PHASE I GEO-ENVIRONMENTAL ASSESSMENT

Corneli Primary School, North Cornelly

September 2020

hsp consulting

CIVIL | STRUCTURAL | GEOTECHNICAL & ENVIRONMENTAL | TRAFFIC AND TRANSPORT

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Phase I Geo-Environmental Desk Study Report

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Executive Summary

HSP Consulting has been commissioned by Gleeds Management Services Ltd to provide technical studies to inform the feasibility study to enable design of a new educational facility at the site. The geo-environmental desk study (Phase I) is one of a series of studies providing information on likely constraints to the development of the site. The purpose of the report is to collate background historical and geo-environmental data to address where possible land contamination and stability matters within Planning Policy Guidance.

The site is recorded as part of five fields on the 1st Edition mapping (1881). Marias Infants and Corneli Junior School are shown on site from 1969 onwards and later renamed Corneli Primary School in 2003. Historically, the surrounding land use has been predominantly agricultural with limited development until the mid 1960's when the land use changes to mainly residential.

The BGS mapping does not indicate any made ground on the site. However, limited made ground may be present associated with the existing development on site.

The majority of the site is underlain by superficial Till deposits. A band of Head deposits are expected in the centre and east of the site. The superficial deposits are both designated as Secondary Undifferentiated Aquifers.

Bedrock geology belonging to the Mercia Mudstone Group (Marginal Facies) – Conglomerate is expected to be encountered across the majority of the site. The deposits have been classified as a Principle Aquifer. Bedrock deposits belonging to the Mercia Mudstone Group are expected to be encountered in the east of the site, and are classified as a Secondary B Aquifer.

Sources of ground gas have been identified within a 250m radius of the site consisting of potential made ground on site, infilled ponds and infilled quarries.

The Preliminary Conceptual Site Model indicates a low to moderate possibility that harm could arise to a designated receptor from identified hazards. A ground investigation is recommended to provide information as part of the feasibility study and assess the geo-environmental constraints identified on site by this desk study.

The executive summary contains an overview of key findings and conclusions. However, no reliance should be placed on the executive summary until the whole of the report has been read. Other sections of the report may contain information which puts into context the findings noted within the executive summary.

1. Introduction

1.1 Background

This report has been prepared to support a feasibility study and at present no detailed development plans have been provided, it is understood that the intention is for a new educational facility with car parking and associated hard and soft landscaping.

1.2 Scope and Limitations

HSP Consulting has been commissioned by Gleeds Management Services Ltd to provide technical studies to inform the feasibility study to enable design of a new education facility on the site. The geo-environmental desk study (Phase I) is one of a series of studies providing information on likely constraints to the development of the site. The purpose of the report is to collate background historical and geo-environmental data to address where possible land contamination and stability matters within Planning Policy Guidance.

The recommendations made in this report are based on the assessment of the published information and information provided by the Client.

1.3 Report Objectives

The objectives of this report are to:

- Establish the geological and hydrogeological conditions using existing available/published information;
- Summarise available information and identify site specific geotechnical and environmental hazards which may place a constraint upon the proposed site use;
- Produce a Conceptual Site Model and preliminary qualitative environmental risk assessment identifying potential pollution linkages between sources of contamination, pathways and receptors;
- Provide recommendations for Phase II Ground Investigation and any other assessments required.

1.4 Sources of Information

The following sources of information were used during the preparation of this report.

- EmapSite Historical Mapping ref. EMS-619792_825901
- EmapSite Geoinsight & Enviroinsight Report ref. EMS-619792_825902
- British Geological Survey. Geology of Britain Map Viewer www.bgs.ac.uk
- DEFRA Magic Map: http://defra.gov.uk/magicmap.aspx
- Department of the Environment. Industry Profiles.

A walkover was undertaken by HSP Consulting on 6th August 2020. The purpose of the walkover was to record the current land use, topography and principal physical features and to identify, where possible, visual and olfactory indicators of contamination. Photographs can be found within Appendix V.

2. Site Setting

2.1 The Site

2.1.1 Location

The site is located centrally within North Cornelly Village, approximately 9km north east of Bridgend. The approximate National Grid Reference for the centre of the site is (NGR) 281929, 181653. A Site Location Plan is included in Appendix I.

2.1.2 Description

The site is irregular in shape and approximately 3.08ha in area. The site is occupied by a Children's Centre located centrally, and two primary schools, Corneli Primary in the west and Ysgol Y Ferch O'r Sger in the north of the site. The buildings vary in age, construction and are a mix of single and two storeys.

Hard surfacing including car parking, footpaths and play areas are in close proximity to each of the buildings. Grassed playing fields set out for rugby are located in the south east of the site.

The site is bound by a mix of low level fencing, including metal railings and post and wire with vehicle and pedestrian access gates on the southern and north western boundaries. A belt of mature trees bounds the south eastern boundary.

The site is reasonably level with gentle falls in elevation from north east to south west across the site. There are small slopes (of approximately 1m in height) and some terracing in the south east of the site to provide a level surface for the rugby pitch.

2.1.3 Surrounding Land Use

The main features of interest identified are:

North:	Greenfield Terrace (highway) and Heol-Y-Parc (highway) with residential properties and gardens beyond.
East:	Gardens and residential properties with Heol-Y-Parc (highway) beyond.
South:	Gardens, residential properties and a small supermarket with Hall Drive (highway) beyond.
West:	Gardens and residential properties with Heol Fach (highway) beyond.

2.1.4 Proposed End Use

No development options are currently available for the site. It is understood that part of the site will be developed as an educational facility, at this stage it is not known where on the site the new development would be positioned.

2.2 Geology

2.2.1 Made Ground

The BGS mapping does not indicate any made ground on the site. However, given the historical development on and surrounding the site some made ground may be encountered.

2.2.2 Superficial Deposits

The BGS mapping indicates the majority of the site to be underlain by superficial Till deposits.

A band of Head deposits is expected to be encountered in the centre east of the site orientated in a north to south direction. The BGS describes these deposits as '*poorly sorted and poorly stratified, angular rock debris and/or clayey hillwash and soil creep, mantling a hillslope and deposited by solifluction and gelifluction processes. The flow is initiated by meltwater from thawing ice lenses. Polymict deposit: comprises gravel, sand and clay depending on upslope source and distance from source. Locally with lenses of silt, clay or peat and organic material.'*

2.2.3 Bedrock Geology

BGS bedrock mapping indicates the majority of the site is underlain by the Mercia Mudstone Group (Marginal Facies) – Conglomerate of the Triassic Period, with Mercia Mudstone Group - Mudstone of the Triassic Period in the east of the site. Respectively described by the BGS as *'Variable, typically consisting of conglomerate and/or breccia with clasts derived locally from rocks lying immediately below the unconformable base of these deposits. The matrix generally consists of finer-grained rock fragments or, less commonly, siltstone, sandstone or micritic limestone.'* and '*Dominantly red, less commonly green-grey, mudstones and subordinate siltstones with thick halite-bearing units in some basinal areas. Thin beds of gypsum/anhydrite widespread; sandstones are also present.*

2.2.4 Structural Geology

Five faults have been identified within 250m of the site boundary. The closest fault is recorded 116m northeast of the site and is orientated in a north to south direction. The displacement is unknown.

2.2.5 Historical Boreholes

There are seven BGS borehole records within 250m of the site. All of the borehole records are recorded as publicly available and have been reviewed. The borehole records are located within the same bedrock and superficial strata that are expected to be encountered upon the site. Below is a summary of the most pertinent ground conditions recorded:

Table 2.1 - Summary of Historical BGS Borehole Information

BGS Reference		Summary of Ground Conditions
SS88SW150 On-site, close to the south eastern boundary.	Drilled by: Glamorgan CC Highways Department Date: 1974 Method: Cable Percussion	Brown silty TOPSOIL with some gravel to 1.50m begl. Medium dense SAND with occasional gravel and clayey silt to 3.00m begl. Medium dense GRAVEL and SAND with little brown clayey silt to 6.50m begl.

BGS Reference		Summary of Ground Conditions
SS88SW149 8m northwest of the site boundary	Drilled by: Glamorgan CC Highways Department Date: 1974 Method: Cable Percussion	Light brown TOPSOIL with occasional gravel to 0.30m begl. Dense GRAVEL with occasional Sand to 6.15m begl.
SS88SW138 94m south of the site boundary	Drilled by: Unknown Date: 1982 Method: Cable Percussion	Brown MADE GROUND comprising silty Clay with gravels of coal, shell and glass to 1.75m begl. Soft brown silty CLAY with occasional gravel (possible Made Ground) to 2.75m begl. Soft to firm red brown silty CLAY with occasional Gravel and pockets of Sand to 6.50m begl.

2.2.6 Geological Hazard Ratings

The Emapsite GeoInsight™ Report provides ground stability data for the site and surrounding area, a summary is provided in Table 2.2 below.

Table 2.2 - Summary of BGS Hazard Ratings

Hazard	Located	Direction	Hazard Potential
Potential for Collapsible Rocks Stability Hazards	On-site	-	Very Low
Potential for Landslide Ground Stability Hazards	On-site	-	Very Low
Potential for Ground Dissolution Stability Hazards	On-site	-	Low
Potential for Compressible Ground Stability Hazards	On-Site	-	Negligible
Potential for Running Sand Ground Stability Hazards	On-site	-	Very Low
Potential for Shrinking or Swelling Clay Ground Stability Hazards	On-site	-	Very Low

2.2.7 Natural Cavities

Three natural cavities have been recorded within a 250m radius of the site. The closest is recorded 90m southwest of the site. All records relate to the formation of a sinkhole and solution pipe within Glacial Sand and Carboniferous Limestone.

2.3 Mining

2.3.1 BGS Mineral Sites

One BGS recorded Mineral Site have been recorded 108m southeast of the site. This entry relates to Old House where Sandstone was historically excavated by surface mining. The operation is recorded to have ceased.

2.3.2 Brine Extraction

No Brine Extraction Areas have been identified within a 250m radius of the site.

2.3.3 Coal Mining

The site does not lie within a Coal Authority standing advice or reporting area.

2.3.4 Historical Surface Workings

Ten historical surface workings have been identified within a 250m radius of the site (more are recorded in the datasheet but relate to the same point). The closest relates to an unspecified pit/ground working/quarry 12m south of the site. This is recorded on historical mapping from 1876 to 1947. The remaining workings relate to ponds, unspecified heaps and old quarries.

2.4 Hydrogeology

2.4.1 Aquifer Units

The superficial Till and Head deposits are classified as a Secondary Undifferentiated Aquifer, defined by the Environment Agency as *'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.'*

The bedrock Mercia Mudstone Group (Marginal Facies) – Conglomerate deposits found across the majority of the site are classified as a Principal Aquifer, defined by the Environment Agency as '*geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers.'*

The bedrock Mercia Mudstone Group Mudstone deposits in the east of the site are classified as a Secondary B Aquifer, defined by the Environment Agency as '*predominantly lower permeability layers which may store / yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water bearing parts of the former non- aquifers.'*

2.4.2 Groundwater Vulnerability

No Source Protection Zones have been identified within 500m radius of the site.

The soils in the south east of the site are recorded to be of high vulnerability which is described as 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.

The remainder of the soils on the site are recorded to be of medium vulnerability which is described as intermediate risk of transmitting pollution to groundwater due to the variability of the underlying soils.

The site is within a 1km square with a 'very significant soluble rocks risk category' where solution features that enable rapid movement of a pollutant are likely to be present, with a high possibility of localised subsidence or dissolution-related degradation of bedrock occurring naturally, especially in adverse conditions such as concentrated surface or sub-surface water flow. The percentage of the grid square covered by the maximum risk is 7%. This risk is likely to relate to Limestone bedrock and sinkhole/solution pipe records from 90m to the southwest of the site.

2.4.3 Groundwater Abstractions

No groundwater abstraction licences have been identified within 250m of the site.

Furthermore, no potable abstractions have been identified within 2km of the site boundary.

2.5 Hydrology

2.5.1 Nearest Surface Water Course

No surface water features have been recorded within a 250m radius of the site.

2.5.2 Surface Water Quality

No Environment Agency River Quality Records have been identified within 250m of the site.

2.5.3 Surface Water Abstractions

No licensed surface water abstraction points are recorded within a 250m radius of the site.

2.5.4 Surface Water Discharge Consents

Three Surface Water Discharge Consents are recorded within a 250m of the site. Two of the entries relate to the same point 117m south of the site and permit the release of sewage discharges into the sea. The permit was issued in 2003.

2.6 Flood Risk

The site does not lie within an Environment Agency Zone 2 or Zone 3 floodplain.

The site does not lie within an area benefitting from flood defences or within an area used for flood storage.

The risk for surface water flooding on site is recorded to be High, before a 1 in 30 year event with a flood range between 0.30m to 1.00m in depth.

The risk of groundwater flooding on site is recorded to be Low.

Although the report provides information on flood risk this does not constitute a flood risk assessment for the site. The flood risk information provided only relates to flooding from Rivers or Seas and does not account for flooding from other sources such as groundwater, blockages in drainage systems, artificial water features and overland flow. A separate Flood Risk Assessment may be required for the site.

2.7 Radon

The site is not recorded to be within a Radon Affected Area as between 1% and 3% of properties being above the Action Level, therefore radon protective measures are not required within new developments on the site.

2.8 Sensitive Land Uses, Ecological and Statutory Designations

No records of sensitive land use (SSSI, NVZ, SAC, Nature Reserves, Environmentally Sensitive Areas, etc) have been identified within a 250m radius of the site.

3. Site History

The following section details the historical development of the site, with reference to historical Ordnance Survey maps. All distances are approximate and given from the site boundary. Descriptions in italics are as identified on the historical plans. For a complete list of maps *consulted* refer to the Emapsite Historical Maps presented in Appendix III.

Table 3.1 - Summary of Historical Maps

Published Map Date & Scale	Land Use on Site	Surrounding Land Use
Date : 1881 – 1884 Scale: 1:2,500 1:10,560 County Series	The site is shown as part of five open fields. A pond is recorded centrally along the southern boundary.	A house and gardens recorded as *The Hall* is shown adjacent to the eastern boundary of the site. A large pond is recorded 90m to the east of the site boundary. An *Old Quarry* is shown 15m to the south of the site. A *Roman Road, Heol-y-Sheet* is located 50m to the west of the site orientated in a northwest to the south direction. A *Smithy* is shown 160m south of the site. The village of *North Cornelau* is located 200m south of the site.
Date : 1914 Scale: 1:10,560 County Series Provisional	No significant change.	The village 200m south of the site is now recorded as *North Cornelly.* Housing is shown adjacent to the western boundary of the site.
Date : 1942 - 1947 Scale: 1:2,500 1:10,560 National Grid	*Allotment Gardens* are recorded along the western boundary of the site. A small rectangular building is shown close to the northern boundary of the site. A small irregular shaped building is shown centrally in the west of the site. The remaining land use continues as open fields.	Residential development is shown adjacent to the north western boundary of the site off *Heol-y-Sheet.* Development has occurred 100m south of the site with the construction of housing within the village. The *Smithy* is no longer shown.
Date : 1965 - 1969 Scale: 1:2,500 1:10,000 National Grid	The small buildings on site are no longer shown and two large irregular shaped buildings are shown in the north and west of the site, named *Marias Infants School* and *Corneli Junior School* respectively. The pond on the southern boundary of the site is no longer recorded.	The gardens and pond adjacent to *The Hall* are no longer shown, replaced by new housing. It is assumed the pond has been infilled. The *Old Quarries* 15m to the south of the site are no longer recorded. Residential development is shown adjacent to the east and north boundaries of the site.
Date : 1985 - 1993 Scale: 1:2,500 1:10,000 National Grid	Both of the school buildings have been extended. *Playing Fields* are recorded in the south east of the site.	Significant residential development is shown to the north, north east, east, southeast and south of the site.
Date : 2003 Scale: 1:1,250 National Grid	No significant changes.	No significant change.
Date : 2010 - 2020 Scale: 1:10,000 National Grid	A third rectangular building is shown in the centre of the site (Children's Centre).	No significant change.

4. Environmental Data

4.1 Polluting Activity

4.1.1 Pollution Incidents to Controlled Water

No Environment Agency Recorded Pollution Incidents to Controlled Water have been recorded within a 250m radius of the site.

4.2 Licensed Industrial Activity

4.2.1 Licensed Sites

No Integrated Pollution Prevention and Control from the Environment Agency are recorded within 250m of the site.

No Local Authority Integrated Pollution Controls, Environmental Permits or Enforcements are recorded within a 250m radius of the site.

There are no Environment Agency Pollution Incidents recorded within 250m of the site.

There are no Registered Radioactive Substance Licences recorded within 250m of the site.

There are no records of Licensed Industrial Activities Part A (1) within 250m of the site.

No Part A (2) or Part B Activities have been identified within a 250m radius of the site.

4.2.2 Industrial Activities

Seven current industrial activities are recorded within a 250m radius of the site. The closest of which relates to a Chimney located on the site. The remaining records relate to a vehicle garage 28m north west, a construction and tool hire company 52m south, a garage 75m south, a publishers 87m northwest, a furniture manufacturer 215m south and a construction and tool hire company 223m east of the site.

Six historical industrial activities are recorded within a 250m radius of the site (more are recorded but relate to the same point of interest). The closest of which relates to an unspecified pit or quarry 12m south of the site. The remaining records relate to unspecified ground workings, a smithy and an unspecified heap.

Three electrical substations are recorded within 250m of the site boundary. The closest is located 91m northwest of the site.

4.2.3 Fuel Stations & Tanks

One fuel station has been identified within a 250m radius of the site. This was located 170m southeast of the site and is recorded as obsolete.

There are no records of tanks identified within a 250m radius of the site.

There are no records of high-pressure underground pipelines (oil and gas) within 250m of the site.

4.3 Waste and Material Storage Locations

4.3.1 Landfill

There are no Historical Landfill Sites within a 250m radius of the site.

There are no Licensed Waste Management Facilities recorded within a 250m radius of the site.

4.3.2 Waste Transfer Stations

No operational or non-operational Registered Waste Treatment, Transfer or Disposal sites have been identified within a 250m radius of the site.

4.5 Summary

Based on the information collated for the desk study, the geo-environmental setting of the site is summarised as follows:

- The site is recorded as part of five fields on the 1st Edition mapping (1881). Marias Infants and Corneli Junior School were constructed upon the site by 1969. An additional building (A Children's Centre) is shown in the centre of the site from 2010.
- Historically, the surrounding land use has been predominantly agricultural with limited development until the mid 1960's where the village of North Cornelly expands and the land uses becomes mainly residential.
- The BGS mapping does not indicate any made ground on the site. However, limited made ground may be present associated with the historical development of the site. Any Made Ground encountered would be of an unknown composition.
- The majority of the site is underlain by superficial Till deposits. A band of Head deposits is expected to be encountered in the centre east of the site orientated in a north to south direction
- Bedrock geology belonging to the Mercia Mudstone Group (Marginal Facies) – Conglomerate is expected to be encountered across the majority of the site with Mercia Mudstone Group - Mudstone expected in the east of the site.
- The superficial deposits are both designated as Secondary Undifferentiated Aquifers. The bedrock Mercia Mudstone Group (Marginal Facies) – Conglomerate deposits is designated Principle Aquifer and the Mercia Mudstone Group – Mudstone is a Secondary B Aquifer.

Based on the above, the environmental sensitivity of the site can be considered to be Low to Moderate at this stage.

5. Preliminary Conceptual Site Model (PCSM)

5.1 Introduction

The UK approach to risk assessment for both 'Contaminated Land' as defined by Part 2A of the Environmental Protection Act 1990 (EPA 1990) and for 'land affected by contamination' as defined in National Planning Policy Framework Planning Practice Guidance follows a risk-based tiered framework published by Defra and the Environment Agency in their guidance document *'CLR11 Model Procedures for the Management of Land Contamination'*.

The basis of CLR11 is the development of the conceptual site model (CSM) which is the representation of the source-pathway-receptor (pollutant) linkages upon which the assessment of risk can be based.

5.2 Risk Assessment Approach

The approach to the human health risk assessment reported here follows the principals given in CLR 11, i.e. application of the following assessment hierarchy:

- Tier 1 risk screening by establishment of potential pollutant linkages, i.e. the preliminary conceptual site model (PCSM), or
- Tier 2 generic quantitative assessment using generic assessment criteria (GACs) that represent 'acceptably low' risk, or
- Tier 3 quantitative risk assessment using site specific assessment criteria (SSACs) that represent 'unacceptable risk', or where generic assessment criteria are not available or they are not applicable to the CSM.

At this stage there is no site-specific data available. The potential sources of contamination based on historical and current land uses were identified using the Emapsite Groundsure Enviro+Geo Insight (Appendix II) and Department of the Environment Industry Profiles. In the absence of a standard exposure scenario for a school environment, a conservative standard exposure scenario of residential without home-grown produce has been used to identify potential exposure pathways for human health receptors, in accordance with the precautionary principle the CLR Guidance advocates. Controlled water, flora and fauna and property receptors have also been included within the PCSM.

5.3 Preliminary Conceptual Site Model

The PCSM was produced by undertaking a Source-Pathway-Receptor analysis of the site:

Sources (**S**) are potential or known contaminant sources, e.g. a former land use:
Pathways (**P**) are environmental systems through which a contaminant could migrate, e.g. air, groundwater;
Receptors (**R**) are sensitive environmental receptors that could be adversely affected by a contaminant, e.g. Site Occupiers, groundwater resources.

For a pollutant linkage to exist between a contaminant source and a receptor, a pathway must be present.

5.3.1 Sources

The potential sources of contamination within 250m of the site and associated groups of potentially contaminative substances are outlined below. The list of potential contaminants was derived from the Department of the Environment Industry Profiles. The activities and substances listed below should not be considered exhaustive and provides a guide to the likely range of contaminants which may be present.

On Site

S1: Historical and Contemporary land use: Agricultural land, existing built development (schools)
Inorganic and organic contaminants including heavy metals, metalloids, acids/alkalis, TPH, PAHs, asbestos and ground gases.

Off Site

S2: Historical and Contemporary land use: Agricultural land, Infilled ponds, Infilled Quarries, vehicle garage.
Inorganic and organic contaminants including heavy metals, metalloids, acids/alkalis, TPH, PAHs and ground gases.

5.3.2 Pathways

The site is underlain by Principle Aquifer and Secondary Undifferentiated Aquifers.

P1: Human uptake;
- Dermal contact with soils and dust
- Ingestion of soils and dust
- Inhalation of soils, dust and vapour

P2: Horizontal and vertical migration of contaminants through potentially permeable soils and rocks

P3: Migration along preferential pathways via underground services and drainage runs (pipes, culverts and granular material)

P4: Overland flow / surface runoff

P5: Vertical and lateral migration of ground gases and/or vapour

P6: Root uptake

5.3.3 Receptors

R1: End Users: Staff, pupils and visitors to the Educational Facilities

R2: Construction and maintenance workers

R3: Controlled Groundwater, Principle Aquifer / Secondary Undifferentiated Aquifers.

R4: Controlled Water, Surface Water – Limited receptors

R5: Property: Services (e.g. drinking water supply pipes) and structures/buildings (concrete used in foundations)

R6: Adjacent residential properties

R7: Proposed flora and fauna

5.3.4 Preliminary Qualitative Risk Assessment

For each potential pollutant linkage identified within the PCSM, the potential risk has been assessed on the probability of a pollution event and the severity it may have on the identified receptors. The results are presented in Table 5.1 below. The methodology for the assessment is presented in Appendix IV.

Table 5.1 Preliminary Conceptual Site Model and Qualitative Risk Assessment

Source	Pathway	Receptor	Consequence	Probability	Risk	Comments
On site **S1:** Historical and Contemporary land use: Agricultural land, existing built development on site **Off Site (within 250m)** **S2:** Historical and Contemporary land use: Agricultural land, Infilled Ponds and Infilled Quarries, vehicle garage.	**P1:** Human uptake pathways	**R1:** End Users **R2:** Construction and maintenance workers	Minor	Low	Low	It is possible that end users / construction workers will come into contact with the soils across the site, however given the limited potential for contamination, the risk is considered to be LOW.
	P2: Horizontal and vertical migration of contaminants through potentially permeable soils and rocks. **P3:** Migration of contaminants along preferential pathways (man- made). **P4:** Surface runoff.	**R3:** Controlled Water: Groundwater & Surface Water	Mild	Low	Low	The majority of the bedrock geology is classified as a Principal Aquifer. The superficial deposits are classified as Secondary Undifferentiated Aquifers. Based on the lack of plausible source on and within the immediate vicinity of the site plus the distance of possible sources from the site, the risk to surface water and groundwater is considered to be LOW.
	P2: Horizontal and vertical migration of contaminants through potentially permeable soils and rocks. **P3:** Migration of contaminants along preferential pathways (man- made). **P4:** Surface runoff.	**R1:** End Users **R2:** Construction and maintenance workers	Mild	Low	Low	Due to the lack of plausible source on and within the immediate vicinity of the site plus the distance of potential off site sources, the risk is considered to be LOW.
	P5: Vertical and lateral migration of ground gases and/or vapour.	**R1:** End Users	Mild	Likely	Low to Moderate	Deeper made ground may be present on site but is considered unlikely at this stage. No landfills are recorded within a 250m radius of the site. Several ponds and quarries (presumed infilled) are within close proximity to the site. Based on the information available at this stage the risk is considered to be LOW to MODERATE.
	P2: Horizontal and vertical migration of contaminants through potentially permeable soils and rocks. **P3:** Migration of contaminants along preferential pathways (man- made). **P4:** Surface runoff. **P5:** Vertical and lateral migration of ground gases and/or vapour.	**R4:** Property, services and substructures **R5:** Adjacent Residential Properties	Mild	Low	Low	Shallow Made Ground and natural deposits may be aggressive to concrete and underground utilities. Until the potential has been investigated further, the risk is considered to be LOW.
	P6: Root uptake.	**R6:** Proposed Flora and fauna	Mild	Low	Low	There is unlikely to be any vegetable planting or fruit bearing trees. Provided this remains the case the risk of uptake to proposed flora and fauna is LOW.

6. Preliminary Engineering Constraints and Recommendations

No development options are currently available for the site. It is understood that the site will be developed as an educational facility, at this stage it is not known where on the site the new development will be positioned.

6.1 Geotechnical Constraints

It is considered that limited Made Ground is likely to be encountered within the area of the existing buildings in the north, west and centre of site and in areas that have been terraced to provide level play spae, any made ground encountered would have an unknown composition and strength.

The groundwater regime on site is unknown and should be assessed further if possible.

It is unknown to what extent site levels will need to be altered to accommodate the new educational facility. Should levels change be proposed the suitability of soils for reuse as engineered fill within new development should be considered during any ground investigation for detailed design.

6.2 Environmental Constraints

Any made ground on site may contain elevated concentrations of potentially harmful contaminants which may present a risk to the receptors identified in the PCSM including end users, adjacent residential properties or construction workers.

Several sources of ground gas generation have been identified within a 250m radius of the site. Monitoring wells should be installed as part of the Phase II investigation and a series of four monitoring visits be carried out to assess the ground gas regime.

The Preliminary Conceptual Site Model indicates a low to moderate possibility that harm could arise to a designated receptor from identified hazards.

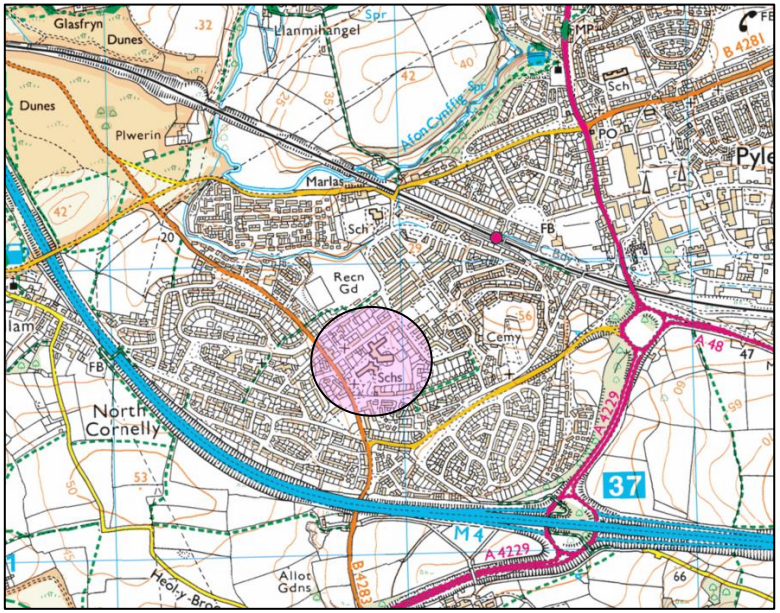
6.3 Recommendations

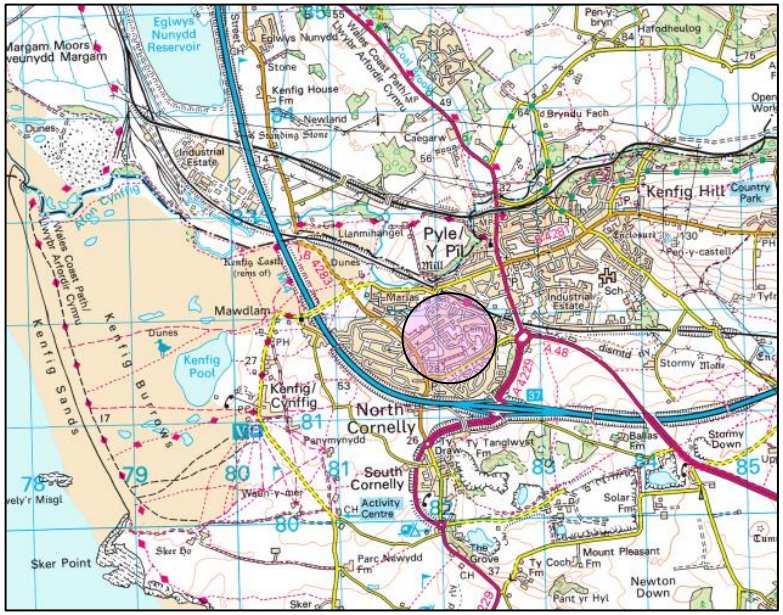
A ground investigation is recommended to provide information as part of the feasibility study and assess the geo-environmental constraints identified on site by this desk study. The objectives of the investigation should be as follows:

- To establish the ground conditions laterally and vertically across the site, including the presence, distribution and composition of any made ground.
- To obtain soil samples for contamination analysis in order to refine the PCSM and undertake generic quantitative risk assessment.
- To obtain data on the groundwater and ground gas regime.
- To obtain geotechnical design parameters for the proposed building including in-situ and laboratory testing.

- To assess if the soils and groundwater on site are likely to be aggressive to buried/surface concrete and proposed utilities.

Appendix I





DO NOT SCALE

NOTES:

- Approximate Site Red Line Boundary

- Approximate Site Location

hsp consulting
Lawrence House, Meadowbank Way,
Eastwood, Nottingham, NG16 3SB
Tel: 01773 535 555 Fax: 0870 600 6091
www.hspconsulting.com

CLIENT:
Gleeds Management Services Ltd

PROJECT:
Cornelli Primary School

TITLE:
Site Location Plan

SCALE@SIZE :	ISSUE:
NTS	FINAL
DESIGN/DRAWN :	DATE:
HEB	Sept. 2020
PROJECT No:	DRAWING No:
C3342	500

Appendix II

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

Cornelli Primary School, Hall Drive, Bridgend, CF33 4LB,

Order Details

Date: 07/07/2020

Your ref: EMS_619792_825902

Our Ref: EMS-619792_825902

Client: emapsite

Site Details

Location: 281929 181653

Area: 3.08 ha

Authority: Pen-y-bont ar Ogwr - Bridgend County Borough Council

Contact us with any questions at:
info@groundsure.com
08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
14	1.1	Historical industrial land uses	0	9	6	29	-
16	1.2	Historical tanks	0	0	0	0	-
17	1.3	Historical energy features	0	0	8	3	-
17	1.4	Historical petrol stations	0	0	0	0	-
18	1.5	Historical garages	0	1	0	0	-
18	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
19	2.1	Historical industrial land uses	0	11	10	33	-
22	2.2	Historical tanks	0	0	0	0	-
22	2.3	Historical energy features	0	0	9	7	-
23	2.4	Historical petrol stations	0	0	0	0	-
23	2.5	Historical garages	0	1	1	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
24	3.1	Active or recent landfill	0	0	0	0	-
24	3.2	Historical landfill (BGS records)	0	0	0	0	-
25	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
25	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
25	3.5	Historical waste sites	0	0	0	3	-
26	3.6	Licensed waste sites	0	0	0	0	-
26	3.7	Waste exemptions	0	0	0	10	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
28	4.1	Recent industrial land uses	1	1	8	-	-
29	4.2	Current or recent petrol stations	0	0	1	0	-
29	4.3	Electricity cables	0	0	0	0	-
30	4.4	Gas pipelines	0	0	0	0	-
30	4.5	Sites determined as Contaminated Land	0	0	0	0	-

30	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
30	4.7	Regulated explosive sites	0	0	0	0	-
30	4.8	Hazardous substance storage/usage	0	0	0	0	-
31	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
31	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
31	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
31	4.12	Radioactive Substance Authorisations	0	0	0	0	-
31	**4.13**	**Licensed Discharges to controlled waters**	0	0	3	8	-
33	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
33	4.15	Pollutant release to public sewer	0	0	0	0	-
34	4.16	List 1 Dangerous Substances	0	0	0	0	-
34	4.17	List 2 Dangerous Substances	0	0	0	0	-
34	**4.18**	**Pollution Incidents (EA/NRW)**	0	0	0	2	-
34	4.19	Pollution inventory substances	0	0	0	0	-
35	4.20	Pollution inventory waste transfers	0	0	0	0	-
35	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
36	**5.1**	**Superficial aquifer**	Identified (within 500m)				
38	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
40	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
41	**5.4**	**Groundwater vulnerability- soluble rock risk**	Identified (within 0m)				
42	5.5	Groundwater vulnerability- local information	None (within 0m)				
43	**5.6**	**Groundwater abstractions**	0	0	0	0	11
46	5.7	Surface water abstractions	0	0	0	0	0
46	5.8	Potable abstractions	0	0	0	0	0
46	5.9	Source Protection Zones	0	0	0	0	-
47	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
48	6.1	Water Network (OS MasterMap)	0	0	0	-	-

48	6.2	Surface water features	0	0	0	-	-
49	**6.3**	**WFD Surface water body catchments**	2	-	-	-	-
49	**6.4**	**WFD Surface water bodies**	0	0	0	-	-
50	**6.5**	**WFD Groundwater bodies**	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
51	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
51	7.2	Historical Flood Events	0	0	0	-	-
51	7.3	Flood Defences	0	0	0	-	-
51	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
52	7.5	Flood Storage Areas	0	0	0	-	-
53	7.6	Flood Zone 2	None (within 50m)				
53	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
54	**8.1**	**Surface water flooding**	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding					
56	**9.1**	**Groundwater flooding**	Low (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
57	**10.1**	**Sites of Special Scientific Interest (SSSI)**	0	0	0	0	6
58	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
58	**10.3**	**Special Areas of Conservation (SAC)**	0	0	0	0	1
59	10.4	Special Protection Areas (SPA)	0	0	0	0	0
59	**10.5**	**National Nature Reserves (NNR)**	0	0	0	0	2
60	**10.6**	**Local Nature Reserves (LNR)**	0	0	0	0	2
60	**10.7**	**Designated Ancient Woodland**	0	0	0	0	23
61	10.8	Biosphere Reserves	0	0	0	0	0
61	10.9	Forest Parks	0	0	0	0	0
62	10.10	Marine Conservation Zones	0	0	0	0	0
62	10.11	Green Belt	0	0	0	0	0
62	10.12	Proposed Ramsar sites	0	0	0	0	0

62	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
62	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
63	10.15	Nitrate Sensitive Areas	0	0	0	0	0
63	**10.16**	**Nitrate Vulnerable Zones**	0	0	0	1	0
64	10.17	SSSI Impact Risk Zones	0	-	-	-	-
64	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
65	11.1	World Heritage Sites	0	0	0	-	-
66	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
66	11.3	National Parks	0	0	0	-	-
66	**11.4**	**Listed Buildings**	0	1	0	-	-
67	11.5	Conservation Areas	0	0	0	-	-
67	11.6	Scheduled Ancient Monuments	0	0	0	-	-
67	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
68	12.1	Agricultural Land Classification	None (within 250m)				
68	12.2	Open Access Land	0	0	0	-	-
68	12.3	Tree Felling Licences	0	0	0	-	-
68	12.4	Environmental Stewardship Schemes	0	0	0	-	-
69	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
70	13.1	Priority Habitat Inventory	0	0	0	-	-
70	13.2	Habitat Networks	0	0	0	-	-
70	13.3	Open Mosaic Habitat	0	0	0	-	-
70	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
71	**14.1**	**10k Availability**	Identified (within 500m)				
72	14.2	Artificial and made ground (10k)	0	0	0	0	-
73	14.3	Superficial geology (10k)	0	0	0	0	-

73	14.4	Landslip (10k)	0	0	0	0	-
74	14.5	Bedrock geology (10k)	0	0	0	0	-
74	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
75	15.1	50k Availability	Identified (within 500m)				
76	15.2	Artificial and made ground (50k)	0	0	0	0	-
76	15.3	Artificial ground permeability (50k)	0	0	-	-	-
77	15.4	Superficial geology (50k)	2	0	0	6	-
78	15.5	Superficial permeability (50k)	Identified (within 50m)				
78	15.6	Landslip (50k)	0	0	0	0	-
78	15.7	Landslip permeability (50k)	None (within 50m)				
79	15.8	Bedrock geology (50k)	2	0	9	15	-
81	15.9	Bedrock permeability (50k)	Identified (within 50m)				
81	15.10	Bedrock faults and other linear features (50k)	0	0	5	5	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
82	16.1	BGS Boreholes	1	2	10	-	-
Page	Section	Natural ground subsidence					
84	17.1	Shrink swell clays	Very low (within 50m)				
85	17.2	Running sands	Very low (within 50m)				
86	17.3	Compressible deposits	Negligible (within 50m)				
87	17.4	Collapsible deposits	Very low (within 50m)				
88	17.5	Landslides	Very low (within 50m)				
89	17.6	Ground dissolution of soluble rocks	Low (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
91	18.1	Natural cavities	0	0	3	3	-
92	18.2	BritPits	0	0	1	0	-
93	18.3	Surface ground workings	0	11	11	-	-
94	18.4	Underground workings	0	0	0	0	0
94	18.5	Historical Mineral Planning Areas	0	0	0	1	-

94	**18.6**	**Non-coal mining**	0	0	0	1	0
95	**18.7**	**Mining cavities**	0	0	0	0	1
95	18.8	JPB mining areas	None (within 0m)				
95	18.9	Coal mining	None (within 0m)				
95	18.10	Brine areas	None (within 0m)				
96	18.11	Gypsum areas	None (within 0m)				
96	18.12	Tin mining	None (within 0m)				
96	18.13	Clay mining	None (within 0m)				

Page	Section	Radon	
97	**19.1**	**Radon**	Between 1% and 3% (within 0m)

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
98	**20.1**	**BGS Estimated Background Soil Chemistry**	8	1	-	-	-
99	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
99	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-

Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
100	21.1	Underground railways (London)	0	0	0	-	-
100	21.2	Underground railways (Non-London)	0	0	0	-	-
100	21.3	Railway tunnels	0	0	0	-	-
100	21.4	Historical railway and tunnel features	0	0	0	-	-
100	21.5	Royal Mail tunnels	0	0	0	-	-
101	21.6	Historical railways	0	0	0	-	-
101	21.7	Railways	0	0	0	-	-
101	21.8	Crossrail 1	0	0	0	0	-
101	21.9	Crossrail 2	0	0	0	0	-
101	21.10	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 18/09/2019

Site Area: 3.08ha

Recent site history - 2017 aerial photograph

Capture Date: 26/05/2017

Site Area: 3.08ha

Recent site history - 2013 aerial photograph

Capture Date: 14/07/2013

Site Area: 3.08ha

Recent site history - 2009 aerial photograph

Capture Date: 12/10/2009

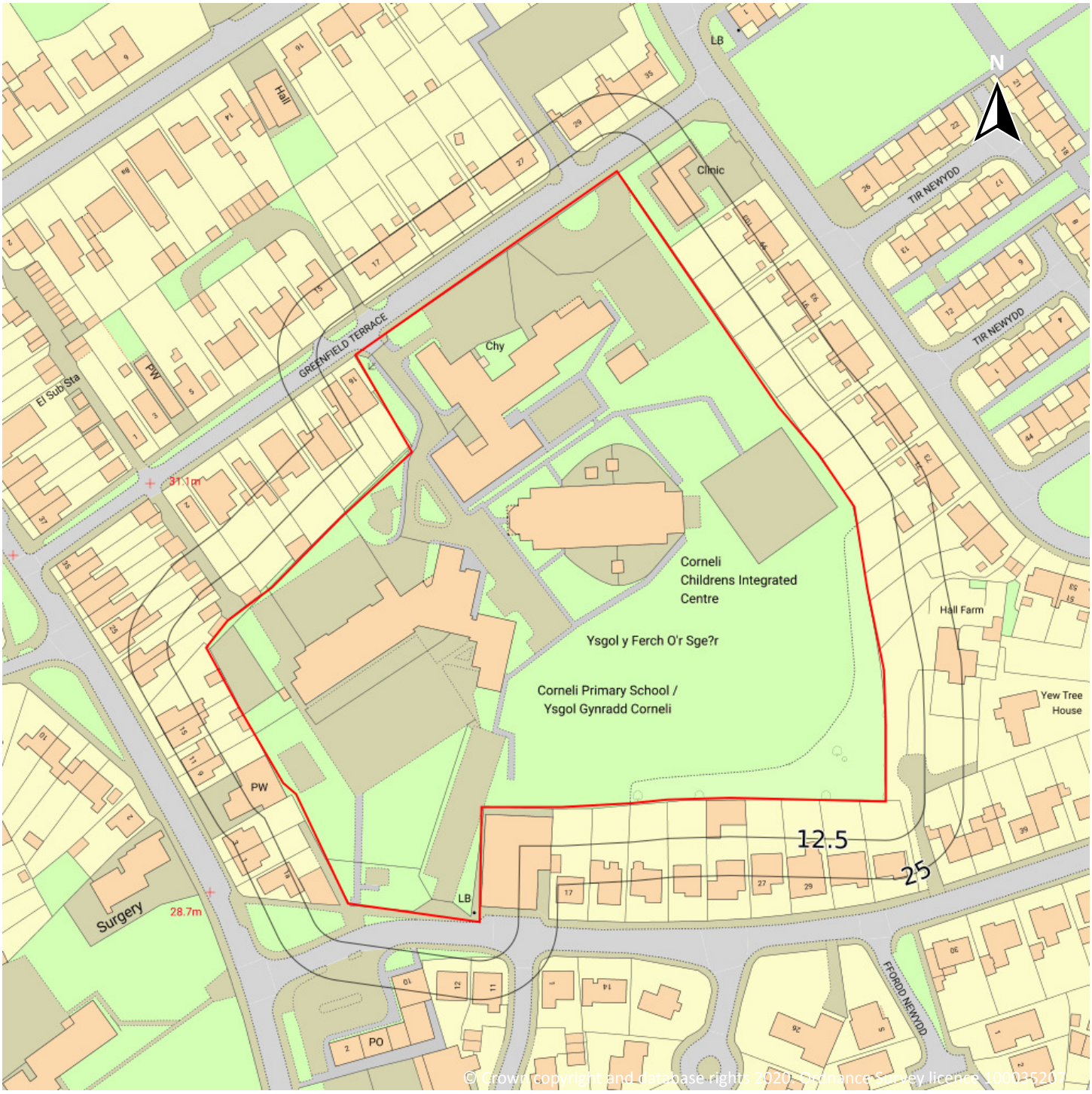
Site Area: 3.08ha

Recent site history - 2000 aerial photograph

Capture Date: 21/07/2000

Site Area: 3.08ha

OS MasterMap site plan



Site Area: 3.08ha

1 Past land use

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Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical energy features

Historical garages

1.1 Historical industrial land uses

Records within 500m	44

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

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

ID	Location	Land use	Dates present	Group ID
A	12m S	Unspecified Pit	1876	373186

ID	Location	Land use	Dates present	Group ID
A	13m S	Unspecified Ground Workings	1947	334492
A	16m S	Unspecified Old Quarries	1900 - 1914	349409
A	19m S	Unspecified Pit	1947	358951
B	43m SW	Unspecified Pit	1947	359833
B	44m SW	Unspecified Pit	1985	368270
B	45m SW	Unspecified Ground Workings	1914 - 1947	374737
B	45m SW	Unspecified Old Quarries	1900	329303
B	47m SW	Unspecified Pit	1969	357383
C	73m S	Unspecified Old Quarries	1900 - 1914	353724
C	76m S	Unspecified Pit	1947	344874
E	152m S	Smithy	1876	343415
E	159m S	Smithy	1900 - 1914	365051
1	174m NW	Unspecified Heap	1969 - 1985	369378
2	234m NW	Unspecified Heap	1969	327894
3	276m E	Burial Ground	1876	331071
H	300m E	Cemetery	1969	373838
H	301m E	Cemetery	1985	341581
H	303m E	Cemetery	1947	366170
H	307m E	Cemetery	1947	377707
5	352m SW	Cuttings	1985	337090
6	414m NE	Railway Sidings	1947	380022
J	418m SW	Unspecified Pit	1947	352492
J	421m SW	Unspecified Pit	1914 - 1947	344628
J	424m SW	Unspecified Ground Workings	1900	334518
K	425m N	Cuttings	1914 - 1947	378309
7	426m NE	Cuttings	1876	361389
K	444m N	Cuttings	1947	352672
8	446m SW	Unspecified Ground Workings	1876	334517

ID	Location	Land use	Dates present	Group ID
K	451m N	Cuttings	1876	358878
L	467m S	Unspecified Quarry	1876	353354
L	468m S	Unspecified Pit	1985	336440
L	468m S	Unspecified Quarry	1947	379967
L	471m S	Unspecified Quarry	1900	354329
L	472m S	Unspecified Ground Workings	1969	334516
L	472m S	Unspecified Yard	1969	337194
L	473m S	Unspecified Quarry	1914 - 1947	374136
L	483m S	Railway Sidings	1900	337650
L	483m S	Unspecified Kiln	1947	320609
L	488m S	Lime Kiln	1876	331860
L	489m S	Disused Lime Kiln	1985	332212
L	492m S	Lime Kiln	1914 - 1947	377080
M	499m S	Unspecified Works	1947	353288
M	499m S	Unspecified Works	1969	370459

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**0**

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'.

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	11

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
D	80m NW	Electricity Substation	-	18886
D	80m NW	Electricity Substation	1993	19303
F	193m S	Electricity Substation	1993	22292
F	196m S	Electricity Substation	1980	23529
F	196m S	Electricity Substation	1983	22842
G	202m E	Electricity Transformer	1969	19964
G	202m E	Electricity Substation	1980 - 1983	22154
G	203m E	Electricity Substation	1993	21066
4	321m SE	Electricity Substation	1969 - 1993	20598
I	416m SE	Electricity Substation	1983 - 1993	22251
I	417m SE	Electricity Substation	1980	22820

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	1

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

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

ID	Location	Land use	Dates present	Group ID
A	40m S	Garage	1966 - 1993	7849

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped

Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical energy features

Historical garages

2.1 Historical industrial land uses

Records within 500m	54

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

Features are displayed on the Past land use - un-grouped map on **page 19**

ID	Location	Land Use	Date	Group ID
A	12m S	Unspecified Pit	1876	373186
A	13m S	Unspecified Ground Workings	1947	334492
A	16m S	Unspecified Old Quarries	1900	349409

ID	Location	Land Use	Date	Group ID
A	19m S	Unspecified Pit	1947	358951
A	21m S	Unspecified Old Quarries	1914	349409
B	43m SW	Unspecified Pit	1947	359833
B	44m SW	Unspecified Pit	1985	368270
B	45m SW	Unspecified Ground Workings	1947	374737
B	45m SW	Unspecified Old Quarries	1900	329303
B	47m SW	Unspecified Pit	1969	357383
B	48m SW	Unspecified Ground Workings	1914	374737
C	73m S	Unspecified Old Quarries	1900	353724
C	76m S	Unspecified Pit	1947	344874
C	77m S	Unspecified Old Quarries	1914	353724
C	79m S	Unspecified Pit	1947	344874
E	152m S	Smithy	1876	343415
E	159m S	Smithy	1900	365051
E	163m S	Smithy	1914	365051
F	174m NW	Unspecified Heap	1969	369378
F	174m NW	Unspecified Heap	1985	369378
1	234m NW	Unspecified Heap	1969	327894
2	276m E	Burial Ground	1876	331071
I	300m E	Cemetery	1969	373838
I	301m E	Cemetery	1985	341581
I	303m E	Cemetery	1947	366170
I	307m E	Cemetery	1947	377707
3	352m SW	Cuttings	1985	337090
4	414m NE	Railway Sidings	1947	380022
L	418m SW	Unspecified Pit	1947	352492
L	421m SW	Unspecified Pit	1947	344628
L	421m SW	Unspecified Pit	1914	344628

ID	Location	Land Use	Date	Group ID
L	424m SW	Unspecified Ground Workings	1900	334518
M	425m N	Cuttings	1914	378309
M	426m NE	Cuttings	1876	361389
M	427m N	Cuttings	1947	378309
M	444m N	Cuttings	1947	352672
5	446m SW	Unspecified Ground Workings	1876	334517
M	451m N	Cuttings	1876	358878
N	467m S	Unspecified Quarry	1876	353354
N	468m S	Unspecified Pit	1985	336440
N	468m S	Unspecified Quarry	1947	379967
N	471m S	Unspecified Quarry	1900	354329
N	472m S	Unspecified Yard	1969	337194
N	472m S	Unspecified Ground Workings	1969	334516
N	473m S	Unspecified Quarry	1914	374136
N	473m S	Unspecified Quarry	1947	374136
N	483m S	Railway Sidings	1900	337650
N	483m S	Unspecified Kiln	1947	320609
N	488m S	Lime Kiln	1876	331860
N	489m S	Disused Lime Kiln	1985	332212
N	492m S	Lime Kiln	1947	377080
N	492m S	Lime Kiln	1914	377080
O	499m S	Unspecified Works	1969	370459
O	499m S	Unspecified Works	1947	353288

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	0

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'.

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	16

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 19**

ID	Location	Land Use	Date	Group ID
D	80m NW	Electricity Substation	1993	19303
D	80m NW	Electricity Substation	-	18886
G	193m S	Electricity Substation	1993	22292
G	196m S	Electricity Substation	1980	23529
G	196m S	Electricity Substation	1983	22842
H	202m E	Electricity Transformer	1969	19964
H	202m E	Electricity Substation	1980	22154
H	202m E	Electricity Substation	1983	22154
H	203m E	Electricity Substation	1993	21066
J	321m SE	Electricity Substation	1993	20598
J	321m SE	Electricity Substation	1969	20598
J	321m SE	Electricity Substation	1980	20598
J	321m SE	Electricity Substation	1983	20598
K	416m SE	Electricity Substation	1993	22251
K	417m SE	Electricity Substation	1983	22251
K	417m SE	Electricity Substation	1980	22820

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	2

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 19**

ID	Location	Land Use	Date	Group ID
A	40m S	Garage	1966	7849
A	52m S	Garage	1993	7849

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 24**

ID	Location	Address	Further Details	Date
B	470m S	Site Address: N/A	Type of Site: Breaker's Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1966
B	470m S	Site Address: N/A	Type of Site: Breakers Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1993
B	470m S	Site Address: N/A	Type of Site: Breakers Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1980

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.

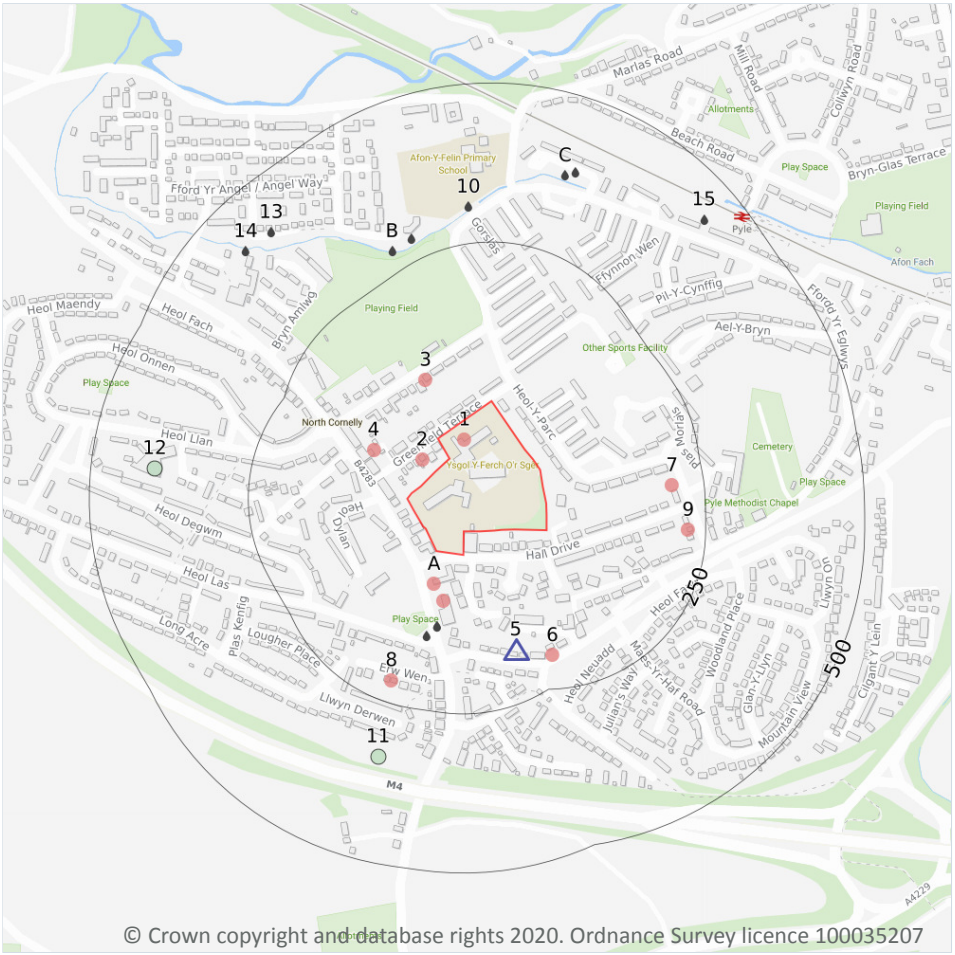
Features are displayed on the Waste and landfill map on **page 24**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	453m N	Marlas Farm, Pyle, Bridgend, Pen-y-bont ar Ogwr, CF33 4PE	NRW-WME000868	Using waste exemption	Waste Exemption - Agricultural	Use of waste in construction
A	453m N	Marlas Farm, Pyle, Bridgend, Pen-y-bont ar Ogwr, CF33 4PE	NRW-WME000868	Using waste exemption	Waste Exemption - Agricultural	Burning of waste as a fuel in a small appliance
A	453m N	Marlas Farm, Pyle, Bridgend, Pen-y-bont ar Ogwr, CF33 4PE	NRW-WME000868	Using waste exemption	Waste Exemption - Agricultural	Spreading waste on agricultural land to confer benefit
A	453m N	Marlas Farm, Pyle, Bridgend, Pen-y-bont ar Ogwr, CF33 4PE	NRW-WME000868	Disposing of waste exemption	Waste Exemption - Agricultural	Deposit of waste from dredging of inland waters
A	453m N	Marlas Farm, Pyle, Bridgend, Pen-y-bont ar Ogwr, CF33 4PE	NRW-WME000868	Disposing of waste exemption	Waste Exemption - Agricultural	Burning waste in the open
A	454m N	Marlas Farm Pyle Bridgend Pen-y-bont ar Ogwr CF334PE	NRW-WME000868	Using waste exemption	On a farm	Use of waste in construction
A	454m N	Marlas Farm Pyle Bridgend Pen-y-bont ar Ogwr CF334PE	NRW-WME000868	Using waste exemption	On a farm	Burning of waste as a fuel in a small appliance
A	454m N	Marlas Farm Pyle Bridgend Pen-y-bont ar Ogwr CF334PE	NRW-WME000868	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
A	454m N	Marlas Farm Pyle Bridgend Pen-y-bont ar Ogwr CF334PE	NRW-WME000868	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters

ID	Location	Site	Reference	Category	Sub-Category	Description
A	454m N	Marlas Farm Pyle Bridgend Pen-y-bont ar Ogwr CF334PE	NRW-WME000868	Disposing of waste exemption	On a farm	Burning waste in the open

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

4 Current industrial land use



4.1 Recent industrial land uses

Records within 250m	10

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 28**

ID	Location	Company	Address	Activity	Category
1	**On site**	**Chimney**	**Mid Glamorgan, CF33**	**Chimneys**	**Industrial Features**
2	28m NW	L V V Trim & Technical	8, Greenfield Terrace, North Cornelly, Bridgend, Mid Glamorgan, CF33 4LW	Vehicle Repair, Testing and Servicing	Repair and Servicing
A	52m S	Cornelly Hardware	Hall Drive, North Cornelly, Bridgend, Mid Glamorgan, CF33 4HS	General Construction Supplies	Industrial Products

ID	Location	Company	Address	Activity	Category
A	75m S	Mike Poacher & Sons	Cornelly Garage, Heol Fach, North Cornelly, Bridgend, Mid Glamorgan, CF33 4HY	Vehicle Repair, Testing and Servicing	Repair and Servicing
3	87m NW	Goylake Publishing	16a, Meadow Street, North Cornelly, Bridgend, Mid Glamorgan, CF33 4LL	Published Goods	Industrial Products
4	91m NW	Electricity Sub Station	Mid Glamorgan, CF33	Electrical Features	Infrastructure and Facilities
6	197m S	Electricity Sub Station	Mid Glamorgan, CF33	Electrical Features	Infrastructure and Facilities
7	200m E	Electricity Sub Station	Mid Glamorgan, CF33	Electrical Features	Infrastructure and Facilities
8	215m S	Black & Blue Wood Products	5, Erw Wen, North Cornelly, Bridgend, Mid Glamorgan, CF33 4BW	Furniture	Consumer Products
9	223m E	Martin J Walsh Plant Hire	1, Heol-y-Parc, North Cornelly, Bridgend, Mid Glamorgan, CF33 4LT	Construction and Tool Hire	Hire Services

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 28**

ID	Location	Company	Address	LPG	Status
5	170m SE	OBSOLETE	Heol Fach, North Cornelly, Bridgend, Bridgend, CF33 4HY	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	0

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

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

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

Records within 500m	0

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

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m	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 28**

ID	Location	Address	Details	
A	117m S	HEOL FACH CSO NORTH CORNELLY, A COMBINED SEWER OVERFLOW, HEOL FACH, NORTH CORNELLY, NEATH PORT TALBOT	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BP0303401 Permit Version: 1 Receiving Water: TO SEA	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 29/01/2003 Effective Date: 29/01/2003 Revocation Date: -
A	117m S	HEOL FACH CSO NORTH CORNELLY, A COMBINED SEWER OVERFLOW, HEOL FACH, NORTH CORNELLY, NEATH PORT TALBOT	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BP0303401 Permit Version: 1 Receiving Water: TO SEA	Status: Effective Issue date: 29/01/2003 Effective Date: 29/01/2003 Revocation Date: -
A	133m S	Heol Fach Cso North Cornelly, Opposite 1 Heol Las, North Cornelly, Bridgend, CF33 4AP	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BP0303401 Permit Version: 0 Receiving Water: Kenfig/Sea via Sker Surface Water Sewer	Status: Effective Issue date: 08/08/2019 Effective Date: 08/08/2019 Revocation Date: -
B	282m NW	Swo.Marlas Stw Pt 55	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BW3200901 Permit Version: 0 Receiving Water: RIVER CYNFFIG	Status: Surrendered Issue date: 08/09/2010 Effective Date: 09/08/2010 Revocation Date: -
B	285m NW	MARLAS PS SSO\AFON FACH	Effluent Type: UNSPECIFIED Permit Number: BW3200801 Permit Version: 1 Receiving Water: AFON FACH	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 10/03/1964 Effective Date: 10/03/1964 Revocation Date: 14/03/1994
10	307m N	PRIMARY SCHOOL SURFACE WATER, SURFACE WATER	Effluent Type: UNSPECIFIED Permit Number: BB4012501 Permit Version: 1 Receiving Water: AFAN FACH	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 15/01/1975 Effective Date: 15/01/1975 Revocation Date: 28/09/1992
C	372m N	CSO AT LON Y CARIADON NORTH CORNELL, CSO, LON Y CARIADON, NORTH CORNELLY, Bridgend	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BP0303101 Permit Version: 1 Receiving Water: THE AFON FACH	Status: Effective Issue date: 05/03/2003 Effective Date: 05/03/2003 Revocation Date: -

ID	Location	Address	Details	
C	382m N	Lon-Y-Caridan Cso, Lon-Y-Cariadon, North Cornelly, Bridgend, CF33 4NL	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BP0303101 Permit Version: 0 Receiving Water: AFON FACH	Status: Effective Issue date: 29/08/2019 Effective Date: 29/08/2019 Revocation Date: -
13	417m NW	NORTH CORNELLY OS 6400 BRYN AMLYG N, NORTH CORNELLY OS 6400 BRYN AMLY, OS 6400 BRYN AMLYG NTH CORNELLY, BRYN AMLYG NTH CORNELLY, NTH CORNELLY, NTH CORNEL	Effluent Type: UNSPECIFIED Permit Number: BP0119901 Permit Version: 1 Receiving Water: AFON FACH	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 20/04/1989 Effective Date: 20/04/1989 Revocation Date: 02/07/1994
14	422m NW	SSO.MARLAS STW.PT56 ALSO N	Effluent Type: UNSPECIFIED Permit Number: BW3200701 Permit Version: 1 Receiving Water: AFON FACH	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 31/07/1956 Effective Date: 31/07/1956 Revocation Date: 05/07/1995
15	439m NE	MARLAS HOUSING SITE,	Effluent Type: UNSPECIFIED Permit Number: BB3011801 Permit Version: 1 Receiving Water: MARLAS BROOK	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV Issue date: 06/02/1969 Effective Date: 06/02/1969 Revocation Date: 31/03/2003

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	2

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 28**

ID	Location	Details	
11	335m S	Incident Date: 15/05/2003 Incident Identification: 158596 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Natural Organic Material	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
12	399m W	Incident Date: 23/10/2007 Incident Identification: 540487 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) 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.

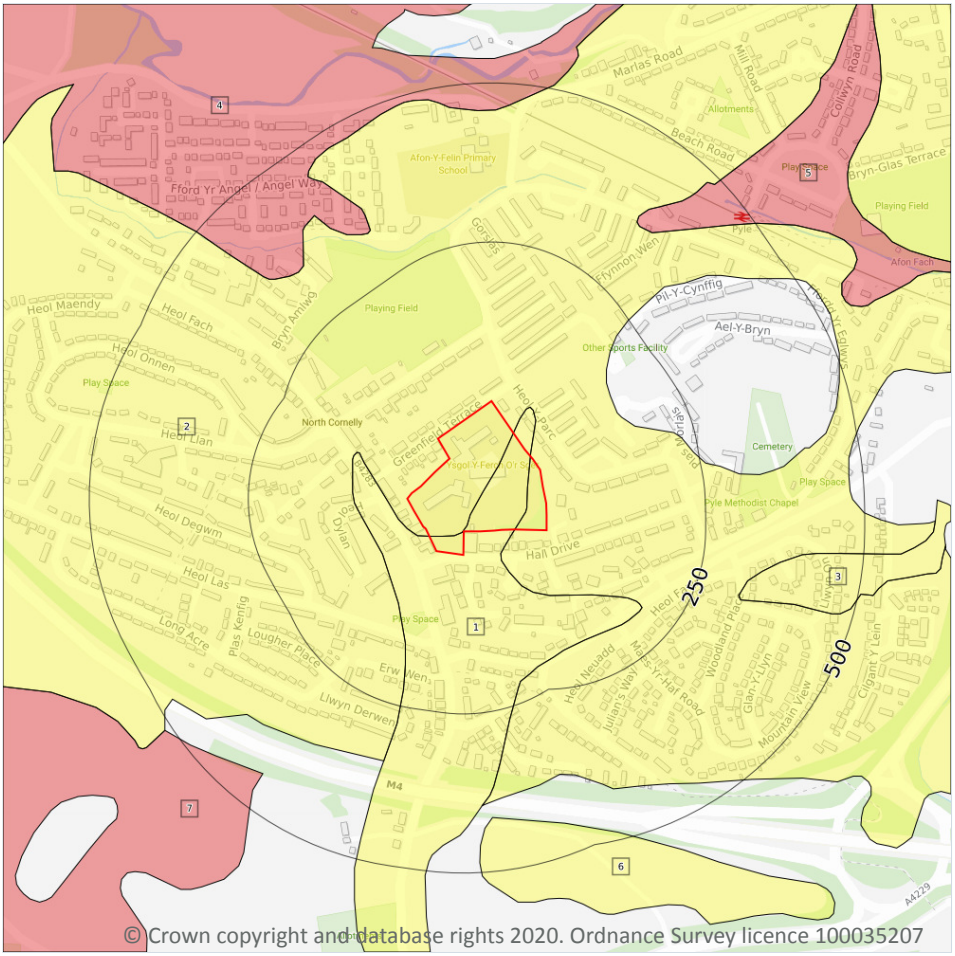
4.21 Pollution inventory radioactive waste

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	7

Aquifer status of groundwater held within superficial geology.

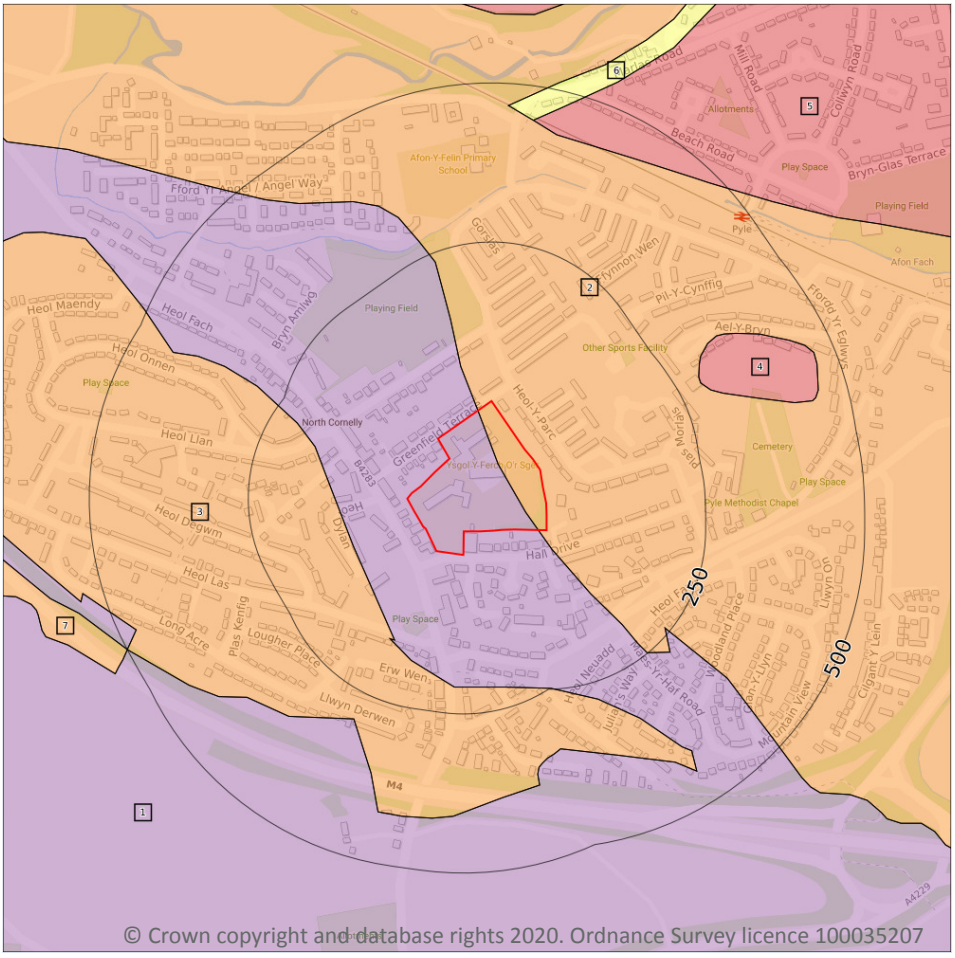
Features are displayed on the Hydrogeology map on **page 36**

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	319m E	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
4	327m NW	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
5	360m NE	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
6	415m S	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
7	444m SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

Bedrock aquifer



5.2 Bedrock aquifer

Records within 500m	7

Aquifer status of groundwater held within bedrock geology.

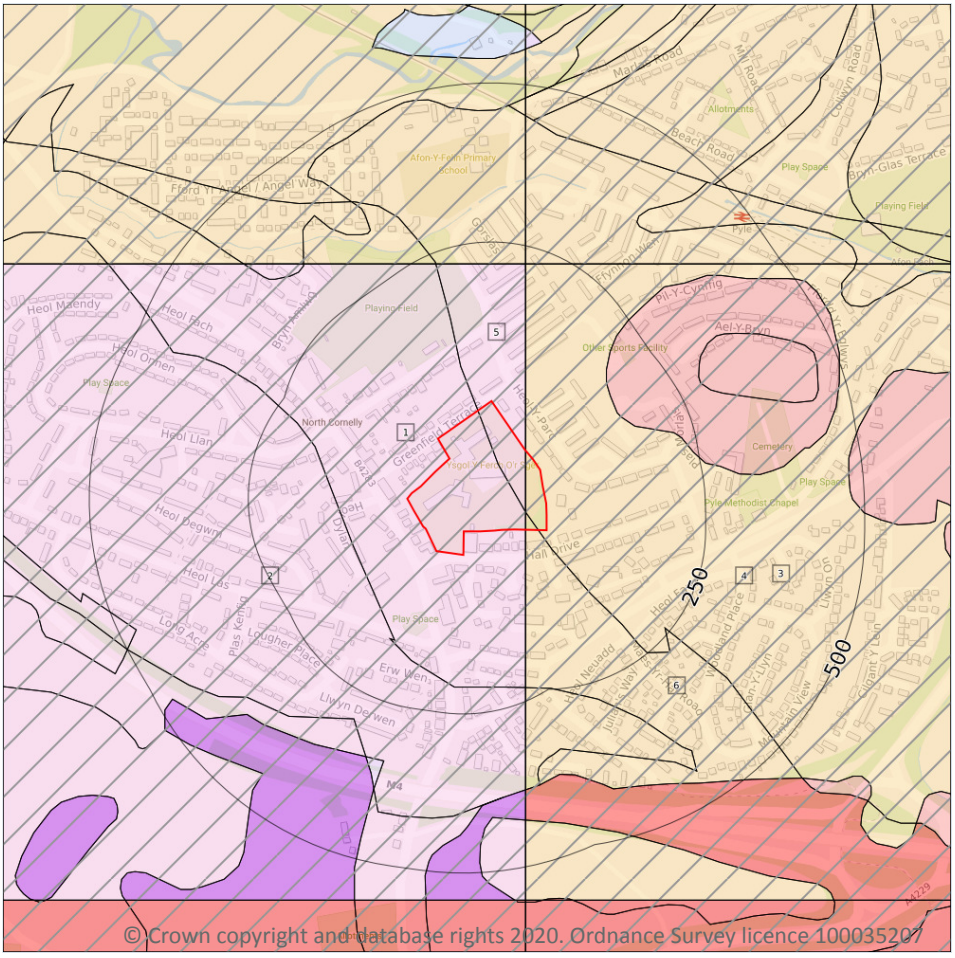
Features are displayed on the Bedrock aquifer map on **page 38**

ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
2	On site	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers

ID	Location	Designation	Description
3	106m W	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers
4	287m NE	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
5	430m N	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
6	446m N	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
7	500m SW	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers

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

Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m	4

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 40**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Medium Aquifer type: Principal Flow mechanism: Well connected fractures
3	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
5	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures
6	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Principal 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	2

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

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
2	**Very significant soluble rocks are likely to be present with a high possibility of localised subsidence or dissolution-related degradation of bedrock occurring naturally, especially in adverse conditions such as concentrated surface or subsurface water flow.**	**7.000000000000001%**

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
4	**Very significant soluble rocks are likely to be present with a high possibility of localised subsidence or dissolution-related degradation of bedrock occurring naturally, especially in adverse conditions such as concentrated surface or subsurface water flow.**	**6.0%**

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

5.5 Groundwater vulnerability- local information

Records on site	0

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

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

Abstractions and Source Protection Zones

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- Site Outline

Search buffers in metres (m)

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

5.6 Groundwater abstractions

Records within 2000m	11

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 43**

ID	Location	Details	
-	781m S	Status: Active Licence No: WA/058/0033/0004 Details: Animal Watering & General use in non-farming situations - Medium Direct Source: Oxwich Head Limestone Formation Point: - Data Type: Point Name: - Easting: 282212 Northing: 180821	Annual Volume (m^3): 10,950 Max Daily Volume (m^3): 96 Original Application No: - Original Start Date: Feb 27 2020 12:00AM Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	818m S	Status: Historical Licence No: 21/58/51/0030 Details: General Farming & Domestic Direct Source: EAW Groundwater Point: U/G LIMESTONE CYNFFIG IN THE DISTRICT OF OGWR MID GLAM Data Type: Point Name: Messrs Lougher & Son Easting: 282240 Northing: 180790	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 22/04/1996 Version End Date: -
-	1613m SW	Status: Historical Licence No: 21/58/33/0010 Details: Spray Irrigation - Storage Direct Source: EAW Groundwater Point: BOREHOLE A Data Type: Point Name: Pyle & Kenfig Golf Club Easting: 280930 Northing: 180230	Annual Volume (m^3): 28000 Max Daily Volume (m^3): 120 Original Application No: - Original Start Date: 02/06/2006 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 02/06/2006 Version End Date: -
-	1613m SW	Status: Active Licence No: 21/58/33/0010 Details: Spray Irrigation - Storage - High Direct Source: Mercia Mudstone Point: - Data Type: Point Name: - Easting: 280930 Northing: 180230	Annual Volume (m^3): 28,000 Max Daily Volume (m^3): 120 Original Application No: - Original Start Date: Apr 1 2017 12:00AM Expiry Date: Mar 31 2029 12:00AM Issue No: - Version Start Date: - Version End Date: -
-	1910m S	Status: Active Licence No: WA/058/0033/0003 Details: Make-up or Top-up Water - High Direct Source: Underground strata Point: - Data Type: Point Name: - Easting: 282048 Northing: 179638	Annual Volume (m^3): 0 Max Daily Volume (m^3): 268.80 Original Application No: - Original Start Date: Sep 20 2018 12:00AM Expiry Date: Mar 31 2029 12:00AM Issue No: - Version Start Date: - Version End Date: -

ID	Location	Details	
-	1910m S	Status: Active Licence No: WA/058/0033/0003 Details: Spray Irrigation - Direct - High Direct Source: Underground strata Point: - Data Type: Point Name: - Easting: 282048 Northing: 179638	Annual Volume (m^3): 4,900 Max Daily Volume (m^3): 268.80 Original Application No: - Original Start Date: Sep 20 2018 12:00AM Expiry Date: Mar 31 2029 12:00AM Issue No: - Version Start Date: - Version End Date: -
-	1918m S	Status: Historical Licence No: 21/58/33/0011 Details: Spray Irrigation - Storage Direct Source: EAW Groundwater Point: BOREHOLE AT GROVE GOLF CLUB, SOUTH CORNELLY, BRIDGEND Data Type: Point Name: Grove Golf Club Limited Easting: 282050 Northing: 179630	Annual Volume (m^3): 4900 Max Daily Volume (m^3): 35 Original Application No: - Original Start Date: 28/09/2006 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 01/04/2008 Version End Date: -
-	1918m S	Status: Historical Licence No: 21/58/33/0011 Details: Make-Up Or Top Up Water Direct Source: EAW Groundwater Point: BOREHOLE AT GROVE GOLF CLUB, SOUTH CORNELLY, BRIDGEND Data Type: Point Name: Grove Golf Club Limited Easting: 282050 Northing: 179630	Annual Volume (m^3): 4900 Max Daily Volume (m^3): 35 Original Application No: - Original Start Date: 28/09/2006 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 01/04/2008 Version End Date: -
-	1918m S	Status: Historical Licence No: WA/058/0033/0002 Details: Spray Irrigation - Storage - High Direct Source: underground strata Point: - Data Type: Point Name: - Easting: 282050 Northing: 179630	Annual Volume (m^3): 4900 Max Daily Volume (m^3): - Original Application No: - Original Start Date: Apr 13 2017 12:00AM Expiry Date: Mar 31 2029 12:00AM Issue No: - Version Start Date: - Version End Date: -
-	1918m S	Status: Historical Licence No: WA/058/0033/0002 Details: Spray Irrigation - Direct - High Direct Source: underground strata Point: - Data Type: Point Name: - Easting: 282050 Northing: 179630	Annual Volume (m^3): 4900 Max Daily Volume (m^3): - Original Application No: - Original Start Date: Apr 13 2017 12:00AM Expiry Date: Mar 31 2029 12:00AM Issue No: - Version Start Date: - Version End Date: -

ID	Location	Details	
-	1918m S	Status: Historical Licence No: WA/058/0033/0002 Details: Make-up or Top-up Water - High Direct Source: underground strata Point: - Data Type: Point Name: - Easting: 282050 Northing: 179630	Annual Volume (m^3): 4900 Max Daily Volume (m^3): - Original Application No: - Original Start Date: Apr 13 2017 12:00AM Expiry Date: Mar 31 2029 12:00AM Issue No: - Version Start Date: - Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**0**

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.

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

5.8 Potable abstractions

Records within 2000m	**0**

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

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

5.9 Source Protection Zones

Records within 500m	**0**

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

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

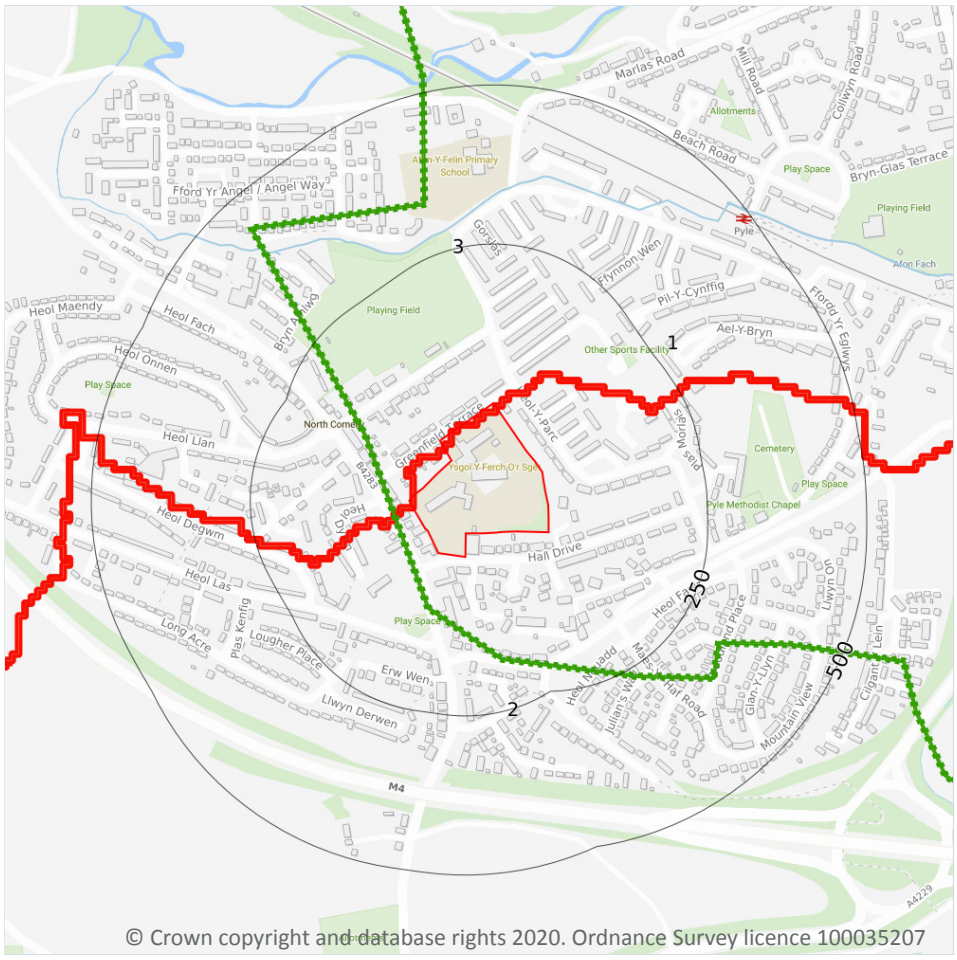
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology



Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	0

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

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	0

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.

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	2

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 48**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	**On site**	**Coastal catchment**	**Not part of a river WB catchment**	**240**	**Ogmore**	**Tawe to Cadoxton**
3	**On site**	**River WB catchment**	**Kenfig - headwaters to tidal**	**GB110058026170**	**Kenfig**	**Tawe to Cadoxton**

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

6.4 WFD Surface water bodies

Records identified	1

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

Features are displayed on the Hydrology map on **page 48**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	507m N	River	Kenfig - headwaters to tidal	GB110058026170	Moderate	Fail	Moderate	2016

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

6.5 WFD Groundwater bodies

Records on site	1

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

Features are displayed on the Hydrology map on **page 48**

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

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

7 River and coastal flooding

7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m	0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance).

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

7.2 Historical Flood Events

Records within 250m	0

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

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

7.3 Flood Defences

Records within 250m	0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

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

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

7.5 Flood Storage Areas

Records within 250m	0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

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

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

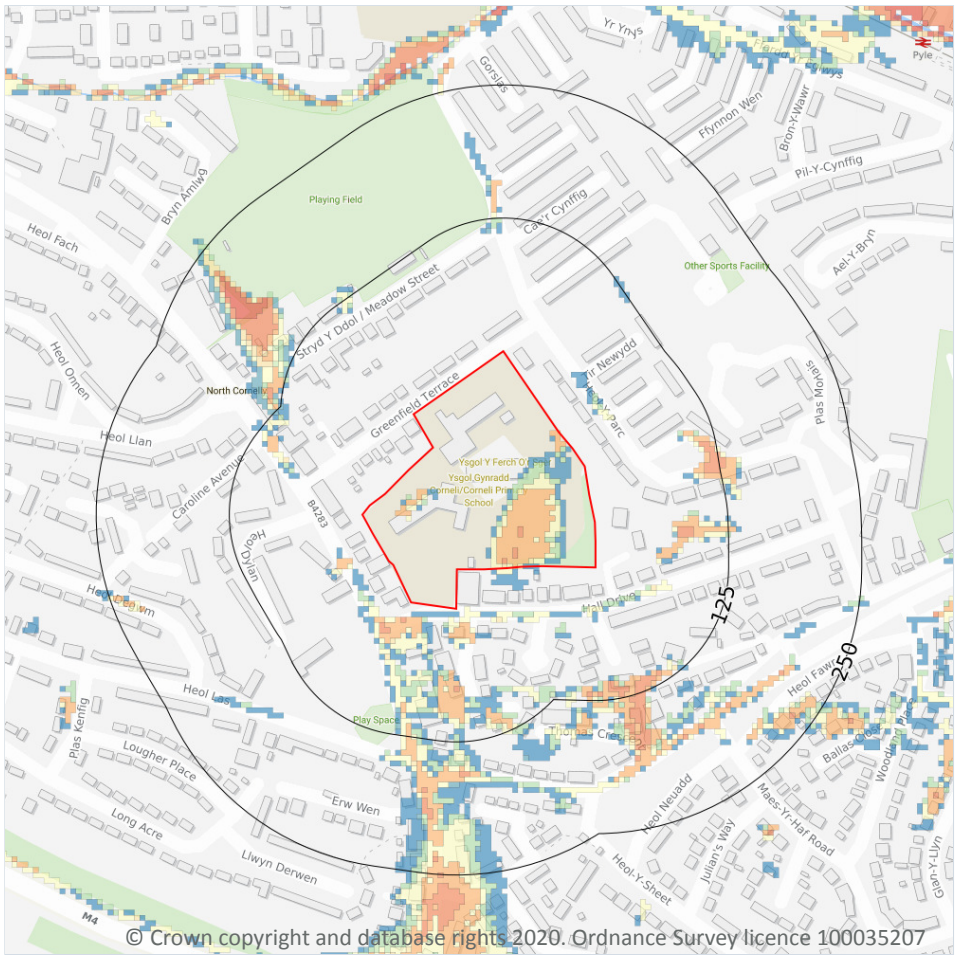
7.7 Flood Zone 3

Records within 50m	0

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

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

8 Surface water flooding



8.1 Surface water flooding

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

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

Features are displayed on the Surface water flooding map on **page 54**

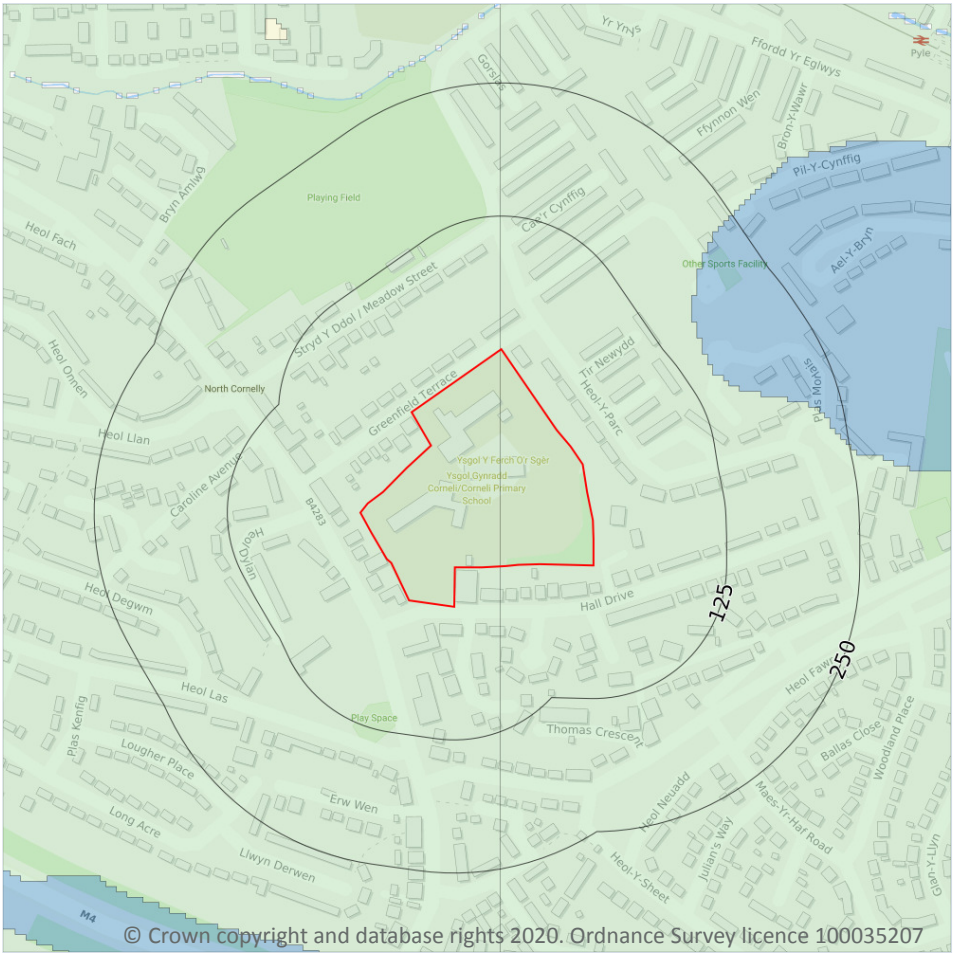
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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

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

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

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

9.1 Groundwater flooding

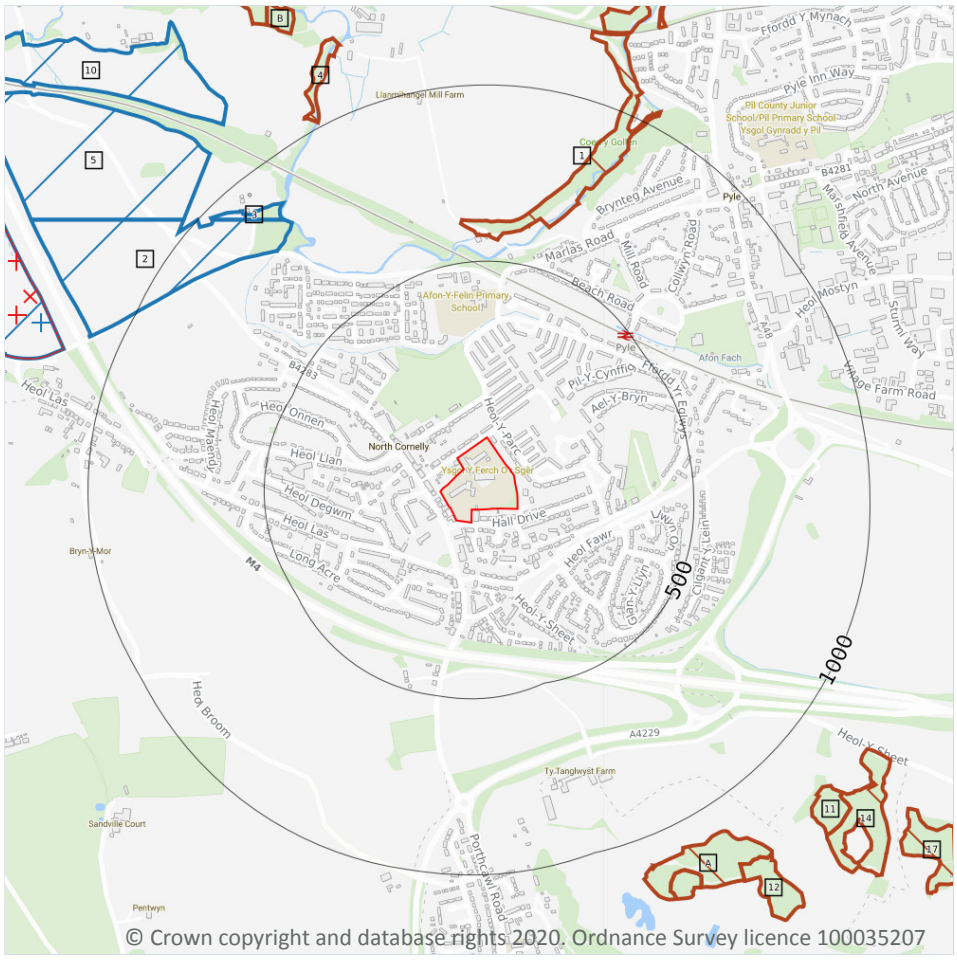
Highest risk on site	**Low**
Highest risk within 50m	**Low**

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 56**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



Site Outline

Search buffers in metres (m)

- Sites of Special Scientific Interest (SSSI)
- Special Areas of Conservation (SAC)
- National Nature Reserves (NNR)
- Local Nature Reserves (LNR)
- Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	6

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 57**

ID	Location	Name	Data source
2	779m NW	Cynffig/kenfig	Natural Resources Wales

ID	Location	Name	Data source
3	836m NW	Cynffig/kenfig	Natural Resources Wales
5	1030m NW	Cynffig/kenfig	Natural Resources Wales
7	1142m W	Cynffig/kenfig	Natural Resources Wales
10	1157m NW	Cynffig/kenfig	Natural Resources Wales
-	1459m NW	Cynffig/kenfig	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	1

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.

Features are displayed on the Environmental designations map on **page 57**

ID	Location	Name	Features of interest	Habitat description	Data source
6	1142m W	Kenfig / Cynffig	Intertidal mudflats and sandflats; Cord-grass swards; Atlantic salt meadows; Shifting dunes; Shifting dunes with marram; Dune grassland; Coastal dune heathland; Dunes with sea-buckthorn; Dunes with creeping willow; Humid dune slacks; Calcium-rich nutrient-poor lakes, lochs and pools; Dry grasslands and scrublands on chalk or limestone; Alder woodland on floodplains; Great crested newt; Lesser horseshoe bat; Petalwort; Fen orchid.	Broad-leaved deciduous woodland; Coastal sand dunes, Sand beaches, Machair; Inland water bodies (Standing water, Running water); Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins); Salt marshes, Salt pastures, Salt steppes; Shingle, Sea cliffs, Islets; Heath, Scrub, Maquis and Garrigue, Phygrana; Bogs, Marshes, Water fringed vegetation, Fens	Natural Resources Wales

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	**2**

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.

Features are displayed on the Environmental designations map on **page 57**

ID	Location	Name	Data source
9	1142m W	KENFIG POOL AND DUNES	Natural Rescources Wales
-	1585m W	KENFIG POOL AND DUNES	Natural Rescources Wales

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	2

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 57**

ID	Location	Name	Data source
8	1142m W	KENFIG POOL AND DUNES	Natural Resources Wales
-	1960m E	FROG POND WOOD	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	23

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 57**

ID	Location	Name	Woodland Type
1	561m N	Unknown	Ancient Semi Natural Woodland
4	1014m NW	Unknown	Ancient Semi Natural Woodland
A	1070m SE	Unknown	Ancient Semi Natural Woodland
A	1127m SE	Unknown	Restored Ancient Woodland Site
11	1171m SE	Unknown	Ancient Semi Natural Woodland
12	1190m SE	Unknown	Ancient Semi Natural Woodland
13	1199m N	Unknown	Restored Ancient Woodland Site
14	1203m SE	Unknown	Ancient Semi Natural Woodland
15	1261m NE	Unknown	Ancient Semi Natural Woodland
B	1274m NW	Unknown	Ancient Semi Natural Woodland
-	1288m N	Unknown	Ancient Semi Natural Woodland

ID	Location	Name	Woodland Type
B	1327m NW	Unknown	Ancient Semi Natural Woodland
17	1397m SE	Unknown	Ancient Semi Natural Woodland
-	1436m NW	Unknown	Ancient Semi Natural Woodland
-	1521m N	Unknown	Ancient Semi Natural Woodland
-	1524m NE	Unknown	Ancient Semi Natural Woodland
-	1532m SE	Unknown	Ancient Semi Natural Woodland
-	1568m NW	Unknown	Ancient Semi Natural Woodland
-	1695m S	Unknown	Ancient Semi Natural Woodland
-	1763m NE	Unknown	Ancient Semi Natural Woodland
-	1835m SE	Unknown	Ancient Semi Natural Woodland
-	1846m N	Unknown	Ancient Semi Natural Woodland
-	1870m 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	1

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.

Location	Name	Type	NVZ ID	Status
341m SE		Groundwater	159	New

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.

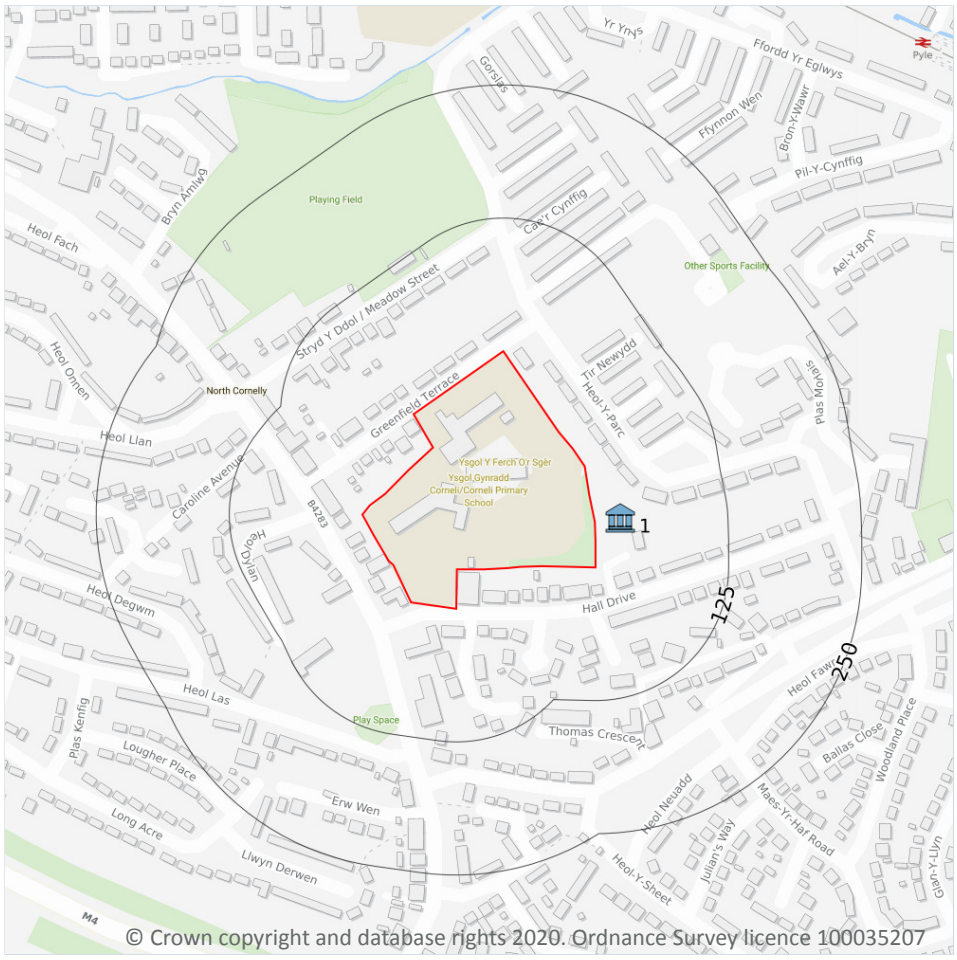
10.18 SSSI Units

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



- Site Outline

Search buffers in metres (m)

- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

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	1

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.

Features are displayed on the Visual and cultural designations map on **page 65**

ID	Location	Name	Grade	Reference Number	Listed date
1	24m E	The Hall Farm, The Former Farmhouse Lies In The Midst Of Suburban Development At The End Of A Driveway Opening Between Nos 33 And 35 Hall Drive	II*	11349	22/06/1988

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations

12.1 Agricultural Land Classification

Records within 250m	0

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.

This data is sourced from Natural Resources Wales.

12.2 Open Access Land

Records within 250m	0

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

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

12.3 Tree Felling Licences

Records within 250m	0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m	0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

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

This data is sourced from Natural England.

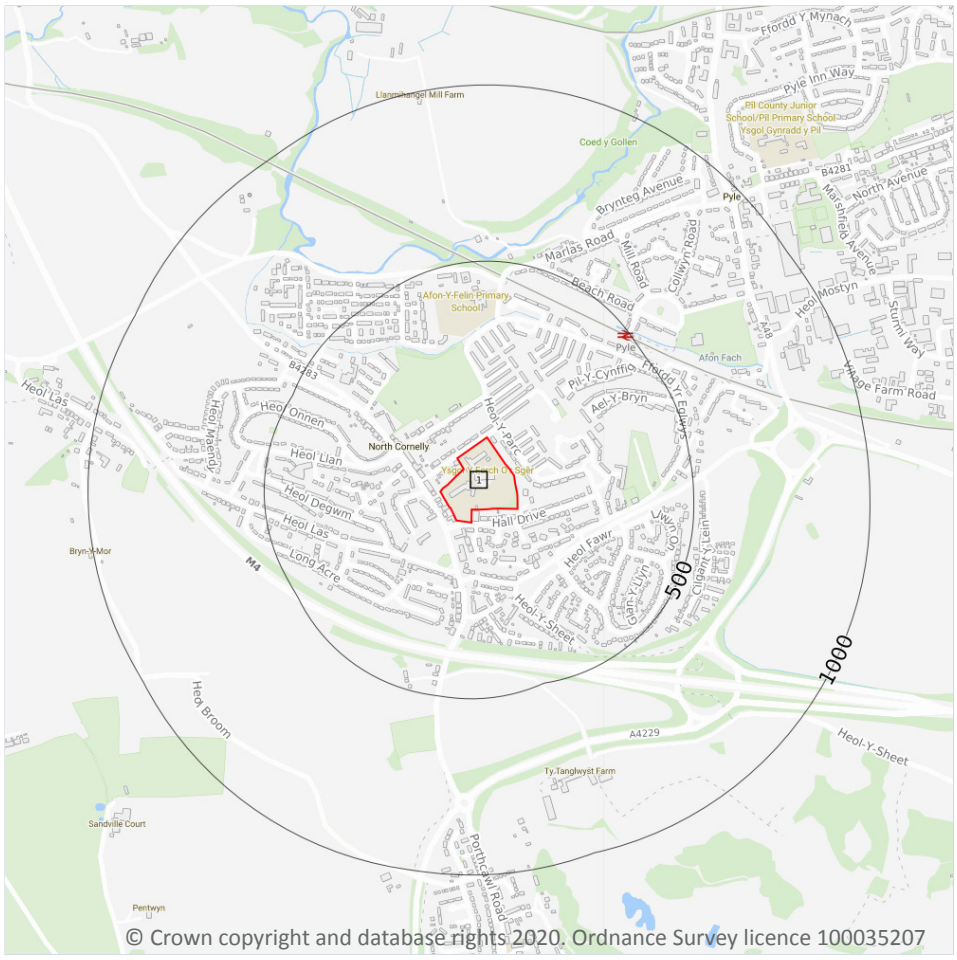
13.4 Limestone Pavement Orders

Records within 250m	0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



14.1 10k Availability

Records within 500m	1

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

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 71**

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

This data is sourced from the British Geological Survey.

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

14.2 Artificial and made ground (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock

14.5 Bedrock geology (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

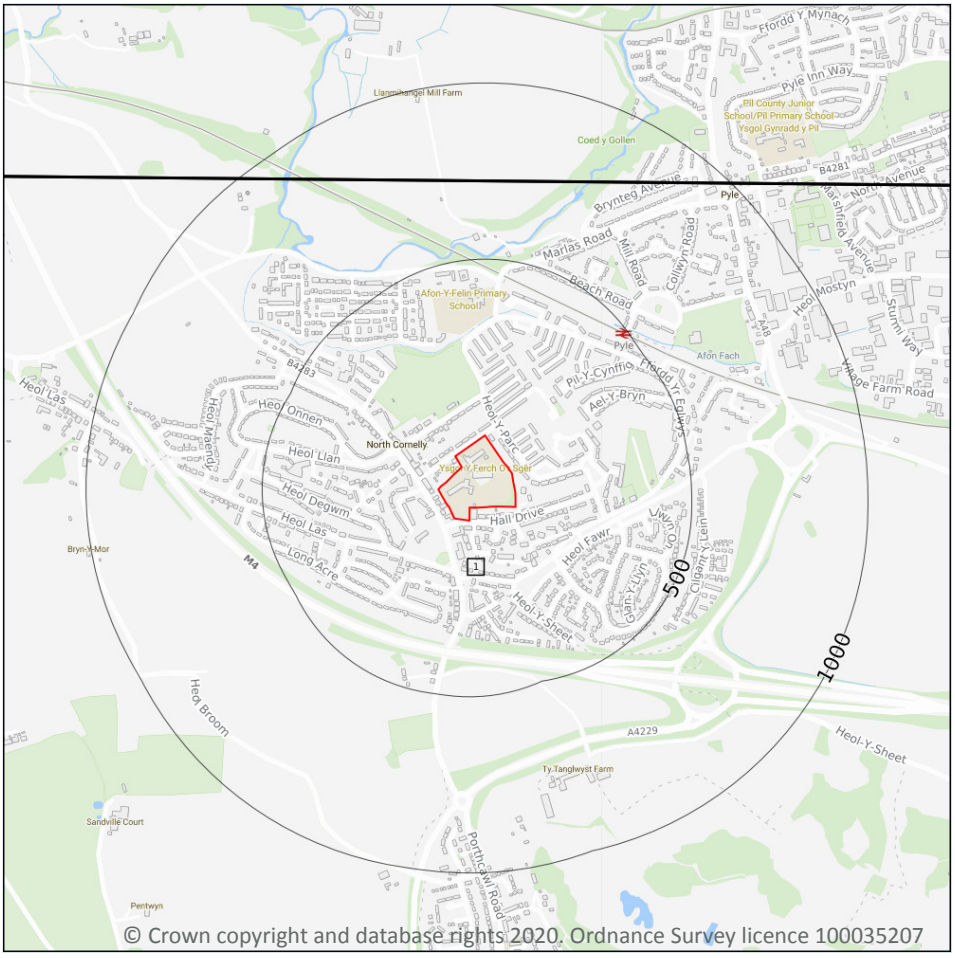
14.6 Bedrock faults and other linear features (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



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 75**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW261_262_sker_point_and_bridgend_v4**

This data is sourced from the British Geological Survey.

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

15.2 Artificial and made ground (50k)

Records within 500m	0

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.

This data is sourced from the British Geological Survey.

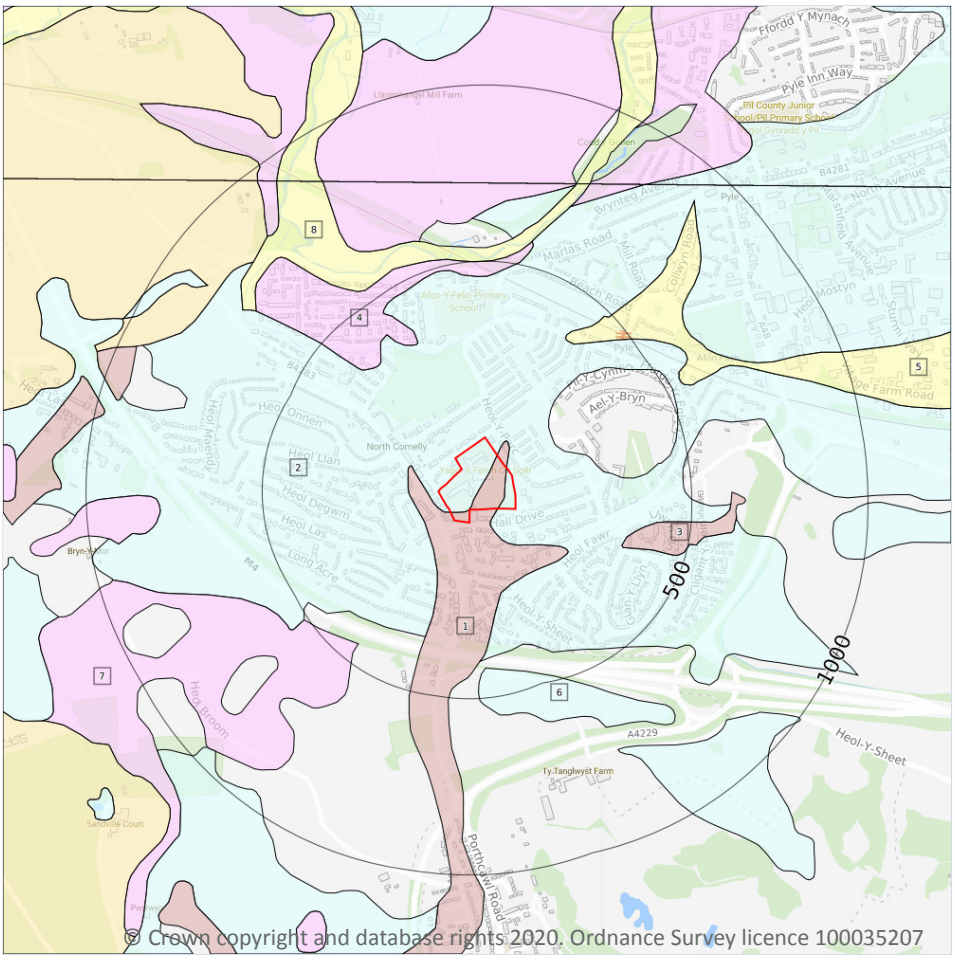
15.3 Artificial ground permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m	8

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 77**

ID	Location	LEX Code	Description	Rock description
1	On site	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL
2	On site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

ID	Location	LEX Code	Description	Rock description
3	319m E	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL
4	327m NW	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
5	360m NE	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
6	415m S	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
7	444m SW	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
8	499m N	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m **2**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**High**	**Very 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.

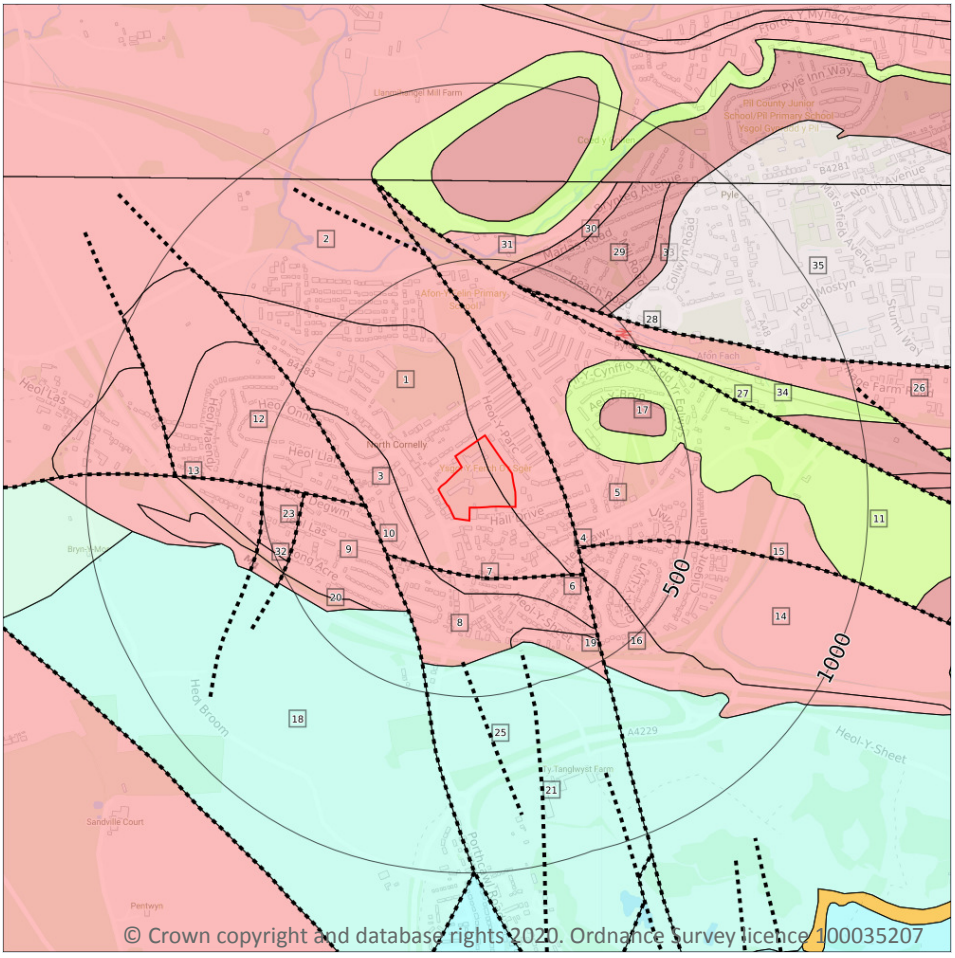
15.7 Landslip permeability (50k)

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 **26**

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 79**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**MMMF-CONG**	**MERCIA MUDSTONE GROUP (MARGINAL FACIES) - CONGLOMERATE**	**-**
2	**On site**	**MMG-MDST**	**MERCIA MUDSTONE GROUP - MUDSTONE**	**-**
3	106m W	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-

ID	Location	LEX Code	Description	Rock age
5	116m NE	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-
6	152m S	MMMF-CONG	MERCIA MUDSTONE GROUP (MARGINAL FACIES) - CONGLOMERATE	-
8	156m SW	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-
9	208m SW	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-
11	211m NE	BAN-MDST	BLUE ANCHOR FORMATION - MUDSTONE	NORIAN
12	212m W	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-
14	213m SE	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-
16	241m SE	MMMF-CONG	MERCIA MUDSTONE GROUP (MARGINAL FACIES) - CONGLOMERATE	-
17	287m NE	PNMF-SDST	PENARTH GROUP (MARGINAL FACIES) - SANDSTONE	RHAETIAN
18	294m SW	OHL-LMST	OXWICH HEAD LIMESTONE FORMATION - LIMESTONE	VISEAN
19	341m SE	MMMF-CONG	MERCIA MUDSTONE GROUP (MARGINAL FACIES) - CONGLOMERATE	-
20	348m SW	MMMF-CONG	MERCIA MUDSTONE GROUP (MARGINAL FACIES) - CONGLOMERATE	-
21	377m SE	OHL-LMST	OXWICH HEAD LIMESTONE FORMATION - LIMESTONE	VISEAN
23	381m W	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-
26	415m NE	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-
29	430m N	PNMF-SDST	PENARTH GROUP (MARGINAL FACIES) - SANDSTONE	RHAETIAN
30	446m N	PNG-MDST	PENARTH GROUP - MUDSTONE	RHAETIAN
31	465m N	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-
32	473m SW	MMMF-CONG	MERCIA MUDSTONE GROUP (MARGINAL FACIES) - CONGLOMERATE	-
33	474m NE	PNMF-MDST	PENARTH GROUP (MARGINAL FACIES) - MUDSTONE	RHAETIAN
34	479m NE	BAN-MDST	BLUE ANCHOR FORMATION - MUDSTONE	NORIAN
35	489m NE	STM-LSMD	ST MARY'S WELL BAY MEMBER - LIMESTONE AND MUDSTONE, INTERBEDDED	RHAETIAN
36	500m SW	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	2

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Fracture**	**Very High**	**Very High**
On site	**Fracture**	**Low**	**Low**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	10

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 79**

ID	Location	Category	Description
4	116m NE	FAULT	Fault, inferred, displacement unknown
7	152m S	FAULT	Fault, inferred, displacement unknown
10	208m SW	FAULT	Fault, inferred, displacement unknown
13	212m W	FAULT	Fault, inferred, displacement unknown
15	213m SE	FAULT	Fault, inferred, displacement unknown
22	381m W	FAULT	Fault, inferred, displacement unknown
24	397m S	FAULT	Fault, inferred, displacement unknown
25	402m S	FAULT	Fault, inferred, displacement unknown
27	415m NE	FAULT	Fault, inferred, displacement unknown
28	430m N	FAULT	Fault, inferred, displacement unknown

This data is sourced from the British Geological Survey.

16 Boreholes

16.1 BGS Boreholes

Records within 250m **13**

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.

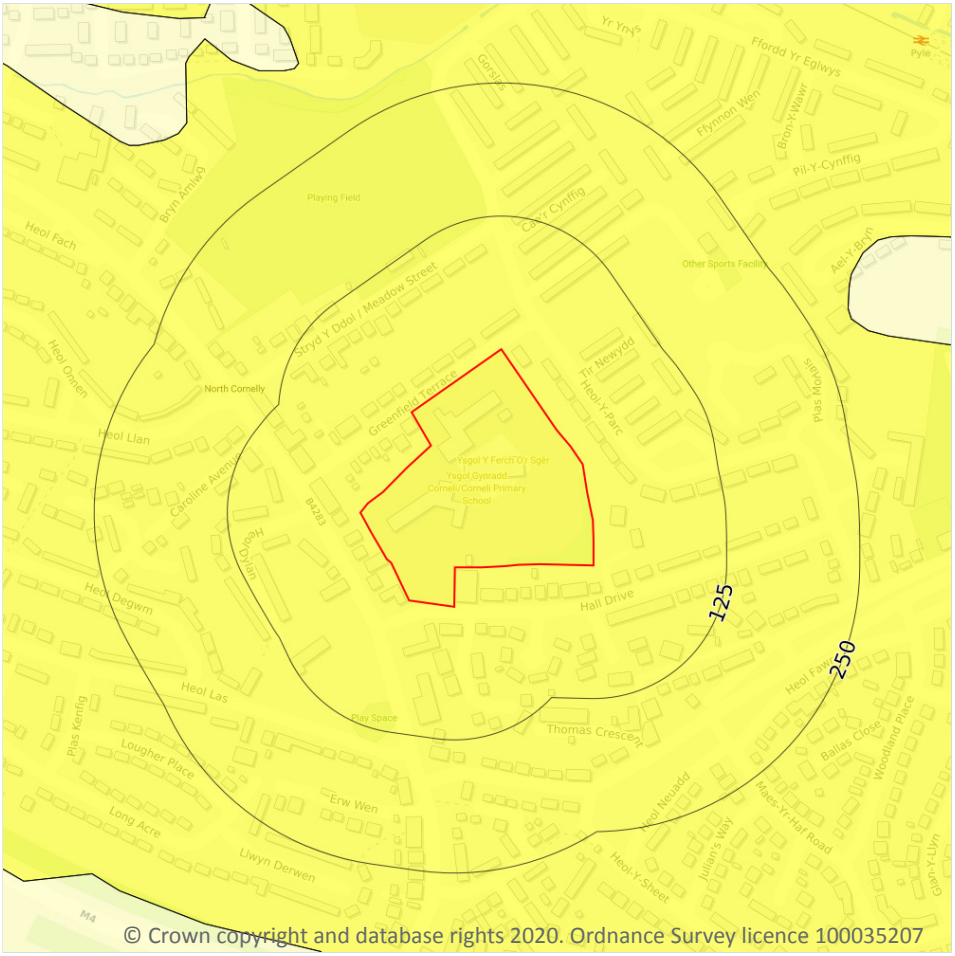
Features are displayed on the Boreholes map on **page 82**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	**On site**	**282030 181590**	**M4 STORMY DOWN, CORNELLY DRAIN, NO.2**	**6.45**	**N**	**372999**
2	8m NW	281940 181790	M4 STORMY DOWN, CORNELLY DRAIN, NO.1	6.15	N	372998
3	32m S	282030 181550	M4 STORMY DOWN, CORNELLY DRAIN, NO.3	6.0	N	373000

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	94m S	281830 181460	CORNELLY CROSS PLAYGROUND NO.3	6.5	N	372984
A	94m S	281830 181460	CORNELLY CROSS PLAYGROUND NO.6	8.0	N	372985
A	94m S	281830 181460	CORNELLY CROSS PLAYGROUND NO.1	7.0	N	372983
A	94m S	281830 181460	CORNELLY CROSS PLAYGROUND NO.8	8.0	N	372986
A	94m S	281830 181460	CORNELLY CROSS PLAYGROUND NO.9	6.5	N	372987
4	166m SE	282120 181440	M4 STORMY DOWN, CORNELLY DRAIN, NO.4	5.4	N	373001
B	225m W	281590 181610	CAROLINE AVENUE, NORTH CORNELLY. 1	5.5	N	372991
B	225m W	281590 181610	CAROLINE AVENUE, NORTH CORNELLY. 3	5.5	N	372993
B	225m W	281590 181610	CAROLINE AVENUE, NORTH CORNELLY. 2	5.5	N	372992
5	242m S	282040 181340	A48 PYLE BY-PASS C54	6.58	N	373072

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m	1

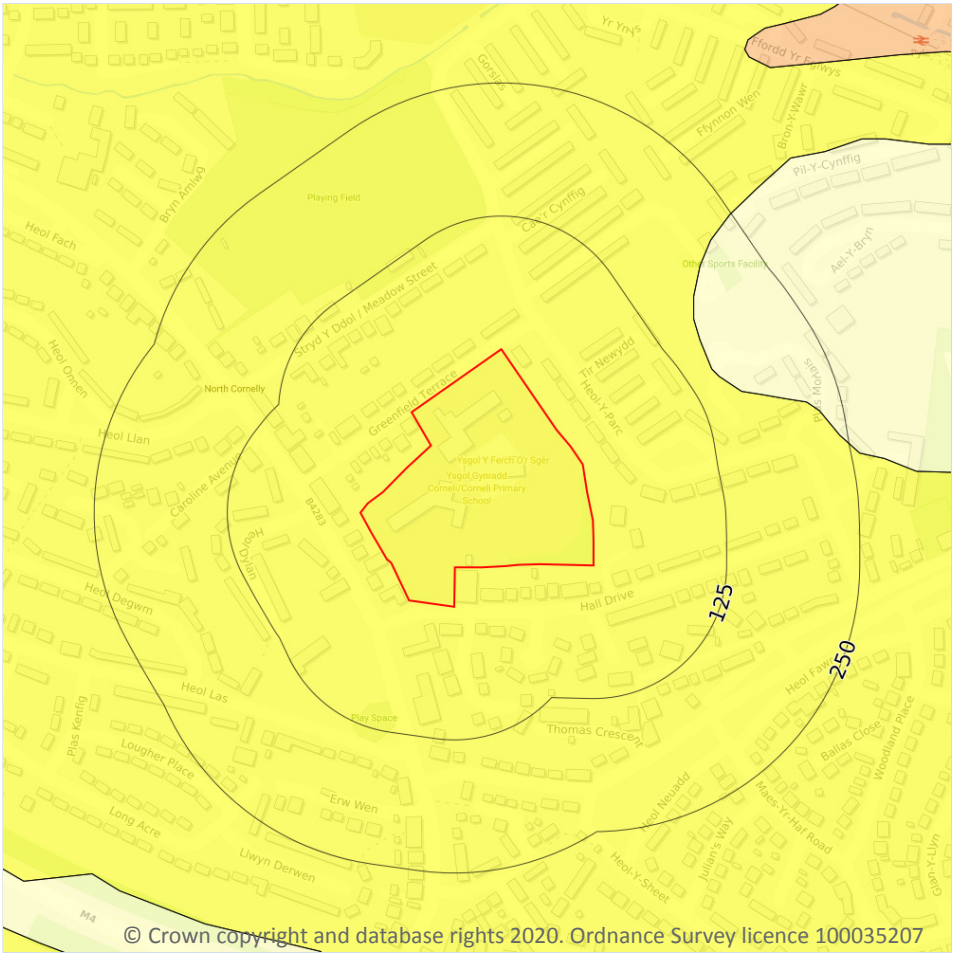
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 84**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	1

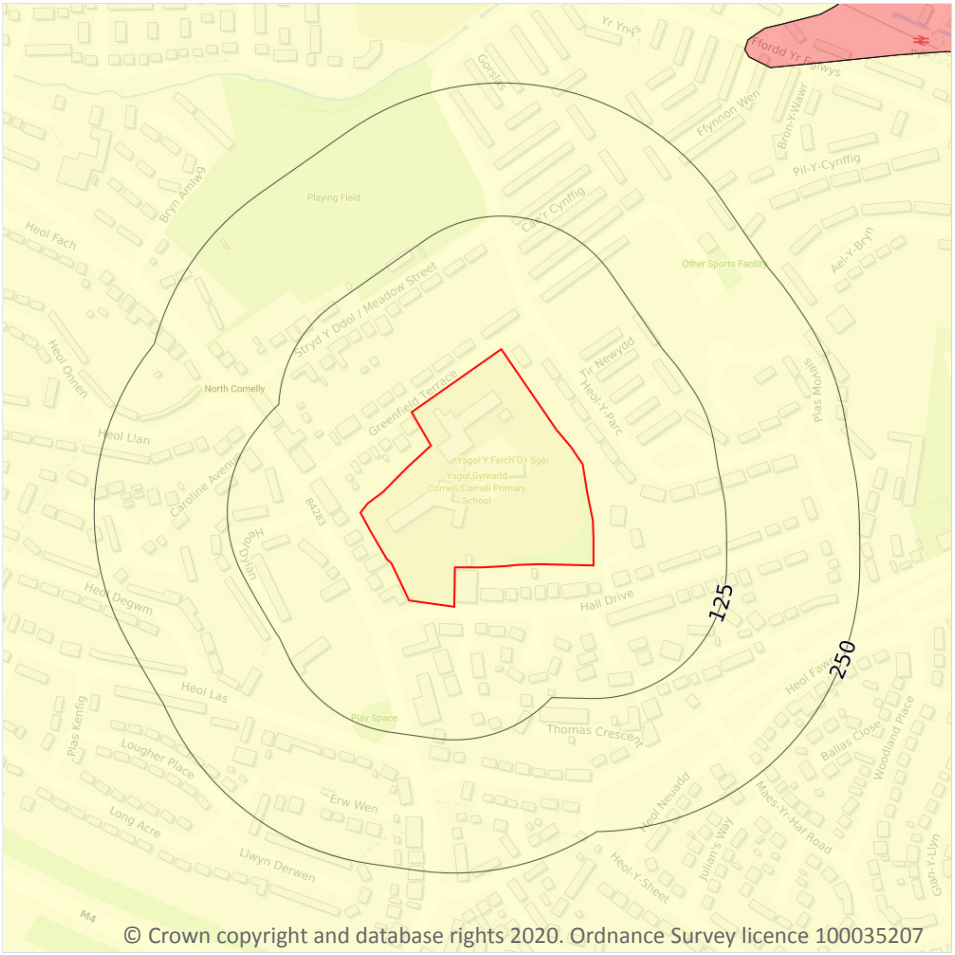
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 85**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

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

17.3 Compressible deposits

Records within 50m	1

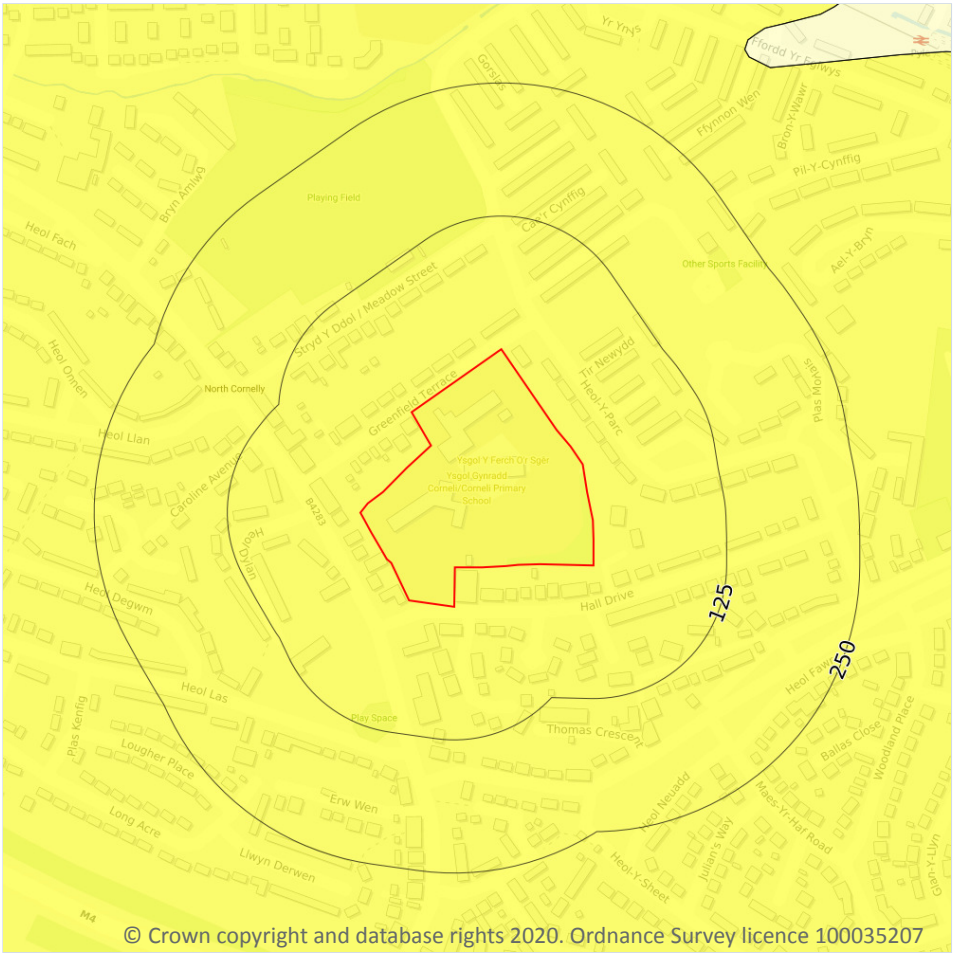
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 86**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



17.4 Collapsible deposits

Records within 50m	1

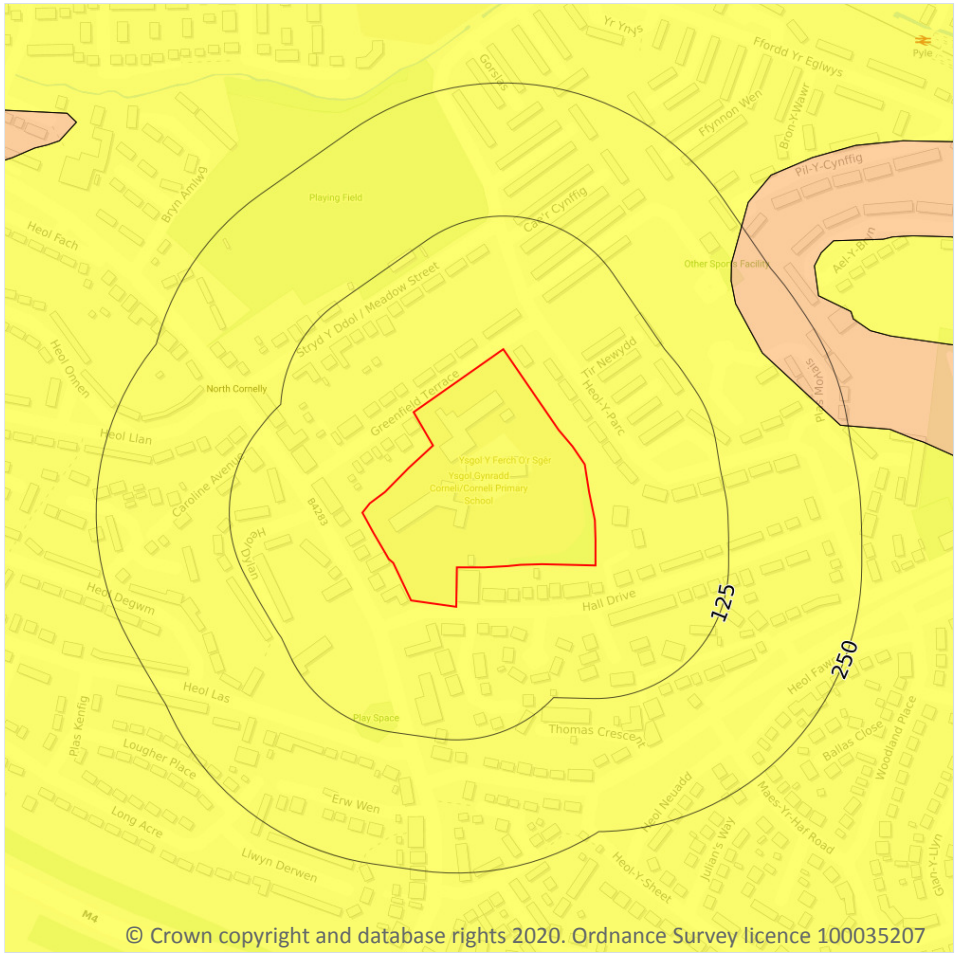
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 87**

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



17.5 Landslides

Records within 50m	1

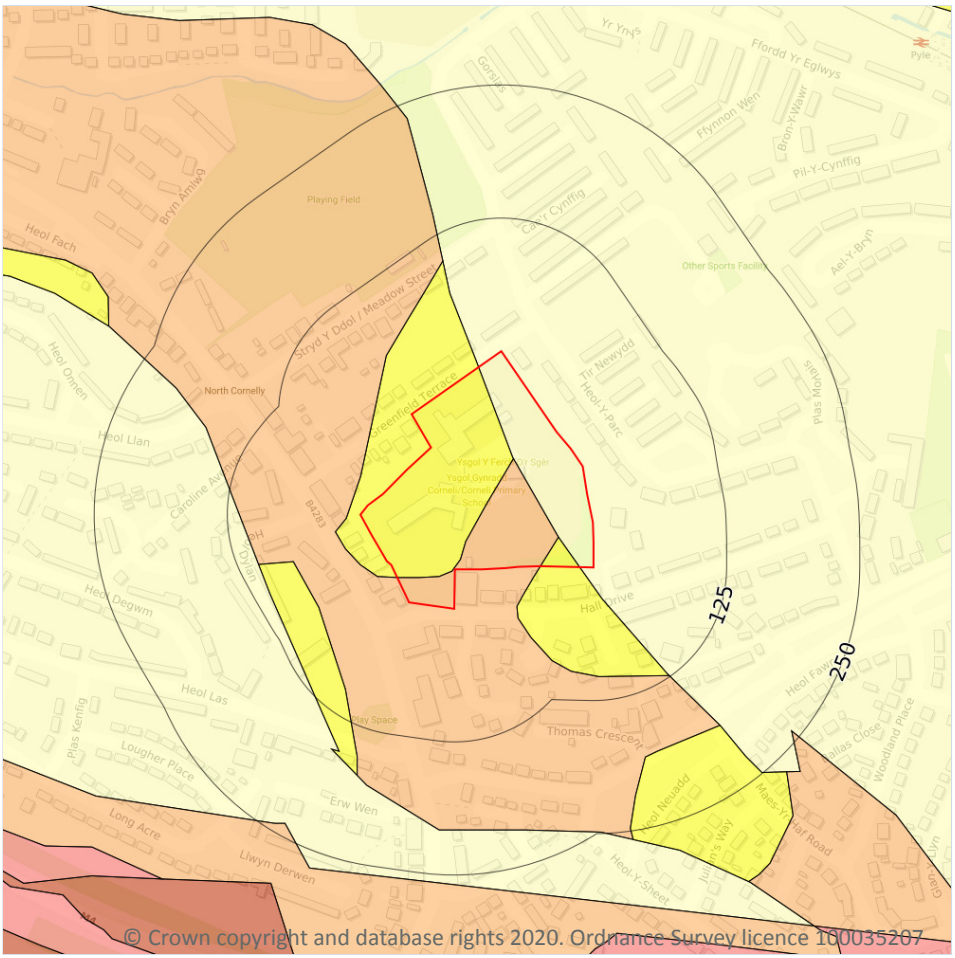
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 88**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m	3

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.

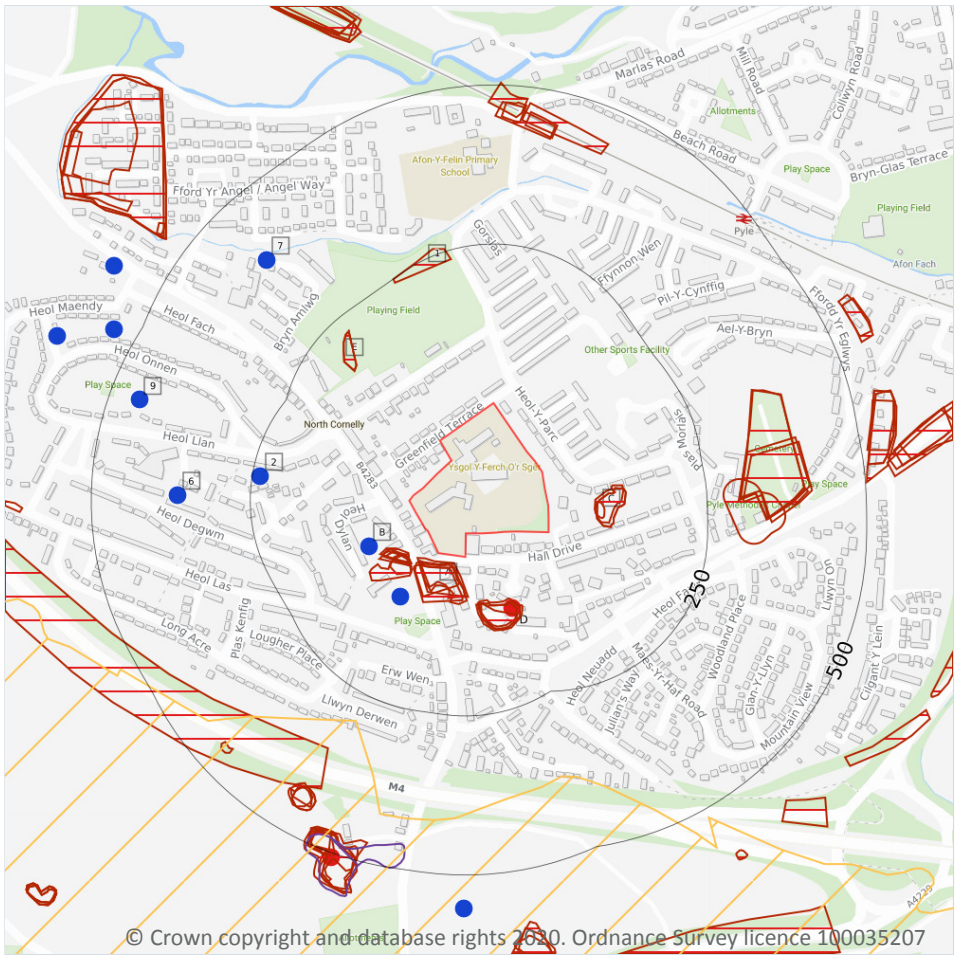
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 89**

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

Location	Hazard rating	Details
On site	**Very low**	**Soluble rocks are present within the ground. Few dissolution features are likely to be present. Potential for difficult ground conditions or localised subsidence are at a level where they need not be considered.**
On site	**Low**	**Soluble rocks are present within the ground. Some dissolution features may be present. Potential for difficult ground conditions are at a level where they may be considered, localised subsidence need not be considered except in exceptional circumstances.**

This data is sourced from the British Geological Survey.

18 Mining, ground workings and natural cavities



Site Outline

Search buffers in metres (m)

- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities

Non Coal Mining

- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m	6

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.

Features are displayed on the Mining, ground workings and natural cavities map on **page 91**

ID	Location	Details	Source
B	90m SW	Type: Sinkhole x 1, Solution Pipe x 1 Superficial Geology: Glacial Sand Bedrock Geology: Carboniferous Limestone Supergroup, Lower Carboniferous Limestone, Upper Carboniferous Limestone	Simple Bibliography: British Geological Survey Full Bibliography: - Confidentiality: Data source can be revealed, data can be used freely

ID	Location	Details	Source
B	91m SW	Type: Sinkhole x 1, Solution Pipe x 1 Superficial Geology: Glacial Sand Bedrock Geology: Carboniferous Limestone Supergroup, Lower Carboniferous Limestone, Upper Carboniferous Limestone	Simple Bibliography: British Geological Survey Full Bibliography: - Confidentiality: Data source can be revealed, data can be used freely
2	237m W	Type: Sinkhole x 1, Solution Pipe x 1 Superficial Geology: Glacial Till and morainic drift Bedrock Geology: Carboniferous Limestone Supergroup, Lower Carboniferous Limestone, Upper Carboniferous Limestone	Simple Bibliography: British Geological Survey Full Bibliography: - Confidentiality: Data source can be revealed, data can be used freely
6	364m W	Type: Sinkhole x 1, Solution Pipe x 1 Superficial Geology: Glacial Till and morainic drift Bedrock Geology: Carboniferous Limestone Supergroup, Lower Carboniferous Limestone, Upper Carboniferous Limestone	Simple Bibliography: British Geological Survey Full Bibliography: - Confidentiality: Data source can be revealed, data can be used freely
7	393m NW	Type: Sinkhole x 1, Solution Pipe x 1 Superficial Geology: Glacial Sand Bedrock Geology: Carboniferous Limestone Supergroup, Lower Carboniferous Limestone, Upper Carboniferous Limestone	Simple Bibliography: British Geological Survey Full Bibliography: - Confidentiality: Data source can be revealed, data can be used freely
9	452m W	Type: Sinkhole x 1, Solution Pipe x 1 Superficial Geology: Glacial Till and morainic drift Bedrock Geology: Carboniferous Limestone Supergroup, Lower Carboniferous Limestone, Upper Carboniferous Limestone	Simple Bibliography: British Geological Survey Full Bibliography: - Confidentiality: Data source can be revealed, data can be used freely

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

18.2 BritPits

Records within 500m **1**

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 91**

ID	Location	Details	Description
D	108m SE	Name: Old House Address: North Cornelly, BRIDGEND, Mid Glamorgan Commodity: Sandstone Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	22

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 91**

ID	Location	Land Use	Year of mapping	Mapping scale
A	12m S	Unspecified Pit	1876	1:10560
A	13m S	Unspecified Ground Workings	1947	1:10560
A	16m S	Unspecified Old Quarries	1900	1:10560
A	19m S	Unspecified Pit	1947	1:10560
A	21m S	Unspecified Old Quarries	1914	1:10560
B	43m SW	Unspecified Pit	1947	1:10560
B	44m SW	Unspecified Pit	1985	1:10000
B	45m SW	Unspecified Ground Workings	1947	1:10560
B	45m SW	Unspecified Old Quarries	1900	1:10560
B	47m SW	Unspecified Pit	1969	1:10560
B	48m SW	Unspecified Ground Workings	1914	1:10560
C	73m E	Pond	1947	1:10560
D	73m S	Unspecified Old Quarries	1900	1:10560
C	74m E	Pond	1900	1:10560
D	76m S	Unspecified Pit	1947	1:10560
C	76m E	Pond	1947	1:10560
C	76m E	Pond	1914	1:10560
D	77m S	Unspecified Old Quarries	1914	1:10560
D	79m S	Unspecified Pit	1947	1:10560
E	174m NW	Unspecified Heap	1969	1:10560
E	174m NW	Unspecified Heap	1985	1:10000
1	234m NW	Unspecified Heap	1969	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	0

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

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	1

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.

Features are displayed on the Mining, ground workings and natural cavities map on **page 91**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
I	461m S	Cornelly Lime Works	Not available	Not available	Not available	Not available

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	1

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 91**

ID	Location	Name	Commodity	Class	Likelihood
4	294m SW	Not available	Vein Mineral	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m	1

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 91**

ID	Location	Mine Address	Mineral	Data source	Publisher
-	989m S	Ty Tanglwyst, Mid Glamorgan	Manganese, Pyrolusite	PERSONAL COMMUNICATION	OVE ARUP AND PARTNERS,CARDIFF

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

18.8 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	0

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

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0

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

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

18.11 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

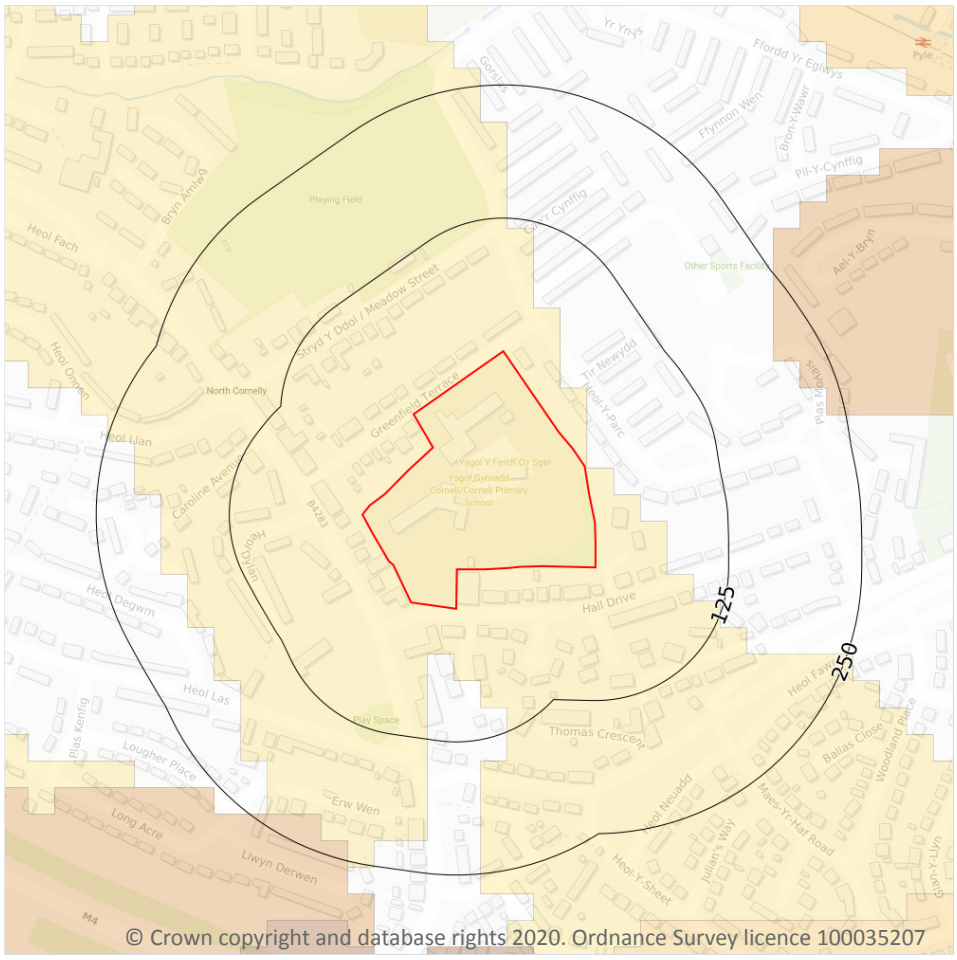
18.13 Clay mining

Records on site	0

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

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

19 Radon



19.1 Radon

Records on site	1

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

Features are displayed on the Radon map on **page 97**

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

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

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m 9

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**	**30 - 45 mg/kg**
On site	**15 - 25 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 - 25 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 - 25 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 - 25 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 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**30 - 45 mg/kg**
43m S	15 - 25 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.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects

21.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	0

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.

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	0

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

This data is sourced from HS2 ltd.

Data providers

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

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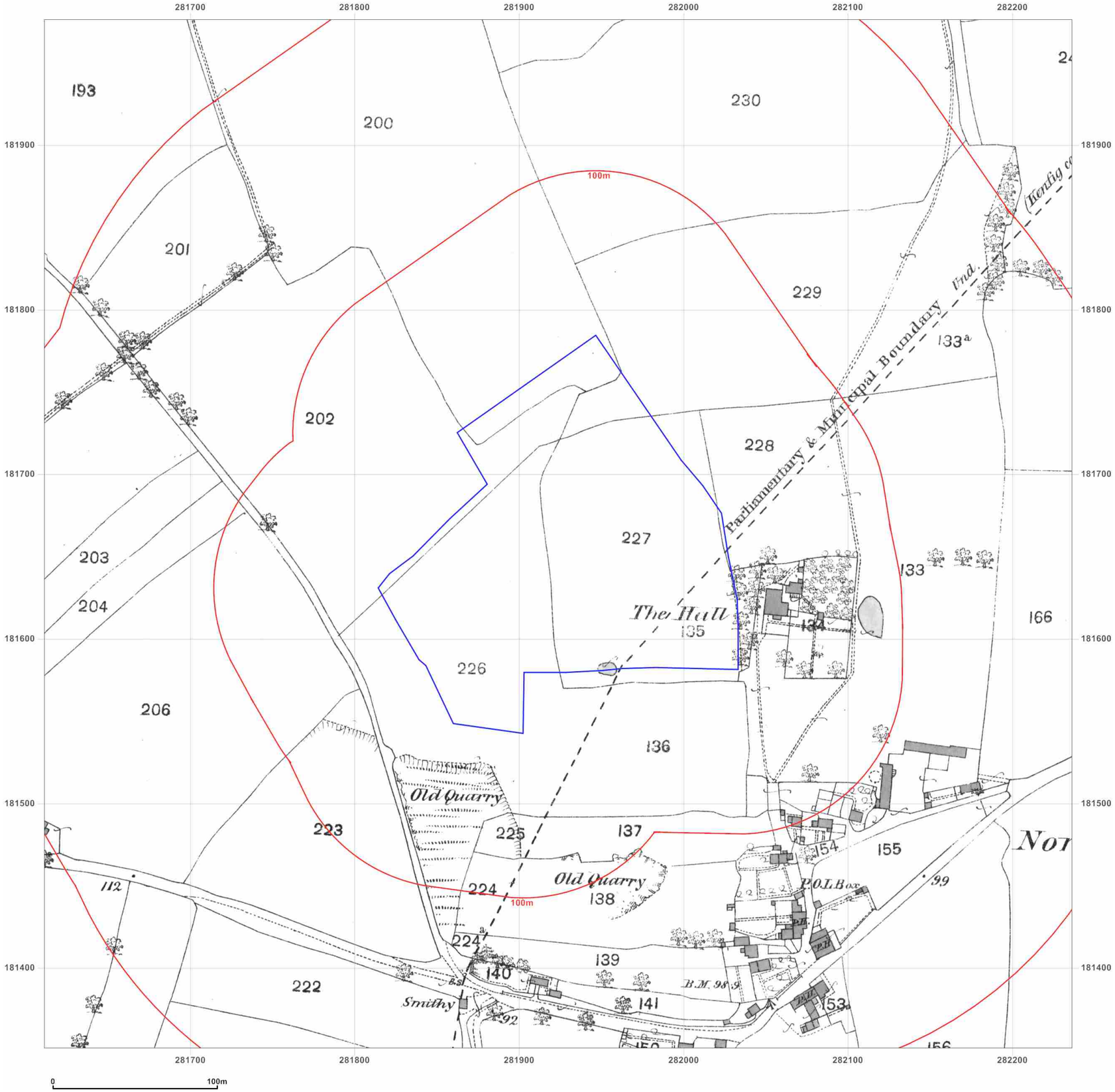
Appendix III



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Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: County Series
Map date: **1881**
Scale: 1:2,500
Printed at: 1:2,500

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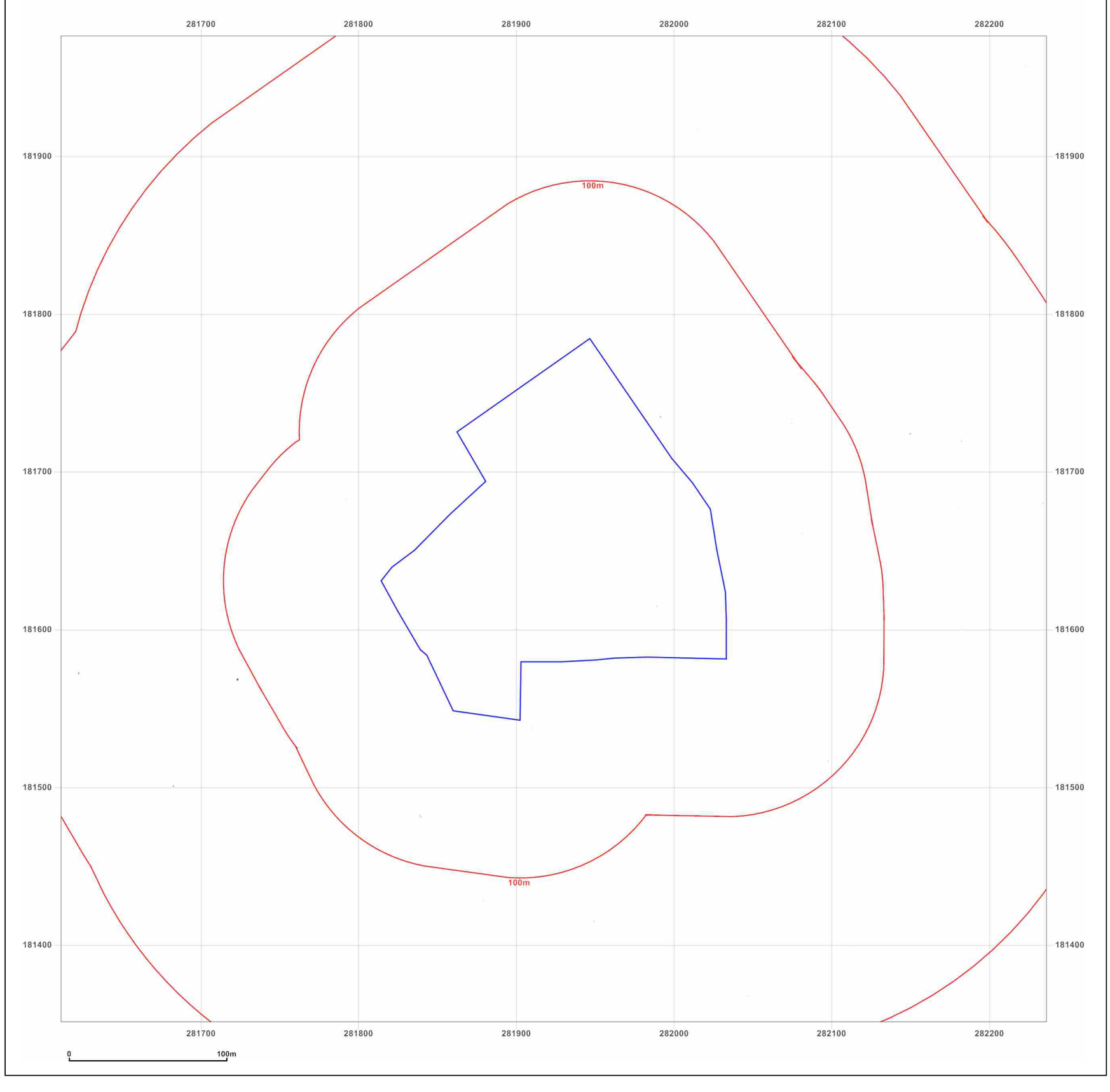

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Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: County Series

Map date: **1882**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1882
Revised 1882
Edition N/A
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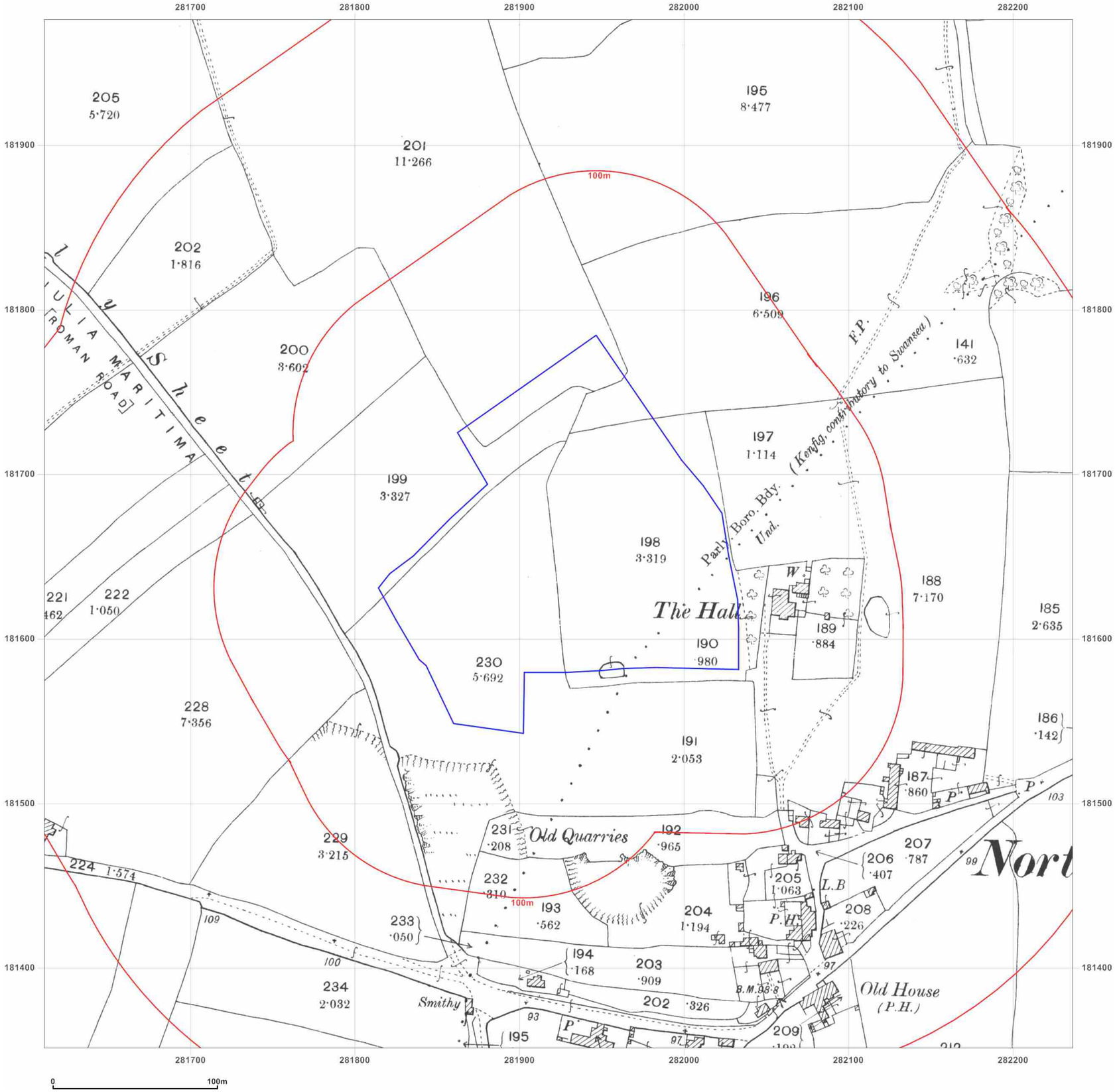

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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: County Series

Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1899
Revised 1899
Edition N/A
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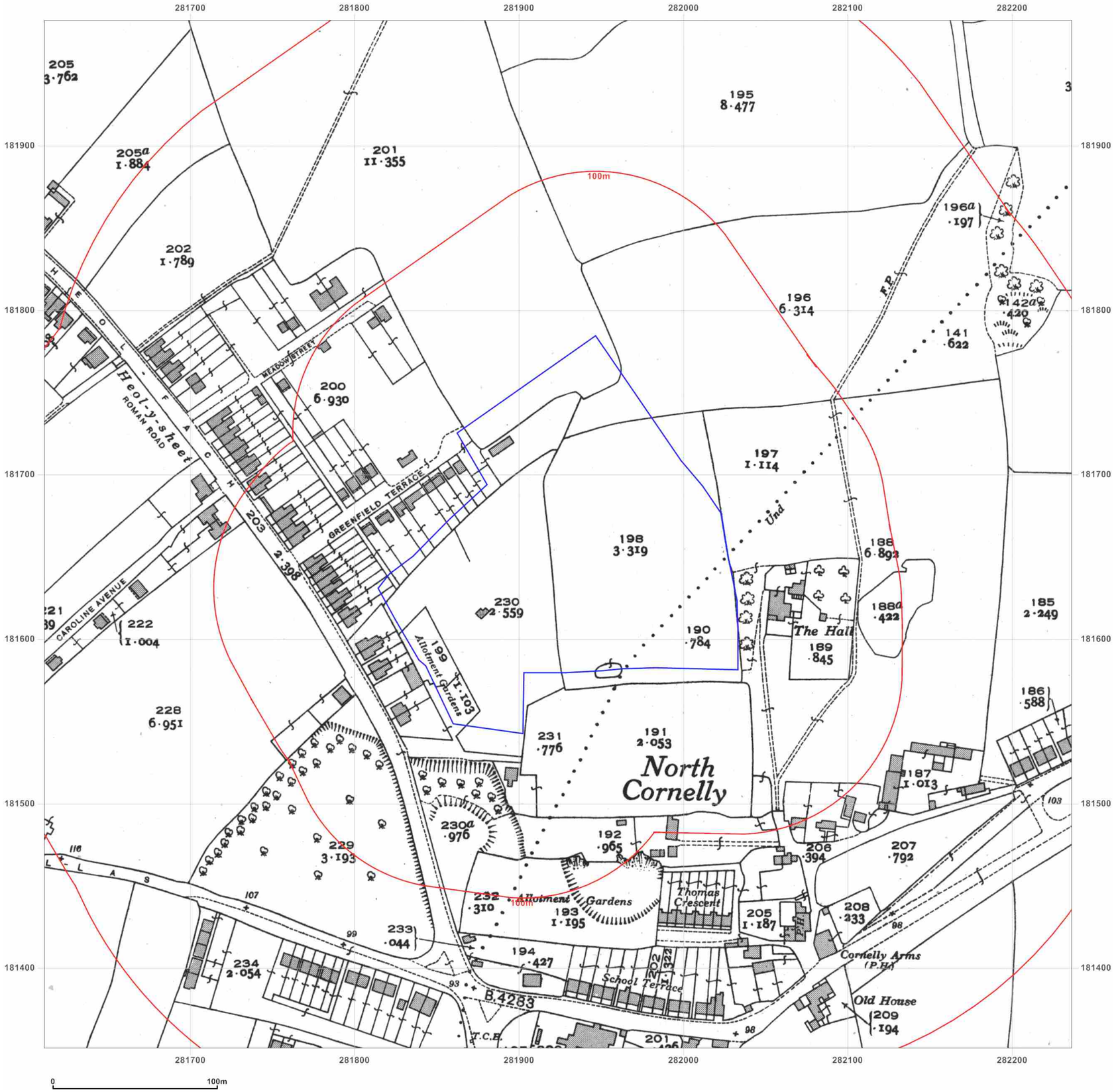

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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: County Series

Map date: **1942**

Scale: 1:2,500

Printed at: 1:2,500

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Revised 1942
Edition N/A
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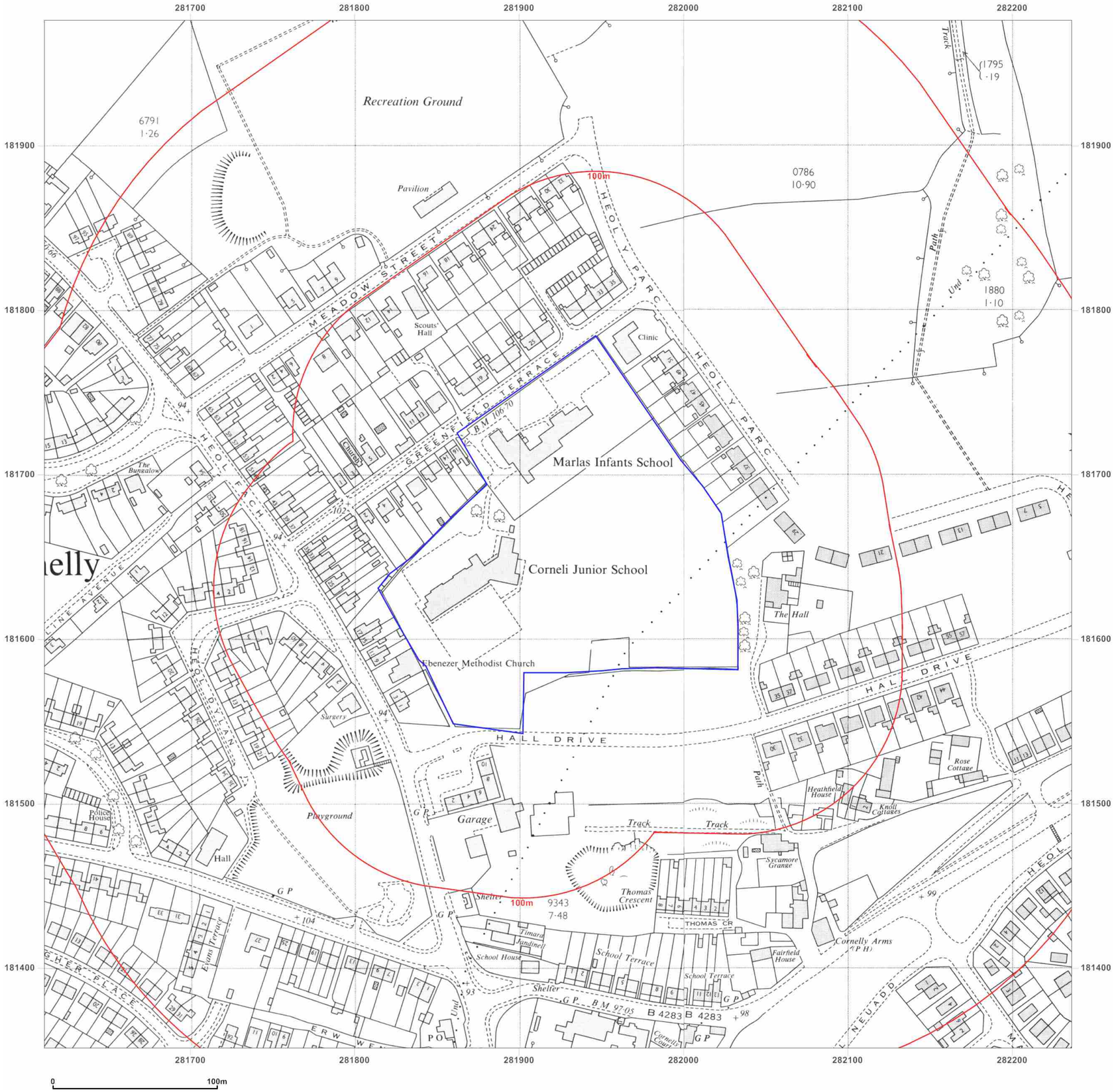

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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: National Grid

Map date: **1965-1966**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1966
Revised 1966
Edition N/A
Copyright 1967
Levelled 1962

Surveyed 1965
Revised 1965
Edition N/A
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Levelled 1957

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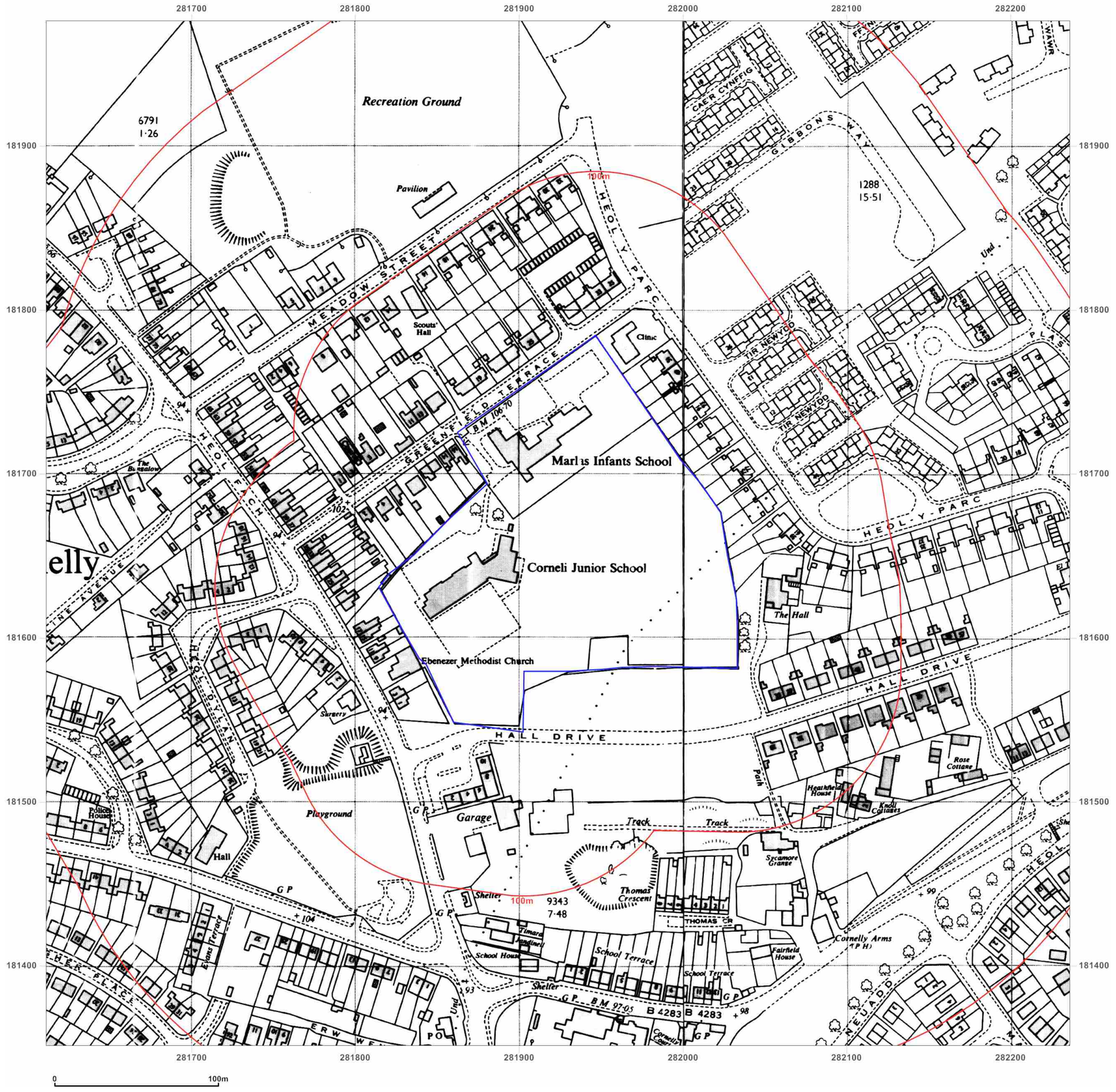

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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: National Grid

Map date: **1967-1969**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed N/A
Revised N/A
Edition N/A
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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: National Grid

Map date: **1969**

Scale: 1:2,500

Printed at: 1:2,500

N
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Revised 1969
Edition N/A
Copyright 1969
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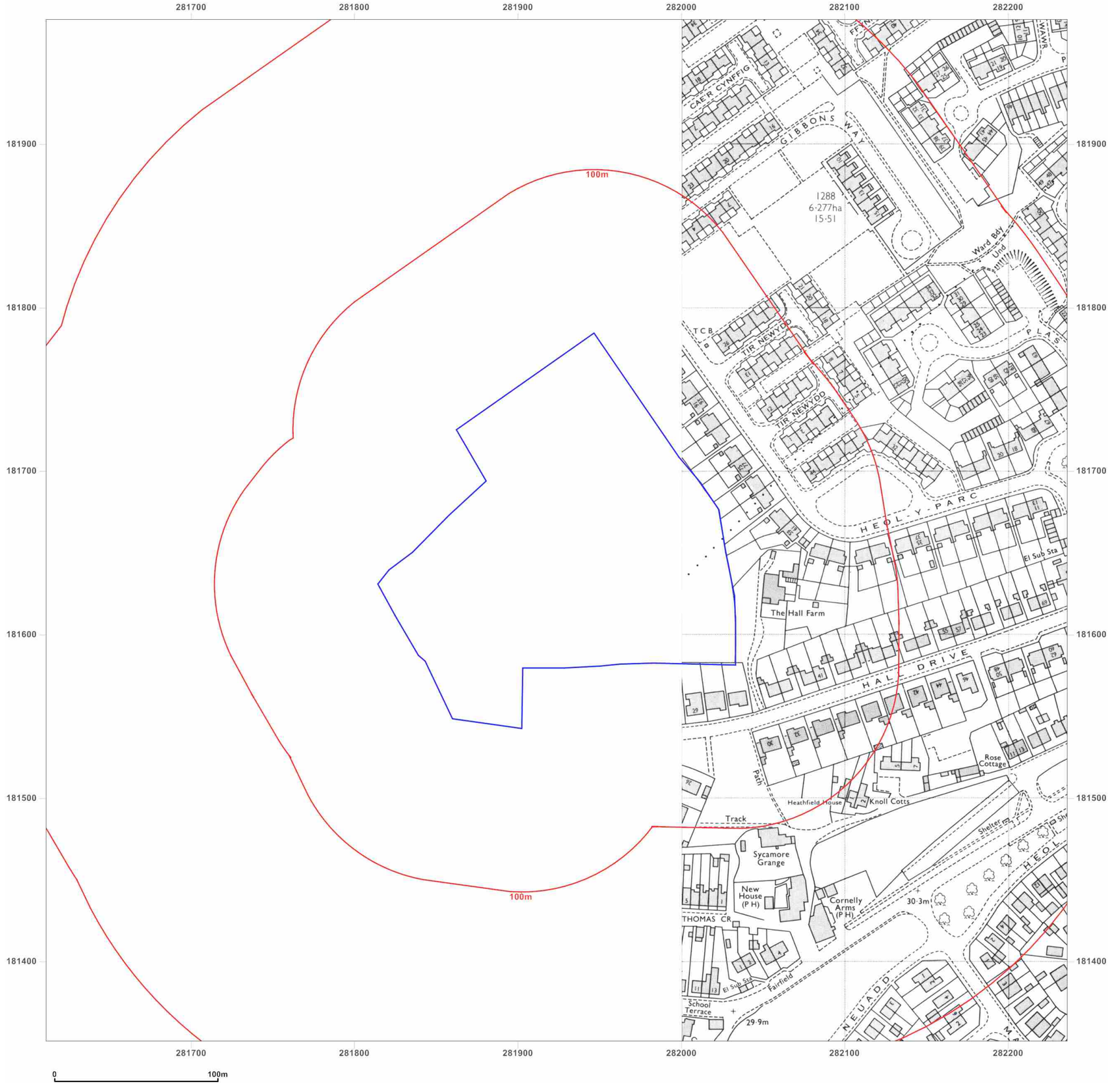

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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: National Grid

Map date: **1980**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1980
Revised 1980
Edition N/A
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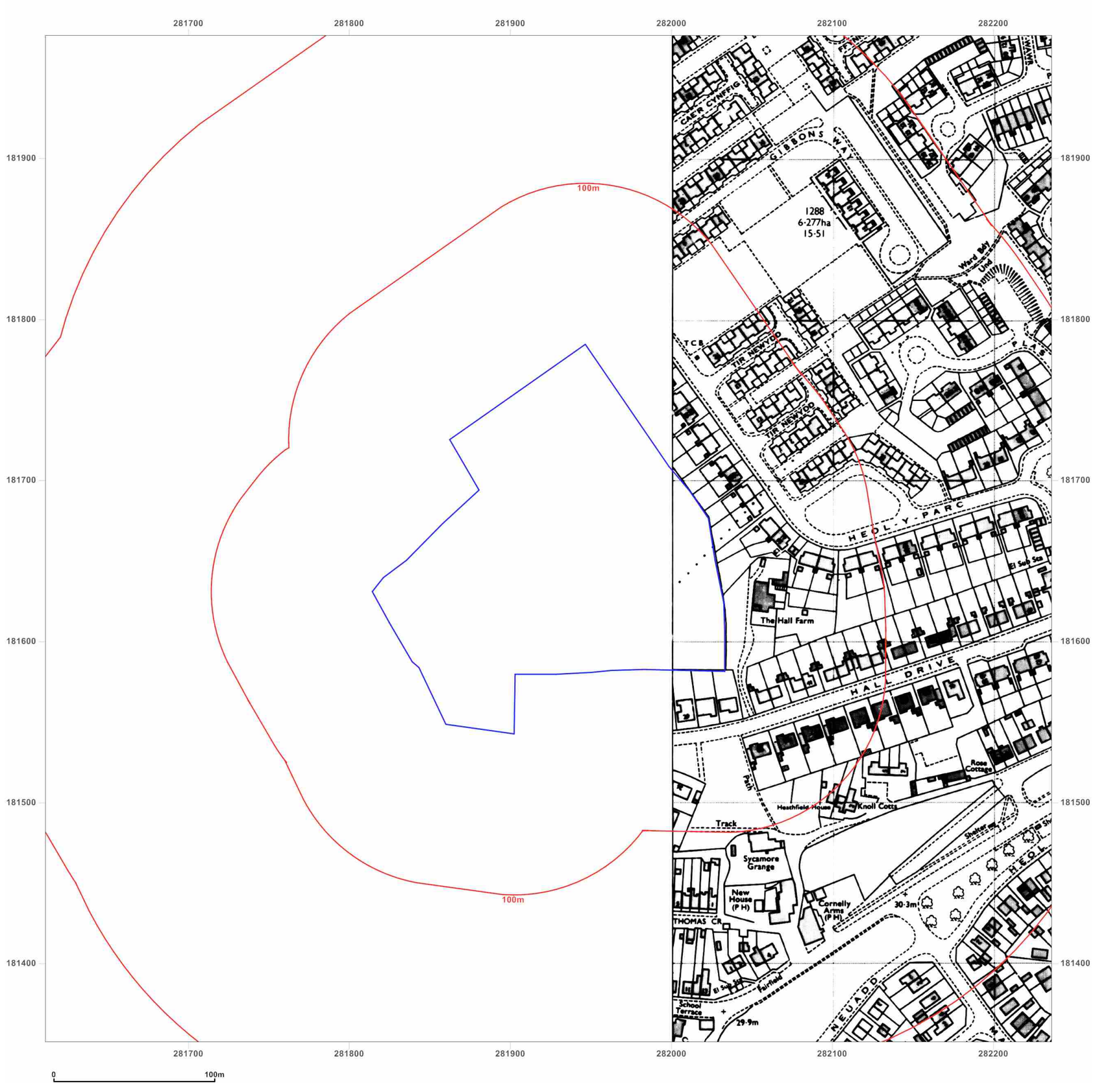

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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: National Grid

Map date: **1981**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed N/A
Revised N/A
Edition N/A
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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: National Grid

Map date: **1983**

Scale: 1:2,500

Printed at: 1:2,500

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Revised 1983
Edition N/A
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Levelled 1962

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Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: National Grid

Map date: **1984**

Scale: 1:2,500

Printed at: 1:2,500

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Map legend available at:
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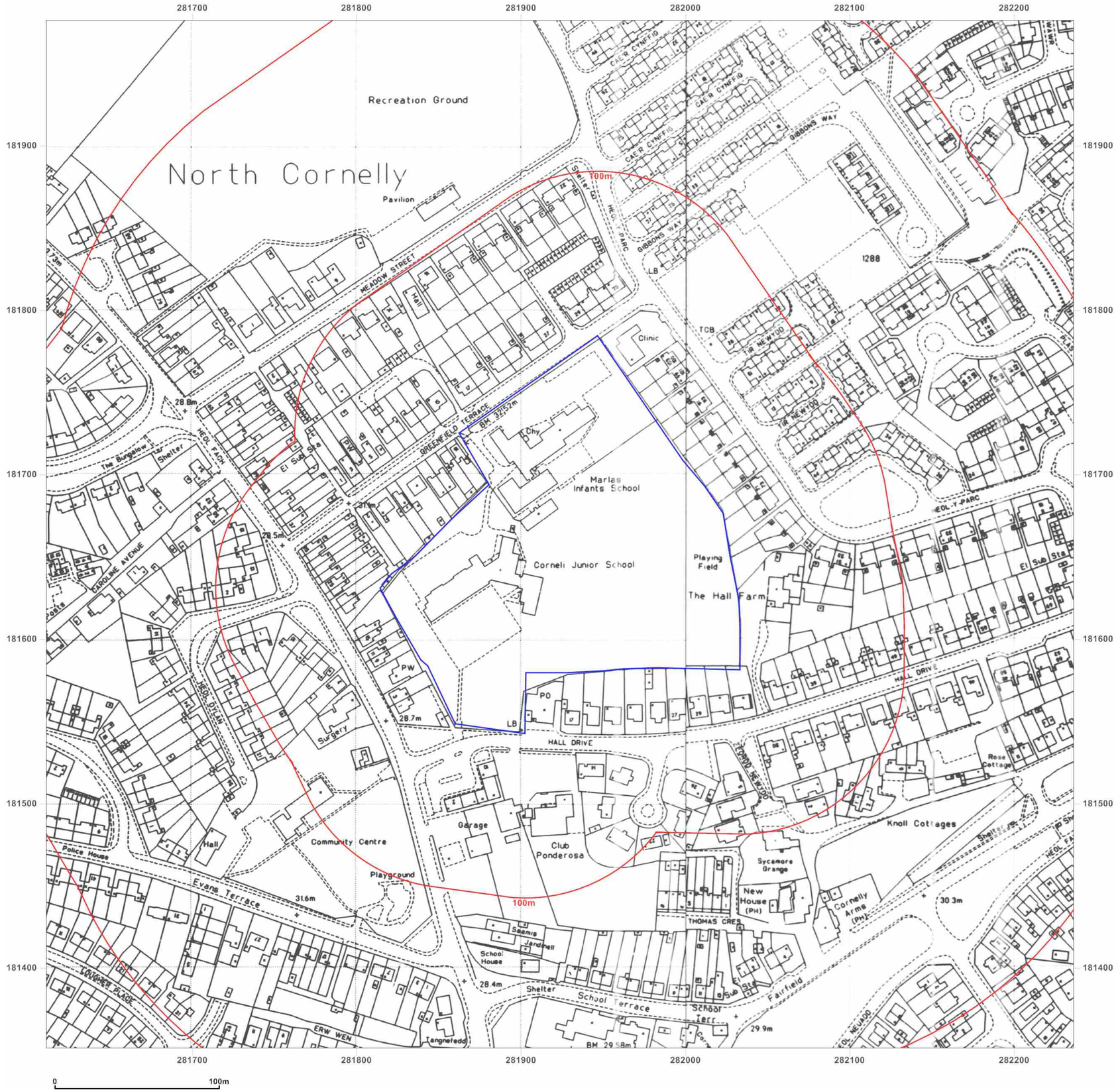

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Site Details:

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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: National Grid

Map date: **1993**

Scale: 1:2,500

Printed at: 1:2,500

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

Surveyed 1993
Revised 1993
Edition N/A
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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

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

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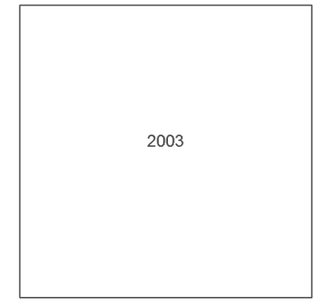

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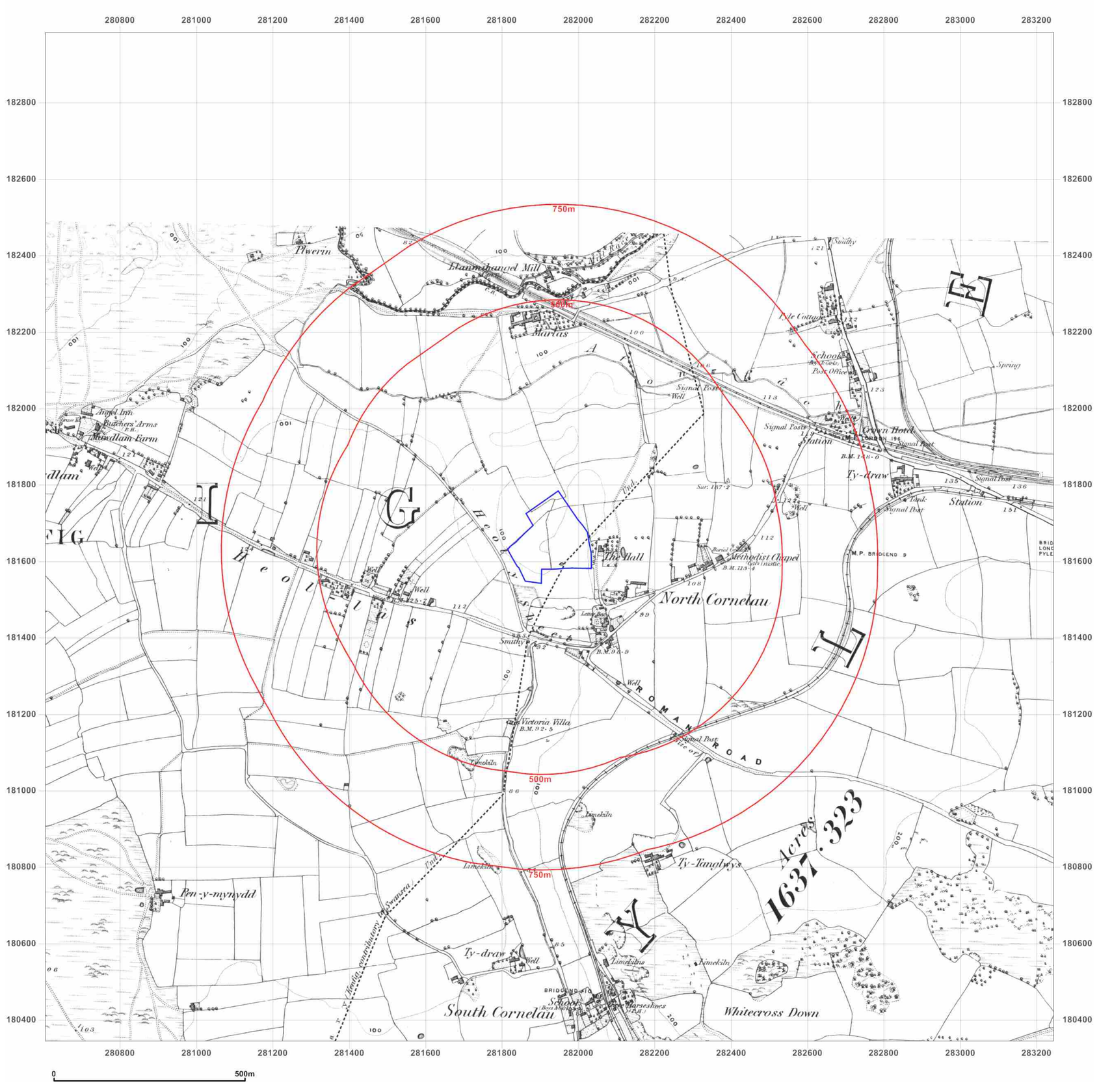

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Site Details:

Cornelli Primary School,Hall Drive,Bridgend,CF33 4LB

Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: County Series

Map date: **1884**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1876
Revised 1876
Edition 1884
Copyright N/A
Levelled N/A

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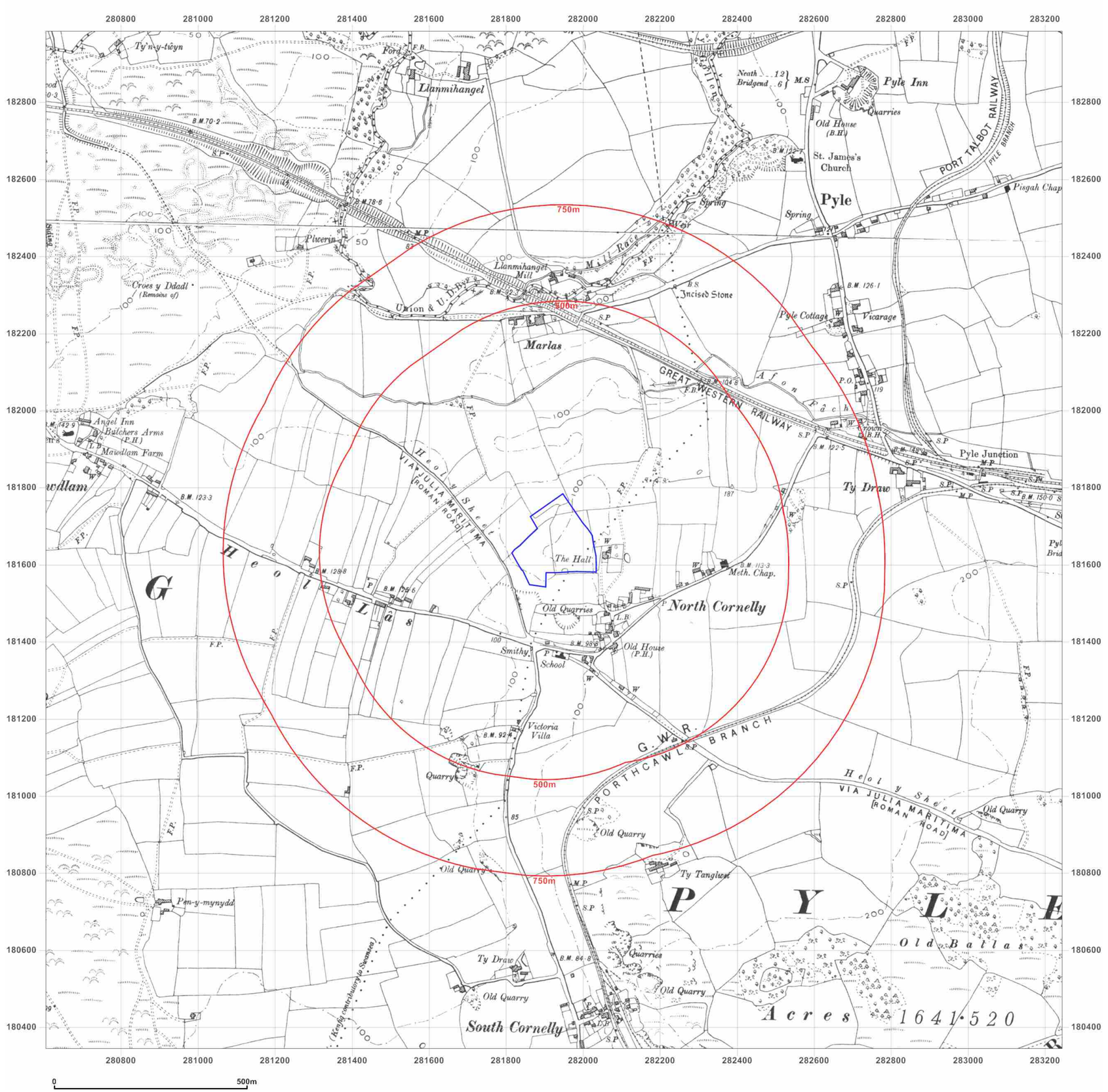

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Site Details:

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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: County Series

Map date: **1897-1900**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1875
Revised 1897
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1900
Edition N/A
Copyright N/A
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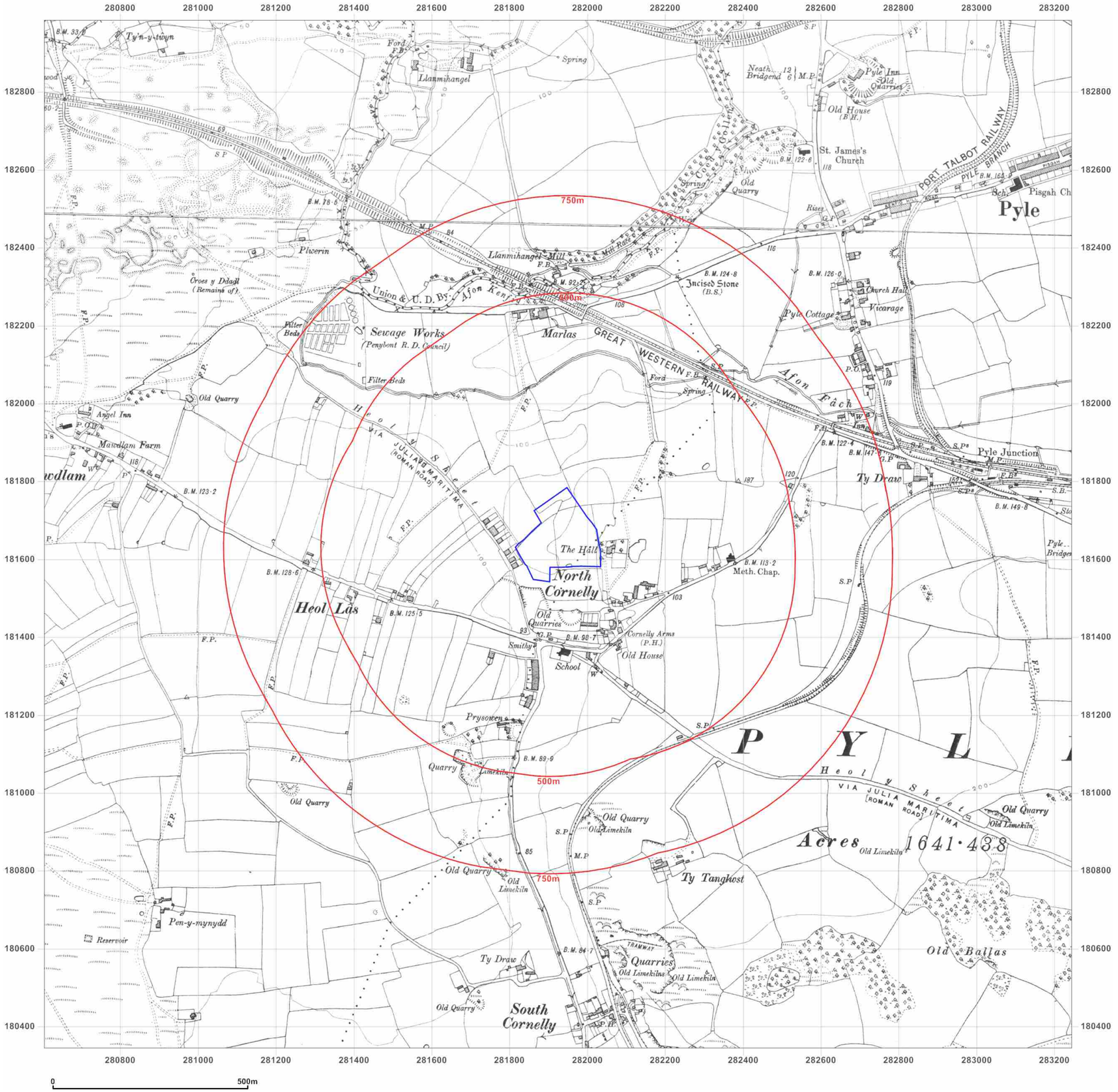

Site Details:

Cornelli Primary School,Hall Drive,Bridgend,CF33 4LB

Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: County Series

Map date: **1914**

Scale: 1:10,560

Printed at: 1:10,560

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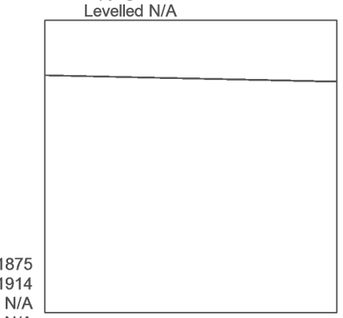
Surveyed 1875
Revised 1914
Edition N/A
Copyright N/A
Levelled N/A



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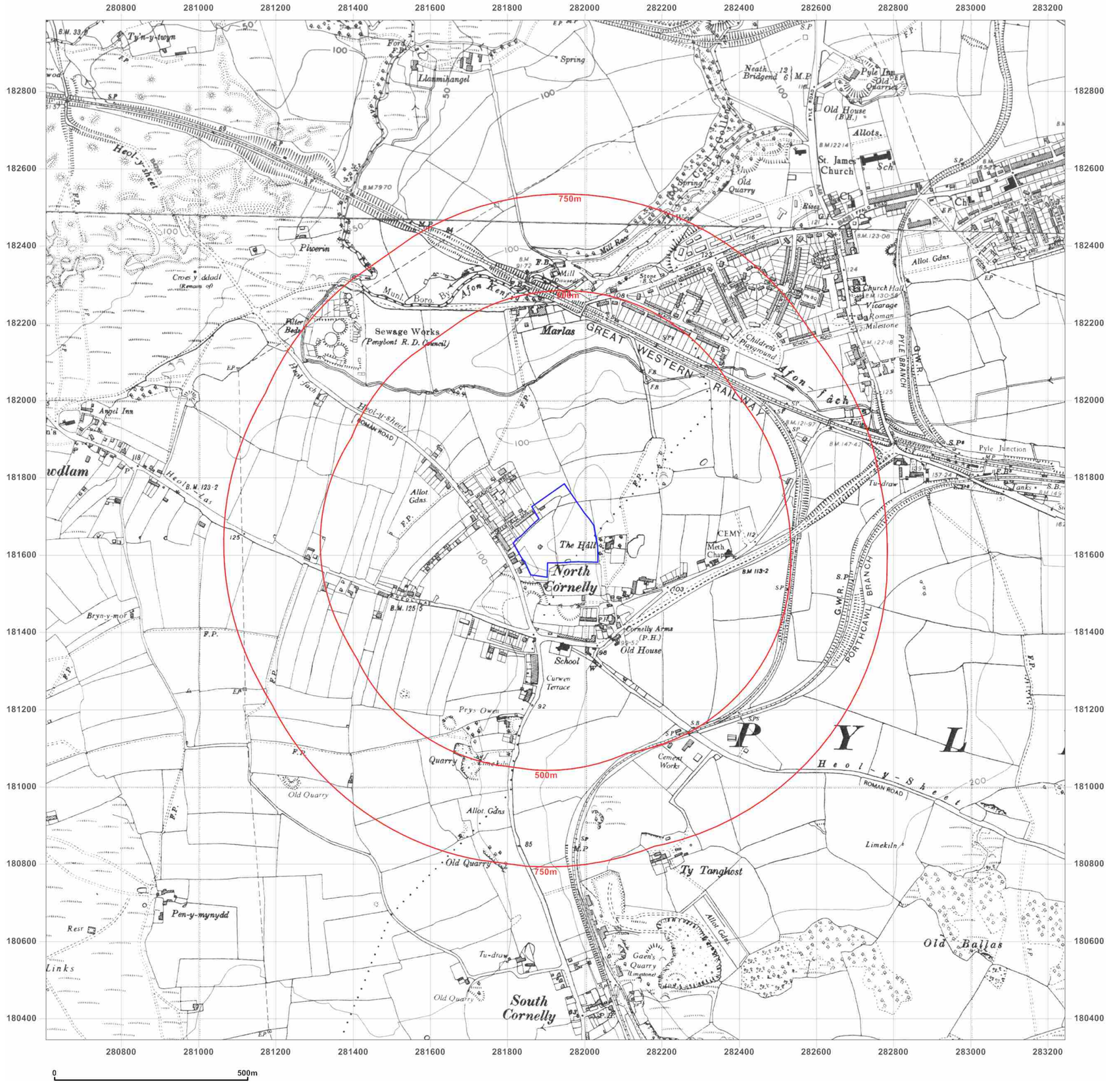

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Site Details:

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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: County Series

Map date: **1947**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1875
Revised 1947
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1947
Edition N/A
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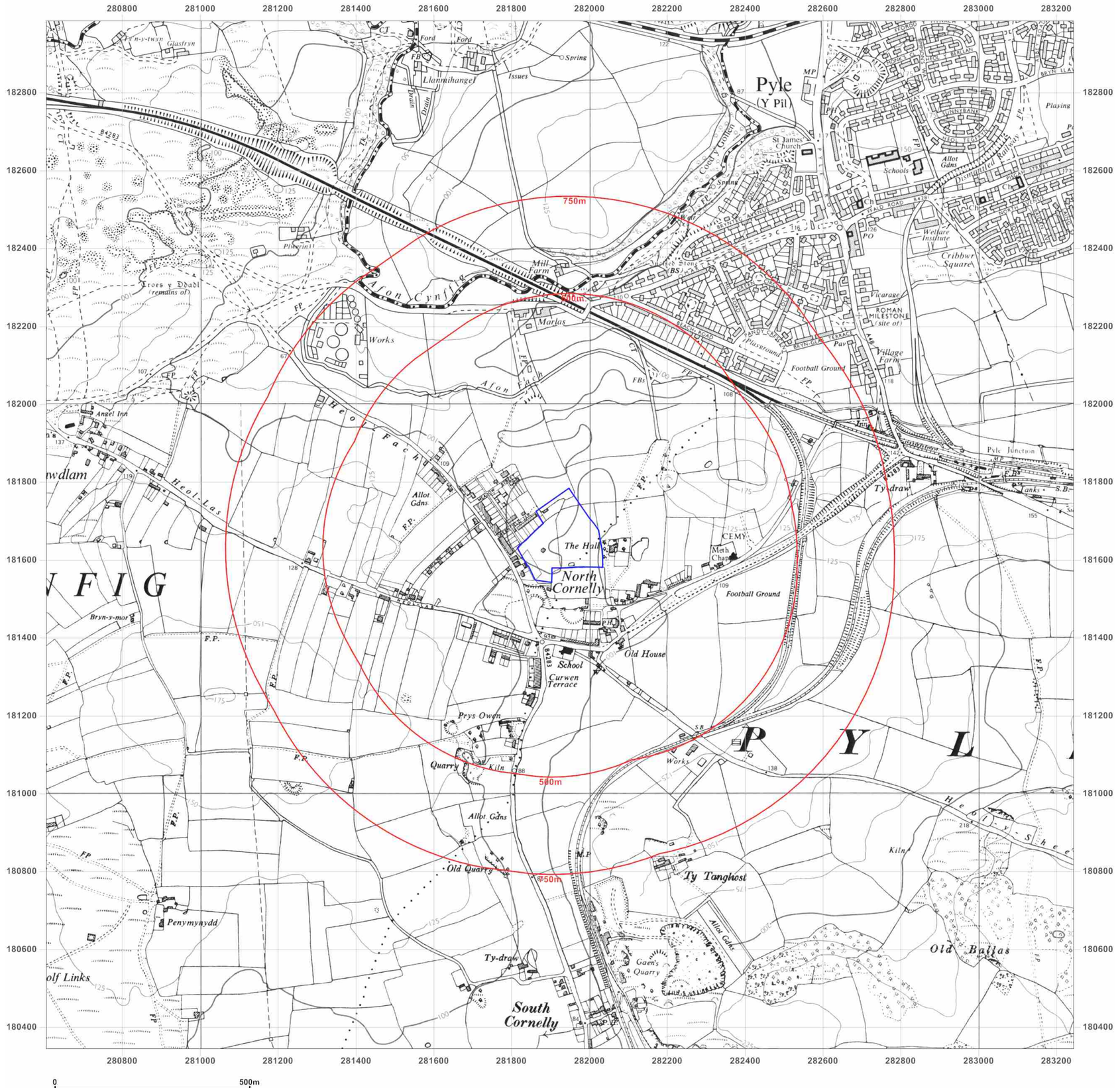

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Site Details:

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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: Provisional

Map date: **1965**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1961
Revised 1964
Edition N/A
Copyright 1965
Levelled N/A

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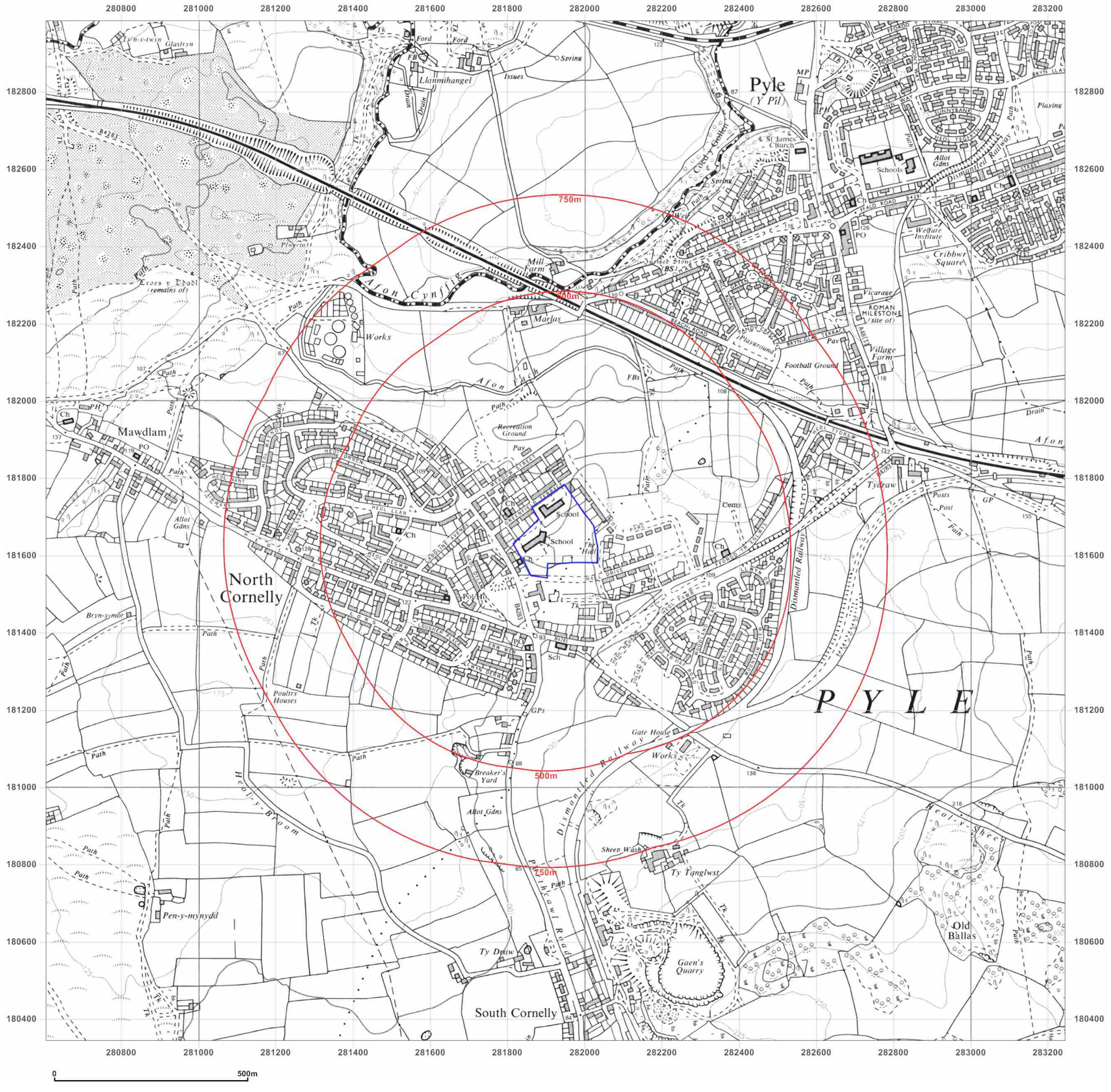

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Site Details:

Cornelli Primary School,Hall Drive,Bridgend,CF33 4LB

Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: Provisional

Map date: **1969**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1969
Revised 1969
Edition N/A
Copyright N/A
Levelled N/A

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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: National Grid

Map date: **1985**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1983
Revised 1985
Edition N/A
Copyright N/A
Levelled N/A

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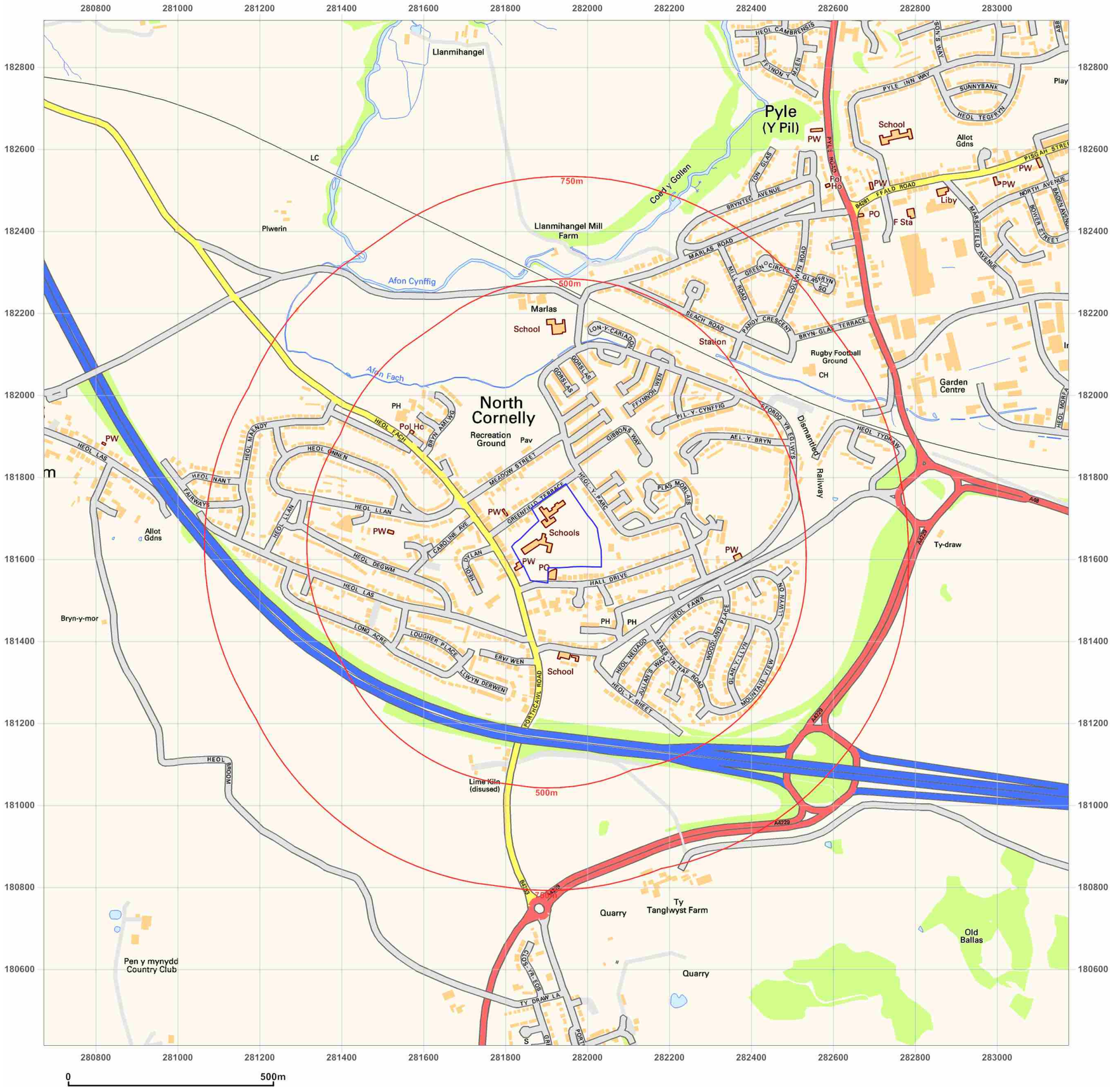

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Site Details:

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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: National Grid

Map date: **2001**

Scale: 1:10,000

Printed at: 1:10,000

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2001

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Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

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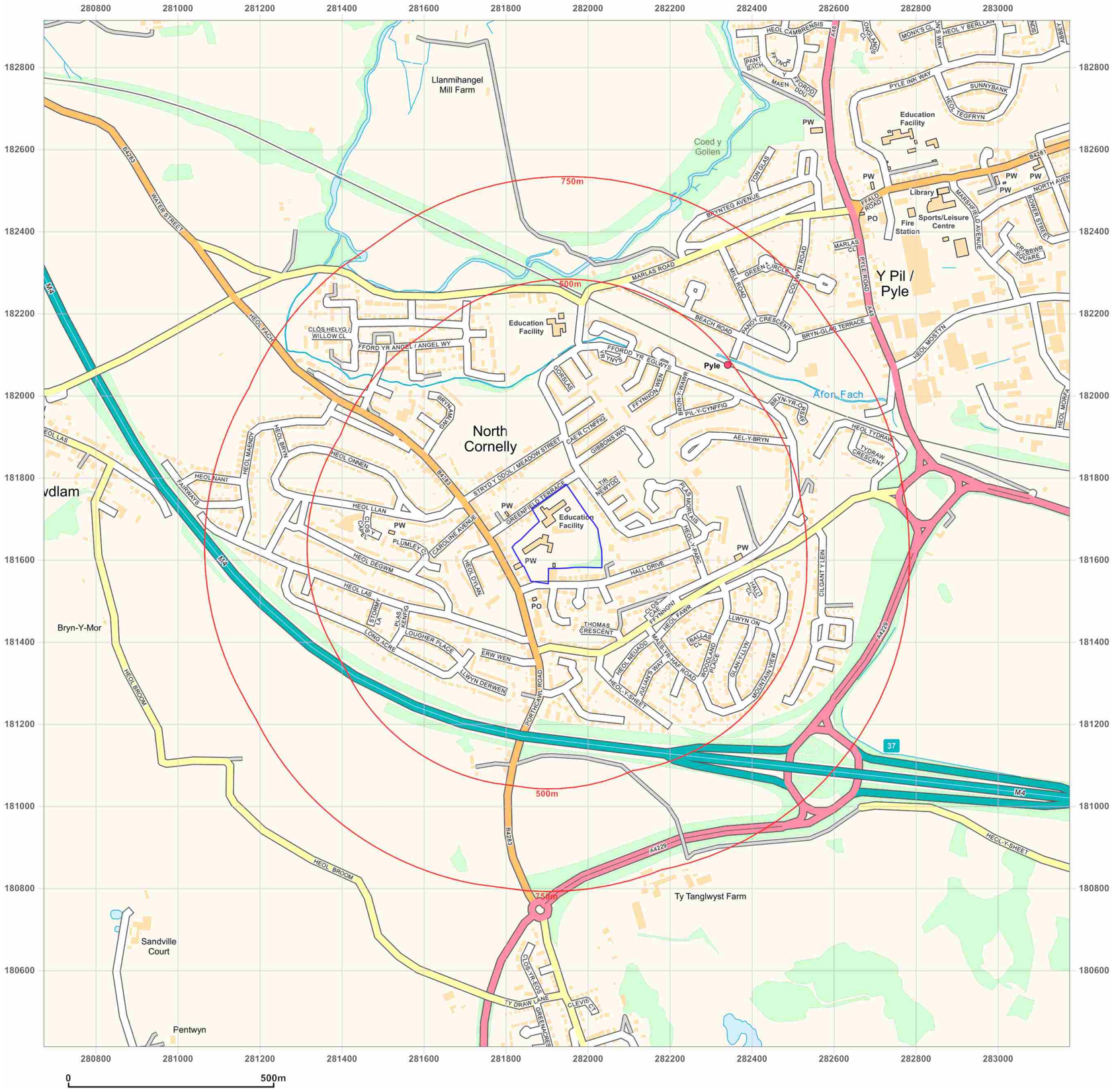

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Site Details:

Cornelli Primary School,Hall Drive,Bridgend,CF33 4LB

Client Ref: EMS_619792_825901
Report Ref: EMS-619792_825901
Grid Ref: 281924, 181664

Map Name: National Grid
Map date: **2020**
Scale: 1:10,000
Printed at: 1:10,000

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2020

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Production date: 07 July 2020

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Appendix IV

Appendix IV
Basis for Contaminated Land Qualitative Risk Assessment

The following Contaminated Land Risk Assessment methodology is based on CIRIA C552 (2001) *Contaminated Land Risk Assessment – A Guide to Good Practice*, in order to quantify potential risk via **risk estimation** and **risk evaluation**, which can be adopted at the Phase I (Desk Study) stage. This will then determine an overall risk category which can be used to identify potential investigation or remedial actions. This methodology uses qualitative descriptors and therefore is a qualitative approach based on desk information. The risk assessment should be refined following receipt of ground investigation data.

The methodology requires the classification of:

- the magnitude of the **consequence** (severity) of a risk occurring, and
- the magnitude of the **probability** (likelihood) of a risk occurring.

The potential consequences of contamination risks occurring at this Site are classified in accordance with Table VI-1 below, which is adapted from the CIRIA guidance.

Table IV-1: Classification of Consequence

Classification	Definition of Consequence
Severe	Short-term (acute) risks to human health likely to result in "significant harm" as defined by the Environmental Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem, or organism forming part of such an ecosystem.
Medium	Chronic damage to Human Health (significant harm as defined in DEFRA, 2012). Pollution of sensitive water resources. A significant change in a particular ecosystem, or organism forming part of such an ecosystem.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ("significant harm" as defined in the DEFRA, 2012). Damage to sensitive buildings/structures/services or the environment.
Minor	Harm, though not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc.). Easily repairable effects of damage to buildings, structures and services.

Source: CIRIA C552

The probability of contamination risks occurring at this Site will be classified in accordance with Table VI-2 below from the CIRIA guidance. Note that for each category, it is assumed that a pollution linkage exists. Where a pollution linkage does not exist, the likelihood is zero, as is the risk.

Table IV-2: Classification of Probability

Classification	Definition of Probability
High Likelihood	There is a pollutant linkage and an event that 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 pollution 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 pollutant 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 an event would take place, and is less likely in the shorter term.
Unlikely	There is a pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

For each possible pollution linkage (source-pathway-receptor) identified, the potential risk can be evaluated based upon the following probability x consequence matrix shown in Table VI-3.

Table IV-3: Overall Contamination Risk Matrix

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

Based upon this, CIRIA C552 present definitions of the risk categories, together with the investigatory and remedial actions that are likely to be necessary in each case, as in Table VI-4. These risk categories apply to each pollutant linkage, not simply to each hazard or receptor.

Table IV-4: Definition of Risk Categories and Likely Actions Required

Risk Category	Definition and likely actions required
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, if [it] is relatively unlikely that any 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.
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 be relatively mild.
Very Low	There is a low possibility that harm could rise to a receptor. In the event of such harm being realised it is not likely to be severe.

Appendix V

Client: Gleeds Management Services Ltd
Date: 01/09/2020

Project: C3342

Site: Cornelli Primary School

Photo No: 1

Comments:

Facing north west towards Cornelli Primary School. Situated on the play area to the south of the school.

Landscape Picture = 12.34 x 16.45 picture

Client: Gleeds Management Services Ltd
Date: 01/09/2020

Project: C3342

Site: Cornelli Primary School

Photo No: 2

Comments:

Facing west towards Cornelli Primary School, situated on the rugby pitch in the south east of the site.

Landscape Picture = 12.34 x 16.45 picture