37					
Borehole Continued					20.00						
General Remarks Chiselling: 1.3 to 1.4m (0.3hrs); 3.1m to 3.4m (0.3hrs); 10.1m to 10.6m (1.2hrs); 13.8m to 15.0m (0.5hrs); 15.0m to 18.1m (4hrs); 16.1m to 16.9m (1.0hrs); 17.5m to 17.7m (1hr); 20.5m to 20.8m (1.0hrs); 21.0m to 21.6m (3hrs); 23.8m to 24m (1.2hrs); 24.7m to 25.0m (1.2hrs). Standpipe piezometer installed: top seal 7.5m to 8.0m; sand filter 8.0m to 10.0m; porous element at 9.0m; remainder of borehole backfilled with arisings.		Key Sample Types U Undisturbed D Disturbed S Bulk Disturbed W Water J Jar NR No Recovery		In-Situ Tests SPT Value CPT Value Seating Blow No Penetration V Vane Test Is Point Load Index		Logged by ALS Scale 10m/sheet					



Earlswood Materials Laboratory		Lab. Ref. 429/91		Borehole No. 48							
Equipment and Methods Hand dug inspection pit to 1.2m depth. Light cable percussion : 300mm diameter to 18.0m; 250mm to 25.0m		Job : A465 ADDITIONAL BOREHOLES									
		SS79NE 226									
Ground Level		Coordinates		Dates							
m. A.O.D. 7.98		-4787E -4669N 7678 9906		19/3/92 to 27/3/92							
Strata Descriptions	Red Level	Legend	Depth m	Sample Depth m	Type/ Core m	In-situ tests	FCR	SCN	AMS	Remarks	
Medium dense grey very clayey very silty fine to coarse SAND with a little fine gravel (including fragments of Coal) and occasional cobbles and boulders (Glacial Till).			20.00	20.00 - 20.45	0.37	C 80/40					
			20.45	20.45 - 21.00	0.55						
Very soft grey sandy SILT (Glacial Till).			21.00	21.00 - 22.00	0.28	VE.0					
			22.00	22.00 - 22.80	0.40	VE.7					
			22.80	22.80 - 23.00	0.11	V 10					
			23.00	23.00 - 23.50	0.42	V 12					
Very dense grey slightly clayey angular to subrounded fine to coarse GRAVEL and subrounded COBBLES with many boulders.			23.50	23.50 - 24.00	0.28						
			24.00	24.00 - 24.45	0.44	C 85					
			24.45	24.45 - 25.00	0.45	C 80					
End of Borehole			25.00								
General Remarks Chiselling: 1.3 to 1.4m (0.8m); 2.1m to 2.4m (0.8m); 10.1m to 10.6m (1.20m); 13.6m to 14.0m (0.8m); 15.0m to 16.1m (4m); 16.1m to 16.5m (1.8m); 17.2m to 17.7m (1m); 20.5m to 20.8m (1.0m); 21.0m to 21.5m (2.5m); 23.8m to 24m (1.20m); 24.7m to 25.0m (1.20m). Standpipe piezometer (installed top seal 7.5m to 8.0m sand filter 8.0m to 10.0m porous element at 9.0m; remainder of borehole backfilled with arisings).		Key Sample Types Undisturbed Disturbed Bulk Disturbed Water Jar		In-Situ Tests SPT Value CPT Value No Penetration Vane Test Is Point Load Index		Logged by RLS					
						Scale 10m/sheet					







SS79NE 180

Earlswood Materials Laboratory		Lab. Ref. 531/92		Borehole No. 80 Sheet No. 1 of 2. Depth 0 to 10 Metres.	
Equipment and Methods Light cable percussion boring : 250mm diameter casing to 9.00m followed by 200mm casing to 16.50m.		Job : A465 ABERDULAIS SLIP ROADS			
Ground Level m. A.O.D. 6.57		Coordinates E276866 N199101		Dates 1-4/12/92	
Strata Descriptions	Red Level	Legend	Depth m	Sample Depth m	Type/ Core Run
Soft grey sandy very gravelly silty organic clay with many cobbles and occasional boulder (MADE GROUND)	S.L.		0.00	0.00 - 0.80	B 1
				0.80 - 0.90	B 2 C 19
			(2.00)	1.00 - 1.05	B 3 C 40
			2.80	2.80 - 2.95	B 4 C 10
Soft brown very peaty gravelly silty organic CLAY with occasional cobbles	8.87			3.15 - 3.30	B 5
			(1.00)	3.50 - 3.95	B 6 C 24
			4.00	4.00 - 5.00	B 7
Soft to firm grey silty CLAY	2.07		(0.40)	4.80	B 8 P
Very dense grey brown sandy subangular to rounded sandstone GRAVEL and COBBLES with occasional boulder	1.87		(0.90)	5.25 - 5.70	B 9 C 66
Medium dense grey slightly clayey very sandy SILT with occasional gravelly bands	0.72		(1.20)	6.25 - 6.70	U 11
			(7.00)	6.75 - 7.20	U 12
Dense to very dense grey brown clayey silty subangular to subrounded sandstone GRAVEL and COBBLES with occasional boulder	-0.46		7.05	7.25 - 7.60	B 13 C 80
			(7.00)	7.65	D 14
			10.00		C 86 / 126
Borehole Continued					
General Remarks Chiselling: 6.50m to 8.85m (1.70hrs); 7.65m to 8.60m (4.50hrs); 8.60m to 9.30m (2.60hrs); 9.90m to 12.45m (4.60hrs); 12.45m to 13.60m (2.0hrs); 14.80m to 14.70m (1.0hrs).		Key S SPT Value C CPT Value + Seating Blows # No Penetration Y Vane Test In Point Load Index Sample Types U Undisturbed D Disturbed S Bulk Disturbed W Water P Piston J Jar NR No Recovery			
In-Situ Tests S SPT Value C CPT Value + Seating Blows # No Penetration Y Vane Test In Point Load Index		Logged by JCO Scale 10m/sheet			



SS79NE 180

Earlswood Materials Laboratory		Lab. Ref. 531/92		Borehole No. 80 Sheet No. 2 of 2. Depth 10 to 20 metres.	
Equipment and Methods Light cable percussion boring : 250mm diameter casing to 9.00m followed by 200mm casing to 15.60m.		Job : A465 ABERDULAIS SLIP ROADS			
		Ground Level m. A.O.D 6.57		Coordinates E276866 N199101 Dates 1-4/12/92	
Strata Descriptions	Red Level	Legend	Depth m	Sample Depth m	Type/ Core Run
Dense to very dense grey brown clayey silty subangular to subrounded sandstone GRAVEL and COBBLES with occasional boulder	10.00		10.00		C 58
	17.00			C 47	
	15.00			C121 7260	
End of Borehole	-8.48		15.00		
General Remarks Chiselling: 5.50m to 5.85m (1.70hrs); 7.65m to 8.60m (4.50hrs); 8.60m to 8.65m (2.50hrs); 9.90m to 12.45m (4.50hrs); (2.45m 13.50m (2.0hrs); 14.90m to 14.75m (1.0hrs).		Key Sample Types U Undisturbed D Disturbed B Bulk Disturbed W Water P Piston J Jar NR No Recovery		In-Situ Tests C SPT Value CPT Value + Seating Blows # No Penetration V Vane Test Is Point Load Index	
		Logged by JCO			
		Scale 10m/sheet			

WEST GLAMORGAN COUNTY COUNCIL
COUNTY ENGINEER AND SURVEYOR'S DEPARTMENT
LABORATORY TEST REPORT

ON

SS79NE/189-192 *

TRIAL HOLES

Job Name Cilfren - Land Adjacent to Brin Amlwg - 10.262

Lab. Ref 74/6 Your Ref/Order No.

Date of excavation :- 2nd August 1977

Trial Hole 2 SS79NE 189
7692 9954

Depth (m)	Symb- olic log	Description
0.20		Top soil
0.60		Soft light brown silty clay with cobbles and boulders
1.40		Soft dark brown silty CLAY
		Loose flaggy SANDSTONE
		HOLE DRY

Trial Hole 3 SS79NE 190
7694 9956

Depth (m)	Symb- olic log	Description
0.20		Top soil
0.60		Soft light brown clayey SILT with cobbles
1.60		Soft dark brown silty CLAY with broken sandstone pieces
		Bottom of hole
		HOLE DRY

Trial Hole 4 SS79NE 191
7697 9955

Depth (m)	Symb- olic log	Description
0.20		Top soil
1.70		Greyish brown sandy SILT with lenses of brown clayey silt and subrounded cobbles and gravel
		sandstone blocks
		SANDSTONE HOLE DRY

Trial Hole 5 SS79NE 192
7698 9959

Depth (m)	Symb- olic log	Description
0.15		Top soil
0.60		light brown sandy SILT with cobbles and gravels
1.00		light brown silty SAND with cobbles and gravel
1.20		SANDSTONE
		Bottom of hole
		HOLE DRY



APPENDIX D: CIRIA C552 RISK METHODOLOGY

The following tables are derived from CIRIA C552 and have been used to define the risk rating presented in the Qualitative Risk Assessment matrix.

Classification of consequence

Classification	Definition
Severe	Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short term risk of pollution (note; Water Resources Act contains no scope for considering significant pollution) of sensitive water resource. Catastrophic damage to building/property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem. (Note the definitions of ecological systems within the Draft Circular on Contaminated Land DETR, 2000).
Medium	Chronic damage to human health ('significant harm', as defined In DETR, 2000). Pollution of sensitive water resources (note; Water Resources Act contains no scope for considering significant pollution). A significant change in a particular ecosystem, or an organism forming part of such an ecosystem. (Note the definitions of ecological systems within the Draft Circular on Contaminated Land DETR, 2000).
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm', as defined In DETR, 2000). Damage to sensitive buildings/structures/services or the environment.
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.

Classification of probability

Classification	Definition
High likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution.
Likely	There is a pollutant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period that such an event would take place, and is even less likely in the shorter term.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Matrix of consequence against probability to gain a risk classification

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely	High Risk	Moderate Risk	Moderate/Low Risk	Low Risk
	Low likelihood	Moderate Risk	Moderate/Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate/Low Risk	Low Risk	Very Low Risk	Very Low Risk

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Phase 1 Geoenvironmental Assessment Desk Top Study

APPENDIX E: UXO

UNEXPLODED BOMB RISK MAP



SITE LOCATION

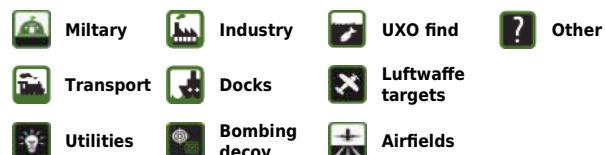
Location: SA10 8DB,
Map Centre: 276621,199255



This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

- **High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- **Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- **Low:** Areas indicated as having 15 bombs per 1000acre or less.



How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

We typically recommend that a detailed UXO desk study and risk assessment is undertaken for sites in an area with a moderate or high bombing density. Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then [additional detailed research](#) is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm that there is a low potential for UXO to be present on your site, then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

If you are unsure whether other sources of UXO may be present, you can request one of our [pre-desk study assessments \(PDSA\)](#) by emailing a site boundary and location to pdsa@zetica.com.

You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

If I have any questions, who do I contact?

tel: [+44 \(0\) 1993 886682](tel:+44201993886682) email: uxo@zetica.com web: www.zeticauxo.com

The information in this UXB risk map is derived from a range of sources and should be used with the [accompanying notes on our website](#).

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