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CONVATEC LIMITED

RHYMNEY WIND AND SOLAR DEVELOPMENT

PHASE 1 DESK STUDY

MARCH 2024

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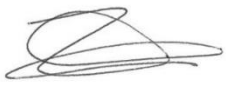
RHYMNEY WIND AND SOLAR DEVELOPMENT

PHASE 1 DESK STUDY

MARCH 2024

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Appendix B – Groundsure Insight Report
Appendix C – Coal Authority Consultants Report
Appendix D – Proposed Development Plan
Appendix E – Historical Maps
Appendix F – Site Walkover Survey Form

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Appendix G – Site Walkover Survey Photographs

Appendix H – CIRIA Risk Classification Definitions

DRAWINGS	TITLE	SCALE
BR10167-035	Site Location Plan	1:5000
BR10167-036	Mining Constraints Plan	1:5000
BR10167-037	Geotechnical and Geoenvironmental Constraints Plan	1:5000

ISSUED REPORTS

VERSION	STATUS	DATE
V0.1	Draft for Comment	05.02.2024
V1.0	Final	11.03.2024

EXECUTIVE SUMMARY

Client	Convatec Limited
Site	The site is located northwest of Rhymney, South Wales, and is centred at National Grid Reference E 310033 N 208227. The initial survey options area comprises of 54Ha of grassed land and the provisional development boundary as of writing this report comprises of 24Ha.
Current Land Use	The site is currently used for sheep grazing.
Past Site Use	Mining features and infrastructure for coal and ironstone such as surface workings, shafts, railway tracks, reservoirs and an Engine House are recorded on the earliest 1875 historical mappings records until the early 1900s. On 1972-1977 historical mapping records, the southeastern half of the site is recorded as a disused "Tip" presumed to be infilled surface workings with mine-related waste. All records of surface mine workings and tips are removed in 1980's/1990's historical mapping records. From 2001 aerial imagery to present day, the site has not been developed or used for additional mining activities.
Proposals	The site is planned for the development of three wind turbines with a generating capacity of around 5MW each and a maximum tip height of 150m, alongside around 5MW (AC) ground mounted solar PV arrays and a singular substation.
Geology	The majority of the site is underlain by artificial made ground deposits with the exception of 2.5Ha in the southeast corner and a 9.5Ha area of worked ground across the northwest/north of the site. BGS geological mapping identified two small areas of Devensian Till in the northeastern (approximately 1.5Ha) and northwestern (approximately 2.6Ha) corners of the site. The northern third of the site is underlain by the South Wales Lower Coal Measures Formation and the southern two thirds of the site is underlain by the South Wales Middle Coal Measures Formation, both comprising of mudstone, siltstone, and sandstone.
Hydrogeology & Hydrology	The Devensian Till is classified as a Secondary Undifferentiated aquifer and the South Wales Lower and Middle Coal Measures Formation are classified as a Secondary A bedrock aquifer. The OS MasterMap water network dataset provided in the Groundsure report identified 15no. records of inland rivers and one record of an area of marshland, predominantly in the eastern third of the site. A walkover survey of the site in January 2024 recorded dry and vegetated water channels with occasional frozen water along the eastern and southern boundary of the site. However, a Water Features Survey conducted in December 2023 recorded smooth to chaotic flowing water within these channels flowing east/south towards the Rhymney River as well as heavily saturated ground, and areas of localised pools of water in topographic depressions. Therefore, during warmer conditions, it is assumed that flowing water surface features are present along the eastern and southern boundary as well as saturated ground conditions across the site.
Mining & Quarrying	The Coal Authority Consultants Report identified underground coal workings beneath the site in 8no. coal seams at depths from ground level to 235mbgl and a maximum extraction thickness of 366cm. The report also identified workings in 5no. ironstone seams at depths from ground level to 131mbgl and a maximum extraction thickness of 780cm. Furthermore, 36no. records of mine entries were identified on and within the site boundary. Multiple surface workings are recorded across the entire site in historical mapping records from 1897 to the 1960s. BGS mapping records identify an area of historical opencast mining across the north of the site.
Geoenvironmental Risk	Contaminants associated with made ground deposits of backfill material/tip material within mine entries and mine workings have the potential to affect the human receptors, controlled waters, and built environment. Backfill/tip material

	is presumed to be mining related but cannot be confirmed without an intrusive ground investigation. Potential contaminants associated with mine related waste include heavy metals, sulphur, asbestos, polycyclic aromatic hydrocarbons, and
Geotechnical Constraints	There is a risk of collapsible ground conditions associated with the non-engineered backfill of mine workings and mine entries across the site. There are a lack of publicly available mine entry or workings sterilisation or treatment records to determine whether all of the mine workings/entries on site were remediated. Furthermore, the Groundsure report identified a moderate risk of landslides in the southwest of the site. However, this only considers the natural geology and not ground instability caused by mining-related features or activities.
Other Risks	The risk of UXO (unexploded ordnance) is low and does not require a further detailed UXO assessment. Furthermore, the site is situated in an area within which less than 1% of properties exceed the Radon Action Level, and therefore, no radon protection measures are required.
Recommendations for Further Works	An intrusive ground investigation is recommended to consist of boreholes to a depth of at least 30m to 50m to target the proposed areas of development. The ground investigation will determine the extent, location, depth, and serialisation of the mine workings and mine entries. The ground investigation will also determine the thickness of the made ground deposits to allow efficient foundation design and a geoenvironmental assessment for contaminated land.
Environmental Risk Prior to Mitigation	Moderate to Low
Environmental Risk Following Mitigation	Moderate/Low to Very Low

1 INTRODUCTION

1.1 Instructions

1.1.1 Wardell Armstrong ('WA LLP') was instructed by Convatec Limited ('the Client') to progress a Phase I Desk Study report for a proposed combined wind and solar development known as the Convatec Manufacturing Hub ('the site').

1.1.2 The report has been prepared in line with our proposal (Ref. PE/GS/BR10167/FP02) and WA LLP Standard Terms of Engagement dated 8th of August 2023. The Standard Terms and Limitations to this report are presented in **Appendix A**.

1.2 Site Location

1.2.1 The "site" referred to within the Phase 1 Desk Study refers to the initial survey options area comprising of 54Ha of grassed fields centred at National Grid Reference E 310033 N 208227. This is shown as a blue line boundary in **Figure 1**.

1.2.2 At the time of writing this report, a reduced provisional development boundary is being considered by the Client that will exist within the initial survey options area (the site) with the exception of a potential private cable route that extends 95m east and 88m north to Convatec Limited in the Heads Of The Valley Industrial Estate (NP22 5RL). However, it is noted that the eastern private cable route to Convatec Limited is yet to be confirmed. The area of the provisional development is shown as a red line boundary in **Figure 1**.

1.2.3 The proposed development red line boundary has not been finalised, and therefore for the purpose of the report, the site boundary referred to within the desk study consists of the larger initial survey options area (blue boundary) to accommodate any changes to the proposed development.



Figure 1 – Satellite image showing the desk study site boundary (blue) and the proposed development boundary as of writing the report (red).

1.2.4 The surrounding land predominantly comprises of open fields to the north, south, and west of the site. The A469 road and Heads of the Valley Industrial Park comprising of Convatec, HSNF Wales Warehouse, and additional businesses is located east of the site.

1.2.5 The location of the site is presented in **Drawing BR10167-035.**

1.3 Scope and Objectives

1.3.1 The purpose of this report is to identify and examine in broad terms readily available information relating to the:

- Past and current uses of the site and surrounding areas.
- Environmental setting including geology, mining, hydrogeology, and hydrology.
- Potential contamination sources, pathways, and receptors.
- Potential stability and geotechnical constraints and liabilities that may have arisen in connection with the historical and/or present use of the Site, and the requirement or otherwise for further studies including potential intrusive and non-intrusive ground investigation works.

1.3.2 This report has been produced in general accordance with current recognised guidance and with the procedures set out in the following:

- Environment Agency's Land Contamination Risk Management (LCRM) (published October 2020 (updated July 2023)).
- British Standard BS EN ISO 21365: 2020 Soil Quality – Conceptual Site Models for Potentially Contaminated Sites.
- British Standard BS 5930:2015 + A1:2020 – Code of Practice for Ground Investigations.

1.4 Data Sources

1.4.1 This report has been prepared following examination of the following key information:

- Groundsure Insight report (Ref. GSWA1-2VF-15B-DDL-WTF) prepared by Groundsure Limited and is presented in **Appendix B**. The report contained the following information:
    - Hydrological and hydrogeological conditions.
    - Groundwater vulnerability mapping.
    - Details of sensitive land use.
    - Registered landfill, waste transfer and waste treatment or disposal sites. Recorded pollution incidents .
    - Discharge consents.
    - Licenced groundwater abstractions.
    - British Geological Survey (BGS) recorded mineral sites.
    - Mining instability/hazards, including natural and mining cavities.
    - Ground instability hazards.
    - Radon affect areas.
    - Information provided by the Local Authority.
- British Geological Survey (BGS) (England and Wales 1:50,000, Sheet 232 Abergavenny (1990) and Geological Survey of Great Britain National Grid Series 1:10 560/1:10 000 maps, Sheet SO00NE (1972) and Sheet SO10NW (1979)), and BGS Geoindex borehole records.
- Zetica Interactive UXO Risk Map.
- Coal Authority Consultants Report Ref. 51003394437001 (**Appendix C**).

1.5 Proposed Use

1.5.1 The site is planned for the development of three wind turbines with generating capacity of around 5MW each, and maximum tip height of 150m, alongside 5MW (AC) ground mounted solar PV arrays, a substation, and associated infrastructure. At the time of writing the report, two temporary construction compounds are planned to be developed in the northeast and southeast corners of the site.

1.5.2 The project is planned to be delivered with both private wire and export connection. Export from the project will primarily be to an industrial consumer, with any surplus planned to be exported to the local distribution system.

1.5.3 A plan of the proposed development is presented in **Appendix D.**

2 SITE HISTORY & PRESENT LAND USE

2.1 Site History

2.1.1 Historical maps presented in **Appendix E** (1:2,500 and 1:10,560) have been assessed to identify previous land uses, significant potentially contaminative processes and/or ground workings or surface features that may present a geotechnical hazard.

2.1.2 The history of the site based upon the available Ordnance Survey mapping and freely available satellite imagery between 1875 and 2023 is summarised below in **Table 2.1**.

TABLE 2.1: SUMMARY OF HISTORICAL ON-SITE LAND USE

Date	Site Land Use
1875 (1:2500 & 1:10,560)	• "Air Shaft" recorded in the south of the site. • "Air Shaft" recorded in the northeast corner of the site. • "Old Shaft (Ironstone)" recorded on the eastern boundary of the site. • "Engine House" recorded in the west of the site. • Surface working recorded across the site. • "Rhymney Limestone Railway" orientated east to west crossing the northern half of the site and orientated northwest to southeast in the eastern half of the site. • One building present in the west of the site within an area labelled as "Coedcae-du". • "Sluice" recorded within the northeast corner of the site.
1879 (1:10,560)	• Site remains unchanged.
1895-1899 (1:10,560)	• Engine Houses have been removed. • "Reservoir" is present on the central western boundary of the site. • Multiple surface workings remain present across the site.
1915-1919 (1:10,560 & 1:2,500)	• "Rhymney Limestone Railway" is labelled as "Old Railway". • Air Shaft in the south and northeast of the site are labelled as "Old". • "Rises" recorded in northwest of the site. • "Reservoir" present in northeast corner of the site.
1938 (1:10,560)	• Site remains unchanged.
1960 (1:10,560)	• Evidence of surface workings removed from the north and west of the site, replaced by record of "Opencast workings". • Buildings within the Coedcae-du area have been removed. • Record of reservoirs, old coal level, and rises have been removed. • Pond present in the northwest corner of the site. • Drain orientated north-south present along the eastern site boundary.
1972-1977 (1:10,560 & 1:2,560)	• Remaining surface workings across the south of the site have been filled in and recorded as "Tips (disused)".
1982-1985 (1:10:560 & 1:2,500)	• The record of "Tips" has been removed from the majority of the with the exception of 0.37Ha in the southeastern corner.
2001 (Aerial imagery)	• The site primarily comprising of green land with no visible evidence of exposed mine workings or tips. • Dirt tracks are present across the centre of the site.
2023 (Aerial imagery)	• Site remains unchanged.

2.1.3 **Table 2.2** summarises the history of the surrounding vicinity between 1875 and 2023.

TABLE 2.2: SUMMARY OF HISTORICAL OFF-SITE LAND USE	
Date	**Site Land Use**
1875 (1:2500 & 1:10,560)	• Six "Air Shafts"/ "Shafts" recorded within a 500m radius surrounding the site. • "Old Air Shaft" recorded 150m north. • "School" present approximately 300m west of site. • "Brick and Tile Works" recorded approximately 250m east of site. • "Level (coal)" recorded approximately 100m west and 20m northeast. • Rhymney Reservoir present 450m north of site. • "London & North Western Railway" present approximately 50m east of the site. The railway is orientated northwest to southeast. • "Carnau Bute Houses" present 150m northeast of site. • "Nantllesg Pit (Ironstone)" and "Nantllesg House" and associated "Shaft" and "Engine House" present across 20-120m northwest of site. • "Pitwell (Ironstone) and associated "Shaft" and two "Engine House" buildings present approximately 250m northwest of the site. • Rhymney town present approximately 250m west of the site. • Collection of small buildings assumed to be a farm under the name of "Cwm-Carno".
1879 (1:10,560)	• Surrounding site remains unchanged.
1895-1899 (1:10,560)	• Nantllesg Pit and Pitwell are labelled as "disused". • Several "Old Quarry" records and multiple surface workings within 500m north, south, and west of the site. • All Coal Levels are labelled as disused. • "Carno Pit" recorded 400m west of the site, labelled as disused. • Cemetery present 200m northeast of site.
1915-1919 (1:10,560 & 1:2,500)	• Airshaft located 250m south of the site is recorded as "old". • "Old Quarry" labels removed from north of the site.
1938 (1:10,560)	• Surrounding site remains unchanged.
1960 (1:10,560)	• "Opencast Workings" recorded immediately east of the site. • "Upper Cwm-carno Farm" present immediately northwest of the site. • London & North Western Railway is recorded as "Dismantled Railway". • Tanks recorded at Nantllesg House, northwest of the site.
1972-1977 (1:10,560 & 1:2,500)	• "Tips (disused)" extending off site to the north, east, and the south. • Additional disused tip present 250m northwest and 500m southwest of the site. • Buildings removed 250m west of the site. • Overhead pylon cables constructed within 100m west of the site.
1982-1985 (1:10:560 & 1:2,500)	• Construction of Heads of the Valley Industrial Estate east of the site consisting of 8.5Ha of 11no. buildings/factories. • Extend of the tip has been reduced to a couple smaller 500-1,000m^2 pockets north, south and west of the site.
2001 (Aerial imagery)	• Two buildings present 150m west of the site. • Visible overgrown surface workings south of the site. • Head of the Valleys Industrial Estate has extended 5.5Ha south.
2023 (Aerial imagery)	• The surrounding site remains unchanged.

2.2 Current Site Use

2.2.1 A site walkover survey was undertaken on the 17th of January 2024. The key findings of the site walkover are summarised below and presented in full within **Appendix F**. Site photographs collected as part of the site walkover are presented within **Appendix G**. All photos can be made available upon request.

2.2.2 The site comprises of open and fenced grassed fields used for sheep grazing (Photograph 1 in **Appendix G**).

2.2.3 The site was accessed through a metal gate in the northeast corner of the site via an unnamed tarmac road southwest of the A469 (Photograph 2).

2.2.4 Vegetated ditches assumed to be water channels were recorded along the eastern boundary, the southeast, and south of the site. However, flowing or stagnant water was not recorded during the site walkover survey. The majority of the ditches were noted to be dry or to contain patches of frozen water. Evidence of a concrete drain was noted underneath the northeastern track (Photograph 3). Areas of frozen ground and several iced puddles of water were noted randomly distributed across the site (Photograph 4). It is noted that the site walkover was conducted during cold and icy weather conditions in the winter season and there is a potential that flowing water courses could be present across the site during the warmer summer months.

2.2.5 The majority of the site is covered in short grass and patches of tall grass (<0.75m in height) were recorded randomly distributed across the site (Photograph 5).

2.2.6 Topography was varied across the site, generally declining in elevation to the north and south from a higher elevated central ridge orientated east to west across the western half of the site. This western central ridge declined in elevation towards the east. The northeastern track orientated north to south was found to be generally flat-lying with a slight incline towards the south. A 16m depression was recorded in the southwest of the site (E 309704 N 208080), declining in elevation from 389m above ordnance data (AOD) to 373mAOD in the south (Photograph 6).

2.2.7 During the site walkover, there was no evidence of exposed surface workings or tip material on site. However, vegetated and exposed waste stockpiles were recorded immediately off-site along the entire southern boundary. Two areas of slope failure were recorded on the stockpiles to the southeast (E 310199 N 207965) and southwest of the site (E 309675 N 208044), presented in Photograph 7 and 8, respectively.

Partially vegetated scree was noted at the base of the southwestern stockpiles (Photograph 8).

2.2.8 One localised area of ground movement was noted in the southwest of the site at the top of the slope of the 16m depression described in paragraph 2.2.5, whereby the ground had slipped approximately 0.3m to the south (Photograph 9).

2.2.9 Overheard and evidence of underground services were not recorded on site, however, overhead telephone pylons were observed 60m west of the site orientated north to south.

2.2.10 A 1,000m^2 area of waste material was noted in the centre of the site, immediately south of the proposed central wind turbine, centred at E 310012 N 208224. The waste consisted of rubber tyres, plastic bags, tarpaulin, rusted metal sheets, rope, wood, barbed wire, and a sheep skeleton (Photograph 10 and 11).

2.2.11 A borehole installed with 50mm polyvinyl chloride (PV*C*) pipe was noted in the southeast of the site open and unlocked, seemingly unused, which does not appear in British Geological Survey (BGS) records (Photograph 12).

3 GEOLOGICAL AND HYDROGEOLOGICAL SETTING

3.1 Geology

3.1.1 The assessment of the geology beneath the site and the surrounding areas is based on freely available geological mapping, online GeoIndex database published by the BGS, and supplementary information provided in the Groundsure Insights Report.

3.1.2 A copy of the Groundsure Insight Report can be found in **Appendix B**.

3.1.3 A summary of the geological information is provided below in **Table 3.1**.

TABLE 3.1 - SUMMARY OF GEOLOGICAL INFORMATION

Strata	Description
Artificial Deposits	The Groundsure report and BGS mapping indicates that there are artificial made ground deposits across the site with the exception of approximately 2.5Ha in the southeast corner. The Groundsure report also identified a 9.5Ha area of worked ground in the northwest and north of the site. Artificial made ground deposits also surround the site to the north, east, south, and west.
Superficial Deposits	The Groundsure report and BGS mapping recorded two small areas of Devensian Till in the northeast (approximately 1.5Ha) and northwest (approximately 2.6Ha) corners of the site.
Bedrock Strata	The northern third of the site is underlain by the South Wales Lower Coal Measures Formation, comprising of mudstone, siltstone, and sandstone. The southern two thirds of the site is underlain by the South Wales Middle Coal Measures Formation, comprising of mudstone, siltstone, and sandstone. The South Wales Coal Measures are described by the BGS as "*grey productive coal-bearing mudstones/siltstones, with seatearths and minor sandstones".*
Geological Structure	The Groundsure report identified four fractures of moderate to low permeability and one inferred fault on site (displacement unknown). The report also identified records of nine inferred coal seams, eight observed coal seams, and two marine bands on site.

3.2 BGS Borehole Records

3.2.1 There are no publicly available borehole records on site. The details of the closest two borehole records are as follows:

- Borehole SO10NW429, located 750m north of the site, (ID: "A465 BERGAVENNY TO HIRWAUN 143") encountered the following ground conditions:
  - 0.00 – 0.50mbgl: Made Ground
  - 0.50 – 2.50mbgl: Firm, grey, brown slightly silty sandy CLAY with occasional gravels and cobbles of quarzitic sandstone.

- 2.50 – 4.40mbgl: Firm to stiff, light grey slightly silty sandy CLAY with occasional gravels of coal and mudstone.
- 4.40 – 4.90mbgl: Very stiff brown grey locally orange, brown slightly silty sandy CLAY with some gravels of mudstone.

- Borehole SO10NE343, located 750m north of the site, (ID: "A465 BERGAVENNY TO HIRWAUN DUALLING TP50") encountered the following ground conditions:
  - 0.00 – 0.20mbgl: Topsoil
  - 0.20 – 0.40mbgl: Stiff light brown and grey sandy SILT with some rootlets.
  - 0.40– 1.50mbgl: Firm light grey and light brown slightly silty CLAY with occasional gravel and cobbles of mudstone and sandstone.
  - 1.50– 2.70mbgl: Soft grey and brown grey slightly silty vey sandy CLAY.
  - 2.70-3.30mbgl: Very stiff brown and brown grey slightly silty CLAY with some gravels of mudstone and sandstone and occasional cobbles and boulders of sandstone.

3.3 Soil Geochemistry

3.3.1 A total of 22no. records of soil concentrations for a selection of determinants from natural soil have been estimated by the BGS and are provided within the Groundsure Insight report and summarised in **Table 3.2** below. These are estimated on a regional bases and should not be taken as representative of the actual soil chemistry of the site.

TABLE 3.2: SUMMARY OF BGS ESTIMATED SOIL GEOCHEMISTRY

Determinand	Arsenic	Cadmium	Chromium	Lead	Nickel
Estimated Concentration range (mg/kg)	15-25	1.8	60 –90	100	15-30

3.4 Hydrogeology

3.4.1 The hydrogeology of the ground beneath the site is summarised in **Table 3.3** below.

TABLE 3.3: SUMMARY OF HYDROGEOLOGY OF THE SITE

Aquifer Designation	Location on Site
Secondary Undifferentiated – Superficial Deposit Aquifer Secondary undifferentiated aquifers are 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.	Devensian Till

TABLE 3.3: SUMMARY OF HYDROGEOLOGY OF THE SITE	
Aquifer Designation	**Location on Site**
Secondary A aquifer – Bedrock Geology Secondary A aquifers consists of 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 generally aquifers formerly classified as minor aquifers.	South Wales Lower Coal Measures Formation South Wales Middle Coal Measures Formation

3.4.2 The BGS groundwater vulnerability data presented in the Groundsure report describes the South Wales Lower and Middle Coal Measures as a "*secondary bedrock aquifer of low permeability with well-connected fractures*" and the Devensian Till as a "*secondary superficial aquifer of low permeability*".

3.4.3 The Groundsure report indicated that the site is situated within the Southeast Valleys Carboniferous Coal Measures groundwater body (ID. GB40902G201900), as designated by the Water Framework Directive (WFD). The groundwater body was classified in 2017 with overall rating of "*Poor*" and a chemical rating of "*Poor*".

3.4.4 The Groundsure report shows that there are no records of groundwater abstraction licenses or source protection zones associated with the site or the land within a 250m radius of the site.

3.5 Hydrology

3.5.1 The OS MasterMap water network dataset provided in the Groundsure report identified 15no. records of inland rivers and one record of an area of marshland. The inland rivers are predominantly located in the eastern half of the site and the area of marshland is identified on the central eastern boundary of the site. The details of the on-site record are as follows:

- 14no. records pertaining to an inland river not influenced by normal tidal action on site at ground level. The watercourse contains water year-round (normal circumstances).
- Two records pertaining to an inland river not influenced by normal tidal action on site underground. The watercourse contains water year-round (normal circumstances).
- One record pertaining to a marsh area on the ground surface that is predominantly waterlogged by freshwater. The watercourse contains water year-round (normal circumstances).

3.5.2 The site walkover in Chapter 2.2 did not note any of the above surface water features, however, the survey was conducted during the winter seasons and these surface water features could be present on site during warmer summer months.

3.5.3 Other water features of relevance include the Nant Carno River located 19-233m north, the Nant Llesg tributary located 8-218m southeast of the site, and the River Rhymney 176-212m east and northeast of the site.

3.5.4 The Groundsure report indicates that site is located within the *"Rhymner River – source to conf Nant Bargoed Rhymni (ID: GB109057033130)"* surface water body catchment, managed under the WFD. It is noted within the Groundsure report that the surface water body catchment was classified in 2016 with overall rating of "*Good*", a "*Good*" chemical rating, and "*Good*" ecological rating.

3.5.5 The Groundsure report indicates that there are no active surface water abstraction licences or potable abstractions located on or within 250m of the Site.

3.5.6 A Water Features Survey was conducted by a WA LLP Hydrogeologist on the 19th of December 2023 as part of the Environmental Impact Assessment. A summary of the findings of the Water Features Survey is listed below:

- Watercourses and a concrete drain were noted following and beneath the access track in the north of the site, flowing southeast to the River Rhymney. The watercourse was noted as having a smooth to chaotic flow and containing vegetation and occasional boulders.
- Areas of highly saturated ground across the site.
- Areas of localised ponds of water forming in topographic depressions across the south of the site.
- The channel of a watercourse along the southeastern site boundary was recorded as mostly dry, with some areas of stagnant water. The channel was noted to be directed in an eastwards direction through a concrete drain and assumed to accumulate flowing water during wetter weather conditions.
- A spring was recorded within the 16m depression identified within Chapter 2.2 in the southwest of the site, noted to be sourced from the off-site coal tips. The spring was recorded to be flowing smoothly in a southwards direction.

3.5.7 The full summary of the water resources across the site is presented in Chapter 20 of the WA LLP Environmental Impact Assessment (Ref. BR10167-004).

3.6 Flooding

3.6.1 Natural Resources Wales (NRW) interactive Flood Risk Map viewer maintains flood maps based on ground level, predicted flood levels, information on flood defences and local knowledge. The flood maps show the predicted likelihood of flooding in an area in the context of current land use.

Rivers and Coastal Flooding

3.6.2 The Groundsure report indicates that the site is not located within a river and coastal flood zone and is designated as not being at risk from river and coastal flooding. There is a low risk of river and coastal flooding immediately north of the northeast corner of the site and a high risk within 50m north of the site. A Flood Zone 2 and Flood Zone 3 is located within 150m north of the site.

Surface Water Flooding

3.6.3 The Groundsure report indicates that the majority of the site is not at risk of surface water flooding.

Groundwater Flooding

3.6.4 Groundwater flooding is caused by unusually high groundwater levels when the water table rises above the ground surface or within underground structures such as basements or cellars.

3.6.5 According to the Groundsure report, the majority of the site is at negligible risk of groundwater flooding with the exception of the northeast and northwest corners of Devensian Till which are classified as a low risk.

Flood Defences

3.6.6 The Groundsure report has not identified any records of historical flood event, flood defences, or areas benefiting from flood defences on or within 250m of the site.

4 MINING AND QUARRYING

4.1.1 Research of the mining and quarrying setting is based on examination of the published geological and topographical information, the Groundsure Report (**Appendix B**) and Coal Authority Consultants Report (**Appendix C**) together with other mining archive information.

4.1.2 According to the Coal Authority, both the site and the proposed development at the time of writing this report (shown on **Appendix D**) lie within a Development High Risk Area. Therefore, the site and proposed development contain one or more recorded coal mining related features which have the potential for instability or a degree of risk to the surface from the legacy of coal mining operations. Due to these risks, a detailed Coal Mining Risk Assessment (CMRA) is required and has been prepared by WA LLP as a separate document (Ref. BR10167-012).

4.1.3 A summary of the mining constraints identified within the Coal Authority Consultants Report and BGS geological records is shown in **Drawing BR10167-036**.

4.2 Surface Ground Workings (Groundsure)

4.2.1 The Groundsure report and OS mapping identified a total of 148no. records of surface ground workings across the site and 284no. records within 250m of the site. The Groundsure report identified the following surface working features across the site:

- Unspecified Ground Workings.
- Unspecified Disused Tip.
- Unspecified Pit.
- Opencast Working.
- Cuttings.
- Unspecified Old Quarry.
- Unspecified Heap(s).
- Old Coal Level.
- Coal Level.
- Reservoir.
- Pond.

- Water Body.
- Ironstone Pit.
- Disused Reservoir.

4.3 Underground Workings (Groundsure)

4.3.1 The site is not located within a known brine area, so collapse issues associated with brine are not expected.

4.3.2 The Groundsure report identified 20no. records of underground workings across the site and a total of 148no. records within 250m of the site. The Groundsure report identified the following underground working features across the site:

- Old Coal Level.
- Unspecified Old Shaft.
- Disused Air Shaft.
- Unspecified Disused Shaft.
- Old Air Shaft.
- Air Shaft.

4.4 Surface and/or Underground Pits

4.4.1 The BGS manages a database of British Pits (abbreviated to BritPits), which are sites of currently active or closed surface and underground mineral workings. The Groundsure report identified 46no. BritPit records across and within 250m of the site. The relevant on-site records have been summarised within the following:

- Two records associated with Blaen-Carno and Bryn Pyllog for the extraction of sandstone.
- Eight records associated with Nant-llesg, Twyn-Carno, and Penyfeddw for the extraction of deep coal.
- One record associated with Bryn Pyllog Pit for the extraction of ironstone.

4.5 Non-coal Mining

4.5.1 The Groundsure report identified two records of non-coal mining on-site using geological mapping records, pertaining to Iron Ore (Bedded) in which underground

mine workings may have occurred. An additional 18no. records of ironstone mining within the site were identified associated with the Coal Authority.

4.6 Coal Authority Consultants Report

4.6.1 The site is located within a Development High Risk Area (DHRA) and therefore a Coal Mining Risk Assessment is required. As part of the CMRA, a Coal Authority Consultants Report has been obtained and the report identifies the following information:

- The report identifies underground coal mine workings beneath the site in 8no. coal seams at depths of 0m below ground level (mbgl) to 235mbgl, last worked in 1934 with a maximum recorded extraction thickness of 366cm, comprising of the following seams:
    - Four Foot.
    - Upper 6ft Rider.
    - Upper 6ft (T.L).
    - Lower 9ft.
    - Lower 7ft Bottom Leaf.
    - Five Foot.
    - Five Foot Gellideg
    - Red Vein.
- The northern half of the site is recorded as an unlicenced opencast site.
- The report identified 16no. records of mine adits located within the site boundary, 12no. of which are located on or within influencing distance of the proposed development boundary consisting of the solar arrays, wind turbines, access tracks, and construction compounds.
- The report identified 20no. records of mine shafts located within the site boundary, 9no. of which are located within the proposed development boundary consisting of the solar arrays, wind turbines, access track, and construction compounds.
- Out of the 36no. mine entries recorded across the site, a total of eight entries have partial or full treatment records associated with them.
- The report identifies the potential for unrecorded shallow mine workings, however it does not specify which seams these relate to.

- The Coal Authority has identified ironstone mining beneath the site at depths of 0mbgl to 131mbgl, last worked in 1871 with a maximum recorded extraction thickness of 780cm, comprising of the following workings:
    - Black Pins Ironstone.
    - Gawr No.1 Ironstone.
    - Gawr Rider Ironstone.
    - Bottom Vein Ironstone.
    - Rider Ironstone.

4.7 BGS Records

4.7.1 According to BGS geological mapping records, the following coal seams are inferred to outcrop within the site, as well as an additional unnamed seam:

- Two Feet Nine.
- Four Feet.
- Upper Six Feet.
- Lower Nine Feet.
- Bute.
- Amman Rider.
- Yard.
- Seven Feet.
- Lower Seven Feet.
- Five Foot Gellideg.
- Gellideg.

4.7.2 By reference to the published geological mapping, the coal seams are shown to dip southwards at an inclination of c.4°-9° southwards.

4.7.3 BGS mapping records identify an area of historical opencast mining across the north of the site in which, as a minimum, it is likely that the following seams have been excavated:

- Lower Nine Feet.

- Bute.
- Amman Rider.
- Yard.
- Seven Feet.
- Lower Seven Feet.
- Five Feet Gellideg.

4.8 Mineral Safeguarding Area

4.8.1 The site is located within a Mineral Safeguarding Area ('MSA') as designed by Caerphilly County Borough Council. The MSA covers the site and the surrounding area, and protects the potential coal resource present that are, or may in the future be, of sufficient value to warrant protections for future generations. A MSA is taken into account in land use planning decisions to ensure that mineral resources are not unknowingly or needlessly sterilised. However, the CA Consultants Report did not identify the potential for future workings beneath the site or records of coal mining licenses.

4.9 Mining Risk

4.9.1 WA LLP have identified the following mining constraints associated with the site following a review of available information from the Coal Authority and BGS records:

- Risk of subsidence caused by shallow recorded mine workings to shallow foundations. The CA Consultants Report and BGS mapping indicates that opencast mining has been undertaken in the northern part of the site. As a minimum it is likely that the following seams have been excavated:
    - Lower Nine Feet.
    - Bute.
    - Amman Rider.
    - Yard.
    - Seven Feet.
    - Lower Seven Feet.
    - Five Feet Gellideg.
- Risk of subsidence and collapse of shallow unrecorded mine workings to shallow foundations.

- Risk of subsidence and collapse of deep recorded mine workings beneath the site to effect deep foundations as well as the risk of aerial collapse through multiple workings to effect shallow foundations.
- Risk of catastrophic collapse of mine entry leading to ground instability, voids, and/or settlement at the ground surface as well as the risk of mine gas emissions migrating onto site.
- Risk of total and differential settlement due to the potential thickness of artificial backfill/made ground deposits across the site. Particular attention should be given to any areas where there is a sharp change in the thickness of artificial backfill/ made ground, i.e., any development across the highwall of the historic opencast.

4.9.2 For additional information on the mining risk associated with the site, see WA LLP Coal Mining Risk Assessment Ref. BR10167-0012.

5 ENVIRONMENTAL DATA AND CONSULTATION

5.1 Recent Industrial Land Use

5.1.1 Based upon a review of the of the Groundsure report, the following environmental information and consultations have been noted.

5.1.2 Within 250m of the site, the Groundsure report identified the following relevant records of recent industrial land use:

- One record on site pertaining to a Shaft for mining or quarrying.
- One record on site pertaining to Workings (Disused) for mining or quarrying.
- One record 68m southeast of the site pertaining to Head of the Valleys Industrial Estate.
- Two records 69-77m east of the site pertaining to an electricity substation.

5.1.3 The Groundsure report identified one record of current or recent petrol stations pertaining to a petrol station located 148m east of the site identified as “Obsolete”.

5.1.4 The Groundsure report identified 36no. records of historical railway and tunnel features on and within 250m of the site, recorded as follows:

- Six records pertaining to Railway Sidings on site recorded on 1873, 1875, 1879, 1895, and 1901 historical mapping records (1:2,500 and 1:10,560).
- Two records pertaining to Railway Sidings 32m and 41m southeast of the site on 1873 and 1901 historical mapping records (1:2,500).
- One record pertaining to Mineral Railway Sidings 91m southeast of the site on 1919 historical mapping records (1:2,500).
- A total of 27no. records pertaining to Railway Siding 105m-250m southeast and east of the site on 1873 to 1948 historical mapping records (1:2,500 and 1:10,560).

5.2 Contaminated Land & Pollution Incidents

5.2.1 Based on the Groundsure Insight report, there are no records of any of the following designations associated with the site or land within 500m of the site:

- Sites determined as contaminated land.
- Control of Major Accident Hazards (COMAH).
- Regulated explosive sites.

- Hazardous substance storage/usage.
- Historic licensed industrial activities (IPC).
- Radioactive Substance Authorisations.
- Pollutant release to surface water (Red list).
- Pollutant release to public sewer.
- List 1 & List 2 Dangerous Substances.
- Pollution Inventory Substances & Waste Transfers.
- Pollution Inventory Radioactive Waste.

5.2.2 A total of 10no. records of Licensed Industrial Activities (Part A(1)) were identified within 250m of the site. The licences are recorded as the following:

- Five records are associated with the Convatec Ltd pertaining to the Gelling Fibre Plant and the process of producing pharmaceutical products (using chemical/biological processes).
- Four records are associated with the Convatec Ltd pertaining to the Rhymney Alginate Fibres Plant and the process of producing organic chemicals such as plastic materials (polymers, synthetic fibres, and cellulose based fibres).
- One record is associated with Dragon Recycling Solutions Limited pertaining to the production, melting, or recovery of cadmium or mercury (or any alloy containing more than 0.05% by weight of either of these metals or both in aggregate).

5.2.3 Two records of Licensed Industrial Activities (Part A(2)/B) were identified within 250m of the site pertaining to Advanced Moulds Ltd for the process of timbre manufacturing and Convatec for chemical and acid processes.

5.2.4 Two Licensed Discharges to controlled waters permits were identified within 250m of the site. One permit relates to unspecified trade discharges into the Nant Carno River at Trecatty Occs, issued on the 25th of November 1974 (permit number AF4012104). The second permit relates to sewage discharge into the River Rhymney at Tywn Carno Bute House, issued on the 8th of September 2010 (permit number AN0093901).

5.2.5 Six records of Pollution Incidents (EA/NRW) with at least one impact classified as Category 3 (Minor) or more were identified within 250m of the site, pertaining to the following information:

- Two pollution incidents were identified 221m east of the site relating to atmospheric pollutants in May 2012. The pollution incidents resulted in a Category 2 (significant) air impact (incident identification 995460 & 996425).
- Two pollution incidents were identified 21m northeast and 77m southeast of the site relating to specified waste materials (household waste and vehicles/vehicle parts) in April and July 2003. The pollution incidents resulted in a Category 3 (Minor) water and land impact (incident identification 150564 & 178078).
- One pollution incident was identified 22m northwest of the site relating to oils and fuels in April 2003. The pollution incident resulted in a Category 3 (Minor) water impact (incident identification 148376).
- One pollution incident was identified 98m northeast of the site relating to organic chemicals/products in July 2020. The pollution incident resulted in a Category 1 (Major) water impact (incident identification 2005438).

5.3 Unexploded Ordnance (UXO)

5.3.1 The Zetica UXO risk interactive viewer was consulted to provide an initial indication of the level of risk posed to the site from unexploded ordnance. The viewer indicated that the site is considered to be at low risk. Therefore, a detailed UXO Risk Assessment will not be required before construction.

5.4 Radon

5.4.1 The Groundsure report has indicated that the site is situated in an area within which less than 1% of properties exceed the Radon Action Level, and therefore no radon protection measures are required.

5.5 Waste Management

5.5.1 The Groundsure report has not identified any records of the following designations within 250m of the site:

- Active or recent landfills.
- Historical landfill (BGS records).
- Historical landfill (LA/mapping records).
- Historical landfill (EA/NRW records).
- Historical Waste Sites.

- Licensed Waste Sites.

5.5.2 The Groundsure report identified 10no. records of waste exemptions within 250m of the site. The details are recorded as follows:

- Two records 98m and 146m southwest pertaining to Battlefield Farm Cottage for the storage of sludge on a farm (Ref. WEX135312 & WEX135310).
- Four records 102m southeast pertaining to Dragon Recycling Solutions for the storage of waste in a secure place (Ref. WME075307 & WME028417), recovery of scrap metal (Ref. WME028418), and preparatory treatments (Ref. WME028417).
- Two records 137m northeast pertaining to Cwm Carno Farm for the use of waste in construction and burning waste in the open on a farm (Ref. NRW-WME018837).
- Two records 144m east pertaining to Unit 4, Heads of the Valley Industrial Estate, for burning waste in the open (Ref. WEX294103 & WEX156010).

5.6 Environmental Designations

5.6.1 The Groundsure report indicates that there are no records of the following environmental designations within 500m of the site:

- Site of Special Scientific Interest (SSSI).
- Conserved wetland sites (RAMSAR).
- Special Areas of Conservation (SAC).
- Special Protection Areas (SPA).
- National Nature Reserves (NNR).
- Local Nature Reserves (LNR).
- Biosphere Reserves.
- Forest Parks.
- Marine Conservation Zones.
- Green Belt.
- Proposed RAMSAR sites.
- Possible Special Areas of Conservation (pSAC).
- Potential Special Protected Areas (pSPC).

- Nitrate Sensitive Areas.
- Nitrate Vulnerable Zones.
- SSSI Impact Risk Zone and Units Divisions.

5.6.2 The Groundsure report identified one record of Designated Ancient Woodland 82m southeast of the site pertaining to an unknown ancient semi-natural woodland.

6 AGRICULTURAL, VISUAL AND CULTURAL DESIGNATIONS

6.1 Agricultural

6.1.1 The Groundsure report indicates that the site is a Grade 5 Agricultural Land Classification pertaining to very poor-quality agricultural land.

6.1.2 The Groundsure report has not identified any records of the following agricultural designations assigned to the site or any land within 250m of the site:

- Tree Felling Licenses.
- Environmental Stewardship Schemes.
- Countryside Stewardship Schemes.

6.1.3 The Groundsure report identified one record of Open Access Land on site pertaining to “Open Access Other Statutory Access Land”.

6.2 Visual and Cultural Designations

6.2.1 The Groundsure report has not identified any records of any of the following heritage designations associated with the site or land within 250m of the site:

- World Heritage Sites.
- Area of Outstanding Natural Beauty.
- National Parks.
- Listed Buildings.
- Registered Parks and Gardens.
- Conservation Areas.
- Scheduled Ancient Monuments.
- Priority Habitat Inventory.

7 CONCEPTUAL SITE MODEL

7.1 Methodology

7.1.1 On 8th October 2020, the Environment Agency (EA) republished Land Contamination Risk Management (LCRM) which replaced the previous guidance 'Model procedures for the management of land contamination' (CLR11).

7.1.2 The LCRM guidance is intended for all those responsible for managing land that is subject to contamination, not just land that falls under the contaminated land regime under Part 2A of the Environmental Protection Act 1990.

7.1.3 The LCRM approach includes a Conceptual Site Model (CSM) depicting the environmental processes that occur on and in the vicinity of the site and identifying the potential contaminant linkages. The assessment of the significance of these contaminant linkages can then be carried out through the risk assessment process.

7.1.4 The production of a CSM and the assessment of the associated risk is based upon the identification of the possible sources of contamination ("the sources"), the identification of who or what may be affected by the contaminants ("the receptors") and the possible pathways by which contaminants may migrate to any of the receptors ("the pathways").

7.1.5 The results of the Desk Study and site walkover have been used to identify the potential sources, pathways, and receptors that exist on the site.

7.2 Potential Sources of Contamination

7.2.1 The potential sources of contamination are summarised below:

On-site:

- Backfill/tip material (made ground deposits) within the mine entries, underground mine workings, and surface workings (opencast mining). Backfill/tip material is presumed to be mining related but cannot be confirmed without an intrusive ground investigation.
- Activities relating to the historical mining across the site (Engine House, reservoir, Rhymney Limestone Railway).

Off-site:

- Backfill/tip material (made ground deposits) within the mine entries, underground mine workings, and surface workings surrounding the site.

TABLE 7.1: SOURCE OF CONTAMINATION AND POTENTIAL CONTAMINANTS.		
On-site Sources	**Activities/ contaminant source**	**Potential Contaminants**
Source 1 – Backfill/tip material of mine entries and mine workings (underground and surface).	Leaching of potentially hazardous contaminants within the backfill material in mine entries and mine workings. The material is presumed to be mine related waste.	Heavy metals, inorganics, total petroleum hydrocarbons (TPH's), polycyclic aromatic hydrocarbons (PAH)'s, asbestos, sulphates, asbestos, ground gas generation.
Source 2 – Activities relating to the historic mining across the site.	Spillages from machinery, the Engine House, and the Rhymey Limestone Railway during mining activities. Potential leaching of contaminants from mining-related stockpiles across the site.	Heavy metals, inorganics, TPH's, PAH's, sulphates.
Off-site Sources	**Activities/ contaminant source**	**Potential Contaminants**
Source 3 – Backfill/tip material of surrounding mine entries and mine workings (underground and surface).	Leaching of potentially hazardous contaminants within the backfill material in mine entries and mine workings. The material is presumed to be mine related waste.	Heavy metals, inorganics, TPH's, PAH's, asbestos, sulphates, ground gas generation.

7.3 Potential Sensitive Receptors

7.3.1 Based on the Desk Study research, the following potential sensitive receptors have been identified:

- Receptor 1: Human health – Construction workers and maintenance workers.
- Receptor 2: Controlled waters – Surface water features (potential surface water features on site and several rivers and tributaries including River Rhymney, Nant Llesg, and Nant Carno off-site).
- Receptor 3: Controlled waters – Groundwater aquifer (Secondary A bedrock aquifer)
- Receptor 4: Built Environment – Solar panel arrays, wind turbines, substation, and associated infrastructure.

7.4 Identification of Pathways

7.4.1 There are various routes by which any contaminant present within the soils or groundwater beneath the site may pose a direct risk to human health receptors, either during construction works or following development. These pathways include:

- Pathway 1: Ingestion of contaminated dust, soils and/or groundwater.
- Pathway 2: Dermal contact with contaminated dust, soil and/or groundwater in excavations.
- Pathway 3: Inhalation of dust, gases and/or vapours.

7.4.2 Contaminants may be transported to surface water features by lateral migration within shallow groundwater in hydraulic continuity or via leachate generated through surface water run-off (Pathway 4).

7.4.3 Mobile or leached contaminants, including spillages and leakages to ground from historical mining activities, could potentially migrate laterally or vertically from ground into the bedrock Secondary (A) aquifer (Pathway 5).

7.4.4 There is a potential for the unknown backfill material associated with historical mining activities to produce aggressive ground conditions that come into direct contact with the solar arrays, wind turbines, substation, and associated infrastructure (Pathway 6).

7.4.5 Ground gas generation from any backfill material on or surrounding the site has the potential to migrate from and through permeable materials including granular artificial and superficial deposits and accumulate in closed spaces (Pathway 7).

7.4.6 A summary of the completed pollutant linkages is present in **Table 7.2.**

TABLE 7.2: SOURCE OF CONTAMINATION AND POTENTIAL CONTAMINANTS.

On-site Sources	**Pathways**	**Receptors**
Source 1 – Backfill/tip material within mine entries and mine workings	Pathway 1: Ingestion Pathway 2: Dermal Contact Pathway 3: Inhalation Pathway 7: Ground gas generation	Receptor 1: Maintenance Workers & Construction Workers
	Pathway 4: Lateral migration of leachate	Receptor 2: Surface waters
	Pathway 5: Vertical migration of leachate	Receptor 3: Groundwater aquifer
	Pathway 6: Aggressive ground conditions Pathway 7: Ground gas generation	Receptor 4: Built Environment
Source 2 – Activities relating to the historic mining across the site.	Pathway 1: Ingestion Pathway 2: Dermal Contact Pathway 3: Inhalation	Receptor 1: Maintenance Workers & Construction Workers
	Pathway 4: Lateral migration of leachate	Receptor 2: Surface waters
	Pathway 5: Vertical migration of leachate	Receptor 3: Groundwater aquifer
	Pathway 6: Aggressive ground conditions	Receptor 4: Built Environment
Off-site Sources	**Pathways**	**Receptors**
Source 3 – Backfill/tip material within surrounding mine entries and mine workings.	Pathway 1: Ingestion Pathway 2: Dermal Contact Pathway 3: Inhalation Pathway 7: Ground gas generation	Receptor 1: Maintenance Workers & Construction Workers
	Pathway 4: Lateral migration of leachate	Receptor 2: Surface waters
	Pathway 5: Vertical migration of leachate	Receptor 3: Groundwater aquifer
	Pathway 6: Aggressive ground conditions Pathway 7: Ground gas generation	Receptor 4: Built Environment

8 QUALITATIVE ENVIRONMENTAL RISK ASSESSMENT

8.1 Introduction

8.1.1 In line with EA guidance - LCRM, plausible source, pathway and receptor linkages have been identified through the Conceptual Site Model (CSM). The information gathered in the CSM can now be used to carry out a Qualitative Risk Assessment (QRA).

8.1.2 LCRM outlines that for each tier of Risk Assessment the following steps must be taken:

I. Identify the hazard - establish contaminant sources.

II. Assess the hazard - use a source-pathway-receptor (S-P-R) contaminant linkage approach to find out if there is the potential for unacceptable risk.

III. Estimate the risk - predict what degree of harm or pollution might result and how likely it is to occur by using the tiered approach to risk assessment.

IV. Evaluate the risk - decide whether a risk is unacceptable.

8.1.3 LCRM states that the assessment must be based on the potential severity that the risk poses to the receptors against the likelihood of it happening. Subsequently, it is necessary to employ a risk assessment matrix, the CIRIA document Contaminated Land Risk Assessment – a guide to good practice C552, 2001 provides a good example of a suitable risk assessment matrices.

8.1.4 The CIRIA document defines Consequence of Risk, Probability of Risk Being Realised and Risk Classification Definitions. These definitions are provided in **Appendix F**.

8.1.5 From the combination of the information collated within this report thus far, a qualitative assessment of the potential geo-environmental risk is provided in **Table 8.1**. Where indicated, these risks may need to be considered for any future redevelopment of the land.

8.1.6 In order to put the onsite assessment of contamination into full context, the contaminative impact of the present site use is assessed. This assessment is in relation to potential contaminant migration and general environmental setting of the surrounding area.

TABLE 8.1 – QUALITATIVE ENVIRONMENTAL RISK ASSESSMENT						
Source	**Contaminants**	**Pathway**	**Receptor**	**Risk (before mitigation)**	**Justification**	**Risk**
On site: Source 1: Backfill/tip material within mine entries and workings. Source 2: Activities relating to the historic mining across the site. **Off site:** Source 3: Backfill/tip material within mine entries and workings.	Source 1: Heavy metals, inorganics, TPH's, PAH's, asbestos, sulphates, ground gas generation. Source 2: Heavy metals, inorganics, TPH's, PAH's, sulphates. Source 3: Heavy metals, inorganics, TPH's, PAH's, asbestos, sulphates, ground gas generation.	• Ingestion of dust, soils and/or ground water. • Dermal contact with dust, soil and/or groundwater. • Inhalation of dust, gases and/or vapour.	Human Health – Construction and maintenance workers	Consequence: Mild Probability: Low Likelihood **Risk: Low**	There is a potential for contaminants associated with historical mining activities to be present across the site. A ground investigation consisting of soil and water sampling for chemical analysis would be required to determine the extent of contamination across the site. It is assumed that appropriate PPE such as gloves will be worn by construction and maintenance workers when excavating materials at the surface.	Consequence: Mild Probability: Unlikely Risk: **Very Low**

TABLE 8.1 – QUALITATIVE ENVIRONMENTAL RISK ASSESSMENT						
Source	**Contaminants**	**Pathway**	**Receptor**	**Risk (before mitigation)**	**Justification**	**Risk**
On site: Source 1: Backfill/tip material within mine entries and workings. **Off site:** Source 3: Backfill/tip material within mine entries and workings.	Artificial deposits - Ground Gas generation.	• Ground gas migration onto site through natural strata (Inhalation/Asphyxiation Risk).	Human Health – Construction and maintenance workers.	Consequence: Severe Probability: Low Likelihood **Risk: Moderate**	There is potential for ground gas generation from the unknown backfill/tip material associated with the past land use. Ground gas has the potential to migrate onto site through permeable deposits and air voids within the non-engineered backfill. The proposed development as of writing this report (Appendix D) does not include the construction of any permanent enclosed spaces. If temporary enclosed spaces are developed within the construction compound, it is assumed that they will be raised off of the ground to prevent ground gas migration. Without any enclosed spaces, any gas generated and exposed to the surface would dissipate into open air. This risk should be reassessed depending on plans to develop large, closed spaces/buildings on site in the future. Site investigation works including the installation and monitoring of ground gas monitoring wells across the site would allow for the characterisation of the ground gas regime beneath the site	Consequence: Severe Probability: Unlikely **Risk: Moderate/Low**

TABLE 8.1 – QUALITATIVE ENVIRONMENTAL RISK ASSESSMENT						
Source	**Contaminants**	**Pathway**	**Receptor**	**Risk (before mitigation)**	**Justification**	**Risk**
					and the recommendation of appropriate levels of ground gas protection measures if required.	

TABLE 8.1 – QUALITATIVE ENVIRONMENTAL RISK ASSESSMENT						
Source	**Contaminants**	**Pathway**	**Receptor**	**Risk (before mitigation)**	**Justification**	**Risk**
On site: Source 1: Backfill/tip material within mine entries and workings. Source 2: Activities relating to the historic mining across the site. **Off site:** Source 3: Backfill/tip material within mine entries and workings.	Source 1: Heavy metals, inorganics, TPH's, PAH's, asbestos, sulphates, ground gas generation. Source 2: Heavy metals, inorganics, TPH's, PAH's, sulphates. Source 3: Heavy metals, inorganics, TPH's, PAH's, asbestos, sulphates, ground gas generation.	• Lateral migration of leachate and contaminated surface water run-off.	Controlled Waters – surface water features on-site and the surrounding site (Nant Carno/River Rhymney)	Consequence: Mild Probability: Low Likelihood **Risk: Low**	There is a potential for contaminants associated with mining related backfill /tip material and historical mining activities to be present across the site. Whilst likely to be limited, surface water could migrate laterally through shallow groundwater or as contaminated surface water run-off. Prior to development, a ground investigation should be carried out to assess any contamination at the site. Any contamination which poses a risk to surface water should be remediated and therefore the risk to groundwater will be reduced. It is assumed that the proposed development will include either hardstanding or a clean capping layer and therefore reducing the potential for leachate generation. Additionally, a detailed surface water drainage strategy is expected to be appropriately designed.	Consequence: Mild Probability: Unlikely **Risk: Very Low**

TABLE 8.1 – QUALITATIVE ENVIRONMENTAL RISK ASSESSMENT						
Source	**Contaminants**	**Pathway**	**Receptor**	**Risk (before mitigation)**	**Justification**	**Risk**
On site: Source 1: Backfill/tip material within mine entries and workings. Source 2: Activities relating to the historic mining across the site. **Off site:** Source 3: Backfill/tip material within mine entries and workings.	Source 1: Heavy metals, inorganics, TPH's, PAH's, asbestos, sulphates, ground gas generation. Source 2: Heavy metals, inorganics, TPH's, PAH's, sulphates. Source 3: Heavy metals, inorganics, TPH's, PAH's, asbestos, sulphates, ground gas generation.	• Vertical migration of leachate into the underlying aquifer.	Controlled Waters – Secondary (A) bedrock aquifer.	Consequence: Medium Probability: Low Likelihood **Risk: Moderate/Low**	There is a potential for contaminants associated with mining related backfill /tip material and historical mining activities to be present across the site. Whilst likely to be limited, surface water infiltration and subsequent leachate generate could allow for the vertical migration of contaminants. Furthermore, voids created during the historical underground mine working could act as pathways for contamination to the bedrock aquifer. Any construction and earthworks planned for the site may disturb and loosen underlying material and expose potential contaminants and pathways through the bedrock and any voids from historical mining activities. There are no records of groundwater abstraction licenses within 250m of the site. However, the bedrock aquifer is described as an aquifer of medium permeability and well-connected fractures.	Consequence: Mild Probability: Low likelihood **Risk: Low**

TABLE 8.1 – QUALITATIVE ENVIRONMENTAL RISK ASSESSMENT						
Source	**Contaminants**	**Pathway**	**Receptor**	**Risk (before mitigation)**	**Justification**	**Risk**
On site: Source 1: Backfill/tip material within mine entries and workings. Source 2: Activities relating to the historic mining across the site. **Off site:** Source 3: Backfill/tip material within mine entries and workings.	Source 1: Heavy metals, inorganics, TPH's, PAH's, asbestos, sulphates, ground gas generation. Source 2: Heavy metals, inorganics, TPH's, PAH's, sulphates. Source 3: Heavy metals, inorganics, TPH's, PAH's, asbestos, sulphates, ground gas generation.	• Aggressive ground conditions.	Built Environment (solar arrays, wind turbines and associated infrastructure).	Consequence: Mild Probability: Low Likelihood **Risk: Low**	The site could facilitate aggressive conditions because of the unknown mixture of the mining related backfill/tip material across the site. The potential acidity could affect the built environment on site consisting of the solar arrays, wind turbines, substation, and the associated infrastructure. It is assumed that the correct classification of concrete will be used during construction of the solar panel and wind turbine foundations.	Consequence: Mild Probability: Unlikely **Risk: Very Low**

TABLE 8.1 – QUALITATIVE ENVIRONMENTAL RISK ASSESSMENT						
Source	**Contaminants**	**Pathway**	**Receptor**	**Risk (before mitigation)**	**Justification**	**Risk**
On site: Source 1: Backfill/tip material within mine entries and workings. **Off site:** Source 3: Backfill/tip material within mine entries and workings	Artificial deposits - Ground Gas generation.	• Ground gas – Explosive Risk	Built Environment (solar arrays, wind turbines and associated infrastructure).	Consequence: Severe Probability: Low Likelihood **Risk: Moderate**	There is potential for ground gas generation from the unknown backfill/tip material associated with the past land use. Ground gas has the potential to migrate onto site through permeable deposits and air voids within the non-engineered backfill. The ground gas has the potential to accumulate in enclosed spaces and create an explosive risk. The proposed development as of writing this report (Appendix D) does not include the construction of any permanent enclosed spaces. If temporary enclosed spaces are developed within the construction compound, it is assumed that they will be raised off of the ground to prevent ground gas migration. However, this risk should be reassessed depending on plans to develop permanent, large, closed spaces/buildings on site in the future.	Consequence: Severe Probability: Unlikely **Risk: Moderate/Low**

9 PRELIMINARY GEOTECHNICAL HAZARDS

9.1 Introduction

9.1.1 A brief summary of the geotechnical hazards associated with the site (non-mining related) identified within the Groundsure report are provided in **Table 9.1** below.

9.1.2 It should be noted that the BGS Ground Stability Hazard assessment data is derived from the BGS digital 1:50,00 geological mapping. The data relates to potential ground stability issues concerning natural geological conditions only, and does not cover any man-made hazards, such as waste disposal, contaminated land, or mining. The only exception to this is the "Compressible Ground" hazard layer, which does consider made ground deposits e.g., landfill.

TABLE 9.1 – SUMMARY OF GEOTECHNICAL HAZARDS

Hazard	Hazard Rating
Potential for Collapsible Ground	Very Low
Potential for Compressible Ground	Very Low - Negligible
Potential for Ground Dissolution	Negligible
Potential for Landslides	Moderate – Very Low
Potential for Running Sand	Very Low - Negligible
Potential for Shrinking or Swelling Clay	Very Low - Negligible

9.2 Shrink-Swell Clays

9.2.1 The northern and southern thirds of the site are recorded as having a negligible rating for shrink-swell clays, whereas the centre third is a very low hazard. The very low and negligible rating for shrink-swell clays indicates that ground conditions are *"predominantly non-plastic"* or of *"low plasticity",* according to the BGS.

9.3 Running Sands

9.3.1 The 9.5Ha area previously identified as worked ground and a 5.5Ha area in the southeast corner of the site is recorded as a negligible hazard rating for running sands. The negligible rating indicates that *"running sand conditions are not thought to occur whatever the position of the water table".* The remainder of the site is recorded as a very low hazard rating for running sands. This classification indicates that *"running sand conditions are unlikely".*

9.4 Compressible Deposits

9.4.1 The 9.5Ha area identified as worked ground and the 5.5Ha area in the southeast corner of the site is recorded as a negligible hazard rating for compressible deposits. The negligible rating indicates that *"compressible strata is not thought to occur".* The remainder of the site is recorded as a very low hazard rating for compressible deposits. This classification indicates that *"compressibility and uneven settlement problems are not likely to be significant on the site for most land uses".*

9.5 Landslides

9.5.1 The majority of the site is recorded a very low hazard rating for landslides with the exception of a low hazard rating pertaining to 5.5Ha within the southeastern corner and 7.4Ha area within the northeast of the. A small 0.1Ha area along the western boundary of the site is recorded as a moderate hazard rating for landslides which indicates that *"slope instability problems are probably present or have occurred in the past and land use should consider the stability of the site".* However, the site walkover did not record any evidence of slope stability specific to this area of moderate risk.

9.6 Ground Dissolution

9.6.1 The negligible rating for ground dissolution across the site indicates that soluble rocks are *"either not thought to be present within the ground, or not prone to dissolution".*

9.7 Collapsible Deposits

9.7.1 The very low rating for collapsible deposits indicates that *"deposits with potential to collapse when loaded and saturated are unlikely to be present".*

9.8 Mining

9.8.1 However, it is noted that the data only relates to potential ground stability issues concerning the natural ground and does not consider mining-related stability issues.

9.8.2 Therefore, there may be a risk of ground instability such as landslides, compressible and collapsible deposits from the non-engineered backfill made ground deposits across the majority of the site from the historical mining activity.

9.8.3 For additional information with regards to the mining risk associated with the proposed development, see WA LLP Coal Mining Risk Assessment Ref. BR10167-0012 and Section 4.0 within this report. WA LLP note that the main geotechnical risk associated with mining relate to the catastrophic collapse of ground and subsidence due to the presence of mine entries (shafts and adits), shallow and deep mine workings, and total/differential settlement due to opencast/mine backfill and tips.

10 SUMMARY AND CONSTRAINTS

10.1 Current Land Use

10.1.1 The site is located northwest of Rhymney, South Wales, and is centred at National Grid Reference E 310033, N 208227. The initial survey options area comprises of 54Ha of grassed land and the provisional development boundary as of writing this report comprises of 24Ha.

10.1.2 The surrounding land predominantly comprises of open fields to the north, south, and west of the site. The A469 road and industrial estate comprising of Convatec, HSNF Wales Warehouse, and additional businesses is located east of the site.

10.2 Proposed Land Use

10.2.1 The site is planned for the development of three wind turbines with a generating capacity of around 5MW each, and maximum tip height of 150m, alongside 5MW (AC) ground mounted solar PV arrays, a singular substation, and associated infrastructure.

10.3 Geology, Hydrogeology, and Hydrology

10.3.1 The available BGS mapping records indicate that the northern third of the site is underlain by the South Wales Lower Coal Measures Formation and the remainder of the site is underlain by the Middle Coal Measures Formation, both classified as a Secondary A aquifer. In addition, a normal inferred fault intersects the eastern quarter of the site, orientated north to south.

10.3.2 The Groundsure report did not identify any groundwater or surface water abstraction licences within 250m of the site.

10.3.3 The OS MasterMap water network dataset provided in the Groundsure report identified 15no. records of inland rivers and one record of an area of marshland, predominantly in the eastern third of the site.

10.3.4 A walkover survey of the site in January 2024 recorded dry and vegetated water channels with occasional frozen water along the eastern and southern boundary of the site. However, a Water Feature Survey conducted in December 2023 recorded smooth to chaotic flowing water within these channels flowing east/south towards the Rhymney River as well as heavily saturated ground, and areas of localised pools of water in topographic depressions. Therefore, during warmer conditions, it is assumed that flowing water surface features are present along the eastern and southern boundary as well as saturated ground conditions across the site.

10.4 Mining

10.4.1 The Groundsure Report, BGS mapping, historical OS mapping, and the Coal Authority Consultants Report identify that the site is located within an extensively mined area for coal and non-coal mining since at least 1875.

10.4.2 The Coal Authority records that the site is located within a Development High Risk Area (DHRA) and therefore, required a Coal Mining Risk Assessment (CMRA).

10.4.3 The Coal Authority Consultants Report identified underground coal workings beneath the site in 8no. coal seams at depths from ground level to 235mbgl and a maximum extraction thickness of 366cm. The report also identified workings in 5no. ironstone seams at depths from ground level to 131mbgl and a maximum extraction thickness of 780cm.

10.4.4 A total of 36no. records of mine entries were identified on and within the site boundary, 21no. of which are interpreted as being within or at an influencing distance to the proposed development.

10.4.5 BGS mapping records identify an area of historical opencast mining across the north of the site and a total of 12no. coal seams are shown to crop within the site boundary.

10.4.6 The Groundsure report and historical OS mapping records from 1875 to the 1970's identified extensive surface workings across the site, including 148no. records of surface working features such as ground workings, tips, pits, opencast workings, and cuttings.

10.4.7 On 1972-1977 historical mapping records, the southeastern half of the site is recorded as a disused "Tip" which is presumed to be infilled surface workings of mine-related waste.

10.4.8 Two reservoirs related to the historic mining activities were identified in the west and east of the site on historical mapping records from 1875 until they were removed on mapping records in 1948 and 1964/196 (1:10,560). The reservoirs were not identified during the site walkover and are, therefore, assumed to be backfilled similar to the surface workings across the site with non-engineered material.

10.5 Geoenvironmental Constraints

10.5.1 A review of the Desk Study and the site walkover survey has identified the following geoenvironmental constraints:

- Potential of the contaminants within the backfill/tip material across the surface mine workings and within the mine entries and underground workings to cause harm to human health, controlled waters, and the proposed development.
- Potential of contaminants associated with historical mining activities and infrastructure to cause harm to human health, controlled waters, and the proposed development.

10.6 Geotechnical Constraints

10.6.1 A review of the Desk Study and the site walkover survey has identified the following geotechnical constraints and the associated risks:

Opencast Mining/ Surface Mine Workings

- Risk of unstable and compressible non-engineered backfill material within surface workings. No validation records of the engineering properties of the backfill across the site, such as how the backfill material was placed, the degree of consolidation, or the size of the material within the backfill. Larger coarse material has a high risk of collapsing due to void space between the particles and finer material is at risk of being washed out of the area by water, leaving void spaces that can cause a collapse of the backfill material.
- Risk of total and/or differential settlement associated with thick and variable backfill material across the site. WA LLP note the presence of the abandoned opencast mine in the north of the site, consideration should be given to any development within proximity to the high wall which could result in high levels of total and/or differential settlement.
- Unknown thickness of backfill material for sufficient foundation design.

Mine Entries

- Risk of collapse of the non-engineered backfill material within recorded mine shafts and mine adits across the site to create crown holes and surface subsidence. It is difficult to determine the zone of influence of the collapsed material to the proposed development. Additionally, a total of eight mine entries out of the 36no. recorded across the site have partial or full treatment records.

Shallow Mine Workings (<30mbgl)

- Risk of collapse of shallow mine workings beneath or within influencing distance of the proposed development.

Deep Mine Workings (>30mbgl)

- Risk to deeper foundations such as piled foundations depending on depth to secure deposits suitable for foundation design.

Reservoir

- Risk of unstable and compressible non-engineered backfill material within the eastern reservoir in 1875 to 1964/1965 historical mapping records (1:10,560) to be within potential influencing distance of the proposed access track across the east of the site.

Landslide

- There is a landslide risk of uncompacted backfill/tipped material across the site, specifically of the 16m depression identified during a site walkover survey where a localised landslip of 0.3m was noted at the top of the slope, as detailed within Chapter 2.2.
- A moderate risk of landslides has been identified within the Groundsure report of the natural strata. However, the risk from the natural strata could not be assessed during the site walkover because of the made ground deposits identified across this area.

10.6.2 The geoenvironmental and geotechnical constraints identified within the Phase 1 Desk Study are shown on **Drawing BR10167-037**.

11 CONCLUSIONS AND RECOMMENDATIONS

11.1 Contamination Potential

11.1.1 This Desk Study review has identified that there is a potential of contamination associated with the historical mining land use that needs to be addressed as part of a ground investigation to include chemical analysis of soil and water samples.

11.1.2 A review of all available Desk Study information indicates that there is a Very Low to Moderate/Low risk to human health, controlled waters, and the built environment receptors with the recommended mitigation measures identified in **Table 8.1**.

11.1.3 Maintenance and construction workers should wear appropriate PPE as identified in **Table 8.1** to protect against any potential contamination.

11.1.4 Mitigation measures to prevent the accumulation of ground gases into large, enclosed spaces such as ventilation systems or impermeable barriers should be used if permanent or temporary enclosed spaces are constructed on site.

11.1.5 Where there is a risk of remobilising contaminants within the made ground into the underlying aquifer and surface water features, prevention measures should be put in place to reduce the amount of water migrating through the made ground and mine-related voids.

11.2 Geotechnical Constraints

11.2.1 An intrusive investigation is recommended to determine the following information:

- The collection of soil samples for geotechnical testing to determine the engineering properties of the backfill/tip material to reassess the risk of collapsible deposits, total and differential settlement, and landslides.
- Suitable foundation horizons for the wind turbines, due to the presence of thick made ground and the mining risk at the site, both shallow and deep foundations will likely need to be considered.
- Suitable foundation horizons for the solar arrays, due to the presence of thick made ground and the mining risk at the site, further testing such as pull out tests and/or bearing capacity tests will likely be required.
- The thickness of the backfill/tip material across the areas of development to determine the appropriate depth of foundations i.e., thickness of solid rock cover above any shallow mine workings. Additionally, the thickness of the backfill will need

to be verified to estimate any sterilisation zones which may be applied as a mitigation measure to ensure that the mine entries are not within influencing distance of the proposed development.

- The location, depth, and orientation of any worked coal seams within the proposed development footprint and southwards following the dip direction as identified on BGS geological mapping records (1:10,560 & 1:10,000).
- The treatment/sterilisation of mine entries, mine workings, and potentially worked seams within the vicinity and influencing distance of the proposed development, as identified within the Coal Authority Consultants Report.

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APPENDICES

Appendix A

Wardell Armstrong Standard Terms and Conditions

STANDARD TERMS AND CONDITIONS AND LIMITATIONS TO REPORTS

This Report is provided for the stated purpose and for the sole use of the client in accordance with the Terms and Conditions of Appointment under which the services were performed. The Report is confidential to the client and no other warranty, expressed or implied, is made as to the professional advice included in the Report or any other services provided by Wardell Armstrong LLP. This Report may not be disclosed by the Client nor relied upon by any other party without the prior and express written agreement of Wardell Armstrong LLP.

The conclusions and recommendations contained in this Report are based upon information provided by others including details supplied by the client and/or professional advisors on the assumption that all relevant information from whom it has been requested and/or supplied is accurate. Information so provided and/or supplied has not been verified independently by Wardell Armstrong LLP, unless otherwise stated in the Report.

The methodology adopted and the sources of information used by Wardell Armstrong LLP in providing the services are outlined in this Report. The work described in this Report is based on the conditions and information as stated at the date the Report was completed. The scope of this Report and the services are accordingly limited by these circumstances. The findings outlined in the Report together with any opinions expressed and recommendations made are considered to be valid and appropriate at the time of preparation and for the specific purpose or purposes intended. Whilst a walk over site visit may have been carried out as part of the work this has been limited to observations only and no other physical investigations, sampling and testing work has been carried out as part of this work.

Wardell Armstrong LLP disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report which may come or be brought to Wardell Armstrong LLP's attention after the date of the Report. Unless otherwise stated in this Report, the assessments made assume that the sites and facilities will continue to be used for their current purpose without significant changes.

Where any site observations have been carried out, these have been restricted to a level of detail required to meet the stated objectives of the services. The results from any site observations made may vary and further confirmatory work should be made after the issuance of this Report. Wardell Armstrong LLP does not guarantee or warrant any estimates or projections contained in this Report.

Appendix B

Groundsure Insight Report

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

Rhymney, NP22

Order Details

Date: 21/12/2023

Your ref: CA11641

Our Ref: GSWA1-2VF-15B-DDL-WTF

Site Details

Location: 310072 208264

Area: 55.05 ha

Authority: Caerffili - Caerphilly County Borough Council ↗



Summary of findings p. 2 >

Aerial image p. 9 >

OS MasterMap site plan N/A: >10ha

groundsure.com/insightuserguide ↗

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

Certified B Corporation

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
14 >	1.1 >	Historical industrial land uses >	128	41	206	225	-
36 >	1.2 >	Historical tanks >	0	0	6	9	-
37 >	1.3 >	Historical energy features >	0	0	4	9	-
38	1.4	Historical petrol stations	0	0	0	0	-
38 >	1.5 >	Historical garages >	0	0	0	3	-
39	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
40 >	2.1 >	Historical industrial land uses >	148	49	263	275	-
67 >	2.2 >	Historical tanks >	0	0	10	11	-
68 >	2.3 >	Historical energy features >	0	0	8	17	-
69	2.4	Historical petrol stations	0	0	0	0	-
69 >	2.5 >	Historical garages >	0	0	0	3	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
70	3.1	Active or recent landfill	0	0	0	0	-
70	3.2	Historical landfill (BGS records)	0	0	0	0	-
71	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
71	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
71 >	3.5 >	Historical waste sites >	0	0	0	3	-
72	3.6	Licensed waste sites	0	0	0	0	-
72 >	3.7 >	Waste exemptions >	0	0	10	0	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
74 >	4.1 >	Recent industrial land uses >	2	0	20	-	-
76 >	4.2 >	Current or recent petrol stations >	0	0	1	0	-
76	4.3	Electricity cables	0	0	0	0	-
76	4.4	Gas pipelines	0	0	0	0	-
77	4.5	Sites determined as Contaminated Land	0	0	0	0	-

77	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
77	4.7	Regulated explosive sites	0	0	0	0	-
77	4.8	Hazardous substance storage/usage	0	0	0	0	-
77	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
78 >	4.10 >	Licensed industrial activities (Part A(1)) >	0	0	10	1	-
80 >	4.11 >	Licensed pollutant release (Part A(2)/B) >	0	0	2	0	-
80	4.12	Radioactive Substance Authorisations	0	0	0	0	-
80 >	4.13 >	Licensed Discharges to controlled waters >	0	0	3	8	-
82	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
82	4.15	Pollutant release to public sewer	0	0	0	0	-
82	4.16	List 1 Dangerous Substances	0	0	0	0	-
83	4.17	List 2 Dangerous Substances	0	0	0	0	-
83 >	4.18 >	Pollution Incidents (EA/NRW) >	0	2	19	11	-
86	4.19	Pollution inventory substances	0	0	0	0	-
87	4.20	Pollution inventory waste transfers	0	0	0	0	-
87	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
88 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
90 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
92 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
94	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
94	5.5	Groundwater vulnerability- local information	None (within 0m)				
95 >	5.6 >	Groundwater abstractions >	0	0	0	0	6
97 >	5.7 >	Surface water abstractions >	0	0	0	1	12
100	5.8	Potable abstractions	0	0	0	0	0
101	5.9	Source Protection Zones	0	0	0	0	-
101	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
102 >	6.1 >	Water Network (OS MasterMap) >	17	22	58	-	-

110 >	6.2 >	Surface water features >	1	9	32	-	-
110 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
111 >	6.4 >	WFD Surface water bodies >	0	0	1	-	-
111 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
112 >	7.1 >	Risk of flooding from rivers and the sea >	High (within 50m)				
113	7.2	Historical Flood Events	0	0	0	-	-
113	7.3	Flood Defences	0	0	0	-	-
113	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
113	7.5	Flood Storage Areas	0	0	0	-	-
114 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
115 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				
Page	Section	Surface water flooding >					
116 >	8.1 >	Surface water flooding >	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
118 >	9.1 >	Groundwater flooding >	Low (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
119 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	0	0	0	0	1
120	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
120	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
120	10.4	Special Protection Areas (SPA)	0	0	0	0	0
120	10.5	National Nature Reserves (NNR)	0	0	0	0	0
121 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	1
121 >	10.7 >	Designated Ancient Woodland >	0	0	1	0	1
121	10.8	Biosphere Reserves	0	0	0	0	0
122	10.9	Forest Parks	0	0	0	0	0
122	10.10	Marine Conservation Zones	0	0	0	0	0
122	10.11	Green Belt	0	0	0	0	0
122	10.12	Proposed Ramsar sites	0	0	0	0	0

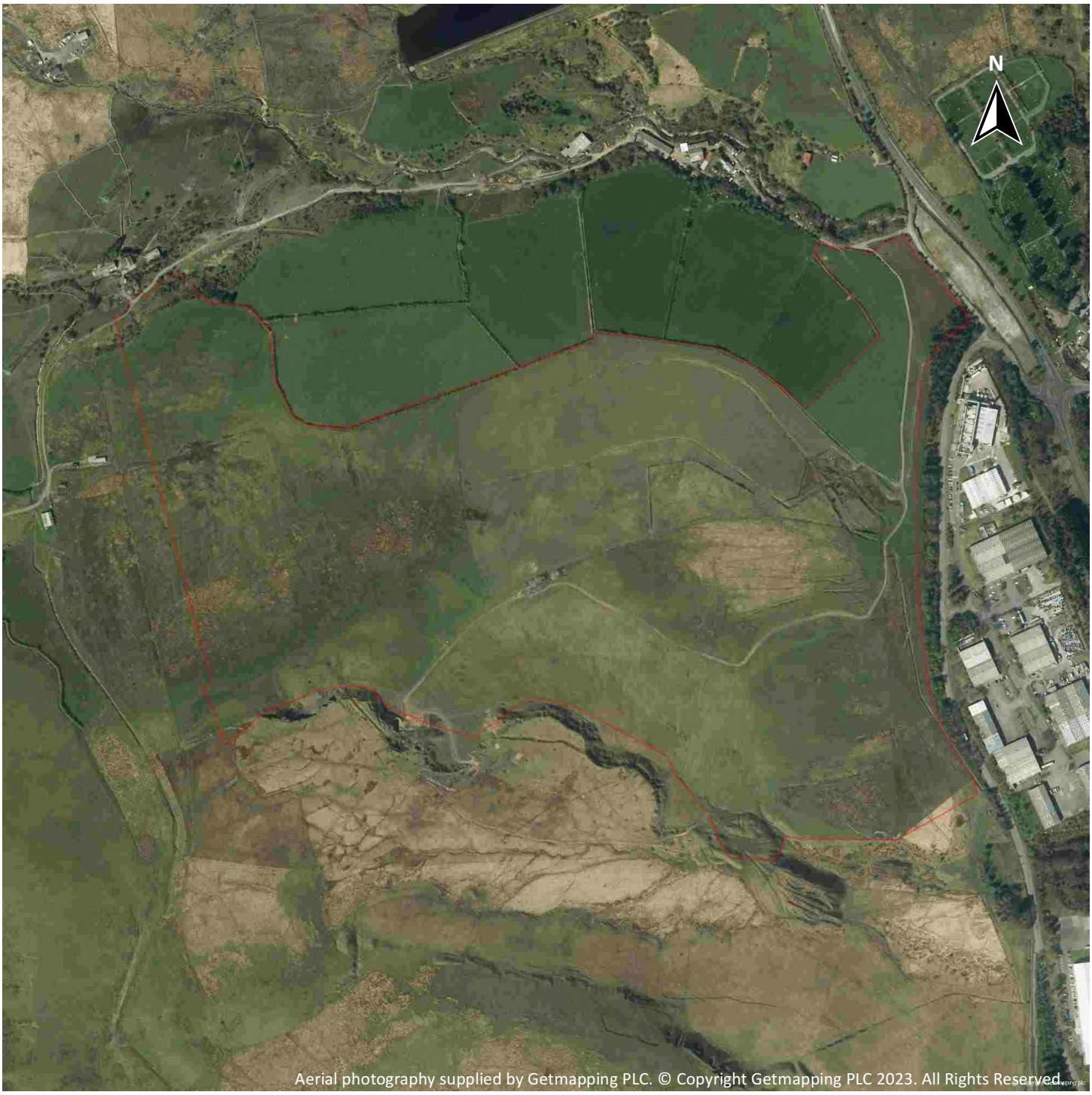
122	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
123	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
123	10.15	Nitrate Sensitive Areas	0	0	0	0	0
123	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
124	10.17	SSSI Impact Risk Zones	0	-	-	-	-
124	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
125	11.1	World Heritage Sites	0	0	0	-	-
125	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
125	11.3	National Parks	0	0	0	-	-
125	11.4	Listed Buildings	0	0	0	-	-
126	11.5	Conservation Areas	0	0	0	-	-
126	11.6	Scheduled Ancient Monuments	0	0	0	-	-
126	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	**Agricultural designations** >	On site	0-50m	50-250m	250-500m	500-2000m
127 >	**12.1** >	**Agricultural Land Classification** >	Grade 5 (within 250m)				
128 >	**12.2** >	**Open Access Land** >	1	0	0	-	-
128	12.3	Tree Felling Licences	0	0	0	-	-
128	12.4	Environmental Stewardship Schemes	0	0	0	-	-
129	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
130	13.1	Priority Habitat Inventory	0	0	0	-	-
130	13.2	Habitat Networks	0	0	0	-	-
130	13.3	Open Mosaic Habitat	0	0	0	-	-
130	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
131 >	**14.1** >	**10k Availability** >	Identified (within 500m)				
132 >	**14.2** >	**Artificial and made ground (10k)** >	3	0	0	3	-
134 >	**14.3** >	**Superficial geology (10k)** >	1	1	0	0	-

135	14.4	Landslip (10k)	0	0	0	0	-
136 >	14.5 >	Bedrock geology (10k) >	3	0	0	0	-
137 >	14.6 >	Bedrock faults and other linear features (10k) >	1	0	0	0	-
Page	Section	**Geology 1:50,000 scale** >	On site	0-50m	50-250m	250-500m	500-2000m
138 >	15.1 >	50k Availability >	Identified (within 500m)				
139 >	15.2 >	Artificial and made ground (50k) >	2	0	0	2	-
140 >	15.3 >	Artificial ground permeability (50k) >	2	0	-	-	-
141 >	15.4 >	Superficial geology (50k) >	1	0	0	0	-
142 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
142	15.6	Landslip (50k)	0	0	0	0	-
142	15.7	Landslip permeability (50k)	None (within 50m)				
143 >	15.8 >	Bedrock geology (50k) >	2	0	0	0	-
144 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
144 >	15.10 >	Bedrock faults and other linear features (50k) >	20	2	11	11	-
Page	Section	**Boreholes** >	On site	0-50m	50-250m	250-500m	500-2000m
147 >	16.1 >	BGS Boreholes >	1	2	14	-	-
Page	Section	**Natural ground subsidence** >					
149 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
150 >	17.2 >	Running sands >	Very low (within 50m)				
152 >	17.3 >	Compressible deposits >	Very low (within 50m)				
154 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
155 >	17.5 >	Landslides >	Moderate (within 50m)				
157 >	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
159 >	18.1 >	BritPits >	11	2	13	20	-
169 >	18.2 >	Surface ground workings >	143	55	234	-	-
185 >	18.3 >	Underground workings >	20	9	41	28	70
191	18.4	Underground mining extents	0	0	0	0	-
191	18.5	Historical Mineral Planning Areas	0	0	0	0	-

191 >	18.6 >	Non-coal mining >	2	0	0	0	5
193	18.7	JPB mining areas	None (within 0m)				
193 >	18.8 >	The Coal Authority non-coal mining >	18	0	3	6	-
194	18.9	Researched mining	0	0	0	0	-
194	18.10	Mining record office plans	0	0	0	0	-
195	18.11	BGS mine plans	0	0	0	0	-
195 >	18.12 >	Coal mining >	Identified (within 0m)				
195	18.13	Brine areas	None (within 0m)				
195	18.14	Gypsum areas	None (within 0m)				
196	18.15	Tin mining	None (within 0m)				
196	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
197	19.1	Natural cavities	0	0	0	0	-
197	19.2	Mining cavities	0	0	0	0	0
197	19.3	Reported recent incidents	0	0	0	0	-
197	19.4	Historical incidents	0	0	0	0	-
198	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
199 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
201 >	21.1 >	BGS Estimated Background Soil Chemistry >	22	5	-	-	-
203	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
203	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
204	22.1	Underground railways (London)	0	0	0	-	-
204	22.2	Underground railways (Non-London)	0	0	0	-	-
205	22.3	Railway tunnels	0	0	0	-	-
205 >	22.4 >	Historical railway and tunnel features >	6	2	28	-	-
206	22.5	Royal Mail tunnels	0	0	0	-	-

207 >	22.6 >	Historical railways >	0	0	1	-	-
207	22.7	Railways	0	0	0	-	-
207	22.8	Crossrail 1	0	0	0	0	-
207	22.9	Crossrail 2	0	0	0	0	-
208	22.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 14/04/2020

Site Area: 55.05ha

Recent site history - 2017 aerial photograph



Capture Date: 17/06/2017

Site Area: 55.05ha

Recent site history - 2013 aerial photograph



Capture Date: 14/07/2013

Site Area: 55.05ha

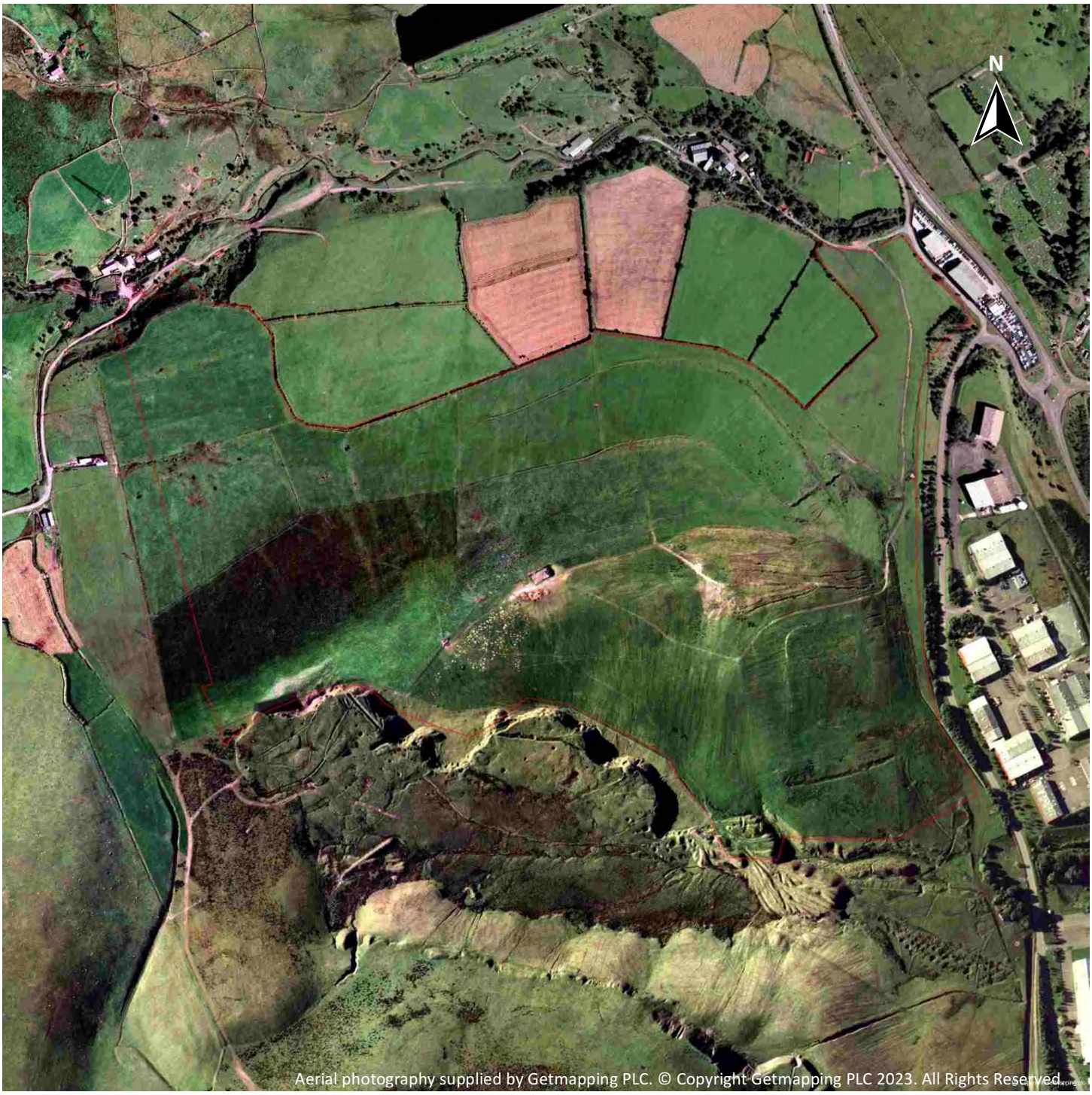
Recent site history - 2009 aerial photograph



Capture Date: 08/10/2009

Site Area: 55.05ha

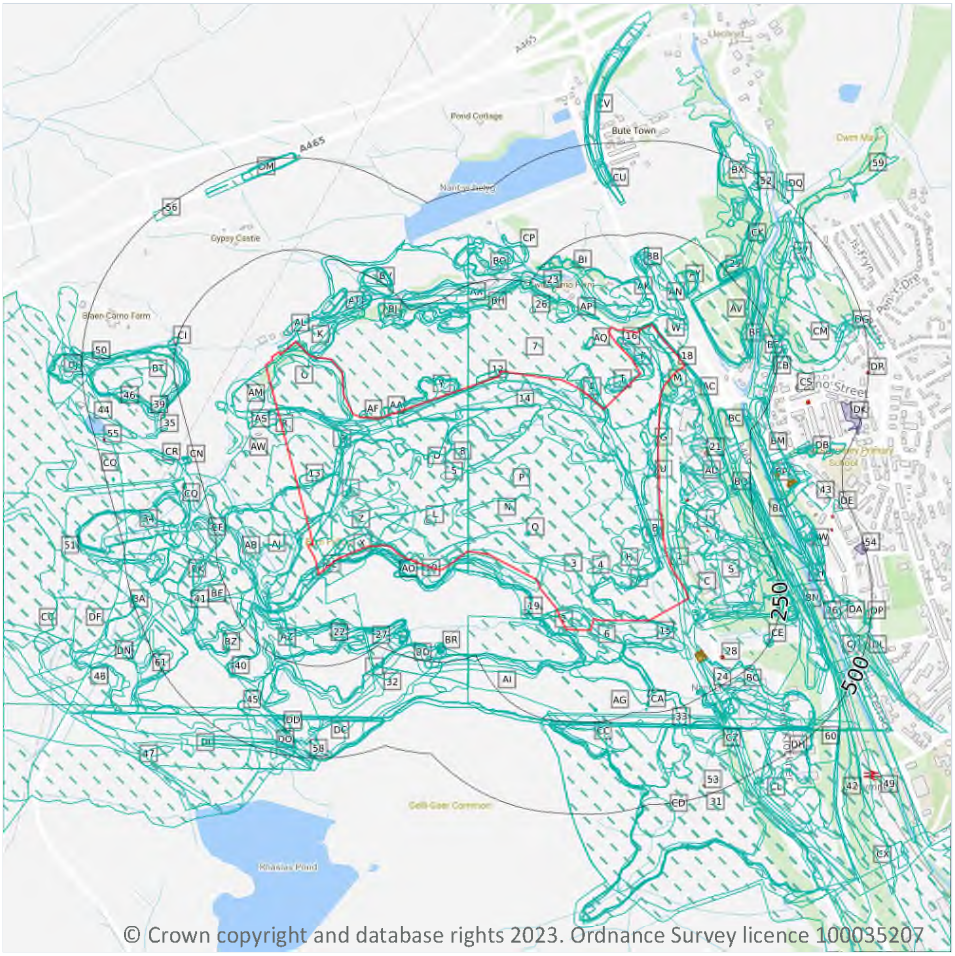
Recent site history - 2000 aerial photograph



Capture Date: 18/06/2000

Site Area: 55.05ha

1 Past land use



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1.1 Historical industrial land uses

Records within 500m	600

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

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

ID	Location	Land use	Dates present	Group ID
1	**On site**	**Unspecified Ground Workings**	**1948**	**1123002**

ID	Location	Land use	Dates present	Group ID
2	On site	Unspecified Heap	1879	1001053
3	On site	Cuttings	1879	994333
4	On site	Unspecified Heap	1895	1001051
5	On site	Unspecified Heap	1895	1001062
6	On site	Unspecified Disused Tip	1985	1005194
7	On site	Opencast Workings	1964	1008260
8	On site	Unspecified Pit	1879	1028367
9	On site	Opencast Working	1965	1032436
10	On site	Unspecified Disused Tip	1992	1069570
11	On site	Railway Sidings	1875 - 1879	1072770
12	On site	Unspecified Heaps	1938	1073946
13	On site	Unspecified Heap	1938	1074952
14	On site	Unspecified Ground Workings	1879	1091364
15	On site	Unspecified Ground Workings	1964 - 1965	1119285
16	On site	Old Coal Level	1915	1135253
17	On site	Unspecified Ground Workings	1895	1140109
18	On site	Unspecified Ground Workings	1898	1153615
A	On site	Unspecified Heap	1879	1001052
A	On site	Unspecified Pit	1879	1028365
A	On site	Unspecified Pit	1879	1028366
A	On site	Unspecified Ground Workings	1895	1153768
B	On site	Cuttings	1879	994334
B	On site	Unspecified Heap	1948	1001061
B	On site	Old Coal Level	1915	1065380
B	On site	Old Coal Level	1915	1066973
B	On site	Old Coal Level	1948	1080957
B	On site	Old Coal Level	1898	1087644
B	On site	Old Coal Level	1895	1099529

ID	Location	Land use	Dates present	Group ID
B	On site	Old Coal Level	1938	1148956
C	On site	Ironstone Pit	1879	1000024
C	On site	Unspecified Ground Workings	1915	1153238
D	On site	Unspecified Heap	1895	1001063
D	On site	Unspecified Pit	1895	1028308
E	On site	Unspecified Heap	1898	1001067
E	On site	Unspecified Heap	1898	1001068
E	On site	Unspecified Ground Workings	1895	1140234
F	On site	Unspecified Heap	1895	1001069
F	On site	Old Coal Level	1938	1078238
F	On site	Unspecified Ground Workings	1915	1078513
F	On site	Unspecified Ground Workings	1898	1109579
F	On site	Unspecified Ground Workings	1948	1142422
G	On site	Unspecified Old Shaft	1898	1003308
G	On site	Unspecified Old Shaft	1895	1003309
G	On site	Disused Air Shaft	1985	1022316
G	On site	Unspecified Ground Workings	1938	1079710
G	On site	Unspecified Heap	1915	1097541
G	On site	Unspecified Ground Workings	1915	1101913
G	On site	Unspecified Ground Workings	1948	1121474
G	On site	Unspecified Heap	1948	1125225
H	On site	Unspecified Disused Tips	1973	1007196
I	On site	Unspecified Factories	1985	1014825
J	On site	Engine House	1879	1019168
J	On site	Engine House	1875	1019169
J	On site	Unspecified Ground Workings	1895	1036105
J	On site	Unspecified Ground Workings	1965	1036108
K	On site	Unspecified Pit	1879	1028307

ID	Location	Land use	Dates present	Group ID
K	On site	Unspecified Ground Workings	1948	1066370
K	On site	Unspecified Old Quarry	1895 - 1898	1091267
K	On site	Unspecified Ground Workings	1915	1122258
K	On site	Unspecified Ground Workings	1875	1143038
L	On site	Unspecified Pit	1895	1028310
L	On site	Unspecified Disused Tip	1982	1063595
L	On site	Unspecified Disused Tip	1975	1146678
M	On site	Unspecified Pit	1915	1028318
M	On site	Old Air Shaft	1948	1043295
M	On site	Old Air Shaft	1938	1091644
M	On site	Unspecified Ground Workings	1948	1123324
M	On site	Old Air Shaft	1915	1131273
N	On site	Unspecified Pit	1879	1028368
N	On site	Unspecified Ground Workings	1915	1104166
N	On site	Unspecified Ground Workings	1948	1115077
N	On site	Unspecified Ground Workings	1938	1139977
N	On site	Unspecified Ground Workings	1938	1155482
O	On site	Unspecified Ground Workings	1938	1036741
O	On site	Unspecified Heap	1879 - 1895	1045277
O	On site	Unspecified Ground Workings	1898 - 1915	1087691
O	On site	Unspecified Ground Workings	1948	1089680
P	On site	Unspecified Ground Workings	1898	1039232
P	On site	Unspecified Ground Workings	1875	1146713
Q	On site	Old Air Shaft	1948	1040223
Q	On site	Old Air Shaft	1915	1059804
Q	On site	Unspecified Disused Shaft	1964 - 1973	1069585
Q	On site	Old Air Shaft	1938	1094040
R	On site	Unspecified Heap	1915	1041289

ID	Location	Land use	Dates present	Group ID
R	On site	Railway Sidings	1895	1102243
R	On site	Railway Sidings	1879	1105307
R	On site	Unspecified Heap	1938 - 1948	1138608
S	On site	Unspecified Disused Pit	1938	1041873
T	On site	Unspecified Ground Workings	1948	1046893
T	On site	Unspecified Heap	1915	1137235
U	On site	Unspecified Ground Workings	1948	1047088
U	On site	Unspecified Ground Workings	1898	1049928
U	On site	Unspecified Ground Workings	1915	1068104
U	On site	Unspecified Ground Workings	1898	1098094
U	On site	Unspecified Heap	1938	1115727
U	On site	Unspecified Ground Workings	1915	1151843
V	On site	Unspecified Old Quarries	1898	1049015
W	On site	Coal Level	1875	1049061
W	On site	Old Coal Level	1895 - 1898	1074051
X	On site	Unspecified Ground Workings	1975	1051110
X	On site	Unspecified Ground Workings	1982	1095075
X	On site	Unspecified Heap	1948	1098490
X	On site	Unspecified Heap	1915	1105342
X	On site	Unspecified Heap	1948	1131810
X	On site	Unspecified Heap	1915	1153767
Y	On site	Unspecified Heaps	1879	1052928
Y	On site	Unspecified Ground Workings	1895	1057312
Y	On site	Unspecified Ground Workings	1898	1057524
Y	On site	Unspecified Heaps	1938	1062358
Z	On site	Railway Sidings	1875	1064117
Z	On site	Railway Sidings	1879	1095430
Z	On site	Unspecified Ground Workings	1895	1110778

ID	Location	Land use	Dates present	Group ID
AA	**On site**	**Unspecified Heap**	**1938**	**1066646**
AA	**On site**	**Unspecified Heap**	**1915**	**1095569**
AA	**On site**	**Unspecified Heap**	**1948**	**1150143**
AB	**On site**	**Unspecified Ground Workings**	**1948**	**1067403**
AB	**On site**	**Unspecified Ground Workings**	**1915**	**1148359**
AC	**On site**	**Unspecified Ground Workings**	**1948**	**1075423**
AC	**On site**	**Unspecified Ground Workings**	**1915**	**1151060**
AD	**On site**	**Unspecified Ground Workings**	**1938**	**1093258**
AE	**On site**	**Unspecified Old Quarry**	**1915**	**1096993**
AE	**On site**	**Unspecified Old Quarry**	**1948**	**1130807**
AF	**On site**	**Unspecified Heap**	**1915**	**1116949**
AG	**On site**	**Unspecified Old Quarry**	**1899**	**1102104**
AG	**On site**	**Unspecified Old Quarry**	**1895**	**1151904**
AH	**On site**	**Unspecified Ground Workings**	**1938**	**1136459**
AH	**On site**	**Unspecified Ground Workings**	**1938**	**1143663**
T	0m NE	Unspecified Ground Workings	1938	1106660
AF	2m NW	Unspecified Heap	1948	1103270
X	2m SW	Unspecified Quarry	1992	1010511
C	2m SE	Unspecified Heap	1948	1001060
T	5m NE	Unspecified Heap	1895	1070612
T	8m NE	Unspecified Pit	1898	1028317
M	8m NE	Unspecified Ground Workings	1915	1050276
I	10m SE	Industrial Estate	1985	1004030
AI	15m SE	Unspecified Old Quarry	1948	1099760
AI	15m SE	Unspecified Old Quarry	1915	1143031
W	16m NE	Coal Level	1879	1140541
AJ	17m SW	Unspecified Old Quarry	1938	1070010
AK	21m NE	Unspecified Ground Workings	1895 - 1898	1146986

ID	Location	Land use	Dates present	Group ID
AJ	21m W	Unspecified Ground Workings	1895	1104610
AL	23m NW	Unspecified Ground Workings	1915	1146847
AL	23m NW	Unspecified Ground Workings	1948	1154621
AM	25m W	Coal Level	1875	1117600
AK	28m NE	Refuse Heaps	1973	1004699
C	33m SE	Unspecified Disused Pit	1895	1015565
AK	33m NE	Unspecified Ground Workings	1948	1094861
AK	33m NE	Unspecified Ground Workings	1915	1129919
AK	35m NE	Unspecified Ground Workings	1938	1042095
AN	36m NE	Unspecified Ground Workings	1938	1147968
AO	36m SW	Unspecified Pit	1948	1101985
AO	36m SW	Unspecified Pit	1915	1142589
S	36m E	Unspecified Disused Pit	1915	1108120
S	36m E	Unspecified Disused Pit	1948	1143882
C	37m SE	Unspecified Shaft	1948	1138596
AP	39m NE	Old Coal Level	1915	1133652
AJ	40m W	Unspecified Heaps	1879	1021491
AP	41m NE	Old Coal Level	1948	1080947
C	42m SE	Unspecified Shaft	1938	1084583
AQ	42m NE	Old Coal Level	1915	1063602
AQ	43m NE	Old Coal Level	1938	1120945
AQ	45m NE	Unspecified Ground Workings	1948	997354
AN	45m NE	Old Coal Level	1948	1117833
C	46m SE	Engine House	1875 - 1879	1088850
AN	46m NE	Unspecified Ground Workings	1964	1083010
C	48m SE	Unspecified Shaft	1915	1112902
AN	48m NE	Old Coal Level	1915	1105204
S	48m SE	Unspecified Disused Pit	1898	1061033

ID	Location	Land use	Dates present	Group ID
AK	51m NE	Unspecified Ground Workings	1964	1068018
C	55m SE	Unspecified Shaft	1879	1009271
AR	57m E	Old Coal Level	1898 - 1915	1059576
AR	57m E	Old Coal Level	1948	1098736
C	60m SE	Unspecified Ground Workings	1948	1057512
AR	60m E	Old Coal Level	1895	1097217
C	62m SE	Unspecified Shaft	1875	1009270
S	63m E	Unspecified Ground Workings	1895	1133902
AD	63m E	Unspecified Ground Workings	1898	1107903
AS	63m W	Unspecified Heap	1948	1095607
AS	63m W	Unspecified Heap	1915	1097673
19	64m S	Unspecified Pit	1915 - 1948	1106115
AQ	73m NE	Unspecified Pit	1879	1028316
AT	76m NW	Unspecified Ground Workings	1895	1080281
AU	83m NW	Unspecified Ground Workings	1915	1116096
AU	83m NW	Unspecified Ground Workings	1948	1135541
AT	85m NW	Unspecified Heap	1898	1055473
AI	93m SE	Unspecified Old Quarry	1938	1133549
AV	93m NE	Cemetery	1895	1047460
AV	97m NE	Cemetery	1964 - 1973	1058632
20	99m NE	Cemetery	1985	1131723
AV	102m NE	Cemetery	1898 - 1915	1072091
AV	102m NE	Cemetery	1948	1117036
AW	104m W	Unspecified Heap	1915	1001064
V	104m S	Unspecified Ground Workings	1879	1130341
AT	105m NW	Unspecified Heap	1875	1132444
AV	105m NE	Cemetery	1938	1069945
AT	108m NW	Unspecified Heap	1938	1073898

ID	Location	Land use	Dates present	Group ID
AX	110m NE	Unspecified Ground Workings	1915	1102495
AX	110m NE	Unspecified Ground Workings	1948	1106465
AW	111m W	Unspecified Ground Workings	1895 - 1898	1080843
AP	114m NE	Unspecified Pit	1879	1028315
AM	116m W	Coal Level	1879	1135687
AY	118m NE	Unspecified Pit	1879	1137214
AY	121m NE	Unspecified Old Quarry	1895 - 1898	1150492
AP	123m NE	Old Coal Level	1895	1032298
AT	126m NW	Unspecified Pit	1879	1028305
AW	126m W	Unspecified Heap	1938	1073554
AM	128m W	Old Coal Level	1915 - 1948	1087383
AY	128m NE	Unspecified Pit	1915	1054818
AY	128m NE	Unspecified Pit	1948	1157083
AY	129m NE	Unspecified Pit	1964 - 1973	1058578
AZ	130m SW	Unspecified Old Quarries	1938	1082322
AZ	131m SW	Unspecified Old Quarries	1948	1044628
AZ	131m SW	Unspecified Old Quarries	1915	1135490
AY	132m NE	Unspecified Pit	1938	1118023
AM	132m W	Old Coal Level	1895 - 1898	1049248
BA	133m SW	Opencast Workings	1975	1149397
BB	138m NE	Unspecified Pit	1875 - 1879	1133160
H	139m SE	Unspecified Tanks	1964 - 1973	1098052
BB	142m NE	Unspecified Ground Workings	1895	1056147
22	144m SW	Unspecified Ground Workings	1895	1084945
AX	149m N	Unspecified Old Quarry	1895	1139420
BC	149m E	Unspecified Ground Workings	1948	1132215
AX	150m N	Unspecified Pit	1875	1028304
BC	151m E	Unspecified Heap	1938	1048345

ID	Location	Land use	Dates present	Group ID
BB	151m NE	Unspecified Pit	1898	1084121
AT	153m NW	Unspecified Heap	1938	1138131
BC	155m E	Unspecified Ground Workings	1895 - 1898	1053114
BC	155m E	Unspecified Ground Workings	1915	1085583
AX	155m N	Unspecified Old Quarry	1898	1079719
AX	156m N	Unspecified Ground Workings	1938	1154420
BD	156m SW	Unspecified Disused Tip	1982	1061045
BD	156m SW	Unspecified Disused Tip	1975	1119044
23	156m N	Unspecified Ground Workings	1938	1111815
BE	164m W	Unspecified Ground Workings	1938	1071213
BF	167m NE	Unspecified Ground Workings	1964	1038770
AV	167m NE	Unspecified Ground Workings	1895	1152887
24	167m SE	Railway Sidings	1895 - 1898	1112219
BG	167m SE	Unspecified Disused Pit	1948	1050571
BG	167m SE	Unspecified Disused Pit	1915	1068548
BG	167m SE	Unspecified Disused Pit	1898 - 1915	1142630
BG	167m SE	Refuse Heap	1938	1044444
25	167m SW	Unspecified Ground Workings	1895	1154752
26	169m N	Unspecified Pit	1915 - 1948	1045383
BH	169m N	Unspecified Ground Workings	1895	1068642
BF	170m NE	Unspecified Ground Workings	1973	1105393
BI	170m NE	Unspecified Pit	1964	1028319
BH	171m N	Old Coal Level	1898	1032297
BJ	171m NW	Unspecified Pit	1879	1028306
27	172m SW	Unspecified Ground Workings	1895	1139388
AV	172m NE	Unspecified Ground Workings	1898	1097995
BJ	174m NW	Unspecified Pits	1875	1007950
AX	177m N	Unspecified Heap	1879	1001070

ID	Location	Land use	Dates present	Group ID
BK	179m W	Unspecified Ground Workings	1875	1135308
BD	182m SW	Unspecified Heaps	1938	1145730
BL	183m E	Railway Sidings	1964	1116964
BJ	186m NW	Unspecified Ground Workings	1895	1098874
BD	186m SW	Unspecified Heaps	1875	1053363
BM	186m E	Railway Sidings	1875	1145740
BD	187m SW	Unspecified Heap	1879	1001054
BN	187m E	Railway Sidings	1898 - 1948	1093330
BO	188m N	Refuse Heap	1973	1019580
AX	189m NW	Unspecified Disused Tip	1975	1068076
AX	189m NW	Unspecified Disused Tip	1982	1098737
BP	190m E	Railway Sidings	1895	1128022
BI	192m N	Unspecified Ground Workings	1938	1037505
BI	192m N	Unspecified Ground Workings	1938	1115809
BQ	194m E	Old Air Shaft	1895	1003802
BQ	196m E	Unspecified Ground Workings	1948	1146371
BQ	196m E	Unspecified Heaps	1938	1105223
BR	196m S	Unspecified Heap	1875 - 1879	1037661
BM	197m E	Railway Sidings	1879	1047432
BS	197m NE	Unspecified Ground Workings	1895	997355
AV	197m NE	Unspecified Disused Pit	1898	1140110
BQ	199m E	Old Air Shaft	1898 - 1915	1135791
BR	199m S	Unspecified Ground Workings	1948	1055226
BQ	200m E	Old Coal Level	1938	1085231
BQ	202m E	Old Air Shaft	1938	1051694
AX	202m NW	Unspecified Pit	1879	1028309
AB	203m W	Old Air Shaft	1948	1124511
BR	204m S	Unspecified Ground Workings	1915	1139198

ID	Location	Land use	Dates present	Group ID
AX	205m N	Unspecified Ground Workings	1965	1093062
BM	206m E	Unspecified Ground Workings	1948	1054962
BM	206m E	Unspecified Ground Workings	1915	1134698
BN	206m E	Unspecified Ground Workings	1915	1071561
AB	206m W	Old Air Shaft	1915 - 1938	1142677
BR	208m S	Unspecified Disused Shaft	1982 - 1992	1081701
BR	208m S	Unspecified Disused Shaft	1975	1097126
BR	208m S	Old Air Shafts	1938 - 1948	1079358
BR	208m S	Unspecified Disused Shaft	1965	1119659
BT	209m W	Unspecified Disused Tip	1975	1134265
BT	209m W	Unspecified Disused Tip	1982	1143314
BQ	209m E	Old Coal Level	1938	1059342
BT	210m W	Unspecified Disused Tip	1992	1043815
BR	211m S	Air Shafts	1898	1027665
BR	211m S	Air Shafts	1875 - 1879	1070623
BD	212m SW	Old Air Shafts	1938 - 1948	1142604
BU	212m SE	Old Coal Level	1938	1092099
BI	213m N	Unspecified Pit	1964	1028320
BV	213m NW	Unspecified Ground Workings	1875	1113135
BR	214m S	Unspecified Pit	1938	1144213
BD	214m SW	Air Shafts	1898	1108459
BR	215m S	Old Air Shafts	1915	1010445
BD	215m SW	Air Shafts	1879	1148267
BV	216m NW	Unspecified Old Quarry	1895 - 1898	1142715
BT	216m W	Unspecified Disused Pit	1938	1101235
BU	216m SE	Old Coal Level	1948	1098694
BD	216m SW	Air Shafts	1875	1047314
29	217m NE	Unspecified Pit	1879	1042776

ID	Location	Land use	Dates present	Group ID
BT	217m W	Unspecified Disused Pit	1948	1055100
AV	217m NE	Unspecified Disused Tips	1973	1007197
BT	218m W	Unspecified Disused Pit	1915	1139600
BR	218m S	Railway Sidings	1915	993883
BD	218m SW	Old Air Shafts	1915	1010438
BW	219m E	Railway Sidings	1898	1070172
BW	219m E	Railway Sidings	1915	1072594
BX	221m NE	Unspecified Ground Workings	1964	1111601
BV	221m NW	Unspecified Ground Workings	1938	1086404
BR	221m S	Air Shafts	1895	1027666
BV	221m NW	Unspecified Ground Workings	1915	1081191
AX	222m N	Unspecified Ground Workings	1898	1037353
BV	223m NW	Unspecified Ground Workings	1948	1121640
AV	223m NE	Coal Pit	1875 - 1879	1155169
BT	223m W	Unspecified Ground Workings	1875	1046405
BX	223m NE	Unspecified Ground Workings	1915	1131910
BT	223m W	Unspecified Disused Pit	1895 - 1898	1084402
BV	224m NW	Unspecified Pit	1879	1069233
BY	224m NE	Unspecified Ground Workings	1948	1122741
30	224m NE	Unspecified Pit	1938	1101972
BT	224m W	Unspecified Ground Workings	1965	1145161
BZ	225m SW	Unspecified Old Quarries	1895	1089697
CA	225m SE	Old Air Shaft	1938	1121610
BD	225m SW	Air Shafts	1895	1027669
CB	226m E	Railway Sidings	1915 - 1938	1105702
BQ	226m E	Unspecified Heap	1915	1095525
CC	227m S	Unspecified Ground Workings	1973	1132418
AX	227m N	Unspecified Heap	1938	1080041

ID	Location	Land use	Dates present	Group ID
CD	227m S	Disused Old Colliery	1899	1098327
BQ	227m E	Unspecified Heap	1938	1150018
CA	227m SE	Old Air Shaft	1898 - 1915	1067842
CA	227m SE	Old Air Shaft	1948	1117776
CE	229m SE	Unspecified Pit	1879	1147970
CE	230m SE	Unspecified Pit	1875	1139054
BG	231m SE	Unspecified Ground Workings	1938	1059540
BG	231m SE	Unspecified Ground Workings	1938	1068986
BG	231m SE	Unspecified Ground Workings	1948	1135299
31	233m S	Iron Works	1875	1016012
BE	233m W	Unspecified Pit	1898	1153400
CF	234m W	Unspecified Heap	1898	1001050
BT	234m W	Unspecified Ground Workings	1879	1121724
BG	236m SE	Unspecified Ground Workings	1915	1037454
CF	237m W	Unspecified Ground Workings	1895	1073520
CA	239m SE	Old Air Shaft	1895	1003790
BE	239m W	Unspecified Ground Workings	1895	1147518
BN	241m E	Railway Sidings	1879	1073509
BE	241m W	Unspecified Pit	1879	1111561
CE	242m SE	Unspecified Pit	1948	1102459
CG	242m W	Railway Sidings	1875 - 1879	1054091
CH	244m E	Railway Sidings	1875	1148992
CI	245m NW	Unspecified Heap	1948	1001066
CI	245m NW	Old Coal Level	1915	1127900
CE	246m SE	Unspecified Pit	1915	1101248
BL	246m E	Railway Sidings	1895	1078502
CI	246m W	Old Coal Level	1915	1047937
CJ	246m E	Railway Sidings	1899 - 1938	1091175

ID	Location	Land use	Dates present	Group ID
CI	247m NW	Old Coal Level	1938	1156972
CK	247m NE	Unspecified Ground Workings	1895 - 1898	1139325
32	248m S	Unspecified Old Quarries	1895	1045416
BV	249m NW	Unspecified Pit	1982 - 1992	1122273
BV	249m NW	Unspecified Pit	1965 - 1975	1145589
CI	249m W	Old Coal Level	1948	1085544
CB	249m NE	Coal Level	1879	1007544
BN	249m SE	Unspecified Heap	1895	1091658
BN	250m SE	Unspecified Pit	1898	1028370
BW	250m E	Railway Sidings	1948	1072135
BN	251m E	Railway Sidings	1895	1139546
BG	254m SE	Unspecified Ground Workings	1895	1074982
CD	254m S	Unspecified Ground Workings	1915 - 1948	1074980
BG	256m SE	Ironstone Pit	1879	1000030
CB	257m NE	Coal Level	1875	1007550
CL	258m S	Ironstone Levels	1875	1003939
CL	258m S	Disused Old Colliery	1916	1071303
CL	259m S	Ground Workings and Refuse Heap	1916	1007290
CM	261m NE	Unspecified Disused Pit	1915	1100122
CM	261m NE	Unspecified Disused Pit	1948	1143239
BO	262m N	Unspecified Ground Workings	1915	1046175
CN	262m W	Unspecified Heap	1938	1149530
CC	262m S	Unspecified Old Quarry	1895	1080229
BS	263m NE	Refuse Heap	1938	1126202
CN	263m W	Unspecified Heap	1948	1153030
CN	263m W	Unspecified Heap	1915	1115578
BO	263m N	Unspecified Ground Workings	1964	1113722
BO	264m N	Unspecified Ground Workings	1948	1083043

ID	Location	Land use	Dates present	Group ID
AV	265m NE	Coal Level	1875	1007545
BO	266m N	Unspecified Ground Workings	1938	1088806
BO	266m N	Unspecified Ground Workings	1938	1142251
BO	266m N	Unspecified Disused Tip	1975	1072669
BO	266m N	Unspecified Disused Tip	1982	1150652
BN	267m E	Unspecified Heap	1948	1001055
CA	269m SE	Old Coal Level	1915	1032294
CB	269m NE	Coal Level	1879	1007546
CB	271m NE	Coal Level	1875	1007549
BO	272m N	Unspecified Ground Workings	1895 - 1898	1112465
CD	273m SE	Unspecified Ground Workings	1895	1052601
CL	273m SE	Disused Colliery	1895	1059429
33	273m SE	Unspecified Heap	1879	1000988
BN	274m SE	Unspecified Heap	1948	1072202
BX	274m NE	Refuse Heap	1973	1019584
BN	275m SE	Unspecified Heap	1938	1122148
BG	276m SE	Unspecified Shaft	1915	1044041
BG	283m SE	Unspecified Shaft	1948	1009217
BE	284m W	Unspecified Ground Workings	1898	1133155
BW	286m E	Unspecified Heap	1948	1001059
BG	288m SE	Unspecified Shaft	1875	1142936
BG	289m SE	Engine House	1875 - 1879	1096157
V	290m SW	Unspecified Disused Tip	1982	1073349
V	290m SW	Unspecified Disused Tip	1975	1089763
CO	290m W	Opencast Workings	1965	1136851
CP	291m N	Unspecified Ground Workings	1915	1063350
CP	291m N	Unspecified Ground Workings	1948	1130554
BP	292m E	Brick and Tile Works	1938	1041971

ID	Location	Land use	Dates present	Group ID
CD	292m SE	Unspecified Ground Workings	1899	1037820
34	294m W	Unspecified Old Quarry	1938	1118043
BG	294m SE	Unspecified Shaft	1938	1093337
BG	294m SE	Unspecified Shaft	1938	1140837
CJ	297m E	Unspecified Heap	1948	1001056
35	299m W	Unspecified Ground Workings	1948	1122915
CQ	300m W	Unspecified Ground Workings	1898	1079853
BO	300m N	Unspecified Pit	1875	1028321
BG	302m SE	Unspecified Pit	1899	1116897
BG	302m SE	Unspecified Pit	1948	1053162
BG	303m SE	Unspecified Pit	1879	1119456
CP	303m N	Unspecified Ground Workings	1898	1089361
BZ	304m SW	Unspecified Pit	1875 - 1879	1050414
BP	304m E	Brick and Tile Works	1879	1068257
36	304m E	Cuttings	1964 - 1973	1086867
BG	305m SE	Unspecified Ground Workings	1915	1044844
CR	306m W	Cuttings	1915 - 1938	1133185
BP	306m E	Brick and Tile Works	1915	1146976
BP	306m E	Brick and Tile Works	1898	1073224
CR	306m W	Cuttings	1948	1130157
BG	307m SE	Unspecified Disused Pit	1948	1098486
BP	308m E	Brick and Tile Works	1875	1067968
CQ	309m W	Unspecified Ground Workings	1895	1085098
CM	310m NE	Unspecified Ground Workings	1898	997339
BP	310m E	Brick and Tiles Works	1895	1006823
37	314m NE	Unspecified Ground Workings	1938	1093251
CT	314m NE	Unspecified Ground Workings	1948	1102277
CT	314m NE	Unspecified Ground Workings	1915	1109303

ID	Location	Land use	Dates present	Group ID
BG	316m SE	Unspecified Pit	1915	1028369
BG	316m SE	Engine House	1875 - 1879	1115904
38	321m E	Railway Sidings	1875 - 1879	1125898
BP	321m E	Unspecified Tank	1895	1109933
BP	322m E	Unspecified Tank	1938	1108424
BP	324m E	Unspecified Tank	1898 - 1915	1047733
BG	324m SE	Unspecified Disused Pit	1895	1063535
39	329m W	Old Coal Level	1915	1032296
BG	332m SE	Unspecified Ground Workings	1875	1033986
CU	333m NE	Cuttings	1948	1111807
AV	334m NE	Coal Level	1879	1007548
BW	337m E	Unspecified Commercial/Industrial	1964	995753
CU	338m NE	Cuttings	1915	1156528
BW	338m E	Brewery	1875 - 1879	1079317
CV	339m NE	Cuttings	1938	1141439
BX	340m NE	Unspecified Heap	1948	1046077
BX	340m NE	Unspecified Heaps	1938	1102195
BX	341m NE	Unspecified Heap	1915	1044114
CW	341m W	Unspecified Old Quarry	1898	1074873
40	343m SW	Unspecified Old Quarries	1895	1155907
41	343m SW	Unspecified Old Quarries	1895	1132987
BW	344m E	Railway Building	1948	1109041
BW	344m E	Railway Building	1898 - 1915	1134656
CW	345m W	Unspecified Old Quarry	1895	1131614
BG	348m SE	Unspecified Shaft	1879	1154198
CW	350m W	Unspecified Old Quarry	1915	1047074
CW	350m W	Unspecified Old Quarry	1948	1111777
CX	353m SE	Railway Sidings	1948	1040879

ID	Location	Land use	Dates present	Group ID
BP	353m E	Unspecified Tanks	1875 - 1879	1043075
CX	353m SE	Railway Sidings	1875	1124286
BP	354m E	Unspecified Tank	1915	1016622
CH	355m E	Railway Building	1915	1013367
CY	356m NE	Unspecified Ground Workings	1895	1107695
CJ	357m SE	Unspecified Pit	1938	1091417
42	361m SE	Colliery	1915	996560
BP	363m E	Unspecified Tank	1915 - 1938	1058346
CK	365m NE	Unspecified Heap	1948	1044497
BX	367m NE	Unspecified Ground Workings	1915	1104664
CK	368m NE	Unspecified Heap	1915	1143854
CZ	368m SE	Unspecified Heap	1899	1000993
BX	368m NE	Unspecified Heap	1964	1001077
CK	369m NE	Unspecified Heap	1938	1055086
CY	369m NE	Unspecified Ground Workings	1898	1105056
DA	376m E	Coal Level	1875	1142015
DB	378m E	Unspecified Heap	1915	1119275
CU	378m N	Cuttings	1875	1069240
DB	378m E	Unspecified Ground Workings	1938	1097423
BK	378m W	Unspecified Heaps	1938	1127645
BK	379m W	Unspecified Ground Workings	1898	1058822
CZ	379m SE	Unspecified Heap	1948	1000989
DB	380m E	Unspecified Ground Workings	1948	1139107
CV	385m N	Cuttings	1879	1034648
CV	386m N	Cuttings	1895	1106147
43	386m E	Brewery	1879	1015953
BG	389m SE	Unspecified Disused Shaft	1964 - 1973	1047071
44	389m W	Unspecified Workings	1965	1015186

ID	Location	Land use	Dates present	Group ID
DC	389m SW	Unspecified Ground Workings	1916 - 1948	1112093
BG	390m SE	Unspecified Old Shaft	1915 - 1948	1092416
DB	390m E	Unspecified Heap	1964	1054109
DC	390m SW	Unspecified Old Quarry	1899	1128743
CU	391m N	Cuttings	1898	1083646
DC	393m SW	Unspecified Quarry	1875	1010512
DC	395m SW	Unspecified Ground Workings	1915	1074981
45	399m SW	Unspecified Heap	1938	1075477
BG	401m SE	Unspecified Old Shaft	1895	1003307
DC	402m SW	Unspecified Old Quarry	1895	1155133
46	402m W	Unspecified Disused Shaft	1965	1008837
47	407m SW	Unspecified Ground Workings	1899 - 1915	1068624
DD	409m SW	Unspecified Ground Workings	1916	1127092
DF	413m SW	Disused Mine Pit	1915	1051416
DF	413m SW	Disused Mine Pit	1948	1084323
48	414m SW	Unspecified Disused Pit	1915 - 1948	1066856
DG	414m E	Tramway Sidings	1875	1014638
DD	414m SW	Cuttings	1875	994337
DH	414m SE	Unspecified Ground Workings	1899	1116174
DG	416m E	Railway Sidings	1879	993877
CW	419m W	Unspecified Pit	1965	1040953
DA	420m E	Unspecified Pit	1964	1028363
DH	420m SE	Refuse Heap	1915 - 1948	1148610
BY	422m NE	Unspecified Ground Workings	1895 - 1898	1127782
DH	422m SE	Unspecified Ground Workings	1895	1040971
DI	423m SW	Coal Pit	1875	1063313
DI	425m SW	Unspecified Ground Workings	1948 - 1965	1053210
DJ	425m W	Unspecified Ground Workings	1895	1053164

ID	Location	Land use	Dates present	Group ID
49	428m SE	Railway Sidings	1964	1120889
BY	430m NE	Unspecified Ground Workings	1938	1066540
BY	430m NE	Unspecified Ground Workings	1938	1138974
DI	433m SW	Unspecified Ground Workings	1916	1062596
DL	439m E	Unspecified Ground Workings	1948	997340
CY	441m NE	Cuttings	1875	994327
CV	442m N	Cuttings	1875	1155168
DA	445m E	Coal Level	1879	1066279
CW	448m W	Unspecified Pit	1879	1154605
DB	448m E	Unspecified Pit	1895	1118504
DB	448m E	Unspecified Pit	1915	1129456
DB	448m E	Unspecified Pit	1948	1136313
CV	449m N	Cuttings	1898 - 1915	1075390
CV	449m N	Cuttings	1948	1081161
DG	449m NE	Railway Building	1875	1013369
CG	450m W	Coal and Ironstone Pit	1875 - 1879	1072986
DB	450m E	Unspecified Pit	1898	1088351
DG	452m NE	Unspecified Disused Pit	1895	1039812
DG	453m NE	Unspecified Disused Pit	1938	1055161
CV	453m N	Cuttings	1964 - 1973	1135698
50	453m W	Unspecified Ground Workings	1898	1114423
DM	453m NW	Cuttings	1875 - 1879	1133910
51	455m W	Opencast Workings	1982	1097577
DG	456m NE	Railway Building	1875	1013363
DE	457m E	Unspecified Pit	1879	1028364
DL	457m SE	Railway Sidings	1948	1106804
DM	458m NW	Cuttings	1938 - 1948	1088722
52	459m NE	Unspecified Heap	1964	1001075

ID	Location	Land use	Dates present	Group ID
DM	460m NW	Cuttings	1915	1067980
DL	460m SE	Railway Sidings	1915	1060479
DL	461m SE	Railway Building	1964	1013368
DM	461m NW	Cuttings	1965	1106300
DN	463m SW	Unspecified Old Quarries	1895	1148938
DO	466m SW	Railway Sidings	1899 - 1915	1117901
DI	466m SW	Railway Sidings	1875	1070700
DO	471m SW	Unspecified Disused Tips	1982	1093923
DO	471m SW	Unspecified Disused Tips	1975	1139015
DN	474m W	Ironstone Mine Pit	1875	1008365
56	476m NW	Cuttings	1895	994328
DO	476m SW	Railway Sidings	1895	1070123
CO	478m W	Unspecified Shaft	1915	1034308
CO	478m W	Unspecified Shaft	1938 - 1948	1046315
DO	479m SW	Railway Sidings	1916	1091524
57	481m SE	Unspecified Disused Level	1985	1006162
DP	481m E	Unspecified Heap	1964	1001057
DP	482m E	Old Coal Levels	1948	1107778
DP	483m E	Old Coal Levels	1915	1086859
DL	484m SE	Railway Sidings	1898	1063748
58	484m SW	Railway Building	1875	1013374
59	485m NE	Unspecified Ground Workings	1895 - 1898	1136837
DQ	486m NE	Unspecified Ground Workings	1938	1149783
BY	486m NE	Unspecified Ground Workings	1964	1059952
60	487m SE	Unspecified Pit	1964	1028373
DO	488m SW	Unspecified Heap	1916	1000992
DQ	490m NE	Unspecified Ground Workings	1915	1123902
BA	491m W	Old Air Shaft	1938 - 1948	1073992

ID	Location	Land use	Dates present	Group ID
BA	491m W	Old Air Shaft	1898	1077413
BA	493m W	Old Air Shaft	1915	1122323
61	494m SW	Unspecified Heap	1879	1001049
DJ	495m W	Unspecified Ground Workings	1915	1100743
CG	495m W	Unspecified Disused Pit	1938	1118193
BY	496m NE	Unspecified Ground Workings	1895	1110961
DQ	496m NE	Unspecified Ground Workings	1895	1113471
DJ	497m W	Unspecified Ground Workings	1938	1067206
DL	497m SE	Railway Building	1915	1013362
DP	498m E	Old Coal Levels	1938	1104733
BA	499m W	Old Air Shaft	1895	1003786

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**15**

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 14 >**

ID	Location	Land use	Dates present	Group ID
21	127m E	Unspecified Tank	1999	149826
H	138m SE	Tanks	1959 - 1983	158987
H	139m SE	Tanks	1973	158876
H	139m SE	Tanks	1983 - 1989	163894
H	141m SE	Tanks	1958 - 1973	160712
H	143m SE	Unspecified Tank	1959	149818
CS	309m E	Unspecified Tank	1877	149827

ID	Location	Land use	Dates present	Group ID
BP	318m E	Unspecified Tank	1919	149822
BP	349m E	Tanks	1920	162024
BP	351m E	Tanks	1876	158470
BP	352m E	Tanks	1901	159988
BP	353m E	Unspecified Tanks	1877	157914
BW	371m E	Unspecified Tank	1971	149823
DE	409m E	Unspecified Tank	1971	149821
53	470m SE	Unspecified Tank	1873 - 1919	167697

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	**13**

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 14 >**

ID	Location	Land use	Dates present	Group ID
AR	72m E	Electricity Substation	1984 - 1987	91271
AR	74m E	Electricity Substation	1981 - 1999	96267
I	119m E	Electricity Substation	1999	85746
28	180m SE	Electricity Substation	1983 - 1989	89477
CS	344m E	Electricity Substation	1971 - 1981	90608
CS	347m E	Electricity Substation	1999	88191
CS	348m E	Electricity Substation	1984 - 1987	89184
DE	429m E	Electricity Substation	1981 - 1987	94788
DE	429m E	Electricity Substation	1999	96337
DE	444m E	Electricity Substation	1971	85747

ID	Location	Land use	Dates present	Group ID
55	475m W	Electricity Substation	1972 - 1986	91318
DR	495m E	Electricity Substation	1984 - 1993	94279
DR	495m E	Electricity Substation	1971 - 1981	95592

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	3

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 14 >**

ID	Location	Land use	Dates present	Group ID
DK	436m E	Garage	1971	28839
54	473m E	Garage	1971	27979
DK	495m E	Garage	1959	28545

This data is sourced from Ordnance Survey / Groundsure.

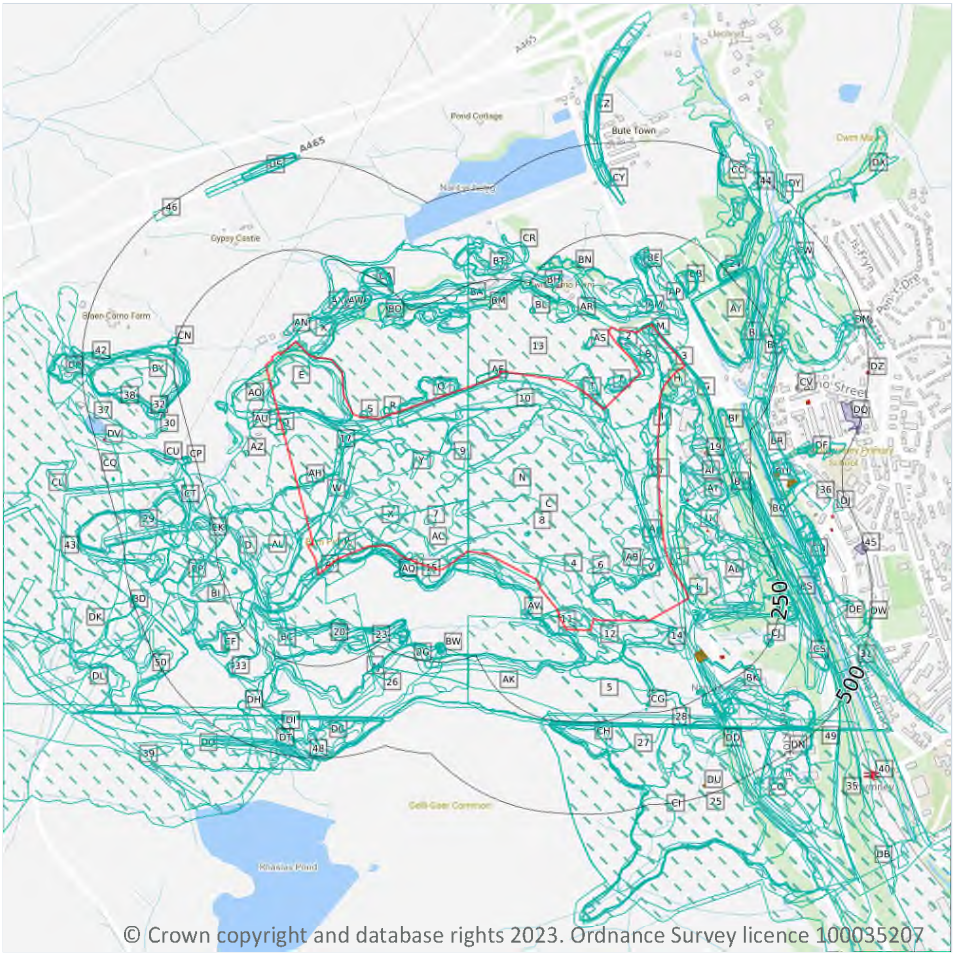
1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped



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Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

2.1 Historical industrial land uses

Records within 500m	735

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 40 >**

ID	Location	Land Use	Date	Group ID
1	On site	Unspecified Ground Workings	1948	1123002
2	On site	Old Coal Level	1915	1135253
3	On site	Unspecified Ground Workings	1898	1153615

ID	Location	Land Use	Date	Group ID
4	On site	Cuttings	1879	994333
5	On site	Unspecified Old Quarry	1895	1151904
6	On site	Unspecified Heap	1895	1001051
7	On site	Unspecified Pit	1895	1028310
8	On site	Unspecified Ground Workings	1895	1140109
9	On site	Unspecified Pit	1879	1028367
10	On site	Unspecified Ground Workings	1879	1091364
11	On site	Unspecified Heap	1879	1001053
12	On site	Unspecified Disused Tip	1985	1005194
13	On site	Opencast Workings	1964	1008260
14	On site	Unspecified Ground Workings	1964	1119285
15	On site	Unspecified Disused Tip	1992	1069570
16	On site	Unspecified Ground Workings	1965	1119285
17	On site	Opencast Working	1965	1032436
A	On site	Old Coal Level	1948	1080957
A	On site	Old Coal Level	1915	1066973
A	On site	Old Coal Level	1915	1065380
A	On site	Old Coal Level	1898	1087644
A	On site	Unspecified Heap	1948	1001061
A	On site	Cuttings	1879	994334
A	On site	Old Coal Level	1895	1099529
A	On site	Old Coal Level	1938	1148956
A	On site	Old Coal Level	1938	1148956
B	On site	Unspecified Ground Workings	1948	1142422
B	On site	Unspecified Ground Workings	1915	1078513
B	On site	Unspecified Ground Workings	1898	1109579
B	On site	Unspecified Heap	1895	1001069
B	On site	Old Coal Level	1938	1078238

ID	Location	Land Use	Date	Group ID
B	On site	Old Coal Level	1938	1078238
C	On site	Unspecified Ground Workings	1948	1115077
C	On site	Unspecified Ground Workings	1915	1104166
C	On site	Unspecified Pit	1879	1028368
C	On site	Unspecified Ground Workings	1938	1155482
C	On site	Unspecified Ground Workings	1938	1139977
D	On site	Unspecified Ground Workings	1948	1067403
D	On site	Unspecified Ground Workings	1915	1148359
E	On site	Unspecified Ground Workings	1948	1089680
E	On site	Unspecified Ground Workings	1915	1087691
E	On site	Unspecified Ground Workings	1898	1087691
E	On site	Unspecified Heap	1895	1045277
E	On site	Unspecified Heap	1879	1045277
E	On site	Unspecified Ground Workings	1938	1036741
E	On site	Unspecified Ground Workings	1938	1036741
F	On site	Unspecified Ground Workings	1948	1046893
F	On site	Unspecified Heap	1915	1137235
G	On site	Unspecified Ground Workings	1948	1075423
G	On site	Unspecified Ground Workings	1915	1151060
H	On site	Unspecified Ground Workings	1948	1123324
H	On site	Unspecified Pit	1915	1028318
H	On site	Old Air Shaft	1948	1043295
H	On site	Old Air Shaft	1915	1131273
H	On site	Old Air Shaft	1938	1091644
I	On site	Unspecified Ground Workings	1948	1121474
I	On site	Unspecified Ground Workings	1915	1101913
I	On site	Unspecified Heap	1948	1125225
I	On site	Unspecified Heap	1915	1097541

ID	Location	Land Use	Date	Group ID
I	On site	Unspecified Old Shaft	1898	1003308
I	On site	Disused Air Shaft	1985	1022316
I	On site	Unspecified Old Shaft	1895	1003309
I	On site	Unspecified Ground Workings	1938	1079710
I	On site	Unspecified Ground Workings	1938	1079710
J	On site	Unspecified Ground Workings	1948	1047088
J	On site	Unspecified Ground Workings	1915	1151843
J	On site	Unspecified Ground Workings	1915	1068104
J	On site	Unspecified Ground Workings	1898	1049928
J	On site	Unspecified Ground Workings	1898	1098094
J	On site	Unspecified Heap	1938	1115727
J	On site	Unspecified Heap	1938	1115727
K	On site	Unspecified Ground Workings	1948	1066370
K	On site	Unspecified Ground Workings	1915	1122258
K	On site	Unspecified Old Quarry	1895	1091267
K	On site	Unspecified Ground Workings	1875	1143038
K	On site	Unspecified Pit	1879	1028307
L	On site	Unspecified Ground Workings	1915	1153238
L	On site	Ironstone Pit	1879	1000024
M	On site	Old Coal Level	1898	1074051
M	On site	Coal Level	1875	1049061
M	On site	Old Coal Level	1895	1074051
N	On site	Unspecified Ground Workings	1898	1039232
N	On site	Unspecified Heap	1895	1001062
N	On site	Unspecified Ground Workings	1875	1146713
N	On site	Unspecified Disused Tip	1975	1146678
N	On site	Unspecified Disused Tip	1982	1063595
O	On site	Unspecified Ground Workings	1898	1057524

ID	Location	Land Use	Date	Group ID
O	On site	Unspecified Ground Workings	1895	1057312
O	On site	Unspecified Heaps	1879	1052928
O	On site	Unspecified Heaps	1938	1062358
O	On site	Unspecified Heaps	1938	1062358
P	On site	Unspecified Heap	1948	1131810
P	On site	Unspecified Heap	1948	1098490
P	On site	Unspecified Heap	1915	1153767
P	On site	Unspecified Heap	1915	1105342
P	On site	Unspecified Ground Workings	1975	1051110
P	On site	Unspecified Ground Workings	1982	1095075
Q	On site	Unspecified Heap	1948	1138608
Q	On site	Unspecified Heap	1915	1041289
Q	On site	Railway Sidings	1895	1102243
Q	On site	Railway Sidings	1879	1105307
Q	On site	Unspecified Heap	1938	1138608
Q	On site	Unspecified Heap	1938	1138608
R	On site	Unspecified Heap	1948	1150143
R	On site	Unspecified Heap	1915	1095569
R	On site	Unspecified Heap	1938	1066646
R	On site	Unspecified Heap	1938	1066646
S	On site	Unspecified Heap	1915	1116949
T	On site	Unspecified Heap	1898	1001067
T	On site	Unspecified Heap	1898	1001068
T	On site	Unspecified Ground Workings	1895	1140234
U	On site	Unspecified Factories	1985	1014825
V	On site	Unspecified Ground Workings	1895	1153768
V	On site	Unspecified Pit	1879	1028366
V	On site	Unspecified Pit	1879	1028365

ID	Location	Land Use	Date	Group ID
V	On site	Unspecified Heap	1879	1001052
W	On site	Unspecified Ground Workings	1895	1036105
W	On site	Engine House	1875	1019169
W	On site	Engine House	1879	1019168
W	On site	Unspecified Ground Workings	1965	1036108
X	On site	Unspecified Ground Workings	1895	1110778
X	On site	Railway Sidings	1875	1064117
X	On site	Railway Sidings	1879	1095430
Y	On site	Unspecified Pit	1895	1028308
Y	On site	Unspecified Heap	1895	1001063
Z	On site	Railway Sidings	1875	1072770
Z	On site	Railway Sidings	1879	1072770
AA	On site	Unspecified Disused Shaft	1973	1069585
AA	On site	Unspecified Disused Shaft	1964	1069585
AA	On site	Old Air Shaft	1948	1040223
AA	On site	Old Air Shaft	1915	1059804
AA	On site	Old Air Shaft	1938	1094040
AB	On site	Unspecified Disused Tips	1973	1007196
AC	On site	Unspecified Disused Tip	1975	1146678
AC	On site	Unspecified Disused Tip	1982	1063595
AD	On site	Unspecified Disused Pit	1938	1041873
AD	On site	Unspecified Disused Pit	1938	1041873
AE	On site	Unspecified Heaps	1938	1073946
AE	On site	Unspecified Heaps	1938	1073946
AF	On site	Unspecified Ground Workings	1938	1093258
AF	On site	Unspecified Ground Workings	1938	1093258
AG	On site	Unspecified Ground Workings	1938	1143663
AG	On site	Unspecified Ground Workings	1938	1136459

ID	Location	Land Use	Date	Group ID
AH	**On site**	**Unspecified Heap**	**1938**	**1074952**
AH	**On site**	**Unspecified Heap**	**1938**	**1074952**
AI	**On site**	**Unspecified Old Quarry**	**1948**	**1130807**
AI	**On site**	**Unspecified Old Quarry**	**1915**	**1096993**
AJ	**On site**	**Unspecified Old Quarries**	**1898**	**1049015**
F	0m NE	Unspecified Ground Workings	1938	1106660
F	0m NE	Unspecified Ground Workings	1938	1106660
S	2m NW	Unspecified Heap	1948	1103270
P	2m SW	Unspecified Quarry	1992	1010511
L	2m SE	Unspecified Heap	1948	1001060
K	5m NW	Unspecified Old Quarry	1898	1091267
F	5m NE	Unspecified Heap	1895	1070612
F	8m NE	Unspecified Pit	1898	1028317
H	8m NE	Unspecified Ground Workings	1915	1050276
U	10m SE	Industrial Estate	1985	1004030
AK	15m SE	Unspecified Old Quarry	1948	1099760
AK	15m SE	Unspecified Old Quarry	1915	1143031
M	16m NE	Coal Level	1879	1140541
AL	17m SW	Unspecified Old Quarry	1938	1070010
AM	21m NE	Unspecified Ground Workings	1895	1146986
AL	21m W	Unspecified Ground Workings	1895	1104610
AN	23m NW	Unspecified Ground Workings	1948	1154621
AN	23m NW	Unspecified Ground Workings	1915	1146847
AO	25m W	Coal Level	1875	1117600
AM	28m NE	Refuse Heaps	1973	1004699
AM	33m NE	Unspecified Ground Workings	1898	1146986
L	33m SE	Unspecified Disused Pit	1895	1015565
AM	33m NE	Unspecified Ground Workings	1948	1094861

ID	Location	Land Use	Date	Group ID
AM	33m NE	Unspecified Ground Workings	1915	1129919
AM	35m NE	Unspecified Ground Workings	1938	1042095
AM	35m NE	Unspecified Ground Workings	1938	1042095
AP	36m NE	Unspecified Ground Workings	1938	1147968
AP	36m NE	Unspecified Ground Workings	1938	1147968
AQ	36m SW	Unspecified Pit	1948	1101985
AQ	36m SW	Unspecified Pit	1915	1142589
AD	36m E	Unspecified Disused Pit	1948	1143882
AD	36m E	Unspecified Disused Pit	1915	1108120
L	37m SE	Unspecified Shaft	1948	1138596
AR	39m NE	Old Coal Level	1915	1133652
AL	40m W	Unspecified Heaps	1879	1021491
AR	41m NE	Old Coal Level	1948	1080947
L	42m SE	Unspecified Shaft	1938	1084583
L	42m SE	Unspecified Shaft	1938	1084583
AS	42m NE	Old Coal Level	1915	1063602
AS	43m NE	Old Coal Level	1938	1120945
AS	43m NE	Old Coal Level	1938	1120945
AS	45m NE	Unspecified Ground Workings	1948	997354
AP	45m NE	Old Coal Level	1948	1117833
L	46m SE	Engine House	1879	1088850
AP	46m NE	Unspecified Ground Workings	1964	1083010
L	48m SE	Unspecified Shaft	1915	1112902
L	48m SE	Engine House	1875	1088850
AP	48m NE	Old Coal Level	1915	1105204
AD	48m SE	Unspecified Disused Pit	1898	1061033
AM	51m NE	Unspecified Ground Workings	1964	1068018
L	55m SE	Unspecified Shaft	1879	1009271

ID	Location	Land Use	Date	Group ID
AT	57m E	Old Coal Level	1948	1098736
AT	57m E	Old Coal Level	1915	1059576
L	60m SE	Unspecified Ground Workings	1948	1057512
AT	60m E	Old Coal Level	1895	1097217
AT	61m E	Old Coal Level	1898	1059576
L	62m SE	Unspecified Shaft	1875	1009270
AD	63m E	Unspecified Ground Workings	1895	1133902
AF	63m E	Unspecified Ground Workings	1898	1107903
AU	63m W	Unspecified Heap	1948	1095607
AU	63m W	Unspecified Heap	1915	1097673
AV	64m S	Unspecified Pit	1938	1106115
AV	64m S	Unspecified Pit	1938	1106115
AV	65m S	Unspecified Pit	1948	1106115
AV	65m S	Unspecified Pit	1915	1106115
AS	73m NE	Unspecified Pit	1879	1028316
AW	76m NW	Unspecified Ground Workings	1895	1080281
AX	83m NW	Unspecified Ground Workings	1948	1135541
AX	83m NW	Unspecified Ground Workings	1915	1116096
AW	85m NW	Unspecified Heap	1898	1055473
AK	93m SE	Unspecified Old Quarry	1938	1133549
AY	93m NE	Cemetery	1895	1047460
AY	97m NE	Cemetery	1973	1058632
AY	97m NE	Cemetery	1964	1058632
18	99m NE	Cemetery	1985	1131723
AY	102m NE	Cemetery	1948	1117036
AY	102m NE	Cemetery	1915	1072091
AY	102m NE	Cemetery	1898	1072091
AZ	104m W	Unspecified Heap	1915	1001064

ID	Location	Land Use	Date	Group ID
AJ	104m S	Unspecified Ground Workings	1879	1130341
AW	105m NW	Unspecified Heap	1875	1132444
AY	105m NE	Cemetery	1938	1069945
AW	108m NW	Unspecified Heap	1938	1073898
AW	108m NW	Unspecified Heap	1938	1073898
BA	110m NE	Unspecified Ground Workings	1948	1106465
BA	110m NE	Unspecified Ground Workings	1915	1102495
AZ	111m W	Unspecified Ground Workings	1898	1080843
AZ	114m W	Unspecified Ground Workings	1895	1080843
AR	114m NE	Unspecified Pit	1879	1028315
AO	116m W	Coal Level	1879	1135687
BB	118m NE	Unspecified Pit	1879	1137214
BB	121m NE	Unspecified Old Quarry	1895	1150492
AR	123m NE	Old Coal Level	1895	1032298
AW	126m NW	Unspecified Pit	1879	1028305
AZ	126m W	Unspecified Heap	1938	1073554
AZ	126m W	Unspecified Heap	1938	1073554
AO	128m W	Old Coal Level	1948	1087383
AO	128m W	Old Coal Level	1915	1087383
BB	128m NE	Unspecified Pit	1948	1157083
BB	128m NE	Unspecified Pit	1915	1054818
BB	128m NE	Unspecified Old Quarry	1898	1150492
AO	129m W	Old Coal Level	1938	1087383
AO	129m W	Old Coal Level	1938	1087383
BB	129m NE	Unspecified Pit	1973	1058578
BB	129m NE	Unspecified Pit	1964	1058578
BC	130m SW	Unspecified Old Quarries	1938	1082322
BC	131m SW	Unspecified Old Quarries	1948	1044628

ID	Location	Land Use	Date	Group ID
BC	131m SW	Unspecified Old Quarries	1915	1135490
BB	132m NE	Unspecified Pit	1938	1118023
BB	132m NE	Unspecified Pit	1938	1118023
AO	132m W	Old Coal Level	1898	1049248
BD	133m SW	Opencast Workings	1975	1149397
AO	137m W	Old Coal Level	1895	1049248
BE	138m NE	Unspecified Pit	1875	1133160
AB	139m SE	Unspecified Tanks	1973	1098052
AB	139m SE	Unspecified Tanks	1964	1098052
BE	142m NE	Unspecified Ground Workings	1895	1056147
20	144m SW	Unspecified Ground Workings	1895	1084945
BE	146m NE	Unspecified Pit	1879	1133160
BA	149m N	Unspecified Old Quarry	1895	1139420
BF	149m E	Unspecified Ground Workings	1948	1132215
BA	150m N	Unspecified Pit	1875	1028304
BF	151m E	Unspecified Heap	1938	1048345
BF	151m E	Unspecified Heap	1938	1048345
BE	151m NE	Unspecified Pit	1898	1084121
AW	153m NW	Unspecified Heap	1938	1138131
AW	153m NW	Unspecified Heap	1938	1138131
BF	155m E	Unspecified Ground Workings	1895	1053114
BF	155m E	Unspecified Ground Workings	1915	1085583
BF	155m E	Unspecified Ground Workings	1898	1053114
BA	155m N	Unspecified Old Quarry	1898	1079719
BA	156m N	Unspecified Ground Workings	1938	1154420
BA	156m N	Unspecified Ground Workings	1938	1154420
BG	156m SW	Unspecified Disused Tip	1975	1119044
BG	156m SW	Unspecified Disused Tip	1982	1061045

ID	Location	Land Use	Date	Group ID
BH	156m N	Unspecified Ground Workings	1938	1111815
BH	156m N	Unspecified Ground Workings	1938	1111815
21	160m SW	Unspecified Ground Workings	1965	1119285
BI	164m W	Unspecified Ground Workings	1938	1071213
BI	164m W	Unspecified Ground Workings	1938	1071213
BJ	167m NE	Unspecified Ground Workings	1964	1038770
AY	167m NE	Unspecified Ground Workings	1895	1152887
BK	167m SE	Unspecified Disused Pit	1948	1050571
BK	167m SE	Unspecified Disused Pit	1915	1068548
BK	167m SE	Unspecified Disused Pit	1915	1142630
BK	167m SE	Unspecified Disused Pit	1898	1142630
BK	167m SE	Railway Sidings	1898	1112219
BK	167m SE	Refuse Heap	1938	1044444
BK	167m SE	Refuse Heap	1938	1044444
22	167m SW	Unspecified Ground Workings	1895	1154752
BL	169m N	Unspecified Pit	1948	1045383
BL	169m N	Unspecified Pit	1915	1045383
BM	169m N	Unspecified Ground Workings	1895	1068642
BJ	170m NE	Unspecified Ground Workings	1973	1105393
BN	170m NE	Unspecified Pit	1964	1028319
BM	171m N	Old Coal Level	1898	1032297
BO	171m NW	Unspecified Pit	1879	1028306
BL	172m N	Unspecified Pit	1938	1045383
BL	172m N	Unspecified Pit	1938	1045383
23	172m SW	Unspecified Ground Workings	1895	1139388
BK	172m SE	Railway Sidings	1895	1112219
AY	172m NE	Unspecified Ground Workings	1898	1097995
BO	174m NW	Unspecified Pits	1875	1007950

ID	Location	Land Use	Date	Group ID
BA	177m N	Unspecified Heap	1879	1001070
BP	179m W	Unspecified Ground Workings	1875	1135308
BG	182m SW	Unspecified Heaps	1938	1145730
BG	182m SW	Unspecified Heaps	1938	1145730
BQ	183m E	Railway Sidings	1964	1116964
BO	186m NW	Unspecified Ground Workings	1895	1098874
BG	186m SW	Unspecified Heaps	1875	1053363
BR	186m E	Railway Sidings	1875	1145740
BG	187m SW	Unspecified Heap	1879	1001054
BS	187m E	Railway Sidings	1948	1093330
BT	188m N	Refuse Heap	1973	1019580
BA	189m NW	Unspecified Disused Tip	1975	1068076
BA	189m NW	Unspecified Disused Tip	1982	1098737
BU	190m E	Railway Sidings	1895	1128022
BN	192m N	Unspecified Ground Workings	1938	1115809
BN	192m N	Unspecified Ground Workings	1938	1037505
BV	194m E	Old Air Shaft	1895	1003802
BV	196m E	Unspecified Ground Workings	1948	1146371
BV	196m E	Unspecified Heaps	1938	1105223
BV	196m E	Unspecified Heaps	1938	1105223
BW	196m S	Unspecified Heap	1879	1037661
BR	197m E	Railway Sidings	1879	1047432
BX	197m NE	Unspecified Ground Workings	1895	997355
BW	197m S	Unspecified Heap	1875	1037661
AY	197m NE	Unspecified Disused Pit	1898	1140110
BV	199m E	Old Air Shaft	1915	1135791
BV	199m E	Old Air Shaft	1898	1135791
BW	199m S	Unspecified Ground Workings	1948	1055226

ID	Location	Land Use	Date	Group ID
BV	200m E	Old Coal Level	1938	1085231
BV	200m E	Old Coal Level	1938	1085231
BV	202m E	Old Air Shaft	1938	1051694
BA	202m NW	Unspecified Pit	1879	1028309
D	203m W	Old Air Shaft	1948	1124511
BW	204m S	Unspecified Ground Workings	1915	1139198
BA	205m N	Unspecified Ground Workings	1965	1093062
BR	206m E	Unspecified Ground Workings	1948	1054962
BR	206m E	Unspecified Ground Workings	1915	1134698
BS	206m E	Unspecified Ground Workings	1915	1071561
D	206m W	Old Air Shaft	1938	1142677
BW	208m S	Unspecified Disused Shaft	1975	1097126
BW	208m S	Unspecified Disused Shaft	1982	1081701
BW	208m S	Unspecified Disused Shaft	1992	1081701
D	208m W	Old Air Shaft	1915	1142677
BW	208m S	Old Air Shafts	1938	1079358
BW	208m S	Unspecified Disused Shaft	1965	1119659
BW	209m S	Old Air Shafts	1948	1079358
BY	209m W	Unspecified Disused Tip	1975	1134265
BY	209m W	Unspecified Disused Tip	1982	1143314
BV	209m E	Old Coal Level	1938	1059342
BV	209m E	Old Coal Level	1938	1059342
BY	210m W	Unspecified Disused Tip	1992	1043815
BW	211m S	Air Shafts	1898	1027665
BW	211m S	Air Shafts	1879	1070623
BG	212m SW	Old Air Shafts	1938	1142604
BZ	212m SE	Old Coal Level	1938	1092099
BZ	212m SE	Old Coal Level	1938	1092099

ID	Location	Land Use	Date	Group ID
CA	213m NW	Unspecified Ground Workings	1875	1113135
BN	213m N	Unspecified Pit	1964	1028320
BW	213m S	Air Shafts	1875	1070623
BW	214m S	Unspecified Pit	1938	1144213
BW	214m S	Unspecified Pit	1938	1144213
BG	214m SW	Air Shafts	1898	1108459
BG	214m SW	Old Air Shafts	1948	1142604
BW	215m S	Old Air Shafts	1915	1010445
BG	215m SW	Air Shafts	1879	1148267
CA	216m NW	Unspecified Old Quarry	1895	1142715
BY	216m W	Unspecified Disused Pit	1938	1101235
BY	216m W	Unspecified Disused Pit	1938	1101235
BZ	216m SE	Old Coal Level	1948	1098694
BG	216m SW	Air Shafts	1875	1047314
24	217m NE	Unspecified Pit	1879	1042776
BY	217m W	Unspecified Disused Pit	1948	1055100
AY	217m NE	Unspecified Disused Tips	1973	1007197
BY	218m W	Unspecified Disused Pit	1915	1139600
BW	218m S	Railway Sidings	1915	993883
BG	218m SW	Old Air Shafts	1915	1010438
CB	219m E	Railway Sidings	1915	1072594
CB	219m E	Railway Sidings	1898	1070172
CC	221m NE	Unspecified Ground Workings	1964	1111601
CA	221m NW	Unspecified Ground Workings	1938	1086404
CA	221m NW	Unspecified Ground Workings	1938	1086404
BW	221m S	Air Shafts	1895	1027666
CA	221m NW	Unspecified Ground Workings	1915	1081191
BA	222m N	Unspecified Ground Workings	1898	1037353

ID	Location	Land Use	Date	Group ID
CA	223m NW	Unspecified Ground Workings	1948	1121640
AY	223m NE	Coal Pit	1879	1155169
CC	223m NE	Unspecified Ground Workings	1915	1131910
BY	223m W	Unspecified Ground Workings	1875	1046405
BY	223m W	Unspecified Disused Pit	1898	1084402
CA	224m NW	Unspecified Pit	1879	1069233
CD	224m NE	Unspecified Ground Workings	1948	1122741
CE	224m NE	Unspecified Pit	1938	1101972
CE	224m NE	Unspecified Pit	1938	1101972
BY	224m W	Unspecified Ground Workings	1965	1145161
CA	225m NW	Unspecified Old Quarry	1898	1142715
CF	225m SW	Unspecified Old Quarries	1895	1089697
BG	225m SW	Air Shafts	1895	1027669
CG	225m SE	Old Air Shaft	1938	1121610
BV	226m E	Unspecified Heap	1915	1095525
BX	226m E	Railway Sidings	1938	1105702
CH	227m S	Unspecified Ground Workings	1973	1132418
BA	227m N	Unspecified Heap	1938	1080041
BA	227m N	Unspecified Heap	1938	1080041
CI	227m S	Disused Old Colliery	1899	1098327
BV	227m E	Unspecified Heap	1938	1150018
BV	227m E	Unspecified Heap	1938	1150018
CG	227m SE	Old Air Shaft	1948	1117776
CG	227m SE	Old Air Shaft	1915	1067842
CG	227m SE	Old Air Shaft	1898	1067842
BY	229m W	Unspecified Disused Pit	1895	1084402
CJ	229m SE	Unspecified Pit	1879	1147970
CJ	230m SE	Unspecified Pit	1875	1139054

ID	Location	Land Use	Date	Group ID
BK	231m SE	Unspecified Ground Workings	1938	1059540
BK	231m SE	Unspecified Ground Workings	1938	1068986
BK	231m SE	Unspecified Ground Workings	1948	1135299
25	233m S	Iron Works	1875	1016012
BI	233m W	Unspecified Pit	1898	1153400
CK	234m W	Unspecified Heap	1898	1001050
BY	234m W	Unspecified Ground Workings	1879	1121724
BK	236m SE	Unspecified Ground Workings	1915	1037454
CK	237m W	Unspecified Ground Workings	1895	1073520
CG	239m SE	Old Air Shaft	1895	1003790
BI	239m W	Unspecified Ground Workings	1895	1147518
BS	241m E	Railway Sidings	1879	1073509
BS	241m E	Railway Sidings	1898	1093330
BI	241m W	Unspecified Pit	1879	1111561
CJ	242m SE	Unspecified Pit	1948	1102459
CL	242m W	Railway Sidings	1875	1054091
CM	244m E	Railway Sidings	1875	1148992
CN	245m NW	Unspecified Heap	1948	1001066
CN	245m NW	Old Coal Level	1915	1127900
CJ	246m SE	Unspecified Pit	1915	1101248
BQ	246m E	Railway Sidings	1895	1078502
CN	246m W	Old Coal Level	1915	1047937
BS	246m E	Railway Sidings	1938	1091175
AY	246m NE	Coal Pit	1875	1155169
CN	247m NW	Old Coal Level	1938	1156972
CN	247m NW	Old Coal Level	1938	1156972
CE	247m NE	Unspecified Ground Workings	1895	1139325
26	248m S	Unspecified Old Quarries	1895	1045416

ID	Location	Land Use	Date	Group ID
CA	249m NW	Unspecified Pit	1975	1145589
CA	249m NW	Unspecified Pit	1982	1122273
CA	249m NW	Unspecified Pit	1992	1122273
CA	249m NW	Unspecified Pit	1965	1145589
CN	249m W	Old Coal Level	1948	1085544
BX	249m NE	Coal Level	1879	1007544
BS	249m SE	Unspecified Heap	1895	1091658
BS	250m SE	Unspecified Pit	1898	1028370
CB	250m E	Railway Sidings	1948	1072135
BS	251m E	Railway Sidings	1895	1139546
27	252m S	Unspecified Old Quarry	1899	1102104
BX	252m NE	Railway Sidings	1915	1105702
CE	254m NE	Unspecified Ground Workings	1898	1139325
BK	254m SE	Unspecified Ground Workings	1895	1074982
CI	254m S	Unspecified Ground Workings	1948	1074980
CL	254m W	Railway Sidings	1879	1054091
BK	256m SE	Ironstone Pit	1879	1000030
BX	257m NE	Coal Level	1875	1007550
CO	258m S	Ironstone Levels	1875	1003939
CI	258m S	Unspecified Ground Workings	1915	1074980
CO	258m S	Disused Old Colliery	1916	1071303
CO	259m S	Ground Workings and Refuse Heap	1916	1007290
AY	261m NE	Unspecified Disused Pit	1948	1143239
AY	261m NE	Unspecified Disused Pit	1915	1100122
CP	262m W	Unspecified Heap	1938	1149530
CP	262m W	Unspecified Heap	1938	1149530
BT	262m N	Unspecified Ground Workings	1915	1046175
CH	262m S	Unspecified Old Quarry	1895	1080229

ID	Location	Land Use	Date	Group ID
BX	263m NE	Refuse Heap	1938	1126202
BX	263m NE	Refuse Heap	1938	1126202
CP	263m W	Unspecified Heap	1948	1153030
CP	263m W	Unspecified Heap	1915	1115578
BT	263m N	Unspecified Ground Workings	1964	1113722
BT	264m N	Unspecified Ground Workings	1948	1083043
AY	265m NE	Coal Level	1875	1007545
BT	266m N	Unspecified Ground Workings	1938	1142251
BT	266m N	Unspecified Ground Workings	1938	1088806
BT	266m N	Unspecified Disused Tip	1975	1072669
BT	266m N	Unspecified Disused Tip	1982	1150652
BS	267m E	Unspecified Heap	1948	1001055
CG	269m SE	Old Coal Level	1915	1032294
BX	269m NE	Coal Level	1879	1007546
BX	271m NE	Coal Level	1875	1007549
BT	272m N	Unspecified Ground Workings	1895	1112465
CI	273m SE	Unspecified Ground Workings	1895	1052601
CO	273m SE	Disused Colliery	1895	1059429
28	273m SE	Unspecified Heap	1879	1000988
BS	274m SE	Unspecified Heap	1948	1072202
CC	274m NE	Refuse Heap	1973	1019584
BS	275m SE	Unspecified Heap	1938	1122148
BS	275m SE	Unspecified Heap	1938	1122148
BK	276m SE	Unspecified Shaft	1915	1044041
BT	278m N	Unspecified Ground Workings	1898	1112465
BK	283m SE	Unspecified Shaft	1948	1009217
BI	284m W	Unspecified Ground Workings	1898	1133155
CB	286m E	Unspecified Heap	1948	1001059

ID	Location	Land Use	Date	Group ID
BK	288m SE	Unspecified Shaft	1875	1142936
BK	289m SE	Engine House	1879	1096157
BK	290m SE	Engine House	1875	1096157
AJ	290m SW	Unspecified Disused Tip	1975	1089763
AJ	290m SW	Unspecified Disused Tip	1982	1073349
CQ	290m W	Opencast Workings	1965	1136851
CR	291m N	Unspecified Ground Workings	1948	1130554
CR	291m N	Unspecified Ground Workings	1915	1063350
BU	292m E	Brick and Tile Works	1938	1041971
BU	292m E	Brick and Tile Works	1938	1041971
CI	292m SE	Unspecified Ground Workings	1899	1037820
29	294m W	Unspecified Old Quarry	1938	1118043
BK	294m SE	Unspecified Shaft	1938	1093337
BK	294m SE	Unspecified Shaft	1938	1140837
CS	297m E	Unspecified Heap	1948	1001056
30	299m W	Unspecified Ground Workings	1948	1122915
CT	300m W	Unspecified Ground Workings	1898	1079853
BT	300m N	Unspecified Pit	1875	1028321
BK	302m SE	Unspecified Pit	1899	1116897
BK	302m SE	Unspecified Pit	1948	1053162
BK	303m SE	Unspecified Pit	1879	1119456
CR	303m N	Unspecified Ground Workings	1898	1089361
CF	304m SW	Unspecified Pit	1875	1050414
BU	304m E	Brick and Tile Works	1879	1068257
BS	304m E	Cuttings	1973	1086867
BS	304m E	Cuttings	1964	1086867
BK	305m SE	Unspecified Ground Workings	1915	1044844
CU	306m W	Cuttings	1938	1133185

ID	Location	Land Use	Date	Group ID
BU	306m E	Brick and Tile Works	1915	1146976
BU	306m E	Brick and Tile Works	1898	1073224
CU	306m W	Cuttings	1948	1130157
CU	306m W	Cuttings	1915	1133185
BK	307m SE	Unspecified Disused Pit	1948	1098486
CF	307m SW	Unspecified Pit	1879	1050414
BU	308m E	Brick and Tile Works	1875	1067968
CT	309m W	Unspecified Ground Workings	1895	1085098
AY	310m NE	Unspecified Ground Workings	1898	997339
BU	310m E	Brick and Tiles Works	1895	1006823
CW	314m NE	Unspecified Ground Workings	1938	1093251
CW	314m NE	Unspecified Ground Workings	1938	1093251
CX	314m NE	Unspecified Ground Workings	1948	1102277
CX	314m NE	Unspecified Ground Workings	1915	1109303
BK	316m SE	Unspecified Pit	1915	1028369
BK	316m SE	Engine House	1875	1115904
BK	317m SE	Engine House	1879	1115904
31	321m E	Railway Sidings	1879	1125898
BU	321m E	Unspecified Tank	1895	1109933
BU	322m E	Unspecified Tank	1938	1108424
BU	324m E	Unspecified Tank	1915	1047733
BU	324m E	Unspecified Tank	1898	1047733
BK	324m SE	Unspecified Disused Pit	1895	1063535
32	329m W	Old Coal Level	1915	1032296
BK	332m SE	Unspecified Ground Workings	1875	1033986
CY	333m NE	Cuttings	1948	1111807
AY	334m NE	Coal Level	1879	1007548
CB	337m E	Unspecified Commercial/Industrial	1964	995753

ID	Location	Land Use	Date	Group ID
CY	338m NE	Cuttings	1915	1156528
CB	338m E	Brewery	1879	1079317
CB	339m E	Brewery	1875	1079317
CZ	339m NE	Cuttings	1938	1141439
CC	340m NE	Unspecified Heap	1948	1046077
CC	340m NE	Unspecified Heaps	1938	1102195
CC	340m NE	Unspecified Heaps	1938	1102195
CC	341m NE	Unspecified Heap	1915	1044114
DA	341m W	Unspecified Old Quarry	1898	1074873
33	343m SW	Unspecified Old Quarries	1895	1155907
34	343m SW	Unspecified Old Quarries	1895	1132987
CB	344m E	Railway Building	1948	1109041
CB	344m E	Railway Building	1915	1134656
CB	344m E	Railway Building	1898	1134656
DA	345m W	Unspecified Old Quarry	1895	1131614
BK	348m SE	Unspecified Shaft	1879	1154198
DA	350m W	Unspecified Old Quarry	1948	1111777
DA	350m W	Unspecified Old Quarry	1915	1047074
DB	353m SE	Railway Sidings	1948	1040879
DB	353m SE	Railway Sidings	1875	1124286
BU	353m E	Unspecified Tanks	1879	1043075
BU	354m E	Unspecified Tank	1915	1016622
BU	354m E	Unspecified Tanks	1875	1043075
CM	355m E	Railway Building	1915	1013367
DC	356m NE	Unspecified Ground Workings	1895	1107695
CS	357m SE	Unspecified Pit	1938	1091417
CS	357m SE	Unspecified Pit	1938	1091417
35	361m SE	Colliery	1915	996560

ID	Location	Land Use	Date	Group ID
BU	363m E	Unspecified Tank	1938	1058346
BU	363m E	Unspecified Tank	1915	1058346
CE	365m NE	Unspecified Heap	1948	1044497
CC	367m NE	Unspecified Ground Workings	1915	1104664
DD	368m SE	Unspecified Heap	1899	1000993
CE	368m NE	Unspecified Heap	1915	1143854
CC	368m NE	Unspecified Heap	1964	1001077
CE	369m NE	Unspecified Heap	1938	1055086
CE	369m NE	Unspecified Heap	1938	1055086
DC	369m NE	Unspecified Ground Workings	1898	1105056
DE	376m E	Coal Level	1875	1142015
DF	378m E	Unspecified Heap	1915	1119275
CY	378m N	Cuttings	1875	1069240
DF	378m E	Unspecified Ground Workings	1938	1097423
DF	378m E	Unspecified Ground Workings	1938	1097423
BP	378m W	Unspecified Heaps	1938	1127645
BP	378m W	Unspecified Heaps	1938	1127645
BP	379m W	Unspecified Ground Workings	1898	1058822
DD	379m SE	Unspecified Heap	1948	1000989
DF	380m E	Unspecified Ground Workings	1948	1139107
CZ	385m N	Cuttings	1879	1034648
CZ	386m N	Cuttings	1895	1106147
36	386m E	Brewery	1879	1015953
BK	389m SE	Unspecified Disused Shaft	1964	1047071
37	389m W	Unspecified Workings	1965	1015186
DG	389m SW	Unspecified Ground Workings	1948	1112093
BK	390m SE	Unspecified Old Shaft	1938	1092416
BK	390m SE	Unspecified Old Shaft	1938	1092416

ID	Location	Land Use	Date	Group ID
DF	390m E	Unspecified Heap	1964	1054109
DG	390m SW	Unspecified Old Quarry	1899	1128743
BK	391m SE	Unspecified Disused Shaft	1973	1047071
CY	391m N	Cuttings	1898	1083646
BK	393m SE	Unspecified Old Shaft	1948	1092416
BK	393m SE	Unspecified Old Shaft	1915	1092416
DG	393m SW	Unspecified Quarry	1875	1010512
DG	395m SW	Unspecified Ground Workings	1915	1074981
DG	397m SW	Unspecified Ground Workings	1916	1112093
DH	399m SW	Unspecified Heap	1938	1075477
DH	399m SW	Unspecified Heap	1938	1075477
BK	401m SE	Unspecified Old Shaft	1895	1003307
DG	402m SW	Unspecified Old Quarry	1895	1155133
38	402m W	Unspecified Disused Shaft	1965	1008837
39	407m SW	Unspecified Ground Workings	1915	1068624
DI	409m SW	Unspecified Ground Workings	1916	1127092
DK	413m SW	Disused Mine Pit	1948	1084323
DK	413m SW	Disused Mine Pit	1915	1051416
DL	414m SW	Unspecified Disused Pit	1938	1066856
DL	414m SW	Unspecified Disused Pit	1938	1066856
DM	414m E	Tramway Sidings	1875	1014638
DI	414m SW	Cuttings	1875	994337
DN	414m SE	Unspecified Ground Workings	1899	1116174
DM	416m E	Railway Sidings	1879	993877
DA	419m W	Unspecified Pit	1965	1040953
DE	420m E	Unspecified Pit	1964	1028363
DN	420m SE	Refuse Heap	1948	1148610
CD	422m NE	Unspecified Ground Workings	1895	1127782

ID	Location	Land Use	Date	Group ID
DN	422m SE	Refuse Heap	1915	1148610
DN	422m SE	Unspecified Ground Workings	1895	1040971
DO	423m SW	Coal Pit	1875	1063313
DO	425m SW	Unspecified Ground Workings	1948	1053210
DP	425m W	Unspecified Ground Workings	1895	1053164
CD	428m NE	Unspecified Ground Workings	1898	1127782
40	428m SE	Railway Sidings	1964	1120889
CD	430m NE	Unspecified Ground Workings	1938	1138974
CD	430m NE	Unspecified Ground Workings	1938	1066540
DO	433m SW	Unspecified Ground Workings	1916	1062596
DR	439m E	Unspecified Ground Workings	1948	997340
41	440m SW	Unspecified Ground Workings	1965	1053210
DC	441m NE	Cuttings	1875	994327
CZ	442m N	Cuttings	1875	1155168
DE	445m E	Coal Level	1879	1066279
DA	448m W	Unspecified Pit	1879	1154605
DF	448m E	Unspecified Pit	1895	1118504
DF	448m E	Unspecified Pit	1948	1136313
DF	448m E	Unspecified Pit	1915	1129456
CZ	449m N	Cuttings	1948	1081161
CZ	449m N	Cuttings	1915	1075390
CZ	449m N	Cuttings	1898	1075390
DM	449m NE	Railway Building	1875	1013369
CL	450m W	Coal and Ironstone Pit	1875	1072986
DF	450m E	Unspecified Pit	1898	1088351
DM	452m NE	Unspecified Disused Pit	1895	1039812
DM	453m NE	Unspecified Disused Pit	1938	1055161
DM	453m NE	Unspecified Disused Pit	1938	1055161

ID	Location	Land Use	Date	Group ID
CZ	453m N	Cuttings	1973	1135698
CZ	453m N	Cuttings	1964	1135698
42	453m W	Unspecified Ground Workings	1898	1114423
DS	453m NW	Cuttings	1875	1133910
43	455m W	Opencast Workings	1982	1097577
DM	456m NE	Railway Building	1875	1013363
DJ	457m E	Unspecified Pit	1879	1028364
DR	457m SE	Railway Sidings	1948	1106804
DS	458m NW	Cuttings	1948	1088722
44	459m NE	Unspecified Heap	1964	1001075
DS	460m NW	Cuttings	1915	1067980
DR	460m SE	Railway Sidings	1915	1060479
DR	461m SE	Railway Building	1964	1013368
DS	461m NW	Cuttings	1965	1106300
DS	462m NW	Cuttings	1938	1088722
DL	463m SW	Unspecified Old Quarries	1895	1148938
DS	465m NW	Cuttings	1879	1133910
DT	466m SW	Railway Sidings	1899	1117901
DO	466m SW	Railway Sidings	1875	1070700
DT	471m SW	Unspecified Disused Tips	1975	1139015
DT	471m SW	Unspecified Disused Tips	1982	1093923
DT	472m SW	Railway Sidings	1915	1117901
DL	474m W	Ironstone Mine Pit	1875	1008365
46	476m NW	Cuttings	1895	994328
DT	476m SW	Railway Sidings	1895	1070123
CQ	478m W	Unspecified Shaft	1915	1034308
CQ	478m W	Unspecified Shaft	1938	1046315
CQ	478m W	Unspecified Shaft	1938	1046315

ID	Location	Land Use	Date	Group ID
DT	479m SW	Railway Sidings	1916	1091524
CQ	479m W	Unspecified Shaft	1948	1046315
47	481m SE	Unspecified Disused Level	1985	1006162
DW	481m E	Unspecified Heap	1964	1001057
DW	482m E	Old Coal Levels	1948	1107778
DW	483m E	Old Coal Levels	1915	1086859
DR	484m SE	Railway Sidings	1898	1063748
48	484m SW	Railway Building	1875	1013374
DX	485m NE	Unspecified Ground Workings	1895	1136837
DY	486m NE	Unspecified Ground Workings	1938	1149783
DY	486m NE	Unspecified Ground Workings	1938	1149783
CD	486m NE	Unspecified Ground Workings	1964	1059952
49	487m SE	Unspecified Pit	1964	1028373
DT	488m SW	Unspecified Heap	1916	1000992
DY	490m NE	Unspecified Ground Workings	1915	1123902
BD	491m W	Old Air Shaft	1948	1073992
BD	491m W	Old Air Shaft	1898	1077413
BD	493m W	Old Air Shaft	1938	1073992
BD	493m W	Old Air Shaft	1915	1122323
50	494m SW	Unspecified Heap	1879	1001049
DP	495m W	Unspecified Ground Workings	1915	1100743
CL	495m W	Unspecified Disused Pit	1938	1118193
CL	495m W	Unspecified Disused Pit	1938	1118193
CD	496m NE	Unspecified Ground Workings	1895	1110961
DX	496m NE	Unspecified Ground Workings	1898	1136837
DY	496m NE	Unspecified Ground Workings	1895	1113471
DP	497m W	Unspecified Ground Workings	1938	1067206
DP	497m W	Unspecified Ground Workings	1938	1067206

ID	Location	Land Use	Date	Group ID
DR	497m SE	Railway Building	1915	1013362
DW	498m E	Old Coal Levels	1938	1104733
DW	498m E	Old Coal Levels	1938	1104733
BD	499m W	Old Air Shaft	1895	1003786

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**21**

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 40 >**

ID	Location	Land Use	Date	Group ID
19	127m E	Unspecified Tank	1999	149826
AB	138m SE	Tanks	1959	158987
AB	138m SE	Tanks	1983	158987
AB	139m SE	Tanks	1973	158876
AB	139m SE	Tanks	1984	163894
AB	139m SE	Tanks	1989	163894
AB	140m SE	Tanks	1983	163894
AB	141m SE	Tanks	1958	160712
AB	143m SE	Unspecified Tank	1959	149818
AB	143m SE	Tanks	1973	160712
CV	309m E	Unspecified Tank	1877	149827
BU	318m E	Unspecified Tank	1919	149822
BU	349m E	Tanks	1920	162024
BU	351m E	Tanks	1876	158470
BU	352m E	Tanks	1901	159988
BU	353m E	Unspecified Tanks	1877	157914

ID	Location	Land Use	Date	Group ID
CB	371m E	Unspecified Tank	1971	149823
DJ	409m E	Unspecified Tank	1971	149821
DU	470m SE	Unspecified Tank	1873	167697
DU	470m SE	Unspecified Tank	1900	167697
DU	470m SE	Unspecified Tank	1919	167697

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**25**

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 40 >**

ID	Location	Land Use	Date	Group ID
AT	72m E	Electricity Substation	1987	91271
AT	72m E	Electricity Substation	1984	91271
AT	74m E	Electricity Substation	1999	96267
AT	74m E	Electricity Substation	1981	96267
U	119m E	Electricity Substation	1999	85746
Z	180m SE	Electricity Substation	1984	89477
Z	180m SE	Electricity Substation	1989	89477
Z	181m SE	Electricity Substation	1983	89477
CV	344m E	Electricity Substation	1981	90608
CV	344m E	Electricity Substation	1971	90608
CV	347m E	Electricity Substation	1999	88191
CV	348m E	Electricity Substation	1987	89184
CV	348m E	Electricity Substation	1984	89184
DJ	429m E	Electricity Substation	1987	94788
DJ	429m E	Electricity Substation	1984	94788

ID	Location	Land Use	Date	Group ID
DJ	429m E	Electricity Substation	1999	96337
DJ	429m E	Electricity Substation	1981	94788
DJ	444m E	Electricity Substation	1971	85747
DV	475m W	Electricity Substation	1972	91318
DV	476m W	Electricity Substation	1986	91318
DZ	495m E	Electricity Substation	1987	94279
DZ	495m E	Electricity Substation	1984	94279
DZ	495m E	Electricity Substation	1981	95592
DZ	495m E	Electricity Substation	1971	95592
DZ	495m E	Electricity Substation	1993	94279

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m	3

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 40 >**

ID	Location	Land Use	Date	Group ID
DQ	436m E	Garage	1971	28839
45	473m E	Garage	1971	27979
DQ	495m E	Garage	1959	28545

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Historical waste sites

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

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

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

3.5 Historical waste sites

Records within 500m	3

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

Features are displayed on the Waste and landfill map on **page 70 >**

ID	Location	Address	Further Details	Date
E	485m E	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1982
E	486m E	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1973
1	494m W	Site Address: Trecatti Landfill Site, Fochrhiw Road, Pant-y-Waun, Merthyr Tydfil, Mid Glamorgan, CF48 4AB	Type of Site: Waste Treatment Centre Planning application reference: P/15/0313 Description: Scheme comprises construction of multipurpose waste treatment centre and remediation pad with associated facilities including office/welfare accommodation, car parking, plant equipment, storage tanks and water lagoons. Data source: Historic Planning Application Data Type: Point	16/11/2015

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	10

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.

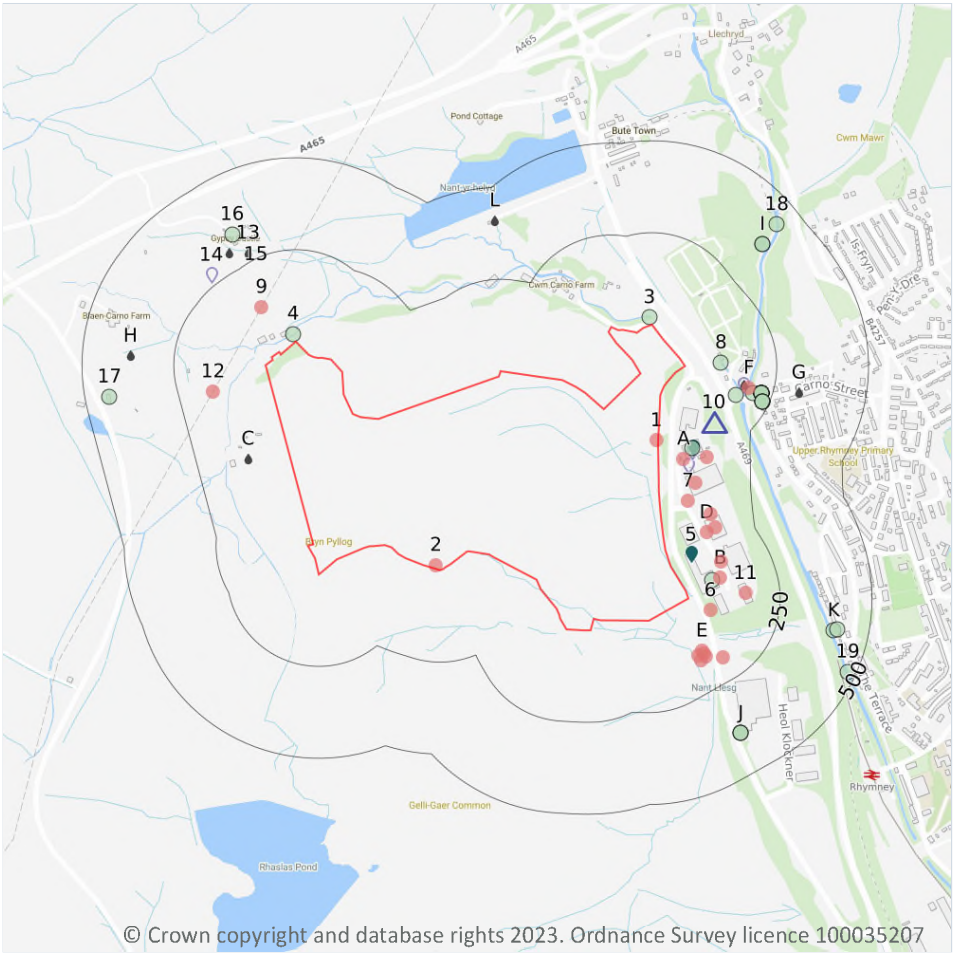
Features are displayed on the Waste and landfill map on **page 70 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	98m SW	BATTLEFIELD FARM COTTAGE, MONSIEURS HALL LANE, DODFORD, BROMSGROVE, B61 9AH	WEX135312	Storing waste exemption	On a farm	Storage of sludge
B	102m SE	Dragon Recycling Solutions Ltd, Dragon Recycling Solutions, Unit 13, Heads of the Valley Industrial Estate, Rhymney, Tredegar, Caerffili, NP22 5RL	NRW-WME075307	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	102m SE	Dragon Recycling, Dragon Recycling Solutions Ltd, Unit 4, Heads of the Valley Industrial Estate, Tredegar, Caerffili, NP225RL	NRW-WME028417	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
B	102m SE	Dragon Recycling, Dragon Recycling Solutions Ltd, Unit 4, Heads of the Valley Industrial Estate, Tredegar, Caerffili, NP225RL	NRW-WME028417	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	102m SE	Dragon Recycling, Dragon Recycling Solutions Ltd, Unit 4, Heads of the Valley Industrial Estate, Tredegar, Caerffili, NP225RL	NRW-WME028418	Treating waste exemption	Not on a farm	Recovery of scrap metal

ID	Location	Site	Reference	Category	Sub-Category	Description
C	137m NE	Cwm Carno Farm Llechryd Rhymni Tredegyr NP225QY	NRW-WME018837	Using waste exemption	On a farm	Use of waste in construction
C	137m NE	Cwm Carno Farm Llechryd Rhymni Tredegyr NP225QY	NRW-WME018837	Disposing of waste exemption	On a farm	Burning waste in the open
D	144m E	UNIT 4, HEADS OF THE VALLEY INDUSTRIAL ESTATE, RHYMNEY, TREDEGAR, NP22 5RL	WEX294103	Disposing of waste exemption	Not on a Farm	Burning waste in the open
D	144m E	UNIT 4, HEADS OF THE VALLEY INDUSTRIAL ESTATE, RHYMNEY, TREDEGAR, NP22 5RL	WEX156010	Disposing of waste exemption	Not on a Farm	Burning waste in the open
A	146m SW	BATTLEFIELD FARM COTTAGE, MONSIEURS HALL LANE, DODFORD, BROMSGROVE, B61 9AH	WEX135310	Storing waste exemption	On a farm	Storage of sludge

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

4 Current industrial land use



Site Outline

Search buffers in metres (m)

Recent industrial land uses

Current or recent petrol stations

Part A(1) industrial activities

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	22

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on page 74 >

ID	Location	Company	Address	Activity	Category
1	On site	Shaft	Gwent, NP22	Unspecified Quarries Or Mines	Extractive Industries
2	On site	Workings (Dis)	Gwent, NP22	Unspecified Quarries Or Mines	Extractive Industries

ID	Location	Company	Address	Activity	Category
6	68m SE	Heads of the Valleys Industrial Estate	Gwent, NP22	Business Parks and Industrial Estates	Industrial Features
A	69m E	Electricity Sub Station	Gwent, NP22	Electrical Features	Infrastructure and Facilities
7	77m E	Electricity Sub Station	Gwent, NP22	Electrical Features	Infrastructure and Facilities
B	100m SE	Electricity Sub Station	Gwent, NP22	Electrical Features	Infrastructure and Facilities
A	101m E	Richards & Appleby Ltd	Unit 3, Heads of the Valleys Industrial Estate, Rhymney, Gwent, NP22 5RL	Cosmetics, Toiletries and Perfumes	Consumer Products
D	118m E	Electricity Sub Station	Gwent, NP22	Electrical Features	Infrastructure and Facilities
B	124m E	Electricity Sub Station	Gwent, NP22	Electrical Features	Infrastructure and Facilities
9	132m NW	Pylon	Gwent, CF48	Electrical Features	Infrastructure and Facilities
A	132m E	Tank	Gwent, NP22	Tanks (Generic)	Industrial Features
D	135m E	Recycling Business	Gwent, NP22	Recycling Centres	Infrastructure and Facilities
E	142m SE	Tank	Gwent, NP22	Tanks (Generic)	Industrial Features
D	144m E	Dragon Recycling Solutions Ltd	Unit 4, Heads of the Valleys Industrial Estate, Rhymney, Gwent, NP22 5RL	Recycling, Reclamation and Disposal	Recycling Services
E	148m SE	Tank	Gwent, NP22	Tanks (Generic)	Industrial Features
E	150m SE	Tank	Gwent, NP22	Tanks (Generic)	Industrial Features
11	156m SE	Prima Fabrications	Unit 7-8, Heads of the Valleys Industrial Estate, Rhymney, Gwent, NP22 5RL	Metalworkers Including Blacksmiths	Construction Services
12	157m W	Pylon	Gwent, CF48	Electrical Features	Infrastructure and Facilities
E	160m SE	Tank	Gwent, NP22	Tanks (Generic)	Industrial Features

ID	Location	Company	Address	Activity	Category
E	162m SE	Tank	Gwent, NP22	Tanks (Generic)	Industrial Features
F	184m E	Outfall	Gwent, NP22	Waste Storage, Processing and Disposal	Infrastructure and Facilities
E	186m SE	Electricity Sub Station	Gwent, NP22	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	**1**

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 74 >**

ID	Location	Company	Address	LPG	Status
10	148m E	OBSOLETE	A469, Rhymney, Caerphilly, NP22 5QP	Not Applicable	Obsolete

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	**0**

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	**0**

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	**11**

Records of Part A(1) 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 74 >**

ID	Location	Details	
A	82m E	Operator: Convatec Ltd Installation Name: Gelling Fibre Plant EA/EPR/NP3433BC/V003 Process: PRODUCING PHARMACEUTICAL PRODUCTS Permit Number: NP3433BC Original Permit Number: -	EPR Reference: - Issue Date: 17/07/2018 Effective Date: 17/07/2018 Last date noted as effective: 23/11/2023 Status: Effective
A	82m E	Operator: CONVATEC LTD Installation Name: GELLING FIBRE PLANT EA/EPR/NP3433BC/V003 Process: PHARMACEUTICALS; PRODUCING PHARMACEUTICALS USING CHEMICAL/BIOLOGICAL PROCESSES Permit Number: LP3233GF Original Permit Number: NP3433BC	EPR Reference: - Issue Date: 04/03/2009 Effective Date: 02/03/2009 Last date noted as effective: 17/11/2015 Status: SUPERCEDED
A	82m E	Operator: CONVATEC LTD Installation Name: GELLING FIBRE PLANT EPR/NP3433BC Process: PHARMACEUTICALS; PRODUCING PHARMACEUTICALS USING CHEMICAL/BIOLOGICAL PROCESSES Permit Number: LP3738CL Original Permit Number: NP3433BC	EPR Reference: - Issue Date: 30/03/2012 Effective Date: 30/03/2012 Last date noted as effective: 17/11/2015 Status: EFFECTIVE
A	82m E	Operator: CONVATEC LTD Installation Name: GELLING FIBRE PLANT Process: PHARMACEUTICALS; PRODUCING PHARMACEUTICALS USING CHEMICAL/BIOLOGICAL PROCESSES Permit Number: PP3433LP Original Permit Number: NP3433BC	EPR Reference: - Issue Date: 01/12/2005 Effective Date: 01/12/2005 Last date noted as effective: 17/11/2015 Status: SUPERCEDED
A	82m E	Operator: CONVATEC LTD Installation Name: GELLING FIBRE PLANT EA/EPR/NP3433BC/V003 Process: - Permit Number: NP3433BC Original Permit Number: LP3738CL	EPR Reference: - Issue Date: 30/03/2012 Effective Date: 30/03/2012 Last date noted as effective: 01/12/2016 Status: EFFECTIVE

ID	Location	Details	
A	92m E	Operator: Convatec Ltd Installation Name: Rhymney Alginate Fibres Plant Process: PRODUCING ORGANIC CHEMICALS SUCH AS: (VIII) PLASTIC MATERIALS (FOR EXAMPLE POLYMERS, SYNTHETIC FIBRES AND CELLULOSE-BASED FIBRES) Permit Number: TP3535LH Original Permit Number: -	EPR Reference: - Issue Date: 17/11/2006 Effective Date: 17/11/2006 Last date noted as effective: 23/11/2023 Status: Effective
A	92m E	Operator: Convatec Ltd Installation Name: Rhymney Alginate Fibres Plant Process: - Permit Number: TP3535LH Original Permit Number: -	EPR Reference: - Issue Date: 17/11/2006 Effective Date: 17/11/2006 Last date noted as effective: 23/11/2023 Status: Effective
A	92m E	Operator: CONVATEC LTD Installation Name: RHYMNEY ALGINATE FIBRES PLANT Process: - Permit Number: TP3535LH Original Permit Number: TP3535LH	EPR Reference: - Issue Date: 17/11/2006 Effective Date: 17/11/2006 Last date noted as effective: 01/12/2016 Status: EFFECTIVE
A	92m E	Operator: CONVATEC LTD Installation Name: RHYMNEY ALGINATE FIBRES PLANT EPR/TP3535LH Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS Permit Number: TP3535LH Original Permit Number: TP3535LH	EPR Reference: - Issue Date: 17/11/2006 Effective Date: 17/11/2006 Last date noted as effective: 17/11/2015 Status: EFFECTIVE
F	168m E	Operator: Dragon Recycling Solutions Ltd Installation Name: Dragon Recycling Solutions Limited Process: PRODUCING, MELTING OR RECOVERING (WHETHER BY CHEMICAL MEANS OR BY ELECTROLYSIS OR BY THE USE OF HEAT) CADMIUM OR MERCURY OR ANY ALLOY CONTAINING MORE THAN 0.05 PER CENT BY WEIGHT OF EITHER OF THOSE METALS OR BOTH IN AGGREGATE Permit Number: YP3339EC Original Permit Number: -	EPR Reference: - Issue Date: 20/02/2014 Effective Date: 20/02/2014 Last date noted as effective: 21/03/2023 Status: Effective
14	277m NW	Operator: NIAGARA LASALLE Installation Name: - Process: FERROUS METALS; HOT ROLLING >20T/HR Permit Number: BS0752 Original Permit Number: BS0752	EPR Reference: - Issue Date: 15/08/2003 Effective Date: 15/08/2003 Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS

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 74 >**

ID	Location	Address	Details	
5	62m E	Advanced Moulds Ltd, Unit 12 -16, Heads of the Valley Industrial Estate, Rhymney, NP22 5RL	Process: Timber Manufacture Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
A	94m E	Convatec, Unit 1 Heads Of The Valleys Industrial Estate, Rhymney, Tredegar, NP22 5RL	Process: Chemical & Acid Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

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	11

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 74 >**

ID	Location	Address	Details	
C	112m W	TRECATTY OCCS, POINT D	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: AF4012104 Permit Version: 1 Receiving Water: NANT CARNO	Status: REVOKED - UNSPECIFIED Issue date: 25/11/1974 Effective Date: 25/11/1974 Revocation Date: 28/01/1985

ID	Location	Address	Details	
C	112m W	TRECATTY OCCS, POINT D	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: AF4012104 Permit Version: 2 Receiving Water: NANT CARNO	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 29/01/1985 Effective Date: 29/01/1985 Revocation Date: 19/11/1992
F	168m E	TWYN CARNO - CARNO BUTE HOUSE, NP22 5QP	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AN0093901 Permit Version: 2 Receiving Water: RIVER RHYMNEY	Status: Effective Issue date: 08/09/2010 Effective Date: 08/09/2010 Revocation Date: -
13	274m NW	2 GYPSY CASTLE NEAR DOWLAIS MERTHY, 2 GYPSY CASTLE NEAR DOWLAIS MER, NEAR DOWLAIS MERTHYR TYDFIL, MERTHYR TYDFIL	Effluent Type: UNSPECIFIED Permit Number: AN0255701 Permit Version: 1 Receiving Water: UNNAMED TRIB OF RIVER RHYMNEY	Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 17/01/1995 Effective Date: 17/01/1995 Revocation Date: -
15	301m NW	1 GYPSY CASTLE NEAR DOWLAIS MERTHY, 1 GYPSY CASTLE NEAR DOWLAIS MER, NEAR DOWLAIS MERTHYR TYDFIL, MERTHYR TYDFIL, MERTHYR TY	Effluent Type: UNSPECIFIED Permit Number: AN0255601 Permit Version: 1 Receiving Water: UN-NAMED TRIB OF RIVER RHYMNEY	Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 17/01/1995 Effective Date: 17/01/1995 Revocation Date: -
G	318m E	PENCOEDCAE FARM, RHYMNEY BRIDGE	Effluent Type: UNSPECIFIED Permit Number: AN0161101 Permit Version: 1 Receiving Water: RHYMNEY TRIBUTARY	Status: REVOKED - UNSPECIFIED Issue date: 01/01/1901 Effective Date: 01/01/1901 Revocation Date: 23/08/1989
G	318m E	PENCOEDCAE FARM, RHYMNEY BRIDGE	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: AN0161101 Permit Version: 2 Receiving Water: RHYMNEY TRIBUTARY	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 24/08/1989 Effective Date: 24/08/1989 Revocation Date: 29/04/1993
H	369m W	TRECATTY OCCS, POINT E (WORKSHOP LAGOON)	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: AF4012105 Permit Version: 1 Receiving Water: UNNAMED WATERCOURSE	Status: REVOKED - UNSPECIFIED Issue date: 25/11/1974 Effective Date: 25/11/1974 Revocation Date: 28/01/1985
H	369m W	TRECATTY OCCS, POINT E (WORKSHOP LAGOON)	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: AF4012105 Permit Version: 2 Receiving Water: UNNAMED WATERCOURSE	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 29/01/1985 Effective Date: 29/01/1985 Revocation Date: 19/11/1992

ID	Location	Address	Details	
L	409m N	SCOUR VALVE RELEASE @ BUTE TOWN RES, BUTE TOWN RESERVOIR, PONTLLOTTYN LINK ROAD, BUTE TOWN, RHYMNEY, NP22 5QY	Effluent Type: FRESHWATER - LAKES/PONDS/RESERVOIRS Permit Number: DB3093HS Permit Version: 0 Receiving Water: UNNAMED TRIB OF NANT CARNO	Status: Effective Issue date: 01/04/2018 Effective Date: 01/04/2018 Revocation Date: -
L	409m N	SCOUR VALVE RELEASE @ BUTE TOWN RES, BUTE TOWN RESERVOIR, PONTLLOTTYN LINK ROAD, BUTE TOWN, RHYMNEY, NP22 5QY	Effluent Type: FRESHWATER - LAKES/PONDS/RESERVOIRS Permit Number: DB3093HS Permit Version: 1 Receiving Water: UNNAMED TRIB OF NANT CARNO	Status: Effective Issue date: 17/02/2015 Effective Date: 17/02/2015 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

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

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0

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

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

4.17 List 2 Dangerous Substances

Records within 500m	0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	32

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 74 >**

ID	Location	Details	
3	21m NE	Incident Date: 12/04/2003 Incident Identification: 150564 Pollutant: Specific Waste Materials Pollutant Description: Household Waste	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
4	22m NW	Incident Date: 03/04/2003 Incident Identification: 148376 Pollutant: Oils and Fuel Pollutant Description: Unidentified Oil	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
B	77m SE	Incident Date: 31/07/2003 Incident Identification: 178078 Pollutant: Specific Waste Materials Pollutant Description: Vehicles and Vehicle Parts	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
A	93m E	Incident Date: 12/09/2013 Incident Identification: 1158850 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
8	98m NE	Incident Date: 30/07/2020 Incident Identification: 2005438 Pollutant: Organic Chemicals / Products Pollutant Description: Surfactants and Detergents	Water Impact: Category 1 (Major) Land Impact: No Details Air Impact: No Details
F	159m E	Incident Date: 02/08/2013 Incident Identification: 1143094 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

ID	Location	Details	
F	200m E	Incident Date: 30/07/2013 Incident Identification: 1141563 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	221m E	Incident Date: 05/10/2013 Incident Identification: 1165215 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	221m E	Incident Date: 11/08/2013 Incident Identification: 1146493 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	221m E	Incident Date: 07/04/2014 Incident Identification: 1225196 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	221m E	Incident Date: 07/10/2013 Incident Identification: 1165794 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	221m E	Incident Date: 18/08/2013 Incident Identification: 1148959 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	221m E	Incident Date: 01/09/2013 Incident Identification: 1154495 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	221m E	Incident Date: 08/08/2013 Incident Identification: 1145654 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	221m E	Incident Date: 28/05/2012 Incident Identification: 995460 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
F	221m E	Incident Date: 30/08/2013 Incident Identification: 1154185 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

ID	Location	Details	
F	221m E	Incident Date: 30/05/2012 Incident Identification: 996425 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
F	232m E	Incident Date: 05/07/2014 Incident Identification: 1252922 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	232m E	Incident Date: 06/07/2014 Incident Identification: 1253084 Pollutant: Organic Chemicals/Products Pollutant Description: Other Organic Chemical or Product	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	232m E	Incident Date: 20/07/2014 Incident Identification: 1258308 Pollutant: Organic Chemicals/Products Pollutant Description: Solvents	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	232m E	Incident Date: 27/06/2014 Incident Identification: 1250329 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
16	339m NW	Incident Date: 23/01/2014 Incident Identification: 1197279 Pollutant: Oils and Fuel Pollutant Description: Unidentified Oil	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
I	372m NE	Incident Date: 24/01/2017 Incident Identification: 1700367 Pollutant: - Pollutant Description: -	Water Impact: Category 3 (Minor) Land Impact: No Details Air Impact: No Details
I	372m NE	Incident Date: 24/01/2017 Incident Identification: 1700367 Pollutant: Sewage Material Pollutant Description: Grey Water	Water Impact: Category 3 (Minor) Land Impact: No Details Air Impact: No Details
J	389m SE	Incident Date: 15/03/2005 Incident Identification: 298924 Pollutant: Contaminated Water Pollutant Description: Firefighting Run-Off	Water Impact: Category 3 (Minor) Land Impact: Category 2 (Significant) Air Impact: Category 2 (Significant)
J	389m SE	Incident Date: 15/03/2005 Incident Identification: 298924 Pollutant: Organic Chemicals/Products Pollutant Description: Surfactants and Detergents	Water Impact: Category 3 (Minor) Land Impact: Category 2 (Significant) Air Impact: Category 2 (Significant)

ID	Location	Details	
J	389m SE	Incident Date: 15/03/2005 Incident Identification: 298924 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 3 (Minor) Land Impact: Category 2 (Significant) Air Impact: Category 2 (Significant)
K	405m SE	Incident Date: 03/09/2002 Incident Identification: 105110 Pollutant: Contaminated Water Pollutant Description: Other Contaminated Water	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
K	414m SE	Incident Date: 15/07/2001 Incident Identification: 16539 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
17	433m W	Incident Date: 21/05/2003 Incident Identification: 159837 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Other General Biodegradable Material or Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
18	436m NE	Incident Date: 17/12/2007 Incident Identification: 551559 Pollutant: Organic Chemicals/Products Pollutant Description: Pesticides and Biocides	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
19	477m SE	Incident Date: 31/03/2003 Incident Identification: 147264 Pollutant: Contaminated Water Pollutant Description: Other Contaminated Water	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m	**0**

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

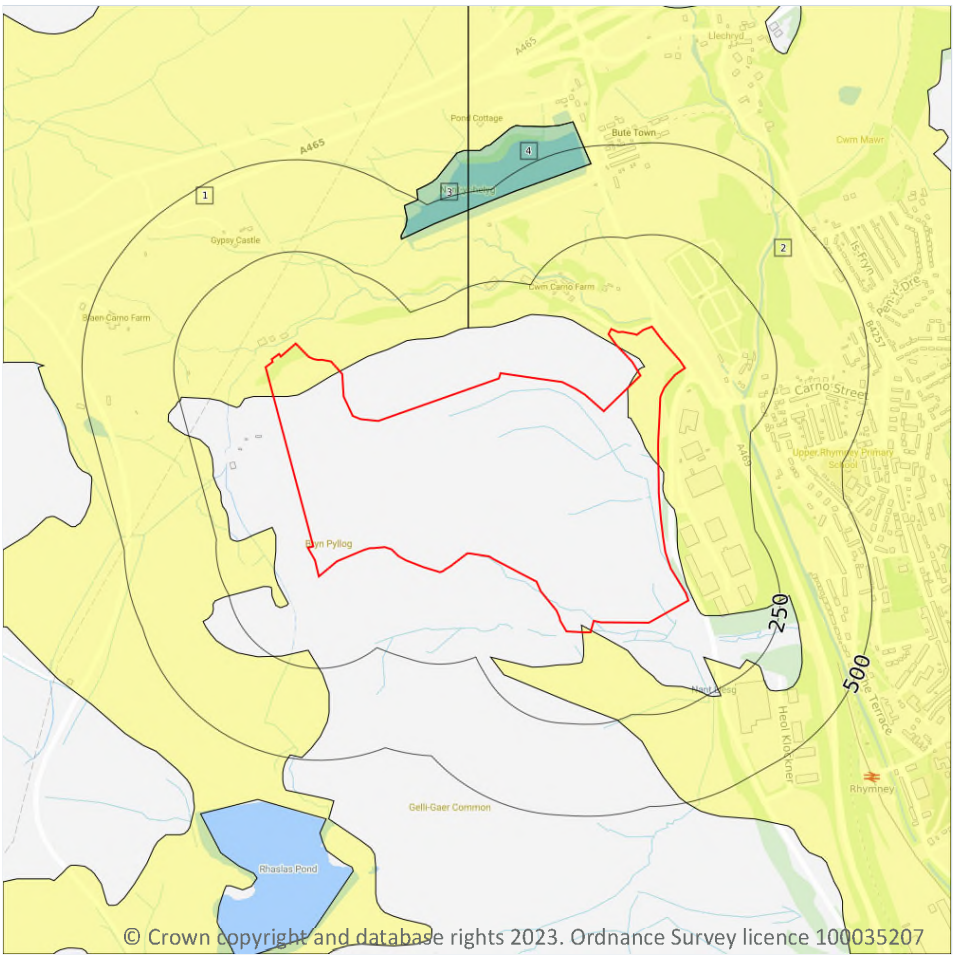
4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

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

5.1 Superficial aquifer

Records within 500m **4**

Aquifer status of groundwater held within superficial geology.

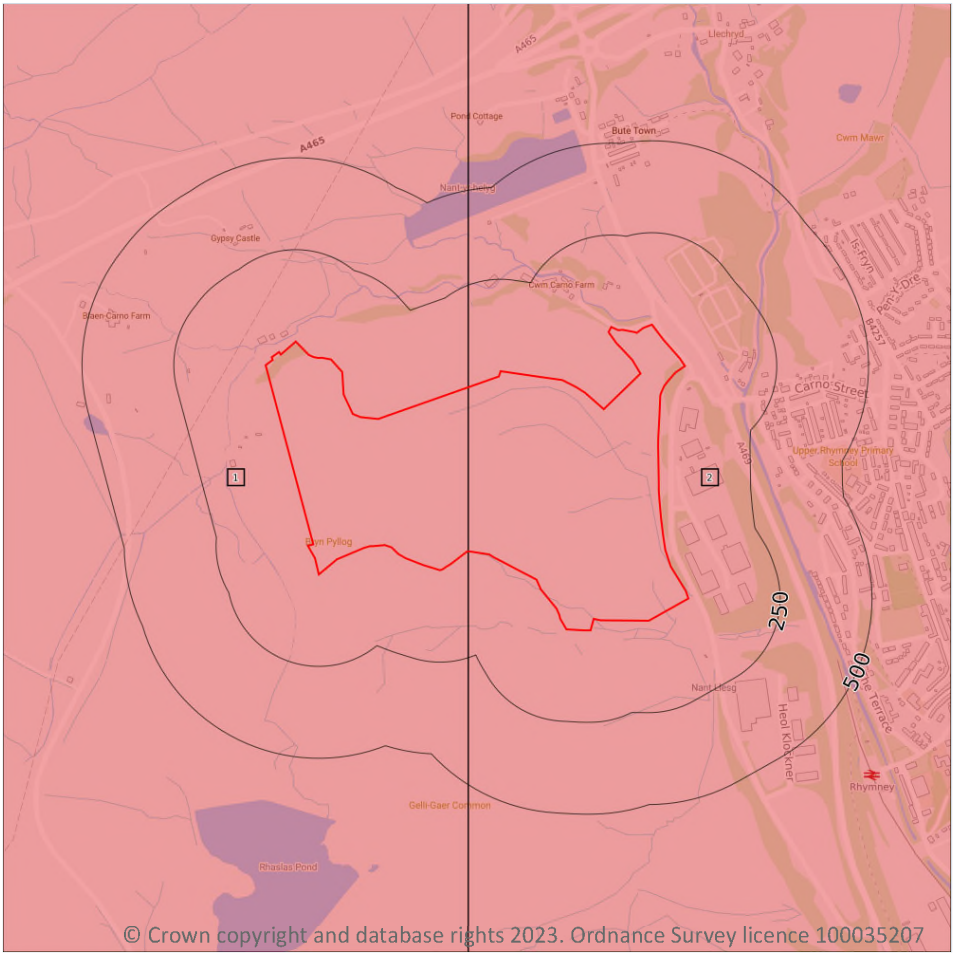
Features are displayed on the Hydrogeology map on page 88 >

ID	Location	Designation	Description
1	On site	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
2	On site	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	384m N	Unknown	Unknown
4	441m N	Unknown	Unknown

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	2

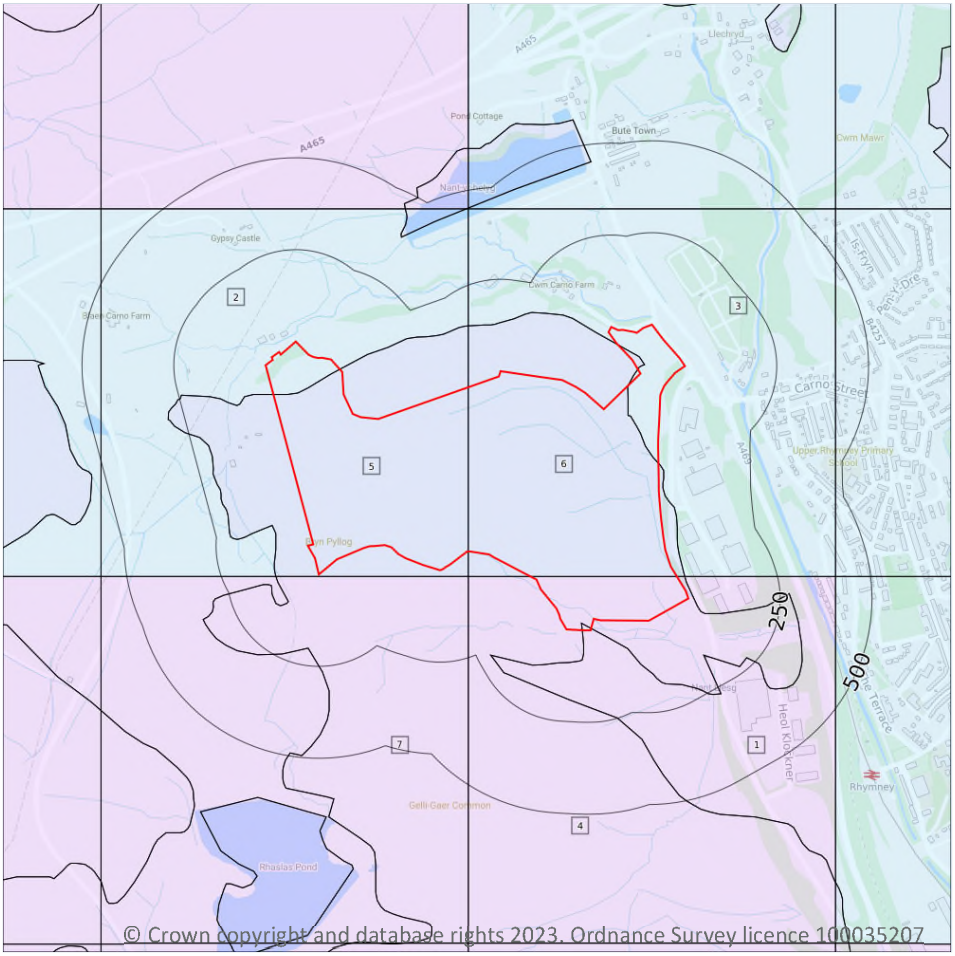
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 90 >**

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	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



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Site Outline

Search buffers in metres (m)

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

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

Other information
- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	7

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 92 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	**On site**	**Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year**	**Vulnerability: Low Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures**
2	**On site**	**Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year**	**Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**
3	**On site**	**Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year**	**Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**
4	**On site**	**Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year**	**Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures**
5	**On site**	**Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year**	**Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**
6	**On site**	**Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year**	**Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**
7	5m SW	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: 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.

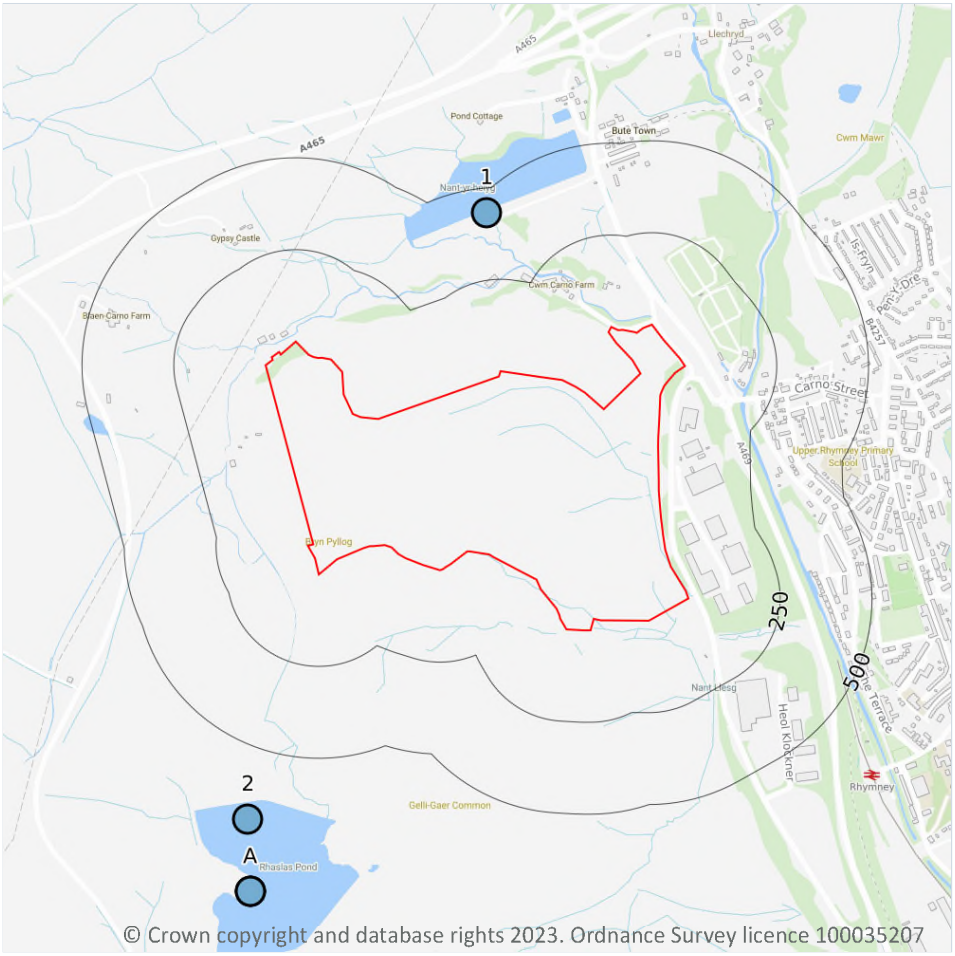
5.5 Groundwater vulnerability- local information

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
- 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	6

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 95 >**

ID	Location	Details	
-	1202m W	Status: Historical Licence No: 21/57/22/0040 Details: Process Water Direct Source: EAW Groundwater Point: BOREHOLE (C) AT ST MERRYN MEAT LTD, DOWLAIS Data Type: Point Name: St Merryn Meat Ltd Easting: 308280 Northing: 208860	Annual Volume (m^3): 146000 Max Daily Volume (m^3): 600 Original Application No: - Original Start Date: 07/09/1998 Expiry Date: - Issue No: 101 Version Start Date: 14/01/2000 Version End Date: -
-	1348m W	Status: Historical Licence No: 21/57/22/0040 Details: Process Water Direct Source: EAW Groundwater Point: BOREHOLE (A) AT ST MERRYN MEAT LTD, DOWLAIS Data Type: Point Name: St Merryn Meat Ltd Easting: 308100 Northing: 208600	Annual Volume (m^3): 146000 Max Daily Volume (m^3): 600 Original Application No: - Original Start Date: 07/09/1998 Expiry Date: - Issue No: 101 Version Start Date: 14/01/2000 Version End Date: -
-	1383m W	Status: Historical Licence No: 21/57/22/0040 Details: Process Water Direct Source: EAW Groundwater Point: BOREHOLE (B) AT ST MERRYN MEAT LTD, DOWLAIS Data Type: Point Name: St Merryn Meat Ltd Easting: 308090 Northing: 208840	Annual Volume (m^3): 146000 Max Daily Volume (m^3): 600 Original Application No: - Original Start Date: 07/09/1998 Expiry Date: - Issue No: 101 Version Start Date: 14/01/2000 Version End Date: -
-	1917m N	Status: Active Licence No: 21/57/11/0022 Details: Transfer between Sources (Pre Water Act 2003) - Very Low Direct Source: Millstone Grit and Carboniferous Limestone Point: - Data Type: Point Name: - Easting: 310140 Northing: 210580	Annual Volume (m^3): 3148105 Max Daily Volume (m^3): 30000 Original Application No: - Original Start Date: 01/04/2019 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -

ID	Location	Details	
-	1917m N	Status: Historical Licence No: 21/57/11/0022 Details: Transfer Between Sources (Pre Water Act 2003) Direct Source: EAW Groundwater Point: BOREHOLE NEAR RHYMNEY Data Type: Point Name: Dwr Cymru Cyfyngedig Easting: 310140 Northing: 210580	Annual Volume (m^3): 3148105 Max Daily Volume (m^3): 30000 Original Application No: - Original Start Date: 09/07/1999 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2006 Version End Date: -
-	1917m N	Status: Historical Licence No: 21/57/11/0022 Details: Transfer between Sources (Pre Water Act 2003) - Very Low Direct Source: Millstone Grit and Carboniferous Limestone Point: - Data Type: Point Name: - Easting: 310140 Northing: 210580	Annual Volume (m^3): 3148105 Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/04/2019 Expiry Date: - 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 **13**

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 95 >**

ID	Location	Details	
1	433m N	Status: Historical Licence No: 21/57/11/0003 Details: General use relating to Secondary Category (Medium Loss) Direct Source: EAW Surface Water Point: BUTE TOWN RESERVOIR Data Type: Point Name: Corus UK Ltd Easting: 310050 Northing: 208990	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 11/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 17/04/2000 Version End Date: -

ID	Location	Details	
2	692m SW	Status: Historical Licence No: 21/57/22/0001 Details: General use relating to Secondary Category (Medium Loss) Direct Source: EAW Surface Water Point: RHASLAS POND Data Type: Point Name: Corus UK Ltd Easting: 309400 Northing: 207340	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 11/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 17/04/2000 Version End Date: -
A	882m SW	Status: Historical Licence No: WA/057/0022/002 Details: Dust Suppression Direct Source: EAW Surface Water Point: RHASLAS POND Data Type: Point Name: Miller Argent (South Wales) Limited Easting: 309406 Northing: 207143	Annual Volume (m^3): 159000 Max Daily Volume (m^3): 1968 Original Application No: - Original Start Date: - Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 07/08/2009 Version End Date: -
A	882m SW	Status: Historical Licence No: WA/057/0022/002 Details: Dust Supression - High Direct Source: Rhaslas Pond Point: - Data Type: Point Name: - Easting: 309406 Northing: 207143	Annual Volume (m^3): 159000 Max Daily Volume (m^3): 3936 Original Application No: - Original Start Date: 20/09/2018 Expiry Date: 31/03/2029 Issue No: - Version Start Date: - Version End Date: -
A	882m SW	Status: Active Licence No: WA/057/0022/002 Details: Dust Supression - High Direct Source: Rhaslas Pond Point: - Data Type: Point Name: - Easting: 309406 Northing: 207143	Annual Volume (m^3): 159000 Max Daily Volume (m^3): 1968 Original Application No: - Original Start Date: 20/09/2018 Expiry Date: 31/03/2029 Issue No: - Version Start Date: - Version End Date: -
-	1053m NW	Status: Historical Licence No: 21/57/22/0001 Details: General use relating to Secondary Category (Medium Loss) Direct Source: EAW Surface Water Point: JEPSON'S POND Data Type: Point Name: Corus UK Ltd Easting: 308600 Northing: 209200	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 11/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 17/04/2000 Version End Date: -

ID	Location	Details	
-	1204m W	Status: Historical Licence No: 21/57/22/0001 Details: General use relating to Secondary Category (Medium Loss) Direct Source: EAW Surface Water Point: ROADSIDE POND Data Type: Point Name: Corus UK Ltd Easting: 308250 Northing: 208450	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 11/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 17/04/2000 Version End Date: -
-	1552m N	Status: Active Licence No: 21/57/11/0001 Details: Transfer between Sources (Pre Water Act 2003) - Very Low Direct Source: - Point: - Data Type: Point Name: - Easting: 310330 Northing: 210230	Annual Volume (m^3): 3148105 Max Daily Volume (m^3): 30000 Original Application No: - Original Start Date: 01/04/2006 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1552m N	Status: Historical Licence No: 21/57/11/0001 Details: Transfer Between Sources (Pre Water Act 2003) Direct Source: EAW Surface Water Point: RIVER RHYMNEY Data Type: Point Name: Dwr Cymru Cyfyngedig Easting: 310330 Northing: 210230	Annual Volume (m^3): 3148105 Max Daily Volume (m^3): 30000 Original Application No: - Original Start Date: 14/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2006 Version End Date: -
-	1552m N	Status: Historical Licence No: 21/57/11/0001 Details: Transfer between Sources (Pre Water Act 2003) - Very Low Direct Source: - Point: - Data Type: Point Name: - Easting: 310330 Northing: 210230	Annual Volume (m^3): 3148105 Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/04/2006 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -

ID	Location	Details	
-	1599m SE	Status: Active Licence No: 21/57/11/0019 Details: Unknown (Impounding) - Direct Source: - Point: - Data Type: Point Name: - Easting: 311100 Northing: 206400	Annual Volume (m^3): 0 Max Daily Volume (m^3): - Original Application No: - Original Start Date: 10/08/1984 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1840m N	Status: Historical Licence No: 21/57/11/0001 Details: Transfer Between Sources (Pre Water Act 2003) Direct Source: EAW Surface Water Point: NANT PIDWELLT NEAR RHYMNEY Data Type: Point Name: Dwr Cymru Cyfyngedig Easting: 309890 Northing: 210450	Annual Volume (m^3): 3148105 Max Daily Volume (m^3): 30000 Original Application No: - Original Start Date: 14/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2006 Version End Date: -
-	1900m NW	Status: Historical Licence No: 21/57/22/0001 Details: General use relating to Secondary Category (Medium Loss) Direct Source: EAW Surface Water Point: PITWELLT RESERVIOR Data Type: Point Name: Corus UK Ltd Easting: 307910 Northing: 209690	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 11/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 17/04/2000 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	**0**

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

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

5.9 Source Protection Zones

Records within 500m	0

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

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

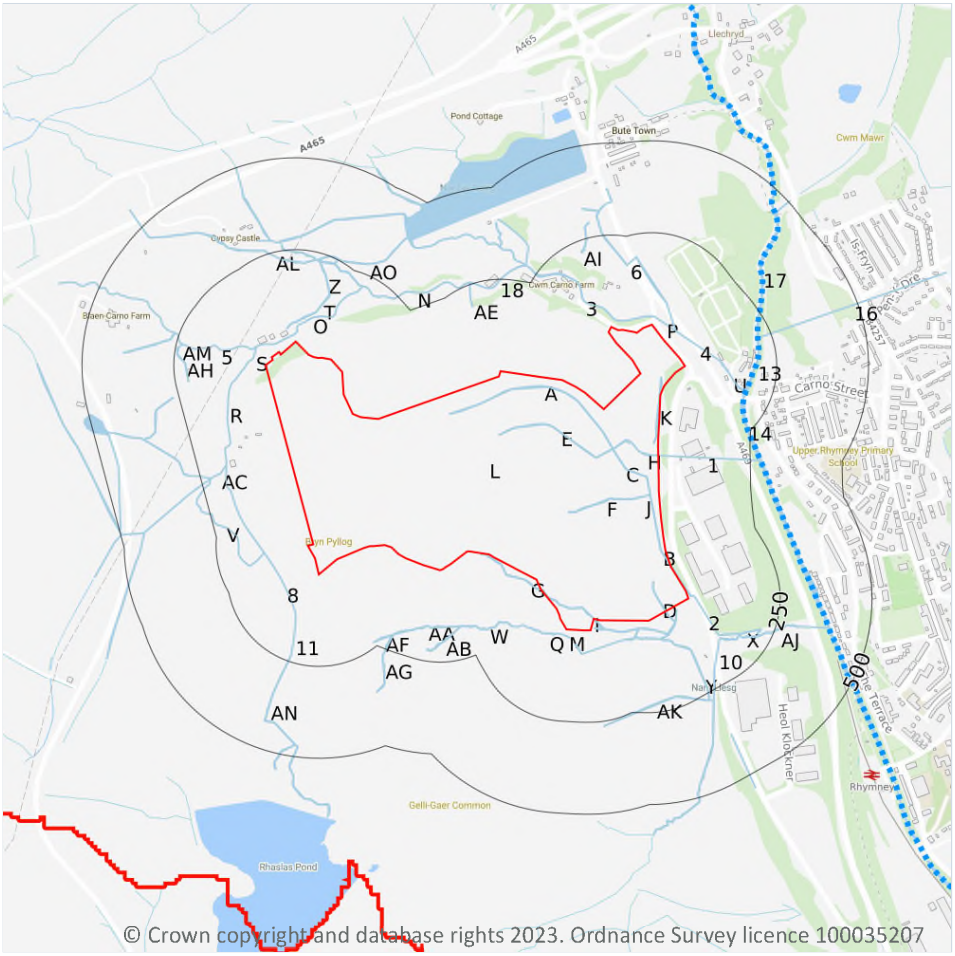
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology



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- 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	97

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 102 >**

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)	-
B	On site	Inland river not influenced by normal tidal action.	On ground surface	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)	-
D	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	On site	Marsh. An area that is predominantly waterlogged by freshwater.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
I	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
J	On site	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
J	**On site**	**Inland river not influenced by normal tidal action.**	**Underground**	**Watercourse contains water year round (in normal circumstances)**	**-**
J	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
K	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
I	8m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Llesg
D	10m SE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
M	16m SE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
2	17m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
O	19m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Carno
D	20m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Llesg
D	21m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	21m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Llesg
P	22m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Carno
3	22m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Carno

ID	Location	Type of water feature	Ground level	Permanence	Name
Q	29m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	29m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
R	38m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	38m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
M	38m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
S	39m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
4	41m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Carno
P	41m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
S	42m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
O	43m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	46m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	47m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
5	51m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Carno

ID	Location	Type of water feature	Ground level	Permanence	Name
I	52m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	58m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Llesg
D	58m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Llesg
Q	65m S	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Q	66m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
6	71m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Q	91m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
T	93m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
U	97m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Carno
8	97m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
V	120m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
V	120m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
W	123m S	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
X	129m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
10	137m SE	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	Nant Llesg
X	137m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Llesg
Y	150m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Llesg
Z	151m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AA	152m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
11	152m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AB	162m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AC	173m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
13	176m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Rhymni
14	176m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Rhymni
AE	190m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Y	203m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Llesg

ID	Location	Type of water feature	Ground level	Permanence	Name
AE	204m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AF	205m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AG	205m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
N	208m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Carno
16	212m NE	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
17	212m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Rhymni
Z	214m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AH	214m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AI	215m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Z	215m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AJ	218m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Llesg
AI	218m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AK	218m SE	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
AI	223m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AC	224m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AC	224m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AC	225m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AL	226m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Z	226m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Z	226m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Z	226m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
18	227m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Carno
Z	228m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Z	228m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Z	228m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AM	232m NW	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
AM	233m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Carno
AN	233m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Z	235m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AF	236m SW	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AO	237m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	42

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 102 >**

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 102 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
L	**On site**	**River WB catchment**	**Rhymney R - source to conf Nant Bargod Rhymni**	**GB109057033130**	**Rhymney**	**South East Valleys**

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

6.4 WFD Surface water bodies

Records identified	**1**

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

Features are displayed on the Hydrology map on **page 102 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
15	180m E	River	Rhymney R - source to conf Nant Bargod Rhymni	GB109057033130	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 102 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
L	**On site**	**SE Valleys Carboniferous Coal Measures**	**GB40902G201900**	**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	43

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

Features are displayed on the River and coastal flooding map on **page 112 >**

Distance	Flood risk category
On site	**Low**
0 - 50m	High

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

7.2 Historical Flood Events

Records within 250m	**0**

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

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

7.3 Flood Defences

Records within 250m	**0**

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	**0**

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

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

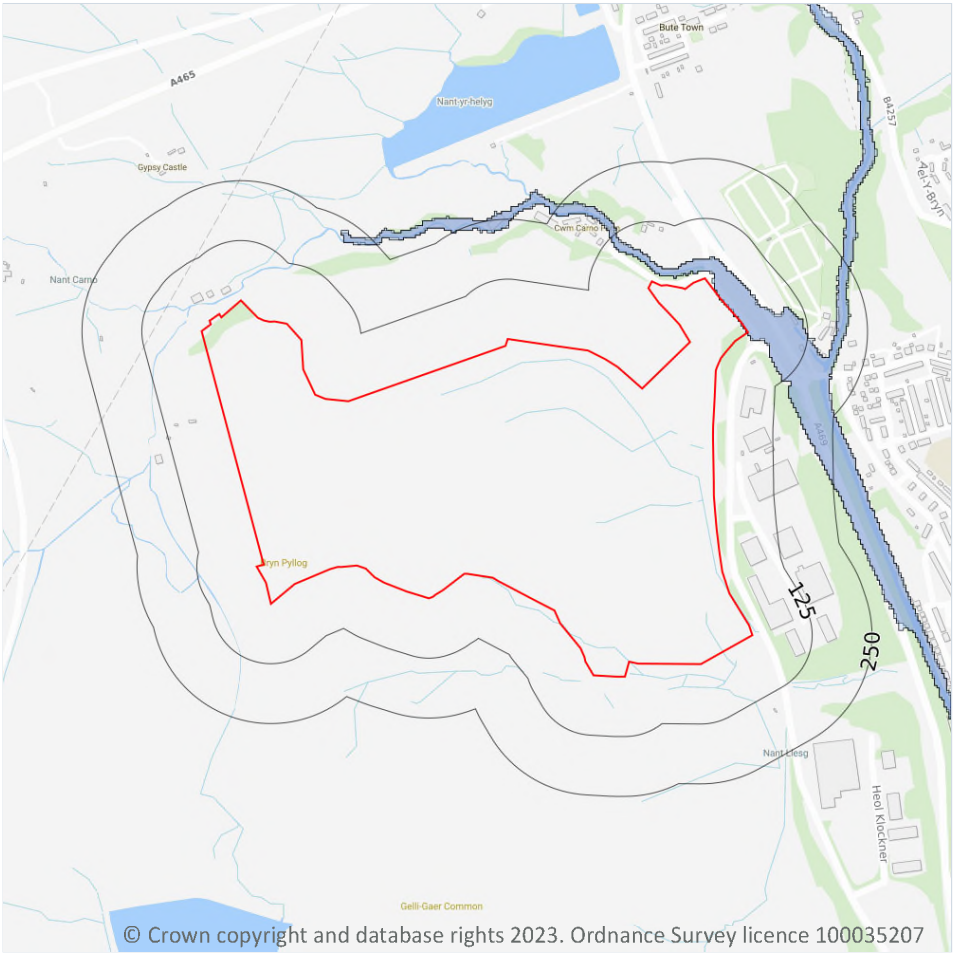
7.5 Flood Storage Areas

Records within 250m	**0**

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

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

River and coastal flooding - Flood Zones



Site Outline

Search buffers in metres (m)

Flood zone 2

Flood zone 3

7.6 Flood Zone 2

Records within 50m	1

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

Features are displayed on the River and coastal flooding map on **page 112 >**

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

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

7.7 Flood Zone 3

Records within 50m	1

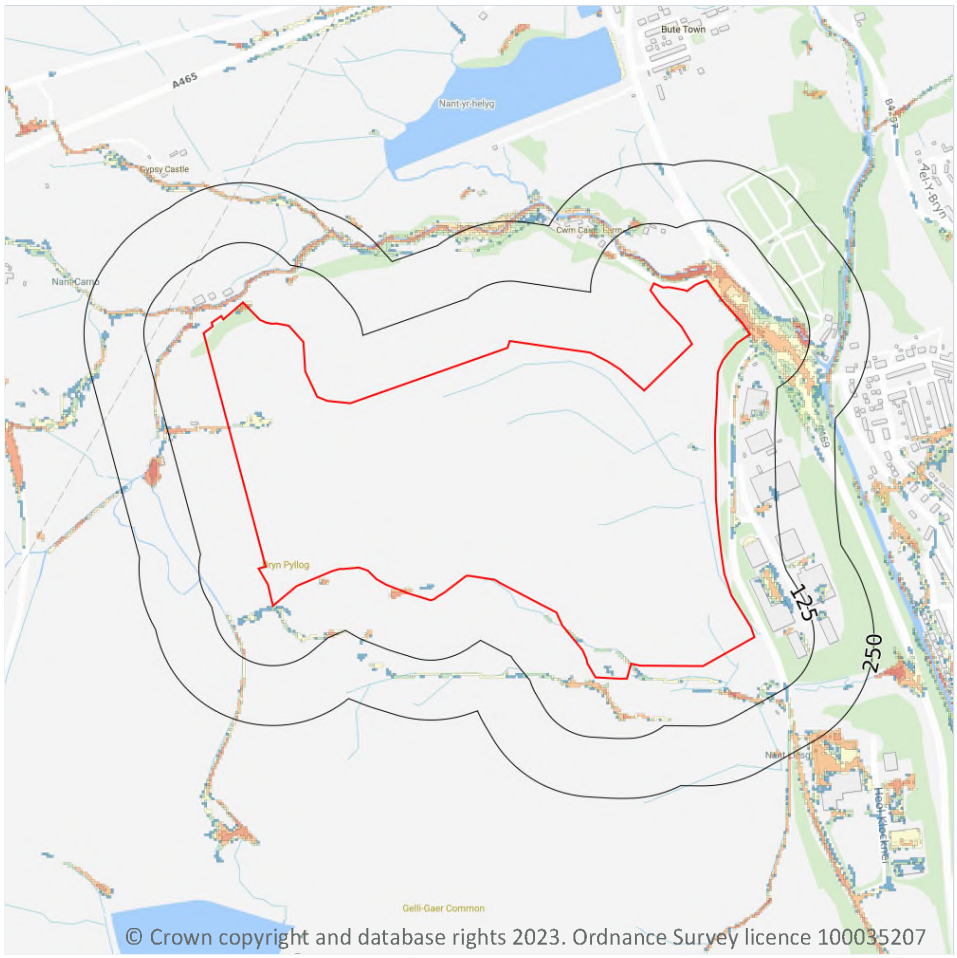
Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on **page 112 >**

Location	Type
On site	**Zone 3 - (Fluvial /Tidal Models)**

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

8 Surface water flooding



Site Outline

Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site	**1 in 30 year, 0.3m - 1.0m**
Highest risk within 50m	**1 in 30 year, Greater than 1.0m**

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

Features are displayed on the Surface water flooding map on **page 116 >**

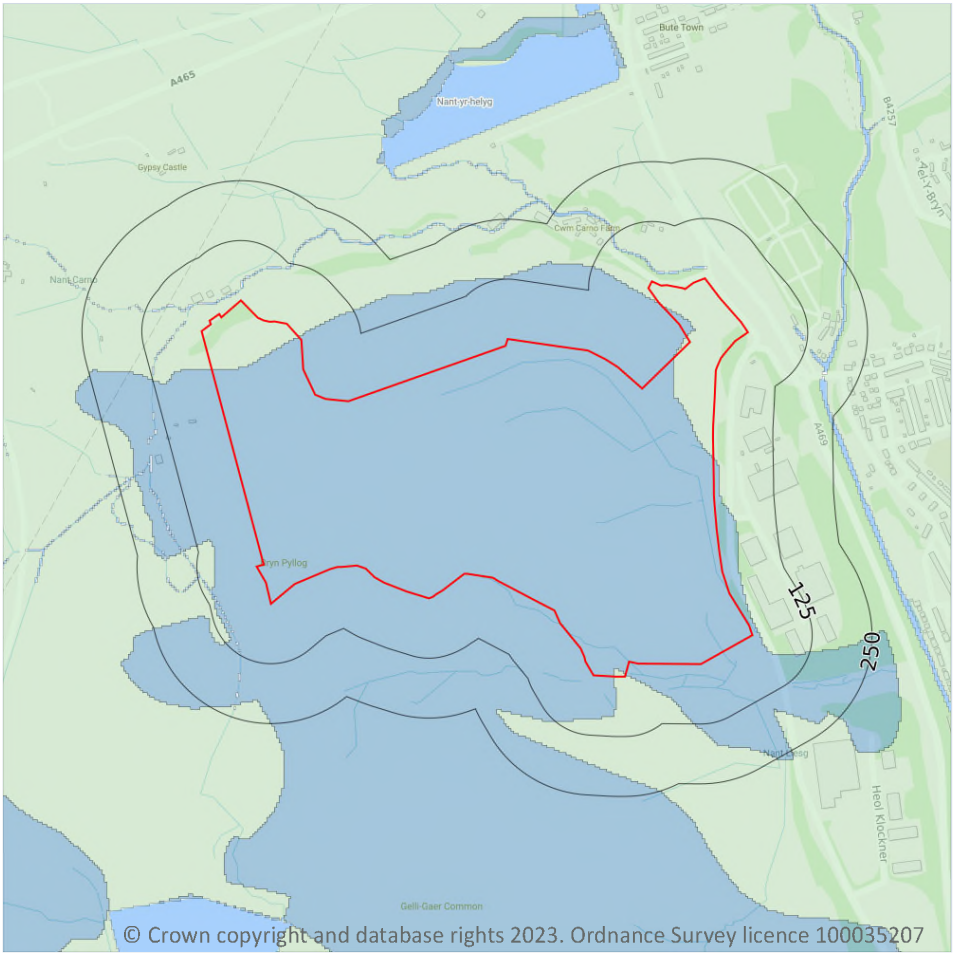
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on

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

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

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

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

9.1 Groundwater flooding

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

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

Features are displayed on the Groundwater flooding map on **page 118 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



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Site Outline

Search buffers in metres (m)

Sites of Special Scientific Interest (SSSI)

Local Nature Reserves (LNR)

Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	1

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

Features are displayed on the Environmental designations map on **page 119 >**

ID	Location	Name	Data source
3	1420m N	Lower House Stream Section	Natural Resources Wales

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m	0

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	1

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

Features are displayed on the Environmental designations map on **page 119 >**

ID	Location	Name	Data source
-	1922m NE	Parc Bryn Bach	Natural Resources Wales

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

10.7 Designated Ancient Woodland

Records within 2000m	2

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 119 >**

ID	Location	Name	Woodland Type
1	82m SE	Unknown	Ancient Semi Natural Woodland
2	812m SE	Unknown	Ancient Semi Natural Woodland

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

10.8 Biosphere Reserves

Records within 2000m	0

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

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

10.9 Forest Parks

Records within 2000m	0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

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

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

10.11 Green Belt

Records within 2000m	0

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

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

10.12 Proposed Ramsar sites

Records within 2000m	0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m	0

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

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

SSSI Impact Zones and Units

10.17 SSSI Impact Risk Zones

Records on site	0

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

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	0

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

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

11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	0

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

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

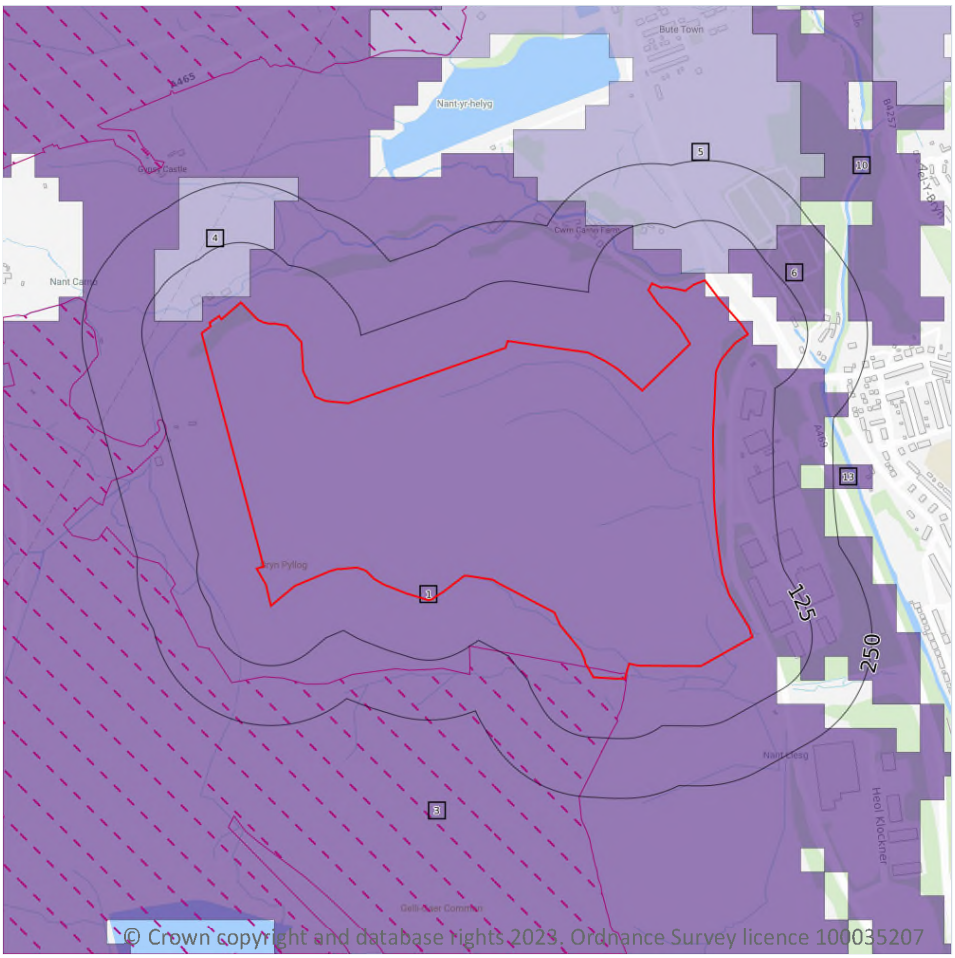
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



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	6

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

Features are displayed on the Agricultural designations map on page 127 >

ID	Location	Classification	Description
1	**On site**	**Grade 5**	**Very poor quality agricultural land**
4	11m NW	Grade 4	Poor quality agricultural land
5	15m NE	Grade 4	Poor quality agricultural land

ID	Location	Classification	Description
6	49m NE	Grade 5	Very poor quality agricultural land
10	212m NE	Grade 5	Very poor quality agricultural land
13	231m E	Grade 5	Very poor quality agricultural land

This data is sourced from Natural Resources Wales.

12.2 Open Access Land

Records within 250m	**1**

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

Features are displayed on the Agricultural designations map on **page 127 >**

ID	Location	Name	Classification	Other relevant legislation
3	**On site**	**-**	**Open Access Other Statutory Access Land**	**-**

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.

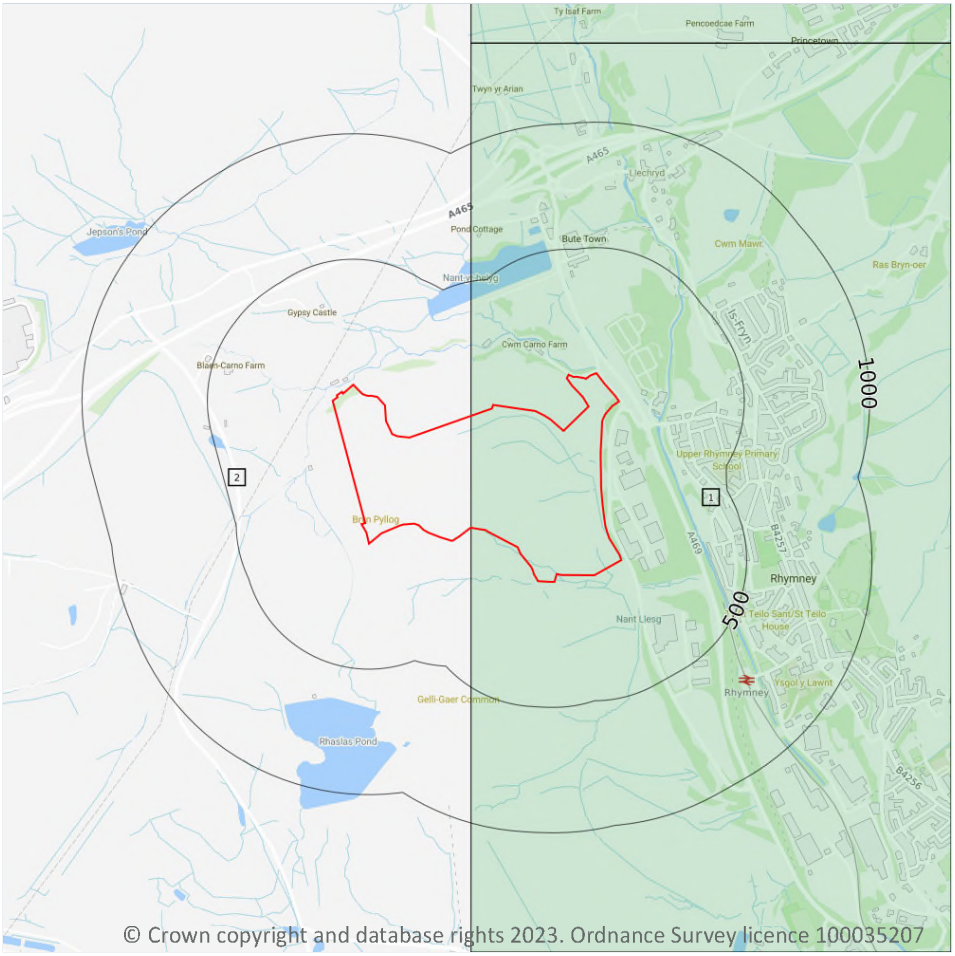
13.4 Limestone Pavement Orders

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



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Site Outline

Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m	2

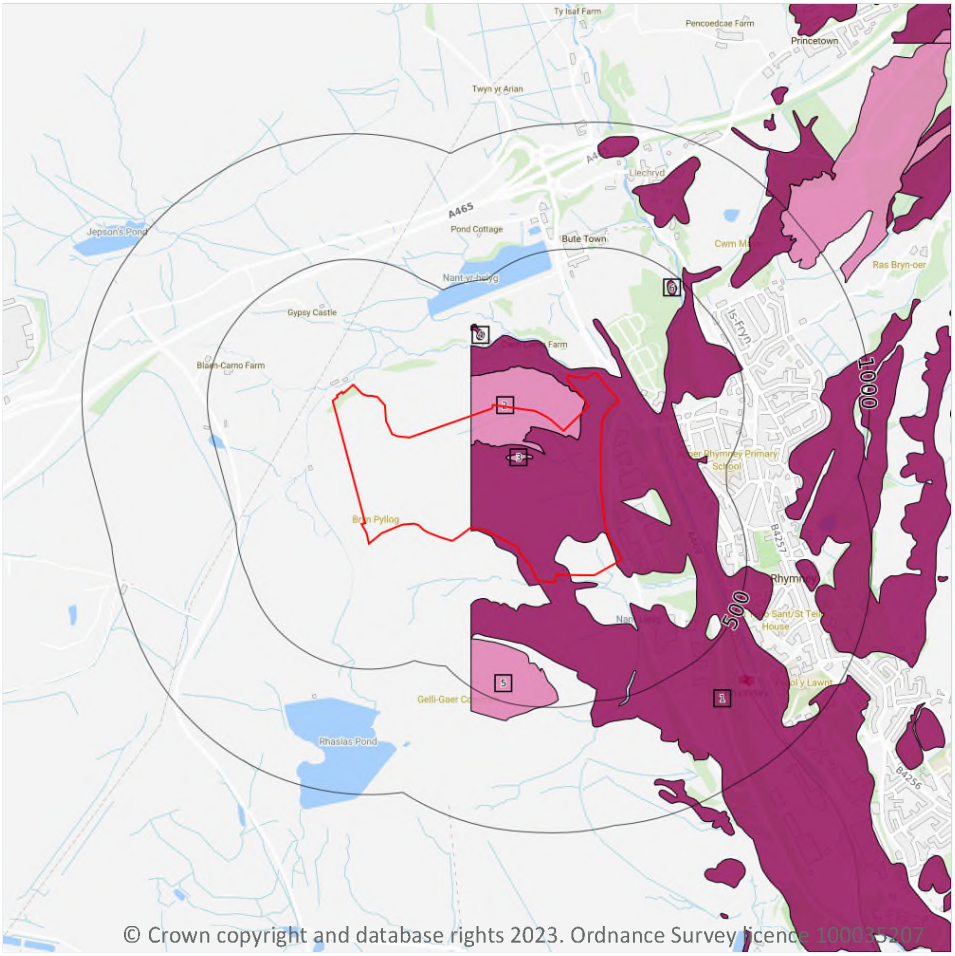
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 131 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SO10NW
2	On site	No coverage	No coverage	No coverage	No coverage	NoCov

This data is sourced from the British Geological Survey.

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



14.2 Artificial and made ground (10k)

Records within 500m **6**

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.

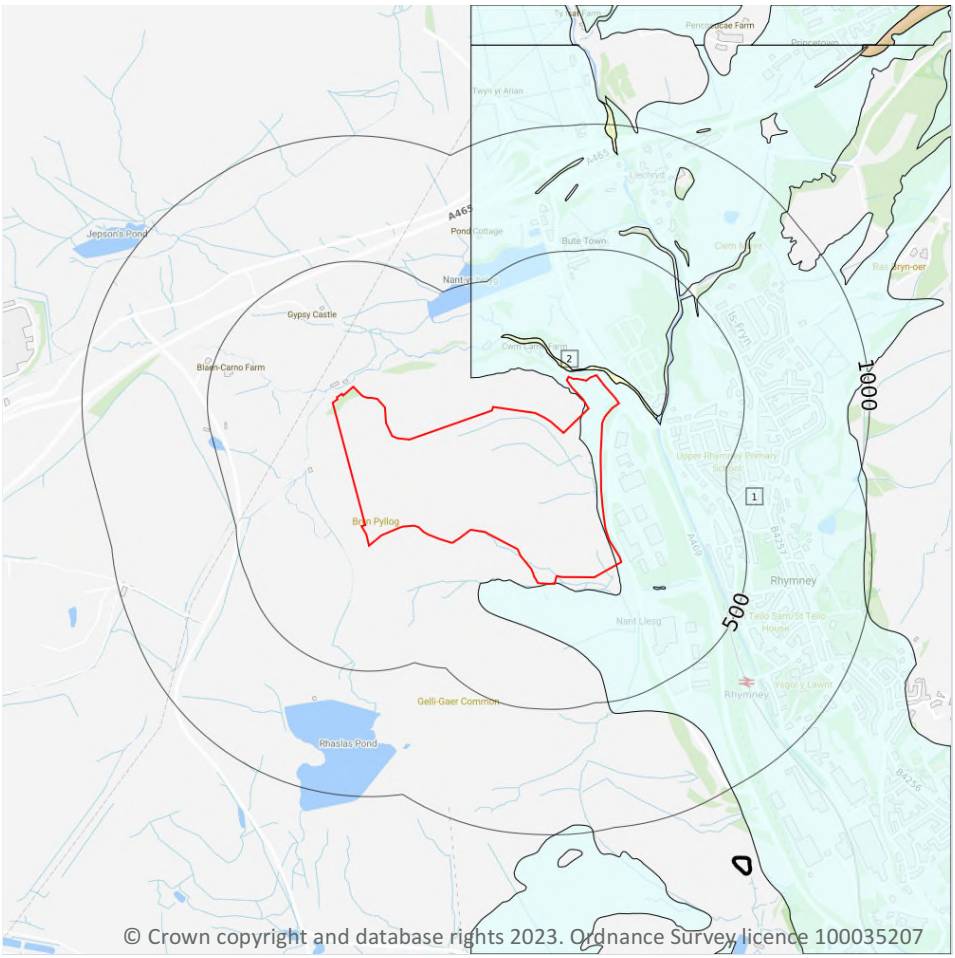
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 132 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**MGR-ARTDP**	**Made Ground (Undivided)**	**Artificial Deposit**
2	**On site**	**WGR-VOID**	**Worked Ground (Undivided)**	**Void**
3	**On site**	**WGR-VOID**	**Worked Ground (Undivided)**	**Void**
4	264m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

ID	Location	LEX Code	Description	Rock description
5	285m S	WGR-VOID	Worked Ground (Undivided)	Void
6	431m NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m	2

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 134 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**TILLD-DMTN**	**Till, Devensian - Diamicton**	**Diamicton**
2	21m NE	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel

This data is sourced from the British Geological Survey.

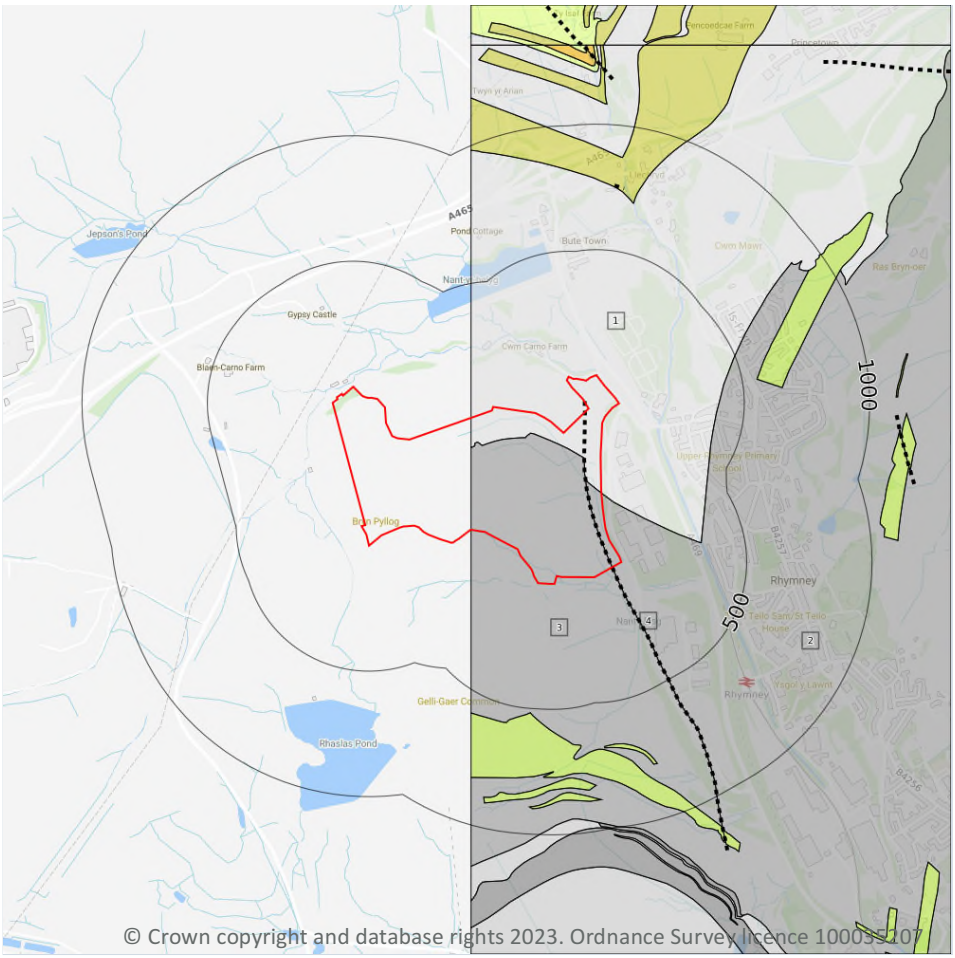
14.4 Landslip (10k)

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	3

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 136 >**

ID	Location	LEX Code	Description	Rock age
1	On site	SWLCM-MDSS	South Wales Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
2	On site	SWMCM-MDSS	South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age

ID	Location	LEX Code	Description	Rock age
3	**On site**	**SWMCM-MDSS**	**South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone**	**Bolsovian Sub-age - Duckmantian Sub-age**

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m	**1**

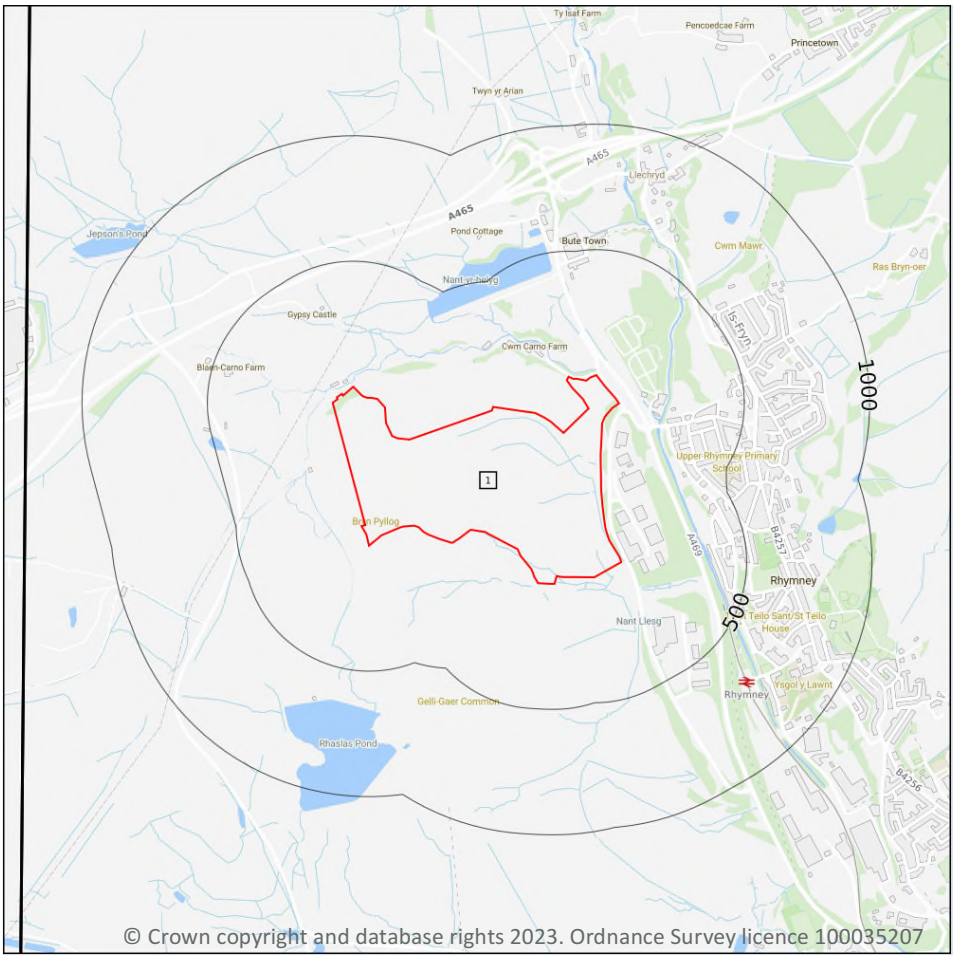
Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 136 >**

ID	Location	Category	Description
4	**On site**	**FAULT**	**Normal fault, inferred; crossmarks on downthrow side**

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

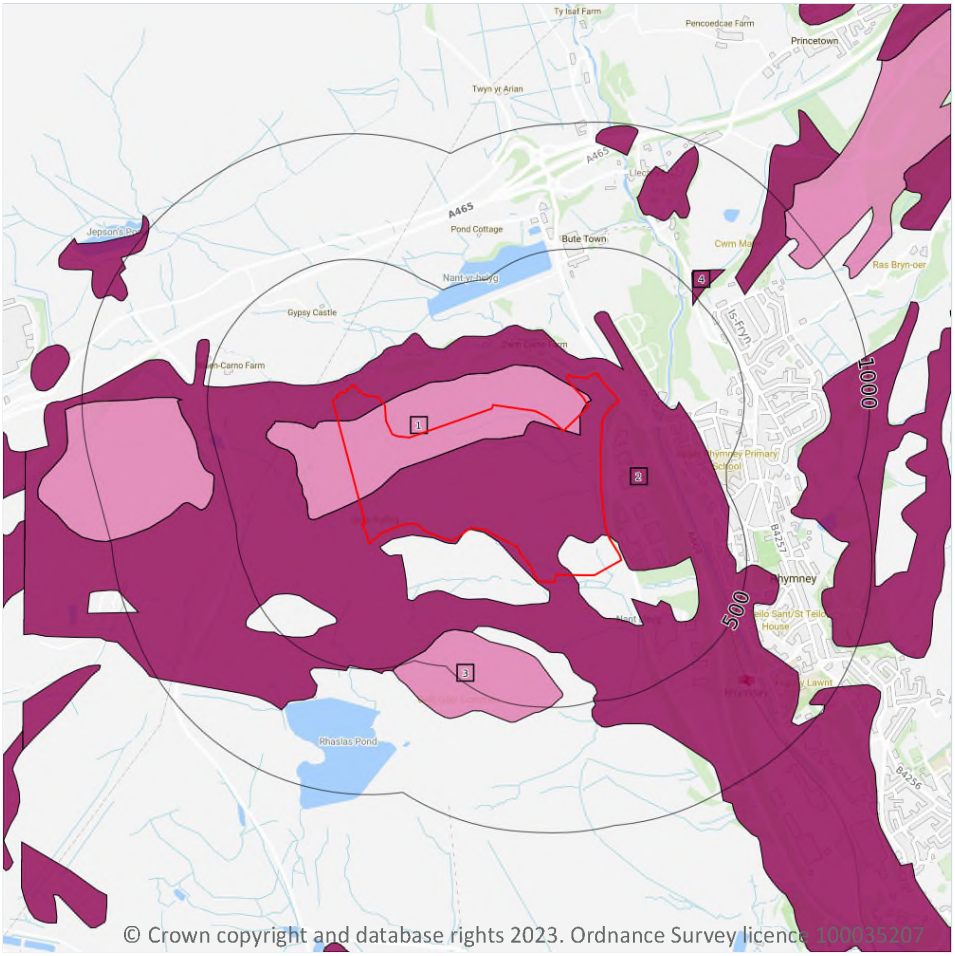
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme. Where 50k data is not available, this area has been filled in with 625k scale data.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 138 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW232_abergavenny_v4**

This data is sourced from the British Geological Survey.

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



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Site Outline

Search buffers in metres (m)

- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m **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 139 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**WGR-VOID**	**WORKED GROUND (UNDIVIDED)**	**VOID**
2	**On site**	**MGR-ARTDP**	**MADE GROUND (UNDIVIDED)**	**ARTIFICIAL DEPOSIT**
3	281m S	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
4	471m NE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

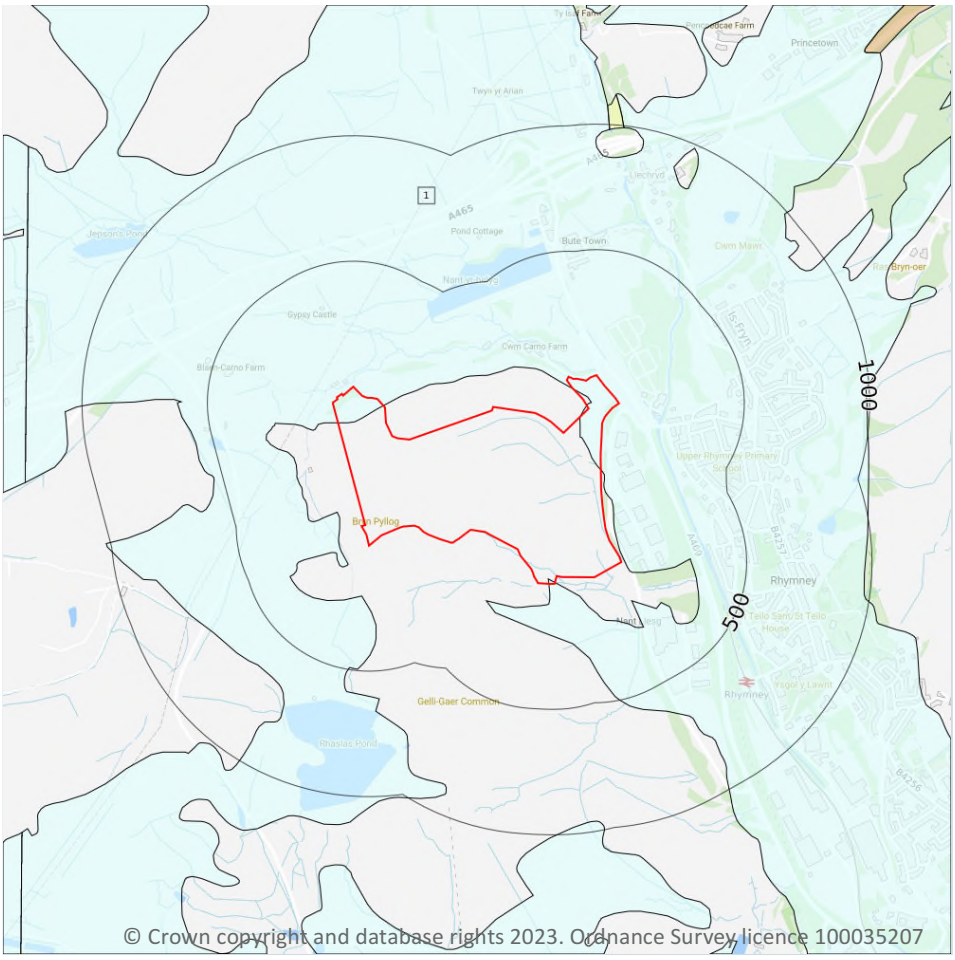
Records within 50m	**2**

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**
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	1

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 141 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**TILLD-DMTN**	**TILL, DEVENSIAN**	**DIAMICTON**

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	2

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

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

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.

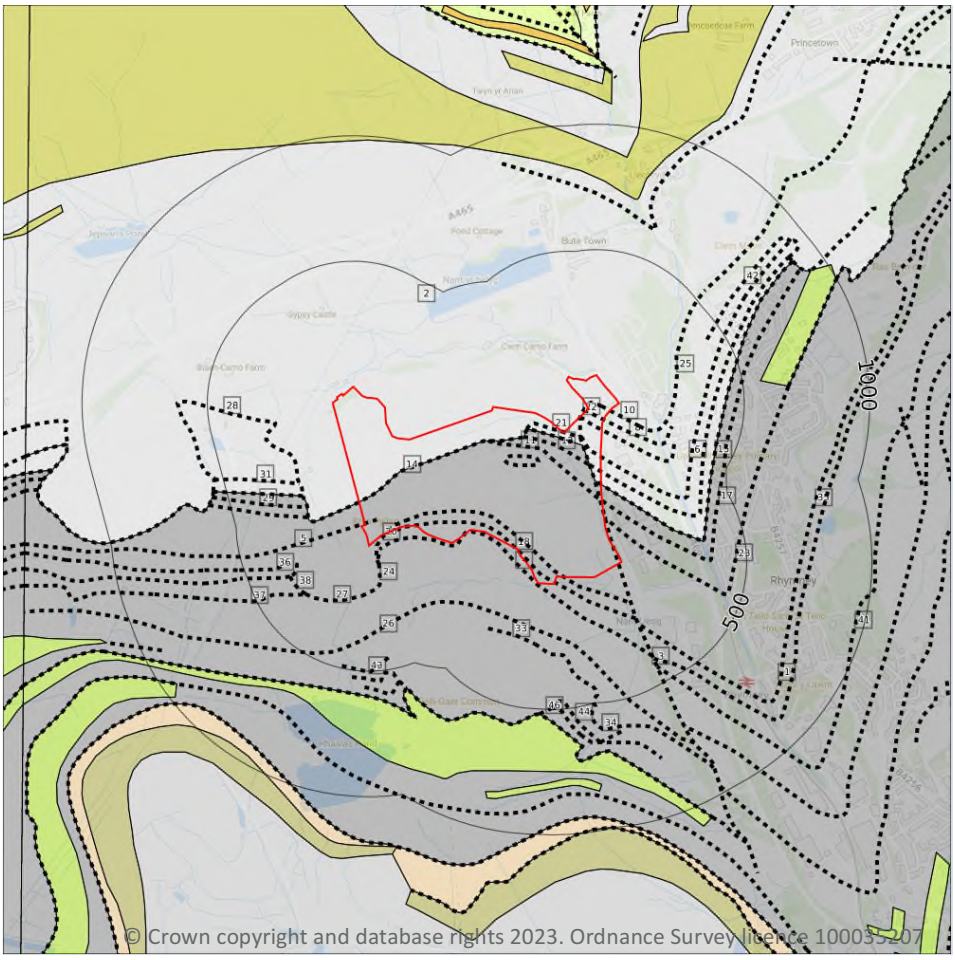
15.7 Landslip permeability (50k)

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 **2**

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 143 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**SWMCM-MDSS**	**SOUTH WALES MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
2	**On site**	**SWLCM-MDSS**	**SOUTH WALES LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	4

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**	**Moderate**	**Low**
On site	**Fracture**	**Moderate**	**Low**
On site	**Fracture**	**Moderate**	**Low**
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	44

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 143 >**

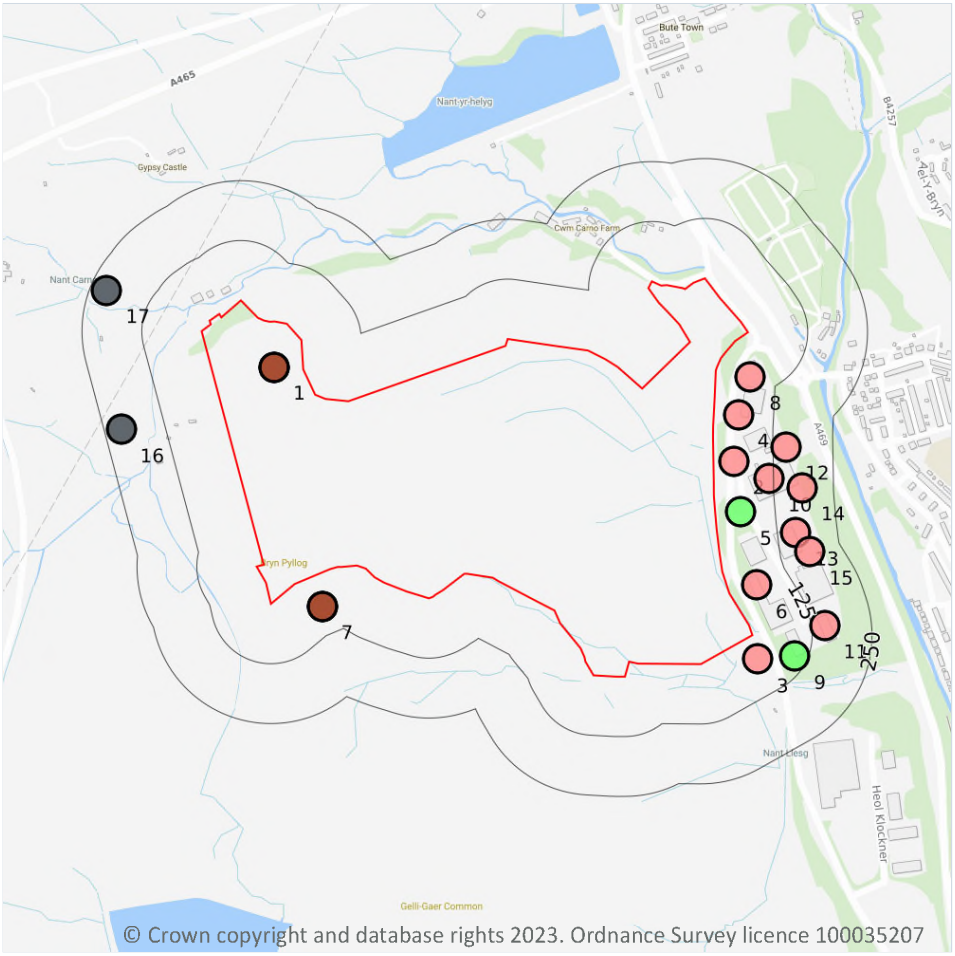
ID	Location	Category	Description
3	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
4	**On site**	**ROCK**	**Coal seam, inferred**
5	**On site**	**ROCK**	**Coal seam, inferred**
6	**On site**	**ROCK**	**Coal seam, inferred**
7	**On site**	**ROCK**	**Coal seam, inferred**
8	**On site**	**ROCK**	**Coal seam, inferred**
9	**On site**	**ROCK**	**Coal seam, inferred**
10	**On site**	**ROCK**	**Coal seam, inferred**
11	**On site**	**ROCK**	**Coal seam, observed**
12	**On site**	**ROCK**	**Coal seam, observed**
13	**On site**	**ROCK**	**Coal seam, observed**

ID	Location	Category	Description
14	**On site**	**ROCK**	**Coal seam, observed**
15	**On site**	**FOSSIL_HORIZON**	**Marine band**
16	**On site**	**FOSSIL_HORIZON**	**Marine band**
17	**On site**	**ROCK**	**Coal seam, inferred**
18	**On site**	**ROCK**	**Coal seam, inferred**
19	**On site**	**ROCK**	**Coal seam, inferred**
20	**On site**	**ROCK**	**Coal seam, observed**
21	**On site**	**ROCK**	**Coal seam, observed**
22	**On site**	**ROCK**	**Coal seam, observed**
23	4m E	ROCK	Coal seam, inferred
24	38m SW	ROCK	Coal seam, observed
25	122m E	ROCK	Coal seam, observed
26	174m S	FOSSIL_HORIZON	Marine band
27	203m SW	ROCK	Coal seam, observed
28	204m W	ROCK	Coal seam, observed
29	205m W	ROCK	Coal seam, observed
30	211m W	FOSSIL_HORIZON	Marine band
31	211m W	ROCK	Coal seam, observed
32	211m W	ROCK	Coal seam, observed
33	226m S	ROCK	Coal seam, inferred
34	243m S	ROCK	Coal seam, observed
35	248m SE	ROCK	Coal seam, inferred
36	298m SW	ROCK	Coal seam, observed
37	318m SW	ROCK	Coal seam, observed
38	318m SW	ROCK	Coal seam, observed
39	338m SW	ROCK	Coal seam, observed
40	399m SE	ROCK	Coal seam, inferred
41	433m SE	ROCK	Coal seam, inferred

ID	Location	Category	Description
42	433m NE	ROCK	Coal seam, inferred
43	450m SW	ROCK	Coal seam, observed
44	467m S	ROCK	Coal seam, inferred
45	494m S	ROCK	Coal seam, observed
46	496m S	ROCK	Coal seam, observed

This data is sourced from the British Geological Survey.

16 Boreholes



Site Outline

Search buffers in metres (m)

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

16.1 BGS Boreholes

Records within 250m **17**

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.

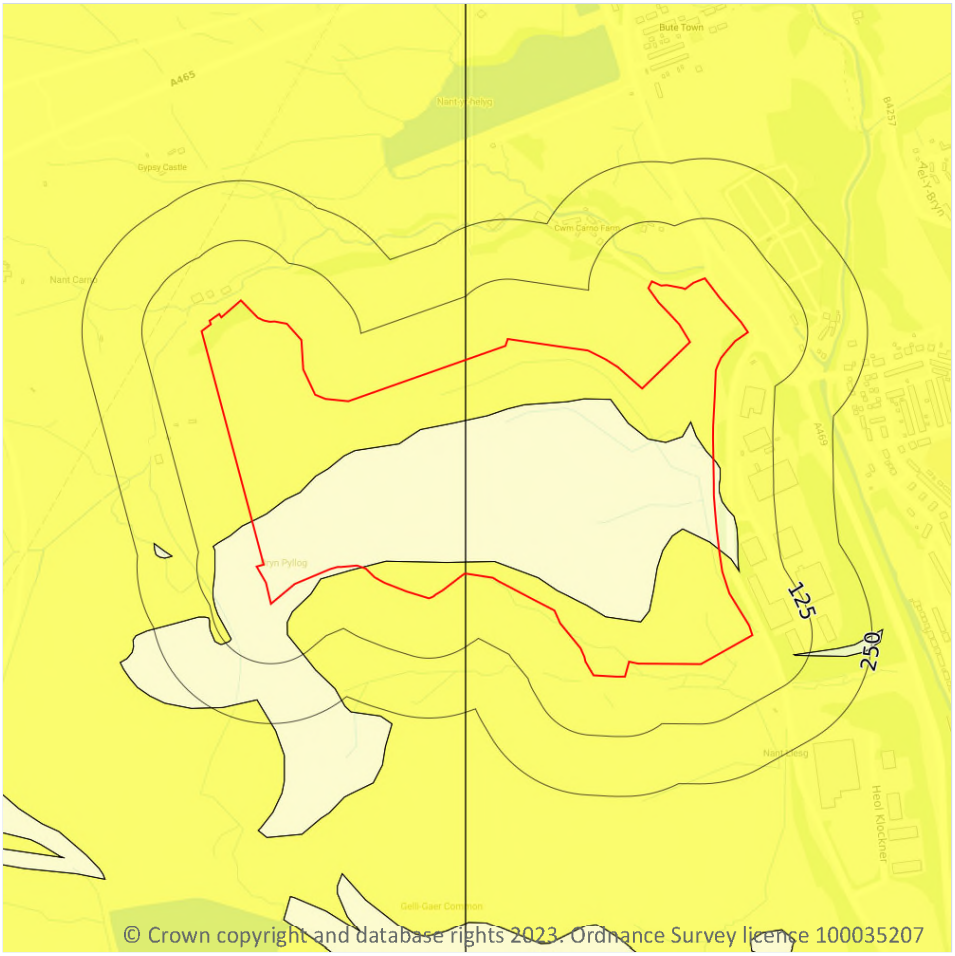
Features are displayed on the Boreholes map on **page 147 >**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	**On site**	**309600 208500**	**ROYAL ARMS. 86**	**-1.0**	**N**	**259412**
2	42m E	310560 208303	PONTLOTTYN 5	35.66	N	262110

ID	Location	Grid reference	Name	Length	Confidential	Web link
3	49m SE	310610 207890	THE OLD VICARAGE RHYMNEY	63.7	N	262477 ↗
4	51m E	310570 208400	PONTLOTTYN 3	30.85	N	262108 ↗
5	53m E	310575 208198	PONTLOTTYN 12	17.34	N	262117 ↗
6	58m E	310608 208045	PONTLOTTYN 9	39.45	N	262114 ↗
7	65m SW	309700 208000	PANT-Y-WAUN. 79	-1.0	N	259413 ↗
8	72m E	310595 208480	PONTLOTTYN 2	40.0	N	262107 ↗
9	99m SE	310688 207897	PONTLOTTYN 10	26.39	N	262115 ↗
10	116m E	310634 208268	PONTLOTTYN 7	31.0	N	262112 ↗
11	152m SE	310750 207960	PONTLOTTYN 8	35.4	N	262113 ↗
12	153m E	310670 208333	PONTLOTTYN 4	36.86	N	262109 ↗
13	164m E	310690 208155	PONTLOTTYN 1	32.35	N	262106 ↗
14	184m E	310703 208248	PONTLOTTYN 6	35.46	N	262111 ↗
15	188m E	310720 208115	PONTLOTTYN 11	31.8	N	262116 ↗
16	215m W	309280 208370	1200MM VHP PIPELINE. TP.11	-	Y	N/A
17	216m NW	309250 208660	1200MM VHP PIPELINE. TP.10	-	Y	N/A

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m	2

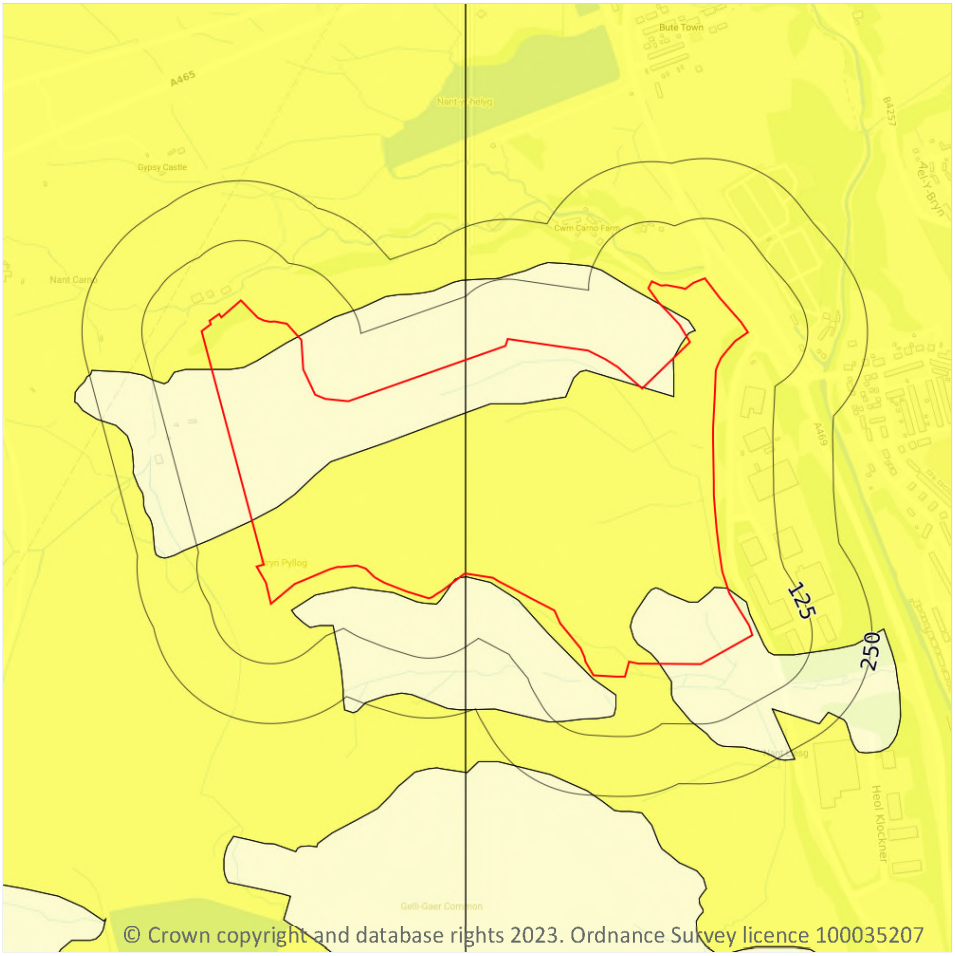
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 149 >**

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	3

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

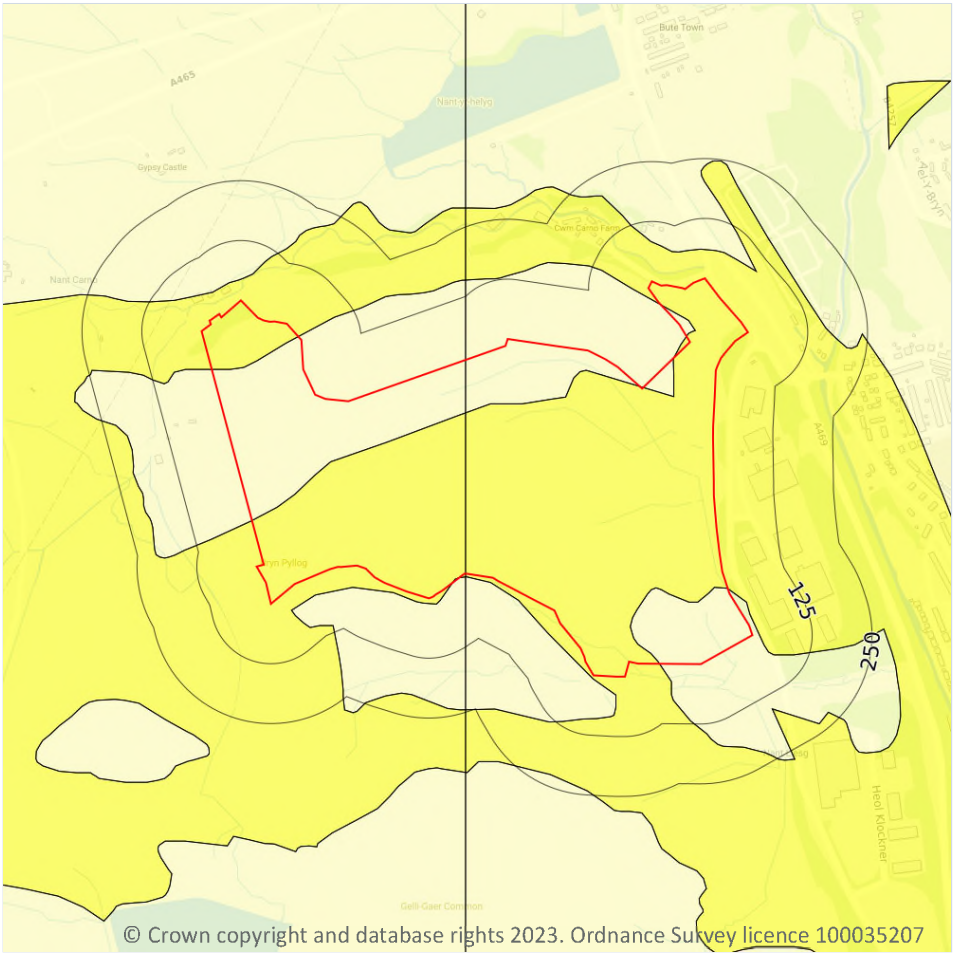
Features are displayed on the Natural ground subsidence - Running sands map on **page 150 >**

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.**
6m SE	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

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

17.3 Compressible deposits

Records within 50m	4

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.

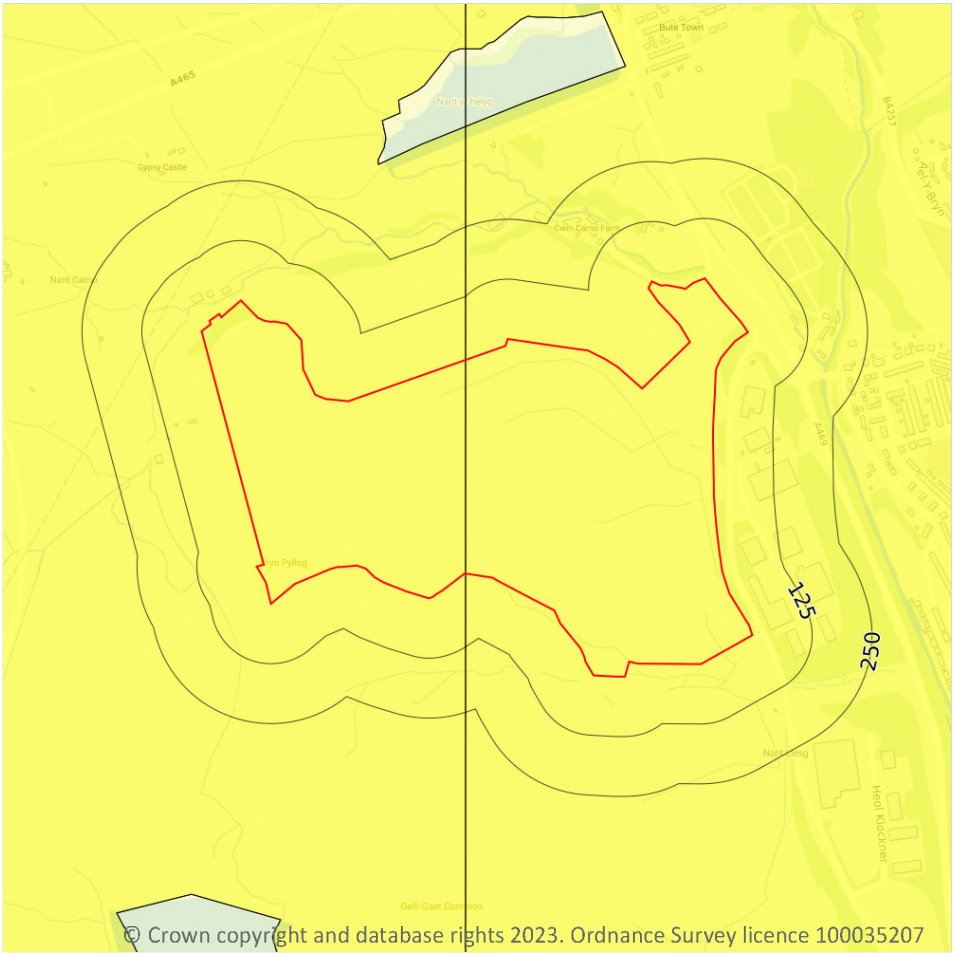
Features are displayed on the Natural ground subsidence - Compressible deposits map on page 152 >

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**
On site	**Very low**	**Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.**

Location	Hazard rating	Details
6m SE	Negligible	Compressible strata are not thought to occur.
42m NW	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

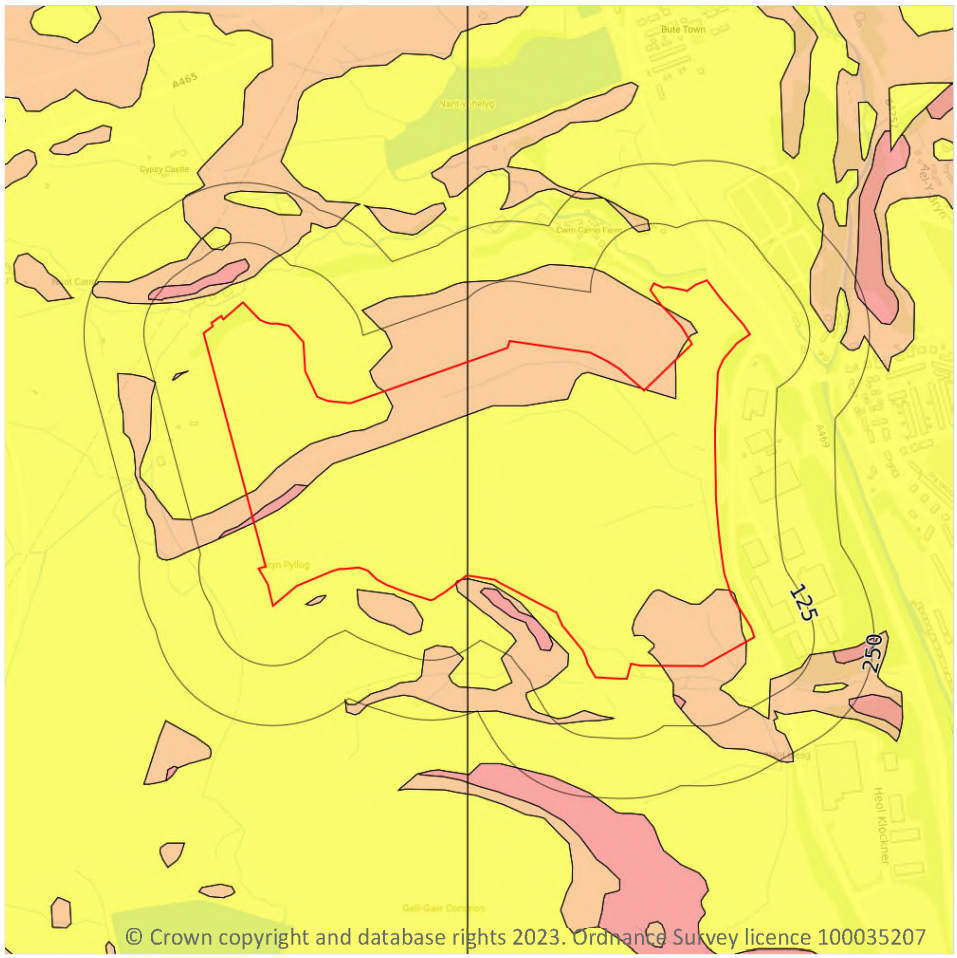
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 154 >**

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	10

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.

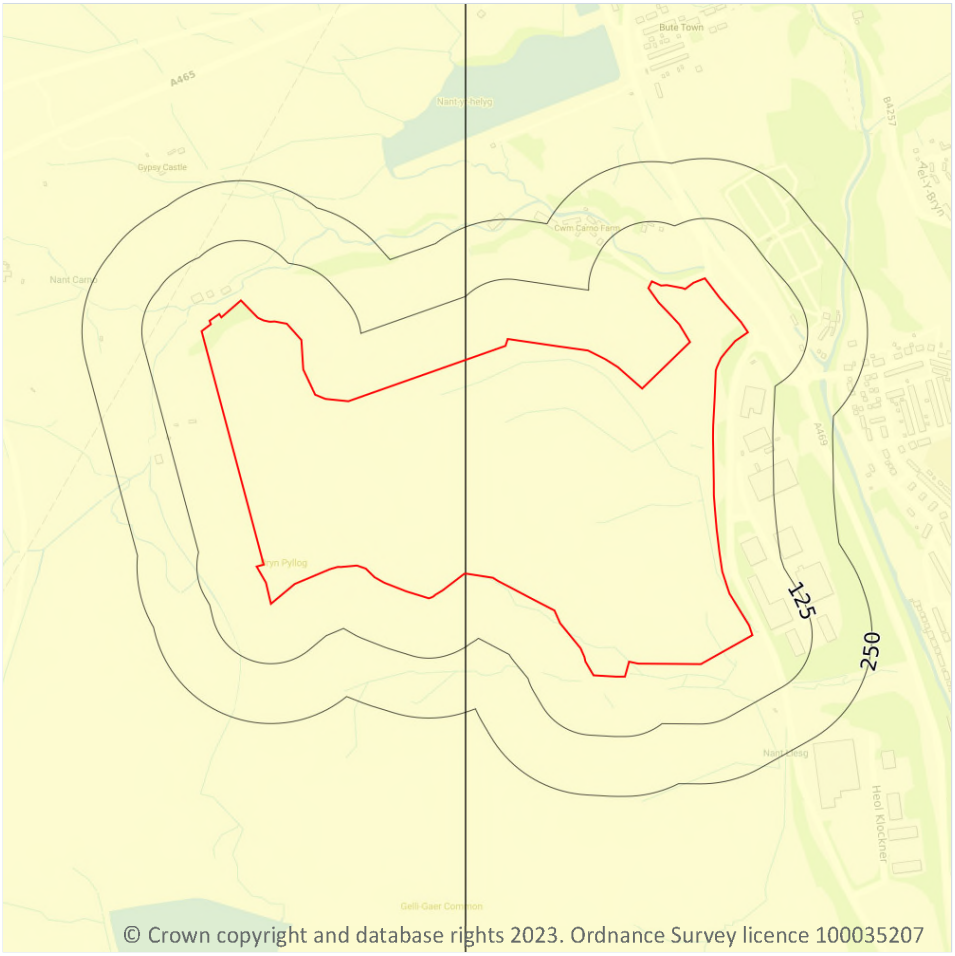
Features are displayed on the Natural ground subsidence - Landslides map on **page 155 >**

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.**
On site	**Moderate**	**Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.**
6m S	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.
13m SW	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.
16m S	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.
38m SW	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.
41m S	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.
42m NW	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.
48m NW	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m	1

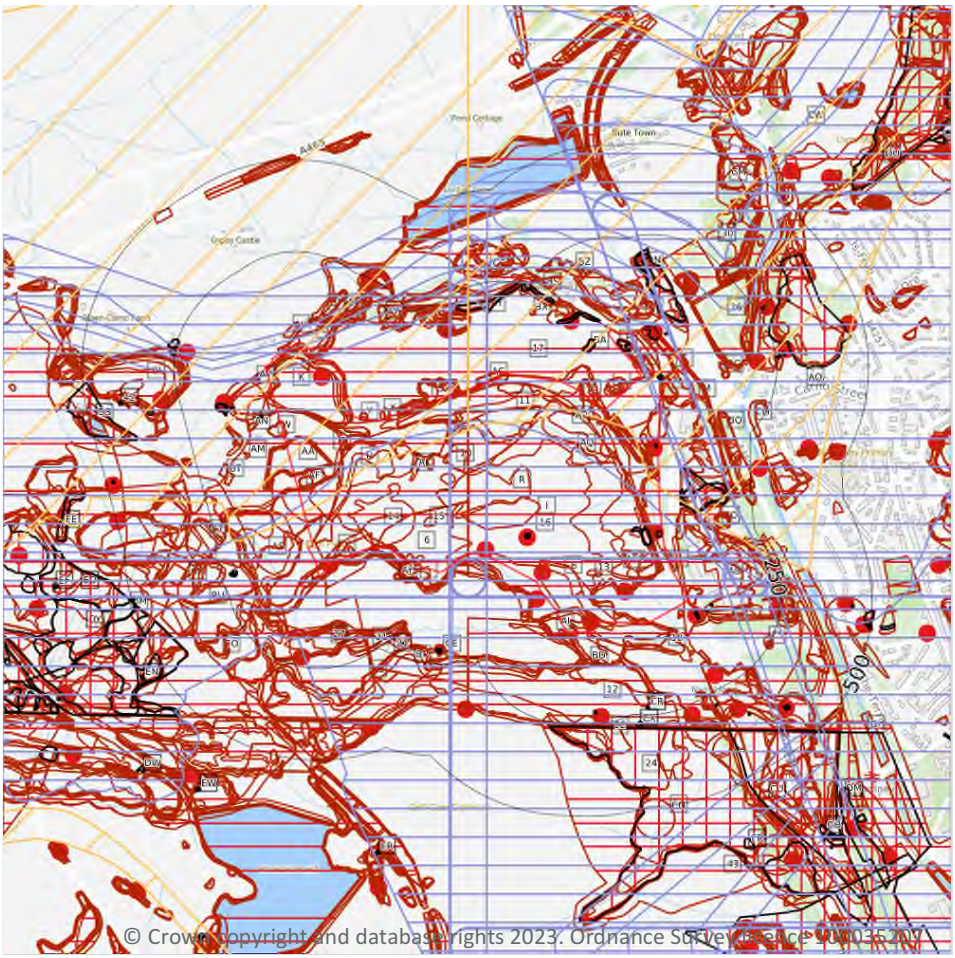
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 157 >**

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



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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	46

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 159 >**

ID	Location	Details	Description
1	On site	Name: Blaen-carno Address: Rhymney, MERTHYR TYDFIL, Brecon Beacons Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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
2	On site	Name: Nant-llesg Level Address: Nant-llesg, RHYMNEY, Gwent 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
3	On site	Name: Nant-llesg Level Address: Nant-llesg, RHYMNEY, Gwent 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
A	On site	Name: Bryn Pyllog Address: TREDEGAR, Gwent Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
B	On site	Name: Twyn-carno Address: Rhymney, TREDEGAR, Gwent 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
C	On site	Name: Bryn Pwllog Pit Address: Twyn-carno, RHYMNEY, Gwent Commodity: Ironstone 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
D	On site	Name: Nant-llesg Level Address: Nant-llesg, RHYMNEY, Gwent 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
E	On site	Name: Nant-llesg Level Address: Nant-llesg, RHYMNEY, Gwent 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
F	On site	Name: Nant-llesg Level Address: Nant-llesg, RHYMNEY, Gwent 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
F	On site	Name: Nant-llesg Level Address: Nant-llesg, RHYMNEY, Gwent 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
G	**On site**	**Name: Penyfeddw Pit** **Address: Nant-llesg, RHYMNEY, Gwent** **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**
25	21m S	Name: Nant-llesg Level Address: Nant-llesg, RHYMNEY, Gwent 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
Q	44m SE	Name: Nant-llesg Pit Address: Nant-llesg, RHYMNEY, Gwent Commodity: Ironstone 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
AZ	107m NE	Name: Twyn-carno Address: Rhymney, TREDEGAR, Gwent 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
AW	135m W	Name: Coedcae du Address: TREDEGAR, Gwent 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
BK	160m NE	Name: Bute Town Address: Llechryd, RHYMNEY, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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
BJ	171m N	Name: Nant Carno Address: Llechryd, RHYMNEY, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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
CD	189m E	Name: Pidwellt Level Air Shaft Address: Twyn-carno, RHYMNEY, Gwent 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
BV	199m NE	Name: Twyn Carno Yard Vein Level Address: Twyn-carno, RHYMNEY, Gwent 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
CD	204m E	Name: Pidwellt Level Address: Twyn-carno, RHYMNEY, Gwent 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
32	212m SE	Name: Nant-llesg Level Address: Nant-llesg, RHYMNEY, Gwent 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
CL	218m NW	Name: Blaen-carno Address: TREDEGAR, Gwent 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
BL	224m SW	Name: Bryn Pyllog Address: Rhymney, TREDEGAR, Gwent Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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
CJ	231m SE	Name: Bryn Pyllog Address: Rhymney, TREDEGAR, Gwent 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
CK	241m NW	Name: Nant Carno Address: Llechryd, RHYMNEY, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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
CH	242m SE	Name: Nant-llesg Level Address: Nant-llesg, RHYMNEY, Gwent 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
CD	276m E	Name: Twyn-carno Level Address: Twyn-carno, RHYMNEY, Gwent 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
BW	278m SE	Name: Nant-llesg Level Address: Nant-llesg, RHYMNEY, Gwent 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
BH	278m NE	Name: Twyn-carno Upper Level Address: Twyn-carno, RHYMNEY, Gwent 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
CF	279m NE	Name: Twyn-carno Level Address: Twyn-carno, RHYMNEY, Gwent 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
BH	284m NE	Name: Twyn-carno Upper Level Address: Twyn-carno, RHYMNEY, Gwent 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
CF	294m NE	Name: Bryn Carno Pit Address: Rhymney, TREDEGAR, Gwent 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
DB	296m W	Name: Farw Pit Address: TREDEGAR, Gwent 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
BW	323m SE	Name: Pitwellt Pit Address: Nant-llesg, RHYMNEY, Gwent 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
BW	323m SE	Name: Pitwellt Pit Address: Nant-llesg, RHYMNEY, Gwent Commodity: Ironstone 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
AR	346m S	Name: Bryn Pyllog Address: Rhymney, TREDEGAR, Gwent Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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
BW	394m SE	Name: Meredith Pit Address: Nant-llesg, RHYMNEY, Gwent 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
DR	402m E	Name: Twyn-carno Level Address: Twyn-carno, RHYMNEY, Gwent 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
DP	427m E	Name: No. 1 Rhas Las Level Address: RHYMNEY, Gwent 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
DP	429m E	Name: Rhymney Level Address: RHYMNEY, Gwent 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
43	434m SW	Name: Rhaslas Pond Address: Rhymney, MERTHYR TYDFIL, Gwent Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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
EG	461m NE	Name: Twyn Carno Pit Address: Twyn-carno, RHYMNEY, Gwent 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
DR	472m E	Name: Twyn-carno Brick & Tile Works Address: Twyn-carno, RHYMNEY, Gwent Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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
EL	483m E	Name: Lower Level Address: RHYMNEY, Gwent 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
CY	484m W	Name: Nant-y-glo-fach Address: TREDEGAR, Gwent 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
DK	496m W	Name: Nant-y-glo-fach Address: TREDEGAR, Gwent Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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	**432**

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 159 >**

ID	Location	Land Use	Year of mapping	Mapping scale
4	**On site**	**Unspecified Ground Workings**	**1948**	**1:10560**
5	**On site**	**Unspecified Disused Tip**	**1992**	**1:10000**
6	**On site**	**Unspecified Ground Workings**	**1965**	**1:10560**
7	**On site**	**Opencast Working**	**1965**	**1:10560**
8	**On site**	**Cuttings**	**1879**	**1:10560**
9	**On site**	**Unspecified Disused Tip**	**1985**	**1:10000**
10	**On site**	**Unspecified Pit**	**1879**	**1:10560**
11	**On site**	**Unspecified Ground Workings**	**1879**	**1:10560**
12	**On site**	**Unspecified Old Quarry**	**1895**	**1:10560**
13	**On site**	**Unspecified Heap**	**1895**	**1:10560**
14	**On site**	**Unspecified Ground Workings**	**1895**	**1:10560**
15	**On site**	**Unspecified Pit**	**1895**	**1:10560**
16	**On site**	**Unspecified Ground Workings**	**1895**	**1:10560**
17	**On site**	**Opencast Workings**	**1964**	**1:10560**
18	**On site**	**Unspecified Ground Workings**	**1964**	**1:10560**
A	**On site**	**Unspecified Old Quarry**	**1948**	**1:10560**

ID	Location	Land Use	Year of mapping	Mapping scale
A	On site	Unspecified Old Quarry	1915	1:10560
B	On site	Old Coal Level	1898	1:10560
B	On site	Coal Level	1875	1:10560
B	On site	Old Coal Level	1895	1:10560
C	On site	Unspecified Ground Workings	1948	1:10560
C	On site	Unspecified Ground Workings	1948	1:10560
C	On site	Unspecified Ground Workings	1915	1:10560
C	On site	Unspecified Ground Workings	1915	1:10560
C	On site	Unspecified Ground Workings	1915	1:10560
C	On site	Unspecified Ground Workings	1898	1:10560
C	On site	Unspecified Ground Workings	1898	1:10560
C	On site	Unspecified Heap	1948	1:10560
C	On site	Unspecified Heap	1915	1:10560
C	On site	Reservoir	1948	1:10560
C	On site	Reservoir	1915	1:10560
C	On site	Pond	1898	1:10560
C	On site	Unspecified Ground Workings	1938	1:10560
C	On site	Unspecified Heap	1938	1:10560
C	On site	Pond	1875	1:10560
C	On site	Water Body	1879	1:10560
C	On site	Reservoir	1938	1:10560
C	On site	Unspecified Ground Workings	1938	1:10560
C	On site	Unspecified Heap	1938	1:10560
C	On site	Pond	1964	1:10560
C	On site	Pond	1895	1:10560
D	On site	Old Coal Level	1948	1:10560
D	On site	Old Coal Level	1915	1:10560
D	On site	Old Coal Level	1915	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
D	On site	Old Coal Level	1898	1:10560
D	On site	Unspecified Heap	1948	1:10560
D	On site	Old Coal Level	1938	1:10560
D	On site	Cuttings	1879	1:10560
D	On site	Old Coal Level	1938	1:10560
D	On site	Old Coal Level	1895	1:10560
E	On site	Unspecified Pit	1879	1:10560
E	On site	Unspecified Pit	1879	1:10560
E	On site	Unspecified Heap	1879	1:10560
E	On site	Unspecified Ground Workings	1895	1:10560
H	On site	Unspecified Ground Workings	1948	1:10560
H	On site	Unspecified Ground Workings	1915	1:10560
H	On site	Unspecified Ground Workings	1898	1:10560
H	On site	Old Coal Level	1938	1:10560
H	On site	Old Coal Level	1938	1:10560
H	On site	Unspecified Heap	1895	1:10560
I	On site	Unspecified Ground Workings	1948	1:10560
I	On site	Unspecified Ground Workings	1915	1:10560
I	On site	Unspecified Ground Workings	1938	1:10560
I	On site	Unspecified Ground Workings	1938	1:10560
I	On site	Unspecified Pit	1879	1:10560
J	On site	Unspecified Ground Workings	1948	1:10560
J	On site	Unspecified Ground Workings	1915	1:10560
K	On site	Unspecified Ground Workings	1948	1:10560
K	On site	Unspecified Ground Workings	1915	1:10560
K	On site	Unspecified Ground Workings	1898	1:10560
K	On site	Unspecified Ground Workings	1938	1:10560
K	On site	Unspecified Ground Workings	1938	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
K	On site	Unspecified Heap	1879	1:10560
K	On site	Unspecified Heap	1895	1:10560
L	On site	Unspecified Ground Workings	1948	1:10560
L	On site	Unspecified Heap	1915	1:10560
M	On site	Unspecified Ground Workings	1948	1:10560
M	On site	Unspecified Ground Workings	1915	1:10560
N	On site	Unspecified Ground Workings	1948	1:10560
N	On site	Unspecified Pit	1915	1:10560
O	On site	Unspecified Ground Workings	1948	1:10560
O	On site	Unspecified Ground Workings	1915	1:10560
O	On site	Unspecified Ground Workings	1875	1:10560
O	On site	Unspecified Pit	1879	1:10560
O	On site	Unspecified Old Quarry	1895	1:10560
P	On site	Old Coal Level	1915	1:10560
Q	On site	Unspecified Ground Workings	1915	1:10560
Q	On site	Ironstone Pit	1879	1:10560
R	On site	Unspecified Ground Workings	1898	1:10560
R	On site	Unspecified Ground Workings	1875	1:10560
R	On site	Unspecified Disused Tip	1975	1:10000
R	On site	Unspecified Disused Tip	1982	1:10000
R	On site	Unspecified Heap	1895	1:10560
S	On site	Unspecified Ground Workings	1898	1:10560
S	On site	Unspecified Heaps	1938	1:10560
S	On site	Unspecified Heaps	1938	1:10560
S	On site	Unspecified Heaps	1879	1:10560
S	On site	Unspecified Ground Workings	1895	1:10560
T	On site	Unspecified Ground Workings	1898	1:10560
U	On site	Unspecified Ground Workings	1965	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
U	On site	Unspecified Ground Workings	1895	1:10560
V	On site	Unspecified Heap	1948	1:10560
V	On site	Unspecified Heap	1948	1:10560
V	On site	Unspecified Heap	1915	1:10560
V	On site	Unspecified Heap	1915	1:10560
V	On site	Unspecified Ground Workings	1975	1:10000
V	On site	Unspecified Ground Workings	1982	1:10000
W	On site	Unspecified Heap	1948	1:10560
W	On site	Unspecified Heap	1915	1:10560
W	On site	Unspecified Heap	1938	1:10560
W	On site	Unspecified Heap	1938	1:10560
X	On site	Unspecified Heap	1948	1:10560
X	On site	Unspecified Heap	1915	1:10560
X	On site	Unspecified Heap	1938	1:10560
X	On site	Unspecified Heap	1938	1:10560
Y	On site	Unspecified Heap	1915	1:10560
Z	On site	Unspecified Heap	1898	1:10560
Z	On site	Unspecified Heap	1898	1:10560
Z	On site	Unspecified Ground Workings	1895	1:10560
AA	On site	Disused Reservoir	1948	1:10560
AA	On site	Reservoir	1915	1:10560
AA	On site	Reservoir	1898	1:10560
AA	On site	Pond	1875	1:10560
AA	On site	Water Body	1879	1:10560
AA	On site	Reservoir	1938	1:10560
AA	On site	Reservoir	1895	1:10560
AB	On site	Unspecified Disused Pit	1938	1:10560
AB	On site	Unspecified Disused Pit	1938	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
AC	**On site**	**Unspecified Heaps**	**1938**	**1:10560**
AC	**On site**	**Unspecified Heaps**	**1938**	**1:10560**
AD	**On site**	**Unspecified Ground Workings**	**1938**	**1:10560**
AD	**On site**	**Unspecified Ground Workings**	**1938**	**1:10560**
AE	**On site**	**Unspecified Ground Workings**	**1938**	**1:10560**
AE	**On site**	**Unspecified Ground Workings**	**1938**	**1:10560**
AF	**On site**	**Unspecified Heap**	**1938**	**1:10560**
AF	**On site**	**Unspecified Heap**	**1938**	**1:10560**
AG	**On site**	**Unspecified Old Quarries**	**1898**	**1:10560**
AH	**On site**	**Unspecified Disused Tips**	**1973**	**1:10000**
AI	**On site**	**Unspecified Heap**	**1879**	**1:10560**
AJ	**On site**	**Unspecified Disused Tip**	**1975**	**1:10000**
AJ	**On site**	**Unspecified Disused Tip**	**1982**	**1:10000**
AK	**On site**	**Unspecified Pit**	**1895**	**1:10560**
AK	**On site**	**Unspecified Heap**	**1895**	**1:10560**
L	0m NE	Unspecified Ground Workings	1938	1:10560
L	0m NE	Unspecified Ground Workings	1938	1:10560
Y	2m NW	Unspecified Heap	1948	1:10560
V	2m SW	Unspecified Quarry	1992	1:10000
Q	2m SE	Unspecified Heap	1948	1:10560
O	5m NW	Unspecified Old Quarry	1898	1:10560
L	5m NE	Unspecified Heap	1895	1:10560
L	8m NE	Unspecified Pit	1898	1:10560
AI	8m SE	Pond	1985	1:10000
Q	8m SE	Pond	1948	1:10560
Q	8m SE	Pond	1898	1:10560
N	8m NE	Unspecified Ground Workings	1915	1:10560
T	8m NE	Pond	1879	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
AI	9m SE	Pond	1973	1:10000
AI	9m SE	Pond	1964	1:10560
T	10m NE	Pond	1875	1:10560
Q	13m SE	Pond	1915	1:10560
AR	15m SE	Unspecified Old Quarry	1948	1:10560
AR	15m SE	Unspecified Old Quarry	1915	1:10560
B	16m NE	Coal Level	1879	1:10560
AS	17m SW	Unspecified Old Quarry	1938	1:10560
AT	21m NE	Unspecified Ground Workings	1895	1:10560
AS	21m W	Unspecified Ground Workings	1895	1:10560
AU	23m NW	Unspecified Ground Workings	1948	1:10560
AU	23m NW	Unspecified Ground Workings	1915	1:10560
AV	24m NW	Pond	1948	1:10560
AW	25m W	Coal Level	1875	1:10560
AV	26m NW	Pond	1915	1:10560
AV	26m NW	Pond	1898	1:10560
AT	28m NE	Refuse Heaps	1973	1:10000
AT	33m NE	Unspecified Ground Workings	1898	1:10560
Q	33m SE	Unspecified Disused Pit	1895	1:10560
AT	33m NE	Unspecified Ground Workings	1948	1:10560
AT	33m NE	Unspecified Ground Workings	1915	1:10560
AT	35m NE	Unspecified Ground Workings	1938	1:10560
AT	35m NE	Unspecified Ground Workings	1938	1:10560
AX	36m NE	Unspecified Ground Workings	1938	1:10560
AX	36m NE	Unspecified Ground Workings	1938	1:10560
AY	36m SW	Unspecified Pit	1948	1:10560
AY	36m SW	Unspecified Pit	1915	1:10560
AB	36m E	Unspecified Disused Pit	1948	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
AB	36m E	Unspecified Disused Pit	1915	1:10560
AI	36m S	Pond	1948	1:10560
AZ	39m NE	Old Coal Level	1915	1:10560
AI	39m S	Pond	1915	1:10560
AS	40m W	Unspecified Heaps	1879	1:10560
AZ	41m NE	Old Coal Level	1948	1:10560
BA	42m NE	Old Coal Level	1915	1:10560
BA	43m NE	Old Coal Level	1938	1:10560
BA	43m NE	Old Coal Level	1938	1:10560
BA	45m NE	Unspecified Ground Workings	1948	1:10560
AX	45m NE	Old Coal Level	1948	1:10560
AX	46m NE	Unspecified Ground Workings	1964	1:10560
AX	48m NE	Old Coal Level	1915	1:10560
AB	48m SE	Unspecified Disused Pit	1898	1:10560
AT	51m NE	Unspecified Ground Workings	1964	1:10560
BB	57m E	Old Coal Level	1948	1:10560
BB	57m E	Old Coal Level	1915	1:10560
Q	60m SE	Unspecified Ground Workings	1948	1:10560
BB	60m E	Old Coal Level	1895	1:10560
BB	61m E	Old Coal Level	1898	1:10560
AB	63m E	Unspecified Ground Workings	1895	1:10560
AD	63m E	Unspecified Ground Workings	1898	1:10560
AN	63m W	Unspecified Heap	1948	1:10560
AN	63m W	Unspecified Heap	1915	1:10560
BC	64m S	Unspecified Pit	1938	1:10560
BC	64m S	Unspecified Pit	1938	1:10560
BC	65m S	Unspecified Pit	1948	1:10560
BC	65m S	Unspecified Pit	1915	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
BA	73m NE	Unspecified Pit	1879	1:10560
BD	73m SE	Pond	1948	1:10560
BD	73m SE	Pond	1915	1:10560
BD	73m SE	Pond	1898	1:10560
BE	76m NW	Unspecified Ground Workings	1895	1:10560
BF	83m NW	Unspecified Ground Workings	1948	1:10560
BF	83m NW	Unspecified Ground Workings	1915	1:10560
BE	85m NW	Unspecified Heap	1898	1:10560
AR	93m SE	Unspecified Old Quarry	1938	1:10560
BG	93m NE	Pond	1964	1:10560
BH	93m NE	Cemetery	1895	1:10560
BG	95m NE	Pond	1973	1:10000
BG	95m NE	Pond	1985	1:10000
BH	97m NE	Cemetery	1973	1:10000
BH	97m NE	Cemetery	1964	1:10560
26	99m NE	Cemetery	1985	1:10000
BH	102m NE	Cemetery	1948	1:10560
BH	102m NE	Cemetery	1915	1:10560
BH	102m NE	Cemetery	1898	1:10560
AM	104m W	Unspecified Heap	1915	1:10560
AG	104m S	Unspecified Ground Workings	1879	1:10560
BE	105m NW	Unspecified Heap	1875	1:10560
BH	105m NE	Cemetery	1938	1:10560
BE	108m NW	Unspecified Heap	1938	1:10560
BE	108m NW	Unspecified Heap	1938	1:10560
BJ	110m NE	Unspecified Ground Workings	1948	1:10560
BJ	110m NE	Unspecified Ground Workings	1915	1:10560
AM	111m W	Unspecified Ground Workings	1898	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
AM	114m W	Unspecified Ground Workings	1895	1:10560
AZ	114m NE	Unspecified Pit	1879	1:10560
AW	116m W	Coal Level	1879	1:10560
BK	118m NE	Unspecified Pit	1879	1:10560
BK	121m NE	Unspecified Old Quarry	1895	1:10560
BK	121m NE	Pond	1875	1:10560
AZ	123m NE	Old Coal Level	1895	1:10560
AH	123m SE	Reservoirs	1938	1:10560
BE	126m NW	Unspecified Pit	1879	1:10560
AM	126m W	Unspecified Heap	1938	1:10560
AM	126m W	Unspecified Heap	1938	1:10560
AW	128m W	Old Coal Level	1948	1:10560
AW	128m W	Old Coal Level	1915	1:10560
BK	128m NE	Unspecified Pit	1948	1:10560
BK	128m NE	Unspecified Pit	1915	1:10560
BK	128m NE	Unspecified Old Quarry	1898	1:10560
AW	129m W	Old Coal Level	1938	1:10560
AW	129m W	Old Coal Level	1938	1:10560
BK	129m NE	Unspecified Pit	1973	1:10000
BK	129m NE	Unspecified Pit	1964	1:10560
BL	130m SW	Unspecified Old Quarries	1938	1:10560
BL	131m SW	Unspecified Old Quarries	1948	1:10560
BL	131m SW	Unspecified Old Quarries	1915	1:10560
BK	132m NE	Unspecified Pit	1938	1:10560
BK	132m NE	Unspecified Pit	1938	1:10560
AW	132m W	Old Coal Level	1898	1:10560
BM	133m SW	Opencast Workings	1975	1:10000
AH	136m SE	Reservoirs	1948	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
AH	136m SE	Reservoirs	1915	1:10560
AW	137m W	Old Coal Level	1895	1:10560
BN	138m NE	Unspecified Pit	1875	1:10560
BN	142m NE	Unspecified Ground Workings	1895	1:10560
BO	144m E	Pond	1973	1:10000
BO	144m E	Pond	1964	1:10560
27	144m SW	Unspecified Ground Workings	1895	1:10560
BO	144m E	Pond	1879	1:10560
BO	146m E	Pond	1895	1:10560
BO	146m E	Pond	1875	1:10560
BN	146m NE	Unspecified Pit	1879	1:10560
BJ	149m N	Unspecified Old Quarry	1895	1:10560
BQ	149m E	Unspecified Ground Workings	1948	1:10560
BJ	150m N	Unspecified Pit	1875	1:10560
BQ	151m E	Unspecified Heap	1938	1:10560
BQ	151m E	Unspecified Heap	1938	1:10560
BN	151m NE	Unspecified Pit	1898	1:10560
BO	152m E	Pond	1938	1:10560
BO	153m E	Pond	1948	1:10560
BO	153m E	Pond	1915	1:10560
BO	153m E	Pond	1898	1:10560
BE	153m NW	Unspecified Heap	1938	1:10560
BE	153m NW	Unspecified Heap	1938	1:10560
BQ	155m E	Unspecified Ground Workings	1895	1:10560
BQ	155m E	Unspecified Ground Workings	1915	1:10560
BQ	155m E	Unspecified Ground Workings	1898	1:10560
BJ	155m N	Unspecified Old Quarry	1898	1:10560
BJ	156m N	Unspecified Ground Workings	1938	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
BJ	156m N	Unspecified Ground Workings	1938	1:10560
BR	156m SW	Unspecified Disused Tip	1975	1:10000
BR	156m SW	Unspecified Disused Tip	1982	1:10000
BS	156m N	Unspecified Ground Workings	1938	1:10560
BS	156m N	Unspecified Ground Workings	1938	1:10560
BT	159m W	Ponds	1975	1:10000
BT	159m W	Ponds	1982	1:10000
28	160m SW	Unspecified Ground Workings	1965	1:10560
BU	164m W	Unspecified Ground Workings	1938	1:10560
BU	164m W	Unspecified Ground Workings	1938	1:10560
BV	167m NE	Unspecified Ground Workings	1964	1:10560
BH	167m NE	Unspecified Ground Workings	1895	1:10560
BW	167m SE	Unspecified Disused Pit	1948	1:10560
BW	167m SE	Unspecified Disused Pit	1915	1:10560
BW	167m SE	Unspecified Disused Pit	1915	1:10560
BW	167m SE	Unspecified Disused Pit	1898	1:10560
BW	167m SE	Refuse Heap	1938	1:10560
BW	167m SE	Refuse Heap	1938	1:10560
29	167m SW	Unspecified Ground Workings	1895	1:10560
BX	169m N	Unspecified Pit	1948	1:10560
BX	169m N	Unspecified Pit	1915	1:10560
BY	169m N	Unspecified Ground Workings	1895	1:10560
BV	170m NE	Unspecified Ground Workings	1973	1:10000
BZ	170m NE	Unspecified Pit	1964	1:10560
BY	171m N	Old Coal Level	1898	1:10560
CA	171m NW	Unspecified Pit	1879	1:10560
BX	172m N	Unspecified Pit	1938	1:10560
BX	172m N	Unspecified Pit	1938	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
31	172m SW	Unspecified Ground Workings	1895	1:10560
BH	172m NE	Unspecified Ground Workings	1898	1:10560
CA	174m NW	Unspecified Pits	1875	1:10560
BJ	177m N	Unspecified Heap	1879	1:10560
CB	179m W	Unspecified Ground Workings	1875	1:10560
BR	182m SW	Unspecified Heaps	1938	1:10560
BR	182m SW	Unspecified Heaps	1938	1:10560
CA	186m NW	Unspecified Ground Workings	1895	1:10560
BR	186m SW	Unspecified Heaps	1875	1:10560
BR	187m SW	Unspecified Heap	1879	1:10560
CC	188m N	Refuse Heap	1973	1:10000
BJ	189m NW	Unspecified Disused Tip	1975	1:10000
BJ	189m NW	Unspecified Disused Tip	1982	1:10000
BZ	192m N	Unspecified Ground Workings	1938	1:10560
BZ	192m N	Unspecified Ground Workings	1938	1:10560
CD	196m E	Unspecified Ground Workings	1948	1:10560
CD	196m E	Unspecified Heaps	1938	1:10560
CD	196m E	Unspecified Heaps	1938	1:10560
CE	196m S	Unspecified Heap	1879	1:10560
CF	197m NE	Unspecified Ground Workings	1895	1:10560
CE	197m S	Unspecified Heap	1875	1:10560
BH	197m NE	Unspecified Disused Pit	1898	1:10560
CE	199m S	Unspecified Ground Workings	1948	1:10560
CD	200m E	Old Coal Level	1938	1:10560
CD	200m E	Old Coal Level	1938	1:10560
BJ	202m NW	Unspecified Pit	1879	1:10560
CE	204m S	Unspecified Ground Workings	1915	1:10560
BJ	205m N	Unspecified Ground Workings	1965	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
CG	206m E	Unspecified Ground Workings	1948	1:10560
CG	206m E	Unspecified Ground Workings	1915	1:10560
CH	206m E	Unspecified Ground Workings	1915	1:10560
CI	209m W	Unspecified Disused Tip	1975	1:10000
CI	209m W	Unspecified Disused Tip	1982	1:10000
CD	209m E	Old Coal Level	1938	1:10560
CD	209m E	Old Coal Level	1938	1:10560
CI	210m W	Unspecified Disused Tip	1992	1:10000
CJ	212m SE	Old Coal Level	1938	1:10560
CJ	212m SE	Old Coal Level	1938	1:10560
CK	213m NW	Unspecified Ground Workings	1875	1:10560
BZ	213m N	Unspecified Pit	1964	1:10560
CE	214m S	Unspecified Pit	1938	1:10560
CE	214m S	Unspecified Pit	1938	1:10560
CK	216m NW	Unspecified Old Quarry	1895	1:10560
CI	216m W	Unspecified Disused Pit	1938	1:10560
CI	216m W	Unspecified Disused Pit	1938	1:10560
CJ	216m SE	Old Coal Level	1948	1:10560
33	217m NE	Unspecified Pit	1879	1:10560
CI	217m W	Unspecified Disused Pit	1948	1:10560
BH	217m NE	Unspecified Disused Tips	1973	1:10000
CI	218m W	Unspecified Disused Pit	1915	1:10560
CM	221m NE	Unspecified Ground Workings	1964	1:10560
CK	221m NW	Unspecified Ground Workings	1938	1:10560
CK	221m NW	Unspecified Ground Workings	1938	1:10560
CK	221m NW	Unspecified Ground Workings	1915	1:10560
BJ	222m N	Unspecified Ground Workings	1898	1:10560
CK	223m NW	Unspecified Ground Workings	1948	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
CI	223m W	Unspecified Ground Workings	1875	1:10560
CM	223m NE	Unspecified Ground Workings	1915	1:10560
CI	223m W	Unspecified Disused Pit	1898	1:10560
CK	224m NW	Unspecified Pit	1879	1:10560
AL	224m NE	Unspecified Ground Workings	1948	1:10560
CN	224m NE	Unspecified Pit	1938	1:10560
CN	224m NE	Unspecified Pit	1938	1:10560
CI	224m W	Unspecified Ground Workings	1965	1:10560
CK	225m NW	Unspecified Old Quarry	1898	1:10560
CO	225m SW	Unspecified Old Quarries	1895	1:10560
CD	226m E	Unspecified Heap	1915	1:10560
CP	227m S	Unspecified Ground Workings	1973	1:10000
BJ	227m N	Unspecified Heap	1938	1:10560
BJ	227m N	Unspecified Heap	1938	1:10560
CD	227m E	Unspecified Heap	1938	1:10560
CD	227m E	Unspecified Heap	1938	1:10560
CQ	227m S	Disused Old Colliery	1899	1:10560
CI	229m W	Unspecified Disused Pit	1895	1:10560
CS	229m SE	Unspecified Pit	1879	1:10560
CS	230m SE	Unspecified Pit	1875	1:10560
BW	231m SE	Unspecified Ground Workings	1938	1:10560
BW	231m SE	Unspecified Ground Workings	1938	1:10560
BW	231m SE	Unspecified Ground Workings	1948	1:10560
BU	233m W	Unspecified Pit	1898	1:10560
CT	234m W	Unspecified Heap	1898	1:10560
CI	234m W	Unspecified Ground Workings	1879	1:10560
BW	236m SE	Unspecified Ground Workings	1915	1:10560
CT	237m W	Unspecified Ground Workings	1895	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
BU	239m W	Unspecified Ground Workings	1895	1:10560
BU	241m W	Unspecified Pit	1879	1:10560
CS	242m SE	Unspecified Pit	1948	1:10560
CL	245m NW	Unspecified Heap	1948	1:10560
CL	245m NW	Old Coal Level	1915	1:10560
CS	246m SE	Unspecified Pit	1915	1:10560
CL	246m W	Old Coal Level	1915	1:10560
CL	247m NW	Old Coal Level	1938	1:10560
CL	247m NW	Old Coal Level	1938	1:10560
CN	247m NE	Unspecified Ground Workings	1895	1:10560
CF	247m E	Pond	1964	1:10560
BW	248m SE	Pond	1898	1:10560
34	248m S	Unspecified Old Quarries	1895	1:10560
BW	248m SE	Pond	1948	1:10560
BW	249m SE	Water Body	1879	1:10560
CK	249m NW	Unspecified Pit	1992	1:10000
CK	249m NW	Unspecified Pit	1965	1:10560
CK	249m NW	Unspecified Pit	1975	1:10000
CK	249m NW	Unspecified Pit	1982	1:10000
CL	249m W	Old Coal Level	1948	1:10560
CF	249m NE	Coal Level	1879	1:10560
CH	249m SE	Unspecified Heap	1895	1:10560
CH	250m SE	Unspecified Pit	1898	1:10560
CF	250m E	Pond	1973	1:10000

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	168

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 159 >**

ID	Location	Land Use	Year of mapping	Mapping scale
B	**On site**	**Old Coal Level**	**1898**	**1:10560**
C	**On site**	**Unspecified Old Shaft**	**1898**	**1:10560**
C	**On site**	**Disused Air Shaft**	**1985**	**1:10000**
D	**On site**	**Old Coal Level**	**1948**	**1:10560**
D	**On site**	**Old Coal Level**	**1915**	**1:10560**
D	**On site**	**Old Coal Level**	**1915**	**1:10560**
D	**On site**	**Old Coal Level**	**1898**	**1:10560**
G	**On site**	**Unspecified Disused Shaft**	**1973**	**1:10000**
G	**On site**	**Unspecified Disused Shaft**	**1964**	**1:10560**
G	**On site**	**Old Air Shaft**	**1948**	**1:10560**
G	**On site**	**Old Air Shaft**	**1915**	**1:10560**
G	**On site**	**Air Shaft**	**1898**	**1:10560**
G	**On site**	**Air Shaft**	**1875**	**1:10560**
G	**On site**	**Air Shaft**	**1879**	**1:10560**
N	**On site**	**Old Air Shaft**	**1948**	**1:10560**
N	**On site**	**Old Air Shaft**	**1915**	**1:10560**
N	**On site**	**Air Shaft**	**1898**	**1:10560**
N	**On site**	**Air Shaft**	**1875**	**1:10560**
N	**On site**	**Air Shaft**	**1879**	**1:10560**
P	**On site**	**Old Coal Level**	**1915**	**1:10560**
B	16m NE	Coal Level	1879	1:10560
Q	37m SE	Unspecified Shaft	1948	1:10560
AZ	39m NE	Old Coal Level	1915	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
AZ	41m NE	Old Coal Level	1948	1:10560
BA	42m NE	Old Coal Level	1915	1:10560
AN	42m W	Air Shaft	1879	1:10560
AX	45m NE	Old Coal Level	1948	1:10560
Q	48m SE	Unspecified Shaft	1915	1:10560
AX	48m NE	Old Coal Level	1915	1:10560
Q	55m SE	Unspecified Shaft	1879	1:10560
BB	57m E	Old Coal Level	1948	1:10560
BB	57m E	Old Coal Level	1915	1:10560
BB	61m E	Old Coal Level	1898	1:10560
Q	62m SE	Unspecified Shaft	1875	1:10560
AW	112m W	Air Shaft	1875	1:10560
AW	116m W	Coal Level	1879	1:10560
AW	128m W	Old Coal Level	1948	1:10560
AW	128m W	Old Coal Level	1915	1:10560
AW	132m W	Old Coal Level	1898	1:10560
BY	171m N	Old Coal Level	1898	1:10560
CD	199m E	Old Air Shaft	1915	1:10560
CD	199m E	Old Air Shaft	1898	1:10560
J	203m W	Old Air Shaft	1948	1:10560
CE	208m S	Unspecified Disused Shaft	1975	1:10000
CE	208m S	Unspecified Disused Shaft	1982	1:10000
CE	208m S	Unspecified Disused Shaft	1992	1:10000
J	208m W	Old Air Shaft	1915	1:10560
CE	208m S	Unspecified Disused Shaft	1965	1:10560
CE	209m S	Old Air Shafts	1948	1:10560
CE	211m S	Air Shafts	1898	1:10560
CE	211m S	Air Shafts	1879	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
J	211m W	Air Shaft	1898	1:10560
CE	213m S	Air Shafts	1875	1:10560
BR	214m SW	Air Shafts	1898	1:10560
BR	214m SW	Old Air Shafts	1948	1:10560
CE	215m S	Old Air Shafts	1915	1:10560
J	215m W	Air Shaft	1875	1:10560
BR	215m SW	Air Shafts	1879	1:10560
CJ	216m SE	Old Coal Level	1948	1:10560
BR	216m SW	Air Shafts	1875	1:10560
J	218m W	Air Shaft	1879	1:10560
BR	218m SW	Old Air Shafts	1915	1:10560
CR	227m SE	Old Air Shaft	1948	1:10560
CR	227m SE	Old Air Shaft	1915	1:10560
CR	227m SE	Old Air Shaft	1898	1:10560
CL	245m NW	Old Coal Level	1915	1:10560
CL	246m W	Old Coal Level	1915	1:10560
CF	246m NE	Coal Pit	1875	1:10560
CL	249m W	Old Coal Level	1948	1:10560
CF	249m NE	Coal Level	1879	1:10560
CF	257m NE	Coal Level	1875	1:10560
CU	258m S	Ironstone Levels	1875	1:10560
BH	265m NE	Coal Level	1875	1:10560
CX	269m SE	Old Coal Level	1915	1:10560
CF	269m NE	Coal Level	1879	1:10560
CF	271m NE	Coal Level	1875	1:10560
BW	283m SE	Unspecified Shaft	1948	1:10560
DB	329m W	Old Coal Level	1915	1:10560
BH	334m NE	Coal Level	1879	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
BW	348m SE	Unspecified Shaft	1879	1:10560
DM	361m SE	Colliery	1915	1:10560
BW	389m SE	Unspecified Disused Shaft	1964	1:10560
DS	389m W	Unspecified Workings	1965	1:10560
BW	391m SE	Unspecified Disused Shaft	1973	1:10000
BW	393m SE	Unspecified Old Shaft	1948	1:10560
BW	393m SE	Unspecified Old Shaft	1915	1:10560
42	402m W	Unspecified Disused Shaft	1965	1:10560
DY	413m SW	Disused Mine Pit	1948	1:10560
DY	413m SW	Disused Mine Pit	1915	1:10560
DP	445m E	Coal Level	1879	1:10560
DY	474m W	Ironstone Mine Pit	1875	1:10560
CY	478m W	Unspecified Shaft	1915	1:10560
CY	479m W	Unspecified Shaft	1948	1:10560
EL	482m E	Old Coal Levels	1948	1:10560
EL	483m E	Old Coal Levels	1915	1:10560
BM	491m W	Old Air Shaft	1948	1:10560
BM	491m W	Old Air Shaft	1898	1:10560
BM	493m W	Old Air Shaft	1915	1:10560
EO	502m W	Disused Mine Drift	1948	1:10560
EO	502m W	Disused Mine Drift	1915	1:10560
EL	528m E	Old Coal Levels	1898	1:10560
EN	549m SW	Unspecified Disused Drift	1965	1:10560
DY	553m SW	Disused Mine Pit	1898	1:10560
FE	564m W	Disused Mine Drift	1898	1:10560
FR	643m SE	Old Ironstone Level	1948	1:10560
EW	659m SW	Unspecified Old Shaft	1899	1:10560
FS	662m NE	Disused Coal and Ironstone Pit	1875	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
EV	663m SE	Unspecified Level	1875	1:10560
EW	664m SW	Unspecified Old Shaft	1948	1:10560
EW	665m SW	Unspecified Old Shaft	1915	1:10560
EF	687m W	Unspecified Disused Drift	1965	1:10560
EF	698m W	Unspecified Level	1879	1:10560
GA	703m W	Coal and Ironstone Pit	1879	1:10560
DW	708m SW	Unspecified Shaft	1875	1:10560
GB	711m SE	Coal Level	1899	1:10560
FT	713m SE	Old Ironstone Level	1915	1:10560
GB	736m SE	Old Coal Levels	1948	1:10560
GB	743m SE	Unspecified Shaft	1875	1:10560
EV	748m SE	Old Coal Levels	1948	1:10560
-	749m E	Old Air Shaft	1915	1:10560
-	750m E	Old Air Shaft	1948	1:10560
-	750m E	Air Shaft	1898	1:10560
EF	750m W	Old Coal Level	1898	1:10560
-	755m E	Air Shaft	1879	1:10560
-	756m E	Air Shaft	1875	1:10560
ER	762m S	Unspecified Disused Shaft	1965	1:10560
ER	764m S	Old Air Shaft	1899	1:10560
ER	765m S	Old Air Shaft	1915	1:10560
ER	765m S	Old Air Shaft	1948	1:10560
GB	774m SE	Air Shaft	1875	1:10560
GH	777m SW	Unspecified Shaft	1875	1:10560
-	781m NE	Unspecified Disused Level	1915	1:10560
GH	781m SW	Unspecified Shaft	1879	1:10560
60	786m SE	Tunnel	1899	1:10560
61	794m SW	Disused Mine Pit	1898	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
GU	796m SW	Disused Mine Pit	1948	1:10560
GU	796m SW	Disused Mine Pit	1915	1:10560
-	798m NE	Coal Level	1879	1:10560
-	800m NE	Coal Level	1875	1:10560
-	806m E	Air Shaft	1879	1:10560
-	806m W	Old Air Shafts	1948	1:10560
-	806m W	Old Air Shafts	1915	1:10560
-	806m W	Old Air Shafts	1898	1:10560
HC	839m SE	Unspecified Disused Mine	1964	1:10560
GD	855m SW	Unspecified Old Level	1899	1:10560
-	868m E	Unspecified Disused Level	1898	1:10560
-	883m W	Unspecified Shaft	1879	1:10560
-	883m NE	Unspecified Disused Level	1948	1:10560
-	883m NE	Unspecified Disused Level	1915	1:10560
-	883m W	Unspecified Shaft	1875	1:10560
-	894m E	Unspecified Old Shaft	1898	1:10560
-	895m E	Old Air Shaft	1915	1:10560
-	895m E	Air Shaft	1948	1:10560
-	895m E	Unspecified Shaft	1879	1:10560
-	896m E	Air Shaft	1898	1:10560
-	896m E	Unspecified Shaft	1875	1:10560
-	903m W	Unspecified Disused Shaft	1965	1:10560
GN	911m NE	Disused Coal and Ironstone Pit	1879	1:10560
-	923m W	Old Coal Level	1948	1:10560
-	927m W	Old Coal Level	1915	1:10560
-	947m SE	Air Shaft	1875	1:10560
-	952m W	Old Air Shafts	1898	1:10560
-	952m W	Old Air Shafts	1915	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
-	953m W	Old Air Shafts	1948	1:10560
-	953m W	Unspecified Disused Shaft	1965	1:10560
GN	955m NE	Unspecified Old Shaft	1898	1:10560
-	980m W	Ironstone Mine Pit	1875	1:10560
-	994m W	Ironstone Mine Pit	1875	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	7

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

Features are displayed on the Mining and ground workings map on **page 159 >**

ID	Location	Name	Commodity	Class	Likelihood
19	**On site**	**Not available**	**Iron Ore (Bedded)**	**B**	**Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.**
AL	**On site**	**Not available**	**Iron Ore (Bedded)**	**B**	**Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.**
58	737m NE	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
66	877m NE	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
69	908m SW	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	938m S	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
74	978m NW	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

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	27

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.

Features are displayed on the Mining and ground workings map on **page 159 >**

ID	Location	Mineral type	Mineral
20	**On site**	**Metals**	**Ironstone**
21	**On site**	**Metals**	**Ironstone**
22	**On site**	**Metals**	**Ironstone**
23	**On site**	**Metals**	**Ironstone**
24	**On site**	**Metals**	**Ironstone**
AM	**On site**	**Metals**	**Ironstone**
AM	**On site**	**Metals**	**Ironstone**
AM	**On site**	**Metals**	**Ironstone**
AM	**On site**	**Metals**	**Ironstone**
AN	**On site**	**Metals**	**Ironstone**
AO	**On site**	**Metals**	**Ironstone**
AO	**On site**	**Metals**	**Ironstone**
AO	**On site**	**Metals**	**Ironstone**
AP	**On site**	**Metals**	**Ironstone**
AP	**On site**	**Metals**	**Ironstone**
AQ	**On site**	**Metals**	**Ironstone**

ID	Location	Mineral type	Mineral
AQ	**On site**	**Metals**	**Ironstone**
AQ	**On site**	**Metals**	**Ironstone**
BI	107m SE	Metals	Ironstone
BP	145m SE	Metals	Ironstone
30	170m NE	Metals	Ironstone
CW	264m NE	Metals	Ironstone
CW	265m NE	Metals	Ironstone
AL	266m NE	Metals	Ironstone
AL	266m NE	Metals	Ironstone
DU	391m NE	Metals	Ironstone
49	474m SE	Metals	Ironstone

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

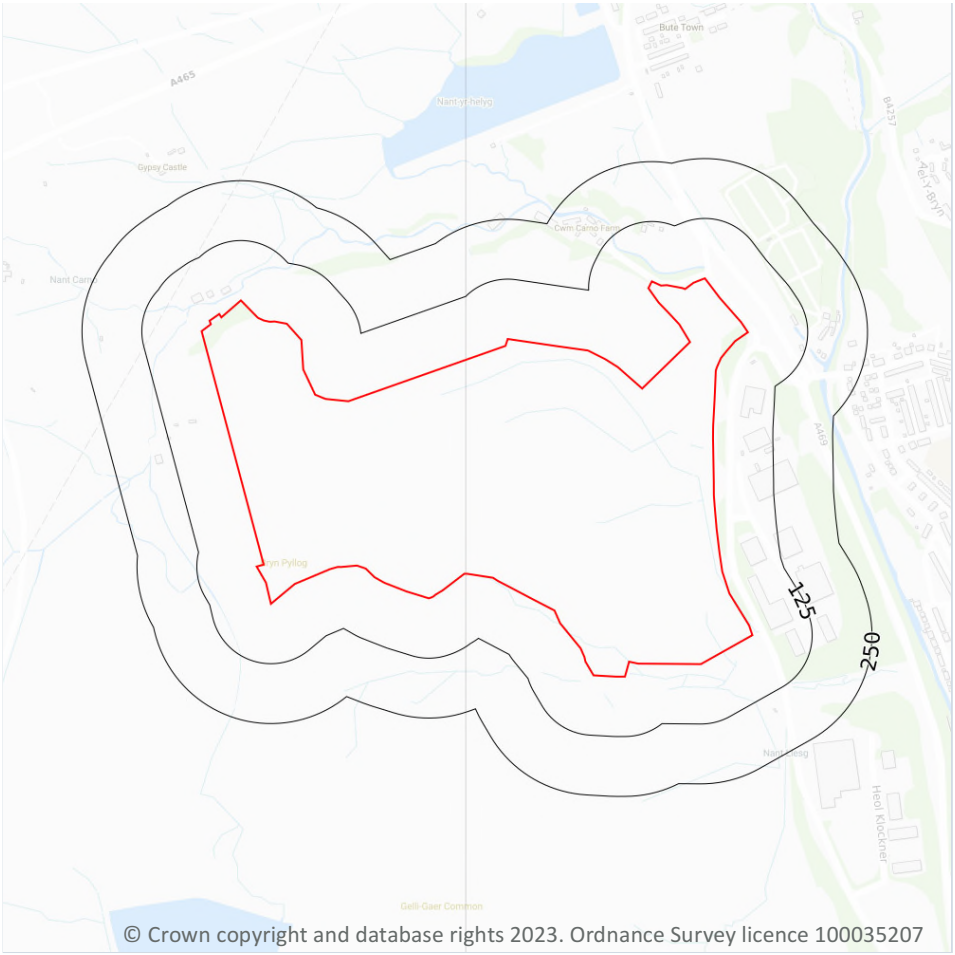
This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

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



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Site Outline

Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

20.1 Radon

Records on site	1

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 199 >**

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 **27**

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

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**30 - 45 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
5m SW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
6m SW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
11m E	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
11m SE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
18m SE	15 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 km^2).

This data is sourced from the British Geological Survey.

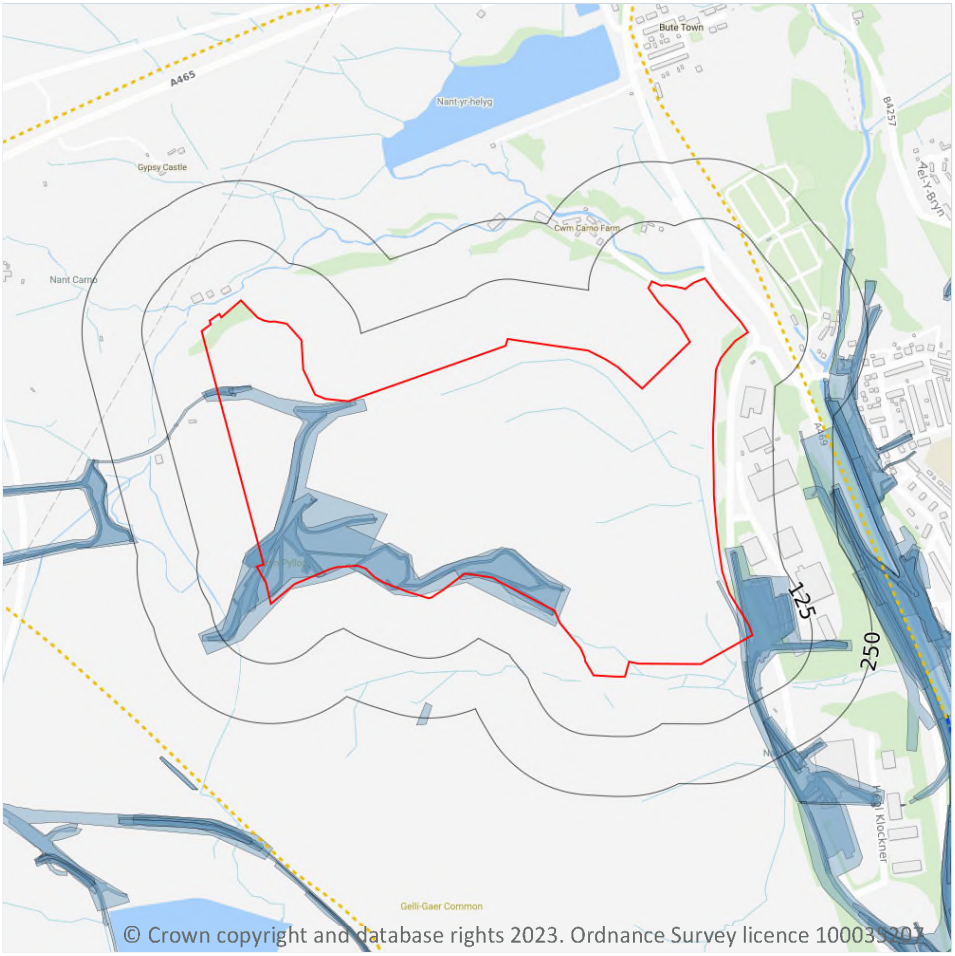
21.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects



Site Outline

Search buffers in metres (m)

- Crossrail 1 Stations
- Crossrail 1 Route
- 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	36

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 204 >**

Location	Land Use	Year of mapping	Mapping scale
On site	**Railway Sidings**	**1873**	**2500**
On site	**Railway Sidings**	**1875**	**2500**
On site	**Railway Sidings**	**1901**	**2500**
On site	**Railway Sidings**	**1875**	**10560**
On site	**Railway Sidings**	**1879**	**10560**
On site	**Railway Sidings**	**1895**	**10560**
32m SE	Railway Sidings	1901	2500
41m SE	Railway Sidings	1873	2500
91m SE	Mineral Railway Sidings	1919	2500
105m SE	Railway Sidings	1875	2500
167m SE	Railway Sidings	1898	10560
172m SE	Railway Sidings	1895	10560
180m E	Railway Sidings	1959	2500
183m E	Railway Sidings	1964	10560
184m E	Railway Sidings	1873	2500
185m E	Railway Sidings	1901	2500
186m E	Railway Sidings	1875	10560

Location	Land Use	Year of mapping	Mapping scale
187m E	Railway Sidings	1948	10560
190m E	Railway Sidings	1895	10560
197m E	Railway Sidings	1879	10560
218m S	Railway Sidings	1915	10560
219m E	Railway Sidings	1915	10560
219m E	Railway Sidings	1898	10560
226m E	Railway Sidings	1938	10560
237m E	Railway Sidings	1919	2500
241m E	Railway Sidings	1879	10560
241m E	Railway Sidings	1898	10560
241m E	Railway Sidings	1875	2500
242m W	Railway Sidings	1875	10560
244m E	Railway Sidings	1875	10560
246m E	Railway Sidings	1895	10560
246m E	Railway Sidings	1901	2500
246m E	Railway Sidings	1919	2500
246m E	Railway Sidings	1938	10560
247m E	Railway Sidings	1873	2500
250m E	Railway Sidings	1948	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	1

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

Features are displayed on the Railway infrastructure and projects map on **page 204 >**

Location	Description
69m NE	Abandoned

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 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 ↗.

Terms and conditions

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

Appendix C

Coal Authority Consultants Report

The Coal Authority

Consultants

Coal Mining Report

Bute Town Reservoir
Pontlottyn Link Road
Bute Town
Rhymney
Caerphilly County Borough
NP22 5QX

Date of enquiry:	**11 December 2023**
Date enquiry received:	**11 December 2023**
Issue date:	**12 December 2023**
Our reference:	**51003394437001**
Your reference:	**BR10167**



Consultants
Coal Mining Report

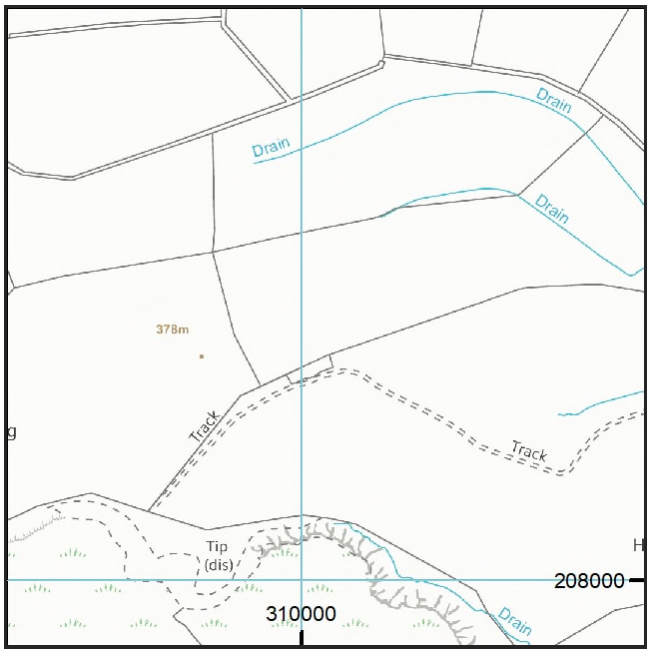
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

Cerys Thomas

Enquiry address

Bute Town Reservoir
Pontlottyn Link Road
Bute Town
Rhymney
Caerphilly County Borough
NP22 5QX



Approximate position of property

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Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	BLACK PINS IRONSTONE	Ironstone	4A7Z	0	Beneath Property	6.0	South-East	120	1900
DOWLAIS	UPPER 6FT RIDER	Coal	4A81	0	Beneath Property	7.0	South	120	1900
unnamed	RED VEIN	Coal	4ZCY	0	Beneath Property	0.0	East	100	1900
unnamed	UPPER 6FT (T.L.)	Coal	4ZCZ	0	Beneath Property	7.1	South	120	1900
DOWLAIS	UPPER 6FT RIDER	Coal	4WFU	0	Beneath Property	4.1	South	120	1869
unnamed	FOUR FOOT	Coal	4A83	0	Beneath Property	4.1	South-East	110	1857
DOWLAIS	UPPER 6FT RIDER	Coal	4A81A	0	Beneath Property	7.0	South	120	1852
unnamed	BLACK PINS IRONSTONE	Ironstone	4ZD3	8	Beneath Property	7.1	South-East	120	1869
unnamed	BLACK PINS IRONSTONE	Ironstone	4WG7	9	Beneath Property	4.1	South-East	120	1900
unnamed	LOWER NINE FOOT	Coal	4A7X	10	Beneath Property	5.9	South-East	100	1863
unnamed	FOUR FOOT	Coal	4WFS	12	Beneath Property	4.1	South-East	180	1858
unnamed	FOUR FOOT	Coal	4WFT	12	Beneath Property	4.1	South-East	180	1858
unnamed	GARW RIDER IRONSTONE	Ironstone	4E59	12	Beneath Property	12.0	East	447	1841
unnamed	ROSSER IRONSTONE	Ironstone	4E53	14	Beneath Property	12.0	East	780	1858
unnamed	GARW NO.1 IRONSTONE	Ironstone	4E53	14	Beneath Property	12.0	East	780	1858
unnamed	GARW RIDER IRONSTONE	Ironstone	4E55	15	Beneath Property	5.7	South	447	1849
unnamed	GARW RIDER IRONSTONE	Ironstone	4E5B	20	Beneath Property	5.7	South	447	1858
unnamed	LOWER 7FT BOTTOM LEAF	Coal	4WGN	21	Beneath Property	5.3	South-East	78	1937
unnamed	BOTTOM VEIN IRONSTONE	Ironstone	4E56	21	Beneath Property	5.7	South	337	1860
unnamed	LOWER NINE FOOT	Coal	4WGF	24	Beneath Property	4.1	South-East	165	1860

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	LOWER NINE FOOT	Coal	4WGE	27	Beneath Property	4.1	South-East	165	1845
unnamed	BOTTOM VEIN IRONSTNE	Ironstone	4E57	28	Beneath Property	5.7	South	227	1860
unnamed	ROSSER IRONSTONE	Ironstone	4E58	30	Beneath Property	5.7	South	127	1860
unnamed	LOWER 7FT BOTTOM LEAF	Coal	4WGM	31	Beneath Property	5.4	South-East	78	1892
unnamed	GARW NO.1 IRONSTONE	Ironstone	4E5A	31	Beneath Property	0.3	South	780	1869
unnamed	FIVE FOOT	Coal	4A7N	32	Beneath Property	4.8	South-East	110	1891
unnamed	GARW NO.1 IRONSTONE	Ironstone	4E54	33	Beneath Property	5.7	South	780	1870
unnamed	FIVE FOOT GELLIDEG	Coal	4WGX	34	Beneath Property	4.1	South-East	84	1873
unnamed	FIVE FOOT	Coal	4WGT	35	Beneath Property	4.1	South-East	70	1891
unnamed	FIVE FOOT	Coal	4WGR	38	Beneath Property	4.1	South-East	70	1891
unnamed	BOTTOM VEIN IRONSTNE	Ironstone	4E5D	39	Beneath Property	5.7	South	227	1858
unnamed	FOUR FOOT	Coal	4ATZ	40	South	5.2	South-East	180	1884
unnamed	FIVE FOOT GELLIDEG	Coal	4A7F	41	Beneath Property	5.0	South	115	1884
unnamed	ROSSER IRONSTONE	Ironstone	4WH4	45	Beneath Property	3.8	South-East	780	1866
unnamed	FIVE FOOT GELLIDEG	Coal	4WGY	46	Beneath Property	4.1	South-East	84	1873
unnamed	FIVE FOOT GELLIDEG	Coal	4A7H	46	Beneath Property	5.5	South	115	1850
DOWLAIS	UPPER 6FT RIDER	Coal	4AU0	47	South	7.1	South	366	1852
unnamed	FIVE FOOT	Coal	4WGQ	50	Beneath Property	4.1	South-East	70	1857
unnamed	BOTTOM VEIN IRONSTONE	Ironstone	4E5C	51	Beneath Property	5.7	South	337	1858
unnamed	FIVE FOOT	Coal	7H0V	52	Beneath Property	5.7	South	70	1900
unnamed	ROSSER IRONSTONE	Ironstone	4E5E	58	Beneath Property	5.7	South	127	1854
unnamed	FIVE FOOT GELLIDEG	Coal	4A7G	60	Beneath Property	5.7	South	115	1850
unnamed	FIVE FOOT GELLIDEG	Coal	7H0Y	65	Beneath Property	5.0	South-East	115	1860
unnamed	FIVE FOOT	Coal	4A7L	68	North-East	4.6	South-East	110	1891

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Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
Unnamed	LOWER 7FT BOTTOM LEAF	Coal	A0US	71	Beneath Property	8.7	South	70	1934
unnamed	FIVE FOOT	Coal	4A7J	73	Beneath Property	3.8	South-East	110	1891
unnamed	FIVE FOOT	Coal	4A7K	78	Beneath Property	3.4	South-East	110	1891
unnamed	FIVE FOOT GELLIDEG	Coal	4ZCM	85	Beneath Property	5.7	South-East	100	1885
unnamed	FIVE FOOT GELLIDEG	Coal	4AUE	100	South	5.7	South-East	110	1882
unnamed	FIVE FOOT GELLIDEG	Coal	4AUD	103	Beneath Property	5.7	South-East	110	1883
unnamed	ROSSER IRONSTONE	Ironstone	4ATQ	131	South	6.8	South-East	78	1871
unnamed	FOUR FOOT	Coal	4ZD0	235	Beneath Property	5.7	South	180	1900

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

Distance to spine roadway (m)	Direction to spine roadway
Within	N/A
Within	N/A
Within	N/A
Within	N/A
Within	N/A
Within	N/A

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	309208-014	309546 208415	This mine entry may have been partially or wholly excavated during past opencast mining	Coal	
Shaft	309208-016	309868 208325		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	309208-017	309893 208208		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	309208-018	309914 208090		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	309208-019	309490 208415	This mine entry may have been partially or wholly excavated during past opencast mining	Coal	
Shaft	309208-020	309435 208267	This mine entry may have been partially or wholly excavated during past opencast mining	Coal	
Shaft	309208-043	309989 208064		Coal	Gelligaer Urban District Council 21/09/1973
Adit	309208-045	309566 208652		Ironstone	
Adit	309208-046	309614 208657		Ironstone	
Shaft	309208-052	309517 208629		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	309208-053	309959 208360		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	310207-013	310621 207906	This shaft was originally filled with pir dirt and demolition rubble. Fo llowing a slumping in this fill the Coal Authority installed a 3m x 2m c ap at the 3m formation level. In addition a 1m concrete plug was install ed within the top of the shaft	Coal	
Adit	310207-028	310221 207941		Coal	
Adit	310207-029	310381 207897		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	310207-055	310614 207915	This shaft has a 7.5 x 9.0 x 0.8m reinforced concrete cap installed at t he surface. In 2004 the Coal Authority drilled the cap. A lockable cover was installed and the shaft fenced. This mine entry is monitored on a three monthly basis for water levels by The Coal Authority or a representative thereof	Coal	
Shaft	310207-080	310414 207805		Coal	
Shaft	310207-081	310602 207850		Coal	
Shaft	310207-083	310353 207933		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	310207-084	310309 207994		Coal	Gelligaer Urban District Council 21/09/1973

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Adit	310207-121	310207 207921		Coal	
Shaft	310207-125	310430 207837		Coal	
Shaft	310208-011	310166 208112	This entry has been filled to an unknown specification	Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-012	310545 208677		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	310208-014	310529 208548	This entry has been filled to an unknown specification	Coal	Gelligaer Urban District Council 21/09/1973
Shaft	310208-015	310516 208360	A combined plug and cap is formed in the top of this shaft from 1320 ton nes of stone and 18 cu metre of C30 concrete	Coal	CA 21/09/1973
Adit	310208-016	310525 208109		Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-024	310386 208638	This mine entry may have been partially or wholly excavated during past opencast mining	Coal	
Adit	310208-025	310188 208030		Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-026	310200 208058		Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-035	310077 208091		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	310208-038	310376 208648	This mine entry may have been partially or wholly excavated during past opencast mining	Coal	
Shaft	310208-052	310499 208661		Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-053	310254 208450	This mine entry may have been partially or wholly excavated during past opencast mining	Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-054	310262 208403	This mine entry may have been partially or wholly excavated during past opencast mining	Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-055	310285 208399	This mine entry may have been partially or wholly excavated during past opencast mining	Coal	Gelligaer Urban District Council 21/09/1973
Shaft	310208-056	310511 208353		Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-057	310041 208112		Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-058	310443 208141		Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-059	310414 208328		Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-060	310438 208063		Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-090	310516 208667		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	310208-092	310510 208671		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	310208-093	310349 208631	This mine entry may have been partially or wholly excavated during past opencast mining	Coal	

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	310208-094	310550 208381		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	310208-095	310168 208338		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	310208-096	310042 208361	This mine entry may have been partially or wholly excavated during past opencast mining	Coal	Gelligaer Urban District Council 21/09/1973
Shaft	310208-097	310455 208379		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	310208-103	310223 208273		Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-105	310664 208599		Coal	
Shaft	310208-125	310328 208353		Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-129	310069 208077		Coal	Gelligaer Urban District Council 21/09/1973
Adit	310208-130	310234 208059		Coal	Gelligaer Urban District Council 21/09/1973
Shaft	310208-135	310366 208648	This mine entry may have been partially or wholly excavated during past opencast mining	Coal	

Abandoned mine plan catalogue numbers

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

SWR2500	SWR3033	SWR3106
SWR2960	SWR1926	SWR1439
6768	SWR1436	SWR3043

Our records show we have more plans than those shown above which could affect the enquiry boundary.

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

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
6FT BOTTOM LEAF	Coal	Yes	Within	N/A	131
6FT BOTTOM LEAF	Coal	Yes	Within	N/A	132
6FT BOTTOM LEAF	Coal	Yes	Within	N/A	239
BUTE	Coal	Yes	Within	N/A	122
CAERAU	Coal	Yes	Within	N/A	123
CAERAU	Coal	Yes	Within	N/A	133
CAERAU	Coal	Yes	Within	N/A	242
FIVE FOOT GELLIDEG	Coal	Yes	Within	N/A	116
FIVE FOOT GELLIDEG	Coal	Yes	Within	N/A	255
FIVE FOOT GELLIDEG	Coal	Yes	Within	N/A	301
GARW VEIN	Coal	Yes	Within	N/A	253
LOWER 7FT BOTTOM LEAF	Coal	Yes	Within	N/A	100
LOWER 7FT BOTTOM LEAF	Coal	Yes	Within	N/A	145
LOWER NINE FOOT TOP LEAF	Coal	Yes	Within	N/A	127
SEVEN FOOT RIDER	Coal	Yes	Within	N/A	125
SIX FOOT	Coal	Yes	Within	N/A	217
UNNAMED	Coal	Yes	Within	N/A	260
UPPER 6FT RIDER	Coal	Yes	Within	N/A	123
UPPER GELLIDEG	Coal	Yes	Within	N/A	120
UPPER GELLIDEG	Coal	Yes	Within	N/A	320
UPPER SEVEN FOOT	Coal	Yes	Within	N/A	108

Geological faults, fissures and breaklines

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

Faults under or close to the property recorded.

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Opencast mines

Please refer to the “Summary of findings” map (on separate sheet) for details of any opencast areas within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

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

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

Distance to site remediation (m)	Direction
34.7	South-East
Within	N/A
24.0	South-East

See Section 4 for further information.

Coal mining subsidence

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

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

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

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

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Section 3 – Licensing and future mining activity

Future underground mining
None recorded.

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

Court orders
None recorded.

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

Withdrawal of support notices
The property is in an area where a notice to withdraw support was given in 1945.

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

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

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Section 4 – Further information

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

Future development

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

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

Development advice

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

Remediated sites

The site is within an area of previous interest. It is close to where the Coal Authority has investigated and where necessary remediated mine entries and/or shallow coal mine workings following specific reported hazards.

The site requires further investigation and may influence your risk assessment. We recommend that you order the Coal Authority **Surface Hazards Incident Report**, which will include more information about the hazard.

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

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Section 5 – Data definitions

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

Past underground coal mining

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

Probable unrecorded shallow workings

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

Spine roadways at shallow depth

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

Mine entries

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

Abandoned mine plan catalogue numbers

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

Outcrops

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

Geological faults, fissures and breaklines

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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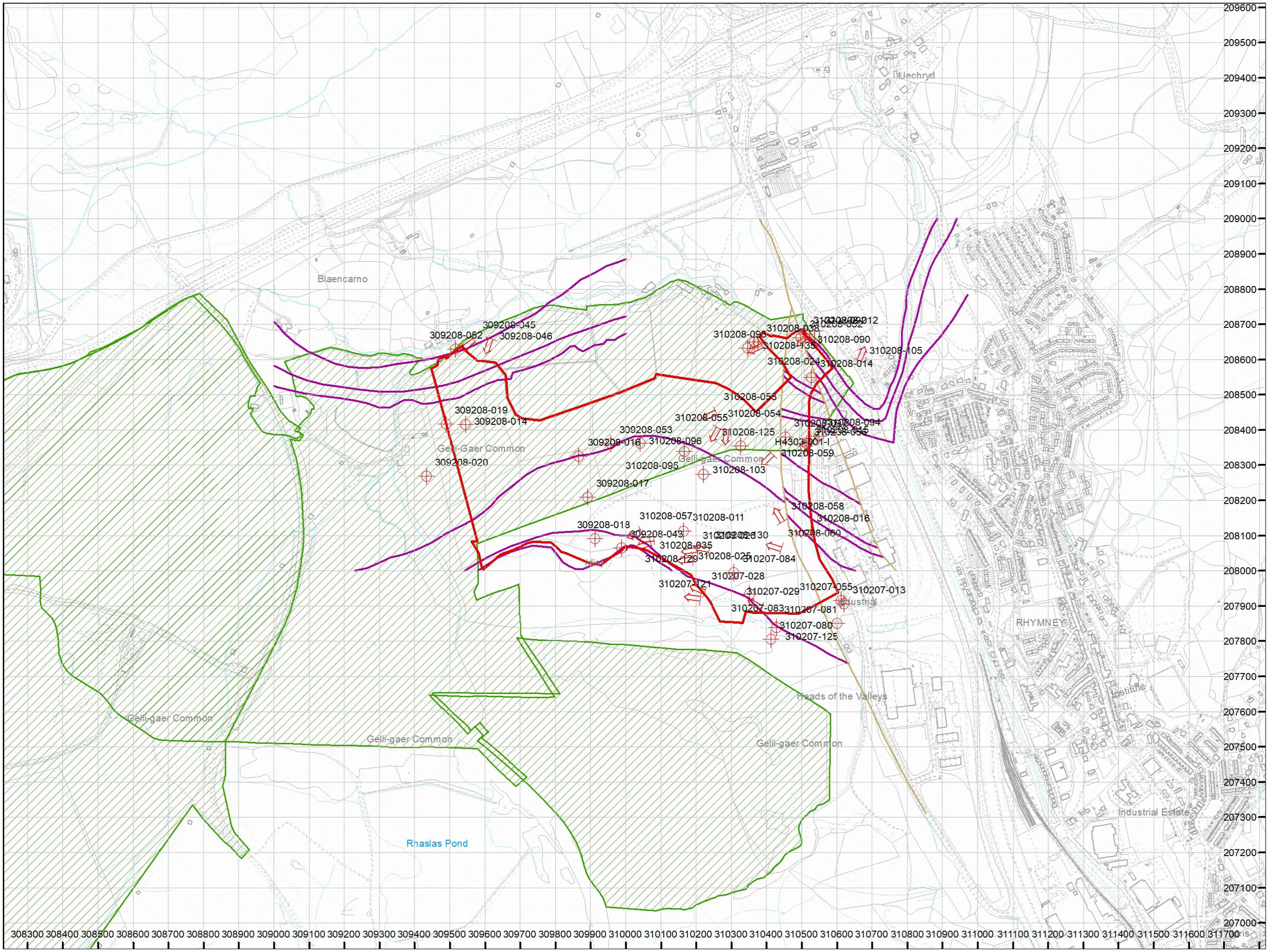
Summary of findings

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

Key

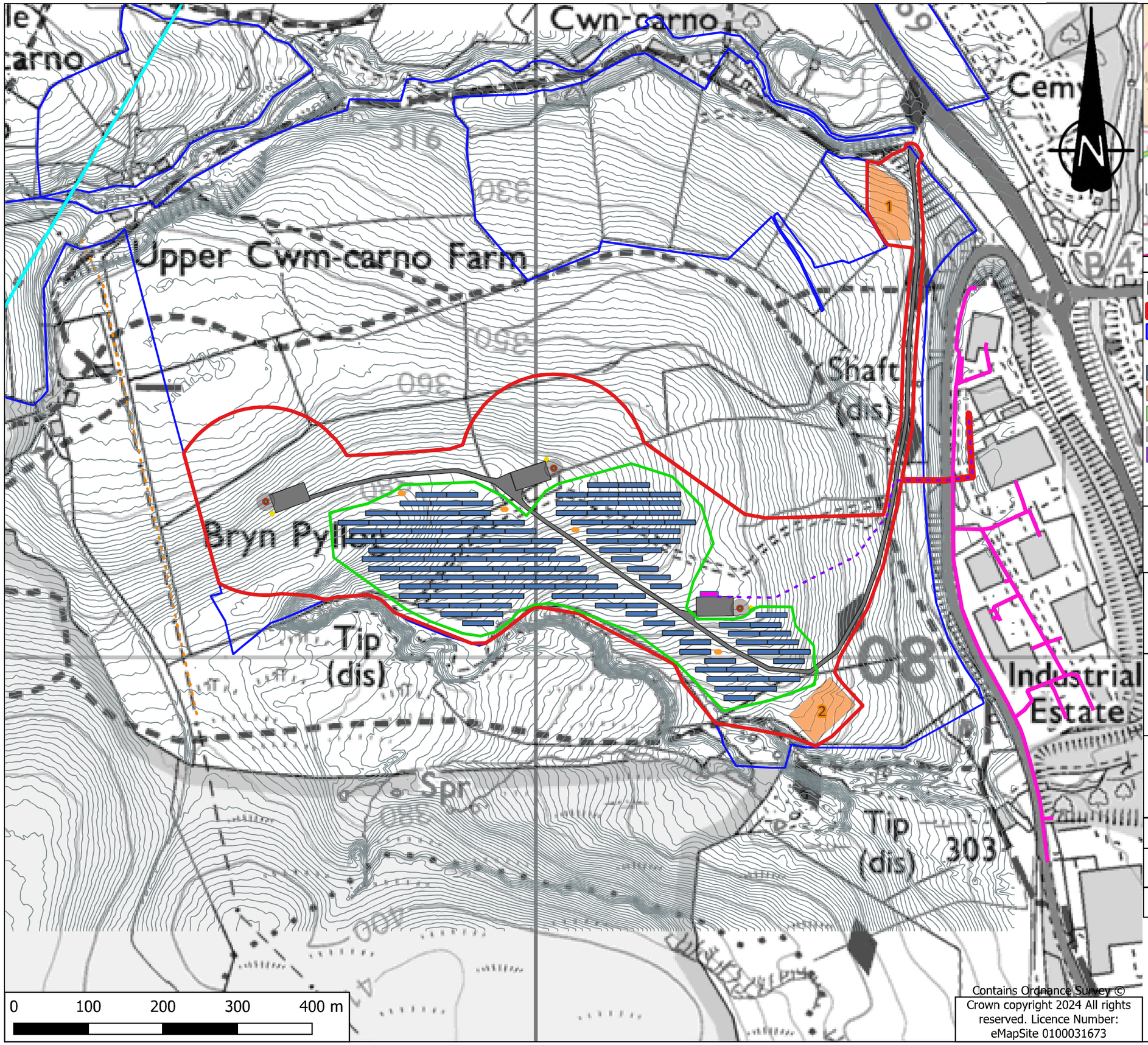
- Approximate position of the enquiry boundary shown
- Disused mine shaft
- Disused adit
- Outcrop (Proven)
- Geological faults
- Unlicensed opencast site
- Remediated sites

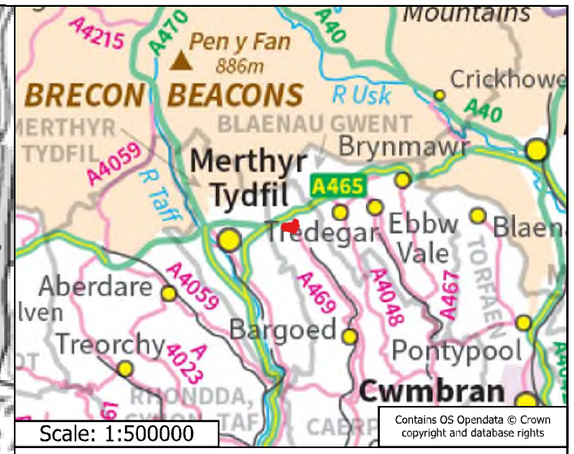


How to contact us
0345 762 6848 (UK)
+44 (0)1623 637 000 (International)
www.groundstability.com

Appendix D

Proposed Development Plan





Legend

- Redline Boundary
- Landowner Boundary
- Turbine Locations
- Solar Panels
- Construction Compound
- Turbine Tower Extent
- Turbine Foundations
- Substation
- Tracks
- Security Fence
- Wind Transformers
- Solar MV Station
- Low Pressure Gas Mains
- Overhead Cables
- Private Cable
- National Grid Cable

Construction Compound:
Option 1: 4033 m2
Option 2: 3752 m2

CLIENT

convatec
— forever caring —

PROJECT

Rhymney Wind and Solar Development

DRAWING TITLE

BR10167 - Site Layout

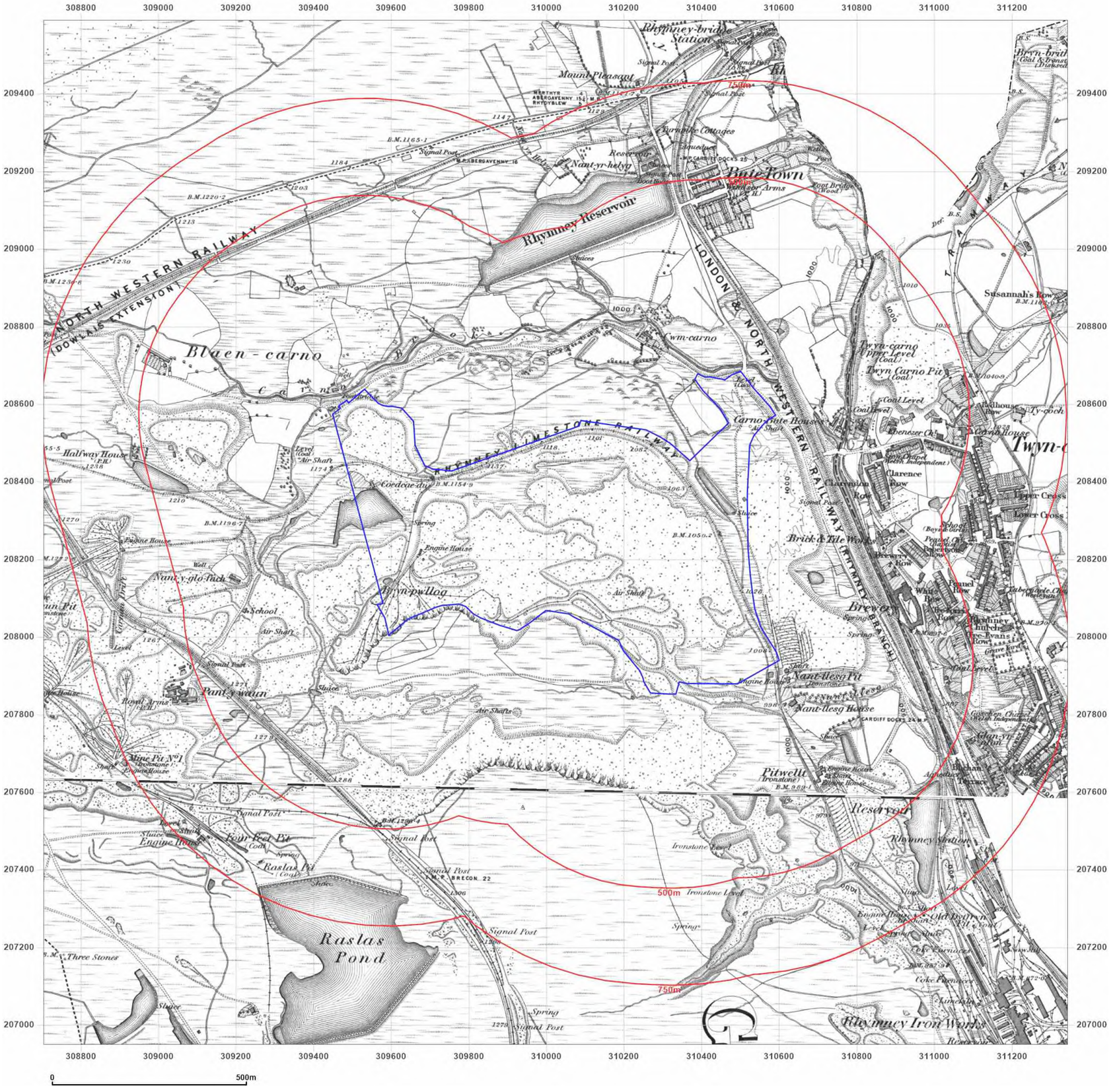
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DRG SIZE: A3	SCALE: 1:5000	DATE: January 2024
DRAWN: JS	CHECKED BY: SA	APPROVED BY: SA

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Appendix E

Historical Maps



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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC
Grid Ref: 310023, 208269

Map Name: County Series

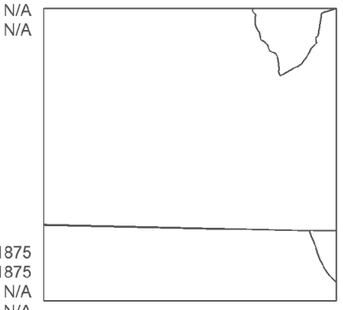
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Scale: 1:10,560

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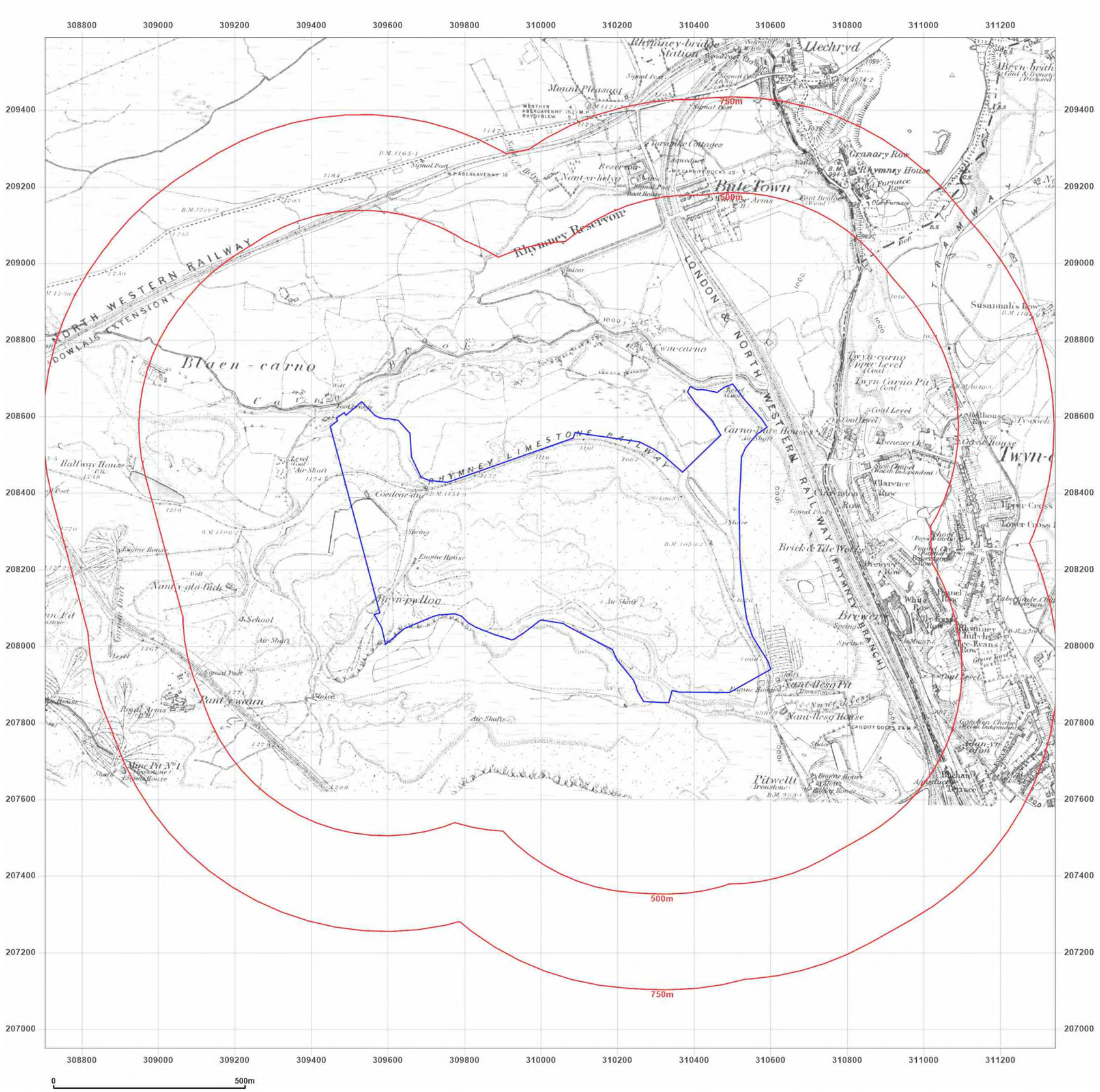
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Report Ref: GSWA1-GUQ-92I-HVI-INC
Grid Ref: 310023, 208269

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Map date: **1879**

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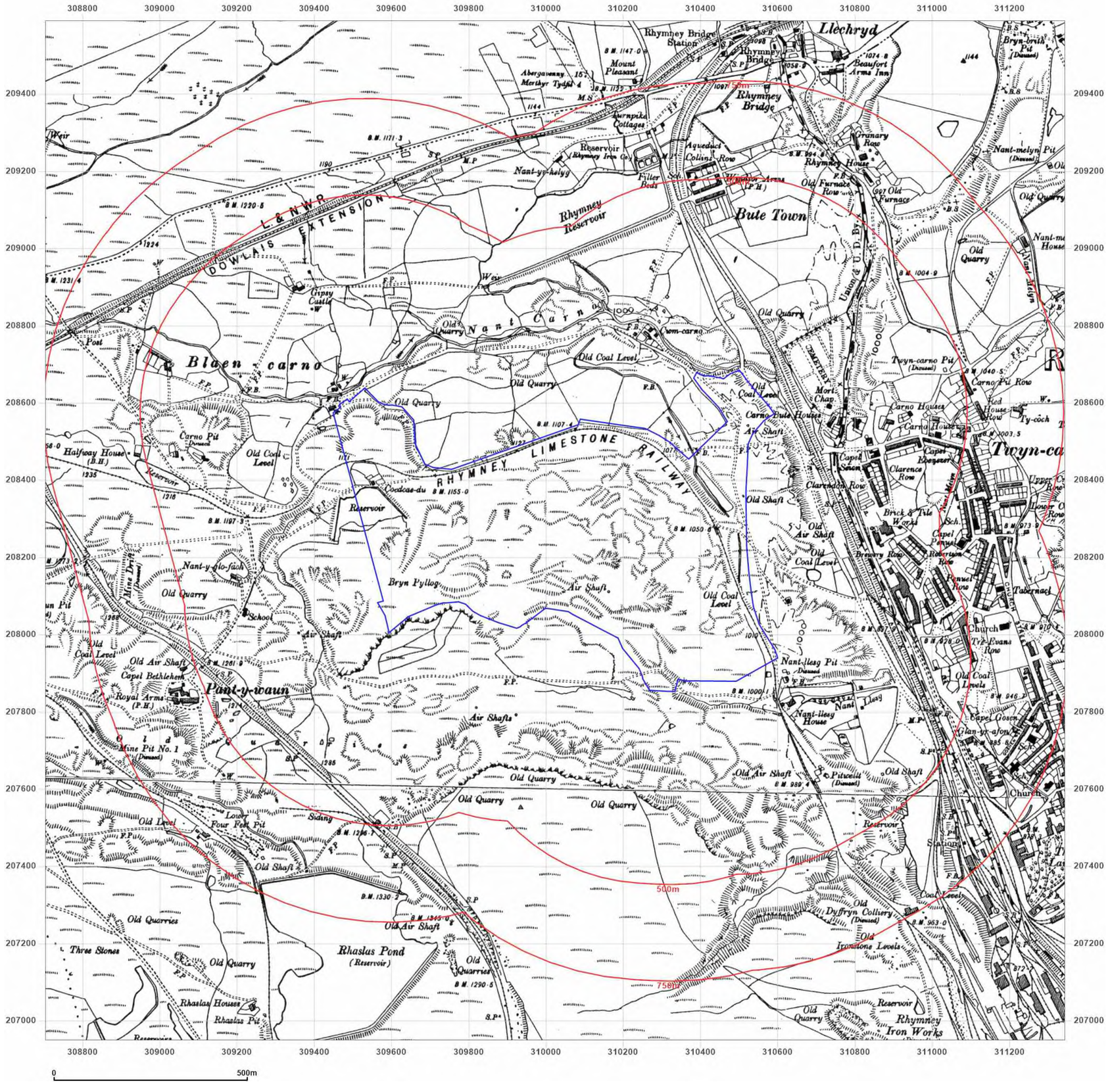
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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC
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Map Name: County Series

Map date: **1895**

Scale: 1:10,560

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Revised 1899
Edition 1901
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Levelled N/A

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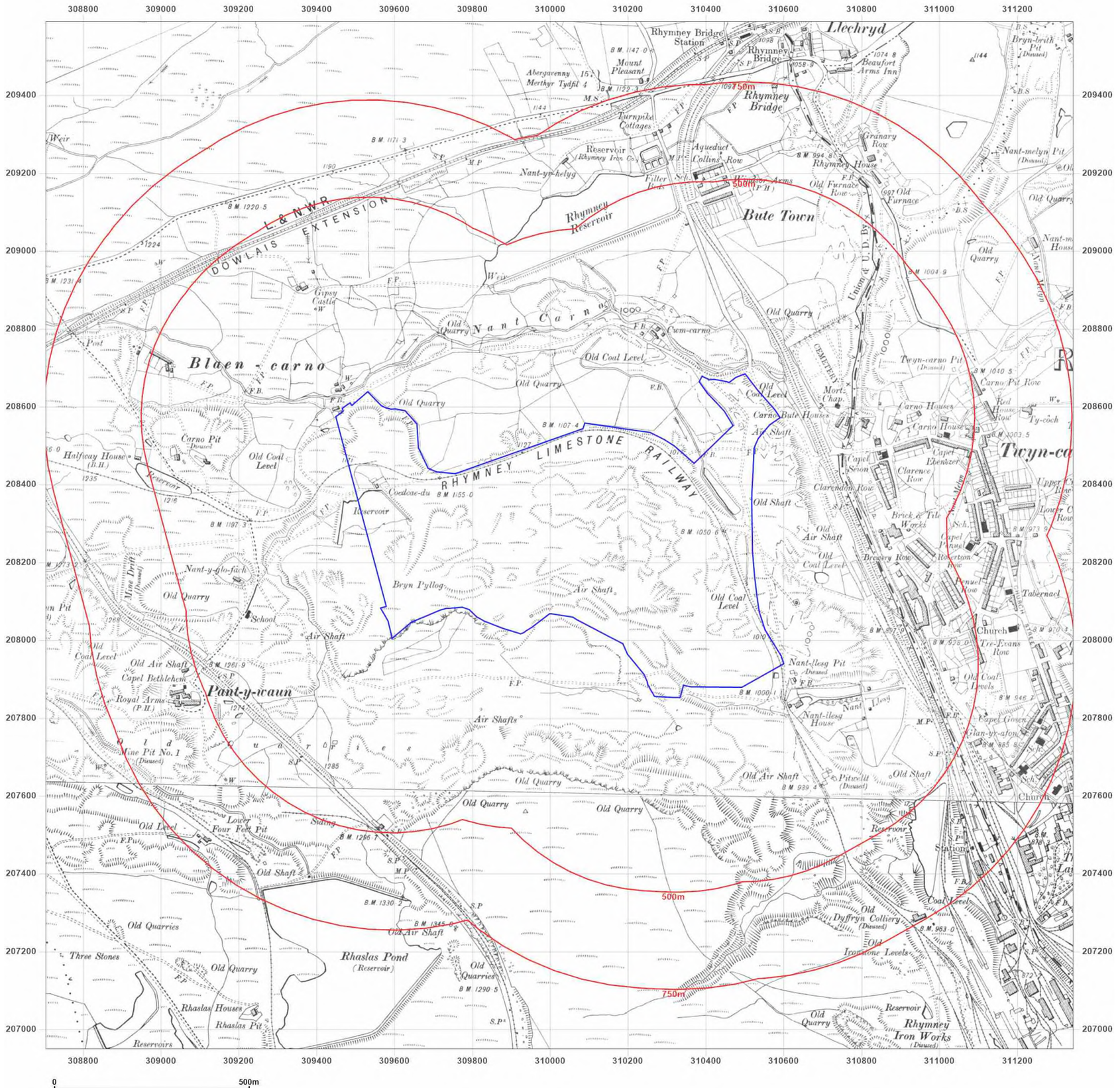
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Map date: **1898-1899**

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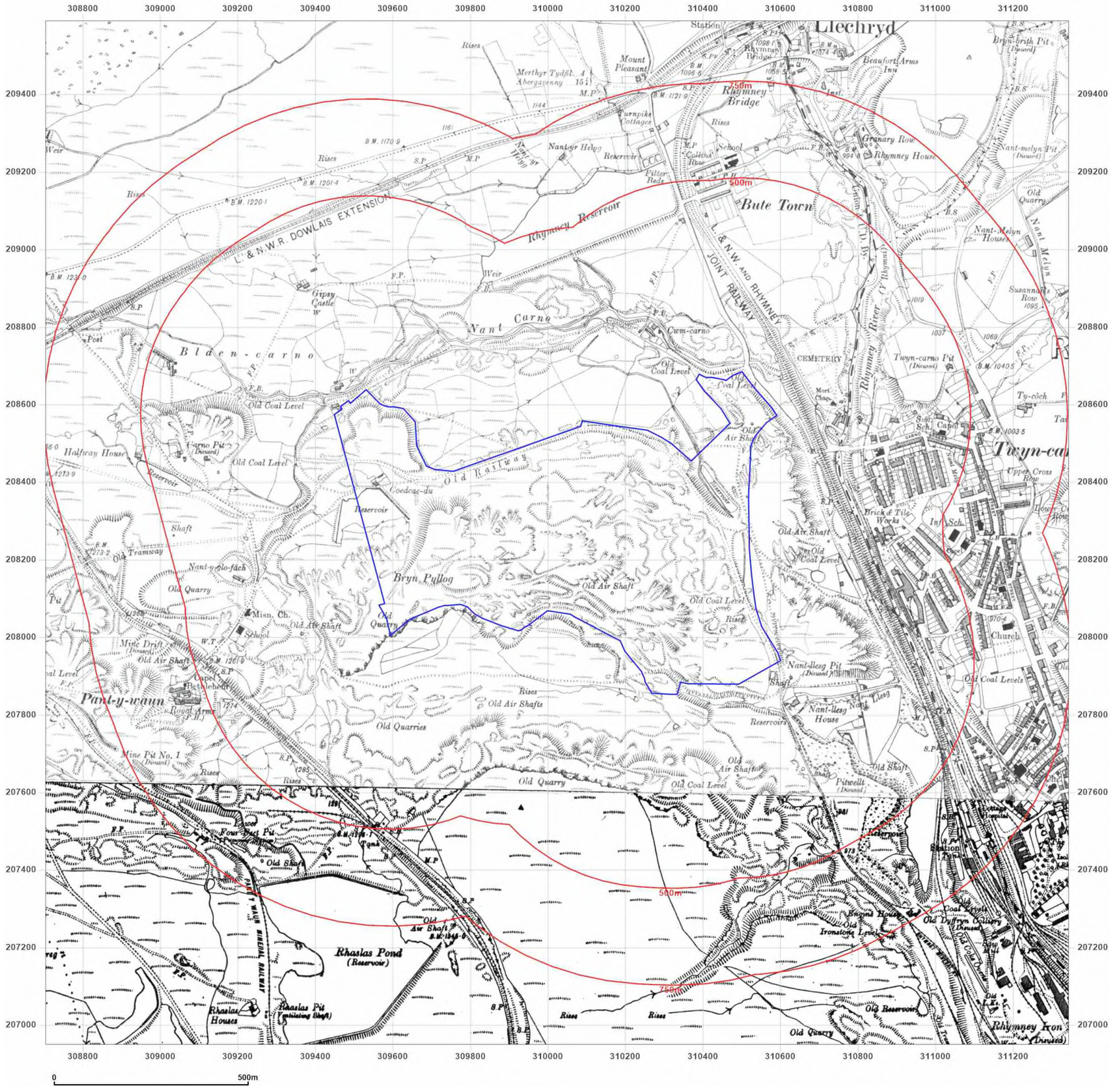
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Map Name: County Series

Map date: **1915**

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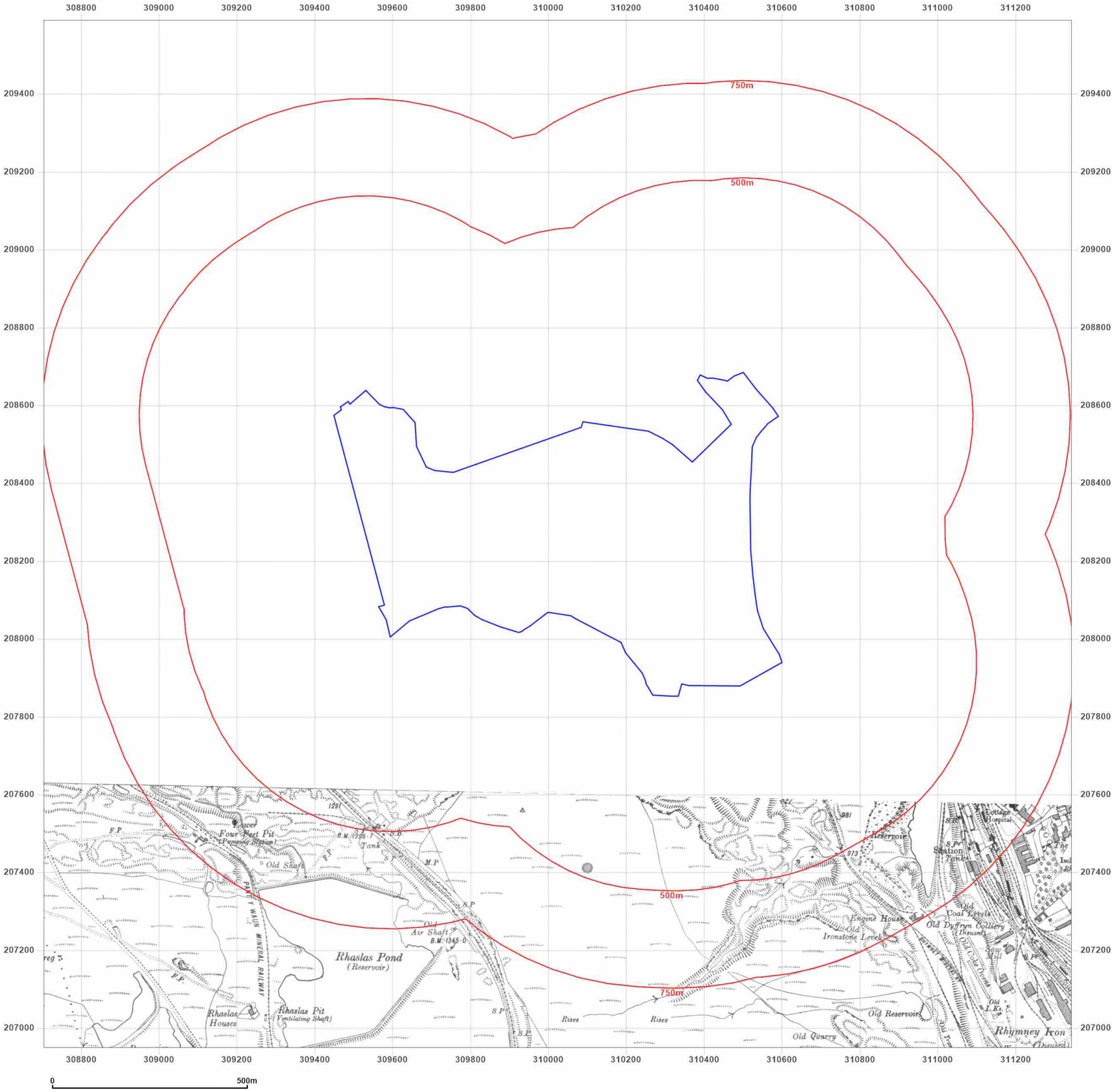
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Map Name: County Series

Map date: **1915**

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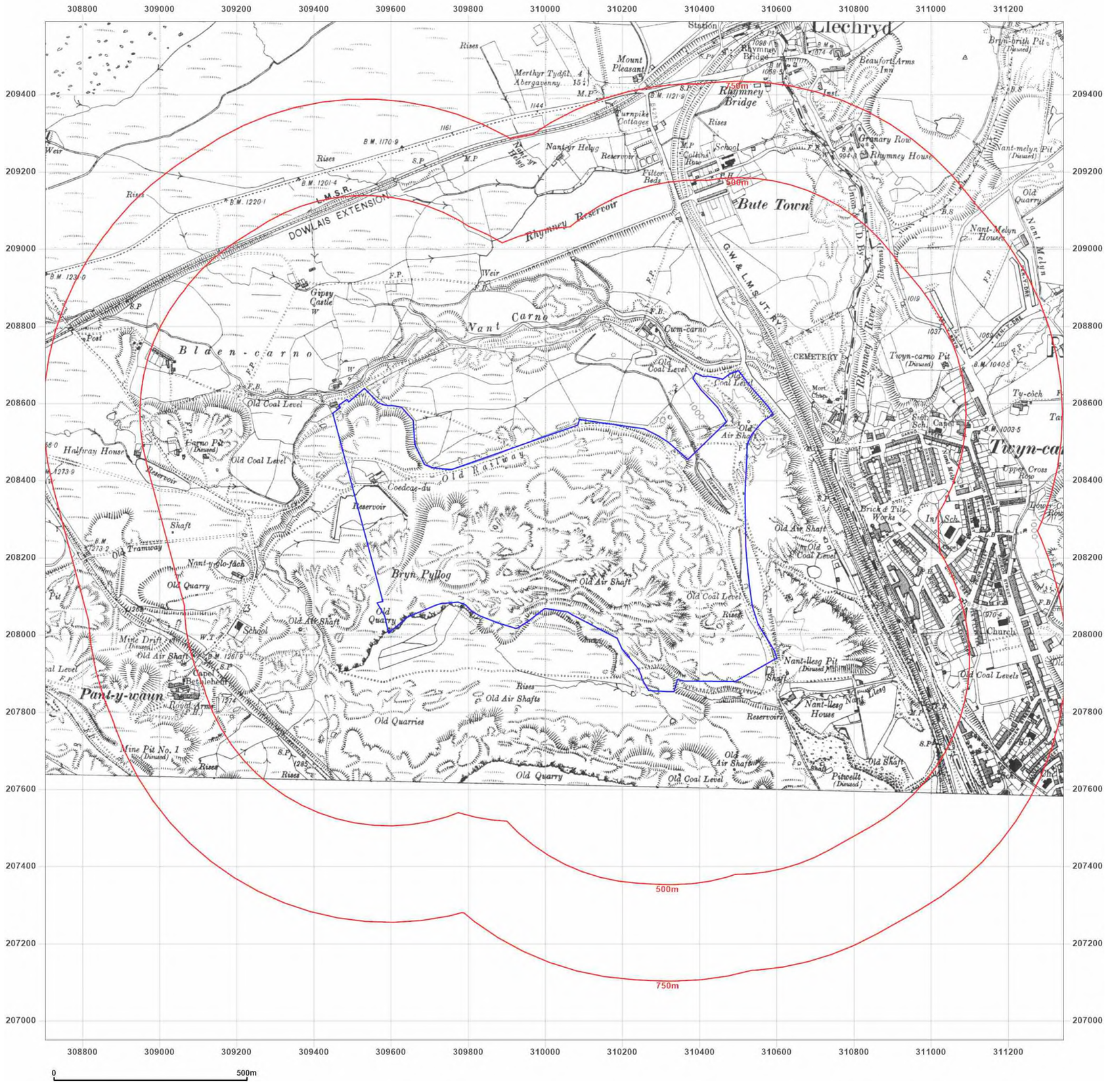
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Report Ref: GSWA1-GUQ-92I-HVI-INC
Grid Ref: 310023, 208269

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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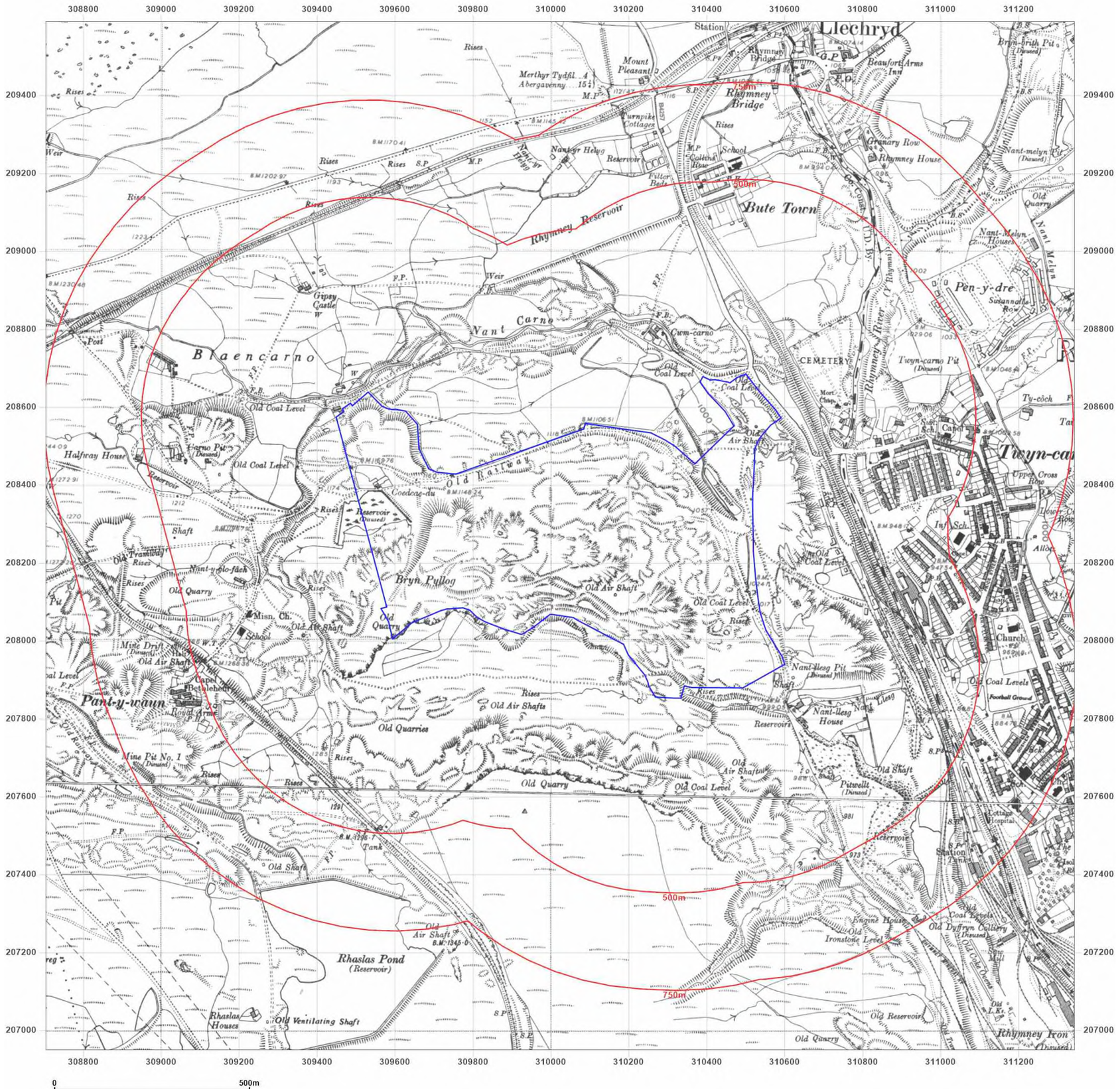
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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC
Grid Ref: 310023, 208269

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560

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Revised 1948
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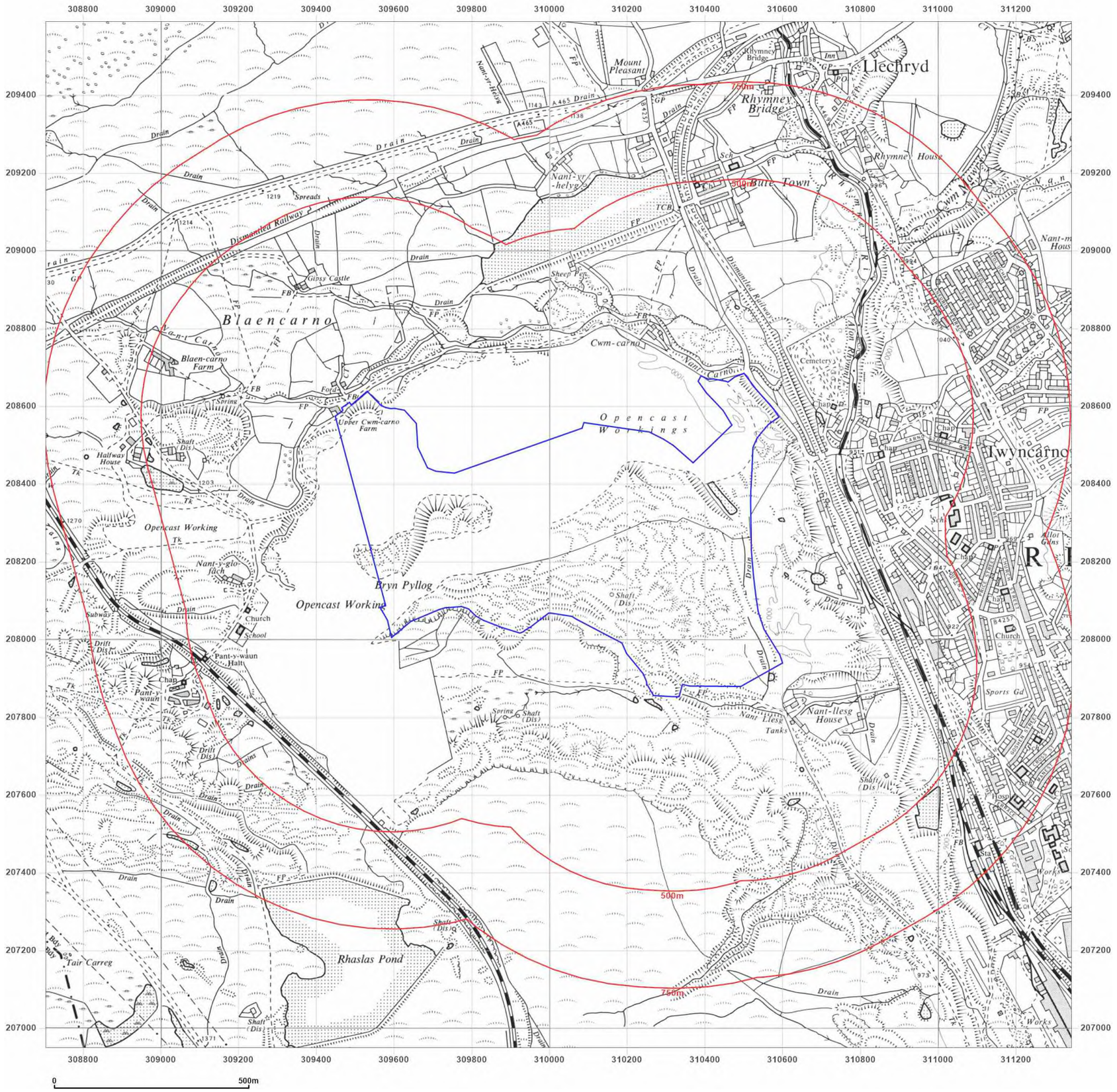
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Report Ref: GSWA1-GUQ-92I-HVI-INC
Grid Ref: 310023, 208269

Map Name: Provisional

Map date: **1964-1965**

Scale: 1:10,560

Printed at: 1:10,560

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

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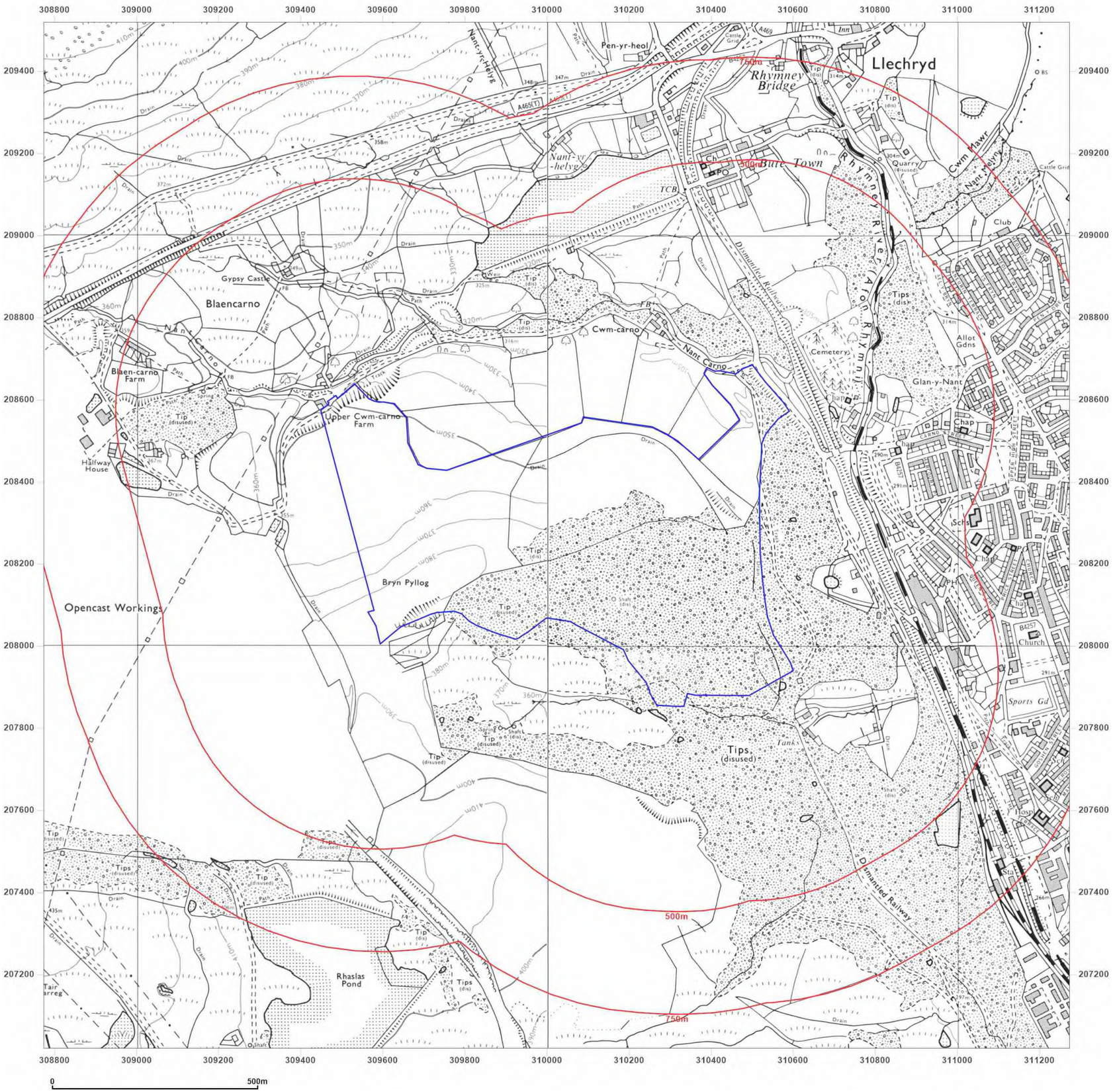
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Report Ref: GSWA1-GUQ-92I-HVI-INC
Grid Ref: 310023, 208269

Map Name: National Grid

Map date: **1973-1977**

Scale: 1:10,000

Printed at: 1:10,000

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Revised 1977
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Copyright 1977
Levelled 1975

Surveyed 1972
Revised 1973
Edition N/A
Copyright 1973
Levelled N/A

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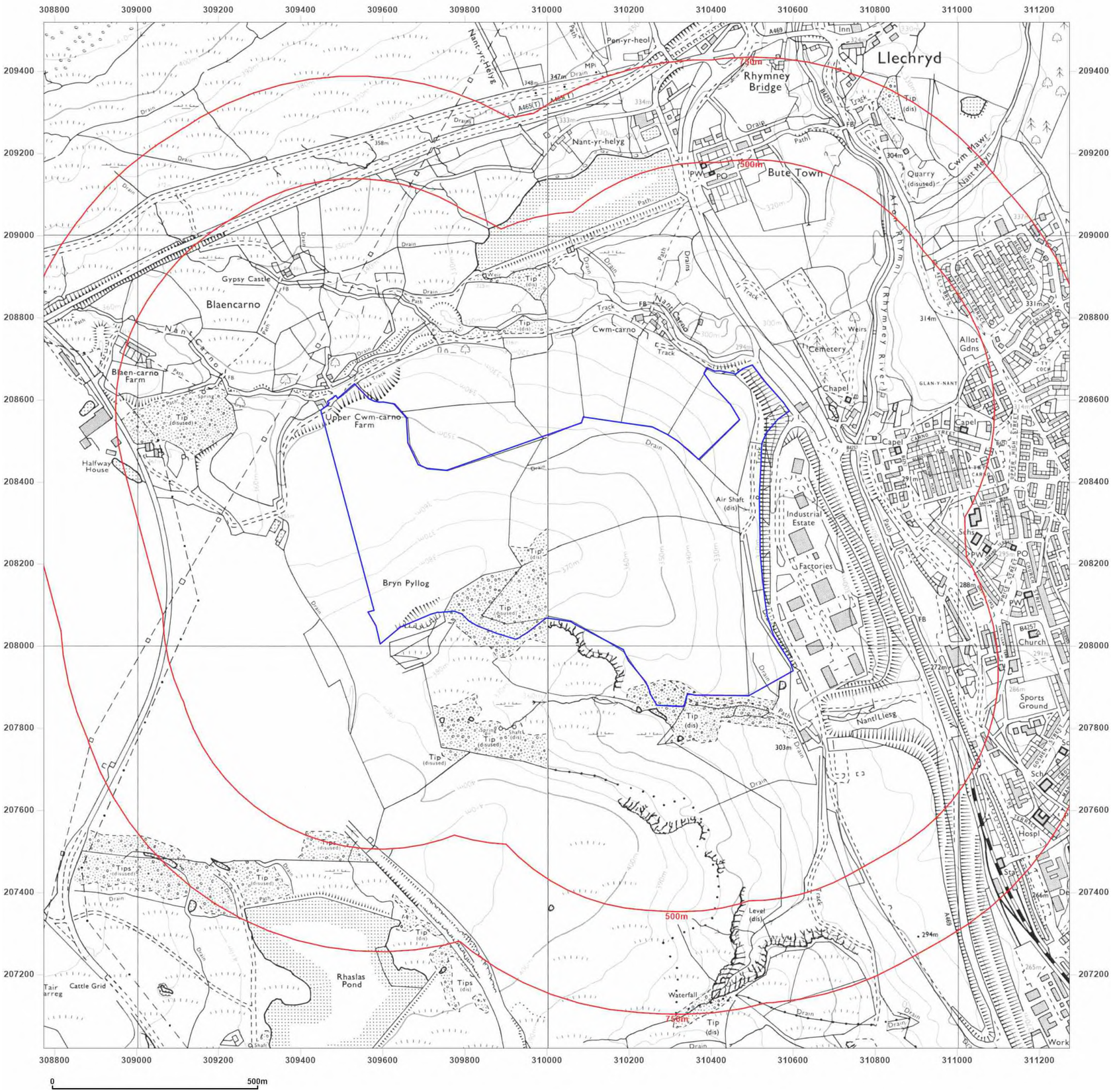
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Report Ref: GSWA1-GUQ-92I-HVI-INC
Grid Ref: 310023, 208269

Map Name: National Grid

Map date: **1982-1985**

Scale: 1:10,000

Printed at: 1:10,000

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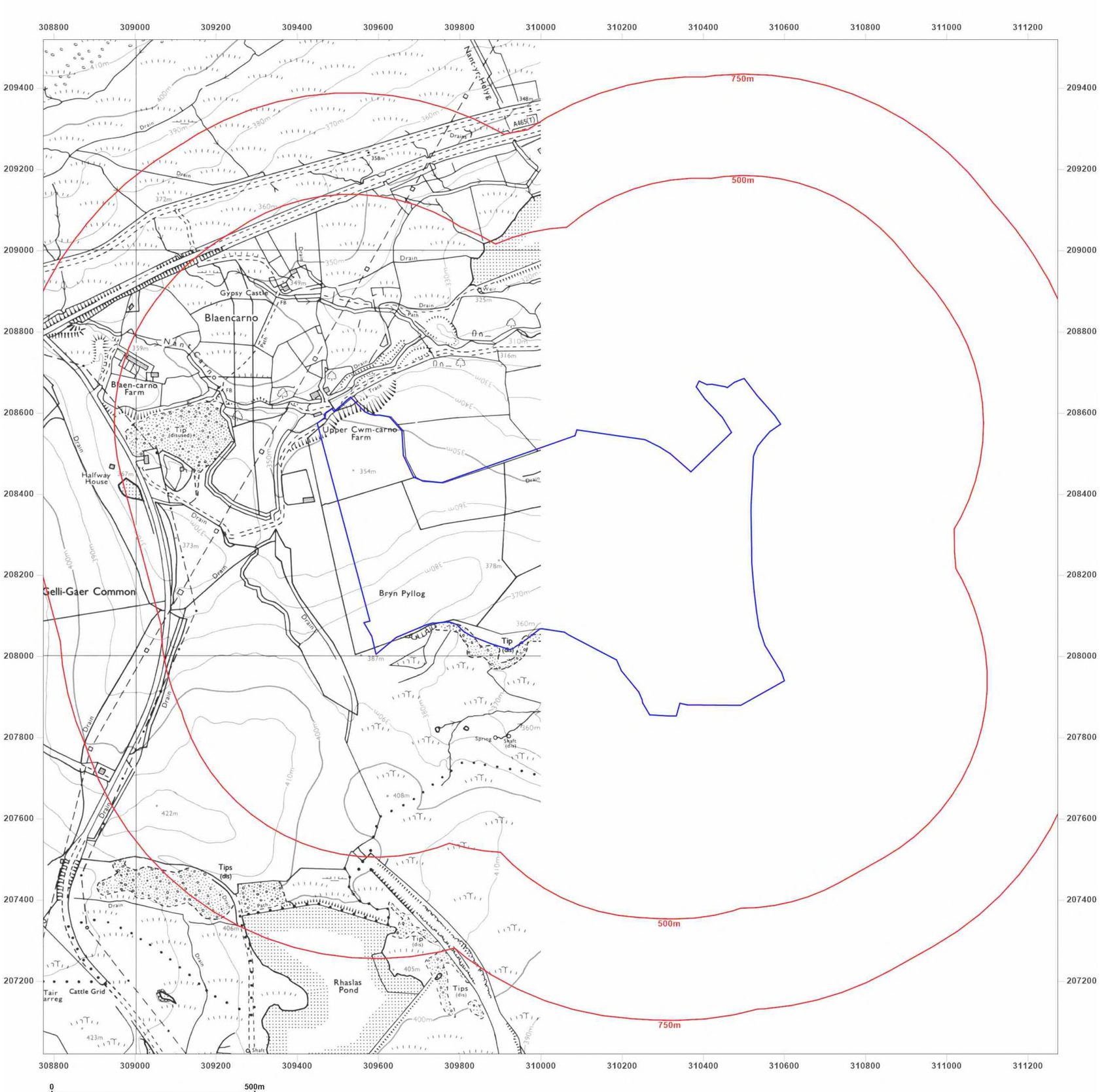
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC
Grid Ref: 310023, 208269

Map Name: National Grid

Map date: **1992**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1989
Revised 1992
Edition N/A
Copyright N/A
Levelled N/A

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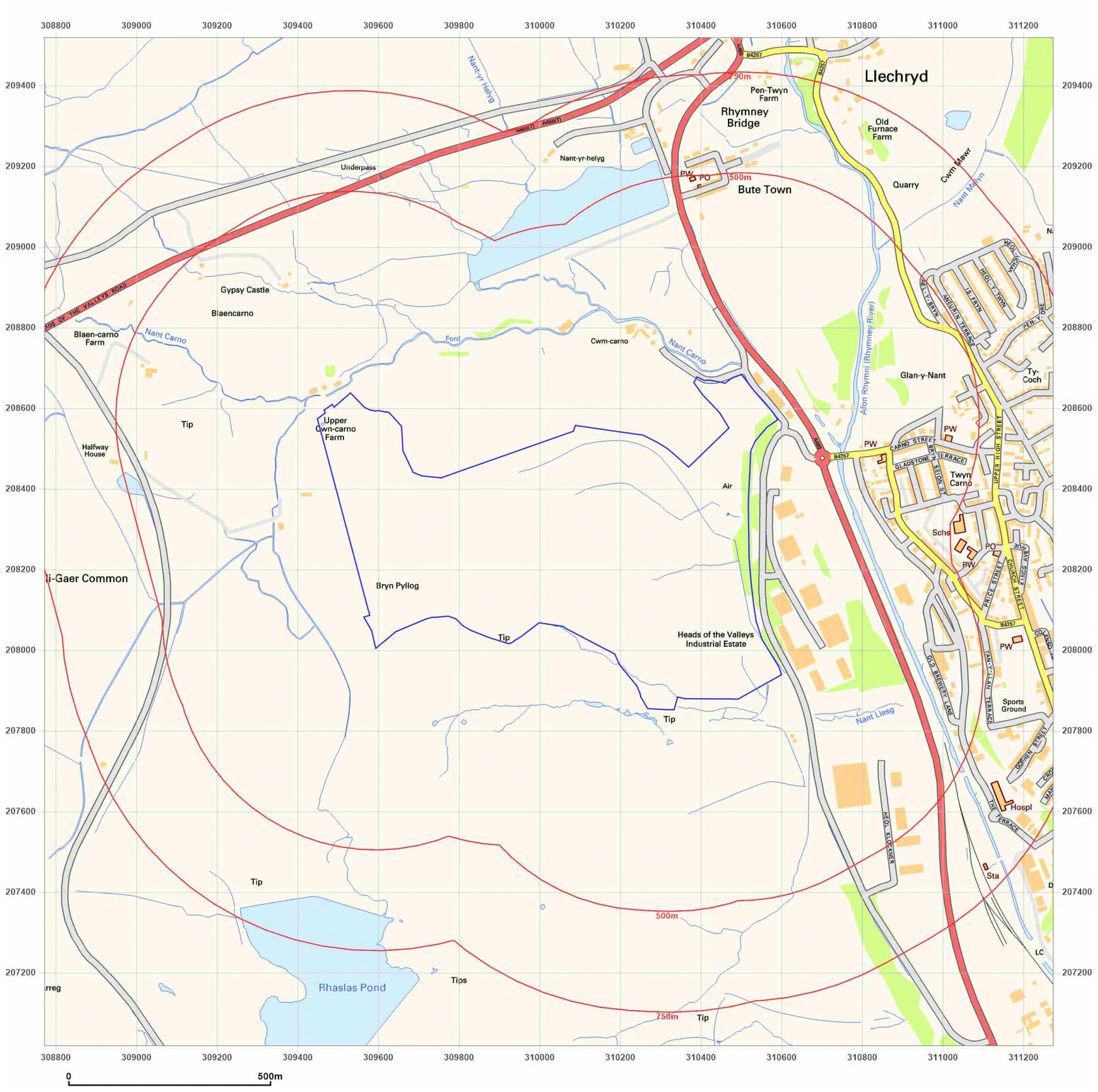
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Site Details:	
Rhymney, NP22	
Client Ref:	CA11641
Report Ref:	GSWA1-GUQ-92I-HVI-INC
Grid Ref:	310023, 208269
Map Name:	National Grid
Map date:	**2001**
Scale:	1:10,000
Printed at:	1:10,000

N
W E
S

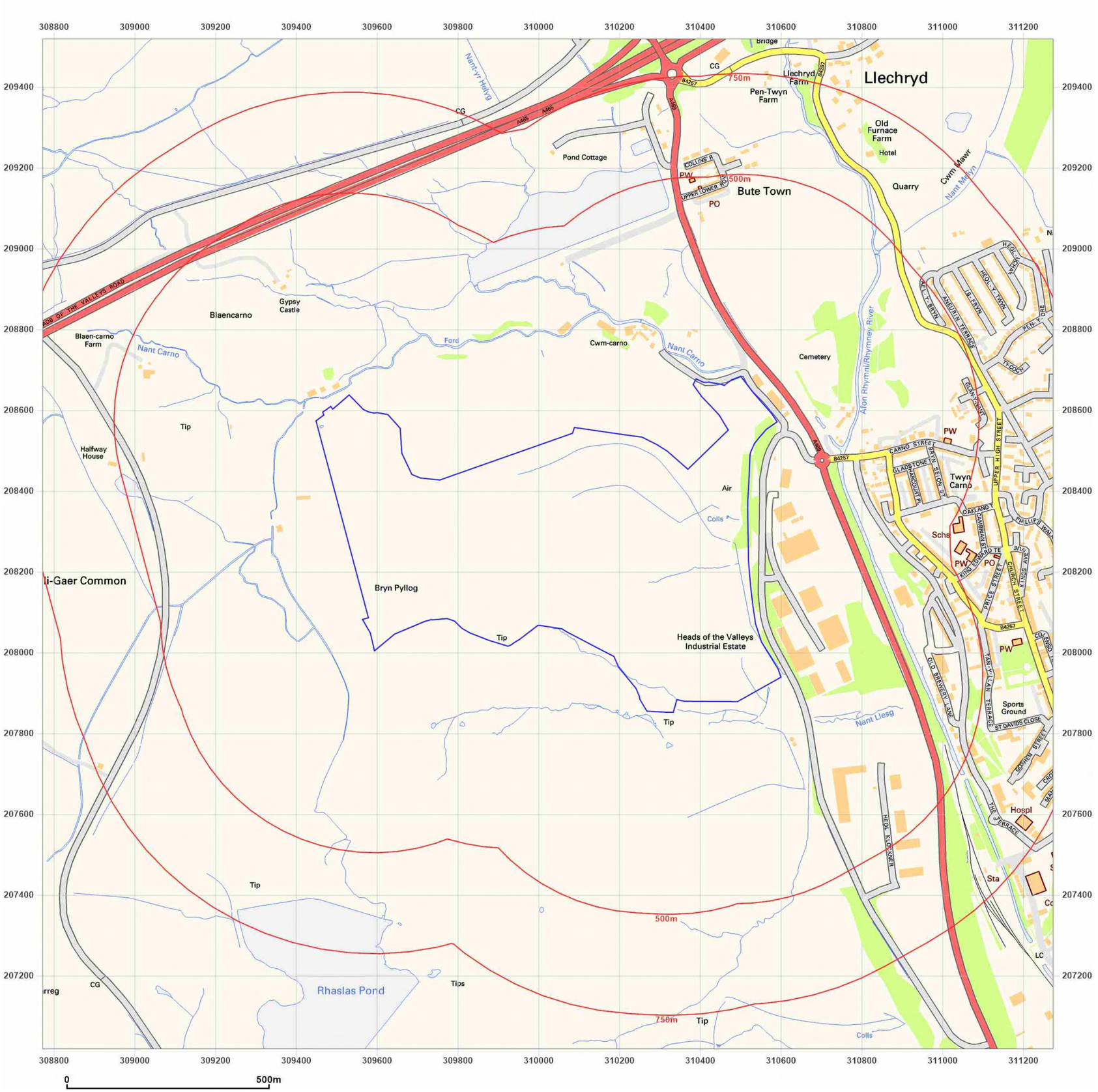
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC
Grid Ref: 310023, 208269

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
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2010

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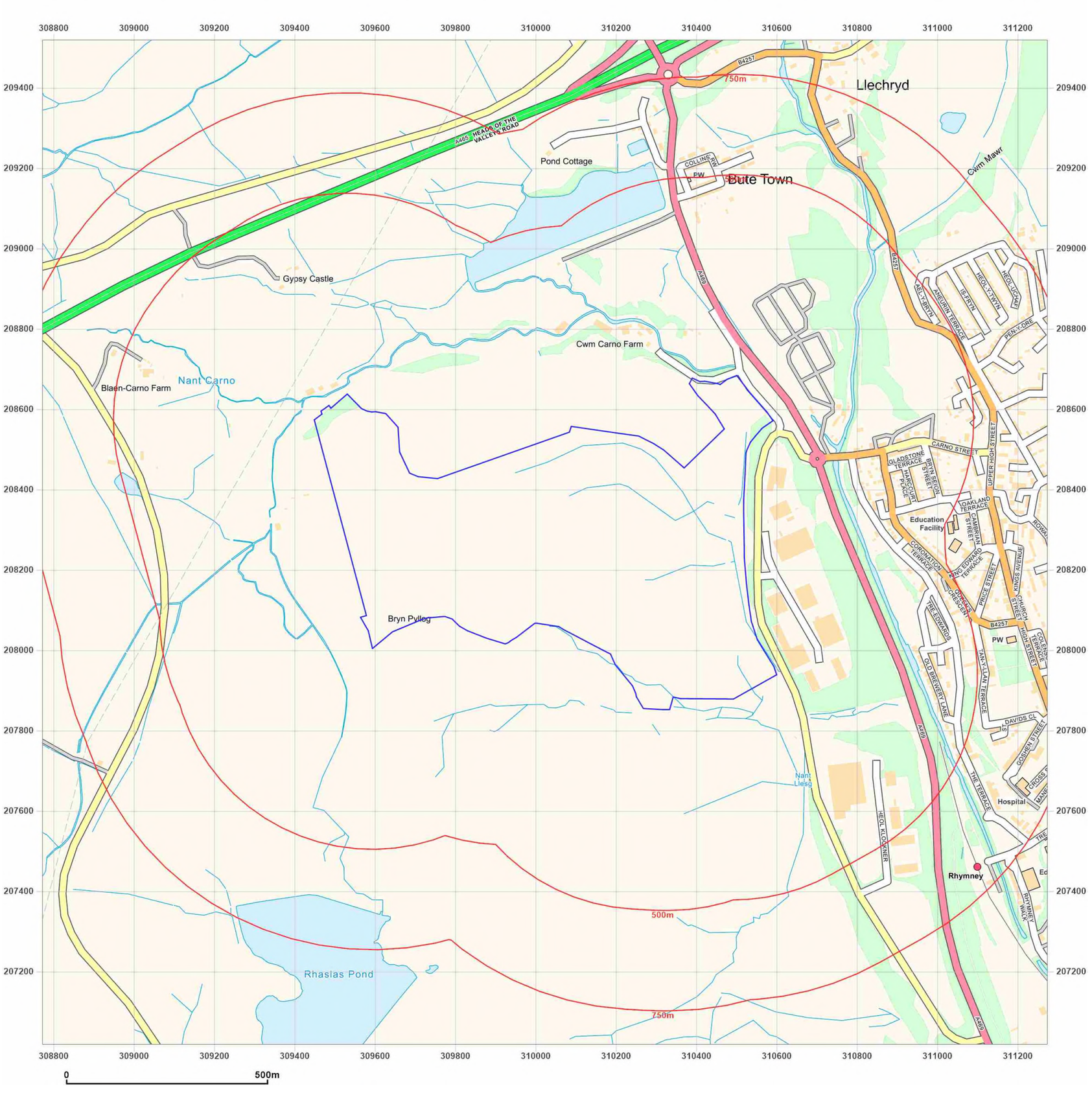
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC
Grid Ref: 310023, 208269

Map Name: National Grid

Map date: **2023**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
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2023

Groundsure INSIGHTS

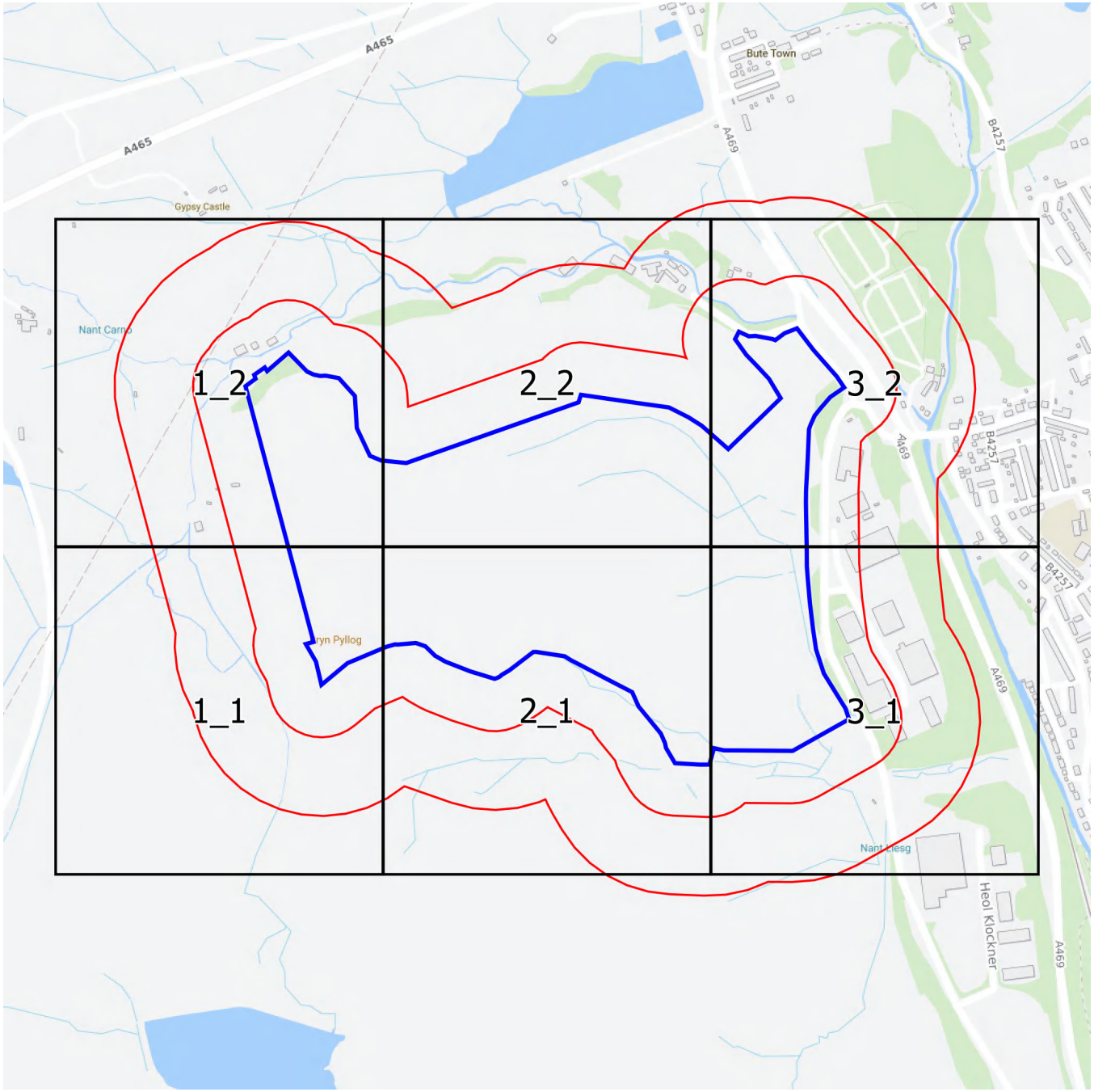
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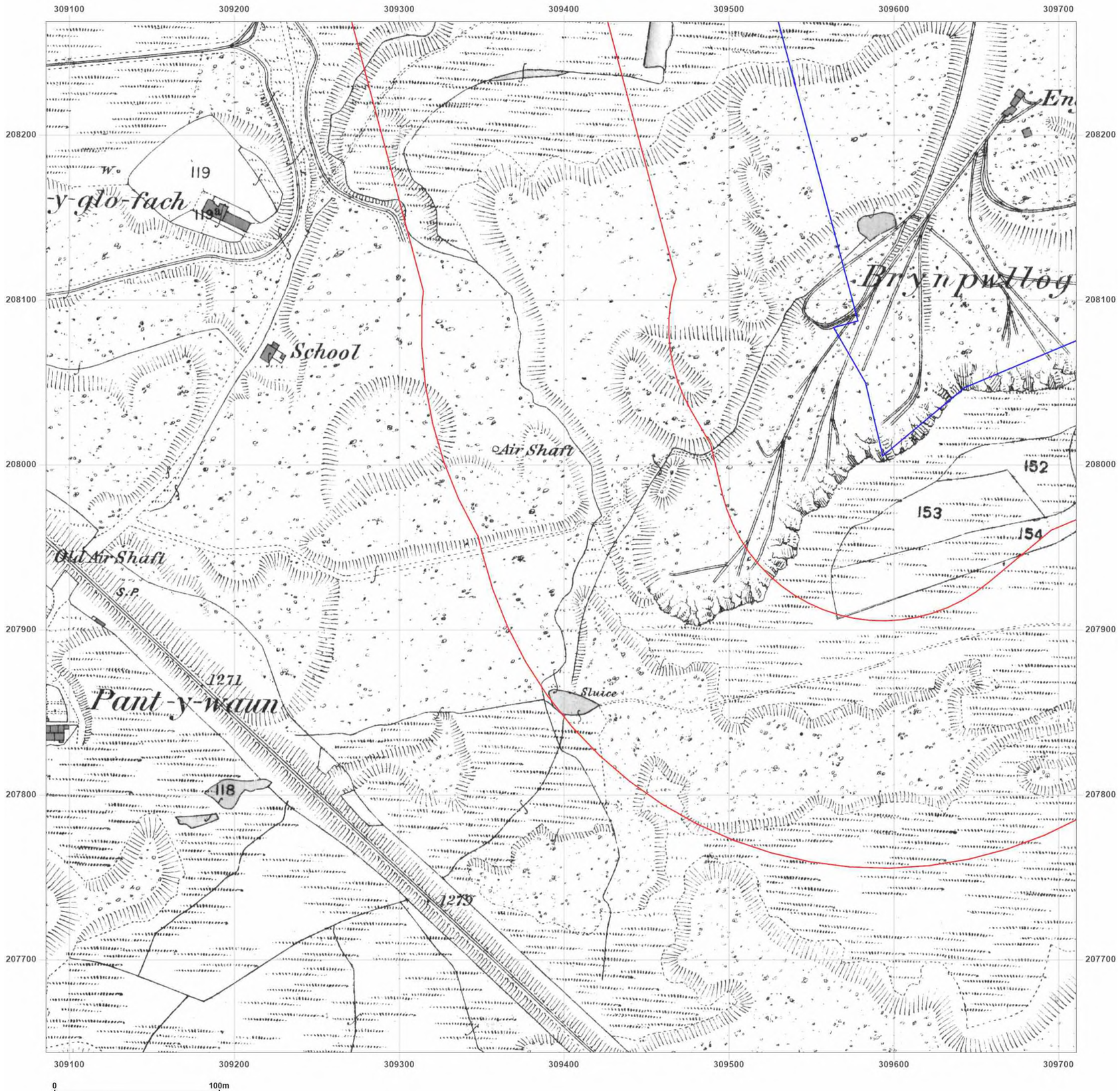
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INSIGHTS

1:2,500 Scale Grid Index

N
W
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S



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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_1
Grid Ref: 309398, 207956

Map Name: County Series

Map date: **1873**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1873
Revised 1873
Edition N/A
Copyright N/A
Levelled N/A

Groundsure INSIGHTS

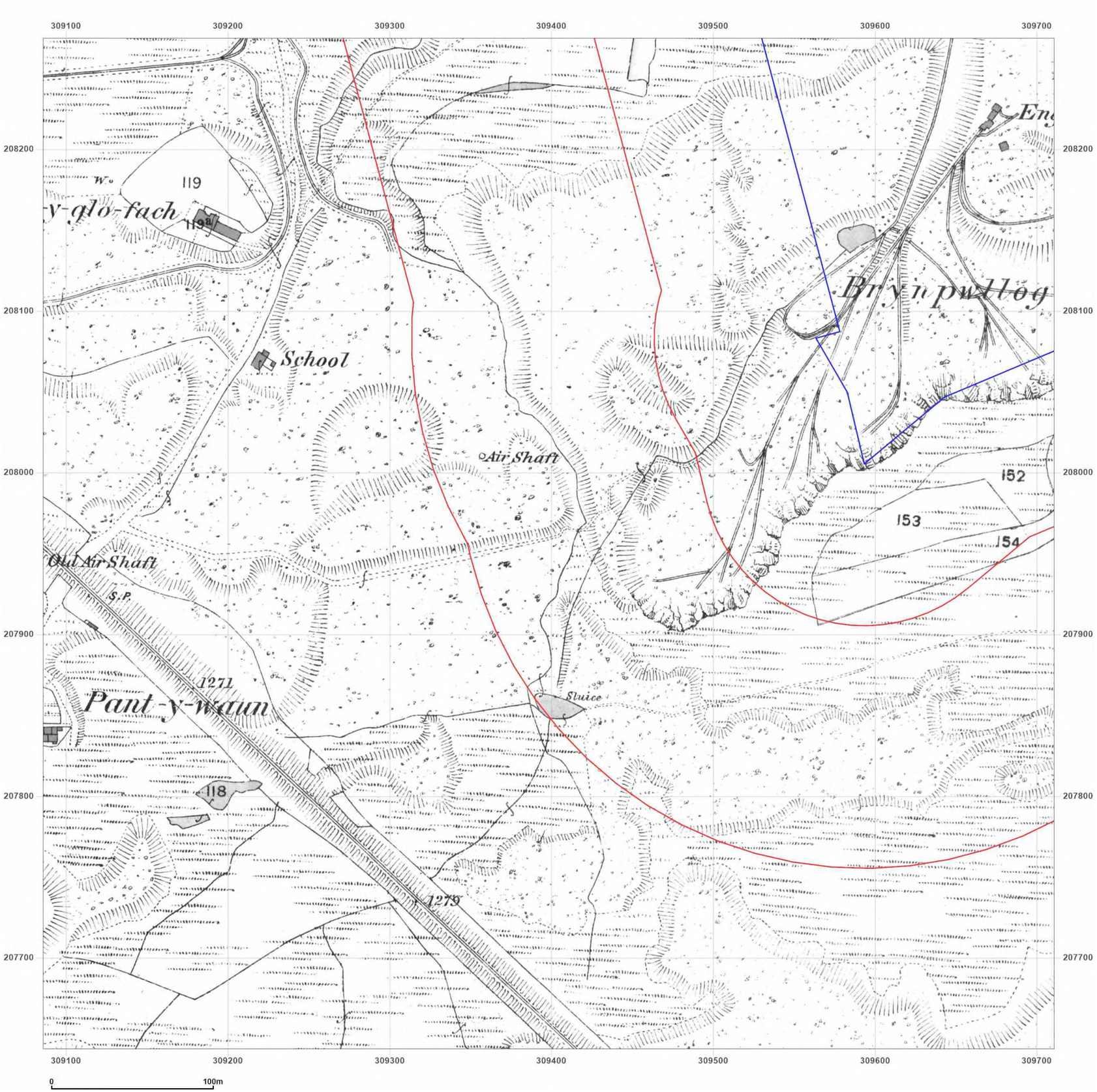
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_1
Grid Ref: 309398, 207956

Map Name: County Series

Map date: **1875**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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

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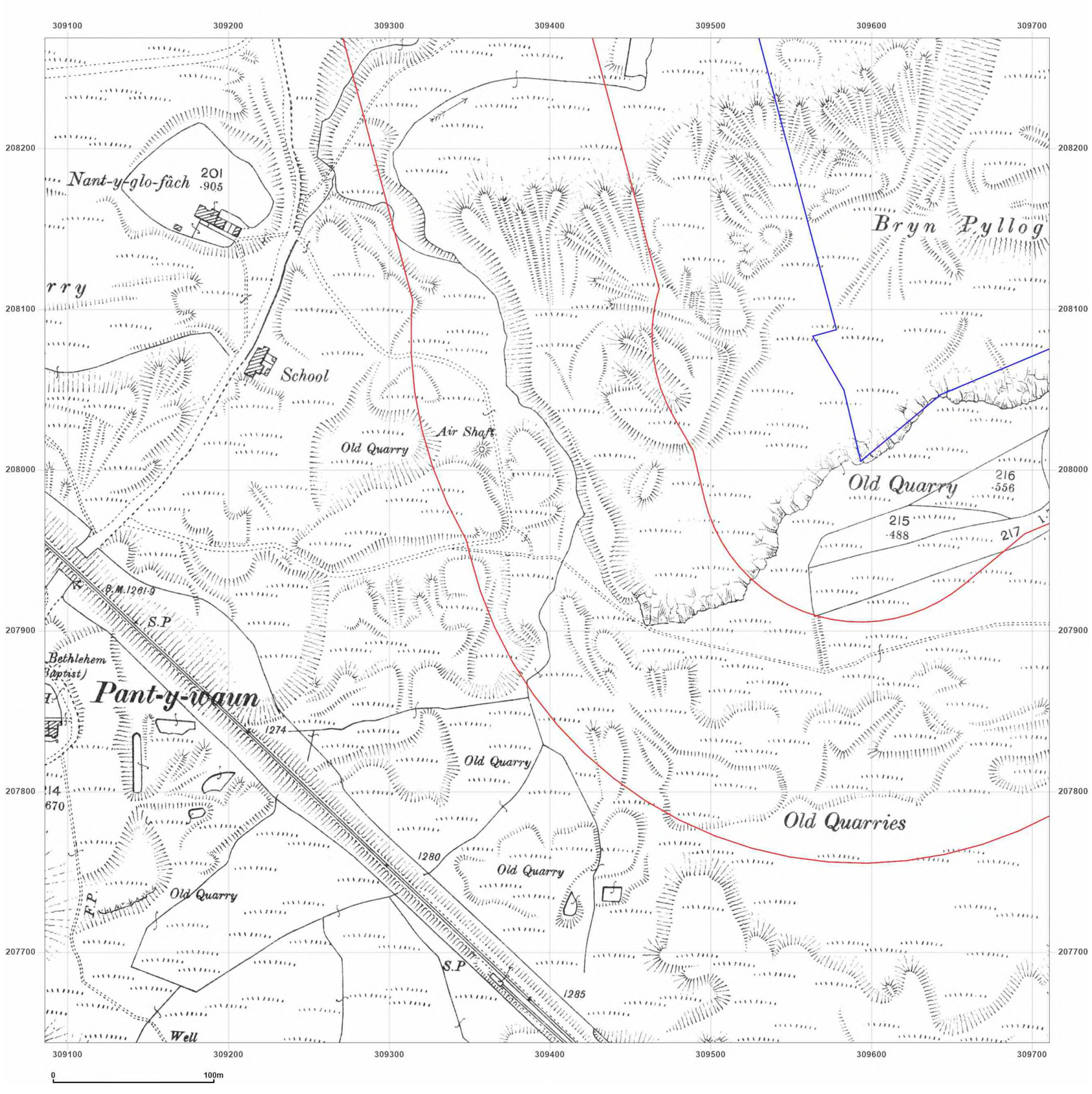
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_1
Grid Ref: 309398, 207956

Map Name: County Series

Map date: **1901**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1901
Revised 1901
Edition N/A
Copyright N/A
Levelled N/A

Groundsure INSIGHTS

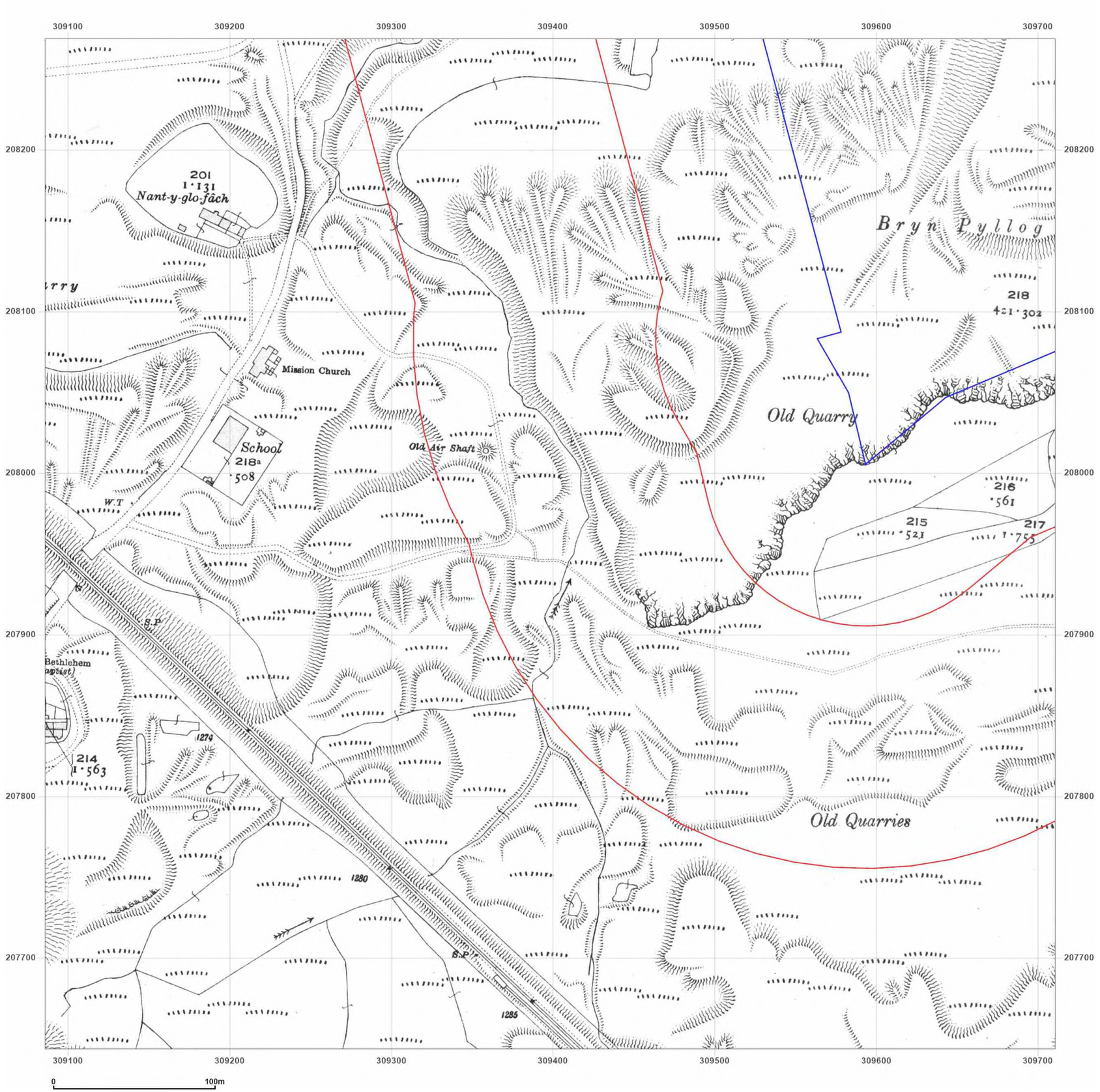
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_1
Grid Ref: 309398, 207956

Map Name: County Series

Map date: **1919**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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

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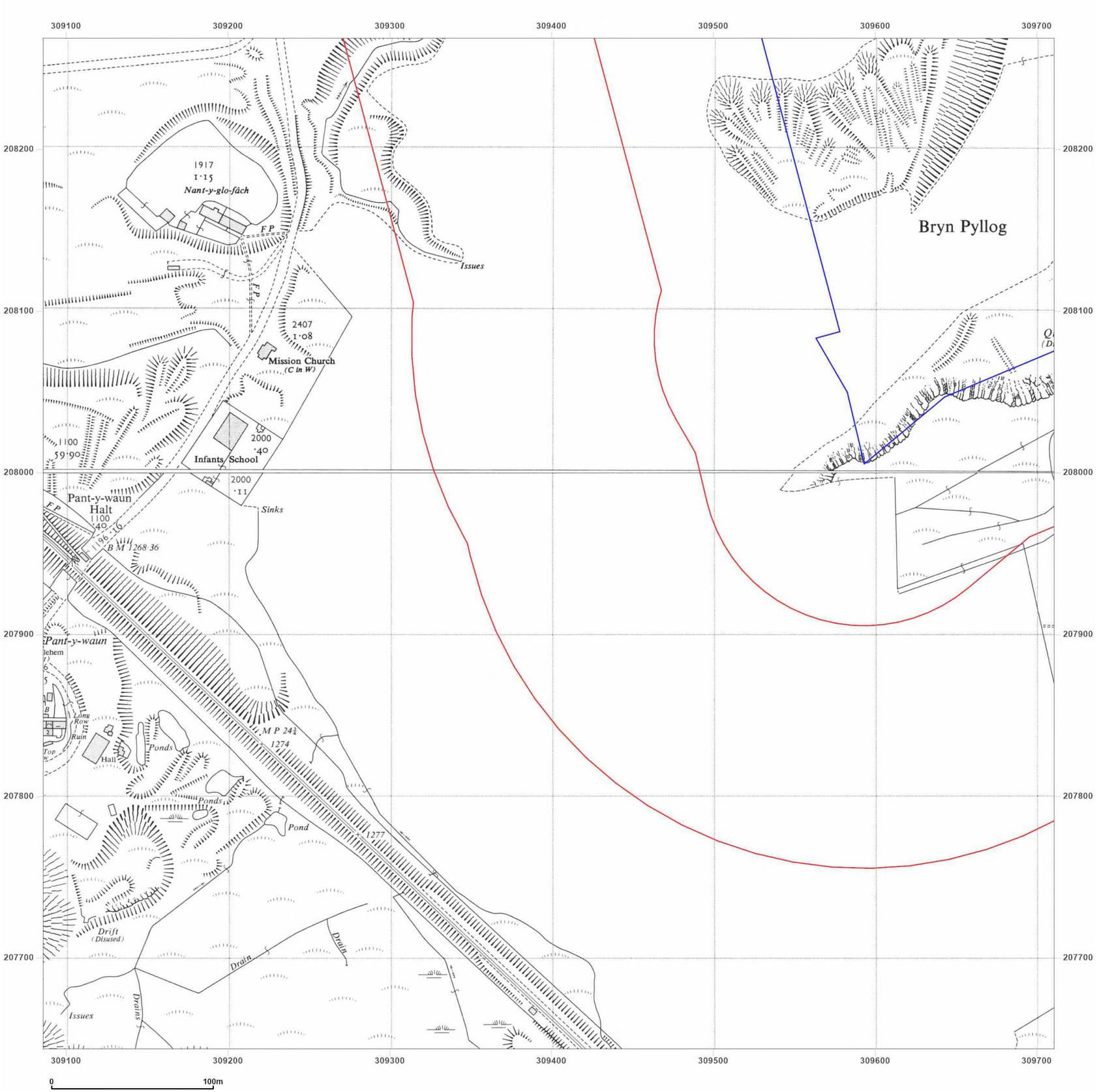
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_1
Grid Ref: 309398, 207956

Map Name: National Grid

Map date: **1960**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1962
Levelled 1958

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1962
Levelled 1959

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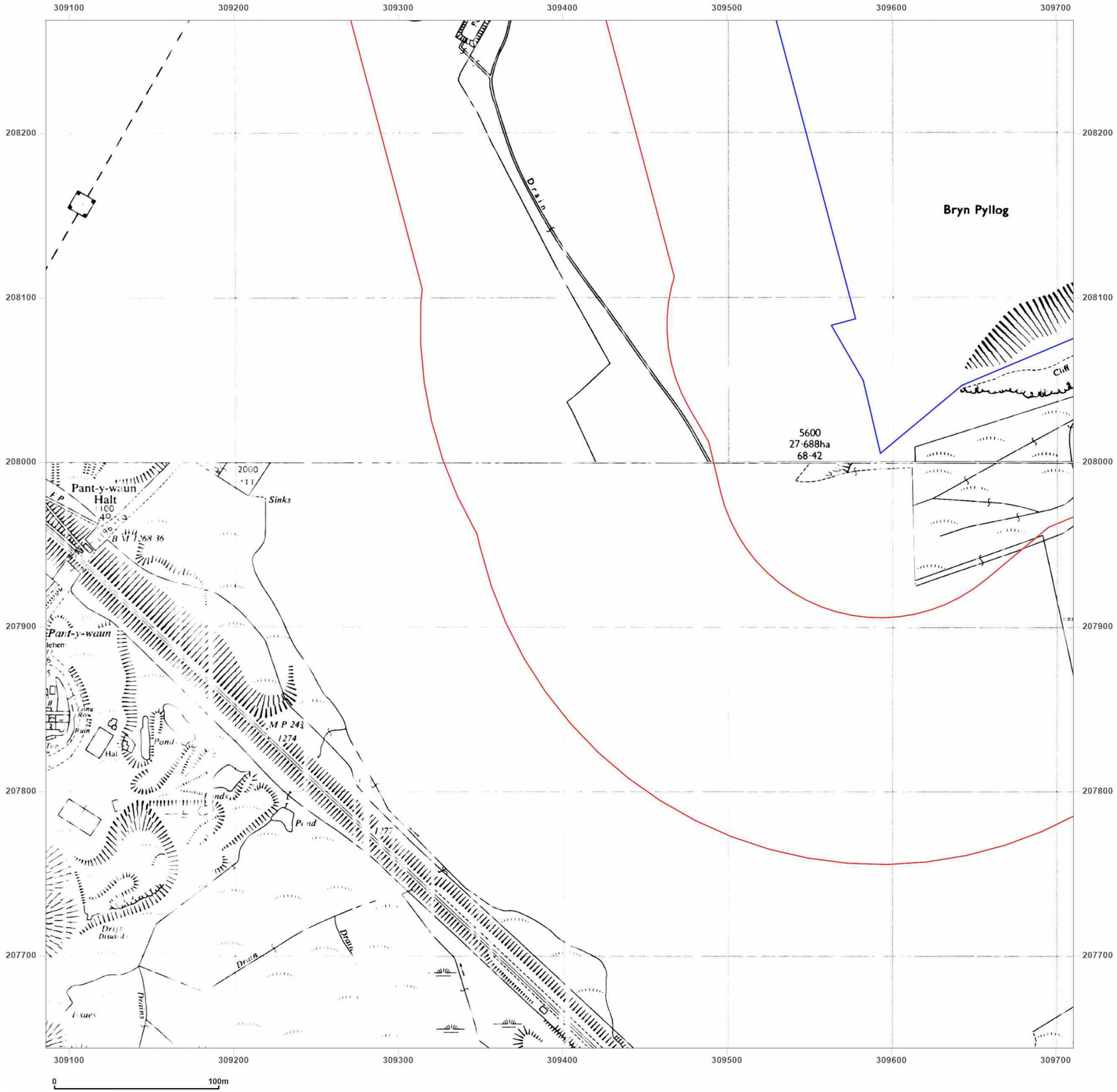
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Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_1
Grid Ref: 309398, 207956

Map Name: National Grid

Map date: **1961-1962**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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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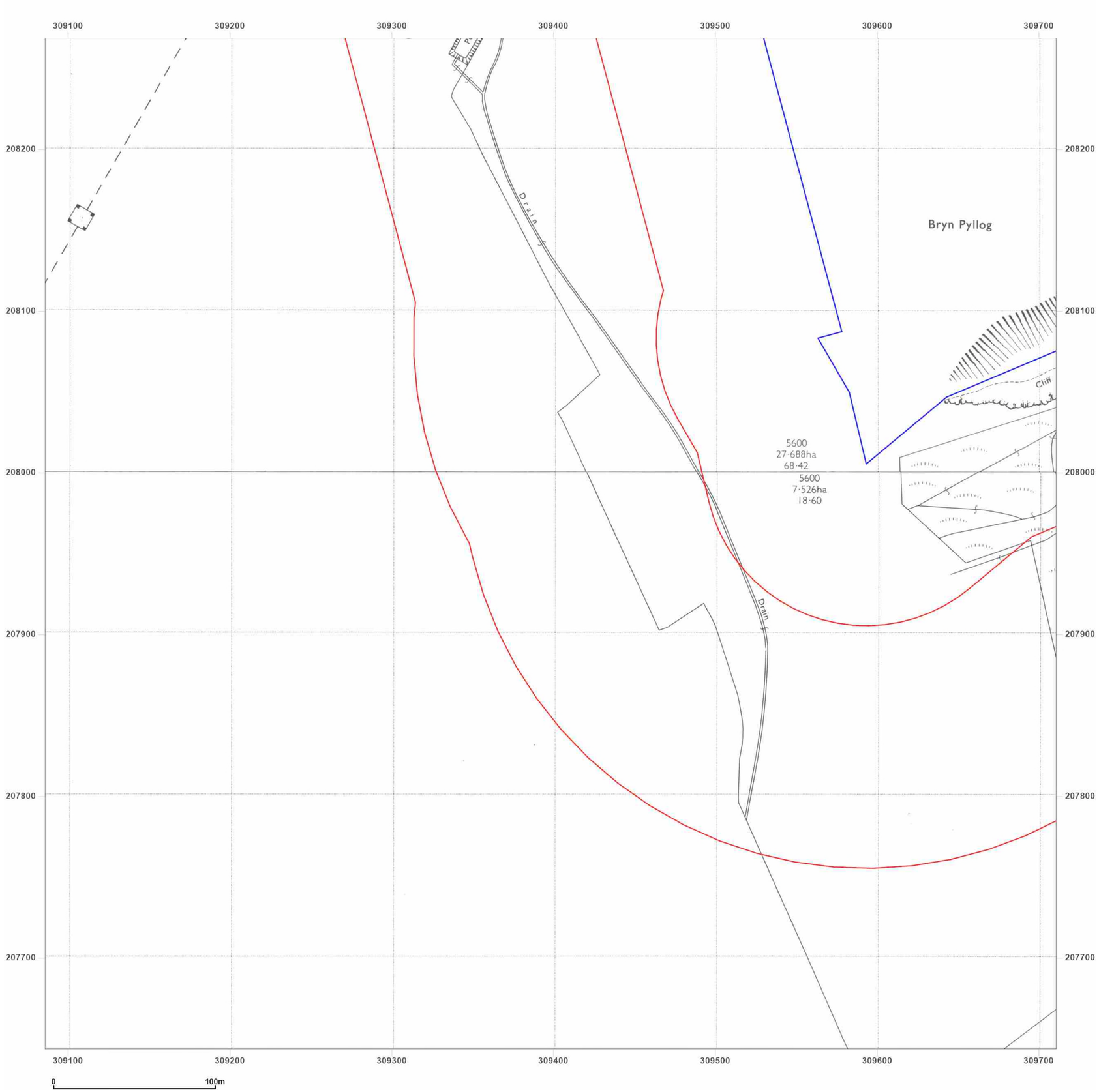
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_1
Grid Ref: 309398, 207956

Map Name: National Grid

Map date: **1972-1973**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1972
Revised 1972
Edition N/A
Copyright N/A
Levelled 1958

Surveyed 1973
Revised 1973
Edition N/A
Copyright 1974
Levelled 1959

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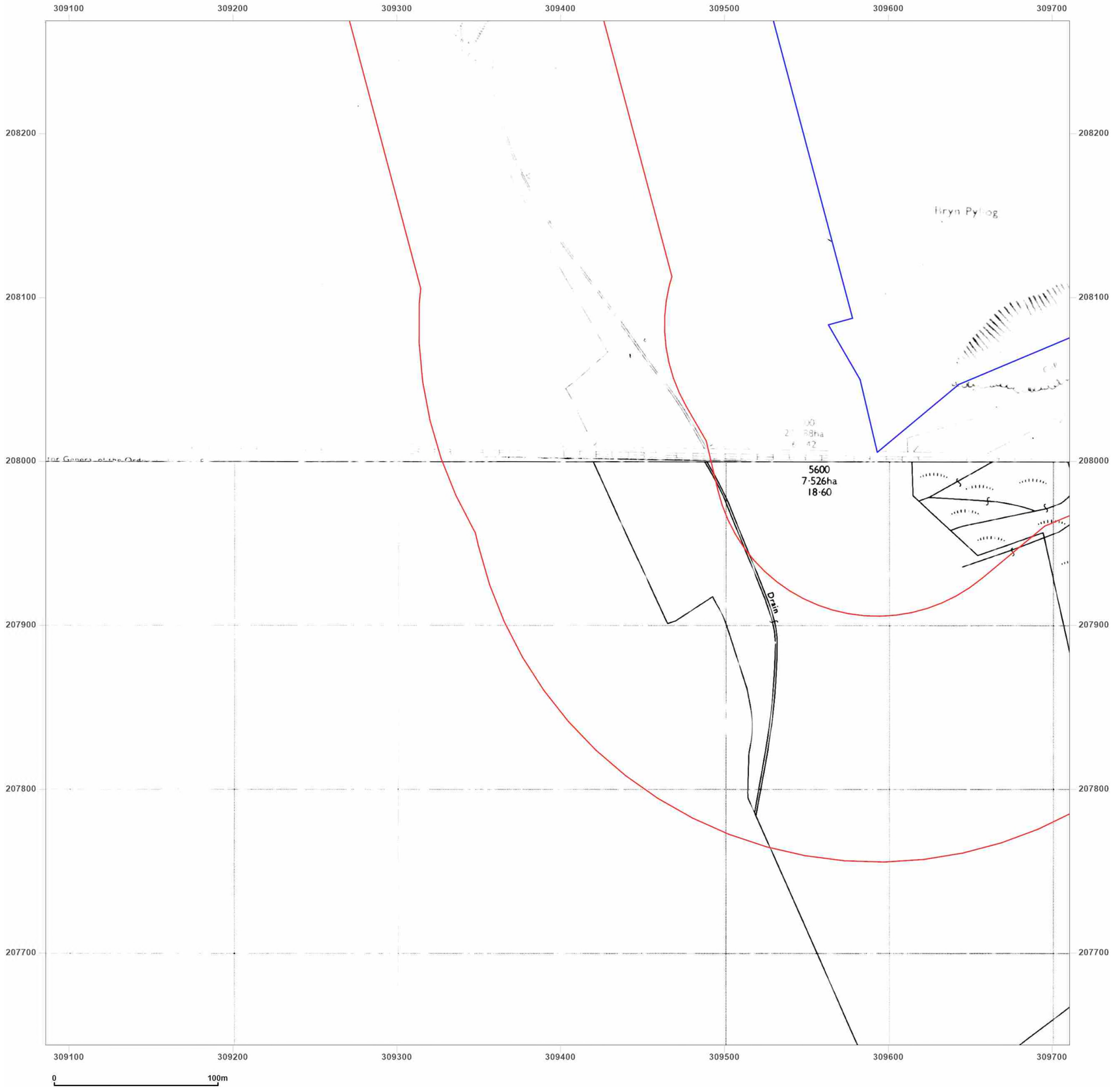
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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_1
Grid Ref: 309398, 207956

Map Name: National Grid

Map date: **1974-1975**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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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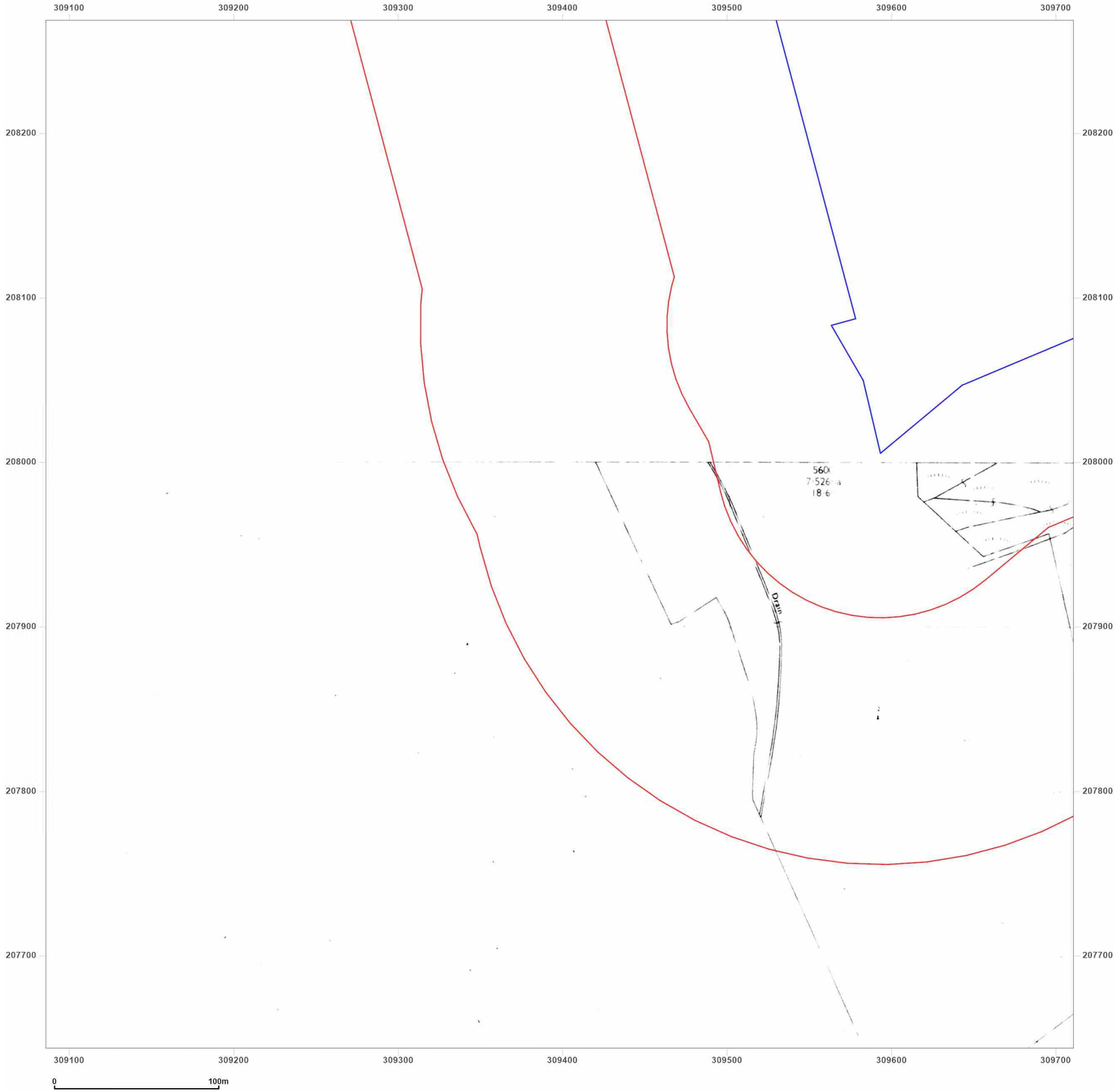
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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_1
Grid Ref: 309398, 207956

Map Name: National Grid

Map date: **1975**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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

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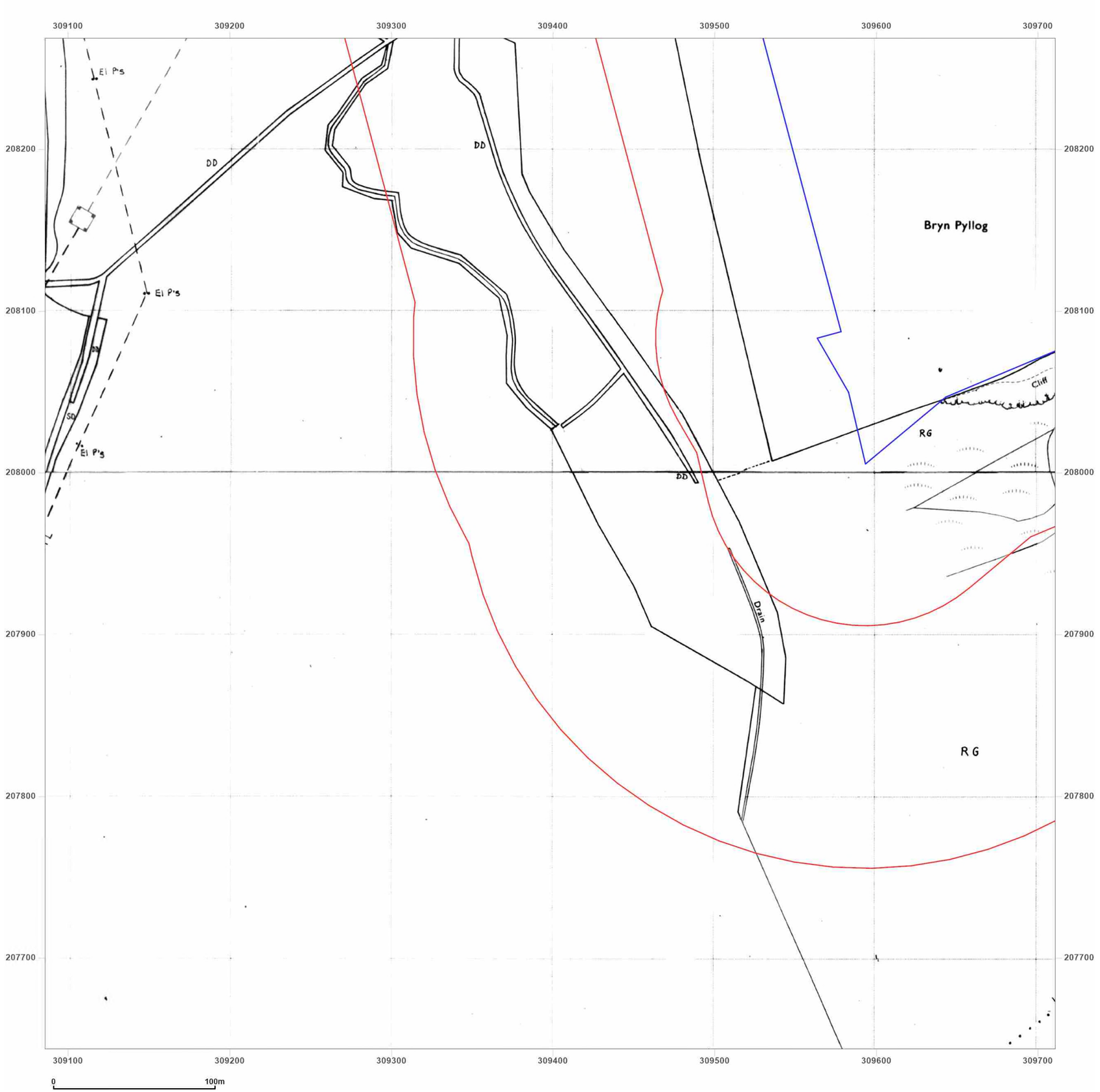
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_1
Grid Ref: 309398, 207956

Map Name: National Grid

Map date: **1988**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1958
Revised 1988
Edition N/A
Copyright 1988
Levelled 1958

Surveyed 1965
Revised 1988
Edition N/A
Copyright 1988
Levelled 1965

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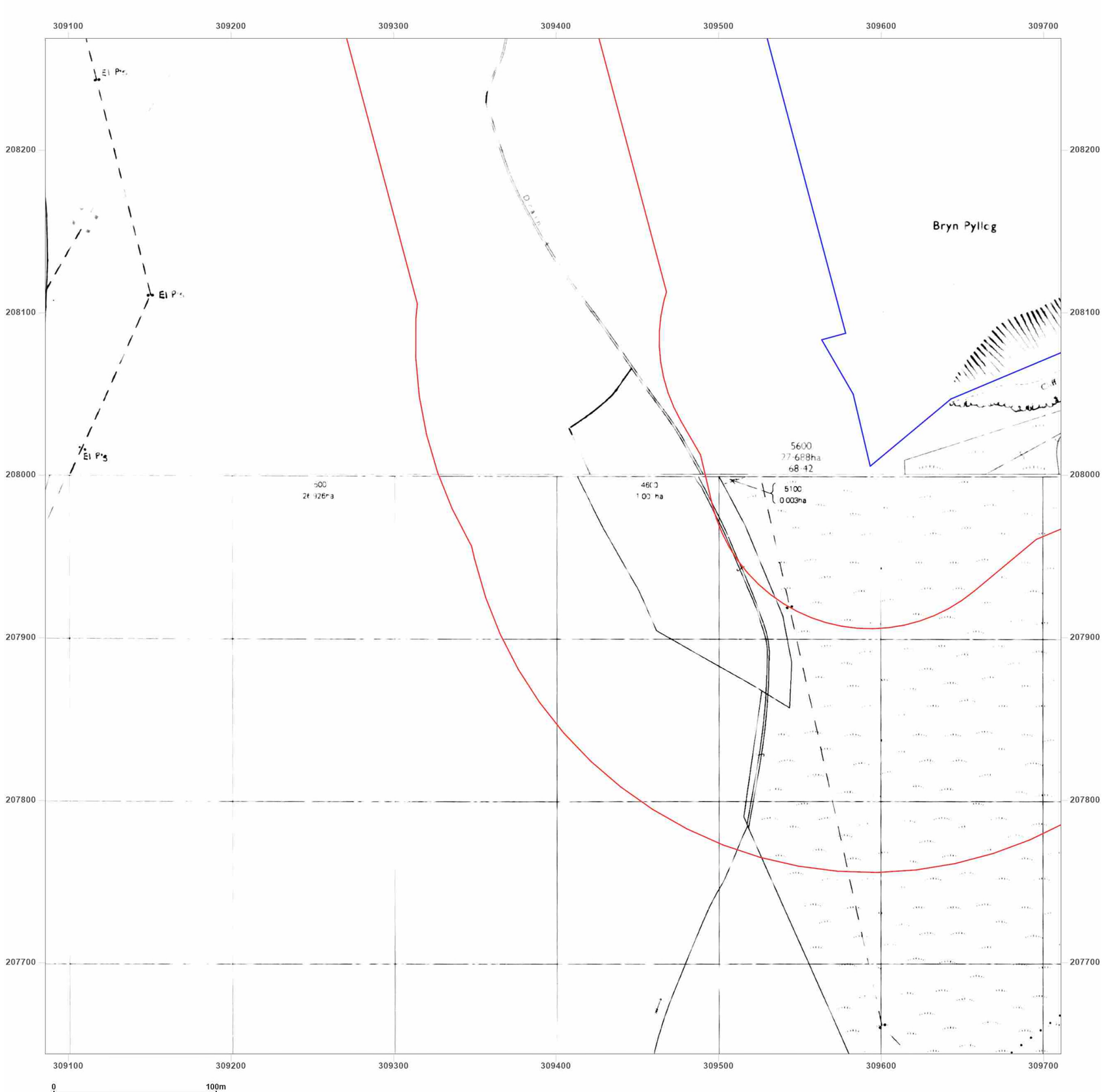
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_1
Grid Ref: 309398, 207956

Map Name: National Grid

Map date: **1986-1991**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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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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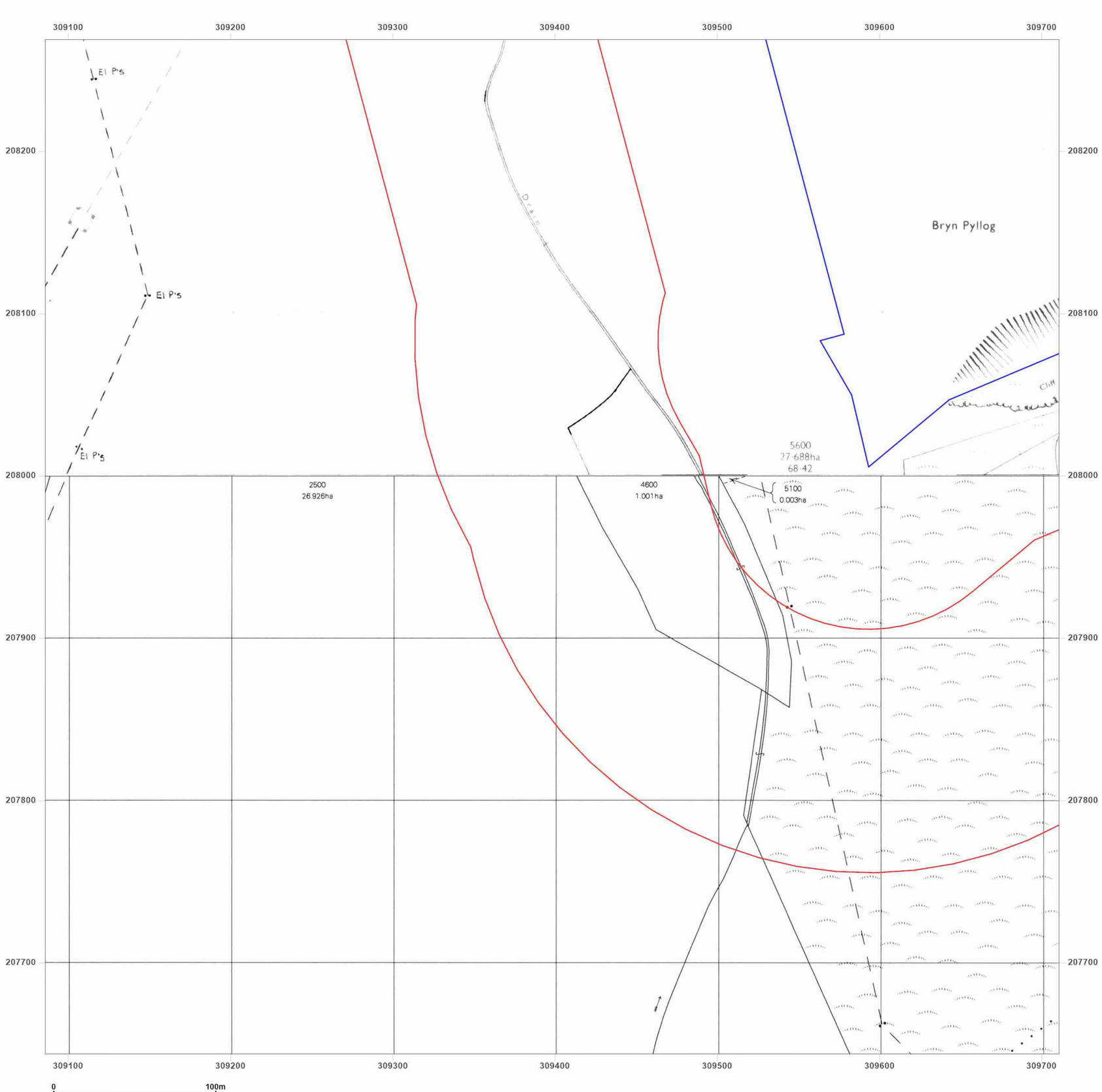
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_1
Grid Ref: 309398, 207956

Map Name: National Grid

Map date: **1986-1991**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1958
Revised 1986
Edition N/A
Copyright 1986
Levelled 1958

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

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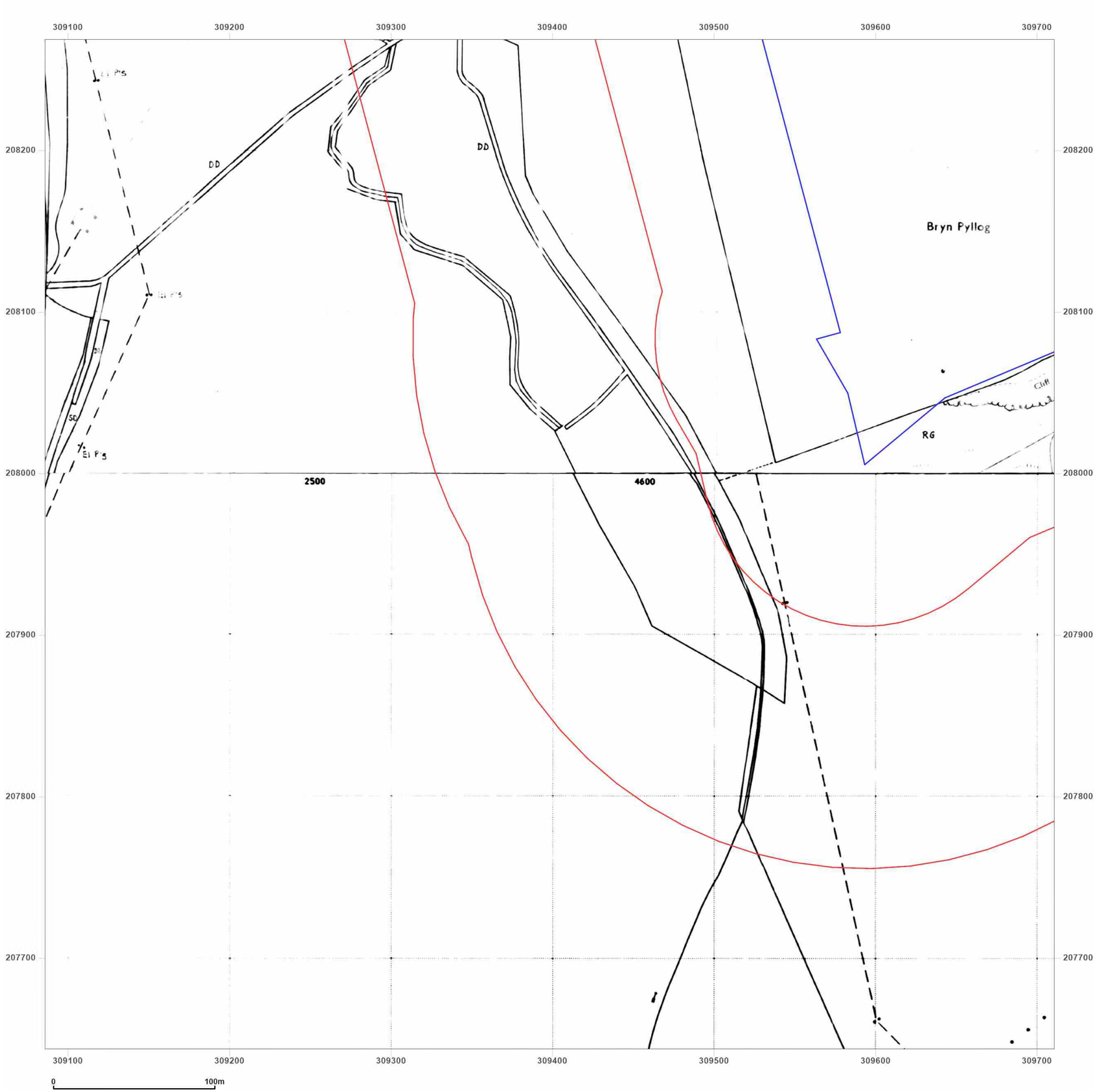
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_1
Grid Ref: 309398, 207956

Map Name: National Grid

Map date: **1988-1993**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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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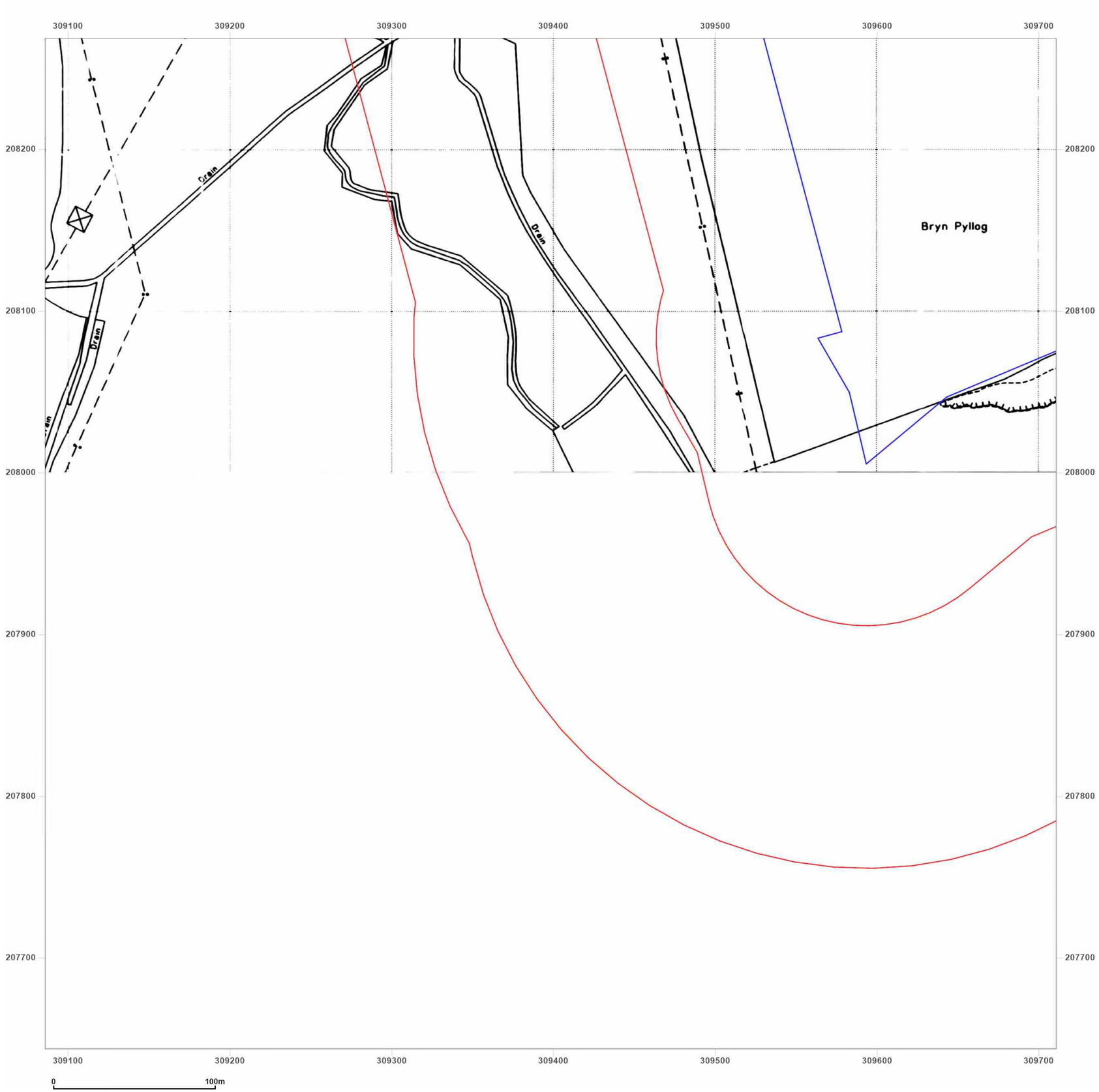
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_1
Grid Ref: 309398, 207956

Map Name: National Grid

Map date: **1993**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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

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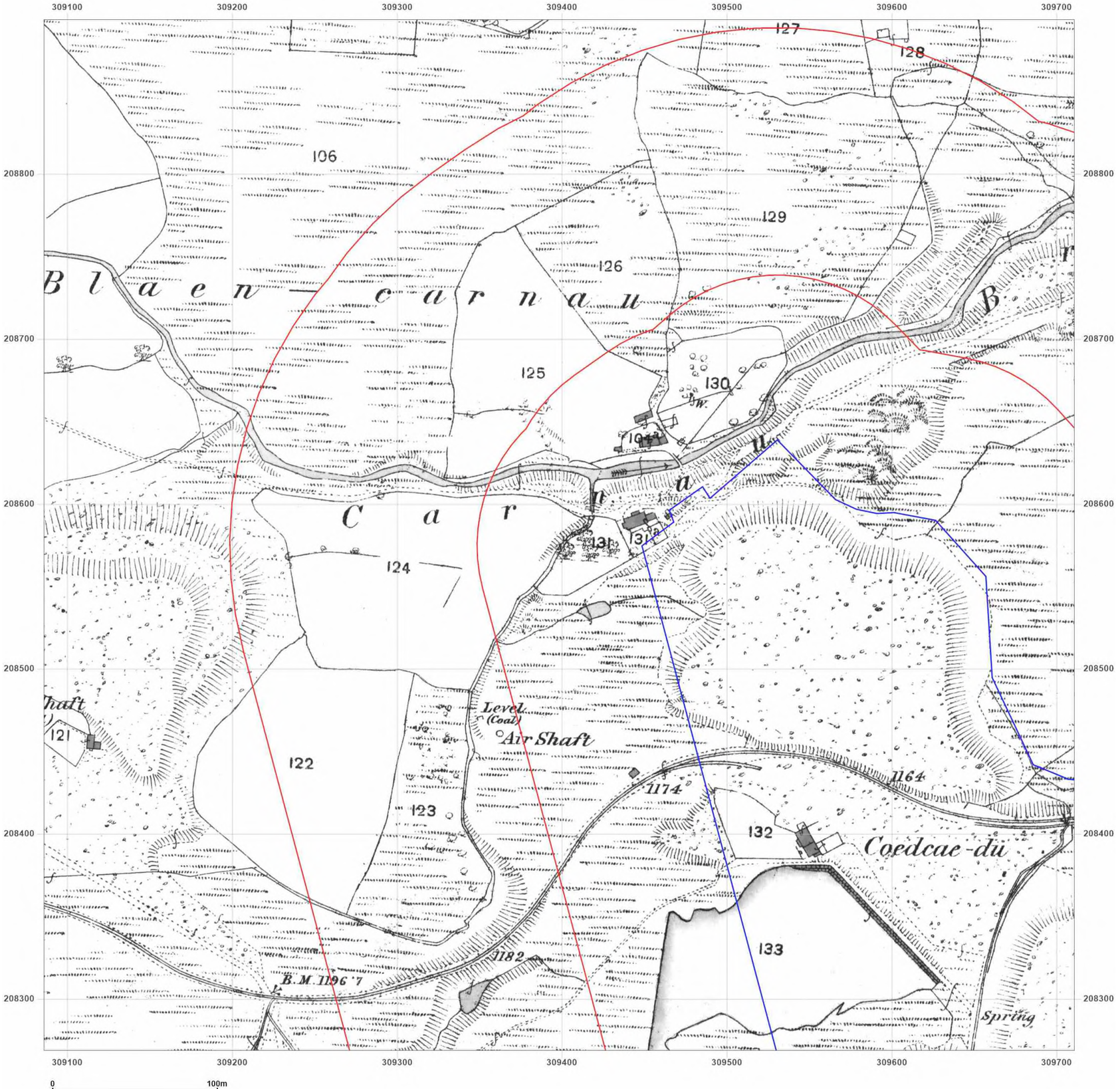
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_2
Grid Ref: 309398, 208581

Map Name: County Series

Map date: **1873**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1873
Revised 1873
Edition N/A
Copyright N/A
Levelled N/A

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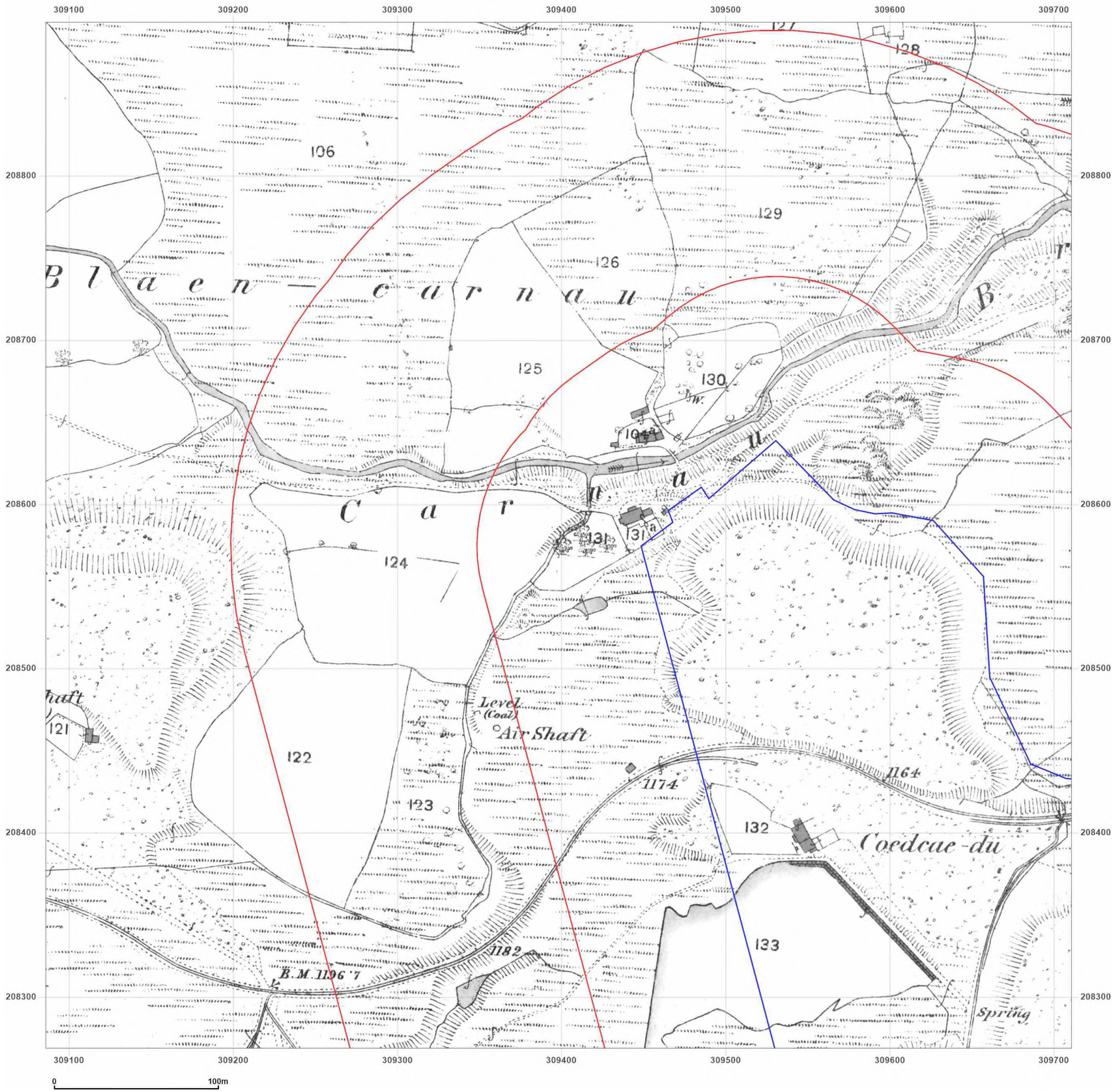
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_2
Grid Ref: 309398, 208581

Map Name: County Series

Map date: **1875**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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

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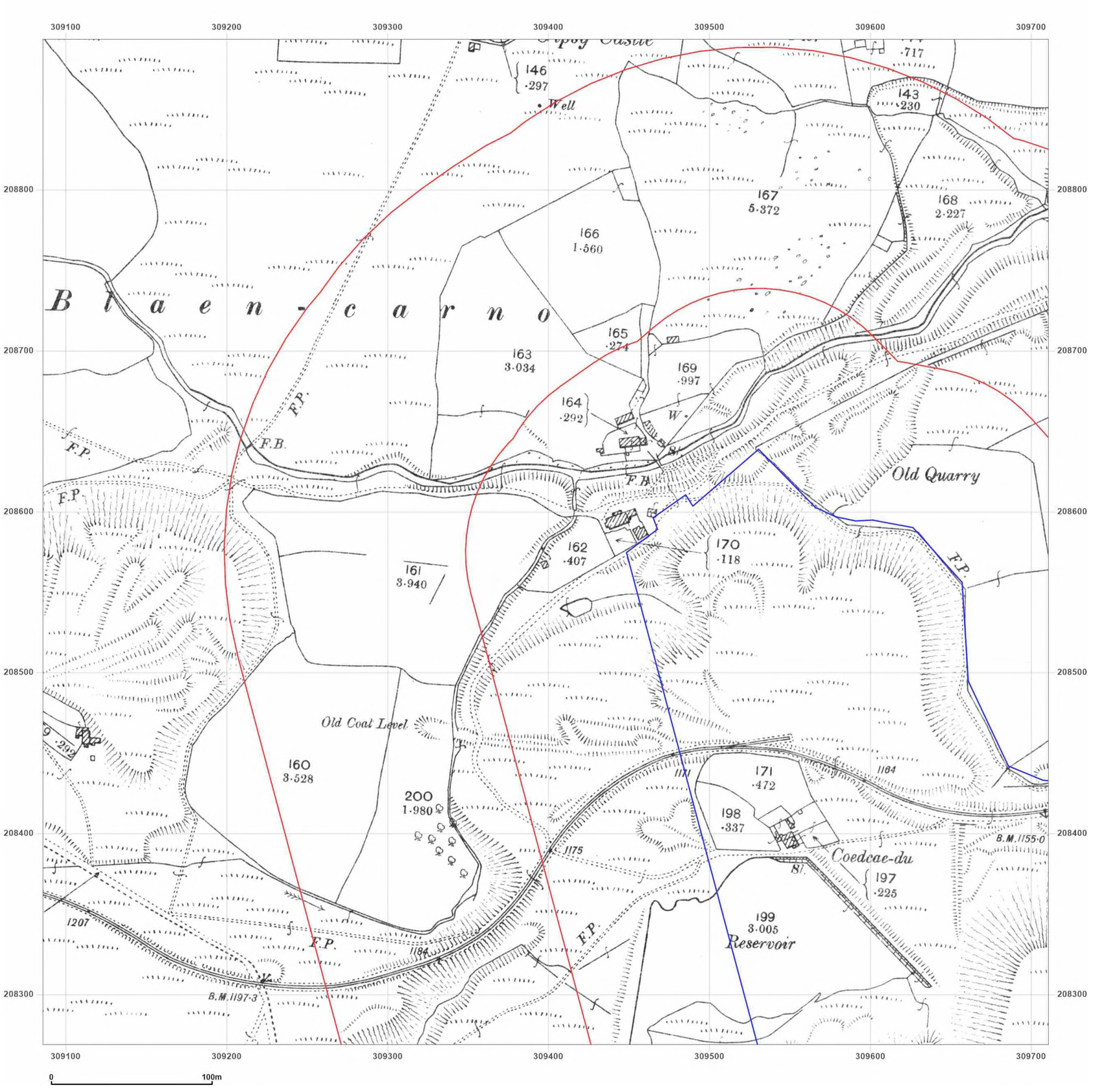
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_2
Grid Ref: 309398, 208581

Map Name: County Series

Map date: **1901**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1901
Revised 1901
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_2
Grid Ref: 309398, 208581

Map Name: County Series

Map date: **1919**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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

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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_2
Grid Ref: 309398, 208581

Map Name: National Grid

Map date: **1960**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1960
Revised 1960
Edition N/A
Copyright 1962
Levelled 1958

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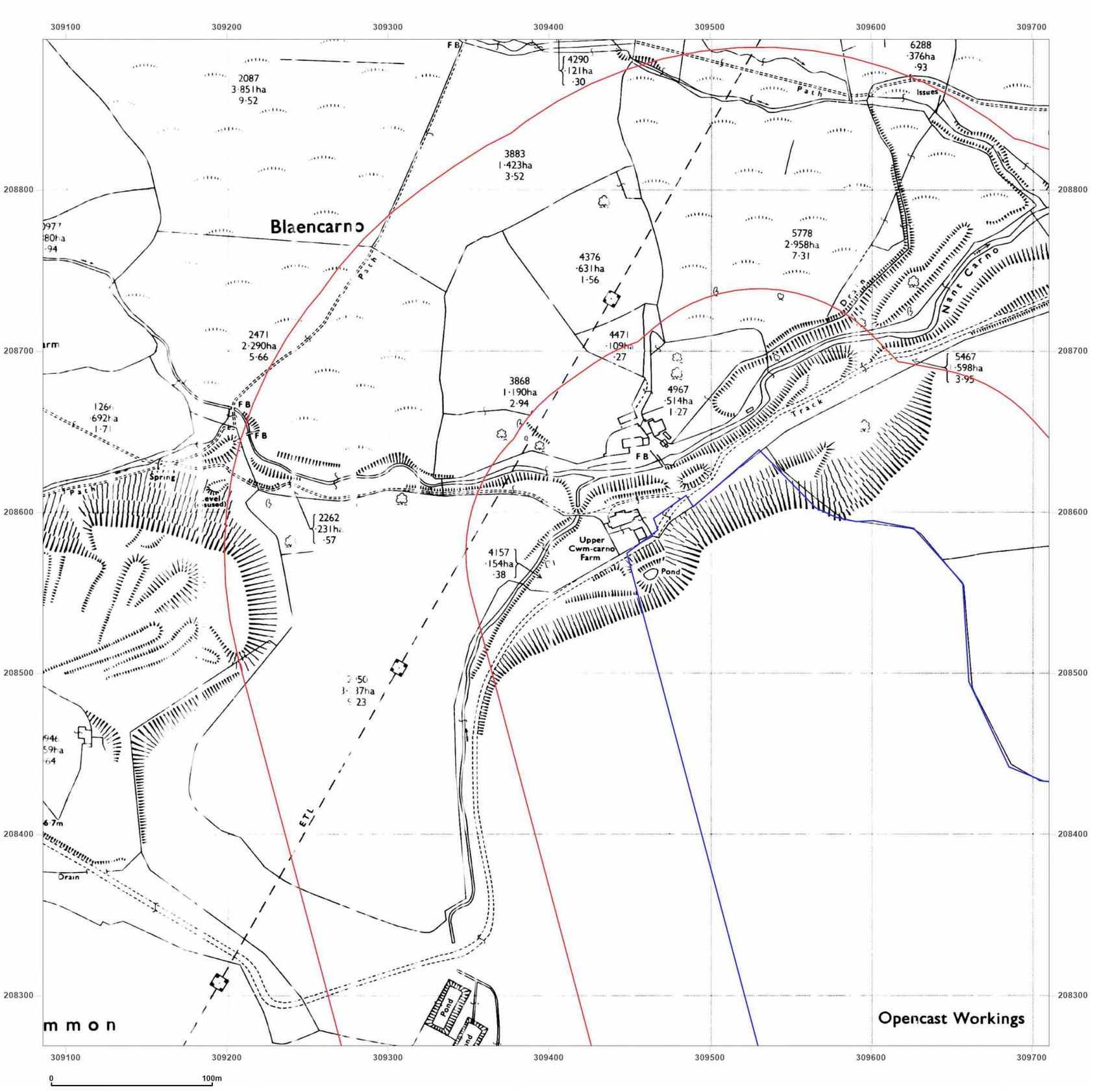
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_2
Grid Ref: 309398, 208581

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

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

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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_2
Grid Ref: 309398, 208581

Map Name: National Grid

Map date: **1972**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1972
Revised 1972
Edition N/A
Copyright N/A
Levelled 1958

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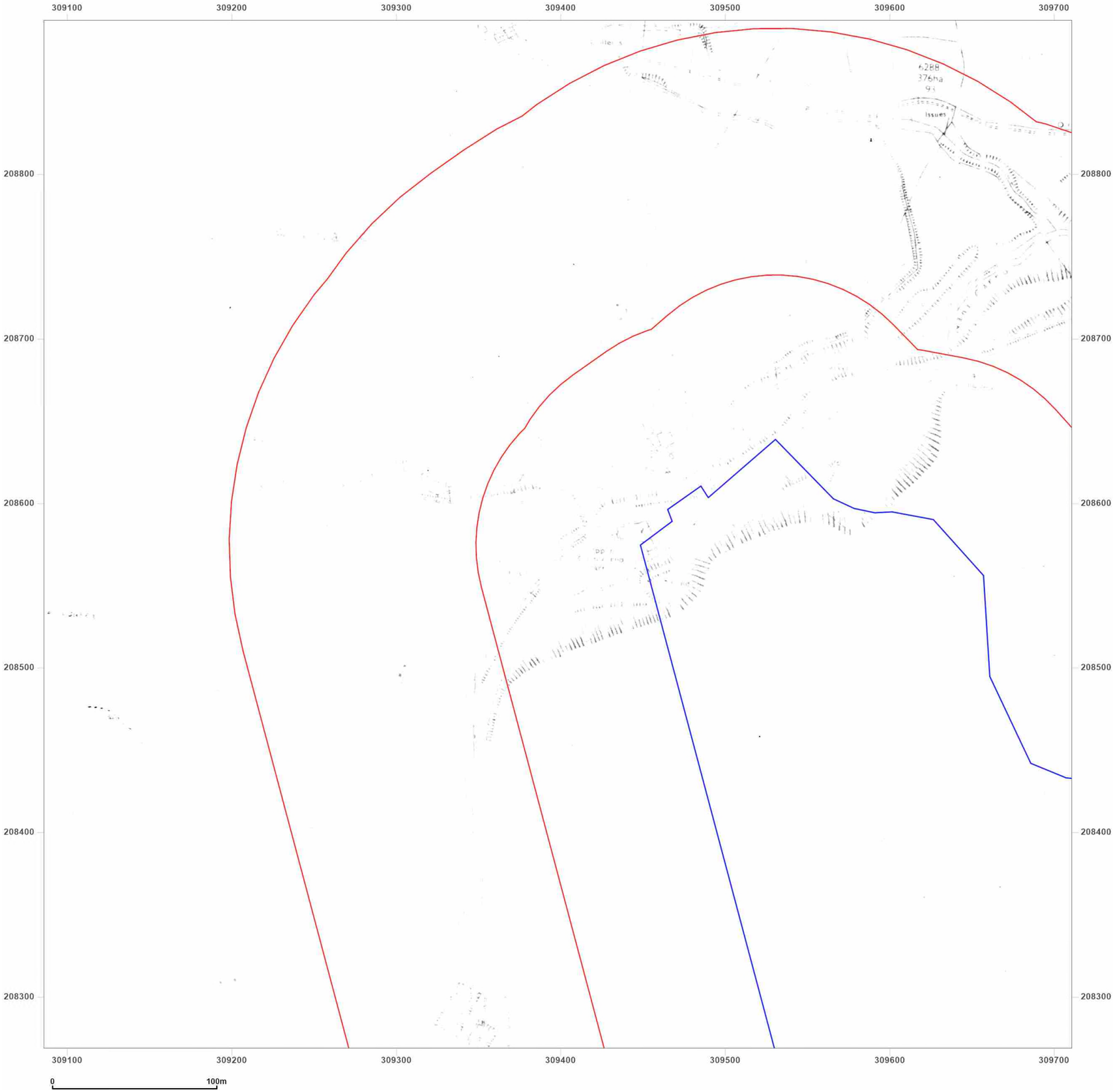
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_2
Grid Ref: 309398, 208581

Map Name: National Grid

Map date: **1975**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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

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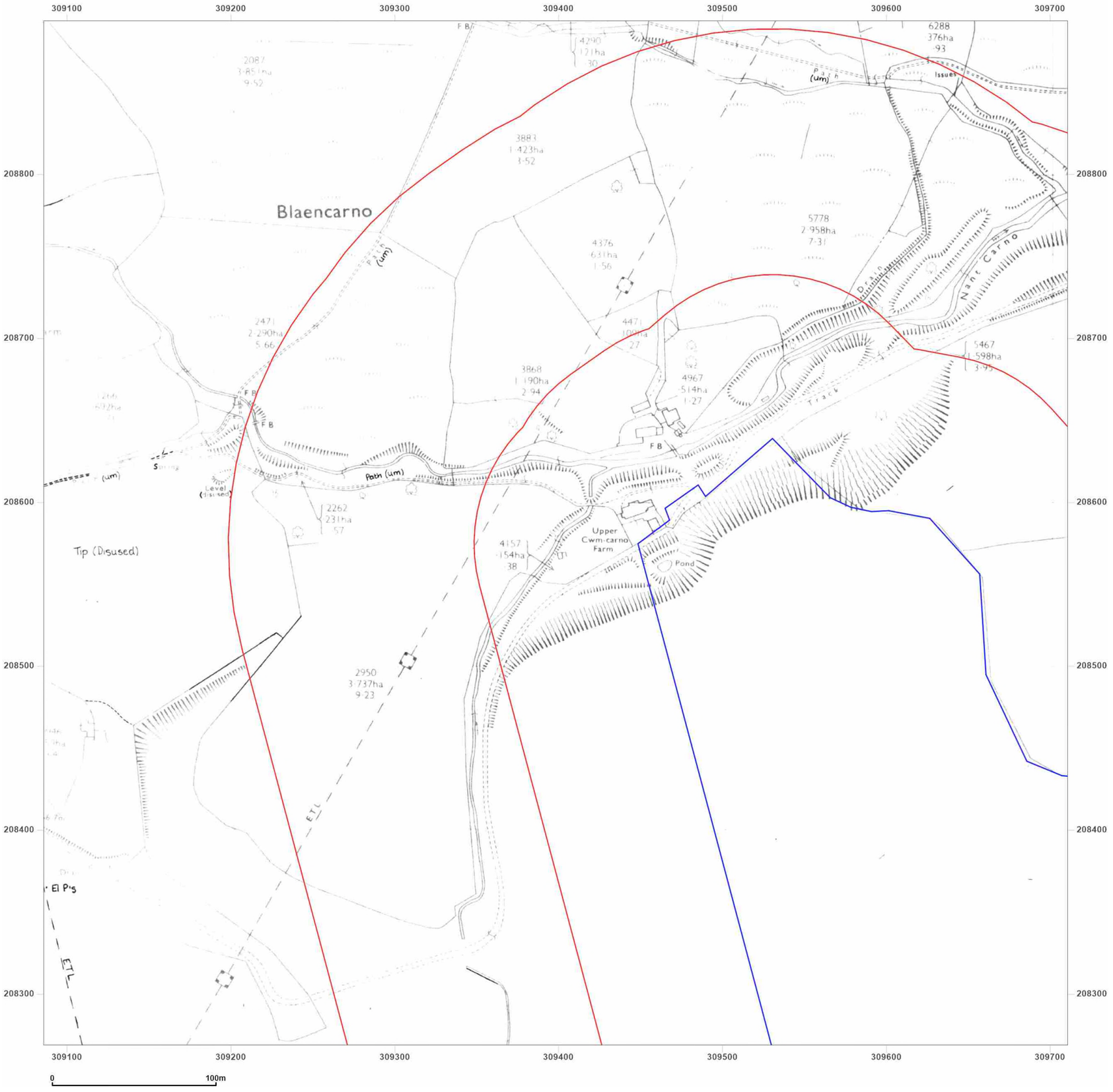
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_2
Grid Ref: 309398, 208581

Map Name: National Grid

Map date: **1986**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1958
Revised 1986
Edition N/A
Copyright 1986
Levelled 1958

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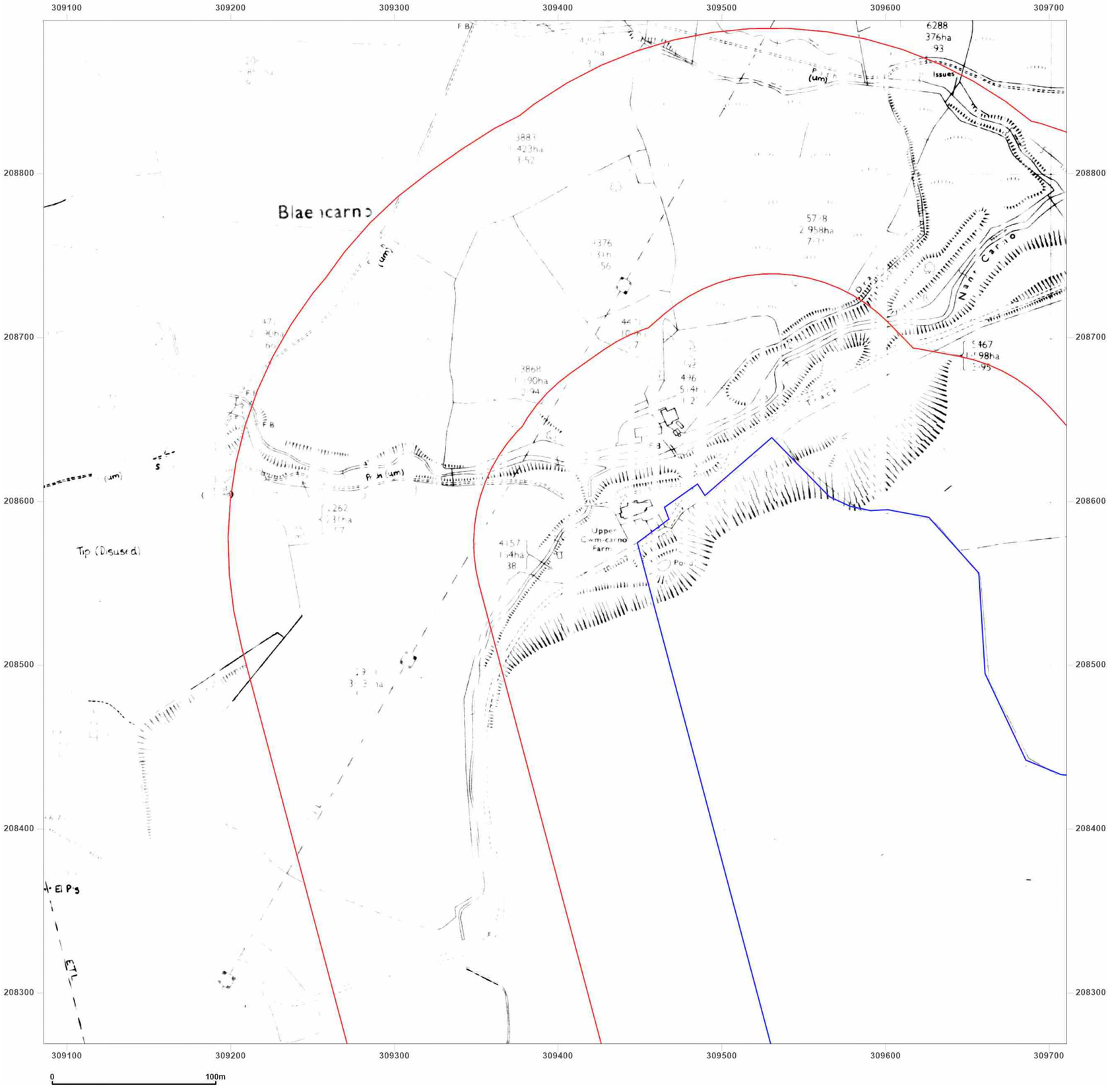
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_2
Grid Ref: 309398, 208581

Map Name: National Grid

Map date: **1986**

Scale: 1:2,500

Printed at: 1:2,500

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

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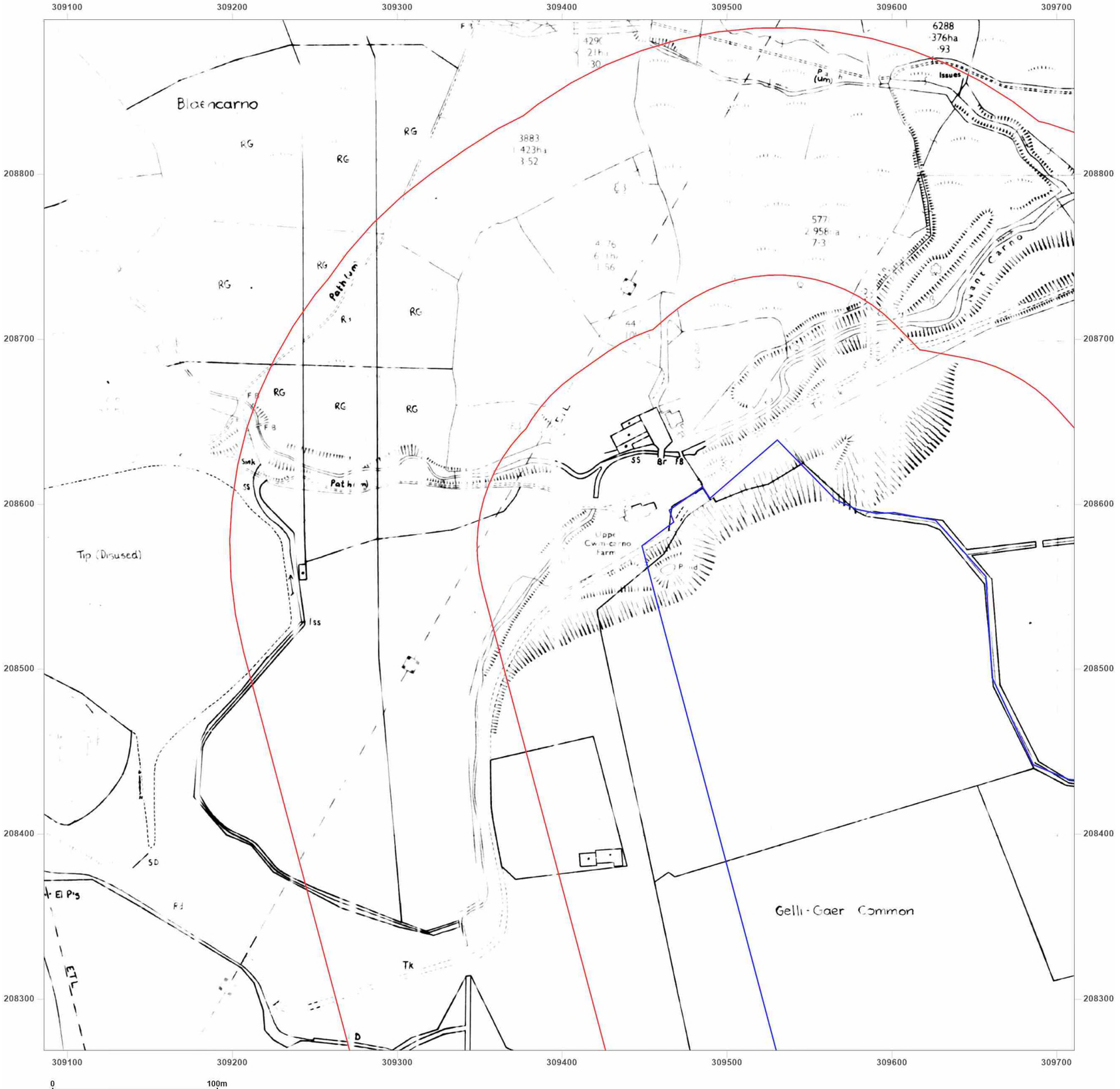
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_2
Grid Ref: 309398, 208581

Map Name: National Grid

Map date: **1988**

Scale: 1:2,500

Printed at: 1:2,500

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

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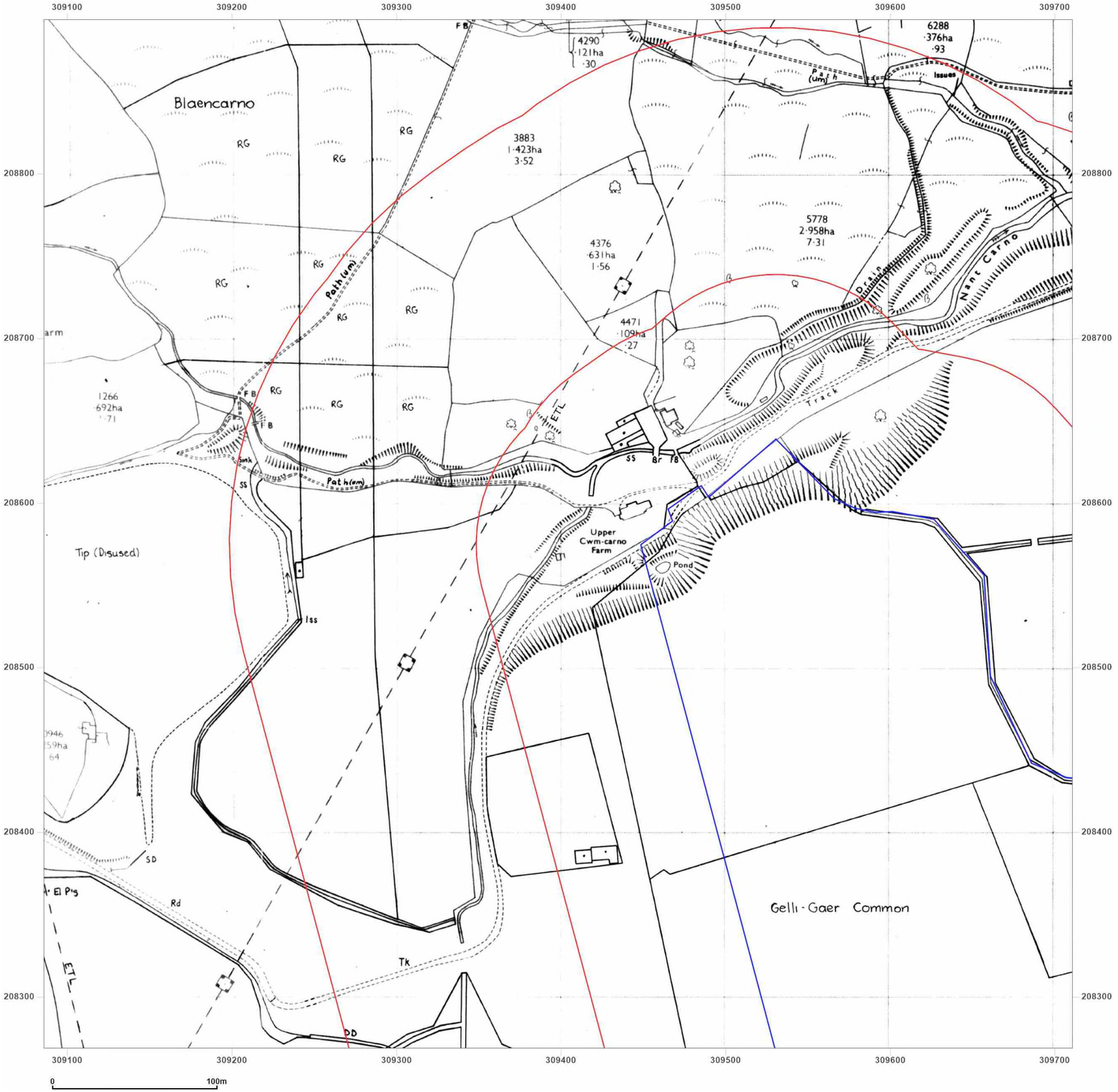
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_2
Grid Ref: 309398, 208581

Map Name: National Grid

Map date: **1988**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1958
Revised 1988
Edition N/A
Copyright 1988
Levelled 1958

Groundsure INSIGHTS

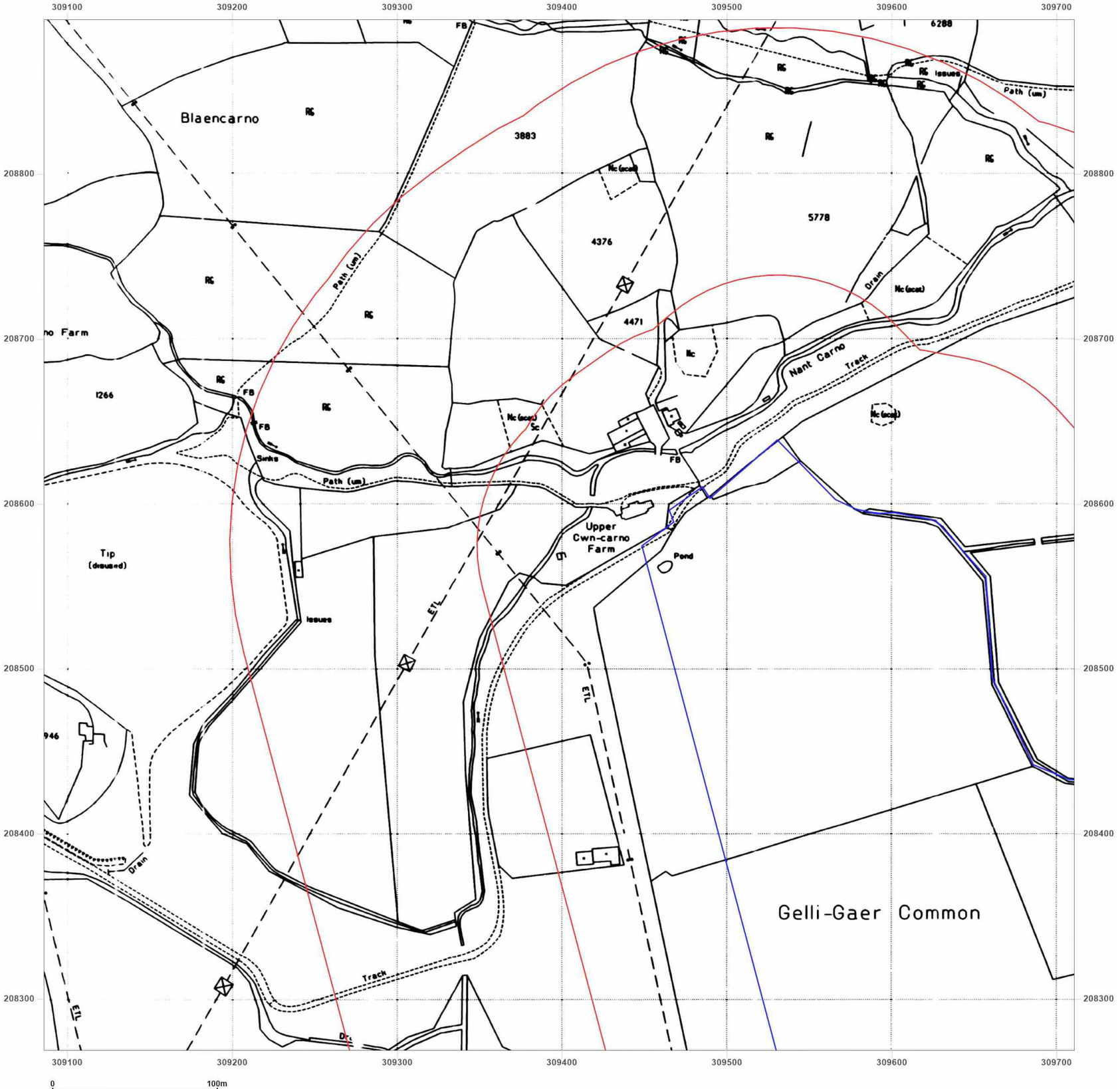
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_1_2
Grid Ref: 309398, 208581

Map Name: National Grid

Map date: **1993**

Scale: 1:2,500

Printed at: 1:2,500

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

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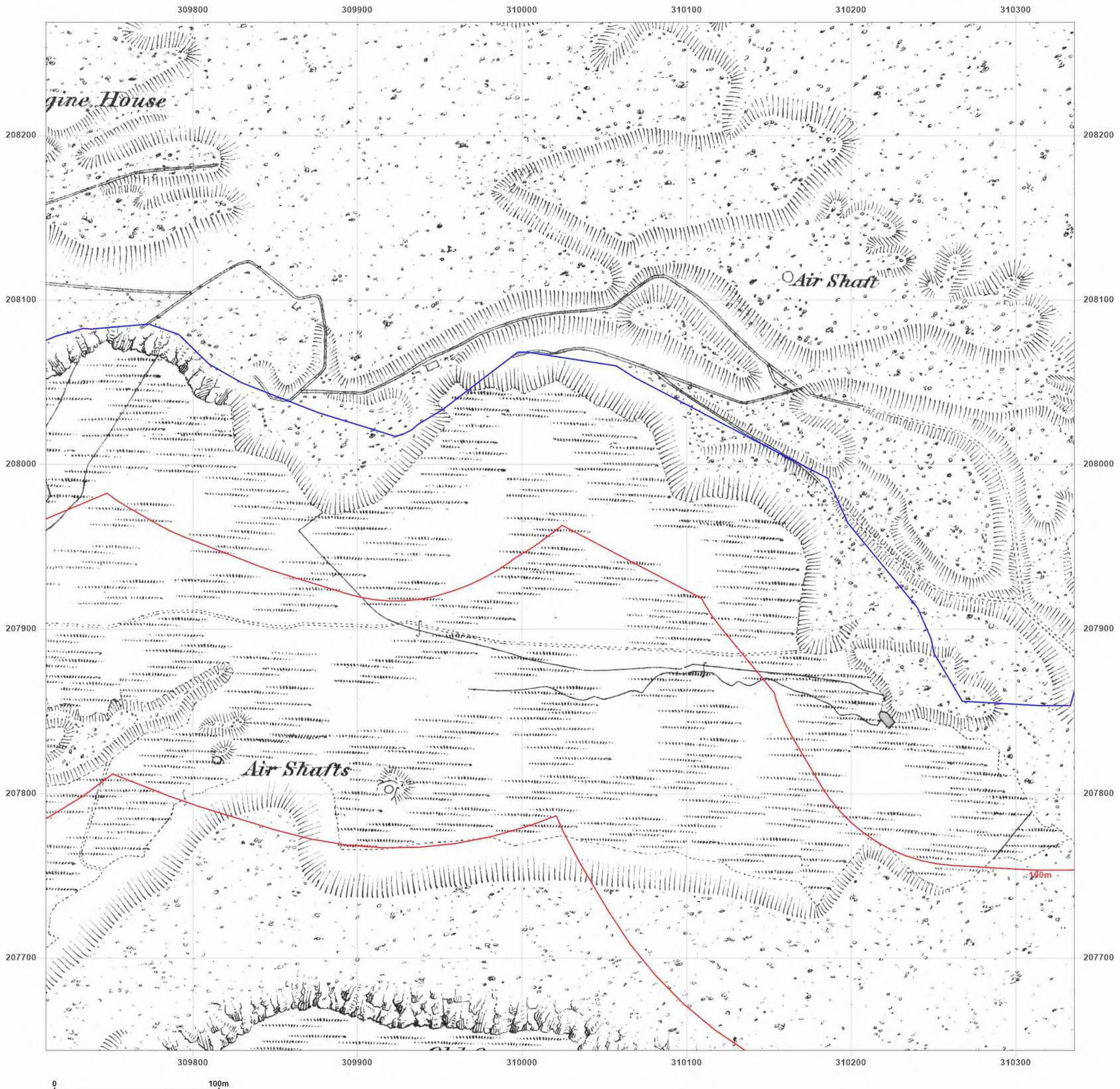
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

Map Name: County Series

Map date: **1873**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1873
Revised 1873
Edition N/A
Copyright N/A
Levelled N/A

Groundsure INSIGHTS

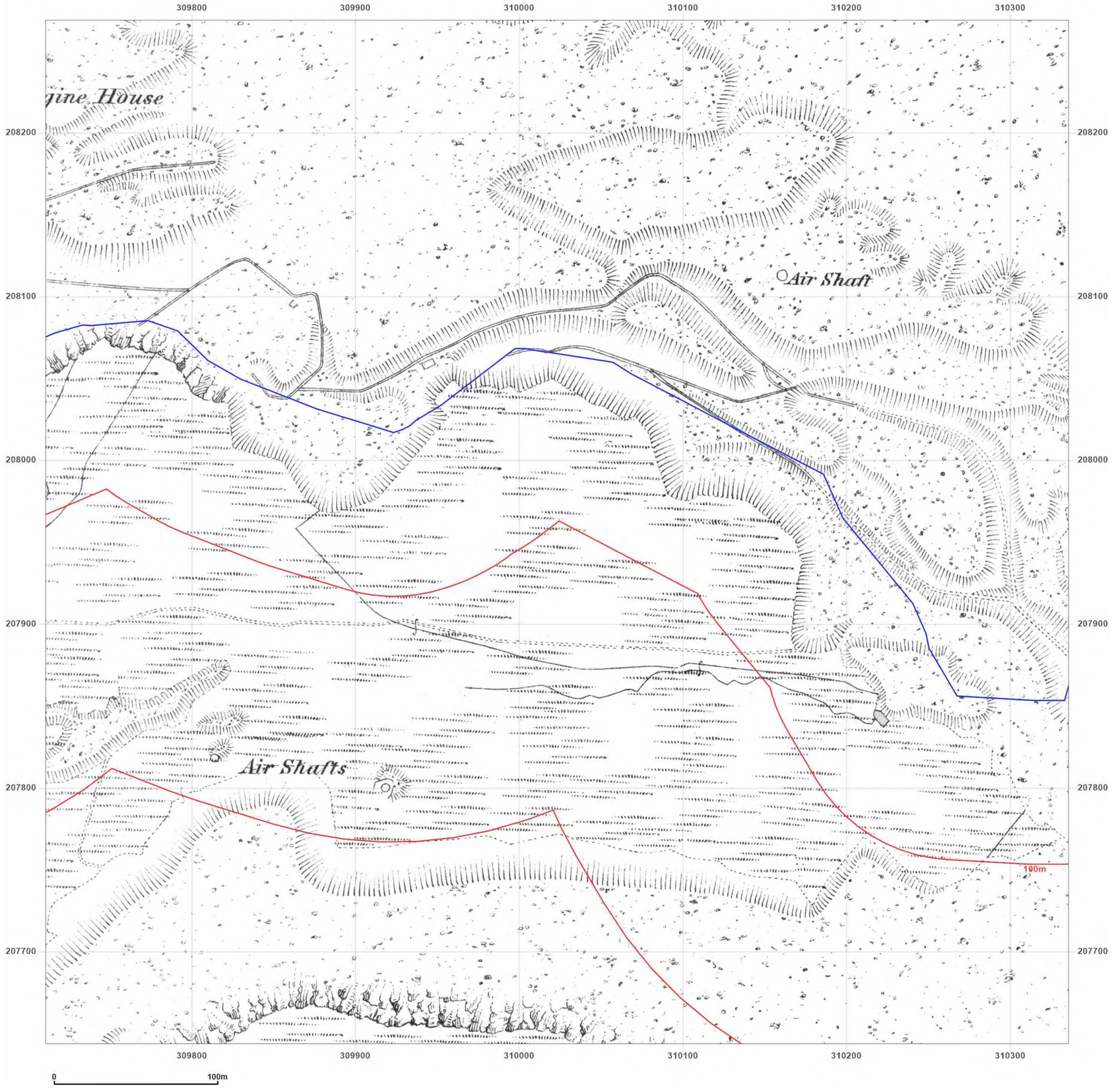
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

Map Name: County Series

Map date: **1875**

Scale: 1:2,500

Printed at: 1:2,500

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

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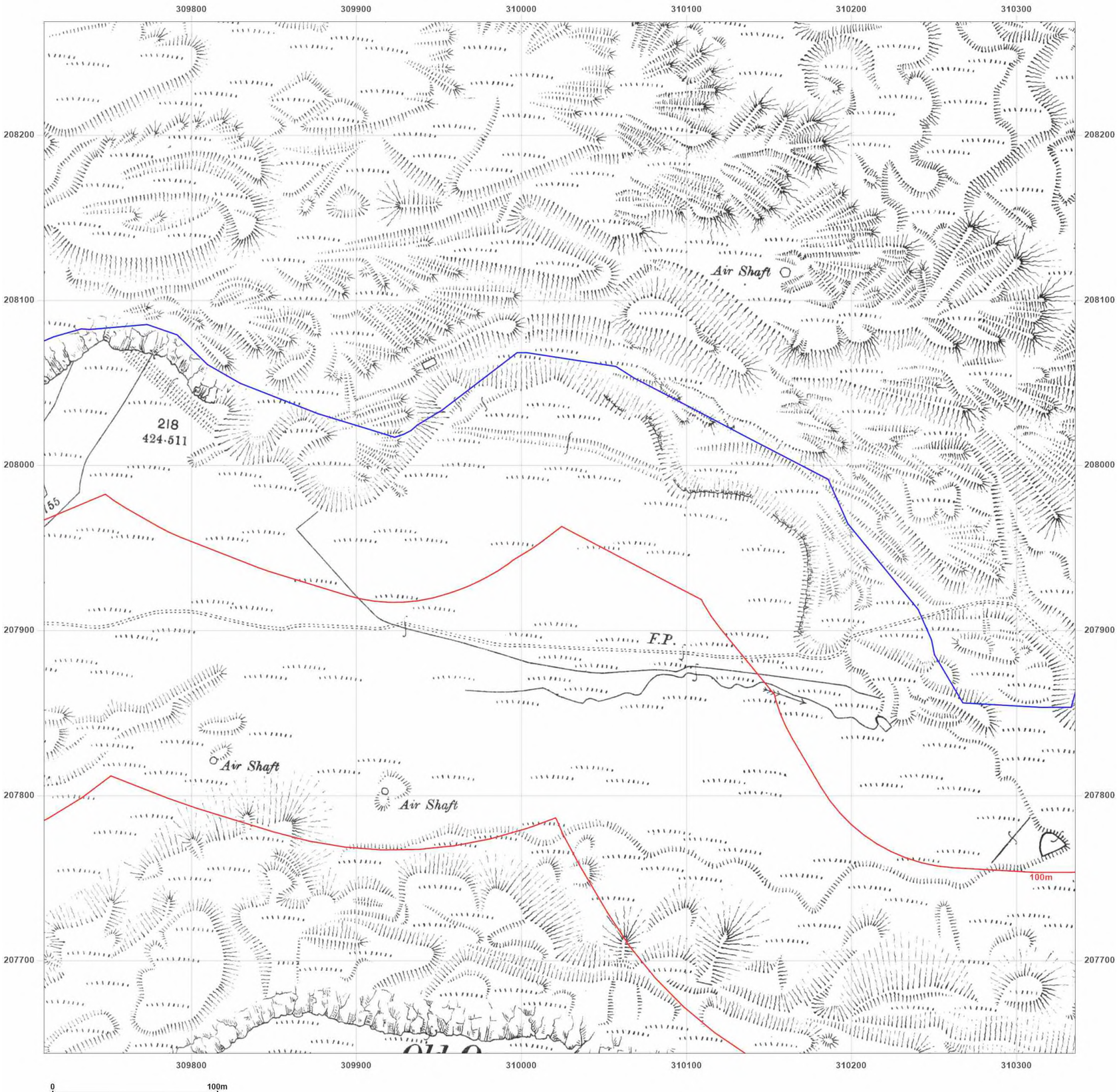
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

Map Name: County Series

Map date: **1901**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1901
Revised 1901
Edition N/A
Copyright N/A
Levelled N/A

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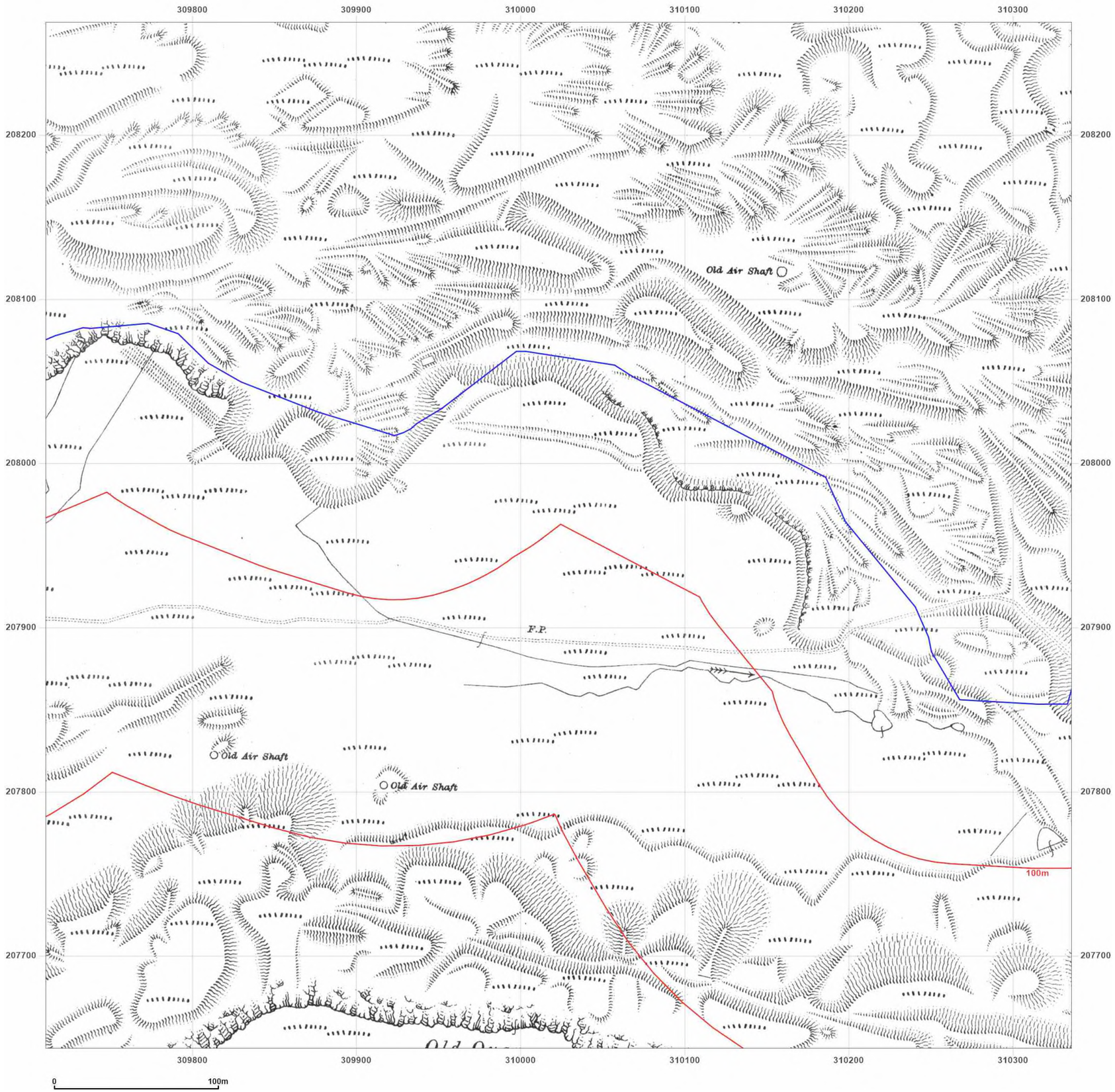
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Site Details:

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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

Map Name: County Series

Map date: **1919**

Scale: 1:2,500

Printed at: 1:2,500

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

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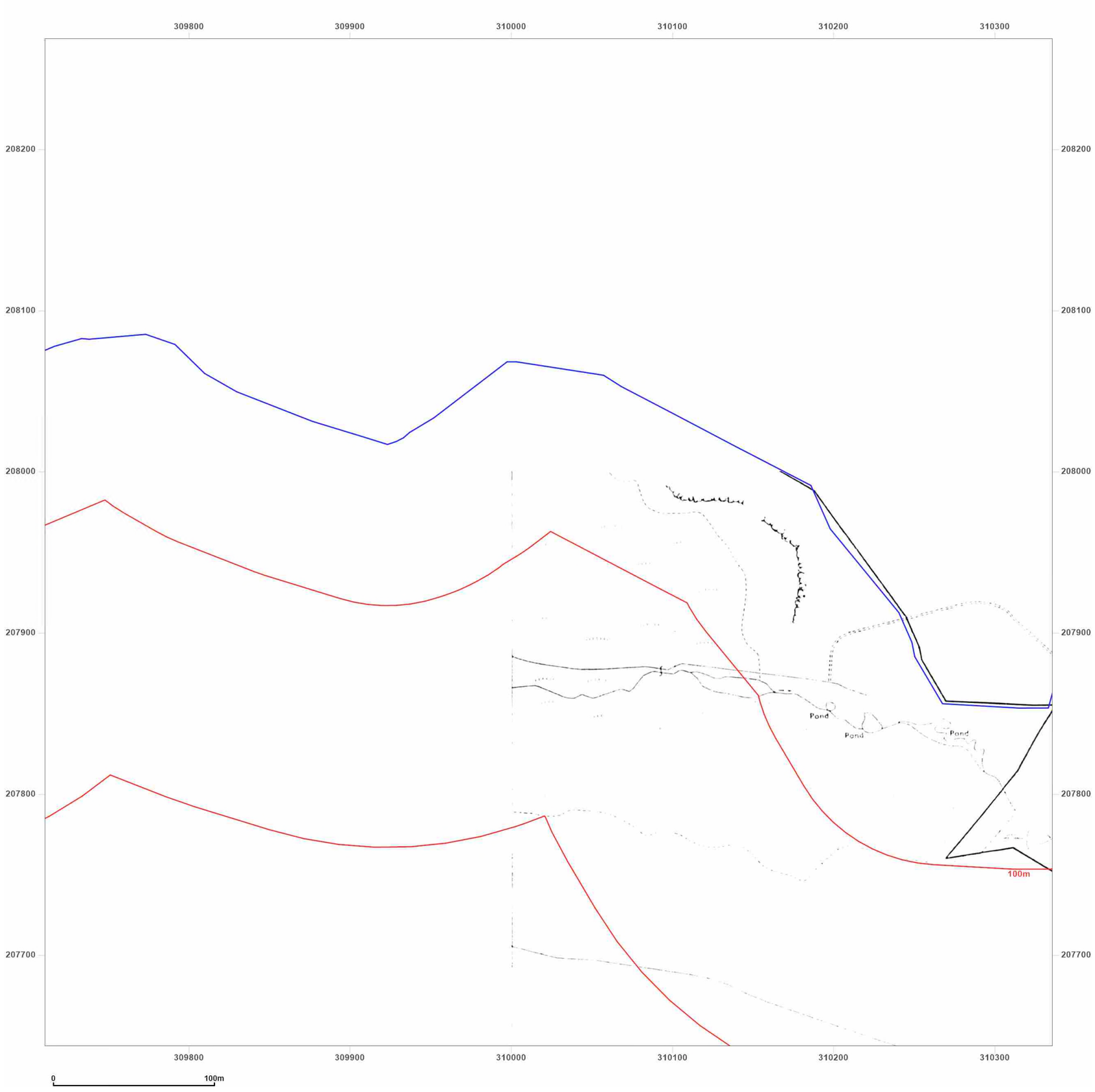
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

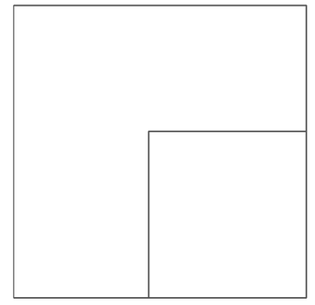
Map Name: National Grid

Map date: **1958**

Scale: 1:2,500

Printed at: 1:2,500

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

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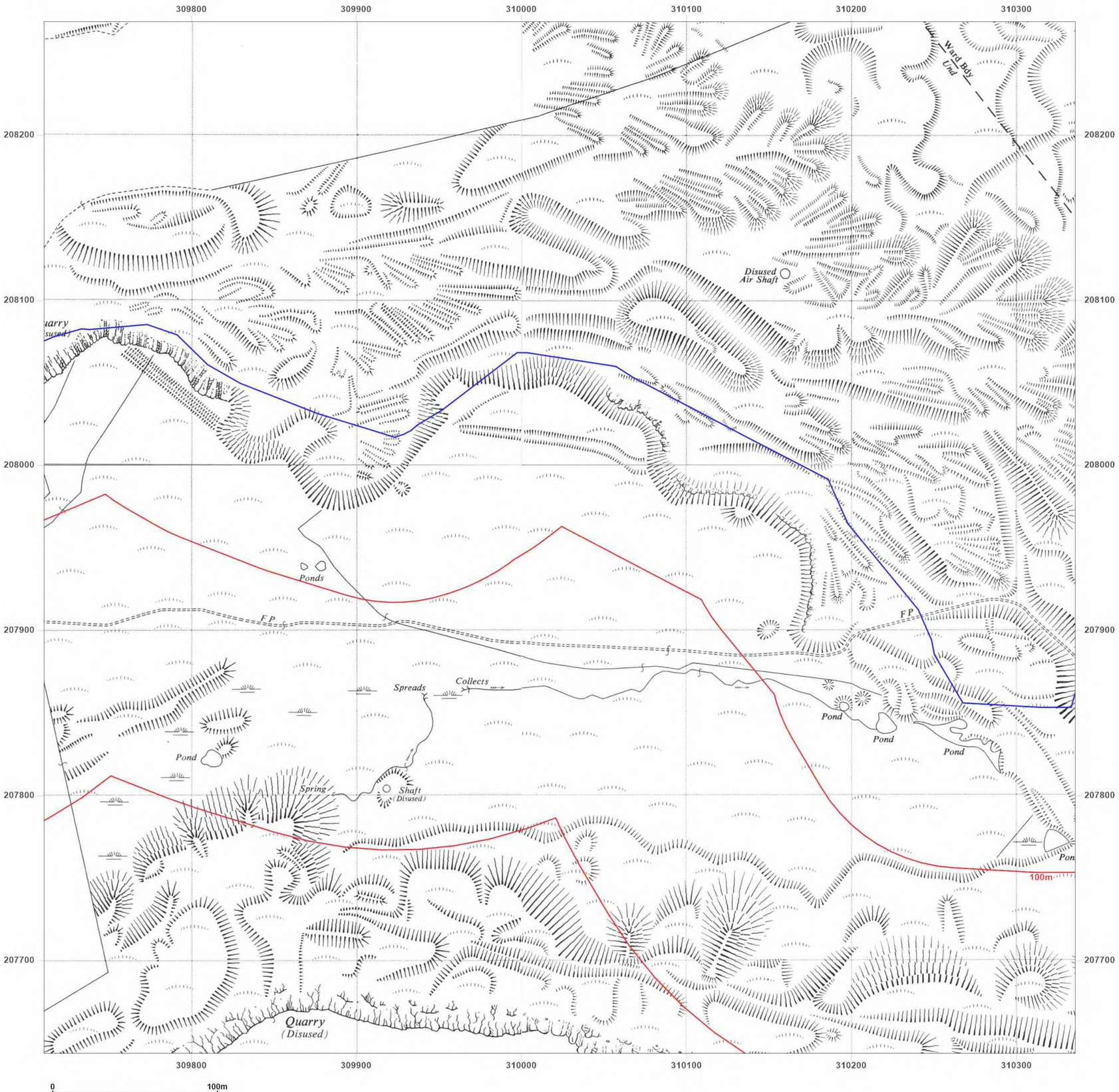
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

Map Name: National Grid

Map date: **1959-1960**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1960
Revised 1960
Edition N/A
Copyright 1962
Levelled 1958

Surveyed 1959
Revised 1959
Edition N/A
Copyright 1961
Levelled 1950

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1962
Levelled 1959

Surveyed 1959
Revised 1959
Edition N/A
Copyright 1961
Levelled 1958

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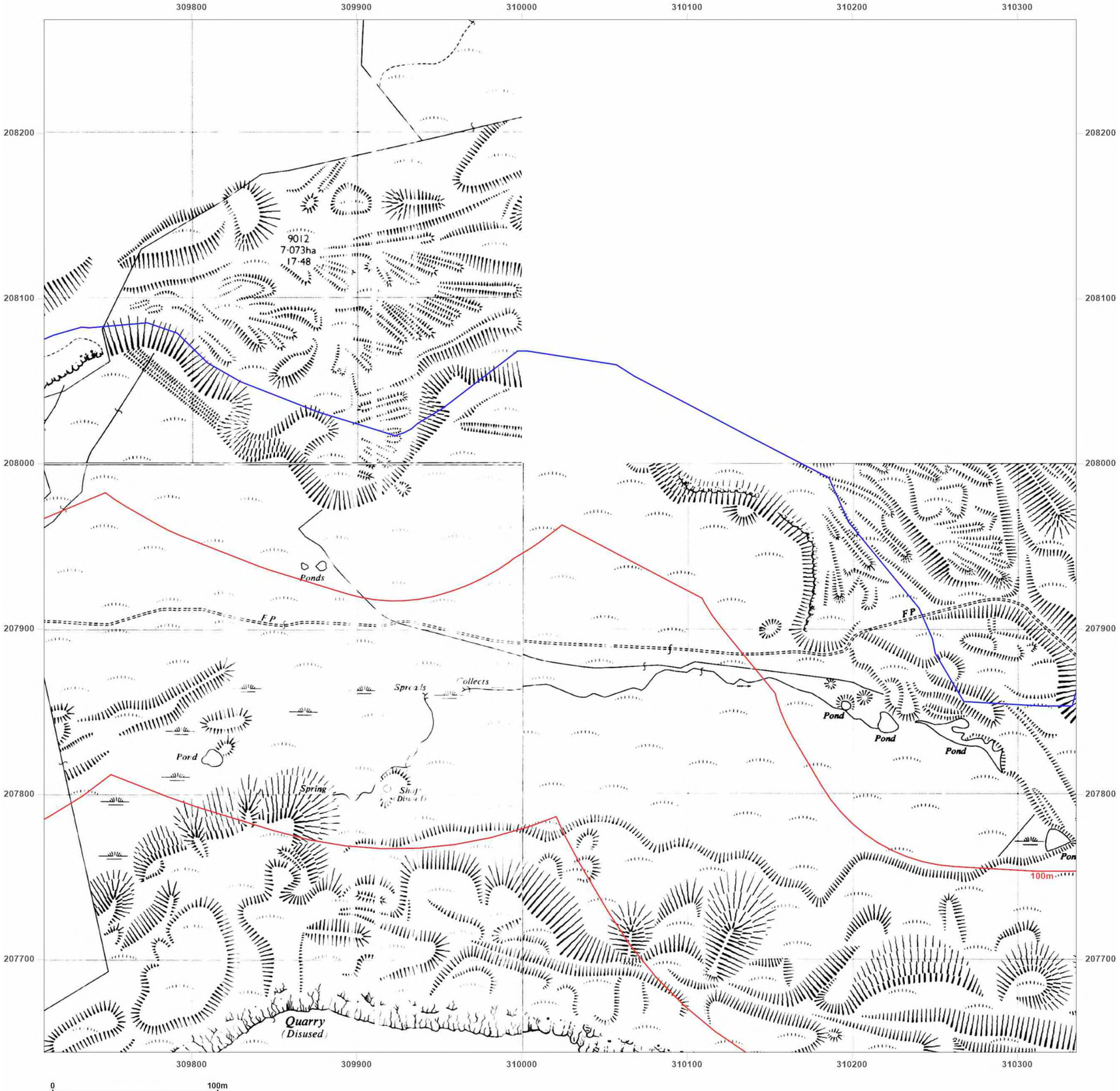
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

Map Name: National Grid

Map date: **1961-1962**

Scale: 1:2,500

Printed at: 1:2,500

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

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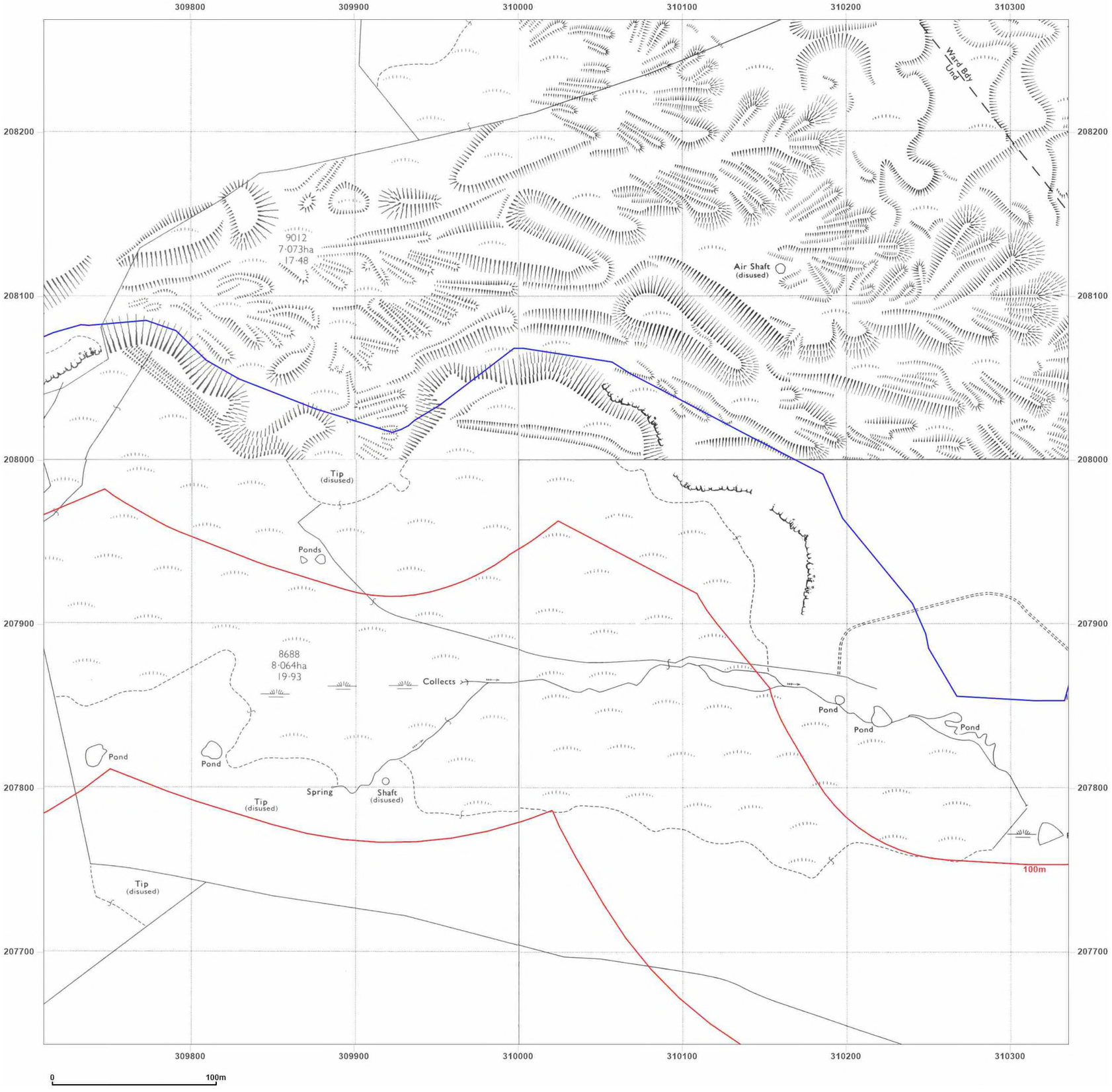
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

Map Name: National Grid

Map date: **1971-1973**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1972
Revised 1972
Edition N/A
Copyright N/A
Levelled 1958

Surveyed 1971
Revised 1971
Edition N/A
Copyright 1972
Levelled 1958

Surveyed 1973
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Edition N/A
Copyright 1974
Levelled 1959

Surveyed 1973
Revised 1973
Edition N/A
Copyright 1975
Levelled 1958

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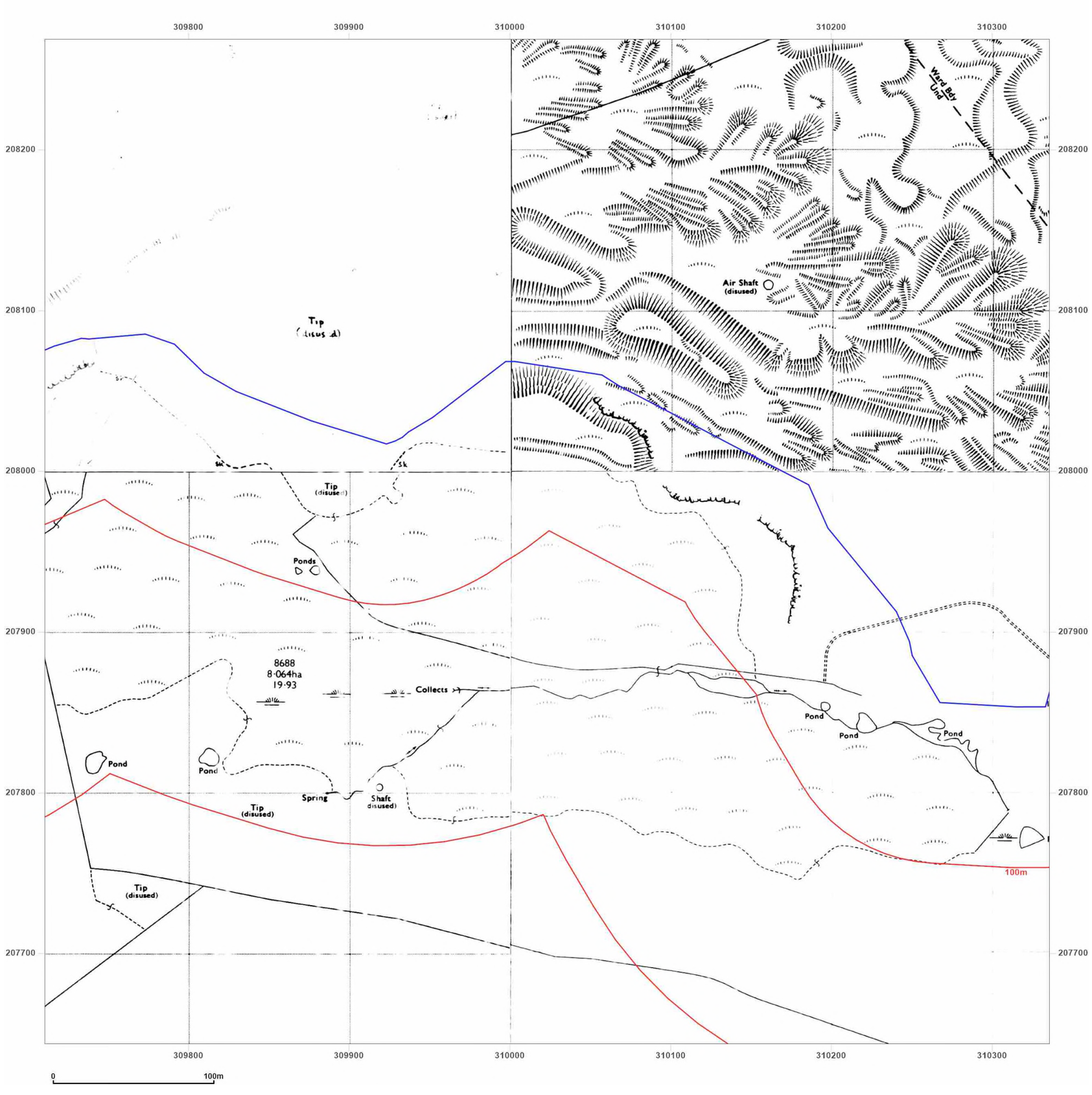
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

Map Name: National Grid

Map date: **1972-1975**

Scale: 1:2,500

Printed at: 1:2,500

N
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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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Copyright N/A
Levelled N/A

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Revised N/A
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Copyright N/A
Levelled N/A

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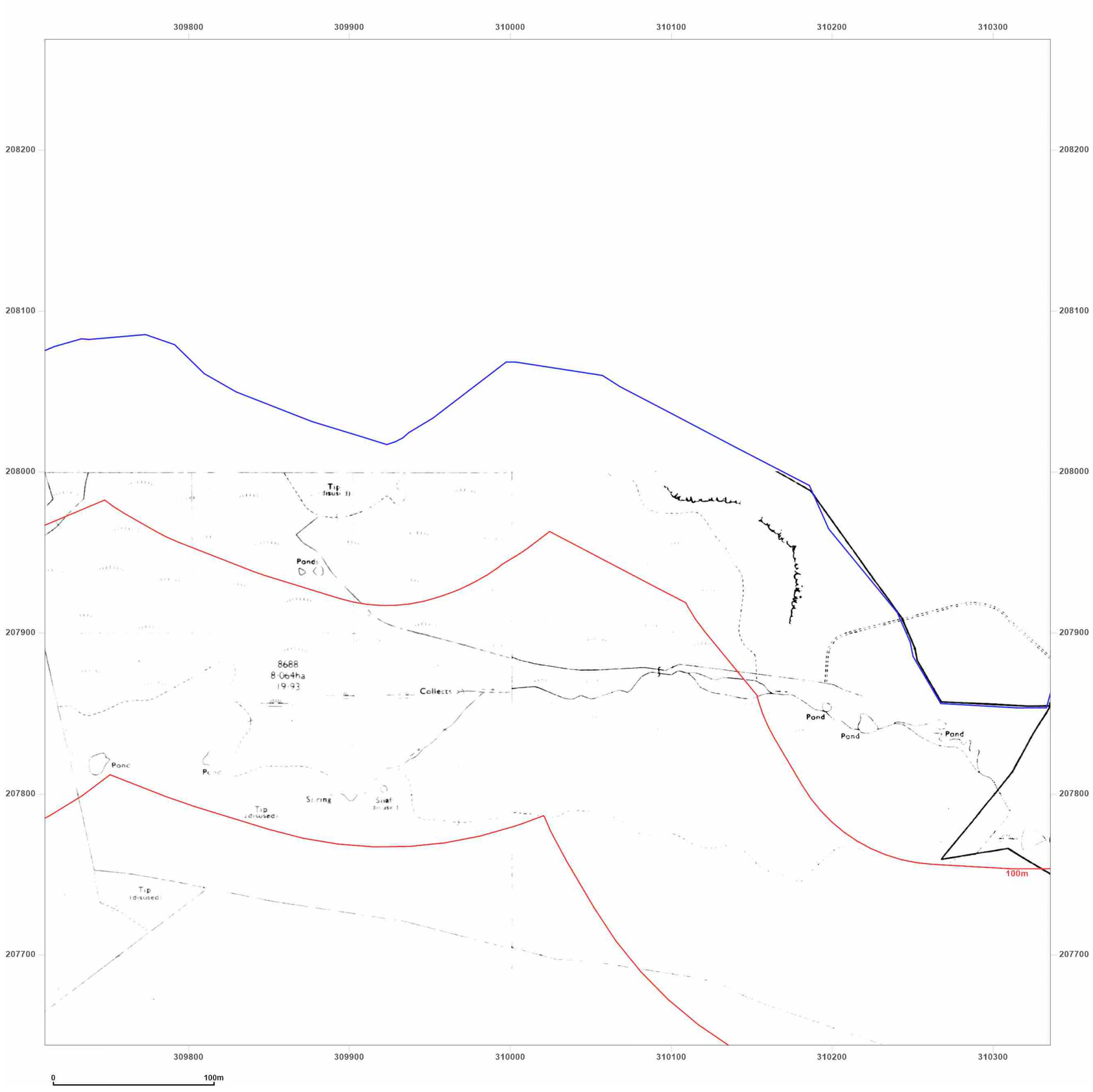
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

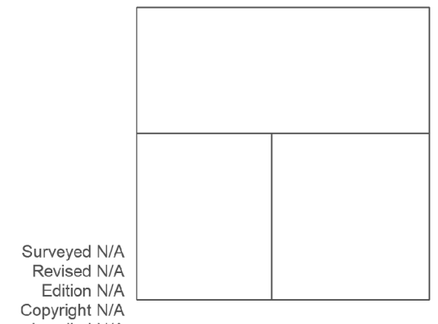
Map Name: National Grid

Map date: **1975-1980**

Scale: 1:2,500

Printed at: 1:2,500

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W E
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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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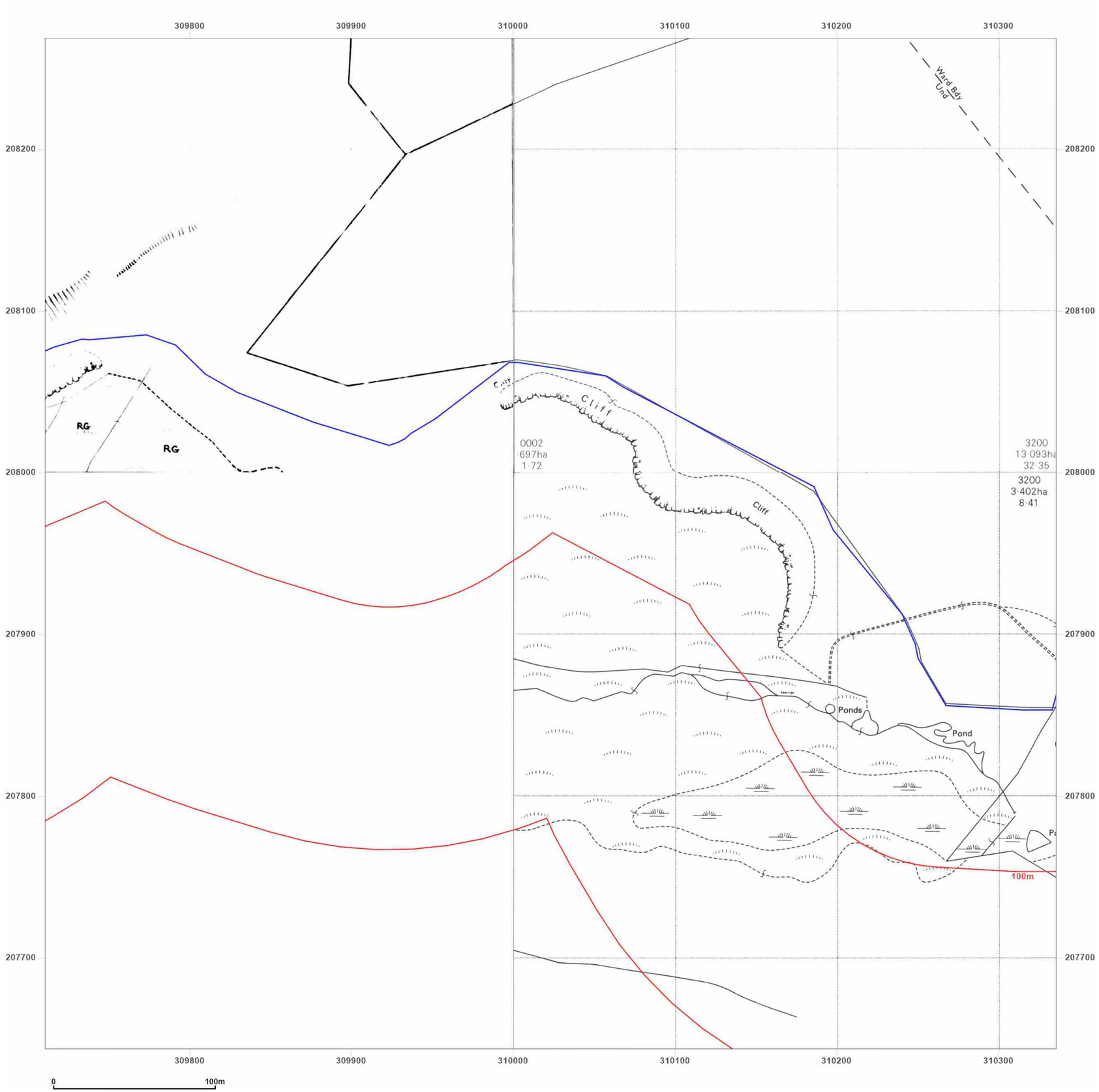
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

Map Name: National Grid

Map date: **1981-1986**

Scale: 1:2,500

Printed at: 1:2,500

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

Surveyed 1981
Revised 1981
Edition N/A
Copyright 1983
Levelled 1958

Surveyed 1983
Revised 1983
Edition N/A
Copyright 1984
Levelled 1958

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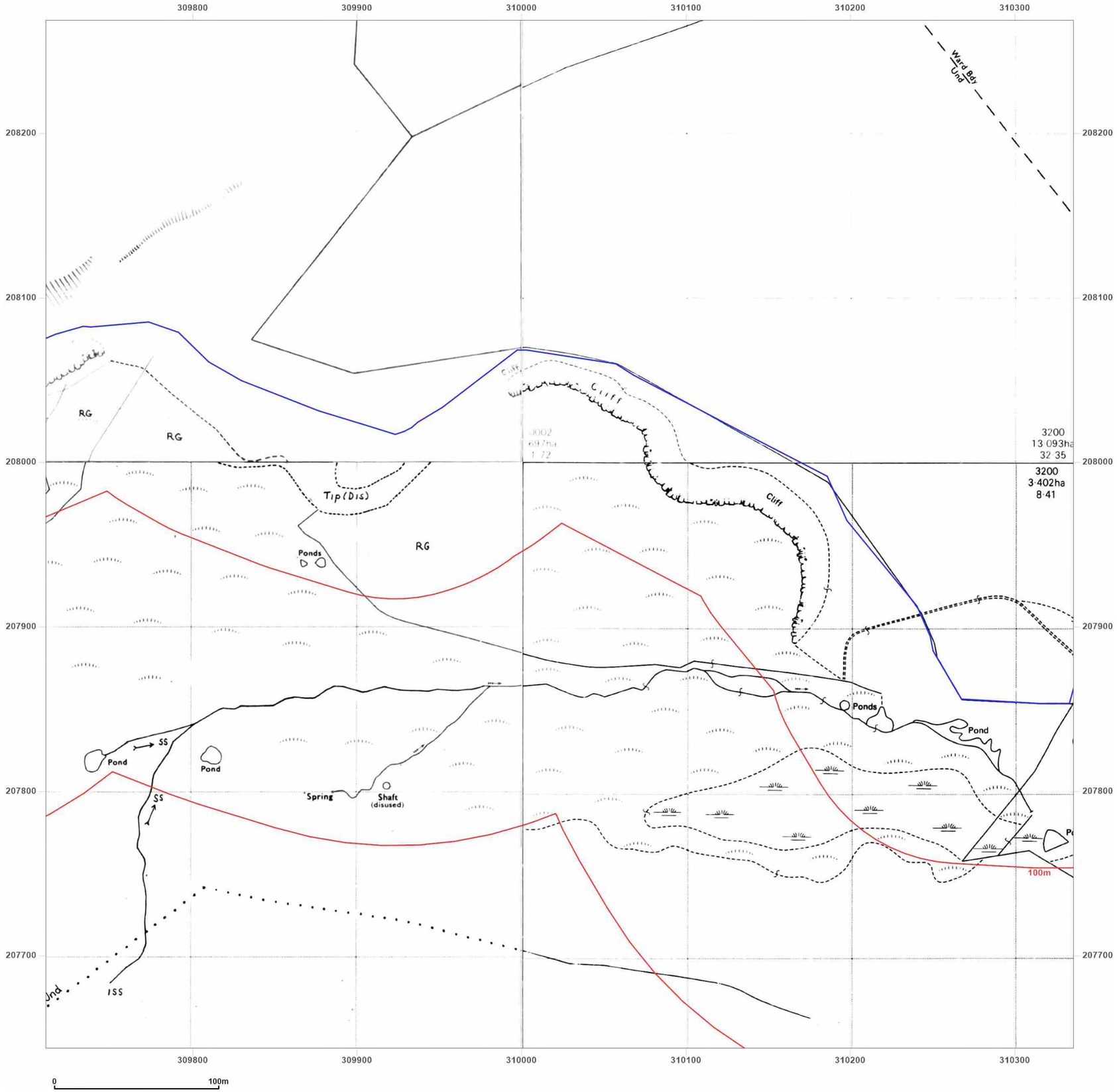
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

Map Name: National Grid

Map date: **1983-1988**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1958 Revised 1986 Edition N/A Copyright 1986 Levelled 1958	Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A
Surveyed 1965 Revised 1988 Edition N/A Copyright 1988 Levelled 1965	Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A

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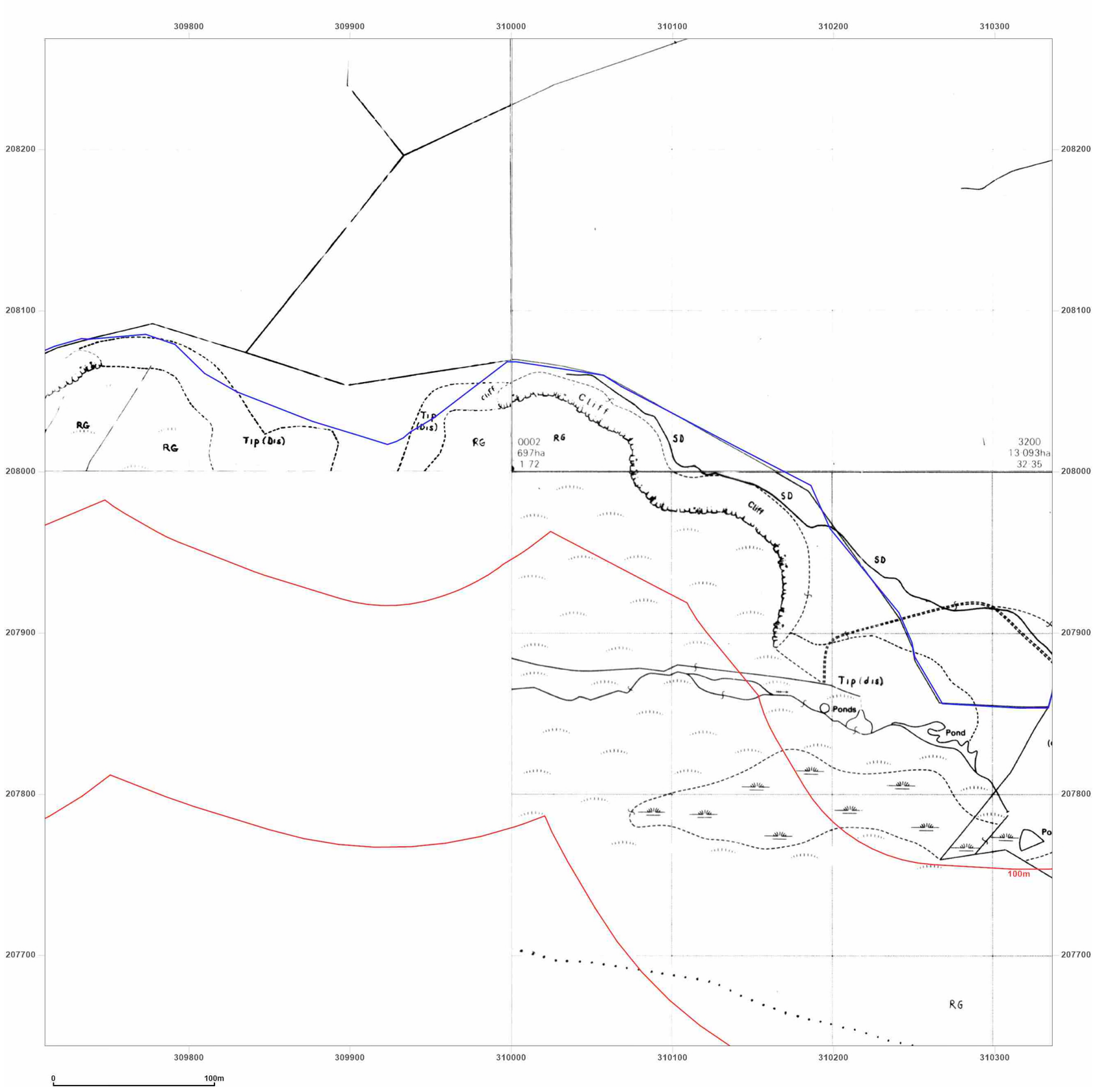
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

Map Name: National Grid

Map date: **1984-1988**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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

Surveyed 1954
Revised 1981
Edition N/A
Copyright 1984
Levelled 1954

Surveyed 1958
Revised 1983
Edition N/A
Copyright 1984
Levelled 1958

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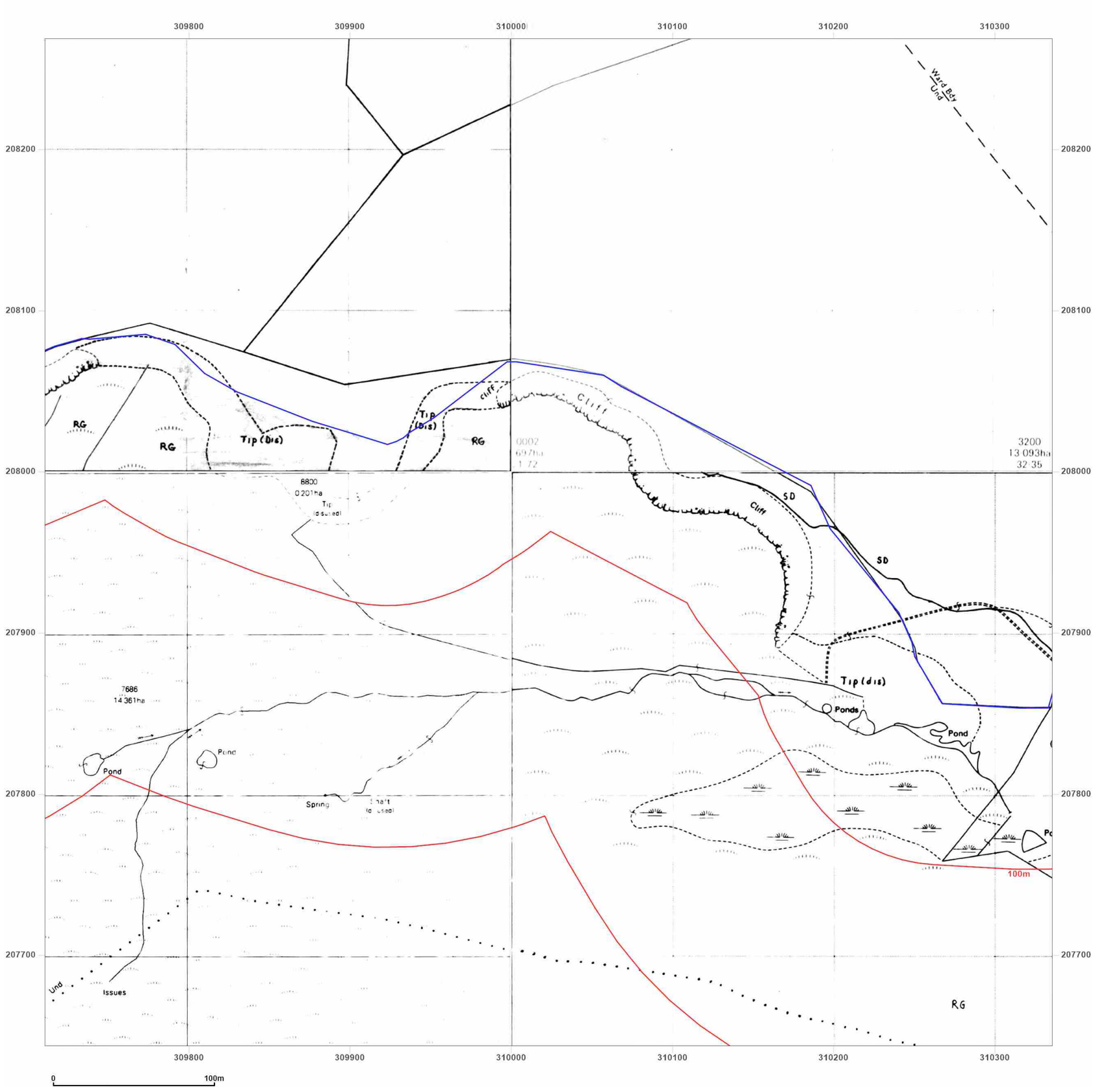
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

Map Name: National Grid

Map date: **1987-1991**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1958 Revised 1988 Edition N/A Copyright 1988 Levelled 1958	Surveyed N/A Revised N/A Edition N/A Copyright 1987 Levelled 1958
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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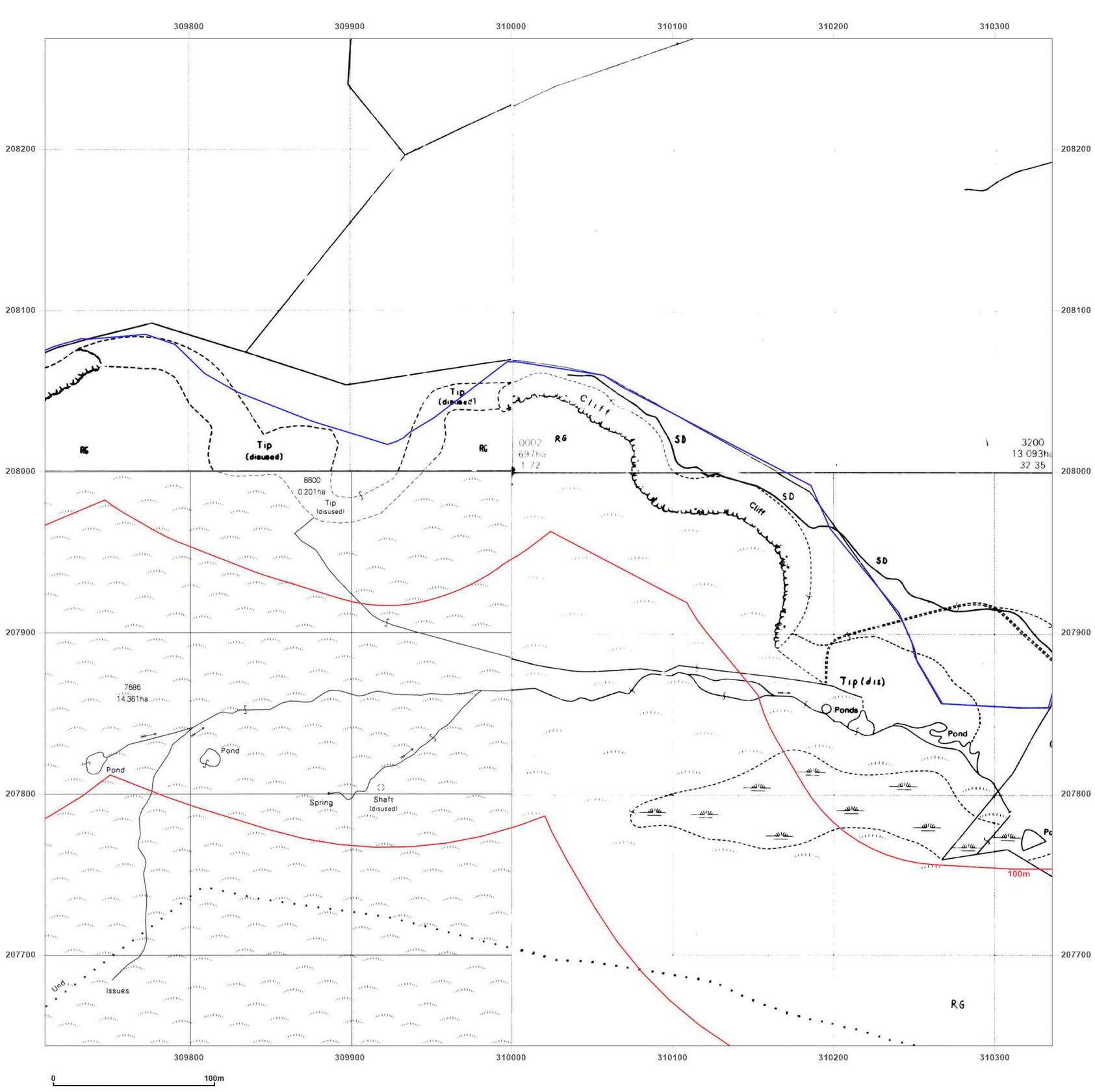
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

Map Name: National Grid

Map date: **1989-1993**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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

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

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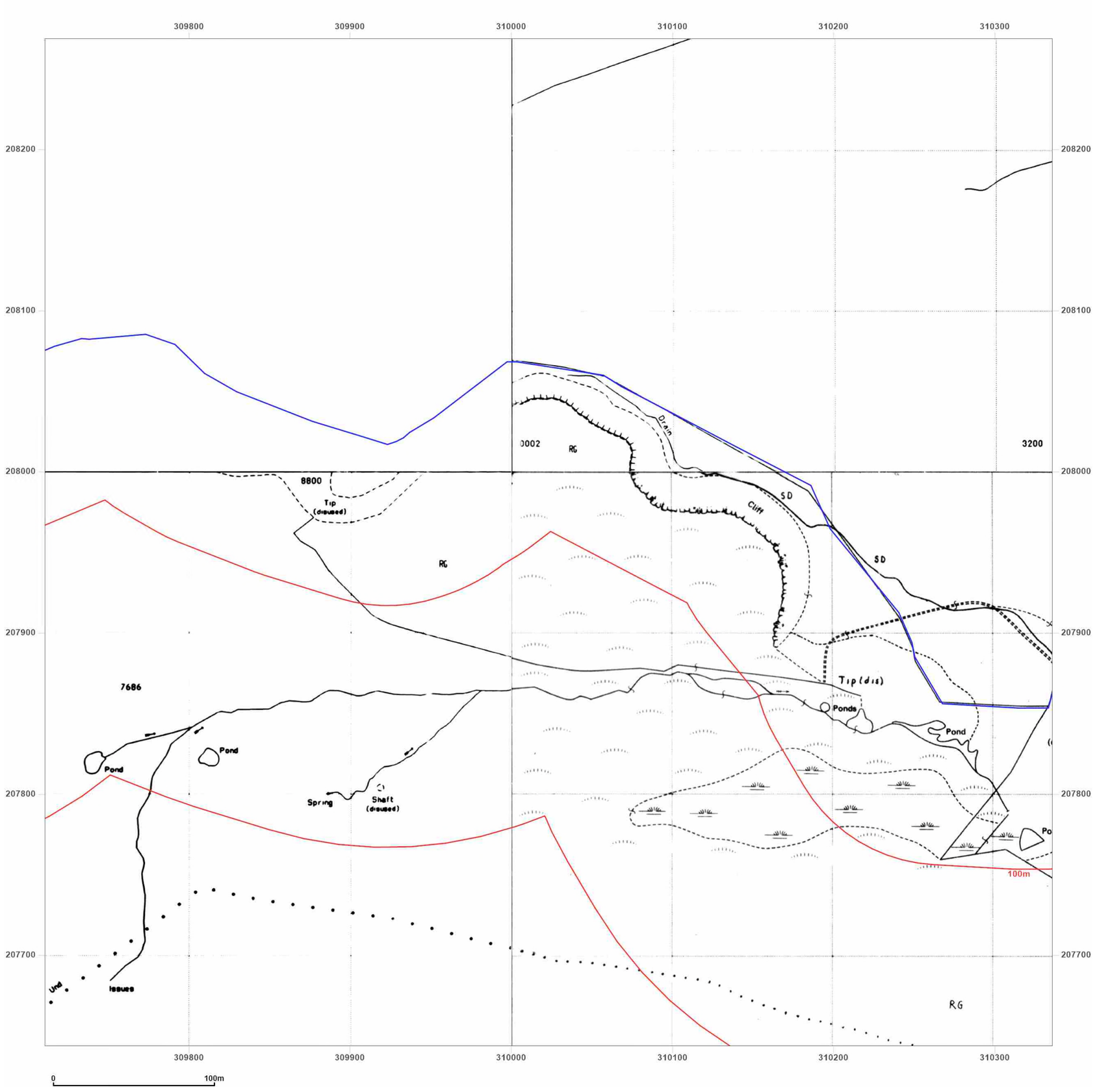
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_1
Grid Ref: 310023, 207956

Map Name: National Grid

Map date: **1989-1993**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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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 1958
Revised 1989
Edition N/A
Copyright 1989
Levelled 1958

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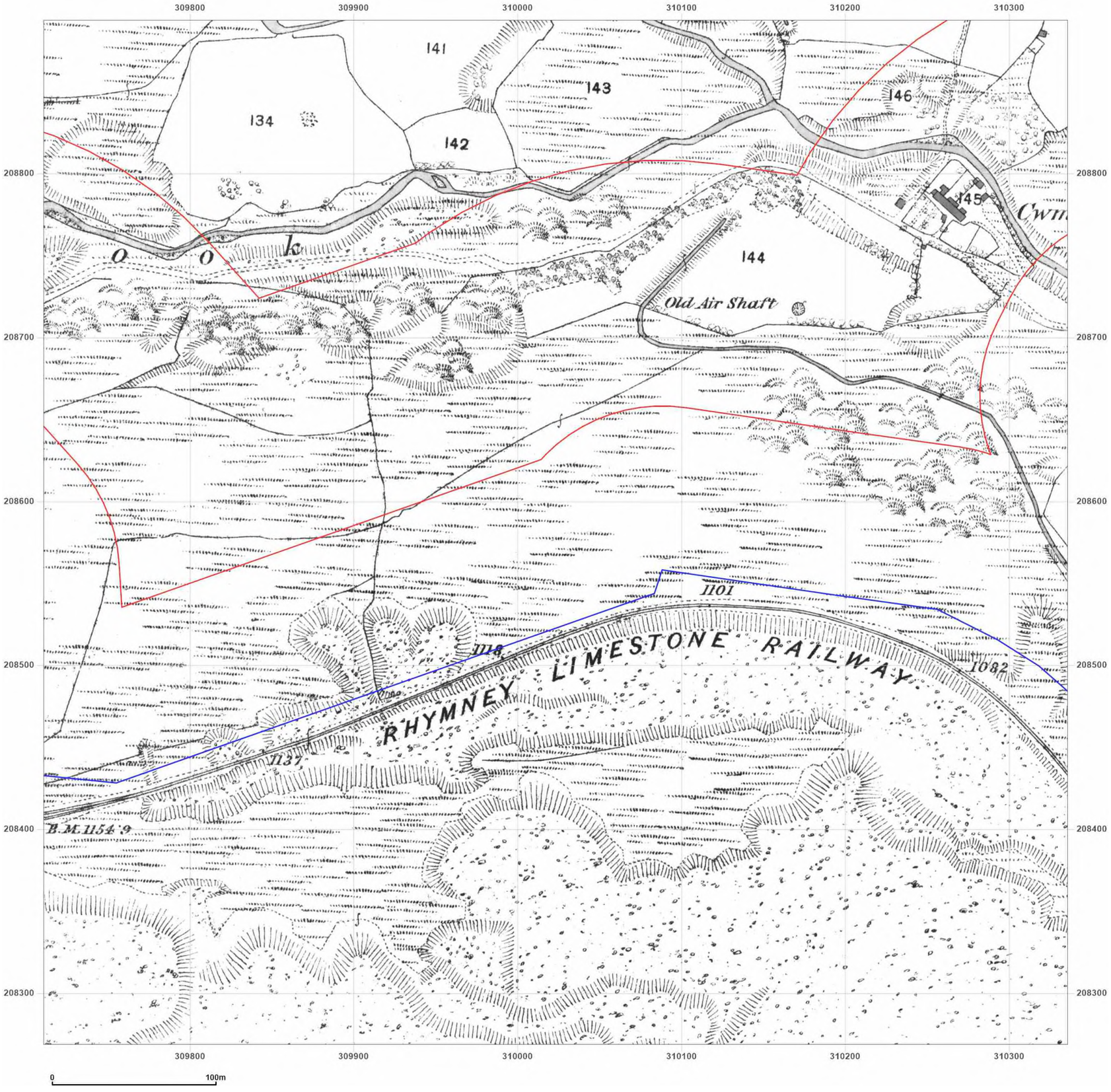
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_2
Grid Ref: 310023, 208581

Map Name: County Series

Map date: **1873**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1873
Revised 1873
Edition N/A
Copyright N/A
Levelled N/A

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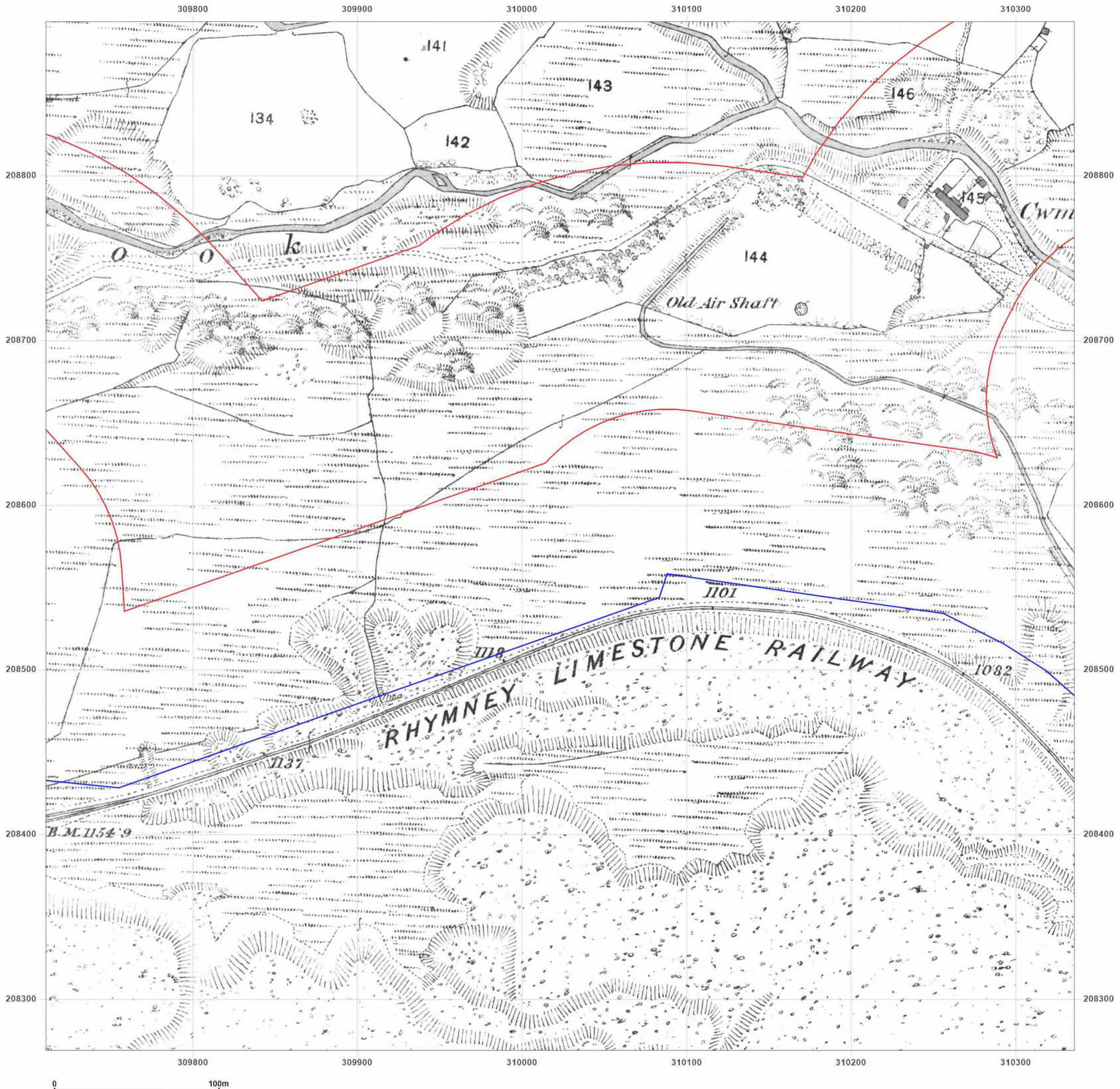
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_2
Grid Ref: 310023, 208581

Map Name: County Series
Map date: **1875**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
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Surveyed 1875
Revised 1875
Edition N/A
Copyright N/A
Levelled N/A

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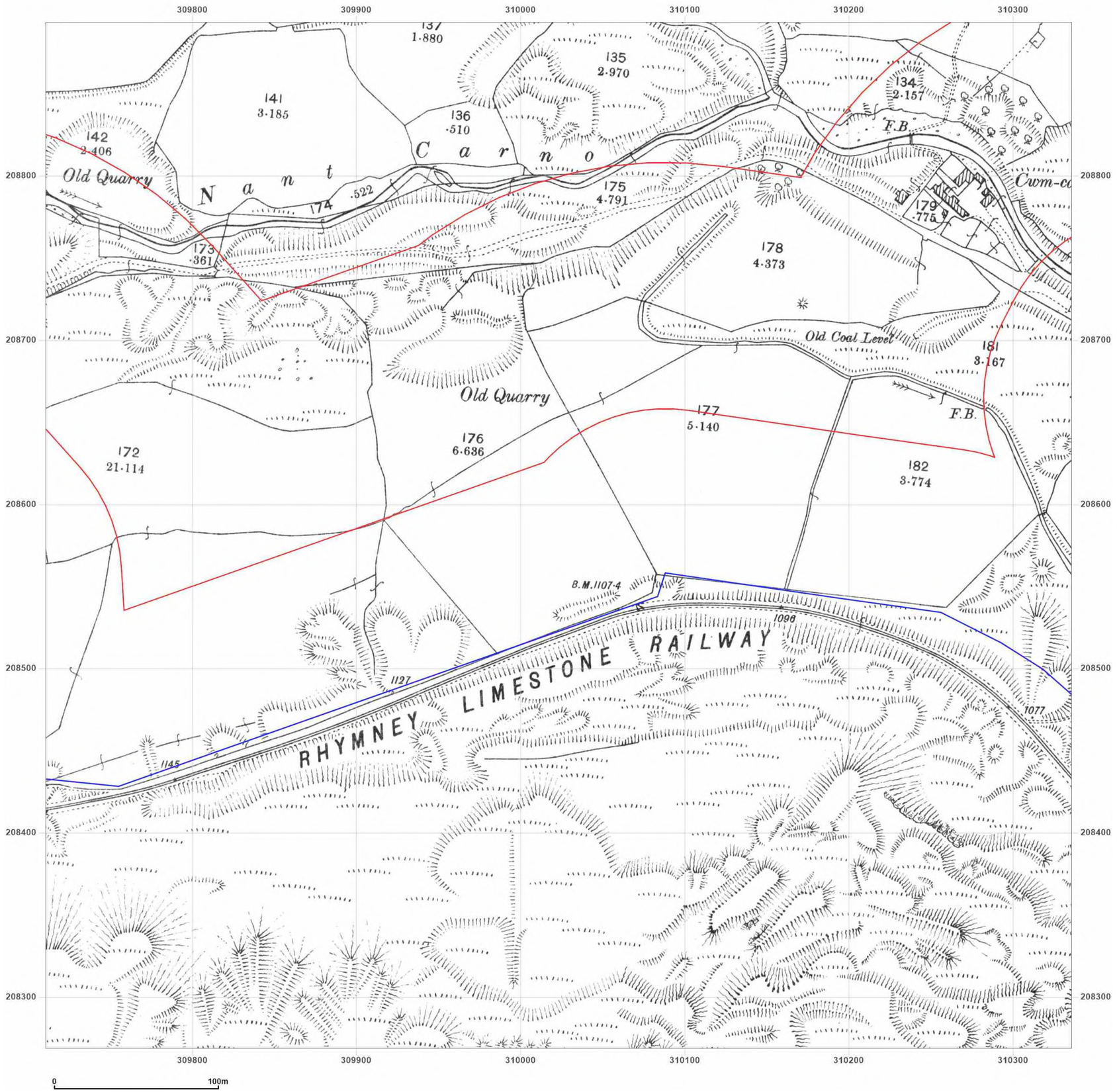
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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_2
Grid Ref: 310023, 208581

Map Name: County Series

Map date: **1901**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1901
Revised 1901
Edition N/A
Copyright N/A
Levelled N/A

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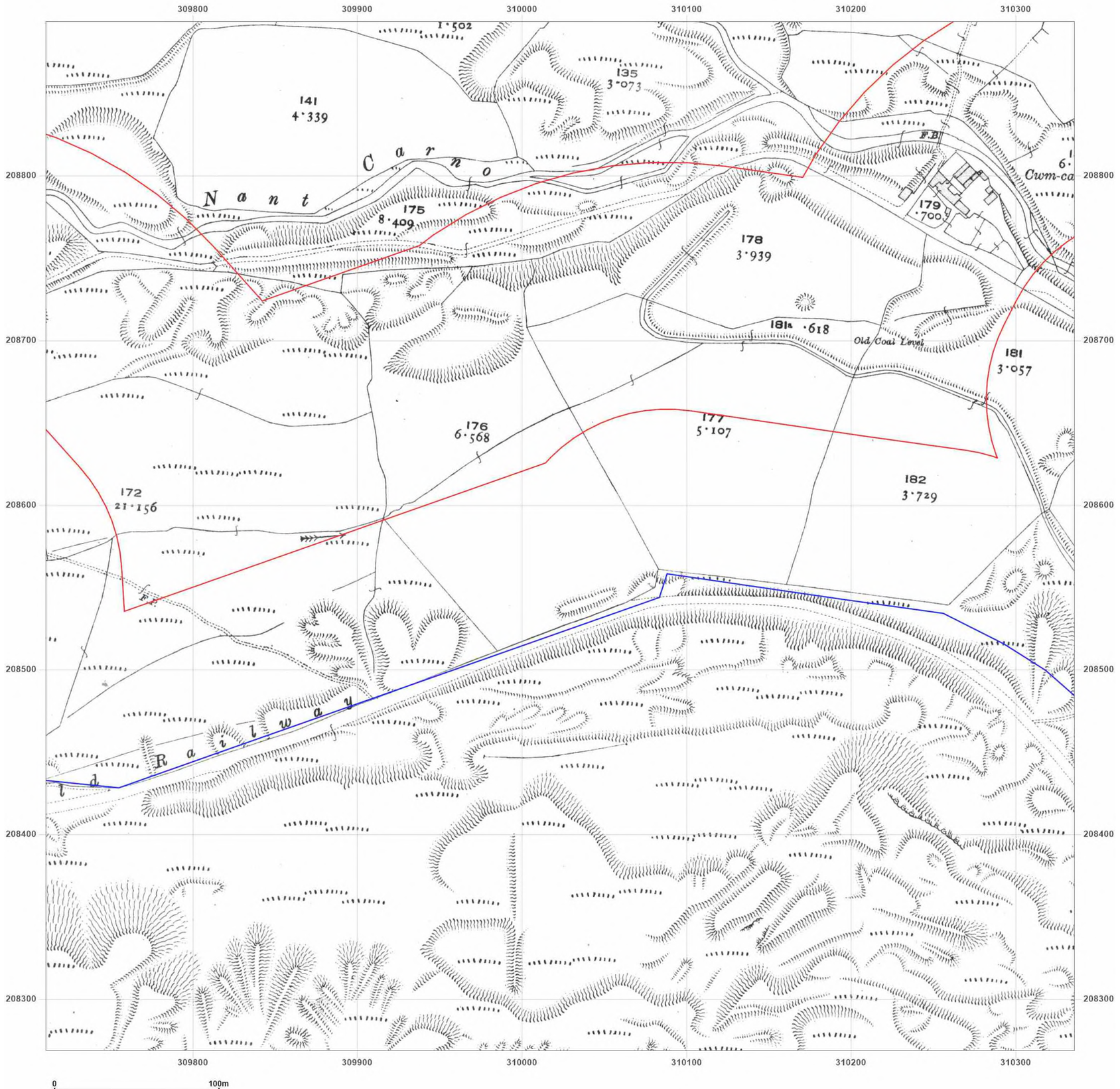
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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_2
Grid Ref: 310023, 208581

Map Name: County Series
Map date: **1919**
Scale: 1:2,500
Printed at: 1:2,500

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

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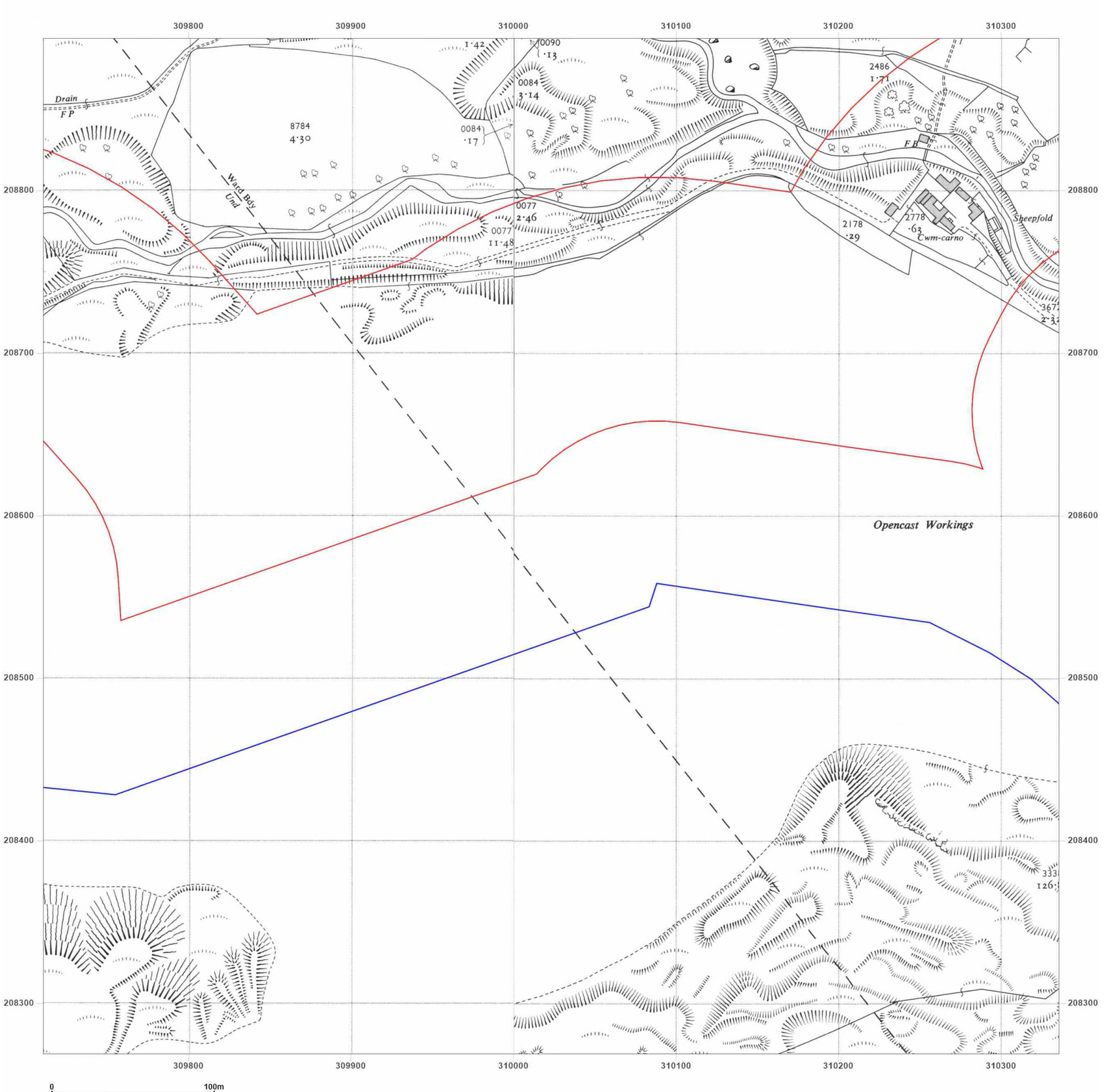
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Site Details:

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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_2
Grid Ref: 310023, 208581

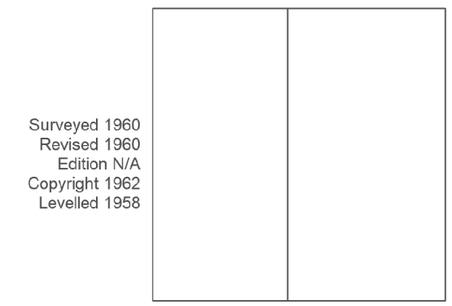
Map Name: National Grid

Map date: **1959-1960**

Scale: 1:2,500

Printed at: 1:2,500

N
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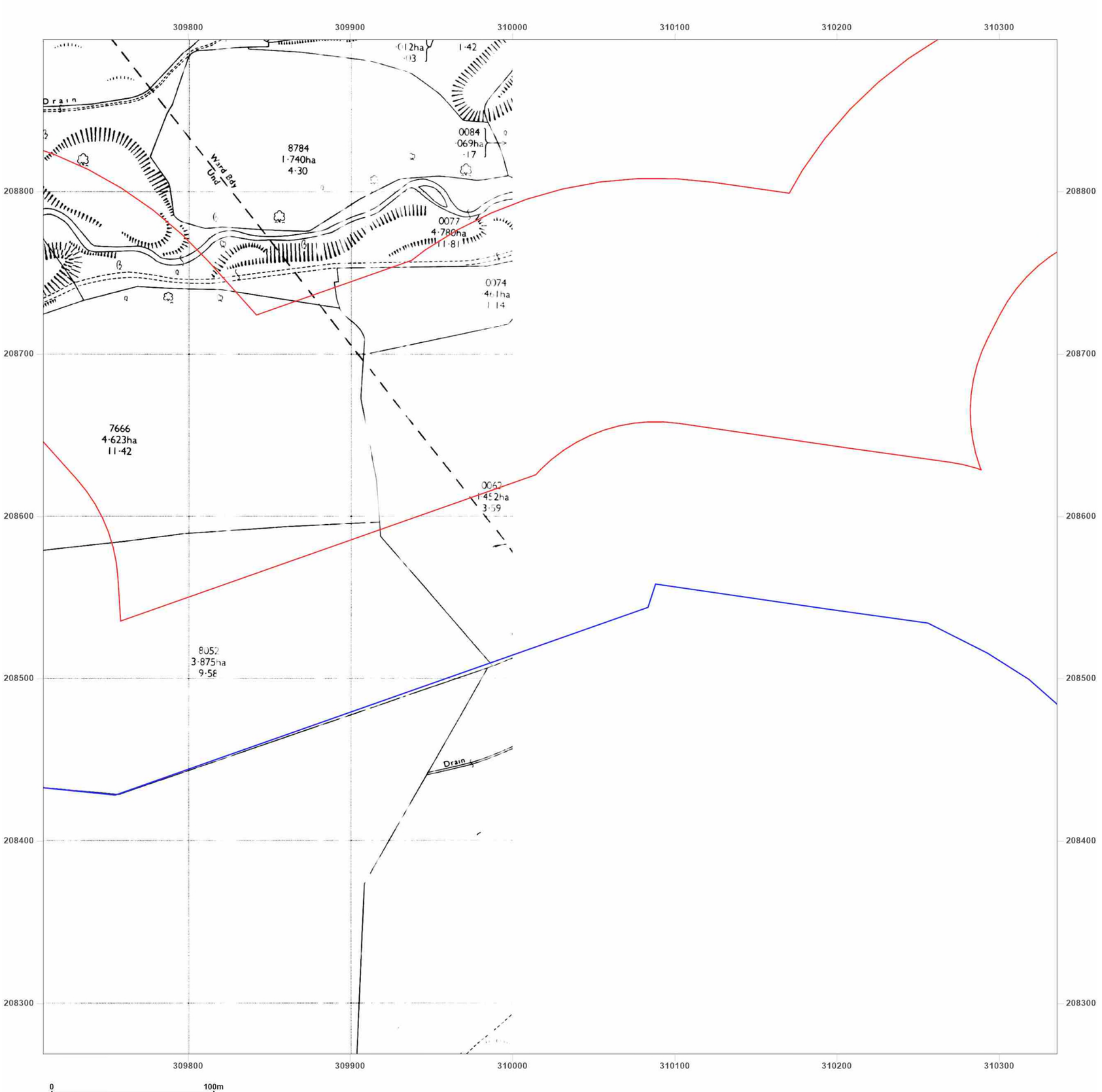
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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_2
Grid Ref: 310023, 208581

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

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

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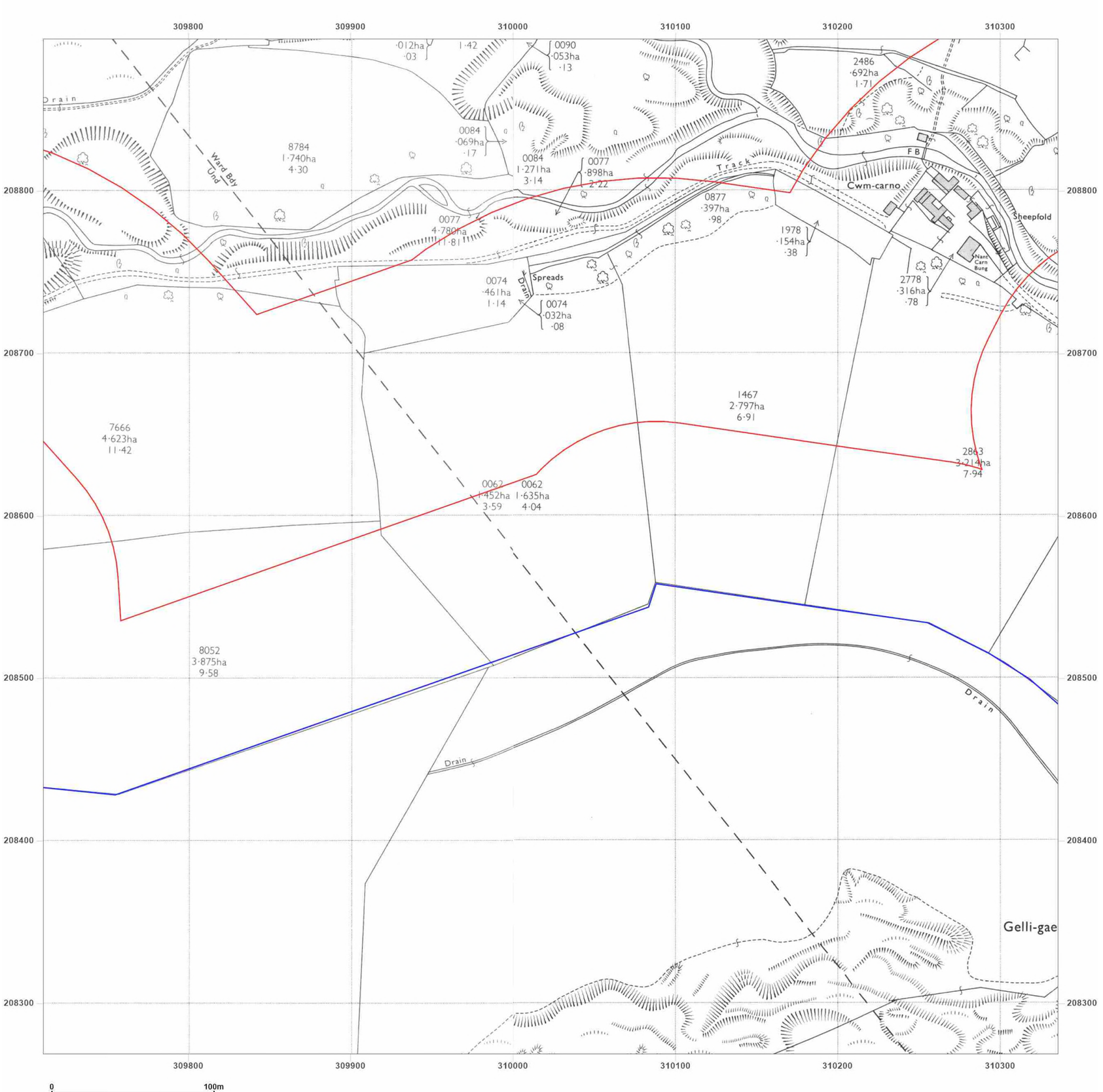
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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_2
Grid Ref: 310023, 208581

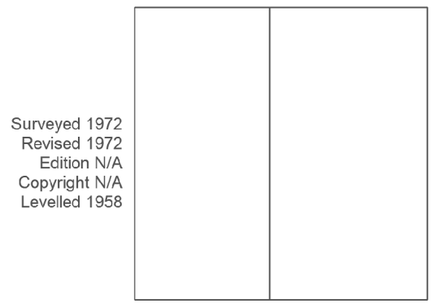
Map Name: National Grid

Map date: **1971-1972**

Scale: 1:2,500

Printed at: 1:2,500

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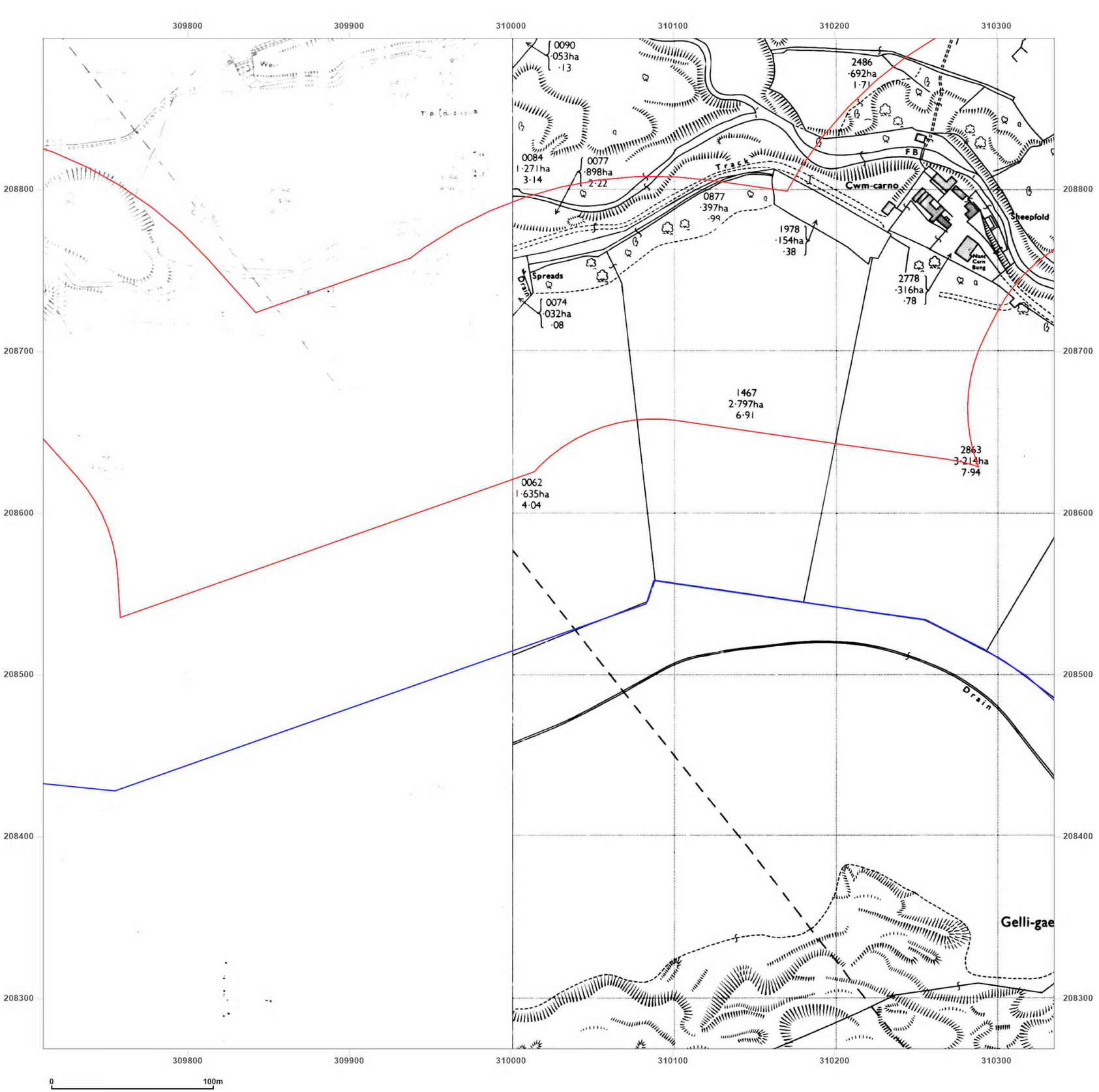
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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_2
Grid Ref: 310023, 208581

Map Name: National Grid

Map date: **1972-1975**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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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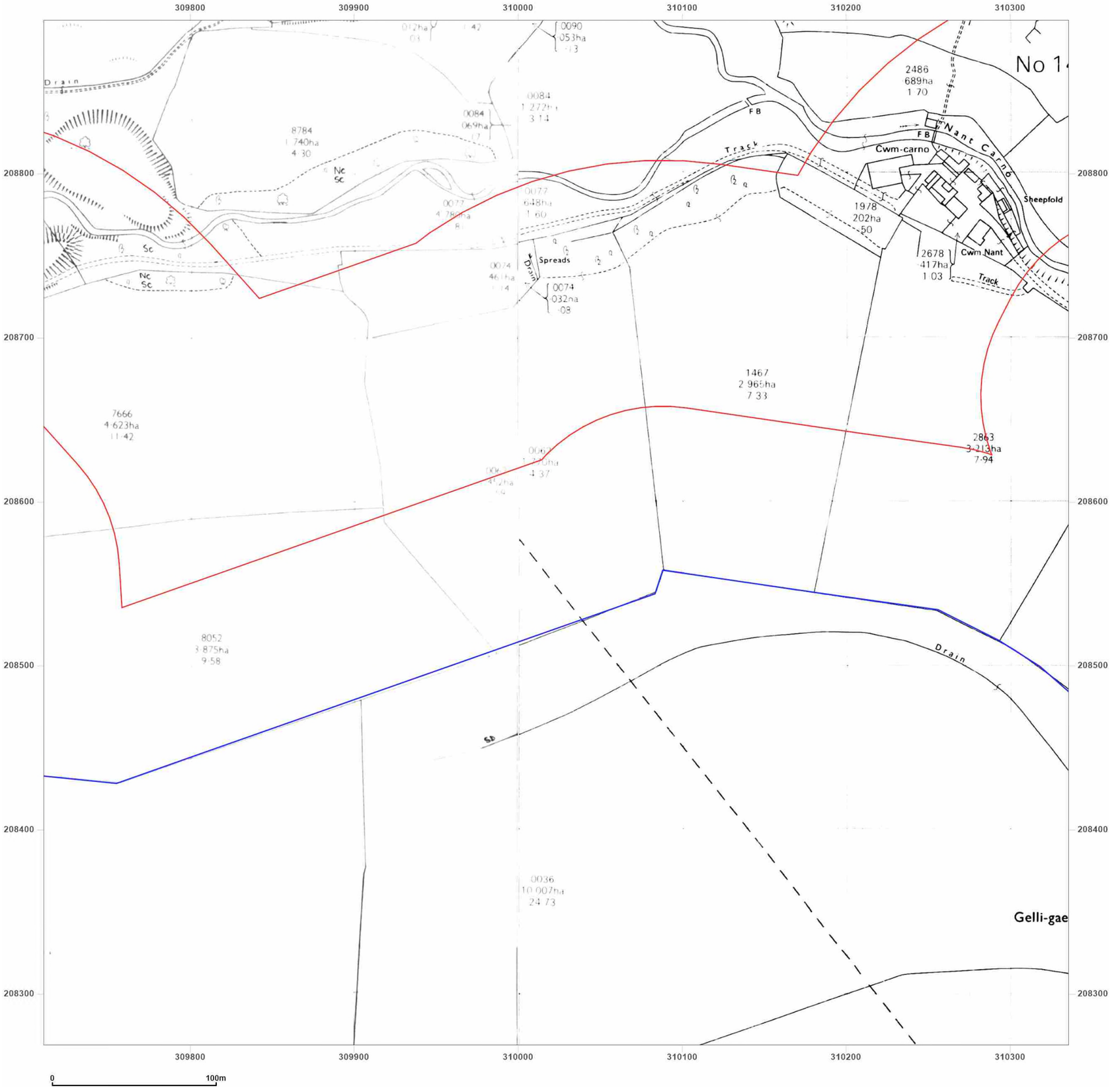
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Site Details:

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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_2
Grid Ref: 310023, 208581

Map Name: National Grid

Map date: **1983-1986**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1958	Surveyed N/A
Revised 1986	Revised N/A
Edition N/A	Edition N/A
Copyright 1986	Copyright N/A
Levelled 1958	Levelled N/A

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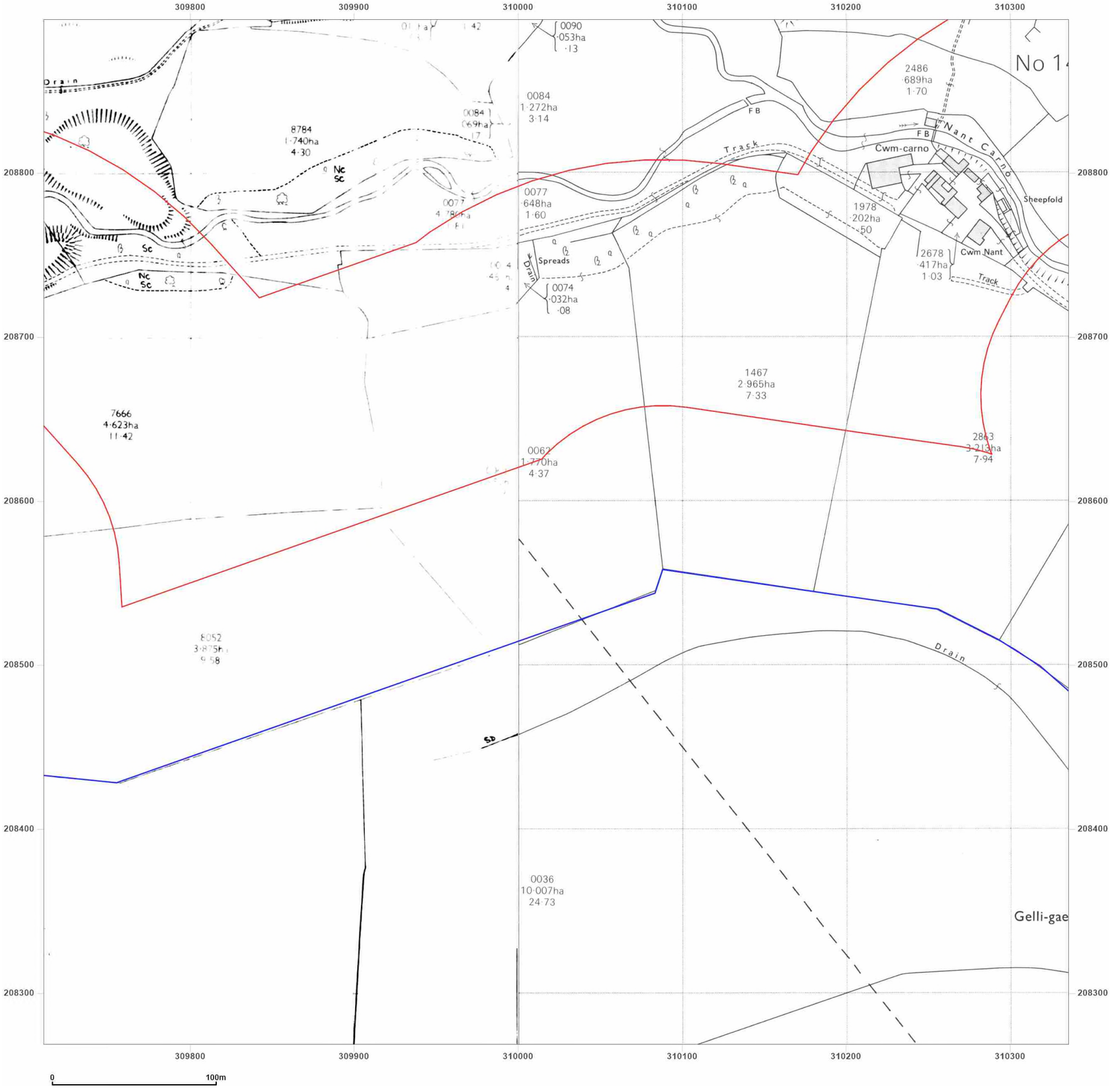
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_2
Grid Ref: 310023, 208581

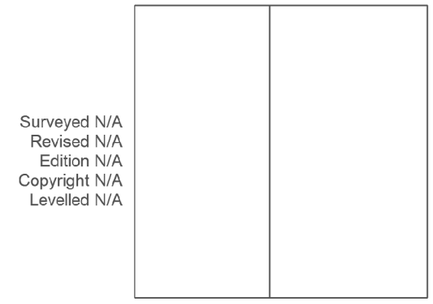
Map Name: National Grid

Map date: **1981-1986**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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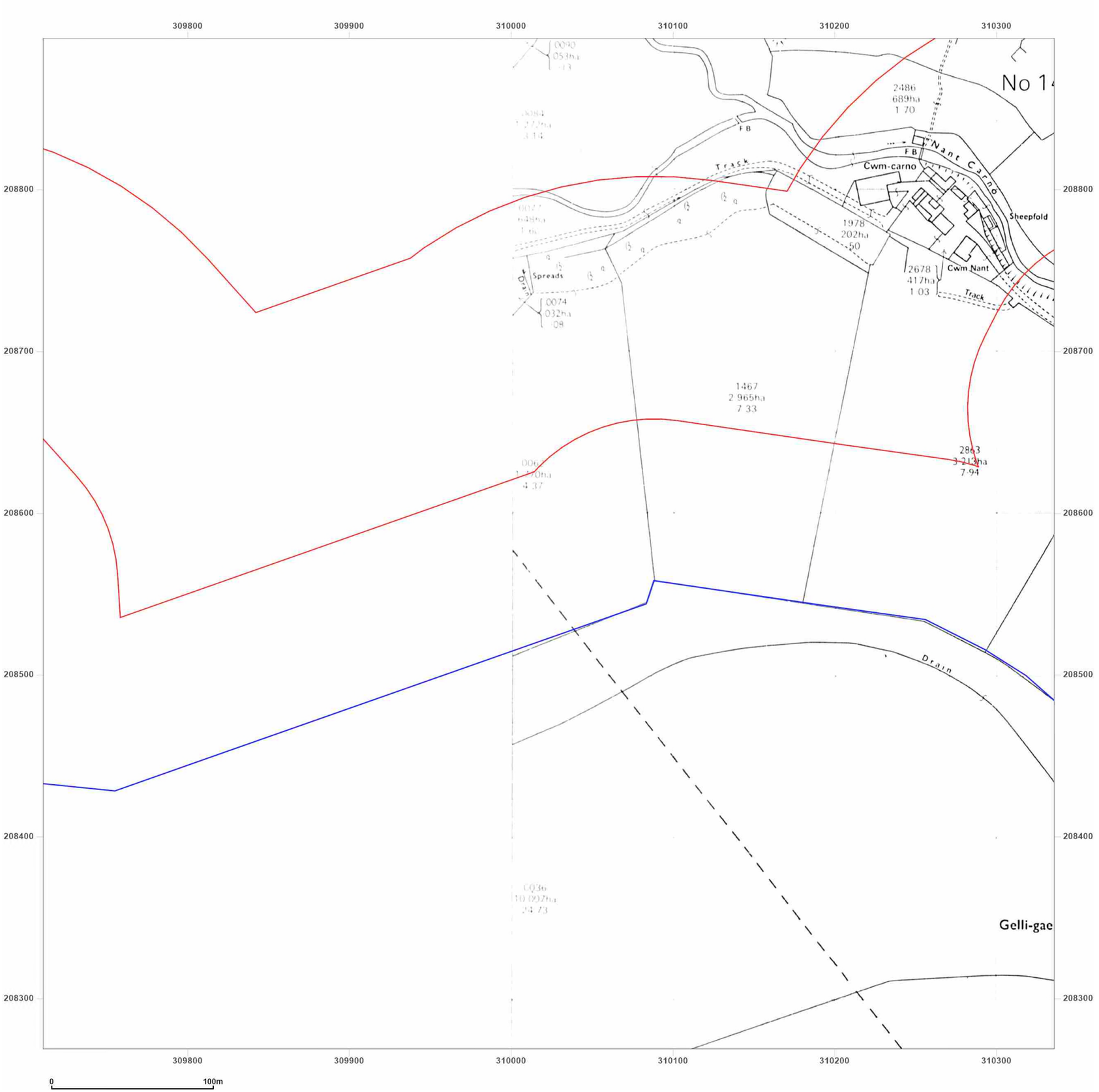


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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_2
Grid Ref: 310023, 208581

Map Name: National Grid
Map date: **1987**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1987
Levelled 1958

Groundsure INSIGHTS

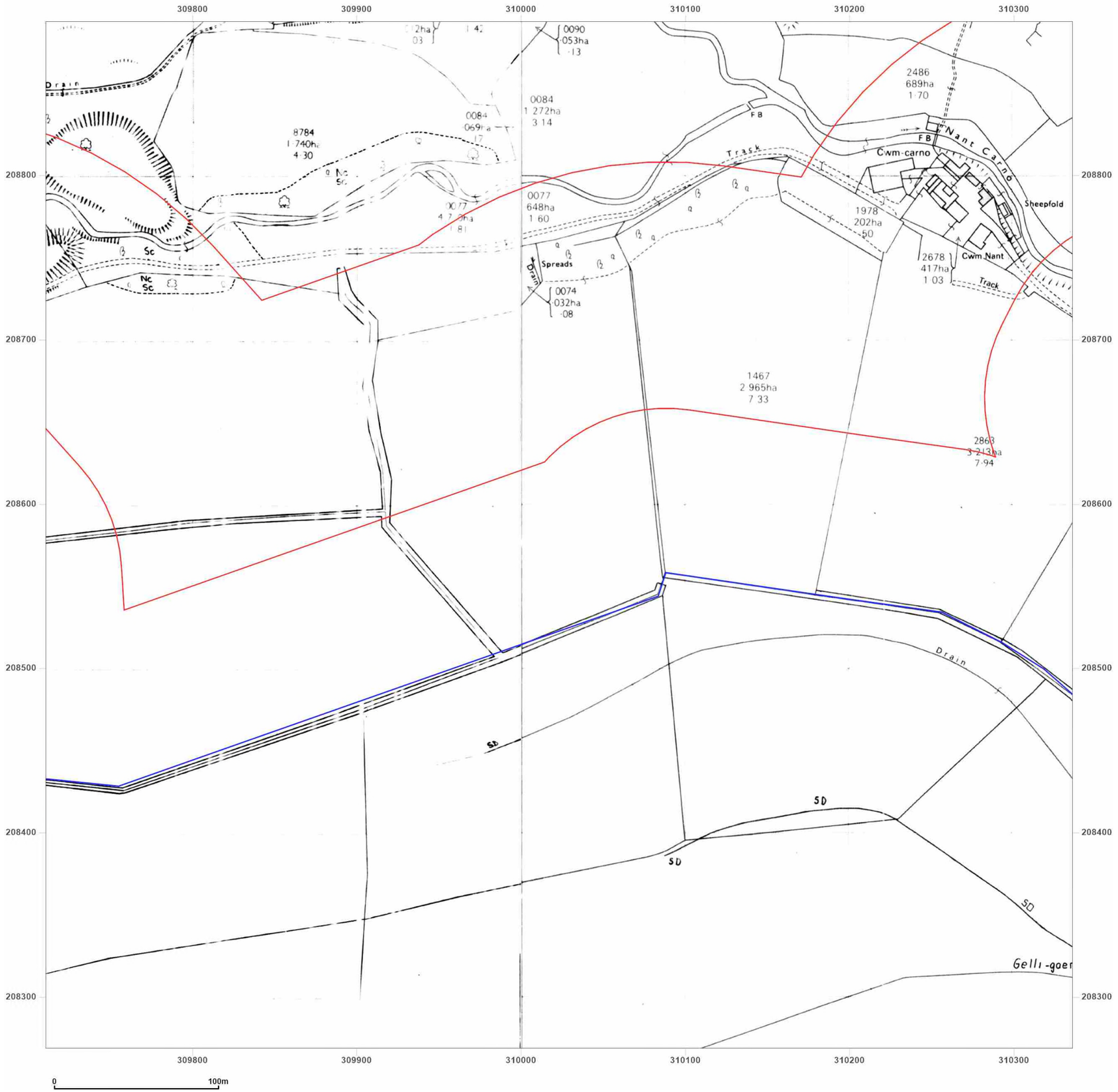
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_2
Grid Ref: 310023, 208581

Map Name: National Grid

Map date: **1984-1988**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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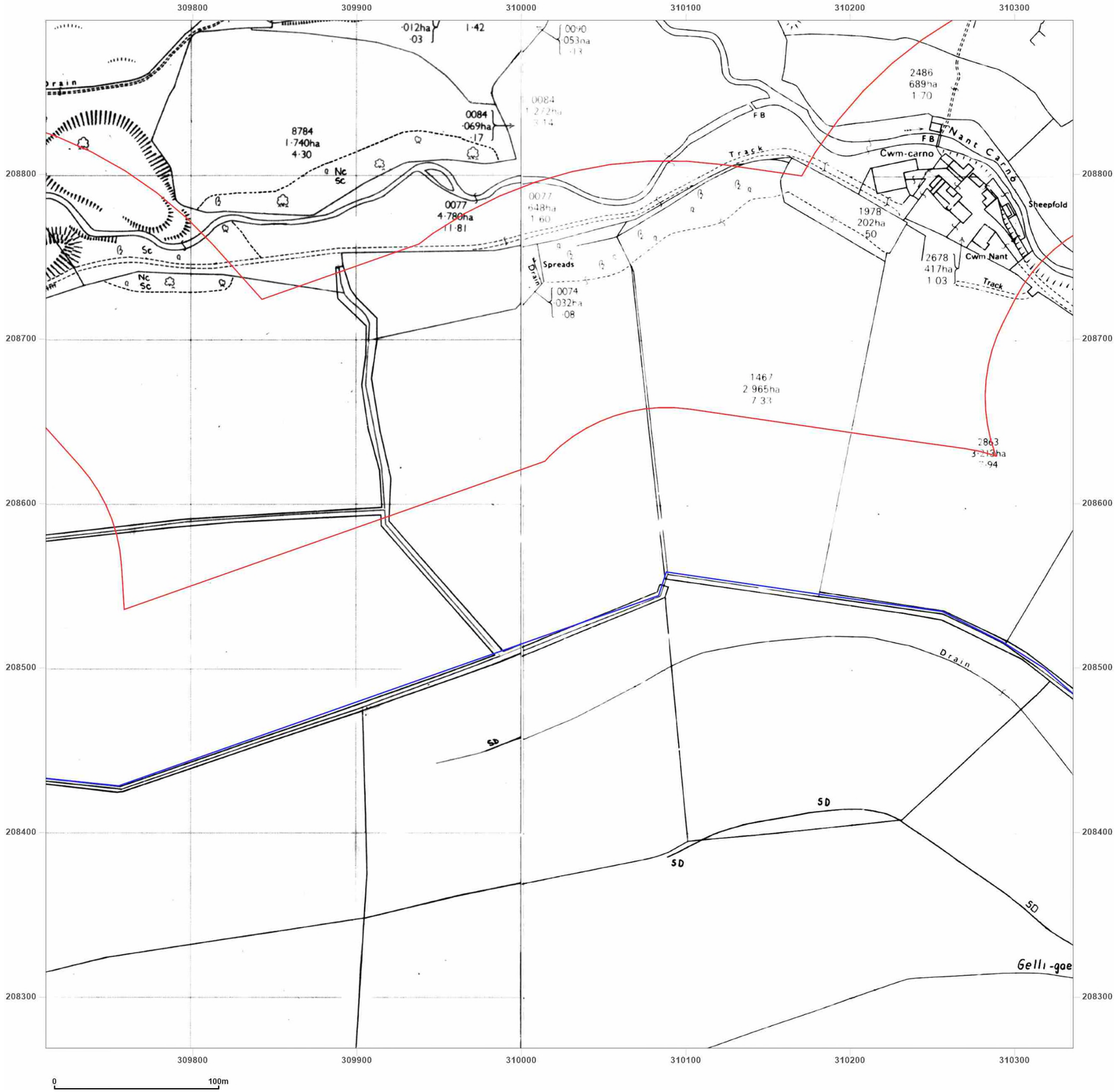


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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_2
Grid Ref: 310023, 208581

Map Name: National Grid

Map date: **1988-1990**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1958	Surveyed N/A
Revised 1988	Revised N/A
Edition N/A	Edition N/A
Copyright 1988	Copyright N/A
Levelled 1958	Levelled N/A

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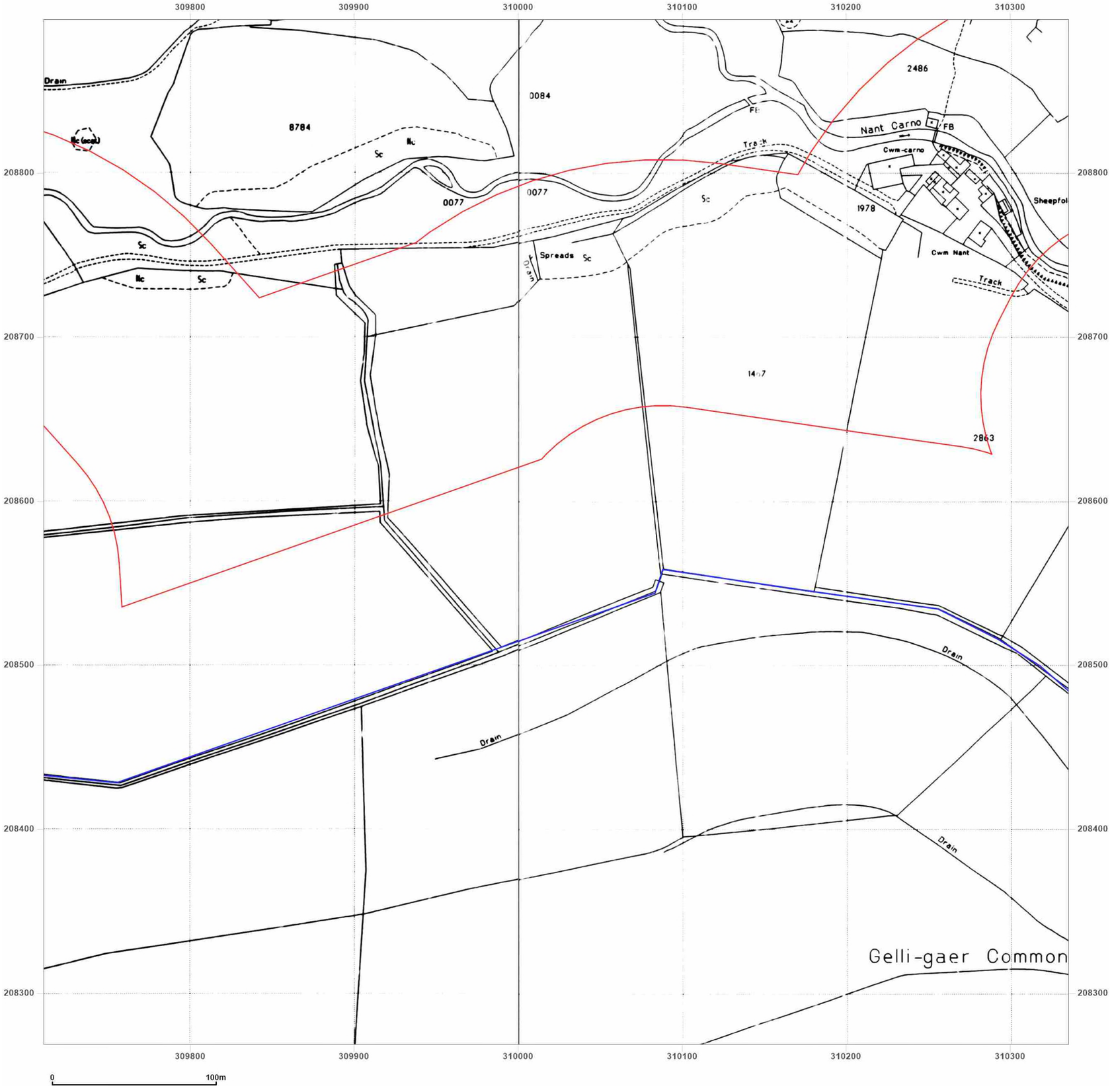
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_2_2
Grid Ref: 310023, 208581

Map Name: National Grid

Map date: **1993**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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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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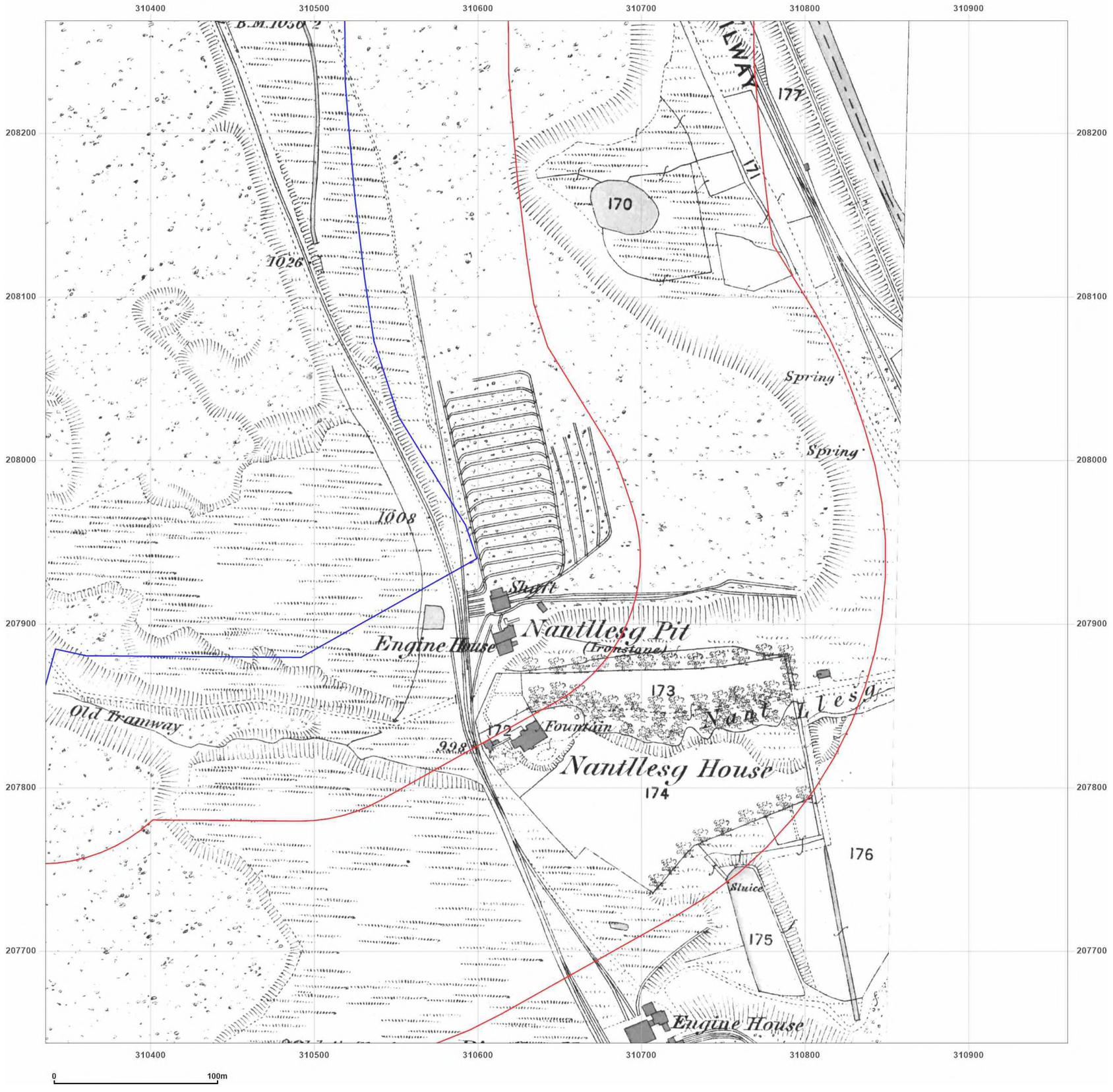
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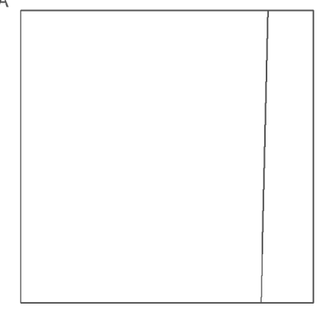
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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: County Series
Map date: **1875**
Scale: 1:2,500
Printed at: 1:2,500

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



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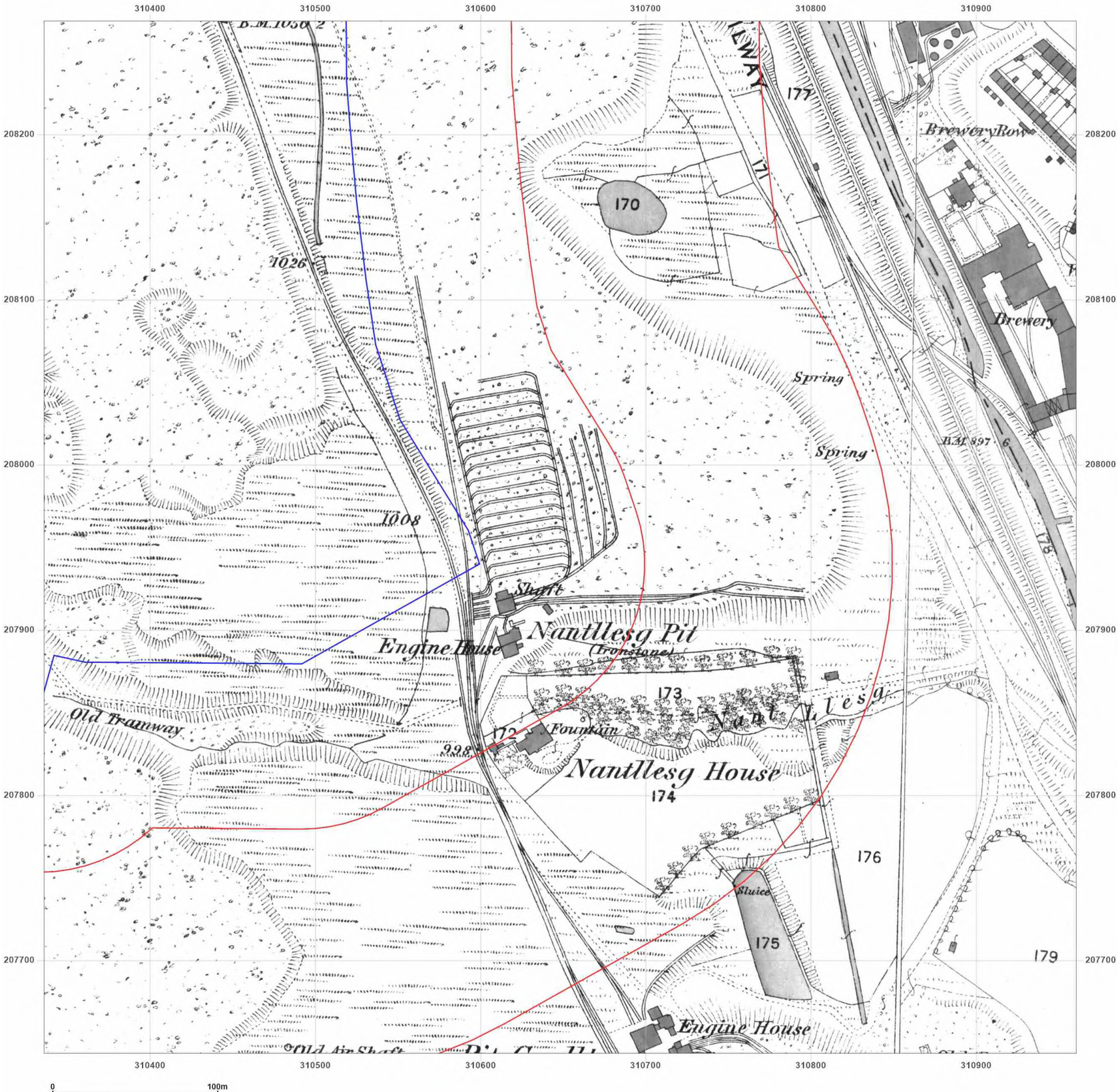
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: County Series

Map date: **1873-1877**

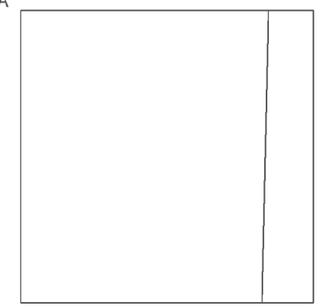
Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1873
Revised 1873
Edition N/A
Copyright N/A
Levelled N/A

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



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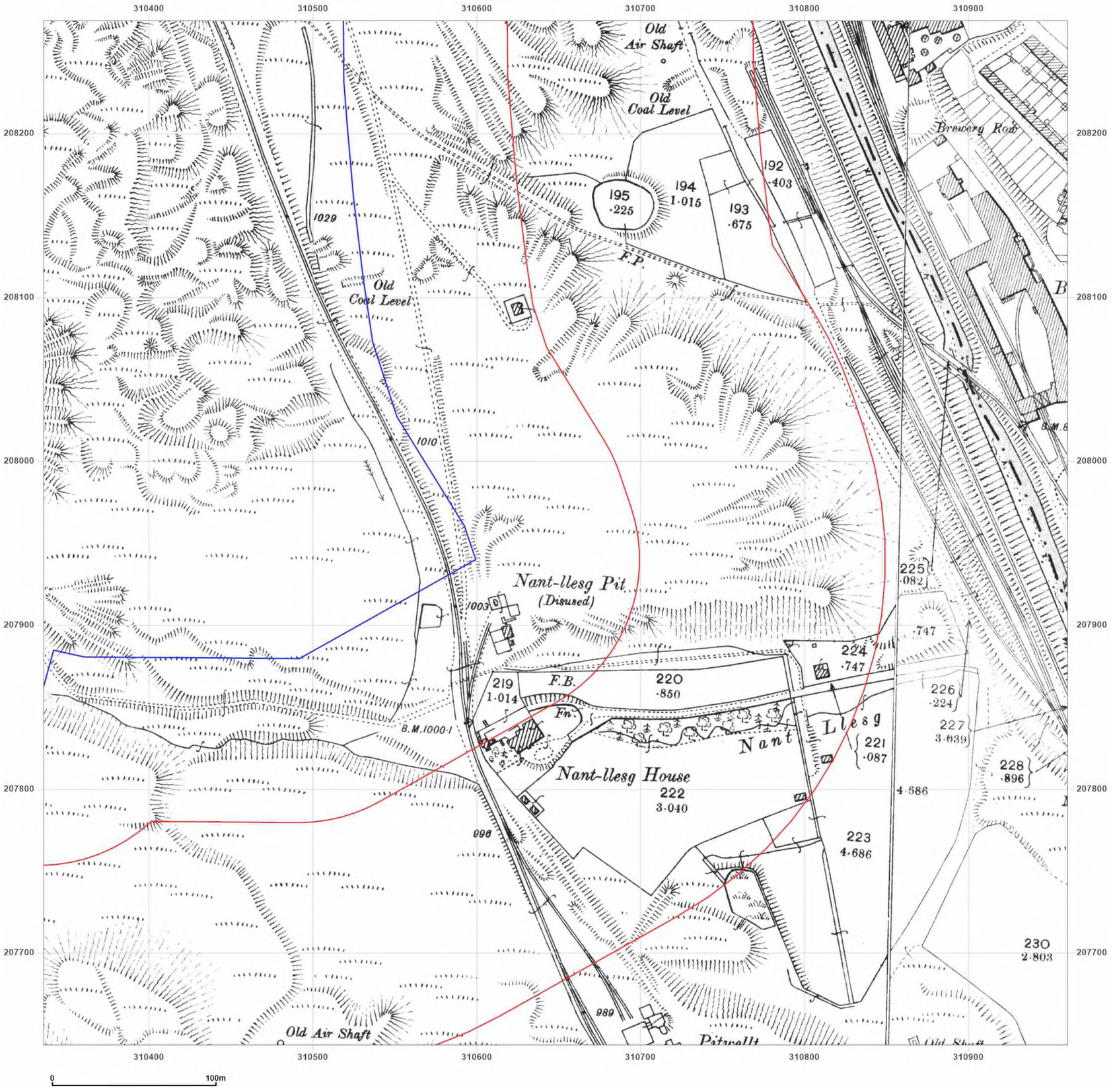
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: County Series

Map date: **1901**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1901
Revised 1901
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1901
Revised 1901
Edition N/A
Copyright N/A
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Site Details:

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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: County Series

Map date: **1919-1920**

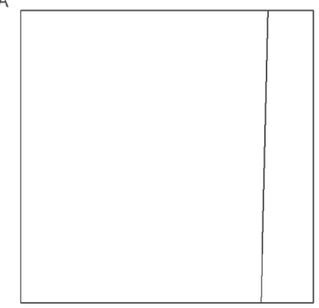
Scale: 1:2,500

Printed at: 1:2,500

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

Surveyed 1920
Revised 1920
Edition N/A
Copyright N/A
Levelled N/A



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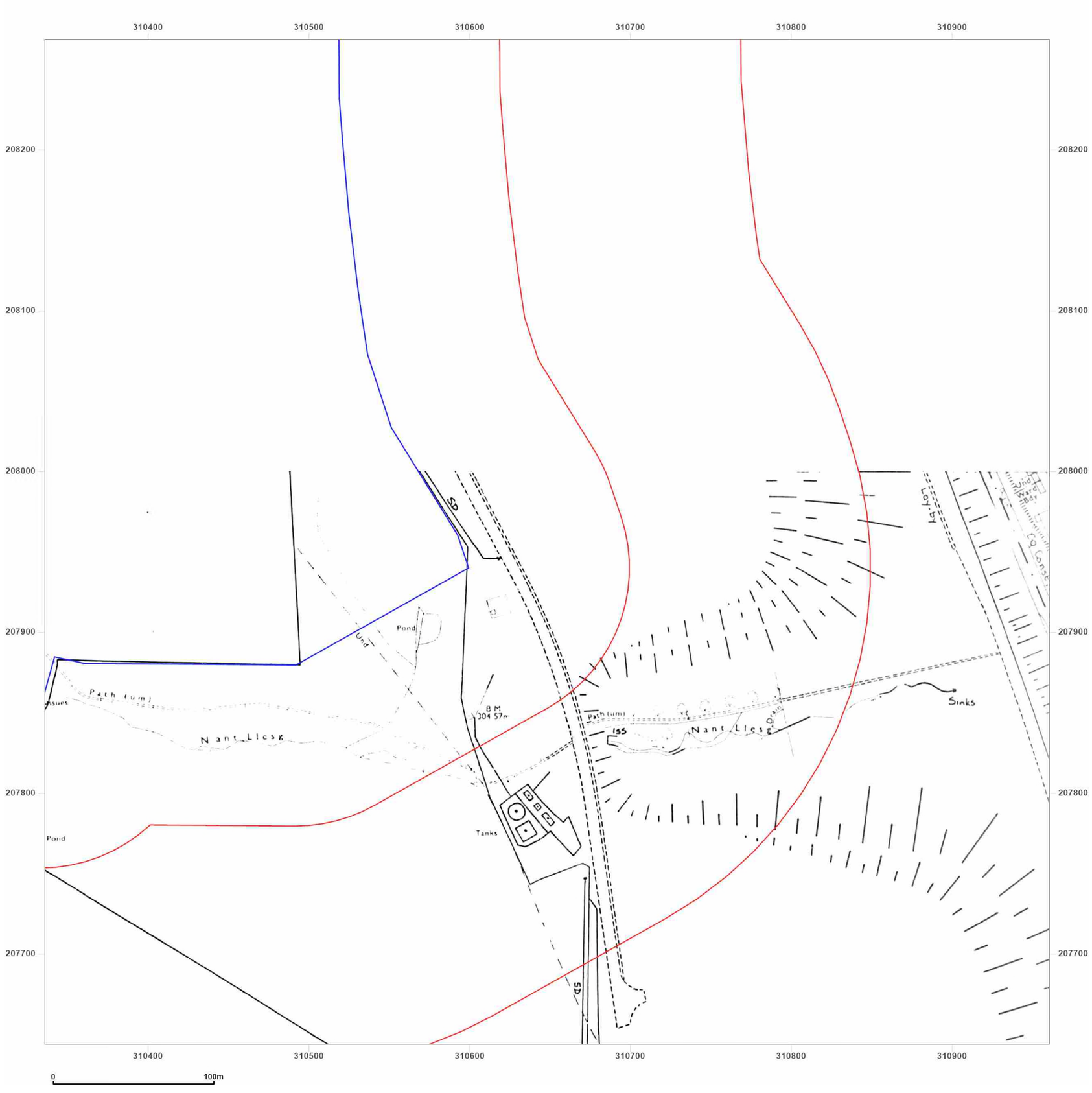
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: National Grid

Map date: **1958**

Scale: 1:2,500

Printed at: 1:2,500

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

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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: National Grid

Map date: **1959**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1959
Revised 1959
Edition N/A
Copyright 1961
Levelled 1950

Surveyed 1959
Revised 1959
Edition N/A
Copyright 1961
Levelled 1958

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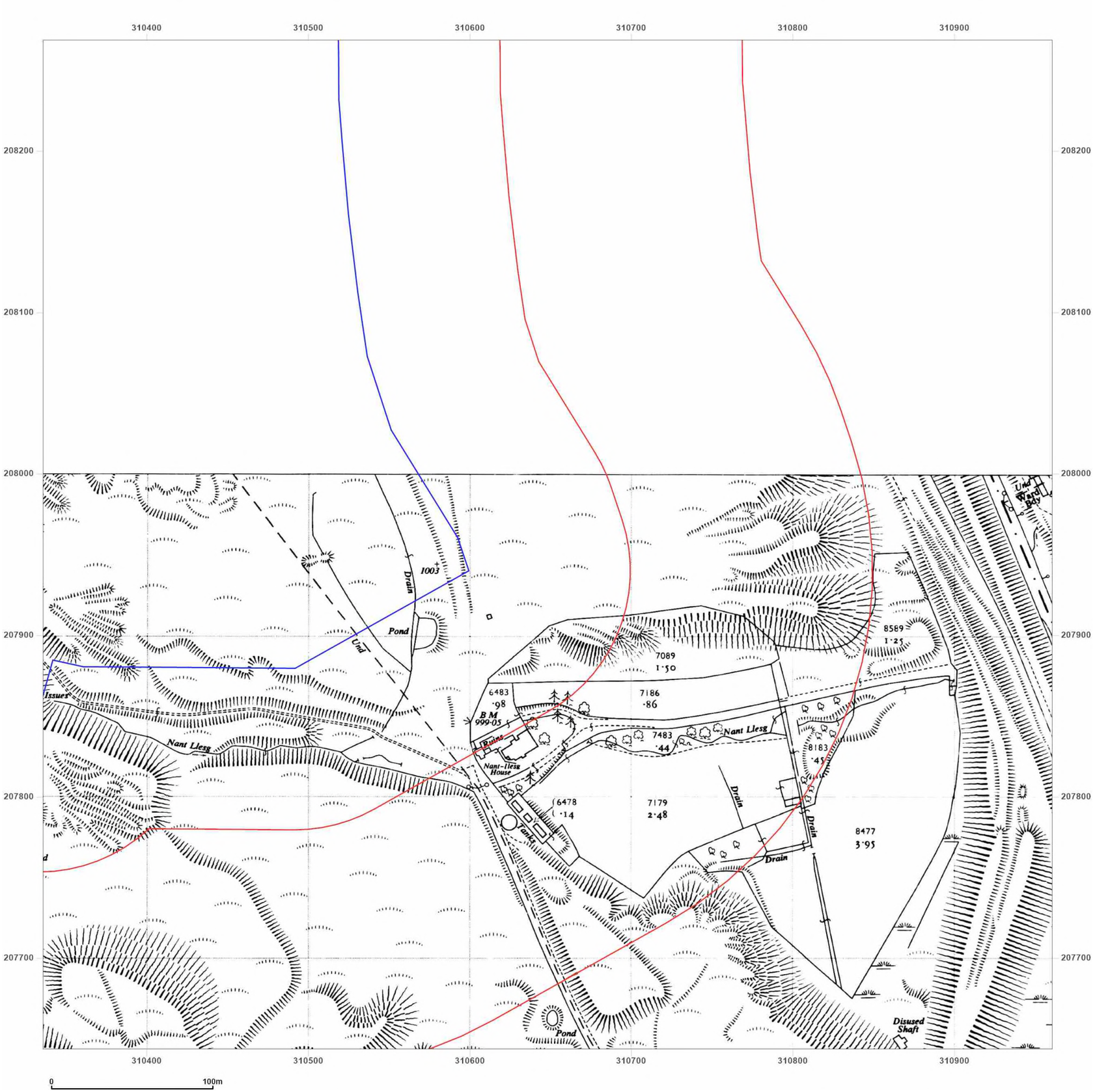
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

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

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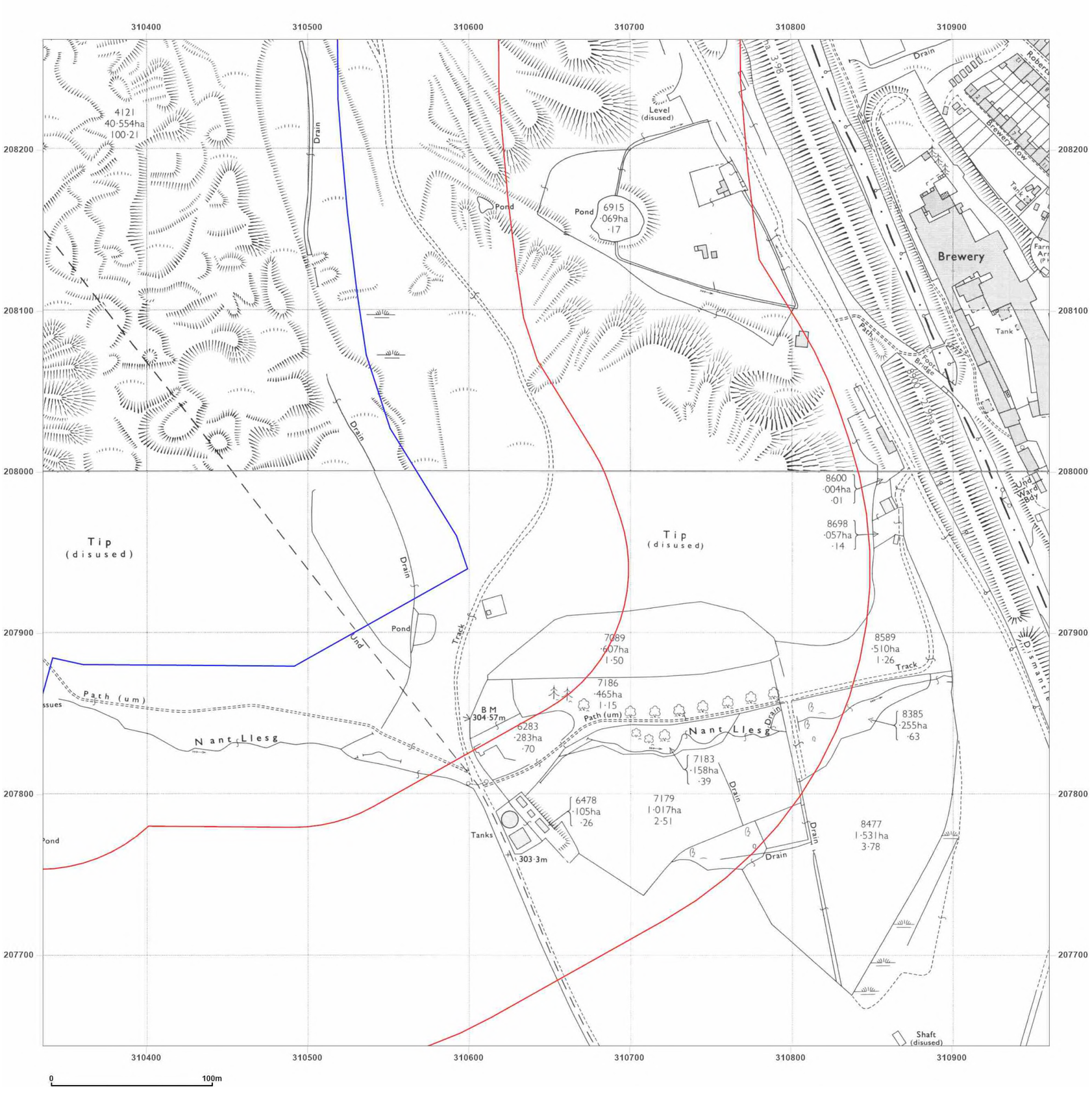
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: National Grid

Map date: **1971-1973**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1971
Revised 1971
Edition N/A
Copyright 1972
Levelled 1958

Surveyed 1973
Revised 1973
Edition N/A
Copyright 1975
Levelled 1958

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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: National Grid

Map date: **1972-1975**

Scale: 1:2,500

Printed at: 1:2,500

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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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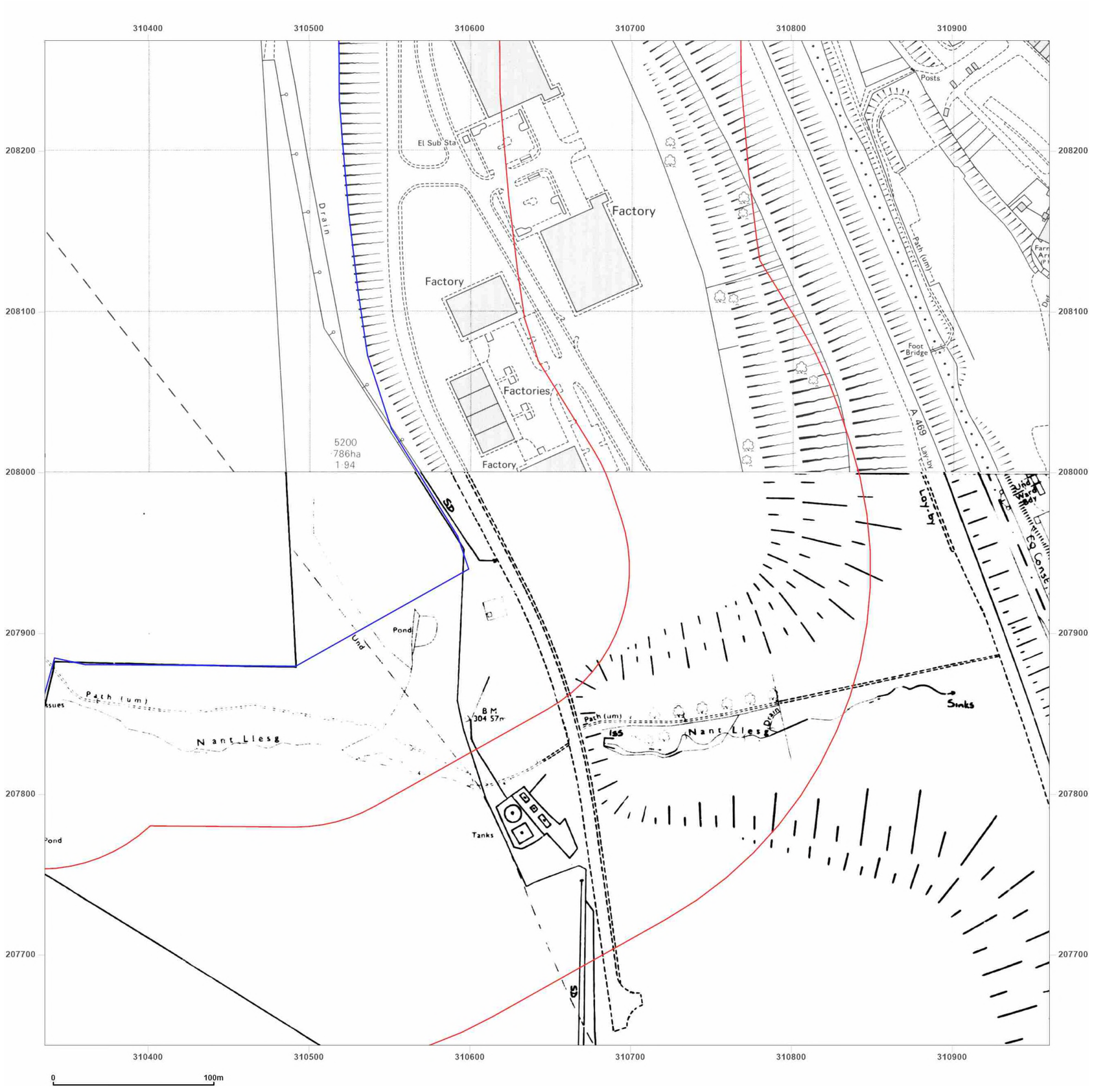
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Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: National Grid

Map date: **1980-1981**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1981
Revised 1981
Edition N/A
Copyright 1983
Levelled 1958

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

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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: National Grid

Map date: **1983**

Scale: 1:2,500

Printed at: 1:2,500

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

Surveyed 1983
Revised 1983
Edition N/A
Copyright 1984
Levelled 1958

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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: National Grid

Map date: **1984**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1954
Revised 1981
Edition N/A
Copyright 1984
Levelled 1954

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

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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: National Grid

Map date: **1984-1987**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1987
Levelled 1958

Surveyed 1958
Revised 1983
Edition N/A
Copyright 1984
Levelled 1958

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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: National Grid

Map date: **1989**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1958
Revised 1989
Edition N/A
Copyright 1989
Levelled 1958

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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: National Grid

Map date: **1988-1990**

Scale: 1:2,500

Printed at: 1:2,500

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

Surveyed N/A
Revised N/A
Edition N/A
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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_1
Grid Ref: 310648, 207956

Map Name: National Grid

Map date: **1989-1993**

Scale: 1:2,500

Printed at: 1:2,500

N
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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

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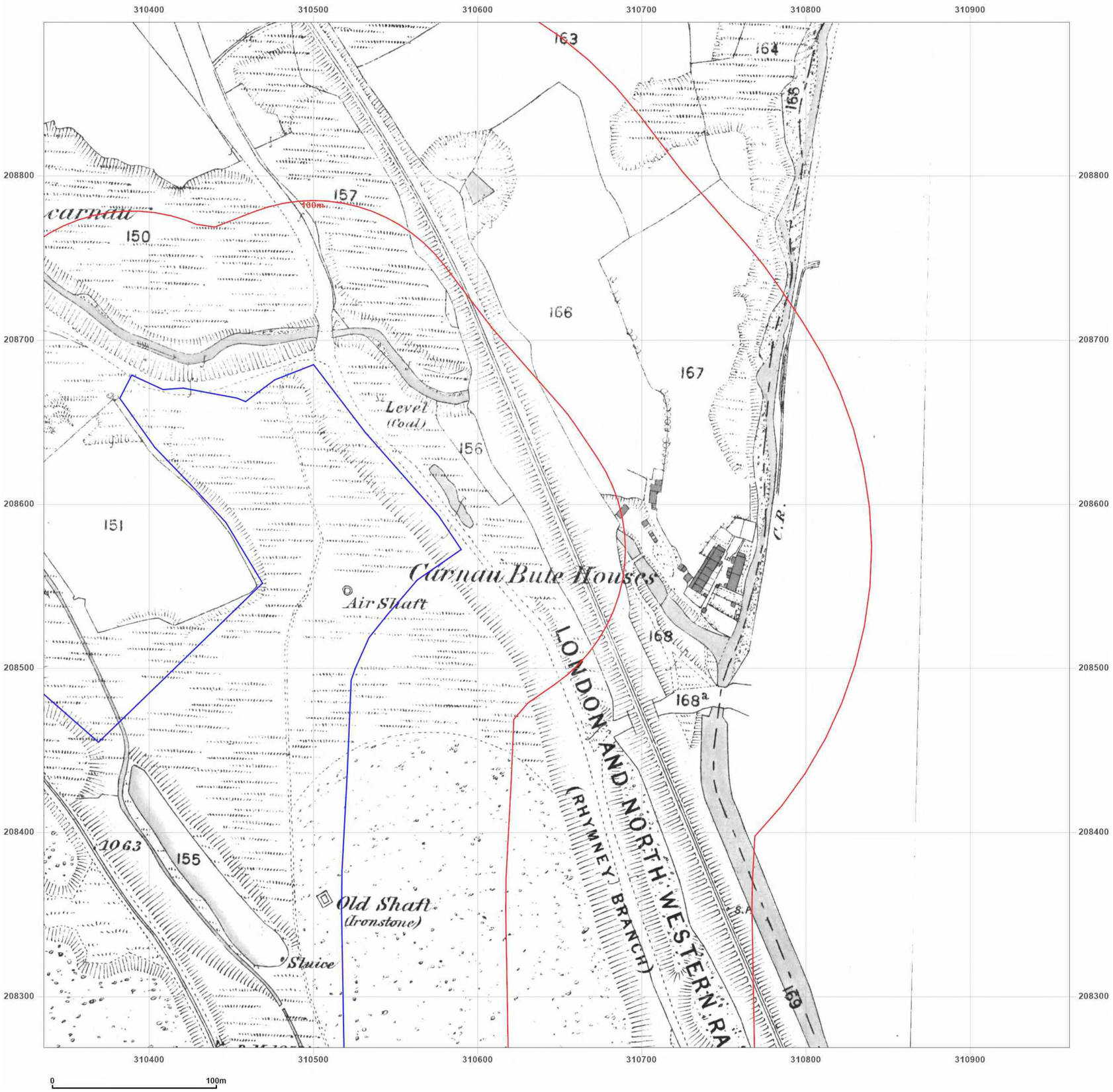
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_2
Grid Ref: 310648, 208581

Map Name: County Series

Map date: **1875**

Scale: 1:2,500

Printed at: 1:2,500

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

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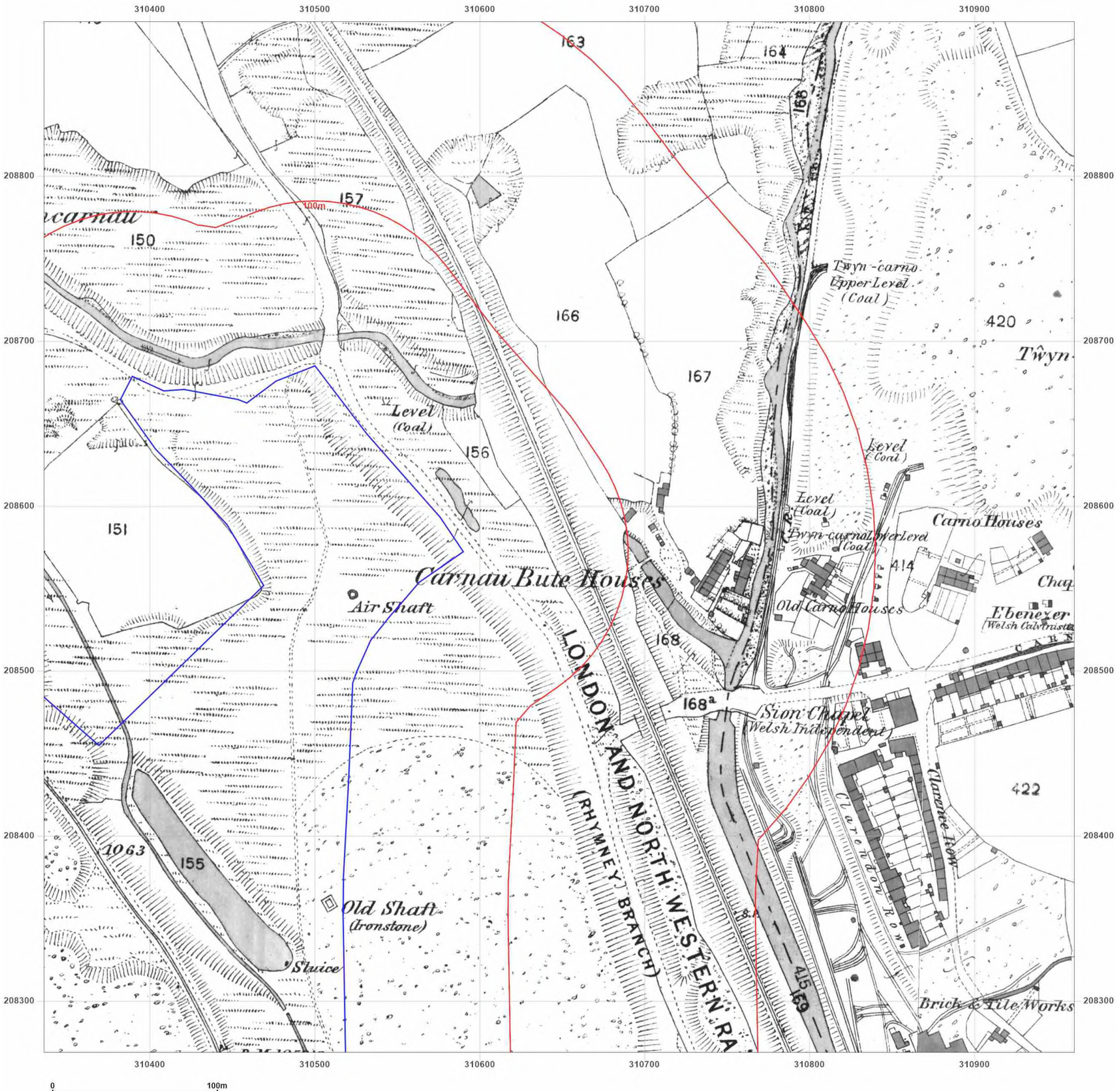
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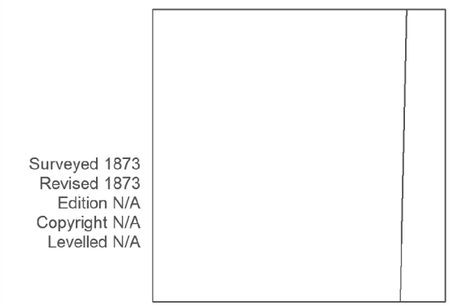
Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_2
Grid Ref: 310648, 208581

Map Name: County Series
Map date: **1873-1877**
Scale: 1:2,500
Printed at: 1:2,500

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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_2
Grid Ref: 310648, 208581

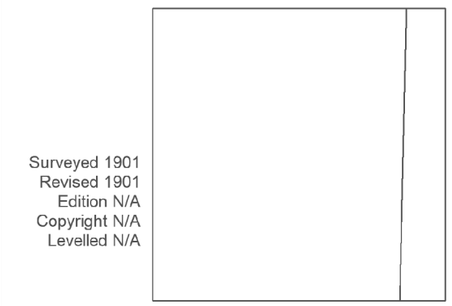
Map Name: County Series

Map date: **1901**

Scale: 1:2,500

Printed at: 1:2,500

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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_2
Grid Ref: 310648, 208581

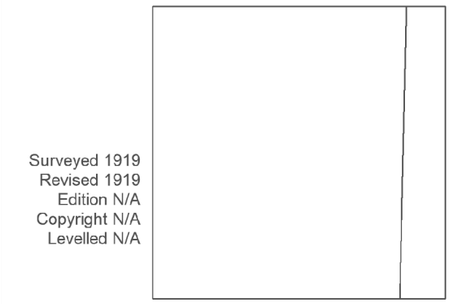
Map Name: County Series

Map date: **1919-1920**

Scale: 1:2,500

Printed at: 1:2,500

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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_2
Grid Ref: 310648, 208581

Map Name: National Grid

Map date: **1959**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1959
Revised 1959
Edition N/A
Copyright 1961
Levelled 1950

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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_2
Grid Ref: 310648, 208581

Map Name: National Grid

Map date: **1971**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1971
Revised 1971
Edition N/A
Copyright 1972
Levelled 1958

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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_2
Grid Ref: 310648, 208581

Map Name: National Grid

Map date: **1972**

Scale: 1:2,500

Printed at: 1:2,500

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

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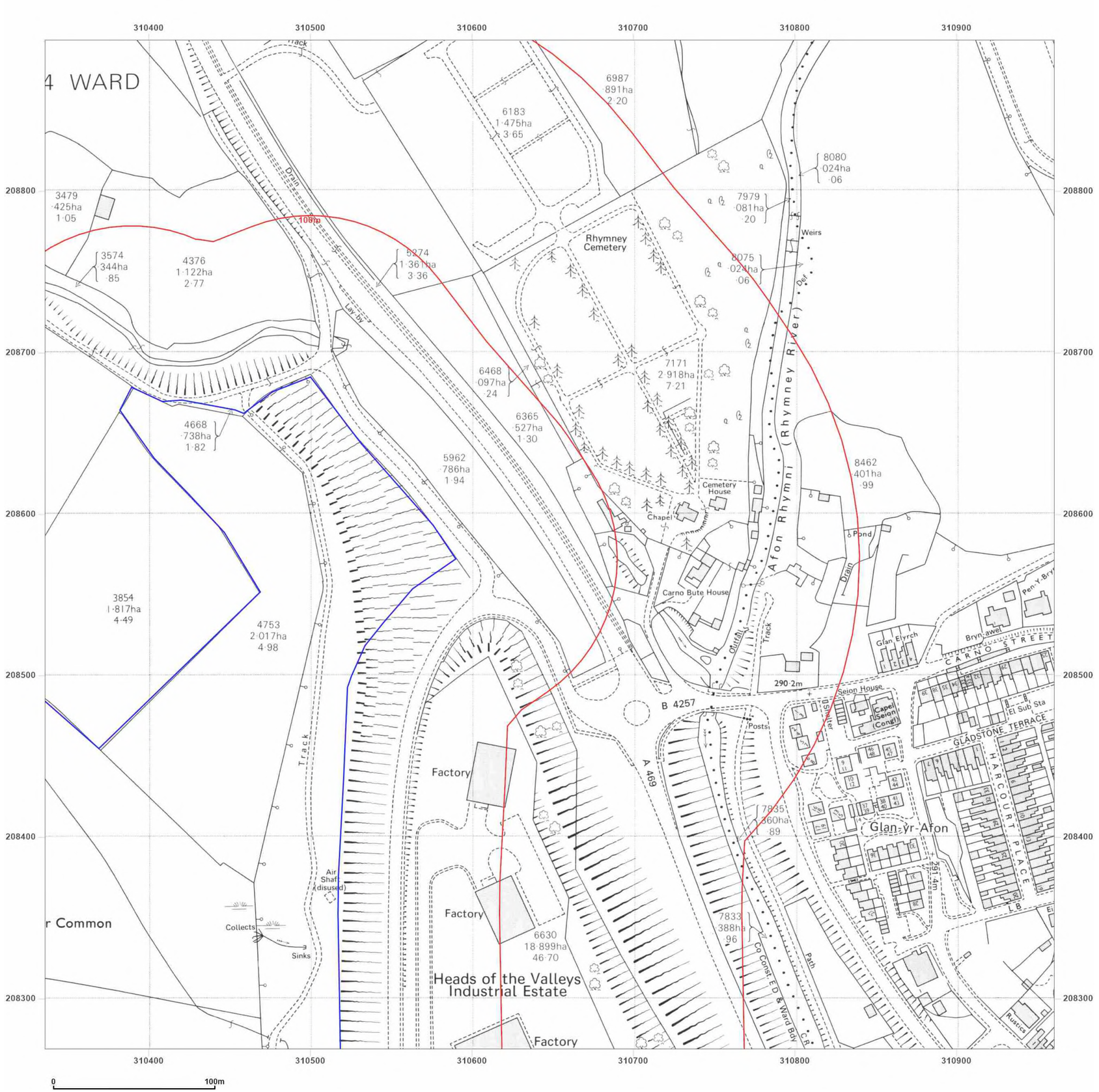
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_2
Grid Ref: 310648, 208581

Map Name: National Grid

Map date: **1981**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1981
Revised 1981
Edition N/A
Copyright 1983
Levelled 1958

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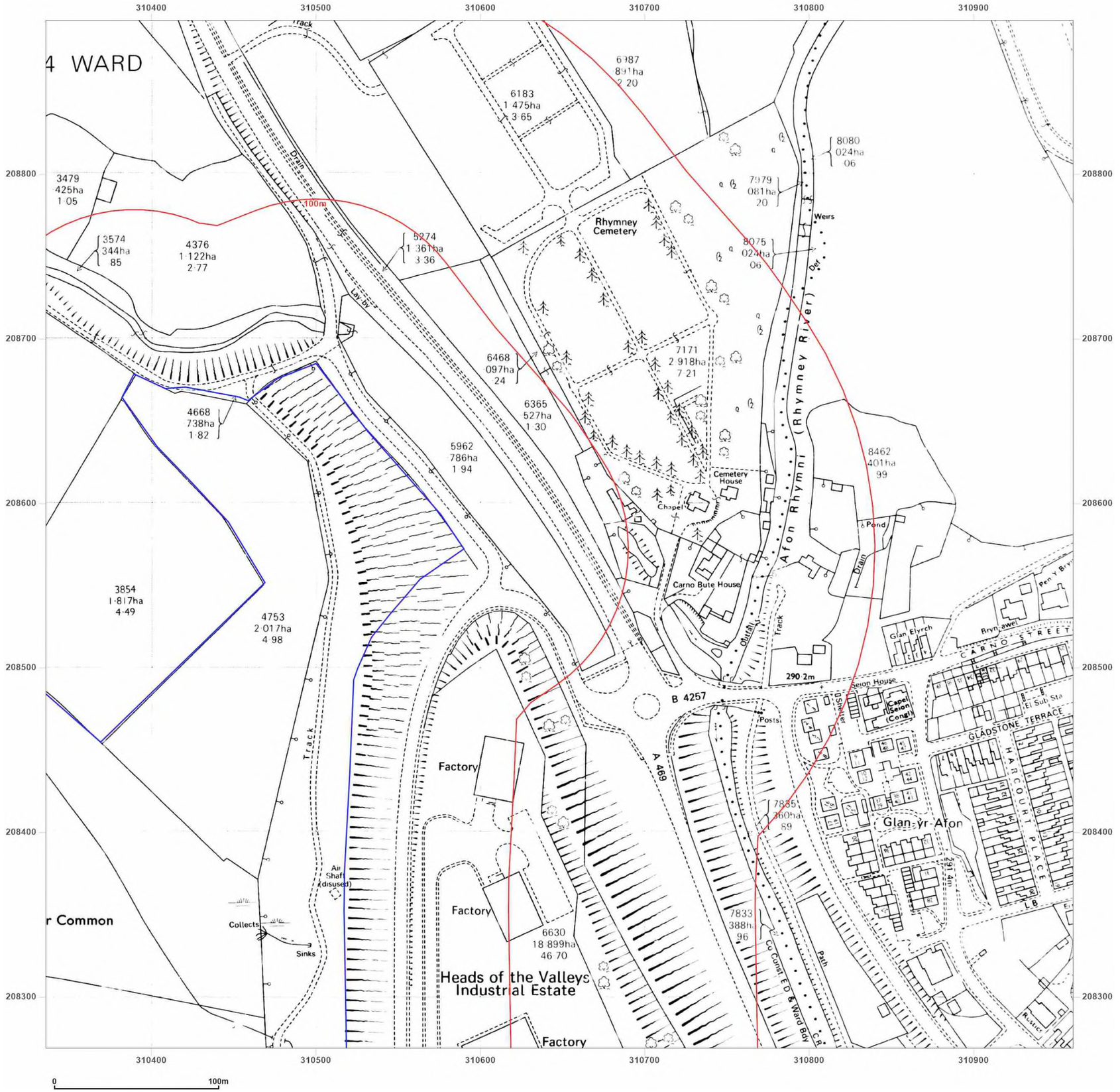
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_2
Grid Ref: 310648, 208581

Map Name: National Grid

Map date: **1983**

Scale: 1:2,500

Printed at: 1:2,500

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

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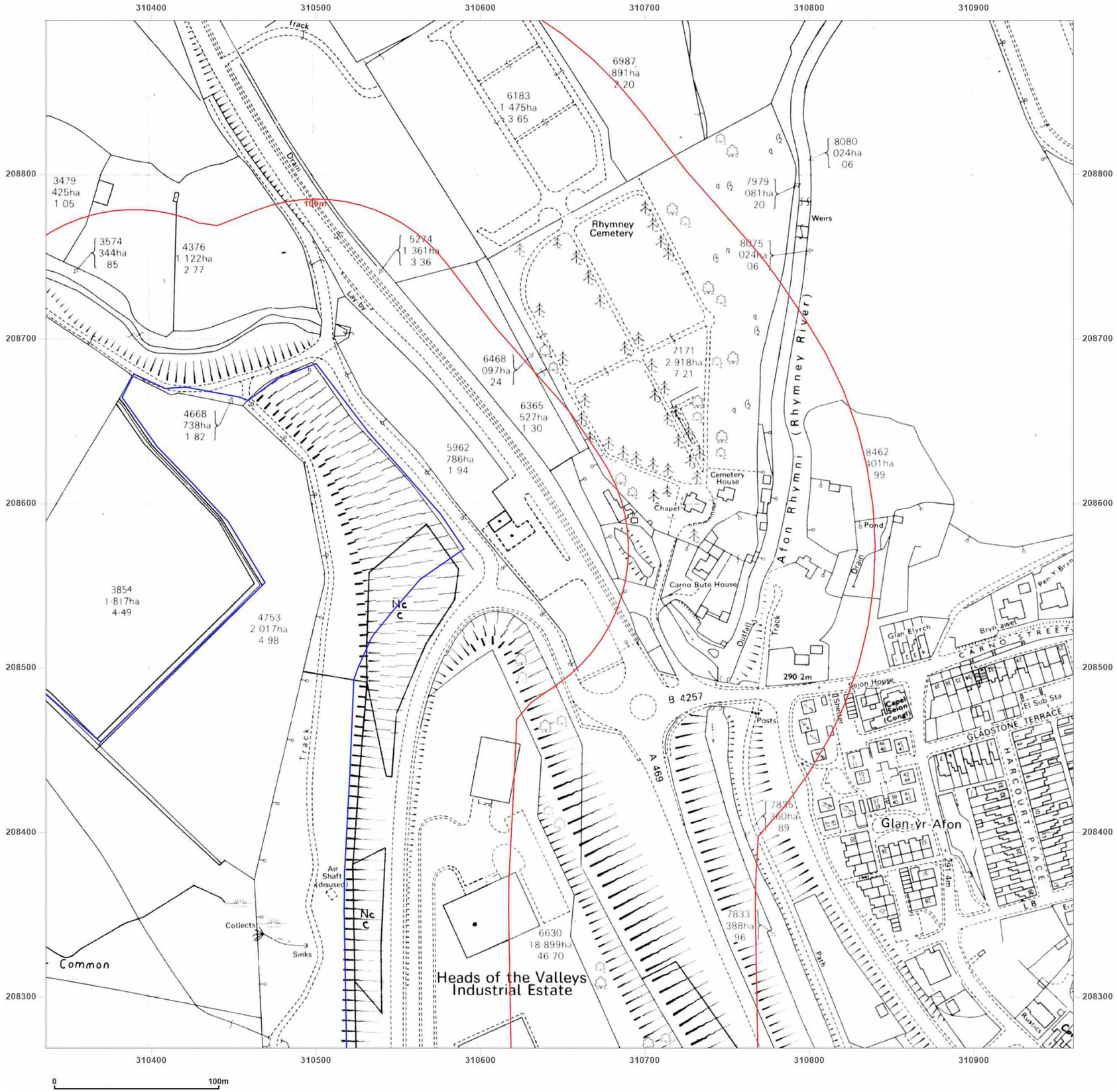
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_2
Grid Ref: 310648, 208581

Map Name: National Grid

Map date: **1984**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1954
Revised 1981
Edition N/A
Copyright 1984
Levelled 1954

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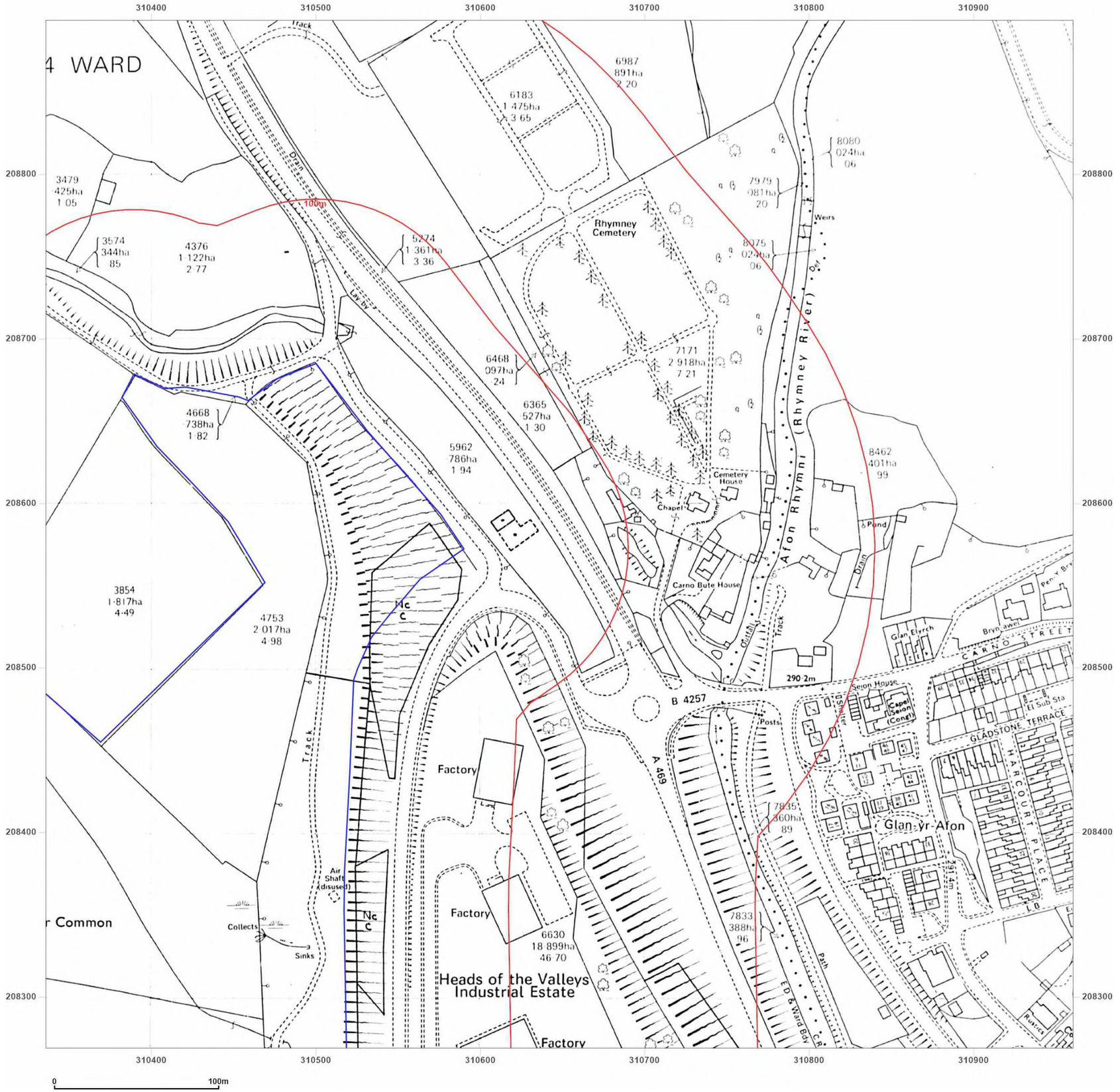
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_2
Grid Ref: 310648, 208581

Map Name: National Grid

Map date: **1987**

Scale: 1:2,500

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Edition N/A
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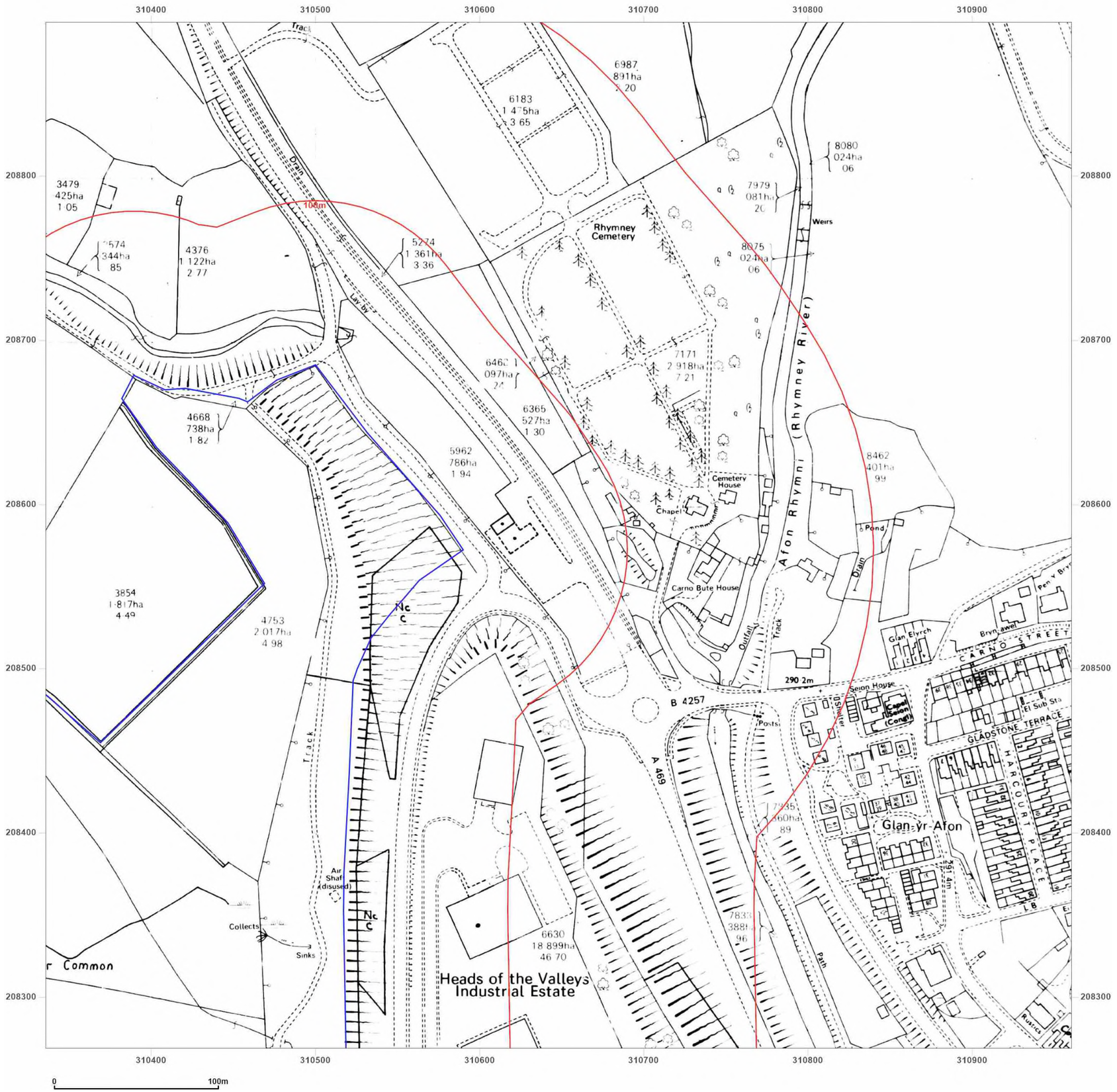
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Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_2
Grid Ref: 310648, 208581

Map Name: National Grid

Map date: **1990**

Scale: 1:2,500

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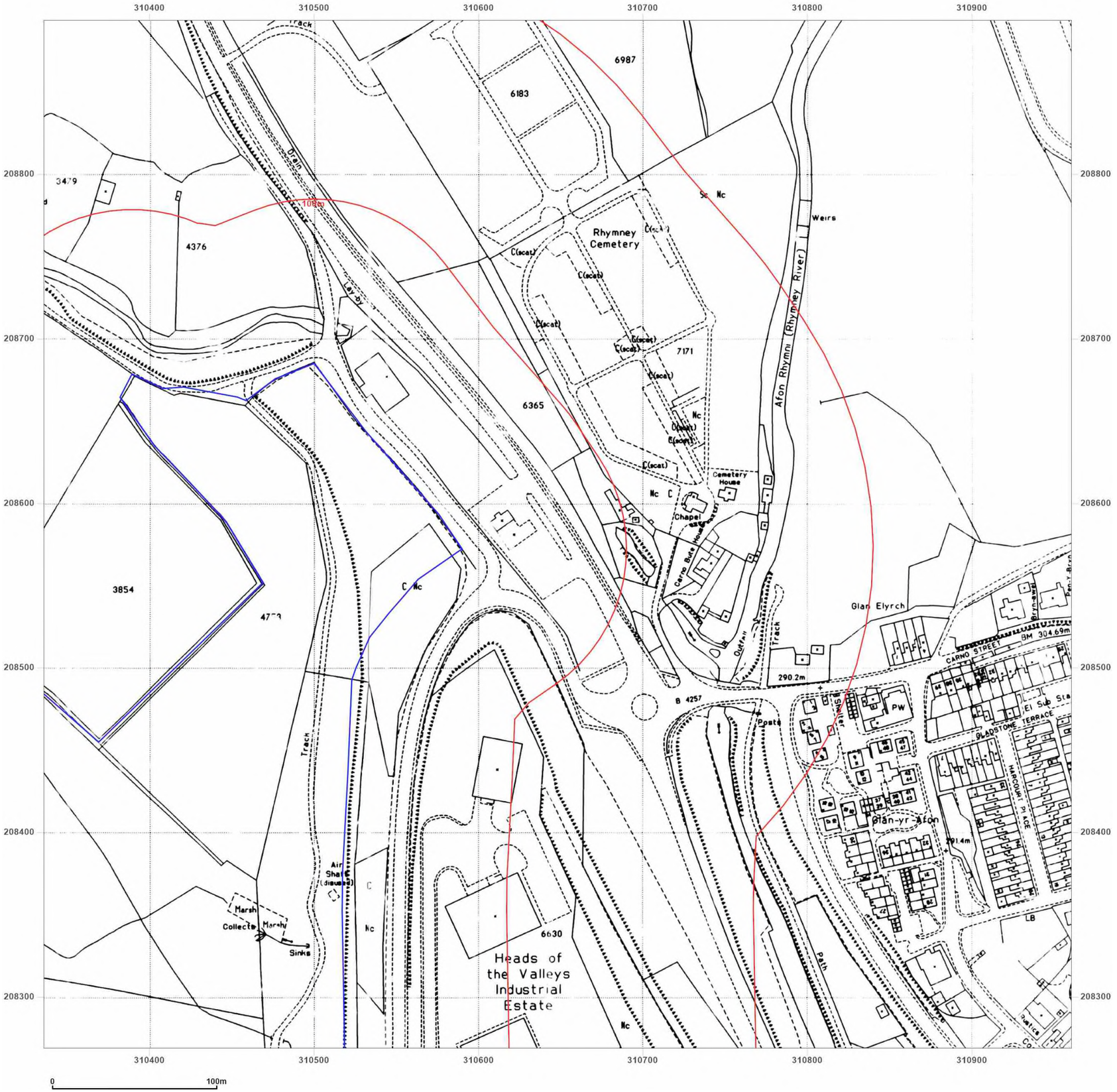
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Site Details:

Rhymney, NP22

Client Ref: CA11641
Report Ref: GSWA1-GUQ-92I-HVI-INC_LS_3_2
Grid Ref: 310648, 208581

Map Name: National Grid

Map date: **1993**

Scale: 1:2,500

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Production date: 21 December 2023

Map legend available at:
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Appendix F

Site Walkover Survey Form

Site Name	PEP wind solar development	**Job No**	BR10167
Ownership		**Client**	Convatec
Inspected By	Zoe Devaney	**Date of Inspection**	17/01/2024
Risk Assessment?	Y		

Site Description

Current land use

Sheep grazing

Dimensions / Area

54Ha = options appraisal area
24Ha = reduced site boundary as of Jan 2024 for the proposed development

Surrounding Land

North = Grassed fields for sheep grazing
East = Head of the Valley Industrial Estate
South = grassed fields for sheep grazing, artificial vegetated spoil heaps (with some rock failure)
West = telephone pylons, grassed fields for sheep and horse grazing

Nature of boundaries i.e., types of wall/fences and conditions

Partial barbed wire fencing on eastern boundary
Barbed wire fencing all along southern boundary
Open north and western boundary

Topography

Varying topography throughout
Lower topography in the north and south of the site with the centre (orientated E-W) at a higher elevation.
The northeastern track is generally flat.
16m depression in the southwest corner of the site.

Surfacing and condition e.g., asphalt, concrete, rough scrubland

Majority of site is covered in short grass.
Northeastern track leading southwards consists of gravels, occasional brick, cobbles, and occasional boulders,
Worked mud track across centre of the site generally orientated east to west.

Vegetation. Any obvious signs of distress, tilting, dieback. Presence of notifiable species

Majority of site covered in short grass.
Half of the site covered in pockets of tall grass (<0.75m height)
Two mature trees noted on site within the depression in the southeast.

Observable Environment (noise/dust/emissions/odours)

N/A
GROUND CONDITIONS
Made ground any infilling being carried out, areas of previously filled ground (review of historical maps)
Historical maps showed that the site is covered in backfilled surface workings, however these were not visible on the site visit. Vegetated spoil heaps were observed off site following along the entire southern boundary.
Geological exposures e.g., natural exposures of rocks/soils
None observed.
Access
Location
The site was initially accessed via a metal gate in the northeast of the site. A second gate was located at the end of the narrow boundary of the northeastern track. A third gate was located to access the western third of the site.
Roads, Tracks, Infrastructure e.g., leading to site, on site
Gravelled tracks as described above. A tarmac road lead to the site access in the northeast.
Existing Structures
Buildings / Asbestos and condition e.g., roofs, pipe insulation, floor tiles,
No buildings on site.
Walls / fences – type, condition, height, retaining,
Barbed wire fencing in the east and south of the site. Barbed wire was mangled and trampled in places.
Foundations
N/A
Contamination e.g., drums which may cause contamination, fly-tipping,
A 1,000m^2 area of waste material was observed in the centre of the site, immediately south of the proposed central wind turbine. The material consisted of rubber tyres, plastic bags, tarpaulin, rusted metal sheets, rope, wood, and barbed wire. The skeleton of a sheep was also noted in this area. A mound of black plastic bags containing barbed wire and dirt was observed within the 1,000m^2 area, to the east.

Services
Substations (private or rec owned?)
N/A
Overground
Telephone pylons located off site, approximately 60m west.
Underground
N/A
Water
Presence of springs, ponds, water courses, ditches. Where? Distance to? Pollution evident
Multiple ditches across the site and the surrounding site – all either dry or frozen over. 1) E 310476, N 208277: vegetated ditch and metal drainage pipe on either side of the gravel track containing frozen water on the western side of the track 2) E 310250, N 207934: vegetated ditch with no evidence of water – concrete drain underneath bared wire fencing of southern boundary 3) E 310521, N 208511: vegetated ditch with some ice and dry mud 4) E 310421, N 207963 – dry vegetated ditch 5) E 310526, N 207925 – completely vegetated ditch Iced puddles observed along the dirt track and randomly distributed across the site.
Wells, depths, current? Decommissioned? Marshy ground. Water loving plants.
One borehole observed in southeast of site E 310386, N 208004, left open and seems disused.
Additional Information/Notes
Evidence of tip failure of the spoil tips off site along the southern boundary e.g., E 309689, N 208055.

Appendix G

Site Walkover Photographs



Picture Taken: 17/01/2024	Figure No. 1	Title: General view in the centre of the site to show the current land use of sheep grazing.



Picture Taken: 17/01/2024	Figure No. 2	Title: View northwest of the site access in the northeast corner through a metal gate accessed via an unnamed road southwest of the A469.

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Project: PEP Wind Solar Development Rhymney

Project Number: BR10167



Picture Taken: 17/01/2024	Figure No. 3	Title: View eastwards at E 310475 N 208276 of metal drainage underneath the northeastern track and iced surface water within a vegetated ditch.



Picture Taken: 17/01/2024	Figure No. 4	Title: Randomly distributed patches of ice across the site.

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Client: Pure Energy Professional Limited

Project: PEP Wind Solar Development Rhymney

Project Number: BR10167



Picture Taken: 17/01/2024	Figure No. 5	Title: Randomly distributed pockets of long grass measured at <1m in height.



Picture Taken: 17/01/2024	Figure No. 6	Title: View southwest of the 16m depression in the southwest of the site.

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Project: PEP Wind Solar Development Rhymney

Project Number: BR10167



Picture Taken: 17/01/2024	Figure No. 7	Title: View southwards of failed waste stockpiles immediately south of the southeastern corner of the site.



Picture Taken: 17/01/2024	Figure No. 8	Title: Partially vegetated scree at the base of slope failure within the waste stockpile south of the southwestern corner of the site.

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Project: PEP Wind Solar Development Rhymney

Project Number: BR10167



Picture Taken: 17/01/2024	Figure No. 9	Title: View westwards of the localised areas of ground movement at the top of the southwestern depression (E 309716 N 208129). The height of the slope was recorded as 0.3m.



Picture Taken: 17/01/2024	Figure No. 10	Title: Area of waste in the centre of the site consisting of rubber tyres, plastic, barbed wire, tarpaulin, and wood.

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Project: PEP Wind Solar Development Rhymney

Project Number: BR10167



Picture Taken: 17/01/2024	Figure No. 11	Title: Additional view of the area of waste material consisting of piles of black plastic bags containing barbed wire and soil material.



Picture Taken: 17/01/2024	Figure No. 12	Title: Single borehole found open and unlocked in the southeast of the site at E 310404 N 207997, seemingly unused.

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Client: Pure Energy Professional Limited

Project: PEP Wind Solar Development Rhymney

Project Number: BR10167

Appendix H

Contaminated Land Guidance & Risk Assessment Matrix

Guidance on Contaminated Land Risk Assessment

In the UK, contaminated land is regulated by the planning and development control system and the contaminated land regime set out in Part 2A of the Environmental Protection Act (EPA) 1990.

When considering an application for development, the potential for the land to be contaminated is a material consideration, and the local planning authority should satisfy itself that any contamination is properly assessed and adequately remediated, based on a suitable for use approach. This is to ensure that the land is made suitable for its proposed new use.

Guidance on the investigation of contamination is contained in British Standard 10175: 2011 (+A2-2017) "Investigation of potentially contaminated sites - Code of Practice". It involves an identification of risks due to the presence of contaminants, and an assessment of those risks based on the:

- possible sources of contamination;
- identification of who or what may be affected by the contaminants (the receptors);
- possible pathways by which contaminants may migrate to one or more of the receptors.

A conceptual site model is a representation of the environmental processes that occur on and in the vicinity of the site and its purpose is to identify the potential contamination linkages that exist on the site. The assessment of the significance of these contamination linkages can then be carried out through the risk assessment process.

Since the conceptual site model underpins each stage of contaminated land management, BS10175: 2011 (+A2-2017) suggests that such a model should be developed for every site. Accordingly, the results of the desk study research on the site have been used to identify the source- pathway-receptor relationships that exist on the site before and during redevelopment works.

A conceptual site model is a representation of the environmental processes that occur on and in the vicinity of the site and its purpose is to identify the potential contamination linkages that exist on the site. The assessment of the significance of these contamination linkages can then be carried out through the risk assessment process.

Environmental Risk Assessment Methodology

In line with EA guidance LCRM, plausible source, pathway and receptor linkages have been identified through the Conceptual Site Model (CSM). The information gathered in the CSM can now be used to carry out a Qualitative Risk Assessment (QRA).

The LCRM outlines that for each tier of Risk Assessment the following steps must be taken:

1. Identify the hazard - establish contaminant sources.
2. Assess the hazard - use a source-pathway-receptor (S-P-R) linkage approach to find out if there is the potential for unacceptable risk.
3. Estimate the risk - predict what degree of harm or pollution might result and how likely it is to occur by using the tiered approach to risk assessment.
4. Evaluate the risk - decide whether a risk is unacceptable.

The LCRM states that the assessment must be based on the potential severity that the risk poses to the receptors against the likelihood of it happening. Subsequently, it is necessary to employ a risk assessment matrix, the CIRIA document Contaminated Land Risk Assessment – a guide to good practice C552, 2001 provides a good example of a suitable risk assessment matrices.

In the CIRIA methodology, the sensitivity assessment considers the contaminant-pathway-receptor in conjunction with the contamination linkage concept (described below). This information is then used to classify consequences and the probability of a contamination linkage occurring, affording the level of sensitivity of a given receptor to be established.

Contamination Linkage Concept

In forming a risk assessment for land contamination, there are three essential elements to be given consideration collectively known as a 'contaminant linkage':

- A contaminant/source – A substance that is in, on or under the land and has potential to cause harm or to cause pollution of controlled waters.

- A receptor – in general terms, something that could be adversely affected by a contaminant, these can include people, an ecological system, property or a water body; and

- A pathway – a route or means by which a receptor can be exposed to or affected by a contaminant.

Each of these elements can exist independently, but they create a risk where they are linked together, so that a particular contaminant affects a particular receptor through a particular pathway. This kind of linked combination of contaminant-pathway-receptor is described as a contaminant linkage.

Sensitivity Assessment Criteria

By considering the contaminant, pathways and receptors, an assessment of the environmental risk is made with reference to the degree of sensitivity of the receptor to a contaminant.

The qualitative sensitivity assessment is conducted by determining the severity of the potential consequences, taking into account the probability of risk and by considering the sensitivity of the receptor based on the categories below. It follows CIRIA documents C552 terminology and methodology as summarised:

Potential Consequences	x	Probability of Risk	=	Sensitivity
(Table 1)	x	(Table 2)	=	(Table 3)

Table 1 presents the consequences to the receptor of the contaminant linkage being realised. It has four categories, with severe being the most serious and minor being the least serious consequences:

Table 1 – Consequence of Risk Being Realised			
Classification	**Category**	**Definition**	**Examples (Not necessarily specific to this site)**
Severe short-term (acute) risks only	Humans	Short-term (acute) risk to human health likely to result in "significant harm" as defined by the Environment Protection Act 1990, Part 2A.	High concentrations of cyanide on the surface of an informal recreation area.
	Controlled Waters	Short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource.	Major spillage of contaminants from site into controlled water.
	Property	Catastrophic damage to buildings/property.	Explosion causing building collapse (can also equate to a short-term human health risk if buildings are occupied.
	Ecological System	A short-term risk to a particular ecosystem, or organism forming part of such ecosystem.	
Medium chronic (long term) risks; "significant harm"	Humans	Chronic damage to Human Health ("significant harm" as defined in Defra 2006).	Concentrations of a contaminant from site exceed the generic, or site-specific assessment criteria
	Controlled Waters	Pollution of sensitive water resources (note: Water Resources Act contains no scope for considering significance of pollution).	Leaching of contaminants from a site into a major or minor aquifer.
	Ecological System	A significant change in a particular ecosystem	Death of a species within a designated nature reserve.
Mild chronic (long term) risks; fewer sensitive receptors	Controlled Waters	Pollution of non-sensitive water resources.	Pollution of non-classified groundwater
	Property	Significant damage to buildings, structures and services ("significant harm" as defined in Circular on Contaminated Land, Defra, 2006). Damage to sensitive buildings/structures/services	Damage to building rendering it unsafe to occupy (e.g., foundation damage resulting in instability)
	Ecological System	Significant damage to crops. Damage to the environment.	
Minor chronic (long term) risks; mild	Financial / project	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve.	
	Humans	Non-permanent health effects to human health (easily prevented by means such as personal protective clothing, etc).	The presence of contaminants at such concentrations that protective equipment is required during site works.
	Property	Easily repairable effects of damage to buildings, structures and services	The loss of plants in a landscaping scheme. Discolouration of concrete.

The likelihood of the pollution linkage being realised must take into account the presence of the source and position of the receptor as well as the pathway that connects them. Table 2 overleaf defines the likelihood of the pollution linkage occurring.

TABLE 2: Probability of Risk Being Realised	
Classification	**Definition**
High Likelihood	There is a contaminant 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 contaminant 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 contaminant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place and is less likely in the shorter term.
Unlikely	There is a contaminant linkage, but circumstances are such that it is improbable that an event would occur even in the very long term.

The potential consequences and the probability of the risk occurring are combined to form the classification of sensitivity matrix, as presented in Table 3a below. It provides a sensitivity category for potential receptors if a pollution linkage exists, allowing the level of sensitivity of a receptor in a particular circumstance can be determined.

TABLE 3a: Risk Classification Matrix					
		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High Likelihood**	Very High	High	Moderate	Moderate/Low
	Likely	High	Moderate	Moderate/Low	Low
	Low Likelihood	Moderate	Moderate/Low	Low	Very Low
	Unlikely	Moderate/Low	Low	Very Low	Very Low

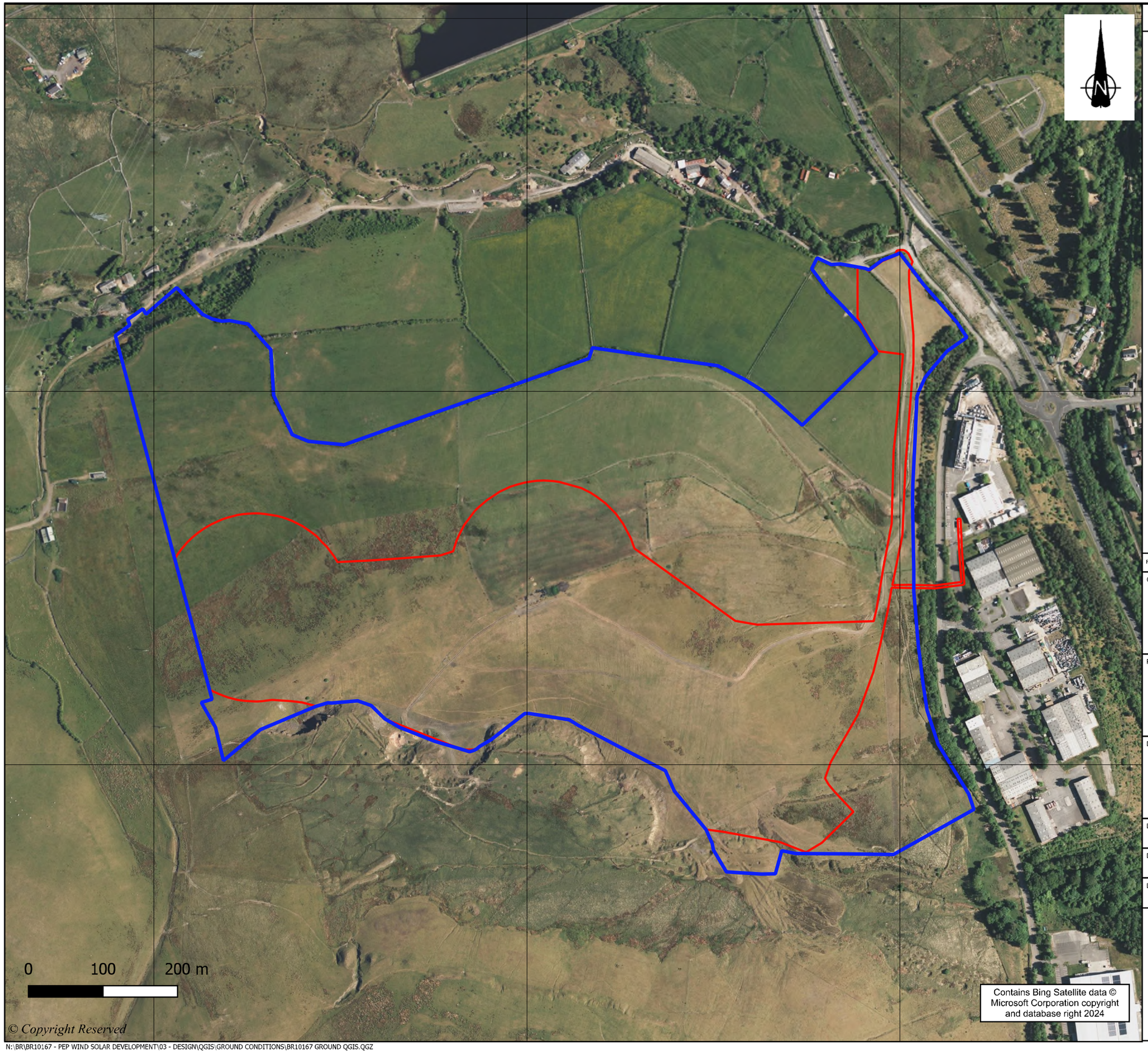
TABLE 3b: Risk Classification Definitions	
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Moderate / Low	A notable balance between moderate and low categorisation. The moderate/low interface.
Low	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very Low	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Under each of the contaminant linkage categories, the identified environmental risks have been assessed with regard to a wide range of topics including (where appropriate):

- the 'source-pathway-receptor' concept;
- the behaviour of potential contaminants within the environment;
- environmental processes;
- industrial operations and best practice;
- current environmental legislation;
- the views and practices of the environmental regulators;
- the likelihood of environmental notices, orders or other enforcement action;
- any requirements to remove waste, contaminated or hazardous materials;
- the health and safety of occupiers or neighbours;
- any redevelopment plans for the site; and
- effects on the fabric of buildings caused by contamination.

Drawing 1

BR10167-035 Site Location Plan



DO NOT SCALE FROM THIS DRAWING

KEY

- Initial Survey Options Area ("the site")
- Proposed Development Boundary

REVISION	DETAILS	DATE	DRN	CHK'D	APP'D

CLIENT

CONVATEC LIMITED

PROJECT

RHYMNEY WIND AND SOLAR DEVELOPMENT

DRAWING TITLE

SITE LOCATION PLAN

DRG No. BR10167-035		REV Final
DRG SIZE A3	SCALE 1:5,000	DATE March 2024
DRAWN BY ZD	CHECKED BY LP	APPROVED BY GC

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Drawing 2

BR10167-036 Mining Constraints Plan

DO NOT SCALE FROM THIS DRAWING

KEY

- Initial Survey Options Area ("the site")
- Proposed Development Boundary

Coal Mining

- Mine Shafts (CA)
- Mine Adits and Orientation (CA)
- Mine Entries with Treatment Records
- Geological Fault (BGS)
- Coal Seams (BGS)
- Unlicensed Opencast Mining (CA)
- Historical Tip
- Past Shallow Coal Mine Workings (BGS)
- Opencast Workings (BGS)

Proposed Development

- ① Proposed Turbine Locations
- Proposed Cable Route
- Proposed Solar Array Layout
- Proposed Solar Array Security Fencing
- Construction Compound
- Proposed Substation Location
- Proposed Access Tracks

REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT

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PROJECT

RHYMNEY WIND AND SOLAR DEVELOPMENT

DRAWING TITLE

MINING CONSTRAINTS PLAN

DRG No.		REV
BR10167-036		Final
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Drawing 3

BR10167-037 Geotechnical and Geoenvironmental Constraints Plan

DO NOT SCALE FROM THIS DRAWING

KEY

- Initial Survey Options Area ("the site")
- Proposed Development Boundary

Constraints

- Mine Shafts (CA)
- Mine Adits and Orientation (CA)
- Mine Entries with Treatment Records
- Geological Fault (BGS)
- Rhymney Limestone Railway
- Coal Seams (BGS)
- Unlicensed Opencast Mining (CA)
- Landslide Risk of Natural Strata
- Observed Slope Failures
- Historical Tip
- Past Shallow Coal Mine Workings (BGS)
- Opencast Workings (BGS)

Proposed Development

- ① Proposed Turbine Locations
- Proposed Cable Route
- Proposed Solar Array Layout
- Proposed Solar Array Security Fencing
- Construction Compound
- Proposed Substation Location
- Proposed Access Tracks

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BR10167-037		Final
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