

**Pobl Homes and Communities**

**PHASE 2 GWYNFAEN FARM, GORSEINON**

**Desk Study Report**

14294/LP/24/DS

**CLIENT:** Pobl Homes and Communities

**PROJECT:** Phase 2 Gwynfaen Farm, Gorseinon

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## **1.0 INTRODUCTION**

### **1.1 GENERAL**

Pobl Homes and Communities are proposing to develop a site at Gwynfaen Farm in Gorseinon for residential end-use.

Hydrock Consultants Limited are the appointed Consulting Civil and Structural Engineers for the scheme.

Intégral Géotechnique (Wales) Limited have been appointed as the Geotechnical Engineers to undertake a geoenvironmental and geotechnical desk study of the site.

The objectives of the geoenvironmental and geotechnical appraisal are to:

- Assess the degree, nature and extent of possible contamination and its implications for ownership and site development;
- Identify any geotechnical constraints on development; and
- Provide recommendations for physical site investigation works.

This report presents the findings of the desk study, and provides guidance on the scope of the geoenvironmental and geotechnical investigation.

The opinions and preliminary assessments presented are based on desk-based research and should be reviewed after intrusive investigation, if required.

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### **1.2 PROPOSED DEVELOPMENT**

The proposed development will comprise the construction of a number a residential properties, including flats, and associated infrastructure such as access roads and car parking areas. The development will also include areas of landscaping and private gardens, and also a BMX Pump Track, allotments, an orchard, play areas and attenuation areas.

### 1.3 SCOPE OF WORKS

The work instructed included a desk study of available information, together with the development of an initial conceptual site model. The desk study comprised a review of:

- An Envirocheck Report obtained for the site,
- Old Ordnance Survey maps covering the site, included within the Envirocheck Report,
- A Radon GeoReport obtained from the British Geological Survey,
- A Consultants Coal Mining Report obtained from The Coal Authority,
- Geological maps of the area provided by the British Geological Survey,
- Natural Resources Wales groundwater vulnerability map and aquifer database for the area,
- Existing site investigation data.

### 1.4 LIMITATIONS

This document is intended to be a working document for further development in discussion with all concerned including the Local Planning Authority, Natural Resources Wales, and the NHBC/building control authority as appropriate.

“Contamination” is taken throughout the report to mean the “presence of one or more potentially harmful substances as a result of human activity”. The use of the term in this way does not imply that harm is being or might be caused by the contamination. It should be noted that “contamination” can have different meanings under different regulatory regimes, for example, planning, building control and Part IIA of the Environmental Protection Act 1990. Naturally elevated concentrations of potentially harmful substances may also be of concern and the significance of any that have been found is also evaluated in this report.

## **2.0 THE SITE**

### **2.1 SITE LOCATION AND DESCRIPTION**

The site is located within land at Gwynfaen Farm on the northwest edge of Gorseinon at a National Grid Reference of 257790, 199350, see Figure 1.

The site is irregular in shape and occupies an area of approximately 3.5 hectares. The boundaries of the site are defined by the Phase 1 residential development site and existing residential development to the east, undeveloped land and residential development to the south, Gwynfaen Farm to the southwest and undeveloped land to the north and northwest. A site plan is presented in Figure 2.

The site is situated on sloping ground which falls to the west from an approximate maximum elevation of 30m along the eastern edge to an approximate minimum elevation of 14m AOD within the western area.

The site comprises an undeveloped grass covered field with heavily vegetated field boundaries. The northern area of the site is also more heavily vegetated.

There are a series of manhole covers located within the eastern area of the site associated with existing sewers. Overhead electricity lines are also indicated to cross the southern area of the site on an approximately west to east orientation.

### **2.2 SITE OPERATIONS**

The site is currently undeveloped and utilised as farmland.

### **2.3 SURROUNDING LAND USE**

The surrounding areas are either undeveloped farmland or are developed for residential use. The area to the east forms the Gwynfaen Farm Phase 1 development area which is currently under construction.

### **2.4 AVAILABLE SITE INVESTIGATION DATA**

There is no available site investigation data for the site to our knowledge.

The area to the east has been investigated as part of the Phase 1 residential development. The ground conditions in the adjacent field typically comprised topsoil overlying variable glacial till deposits.

**2.4 AVAILABLE SITE INVESTIGATION DATA** (CONTINUED)

The glacial till comprised a vertically and laterally variable sequence of loose to medium dense orange brown slightly gravelly clayey sand or soft to firm, firm orange brown slightly gravelly to gravelly sandy silty clay. The glacial till further graded into firm orange grey brown sandy gravelly silty clay or locally medium dense sandy clayey gravel with depth and contained variable quantities of gravels, cobbles and boulders of mudstone, siltstone and sandstone.



### 3.0 SITE HISTORY

The recent history of the site has been traced with the aid of an Envirocheck Report, a copy of which is included in Appendix A. The Envirocheck Report includes the following scaled historical maps:

Map Scale	Dates
1:2,500	1877-1879, 1898, 1916, 1935, 1958-1959, 1959-1978, 1988, 1900, 1993, 2001 (aerial photo)
1:10,560	1884, 1899, 1900-1901, 1907-1908, 1921, 1935-1936, 1938, 1951
1:10,000	1964, 1969, 1974, 1980-1989, 1993, 1999, 2006, 2023

The earliest edition of the map dated 1877-1879 indicated the site to comprise an undeveloped field with a small possible outbuilding located on the southern boundary of the site. The building is likely to be associated with "Gwyn-fain" which was a collection of buildings located adjacent to the southwest corner of the site. Non-coniferous trees were indicated on the boundary of the site and a surface water feature flowed across the southeast corner and along the southern boundary. A less prominent surface water feature with a track beyond flowed along the northern boundary. An area of rough grassland/heath known as Black Hill was indicated to the south and southeast of the site. The surrounding areas were typically undeveloped at this time apart from Gwyn-fain.

The 1898 edition of the map indicated that the site had remained unchanged with Gwyn - faen Farm located adjacent to the southwest. The surface water feature was indicated to flow in a westerly direction along the southern edge of the site. A new property called Pleasant View had been constructed to the south of the site, but the other surrounding areas remained undeveloped. The area known as Black Hill was still located to the south and southeast.

The 1916 edition of the map indicated that the site and the immediate surrounding areas had remained relatively unchanged. The northern area of the field was now indicated to be covered with gorse. The surface water feature which flowed along the northern boundary was now more prominent.

The 1935 edition of the map indicated that the small building had been removed from the southern edge of the site. The surrounding areas to had remained unchanged.

### **3.0 SITE HISTORY** (CONTINUED)

The 1958-1959 edition of the map indicated that the site remained undeveloped, and the gorse vegetation was no longer indicated within the northern area. The track along the northern boundary of the site was now more established and indicated to be a cart track. The immediate surrounding areas remained unchanged and largely undeveloped. Significant residential development had taken place approximately 220m to the east of the site.

The site remained undeveloped over the subsequent years and residential development continued in the vicinity of the site. During the 1970's development commenced across the area to the southeast formerly known as Black Hill. The development within this area had extended to the south of the site by the edition of the map dated 1993.

The 2001 aerial photo indicated the site to be undeveloped and grass covered with densely vegetated field boundaries. There was a slight change in vegetation within the northern area of the site. Undeveloped fields were located to the north and east, Gwynfaen Farm to the west and southwest and residential development to the south.

The 2005 aerial photo indicated a series of manholes located within the eastern area of the site. These manholes are known to be associated with large sewer pipes which cross the site on a north south orientation.

The 2013 aerial photo indicated the site had remained undeveloped apart from the manholes associated with the sewer. New residential development had commenced directly to the east of the southern corner of the site within Min Yr Aber.

The 2014 aerial photo indicated that the eastern edge of the site had been stripped of vegetation and a new public sewer had been constructed associated with the proposed adjacent development site.

The Phase 1 Gwynfaen development was indicated to have commenced to the east of the site by the aerial photo dated 2021. An area of disturbed ground associated with this development encroached across the eastern boundary of the northern part of the site.

The most recent aerial photo dated 2024 indicated the site to be grass covered with some areas of variable vegetation across the site. The areas of formerly disturbed ground were no longer evident. The Phase 1 development continued to the east.

## **4.0 SITE ENVIRONMENTAL SETTING**

### **4.1 PHYSICAL SETTING**

The site is located within a mixed rural and residential setting on the north western edge of Gorseinon.

The site is situated on sloping ground which falls to the west from an approximate maximum elevation of 30m along the eastern edge to an approximate minimum elevation of 14m AOD within the western area.

Existing surface water features flow to the west along the northern and southern boundaries of the site.

### **4.2 GEOLOGY**

The 1:50,000 and 1:10,560 scale ( Sheet No. SS 59 NE) geological map of the area indicates that the site to be underlain by the solid strata of the Grovesend Formation of the Carboniferous period. This bedrock typically comprises mudstones and siltstones, with well-developed coals and minor lithic Pennant sandstones. There are no strata dips indicated in the vicinity of the site but based on the Generalised Vertical Section (GVS) the strata dip is likely to be shallow or sub-horizontal to the south and southwest. Further to the south of the site the strata dip would be expected to change to a northerly direction associated with the location of the axis of the Gorseinon Syncline located approximately 180m to the southeast of the site. The site is also located in between two north to south orientated faults namely the Gwili Fault located approximately 130m east and the Morlais Fault located approximately 280m to the west.

The bottom seam of the Gelli Group of Coals is indicated to conjecturally outcrop beneath the site on an approximately northwest to southeast orientation. The Gelli Group comprises a series of thin coal seams which the Generalised Vertical Section (GVS) indicates consists of nine thin coal seams spread over a depth of approximately 60m. Therefore, given the southerly to south westerly dip of the strata, these Gelli Group coal seams would underlie the site to the southwest of the outcrop at shallow depth. The top seam of the Gelli Group of Coals is indicated approximately 90m to the southwest and therefore this seam and some of the other upper seams in the group would not underlie the site.

The solid strata are indicated to be overlain by superficial deposits of Devensian Till of the Quaternary Period. These deposits generally comprise a poorly sorted and variable composition of clays, sands and gravel, with cobbles and boulders.

## 4.2 GEOLOGY (CONTINUED)

A geology map extract is presented on Figure 3.

Made ground is not anticipated to be widespread above the superficial deposits across the site. However, localised made ground/reworked material may be encountered in the vicinity of the sewer construction within the eastern area of the site, in the vicinity of the small building which was located on the southern edge of the site and also on field boundaries or in gateways associated with general agricultural use.

A summary of the anticipated geological succession is given below in Table 1.

<b>Geological unit</b>	<b>Horizon</b>	<b>Description</b>
Recent	Topsoil/subsoil with localised areas of made ground or reworked materials	Various materials
Quaternary	Devensian Till	A poorly sorted and variable composition of clays, sands and gravel, with cobbles and boulders
Carboniferous	Grovesend Formation	Mudstones and siltstones, with well-developed coals and minor lithic Pennant sandstones

## 4.3 RADON

Information with regard to Radon Protective Measures is provided within the Envirocheck Report and the BGS Rado GeoReport as presented in Appendices A and B respectively. The reports state that the site is located within a lower probability area, as less than 1% of properties are above action level, and that therefore no radon protective measures would be necessary in the construction of new buildings within the site.

## 4.4 MINING

The site is located within a coal mining reporting area and therefore a Consultants Coal Mining Report has been obtained from the Coal Authority and a copy is included in Appendix C. An appraisal of the mining data and its significance is presented below.

#### 4.4 MINING (CONTINUED)

The Coal Authority state that there are recorded workings beneath the site within one seam of coal at 385m depth. The workings are recorded within an unnamed seam and was last worked in 1942. The extraction thickness for the workings was 220cm. The Coal Authority Interactive Map indicates these workings are located beneath the eastern area of the site and extending off-site to the north, south and east. It is considered that the shallowest recorded workings at 385m would be at a depth that would not pose a subsidence risk at the surface. The shallowest recorded workings within an influencing distance of the site are within the Mynyddislwyn Lower Leaf seam (Swansea Four Feet) at 160m depth to the northeast.

The Coal Authority state that the probable unrecorded workings is “none” and there are no recorded shallow roadways. However, this does not mean that shallow workings or roadways do not exist, but rather any information to support this has not come into the possession of the Coal Authority. As discussed previously, the bottom seam of the Gelli Group of Coals is indicated to conjecturally outcrop beneath the site on an approximately northwest to southeast orientation. The Coal Authority state in the Consultants Report that this is a proven outcrop and name the seam locally as the Mynyddislwyn Big Rider. The Gelli Group of Coals would therefore underlie the site to the southwest of the outcrop at shallow depths and the potential for unrecorded workings within these coals should not be ruled out. Despite the Gelli Group of Coals being a series of thin coal seams, the bottom seam or seams are shown to have associated adits to the northwest of the site. These mine entries indicate that these seams have been mined near to the site.

The Coal Authority States that, with regards to mine entries that there are “*none recorded within 100m of the enquiry boundary.*” The presence of unrecorded mine entries should not be ruled out.

The Coal Authority states that there are “*no faults, fissures or breaklines recorded.*”

The Coal Authority states that there are no managed tips recorded within 500m of the site boundary. The latest guidance published by the Welsh Government and its partners include a Mining and Coal Tip Safety document, published on the 14<sup>th</sup> of November 2023, which assigns an identification number (UID), a category, and the immediate status of each disused coal tip in Wales. This document also confirms that there are no managed tips within an influencing distance of the site.

The Coal Authority has “*not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994. There is no current Stop Notice delaying the start of remedial works or repairs to the property.*”

#### 4.4 MINING (CONTINUED)

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

The Coal Authority states that no mine gas has been recorded within 500m of the enquiry boundary. However, a mine gas risk assessment should always be undertaken within coal mining areas in order to satisfy the guidelines within CL:AIRE document Good Practice for Risk Assessment for Coal Mine Gas Emissions, dated October 2021.

The site is located within a coal mining reporting area and based on the above guidelines a mine gas risk assessment should be undertaken. The initial desk-based assessment of the site will be utilised in order to develop the level of mine gas risk within the site.

There are many sources of gas in mine workings including desorption of gas from coal and rocks, oxidation of coal, decomposition of old wood (such as pit props) and acidic mine drainage reacting with carbonate in the rocks around the seam or shaft. These gases, if produced within the old workings, would need a viable pathway to the surface such as a shaft or fractured rock above the workings.

The desk study shows that the site is located within a high-risk development area associated with the coal outcrop beneath the site. There is potential for shallow unrecorded workings within the group of thin seams.

There are no mine entries located within 100m of the site boundary. It is therefore concluded that there are no viable pathways, via old shafts or adits, for any mine gas beneath, or within an influencing distance, of the site.

No faults, fissures or breaklines are known to affect the development site. It is therefore concluded that there are no viable pathways via fractured rock or fault zones.

Based on the desk-based research, the potential risk from coal mine gas emissions at the development site is considered below:

Figure 13.1 Decision Support Tool for Mine Gas Risk Assessment, included within CL:AIRE document Good Practice for Risk Assessment for Coal Mine Gas Emissions, dated October 2021 includes a flow chart to aid the risk assessment process and decision making.

Stage 1 of the flow chart asks if the site is within a Coal Authority defined Coal Mining Reporting Area. Since the site is located within a Coal Authority defined Coal Mining Reporting Area the flow chart then asks if all of the following statements are true:

#### 4.4 MINING (CONTINUED)

- Mine entries >50m from site boundary
- Workings >150m depth
- No faults or other potential pathways connecting surface to deeper unflooded workings
- Outside area of past or probable shallow workings on Coal Authority viewer

Based on the information gained from the desk-based research, it is considered that the Stage 1 statements may be true based on the available information. However, there is potential for shallow unrecorded workings which need to be confirmed by drilling a series of rotary boreholes.

Intrusive works are recommended to confirm the level of gas risk. If shallow workings are found beneath the proposed development area, a programme of gas monitoring may become required, and a mine gas risk assessment should be undertaken based on the results. The recommended boreholes would also confirm the thickness of superficial deposits and whether or not the workings are flooded. All these factors would provide a basis for the mine gas risk assessment.

If no workings are found as part of the intrusive works, the site would be classified as being within a “Negligible Risk Zone” with no mine entries recorded, no fault features to form a pathway and with the site located outside the area of past or probable shallow workings. Based on a negligible risk classification, mitigation would not be required for the proposed residential development.

The Coal Authority Interactive Map indicates a linear high-risk development area associated with the outcrop of the coal seam on a northwest to southeast orientation beneath the site. Our desk-based research would extend the area of high-risk across the site to the southwest of the outcrop. The high-risk development zone is shown on Figure 4.

Based on the information provided by the geology maps and the information contained within the Consultants Coal Mining Report it is considered that there is a risk of unrecorded shallow workings beneath the site to the southwest of the coal outcrop.

An intrusive investigation in the form of deep rotary boreholes to a depth of 30m to 35m would be required to determine the level of risk to the development and to define the risk based on site specific data.

#### 4.5 HYDROLOGY, HYDROGEOLOGY AND FLOOD RISK

The Envirocheck report records the nearest surface water features to be located on site and flowing along the north western and southern edges. The OS Water Network Lines map indicates these features to be unnamed inland rivers. There are additional unnamed features to the west of the site which flow into unnamed tidal rivers before eventually flowing into the River Loughor which is located greater than 1km west of the site.

The Natural Resources Wales groundwater vulnerability map and aquifer database classifies the bedrock beneath the site as a Secondary 'A' Aquifer. Secondary 'A' Aquifers are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

The Natural Resources Wales groundwater vulnerability map and aquifer database classifies the superficial deposits beneath the site as Secondary Aquifer-Undifferentiated. This classification is assigned in cases where it has not been possible to attribute either category A or B to a soil type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the material.

A perched water body may be encountered within any localised made ground or reworked materials or within the more granular superficial deposits. Vertical migration of groundwater is likely to be limited by the high clay content of the superficial soils.

It is considered possible that any existing site drainage could act as a pathway for potential surface contaminants.

There are eight effective discharge consents recorded within 250m of the site boundary. The nearest two are recorded 140m to the south where an unspecified discharge from a domestic property is received by the groundwater via an infiltration system. A further six Dwr Cymru sewage discharges (storm overflow) are recorded 234m to the south of the site received by a tributary of the River Loughor.

The Envirocheck Report states that there are no surface water or groundwater abstractions recorded within 1km of the site boundary.

Tables 2 and 3 present a summary of the hydrological features and key hydrogeological nature of the site.



**4.5 HYDROLOGY, HYDROGEOLOGY AND FLOOD RISK (CONTINUED)**

<b>Table 2: Summary of Site Hydrology</b>					
Feature	Distance from site	Flow	Classification	Abstraction	Discharge
Unnamed surface water features	North western and southern boundaries	South westerly and westerly	Inland rivers	No	River Loughor via additional unnamed features
River Loughor	>1km west	Southerly and south westerly	Tidal river	No	Carmarthen Bay
Surface run-off	On site	Flows into site drainage or into site	N/A	No	Not known
Site Drainage	On site	Not known	N/A	No	Not known

<b>Table 3: Summary of Site Hydrogeology</b>				
Geological Unit	Aquifer Classification	Aquifer Characteristics	Source Protection Zone	Groundwater Abstractions
Topsoil/subsoil and possible localised made ground/reworked material	Not classified	Highly variable permeability and porosity. Perched water may be present with variable flow directions.	No	None
Devensian Till	Secondary Aquifer Undifferentiated	Variable low to moderate permeability and porosity with intergranular flow possible. High clay content likely to restrict flow.	No	None
Grovesend Formation	Secondary A Aquifer	Variable moderate permeability mudstones and siltstones, with well-developed coals and minor sandstones capable of supporting water supplies at a local rather than strategic scale	No	None

The Groundwater Vulnerability map of the area indicates the secondary superficial aquifer to have a low vulnerability. The pollutant speed is low with well-connected fractures.

#### **4.5 HYDROLOGY, HYDROGEOLOGY AND FLOOD RISK (CONTINUED)**

The Natural Resources Wales Flood Risk map as presented within the Envirocheck Report indicates that the site is not at risk to extreme flooding from rivers or sea without defences.

The Natural Resources Wales Surface Water Flood Risk map as presented within the Envirocheck Report indicates that the majority of the site is not at a high-risk to surface water flooding (1 in 30-year flood extent). However, a high-risk areas are indicated along the northern and southern edges of the site associated with the surface water features which flow along these boundaries.

The BGS Groundwater Flooding Susceptibility map indicates the majority of the site to have limited potential for groundwater flooding to occur. It also indicates that the western area has potential for groundwater flooding of property situated below ground level and the southwest corner has potential for groundwater flooding to occur at surface.

#### **4.6 LANDFILL SITES**

The Envirocheck Report indicates that there are no BGS recorded, historical or local authority landfill sites or any licensed waste management facilities located within 500m of the site boundary.

There are no areas of potentially infilled land (non-water) recorded within 250m of the site boundary. The nearest area is located 277m to the south at the location of an old quarry.

There are two areas of potentially infilled land (water) located both on site and within 250m of the site boundary. The areas are located along the southeast edge of the site and 225m to the south at the location of former surface water features.

#### **4.7 POTENTIAL CONTAMINATION**

##### ***Previous Uses***

The various activities in the vicinity of the site which may have resulted in ground or water resource contamination on this site are listed below in Tables 4 and 5. A summary of the potential contaminants can be found in the tables.

**4.7 POTENTIAL CONTAMINATION (CONTINUED)**

<b>Table 4: Potential Contaminants</b>		
<b>Land Use:</b> Generally, an undeveloped field until the present day		
<b>Material/Process</b>	<b>Contamination/Hazard</b>	<b>Evidence</b>
Construction of a small building on the southern boundary of the site pre-1880's and subsequently removed by the 1930's. Construction may have caused localised ground disturbance or may have used imported materials of unknown origin.	Metals, semi metals, non-metals, PAH, asbestos	Historical maps
Construction of sewers within the eastern area circa 2005 and subsequent additional sewer construction and disturbance associated with the Phase 1 residential development to the east between 2014 and 2021 which would have caused additional ground disturbance and may have utilised imported materials of unknown origin	Metals, semi metals, non-metals, PAH, asbestos	Aerial photos
General farming activity and land uses with potential for disturbed ground or made ground on field boundaries or in gateways	Metals, semi metals, non-metals, PAH, asbestos	Anecdotal

**Existing Uses**

The site is currently in use as agricultural land. The current uses would not add any additional contamination concerns.

**Adjacent Site Uses**

<b>Table 5: Potential Contaminants: Adjacent Site Uses</b>		
<b>Potential Contamination Source</b>	<b>Boundary</b>	<b>Associated Contaminants and Hazards</b>
Undeveloped land	Northern and north western	No Potential Contaminants
Buildings and access associated with Gwynfaen Farm	South western	No Potential Contaminants
Undeveloped land and residential development	Southern	No Potential Contaminants
Residential development and residential development site	Eastern	No Potential Contaminants

#### **4.8 OTHER ENVIRONMENTAL ISSUES**

The Envirocheck Report indicates that Bury Inlet and Loughor Estuary is designated as a Site of Special Scientific Interest and Carmarthen Bay and Estuary is designated as a Special Area of Conservation. Both are located 114m to the southwest. There is no additional environmentally sensitive land located within 1km of the site boundary.

The Envirocheck Report indicates that there have been no pollution incidents to controlled waters recorded on site but twenty-two within 250m of the site boundary. The nearest incident was recorded 16m to the north and was a Category 3-Minor Incident involving rubble litter or solids from a blocked sewer. Another minor incident was recorded 44m to the southwest involving an unknown pollutant from a mechanical failure. The nearest Category 2-Significant Incident was recorded 178m to the southwest involving an unknown pollutant due to a mechanical failure. Additional incidents, both minor and significant were recorded between 178m to the southwest and 248m to the south involving pollutants such as crude sewage, mud/clay/soil, washery effluent, light oil, sullage, oils-diesel/petrol and stagnant water.

There have been no substantiated pollution incidents registered on site or recorded within 1km of the site boundary.

There have been no prosecutions relating to controlled waters or to authorised processes recorded on site or recorded within 1km of the site boundary.

It is not known if any invasive plants are present on site, but the boundaries are heavily vegetated. It would be prudent to undertake a full vegetation survey prior to development.

## 5.0 PRELIMINARY CONCEPTUAL SITE MODEL

### 5.1 RISK ASSESSMENT FRAMEWORK

In order to be consistent with current UK government policies and legislation, it is necessary to identify, assess, estimate, evaluate, and take appropriate action to deal with land contamination, in accordance with the procedures specified in the Environment Agency guidance Land Contamination Risk Management (LCRM) published in October 2020. This replaces the now withdrawn 'Model Procedures for the Management of Land Contamination CLR-11' (Environment Agency 2004).

The risk assessment process is designed to provide a reasoned, structured and pragmatic mechanism for the identification of any potential human health and controlled waters risks associated with land contamination and where necessary to develop a robust remediation strategy to ensure protection of the sensitive receptors (human health of future residents, controlled waters, etc).

In accordance with LCRM, the term 'land contamination' is defined as:

- All land affected by contamination – land that might have contamination present which may, or may or may not, meet the statutory definition of contaminated land,
- Land determined as contaminated land under Part 2A of the Environmental Protection Act 1990.

LCRM provides a tiered approach to risk assessment, comprising a preliminary risk assessment (including the development of an initial conceptual site model), a generic quantitative risk assessment and a detailed quantitative risk assessment. For each tier of risk assessment, the following steps must be followed:

1. Identify the hazard - establish contaminant sources,
2. Assess the hazard – use a source-pathway-receptor linkage approach to determine if there is potential for unacceptable risk,
3. Estimate the risk – predict what degree of harm or pollution may result and how likely it is to occur, and
4. Evaluate the risk – decide whether a risk is unacceptable.

LCRM also provides definitions of the following terms:

- Hazard – a property or situation that in particular circumstances could lead to harm or pollution,

## 5.1 RISK ASSESSMENT FRAMEWORK (CONTINUED)

- Risk – a combination of the probability, or frequency of occurrence of a defined hazard and the magnitude of the consequences of the occurrence,
- Risk assessment – the formal process of identifying, assessing and evaluating the health and environmental risks that may be associated with a hazard,
- Risk management – the formal process to identify, assess and determine the risks, and to select and take action to mitigate them.

The three essential elements to any risk are defined by LCRM as follows:

- A contaminant, or pollutant, that is in, on, or under the land and that has the potential to cause harm, or pollution (Source)
- A route by which a receptor is, or could be affected by a contaminant (Pathway)
- A receptor, i.e. something that could be adversely affected by a contaminant, for example a person, controlled waters, an organism, an ecosystem, or Part 2A receptors such as buildings, crops or animals (Receptor).

In order for there to be a potential risk, all three of the above elements must be present. If there is a source of contamination and a receptor (for example a resident or site user), then there is only a potential risk if there is a pathway linking the two. Such an active pathway is known as a relevant pollutant linkage. It is possible for the same contaminant to be linked to a receptor via a number of pathways, and hence it is important that all relevant pollutant linkages, to both human health and controlled waters, are separately identified on a site in order that a comprehensive conceptual model can be formed and ultimately a robust remediation strategy designed.

Current practice during Generic Quantitative Risk Assessment of land affected by contamination is to use generic soil screening values based on the appropriate proposed end use. These usually comprise risk-based Soil Guideline values (SGVs) or Generic Assessment Criteria (GACs) derived by the Environment Agency's Contaminated Land Exposure Assessment Model (CLEA). The SGVs and the supporting technical guidance were developed in order to assist in the assessment of long-term risk to human health from the exposure to contaminated soils.

Revised Statutory Guidance, published in 2012, to support Part 2A of the Environmental Protection Act 1990, introduced a new four category system for classifying land under Part 2A. Category 1 includes land where the level of risk is clearly unacceptable and Category 4 includes land where the level of risk posed is considered to be acceptably low. Under Part 2A, land would be determined as contaminated if it falls within Categories 1 or 2.

## 5.1 RISK ASSESSMENT FRAMEWORK (CONTINUED)

The revised Part 2A Statutory Guidance was accompanied by an Impact Assessment that identified a role for new 'Category 4 Screening Levels' (C4SLs) that would provide a simple test for determining when land is suitable for use and definitely not contaminated land. A Policy Companion Document including the C4SLs was published in March 2014 (England) and May 2014 (Wales).

The C4SLs have been based on the CLEA methodology and derived using the CLEA model, with modified toxicological and exposure parameters. To date, C4SLs have been released for six substances (arsenic, cadmium, chromium (VI), lead, benzo(a)pyrene and benzene).

The C4SLs have been derived on the assumption that where they exist, they will be used as generic screening criteria within generic quantitative risk assessment.

Following publication of the C4SLs, Land Quality Management (LQM), in conjunction with the Chartered Institute for Environmental Health (CIEH) released Suitable 4 Use Levels (S4ULs) in January 2015.

The S4ULs have been derived in accordance with UK legislation, and using a modified version of the Environment Agency's CLEA software. As such, the S4ULs are based on the concept of minimal or tolerable risk as described in Human Health Toxicological Assessment of Contaminants in Soil (Science Report SR2, Environment Agency 2009a).

S4ULs have been derived for a wider number of substances.

In addition to the existing SGVs, C4SLs and S4ULs, Atkins ATRISK<sup>soil</sup> also provide a set of Soil Screening Values. These are currently intended to be used in conjunction with SGVs, although they intend to update these values in line with the C4SLs in due course.

We have reviewed all sets of values and intend to use the most appropriate assessment criteria as Tier 1 screening values in the first instance. Where a published S4UL is available, and considered appropriate, this will be used in the first instance.

## 5.2 CONCEPTUAL MODEL FRAMEWORK

The preliminary stage of the risk assessment process is to develop and define a conceptual site model, based on the desk study and any existing site investigation data. This is used to establish any potential contaminant sources, identify existing and future receptors and assess if there are any potentially active pathways by which a potential risk may be present.

## **5.2 CONCEPTUAL MODEL FRAMEWORK (CONTINUED)**

The preliminary conceptual site model will be developed and refined as site specific data is gathered, such as actual ground conditions and chemical data, resulting in a more robust conceptual understanding of the site.

## **5.3 CRITICAL SENSITIVE RECEPTOR – HUMAN HEALTH**

The proposed redevelopment of the site is for a residential end use. Therefore, the critical sensitive receptor from a human health perspective is an on-site residential receptor.

In accordance with S4UL/C4SL and CLEA guidance for a standard residential with homegrown produce scenario, the critical sensitive receptor for a residential end use risk assessment is a female child, with exposure from 0 to 6 years.

The standard residential with homegrown produce end use conceptual model defined by S4UL/C4SL and CLEA is assumed to be suitable for the purposes of this assessment.

## **5.4 CRITICAL SENSITIVE RECEPTOR – CONTROLLED WATERS**

Based on the proposed redevelopment of the site for a residential end use, and the findings of the desk study, the critical sensitive receptor from a controlled water perspective is groundwater within the Secondary 'A' Aquifer of the Grovesend Formation.

By considering groundwater as the critical sensitive receptor for controlled waters, the groundwater/hydrogeological risk assessment will also be protective of the nearby surface water features, particularly the ones which flow along the southern and north western boundaries.

## **5.5 POTENTIAL CONTAMINANT SOURCES**

As identified in the desk study, the site has remained essentially undeveloped over the years apart from a small building located on the southern boundary that was no longer present by 1935. There is likely to be disturbed ground within the eastern area of the site associated with the sewer construction and works associated with the adjacent site. There is also potential for there to be localised made ground associated with general farming activity particularly on field boundaries or in gateways.

The potential types of contaminants of concern are listed below:



## 5.5 POTENTIAL CONTAMINANT SOURCES (CONTINUED)

- Metals, semi-metals, and inorganics within the shallow made ground,
- Polyaromatic hydrocarbons (PAH) within the shallow made ground,
- Asbestos within the shallow made ground.

Additionally, it would be prudent to check topsoil/subsoil for reuse in gardens and landscaped areas.

## 5.6 POTENTIAL EXPOSURE PATHWAYS

Potential exposure pathways for the critical receptors (both human health and controlled waters) are listed below:

- Dermal contact with soil and/or soil derived dust,
- Ingestion of soil and/or soil attached to home-grown produce,
- Ingestion of home-grown produce,
- Inhalation of soil derived dust,
- Inhalation of vapours – indoor and outdoor air,
- Leaching of contaminants from made ground to groundwater,
- Transportation of contaminants within groundwater.

In addition, the following exposure pathways have also been considered:

- Ground gas generation and migration,
- Building materials durability.

## 5.7 SUMMARY OF CONCEPTUAL EXPOSURE MODEL

A preliminary conceptual exposure model has been developed for the site. This is based on the findings of the desk study and historical review and includes all potential sources, pathways and receptors that may be present on site. Those that have been identified as being potentially active require further investigation in the form of sampling and testing of soils and groundwater, followed by appropriate risk assessment.

The preliminary conceptual exposure model will be reviewed and refined following the completion of the site works and laboratory testing.

The preliminary conceptual exposure model is presented below in Table 6.

**5.7 SUMMARY OF CONCEPTUAL EXPOSURE MODEL (CONTINUED)**

<b>Table 6: Preliminary Conceptual Exposure Model</b>				
Source		Receptor	Pathway	Potentially Active Pathway?
Origin	Contaminant			
Made Ground of unknown origin and historical land uses and existing natural soils	Metals, semi-metals, non-metals, PAH, asbestos	Resident – human health	Dermal Contact with made ground/dust	✓
			Ingestion of soil and/or soil attached to home-grown produce	✓
			Ingestion of home-grown produce	✓
			Inhalation of dust	✓
			Inhalation of vapours – indoor/outdoor	✓
	Metals, semi-metals, inorganics, PAH	Groundwater quality	Leaching from made ground	✓
Metals, semi-metals, inorganics, PAH	Surface water quality	Transportation within groundwater	✓	
Made Ground of unknown origin and natural ground	pH and water-soluble sulphate	Building Materials Durability	Direct contact	✓
Ground and Mine Gas – organic, gas producing materials present within site or adjacent to the site	Methane, carbon dioxide	Human health	Accumulation of gases in confined spaces, and/or migration off site, leading to asphyxiation, or risk of explosion	✓ Significant thickness of gas producing materials are not anticipated, no off-site sources. No radon protective measures required. Possible mine gas risk

## 6.0 ANTICIPATED GROUND CONDITIONS

Based on the geological map data, historical records and available site investigation data, the following general succession of superficial deposits and underlying solid geology beneath the site is anticipated:

### **Recent**

*(Various)* Topsoil/subsoil with potential for localised areas of made ground or reworked materials

### **Quaternary**

*(Devensian Till)* A poorly sorted and variable composition of clays, sands and gravel, with cobbles and boulders

### **Carboniferous**

*(Grovesend Formation)* Mudstones and siltstones, with well-developed coals and minor lithic Pennant sandstones

Topsoil/subsoil would be anticipated across the site. Localised areas of made ground or reworked material could be present within the eastern area of the site associated with the sewer construction and potentially on the southern boundary associated with the former historic building. Allowances should also be made for the potential for made ground to be present on field boundaries or in gateways associated with farming activity.

The superficial deposits are known to be variable in nature but typically comprising clays, sands and gravels. Available information from the adjacent site indicates that the superficial deposits are likely to extend to a depth of between approximately 4m and 5m below ground level.

It is unlikely that bedrock would be encountered within shallow excavations

Localised seepages of perched groundwater could be encountered within any made ground or reworked materials or within the more granular superficial shallow soils. Groundwater would be at greater depth within the weathered bedrock.

## 7.0 SITE ASSESSMENT

### 7.1 ENVIRONMENTAL RISK ASSESSMENT

This assessment takes due regard of Contaminated Land Guidance issued by DEFRA and RICS. The methods used follow a risk-based approach with the potential environmental risk assessed qualitatively using the 'source-pathway-receptor' pollutant linkage concept set out in the Environment Protection Act 1990.

Although the risk presented in the following tables and above is descriptive, it is correlated to a numerical chance of occurrence. Therefore, the range and percentage chance of occurrence is given in order that the reader may assess the datum for the risk level. Although the percentage chance is quoted, this is still a subjective evaluation and is not prepared by probabilistic determination. Therefore, the chance of occurrence is a value judgement and not a numerical calculation. The evaluation is a simple qualitative risk assessment, which cannot make a judgement on the probability of occurrence or level of contamination. The latter two aspects require site specific information.

Reference to risk classifications is made according to the following definitions.

<b>Low Risk</b>	It is unlikely that the issue will arise as a liability/cost.
<b>Medium Risk</b>	It is possible that the issue could arise as a liability/cost. Further work is needed to clarify the risk and consequences.
<b>High Risk</b>	It is likely that the issue will arise as a liability/cost.

In consideration of the information gathered and presented in this report the following risk appraisal is considered appropriate.

<b>Table 7: Environmental Risk Assessment</b>		
<b>Issue</b>	<b>Risk Category</b>	<b>Comments</b>
<b>Site sensitivity</b>		
Sensitivity of site location	Low	<ul style="list-style-type: none"> <li>Site is not located within an environmentally sensitive area</li> </ul>
Environmental sensitivity of adjacent land uses	Low/medium	<ul style="list-style-type: none"> <li>Site situated in a mainly undeveloped or residential area but with surface water features flowing along the southern and northern boundaries</li> </ul>

**7.1 ENVIRONMENTAL RISK ASSESSMENT (CONTINUED)**

<b>Table 7: Environmental Risk Assessment (Continued)</b>		
<b>Issue</b>	<b>Risk Category</b>	<b>Comments</b>
<b>Contamination potential</b>		
Potential for significant on-site contamination	Low/medium	<ul style="list-style-type: none"> <li>Site has been historically mainly undeveloped and is currently undeveloped</li> <li>Potential for localised made ground/reworked materials in the vicinity of the former building, within the eastern area associated with the sewer construction and in gateways and on field boundaries. Not anticipated to be significant</li> <li>Mine gas protection measures may be required if shallow workings are found to be present</li> </ul>
Potential for contaminants migrating off from the site	Low	
Potential for contaminants migrating onto the site	Low	
Potential for other environmental issues to give rise to liabilities	Low/medium	
<b>Environmental Consequences</b>		
Risk of pollution of controlled waters	Low	<ul style="list-style-type: none"> <li>Any made ground encountered beneath the site is not anticipated to be significant and likely to be associated with the historic site uses</li> </ul>
Risk of damage to future property	Low	
Risk of harm to human health	Low	
<b>Business Consequences</b>		
Risk of liability for owner	Low	<ul style="list-style-type: none"> <li>Previous and current land use not likely to produce significant contaminants but hot spots/areas could be present if made ground is encountered</li> </ul>
Likelihood of designation as Contaminated Land under EPA 1990	Low	
Risk of site value and/or saleability being affected	Low	
<b>Overall Risk</b>	Low locally low/medium	

**7.2 GEOTECHNICAL HAZARDS AND CONSTRAINTS**

A summary of commonly occurring geotechnical hazards is given in Table 8, together with an assessment of whether the site may be affected by each of the stated hazards. This information would be required prior to any future construction works.

## 7.2 GEOTECHNICAL HAZARDS AND CONSTRAINTS (CONTINUED)

<b>Table 8: Summary of Potential Geotechnical Hazards</b>				
<b>Issue</b> (excluding contamination issues)	<b>Hazard Status</b>			<b>Engineering considerations</b>
	Likely to be present on site	Could be present on site	Unlikely to be present and/or affect the site	
Shrinkable clays		✓		Special requirements for foundation and floor design near trees/hedgerows
Filled and made ground		✓		Unlikely to be widespread but if present, would require assessment followed by potential removal, encapsulation or remediation
Highly compressible and low bearing capacity soils including peat and soft clay		✓		Allowances should be made for the removal and replacement of any soft spots/areas
Silt rich soils susceptible to rapid loss of strength in wet conditions	✓			All formations should be protected from wet weather and site traffic
Adverse ground chemistry (including expansive slags, weathering of sulphides to sulphates)			✓	
Combustibility potential			✓	
Solution features			✓	
Evaporite dissolution features and subsidence			✓	
Ground subject to peri-glacial valley cambering with gulls present			✓	
Sudden lateral changes in ground conditions		✓		Potential for differences in founding levels due to the variability of the superficial deposits
Existing sub structures (e.g. foundations and pits)	✓			Care should be taken in the eastern area of the site due to the known presence of the sewers
Ground subject to vibration			✓	

**7.2 GEOTECHNICAL HAZARDS AND CONSTRAINTS (CONTINUED)**

<b>Table 8: Summary of Potential Geotechnical Hazards (Continued)</b>				
<b>Issue</b> (excluding contamination issues)	<b>Hazard Status</b>			<b>Engineering considerations</b>
	Likely to be present on site	Could be present on site	Unlikely to be present and/or affect the site	
Underground mining (shallow)		✓		Allowances should be made for further investigation due to the potential for shallow unrecorded workings. The use of additional reinforcement to span voids or drilling and grouting remediation works prior to construction may be required
Mine entries (shafts and adits, bell pits)		✓		Possibility of unrecorded mine entries so a watching brief during site works is recommended
Ground subject to or at risk of coastal or river erosion		✓		Streams flow along the northern and southern boundaries. Care should be taken in the vicinity of these features including measures to protect the riverbanks from the construction works as deemed necessary.
Ground subject to, or at risk from landslips or slope instability		✓		The site is located on sloping ground, but slope instability is not anticipated. Cut and fill works will be required to create appropriate development plateaux. These works should be appropriately designed and validated
High water table (including waterlogged ground)		✓		Any water inflows should be dealt with using conventional pumping techniques. Potentially wet or softer ground may be present on the northern and southern edges of the site in the vicinity of the surface water features or within the lower lying western area of the site.

**7.2 GEOTECHNICAL HAZARDS AND CONSTRAINTS (CONTINUED)**

<b>Table 8: Summary of Potential Geotechnical Hazards (Continued)</b>				
<b>Issue</b> (excluding contamination issues)	<b>Hazard Status</b>			<b>Engineering considerations</b>
	Likely to be present on site	Could be present on site	Unlikely to be present and/or affect the site	
Culverted watercourses			✓	
Rising groundwater table due to diminishing abstraction in urban areas or cessation of deep mining			✓	



## 8.0 SITE INVESTIGATION PROPOSALS

Prior to redevelopment of the site, a comprehensive intrusive site investigation would be required, over the entire site, in order to facilitate a detailed technical and financial appraisal. This would enable the foundation and hardstanding design for any proposed development to be developed using specific data on the ground conditions and enable more accurate costings to be made.

Investigation works should give consideration to the following:

- Coal mining legacy risks associated with shallow underground mine workings and mine gas,
- Foundation and floor slab design,
- Excavation stability design,
- Remediation requirements,
- Soil Infiltration Potential,
- Groundwater control.

In particular, the principal geoenvironmental and geotechnical issues to be addressed are:

- The presence of shallow underground mine workings,
- Foundation strata - level, strength, compressibility, and chemical characteristics,
- Presence or absence of shrinkable clays,
- The extent of any ground contamination, including potential asbestos in the ground,
- The potential for mine gas to be present beneath the site.

Investigation techniques to be adopted should include:

- Trial pits could be used to examine the shallow ground conditions and include BRE 365 compliant soil infiltration testing within selected trial pits,
- Rotary probeholes to examine the deeper ground conditions including the location, depth and condition of any underlying coal seams,
- Laboratory chemical testing of any made ground and natural soils to determine soil chemistry to include a range of organic and inorganic contaminants and screening for asbestos,
- Laboratory geotechnical testing to determine soil plasticity.

Further works in the form of deeper boreholes may become required if competent ground is not encountered at shallow depths or if significant made ground or organic material is encountered that would require a programme of gas monitoring.

## **8.0 SITE INVESTIGATION PROPOSALS** (CONTINUED)

Permission would need to be obtained from the Coal Authority, prior to undertaking any physical site investigation that may intersect coal seams/associated mine workings.

## **APPENDIX A**

### **ENVIROCHECK REPORT**

# Envirocheck<sup>®</sup> Report:

## Datasheet

### Order Details:

**Order Number:**

331303750\_1\_1

**Customer Reference:**

14294/LP

**National Grid Reference:**

257790, 199350

**Slice:**

A

**Site Area (Ha):**

3.53

**Search Buffer (m):**

1000

### Site Details:

Gwynfaen Farm (Phase 2)

Gorseinon

Swansea

SA4 4BF

### Client Details:

MR H Pritchard

Integral Geotechnique

Integral House

7 Beddau Way

Castlegate Business Park

Caerphilly

CF83 2AX

Report Section	Page Number
Summary	-
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Waste	39
Hazardous Substances	-
Geological	42
Industrial Land Use	46
Sensitive Land Use	51
Data Currency	52
Data Suppliers	58
Useful Contacts	59

**Introduction**

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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**Report Version v53.0**

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Agency &amp; Hydrological</b>					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 3		9	5	21
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 11	Yes			
Pollution Incidents to Controlled Waters	pg 11		22	1	7
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 17				(*2)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 17	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 17	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 17	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 17		Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 17		Yes	n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences	pg 17		Yes	n/a	n/a
OS Water Network Lines	pg 18	3	23	24	138

<b>Data Type</b>	<b>Page Number</b>	<b>On Site</b>	<b>0 to 250m</b>	<b>251 to 500m</b>	<b>501 to 1000m (*up to 2000m)</b>
<b>Waste</b>					
BGS Recorded Landfill Sites	pg 39				1
Historical Landfill Sites	pg 39				3
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 39				2
Local Authority Landfill Coverage	pg 40	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 40			1	6
Potentially Infilled Land (Water)	pg 40	1	1	8	6
Registered Landfill Sites	pg 41				1
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
<b>Hazardous Substances</b>					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

<b>Data Type</b>	<b>Page Number</b>	<b>On Site</b>	<b>0 to 250m</b>	<b>251 to 500m</b>	<b>501 to 1000m (*up to 2000m)</b>
<b>Geological</b>					
BGS 1:625,000 Solid Geology	pg 42	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 42	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 43				6
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 44	Yes	n/a	n/a	n/a
Mining Instability	pg 44	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 44	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 45		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 45	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 45	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 45	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
<b>Industrial Land Use</b>					
Contemporary Trade Directory Entries	pg 46			4	22
Fuel Station Entries					
Points of Interest - Commercial Services	pg 48			5	1
Points of Interest - Education and Health	pg 48				5
Points of Interest - Manufacturing and Production	pg 49				6
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Points of Interest - Recreational and Environmental	pg 50		1		5
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Underground Electrical Cables					



<b>Data Type</b>	<b>Page Number</b>	<b>On Site</b>	<b>0 to 250m</b>	<b>251 to 500m</b>	<b>501 to 1000m (*up to 2000m)</b>
<b>Sensitive Land Use</b>					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest	pg 51		1		
Special Areas of Conservation	pg 51		1		
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (SW)	0	1	257700 199300
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (E)	0	1	257800 199348
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	0	1	257700 199348
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	0	1	257750 199348
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (NW)	0	1	257787 199348
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	0	1	257750 199300
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	27	1	257650 199350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	28	1	257800 199200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	30	1	257787 199200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	80	1	257787 199150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	128	1	257800 199100
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	129	1	257850 199100
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	178	1	257800 199050
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	188	1	257950 199650
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	229	1	257850 199000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	231	1	257900 199000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (W)	232	1	257450 199400
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (N)	240	1	257787 199750
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (W)	273	1	257400 199350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	280	1	257400 199400
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (N)	291	1	257787 199800
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	296	1	257400 199450

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (N)	316	1	257700 199800
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	330	1	257900 198900
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	348	1	257750 199850
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	362	1	257450 199650
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	362	1	257700 199850
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (NW)	373	1	257400 199600
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (NW)	382	1	257550 199800
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	397	1	257450 199700
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	401	1	257400 199650
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (NW)	401	1	257500 199750
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	410	1	257700 199900
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	427	1	257650 199900
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	436	1	257950 198800
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	436	1	257500 199800
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	471	1	257450 199800
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	479	1	257850 198750
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	483	1	257700 198750
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (N)	490	1	257800 200000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (N)	491	1	257787 200000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	<p><b>Discharge Consents</b></p> <p>Operator: David Edwards  Property Type: Domestic Property (Single)  Location: Pentre Bach Farm Gwynfe Road Lougho, Gwynfe Road Loughor Swansea  Authority: Natural Resources Wales  Catchment Area: Not Given  Reference: BF0112001  Permit Version: 1  Effective Date: 23rd April 1975  Issued Date: 23rd April 1975  Revocation Date: Not Supplied  Discharge Type: Not Supplied  Discharge: Into Land  Environment:  Receiving Water: Groundwater Via Infiltration System  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 100m</p>	A13SW (S)	140	2	257700 199100
1	<p><b>Discharge Consents</b></p> <p>Operator: David Edwards  Property Type: Domestic Property (Single)  Location: Pentre Bach Farm Gwynfe Road Lougho, Gwynfe Road Loughor Swansea  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bf0112001  Permit Version: Not Supplied  Effective Date: 23rd April 1975  Issued Date: 23rd April 1975  Revocation Date: Not Supplied  Discharge Type: Not Supplied  Discharge: Into Land  Environment:  Receiving Water: Groundwater Via Infiltration System  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 100m</p>	A13SW (S)	140	2	257700 199100
1	<p><b>Discharge Consents</b></p> <p>Operator: Mr David Edwards  Property Type: Domestic Property (Single)  Location: Pentre Bach Farm Gwynfe Road Lougho, Gwynfe Road Loughor Swansea  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bf0095801  Permit Version: 1  Effective Date: 12th November 1973  Issued Date: 12th November 1973  Revocation Date: Not Supplied  Discharge Type: Unspecified  Discharge: Into Land  Environment:  Receiving Water: To Land Nr. River Loughor  <b>Status: Consent expired</b>  Positional Accuracy: Located by supplier to within 100m</p>	A13SW (S)	140	2	257700 199100
2	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Heol Pentre Bach Cso Gorseinon, Swansea, Wales  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bp0316901  Permit Version: 1  Effective Date: 27th February 2004  Issued Date: 27th February 2004  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Trib Of Loughor Estuary  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A8NW (S)	233	2	257710 199002

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Heol Pentre Bach Cso Gorseinon, Swansea, Wales  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bp0316901  Permit Version: 1  Effective Date: 27th February 2004  Issued Date: 27th February 2004  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Trib Of Loughour Estuary  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A8NW (S)	233	2	257710 199002
2	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Borough Road Cso Gorseinon Swansea, Nr 10 Borough Rd, Loughor, Swansea, Wales, Sa4 6rp  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bp0317001  Permit Version: Not Supplied  Effective Date: 11th October 2019  Issued Date: 11th October 2019  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Unnamed Tributary Of The Loughor Estuary Via Surface Water Sewer  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A8NW (S)	234	2	257710 199001
2	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Heol Pentre Bach Cso Gorseinon, Nr 7 Heol Pentre Bach, Swansea, Sa4 4za  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bp0316901  Permit Version: Not Supplied  Effective Date: 21st August 2019  Issued Date: 21st August 2019  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Unnamed Tributary Of The Loughor Estuary Via Surface Water Sewer  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A8NW (S)	234	2	257710 199001
2	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Borough Road Cso Gorseinon Swansea, Gorseinon, Wales  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bp0317001  Permit Version: 1  Effective Date: 31st March 2004  Issued Date: 27th February 2004  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Unnamed Trib Of River Loughour  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A8NW (S)	234	2	257710 199001

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Borough Road Cso Gorseinon Swansea, Gorseinon, Wales  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bp0317001  Permit Version: 1  Effective Date: 31st March 2004  Issued Date: 27th February 2004  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Unnamed Trib Of River Loughour  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A8NW (S)	234	2	257710 199001
3	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Cso Brynafon Road, Nr 2 Clos Brynafon, Gorseinon, Sa4 4bf  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bw2301701  Permit Version: Not Supplied  Effective Date: 15th July 2022  Issued Date: 15th July 2022  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Unnamed Tidal Tributary Of The Loughour Estuary Via Surface-Water Sewer  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A13SW (SW)	252	2	257470 199115
3	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Not Supplied  Location: Cso Brynafon Road Gorseinon Swansea, Combined Sewer Overflow, Brynafon Road, Gorseinon  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bw2301701  Permit Version: 2  Effective Date: 14th December 2004  Issued Date: 14th December 2004  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Unnamed Stream To Loughor Estu  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A13SW (SW)	252	2	257470 199115
3	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Not Supplied  Location: Cso Brynafon Road Gorseinon Swansea, Combined Sewer Overflow, Brynafon Road, Gorseinon  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bw2301701  Permit Version: 2  Effective Date: 14th December 2004  Issued Date: 14th December 2004  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Unnamed Stream To Loughor Estu  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A13SW (SW)	252	2	257470 199115

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Swo. Gwyn Faen Loughor (Soc 4).  Authority: Natural Resources Wales  Catchment Area: River Loughor  Reference: BW2301701  Permit Version: 1  Effective Date: 24th January 1967  Issued Date: 24th January 1967  Revocation Date: 13th December 2004  Discharge Type: Unspecified  Discharge: Not Supplied  Environment:  Receiving Water: Unnamed Stream To Loughor Estu  <b>Status: New Consent, by Application (Water Resources Act 1991, Section 88)</b>  Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	258	2	257460 199118
4	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewage Disposal Works - Water Company  Location: Llannant Stw  Authority: Natural Resources Wales  Catchment Area: River Loughor  Reference: BC0018601  Permit Version: 1  Effective Date: 25th May 1983  Issued Date: 25th May 1983  Revocation Date: 1st April 2005  Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company  Discharge: Not Supplied  Environment:  Receiving Water: Loughor Estuary  <b>Status: New Consent, by Application (Water Resources Act 1991, Section 88)</b>  Positional Accuracy: Located by supplier to within 100m</p>	A12NE (W)	500	2	257200 199500
5	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Swo. Near Loughor Crossroads  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bw2301101  Permit Version: 2  Effective Date: 8th September 2010  Issued Date: 8th September 2010  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Loughor Estuary  <b>Status: Surrendered</b>  Positional Accuracy: Located by supplier to within 10m</p>	A8SE (S)	609	2	257890 198620
5	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Swo. Near Loughor Crossroads  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bw2301101  Permit Version: 2  Effective Date: 8th September 2010  Issued Date: 8th September 2010  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Loughor Estuary  <b>Status: Surrendered</b>  Positional Accuracy: Located by supplier to within 10m</p>	A8SE (S)	609	2	257890 198620

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Swo. Near Loughor Crossroads  Authority: Natural Resources Wales  Catchment Area: River Loughor  Reference: BW2301201  Permit Version: 1  Effective Date: 20th October 1989  Issued Date: 20th October 1989  Revocation Date: 31st March 2004  Discharge Type: Unspecified  Discharge: Not Supplied  Environment:  Receiving Water: Parish Boundary Stream  <b>Status: Revoked (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 100m</p>	A8SE (S)	609	2	257890 198620
5	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Swo. Near Loughor Crossroads  Authority: Natural Resources Wales  Catchment Area: River Loughor  Reference: BW2301101  Permit Version: 1  Effective Date: 20th October 1989  Issued Date: 20th October 1989  Revocation Date: 7th September 2010  Discharge Type: Public Sewage: Storm Sewage Overflow  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Parish Boundary Stream  <b>Status: New Consent, by Application (Water Resources Act 1991, Section 88)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A8SE (S)	609	2	257890 198620
6	<p><b>Discharge Consents</b></p> <p>Operator: Stevens M  Property Type: Livestock Production, Food Production  Location: Llannant Farm Penyrheol Gorseinon S, Penyrheol Gorseinon Swansea  Authority: Natural Resources Wales  Catchment Area: River Loughor  Reference: Bd0025901  Permit Version: 1  Effective Date: 20th May 1975  Issued Date: 20th May 1975  Revocation Date: 13th February 1992  Discharge Type: Unspecified  Discharge: Not Supplied  Environment:  Receiving Water: 6 Inch Concrete Pipe To 12 Inch Culver  <b>Status: Consent expired</b>  Positional Accuracy: Located by supplier to within 10m</p>	A18NW (N)	615	2	257650 200100
7	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewage Disposal Works  Location: Llannant Wwtw Llannant Road Swansea Settled Storm, Llanant Wwtw, Llanant Rd, Gorseinon, Swansea, Sa4 4gd  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bp0341501  Permit Version: Not Supplied  Effective Date: 1st May 2020  Issued Date: 1st May 2020  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Freshwater Estuary  Environment:  Receiving Water: Un-Named Tributary Of The Loughor Estuary  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	617	2	257336 199894



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewage Disposal Works  Location: Llannant Wwtw Llannant Road Swansea, Llannant Road, Sa4 4nd  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bc0018601  Permit Version: Not Supplied  Effective Date: 25th May 2017  Issued Date: 25th May 2017  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Not Supplied  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	617	2	257336 199894
7	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewage Disposal Works  Location: Llannant Wwtw Llannant Road Swansea, Llannant Road, Sa4 4nd  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bc0018601  Permit Version: 6  Effective Date: 25th May 2017  Issued Date: 25th May 2017  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Unnamed Trib Of Loughor Est'Y  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	617	2	257336 199894
7	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewage Disposal Works  Location: Llannant Wwtw Llannant Road Swansea, Llannant Road, Sa4 4nd  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bc0018601  Permit Version: Not Supplied  Effective Date: 25th May 2017  Issued Date: 25th May 2017  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Unnamed Trib Of Loughor Est'Y  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	617	2	257336 199894
7	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewage Disposal Works - Water Company  Location: Llannant Wwtw Llannant Road Swansea, Llannant Road, Sa4 4nd  Authority: Natural Resources Wales  Catchment Area: River Loughor  Reference: Bc0018601  Permit Version: 5  Effective Date: 21st July 2010  Issued Date: 21st June 2010  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Unnamed Trib Of Loughor Est'Y  <b>Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	617	2	257336 199894

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewage Disposal Works - Water Company  Location: Llannant Wwtw Llannant Road Swansea, Llannant Road, Sa4 4nd  Authority: Natural Resources Wales  Catchment Area: River Loughor  Reference: Bc0018601  Permit Version: 4  Effective Date: 1st January 2010  Issued Date: 26th June 2009  Revocation Date: 20th June 2010  Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Unnamed Trib Of Loughor Est'Y  <b>Status:</b> <b>Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	617	2	257336 199894
7	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewage Disposal Works - Water Company  Location: Llannant Wwtw Llannant Road Swansea, Llannant Road, Sa4 4nd  Authority: Natural Resources Wales  Catchment Area: River Loughor  Reference: Bc0018601  Permit Version: 3  Effective Date: 31st January 2006  Issued Date: 31st January 2006  Revocation Date: 31st January 2009  Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Unnamed Trib Of Loughor Est'Y  <b>Status:</b> <b>Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	617	2	257336 199894
7	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewage Disposal Works  Location: Llannant Wwtw Llannant Road Swansea, Llannant Road, Sa4 4nd  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bp0341501  Permit Version: 1  Effective Date: 31st March 2005  Issued Date: 23rd March 2005  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Freshwater Estuary  Environment:  Receiving Water: Un-Named Trib Loughor Estuary  <b>Status:</b> <b>Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	617	2	257336 199894
7	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewage Disposal Works - Water Company  Location: Llannant Wwtw Llannant Road Swansea, Llannant Road, Sa4 4nd  Authority: Natural Resources Wales  Catchment Area: River Loughor  Reference: Bc0018601  Permit Version: 2  Effective Date: 31st March 2005  Issued Date: 23rd March 2005  Revocation Date: 30th January 2006  Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Unnamed Trib Of Loughor Est'Y  <b>Status:</b> <b>Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	617	2	257336 199894

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewage Disposal Works  Location: Llannant Wwtw Llannant Road Swansea, Llannant Road, Sa4 4nd  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bp0341501  Permit Version: 1  Effective Date: 31st March 2005  Issued Date: 23rd March 2005  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Freshwater Estuary  Environment:  Receiving Water: Un-Named Trib Loughor Estuary  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	617	2	257336 199894
8	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Swo. 100 Yds U/S Of Broadoak C  Authority: Natural Resources Wales  Catchment Area: BURRY INLET INNER  Reference: BW2301401  Permit Version: 1  Effective Date: 24th November 1966  Issued Date: 24th November 1966  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: River Loughor  <b>Status: Surrendered</b>  Positional Accuracy: Located by supplier to within 100m</p>	A7NW (SW)	825	2	257050 198724
8	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Swo. 100 Yds U/S Of Broadoak C  Authority: Natural Resources Wales  Catchment Area: BURRY INLET INNER  Reference: Bw2301401  Permit Version: 1  Effective Date: 24th November 1966  Issued Date: 24th November 1966  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: River Loughor  <b>Status: Surrendered</b>  Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	825	2	257050 198724
8	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Ben Hughes Foundry Cso, Nr 5 Bwlch Road, Loughor, Swansea, Sa4 6sa  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bp0315201  Permit Version: Not Supplied  Effective Date: 26th August 2022  Issued Date: 26th August 2022  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Loughor Estuary  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	854	2	257026 198708

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Ben Hughes Foundry Cso Opp Rev Jame, Opp Reverend James Public House, Loughour, Swansea  Authority: Natural Resources Wales  Catchment Area: BURRY INLET INNER  Reference: Bp0315201  Permit Version: 1  Effective Date: 27th February 2004  Issued Date: 27th February 2004  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Loughour Estuary  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	854	2	257026 198708
8	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Sewerage Network - Sewers - Water Company  Location: Ben Hughes Foundry Cso Opp Rev Jame, Opp Reverend James Public House, Loughour, Swansea  Authority: Natural Resources Wales  Catchment Area: BURRY INLET INNER  Reference: Bp0315201  Permit Version: 1  Effective Date: 27th February 2004  Issued Date: 27th February 2004  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Loughour Estuary  <b>Status: Effective</b>  Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	854	2	257026 198708
9	<p><b>Discharge Consents</b></p> <p>Operator: Dwr Cymru Cyfyngedig  Property Type: Water Supply Grid  Location: Frampton Chlor.Overflow  Authority: Natural Resources Wales  Catchment Area: Not Supplied  Reference: Bp0181701  Permit Version: 1  Effective Date: 2nd October 1989  Issued Date: 2nd October 1989  Revocation Date: 14th March 1994  Discharge Type: Unspecified  Discharge: Not Supplied  Environment:  Receiving Water: To Land  <b>Status: Consent expired</b>  Positional Accuracy: Located by supplier to within 100m</p>	A19SE (NE)	958	2	258700 199900
	<p><b>Nearest Surface Water Feature</b></p>	A13NW (NW)	0	-	257720 199407
10	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given  Location: Running Through, Gwynfe  Authority: Environment Agency, Welsh Region  Pollutant: Rubble/Litter Or Solids  Note: Blocked Sewer  Incident Date: 17th June 1996  Incident Reference: 28741  Catchment Area: Not Given  Receiving Water: Not Given  Cause of Incident: Overflow  Incident Severity: Category 3 - Minor Incident  Positional Accuracy: Located by supplier to within 100m</p>	A13NE (N)	16	3	257800 199500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Council Premises            Location: Queensgate            Authority: Environment Agency, Welsh Region            Pollutant: Unknown            Note: Mechanical Failure            Incident Date: 11th June 1992            Incident Reference: 4785            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Overflow            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	44	3	257700 199200
12	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Location Description Not Available            Authority: Environment Agency, Welsh Region            Pollutant: Unknown            Note: Inadequate Design/Capacity            Incident Date: 14th May 1992            Incident Reference: 4621            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A13SE (S)	132	3	257800 199100
13	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Council Premises            Location: Queensgate, Housing Estate Pumping Station            Authority: Environment Agency, Welsh Region            Pollutant: Unknown            Note: Mechanical Failure            Incident Date: 1st June 1992            Incident Reference: 4780            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Bypass Of Treatment Facilities            Incident Severity: Category 2 - Significant Incident            Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	178	3	257600 199100
13	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Gwynfe Road            Authority: Environment Agency, Welsh Region            Pollutant: Crude Sewage            Note: Not Supplied            Incident Date: 19th July 1991            Incident Reference: 1071            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 2 - Significant Incident            Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	183	3	257600 199095
14	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Water Company Sewage: Other            Location: Gwynfe Road, LOUGHOR            Authority: Environment Agency, Welsh Region            Pollutant: Mud/Clay/Soil            Note: Not Supplied            Incident Date: 5th October 1991            Incident Reference: 1606            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	184	3	257500 199200
14	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Location Description Not Available            Authority: Environment Agency, Welsh Region            Pollutant: Crude Sewage            Note: Not Supplied            Incident Date: 17th November 1991            Incident Reference: 1624            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 2 - Significant Incident            Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	186	3	257500 199195

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Water Company Sewage: Storm Overflow            Location: Crossing Gwynfe Road, LOUGHOR            Authority: Environment Agency, Welsh Region            Pollutant: Washery Effluent            Note: Not Supplied            Incident Date: 21st February 1991            Incident Reference: 2448            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Spillage            Incident Severity: Category 2 - Significant Incident            Positional Accuracy: Located by supplier to within 100m</p>	A13SW (S)	188	3	257700 199050
16	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Land            Location: Adjacent 9 Gwynfe Road, LOUGHOR            Authority: Environment Agency, Welsh Region            Pollutant: Light Oil            Note: Not Supplied            Incident Date: 27th July 1991            Incident Reference: 1098            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 2 - Significant Incident            Positional Accuracy: Located by supplier to within 100m</p>	A8NW (S)	231	3	257705 199005
16	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Land            Location: Queensgate            Authority: Environment Agency, Welsh Region            Pollutant: Sullage            Note: Not Supplied            Incident Date: 31st July 1991            Incident Reference: 1099            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 2 - Significant Incident            Positional Accuracy: Located by supplier to within 100m</p>	A8NW (S)	232	3	257700 199005
16	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: The River            Authority: Environment Agency, Welsh Region            Pollutant: Oils - Diesel (Including Agricultural)            Note: Not Supplied            Incident Date: 15th January 1996            Incident Reference: 27126            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A8NW (S)	233	3	257695 199005
16	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Pentrebach Farm, LOUGHOR            Authority: Environment Agency, Welsh Region            Pollutant: Unknown            Note: Not Supplied            Incident Date: 3rd October 1991            Incident Reference: 1617            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A8NW (S)	236	3	257705 199000
16	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Miscellaneous Premises: Surface Runoff            Location: Bach Farm, Queensgate, PENTRE            Authority: Environment Agency, Welsh Region            Pollutant: Oils - Petrol            Note: Weather            Incident Date: 8th April 1992            Incident Reference: 4050            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Runoff            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A8NW (S)	237	3	257700 199000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Land            Location: Location Description Not Available            Authority: Environment Agency, Welsh Region            Pollutant: Unknown            Note: Not Supplied            Incident Date: 27th July 1991            Incident Reference: 1321            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A8NW (S)	238	3	257695 199000
16	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Down Stream Of Queensgate, Village Gwynfe Road, LOUGHOR            Authority: Environment Agency, Welsh Region            Pollutant: Sewage - Treated Effluent            Note: Not Supplied            Incident Date: 24th February 1992            Incident Reference: 3692            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 2 - Significant Incident            Positional Accuracy: Located by supplier to within 100m</p>	A8NW (S)	241	3	257705 198995
16	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Council Premises            Location: 50 Yards Up Stream Of, Gwynfe Road            Authority: Environment Agency, Welsh Region            Pollutant: Agricultural: Silage Liquor            Note: Mechanical Failure            Incident Date: 28th June 1992            Incident Reference: 4813            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Overflow            Incident Severity: Category 2 - Significant Incident            Positional Accuracy: Located by supplier to within 100m</p>	A8NW (S)	242	3	257700 198995
16	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Location Description Not Available            Authority: Environment Agency, Welsh Region            Pollutant: Stagnant Water            Note: Not Supplied            Incident Date: 7th October 1991            Incident Reference: 1578            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A8NW (S)	243	3	257695 198995
16	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Council Premises            Location: Location Description Not Available            Authority: Environment Agency, Welsh Region            Pollutant: Unknown            Note: Weather            Incident Date: 20th April 1992            Incident Reference: 4518            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Overflow            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A8NW (S)	245	3	257705 198990
16	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Location Description Not Available            Authority: Environment Agency, Welsh Region            Pollutant: Unknown            Note: Not Supplied            Incident Date: 3rd October 1991            Incident Reference: 1617            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A8NW (S)	248	3	257695 198990

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Road (Lost Load)            Location: Location Description Not Available            Authority: Environment Agency, Welsh Region            Pollutant: Light Oil            Note: Accidental Spillage/Leakage            Incident Date: 19th May 1992            Incident Reference: 4624            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Spillage            Incident Severity: Category 2 - Significant Incident            Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	239	3	257505 199095
17	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Through Queensgate Estate            Authority: Environment Agency, Welsh Region            Pollutant: Unknown            Note: Weather            Incident Date: 10th March 1992            Incident Reference: 3934            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Runoff            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	239	3	257500 199100
17	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Road (Lost Load)            Location: Location Description Not Available            Authority: Environment Agency, Welsh Region            Pollutant: Crude Sewage            Note: Accidental Spillage/Leakage            Incident Date: 19th May 1992            Incident Reference: 4624            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Spillage            Incident Severity: Category 2 - Significant Incident            Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	242	3	257500 199095
18	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Pencefnarda Farm, Down Alongside Access Road            Authority: Environment Agency, Welsh Region            Pollutant: Farm Effluent/Slurry            Note: Tributary Of River Loughor; Direct Introduction            Incident Date: 11th February 1998            Incident Reference: 34754            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Inadequate Design/Capacity            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A18SE (NE)	477	3	258100 199900
19	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Hendy Stw/Llanant Stw, PONTARDAWE            Authority: Environment Agency, Welsh Region            Pollutant: Crude Sewage            Note: Inadequate Design/Capacity            Incident Date: 26th March 1996            Incident Reference: 27996            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Overflow            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A18SW (NW)	504	3	257500 199895
19	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Water Company Sewage: Other            Location: Hendy Sewage Works            Authority: Environment Agency, Welsh Region            Pollutant: Crude Sewage            Note: Inadequate Design/Capacity            Incident Date: 26th March 1996            Incident Reference: 27996            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Overflow            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A18SW (NW)	508	3	257500 199900



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Rear Gower Field Road, GORSEINON            Authority: Environment Agency, Welsh Region            Pollutant: Stagnant Water            Note: Drainage Ditch At Gorseinon; Natural Occurrence            Incident Date: 1st August 1997            Incident Reference: 33236            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Natural Causes            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A19SW (NE)	557	3	258300 199800
21	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Water Company Sewage: Sewerage            Location: Gwynfe Road Crossing            Authority: Environment Agency, Welsh Region            Pollutant: Industrial Solid Waste            Note: Emergency Overflow            Incident Date: 28th September 1991            Incident Reference: 1575            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Overflow            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A8SE (S)	679	3	257800 198550
22	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: On Footpath To, Gwyd Place From, Rev James Pub            Authority: Environment Agency, Welsh Region            Pollutant: Unknown            Note: River Loughor            Incident Date: 19th August 1997            Incident Reference: 33303            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A7SE (SW)	899	3	257200 198500
23	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Glanymor Park, Near Loughor Estuary            Authority: Environment Agency, Welsh Region            Pollutant: Heavy Fuel Oil            Note: River Loughor            Incident Date: 23rd September 1997            Incident Reference: 33854            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A7SW (SW)	911	3	257050 198600
24	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Ddol Farm, Duvant 3 Bridges            Authority: Environment Agency, Welsh Region            Pollutant: Sewage Debris/Litter            Note: Not Supplied            Incident Date: 21st February 1995            Incident Reference: 23089            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Unknown            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A9SW (SE)	983	3	258400 198400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Water Abstractions</b> Operator: British Steel Plc Licence Number: 22/59/4/0053 Permit Version: 100 Location: River Lliw At Point C Authority: Environment Agency, Welsh Region Abstraction: Metal: General Use Relating To Secondary Category (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Mill Leat Of River Lliw Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 4th January 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A5NE (SE)	1841	3	259400 198200
	<b>Water Abstractions</b> Operator: British Steel Plc Licence Number: 22/59/4/0053 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, Welsh Region Abstraction: Metal: General Use Relating To Secondary Category (Medium Loss) Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 249 Yearly Rate (m3): 90920 Details: River Lliw At Point C Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A5NE (SE)	1841	3	259400 198200
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: <3m Superficial Recharge: Medium	A13SE (NW)	0	2	257787 199348
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	A13SE (NW)	0	2	257787 199348
	<b>Superficial Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - Undifferentiated	A13SE (NW)	0	2	257787 199348
	<b>Extreme Flooding from Rivers or Sea without Defences</b> Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	120	2	257593 199176
	<b>Flooding from Rivers or Sea without Defences</b> Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	124	2	257589 199174
	<b>Areas Benefiting from Flood Defences</b> None				
	<b>Flood Water Storage Areas</b> None				
	<b>Flood Defences</b> Type: Flood Defences Reference: Not Supplied	A13SW (SW)	241	2	257518 199080

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 176.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SE (S)	0	4	257794 199234
26	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 9.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13NW (NW)	0	4	257720 199407
27	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 229.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13NW (NW)	0	4	257720 199407
28	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 28.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	3	4	257671 199263
29	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 57.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13NW (NW)	9	4	257710 199407
30	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 88.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (W)	17	4	257657 199360
31	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 308.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	26	4	257645 199274
32	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 13.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (W)	30	4	257669 199367
33	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 84.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13NE (N)	73	4	257874 199565

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
34	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 6.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13NE (NE)	77	4	257878 199565
35	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 14.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13NE (NE)	82	4	257884 199567
36	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 6.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13NE (NE)	95	4	257898 199570
37	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 11.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13NE (NE)	100	4	257904 199571
38	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 98.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13NE (NE)	111	4	257916 199573
39	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 3.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13NE (N)	143	4	257881 199642
40	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 201.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13NE (N)	146	4	257882 199645
41	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 215.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	151	4	257616 199123
42	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 7.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	169	4	257640 199089

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 27.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	173	4	257645 199083
44	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 2.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	197	4	257643 199058
45	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 33.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	199	4	257643 199055
46	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 27.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A8NW (S)	210	4	257720 199023
47	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 67.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A8NW (S)	226	4	257673 199018
48	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 106.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	233	4	257592 199042
49	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 1.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A8NW (S)	234	4	257707 199001
50	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 43.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	245	4	257485 199109
51	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 10.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	273	4	257443 199116

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
52	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 30.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	275	4	257487 199062
53	<b>OS Water Network Lines</b> Watercourse Form: Foreshore Watercourse Length: 1.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SE (SW)	279	4	257433 199121
54	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 174.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SE (SW)	279	4	257433 199121
55	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 7.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SE (SW)	281	4	257432 199120
56	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 42.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SE (SW)	285	4	257432 199112
57	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 48.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SE (SW)	286	4	257429 199114
58	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 12.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	293	4	257448 199077
59	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 7.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	296	4	257454 199066
60	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 8.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	298	4	257457 199059

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
61	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 137.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A13SW (SW)	302	4	257460 199051
62	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 66.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SE (W)	320	4	257351 199273
63	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 27.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SE (W)	334	4	257339 199244
64	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 50.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SE (W)	360	4	257312 199246
65	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 254.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SE (W)	384	4	257294 199200
66	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 8.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A8NW (SW)	399	4	257458 198930
67	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 66.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A8NW (SW)	402	4	257463 198923
68	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 32.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A7NE (SW)	403	4	257376 198993
69	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A8NW (SW)	429	4	257500 198869

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
70	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 125.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A8NW (SW)	431	4	257502 198865
71	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A7NE (SW)	435	4	257356 198968
72	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 47.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A7NE (SW)	437	4	257351 198970
73	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 191.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SE (W)	444	4	257230 199369
74	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 194.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SE (SW)	468	4	257267 199032
75	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 122.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NE (W)	525	4	257179 199516
76	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 104.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NE (W)	525	4	257179 199516
77	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 223.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A18NE (N)	541	4	257886 200047
78	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 258.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SE (W)	541	4	257129 199292



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
79	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 101.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SE (NW)	561	4	257284 199761
80	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 207.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A7NE (SW)	581	4	257265 198852
81	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 250.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SW (W)	597	4	257089 199136
82	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 87.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 1	A12SW (W)	599	4	257085 199147
83	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 1.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 1	A12SW (W)	599	4	257085 199147
84	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 89.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	601	4	257076 199411
85	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 81.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NE (NW)	603	4	257149 199633
86	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 213.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SE (NW)	604	4	257383 199923
87	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 101.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NE (W)	607	4	257110 199565

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
88	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 96.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SW (W)	609	4	257066 199204
89	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 45.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SW (W)	609	4	257066 199204
90	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 1.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NE (W)	611	4	257114 199582
91	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 40.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A7NE (SW)	612	4	257153 198942
92	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 39.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NE (W)	613	4	257112 199582
93	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SW (W)	616	4	257054 199338
94	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 1.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NE (W)	631	4	257110 199621
95	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 8.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NE (W)	633	4	257108 199621
96	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 1.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NE (NW)	636	4	257109 199630

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
97	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 18.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NE (NW)	636	4	257109 199630
98	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 90.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NE (NW)	637	4	257107 199630
99	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 1.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NE (NW)	643	4	257112 199649
100	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 106.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NE (NW)	643	4	257112 199649
101	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 61.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NE (NW)	644	4	257110 199649
102	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 71.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SE (NW)	649	4	257235 199839
103	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 26.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A18NW (N)	650	4	257686 200145
104	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 17.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SE (NW)	654	4	257192 199795
105	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 43.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	656	4	257042 199515

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
106	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 254.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12SW (W)	657	4	257014 199345
107	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 52.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	666	4	257038 199540
108	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 93.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SE (NW)	670	4	257176 199799
109	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 94.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 1	A12SW (W)	675	4	257005 199158
110	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 1.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 1	A12SW (W)	675	4	257006 199159
111	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 39.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A8SE (S)	695	4	257847 198534
112	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 155.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	697	4	257024 199590
113	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 91.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (NW)	703	4	257070 199696
114	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 56.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	706	4	256982 199481

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
115	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 11.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 2	A17SW (NW)	709	4	257093 199744
116	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 1.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	709	4	257093 199744
117	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 42.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	711	4	257092 199745
118	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 17.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	711	4	256987 199522
119	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 8.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	712	4	257097 199755
120	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 53.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	713	4	256999 199570
121	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 102.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	713	4	257000 199571
122	<b>OS Water Network Lines</b> Watercourse Form: Foreshore Watercourse Length: 1.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	713	4	257000 199571
123	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 9.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	718	4	257095 199763

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
124	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 158.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 1	A12SW (W)	721	4	256948 199284
125	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 21.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	722	4	256977 199528
126	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 1.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	724	4	257095 199773
127	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 115.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 2	A17SW (NW)	724	4	257095 199773
128	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 64.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	725	4	257093 199772
129	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 393.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 2	A12SW (W)	733	4	256937 199335
130	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 1081.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 1	A7NW (SW)	735	4	257004 198959
131	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 1.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	740	4	257052 199739
132	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 132.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	740	4	257052 199739

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
133	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 82.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	741	4	257052 199740
134	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 1.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	754	4	256932 199474
135	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 76.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	755	4	256930 199474
136	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 93.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A9NE (SE)	762	4	258461 198745
137	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 10.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	763	4	257033 199750
138	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 54.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	763	4	257033 199750
139	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 15.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	770	4	257031 199760
140	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 42.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (NW)	773	4	256985 199690
141	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 24.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	777	4	257042 199788

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
142	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 47.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	780	4	257028 199775
143	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 49.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	781	4	257041 199794
144	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 23.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	786	4	256982 199711
145	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 3.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	792	4	256909 199546
146	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 31.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	794	4	256907 199545
147	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 86.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	794	4	256983 199729
148	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 5.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	794	4	256983 199729
149	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 72.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	797	4	256983 199735
150	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 3.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	813	4	257053 199873



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
151	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 44.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	813	4	257053 199873
152	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 49.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	813	4	256899 199586
153	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 51.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	813	4	256899 199586
154	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 101.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	815	4	257050 199872
155	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 50.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	817	4	256909 199627
156	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 51.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	820	4	257022 199838
157	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 32.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	823	4	256985 199788
158	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 39.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	823	4	256877 199545
159	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 46.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	844	4	256879 199621

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
160	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 68.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	847	4	256976 199818
161	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 71.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	848	4	256910 199706
162	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 87.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	849	4	256904 199695
163	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 112.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	851	4	257010 199878
164	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 4.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	854	4	257025 199905
165	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 26.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	854	4	257025 199905
166	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 58.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	856	4	256837 199522
167	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 133.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	856	4	256845 199552
168	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 25.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	864	4	256925 199769

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
169	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 27.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	870	4	257024 199931
170	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 219.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	870	4	257028 199937
171	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 89.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	888	4	256930 199822
172	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 47.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	891	4	256997 199929
173	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 166.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17NE (NW)	893	4	257125 200075
174	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 41.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	896	4	256880 199754
175	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 39.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	896	4	256880 199754
176	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 21.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	897	4	256928 199835
177	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 62.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A7SE (SW)	909	4	257133 198534

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
178	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 28.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	913	4	256853 199739
179	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 4.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	914	4	256822 199670
180	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 150.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	916	4	256817 199663
181	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 28.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	917	4	256818 199669
182	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 15.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (W)	923	4	256834 199722
183	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 14.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	924	4	256867 199789
184	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 38.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	925	4	256889 199825
185	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 60.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	931	4	256950 199932
186	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 29.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	931	4	256950 199932

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
187	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 8.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	932	4	256868 199806
188	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 2.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (W)	933	4	256829 199734
189	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 45.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	935	4	256862 199802
190	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 26.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (W)	935	4	256828 199736
191	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 11.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A7SW (SW)	938	4	257082 198536
192	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 56.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	943	4	256799 199690
193	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 101.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A12NW (W)	943	4	256799 199690
194	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 20.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	948	4	256875 199848
195	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 36.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	952	4	256895 199885

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
196	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 107.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 2	A17SW (NW)	957	4	256922 199936
197	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 77.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	957	4	256922 199936
198	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 36.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (W)	960	4	256807 199750
199	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 14.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	965	4	256836 199816
200	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 28.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	966	4	256864 199863
201	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 1.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	978	4	256860 199879
202	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 29.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	978	4	256860 199879
203	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 5.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	979	4	256858 199879
204	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 39.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	982	4	256853 199877

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
205	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 214.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 2	A17NW (NW)	984	4	257047 200126
206	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 8.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 2	A17NW (NW)	987	4	257054 200136
207	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 60.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	988	4	256805 199809
208	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 89.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 1	A17NW (NW)	989	4	257058 200144
209	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 133.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17NE (NW)	994	4	257139 200229
210	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 20.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	996	4	256805 199824
211	<b>OS Water Network Lines</b> Watercourse Form: Tidal river Watercourse Length: 59.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A17SW (NW)	996	4	256805 199824
212	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 21.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Loughor Primacy: 1	A16SE (W)	998	4	256750 199717

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
213	<p><b>BGS Recorded Landfill Sites</b></p> <p>Site Name: Llannant Tip            Location: Curst-y-canre Farm, Glamorgan            Authority: British Geological Survey, National Geoscience Information Service            Ground Water: No threat to ground water            Surface Water: No threat to surface water            Geology: N/A            Positional Accuracy: Positioned by the supplier            Boundary Accuracy: Moderate</p>	A18SW (NW)	527	-	257477 199906
214	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: Lliw Valley Council            Location: Gorseinon            Name: Cwrt Y Carne Farm            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD14461            First Input Date: 31st December 1985            Last Input Date: 31st December 1993            Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial, Household and Special Waste            EA Waste Ref: 0            Regis Ref: Not Supplied            WRC Ref: 6855/0012            BGS Ref: Not Supplied            Other Ref: Not Supplied</p>	A18SW (NW)	524	2	257486 199909
215	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: Not Supplied            Location: Curst-y-canre Farm, Glamorgan            Name: Llannant Tip            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD31172            First Input Date: Not Supplied            Last Input Date: Not Supplied            Specified Waste Type: Deposited Waste included Commercial Waste            EA Waste Ref: 0            Regis Ref: Not Supplied            WRC Ref: Not Supplied            BGS Ref: 1206            Other Ref: Not Supplied</p>	A18SW (NW)	527	2	257477 199906
216	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: Lliw Valley Council            Location: Gorseinon            Name: Cwrt Y Carne Farm            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD14462            First Input Date: 31st December 1985            Last Input Date: 31st December 1993            Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial, Household and Special Waste            EA Waste Ref: 0            Regis Ref: Not Supplied            WRC Ref: 6855/0012            BGS Ref: Not Supplied            Other Ref: Not Supplied</p>	A17SE (NW)	612	2	257355 199915
217	<p><b>Licensed Waste Management Facilities (Locations)</b></p> <p>Licence Number: GP3597SN            Location: Penyrheol, Gorseinon, Swansea, West Glamorgan, SA4 4FY            Operator Name: J H Jenkins &amp; Sons            Operator Location: Not Supplied            Authority: Natural Resources Wales            Site Category: Other Landfill Sites Taking Special Waste  <b>Licence Status: Effective</b>            Issued: 7th March 2011            Last Modified: Not Supplied            Expires: Not Supplied            Suspended: Not Supplied            Revoked: Not Supplied            Surrendered: Not Supplied            IPPC Reference: Not Supplied            Positional Accuracy: Approximate location provided by supplier</p>	A18SE (N)	520	2	258000 200000



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
217	<p><b>Licensed Waste Management Facilities (Locations)</b></p> <p>Licence Number: 101553            Location: Pencefnarda Uchaf Farm, Penyrheol, Gorseinon, Swansea, SA4 4FY            Operator Name: J H Jenkins &amp; Sons            Operator Location: Not Supplied            Authority: Natural Resources Wales            Site Category: Other Landfill Sites Taking Special Waste  <b>Licence Status: Issued</b>            Issued: 7th March 2011            Last Modified: Not Supplied            Expires: Not Supplied            Suspended: Not Supplied            Revoked: Not Supplied            Surrendered: Not Supplied            IPPC Reference: Not Supplied            Positional Accuracy: Approximate location provided by supplier</p>	A18SE (N)	520	2	258000 200000
	<p><b>Local Authority Landfill Coverage</b></p> <p>Name: City and County of Swansea            - Has no landfill data to supply</p>		0	5	257787 199348
218	<p><b>Potentially Infilled Land (Non-Water)</b></p> <p>Bearing Ref: S            Use: Unknown Filled Ground (Pit, quarry etc)            Date of Mapping: 1993</p>	A8NE (S)	277	-	257805 198953
219	<p><b>Potentially Infilled Land (Non-Water)</b></p> <p>Bearing Ref: SW            Use: Unknown Filled Ground (Pit, quarry etc)            Date of Mapping: 1993</p>	A7NE (SW)	512	-	257261 198961
220	<p><b>Potentially Infilled Land (Non-Water)</b></p> <p>Bearing Ref: NE            Use: Unknown Filled Ground (Pit, quarry etc)            Date of Mapping: 1993</p>	A14NW (NE)	560	-	258350 199703
221	<p><b>Potentially Infilled Land (Non-Water)</b></p> <p>Bearing Ref: E            Use: Unknown Filled Ground (Pit, quarry etc)            Date of Mapping: 1993</p>	A14NE (E)	611	-	258449 199505
222	<p><b>Potentially Infilled Land (Non-Water)</b></p> <p>Bearing Ref: NE            Use: Unknown Filled Ground (Pit, quarry etc)            Date of Mapping: 1993</p>	A19SW (NE)	639	-	258419 199745
223	<p><b>Potentially Infilled Land (Non-Water)</b></p> <p>Bearing Ref: S            Use: Unknown Filled Ground (Pit, quarry etc)            Date of Mapping: 1993</p>	A8SE (S)	778	-	257973 198458
224	<p><b>Potentially Infilled Land (Non-Water)</b></p> <p>Bearing Ref: SE            Use: Unknown Filled Ground (Pit, quarry etc)            Date of Mapping: 1993</p>	A9SW (SE)	872	-	258403 198538
225	<p><b>Potentially Infilled Land (Water)</b></p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)            Date of Mapping: 1951</p>	A13SE (S)	0	-	257802 199231
226	<p><b>Potentially Infilled Land (Water)</b></p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)            Date of Mapping: 1951</p>	A13SE (SE)	225	-	257987 199036
227	<p><b>Potentially Infilled Land (Water)</b></p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)            Date of Mapping: 1951</p>	A13SW (SW)	301	-	257461 199051
228	<p><b>Potentially Infilled Land (Water)</b></p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)            Date of Mapping: 1951</p>	A8NW (S)	383	-	257756 198847
229	<p><b>Potentially Infilled Land (Water)</b></p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)            Date of Mapping: 1891</p>	A14SW (SE)	395	-	258221 199042
230	<p><b>Potentially Infilled Land (Water)</b></p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)            Date of Mapping: 1891</p>	A8NE (SE)	401	-	258075 198884
231	<p><b>Potentially Infilled Land (Water)</b></p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)            Date of Mapping: 1951</p>	A8NW (SW)	409	-	257479 198903

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
232	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A8NE (SE)	438	-	258101 198856
233	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A8NE (S)	448	-	257968 198791
234	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A7NE (SW)	496	-	257248 199009
235	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A9NW (SE)	617	-	258387 198887
236	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A17SE (NW)	663	-	257216 199839
237	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1891	A14SE (E)	765	-	258619 199054
238	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1891	A9NE (SE)	778	-	258481 198743
239	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1891	A7SE (SW)	937	-	257210 198450
240	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A9SE (SE)	990	-	258564 198521
241	<b>Registered Landfill Sites</b> Licence Holder: Lliw Valley B.C. Licence Reference: . Site Location: Cwrt Y Carne Farm, Gorseinon, Swansea, West Glamorgan Licence Easting: 257500 Licence Northing: 200100 Operator Location: Civic Centre, Penllergaer, SWANSEA, West Glamorgan, SA4 2GH Authority: Environment Agency Wales, South West Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st June 1977 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Approved Trade Waste Civic Amenity/Refuse Amenity Waste Construction And Demolition Wastes Household Waste Prohibited Waste: Corrosive Waste Explosive Waste Highly Flammable Chemicals Toxic/Poisonous Wastes	A18NW (N)	674	3	257500 200100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS 1:625,000 Solid Geology</b> Description: South Wales Upper Coal Measures Formation	A13SE (NW)	0	1	257787 199348
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (NW)	0	1	257787 199348
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NE (S)	204	1	257787 199000
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A8NE (SE)	263	1	258000 199000
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NE (SW)	531	1	257213 199000
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18NE (N)	596	1	257919 200098
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A8SE (S)	628	1	258000 198615

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p><b>BGS Estimated Soil Chemistry</b></p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic 25 - 35 mg/kg</p> <p>Concentration:</p> <p>Cadmium 1.8 - 2.2 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: &lt;100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A14NE (E)	661	1	258500 199500
	<p><b>BGS Estimated Soil Chemistry</b></p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic 25 - 35 mg/kg</p> <p>Concentration:</p> <p>Cadmium &lt;1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: &lt;100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A17NE (NW)	691	1	257434 200080
	<p><b>BGS Estimated Soil Chemistry</b></p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic 15 - 25 mg/kg</p> <p>Concentration:</p> <p>Cadmium &lt;1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: &lt;100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A14NE (E)	781	1	258638 199412
	<p><b>BGS Estimated Soil Chemistry</b></p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic 15 - 25 mg/kg</p> <p>Concentration:</p> <p>Cadmium 1.8 - 2.2 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: &lt;100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A14NE (E)	880	1	258722 199500
242	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Pen-Cefn-Arda Isaf</p> <p>Location: Gorseinon, Swansea, West Glamorgan</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Reference: 153932</p> <p>Type: Opencast</p> <p><b>Status: Ceased</b></p> <p>Operator: Unknown Operator</p> <p>Operator Location: Not Supplied</p> <p>Periodic Type: Carboniferous</p> <p>Geology: Grovesend Formation</p> <p>Commodity: Sandstone</p> <p>Positional Accuracy: Located by supplier to within 10m</p>	A14NW (NE)	563	1	258354 199700
243	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Glan-Nant</p> <p>Location: Gorseinon, Swansea, West Glamorgan</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Reference: 153942</p> <p>Type: Opencast</p> <p><b>Status: Ceased</b></p> <p>Operator: Unknown Operator</p> <p>Operator Location: Not Supplied</p> <p>Periodic Type: Carboniferous</p> <p>Geology: Grovesend Formation</p> <p>Commodity: Sandstone</p> <p>Positional Accuracy: Located by supplier to within 10m</p>	A18NE (NE)	600	1	258083 200051

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
244	<b>BGS Recorded Mineral Sites</b> Site Name: Tir-Newydd Location: Gorseinon, Llanelli, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 153971 Type: Underground <b>Status: Ceased</b> Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SE (S)	780	1	257989 198458
245	<b>BGS Recorded Mineral Sites</b> Site Name: Broadoak Pit Location: Gorseinon, Llanelli, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 153970 Type: Underground <b>Status: Ceased</b> Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7SW (SW)	876	1	257055 198644
245	<b>BGS Recorded Mineral Sites</b> Site Name: Broadoak Colliery Location: Loughor, Gorseinon, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 188592 Type: Underground <b>Status: Ceased</b> Operator: Individual'S Name Withheld Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7SW (SW)	904	1	257023 198637
246	<b>BGS Recorded Mineral Sites</b> Site Name: Broadoak Colliery Location: Loughor, Gorseinon, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 188593 Type: Underground <b>Status: Ceased</b> Operator: Individual'S Name Withheld Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7SW (SW)	929	1	257028 198597
	<b>BGS Measured Urban Soil Chemistry</b> No data available				
	<b>BGS Urban Soil Chemistry Averages</b> No data available				
	<b>Coal Mining Affected Areas</b> Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13SE (NW)	0	6	257787 199348
	<b>Mining Instability</b> Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13SE (NW)	0	-	257787 199348
	<b>Non Coal Mining Areas of Great Britain</b> No Hazard				
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	257787 199348
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	113	1	257614 199167

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	257787 199348
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	113	1	257614 199167
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	257787 199348
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	257787 199348
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	187	1	257917 199672
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	243	1	258007 199670
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	257787 199348
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	113	1	257614 199167
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	187	1	257917 199672
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	257787 199348
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	113	1	257614 199167
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	210	1	257978 199657
	<b>Radon Potential - Radon Affected Areas</b> Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	257787 199348
	<b>Radon Potential - Radon Protection Measures</b> Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	257787 199348

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
247	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Jopling Coaches            Location: 64, Heol Pentre Bach, Gorseinon, Swansea, SA4 4ZA            Classification: Bus &amp; Coach Operators &amp; Stations  <b>Status:</b> Inactive            Positional Accuracy: Automatically positioned to the address</p>	A8NE (S)	298	-	257808 198932
248	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: P J Norman Haulage Ltd            Location: 19, Brynhyfryd Road, Gorseinon, Swansea, SA4 4XH            Classification: Road Haulage Services  <b>Status:</b> Inactive            Positional Accuracy: Automatically positioned to the address</p>	A14SW (SE)	447	-	258284 199051
249	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Fairfield Garage            Location: A, 177, Frampton Road, Gorseinon, Swansea, SA4 4YG            Classification: Garage Services  <b>Status:</b> Inactive            Positional Accuracy: Automatically positioned to the address</p>	A14NW (E)	494	-	258341 199433
249	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: A G B Repairs            Location: 177a, Frampton Road, Gorseinon, Swansea, SA4 4YG            Classification: Garage Services  <b>Status:</b> Inactive            Positional Accuracy: Automatically positioned to the address</p>	A14NW (E)	494	-	258341 199433
250	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Ironing Fairy            Location: 3, Banfield Terrace, Loughor, Swansea, SA4 6TF            Classification: Ironing &amp; Home Laundry Services  <b>Status:</b> Inactive            Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	530	-	257337 198855
251	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: J Car Autos Vw Audi &amp; German Car Specialists            Location: 189, Frampton Road, Gorseinon, Swansea, SA4 4YG            Classification: Garage Services  <b>Status:</b> Inactive            Positional Accuracy: Automatically positioned to the address</p>	A14NW (E)	539	-	258381 199471
251	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: One Stop Tyre            Location: 189, Frampton Road, Gorseinon, Swansea, SA4 4YG            Classification: Tyre Dealers  <b>Status:</b> Inactive            Positional Accuracy: Automatically positioned to the address</p>	A14NW (E)	539	-	258381 199471
251	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: L J Autoz            Location: 189, Frampton Road, Gorseinon, Swansea, SA4 4YG            Classification: Garage Services  <b>Status:</b> Active            Positional Accuracy: Automatically positioned to the address</p>	A14NW (E)	539	-	258381 199471
252	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Mrs Muscle            Location: 25, Brynamlwg Road, Gorseinon, Swansea, SA4 4UZ            Classification: Cleaning Services - Domestic  <b>Status:</b> Inactive            Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	549	-	258274 198855
253	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: S W A            Location: A, 1, Penybank, Gorseinon, Swansea, West Glamorgan, SA4 4FZ            Classification: Hi-Fi Equipment Manufacturers &amp; Distributors  <b>Status:</b> Inactive            Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	569	-	258314 199800
254	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Gorseinon Hospital            Location: Brynawel Road, Gorseinon, SWANSEA, SA4 4UU            Classification: Hospitals  <b>Status:</b> Active            Positional Accuracy: Automatically positioned to the address</p>	A9NE (SE)	637	-	258478 199025
255	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Crossroads            Location: Alexandra Road, Gorseinon, Swansea, SA4 4PF            Classification: Car Dealers - Used  <b>Status:</b> Inactive            Positional Accuracy: Automatically positioned to the address</p>	A8SE (S)	649	-	258017 198597

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
255	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: The Car Store            Location: Alexandra Road, Gorseinon, Swansea, West Glamorgan, SA4 4PF            Classification: Car Dealers - Used  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A8SE (S)	649	-	258017 198597
255	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Ritchie'S Laundry Services            Location: 1, Bryn Road, Loughor, Swansea, SA4 6PG            Classification: Laundries &amp; Launderettes  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A8SE (S)	679	-	258009 198564
256	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: S &amp; M Pallets            Location: 1, Bryneithin Road, Gorseinon, Swansea, SA4 4XA            Classification: Pallets, Crates &amp; Packing Cases  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	650	-	258262 198709
257	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Superfix            Location: 35, HAWTHORN AVENUE, GORSEINON, SWANSEA, SA4 4XD            Classification: Plant &amp; Machinery Repairs  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	696	-	258225 198629
258	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Parfumesque            Location: 150, Alexandra Road, Gorseinon, Swansea, SA4 4PE            Classification: Perfume Suppliers  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	719	-	258160 198570
258	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Leisure Launderette Services            Location: 173, Alexandra Road, Gorseinon, Swansea, SA4 4PE            Classification: Laundries &amp; Launderettes  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	744	-	258158 198543
259	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Gas Technical Services Uk            Location: 32, Princess Street, Gorseinon, Swansea, SA4 4US            Classification: Gas Appliances - Sales &amp; Service  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A9NE (SE)	810	-	258626 198927
260	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Swansea Nhs Trust            Location: Ty Eion, Princess Street, Gorseinon, Swansea, West Glamorgan, SA4 4US            Classification: Hospitals  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A9NE (SE)	818	-	258546 198764
261	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Mydentist Alexandra Road Swansea            Location: 104, ALEXANDRA ROAD, GORSEINON, SWANSEA, SA4 4NX            Classification: Hospitals  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A9SE (SE)	825	-	258449 198640
262	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Turners            Location: 13, Heol Pen y Scallen, Loughor, Swansea, SA4 6SE            Classification: Mot Testing Centres  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A7SE (SW)	866	-	257398 198435
263	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Frozen Joy            Location: 25, Heol Cae Tynewydd, Loughor, Swansea, SA4 6PW            Classification: Ice Cream Manufacturers &amp; Suppliers  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A3NE (S)	875	-	257773 198355
264	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Essential Oven Cleaning            Location: 26, Heol Cae Copyn, Loughor, Swansea, SA4 6SF            Classification: Oven cleaning  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A7SE (S)	918	-	257395 198380



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
265	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Chappell Rentals            Location: 19, Heol Maes y Bryn, Loughor, Swansea, SA4 6PL            Classification: Washing Machines - Servicing &amp; Repairs            Status: <b>Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A3NE (S)	974	-	257888 198256
266	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: All Print Swansea Ltd            Location: Pontardulais Road, Gorseinon, Swansea, SA4 4FE            Classification: Printers            Status: <b>Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A9NE (SE)	994	-	258759 198776
267	<p><b>Points of Interest - Commercial Services</b></p> <p>Name: P J Norman Haulage Ltd            Location: 19 Brynhyfryd Road, Gorseinon, Swansea, SA4 4XH            Category: Transport, Storage and Delivery            Class Code: Distribution and Haulage            Positional Accuracy: Positioned to address or location</p>	A14SW (SE)	447	7	258284 199051
268	<p><b>Points of Interest - Commercial Services</b></p> <p>Name: Fairfield Garage            Location: 177a Frampton Road, Gorseinon, Swansea, SA4 4YG            Category: Repair and Servicing            Class Code: Vehicle Repair, Testing and Servicing            Positional Accuracy: Positioned to address or location</p>	A14NW (E)	494	7	258341 199433
268	<p><b>Points of Interest - Commercial Services</b></p> <p>Name: Fairfield Garage            Location: A 177 Frampton Road, Gorseinon, Swansea, SA4 4YG            Category: Repair and Servicing            Class Code: Vehicle Repair, Testing and Servicing            Positional Accuracy: Positioned to address or location</p>	A14NW (E)	494	7	258341 199433
268	<p><b>Points of Interest - Commercial Services</b></p> <p>Name: A G B Repairs            Location: 177a Frampton Road, Gorseinon, Swansea, SA4 4YG            Category: Repair and Servicing            Class Code: Vehicle Repair, Testing and Servicing            Positional Accuracy: Positioned to address or location</p>	A14NW (E)	494	7	258341 199433
268	<p><b>Points of Interest - Commercial Services</b></p> <p>Name: Fairfield Garage            Location: 177a Frampton Road, Gorseinon, Swansea, SA4 4YG            Category: Repair and Servicing            Class Code: Vehicle Repair, Testing and Servicing            Positional Accuracy: Positioned to address or location</p>	A14NW (E)	494	7	258341 199433
268	<p><b>Points of Interest - Commercial Services</b></p> <p>Name: L J Autoz            Location: 189 Frampton Road, Gorseinon, Swansea, SA4 4YG            Category: Repair and Servicing            Class Code: Vehicle Repair, Testing and Servicing            Positional Accuracy: Positioned to address or location</p>	A14NW (E)	539	7	258381 199471
269	<p><b>Points of Interest - Education and Health</b></p> <p>Name: Gorseinon Hospital            Location: Brynawel Road, Gorseinon, Swansea, SA4 4UU            Category: Health Practitioners and Establishments            Class Code: Hospitals            Positional Accuracy: Positioned to address or location</p>	A9NE (SE)	637	7	258478 199025
269	<p><b>Points of Interest - Education and Health</b></p> <p>Name: Gorseinon Hospital            Location: Brynawel Road, Gorseinon, Swansea, SA4 4UU            Category: Health Practitioners and Establishments            Class Code: Hospitals            Positional Accuracy: Positioned to address or location</p>	A9NE (SE)	637	7	258478 199025
269	<p><b>Points of Interest - Education and Health</b></p> <p>Name: Gorseinon Hospital            Location: Brynawel Road, Gorseinon, Swansea, SA4 4UU            Category: Health Practitioners and Establishments            Class Code: Hospitals            Positional Accuracy: Positioned to address or location</p>	A9NE (SE)	637	7	258478 199025
270	<p><b>Points of Interest - Education and Health</b></p> <p>Name: Swansea NHS Trust            Location: Ty Eion, Princess Street, Gorseinon, Swansea, SA4 4US            Category: Health Practitioners and Establishments            Class Code: Hospitals            Positional Accuracy: Positioned to address or location</p>	A9NE (SE)	818	7	258546 198764

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
270	<p><b>Points of Interest - Education and Health</b></p> <p>Name: Swansea NHS Trust            Location: Ty Eion, Princess Street, Gorseinon, Swansea, SA4 4US            Category: Health Practitioners and Establishments            Class Code: Hospitals            Positional Accuracy: Positioned to address or location</p>	A9NE (SE)	818	7	258546 198764
271	<p><b>Points of Interest - Manufacturing and Production</b></p> <p>Name: Workings (Dis)            Location: SA4            Category: Extractive Industries            Class Code: Unspecified Quarries Or Mines            Positional Accuracy: Positioned to an adjacent address or location</p>	A18NE (N)	577	7	258021 200052
272	<p><b>Points of Interest - Manufacturing and Production</b></p> <p>Name: Quarry (Disused)            Location: SA4            Category: Extractive Industries            Class Code: Unspecified Quarries Or Mines            Positional Accuracy: Positioned to address or location</p>	A19SW (NE)	605	7	258169 200007
272	<p><b>Points of Interest - Manufacturing and Production</b></p> <p>Name: Quarries (Disused)            Location: SA4            Category: Extractive Industries            Class Code: Unspecified Quarries Or Mines            Positional Accuracy: Positioned to an adjacent address or location</p>	A19NW (NE)	615	7	258118 200050
273	<p><b>Points of Interest - Manufacturing and Production</b></p> <p>Name: M Stevens            Location: Llannant Road, Gorseinon, Swansea, SA4 4ND            Category: Farming            Class Code: Livestock Farming            Positional Accuracy: Positioned to address or location</p>	A18NW (N)	654	7	257638 200136
274	<p><b>Points of Interest - Manufacturing and Production</b></p> <p>Name: Limekiln (Disused)            Location: SA4            Category: Industrial Features            Class Code: Lime Kilns            Positional Accuracy: Positioned to an adjacent address or location</p>	A18NW (N)	758	7	257573 200225
274	<p><b>Points of Interest - Manufacturing and Production</b></p> <p>Name: Lime Kiln (Disused)            Location: SA4            Category: Industrial Features            Class Code: Lime Kilns            Positional Accuracy: Positioned to address or location</p>	A18NW (N)	759	7	257558 200220
275	<p><b>Points of Interest - Public Infrastructure</b></p> <p>Name: Sewage Pumping Station            Location: SA4            Category: Infrastructure and Facilities            Class Code: Waste Storage, Processing and Disposal            Positional Accuracy: Positioned to an adjacent address or location</p>	A8NW (S)	262	7	257762 198968
275	<p><b>Points of Interest - Public Infrastructure</b></p> <p>Name: Jopling Coaches            Location: 64 Heol Pentre Bach, Gorseinon, Swansea, SA4 4ZA            Category: Public Transport, Stations and Infrastructure            Class Code: Bus and Coach Stations, Depots and Companies            Positional Accuracy: Positioned to address or location</p>	A8NE (S)	298	7	257808 198932
275	<p><b>Points of Interest - Public Infrastructure</b></p> <p>Name: Jopling Coaches            Location: 64 Heol Pentre Bach, Gorseinon, Swansea, SA4 4ZA            Category: Public Transport, Stations and Infrastructure            Class Code: Bus and Coach Stations, Depots and Companies            Positional Accuracy: Positioned to address or location</p>	A8NE (S)	298	7	257808 198932
276	<p><b>Points of Interest - Public Infrastructure</b></p> <p>Name: Sludge Bed            Location: SA4            Category: Infrastructure and Facilities            Class Code: Waste Storage, Processing and Disposal            Positional Accuracy: Positioned to an adjacent address or location</p>	A18SW (N)	410	7	257634 199873
276	<p><b>Points of Interest - Public Infrastructure</b></p> <p>Name: Sludge Bed            Location: SA4            Category: Infrastructure and Facilities            Class Code: Waste Storage, Processing and Disposal            Positional Accuracy: Positioned to an adjacent address or location</p>	A18SW (N)	411	7	257633 199873

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
276	<b>Points of Interest - Public Infrastructure</b> Name: Sewage Works Location: SA4 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A18SW (NW)	454	7	257541 199864
277	<b>Points of Interest - Public Infrastructure</b> Name: Sewage Works Location: SA4 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	436	7	257477 199776
278	<b>Points of Interest - Public Infrastructure</b> Name: Chapel of Rest Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	538	7	258371 199520
278	<b>Points of Interest - Public Infrastructure</b> Name: Chapel of Rest Location: SA4 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	541	7	258379 199494
279	<b>Points of Interest - Public Infrastructure</b> Name: Slurry Bed Location: SA4 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A18NW (N)	580	7	257647 200062
280	<b>Points of Interest - Public Infrastructure</b> Name: Cemetery Location: SA4 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	859	7	258735 199222
281	<b>Points of Interest - Recreational and Environmental</b> Name: Playground Location: Gower View Road, SA4 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A13NE (NE)	197	7	258014 199564
282	<b>Points of Interest - Recreational and Environmental</b> Name: Playground Location: Brynawel Road, SA4 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A9NW (SE)	667	7	258435 198870
282	<b>Points of Interest - Recreational and Environmental</b> Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	668	7	258434 198866
283	<b>Points of Interest - Recreational and Environmental</b> Name: Play Area Location: SA4 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	754	7	258563 198923
284	<b>Points of Interest - Recreational and Environmental</b> Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	767	7	258587 199604
284	<b>Points of Interest - Recreational and Environmental</b> Name: Playground Location: (Heol Gwenallt), SA4 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A14NE (E)	767	7	258588 199601

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
285	<p><b>Sites of Special Scientific Interest</b></p> <p>Name: Burry Inlet And Loughor Estuary  Multiple Areas: N  Total Area (m2): 58511645.68  Source: Natural Resources Wales  Reference: 67033wwl  Designation Details: Biological  Designation Date: 1st January 1972  Date Type: Notified</p>	A13SW (SW)	114	2	257561 199242
286	<p><b>Special Areas of Conservation</b></p> <p>Name: Carmarthen Bay And Estuaries / Bae Caerfyrddin Ac Aberoedd  Multiple Areas: N  Total Area (m2): 661083957.79  Source: Natural Resources Wales  Reference: Uk0020020  <b>Status: Designated</b></p>	A13SW (SW)	114	2	257561 199242

<b>Agency &amp; Hydrological</b>	<b>Version</b>	<b>Update Cycle</b>
<b>Contaminated Land Register Entries and Notices</b> Natural Resources Wales Carmarthenshire County Council - Environmental Health Department City and County of Swansea - Environmental Health Department	November 2023 September 2017 September 2017	Annually Annual Rolling Update Annual Rolling Update
<b>Discharge Consents</b> Environment Agency - Welsh Region Natural Resources Wales	August 2014 August 2023	Quarterly Quarterly
<b>Enforcement and Prohibition Notices</b> Environment Agency - Welsh Region	March 2013	
<b>Integrated Pollution Controls</b> Environment Agency - Welsh Region	January 2009	
<b>Integrated Pollution Prevention And Control</b> Natural Resources Wales Environment Agency - Welsh Region	August 2023 January 2021	Quarterly Quarterly
<b>Local Authority Integrated Pollution Prevention And Control</b> Swansea Bay Port Health Authority City and County of Swansea - Environmental Health Department Carmarthenshire County Council - Environmental Health Department	April 2014 December 2020 March 2015	Variable Variable Variable
<b>Local Authority Pollution Prevention and Controls</b> Swansea Bay Port Health Authority City and County of Swansea - Environmental Health Department Carmarthenshire County Council - Environmental Health Department	April 2014 December 2020 March 2015	Annually Annual Rolling Update Annual Rolling Update
<b>Local Authority Pollution Prevention and Control Enforcements</b> Swansea Bay Port Health Authority City and County of Swansea - Environmental Health Department Carmarthenshire County Council - Environmental Health Department	April 2014 June 2014 March 2015	Variable Variable Variable
<b>Nearest Surface Water Feature</b> Ordnance Survey	November 2023	
<b>Pollution Incidents to Controlled Waters</b> Environment Agency - Welsh Region	December 1998	
<b>Prosecutions Relating to Authorised Processes</b> Environment Agency - Welsh Region Natural Resources Wales	July 2015 July 2015	
<b>Prosecutions Relating to Controlled Waters</b> Environment Agency - Welsh Region Natural Resources Wales	March 2013 March 2013	
<b>Registered Radioactive Substances</b> Natural Resources Wales Environment Agency - Welsh Region	January 2015 June 2016	As notified
<b>Substantiated Pollution Incident Register</b> Natural Resources Wales Environment Agency Wales - South West Area	August 2023 January 2021	Quarterly Quarterly
<b>Water Abstractions</b> Natural Resources Wales Environment Agency - Welsh Region	June 2023 October 2023	Quarterly Quarterly
<b>Water Industry Act Referrals</b> Environment Agency - Welsh Region Natural Resources Wales	October 2017 October 2022	
<b>Groundwater Vulnerability Map</b> Natural Resources Wales	June 2018	As notified
<b>Bedrock Aquifer Designations</b> Natural Resources Wales	January 2018	As notified

<b>Agency &amp; Hydrological</b>	<b>Version</b>	<b>Update Cycle</b>
<b>Superficial Aquifer Designations</b> Natural Resources Wales	January 2018	As notified
<b>Source Protection Zones</b> Natural Resources Wales	July 2022	Annual Rolling Update
<b>Extreme Flooding from Rivers or Sea without Defences</b> Natural Resources Wales	September 2020	
<b>Flooding from Rivers or Sea without Defences</b> Natural Resources Wales	September 2020	
<b>Areas Benefiting from Flood Defences</b> Natural Resources Wales	November 2019	Quarterly
<b>Flood Water Storage Areas</b> Natural Resources Wales	August 2019	Quarterly
<b>Flood Defences</b> Natural Resources Wales	November 2019	Quarterly
<b>OS Water Network Lines</b> Ordnance Survey	October 2023	Quarterly
<b>Surface Water 1 in 30 year Flood Extent</b> Natural Resources Wales	May 2018	Annually
<b>Surface Water 1 in 100 year Flood Extent</b> Natural Resources Wales	May 2018	Annually
<b>Surface Water 1 in 1000 year Flood Extent</b> Natural Resources Wales	May 2018	Annually
<b>Surface Water Suitability</b> Natural Resources Wales	February 2016	Annually
<b>BGS Groundwater Flooding Susceptibility</b> British Geological Survey - National Geoscience Information Service	May 2013	As notified

<b>Waste</b>	<b>Version</b>	<b>Update Cycle</b>
<b>BGS Recorded Landfill Sites</b> British Geological Survey - National Geoscience Information Service	November 2002	As notified
<b>Historical Landfill Sites</b> Natural Resources Wales	March 2023	As notified
<b>Integrated Pollution Control Registered Waste Sites</b> Environment Agency - Welsh Region	January 2009	Not Applicable
<b>Licensed Waste Management Facilities (Landfill Boundaries)</b> Environment Agency Wales - South West Area Natural Resources Wales	January 2023 October 2021	Quarterly Quarterly
<b>Licensed Waste Management Facilities (Locations)</b> Natural Resources Wales Environment Agency Wales - South West Area	August 2023 July 2021	Quarterly Quarterly
<b>Local Authority Landfill Coverage</b> Carmarthenshire County Council City and County of Swansea - Environmental Health Department	February 2003 February 2003	Not Applicable Not Applicable
<b>Local Authority Recorded Landfill Sites</b> Carmarthenshire County Council City and County of Swansea - Environmental Health Department	October 2018 October 2018	
<b>Potentially Infilled Land (Non-Water)</b> Landmark Information Group Limited	December 1999	
<b>Potentially Infilled Land (Water)</b> Landmark Information Group Limited	December 1999	
<b>Registered Landfill Sites</b> Environment Agency Wales - South West Area	March 2006	Not Applicable
<b>Registered Waste Transfer Sites</b> Environment Agency Wales - South West Area	April 2018	
<b>Registered Waste Treatment or Disposal Sites</b> Environment Agency Wales - South West Area	June 2015	
<b>Hazardous Substances</b>	<b>Version</b>	<b>Update Cycle</b>
<b>Control of Major Accident Hazards Sites (COMAH)</b> Health and Safety Executive	March 2023	Bi-Annually
<b>Explosive Sites</b> Health and Safety Executive	March 2017	
<b>Notification of Installations Handling Hazardous Substances (NIHHS)</b> Health and Safety Executive	August 2001	
<b>Planning Hazardous Substance Enforcements</b> Carmarthenshire County Council - Area Planning Office (East Area) Carmarthenshire County Council - Area Planning Office (South Area) Carmarthenshire County Council - Environment Department (West Area) City and County of Swansea - Planning Department	February 2016 February 2016 February 2016 June 2023	Variable Variable Variable Variable
<b>Planning Hazardous Substance Consents</b> Carmarthenshire County Council - Area Planning Office (East Area) Carmarthenshire County Council - Area Planning Office (South Area) Carmarthenshire County Council - Environment Department (West Area) City and County of Swansea - Planning Department	February 2016 February 2016 February 2016 January 2016	Variable Variable Variable Variable


<b>Geological</b>	<b>Version</b>	<b>Update Cycle</b>
<b>BGS 1:625,000 Solid Geology</b> British Geological Survey - National Geoscience Information Service	January 2009	As notified
<b>BGS Estimated Soil Chemistry</b> British Geological Survey - National Geoscience Information Service	December 2015	As notified
<b>BGS Recorded Mineral Sites</b> British Geological Survey - National Geoscience Information Service	June 2023	Bi-Annually
<b>CBSCB Compensation District</b> Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
<b>Coal Mining Affected Areas</b> The Coal Authority - Property Searches	February 2023	Annual Rolling Update
<b>Mining Instability</b> Ove Arup & Partners	June 1998	Not Applicable
<b>Non Coal Mining Areas of Great Britain</b> British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
<b>Potential for Collapsible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	April 2020	As notified
<b>Potential for Compressible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Ground Dissolution Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Landslide Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Running Sand Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Radon Potential - Radon Affected Areas</b> British Geological Survey - National Geoscience Information Service	October 2023	Annually
<b>Radon Potential - Radon Protection Measures</b> British Geological Survey - National Geoscience Information Service	October 2023	Annually



<b>Industrial Land Use</b>	<b>Version</b>	<b>Update Cycle</b>
<b>Contemporary Trade Directory Entries</b> Thomson Directories	October 2023	Quarterly
<b>Fuel Station Entries</b> Catalist Ltd - Experian	November 2023	Quarterly
<b>Gas Pipelines</b> National Grid	October 2021	Bi-Annually
<b>Points of Interest - Commercial Services</b> PointX	December 2023	Quarterly
<b>Points of Interest - Education and Health</b> PointX	December 2023	Quarterly
<b>Points of Interest - Manufacturing and Production</b> PointX	December 2023	Quarterly
<b>Points of Interest - Public Infrastructure</b> PointX	December 2023	Quarterly
<b>Points of Interest - Recreational and Environmental</b> PointX	December 2023	Quarterly
<b>Underground Electrical Cables</b> National Grid	February 2023	Bi-Annually

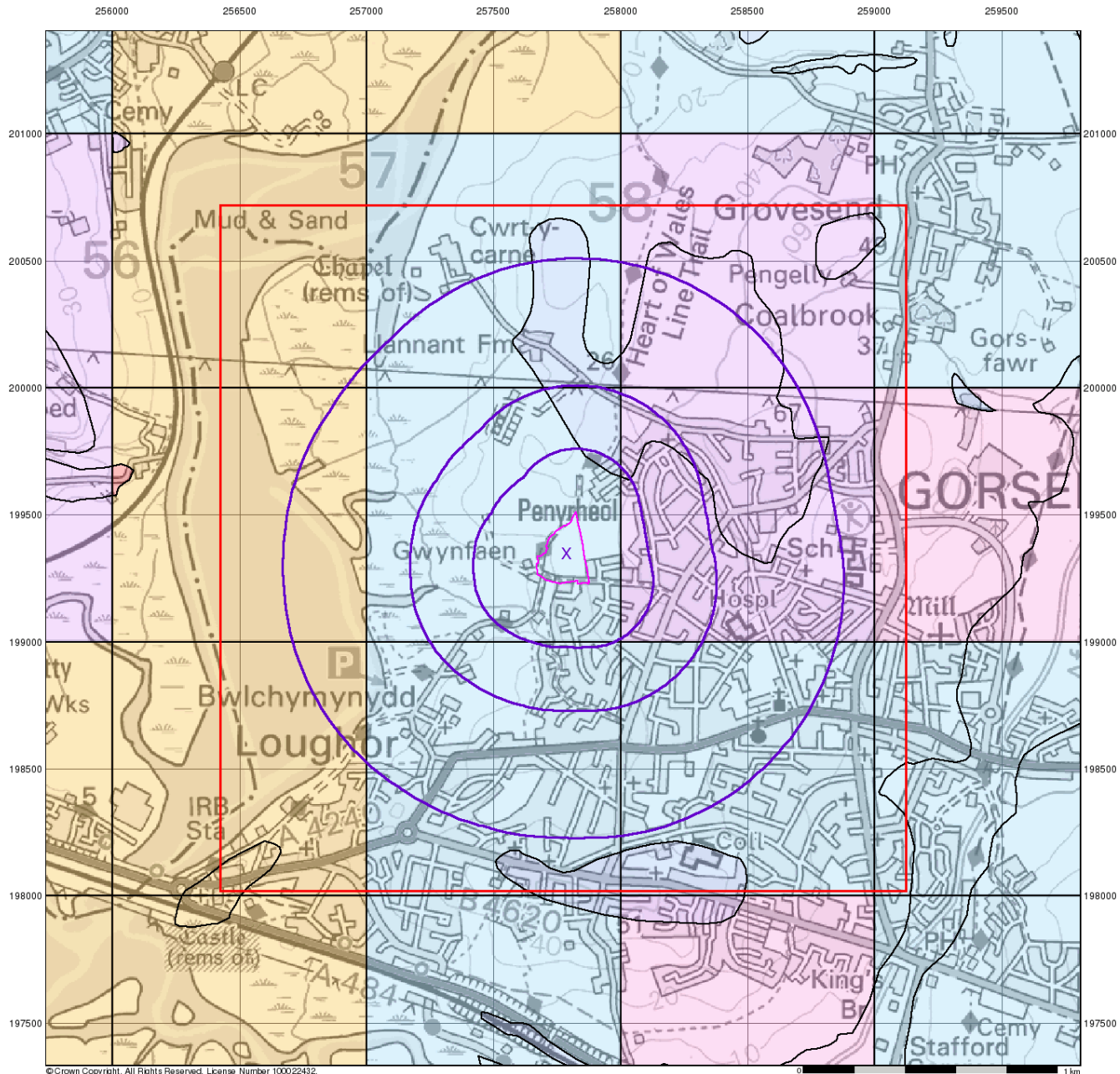
<b>Sensitive Land Use</b>	<b>Version</b>	<b>Update Cycle</b>
<b>Ancient Woodland</b> Natural Resources Wales	October 2023	Bi-Annually
<b>Areas of Adopted Green Belt</b> Carmarthenshire County Council City and County of Swansea	August 2023 August 2023	Quarterly Quarterly
<b>Areas of Unadopted Green Belt</b> Carmarthenshire County Council City and County of Swansea	August 2023 August 2023	Quarterly Quarterly
<b>Areas of Outstanding Natural Beauty</b> Natural Resources Wales	November 2023	Bi-Annually
<b>Environmentally Sensitive Areas</b> The National Assembly for Wales - GI Services (Department of Planning & Countryside)	January 2017	
<b>Forest Parks</b> Forestry Commission	May 2023	Not Applicable
<b>Local Nature Reserves</b> Carmarthenshire County Council City and County of Swansea	August 2023 August 2023	Bi-Annually Bi-Annually
<b>Marine Nature Reserves</b> Natural Resources Wales	October 2023	Bi-Annually
<b>National Nature Reserves</b> Natural Resources Wales	September 2023	Bi-Annually
<b>National Parks</b> Natural Resources Wales	February 2018	Annually
<b>Nitrate Vulnerable Zones</b> The National Assembly for Wales - GI Services (Department of Planning & Countryside) Natural Resources Wales	April 2016 March 2023	Bi-Annually
<b>Ramsar Sites</b> Natural Resources Wales	October 2023	Bi-Annually
<b>Sites of Special Scientific Interest</b> Natural Resources Wales	October 2023	Bi-Annually
<b>Special Areas of Conservation</b> Natural Resources Wales	October 2023	Bi-Annually
<b>Special Protection Areas</b> Natural Resources Wales	October 2023	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 <b>British Geological Survey</b> <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Centre for Ecology and Hydrology	 <b>Centre for Ecology &amp; Hydrology</b> <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Contact	Name and Address	Contact Details
1	<b>British Geological Survey - Enquiry Service</b> British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	<b>Natural Resources Wales</b> Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	<b>Environment Agency - National Customer Contact Centre (NCCC)</b> PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
4	<b>Ordnance Survey</b> Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	<b>City and County of Swansea - Environmental Health Department</b> The Guildhall, Swansea, West Glamorgan, SA1 4PE	Telephone: 01792 636000 extn 5651 Fax: 01792 635719
6	<b>The Coal Authority - Property Searches</b> 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
7	<b>PointX</b> 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
-	<b>Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards</b> Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	<b>Landmark Information Group Limited</b> Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



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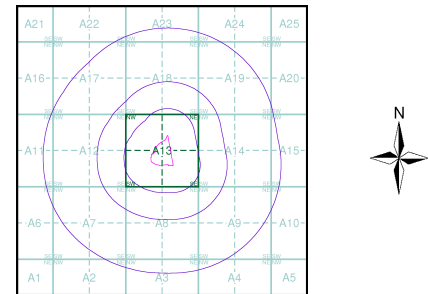
# Intégral Géotechnique

## Groundwater Vulnerability

- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Slice
  - Map ID

- Agency and Hydrological**
- | Bedrock Aquifers |   | Superficial Aquifers |   |
|------------------|---|----------------------|---|
|                  | High Vulnerability, Principal Aquifer   |                      | High Vulnerability, Principal Aquifer   |
|                  | High Vulnerability, Secondary Aquifer   |                      | High Vulnerability, Secondary Aquifer   |
|                  | Medium Vulnerability, Principal Aquifer |                      | Medium Vulnerability, Principal Aquifer |
|                  | Medium Vulnerability, Secondary Aquifer |                      | Medium Vulnerability, Secondary Aquifer |
|                  | Low Vulnerability, Principal Aquifer    |                      | Low Vulnerability, Principal Aquifer    |
|                  | Low Vulnerability, Secondary Aquifer    |                      | Low Vulnerability, Secondary Aquifer    |
- Unproductive Aquifer  
 Soluble Rock

### Site Sensitivity Context Map - Slice A



**Order Details**

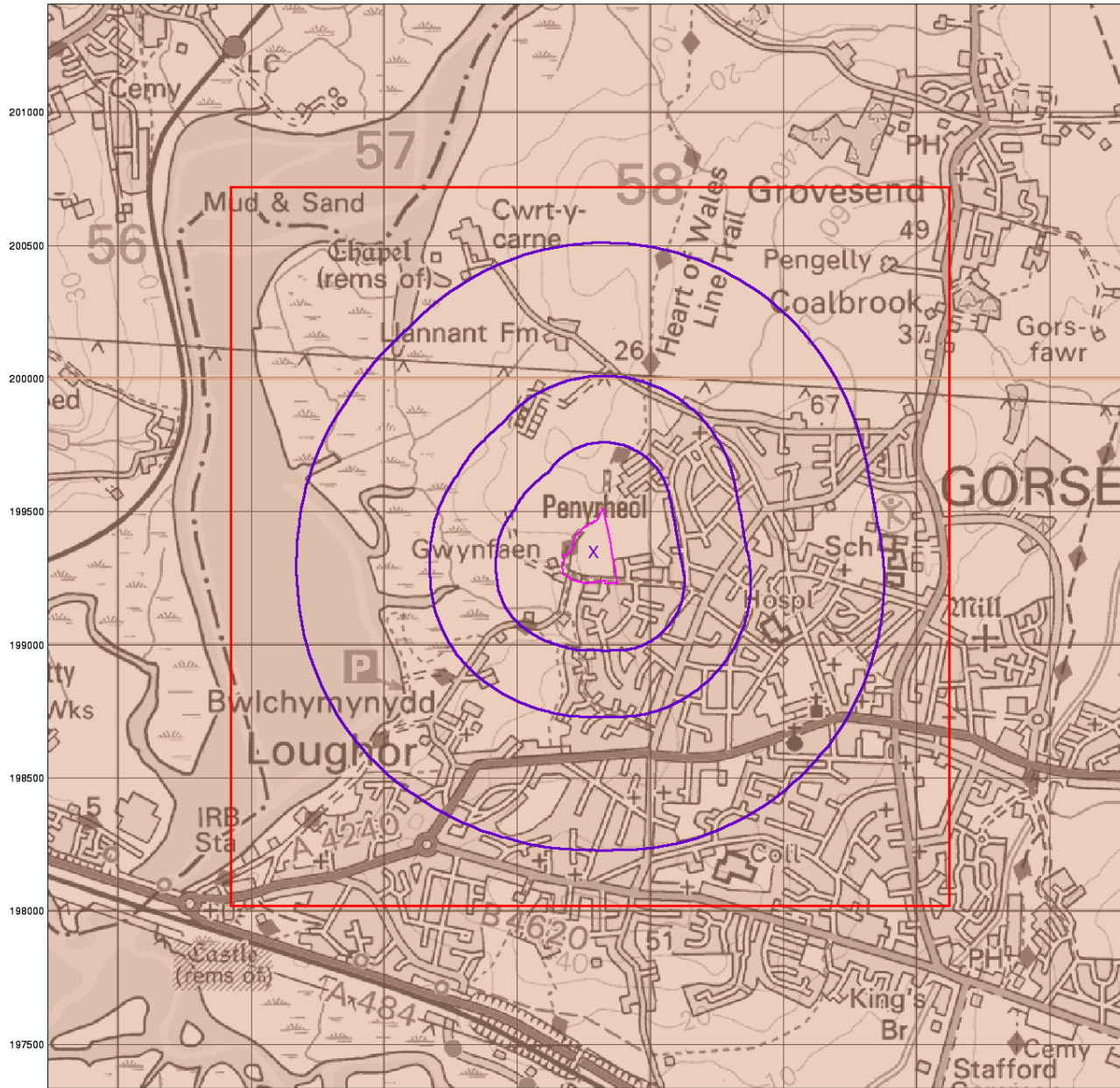
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

**Site Details**  
 Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk

256000 256500 257000 257500 258000 258500 259000 259500



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0 1 km

# Intégral Géotechnique

## Bedrock Aquifer Designation

### General

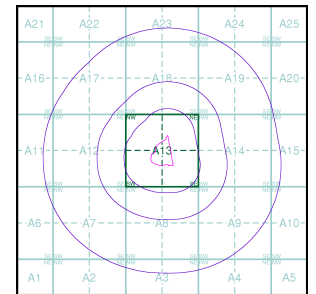
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice A



### Order Details

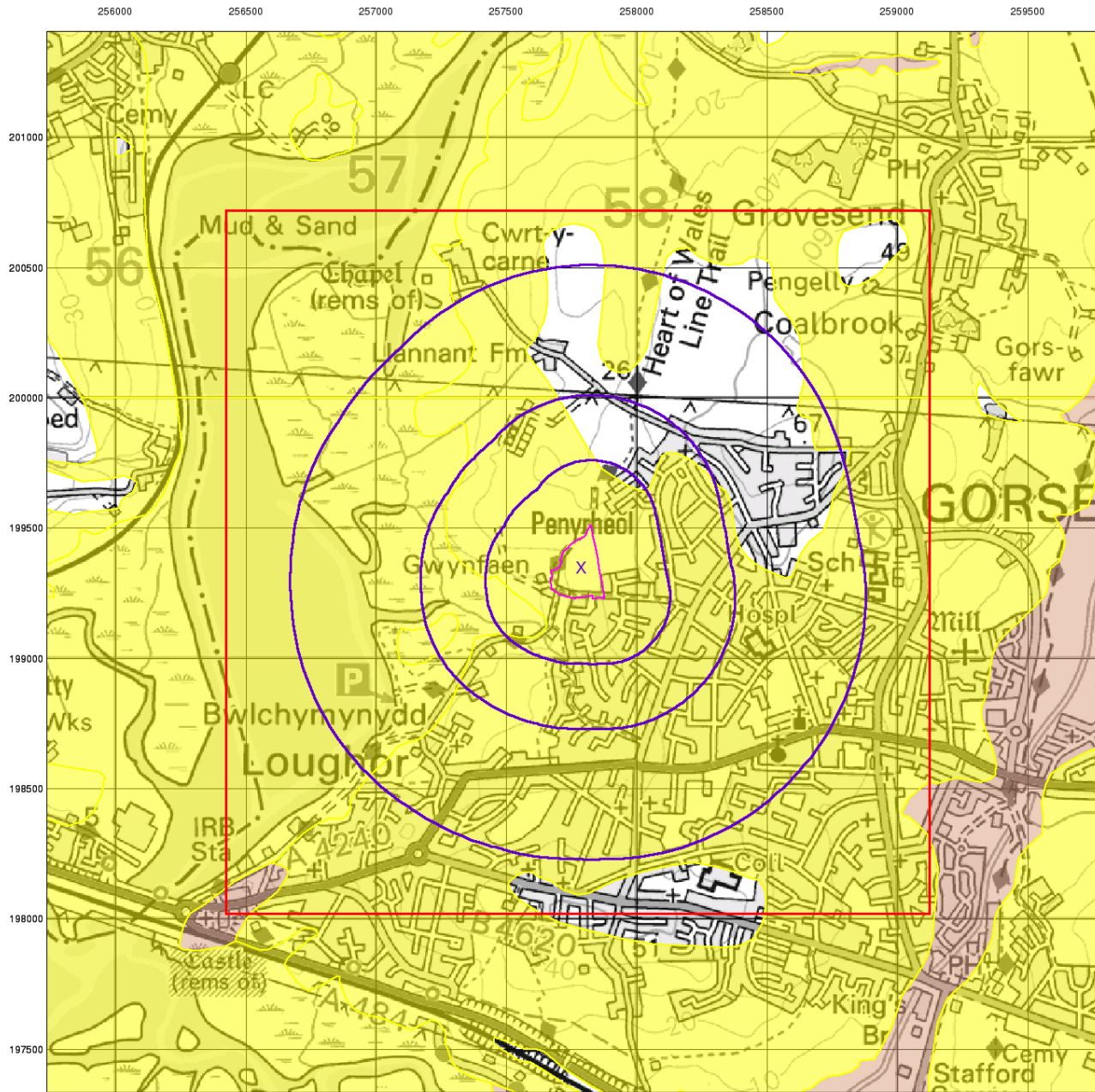
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 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

### Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk



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0 1 km

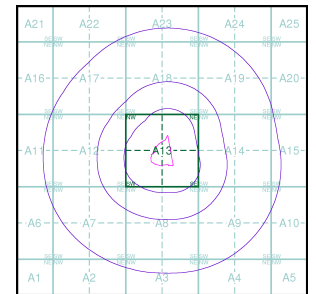
# Intégral Géotechnique

## Superficial Aquifer Designation

- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Slice
  - Map ID

- Agency and Hydrological**
- Geological Classes**
- Principal Aquifer
  - Secondary A Aquifer
  - Secondary B Aquifer
  - Secondary Undifferentiated
  - Unproductive Strata
  - Unknown
  - Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice A



### Order Details

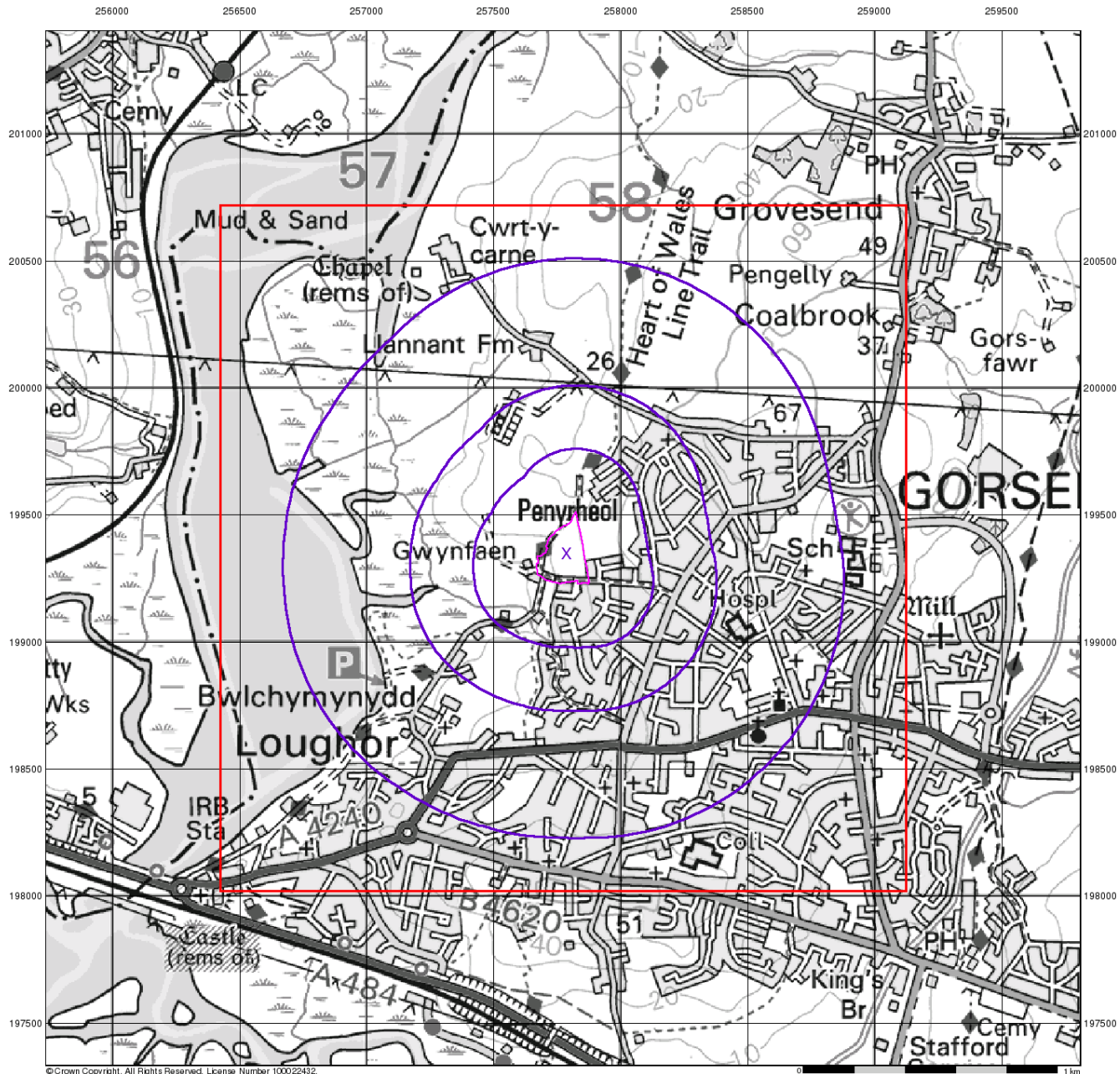
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

### Site Details

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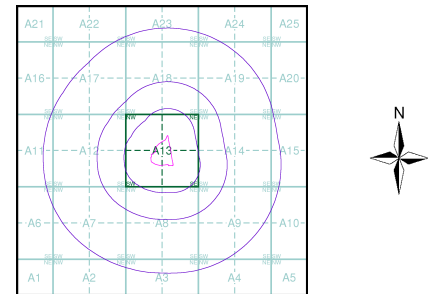
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# Intégral Géotechnique

## Source Protection Zones

- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Slice
  - Map ID
- Agency and Hydrological**
- Inner zone (Zone 1)
  - Inner zone - subsurface activity only (Zone 1c)
  - Outer zone (Zone 2)
  - Outer zone - subsurface activity only (Zone 2c)
  - Total catchment (Zone 3)
  - Total catchment - subsurface activity only (Zone 3c)
  - Special interest (Zone 4)

## Site Sensitivity Context Map - Slice A



## Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

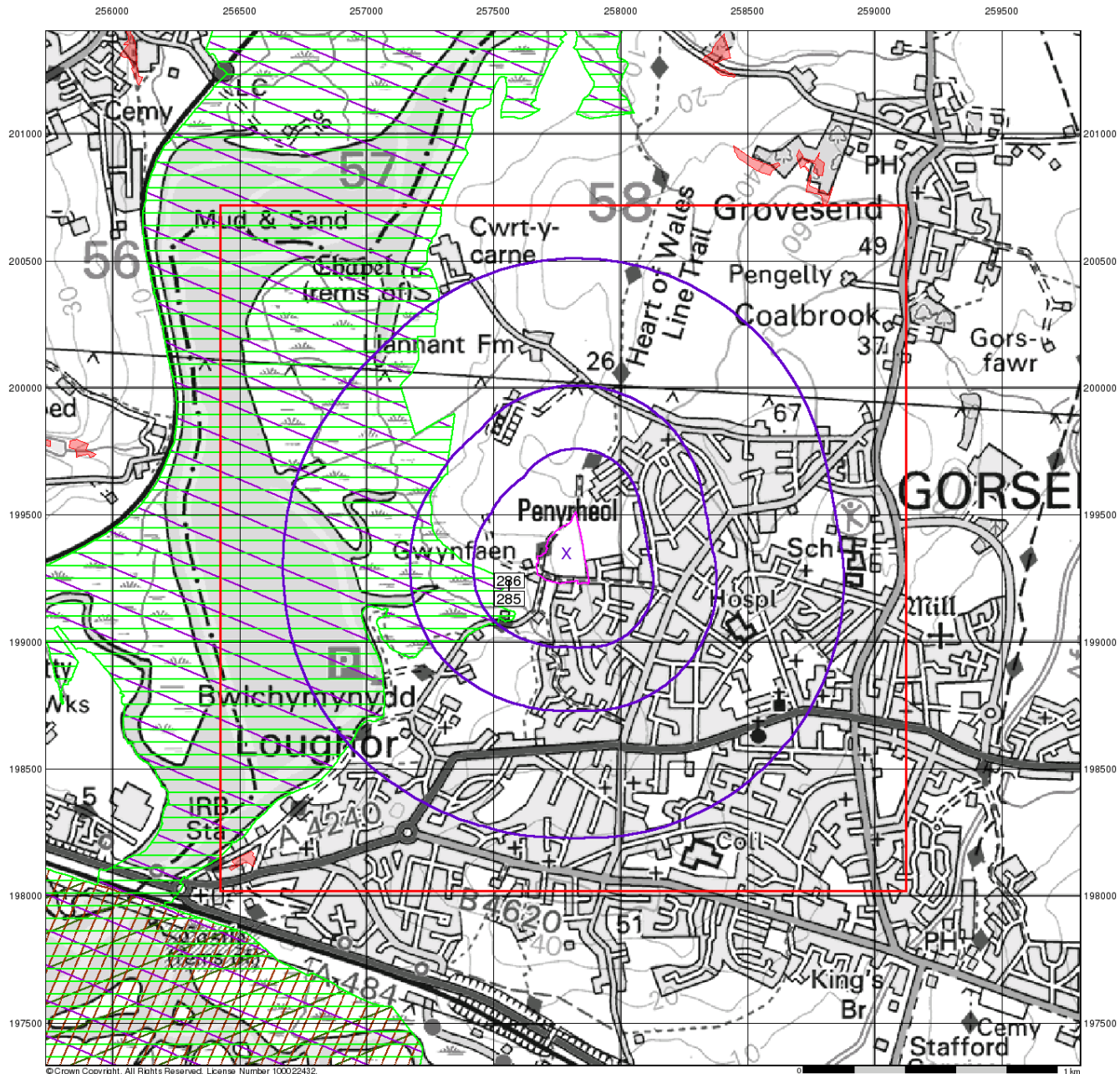
## Site Details

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0 1 km

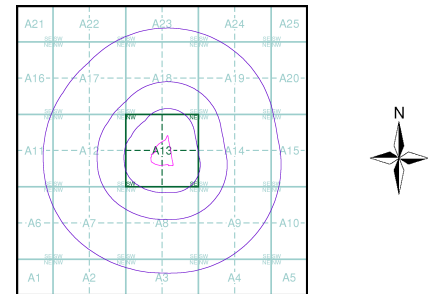
# Intégral Géotechnique

## Sensitive Land Uses

- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Slice
  - Map ID

- Sensitive Land Uses**
- Ancient Woodland
  - Area of Adopted Green Belt
  - Area of Unadopted Green Belt
  - Area of Outstanding Natural Beauty
  - Environmentally Sensitive Area
  - Forest Park
  - Local Nature Reserve
  - Marine Nature Reserve
  - National Nature Reserve
  - National Park
  - Nitrate Sensitive Area
  - Nitrate Vulnerable Zone
  - Ramsar Site
  - Site of Special Scientific Interest
  - Special Area of Conservation
  - Special Protection Area
  - World Heritage Sites

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

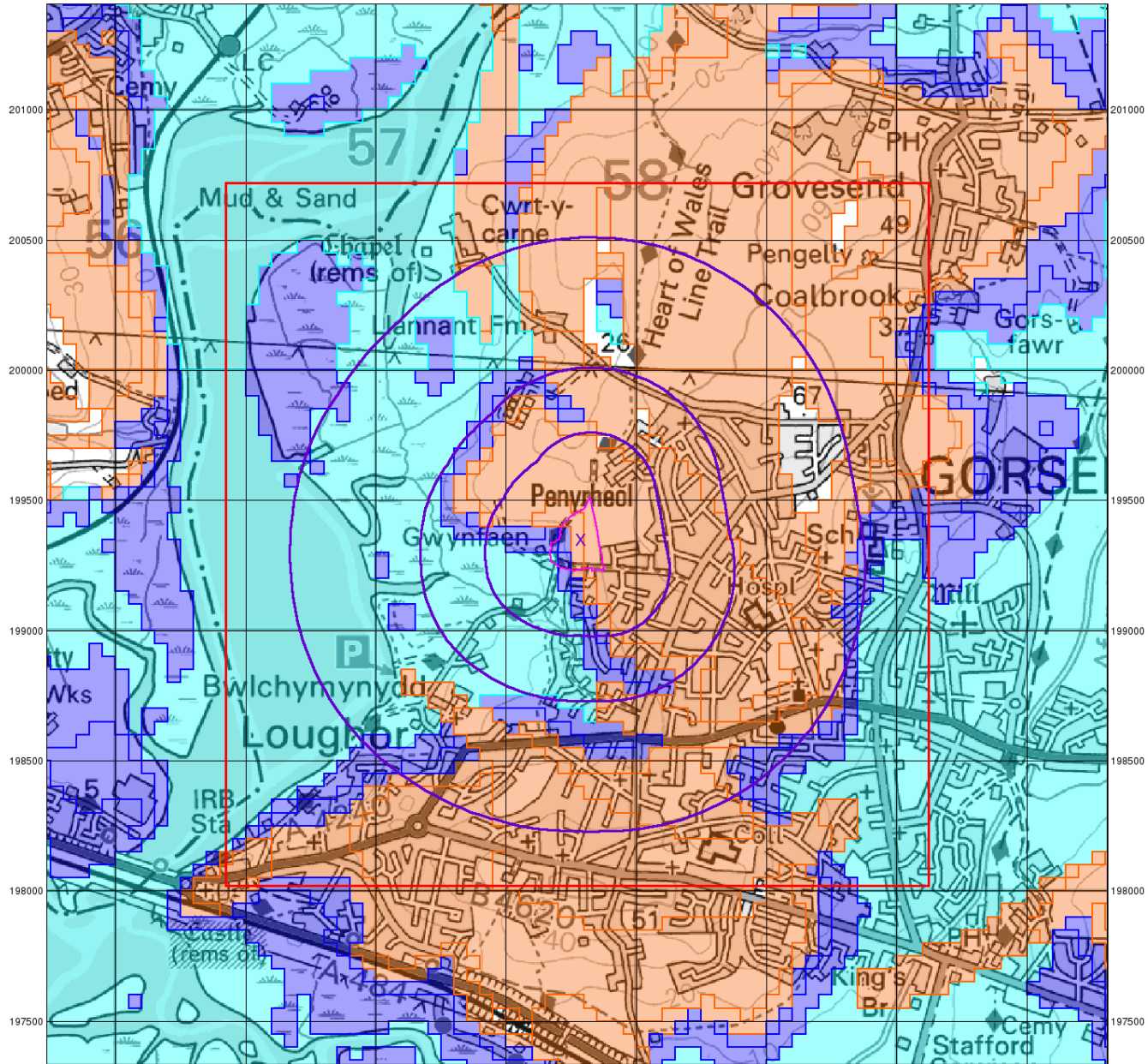
### Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

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 Web: www.envirocheck.co.uk

256000 256500 257000 257500 258000 258500 259000 259500



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0 1 km

# Intégral Géotechnique

## BGS Flood GFS Data

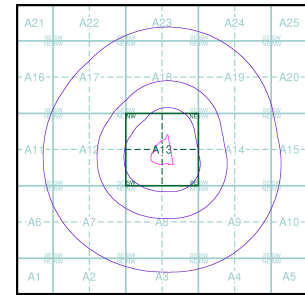
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice

### Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

## Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

### Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

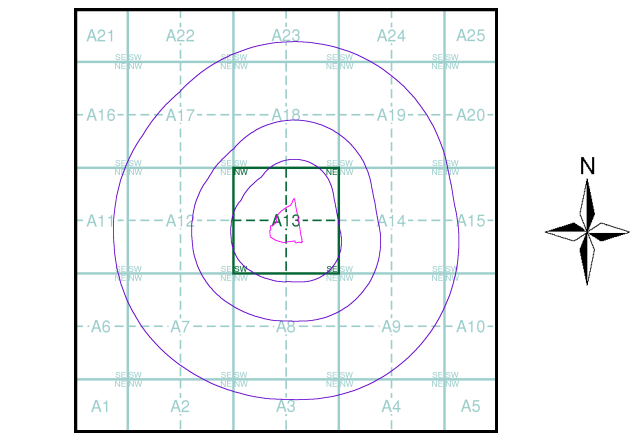


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 Fax: 0844 844 9951  
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# Intégral Géotechnique

- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Map ID
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
  - Contaminated Land Register Entry or Notice
  - Discharge Consent
  - Enforcement or Prohibition Notice
  - Integrated Pollution Control
  - Integrated Pollution Prevention Control
  - Local Authority Integrated Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control Enforcement
  - Pollution Incident to Controlled Waters
  - Prosecution Relating to Authorised Processes
  - Prosecution Relating to Controlled Waters
  - Registered Radioactive Substance
  - River Network or Water Feature
  - River Quality Sampling Point
  - Substantiated Pollution Incident Register
  - Water Abstraction
  - Water Industry Act Referral
- Waste**
- BGS Recorded Landfill Site (Location)
  - BGS Recorded Landfill Site
  - EA Historic Landfill (Buffered Point)
  - EA Historic Landfill (Polygon)
  - Integrated Pollution Control Registered Waste Site
  - Licensed Waste Management Facility (Landfill Boundary)
  - Licensed Waste Management Facility (Location)
  - Local Authority Recorded Landfill Site (Location)
  - Local Authority Recorded Landfill Site
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Registered Landfill Site
  - Registered Landfill Site (Location)
  - Registered Landfill Site (Point Buffered to 100m)
  - Registered Landfill Site (Point Buffered to 250m)
  - Registered Waste Transfer Site (Location)
  - Registered Waste Transfer Site
  - Registered Waste Treatment or Disposal Site (Location)
  - Registered Waste Treatment or Disposal Site
- Hazardous Substances**
- COMAH Site
  - Explosive Site
  - NIHHS Site
  - Planning Hazardous Substance Consent
  - Planning Hazardous Substance Enforcement
- Geological**
- BGS Recorded Mineral Site

## Site Sensitivity Map - Slice A



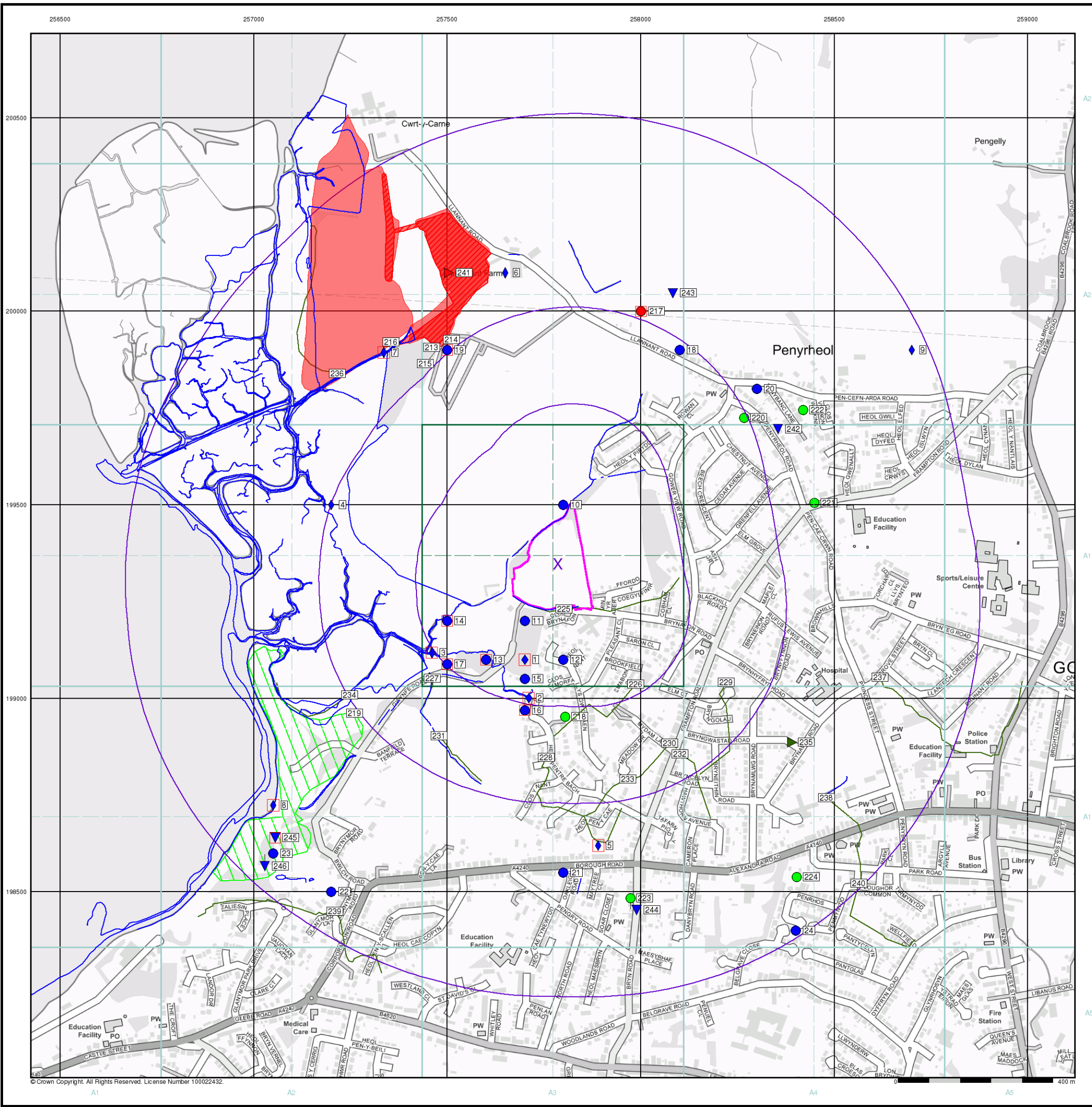
**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

**Site Details**  
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# Intégral Géotechnique

## Industrial Land Use Map

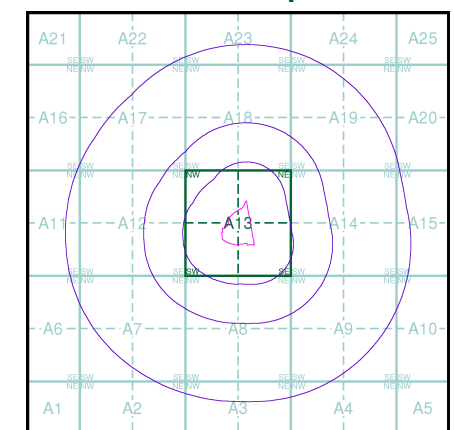
### General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point
-  Slice
-  Map ID

### Industrial Land Use

-  Contemporary Trade Directory Entry
-  Fuel Station Entry
-  Gas Pipeline
-  Points of Interest - Commercial Services
-  Points of Interest - Education and Health
-  Points of Interest - Manufacturing and Production
-  Points of Interest - Public Infrastructure
-  Points of Interest - Recreational and Environmental
-  Underground Electrical Cables

### Industrial Land Use Map - Slice A



### Order Details

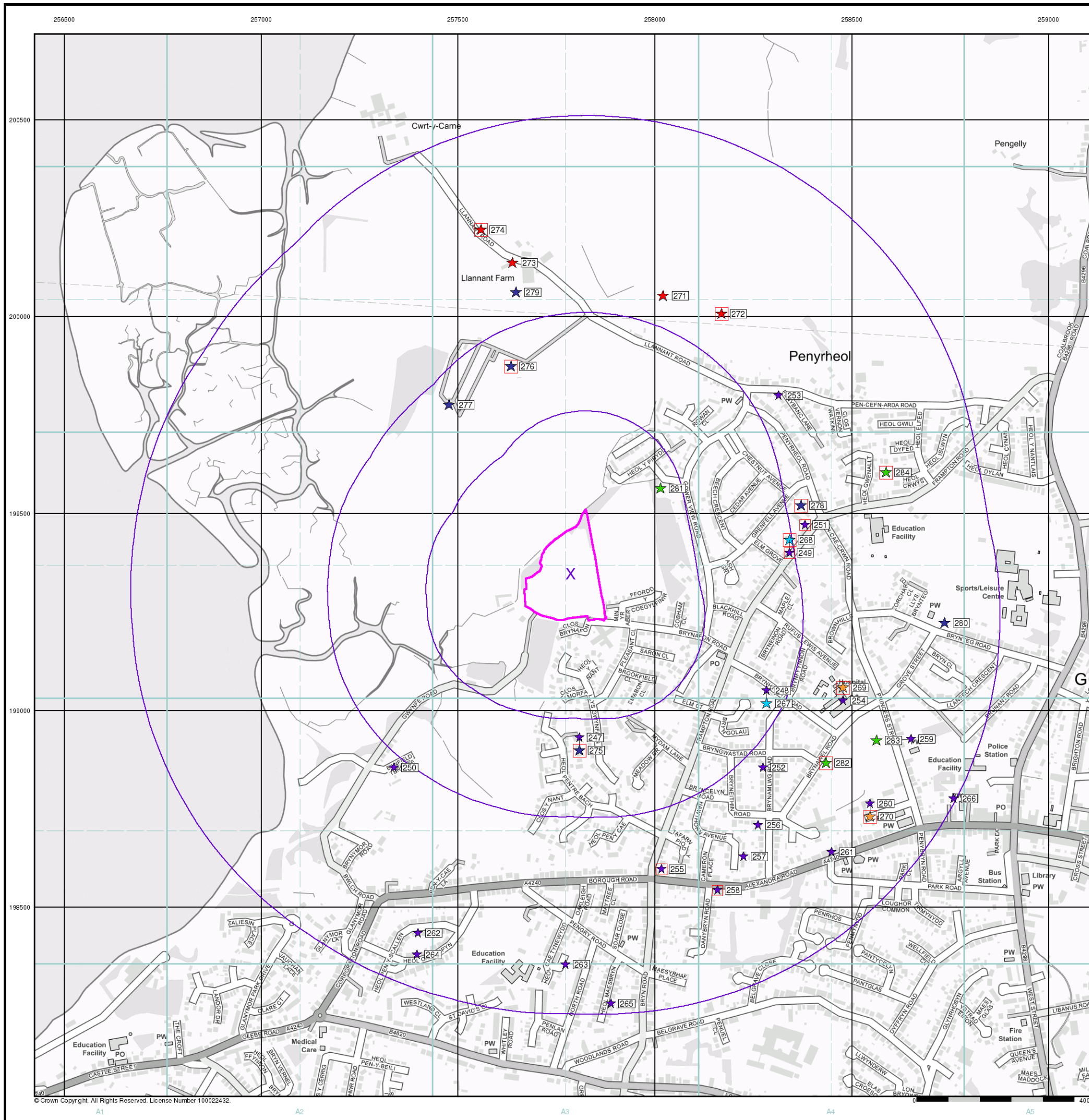
Order Number: 331303750\_1\_1  
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 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

### Site Details

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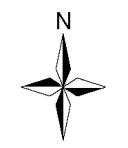
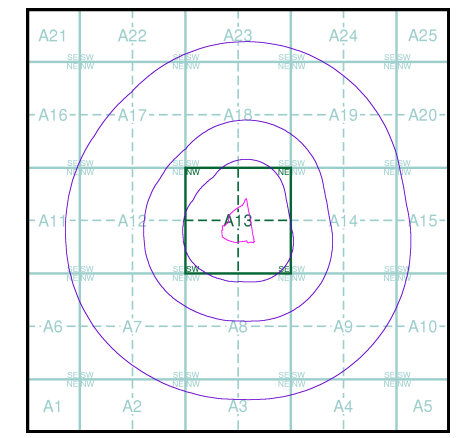
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

### Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

### Flood Map - Slice A



### Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

### Site Details

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# Intégral Géotechnique

## General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

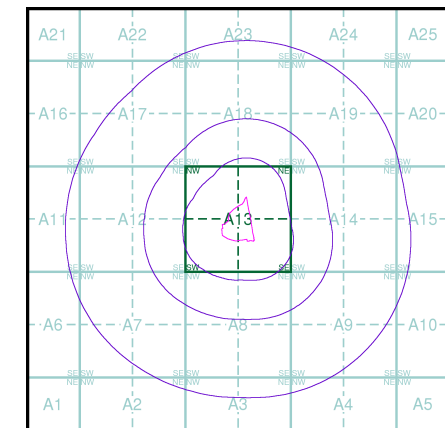
## Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of [www.envirocheck.co.uk](http://www.envirocheck.co.uk).

## Borehole Map - Slice A



## Order Details

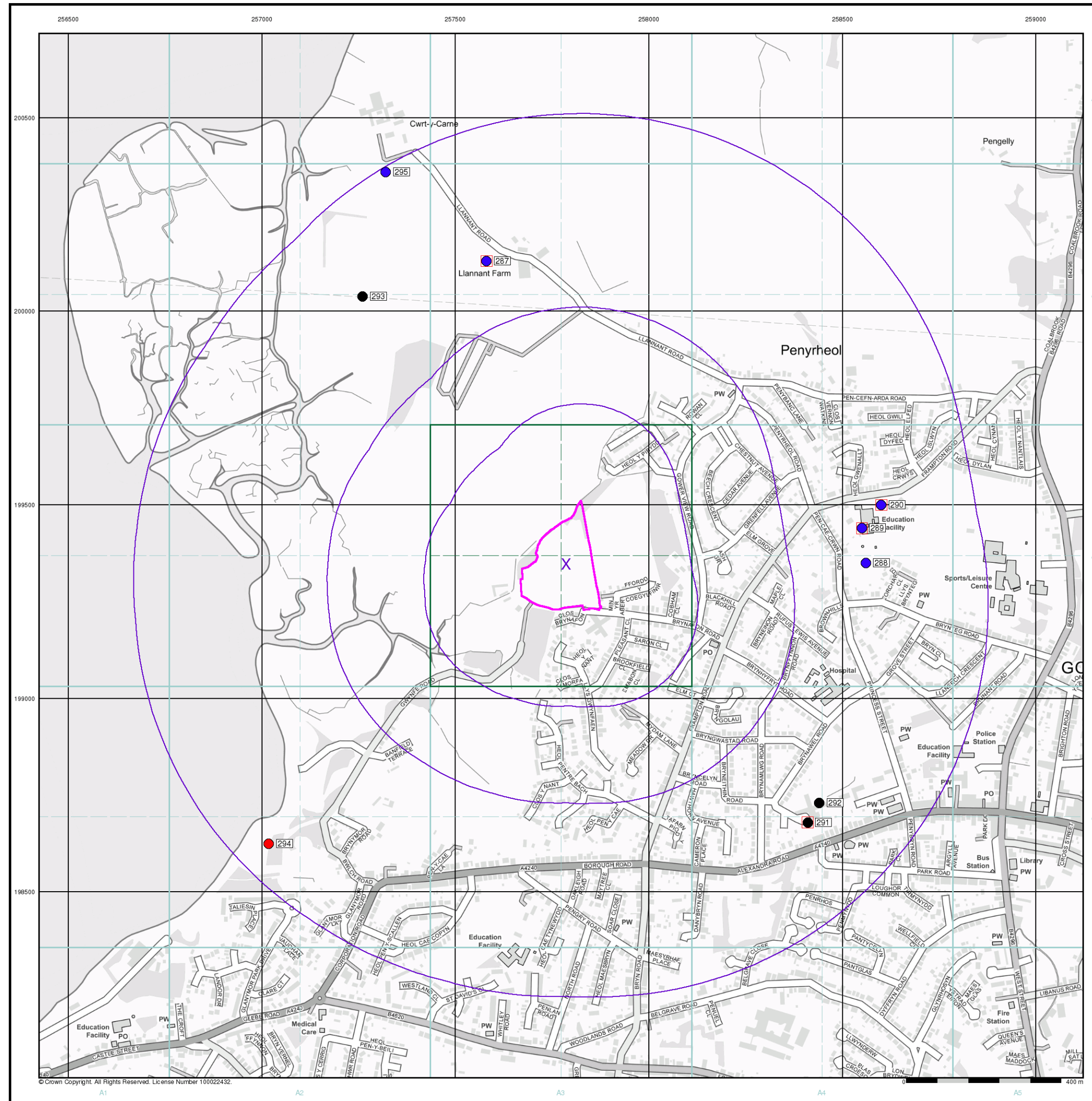
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 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

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# Intégral Géotechnique

## General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

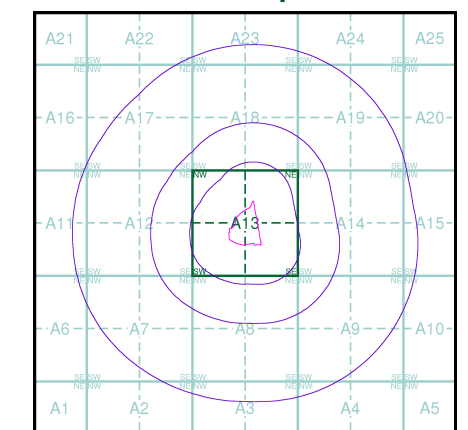
## OS Water Network Data

- |  |              |  |                         |
|--|--------------|--|-------------------------|
|  | Canal        |  | Drain                   |
|  | Reservoir    |  | Other                   |
|  | Foreshore    |  | Lake                    |
|  | Marsh        |  | Transfer                |
|  | Tidal River  |  | Lock Or Flight Of Locks |
|  | Inland River |  | Sea                     |

## Contours (height in meters)

- Standard Contour
- Master Contour
- Spot Height
- Mean Low Water
- Mean High Water

## OS Water Network Map - Slice A



## Order Details

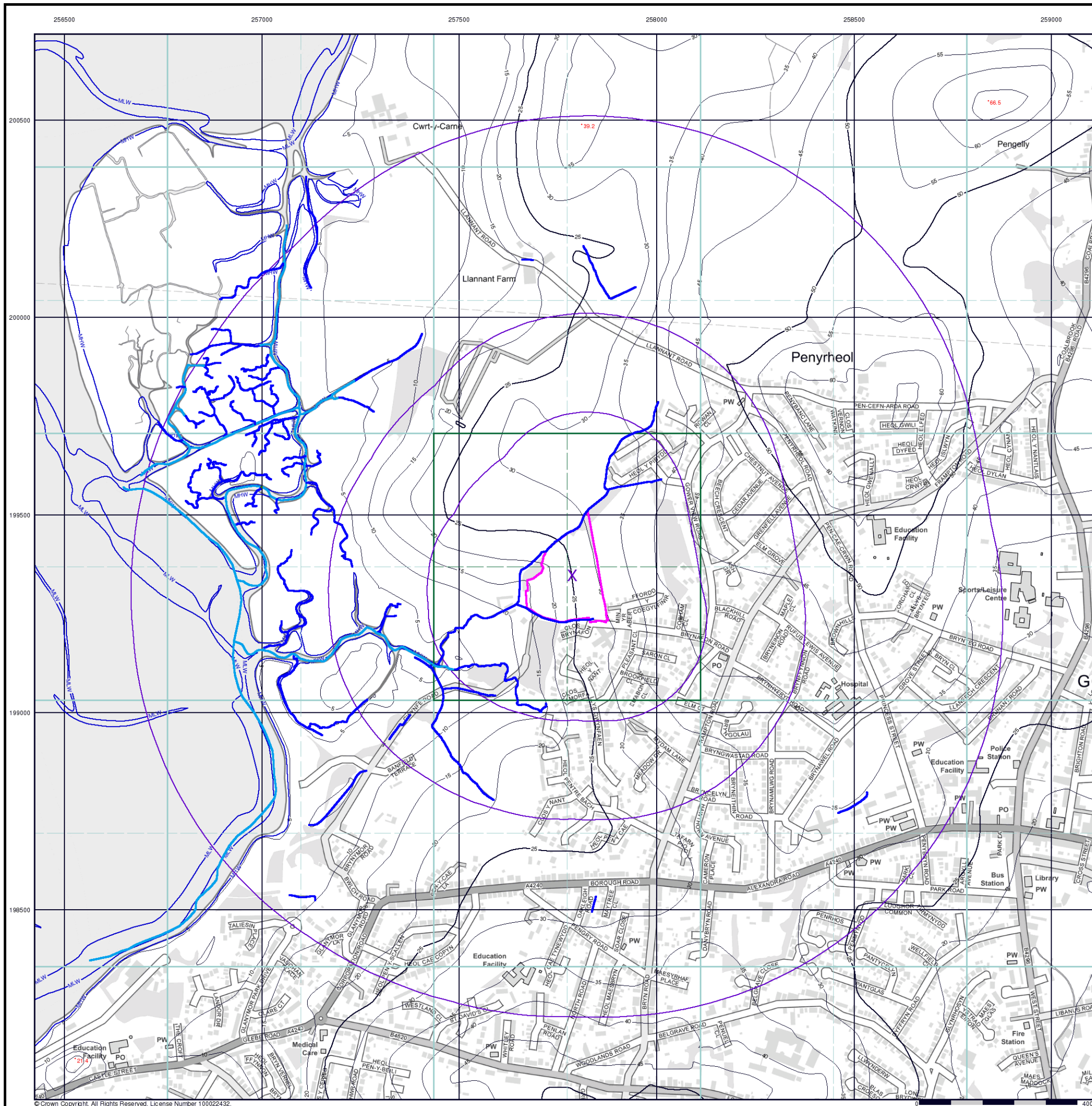
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

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# Intégral Géotechnique

## General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

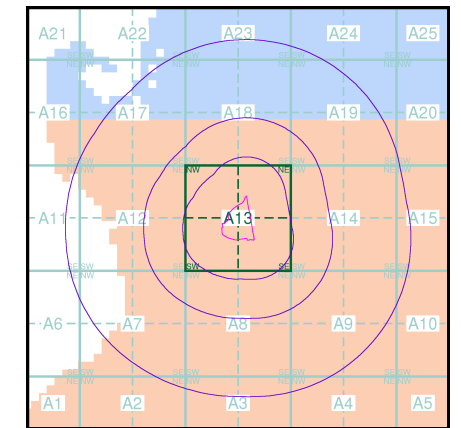
## Risk of Flooding from Surface Water

- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

## Suitability

- See the suitability map below
- National to county
  - County to town
  - Town to street
  - Street to parcels of land
  - Property

## EANRW Suitability Map - Slice A



## Order Details

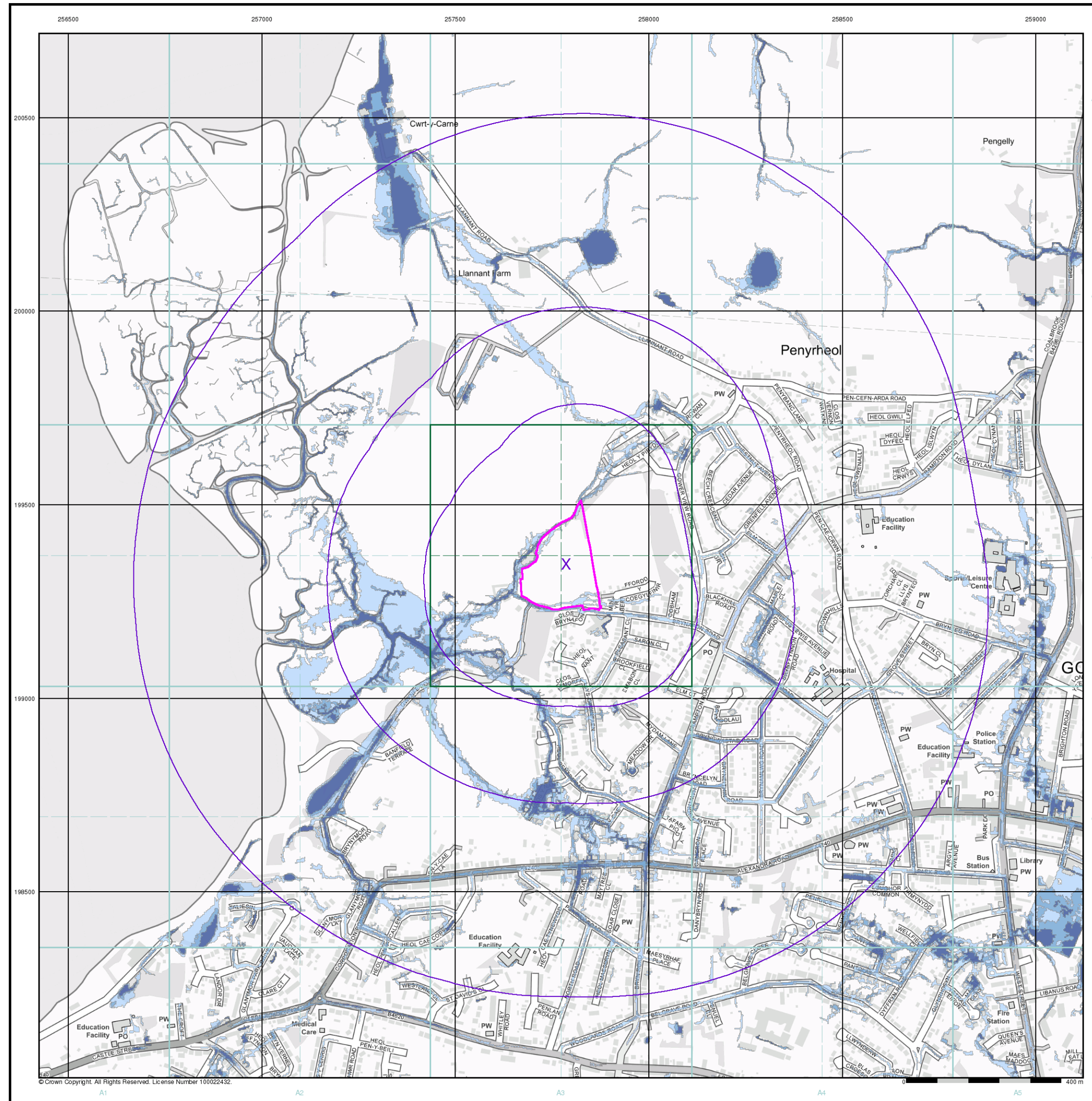
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

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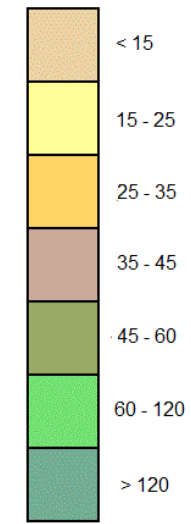
# Intégral Géotechnique

## General

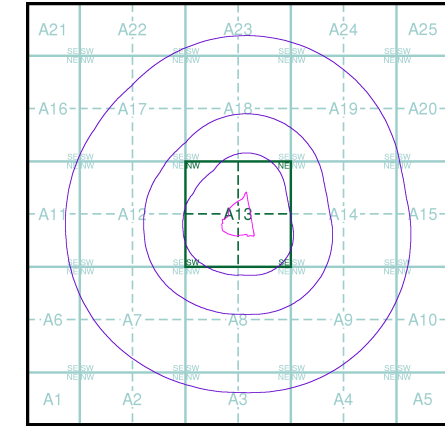
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

## Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



## Estimated Soil Chemistry Arsenic - Slice A



## Order Details

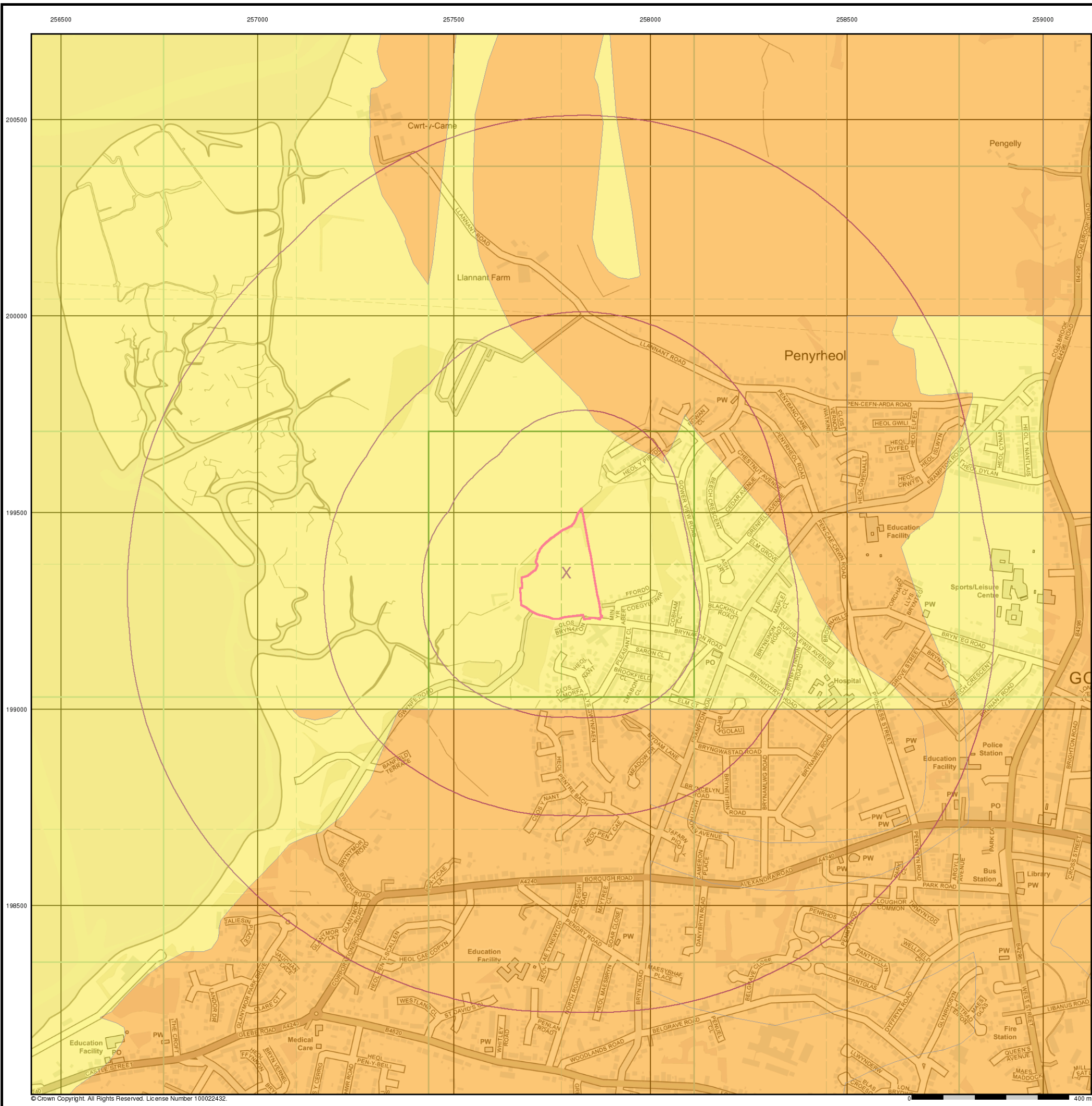
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 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

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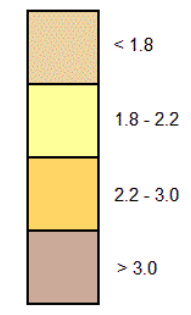
# Intégral Géotechnique

## General

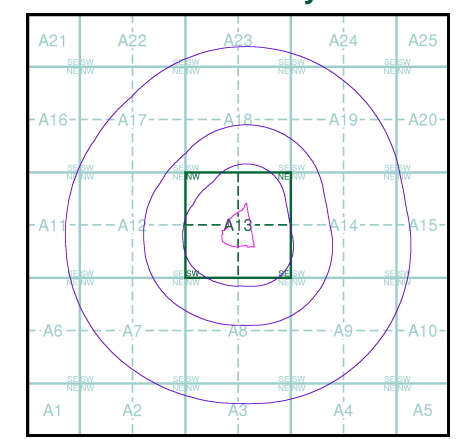
- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

## Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



## Estimated Soil Chemistry Cadmium - Slice A



## Order Details

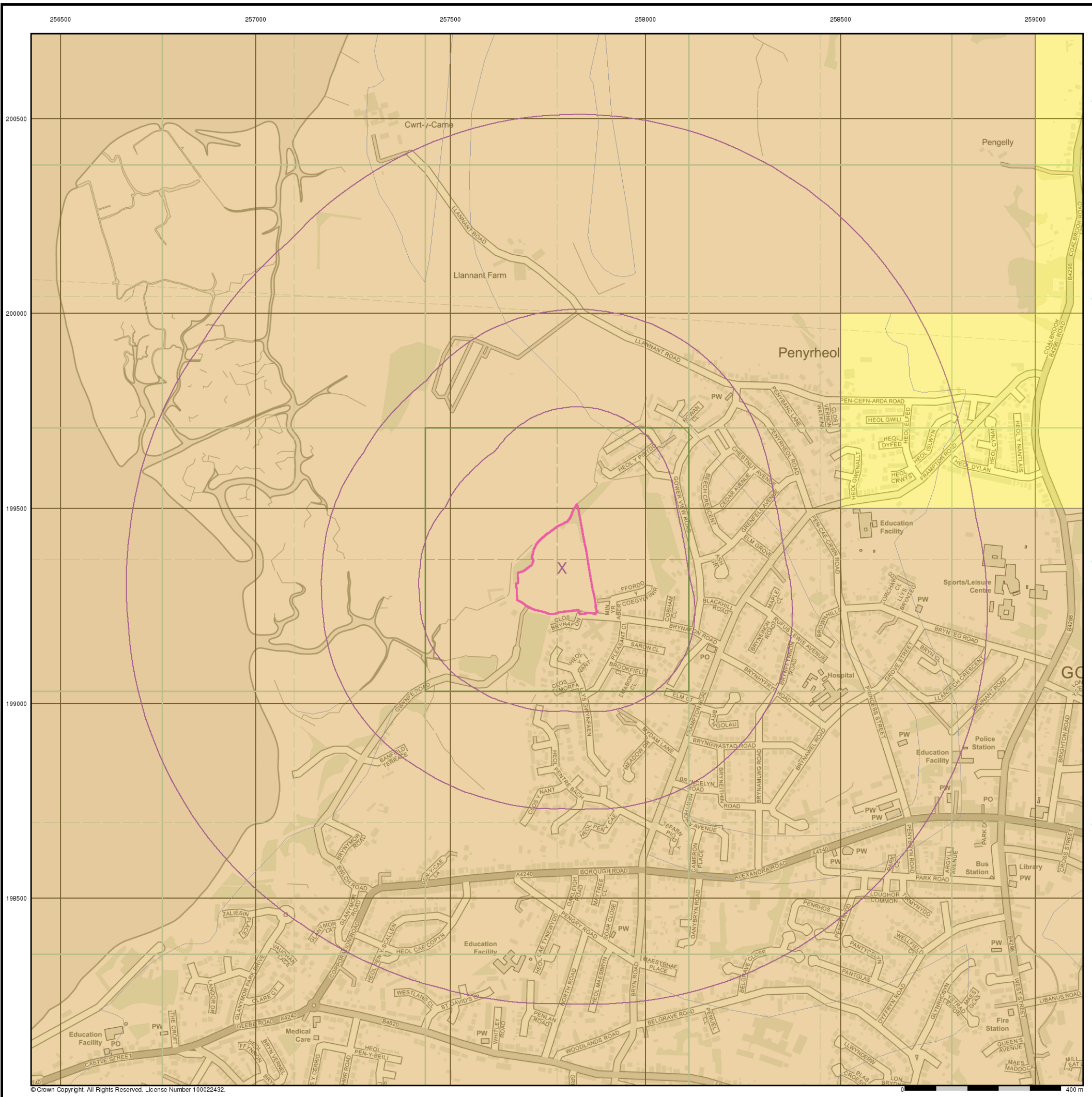
Order Details: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

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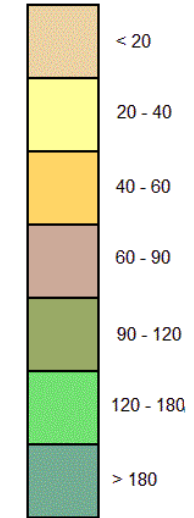
# Intégral Géotechnique

## General

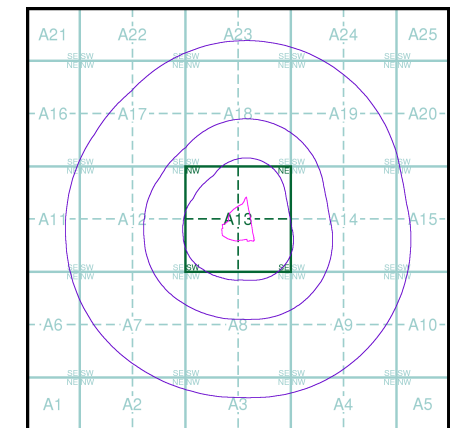
- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

## Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



## Estimated Soil Chemistry Chromium - Slice A

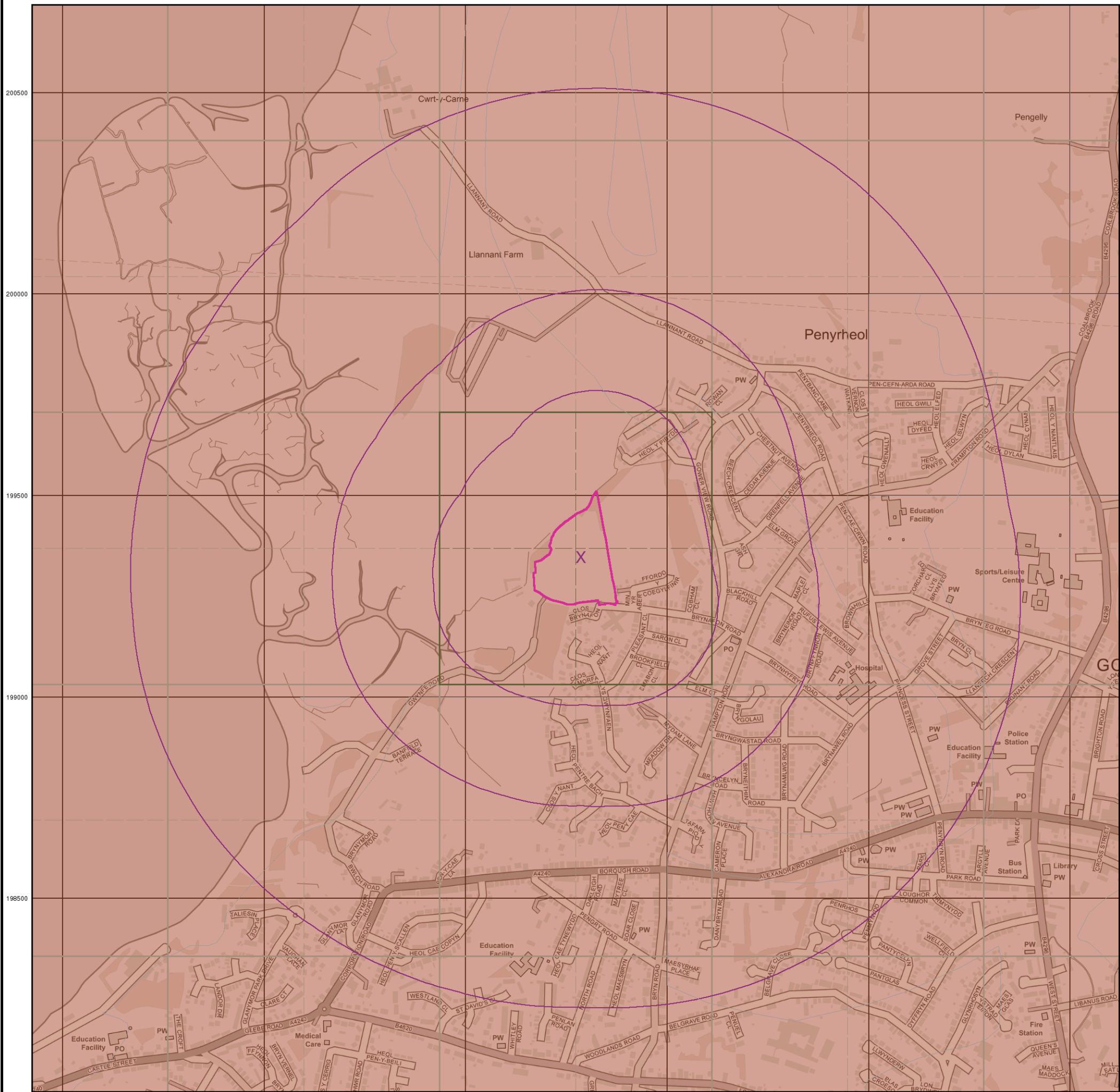


## Order Details

Order Details: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

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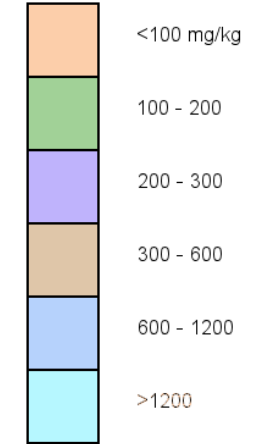
# Intégral Géotechnique

## General

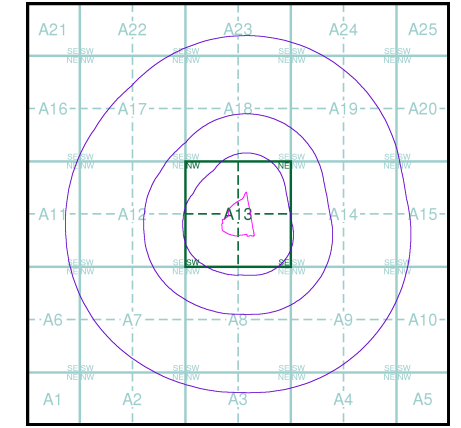
- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

## Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



## Estimated Soil Chemistry Lead - Slice A



## Order Details

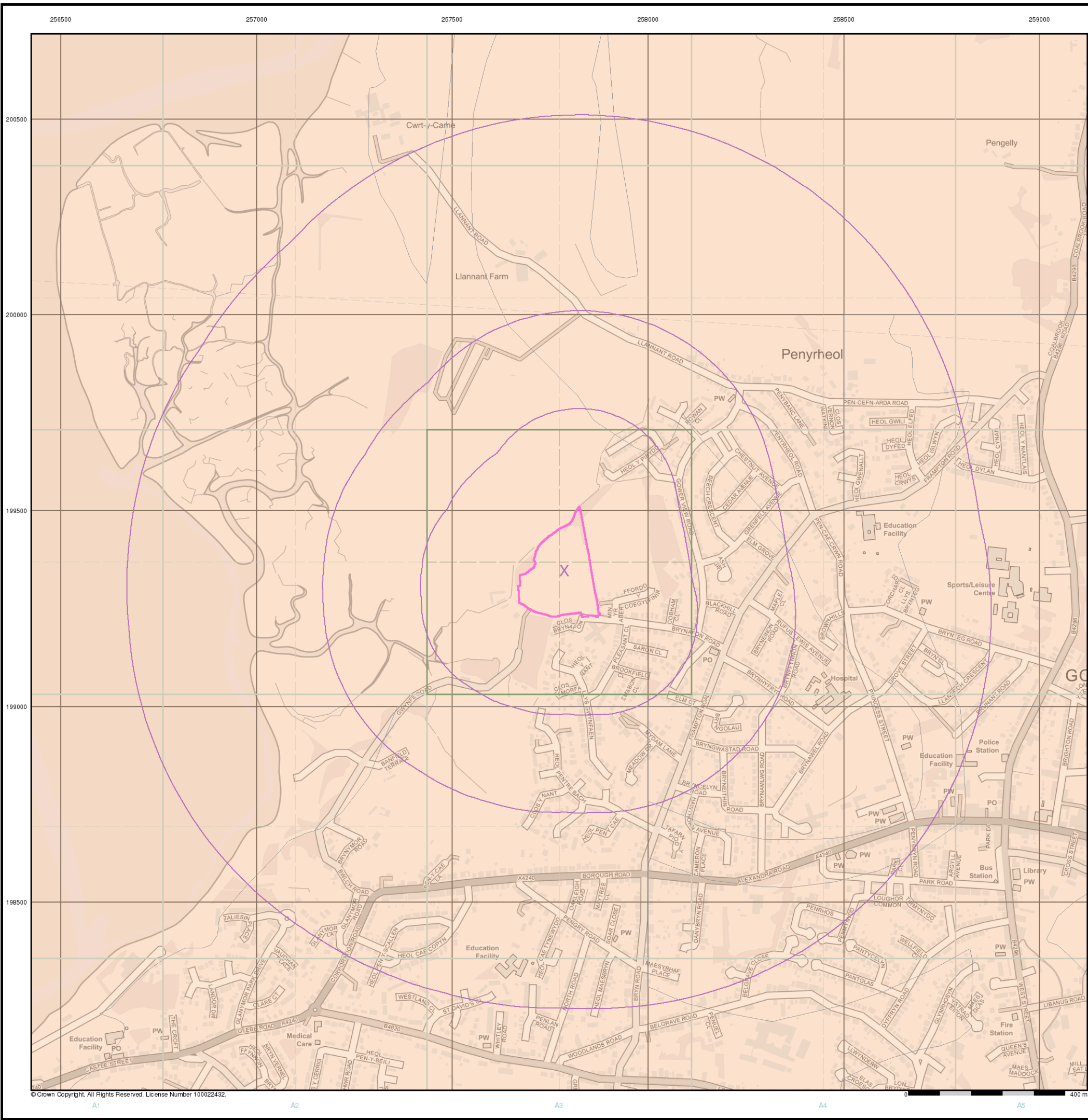
Order Details: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

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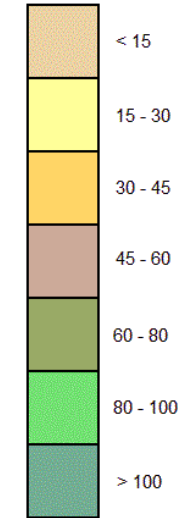
# Intégral Géotechnique

## General

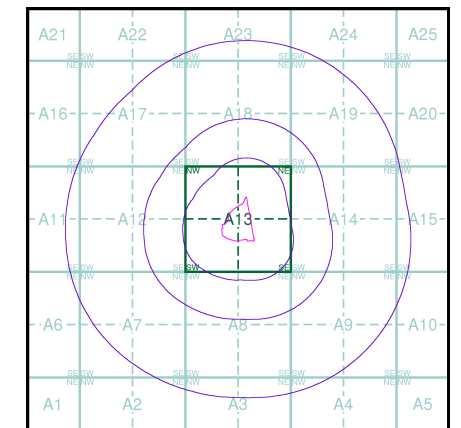
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

## Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



## Estimated Soil Chemistry Nickel - Slice A



## Order Details

Order Details: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

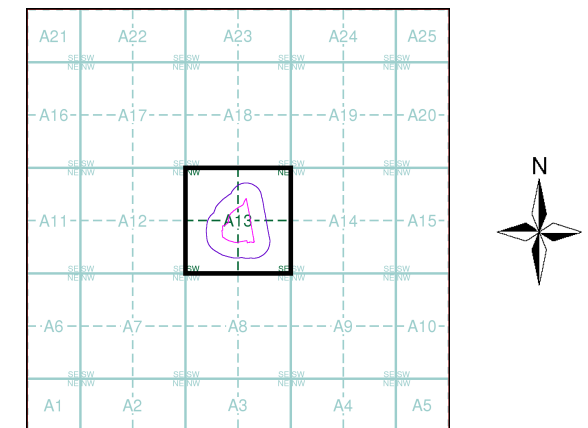


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# Intégral Géotechnique

- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Map ID
  - Several of Type at Location
  - Pylon
  - Overhead Transmission Line
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
  - Contaminated Land Register Entry or Notice
  - Discharge Consent
  - Enforcement or Prohibition Notice
  - Integrated Pollution Control
  - Integrated Pollution Prevention Control
  - Local Authority Integrated Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control Enforcement
  - Pollution Incident to Controlled Waters
  - Prosecution Relating to Authorised Processes
  - Prosecution Relating to Controlled Waters
  - Registered Radioactive Substance
  - River Network or Water Feature
  - River Quality Sampling Point
  - Substantiated Pollution Incident Register
  - Water Abstraction
  - Water Industry Act Referral
- Waste**
- BGS Recorded Landfill Site (Location)
  - BGS Recorded Landfill Site
  - EA Historic Landfill (Buffered Point)
  - EA Historic Landfill (Polygon)
  - Integrated Pollution Control Registered Waste Site
  - Licensed Waste Management Facility (Landfill Boundary)
  - Licensed Waste Management Facility (Location)
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  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Registered Landfill Site
  - Registered Landfill Site (Location)
  - Registered Landfill Site (Point Buffered to 100m)
  - Registered Landfill Site (Point Buffered to 250m)
  - Registered Waste Transfer Site (Location)
  - Registered Waste Transfer Site
  - Registered Waste Treatment or Disposal Site (Location)
  - Registered Waste Treatment or Disposal Site
- Hazardous Substances**
- COMAH Site
  - Explosive Site
  - NIHHS Site
  - Planning Hazardous Substance Consent
  - Planning Hazardous Substance Enforcement
- Geological**
- BGS Recorded Mineral Site

## Site Sensitivity Map - Segment A13



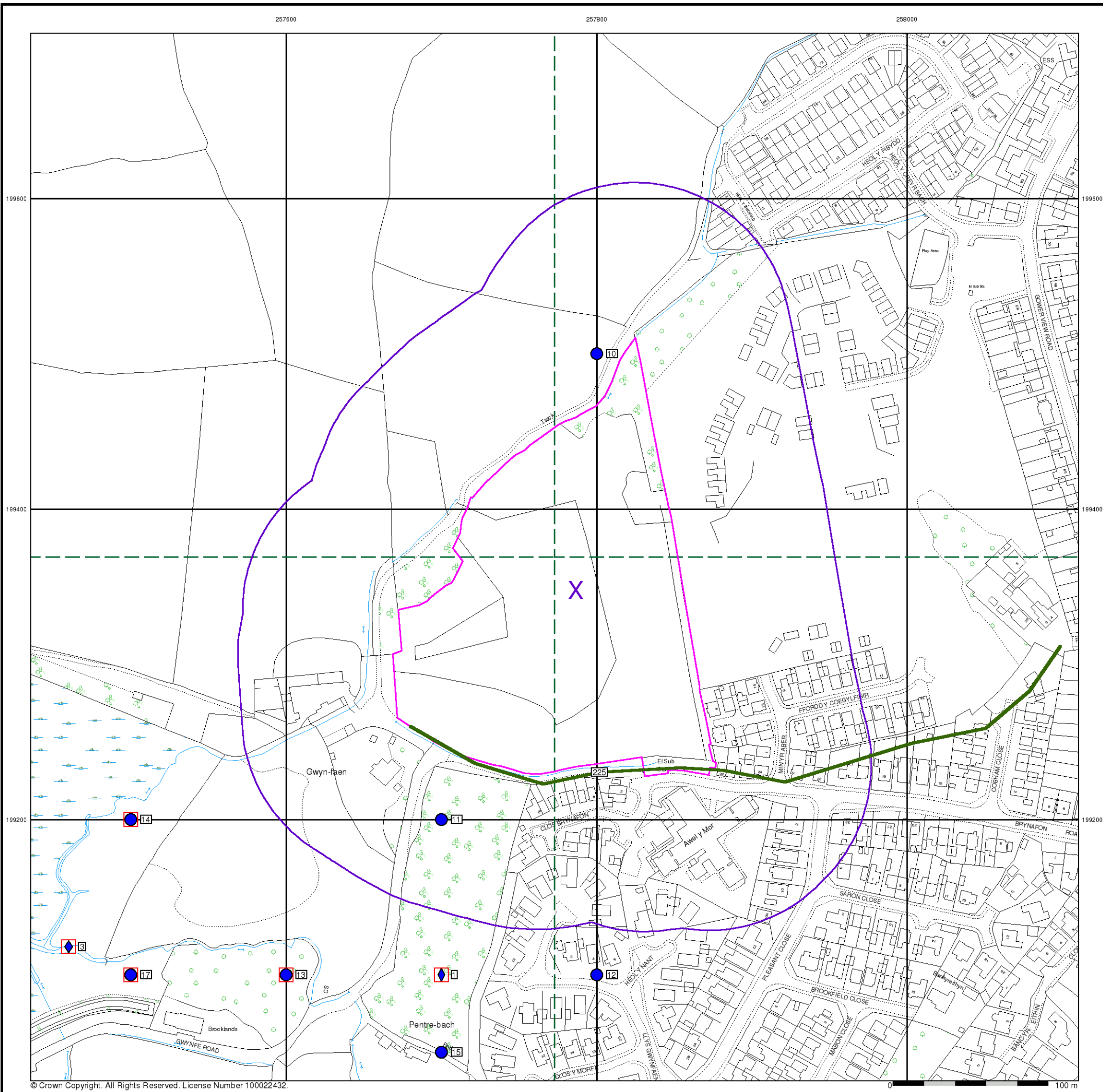
**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Plot Buffer (m): 100

**Site Details**  
 Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
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# Geology 1:50,000 Maps Legends

## Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	LSGR	Landscaped Ground (Undivided)	Artificially Modified Ground	Not Supplied - Holocene
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene
	WGR	Worked Ground (Undivided)	Void	Not Supplied - Holocene

## Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	TFD	Tidal Flat Deposits	Silt and Clay	Not Supplied - Holocene
	TFD	Tidal Flat Deposits	Sand, Silt and Clay	Not Supplied - Holocene
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	TILLD	Till, Devensian	Diamicton	Not Supplied - Devensian
	GFSD	Glaciofluvial Sheet Deposits	Sand and Gravel	Not Supplied - Quaternary

## Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	GDB	Grovesend Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	GDB	Grovesend Formation	Sandstone	Not Supplied - Westphalian
	SW	Swansea Member	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	H	Hughes Member	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
		Rock Segments		
		Faults		

# Intégral Géotechnique

## Geology 1:50,000 Maps

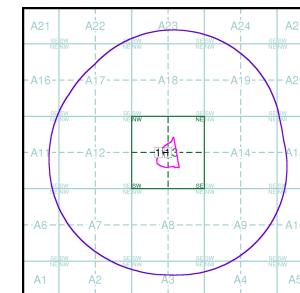
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

## Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	247
Map Name:	Swansea
Map Date:	2011
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

## Geology 1:50,000 Maps - Slice A

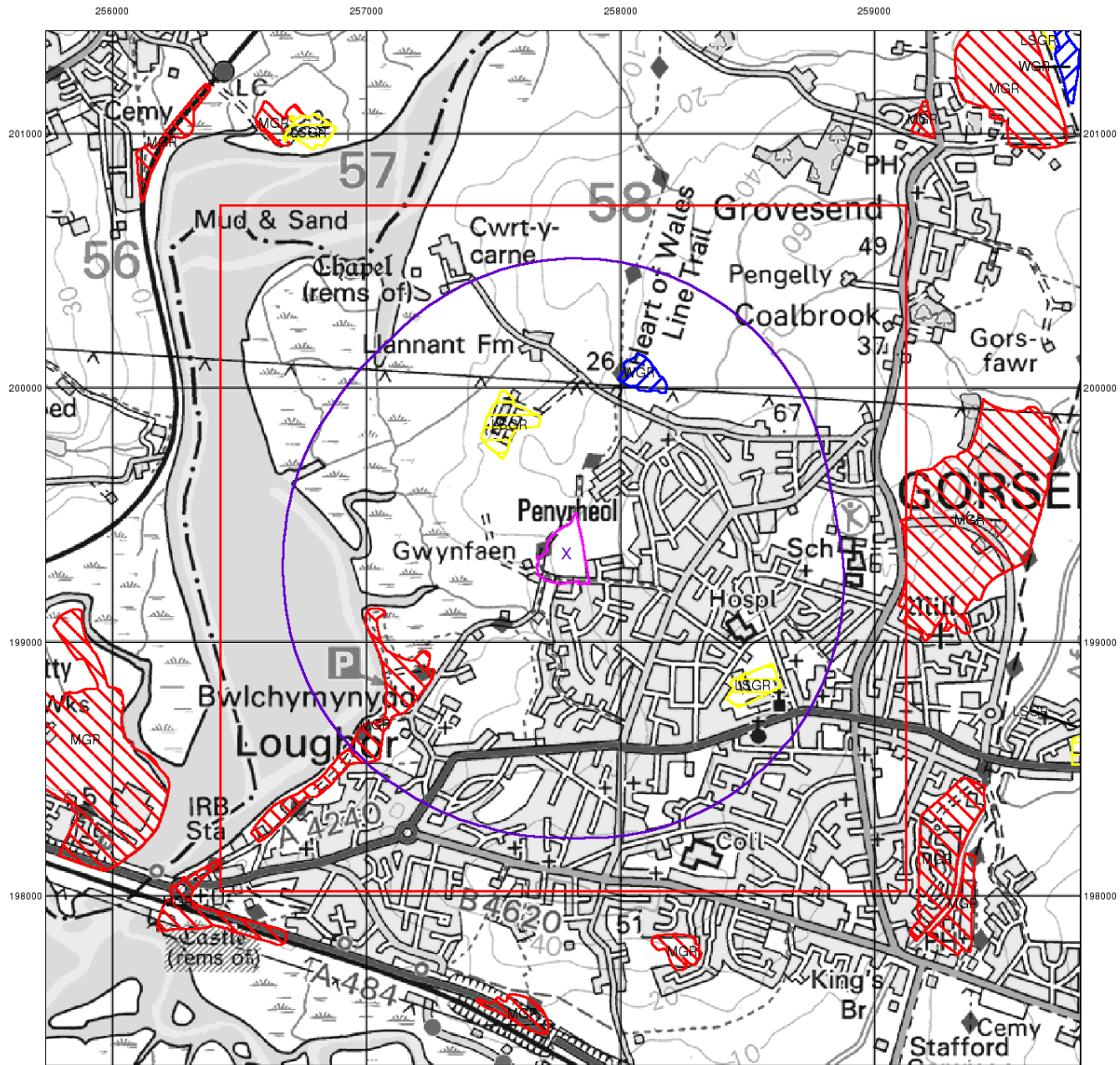


## Order Details:

Order Number:	331303750_1_1
Customer Reference:	14294/LP
National Grid Reference:	257790, 199350
Slice:	A
Site Area (Ha):	3.53
Search Buffer (m):	1000

## Site Details:

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



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# Intégral Géotechnique

## Artificial Ground and Landslip

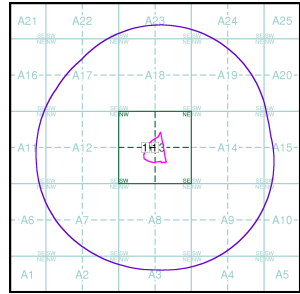
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

## Artificial Ground and Landslip Map - Slice A



### Order Details:

Order Number: 331303750\_1\_1  
 Customer Reference: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

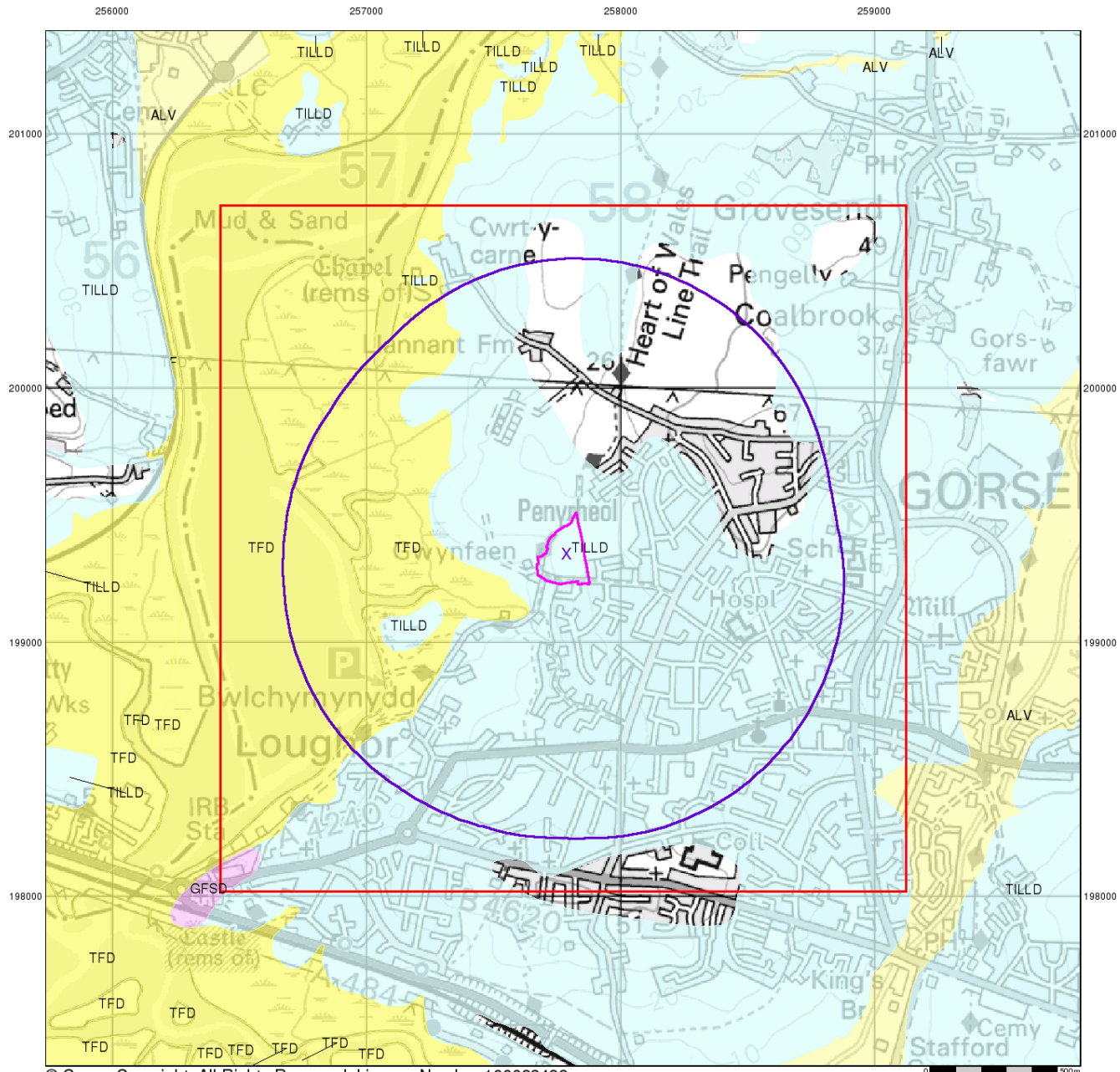
### Site Details:

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
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# Intégral Géotechnique

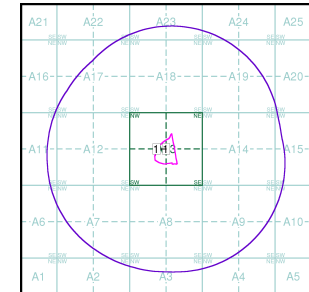
## Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

## Superficial Geology Map - Slice A



### Order Details:

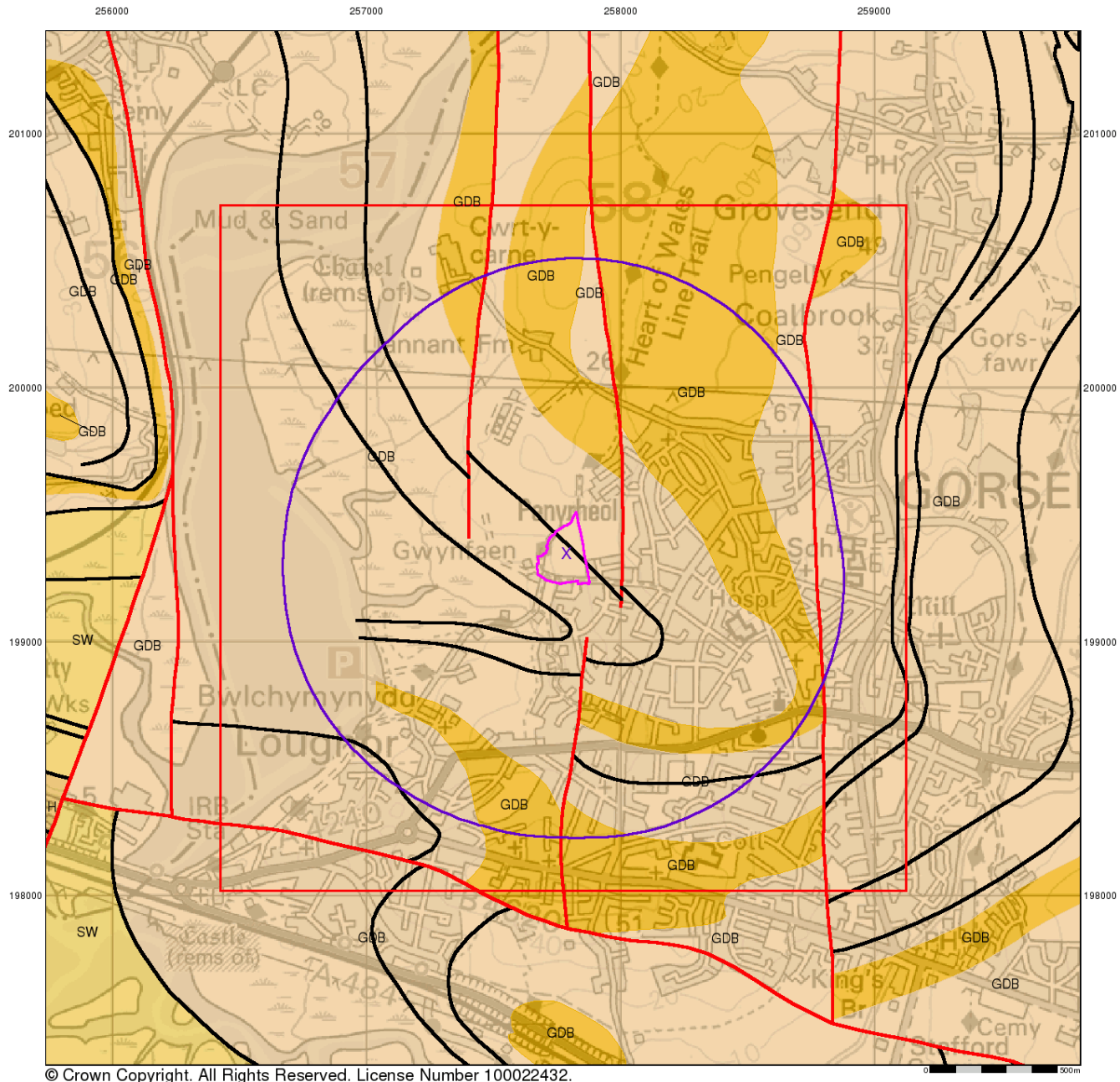
Order Number: 331303750\_1\_1  
 Customer Reference: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
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# Intégral Géotechnique

## Bedrock and Faults

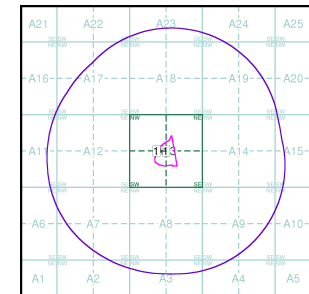
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

## Bedrock and Faults Map - Slice A



### Order Details:

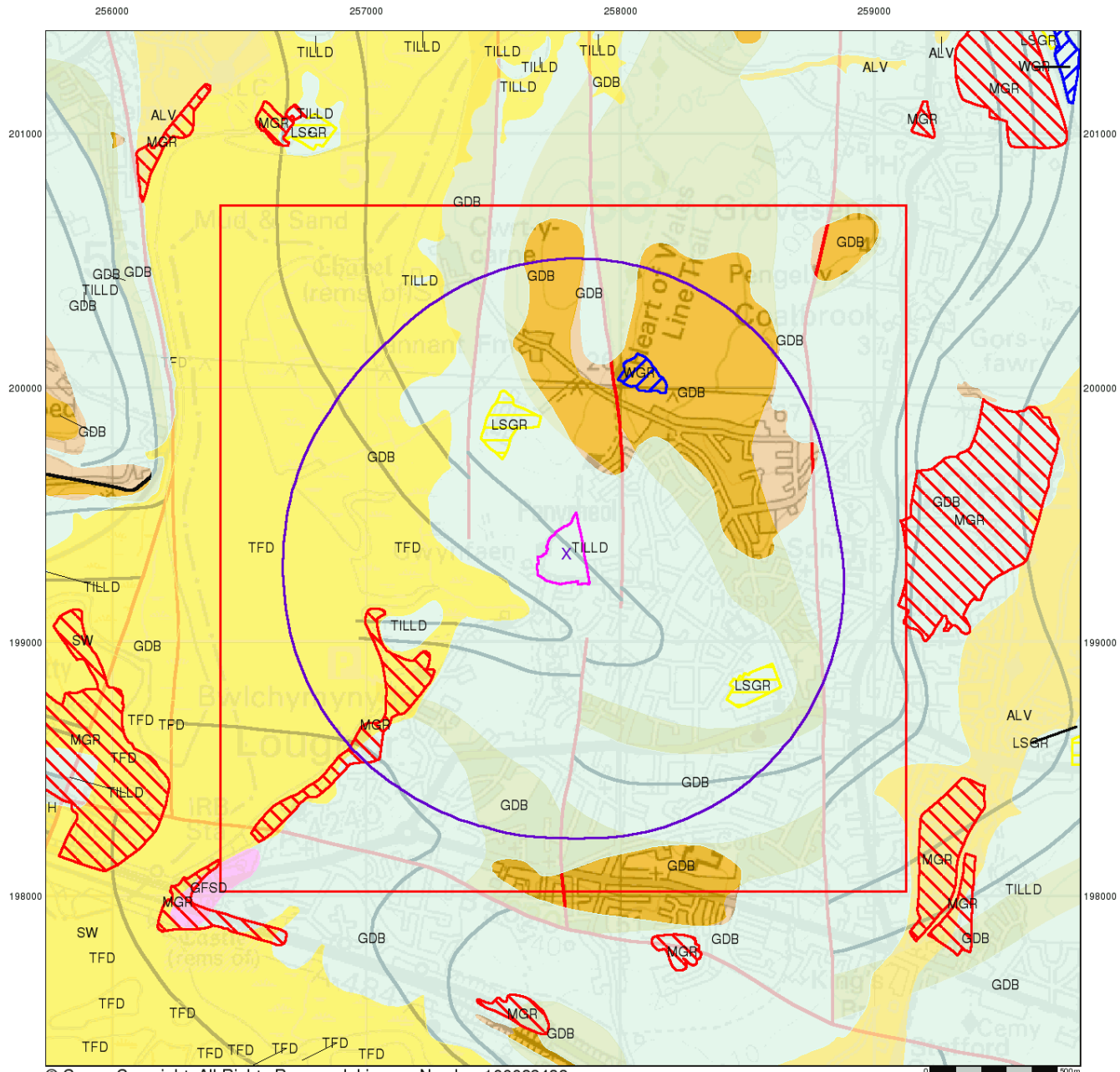
Order Number: 331303750\_1\_1  
 Customer Reference: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
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# Intégral Géotechnique

## Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

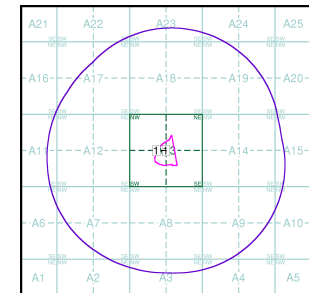
## Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

## Contact

British Geological Survey  
Kingsley Dunham Centre  
Keyworth  
Nottingham  
NG12 5GG  
Telephone: 0115 936 3143  
Fax: 0115 936 3276  
email: enquiries@bgs.ac.uk  
website: www.bgs.ac.uk

## Combined Geology Map - Slice A



## Order Details:

Order Number: 331303750\_1\_1  
Customer Reference: 14294/LP  
National Grid Reference: 257790, 199350  
Slice: A  
Site Area (Ha): 3.53  
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# Historical Mapping Legends

## Ordnance Survey County Series 1:10,560

- Gravel Pit
- Sand Pit
- Other Pits
- Quarry
- Shingle
- Orchard
- Osiers
- Reeds
- Marsh
- Mixed Wood
- Deciduous
- Brushwood
- Fir
- Furze
- Rough Pasture
- Arrow denotes flow of water
- Trigonometrical Station
- Site of Antiquities
- Bench Mark
- Pump, Guide Post, Signal Post
- Well, Spring, Boundary Post
- 285 Surface Level
- Sketched Contour
- Instrumental Contour
- Main Roads (Fenced, Un-Fenced)
- Minor Roads (Fenced, Un-Fenced)
- Sunken Road
- Raised Road
- Road over Railway
- Railway over River
- Railway over Road
- Level Crossing
- Road over River or Canal
- Road over Stream
- Road over Stream
- County Boundary (Geographical)
- County & Civil Parish Boundary
- Administrative County & Civil Parish Boundary
- County Borough Boundary (England)
- County Burgh Boundary (Scotland)
- Rural District Boundary
- Civil Parish Boundary

## Ordnance Survey Plan 1:10,000

- Chalk Pit, Clay Pit or Quarry
- Gravel Pit
- Sand Pit
- Disused Pit or Quarry
- Refuse or Slag Heap
- Lake, Loch or Pond
- Dunes
- Boulders
- Coniferous Trees
- Non-Coniferous Trees
- Orchard
- Scrub
- Coppice
- Bracken
- Heath
- Rough Grassland
- Marsh
- Reeds
- Saltings
- Building
- Glasshouse
- Sloping Masonry
- Pylon
- Electricity Transmission Line
- Pole
- Cutting
- Embankment
- Standard Gauge Multiple Track
- Road Under
- Road Over
- Level Crossing
- Foot Bridge
- Standard Gauge Single Track
- Siding, Tramway or Mineral Line
- Narrow Gauge
- Geographical County
- Administrative County, County Borough or County of City
- Municipal Borough, Urban or Rural District, Burgh or District Council
- Borough, Burgh or County Constituency (Shown only when not coincident with other boundaries)
- Civil Parish (Shown alternately when coincidence of boundaries occurs)
- BP, BS Boundary Post or Stone
- Ch Church
- CH Club House
- F E Sta Fire Engine Station
- FB Foot Bridge
- Fn Fountain
- GP Guide Post
- MP Mile Post
- MS Mile Stone
- Pol Sta Police Station
- PO Post Office
- PC Public Convenience
- PH Public House
- SB Signal Box
- Spr Spring
- TCB Telephone Call Box
- TCP Telephone Call Post
- W Well

## 1:10,000 Raster Mapping

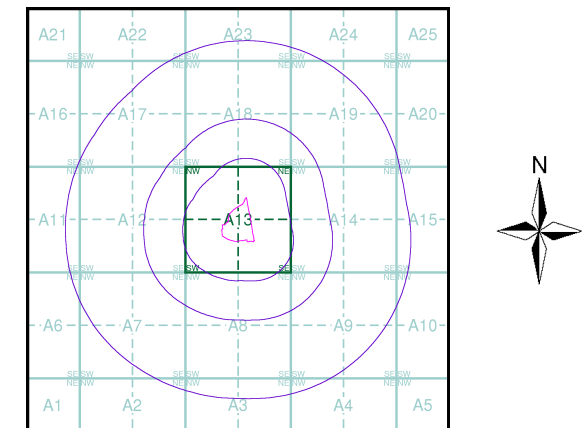
- Gravel Pit
- Refuse tip or slag heap
- Rock
- Rock (scattered)
- Boulders
- Boulders (scattered)
- Shingle
- Mud
- Mud
- Sand
- Sand Pit
- Slopes
- Top of cliff
- General detail
- Underground detail
- Overhead detail
- Narrow gauge railway
- Multi-track railway
- Single track railway
- County boundary (England only)
- Civil, parish or community boundary
- District, Unitary, Metropolitan, London Borough boundary
- Constituency boundary
- Area of wooded vegetation
- Non-coniferous trees
- Non-coniferous trees (scattered)
- Coniferous trees
- Coniferous trees (scattered)
- Positioned tree
- Orchard
- Coppice or Osiers
- Rough Grassland
- Heath
- Scrub
- Marsh, Salt Marsh or Reeds
- Water feature
- Flow arrows
- MHW(S) Mean high water (springs)
- MLW(S) Mean low water (springs)
- Telephone line (where shown)
- Electricity transmission line (with poles)
- Bench mark (where shown)
- Triangulation station
- Point feature (e.g. Guide Post or Mile Stone)
- Pylon, flare stack or lighting tower
- Site of (antiquity)
- Glasshouse
- General Building
- Important Building

# Intégral Géotechnique

## Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:10,560	1884	3
Carmarthenshire	1:10,560	1889	4
Glamorganshire	1:10,560	1900 - 1901	5
Carmarthenshire	1:10,560	1907 - 1908	6
Carmarthenshire	1:10,560	1921	7
Carmarthenshire	1:10,560	1935 - 1936	8
Carmarthenshire	1:10,560	1938	9
Carmarthenshire	1:10,560	1951	10
Ordnance Survey Plan	1:10,000	1964	11
Ordnance Survey Plan	1:10,000	1969	12
Ordnance Survey Plan	1:10,000	1974	13
Swansea	1:10,000	1976	14
Ordnance Survey Plan	1:10,000	1980 - 1989	15
Ordnance Survey Plan	1:10,000	1993	16
10K Raster Mapping	1:10,000	1999	17
10K Raster Mapping	1:10,000	2006	18
VectorMap Local	1:10,000	2023	19

## Historical Map - Slice A



## Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
 INFORMATION GROUP

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# Russian Military Mapping Legends

## 1:5,000 and 1:10,000 mapping

a. Not drawn to scale    b. Drawn to scale

**Government and Administrative Buildings**  
**Military and Industrial Buildings**  
**Military and Communication Areas**  
**Fireproof Building** (a, b)  
**Non-fireproof Building** (a, b)  
**Factory, mill, and flour mill, with chimneys** (a, b)  
**Power Station, drawn to scale**  
**Radio Station, drawn to scale**  
**Abandoned Open-pit Mine or Quarry**  
**Pit** (a, b)  
**Oil Deposit or Well** (a, нефть)  
**Oil Seepage** (a, нефть)  
**Tailings Pile** (b, отвал)  
**Bench Mark** (125.4, 125.1)  
**Drill Hole** (бур.)  
**Burial Mound** (+2.0)  
**Triangulation Point on Burial Mound** (+1.2, 67.8)  
**Single-track Railroad** (раз., платформ., Cut)  
**Double-track Railroad and Station Building** (Ст., мун., Tunnel, Pipe (Culvert))  
**Coniferous Forest** (сосна, 24, 0.30)  
**Deciduous Forest** (кален, 12, 0.20)  
**Mixed Forest** (ель береза, 20, 0.25)  
**Lawns**  
**Citrus Orchard**  
**Wet Ground**  
**Scattered Vegetation**

**243.8** Values for prominent elevations  
**186.0** Numbers for spot elevations, depth soundings, contour lines, etc.  
**0.2** Velocity of the current, width of river bed, depth of river  
**180/12** Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

### Russian Alphabet (For reference and phonetic interpretation of map text)

<b>А а (A)</b>	<b>З з (Z)</b>	<b>П п (P)</b>	<b>Ч ч (CH)</b>
<b>Б б (B)</b>	<b>И и (I)</b>	<b>Р р (R)</b>	<b>Ш ш (SH)</b>
<b>В в (V)</b>	<b>Й й (Y)</b>	<b>С с (S)</b>	<b>Щ щ (SHCH)</b>
<b>Г г (G)</b>	<b>К к (K)</b>	<b>Т т (T)</b>	<b>Ъ (-)</b>
<b>Д д (D)</b>	<b>Л л (L)</b>	<b>У у (U)</b>	<b>Ы (Y)</b>
<b>Е е (E)</b>	<b>М м (M)</b>	<b>Ф ф (F)</b>	<b>Ь (')</b>
<b>Ё ё (YO)</b>	<b>Н н (N)</b>	<b>Х х (KH)</b>	<b>Э э (E)</b>
<b>Ж ж (ZH)</b>	<b>О о (O)</b>	<b>Ц ц (TS)</b>	<b>Ю ю (YU or IU)</b>
			<b>Я я (YA or IA)</b>

## 1:25,000 mapping

a. Not drawn to scale    b. Drawn to scale

**Government and Administrative Buildings**  
**Military and Industrial Buildings**  
**Military and Communication Areas**  
**Partly Demolished Buildings**  
**Built-Up Area with Fireproof Buildings Predominant**  
**Built-Up Area with Non-Fireproof Buildings Predominant**  
**Individual Fireproof Building** (a, b)  
**Individual Dwelling, Fireproof**  
**Factory or Mill Chimney**  
**Factory or Mill with Chimney** (бум.)  
**Factory or Mill without Chimney** (скуп.)  
**Mine or Open Pit Mine** (медн.)  
**Operating Shaft or Mine** (кам. уг.)  
**Non-Operating Shaft or Mine** (x)  
**Salt Mine** (сол.)  
**Tailings Pile** (Δ)  
**Pit** (1.7)  
**Stone Quarry** (гл. пес. кам.)  
**Gas Pump or Service Station**  
**Fuel Storage or Natural Gas Tank**  
**Oil or Natural Gas Derrick**  
**Small Hydroelectric Power Station**  
**Power Station**  
**Transformer Station** (б.тр.)  
**Cemetery**  
**Burial Mound (height in metres)** (0 + 8.1)  
**Triangulation Point on Burial Mound** (95.7)  
**Triangulation Point** (92.6)  
**Bench Mark** (52.1)  
**Bench Mark (monumented)** (71.1)  
**Telegraph Office**  
**Telephone Station**  
**Radio Station**  
**Radio Tower**  
**Airfield or Seaplane Base**  
**Landing Strip**  
**Telegraph/Telephone Lines**  
**Main Highway**  
**Highway under Construction**  
**Improved Dirt Road (former truck road)**  
**Double-track Railroad with First Class Station**  
**Dismantled Railroad**  
**Railroad Under Construction**  
**Shore Embankment**  
**River or Ditch with Embankment**  
**Direction and velocity of current** (135.1)  
**Water Level Mark**  
**Well** (к. 55.0, 22.8, 2-ска.)  
**Water Reservoir or Rain Water Pit** (адзр.)  
**Spring** (156.2, к.к.)  
**Isobath with value** (20)  
**Heavy (Index) Contour Line**  
**Contour Line and Value** (20)  
**Half Contour Line**  
**Spot Elevation Value** (347.1)  
**Coniferous**  
**Deciduous**  
**Mixed**  
**Scrub**

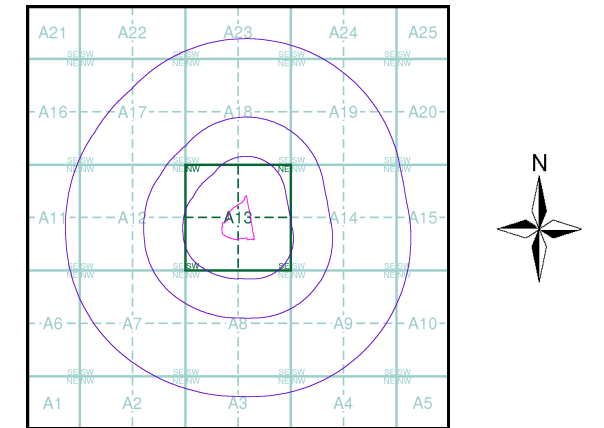
## Key to Numbers on Mapping

# Intégral Géotechnique

## Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:10,560	1884	3
Carmarthenshire	1:10,560	1889	4
Glamorganshire	1:10,560	1900 - 1901	5
Carmarthenshire	1:10,560	1907 - 1908	6
Carmarthenshire	1:10,560	1921	7
Carmarthenshire	1:10,560	1935 - 1936	8
Carmarthenshire	1:10,560	1938	9
Carmarthenshire	1:10,560	1951	10
Ordnance Survey Plan	1:10,000	1964	11
Ordnance Survey Plan	1:10,000	1969	12
Ordnance Survey Plan	1:10,000	1974	13
Swansea	1:10,000	1976	14
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Ordnance Survey Plan	1:10,000	1993	16
10K Raster Mapping	1:10,000	1999	17
10K Raster Mapping	1:10,000	2006	18
VectorMap Local	1:10,000	2023	19

## Russian Map - Slice A



## Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
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# Intégral Géotechnique

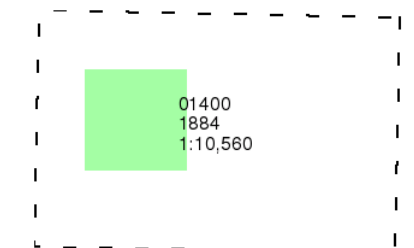
**Glamorganshire**

**Published 1884**

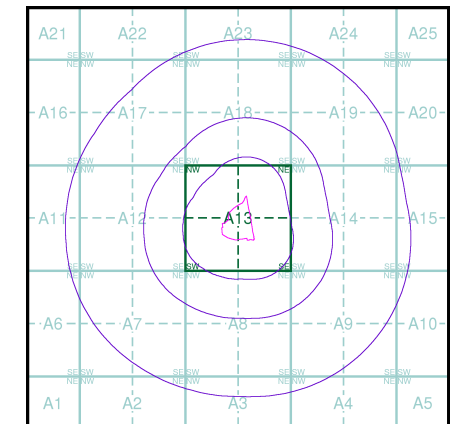
**Source map scale - 1:10,560**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

## Map Name(s) and Date(s)



## Historical Map - Slice A



## Order Details

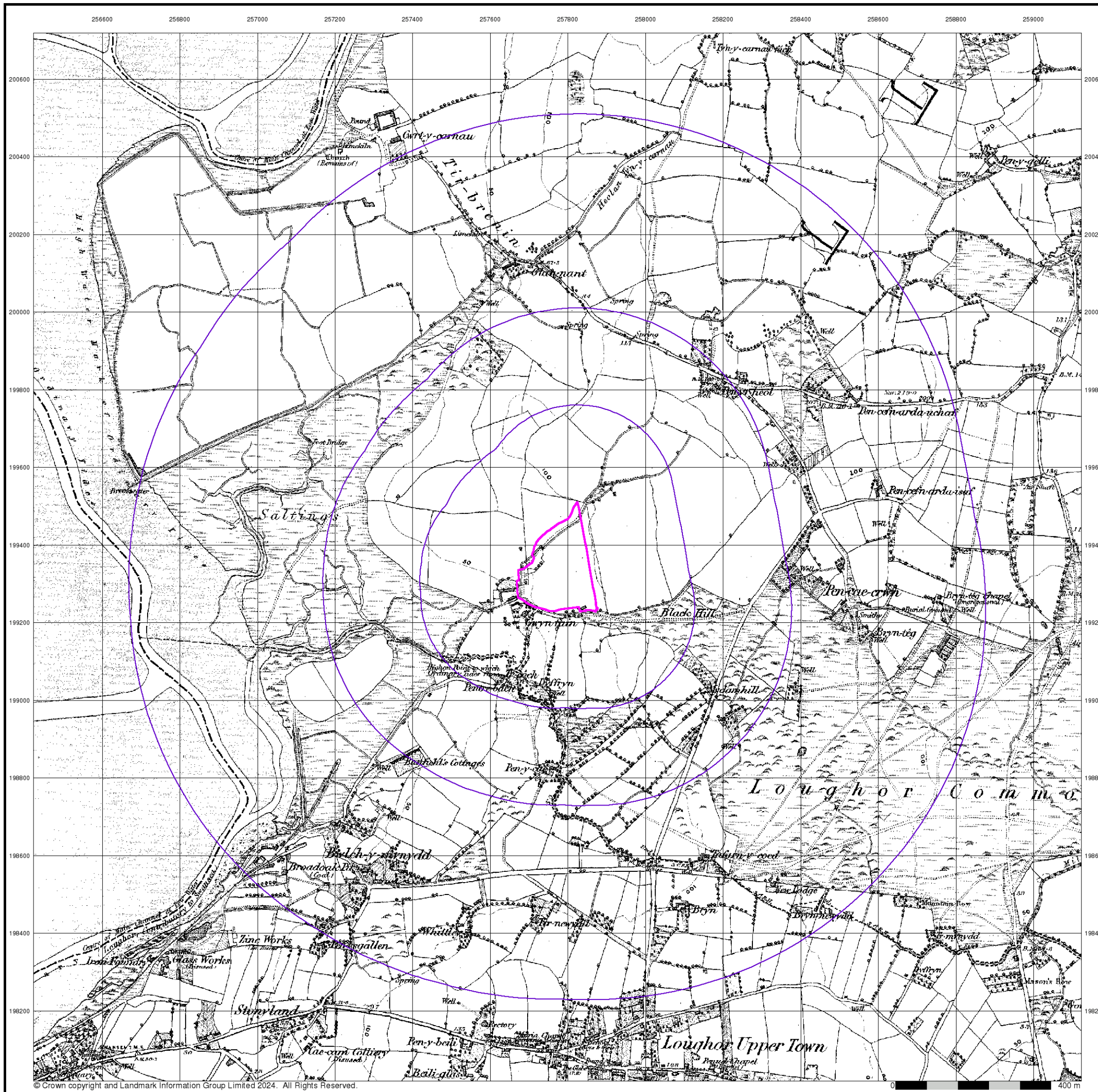
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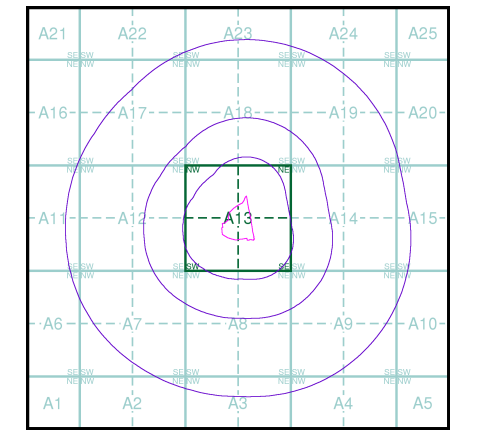


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**Map Name(s) and Date(s)**

059NW	1889	1:10,560
059SW	1889	1:10,560

**Historical Map - Slice A**

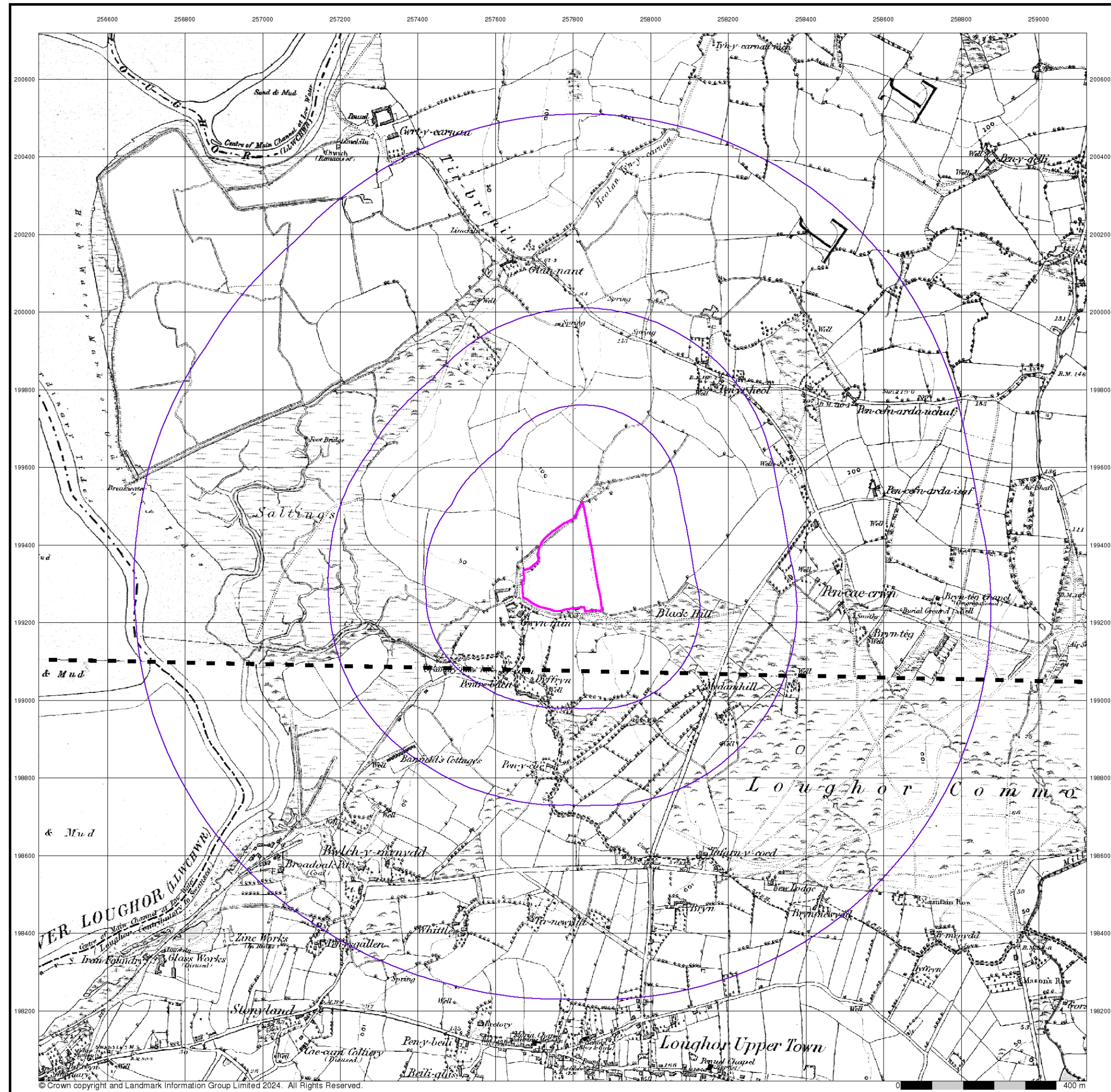


**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



# Intégral Géotechnique

**Glamorganshire**

**Published 1900 - 1901**

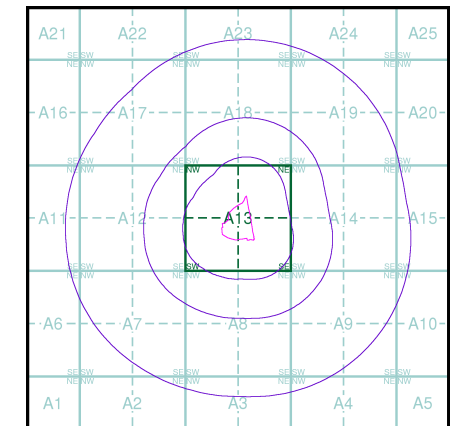
**Source map scale - 1:10,560**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

## Map Name(s) and Date(s)

014NW	1901	1:10,560
014SW	1900	1:10,560

## Historical Map - Slice A



## Order Details

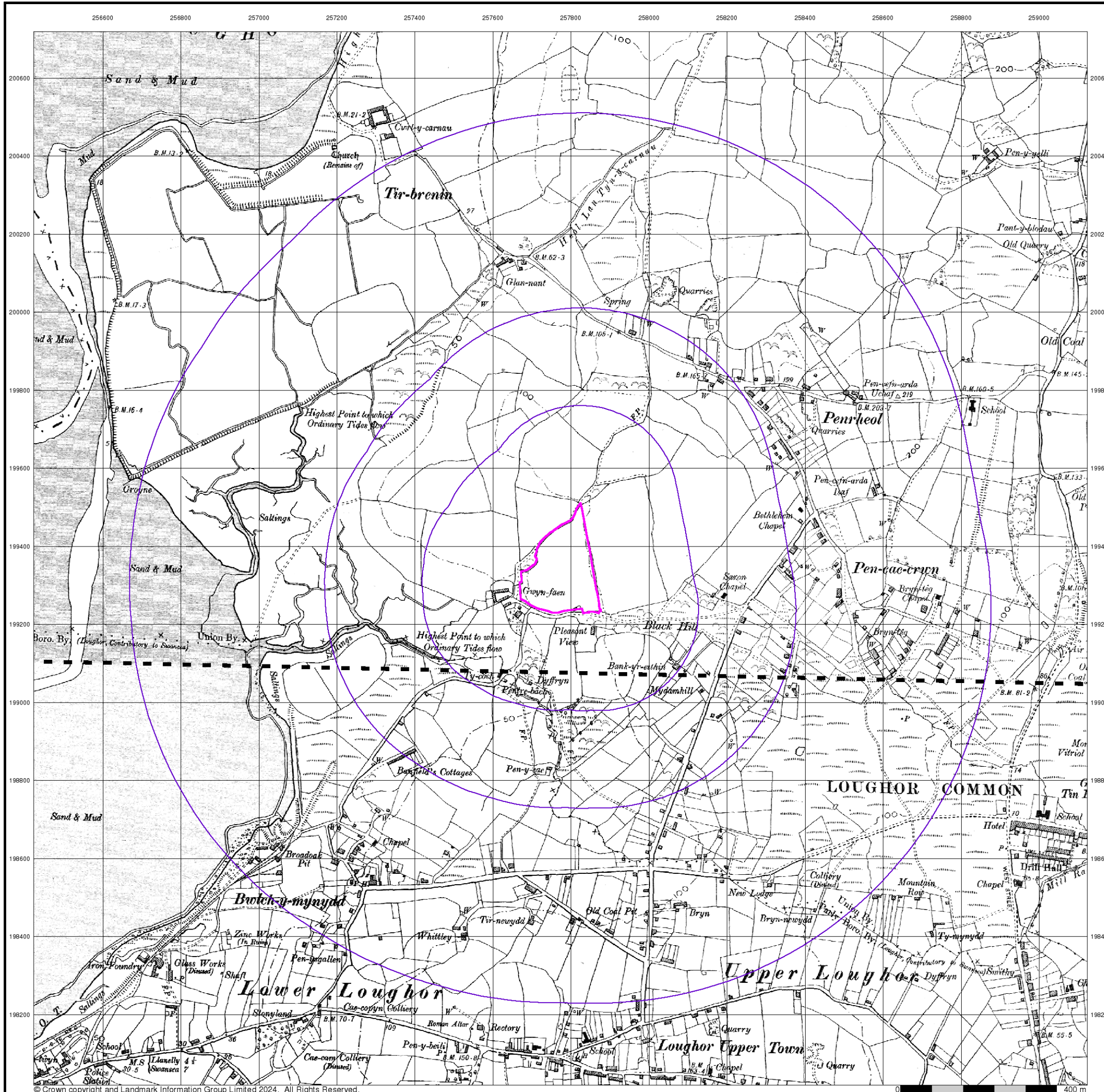
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
 INFORMATION GROUP

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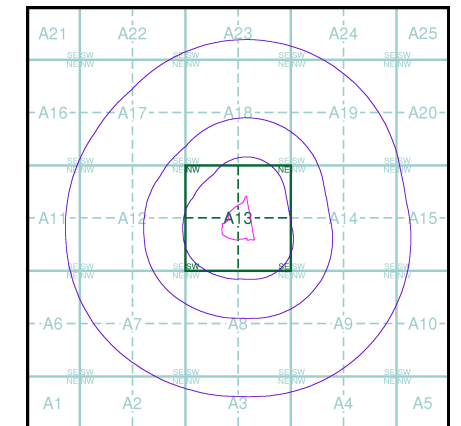


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

**Map Name(s) and Date(s)**

059NW	1908	1:10,560
059SW	1907	1:10,560

**Historical Map - Slice A**

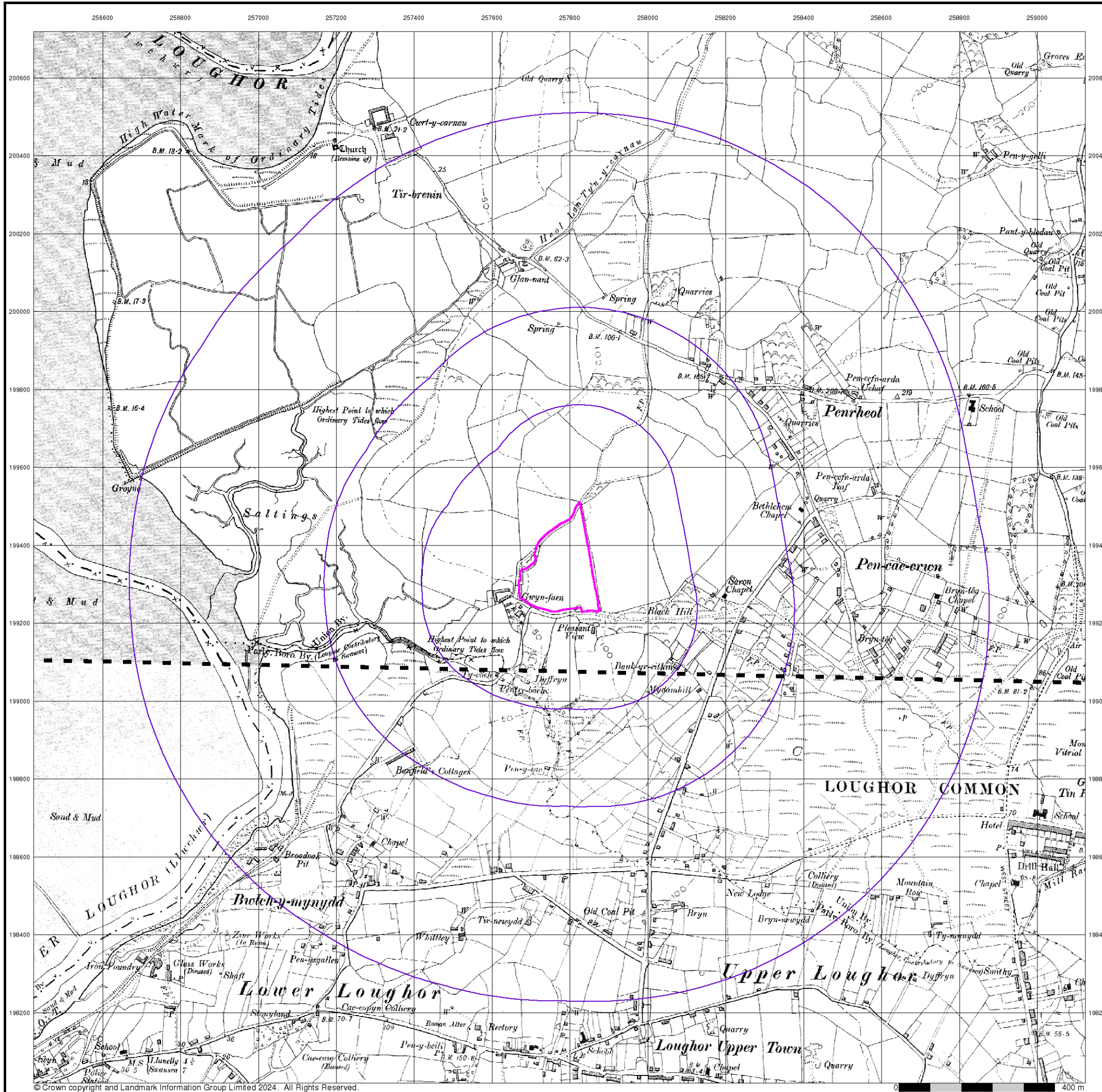


**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

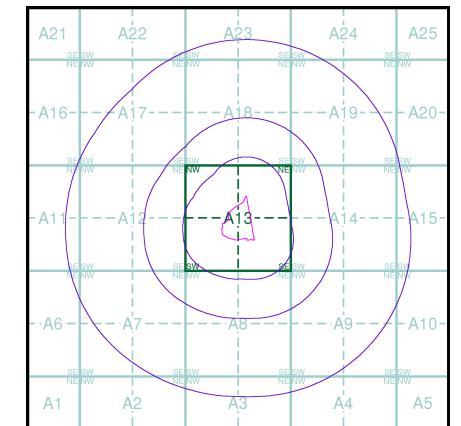


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

**Map Name(s) and Date(s)**

059NW	1921	1:10,560
059SW	1921	1:10,560

**Historical Map - Slice A**

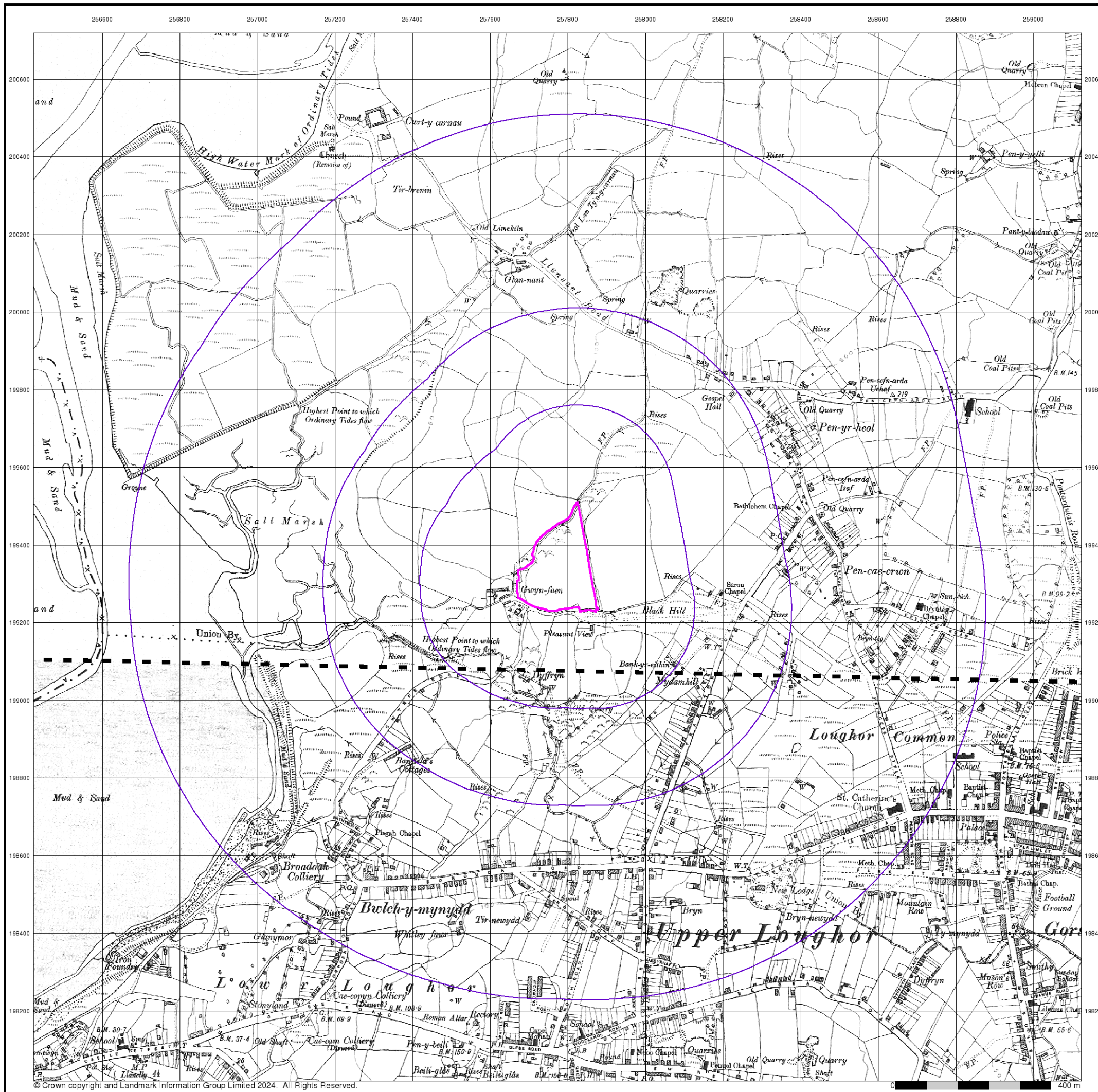


**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



# Intégral Géotechnique

**Carmarthenshire**

**Published 1935 - 1936**

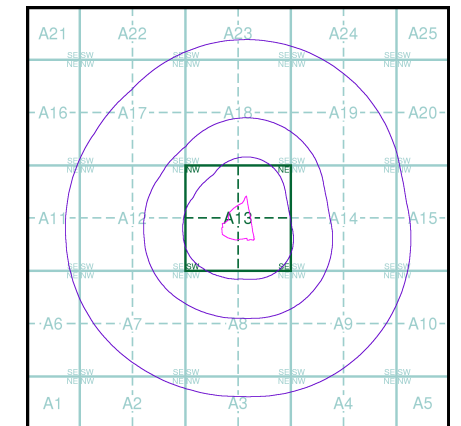
**Source map scale - 1:10,560**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

## Map Name(s) and Date(s)

059NW	1935	1:10,560
059SW	1936	1:10,560

## Historical Map - Slice A



## Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
 INFORMATION GROUP

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# Intégral Géotechnique

Carmarthenshire

Published 1938

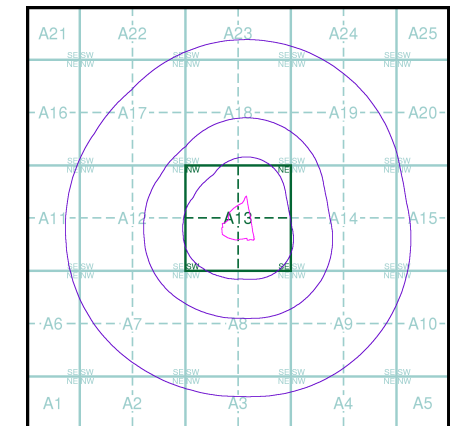
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

## Map Name(s) and Date(s)

059NW	1938	1:10,560
059SW	1938	1:10,560

## Historical Map - Slice A



## Order Details

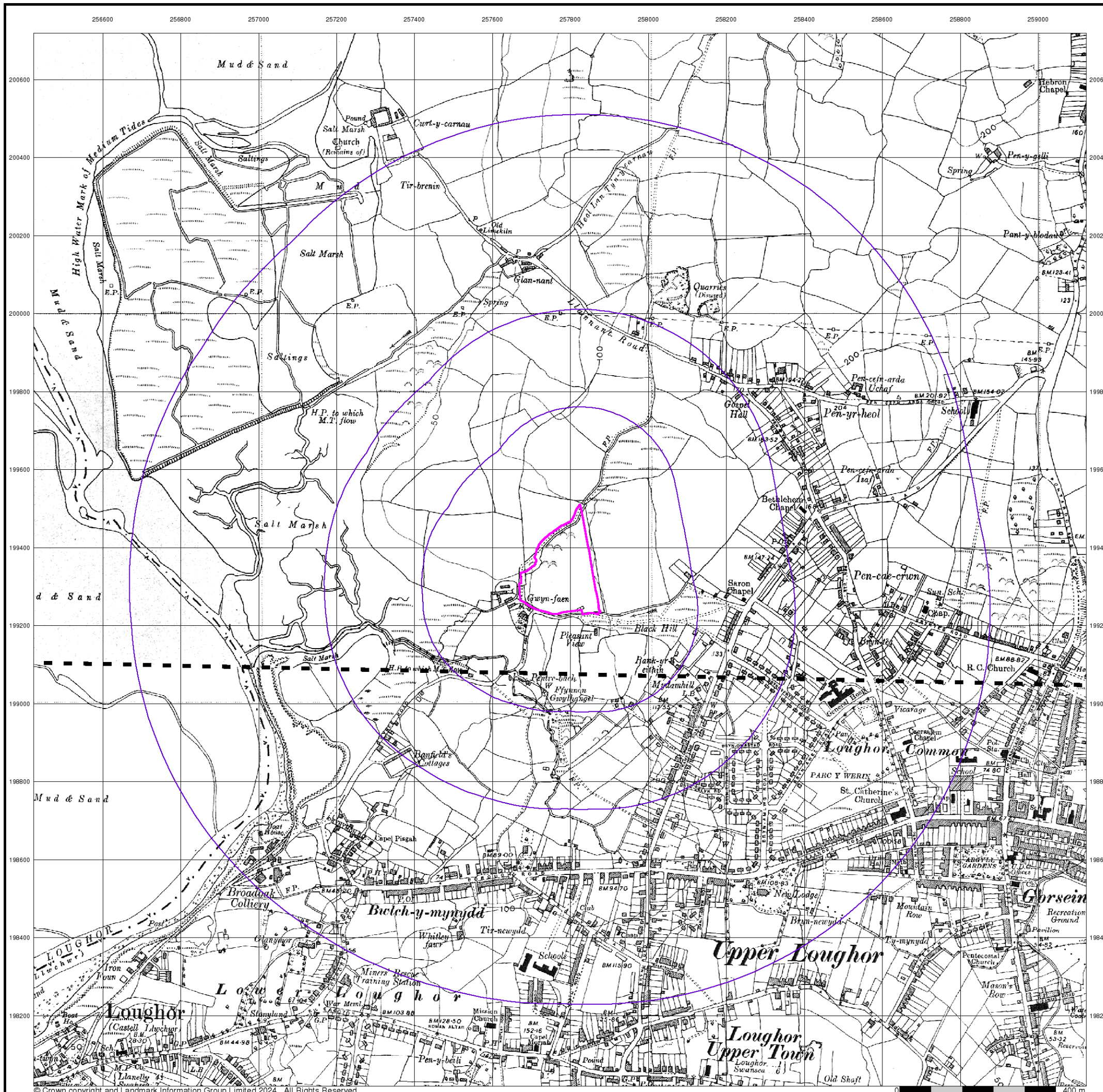
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

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# Intégral Géotechnique

**Carmarthenshire**

**Published 1951**

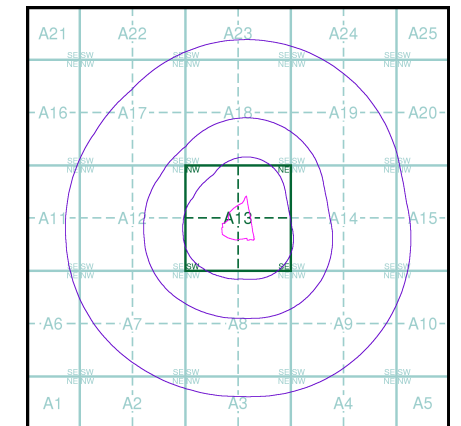
**Source map scale - 1:10,560**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

## Map Name(s) and Date(s)

059NW	1951	1:10,560
059SW	1951	1:10,560

## Historical Map - Slice A



## Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

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### Ordnance Survey Plan

Published 1964

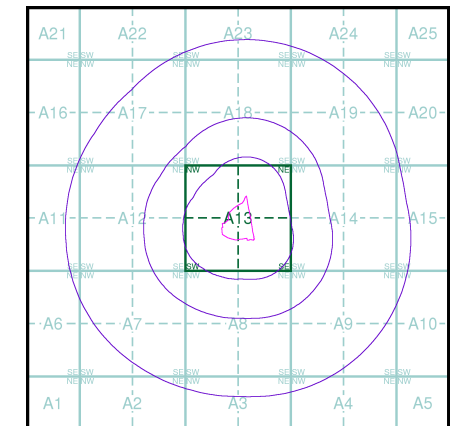
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)

- SN50SE | 1964 | 1:10,560
- SS59NE | 1964 | 1:10,560

### Historical Map - Slice A



### Order Details

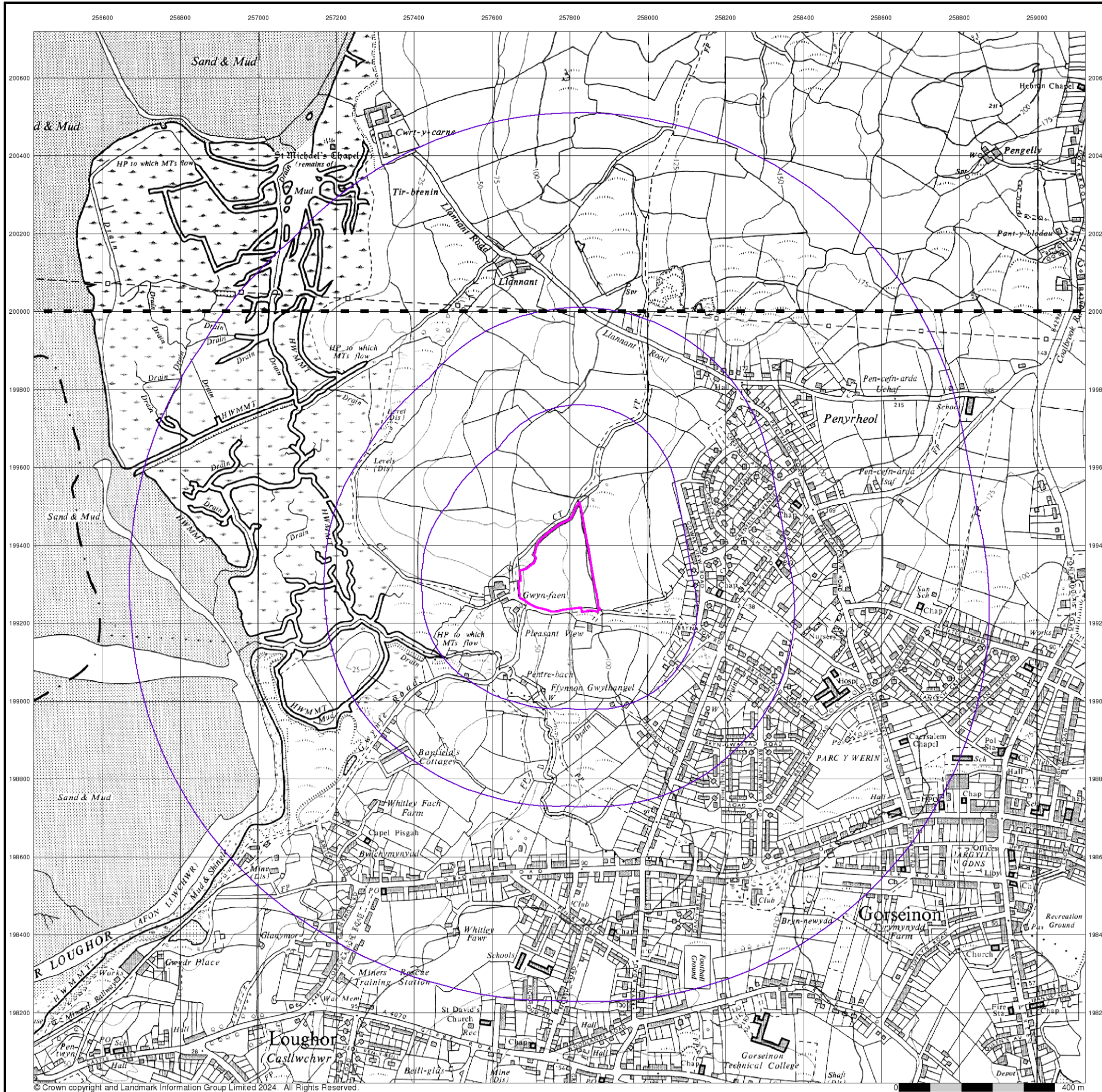
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

### Site Details

Gwynfaen Farm (Phase 2), Gorseion, Swansea, SA4 4BF



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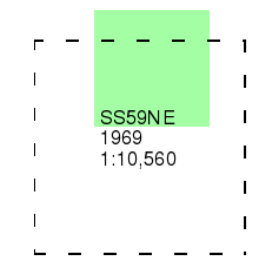
**Ordnance Survey Plan**

**Published 1969**

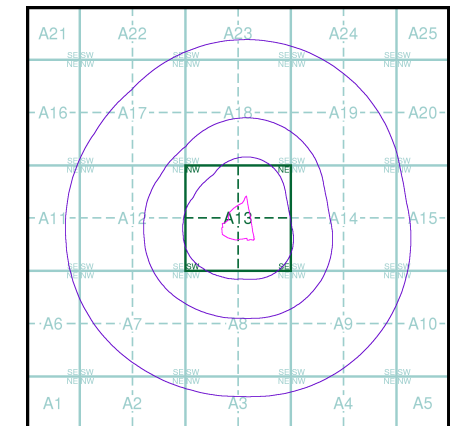
**Source map scale - 1:10,000**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

**Map Name(s) and Date(s)**



**Historical Map - Slice A**

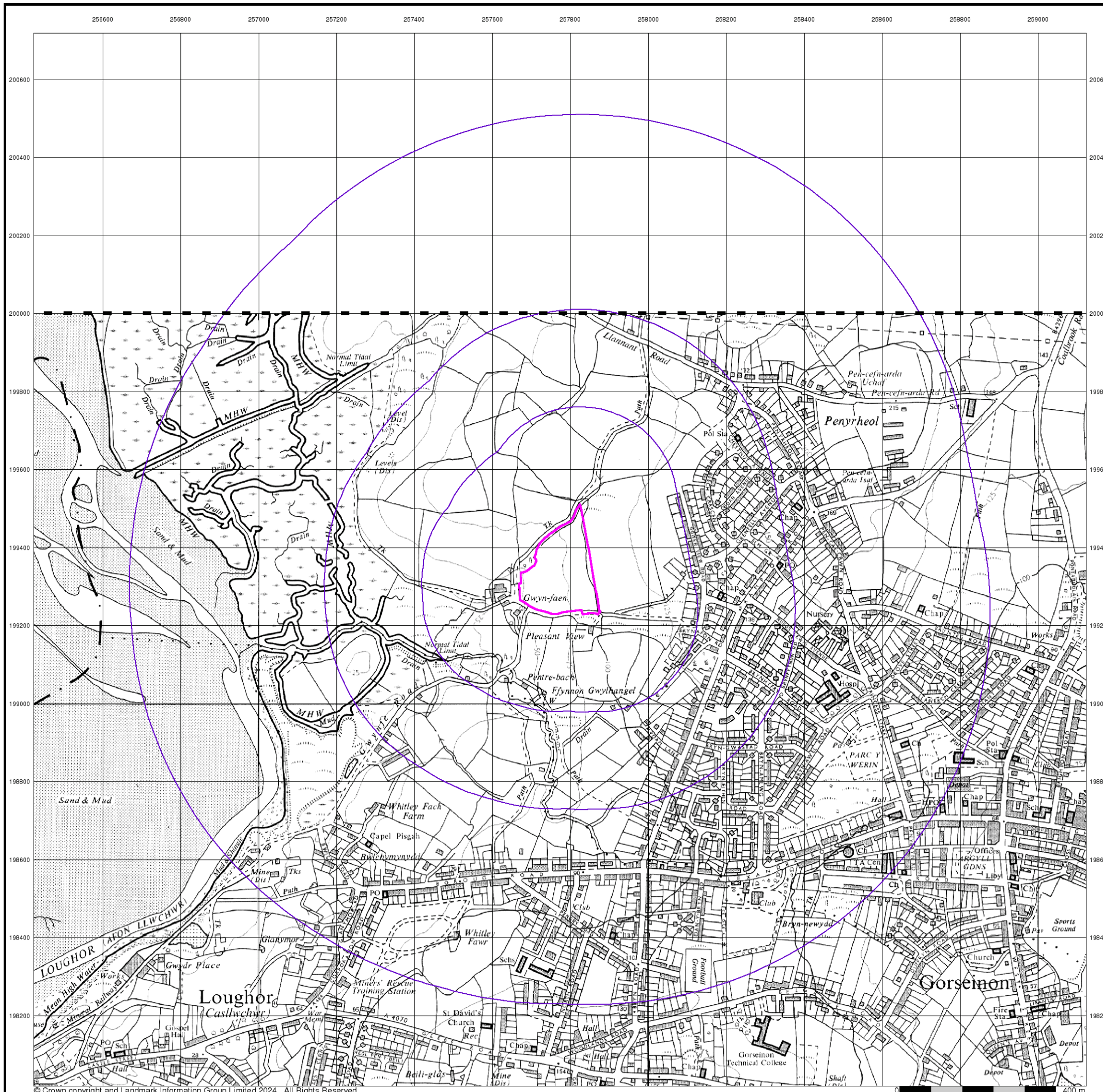


**Order Details**

Order Number: 331303750\_1\_1  
Customer Ref: 14294/LP  
National Grid Reference: 257790, 199350  
Slice: A  
Site Area (Ha): 3.53  
Search Buffer (m): 1000

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



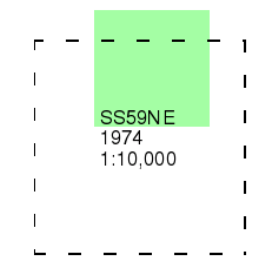
**Ordnance Survey Plan**

**Published 1974**

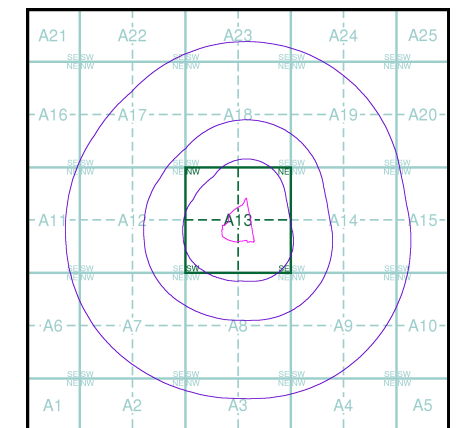
**Source map scale - 1:10,000**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

**Map Name(s) and Date(s)**



**Historical Map - Slice A**

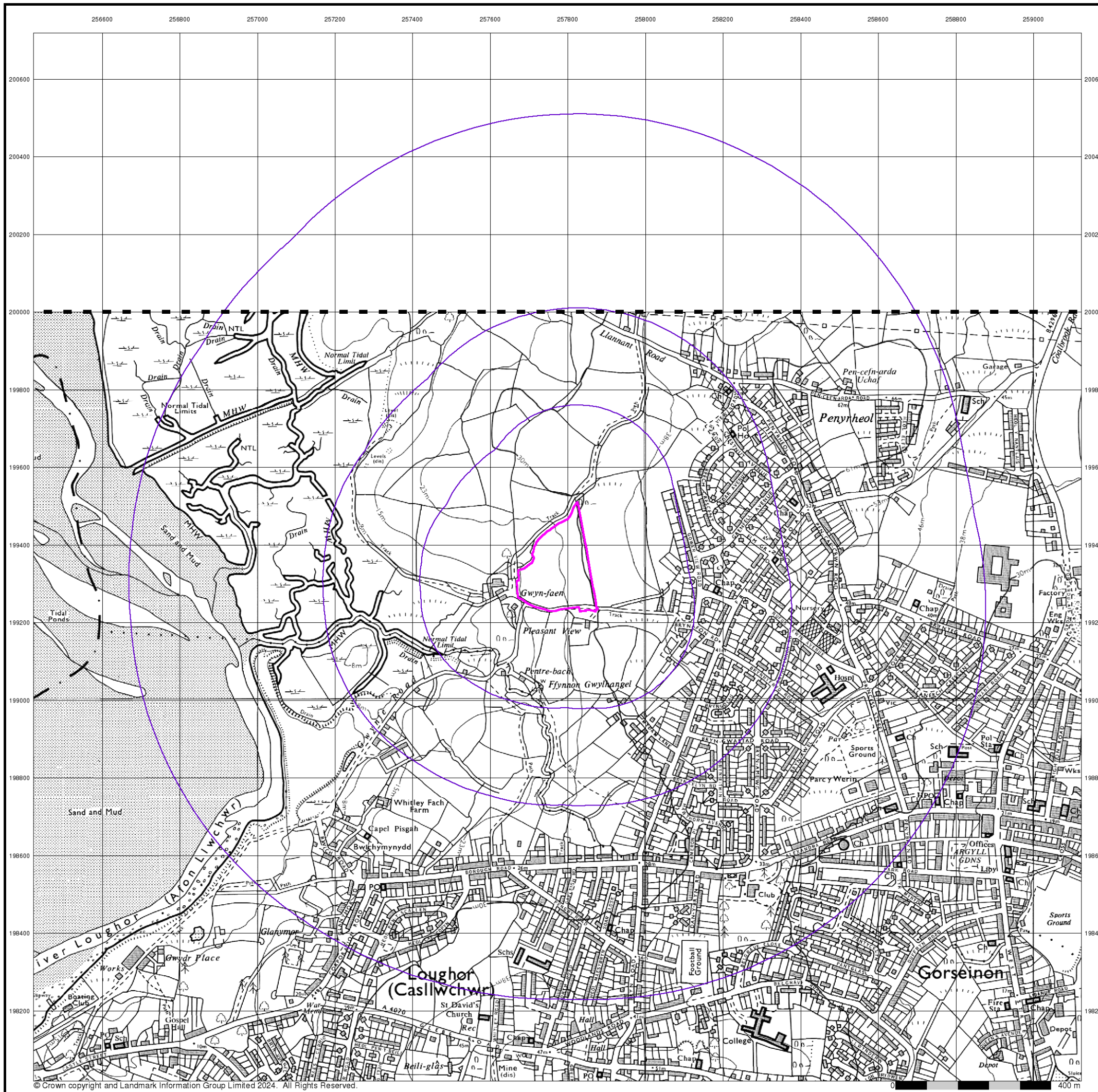


**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



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**Swansea**

**Published 1976**

**Source map scale - 1:10,000**

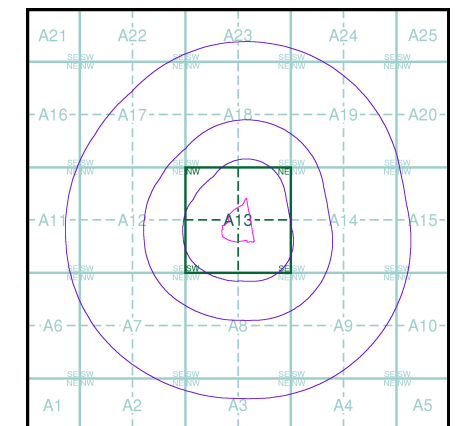
These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.

They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

**Map Name(s) and Date(s)**

- SN 50SE  
1976  
1:10,000
- SS 59NE  
1976  
1:10,000

**Russian Map - Slice A**

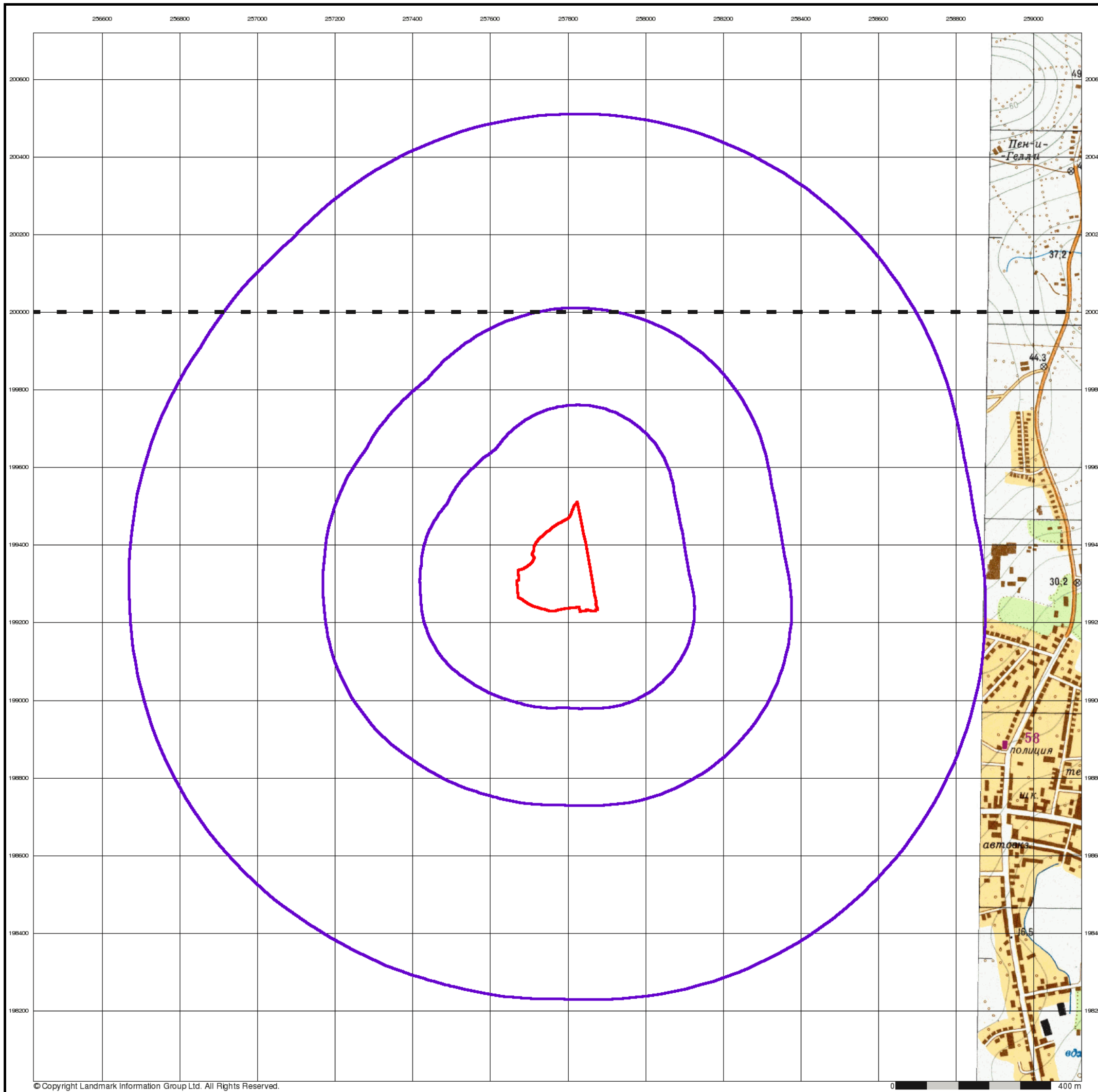


**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



# Intégral Géotechnique

## Ordnance Survey Plan

Published 1980 - 1989

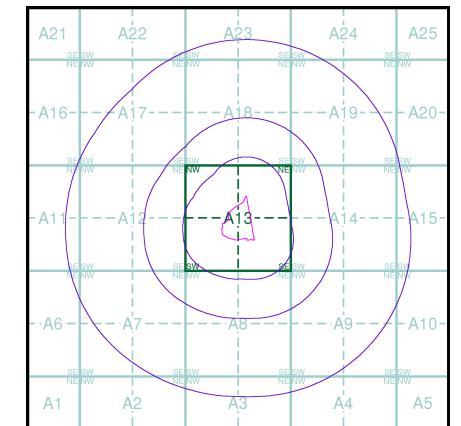
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)

SN50SE	1980	1:10,000
SS59NE	1989	1:10,000

### Historical Map - Slice A



### Order Details

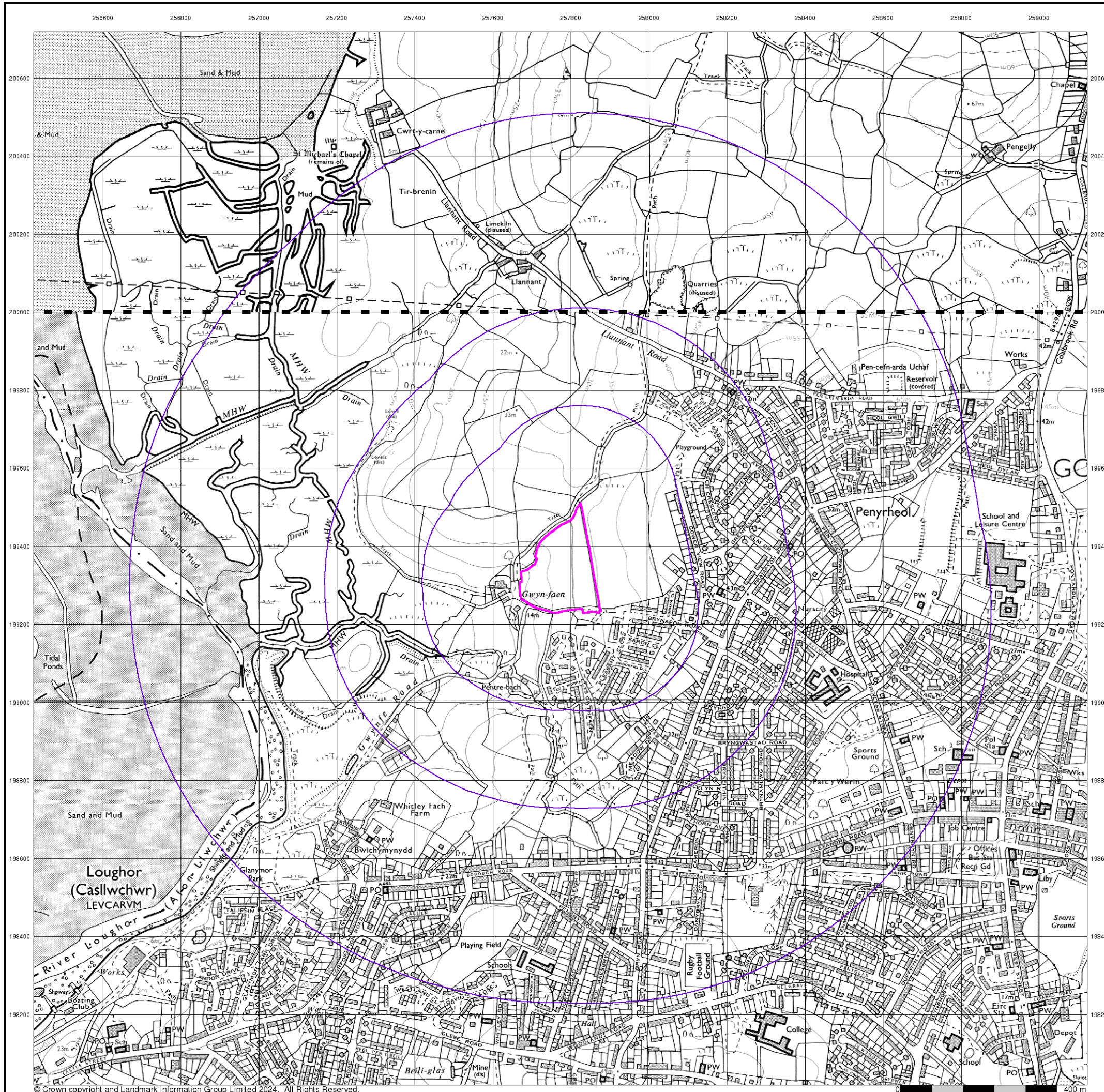
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

### Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
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# Intégral Géotechnique

## Ordnance Survey Plan

Published 1993

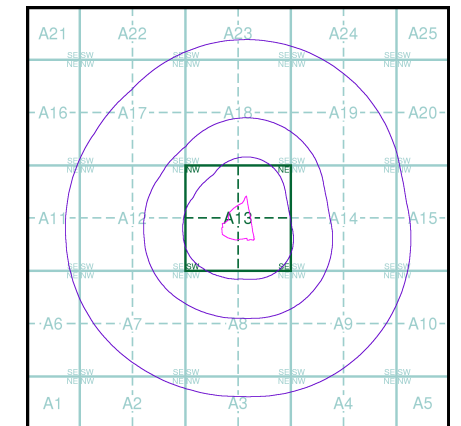
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)

SN50SE	1993	1:10,000
SS59NE	1993	1:10,000

### Historical Map - Slice A



### Order Details

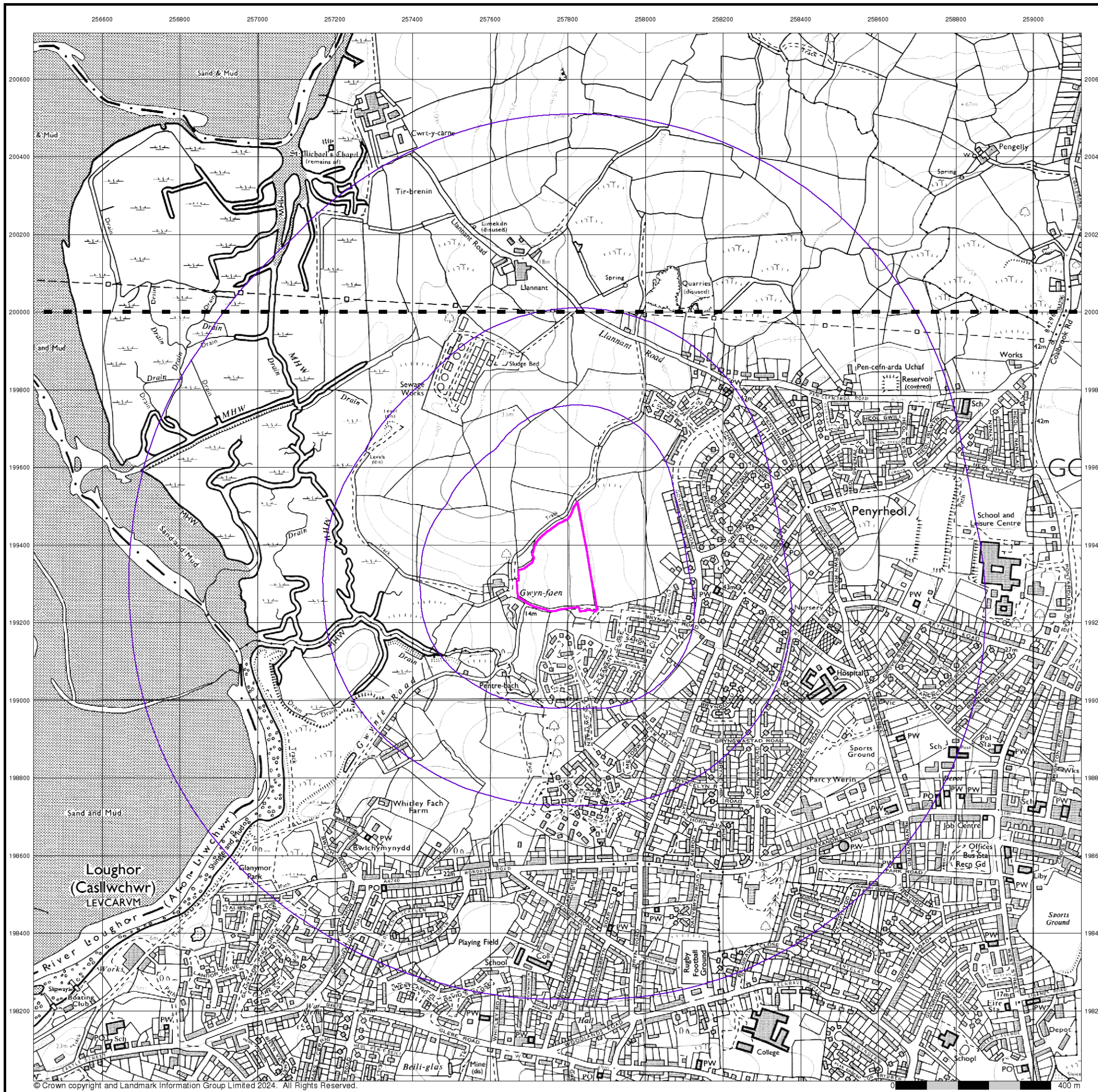
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

### Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

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# Intégral Géotechnique

**10k Raster Mapping**

**Published 1999**

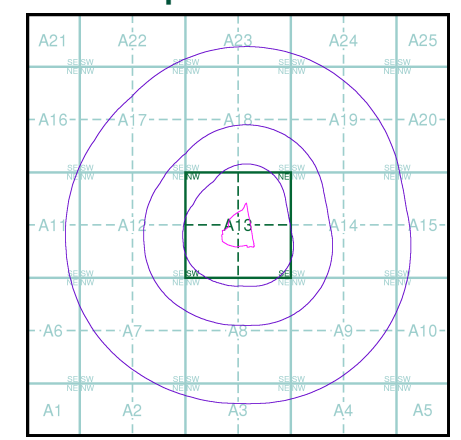
**Source map scale - 1:10,000**

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

### Map Name(s) and Date(s)

- SN50SE | 1999 | 1:10,000
- SS59NE | 1999 | 1:10,000

### Historical Map - Slice A



### Order Details

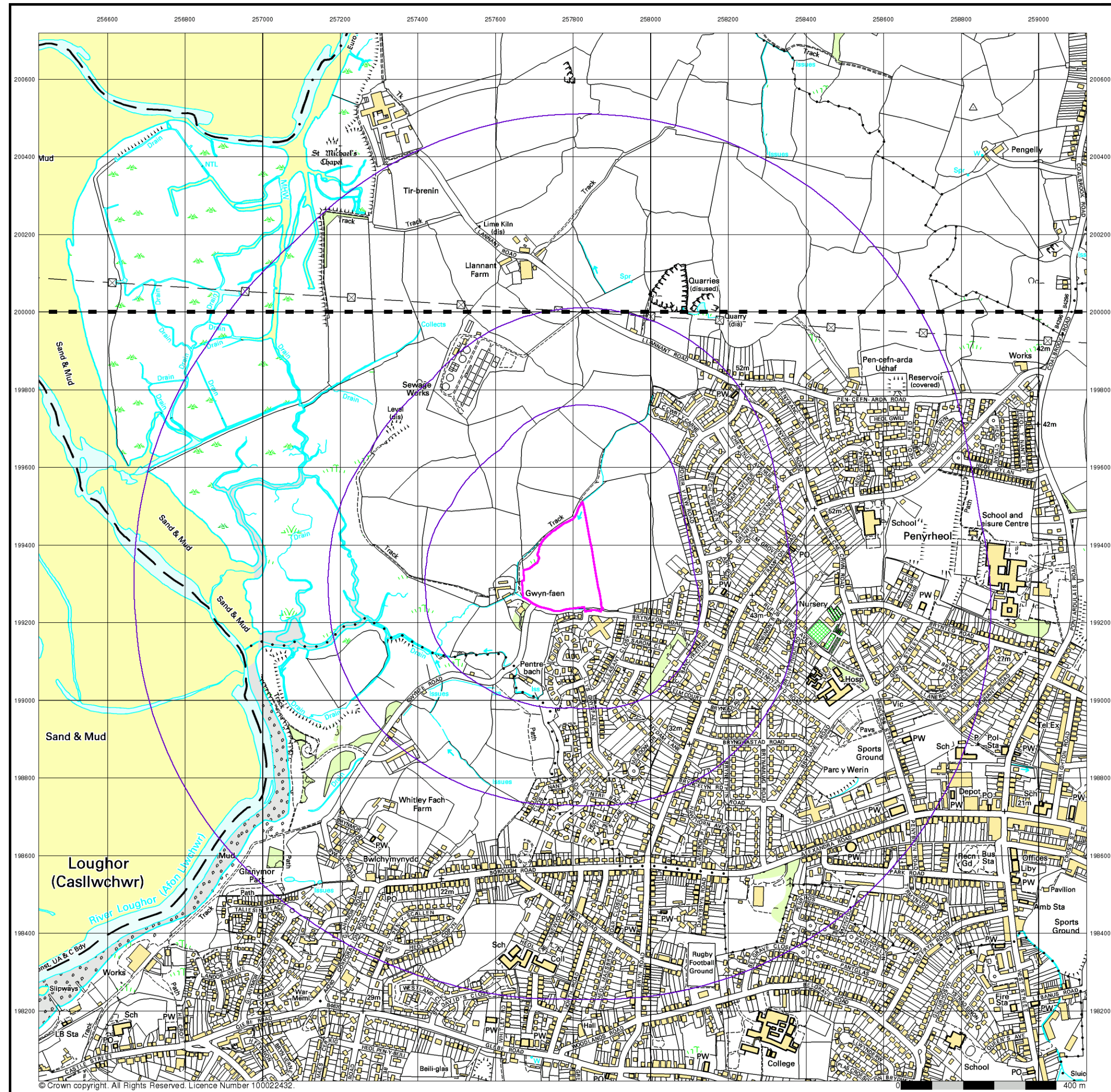
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

### Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
 INFORMATION GROUP

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# Intégral Géotechnique

10k Raster Mapping

Published 2006

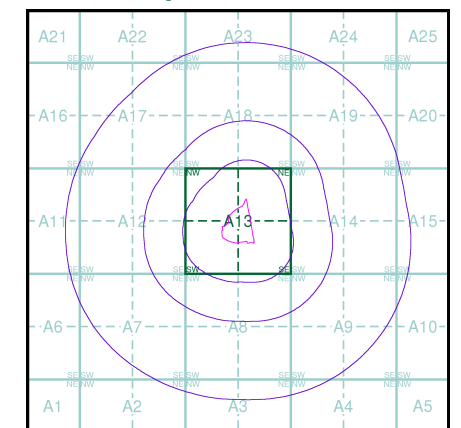
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

## Map Name(s) and Date(s)

SN50SE	2006	1:10,000
SS59NE	2006	1:10,000

## Historical Map - Slice A



## Order Details

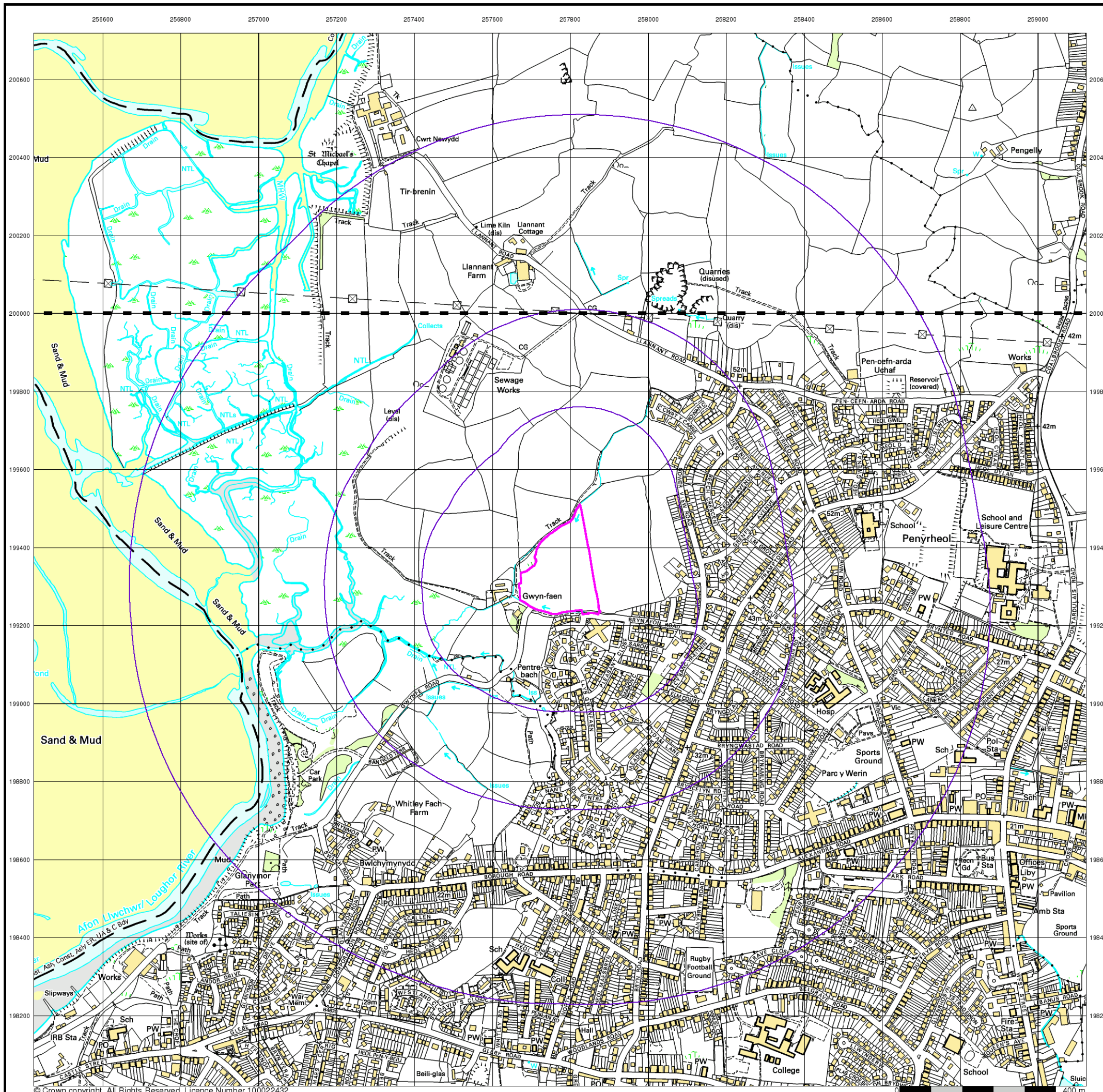
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

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# Intégral Géotechnique

**VectorMap Local**

**Published 2023**

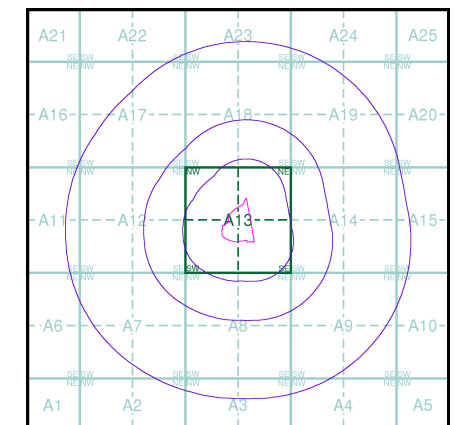
**Source map scale - 1:10,000**

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities), 1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

## Map Name(s) and Date(s)

- SN50SE | 2023 | Variable
- SS59NE | 2023 | Variable

## Historical Map - Slice A



## Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
 INFORMATION GROUP

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# Historical Mapping Legends

## Ordnance Survey County Series and Ordnance Survey Plan 1:2,500

**Quarry** **Gravel Pit** **Sand Pit**  
**Clay Pit** **Shingle** **Refuse Heap**  
**Sloping Masonry** **Flat Rock**  
**Marsh** **Reeds** **Osiers**  
**Rough Pasture** **Furze** **Wood**  
**Mixed Wood** **Brushwood** **Orchard**  
**Fir** **Ford** **Stepping Stones**  
**Ferry** **Waterfall** **Lock**  
**Trig. Station** **Altitude at Trig. Station**  
**B.M. 325.9** **Bench Mark** **Surface Level**  
**Arrow denotes flow of water** **Antiquities (site of)**  
**Cutting** **Embankment**  
**Railway crossing Road** **Level Crossing** **Road crossing Railway**  
**Railway crossing River or Canal** **Road over single stream** **Road over River or Canal**  
**County Boundary (Geographical)**  
**County & Civil Parish Boundary**  
**Administrative County & Civil Parish Boundary**  
**County Borough Boundary (England)**  
**County Burgh Boundary (Scotland)**  
**Co. Boro. Bdy.**  
**Co. Burgh Bdy.**  
**BP BS** Boundary Post or Stone **P.C.B** Police Call Box  
**B.R.** Bridle Road **P** Pump  
**E.P** Electricity Pylon **S.P** Signal Post  
**F.B.** Foot Bridge **SL** Sluice  
**F.P.** Foot Path **Sp.** Spring  
**G.P** Guide Post or Board **T.C.B** Telephone Call Box  
**M.S** Mile Stone **Tr.** Trough  
**M.P M.R** Mooring Post or Ring **W** Well

## Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250

**Inactive Quarry, Chalk Pit or Clay Pit** **Active Quarry, Chalk Pit or Clay Pit**  
**Rock** **Boulders**  
**Cliff** **Slopes** **Top**  
**Roofed Building** **Glazed Roof Building**  
**Sloping Masonry** **Archway**  
**Non-Coniferous Tree (surveyed)** **Coniferous Tree (surveyed)**  
**Non-Coniferous Trees (not surveyed)** **Coniferous Trees (not surveyed)**  
**Orchard Tree** **Scrub** **Bracken**  
**Coppice, Osier** **Reeds** **Marsh, Saltings**  
**Rough Grassland** **Heath** **Culvert**  
**Direction of water flow** **Bench Mark** **Antiquity (site of)**  
**Cave Entrance** **Triangulation Station** **Electricity Pylon**  
**Electricity Transmission Line**  
**County Boundary (Geographical)**  
**County & Civil Parish Boundary**  
**Civil Parish Boundary**  
**Admin. County or County Bor. Boundary**  
**London Borough Boundary**  
**Symbol marking point where boundary mereing changes**  
**BH** Beer House **P** Pillar, Pole or Post  
**BP, BS** Boundary Post or Stone **PO** Post Office  
**Cn, C** Capstan, Crane **PC** Public Convenience  
**Chy** Chimney **PH** Public House  
**D Fn** Drinking Fountain **Pp** Pump  
**EI P** Electricity Pillar or Post **SB, S Br** Signal Box or Bridge  
**FAP** Fire Alarm Pillar **SP, SL** Signal Post or Light  
**FB** Foot Bridge **Spr** Spring  
**GP** Guide Post **Tk** Tank or Track  
**H** Hydrant or Hydraulic **TCB** Telephone Call Box  
**LC** Level Crossing **TCP** Telephone Call Post  
**MH** Manhole **Tr** Trough  
**MP** Mile Post or Mooring Post **Wr Pt, Wr T** Water Point, Water Tap  
**MS** Mile Stone **W** Well  
**NTL** Normal Tidal Limit **Wd Pp** Wind Pump

## Large-Scale National Grid Data 1:2,500 and 1:1,250

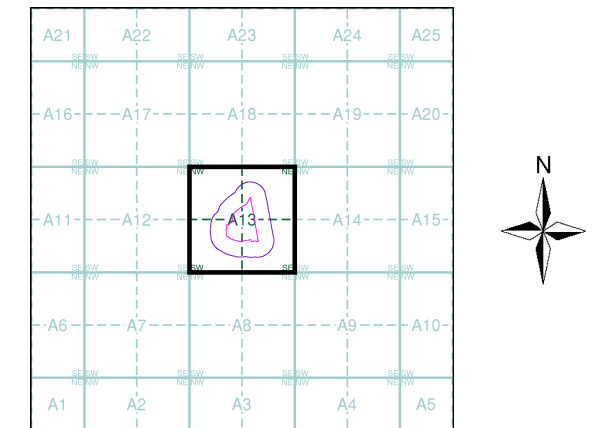
**Cliff** **Slopes** **Top**  
**Rock** **Rock (scattered)**  
**Boulders** **Boulders (scattered)**  
**Positioned Boulder** **Scree**  
**Non-Coniferous Tree (surveyed)** **Coniferous Tree (surveyed)**  
**Non-Coniferous Trees (not surveyed)** **Coniferous Trees (not surveyed)**  
**Orchard Tree** **Scrub** **Bracken**  
**Coppice, Osier** **Reeds** **Marsh, Saltings**  
**Rough Grassland** **Heath** **Culvert**  
**Direction of water flow** **Triangulation Station** **Antiquity (site of)**  
**Electricity Transmission Line** **Electricity Pylon**  
**B.M. 231.60m** **Bench Mark** **Buildings with Building Seed**  
**Roofed Building** **Glazed Roof Building**  
**Civil parish/community boundary**  
**District boundary**  
**County boundary**  
**Boundary post/stone**  
**Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)**  
**Bks** Barracks **P** Pillar, Pole or Post  
**Bty** Battery **PO** Post Office  
**Cemy** Cemetery **PC** Public Convenience  
**Chy** Chimney **Pp** Pump  
**Cis** Cistern **Ppg Sta** Pumping Station  
**Dismtd Rly** Dismantled Railway **PW** Place of Worship  
**EI Gen Sta** Electricity Generating Station **Sewage Ppg Sta** Sewage Pumping Station  
**EI P** Electricity Pole, Pillar **SB, S Br** Signal Box or Bridge  
**EI Sub Sta** Electricity Sub Station **SP, SL** Signal Post or Light  
**FB** Filter Bed **Spr** Spring  
**Fn / D Fn** Fountain / Drinking Ftn. **Tk** Tank or Track  
**Gas Gov** Gas Valve Compound **Tr** Trough  
**GVC** Gas Governor **Wd Pp** Wind Pump  
**GP** Guide Post **Wr Pt, Wr T** Water Point, Water Tap  
**MH** Manhole **Wks** Works (building or area)  
**MP, MS** Mile Post or Mile Stone **W** Well

# Intégral Géotechnique

## Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:2,500	1877 - 1879	2
Carmarthenshire	1:2,500	1879 - 1880	3
Glamorganshire	1:2,500	1898	4
Carmarthenshire	1:2,500	1907	5
Carmarthenshire	1:2,500	1916	6
Glamorganshire	1:2,500	1916	7
Carmarthenshire	1:2,500	1935	8
Glamorganshire	1:2,500	1935	9
Ordnance Survey Plan	1:2,500	1958 - 1959	10
Additional SIMs	1:2,500	1959 - 1978	11
Ordnance Survey Plan	1:2,500	1972	12
Ordnance Survey Plan	1:2,500	1988	13
Additional SIMs	1:2,500	1988	14
Additional SIMs	1:2,500	1990	15
Large-Scale National Grid Data	1:2,500	1993	16
Large-Scale National Grid Data	1:2,500	1993	17
Large-Scale National Grid Data	1:2,500	1995	18
Historical Aerial Photography	1:2,500	2001	19

## Historical Map - Segment A13



## Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

## Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

# Intégral Géotechnique

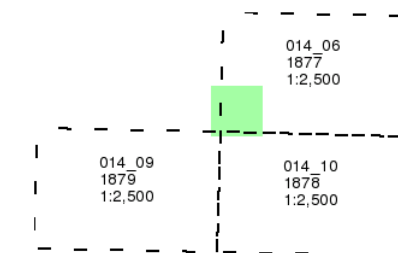
**Glamorganshire**

**Published 1877 - 1879**

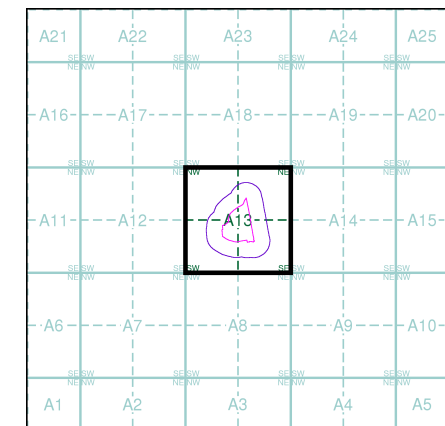
**Source map scale - 1:2,500**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)



## Historical Map - Segment A13



## Order Details

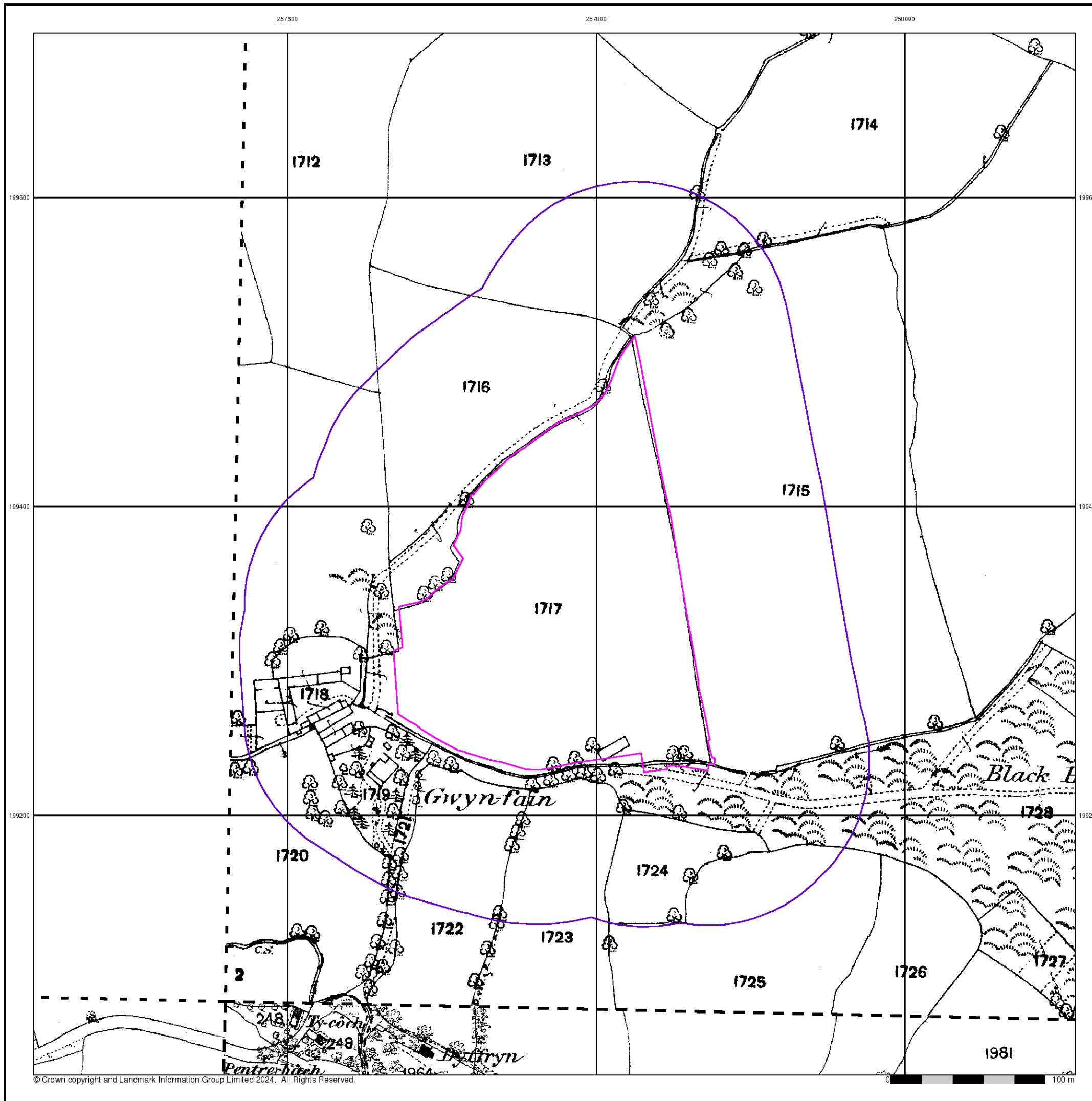
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 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

## Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
 INFORMATION GROUP

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 Fax: 0844 844 9951  
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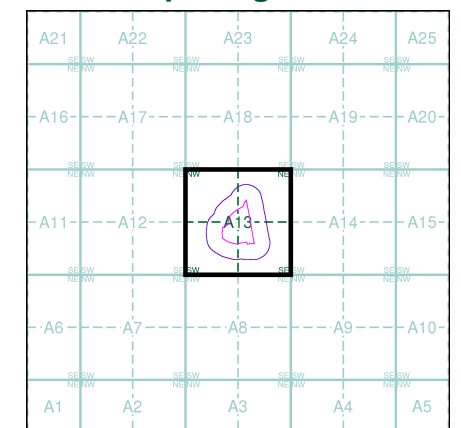


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

**Map Name(s) and Date(s)**

059_05	1880	1:2,500
059_09	1879	1:2,500

**Historical Map - Segment A13**

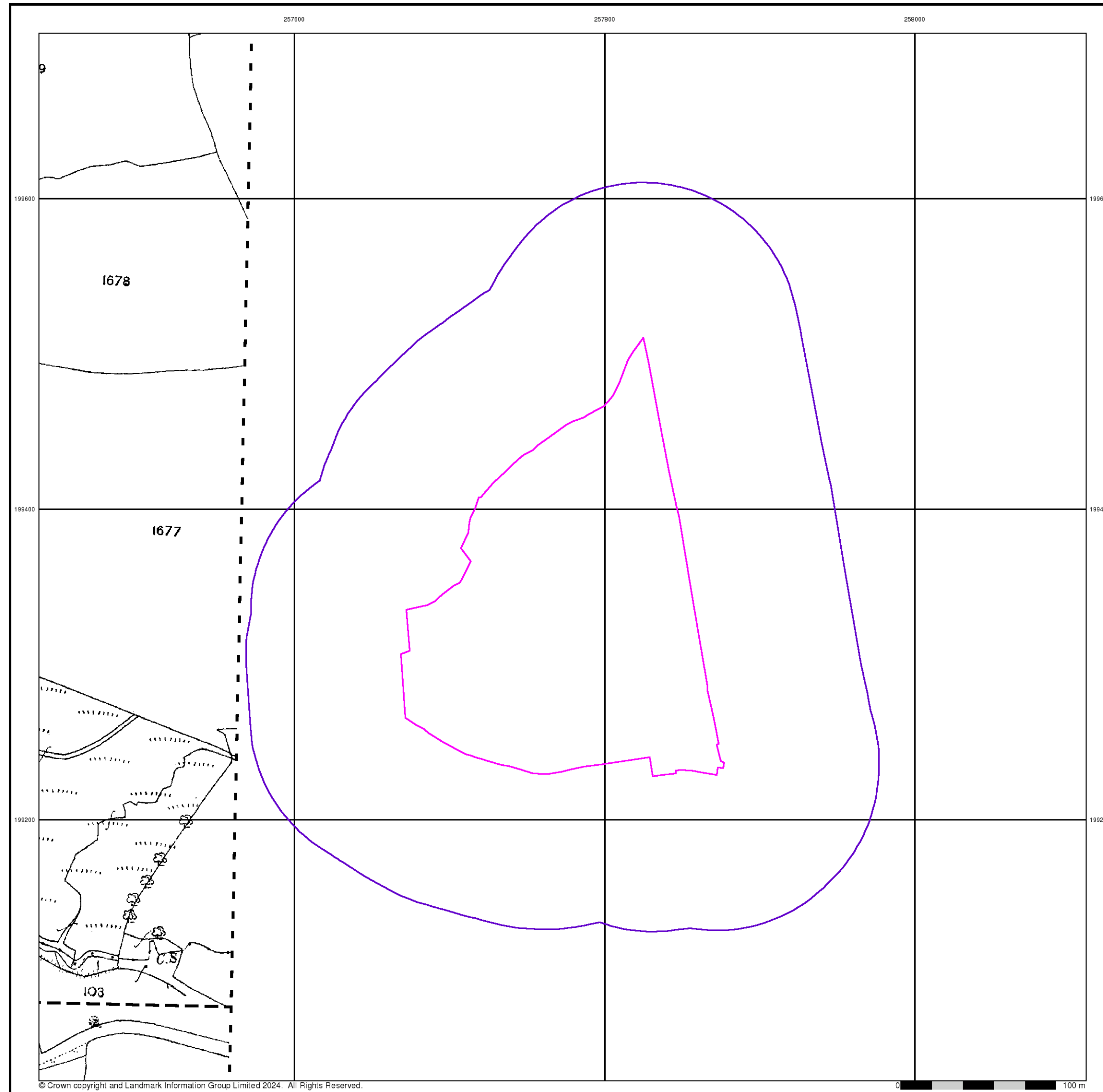


**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



# Intégral Géotechnique

Glamorganshire

Published 1898

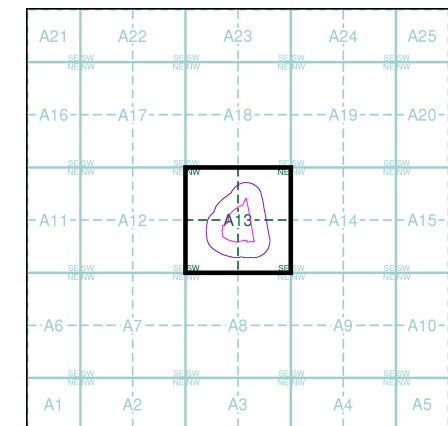
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)

014_05 1898 1:2,500	014_06 1898 1:2,500
014_09 1898 1:2,500	014_10 1898 1:2,500

## Historical Map - Segment A13



## Order Details

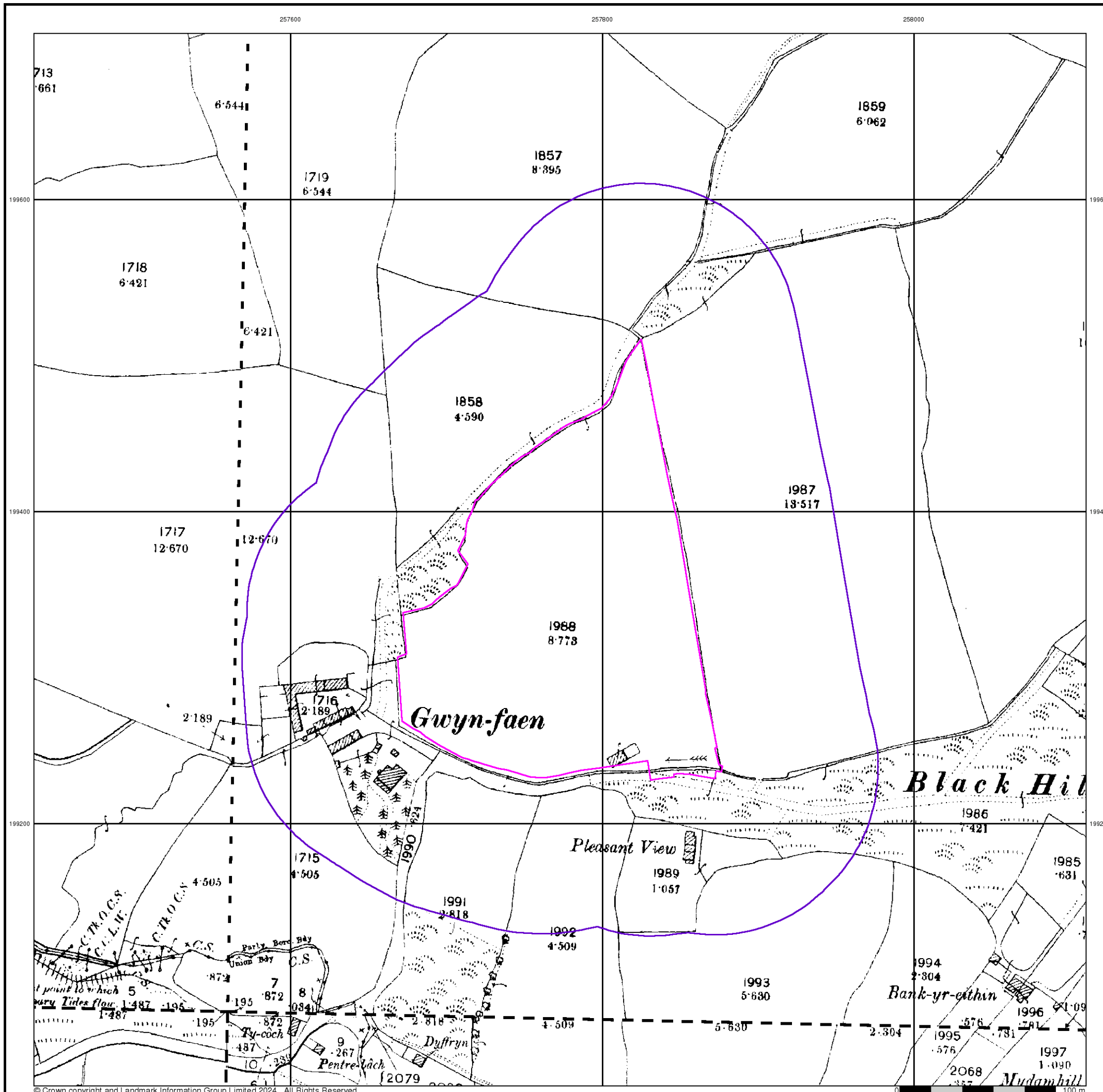
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 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

## Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

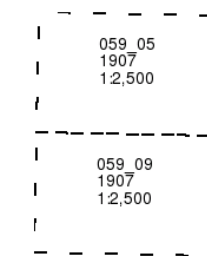
**Landmark**  
 INFORMATION GROUP

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 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk

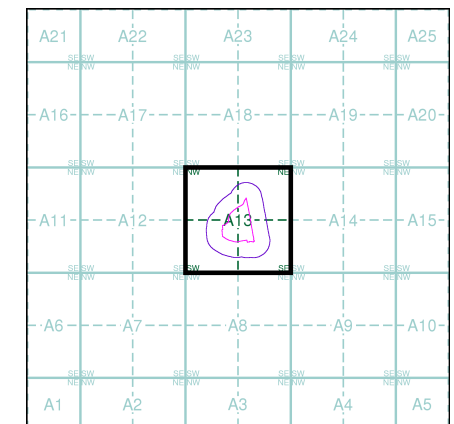


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

**Map Name(s) and Date(s)**



**Historical Map - Segment A13**

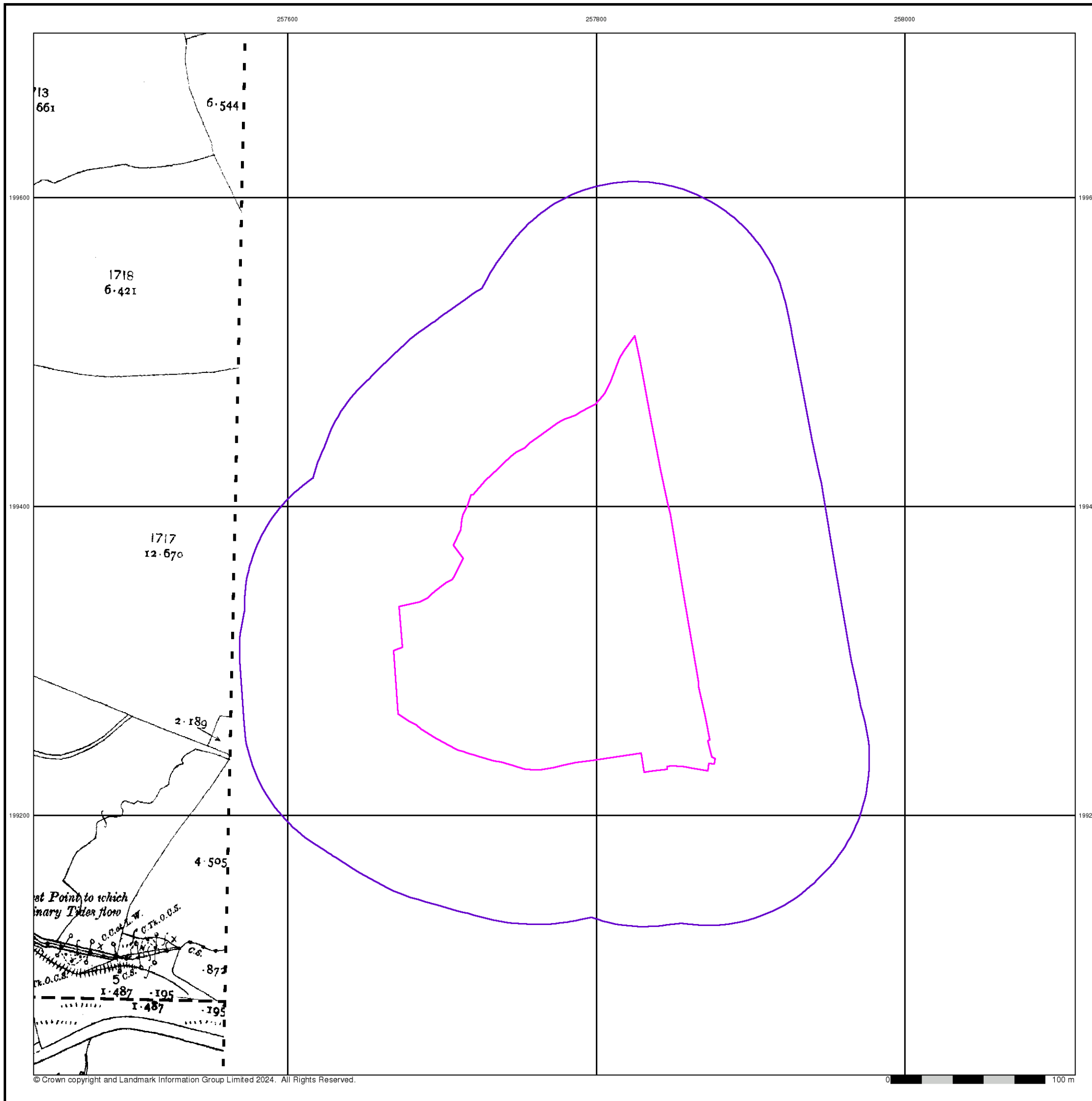


**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

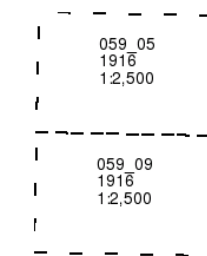
**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

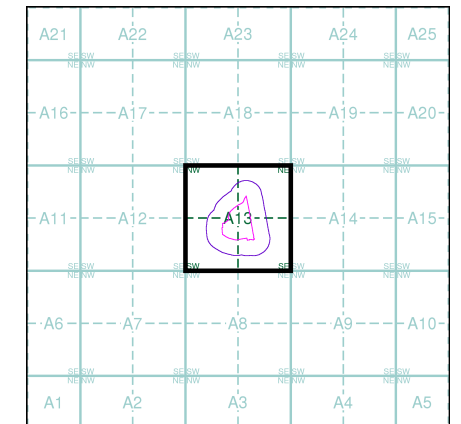


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

**Map Name(s) and Date(s)**



**Historical Map - Segment A13**

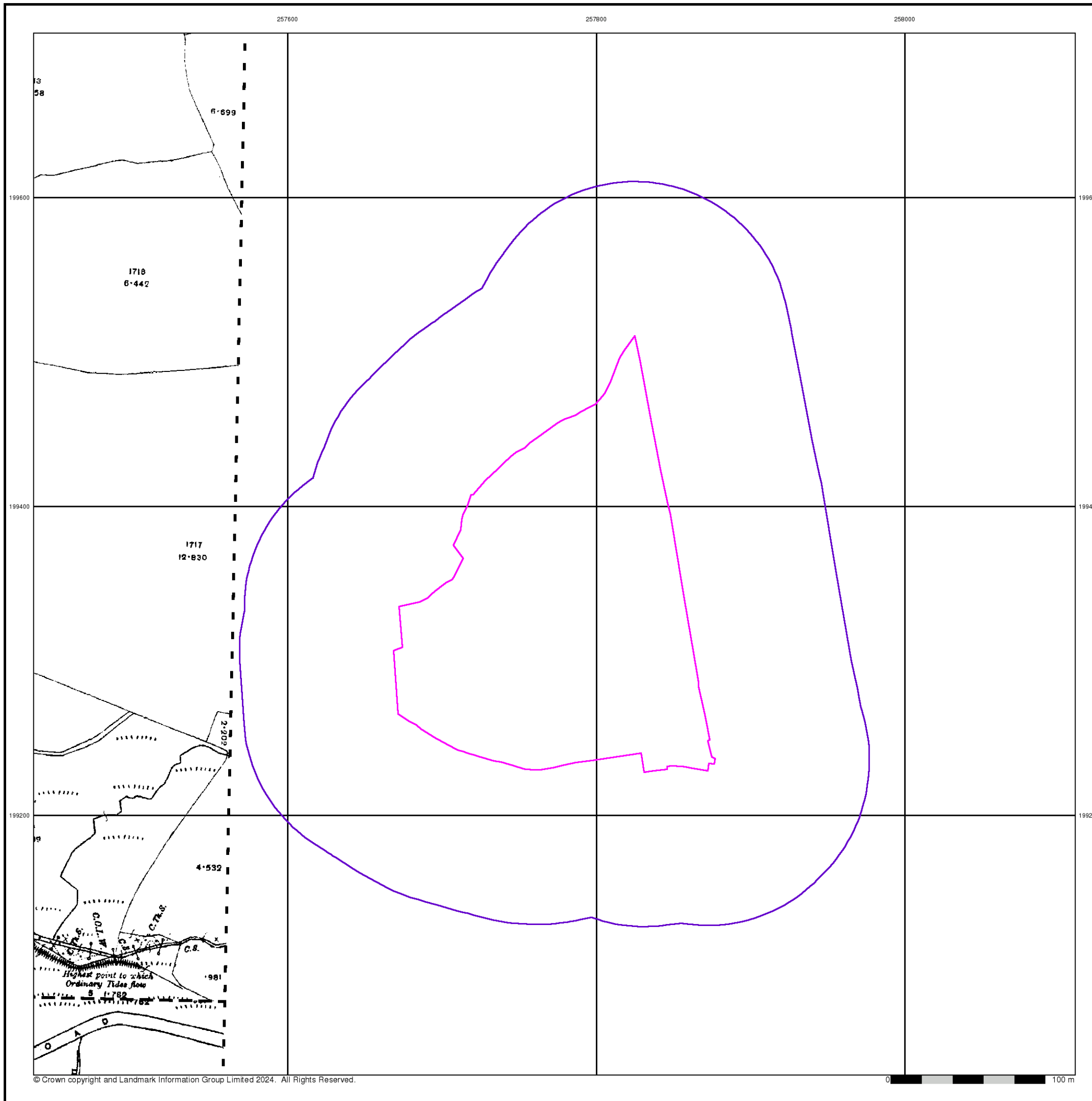


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Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



# Intégral Géotechnique

**Glamorganshire**

**Published 1916**

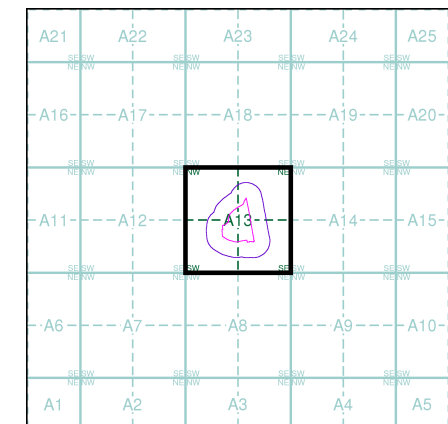
**Source map scale - 1:2,500**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)

014_06	1916	12,500
014_10	1916	12,500

## Historical Map - Segment A13



## Order Details

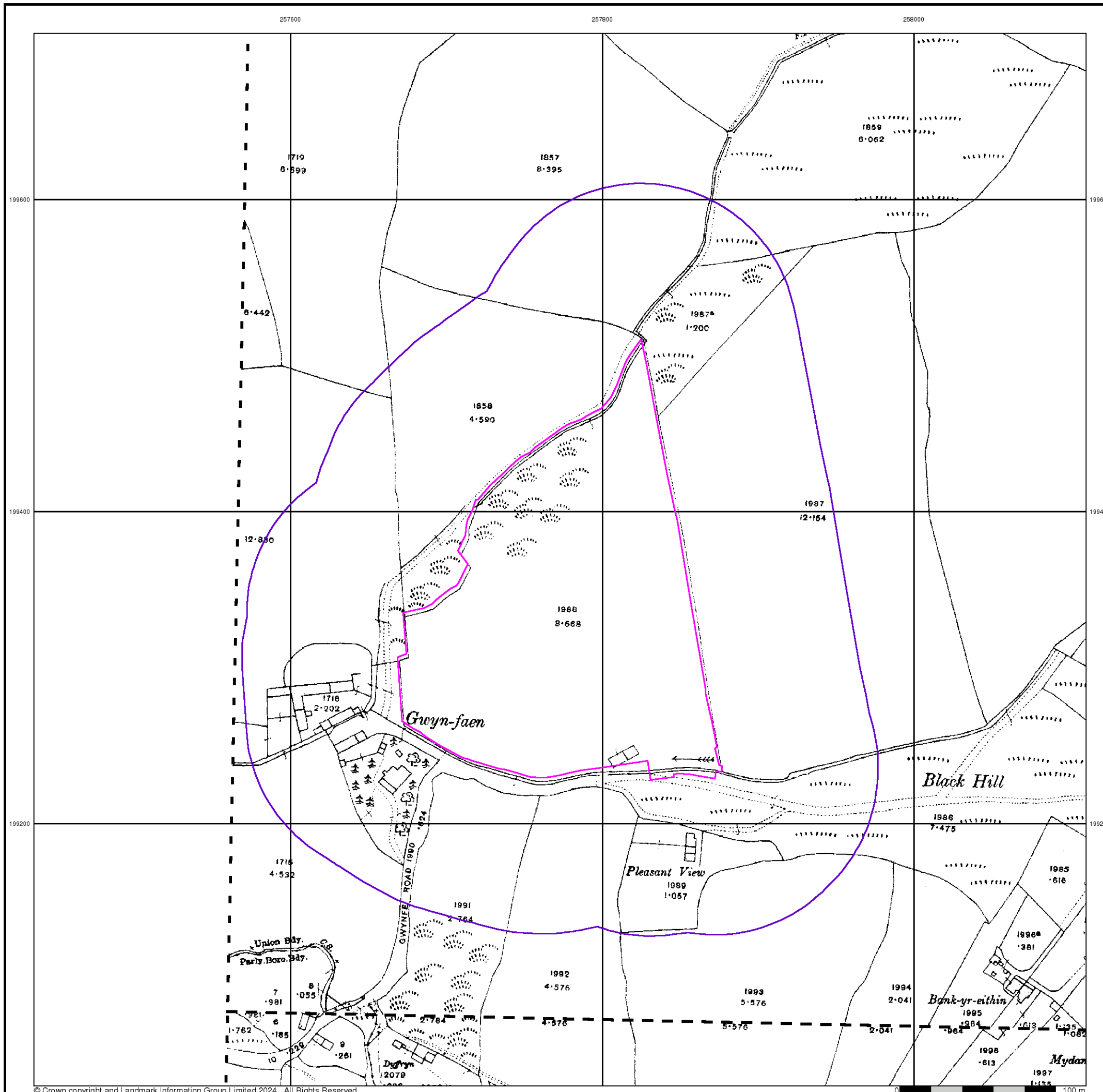
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
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 Site Area (Ha): 3.53  
 Search Buffer (m): 100

## Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

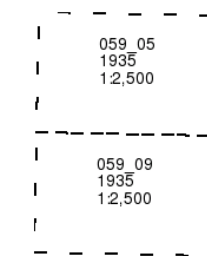
**Landmark**  
 INFORMATION GROUP

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 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk

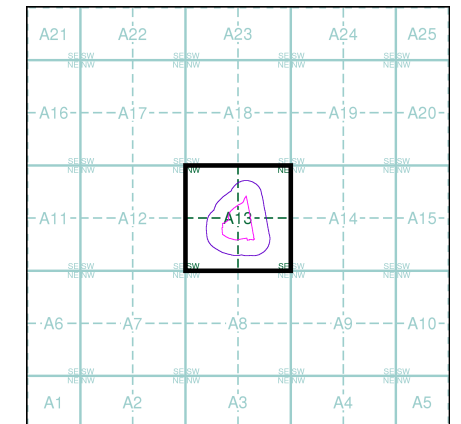


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

**Map Name(s) and Date(s)**



**Historical Map - Segment A13**

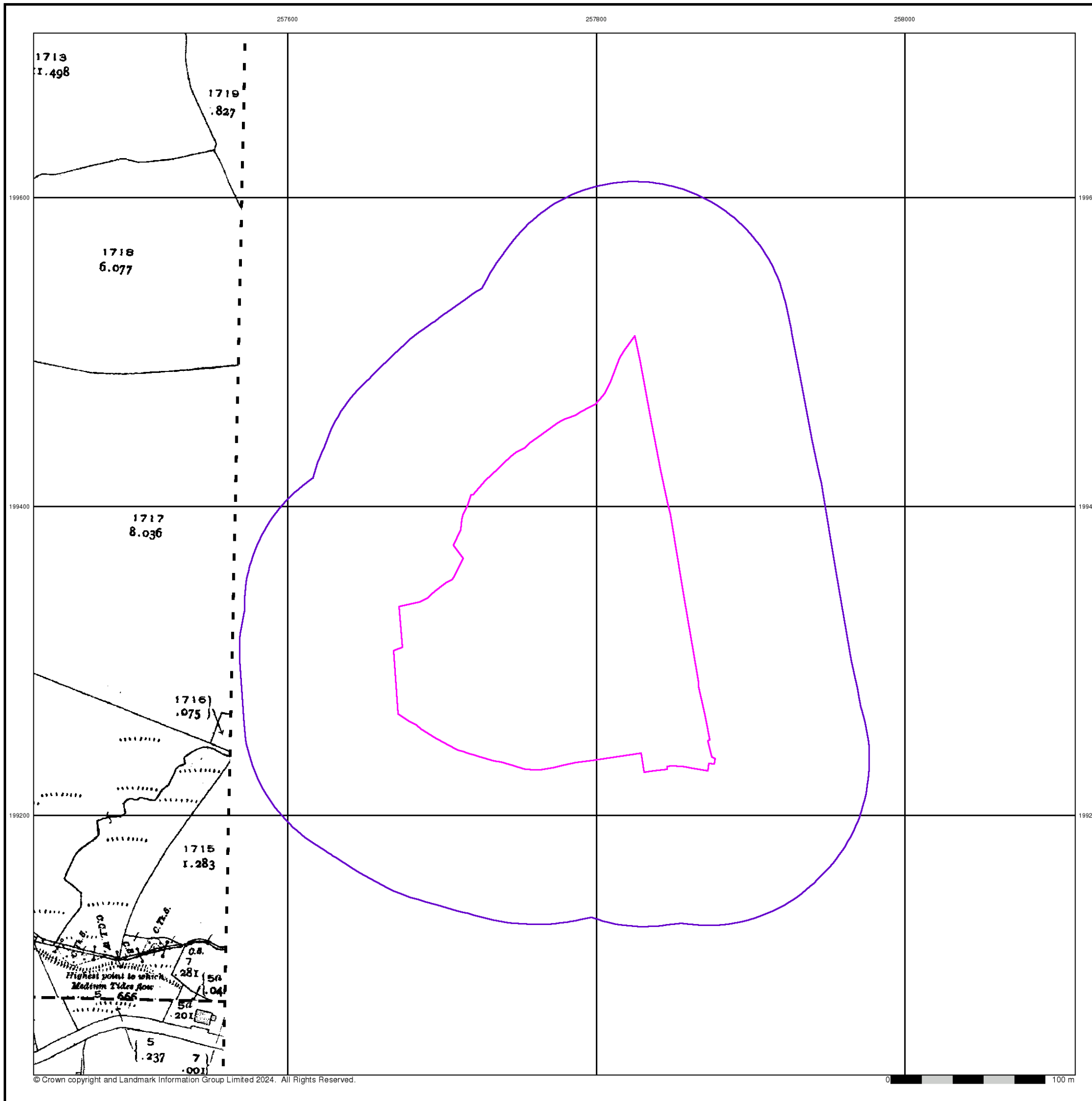


**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



# Intégral Géotechnique

**Glamorganshire**

**Published 1935**

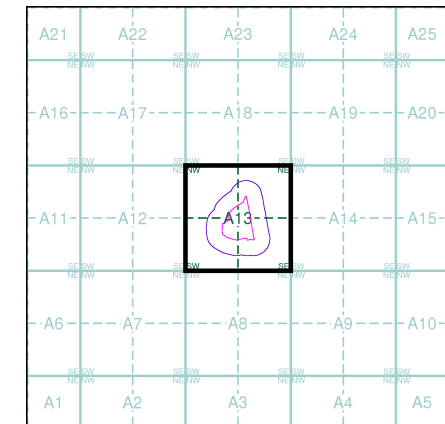
**Source map scale - 1:2,500**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)

014_06	1935	12,500
014_10	1935	12,500

## Historical Map - Segment A13



## Order Details

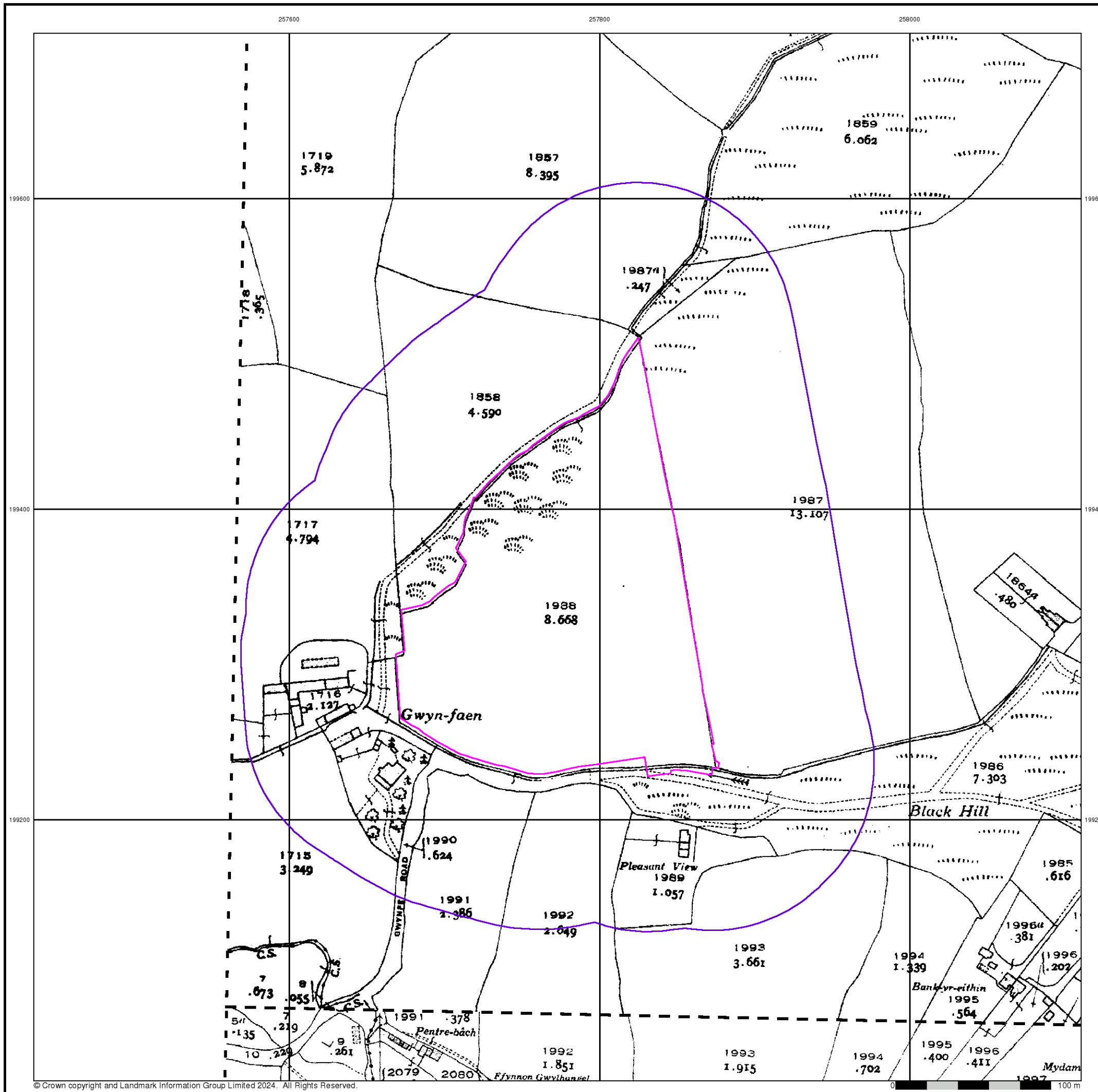
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

## Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

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 INFORMATION GROUP

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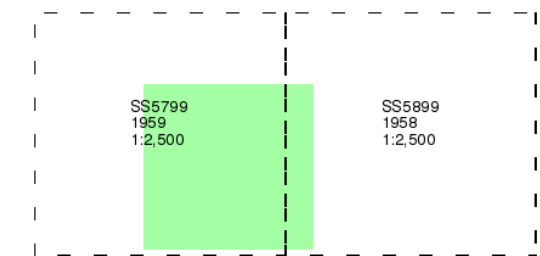
**Ordnance Survey Plan**

Published 1958 - 1959

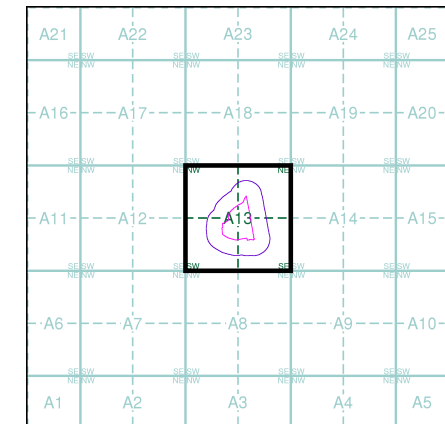
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

**Map Name(s) and Date(s)**



**Historical Map - Segment A13**

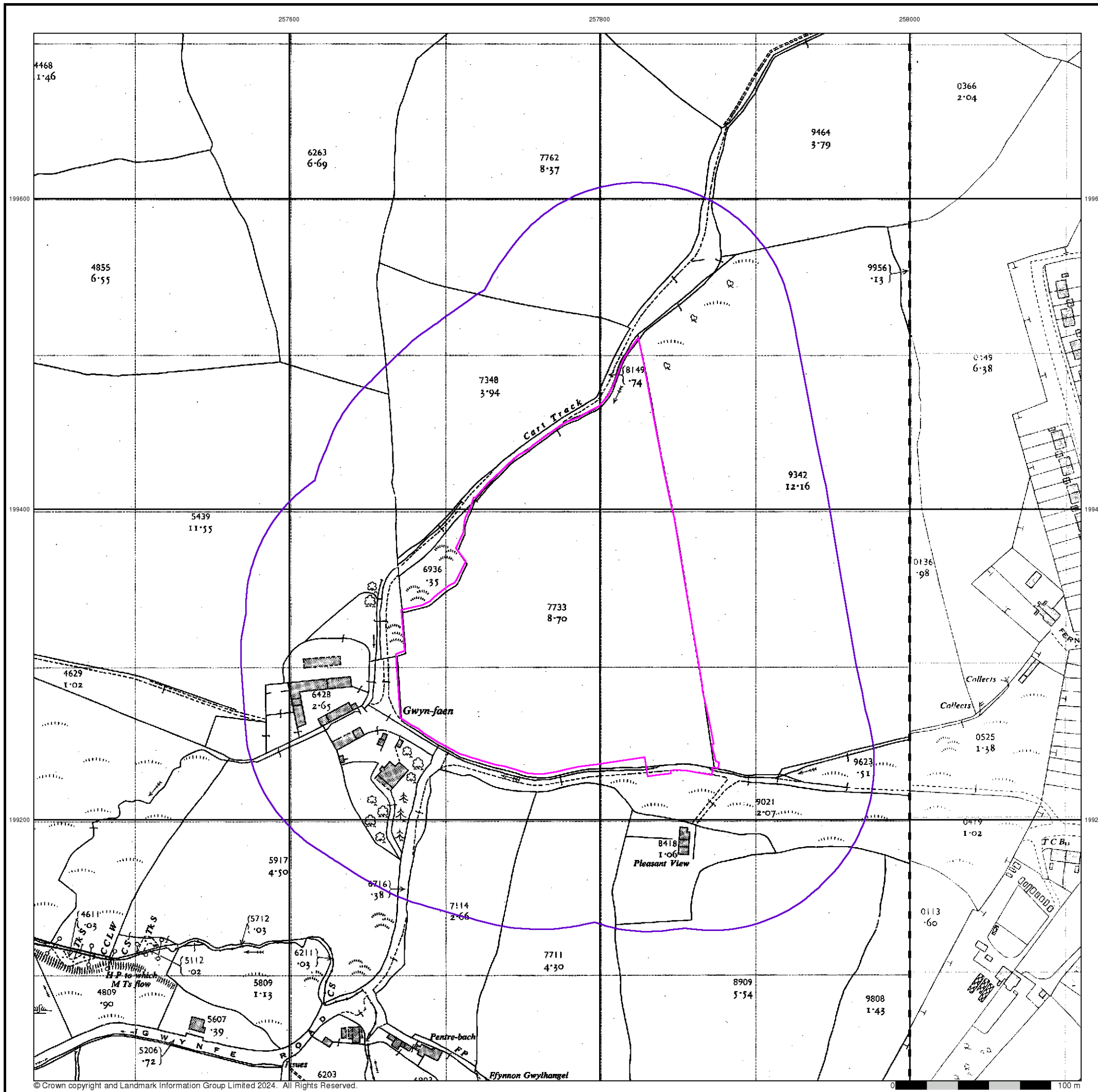


**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF





# Intégral Géotechnique

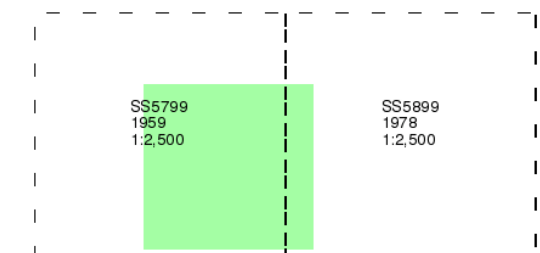
## Additional SIMs

Published 1959 - 1978

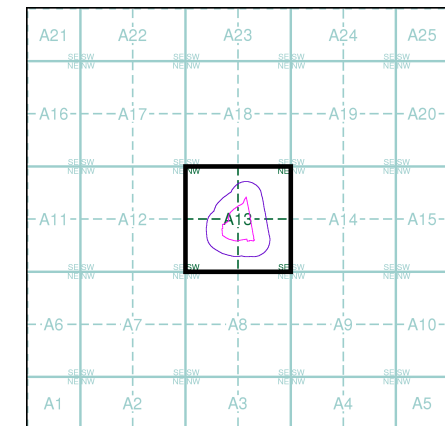
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

## Map Name(s) and Date(s)



## Historical Map - Segment A13



## Order Details

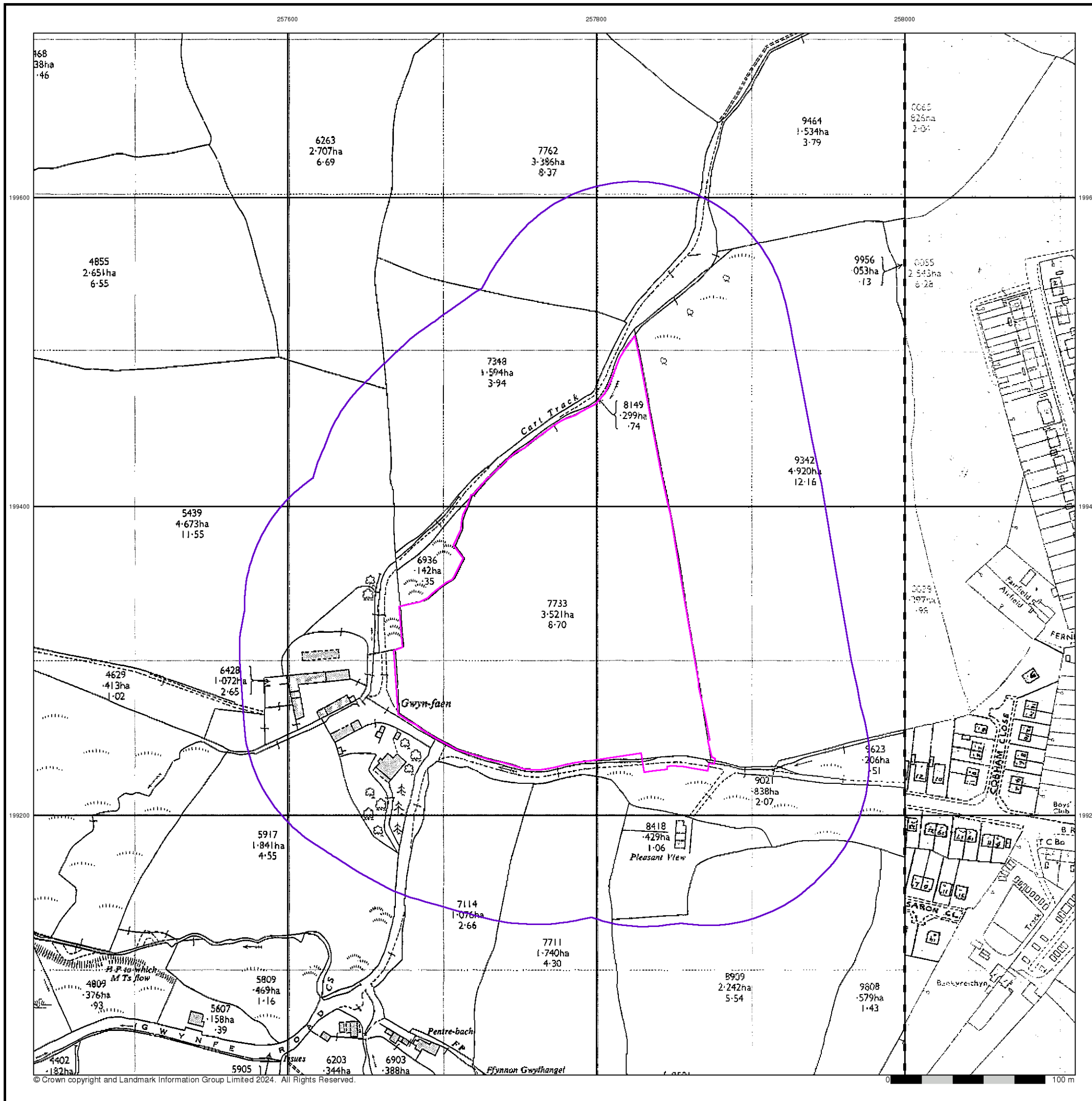
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 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

## Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
 INFORMATION GROUP

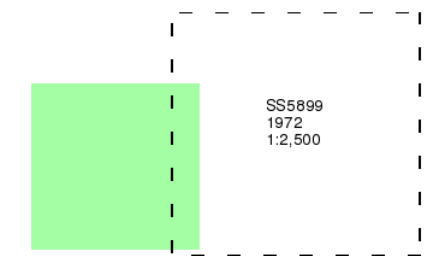
Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk



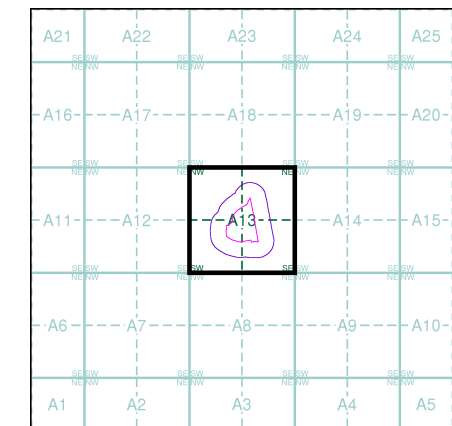
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**Map Name(s) and Date(s)**



**Historical Map - Segment A13**

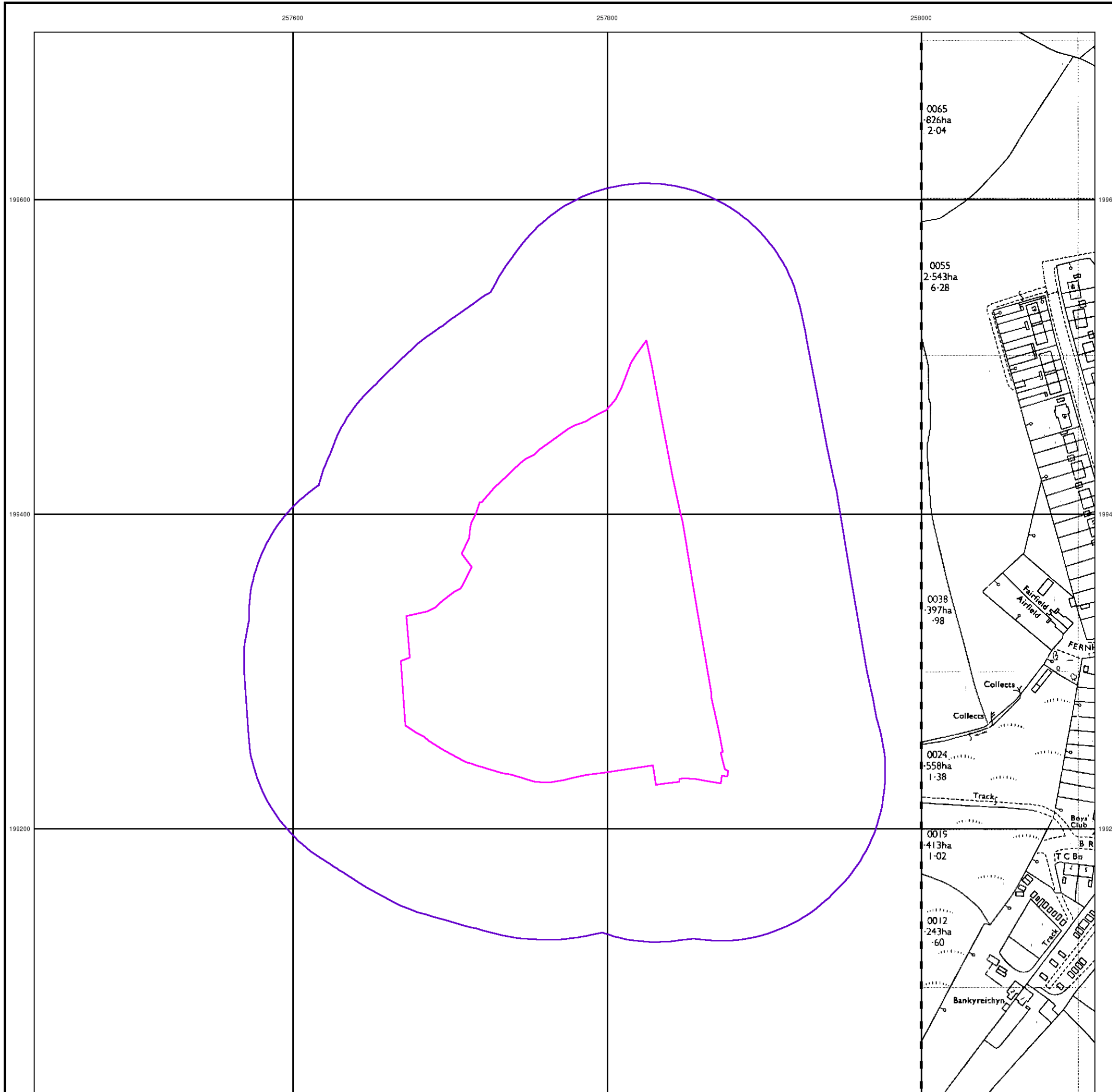


**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



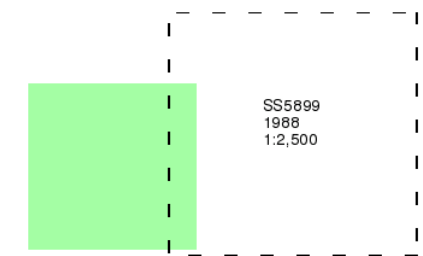
**Ordnance Survey Plan**

**Published 1988**

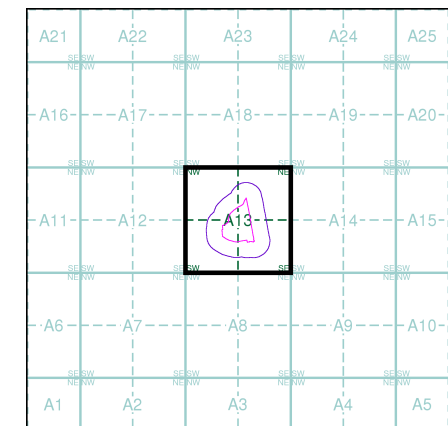
**Source map scale - 1:2,500**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

**Map Name(s) and Date(s)**



**Historical Map - Segment A13**

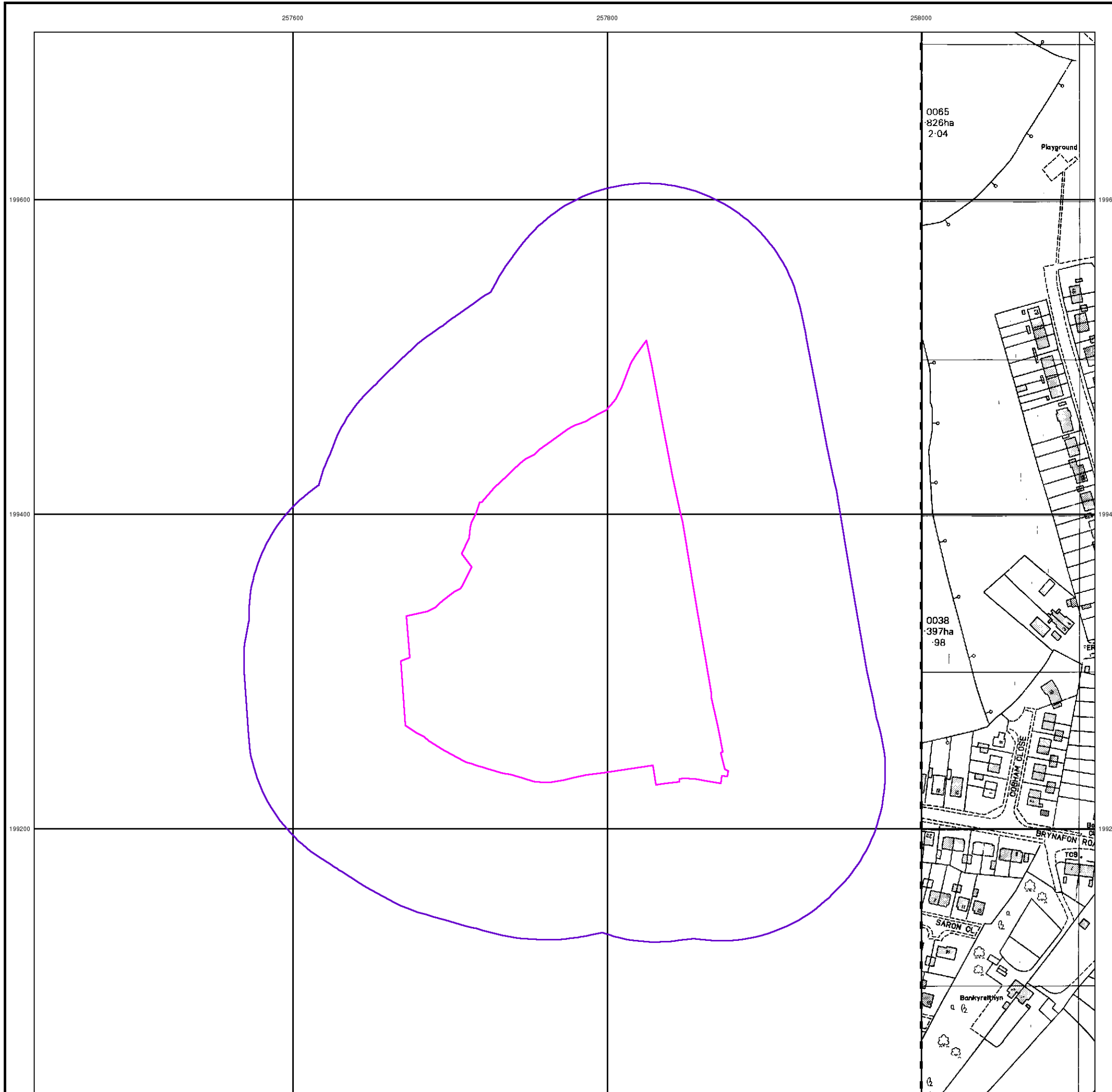


**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



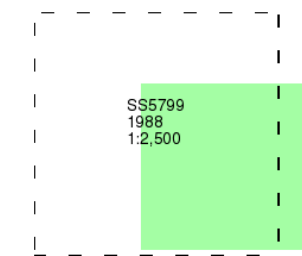
**Additional SIMs**

**Published 1988**

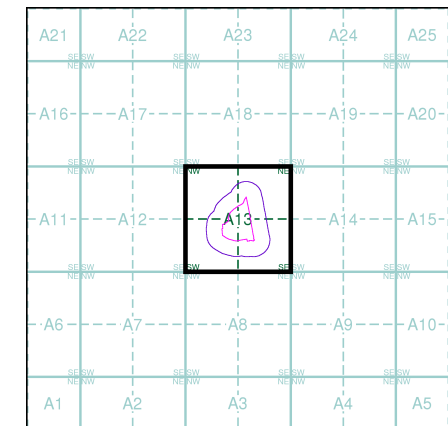
**Source map scale - 1:2,500**

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

**Map Name(s) and Date(s)**



**Historical Map - Segment A13**



**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



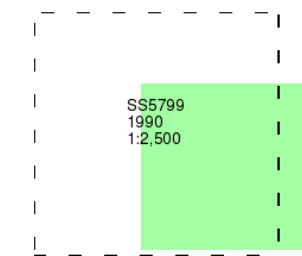
**Additional SIMs**

**Published 1990**

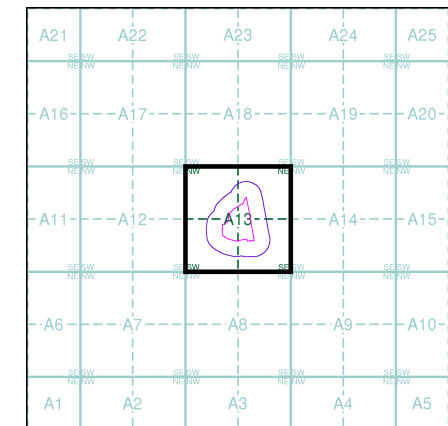
**Source map scale - 1:2,500**

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

**Map Name(s) and Date(s)**



**Historical Map - Segment A13**



**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



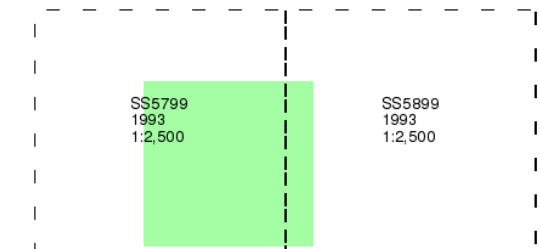
## Large-Scale National Grid Data

Published 1993

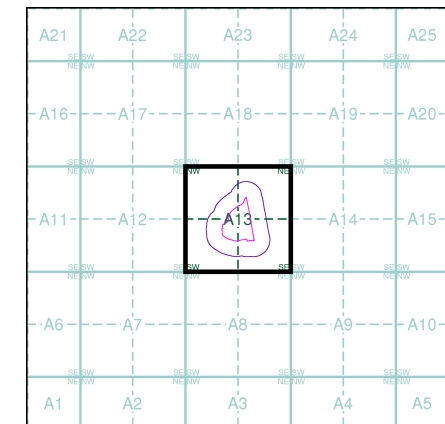
Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

### Map Name(s) and Date(s)



### Historical Map - Segment A13



### Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

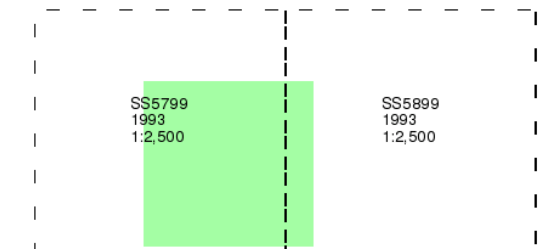
### Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

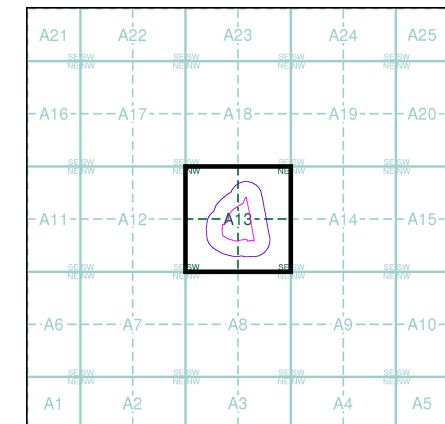


'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

**Map Name(s) and Date(s)**



**Historical Map - Segment A13**

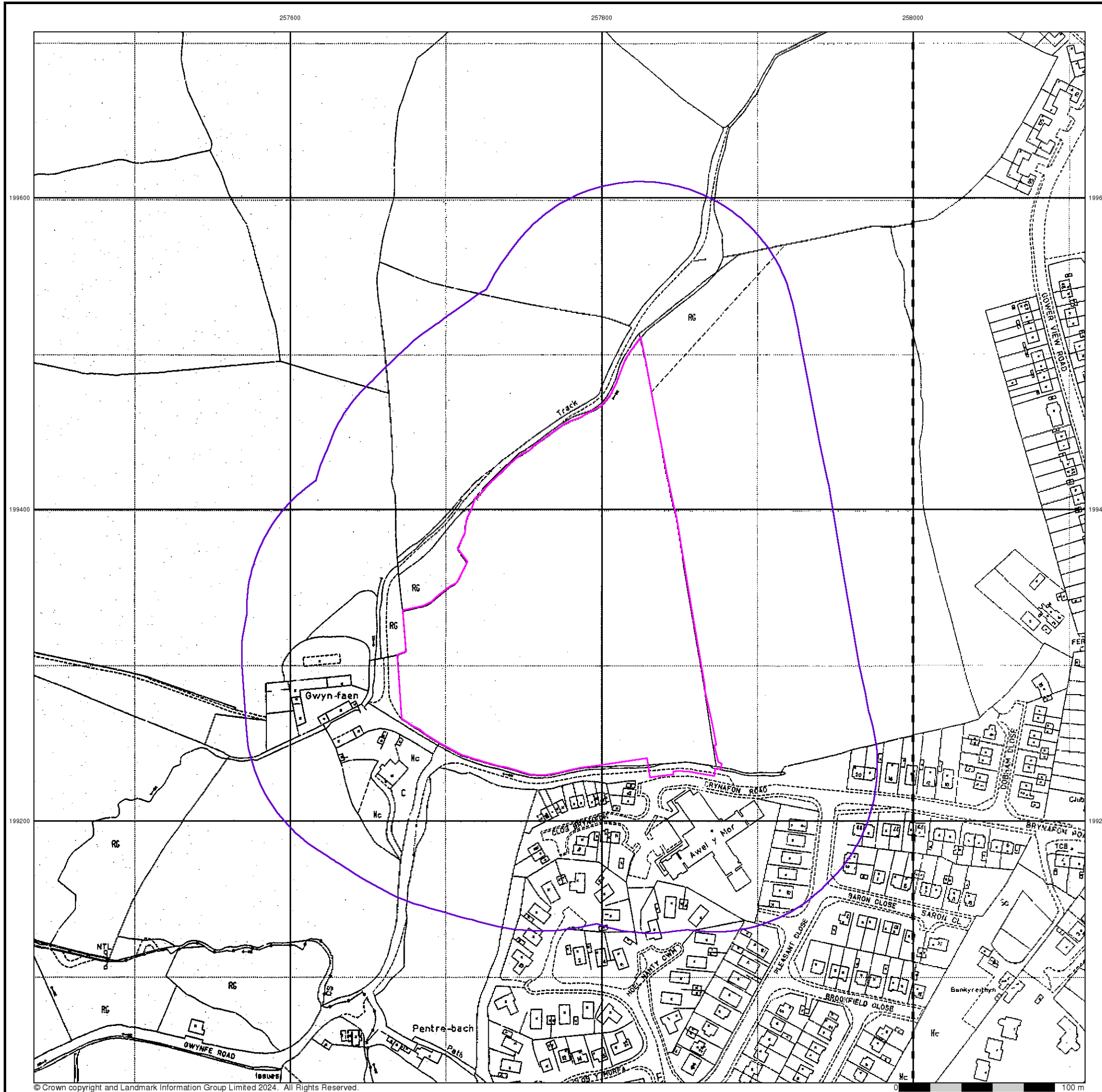


**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



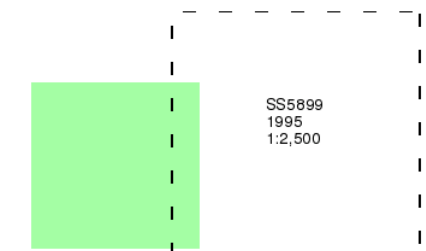
**Large-Scale National Grid Data**

**Published 1995**

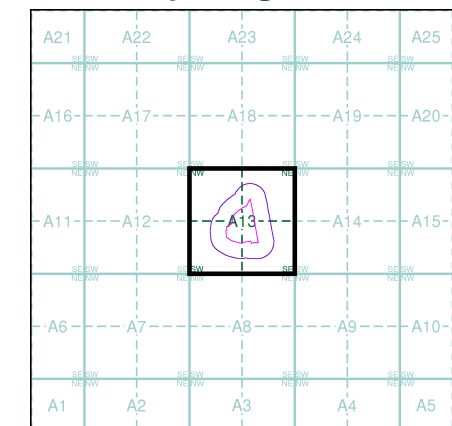
**Source map scale - 1:2,500**

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

**Map Name(s) and Date(s)**



**Historical Map - Segment A13**

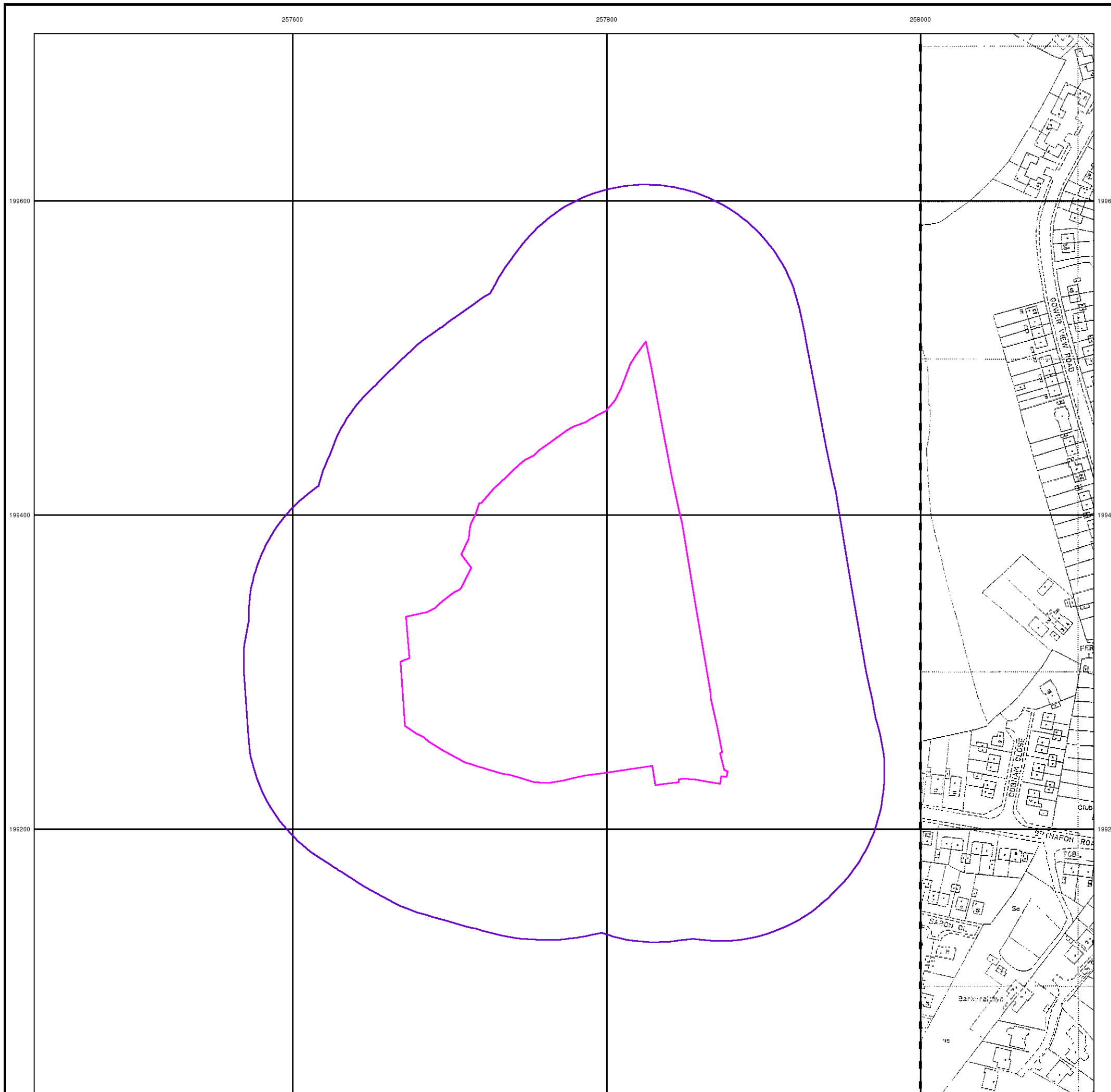


**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF





257600

257800

258000

199600

199600

199400

199400

199200

199200



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0 100 m

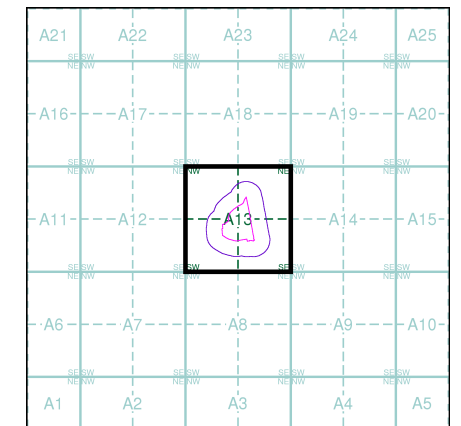
# Intégral Géotechnique

## Historical Aerial Photography

Published 2001

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

### Historical Aerial Photography - Segment A13



#### Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 100

#### Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk

## Envirocheck<sup>®</sup> Report:

### Mining and Ground Stability Datasheet

#### Order Details:

**Order Number:**

331303750\_1\_1

**Customer Reference:**

14294/LP

**National Grid Reference:**

257790, 199350

**Slice:**

A

**Site Area (Ha):**

3.53

**Search Buffer (m):**

1000

#### Site Details:

Gwynfaen Farm (Phase 2)

Gorseinon

Swansea

SA4 4BF

#### Client Details:

MR H Pritchard

Integral Geotechnique

Integral House

7 Beddau Way

Castlegate Business Park

Caerphilly

CF83 2AX

<b>Report Section and Details</b>	<b>Page Number</b>
<b>Summary</b>	-
<p>The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer selected.</p> <p>For ease of reference, the report is broken down into 4 sections of data; Mining and Natural Cavities Data, Historical Land Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data (1:50,000).</p>	
<b>Mining and Natural Cavities Data</b>	<b>1</b>
<p>The Mining and Natural Cavities Data section features data sets related to the existence of mining areas and their potential hazards; and details of naturally formed cavities.</p> <p>Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites and Potential Mining Areas which feature on the Historical Land Use Information (1:10,000) map.</p>	
<b>Historical Land Use Information (1:2,500)</b>	-
<p>The Historical Land Use Information (1:2,500) section contains data captured from analysis carried out by Landmark of 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping, identifying areas where, historically, the land uses were potentially contaminative.</p> <p>For the purpose of this Envirocheck module, only historical data relating to mining and ground stability has been included and plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also includes the Subterranean Features data set, which details various man-made and man-used underground spaces obtained from the Subterranea Britannica society.</p>	
<b>Historical Land Use Information (1:10,000)</b>	<b>6</b>
<p>The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses.</p> <p>For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.</p>	
<b>Ground Stability Data (1:50,000)</b>	<b>8</b>
<p>The Ground Stability (1:50,000) section includes the BGS Geosure data suite, reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence, brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted, and subsidence insurance claims and insurance investigations data, which is not plotted.</p>	
<b>Historical Map List</b>	<b>9</b>
<p>The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.</p>	
<b>Data Currency</b>	<b>11</b>
<b>Data Suppliers</b>	<b>12</b>
<b>Useful Contacts</b>	<b>13</b>

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The brine subsidence data relating to the Driotwich area as provided in this report is derived from JPB studies and physical monitoring undertaken annually over more than 35 years. For more detailed interpretation contact enquiries@jpb.co.uk. JPB retain the copyright and intellectual rights to this data and accept no liability for any loss or damage, including in direct or consequential loss, arising from the use of this data.

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**Report Version v53.0**

<b>Data Type</b>	<b>Page Number</b>	<b>On Site</b>	<b>0 to 250m</b>	<b>251 to 500m</b>	<b>501 to 1000m</b>
<b>Mining and Natural Cavities Data</b>					
BGS Recorded Mineral Sites	pg 1				6
Coal Mining Affected Areas	pg 2	Yes	n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability	pg 2	Yes	n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential Mining Areas	pg 2	1	7	3	20
<b>Historical Land Use Information (1:2,500)</b>					
Extractive Industries or Potential Excavations from 1855-1909 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)				n/a	n/a
Subterranean Features (100m)				n/a	n/a
<b>Historical Land Use Information (1:10,000)</b>					
Air Shafts					
Disturbed Ground					
General Quarrying	pg 6			1	5
Heap, unknown constituents					
Mineral Railway	pg 6				1
Mining & quarrying general	pg 6			1	
Mining of coal & lignite	pg 6				3
Quarrying of sand & clay, operation of sand & gravel pits					
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 6			1	6
Potentially Infilled Land (Water)	pg 6	1	1	8	6
<b>Ground Stability Data (1:50,000)</b>					
CBSCB Compensation District			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 8	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 8	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 8	Yes		n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 8	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 8	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 8	Yes	Yes	n/a	n/a
Salt Mining Related Features					



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Pen-Cefn-Arda Isaf            Location: Gorseinon, Swansea, West Glamorgan            Source: British Geological Survey, National Geoscience Information Service            Reference: 153932            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Grovesend Formation            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A14NW (NE)	563	1	258354 199700
2	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Glan-Nant            Location: Gorseinon, Swansea, West Glamorgan            Source: British Geological Survey, National Geoscience Information Service            Reference: 153942            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Grovesend Formation            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A18NE (NE)	600	1	258083 200051
3	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Tir-Newydd            Location: Gorseinon, Llanelli, West Glamorgan            Source: British Geological Survey, National Geoscience Information Service            Reference: 153971            Type: Underground  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Grovesend Formation            Commodity: Coal - Deep            Positional Accuracy: Located by supplier to within 10m</p>	A8SE (S)	780	1	257989 198458
4	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Broadoak Pit            Location: Gorseinon, Llanelli, West Glamorgan            Source: British Geological Survey, National Geoscience Information Service            Reference: 153970            Type: Underground  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Grovesend Formation            Commodity: Coal - Deep            Positional Accuracy: Located by supplier to within 10m</p>	A7SW (SW)	876	1	257055 198644
4	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Broadoak Colliery            Location: Loughor, Gorseinon, West Glamorgan            Source: British Geological Survey, National Geoscience Information Service            Reference: 188592            Type: Underground  <b>Status: Ceased</b>            Operator: Individual'S Name Withheld            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Grovesend Formation            Commodity: Coal - Deep            Positional Accuracy: Located by supplier to within 10m</p>	A7SW (SW)	904	1	257023 198637
5	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Broadoak Colliery            Location: Loughor, Gorseinon, West Glamorgan            Source: British Geological Survey, National Geoscience Information Service            Reference: 188593            Type: Underground  <b>Status: Ceased</b>            Operator: Individual'S Name Withheld            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Grovesend Formation            Commodity: Coal - Deep            Positional Accuracy: Located by supplier to within 10m</p>	A7SW (SW)	929	1	257028 198597

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Coal Mining Affected Areas</b> Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13SE (NW)	0	2	257787 199348
	<b>Mining Instability</b> Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13SE (NW)	0	3	257787 199348
	<b>Non Coal Mining Areas of Great Britain</b> No Hazard				
6	<b>Potential Mining Areas</b> Name: Cae Duke Ceased Operation: 1922 Commodity: Coal; Swansea Five Feet Reference: 11600 Alternate: Jubilee Name/Mine: Custodian: Not Supplied	A13SE (NW)	0	4	257787 199348
7	<b>Potential Mining Areas</b> Name: Cory's Swansea Navigation Ceased Operation: 1896 Commodity: Coal; Four Feet Reference: 3561 Alternate: Pengrees (Pengrys) Name/Mine: Custodian: Not Supplied	A13SE (E)	89	4	257968 199344
8	<b>Potential Mining Areas</b> Name: Sterry's Mountain Ceased Operation: 1894 Commodity: Coal; Four Feet Reference: 11601 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A13SE (E)	89	4	257968 199344
9	<b>Potential Mining Areas</b> Name: Broadoak Ceased Operation: 1928 Commodity: Coal; Big or Five Feet; Six Feet Reference: 9572 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A13SW (W)	105	4	257565 199353
10	<b>Potential Mining Areas</b> Name: Broadoak Ceased Operation: 1928 Commodity: Coal; Big or Five Feet; Six Feet Reference: 9572 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A13SW (W)	105	4	257566 199353
11	<b>Potential Mining Areas</b> Name: Broadoak Ceased Operation: 1907 Commodity: Coal; Four Feet; Seam unnamed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: A.G. Fleming, 3 Temple Buildings, Goat Street, Swansea.	A13SE (S)	155	4	257781 199075
12	<b>Potential Mining Areas</b> Name: Cae Duke Ceased Operation: 1898-1920 Commodity: Coal; Five Feet; Six Feet Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: A.G. Fleming, 3 Temple Buildings, Goat Street, Swansea.	A13SE (SE)	182	4	257962 199071

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	<b>Potential Mining Areas</b> Name: Broadoak Ceased Operation: 1870 Commodity: Coal; Seam unnamed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: D.P. Thomas, "Kymin", Newton, Porthcawl.	A13SW (SW)	218	4	257560 199079
14	<b>Potential Mining Areas</b> Name: Coalbrook Ceased Operation: 1887 Commodity: Coal; Upper Grovesend Reference: 5226A Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A14SW (E)	491	4	258370 199335
15	<b>Potential Mining Areas</b> Name: Coalbrook and Goedin Ceased Operation: 1895 Commodity: Coal; Lower Grovesend; Goedin Reference: 5226B Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A14SW (E)	491	4	258370 199335
16	<b>Potential Mining Areas</b> Name: Mountain Ceased Operation: 1897 Commodity: Coal; Upper Grovesend; Lower Grovesend Reference: 3706 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A14SW (E)	491	4	258370 199335
17	<b>Potential Mining Areas</b> Name: Caecopin Ceased Operation: 1910 Commodity: Coal; Penscallen Reference: 5594 Alternate: Broadoak Name/Mine: Alternate: Glebe Name/Mine: Custodian: Not Supplied	A8SW (S)	557	4	257772 198672
18	<b>Potential Mining Areas</b> Name: Beili Glas Ceased Operation: 1917 Commodity: Coal; Penscallen Reference: 10112 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A8SW (S)	557	4	257772 198672
19	<b>Potential Mining Areas</b> Name: Beili Glas Wern Ceased Operation: Not Supplied Commodity: Coal; Seam unnamed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: A.G. Fleming, 3 Temple Buildings, Goat Street, Swansea.	A8SW (S)	557	4	257772 198672
20	<b>Potential Mining Areas</b> Name: Pengrys Ceased Operation: Not Supplied Commodity: Coal; Four Feet Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: G.E. Gordon, 9 Wind Street, Swansea.	A8SW (S)	557	4	257772 198672
21	<b>Potential Mining Areas</b> Name: Loughor Old Ceased Operation: Not Supplied Commodity: Coal; Four Feet Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Francis Hobbs, Beaufort Estate Office, 7 Picton Place, Swansea.	A8SW (S)	557	4	257772 198672



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	<p><b>Potential Mining Areas</b></p> <p>Name: Broadoak            Ceased Operation: 1887            Commodity: Coal; Penscallen            Reference: Not Supplied            Alternate: Not Supplied            Name/Mine:            Custodian: Francis Hobbs, Beaufort Estate Office, 7 Picton Place, Swansea.</p>	A8SW (S)	587	4	257551 198677
23	<p><b>Potential Mining Areas</b></p> <p>Name: Mountain            Ceased Operation: 1935            Commodity: Coal; Swansea Two Feet or Bushy            Reference: 11846            Alternate: Not Supplied            Name/Mine:            Custodian: Not Supplied</p>	A14SE (E)	894	4	258772 199327
24	<p><b>Potential Mining Areas</b></p> <p>Name: Mountain            Ceased Operation: 1917            Commodity: Coal; Four Feet; Five Feet            Reference: Not Supplied            Alternate: Not Supplied            Name/Mine:            Custodian: A.G. Fleming, 3 Temple Buildings, Goat Street, Swansea.</p>	A14SE (E)	894	4	258772 199327
25	<p><b>Potential Mining Areas</b></p> <p>Name: Mountain            Ceased Operation: 1932            Commodity: Coal; Four Feet            Reference: 10774            Alternate: Cefn Arda            Name/Mine:            Custodian: Not Supplied</p>	A14SE (E)	894	4	258772 199327
26	<p><b>Potential Mining Areas</b></p> <p>Name: Coalbrook            Ceased Operation: 1907            Commodity: Coal; Middle Grovesend            Reference: 5226            Alternate: Not Supplied            Name/Mine:            Custodian: Not Supplied</p>	A14NE (E)	925	4	258775 199456
27	<p><b>Potential Mining Areas</b></p> <p>Name: Coalbrook            Ceased Operation: Not Supplied            Commodity: Coal; Upper Grovesend; Lower Grovesend            Reference: Not Supplied            Alternate: Not Supplied            Name/Mine:            Custodian: T. Williams and Sons, Llangennech, Carm.</p>	A14NE (E)	925	4	258775 199456
28	<p><b>Potential Mining Areas</b></p> <p>Name: Beili Glas            Ceased Operation: 1921            Commodity: Coal; Penscallen            Reference: 8145            Alternate: Wern            Name/Mine:            Custodian: Not Supplied</p>	A3NW (S)	959	4	257764 198270
29	<p><b>Potential Mining Areas</b></p> <p>Name: Beili Glas            Ceased Operation: 1931            Commodity: Coal; Four Feet            Reference: 10474            Alternate: Wern            Name/Mine:            Custodian: Not Supplied</p>	A3NW (S)	959	4	257764 198270
30	<p><b>Potential Mining Areas</b></p> <p>Name: Jubilee            Ceased Operation: 1904            Commodity: Coal; Probably Five Feet            Reference: Not Supplied            Alternate: Not Supplied            Name/Mine:            Custodian: A.G. Fleming, 3 Temple Buildings, Goat Street, Swansea.</p>	A3NW (S)	959	4	257764 198270

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	<p><b>Potential Mining Areas</b></p> <p>Name: Jubilee            Ceased Operation: 1903            Commodity: Coal; Seam unnamed            Reference: Not Supplied            Alternate: Not Supplied            Name/Mine:            Custodian: J. Davies and Son, The Pines, Pembrey.</p>	A3NW (S)	959	4	257764 198270
32	<p><b>Potential Mining Areas</b></p> <p>Name: Beili Glas            Ceased Operation: 1932            Commodity: Coal; Five Feet            Reference: 10886            Alternate: Wern            Name/Mine:            Custodian: Not Supplied</p>	A3NW (S)	959	4	257764 198270
33	<p><b>Potential Mining Areas</b></p> <p>Name: Beili Glas            Ceased Operation: 1919            Commodity: Coal; Four Feet            Reference: Not Supplied            Alternate: Not Supplied            Name/Mine:            Custodian: A.G. Fleming, 3 Temple Buildings, Goat Street, Swansea.</p>	A3NW (S)	959	4	257764 198270
34	<p><b>Potential Mining Areas</b></p> <p>Name: Jubilee            Ceased Operation: 1904            Commodity: Coal; Five Feet            Reference: 5615            Alternate: Not Supplied            Name/Mine:            Custodian: Not Supplied</p>	A3NW (S)	959	4	257764 198270
35	<p><b>Potential Mining Areas</b></p> <p>Name: Jubilee            Ceased Operation: 1891            Commodity: Coal; Seam unnamed            Reference: Not Supplied            Alternate: Not Supplied            Name/Mine:            Custodian: J. Davies and Son, Cowell House, Cowell Street, Llanelly.</p>	A3NW (S)	959	4	257764 198270
36	<p><b>Potential Mining Areas</b></p> <p>Name: Waun            Ceased Operation: 1887            Commodity: Coal; Seams unnamed            Reference: Not Supplied            Alternate: Not Supplied            Name/Mine:            Custodian: H. Lynch Blossie, Worcester Chambers, Swansea.</p>	A3NW (S)	959	4	257764 198270

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	<b>General Quarrying</b> Use: Not Supplied Date of Mapping: 1901	A8NE (S)	277	-	257805 198953
38	<b>General Quarrying</b> Use: Not Supplied Date of Mapping: 1892 - 1938	A18SE (N)	538	-	258008 200016
39	<b>General Quarrying</b> Use: Not Supplied Date of Mapping: 1892 - 1921	A19SW (NE)	558	-	258118 199985
40	<b>General Quarrying</b> Use: Not Supplied Date of Mapping: 1908	A14NW (NE)	560	-	258350 199703
41	<b>General Quarrying</b> Use: Not Supplied Date of Mapping: 1908	A14NE (E)	611	-	258449 199505
42	<b>General Quarrying</b> Use: Not Supplied Date of Mapping: 1892 - 1908	A19SW (NE)	639	-	258419 199745
43	<b>Mineral Railway</b> Use: Not Supplied Date of Mapping: 1884 - 1964	A7SW (SW)	983	-	256981 198567
44	<b>Mining &amp; quarrying general</b> Use: Not Supplied Date of Mapping: 1964	A12NE (NW)	433	-	257355 199641
45	<b>Mining of coal &amp; lignite</b> Use: Not Supplied Date of Mapping: 1884 - 1951	A7NE (SW)	512	-	257261 198961
46	<b>Mining of coal &amp; lignite</b> Use: Not Supplied Date of Mapping: 1901	A8SE (S)	778	-	257973 198458
47	<b>Mining of coal &amp; lignite</b> Use: Not Supplied Date of Mapping: 1907	A9SW (SE)	872	-	258403 198538
48	<b>Potentially Infilled Land (Non-Water)</b> Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8NE (S)	277	-	257805 198953
49	<b>Potentially Infilled Land (Non-Water)</b> Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7NE (SW)	512	-	257261 198961
50	<b>Potentially Infilled Land (Non-Water)</b> Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A14NW (NE)	560	-	258350 199703
51	<b>Potentially Infilled Land (Non-Water)</b> Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A14NE (E)	611	-	258449 199505
52	<b>Potentially Infilled Land (Non-Water)</b> Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A19SW (NE)	639	-	258419 199745
53	<b>Potentially Infilled Land (Non-Water)</b> Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8SE (S)	778	-	257973 198458
54	<b>Potentially Infilled Land (Non-Water)</b> Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A9SW (SE)	872	-	258403 198538
55	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A13SE (S)	0	-	257802 199231
56	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A13SE (SE)	225	-	257987 199036
57	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A13SW (SW)	301	-	257461 199051

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
58	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A8NW (S)	383	-	257756 198847
59	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1891	A14SW (SE)	395	-	258221 199042
60	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1891	A8NE (SE)	401	-	258075 198884
61	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A8NW (SW)	409	-	257479 198903
62	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A8NE (SE)	438	-	258101 198856
63	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A8NE (S)	448	-	257968 198791
64	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A7NE (SW)	496	-	257248 199009
65	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A9NW (SE)	617	-	258387 198887
66	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A17SE (NW)	663	-	257216 199839
67	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1891	A14SE (E)	765	-	258619 199054
68	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1891	A9NE (SE)	778	-	258481 198743
69	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1891	A7SE (SW)	937	-	257210 198450
70	<b>Potentially Infilled Land (Water)</b> Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A9SE (SE)	990	-	258564 198521

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>CBSCB Compensation District</b> The site does not fall within the brine compensation area.				
	<b>Brine Subsidence Solution Area</b> The site does not fall within the brine subsidence solution area.				
71	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	257787 199348
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	113	1	257614 199167
72	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	113	1	257614 199167
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	257787 199348
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	257787 199348
73	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	257787 199348
74	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	187	1	257917 199672
75	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	243	1	258007 199670
76	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	257787 199348
77	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	113	1	257614 199167
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	187	1	257917 199672
78	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	257787 199348
79	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	113	1	257614 199167
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	210	1	257978 199657

The following mapping has been analysed for Historical Land Use Information (1:2,500):

<b>1:2,500</b>	<b>Mapsheet</b>	<b>Published Date</b>
Glamorganshire	014_06	1877
Glamorganshire	014_10	1878
Glamorganshire	014_09	1879
Carmarthenshire	059_09	1879
Carmarthenshire	059_05	1880
Glamorganshire	014_05	1898
Glamorganshire	014_06	1898
Glamorganshire	014_09	1898
Glamorganshire	014_10	1898
Carmarthenshire	059_05	1907
Carmarthenshire	059_09	1907
Glamorganshire	014_06	1916
Glamorganshire	014_10	1916
Carmarthenshire	059_05	1916
Carmarthenshire	059_09	1916
Glamorganshire	014_06	1935
Glamorganshire	014_10	1935
Carmarthenshire	059_05	1935
Carmarthenshire	059_09	1935
Ordnance Survey Plan	SS5899	1958
Ordnance Survey Plan	SS5799	1959








The following mapping has been analysed for Historical Land Use Information (1:10,000):

<b>1:10,560</b>	<b>Mapsheet</b>	<b>Published Date</b>
Glamorganshire	014_00	1884
Carmarthenshire	059_SW	1891
Carmarthenshire	059_NW	1892
Glamorganshire	014_NW	1901
Glamorganshire	014_SW	1901
Carmarthenshire	059_SW	1907
Carmarthenshire	059_NW	1908
Carmarthenshire	059_NW	1921
Carmarthenshire	059_SW	1921
Glamorganshire	014_NW	1938
Glamorganshire	014_SW	1938
Carmarthenshire	059_NW	1951
Carmarthenshire	059_SW	1951
Ordnance Survey Plan	SN50SE	1964
Ordnance Survey Plan	SS59NE	1964
<b>1:10,000</b>	<b>Mapsheet</b>	<b>Published Date</b>
Ordnance Survey Plan	SN50SE	1993
Ordnance Survey Plan	SS59NE	1993

<b>Mining and Cavities Data</b>	<b>Version</b>	<b>Update Cycle</b>
<b>BGS Recorded Mineral Sites</b> British Geological Survey - National Geoscience Information Service	June 2023	Bi-Annually
<b>Coal Mining Affected Areas</b> The Coal Authority - Property Searches	February 2023	Annual Rolling Update
<b>Man Made Mining Cavities</b> Stantec UK Ltd	December 2022	Bi-Annually
<b>Mining Instability</b> Ove Arup & Partners	June 1998	Not Applicable
<b>Natural Cavities</b> Stantec UK Ltd	December 2022	Bi-Annually
<b>Non Coal Mining Areas of Great Britain</b> British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
<b>Historical Land Use Information (1:2,500)</b>	<b>Version</b>	<b>Update Cycle</b>
<b>Subterranean Features</b> Landmark Information Group Limited	July 2023	Bi-Annually
<b>Ground Stability Data (1:50,000)</b>	<b>Version</b>	<b>Update Cycle</b>
<b>CBSCB Compensation District</b> Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
<b>Potential for Collapsible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	April 2020	As notified
<b>Potential for Compressible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Ground Dissolution Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Landslide Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Running Sand Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Brine Subsidence Solution Area</b> Johnson Poole & Bloomer	December 2020	



A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
British Geological Survey	 <b>British Geological Survey</b> <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
The Coal Authority	
Ove Arup	
Stantec UK Ltd	
Wardell Armstrong	
Johnson Poole & Bloomer	

Contact	Name and Address	Contact Details
1	<b>British Geological Survey - Enquiry Service</b> British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	<b>The Coal Authority - Property Searches</b> 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
3	<b>Ove Arup &amp; Partners</b> Central Square, Forth Street, Newcastle upon Tyne, Tyne and Wear, NE1 3PL	Telephone: 0191 261 6080 Fax: 0191 261 7879
4	<b>Landmark Information Group Limited</b> Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9960 Fax: 0844 844 9951 Email: customerservice@promap.co.uk Website: www.landmarkinfo.co.uk
-	<b>Landmark Information Group Limited</b> Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

# Intégral Géotechnique

## Historical Land Use Information (1:2,500)

### General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Map ID
- Several of Type at Location

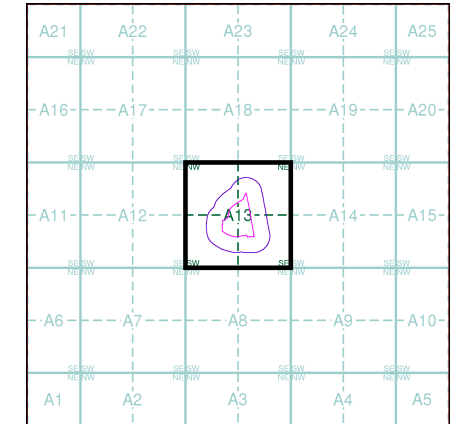
### Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	■
Extractive Industries Activity from 1893 - 1915	▲	—	■
Extractive Industries Activity from 1906 - 1937	▲	—	■
Extractive Industries Activity from 1924 - 1949	▲	—	■
Extractive Industries Activity from 1950 - 1980	▲	—	■

### Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	■

### Mining and Ground Stability - Segment A13



### Order Details

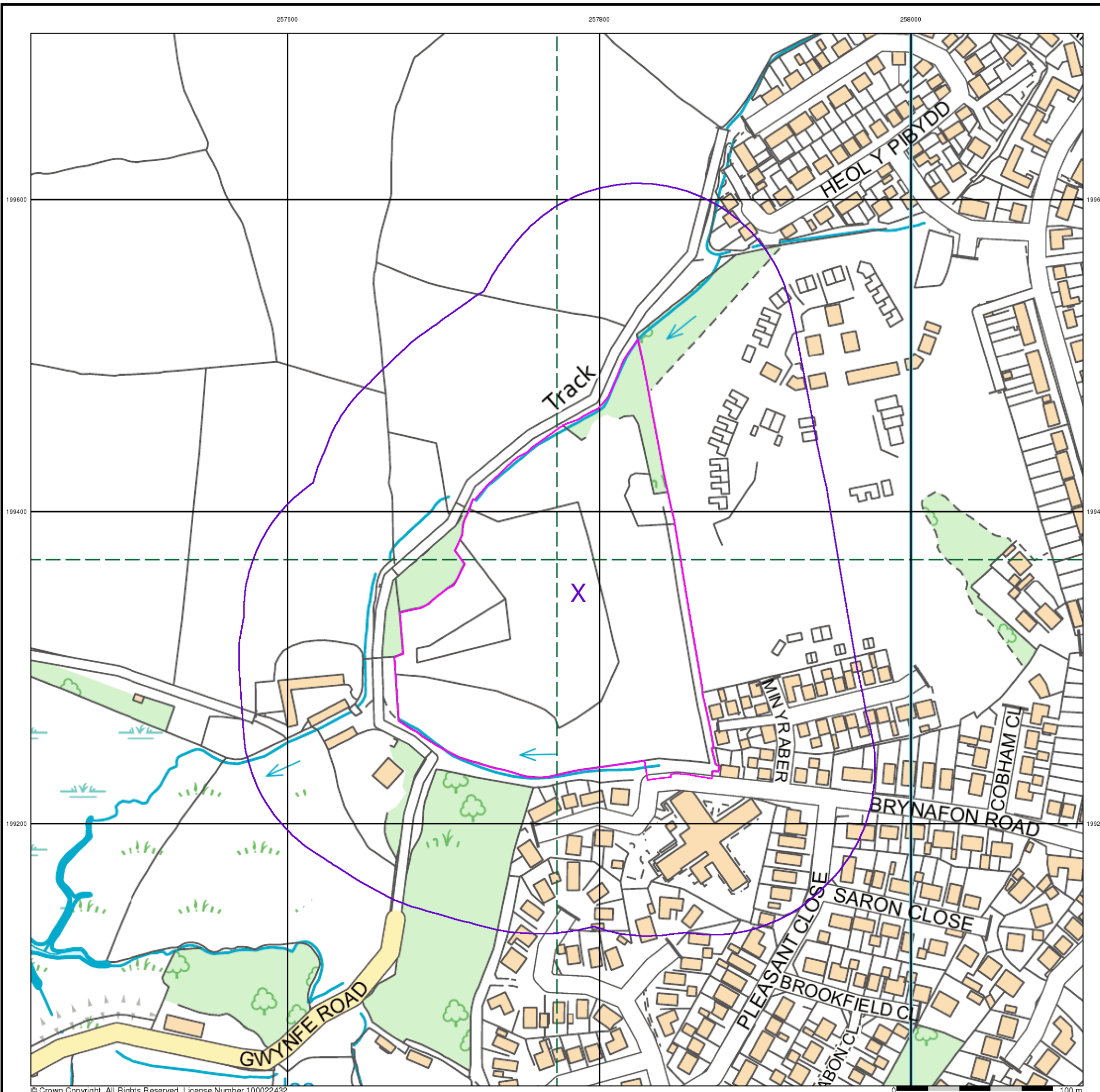
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Plot Buffer (m): 100

### Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk



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## Historical Land Use Information (1:10,000)

### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

### Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

	Point	Line	Polygon
Air Shafts			
Disturbed Ground			
General Quarrying			
Heap, unknown constituents			
Mineral Railway			
Mining and Quarrying General			
Mining of Coal & Lignite			
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits			

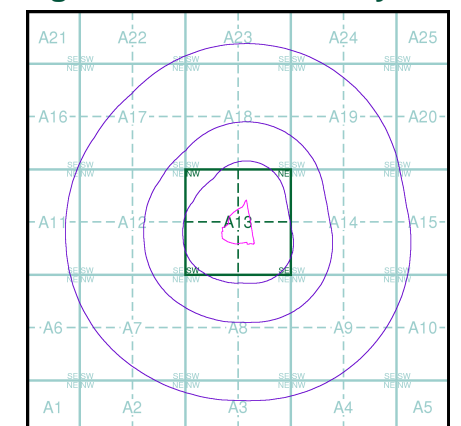
### Historical Land Use

	Point	Line	Polygon
Potentially Infilled Land (Non-Water)			
Potentially Infilled Land (Water)			
Former Marsh			

### Mining Data

- Potential Mining Area
- BGS Recorded Mineral Site

### Mining and Ground Stability - Slice A

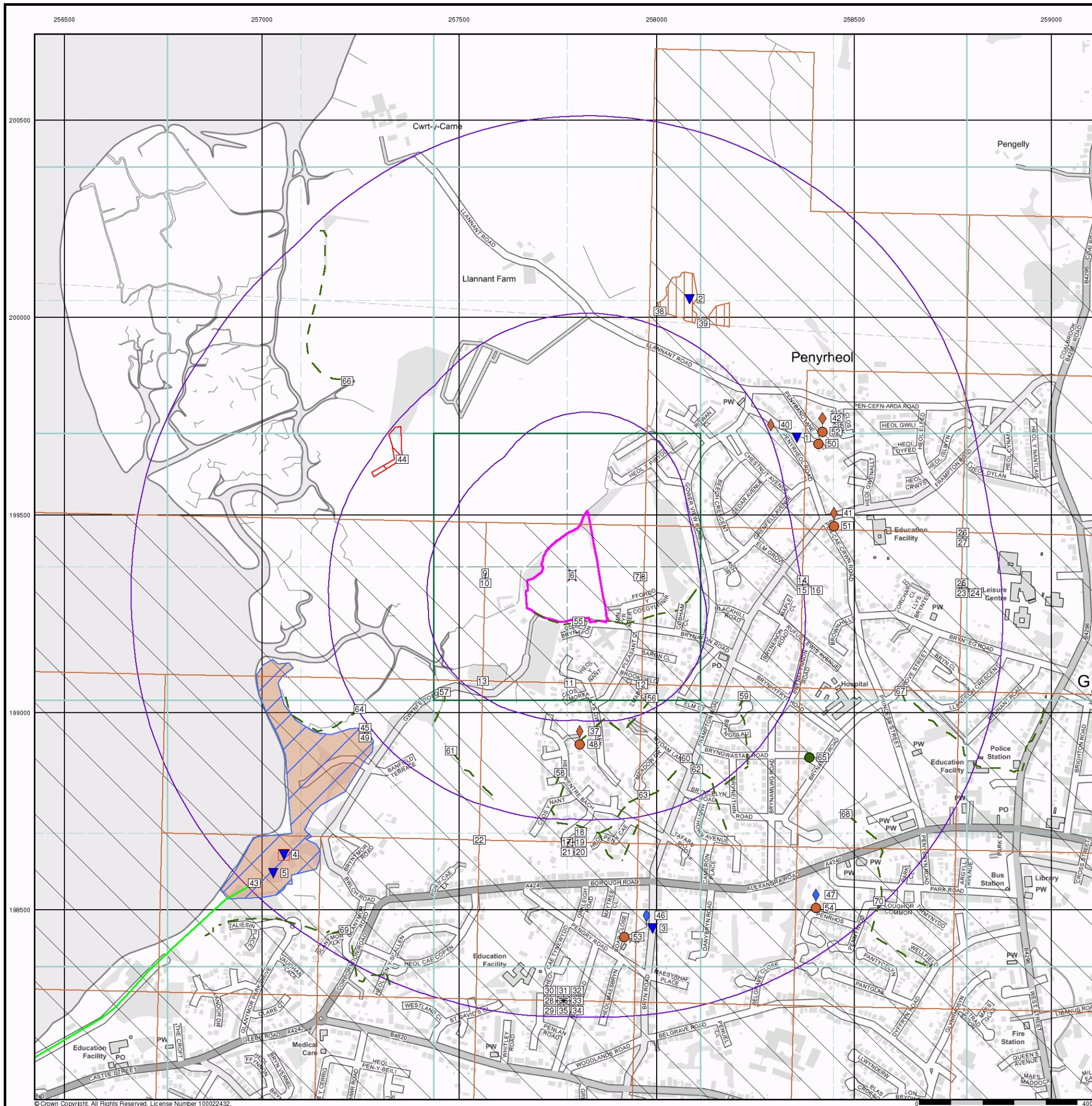


### Order Details

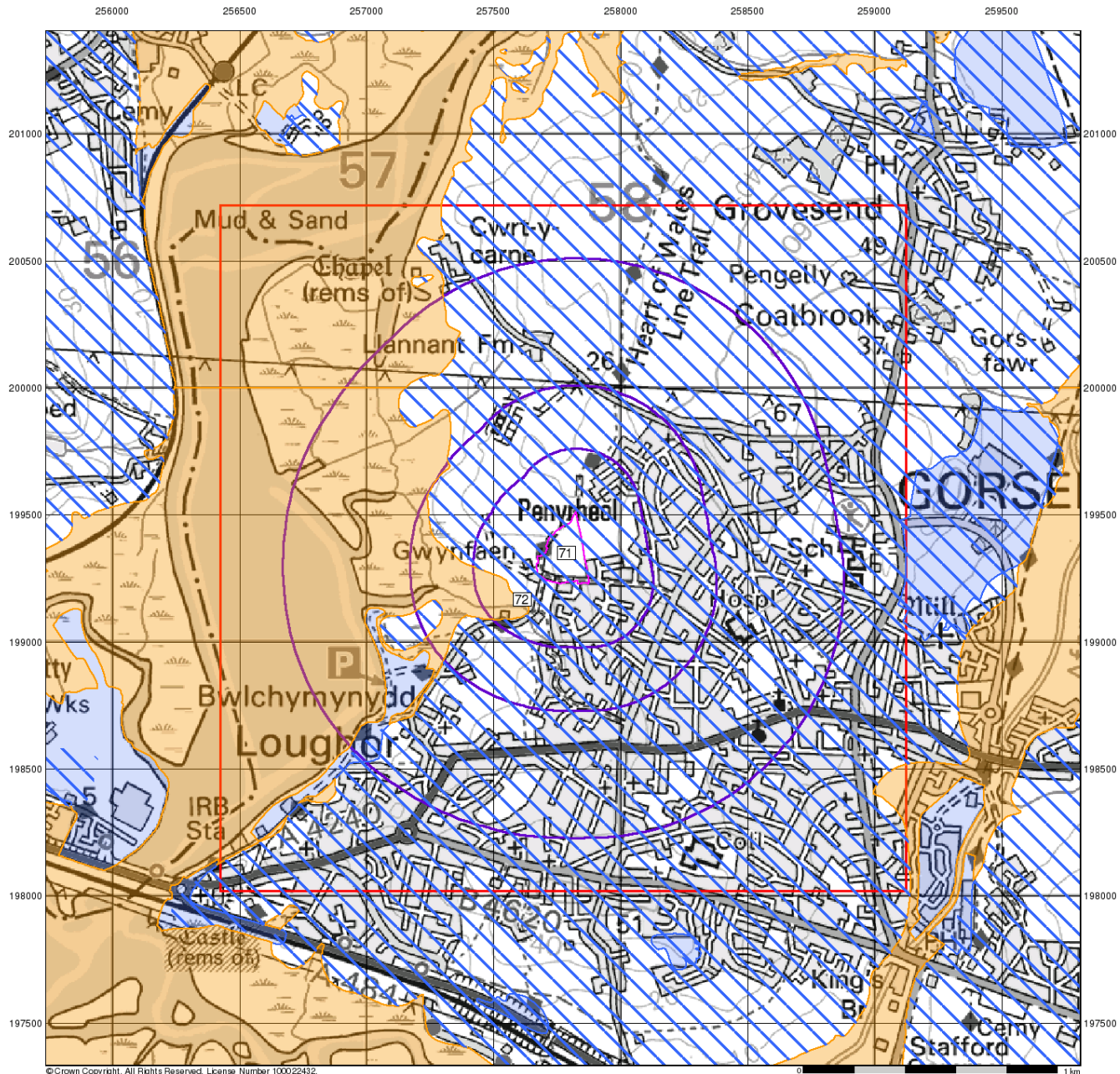
Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

### Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



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# Intégral Géotechnique

## Ground Stability Data (1:50,000)

- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Slice
  - Map ID

### Potential for Compressible Ground Stability Hazards

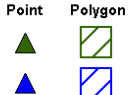
- High
- Moderate
- Low
- Very Low

### Potential for Collapsible Ground Stability Hazards

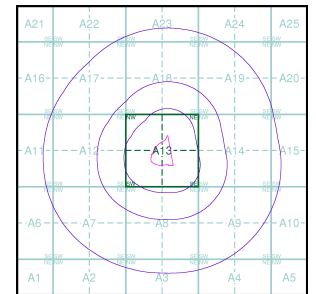
- High
- Moderate
- Low
- Very Low

### Brine Pumping and Salt Mining

- Brine Pumping Related Feature
- Salt Mining Related Feature



### Mining and Ground Stability - Slice A



### Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

### Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF



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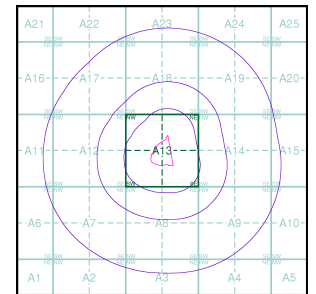
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# Intégral Géotechnique

## Ground Stability Data (1:50,000)

- General**
- Specified Site
  - Specified Buffer(s)
  - Slice
  - Bearing Reference Point
  - Map ID
- Potential for Landslide Ground Stability Hazards**
- High
  - Moderate
  - Low
  - Very Low
- Potential for Ground Dissolution Stability Hazards**
- High
  - Moderate
  - Low
  - Very Low

### Mining and Ground Stability - Slice A



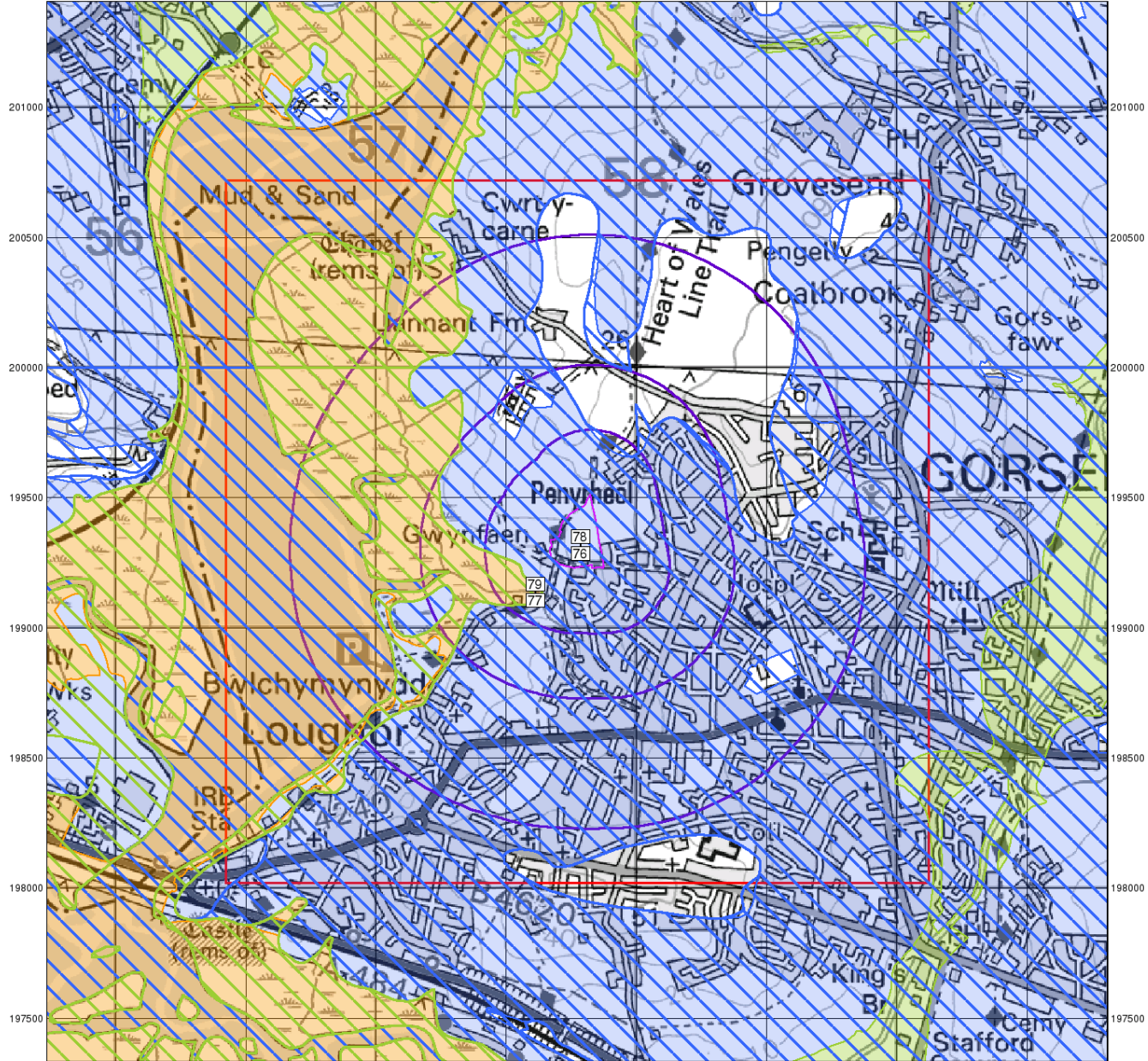
**Order Details**

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

**Site Details**

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

256000 256500 257000 257500 258000 258500 259000 259500



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# Intégral Géotechnique

## Ground Stability Data (1:50,000)

- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Slice
  - Map ID

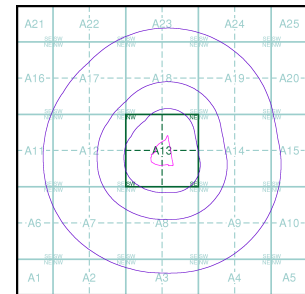
### Potential for Running Sand Ground Stability Hazards

- High
- Moderate
- Low
- Very Low

### Potential for Shrinking or Swelling Clay Ground Stability Hazards

- High
- Moderate
- Low
- Very Low

### Mining and Ground Stability - Slice A



### Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257790, 199350  
 Slice: A  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

### Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk

## Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

### Slice

Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

### Segment

A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

### Quadrant

A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

## Client Details

MR H Pritchard, Integral Geotechnique, Integral House, 7 Beddau Way, Castlegate Business Park, Caerphilly, CF83 2AX

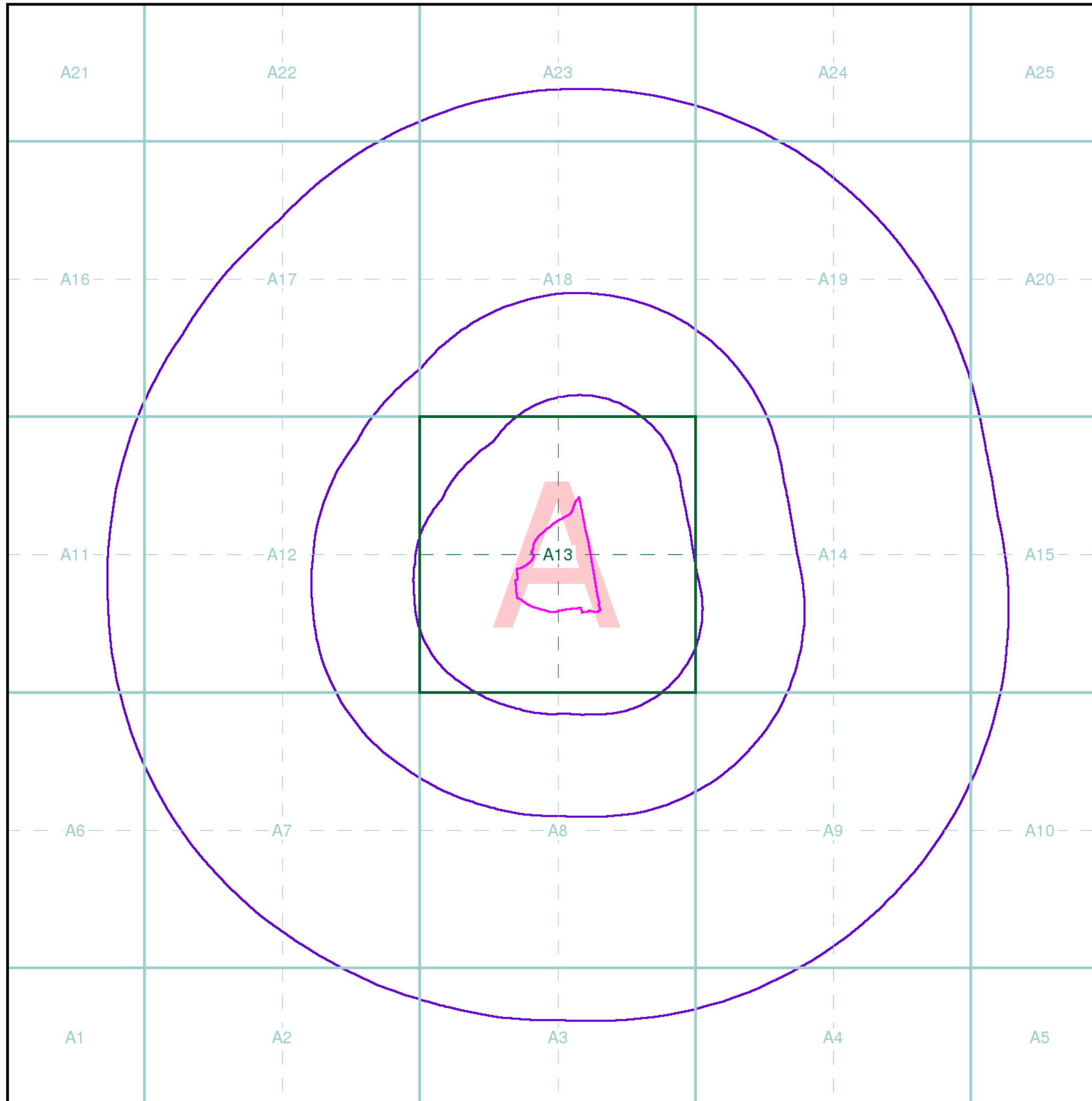
## Order Details

Order Number: 331303750\_1\_1  
 Customer Ref: 14294/LP  
 National Grid Reference: 257780, 199340  
 Site Area (Ha): 3.53  
 Search Buffer (m): 1000

## Site Details

Gwynfaen Farm (Phase 2), Gorseinon, Swansea, SA4 4BF

Full Terms and Conditions can be found on the following link:  
<http://www.landmarkinfo.co.uk/Terms/Show/515>





## **APPENDIX B**

### **BGS RADON GEOREPORT**

LAURA PULLIN  
INTEGRAL GEOTECHNIQUE (WALES) LTD  
INTEGRAL HOUSE  
7  
BEDDAU WAY  
CAERPHILLY  
CF83 2AX

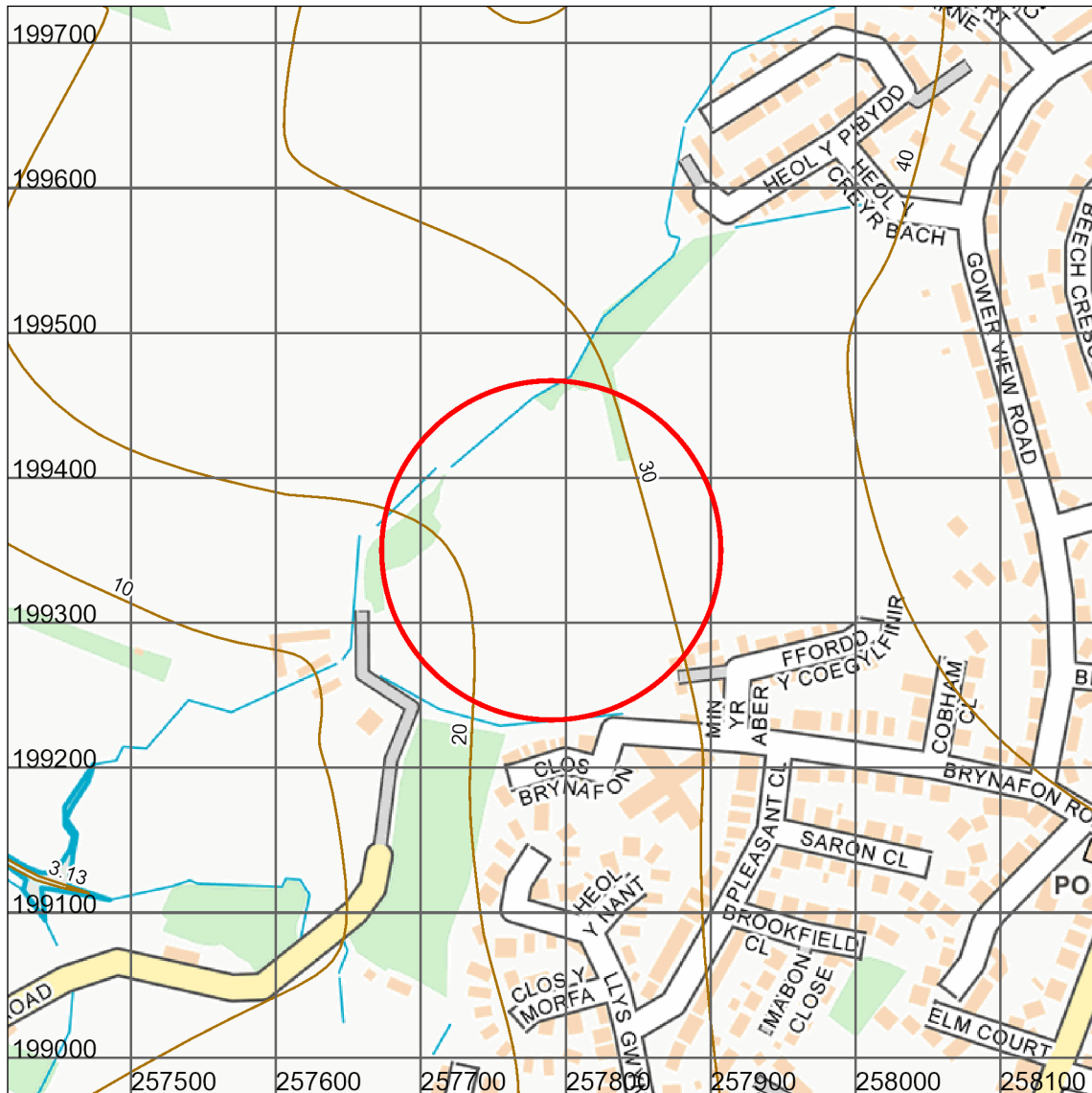
## Radon Report

Advisory report on the requirement for radon protective measures in new buildings, conversions and extensions to existing buildings. The report also indicates whether a site is located within a radon Affected Area

Report Id: *BGS\_336637/51449*

Client reference: 14294/LP Gwynfaen Farm (Phase 2)

## Search location



Contains OS data © Crown Copyright and database right 2024. OS OpenMap Local: Scale: 1:5 000 (1cm = 50 m)

**Search location indicated in red**

*Area centred at: 257790,199350*

*Radius of site area: 117 metres*

## Radon Report: UK

When extensions are made to existing buildings in high radon areas, or new buildings are constructed in these areas, the Building Regulations for England, Wales, Scotland and Northern Ireland require that protective measures are taken against radon entering the building.

This report provides information on whether radon protective measures are required. Depending on the probability of buildings having high radon levels, the Regulations may require either:

1. No protective measures
2. Basic protective measures
3. Full protective measures

This is an advisory report on the requirement for radon protective measures in new buildings, conversions and extensions. The report also indicates whether a site is located within a radon Affected Area

### Requirement for radon protective measures

The determination below follows advice in *BR211 Radon: Guidance on protective measures for new buildings (2023 edition)*, which also provides guidance on what to do if the result indicates that protective measures are required.

**Is the property in an area where radon protective measures are required for new buildings or extensions to existing ones as described in publication BR211 (2023 edition) Radon: Guidance on protective measures for new buildings?**

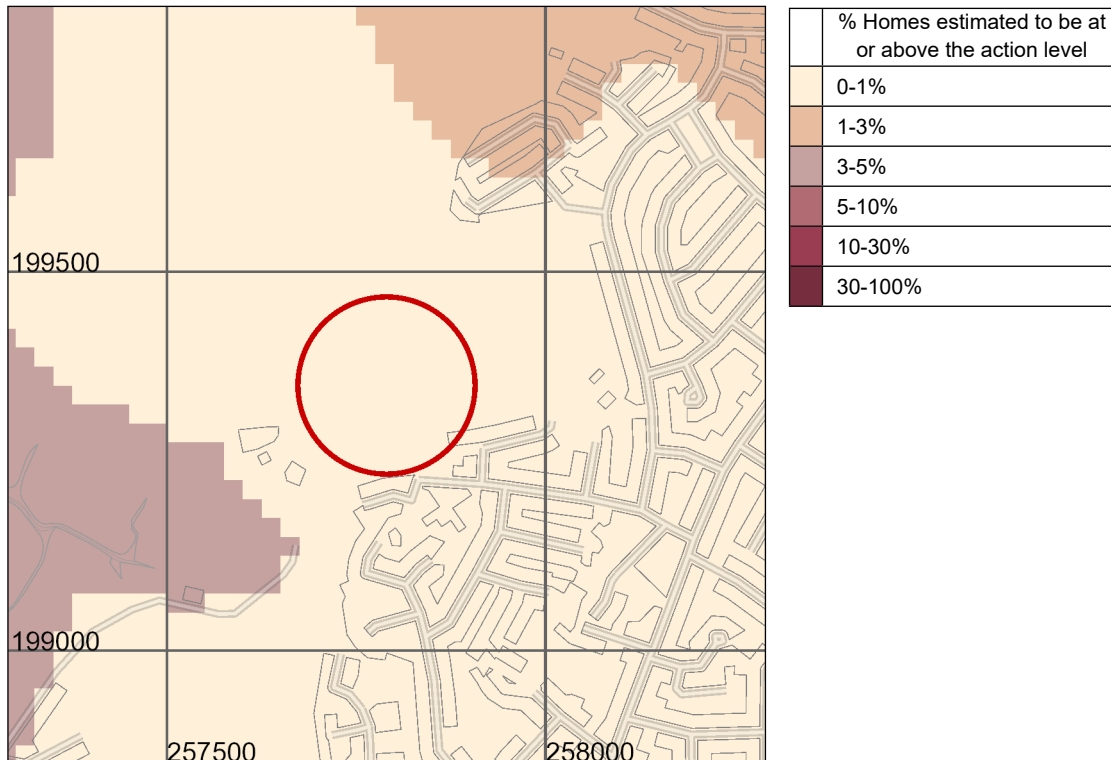
**NO RADON PROTECTIVE MEASURES ARE REQUIRED FOR THE REPORT AREA.**

More details of the protective measures required are available in *BR211 Radon: Guidance on protective measures for new buildings (2023 Edition)*.

Whether or not the radon level in a building is above or below the radon Action Level can only be established by having the building tested. The UKHSA provides a radon testing service which can be accessed at [www.ukradon.org](http://www.ukradon.org) or by telephone (01235 822622).

If you require further information or guidance, you should contact your local authority building control officer or approved inspector.

## Radon Affected Area



Contains OS data © Crown Copyright and database right 2024  
 Scale: 1:10 000 (1cm = 100 m)  
**Search area indicated in red**

**Is the property in a radon Affected Area as defined by the UK Health Security Agency (UKHSA) and if so what percentage of homes are estimated to be at or above the Action Level? **NO****

### Additional Information

**THE PROPERTY IS IN AN AREA WHERE LESS THAN 1% OF HOMES ARE ESTIMATED TO BE AT OR ABOVE THE ACTION LEVEL. THE PROPERTY IS NOT IN A RADON AFFECTED AREA.**

The UKHSA recommends a radon 'Action Level' of 200 Becquerels per cubic metre of air ( $\text{Bq m}^{-3}$ ) for the annual average of the radon gas concentration in a home. Where 1% or more of homes are estimated to be at or above the Action Level the area should be regarded as a radon Affected Area.

This report informs you whether the property is in a radon Affected Area and the percentage of homes that are estimated to be at or above the radon Action Level at this location. Being in an Affected Area does not necessarily mean there is a high radon level within the property; the only way to determine the radon level is to carry out a radon measurement.

The UKHSA advises that radon gas should be measured in all properties within radon Affected Areas and that homes with radon levels at or above the Action Level (200 Bq m<sup>-3</sup>) should be remediated. Householders with levels between the Target Level (100 Bq m<sup>-3</sup>) and Action Level should seriously consider reducing their radon level, especially if they are at greater risk, such as if they are current or ex smokers. Whether or not a home is in fact above or below the Action Level or Target Level can only be established by having the building tested. The UKHSA provides a validated radon testing service which can be accessed at [www.ukradon.org](http://www.ukradon.org).

The information in this report provides an answer to one of the standard legal enquiries on house purchase in England and Wales, known as Law Society CON29 Enquiries of the Local Authority (2016); 3.14 Radon Gas: Do records indicate that the property is in a “Radon Affected Area” as identified by the UKHSA. The data can also be used to advise house buyers and sellers in Scotland and Northern Ireland.

If you are buying a new build property in a Radon Affected Area, you should ask the builder whether radon protective measures were incorporated in the construction of the property.

If you are buying a currently occupied property in a radon Affected Area, you should ask the present owner whether radon levels have been measured in the property. If they have, ask whether the results were at or above the radon Action Level and if so, whether remedial measures were installed, radon levels were re-tested, and if the results of re-testing confirmed the effectiveness of the measures.

Further information on radon is available from the UKHSA at [www.ukradon.org](http://www.ukradon.org).

## What is radon?

Radon is a naturally occurring radioactive gas, which is produced by the radioactive decay of radium which, in turn, is derived from the radioactive decay of uranium. Uranium is found in small quantities in all soils and rocks, although the amount varies from place to place. Radon released from rocks and soils is quickly diluted in the atmosphere. Concentrations in the open air are normally very low and do not present a hazard. Radon that enters enclosed spaces such as some buildings (particularly basements), caves, mines, and tunnels may reach high concentrations in some circumstances. The construction method and degree of ventilation will influence radon levels in individual buildings. A person's exposure to radon will also vary according to how particular buildings and spaces are used.

Inhalation of the radioactive decay products of radon gas increases the chance of developing lung cancer. If individuals are exposed to high concentrations for significant periods of time, there may be cause for concern. In order to limit the risk to individuals, the Government has adopted an Action Level for radon in homes of 200 becquerels per cubic metre ( $\text{Bq m}^{-3}$ ). The Government advises householders that, where the radon level is at or above the Action Level, measures should be taken to reduce the concentration.

## Radon in workplaces

The Ionising Radiation Regulations 2017 require employers to take action when radon is present above a defined level in the workplace. Advice may be obtained from your local Health and Safety Executive Area Office or the Environmental Health Department of your local authority. The BRE publishes a guide (BR293): **Radon in the workplace**. BRE publications may be obtained from the BRE Bookshop, Tel: 01923 664262, email: [bookshop@bre.co.uk](mailto:bookshop@bre.co.uk) website: [www.brebookshop.com](http://www.brebookshop.com)

## Contact Details

### ***Keyworth Office***

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Environmental Science Centre  
Nicker Hill  
Keyworth  
Nottingham  
NG12 5GG  
Tel: 0115 9363100  
Email: [enquiries@bgs.ac.uk](mailto:enquiries@bgs.ac.uk)

### ***Wallingford Office***

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Email: [enquiries@bgs.ac.uk](mailto:enquiries@bgs.ac.uk)

### ***Edinburgh Office***

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Tel: 0131 6671000  
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- Detail, which is clearly defined and accurately depicted on large-scale maps, may be lost when small-scale maps are derived from them.
- Although samples and records are maintained with all reasonable care, there may be some deterioration in the long term.
- The most appropriate techniques for copying original records are used, but there may be some loss of detail and dimensional distortion when such records are copied.
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- The topography shown on any map extracts is based on the latest OS mapping and is not necessarily the same as that used in the original compilation of the BGS geological map, and to which the geological linework available at that time was fitted.
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Report issued by  
**BGS Enquiry Service**

## **APPENDIX C**

**CONSULTANTS COAL MINING REPORT FROM THE COAL AUTHORITY**



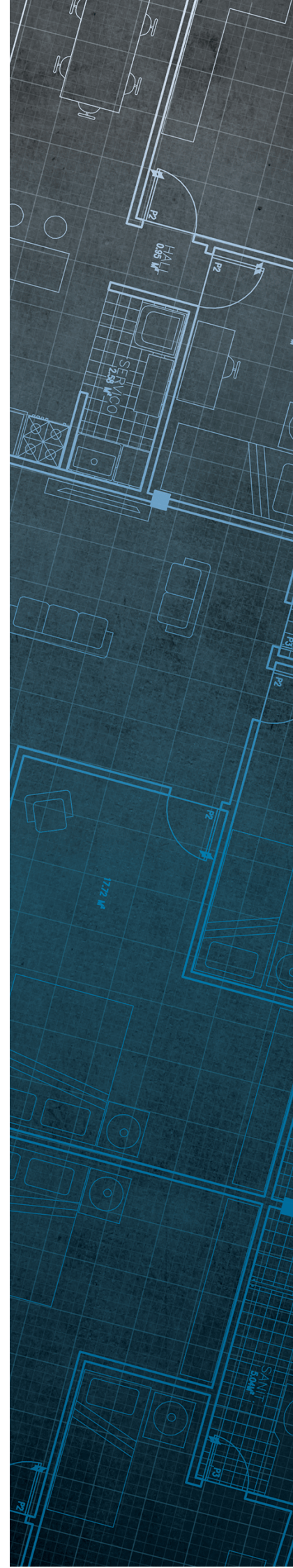
The Coal  
Authority

# Consultants Coal Mining Report

Gwynfaen Farm (Phase 2)  
Gorseinon  
Swansea  
SA4 4BF

Date of enquiry: 16 January 2024  
Date enquiry received: 16 January 2024  
Issue date: 16 January 2024

Our reference: 51003399609001  
Your reference: 14292/LP



# Consultants

# Coal Mining Report

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

## Client name

INTEGRAL GEOTECHNIQUE (WALES) LTD.

## Enquiry address

Gwynfaen Farm (Phase 2)  
Gorseinon  
Swansea  
SA4 4BF


## How to contact us

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Mansfield  
Nottinghamshire  
NG18 4RG

[www.groundstability.com](http://www.groundstability.com)

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Approximate position of property



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# Section 1 – Mining activity and geology

## Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	MYNYDDISL WYN LOWER LEAF	Coal	4CSY	160	North-East	11.6	South-West	162	1952
unnamed	UNNAMED	Coal	4CTD	234	North	10.8	South-West	150	1981
CAE DUKE	UNNAMED	Coal	4E39	244	South-East	15.1	South-West	180	1907
unnamed	UNNAMED	Coal	4D8Q	277	South	13.0	North	220	1903
unnamed	UNNAMED	Coal	4CT9	329	South	26.6	South	170	1904
unnamed	UNNAMED	Coal	4CT7	355	South	26.5	North	170	1911
unnamed	SWANSEA 6FT	Coal	4E36	358	East	11.9	South-West	220	1939
unnamed	UNNAMED	Coal	4CSS	385	Beneath Property	12.4	South-West	220	1942
unnamed	SWANSEA 6FT	Coal	4D8O	469	South	12.7	North-East	230	1943
unnamed	SWANSEA NO.3	Coal	4D8L	469	South	12.9	North-East	70	1941
unnamed	SWANSEA 6FT	Coal	4CSR	482	South-West	32.0	North	100	1939
unnamed	UNNAMED	Coal	4D8J	490	South	16.9	North	90	1948
unnamed	SWANSEA NO.3	Coal	4CT2	524	South-West	24.9	North	70	1945

### Probable unrecorded shallow workings

None.

### Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

### Mine entries

None recorded within 100 metres of the enquiry boundary.

### Abandoned mine plan catalogue numbers

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

SWA2835	SWA1075	11600
SWA696	SWA2507	

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

### Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
MYNYDDISLWYN BIG RIDER	Coal	Yes	Within	N/A	133

### Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

### Opencast mines

None recorded within 500 metres of the enquiry boundary.

### Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

## Section 2 – Investigative or remedial activity

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

### Site investigations

None recorded within 50 metres of the enquiry boundary.

### Remediated sites

None recorded within 50 metres of the enquiry boundary.

### Coal mining subsidence

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

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

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

### Mine gas

None recorded within 500 metres of the enquiry boundary.

### Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

## Section 3 – Licensing and future mining activity

### Future underground mining

None recorded.

### Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

### Court orders

None recorded.

### Section 46 notices

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

### Withdrawal of support notices

The property is in an area where notices to withdraw support were given in 1976, 1977 and 1983.

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

### Payments to owners of former copyhold land

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



## Section 4 – Further information

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

### Future development

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

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

### Development advice

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

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

## Section 5 – Data definitions

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

### Past underground coal mining

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

### Probable unrecorded shallow workings

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

### Spine roadways at shallow depth

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

### Mine entries

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

### Abandoned mine plan catalogue numbers

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

### Outcrops

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

### Geological faults, fissures and breaklines

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

### **Opencast mines**

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

### **Coal Authority managed tips**

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

### **Site investigations**

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

### **Remediated sites**

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

### **Coal mining subsidence**

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

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

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

### **Mine gas**

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

### **Mine water treatment schemes**

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

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

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

### **Future underground mining**

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

### **Coal mining licensing**

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

### **Court orders**

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

### **Section 46 notices**

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

### **Withdrawal of support notices**


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


### **Payment to owners of former copyhold land**

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

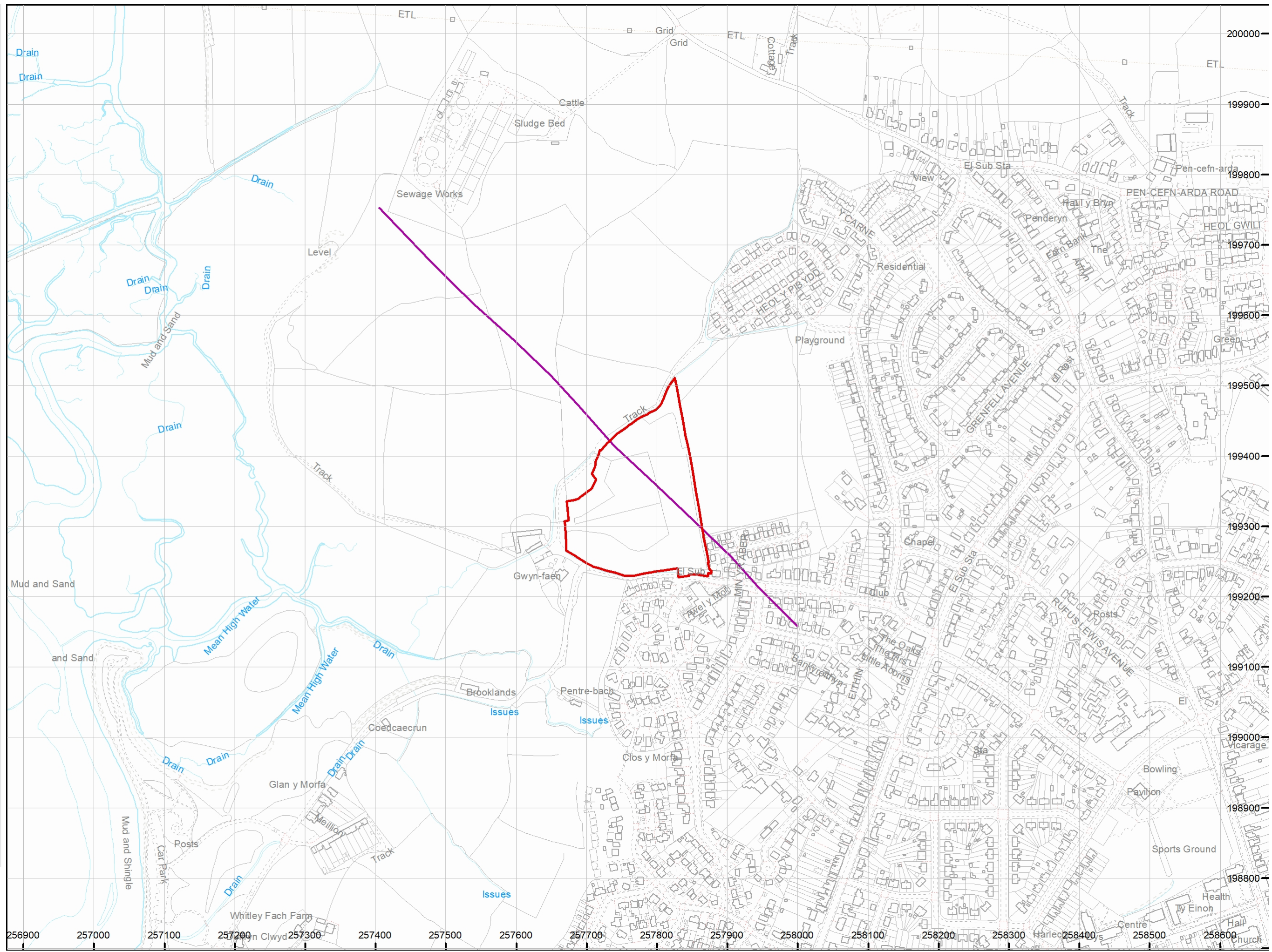
The map highlights any specific surface or subsurface features within or near to the boundary of the site.

**Key**

Approximate position of the enquiry boundary shown 

Outcrop (Proven) 

**How to contact us**  
0345 762 6848 (UK)  
+44 (0)1623 637 000 (International)  
[www.groundstability.com](http://www.groundstability.com)



## FIGURES



NORTH

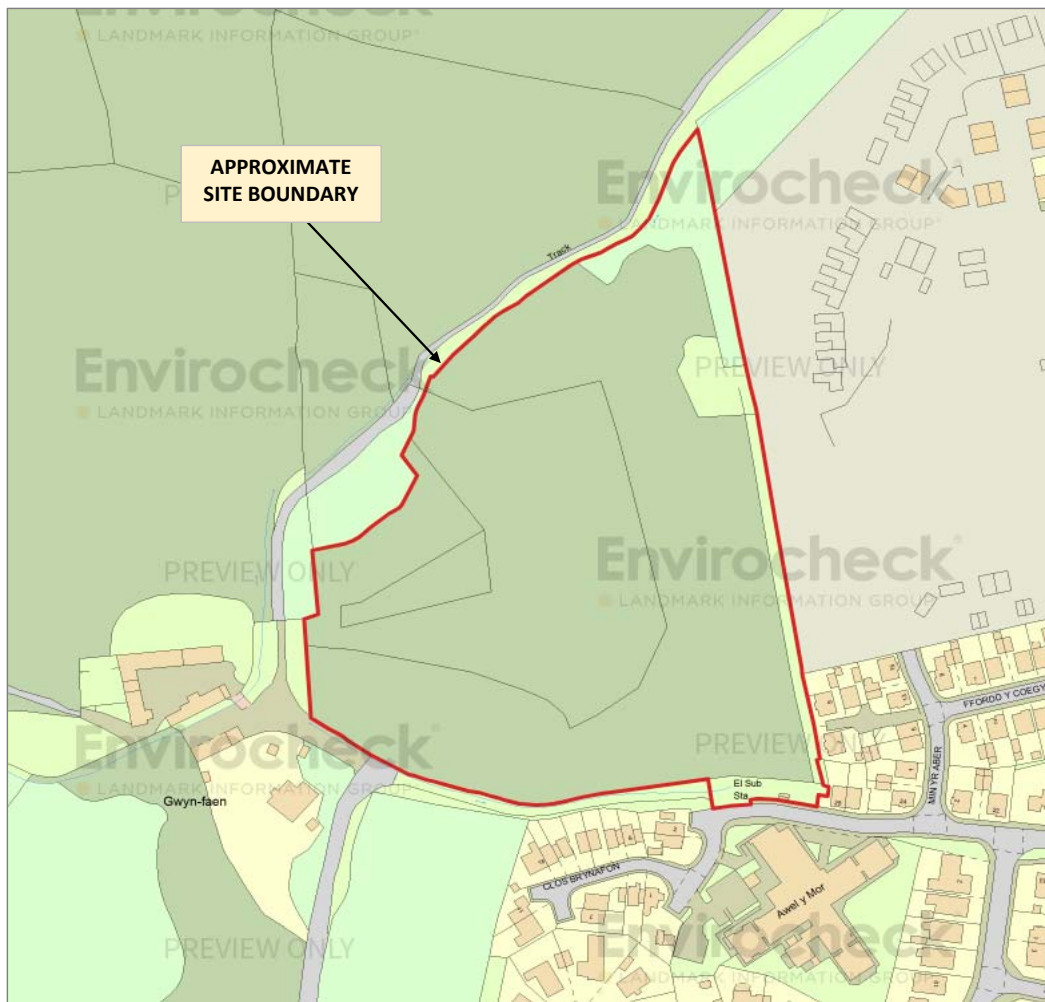


FIGURE 1: SITE LOCATION

Phase 2, Gwynfaen Farm, Gorseinon

**Intégral**  
Géotechnique

Intégral House  
7 Beddau Way  
Castlegate Business Park  
Caerphilly  
CF83 2AX  
Tel: 029 2080 7991



AERIAL PHOTO

FIGURE 2: SITE PLAN

Phase 2, Gwynfaen Farm, Gorseinon

**Intégral**  
Géotechnique

Intégral House  
7 Beddau Way  
Castlegate Business Park  
Caerphilly  
CF83 2AX  
Tel: 029 2080 7991





NORTH

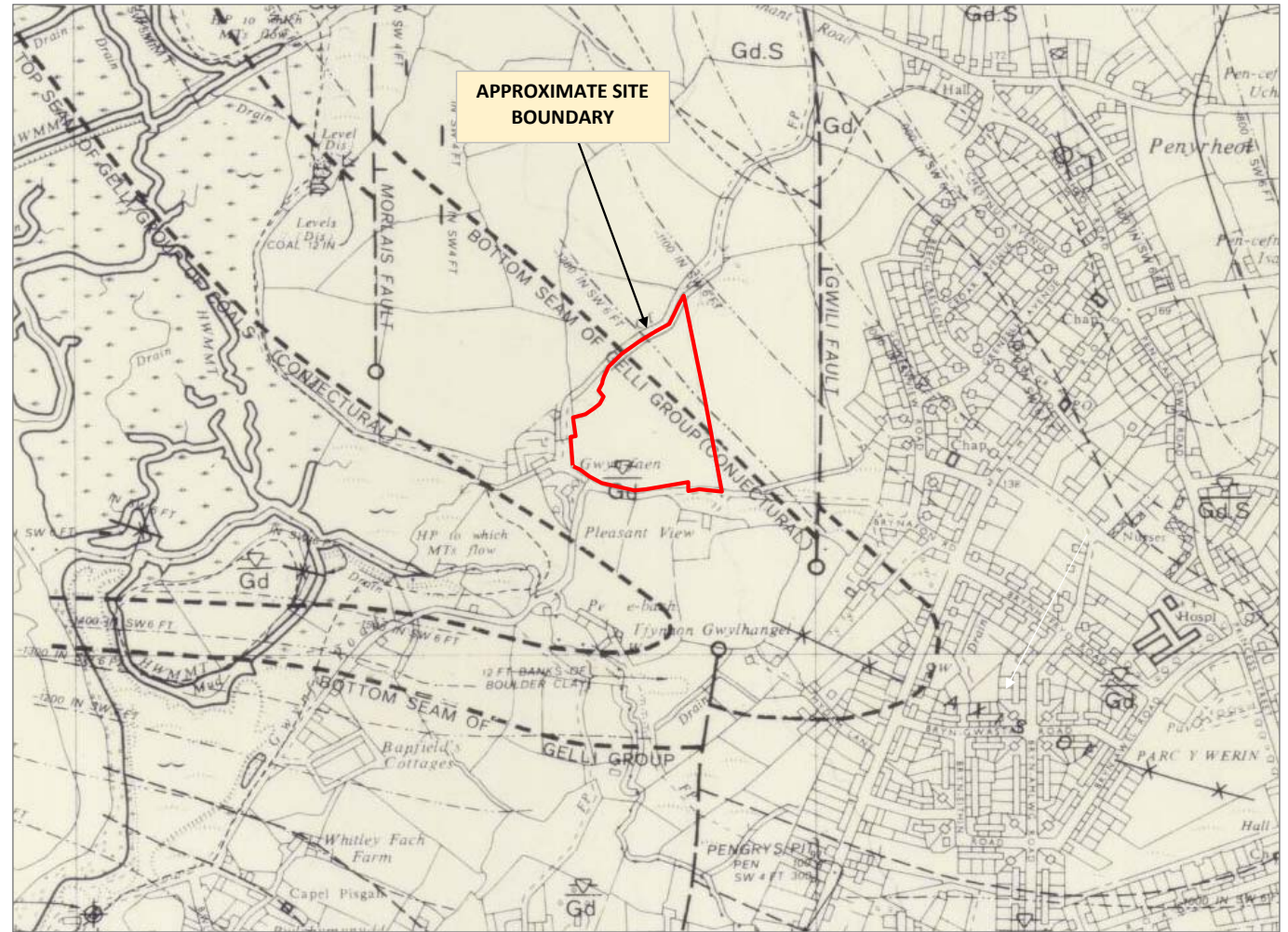
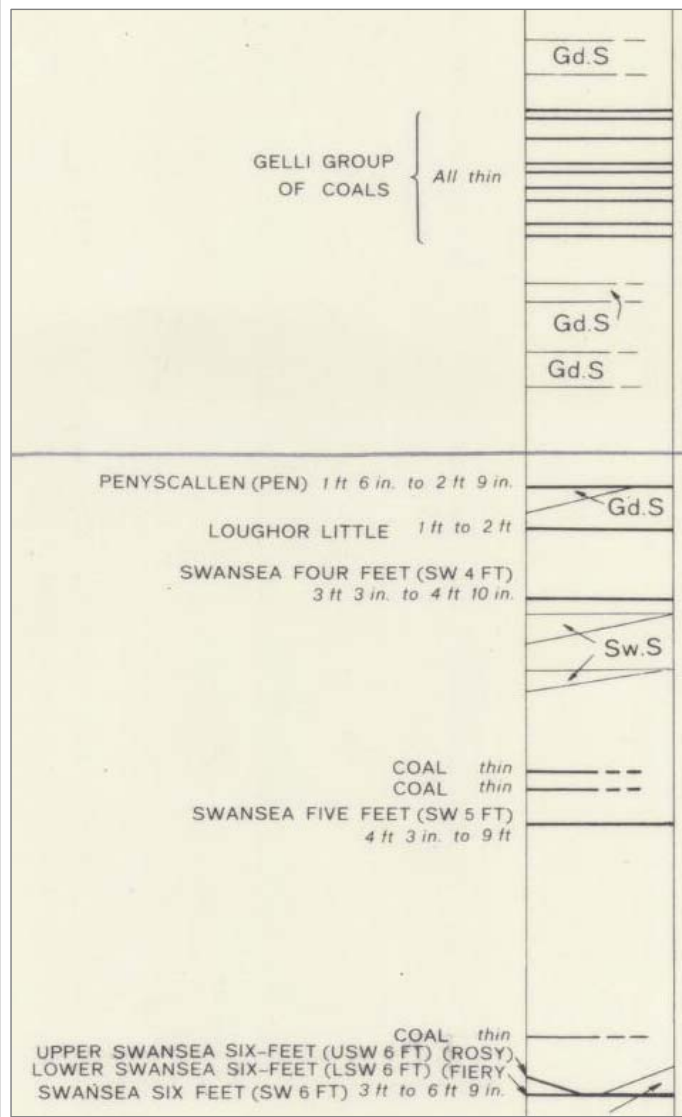
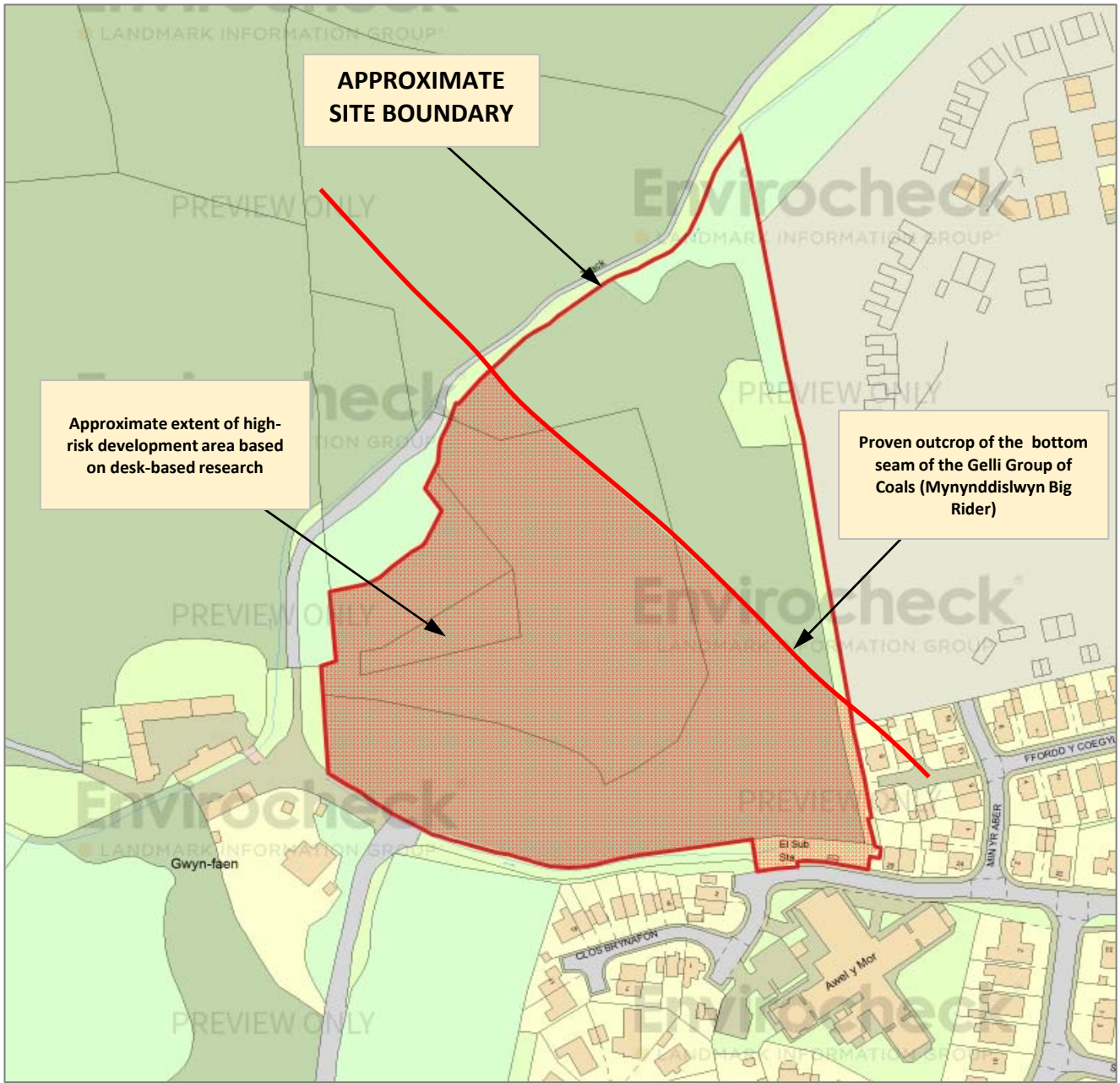


FIGURE 3: GEOLOGY PLAN EXTRACT

Phase 2, Gwynfaen Farm, Gorseinon



**NORTH**



**FIGURE 4: HIGH-RISK DEVELOPMENT ZONE**

**Phase 2, Gwynfaen Farm, Gorseinon**

**Intégral**  
Géotechnique

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Castlegate Business Park  
Caerphilly  
CF83 2AX  
Tel: 029 2080 7991