terra firma
Geotechnical & Geoenvironmental Specialists



Geotechnical and Geoenvironmental Report

Site: Phase 5 Crymlyn Road, Skewen

Prepared For: Hale Construction Limited

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V3

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Executive Summary

Site Location and Proposed Development	*Hale Construction Limited (the Client) is proposing the residential development of field land to the north of Crymlyn Road in Skewen, Neath Port Talbot, SA10 6NL.*
Site History	*The site has been occupied by three fields since the earliest map researched. The site has been located within proximity of roads, houses, and railway lines. A landfill replaced a railway line 20m north of the site.*
Geology	*The site is underlain by Hughes Member bedrock of the Pennant Sandstone Formation. Superficial deposits are recorded as Till at the north of the site.*
Radon	*No radon protective measures are required for new developments on the investigation site.*
Coal Mining Risk Assessment	*It is considered that there is an insignificant risk to the site from past shallow coal mining.*
Ground Conditions	

Depth (m)			***Thickness (m)***	***Stratum***
0.00	-	*0.1/0.4*	*0.1/0.3*	*Grass over brown organic-rich sandy slightly gravelly CLAY with some rootlets.*
0.1/0.3	-	*0.5/1.4*	*Absent/1.2*	*Soft to firm orangish brown and brown mottled grey sandy slightly gravelly CLAY/ medium dense orangish brown clayey gravelly SAND with variable cobble and boulder content.*
0.5/1.4	-	*0.7/>2.25*	*Absent/>1.65*	*Medium dense to dense grey and brown clayey/silty sandy GRAVEL/clayey/silty gravelly SAND with variable cobble and boulder content.*
0.45/>2.25	-	*>0.9/>2.25*	*-*	*Recovered as very dense grey sandy GRAVEL with cobble content.* ***POSSIBLE SANDSTONE BEDROCK***

Contamination of Concern	*Concentrations of arsenic have been recorded above the generic threshold value in nine of the nineteen samples tested. All the elevated concentrations were recorded within the brown organic-rich sandy slightly gravelly CLAY with some rootlets that covers the surface of the site.* *It is recommended that a more detailed analysis of the soil should take place to calculate a site-specific assessment criterion for arsenic.* *Alternatively, to protect future site users from the identified contamination either the site will need to be capped, or the affected soils could be removed from site and disposed of at a suitably licenced landfill site. If the site is capped, the capping will consist of the proposed buildings and hard standings, and in garden and soft landscaped areas the capping should consist of 600mm of suitable inert topsoil, and subsoil if desired.*
Preliminary Ground Gas Risk Assessment	*Following one of three proposed gas monitoring rounds, the site is preliminarily classified as 'Gas Characteristic Situation 1' (CS1).*
Foundation Solution	*It is recommended that mass concrete strip or trench fill foundations be used; founded within the medium dense to dense grey and brown clayey/silty sandy GRAVEL/clayey/silty gravelly SAND with variable cobble and boulder content. at an approximate depth of 0.5m to 1.4m below the existing ground level. An allowable bearing pressure of 100kN/m2 may be used for strips up to 750mm wide.* *Alternatively, where shallow bedrock is encountered, mass concrete strip or trench fill foundations be used from a depth ranging between 0.45m and more than 2.25m. If any part of the foundation is founded within the bedrock, all of the foundation must be founded within the bedrock to prevent excessive differential settlement. If founding in the sandstone bedrock, an allowable bearing pressure of 150kN/m^2 may be used for strips up to 750mm wide.* *Foundations must sit at least 200mm within the founding horizon.* *For the given foundation solutions and bearing pressure, maximum total settlements of 25mm should result with differential movements of the superstructure not exceeding 1:750.*

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SECTION 1 Introduction and Proposed Development

1.1 Introduction

Hale Construction Limited (the Client) is proposing the residential development of field land to the north of Crymlyn Road in Skewen, Neath Port Talbot, SA10 6NL.

Terra Firma (Wales) Limited have been commissioned by the Client to undertake a geoenvironmental assessment and geotechnical investigation of the site.

The main objectives of the geoenvironmental assessment programme are:

- Investigate the potential human health and environmental liabilities at the site associated with any contamination
- Provide a summary of the human health and environmental conditions at the site, together with any necessary further intrusive works and / or remediation works to render the site fit for its intended use

The main objectives of the geotechnical site investigation are:

- Investigated the type, strength and bearing characteristics of the shallow superficial and underlying solid geology
- Investigate the risk, if any, from historical shallow underground mining features
- Provide engineering foundation and floor slab recommendations for the proposed development
- Provide infiltration rates and stormwater drainage viability.
- Provide recommendations regarding any other geotechnical aspects pertaining to the development

In order to achieve the above objectives, Terra Firma (Wales) Limited carried out an assessment programme including a site walkover, a review of existing data, followed by a field investigation to collect geotechnical and geoenvironmental data from selected locations.

1.2 Limitations and Exceptions of Investigation

The Client has requested that a Geoenvironmental Site Assessment (GSA) and Geotechnical Investigation (GI) be performed to enable the outlined main objectives.

The GSA and GI were conducted, and this report has been prepared for the sole internal reliance of the Client and their design and construction team. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Terra Firma (Wales) Limited. If an unauthorised third party comes into possession of this report, they rely on it at their peril and the authors owe them no duty of care and skill. The report represents the findings and opinions of experienced geoenvironmental and geotechnical consultants. Terra Firma (Wales) Limited does not provide legal advice and the advice of lawyers may be required.

The subsurface geological profiles, any contamination and other plots are generalised by necessity and have been based on the information found at the locations of the exploratory holes and depths sampled and tested.

The investigation was limited by underground services.

1.3 Quality Assurance

The quality and environmental aspects of the assessment comply with Terra Firma Wales Ltd business management system which is UKAS Accredited to ISO 9001:2015 and ISO 14001:2015 standards.

SECTION 2 Review of Existing Data

2.1 Physical Setting and Current Site Use

The development site is roughly rectangular in shape and locates on field land to the north of Crymlyn Road in Skewen, Neath Port Talbot, SA10 6NL. The site centres on an approximate National Grid Reference of 270880 196970, occupying a plan area of approximately 4.77 Hectares.

The site is occupied by grass-covered field land, currently used for grazing sheep and cattle. The site is divided into three fields, separated from each other by trees and hedgerows. The site is surrounded by hedgerows and trees.

To the immediate east of the site is a housing estate, to the south is a pedestrian path and strip of grassland. To the immediate west of the site is a farm including farmhouse, farmyard and barns; and to the north is a path running through rough grassland and trees.

Railway lines running from northwest to southeast and east to west are located 75m to the west and 50m to the north, respectively. The M4 motorway is located 80m to the north. Housing estates are located to the immediate east and 15m to the south. Beyond the farm and railway line to the west is mainly field land. Housing dominates the land to the south, north and east.

The site elevation is approximately between 63m and 51m AOD sloping down to the south.

The site location can be seen on **Figure 2.1**.

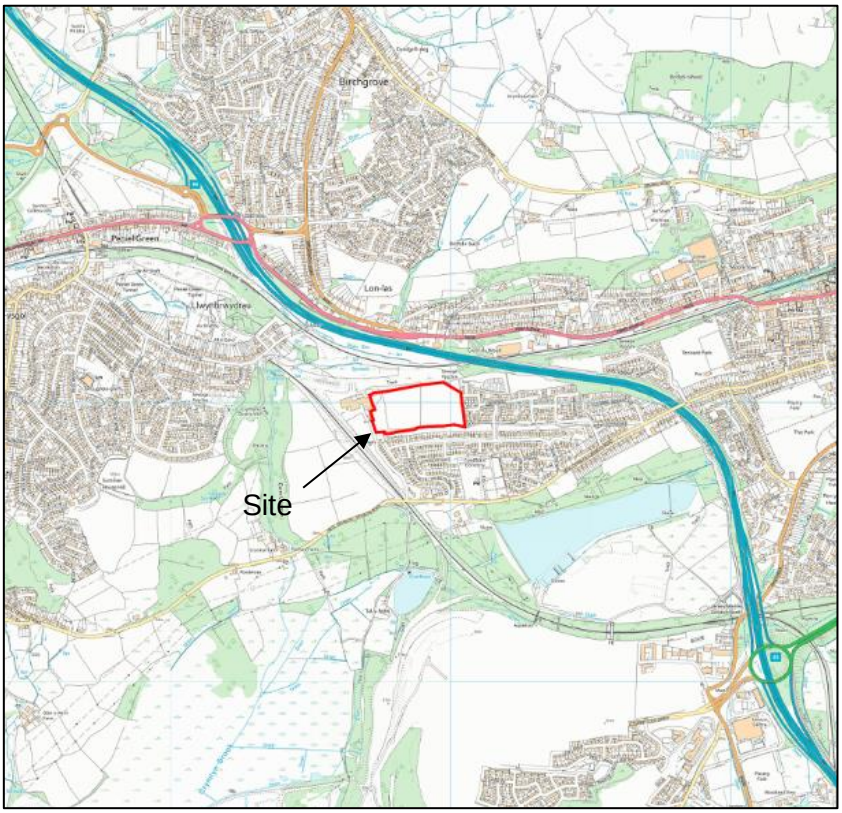


Figure 2.1 Site Location

2.2 Site History

Historical maps of the site have been obtained in an Envirocheck Report, provided by Landmark Information Group. The history plans are supplied in **Annex A** of this report, and the most relevant editions are summarised in **Table 2.1**. Distances, where quoted, are approximate, and any changes in-between map editions may not be recorded.

Table 2.1 Historical Development from Map Information

Map Edition & Scale	Key Features on Site	Key Features off Site
1876-82 1:2,500	The site is occupied by three fields. A track separates the west field from the middle field and a hedgerow separates the east field from the middle field. A small 'old' quarry is located at the southeast of the site. A track runs along the site's southern boundary.	Pentwyn Farm lies to the immediate west of the site. Field land surrounds the site. A railway line is located 50m north of the site.
1899 1:2,500	No significant changes.	No significant changes.
1917-18	No significant changes.	A railway line is located 20m north and 75 west of the site. Both are downslope of the site.
1938-40 1:10,000	No significant changes.	No significant changes.
1962 1:2,500	No significant changes.	No significant changes.
1993 1:1,250	No significant changes.	The railway to the immediate north of the site has been dismantled and a road (A48) has been built to the immediate northeast of the site. A large housing estate has been built 30m to the southeast.
1999 1:10,000	No significant changes.	The construction of the A48 has been discontinued following the construction of the M4, which is located 80m to the north.
2021 1:10,000	No significant changes.	Housing has been built to the east and south of the site. The abandoned A48 has been replaced by the housing estate or grown over by trees.

2.3 Geological Setting

2.3.1 Geology

The 1:50,000 scale British Geological Map of the area (Sheet 247) and 1:10,560 scale geological map (SS 79 NW) were consulted for geology underlying the site. The site is shown to be underlain by Hughes Member bedrock of the Pennant Sandstone Formation. Detailed stratigraphical information is provided in **Table 2.2**.

Table 2.2 Detailed Stratigraphical Information

Period	Group	Formation	Member	Description
Carboniferous	Wawrickshire Group	Pennant Sandstone Formation	Hughes Member	Green-grey and blue-grey, feldspathic, micaceous, lithic arenites ("Pennant" sandstones) of southerly provenance, with thin mudstone/siltstone and seatearth interbeds and mainly thin coals; the lithologies are commonly arranged in fining-upwards channel-fill sequences.

Strata are typically dipping 10º to the north in the local area.

The conjectured Bodwr and Hughes coal seams are recorded approximately 1500m south of the site. Based on the distance from site they will not underlie the site at shallow depth. The Mountain coal seam (thin) is recorded by the geological map's generalised vertical section stratigraphically above the Bodwr seam; however, it too is unlikely to underlie the site or to be worked due to it its thin nature and the fact that there is no evidence of it outcropping in the local area.

The Maesmelyn coal seam outcrops approximately 100m north of the site and based on the direction of dip will not underlie the site.

The geological map records the former railway line to the north of the site as being cut 10 feet (3.3m) into sandstone bedrock. The railway line to the west of the site is also recorded as being cut into sandstone bedrock.

Superficial deposits are recorded as Till at the north of the site. Till is unsorted and unstratified drift, generally overconsolidated, deposited directly by and underneath a glacier without subsequent reworking by water from the glacier. It consists of a heterogenous mixture of clay, sand, gravel, and boulders varying widely in size and shape (diamicton).

Significant amounts of made ground are not anticipated on site.

2.3.2 BGS Borehole Information

Several borehole logs have been made available next to the nearby M4 and railway line. The nearest two boreholes are located around 96m and 97 to the northeast.

The borehole located 96m away comprises loose ash and brick fill to 2.5m, underlain by 'grey angular gravel of mudstone in a soft to firm clay matrix' to 6.6m depth. Moderately weak to moderately strong fine-grained sandstone was recorded from 6.6m to the bottom of the borehole 11.8m. Groundwater was recorded at 4.1m depth.

The borehole located 97m away comprises grey mottled brown and black silty fine sandy clay with fine to medium slag and sandstone gravel to 1.2m. The made ground is underlain by 'soft to firm grey-brown mottled orange brown silty clay with sand and sandstone gravel' to 3.65m.

Moderately strong sandstone was recorded from 3.65m to the bottom of the borehole at 14.6m. Groundwater was recorded at 1.8m.

2.3.3 Radon

The Envirocheck Report (**Annex A**) details that no radon protective measures are required for new developments on the investigation site.

2.3.4 Mining

A Coal Authority CON29M coal mining report was procured for the site.

The report states that the property is in a surface area that could be affected by underground mining in 1 seam of coal at 180m to 190m depth, and last worked in 1911.

The report goes on to say any movement in the ground due to coal mining activity associated with these workings should have stopped by now.

There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

The Coal Authority has no record of a mine gas emission requiring action.

It is considered that there is an insignificant risk to the site from past shallow coal mining.

The Coal Authority report is appended in (**Annex B**).

2.4 Environmental Setting

The following sections have been compiled using the Landmark Information Group Envirocheck datasheet and maps which can be found in **Annex A**.

2.4.1 Hydrogeology

Superficial deposits beneath the north of the site have an aquifer designation of secondary aquifer –Undifferentiated.

The bedrock deposits beneath the site have an aquifer designation of secondary aquifer – A.

Deeper groundwater flow within the underlying bedrock will be controlled by the strata dip and any fractures or bedding planes within the rock units.

The hydraulic gradient will be at its steepest during periods of heavy rainfall and aquifer recharge.

The site does not locate within a groundwater source protection zone.

There are no groundwater abstraction points located within 500m of the site.

2.4.2 Hydrology

The nearest surface water feature locates 92m off site to the north and comprises a drainage channel alongside the railway line.

Crymlyn Brook is located 124m northwest of the site.

The topography of the site slopes down towards to the north. Surface water is likely to drain in this direction.

2.4.3 Flooding

The site is not at risk from extreme flooding from rivers or sea.

Surface Water 1 in 1000-year Flood Extent encroaches onto the far north of the site.

The site lies in an area with limited potential for groundwater flooding to occur.

2.4.4 Waste

Recorded landfill sites within 250m of the site are summaries in **Table 2.3**.

Table 2.3 Landfill Sites Summary

Landfill Name	Distance/ Direction from site	Operation Dates	Deposited Wastes	Site Category
Pentwyn Farm	1m north	1993 – not known (Inactive)	Inert and industrial waste.	Landfills Taking Non-biodegradable Wastes (Not Construction)

The landfill detailed in **Table 2.4** was deposited within an old railway cutting and lies downslope of the site.

2.4.5 Pollution

No. pollution incidents are recorded to have occurred within 250m radius of the site.

2.4.6 Sensitive Land Use

The site is not located within a sensitive land use area.

2.4.7 Infilled Land

Potentially infilled land features within 250m of the site are summarised in **Table 2.4**.

Table 2.4 Potentially Infilled Land

Feature	Distance/Direction from site
Unknown filled ground (pit, quarry, etc)	192 NW

2.5 Ecology

Please note that Terra Firma (Wales) Ltd are not specialists in this field and the advice of an expert should be sought.

2.6 Archaeology

Please note that Terra Firma (Wales) Ltd are not specialists in this field and the advice of an expert should be sought.

SECTION 3 Preliminary Human Health and Environmental Risk Assessment

3.1 General

The preliminary human health and environmental risk assessment is a qualitative evaluation of unacceptable risks to human health or the environment from potential 'contaminated land', based on reviewed information in preceding sections of this report.

For 'contaminated land' to exist as defined in Part 2A of the Environmental Protection Act (EPA) 1990, a Pollutant Linkage needs to be identified. Pollutant linkages are defined by having a valid 'source – pathway – receptor' as established in the preliminary conceptual site model.

For our definitions of pollution linkage and how we define risk please refer to **Annex C** which includes our classifications of consequence and probability, and risk assessment matrix.

3.2 Potential Sources of Contamination

Potential or known sources of contamination associated the sites current and historical land use are summarised in **Table 3.1**.

Table 3.1 Contamination Sources

ID	Source	Contaminant
S1	Contaminated Soils	Metals, metalloids, PAH, TPH, PCBs (at far north of site alongside former railway land)
S3	Landfill to north of site	CH_4, CO_2
S4		

No other significant potential on-site or off-site sources of contamination have been identified during the desk study.

3.3 Potential Pollution Pathways

Potential contaminant pathways associated with a residential with home grown produce land use are as follows.

P1 – Direct soil and dust ingestion
P2 – Consumption of home grown produce
P3 – Dermal contact
P4 – Inhalation of dust and vapours
P5 – Vertical migration of leachates (unsaturated zone)
P6 – Horizontal and vertical migration of contaminants (saturated zone)
P7 – Artificial contaminant pathway (borehole, pile, excavation etc)
P8 – Surface run-off
P9 – Plant uptake
P10 – Horizontal and vertical migration of ground gasses and vapours
P11 – Direct contact with construction materials
P12 – Inhalation of asbestos fibres

3.4 Potential Receptors

There are human and hydrological receptors to any contamination that may be present on site. Potential receptors include.

R1 – Construction and maintenance workers
R2 – Future site users (residents)
R3 – Passers-by or neighbouring site users

R4 – Groundwater (aquifer)
R5 – Surface waters (river/lake)
R6 – Area of public open space
R7 – Construction materials (concrete/potable water pipes)

3.5 Preliminary Conceptual Site Model

The preliminary conceptual site model establishes potential pollutant linkages between contaminants (source), pathways and receptors, realised during the preparation of the desk study report. Where a potential pollutant linkage is identified an assessment of risk is subsequently undertaken. The preliminary conceptual site model is tabulated in **Table 3.2**.

Outcomes of the preliminary conceptual site model are used as a basis for the design and implementation of the site investigation, whereby areas of potential contamination can be targeted as well as investigating the wider site.

Findings of the site investigation can in turn be used to develop and refine the conceptual site model.

Table 3.2 Preliminary Conceptual Site Model

Source	Pathway	Receptor	Preliminary Risk Assessment		
			Consequence	Probability	Risk
Human Health					
Contaminated Soils S1	Direct soil and dust ingestion P1 Dermal contact P3 Inhalation of dust and vapours P4	Construction and maintenance workers R1	**Medium**	**Low Likelihood**	**Medium Risk -** COSHH assessment and good level of PPE/ hygiene by site workers/ staff; dust suppression measures if required. Suitably designed site investigation recommended
		Passers-by or neighbouring site users R3	**Medium**	**Unlikely**	**Low Risk** - Dust suppression measures if required.
		Future site users (residents) R2	**Medium**	**Low Likelihood**	**Low Risk -** Suitably designed site investigation recommended
Radon Gas S2	Horizontal and vertical migration of ground gasses and vapours P10	Future site users (residents) R2	**Medium**	**Unlikely**	**Very Low Risk** - No radon protection measures required
Landfill Gas S3 Ground Gas S1 Vapours S1		Future site users (residents) R2, Construction and maintenance workers R1	**Severe**	**Low Likelihood**	**Medium Risk** - Gas monitoring to be undertaken to assess risk to site end users
Mine Gas S4			**Severe**	**Unlikely**	**Low Risk** – Site not underlain at shallow depth by coal or workings**.**
Impacted Groundwaters S1	Horizontal and vertical migration of contaminants (saturated zone) P6 Dermal contact P3	Construction and maintenance workers R1	**Medium**	**Unlikely**	**Low Risk**
Contaminated Soils S1	Plant uptake P9 Consumption of home grown produce P2	Future site users (residents) R2	**Medium**	**Unlikely**	**Low Risk**
Contaminated Soils S1	Direct Contact P11	Construction materials (water pipes) R7	**Mild**	**Low Likelihood**	**Low Risk**
Aggressive ground conditions - Sulphates S1		Construction materials (concrete) R7			
Aquatic Environment					
Contaminated Soils S1	Vertical migration of leachates (unsaturated zone) P5	Groundwater (aquifer) R4 Surface waters (river/lake) R5	**Mild**	**Low Likelihood**	**Low Risk**
	Surface run-off P8	Surface waters (river/lake) R5			

	Horizontal and vertical migration of contaminants (saturated zone) P6				

SECTION 4 Field Investigation

4.1 Site Works

A geotechnical and geoenvironmental site investigation comprising twenty five trial pts and eighteen windowless sampler boreholes was undertaken between the 12th and 16th April 2021.

Trial pits referenced TP01 to TP25, were formed using an eight-tonne tracked mechanical excavator with a 0.60m wide bucket.

On completion all trial pits were backfilled with materials arisings compacted in layers using the excavator bucket. The ground surface was left proud to accommodate future settlement of backfilled materials.

The trial pit logs are presented in **Annex D.**

Soakaway tests were carried out in trial pits TP02 and TP19 to TP25 in general accordance with BRE DG 365:2016. The excavation sides were squared using the excavator bucket and dimensions recorded within the test section. The trial pit was partially filled with clean water using a dedicated bowser with a 75mm diameter outlet and the fall in level recorded against time. The results are presented in **Annex E.**

The boreholes referenced WS01 to WS18, were formed using a Terrier 2000 rig. Dynamic sampling techniques were employed from surface to produce a continuous disturbed sample.

Standard penetration tests (SPT) were carried out at regular intervals in general accordance with BS1377: Part 9:1990:3.3. SPT results summarised as N values are presented on the borehole log.

Boreholes were monitored for groundwater ingress as drilling proceeded.

The windowless sampler borehole logs are presented in **Annex F.**

Representative disturbed samples were taken and retained in airtight containers for environmental and geotechnical testing.

Dynamic Cone Penetrometer tests were carried out alongside TP01 to TP18 using a CNS Farnell A2465 dynamic cone penetrometer. Probe depths were measured with respect to ground level and the number of blows for the penetration of the probe was recorded. Equivalent CBR values have been calculated and presented with the results in **Annex G**.

The fieldwork was supervised by Terra Firma (Wales) Limited, who logged the exploratory holes to the requirements of BS 5930:2015+A1:2020. The proposed locations of the exploratory holes were determined by Terra Firma (Wales) Ltd in general accordance with BS 10175:2011+A2:2017 in order to assess the findings of the preliminary conceptual site model.

Exploratory hole locations are shown on **Drawing 01**.

4.2 Ground Conditions

The ground conditions encountered by the exploratory holes can in general be summarised as shown in **Table 4.1**.

Table 4.1 Summary of Typical Ground Conditions

Depth (m)			Thickness (m)	Stratum
0.00	-	0.1/0.4	0.1/0.3	Grass over brown organic-rich sandy slightly gravelly **CLAY** with some rootlets.

0.1/0.3	-	0.5/1.4	Absent/1.2	Soft to firm orangish brown and brown mottled grey sandy slightly gravelly **CLAY**/ medium dense orangish brown clayey gravelly **SAND** with variable cobble and boulder content.
0.5/1.4	-	0.7/>2.25	Absent/>1.65	Medium dense to dense grey and brown clayey/silty sandy **GRAVEL**/clayey/silty gravelly **SAND** with variable cobble and boulder content.
0.45/>2.25	-	>0.9/>2.25	-	Recovered as very dense grey sandy **GRAVEL** with cobble content. **POSSIBLE SANDSTONE BEDROCK**

4.3 Groundwater

Groundwater was not recorded in any of the exploratory holes during the site investigation.

4.4 Stability and Obstructions

Spalling was recorded in the following trial pits. TP01, TP05, TP13, and TP18. All other trial pits were stable during excavation.

Advancement of trial pit TP was stopped due to the presence of suspected bedrock in several of the trial pits. Further information regarding this is detailed on the trial pit logs.

4.5 Installation Well Construction

Gas well locations were selected on a non-targeted basis to characterise the gas contamination status of the site. A herringbone pattern was adopted.

Gas installation well construction details are summarised in **Table 4.2**.

Table 4.2 Installation Well Summary

Location	Response Zone		Stratum
	From (m)	To (m)	
WS02	0.5	1.0	Till
WS04	1.0	1.6	Till
WS08	0.5	0.9	Till and possible sandstone bedrock
WS09	0.5	1.0	Till
WS15	1.0	2.0	Till
WS17	0.5	1.0	Till

4.6 Laboratory Chemical Testing

4.6.1 Sampling Strategy

Soil sampling locations were selected on a mixture of a targeted basis to investigate suspected sources of contamination (alongside the former railway) and on a non-targeted basis to characterise the contamination status of the site. A herringbone sampling pattern was adopted for the non-targeted samples.

Sample locations, depths and suspected/known contamination source targets are summarised in **Table 4.3**:

Table 4.3 Sample Locations, Depths and Targets

Location	Depth (m)	Contamination Targets
TP01	0.1	S1
TP01	0.5	S1
TP03	0.1	S1
TP04	0.3	S1
TP05	0.1	S1
TP07	0.1	S1
TP08	0.1	S1
TP09	0.1	S1
TP10	0.4	S1
TP11	0.5	S1
TP12	0.1	S1
TP13	0.5	S1
TP14	0.4	S1
TP15	0.4	S1
TP16	0.1	S1
TP17	0.1	S1
TP18	0.4	S1
WS11	0.2	S1
WS15	0.4	S1

4.6.2 Soil Laboratory Analysis

During the site investigation works soil samples were taken and despatched to the accredited laboratories of Eurofins Chemtest for laboratory chemical testing. Soil samples were tested for the determinants listed in **Table 4.4**.

Table 4.4 Soil Laboratory Analysis

Metals & Metalloids	In-Organics	Organics	Others
Arsenic	Cyanide	Phenols	pH (acidity)
Cadmium	Sulphate	PAH	Asbestos
Chromium III		PCBs	
Chromium VI		Petroleum hydrocarbons	
Copper			
Lead			
Mercury			
Nickel			
Selenium			
Zinc			

The results are discussed in detail in **SECTION 6** and the laboratory test results certificates may be found in **Annex H**.

4.7 Soil Property Testing

4.7.1 In-situ Permeability Testing

During the site investigation eight trial pit soakaway tests were undertaken in TP02 and TP19 to TP25 and carried out in general accordance with BRE DG 365:2016. The test depths were limited by the strength of the shallow soils/possible bedrock, which meant excavation by the excavator was terminated at maximum depths of 1.3m.

Due to the slow rate of infiltration, soil infiltration rates (m/s) could not be determined. The soakaway test data is discussed in presented in **SECTION 9.6** and the calculation sheets may be found in **Annex E**.

4.7.2 Laboratory Geotechnical Testing

A schedule of laboratory tests was prepared by Terra Firma Wales Ltd and samples were despatched to the accredited laboratories of GSTL. A summary of the testing carried out is presented in **Table 4.5**.

Table 4.5 Summary of Geotechnical Testing

Geotechnical Test	Standard (BS1377:1990)	No. Tested
Moisture Content	Part 2, Clause 3.2	
4 Point Liquid and Plastic Limit	Part 2, Clause 4.3 & 5.3	

The test results are presented in **Annex I** and discussed in **SECTION 9** of this report.

SECTION 5 Evaluation of Geoenvironmental Analytical Results

5.1 Assessment Methodology

Comparison of the analytical results has been made with the 2015 Suitable 4 Use Levels (S4UL) provided by Land Quality Management (LQM) Limited and the Chartered Institute of Environmental Health (CIEH) or provisional Category 4 Screening Levels (pC4SL).

Soil leachate and groundwater analytical results have been compared with available published guidelines in the Water Framework Direction (Standards and Classification) Directions (England and Wales) 2015 and Drinking Water Directive (98/83/EC).

Sulphate results have been compared to guidelines presented in British Research Establishment (BRE SD1:2015). Sulphate levels need only be considered for buried concrete risk assessment and are not human health related.

Soils subjected to a UK Water Industry Research (UKWIR) suite of testing have been compared with guidelines set out in UKWIR Guidance for the Selection of Water Supply Pipes to be Used in Brownfield Sites (Ref 10/WM/03/21).

5.1.1 Soil Test Results

A summary of the chemical test results which include the regulatory soil guideline values used in a residential setting with plant uptake are given in the following tables. The complete results can be found in **Annex H**.

5.1.2 Inorganics & Miscellaneous

Nineteen samples were tested for a standard suite of inorganics, pH and organic matter. The summarised results are in Error! Reference source not found..

Table 5.1 Summary of Soil Chemical Test Results – Inorganics & Miscellaneous

Substance	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Arsenic	37	LQM/CIEH	10	88	9
Cadmium	11	LQM/CIEH	0.09	6.3	0
Chromium III	910	LQM/CIEH	<0.1	22	0
Chromium VI	6	LQM/CIEH	<0.5	<0.5	0
Copper	2400	LQM/CIEH	15	170	0
Lead	200	pC4SL	14	900	0
Mercury (inorganic)	40	LQM/CIEH	0.06	0.24	0
Nickel	180	LQM/CIEH	13	47	0
Selenium	250	LQM/CIEH	0.28	1.5	0
Zinc	3700	LQM/CIEH	59	570	0
Cyanide	-	-	<0.5	0.8	-
Boron	290	LQM/CIEH	<0.4	1.2	0
Sulphate (%)	0.24	BRE	<0.01	0.065	0
Organic Matter (%)	-	-	0.5	3.5	-
pH	-	-	6.5	7.7	-

Notes:
- No available guideline

5.1.3 Organics

Nineteen samples were tested for speciated polycyclic aromatic hydrocarbons. The summarised results are in Error! Reference source not found..

Table 5.2 Summary of Soil Chemical Test Results – Speciated Polycyclic Aromatic Hydrocarbons

Substance	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Naphthalene	2.3	LQM/CIEH	<0.1	0.14	0
Acenaphthylene	170	LQM/CIEH	<0.1	0.14	0
Acenaphthene	210	LQM/CIEH	<0.1	0.12	0
Fluorene	170	LQM/CIEH	<0.1	<0.1	0
Phenanthrene	95	LQM/CIEH	<0.1	1.2	0
Anthracene	2400	LQM/CIEH	<0.1	0.1	0
Fluoranthene	280	LQM/CIEH	<0.1	1.6	0
Pyrene	620	LQM/CIEH	<0.1	1.5	0
Benzo(a)anthracene	7.2	LQM/CIEH	<0.1	0.42	0
Chrysene	15	LQM/CIEH	<0.1	0.88	0
Benzo(b)fluoranthene	2.6	LQM/CIEH	<0.1	0.77	0
Benzo(k)fluoranthene	77	LQM/CIEH	<0.1	0.78	0
Benzo(a)pyrene	2.2	LQM/CIEH	<0.1	1.0	0
Indeno(123cd)pyrene	27	LQM/CIEH	<0.1	0.69	0
Dibenzo(ah)anthracene	0.24	LQM/CIEH	<0.1	<0.1	0
Benzo(ghi)perylene	320	LQM/CIEH	<0.1	0.57	0
Total PAH	-	-	<2.0	9.9	-

Notes:
Thresholds based on 1.0% soil organic matter
- No available guidelines

Five samples were tested for petroleum hydrocarbon alongside the site's northern boundary. The summarised results are shown in **Table 5.3**.

Table 5.3 Summary of Soil Chemical Test Results – Petroleum Hydrocarbons

Substance	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Aliphatic					
PH C5 – C6 Ali	42	LQM/CIEH	<1.0	<1.0	0
PH C6 – C8 Ali	100	LQM/CIEH	<1.0	<1.0	0
PH C8 – C10 Ali	27	LQM/CIEH	<1.0	<1.0	0
PH C10 – C12 Ali	130	LQM/CIEH	<1.0	<1.0	0
PH C12 – C16 Ali	1100	LQM/CIEH	<1.0	<1.0	0
PH C16 – C21 Ali	65000*	LQM/CIEH	<1.0	<1.0	0
PH C21 – C35 Ali	65000*	LQM/CIEH	<1.0	23	0
PH C35 – C44 Ali	65000	LQM/CIEH	<1.0	<1.0	0
Aromatic					
PH C5 – C7 Arom	70	LQM/CIEH	<1.0	<1.0	0
PH C7 – C8 Arom	130	LQM/CIEH	<1.0	<1.0	0

PH C8 – C10 Arom	34	LQM/CIEH	<1.0	<1.0	0
PH C10 – C12 Arom	74	LQM/CIEH	<1.0	<1.0	0
PH C12 – C16 Arom	140	LQM/CIEH	<1.0	<1.0	0
PH C16 – C21 Arom	260	LQM/CIEH	<1.0	32	0
PH C21 – C35 Arom	1100	LQM/CIEH	<1.0	110	0
PH C35 – C44 Arom	1100	LQM/CIEH	<1.0	<1.0	0

Notes:
PH – Petroleum Hydrocarbon
Ali – Aliphatic
Arom – Aromatic
Thresholds based on 1.0% soil organic matter
* – Ali C16-21 and C21-C35 based on criteria for Ali EC >16-35

Nineteen samples were tested for Phenols. The summarised results are in **Table 5.4**.

Table 5.4 Summary of Soil Chemical Test Results – Phenols

Substance	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Phenols	120	LQM/CIEH	<0.3	<0.3	0

Notes:
- No available guideline

Five samples were tested for polychlorinated biphenyl (PCB) alongside the site's northern boundary. The summarised results are in **Table 5.5**.

Table 5.5 Summary of Soil Chemical Test Results – PCB

Substance	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Total PCBs	0.008	CLEA	<0.001	<0.001	0

Notes:
- No available guideline

SECTION 6 Geotechnical Testing Results

Geotechnical testing results are summarised in the following sections and presented in their entirety in **Annex I**.

6.1 Plasticity & Moisture Content Testing

During the investigation four samples of the shallow clay material was taken and submitted for plasticity testing. The test results are summarised in **Table 6.1**.

Table 6.1 Plasticity & Moisture Content Test Results

Location	Depth (m)	Laboratory Principal Soil Type	Moisture Content (%)	Plasticity Index (%)	Passing 425µm Sieve (%)	Modified Plasticity Index (%)	Volume Change Potential
TP03	0.8	CLAY	19	20	90	18.0	Low
TP12	0.8	CLAY	21	19	86	16.3	Low
WS11	0.9	CLAY	21	14	90	12.6	Low
WS15	0.7	CLAY	17	15	92	13.8	Low

In line with the NHBC (Chapter 4.2), the modified plasticity index for each sample was calculated. For design purposes the soils on site should be assumed to have a low volume change potential.

6.2 BRE SD1 Testing

Fifteen samples were subject to BRE SD1 testing for concrete classification. The results are summarised in **Table 6.2**.

Table 6.2 BRE SD1 Testing Summary

Location	Depth (m)	2:1 Water/Soil Extract		Total Potential Sulphate (%)	pH	Acid Soluble Sulphate	Oxidisable Sulphate
		SO_4 (mg/l)	Mg (mg/l)				
TP01	0.1	15	-	0.138	6.9	0.048	0.09
TP01	0.5	14	-	0.069	7.3	0.018	0.051
TP03	0.8	19	-	0.03	6.5	0.03	0
TP04	0.3	12	-	0.084	6.7	0.019	0.065
TP05	1.0	<10	-	0.03	6.0	0.03	0
TP08	0.1	16	-	0.186	7.0	0.059	0.127
TP08	1.5	13	-	0.03	6.4	0.03	0
TP11	0.5	<10	-	0.063	6.8	0.017	0.046
TP13	0.5	<10	-	0.072	7.3	0.011	0.061
TP13	1.5	12	-	0.03	6.2	0.03	0
TP14	0.4	<10	-	0.066	6.7	0.021	0.045
TP15	1.2	11	-	0.03	6.3	0.03	0
TP16	0.1	<10	-	0.162	7.6	0.065	0.097
TP16	0.65	15	-	0.06	6.1	0.04	0.02
TP18	0.4	<10	-	0.072	6.7	0.023	0.049

The characteristic value for 2:1 Water/Soil Extract SO_4 is 17mg/litre. The characteristic value for pH is 6.2. Based on the calculated oxidisable sulphate results, pyrite is probably not present.

The Design Sulphate Class and ACEC Class based on natural ground conditions and static groundwater are **DS-1**, **AC-1s** respectively.

SECTION 7 Preliminary Ground Gas Risk Assessment

7.1 Gas Screening Value

Six ground gas monitoring wells were installed in the windowless sampler boreholes WS02, WS04, WS08, WS09, WS15, and WS17. Installation details are shown on the relevant log.

One round of gas monitoring has been carried out to date. The installations were tested for carbon dioxide, methane, oxygen, carbon monoxide and hydrogen sulphide using a Gas Analyser GA2000/5000.

Recorded gas concentrations are summarised in **Table 7.1**.

Table 7.1 Measured Gas Concentration Summary

Gas	Minimum (% V/V)	Maximum (% V/V)
Methane	0.3	0.6
Carbon Dioxide	1.2	3.0
Oxygen	19.1	20.4

Methane levels peaked at 0.6% V/V. Carbon dioxide levels varied between 1.2% and 3.0% V/V. Oxygen concentrations varied between 19.1% and 21.4% V/V.

The gas flow rate from the boreholes was also assessed, a maximum flow rate of 0.0l/hr was recorded.

Based on a flow rate of 0.1 l/hr and the highest recorded carbon dioxide concentration of 3.0%, a gas screening value of 0.003 l/hr is calculated, as follows:

(3.0/100) x 0.1 = 0.003 l/hr

The results to date are presented in **Annex J**.

7.2 Conclusion

When this monitoring result is compared with Table 8.5 of CIRIA report C665, the site is classified as ‘Gas Characteristic Situation 1’ (CS1).

Upon completion of the full three rounds of monitoring the recommendation will be reviewed in a letter report and if necessary amended.

SECTION 8 Quantitative Risk Assessment

8.1 Contaminants of Concern

Contaminants identified as part of the investigation are summarised in **Table 8.1**, along with an interpretation of the likely contamination source. Where applicable, the contaminant, source relationship is based on the inferences made in the preliminary conceptual site model.

Table 8.1 Contaminants of Concern

Location	Depth	Contaminant	Source
TP01	0.1	Arsenic	S1
TP03	0.1	Arsenic	S1
TP07	0.1	Arsenic	S1
TP08	0.1	Arsenic	S1
TP09	0.1	Arsenic	S1
TP12	0.1	Arsenic	S1
TP16	0.1	Arsenic	S1
TP17	0.1	Arsenic	S1
WS11	0.2	Arsenic	S1

All of the elevated concentrations were recorded within the brown organic-rich sandy slightly gravelly CLAY with some rootlets that covers the surface of the site.

Based on the desk study data, and experience of investigating multiple sites in the surrounding area, it is extremely likely that the source of the elevated arsenic concentrations is from the fallout from historic smelting of non-ferrous metals in the Swansea area. No alternative sources of arsenic contamination have been identified by the desk study or site investigation.

In addition to the nine samples containing elevated arsenic concentrations, three samples contained cyanide concentrations marginally above their laboratory detection limits of 0.5mg/kg. However, the concentrations of between 0.6mg/kg and 0.8mg/kg are exceptionally low and are not considered to pose a risk to the receptors.

8.2 Pollutant Linkages

Based on the findings of the intrusive site investigation and identified contaminants, the preliminary conceptual site model has been revised. Significant pollutant linkages are tabulated in the refined conceptual site model **Table 8.2**. Identified pollutant linkages will require detailed risk assessment, appropriate mitigation or remedial measures.

Table 8.2 Refined Conceptual Site Model

Source	Pathway	Receptor
S1	P1, P2, P3, P4	R1, R2, R3

8.3 Mitigation and Remedial Measures

The following sections summarise the likely mitigation and remedial measures suitable for the identified contamination and proposed development. Detailed methodology to achieve the measures should be prescribed in a Remediation Strategy Report and the results presented in a Validation Report upon completion of the development.

8.3.1 Human Health

8.3.1.1 Contaminated Soils

It is recommended that a more detailed analysis of the soil should take place to calculate a site-specific assessment criterion for arsenic. This would require bio-accessibility testing of the affected soils and processing the data into the CLEA (contaminated land exposure assessment) computer software to more accurately assess whether there is an actual risk to human health from the elevated concentrations of arsenic in the shallow soil.

A site-specific assessment criterion has been undertaken on other nearby sites as part of a lines of evidence approach where elevated concentrations of arsenic in the shallow soils are suspected to have been caused by fallout from the smelting of non-ferrous metals. On many of these occasions, the recorded arsenic concentrations, which previously failed the generic assessment criterion, were recorded below the new site-specific assessment criterion. The result of this assessment was that the soil was then deemed to be suitable for use in a residential with plant uptake scenario.

Alternatively, to protect future site users from the identified contamination either the site will need to be capped, or the affected soils could be removed from site and disposed of at a suitably licenced landfill site. If the site is capped, the capping will consist of the proposed buildings and hard standings, and in garden and soft landscaped areas the capping should consist of 600mm of suitable inert topsoil, and subsoil if desired.

As good practice, construction workers should adhere to good site management, COSHH, good standards of hygiene and appropriate health & safety on site, with personal protection equipment (PPE) and dust suppression where appropriate.

All imported soils should be validated as clean and suitable for use in accordance with ‘Requirements for the Chemical Testing of Imported Soils for Various End Uses and Validation Cover Systems’.

For proposed new supply water pipes, the UK Water Industry Research publication ‘Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites (Report 10/WM/03/21)’ should be consulted.

In accordance with EC Regulation 1272/2008 and Environment Agency Guidance WM3 soils destined for off-site disposal should be classified on the basis of their hazard phrases prior to disposal. Soils are classified as a mirror entry waste and should be classified on the basis of their specific chemical properties.

If during earthworks ground conditions are encountered that are markedly different to those found during the investigation then the ground should be subject to additional sampling and testing and any necessary remedial measures designed and implemented before continuing with the works.

8.3.2 Aquatic Environment

Site specific mitigation and remedial measures are not required with respect to the aquatic environment.

During the construction period, there is a risk to the environment/adjacent sites from de-watering, digging foundations, moving contaminated soil, drainage misconnections, discharges to local surface waters or the ground, runoff from construction materials and/or exposed ground, wheel washings and oil or chemical spills.

The risk is considered to be negligible as any adverse effects will be easily preventable by due diligence to good construction practise and housekeeping in preventing surface runoff and the spillage of materials.

The basic measures that should be taken are as follows:

- Prepare a drainage plan and mark the manholes to prevent pollutants accidently reaching the surface water sewers;
- Carry out any activities that could cause pollution in a designated, bunded area, away from rivers or boreholes. Where possible it should drain to the foul sewer;
- Use settlement ponds to remove silty water;
- Store all oils and chemicals in a fully bunded area to prevent leaks or spills;
- Get advice on whether you need an environmental permit and apply in good time

SECTION 9 Engineering Recommendations

9.1 Preparation of Site

Areas of vegetation including all roots should be stripped and removed from beneath the proposed development site.

Allowances should be made for any temporary/permanent support works to any existing adjacent structure necessary as a result of the proposed works.

Contingencies should be made for the protection/diversion of any underground/overhead services present beneath/above the site brought about as a result of the proposed works.

Any reduced levels should be brought up to the required levels with suitable inert mainly granular materials. Department of Transport (DTp) type 2 sub-base or similar should be used and compacted in layers to the requirements of the Specification for Highway Works.

Allowances should also be made for the excavation of any soft spots/areas and their replacement with well compacted imported granular materials.

In accordance with EC Regulation 1272/2008 and Environment Agency Guidance WM3 soils and other materials destined for off-site disposal should be classified on the basis of their hazard phrases prior to disposal. Soils are classified as a mirror entry waste and should be classified on the basis of their specific chemical properties. Terra Firma (Wales) Ltd offer this service if required.

9.2 Foundation and Floor Slab Solution

It is recommended that mass concrete strip or trench fill foundations be used; founded within the medium dense to dense grey and brown clayey/silty sandy GRAVEL/clayey/silty gravelly SAND with variable cobble and boulder content. at an approximate depth of 0.5m to 1.4m below the existing ground level. An allowable bearing pressure of 100kN/m^2 may be used for strips up to 750mm wide.

Alternatively, where shallow bedrock is encountered, mass concrete strip or trench fill foundations be used from a depth ranging between 0.45m and more than 2.25m. If any part of the foundation is founded within the bedrock, all of the foundation must be founded within the bedrock to prevent excessive differential settlement. If founding in the sandstone bedrock, an allowable bearing pressure of 150kN/m^2 may be used for strips up to 750mm wide.

Foundations must sit at least 200mm within the founding horizon.

For the given foundation solutions and bearing pressure, maximum total settlements of 25mm should result with differential movements of the superstructure not exceeding 1:750.

The recommended founding strata is granular and not considered at risk of damage from the shrinking or swelling of the soil, and the effects of frost heave/and or thermal shrinkage. As a precaution, foundations should be taken down to a minimum depth of 450mm below finished level.

Allowances should be made for the removal of any ‘soft spots’ and their replacement with well-compacted granular materials. Department of Transport (DoT) Type 2 materials or similar could be used and should be compacted in layers to the specification for Highway Works.

Due to the presence of shrinkable soils at shallow depth and trees located on and adjacent to the site, floor slabs may need to be designed as suspended.

The National House Building Council (NHBC) Chapter 4.2 gives guidelines as to the appropriate type of floor slab and void based on the type of tree, distance of the foundation from the tree and the plasticity index of the in-situ materials.

During the investigation four samples of the in-situ clay were taken and submitted for plasticity testing. In line with the NHBC (Chapter 4.2), the modified plasticity index for each sample was calculated. For design purposes the superficial cohesive deposits should be assumed to have a low volume change potential.

All foundation formations should be inspected by a suitably qualified Engineer before being concreted.

9.3 Excavations and Formations

Significant allowances should be made for the use of breaker attachments when excavating through the bedrock.

Shallow perched water and groundwater flows were not encountered during the investigation. Any water inflows together with rainwater infiltration should be dealt with by conventional pumping techniques. However, it should be noted that during times of heavy rainfall a higher water table will be encountered.

The sides of any excavations deeper than 1.20m, or shallower if unstable, should be supported by planking and strutting or other proprietary means.

The sub-formations/formations are likely to be susceptible to loosening, softening and deterioration by exposure to weather (rain, frost and drying conditions), the action of water (flood water or removal of groundwater) and site traffic.

Formations should never be left unprotected and continuously exposed to rain causing degradation, or left exposed/uncovered overnight, unless permitted by a qualified engineer.

Construction plant and other vehicular traffic should not be operated on unprotected formations.

As a minimum the formation/excavation surfaces must be protected by blinding concrete immediately after exposure.

Allowances should be made for the removal of soft spots/areas and their replacement with well compacted granular materials.

Allowances should also be made for special precautions to prevent formation deterioration in addition to the above.

9.4 Protection of Buried Concrete

When the results are compared with Table C1 of BRE Digest 1:2005, it indicates that buried concrete should generally conform to DS-1 AC-1s.

9.5 Access Roads and Car Parking Areas

CBR correlations obtained using the CNS Farnell A2465 dynamic cone penetrometer. Based on these results, for car parking and road areas, formations within the in-situ natural soils a CBR value of 2% may be used for design purposes.

A copy of the CBR Correlations is presented in **Annex G**.

Allowances should be made for the removal of any 'soft spots/areas' and their replacement with well-compacted granular materials as previously described.

Please note that the Local Council / Highways Authority may require in-situ CBR testing to be undertaken before a road is adopted. In-situ CBR Testing should be performed following earthworks to verify the performance of the engineered fill.

9.6 Storm Water Drainage

During the site investigation six soakaway tests were undertaken in general accordance with BRE DG 365:2016. The soakaway test was carried out in trial pit TP02 and TP19 to TP25 within natural materials.

Due to a slow rate of infiltration and in some circumstances the test pit emptying overnight, infiltration rates could not be determined.

A copy of soakaway test results is presented in **Annex E**.

9.7 Retaining Walls

Due to the sloping nature of the site, retaining walls may be required. The existing steepness of any embankments should not be increased. Any cuts should be undertaken in small sections and in such a way so as not to induce any instability to the ground.

Effective shear parameters for retaining wall design are presented in **Table 9.1**.

Table 9.1 Effective Shear Stress Parameters

Stratum Description	Bulk Unit Weight (γ) kN/m^3	Effective Cohesion (c′) kN/m^2	Effective Angle of Shearing Resistance (ϕ') degrees
Soft to firm cohesive soils	18	0	18-24
Firm to stiff cohesive soils	18	0	24-28
Medium dense granular soils	18	0	25-28
Dense granular soils	18	0	30-33
Sandstone	18	0	40-50

The parameters are based on experience in similar ground conditions.

The materials to be in-filled behind the retaining wall should be placed at or close to its optimum moisture content/maximum dry density and compacted in layers as per the requirements of the Specification for Highway Works. During the earthworks suitable in-situ testing should be carried out to ensure that the compaction process is achieving the required maximum dry density to achieve at least 95% compaction.

The acceptability of the filling works should be verified by appropriate on site testing. A certification report should also be prepared on the earthworks by a suitably qualified Geotechnical Engineer.

Appropriate drainage should be incorporated in the design to prevent the build-up of hydrostatic pressure.

Appropriate cutting and benching of the existing slope should be conducted prior to the replacement of any imported fill to minimise the risk of any slip surfaces forming on the interface between the existing imported materials.

ANNEX A
Envirocheck Report

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
274471833_1_1

Customer Reference:
16595-MW

National Grid Reference:
270880, 196970

Slice:
A

Site Area (Ha):
4.77

Search Buffer (m):
1000

Site Details:

Phase 5 - Crymlyn Road
Skewen
Neath
SA10 6NL

Client Details:

Mr M Watkins
Terra Firma (Wales) Ltd
5 Deryn Court
Wharfdale Road
Pentwyn
Cardiff
CF23 7HB

terra firma
Geotechnical & Geoenvironmental Specialists

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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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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2			19	5
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	pg 7		1		
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 8		Yes		
Pollution Incidents to Controlled Waters	pg 8			4	3
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 9				4 (*5)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 11	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 13	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 13	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 13		12	46	101

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites	pg 32			1	
Historical Landfill Sites	pg 32		1	1	
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 32		2		
Licensed Waste Management Facilities (Locations)	pg 33		1		
Local Authority Landfill Coverage		1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 33		1		
Potentially Infilled Land (Non-Water)	pg 33		1	4	8
Potentially Infilled Land (Water)	pg 34				7
Registered Landfill Sites	pg 34	1	1	1	
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites	pg 35				1
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 36	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 36	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 38			5	14
BGS Urban Soil Chemistry	pg 42		Yes	Yes	Yes
BGS Urban Soil Chemistry Averages	pg 44	Yes			
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	pg 45				1
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 45	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 46	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
Industrial Land Use					
Contemporary Trade Directory Entries	pg 47		4	11	37
Fuel Station Entries	pg 51		1	1	1
Points of Interest - Commercial Services	pg 51		2	4	18
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 54			3	16
Points of Interest - Public Infrastructure	pg 55		7	3	7
Points of Interest - Recreational and Environmental	pg 57		1	2	5
Gas Pipelines					
Underground Electrical Cables					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 58		2	9	5
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	pg 59				1
Sites of Special Scientific Interest	pg 59				1
Special Areas of Conservation	pg 59				1
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (NW)	0	1	270877 196973
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	63	1	270750 197100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (N)	79	1	270877 197150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	94	1	270850 197150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	104	1	270800 197150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (NW)	113	1	270750 197150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (N)	129	1	270950 197200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	132	1	271000 197200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	144	1	270850 197200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (N)	153	1	270800 197200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	164	1	271150 197150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (NE)	203	1	271150 197200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	288	1	270877 196600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (W)	307	1	270400 196973
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	308	1	270400 197050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (W)	357	1	270350 196973
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	378	1	270350 197150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (N)	379	1	270900 197450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (SW)	406	1	270350 196750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	425	1	271150 196500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (SW)	432	1	270550 196500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	489	1	270850 196400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Station - Water Company Location: Frederick Place Pumping Station, Frederick Place, Llansamlet, Swansea Authority: Natural Resources Wales Catchment Area: River Tawe Reference: Bw4101001 Permit Version: 1 Effective Date: 11th March 1966 Issued Date: 11th March 1966 Revocation Date: 11th March 1966 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Crymlyn Brook **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	310	2	270450 197200
1	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Frederick Place Pumping Station, Frederick Place, Llansamlet, Swansea Authority: Natural Resources Wales Catchment Area: CRYMLYN BROOK - HW TO CONF WITH TENNANT CANAL Reference: BC0001701 Permit Version: 1 Effective Date: 11th March 1966 Issued Date: 11th March 1966 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Crymlyn Brook **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A12NE (NW)	310	2	270450 197200
1	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Frederick Place Pumping Station, Frederick Place, Llansamlet, Swansea Authority: Natural Resources Wales Catchment Area: CRYMLYN BROOK - HW TO CONF WITH TENNANT CANAL Reference: Bc0001701 Permit Version: 1 Effective Date: 11th March 1966 Issued Date: 11th March 1966 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Crymlyn Brook **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	310	2	270450 197200
2	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Skewen Sps Park Avenue Lonlas Neath, Nr 2 Park Av, Skewen, Neath, Sa10 6ra Authority: Natural Resources Wales Catchment Area: CRYMLYN BROOK - HW TO CONF WITH TENNANT CANAL Reference: Bw2902601 Permit Version: 4 Effective Date: 25th September 2020 Issued Date: 25th September 2020 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: To The Crymlyn Brook Via A Surface Water Culvert **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	327	2	271305 197217

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Skewen Sps Park Avenue Lonlas Neath, Nr 2 Park Av, Skewen, Neath, Sa10 6ra Authority: Natural Resources Wales Catchment Area: CRYMLYN BROOK - HW TO CONF WITH TENNANT CANAL Reference: Bw2902601 Permit Version: 4 Effective Date: 25th September 2020 Issued Date: 25th September 2020 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: To The Crymlyn Brook Via A Surface Water Culvert **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	327	2	271305 197217
2	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Skewen Sps Park Avenue Lonlas Neath, Park Avenue, Lonlas Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bw2902601 Permit Version: 3 Effective Date: 8th February 2008 Issued Date: 8th February 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Crymlyn Brook **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	331	2	271306 197223
2	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Skewen Sps Park Avenue Lonlas Neath, Park Avenue, Lonlas Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bw2902601 Permit Version: 3 Effective Date: 8th February 2008 Issued Date: 8th February 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Crymlyn Brook **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	331	2	271306 197223
2	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Skewen Sps Park Avenue Lonlas Neath, Park Avenue, Lonlas Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bw2902601 Permit Version: 3 Effective Date: 8th February 2008 Issued Date: 8th February 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Crymlyn Brook **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	331	2	271306 197223

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Skewen Sps Park Avenue Lonlas Neath, Park Avenue, Lonlas Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bw2902601 Permit Version: 3 Effective Date: 8th February 2008 Issued Date: 8th February 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Crymlyn Brook **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	331	2	271306 197223
3	**Discharge Consents** Operator: B J Group Plc Property Type: Undefined Or Other Location: Skewen Land Adjacent To Crymly Authority: Natural Resources Wales Catchment Area: River Tawe Reference: Bp0132101 Permit Version: 1 Effective Date: 31st October 1989 Issued Date: 31st October 1989 Revocation Date: 7th July 1995 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: North Side Reservoir **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A8NE (SE)	394	2	271200 196550
4	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Station - Water Company Location: Sso.Skewen P.S. Lonlas. Authority: Natural Resources Wales Catchment Area: River Tawe Reference: Bw2902601 Permit Version: 2 Effective Date: 31st March 2006 Issued Date: 31st March 2005 Revocation Date: 7th February 2008 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Neath **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A14NW (NE)	402	2	271400 197200
4	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Station - Water Company Location: Sso.Skewen P.S. Lonlas. Authority: Natural Resources Wales Catchment Area: River Tawe Reference: BW2902601 Permit Version: 1 Effective Date: 19th October 1989 Issued Date: 19th October 1989 Revocation Date: 30th March 2006 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Neath **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A14NW (NE)	402	2	271400 197200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Discharge Consents** Operator: City And County Of Swansea Property Type: Domestic Property (Single) Location: Mess Shed At Crymlyn Quarry Off Fre, Off Frederick Place Authority: Natural Resources Wales Catchment Area: Not Given Reference: BE0073301 Permit Version: 1 Effective Date: 1st March 1973 Issued Date: 1st March 1973 Revocation Date: Not Supplied Discharge Type: Unspecified Discharge Environment: Land/Soakaway Receiving Water: Soakaway Nr. Crymlyn Burrows **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A12SE (W)	416	2	270300 196900
6	**Discharge Consents** Operator: Swansea City Council Property Type: Undefined Or Other Location: Swansea Leisure Garden Fredrick Plc, Leisure Garden Fredrick Plc Llan, Fredrick Plc Llansamlet Authority: Natural Resources Wales Catchment Area: River Tawe Reference: Bp0085501 Permit Version: 1 Effective Date: 17th May 1988 Issued Date: 17th May 1988 Revocation Date: 23rd May 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: To Land **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A12SE (W)	437	2	270300 196800
7	**Discharge Consents** Operator: St Modwen Developments Property Type: General Construction Work Location: Treatment System@Coed Darcy Llandar, Coed Darcy, Llandarcy, Neath, Swansea, Sa10 6hj Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Eprlb3293hn Permit Version: 1 Effective Date: 25th March 2014 Issued Date: 25th March 2014 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: Crymlyn Brook And Crymlyn Bog **Status: New issued under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	484	2	270853 196410
7	**Discharge Consents** Operator: St Modwen Developments Property Type: General Construction Work Location: Treatment System@Coed Darcy Llandar, Coed Darcy, Llandarcy, Neath, Swansea, Sa10 6hj Authority: Natural Resources Wales Catchment Area: CRYMLYN BROOK - HW TO CONF WITH TENNANT CANAL Reference: Lb3293hn Permit Version: 1 Effective Date: 25th March 2014 Issued Date: 25th March 2014 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: Crymlyn Brook And Crymlyn Bog **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	484	2	270853 196410

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**Discharge Consents** Operator: St Modwen Developments Property Type: General Construction Work Location: Treatment System@Coed Darcy Llandar, Coed Darcy, Llandarcy, Neath, Swansea, Sa10 6hj Authority: Natural Resources Wales Catchment Area: CRYMLYN BROOK - HW TO CONF WITH TENNANT CANAL Reference: Lb3293hn Permit Version: 1 Effective Date: 25th March 2014 Issued Date: 25th March 2014 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: Crymlyn Brook And Crymlyn Bog **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	484	2	270853 196410
7	**Discharge Consents** Operator: St Modwen Developments Property Type: General Construction Work Location: Treatment System@Coed Darcy Llandar, Coed Darcy, Llandarcy, Neath, Swansea, Sa10 6hj Authority: Natural Resources Wales Catchment Area: CRYMLYN BROOK - HW TO CONF WITH TENNANT CANAL Reference: Lb3293hn Permit Version: 1 Effective Date: 25th March 2014 Issued Date: 25th March 2014 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: Crymlyn Brook And Crymlyn Bog **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	484	2	270853 196410
7	**Discharge Consents** Operator: St Modwen Developments Property Type: General Construction Work Location: Treatment System@Coed Darcy Llandar, Coed Darcy, Llandarcy, Neath, Swansea, Sa10 6hj Authority: Natural Resources Wales Catchment Area: CRYMLYN BROOK - HW TO CONF WITH TENNANT CANAL Reference: Lb3293hn Permit Version: 1 Effective Date: 25th March 2014 Issued Date: 25th March 2014 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: Crymlyn Brook And Crymlyn Bog **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	484	2	270853 196410
7	**Discharge Consents** Operator: St. Modwen Developments Limited Property Type: Mineral Oil Processing Location: Pt W1 Bp Oil Llandarcy Refinery, Llandarcy, Neath, Sa10 6hj Authority: Natural Resources Wales Catchment Area: River Tawe Reference: Bp027900101 Permit Version: 1 Effective Date: 2nd November 1999 Issued Date: 2nd November 1999 Revocation Date: 25th March 2014 Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: Crymlyn Brook **Status: New issued under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A8NE (S)	502	2	270900 196401

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**Discharge Consents** Operator: Bp Oil Llandarcy Refinery Ltd Property Type: Mineral Oil Processing Location: Outlet No. 1 Llandar Authority: Natural Resources Wales Catchment Area: River Tawe Reference: Bm0011301 Permit Version: 1 Effective Date: 24th November 1980 Issued Date: 24th November 1980 Revocation Date: 8th February 1994 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: Drainage Ditch Flowing To Crym **Status: Revoked and replaced by IPC Authorisation** Positional Accuracy: Located by supplier to within 100m	A8NE (S)	503	2	270900 196400
8	**Discharge Consents** Operator: Quipp A M & Rosser H Property Type: Undefined Or Other Location: Paxford Farm Llansamlet Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bm0036501 Permit Version: 1 Effective Date: 22nd March 1984 Issued Date: 22nd March 1984 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Underground Strata **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	524	2	270420 196470
9	**Discharge Consents** Operator: Bp Oil Llandarcy Refinery Ltd Property Type: Mineral Oil Processing Location: Outlet No. 2 Llandar Authority: Natural Resources Wales Catchment Area: River Tawe Reference: Bm0011302 Permit Version: 1 Effective Date: 24th November 1980 Issued Date: 24th November 1980 Revocation Date: 15th March 1993 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: Drainage Ditch Flowing To Crym **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A8SW (S)	588	2	270750 196300
10	**Discharge Consents** Operator: Roy Parr Property Type: Undefined Or Other Location: Rhyd Y Coed Birchgrove Swansea Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bm0047701 Permit Version: 1 Effective Date: 10th June 1985 Issued Date: 10th June 1985 Revocation Date: 11th July 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Underground Strata **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A17NW (NW)	844	2	270200 197700
11	**Local Authority Pollution Prevention and Controls** Name: Df & Am Bevan Co. Ltd. Location: Park Avenue, Skewen, NEATH, West Glamorgan, SA10 Authority: Neath Port Talbot County Borough Council, Environmental Health Department Permit Reference: E3/1/75 Dated: 26th February 1999 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station **Status: Permitted** Positional Accuracy: Automatically positioned to the address	A13NE (N)	132	3	270950 197202

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Nearest Surface Water Feature	A13NW (N)	92	-	270857 197149
12	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Quarry Below, Frederick Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Blocked Sewer Incident Date: 13th November 1991 Incident Reference: 1744 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	A14NW (NE)	314	4	271300 197200
13	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewerage Location: Road Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Blocked Sewer Incident Date: 21st December 1994 Incident Reference: 21949 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	A18SE (N)	330	4	271000 197400
14	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Other Location: Lonlas, School Near, Ebenezer Chapel Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blocked Sewer Incident Date: 27th April 1992 Incident Reference: 4453 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	A12NE (NW)	353	4	270400 197200
15	**Pollution Incidents to Controlled Waters** Property Type: Council Premises Location: Opposite Lon Las Welsh School Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 15th May 1991 Incident Reference: 745 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	A12NE (NW)	376	4	270450 197300
16	**Pollution Incidents to Controlled Waters** Property Type: Process Location: Railway Line On Bp, Llandarcy Site, LLANDARCY Authority: Environment Agency, Welsh Region Pollutant: Chemicals - Other Inorganic Note: Accidental Spillage/Leakage Incident Date: 1st February 1992 Incident Reference: 3801 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A9SE (SE)	825	4	271600 196300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Bp Llandarcy, LLANDARCY Authority: Environment Agency, Welsh Region Pollutant: Sewage Debris/Litter Note: Not Supplied Incident Date: 14th May 1996 Incident Reference: 28579 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	A8SE (S)	912	4	271000 196000
18	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: SKEWEN Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Not Supplied Incident Date: 13th November 1995 Incident Reference: 27058 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	A20SW (NE)	940	4	271900 197400
19	**Water Abstractions** Operator: St Mowden Properties Plc Licence Number: 22/59/5/0005 Permit Version: 102 Location: North Site Reservoir Authority: Natural Resources Wales Abstraction: Petrochemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 29th July 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	622	2	271290 196340
19	**Water Abstractions** Operator: Bp Oil Llandarcy Refinery Ltd Licence Number: 22/59/5/0005 Permit Version: 101 Location: North Site Reservoir Authority: Environment Agency, Welsh Region Abstraction: Petrochemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 31st March 2005 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	622	4	271290 196340
19	**Water Abstractions** Operator: Bp Oil Llandarcy Refinery Ltd Licence Number: 22/59/5/0005 Permit Version: 100 Location: North Site Reservoir Authority: Environment Agency, Welsh Region Abstraction: Petrochemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: North Site Reservoir Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	622	4	271290 196340

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**Water Abstractions** Operator: St Mowden Properties Plc Licence Number: 22/59/5/0005 Permit Version: Not Supplied Location: North Site Reservoir At B P Refinery Llandarcy Authority: Natural Resources Wales Abstraction: Petrochemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	622	2	271290 196340
	Water Abstractions Operator: Bp Oil Llandarcy Refinery Ltd Licence Number: 22/59/5/0008 Permit Version: 1 Location: Groundwater Remediation Well Points Llandarcy Refinery Authority: Environment Agency, Welsh Region Abstraction: Environmental: Pump & Treat: Pollution Remediation Abstraction Type: Water may be abstracted from any point within an area Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Oil Refinery Llandarcy Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 13th September 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2SE (SW)	1386	4	270278 195582
	Water Abstractions Operator: St Mowden Properties Plc Licence Number: 22/59/5/0006 Permit Version: 102 Location: Lagoon At B P Refinery Llandarcy Authority: Natural Resources Wales Abstraction: Petrochemicals: General Use (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: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 29th July 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2SW (SW)	1703	2	270100 195310
	Water Abstractions Operator: Bp Oil Llandarcy Refinery Ltd Licence Number: 22/59/5/0006 Permit Version: 101 Location: Lagoon At B P Refinery Llandarcy Authority: Environment Agency, Welsh Region Abstraction: Petrochemicals: General Use (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: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 31st March 2005 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2SW (SW)	1703	4	270100 195310

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Bp Oil Llandarcy Refinery Ltd Licence Number: 22/59/5/0006 Permit Version: 100 Location: Lagoon At B P Refinery Llandarcy Authority: Environment Agency, Welsh Region Abstraction: Petrochemicals: General Use (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: Lagoon On Site Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 30th June 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2SW (SW)	1703	4	270100 195310
	Water Abstractions Operator: St Mowden Properties Plc Licence Number: 22/59/5/0006 Permit Version: Not Supplied Location: Land At B P Refinery At Llandarcy Authority: Natural Resources Wales Abstraction: Petrochemicals: General Use (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: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2SW (SW)	1703	2	270100 195310
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: Medium	A13NE (N)	0	2	270877 197000
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	A13NE (E)	0	2	271000 197006

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium 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: No Data	A13NE (N)	0	2	270877 196996
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: Medium	A13NE (E)	0	2	270960 197000
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: Medium	A13NW (N)	0	2	270864 197048
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	A13NE (E)	0	2	271000 197000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No 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: No Data	A13SE (NW)	0	2	270877 196973
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No 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 (E)	0	2	271000 196973
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SE (NW)	0	2	270877 196973
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13NE (N)	0	2	270877 196996
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
20	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 97.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A13NW (N)	92	5	270857 197149
21	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 103.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A13NW (NW)	124	5	270664 197142
22	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 49.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A13NW (NW)	124	5	270693 197169

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 62.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A13NW (NW)	124	5	270762 197164
24	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 123.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A13NW (NW)	144	5	270700 197176
25	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 155.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A13NW (NW)	144	5	270700 197176
26	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 51.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A13NW (NW)	177	5	270562 197128
27	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 36.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (NW)	223	5	270514 197137
28	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A13NW (NW)	223	5	270583 197212
29	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A13NW (NW)	223	5	270583 197212
30	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 124.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A13NW (N)	231	5	270813 197282
31	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 320.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A13NW (NW)	241	5	270576 197228

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
32	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	251	5	270469 197105
33	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 1.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	253	5	270479 197137
34	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 11.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	254	5	270478 197136
35	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 39.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	254	5	270478 197136
36	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	263	5	270467 197134
37	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 25.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	267	5	270462 197134
38	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 47.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (NW)	272	5	270478 197174
39	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	282	5	270442 197123
40	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 39.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	285	5	270438 197120

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
41	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NW (S)	294	5	270857 196605
42	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	311	5	270405 197099
43	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	321	5	270393 197093
44	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	323	5	270391 197093
45	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	328	5	270379 197029
46	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 6.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	328	5	270379 197029
47	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	329	5	270380 197063
48	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	330	5	270377 197035
49	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NW (S)	332	5	270856 196566

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
50	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	333	5	270374 197023
51	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 3.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	333	5	270375 197050
52	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	340	5	270367 197018
53	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 209.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18SW (N)	341	5	270837 197398
54	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 3.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	342	5	270364 197017
55	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 807.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Crymlyn Brook Catchment Name: Tawe Primacy: 1	A12SE (W)	342	5	270368 196976
56	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NE (W)	344	5	270364 197011
57	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 144.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NE (SE)	366	5	271161 196565
58	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NE (SE)	366	5	271161 196565

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
59	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 67.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NE (SE)	367	5	271160 196564
60	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 93.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18SW (N)	402	5	270694 197435
61	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 65.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NW (SW)	402	5	270557 196530
62	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NE (SE)	430	5	271155 196497
63	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 106.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NE (SE)	444	5	271154 196481
64	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 113.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NW (SW)	455	5	270569 196467
65	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 16.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12SE (W)	471	5	270239 196974
66	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 159.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 2	A9NW (SE)	471	5	271296 196512
67	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 509.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A9NW (SE)	471	5	271296 196512

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
68	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 251.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18SE (N)	475	5	270959 197546
69	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18SE (N)	475	5	270959 197546
70	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18SE (N)	476	5	270960 197546
71	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18SE (N)	485	5	270967 197555
72	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 193.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NW (S)	488	5	270869 196409
73	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 55.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NW (S)	490	5	270836 196397
74	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 57.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NW (S)	493	5	270783 196395
75	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NW (S)	495	5	270847 196398
76	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 36.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18SE (N)	497	5	271004 197566

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
77	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 28.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NE (S)	497	5	271090 196418
78	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 48.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NE (S)	505	5	271062 196405
79	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 49.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NW (S)	505	5	270853 196389
80	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 123.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NW (S)	510	5	270732 196378
81	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 37.5 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 2	A8NW (S)	510	5	270732 196378
82	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18SE (N)	515	5	271036 197582
83	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 190.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18SE (N)	515	5	271036 197582
84	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 56.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18SE (N)	516	5	271055 197582
85	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 83.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18SE (N)	527	5	271106 197580

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
86	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NW (S)	529	5	270632 196372
87	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 16.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A17SE (NW)	533	5	270320 197393
88	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 96.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 2	A8NW (S)	546	5	270718 196344
89	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 113.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NE (S)	550	5	270881 196349
90	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 55.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NE (S)	550	5	270936 196355
91	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NE (S)	552	5	270936 196355
92	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NE (S)	564	5	270955 196346
93	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NW (S)	573	5	270623 196330
94	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 45.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NW (S)	574	5	270623 196328

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
95	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 52.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NE (S)	574	5	270973 196338
96	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 56.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18SE (NE)	590	5	271176 197624
97	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 34.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18SE (NE)	591	5	271176 197625
98	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NE (S)	598	5	271020 196316
99	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 117.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NW (SW)	599	5	270581 196312
100	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8NE (S)	604	5	271034 196309
101	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12SW (SW)	606	5	270170 196663
102	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 105.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A9NW (SE)	611	5	271383 196402
103	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 80.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	613	5	270642 196285

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
104	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 66.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	614	5	270641 196286
105	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 307.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SE (S)	615	5	271057 196298
106	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 23.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 2	A9NW (SE)	615	5	271305 196355
107	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12SW (SW)	617	5	270160 196657
108	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A19SW (NE)	618	5	271232 197631
109	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A9NW (SE)	622	5	271465 196452
110	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 417.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A9NW (SE)	622	5	271470 196457
111	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 44.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18NE (NE)	625	5	271193 197655
112	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 111.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 2	A9NW (SE)	629	5	271262 196316

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
113	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 216.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18NW (N)	633	5	270624 197659
114	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	657	5	270583 196253
115	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A19NW (NE)	667	5	271218 197691
116	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 91.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A19NW (NE)	674	5	271222 197696
117	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 44.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Crymlyn Brook Catchment Name: Tawe Primacy: 1	A7SE (SW)	686	5	270390 196297
118	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 149.8 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A7SE (SW)	686	5	270390 196297
119	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 33.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	687	5	270828 196203
120	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 77.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	691	5	270594 196215
121	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 71.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	691	5	270593 196215

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
122	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A7SE (SW)	696	5	270500 196235
123	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 49.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18NW (N)	699	5	270812 197756
124	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 2	A9SW (SE)	699	5	271297 196260
125	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 265.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A7SE (SW)	699	5	270499 196233
126	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 127.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A12NW (W)	700	5	270064 197305
127	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 68.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A9SW (SE)	707	5	271318 196260
128	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A9SW (SE)	707	5	271318 196260
129	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.0 Watercourse Level: Underground Permanent: True Watercourse Name: Crymlyn Brook Catchment Name: Tawe Primacy: 1	A7SE (SW)	721	5	270395 196254
130	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 347.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Crymlyn Brook Catchment Name: Tawe Primacy: 1	A7SE (SW)	724	5	270394 196251

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
131	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 175.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A9SW (SE)	748	5	271385 196245
132	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 8.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A14SE (E)	751	5	271769 196703
133	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 54.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A14SE (E)	751	5	271770 196709
134	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 33.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	752	5	270543 196164
135	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	758	5	270612 196144
136	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 7.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A14SE (E)	759	5	271775 196697
137	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 57.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A14SE (E)	766	5	271782 196697
138	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A7SE (SW)	770	5	270238 196300
139	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	781	5	270698 196109

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
140	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	782	5	270701 196108
141	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 170.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 2	A17SW (W)	784	5	269982 197325
142	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A7SE (SW)	784	5	270525 196136
143	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A17SW (W)	785	5	269983 197329
144	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	786	5	270619 196115
145	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 56.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A7SE (SW)	786	5	270524 196134
146	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A14SE (E)	787	5	271813 196731
147	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	797	5	270691 196093
148	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A7SE (SW)	798	5	270245 196259

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
149	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 42.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 2	A7SE (SW)	799	5	270247 196256
150	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A17SW (NW)	803	5	269974 197354
151	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A17SW (NW)	804	5	270183 197636
152	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 61.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A14SE (E)	823	5	271834 196670
153	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 44.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A14SE (E)	823	5	271834 196670
154	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	824	5	270629 196075
155	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 134.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 2	A8SW (S)	824	5	270629 196075
156	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 120.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19SE (NE)	828	5	271704 197520
157	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 81.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A14SE (E)	831	5	271862 196752

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
158	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A9NE (E)	832	5	271822 196610
159	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 287.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A7SE (SW)	839	5	270211 196234
160	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 96.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A14SE (E)	842	5	271863 196704
161	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 226.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A7SE (SW)	842	5	270496 196084
162	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	849	5	270688 196042
163	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 307.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A8SW (S)	852	5	270682 196040
164	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 98.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A17SW (NW)	855	5	269937 197398
165	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A17SW (NW)	855	5	269937 197398
166	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 87.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A17SW (NW)	857	5	269936 197399

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
167	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 128.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A18NW (N)	879	5	270609 197905
168	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 79.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19NE (NE)	888	5	271632 197690
169	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 68.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A17NW (NW)	901	5	270188 197762
170	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 60.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19NE (NE)	918	5	271583 197769
171	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19SE (NE)	929	5	271813 197539
172	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 34.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A16SE (W)	931	5	269842 197370
173	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19NE (NE)	934	5	271603 197774
174	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19NE (NE)	935	5	271610 197771
175	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 7.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19NE (NE)	954	5	271612 197792

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
176	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 60.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A17NE (NW)	956	5	270209 197842
177	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 57.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A7SE (SW)	960	5	270366 196004
178	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 83.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Tawe Primacy: 1	A17NW (NW)	970	5	270152 197821

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
179	**BGS Recorded Landfill Sites** Site Name: Crymlyn Quarry Location: Fredericks Place, SWANSEA, West Glamorgan Authority: British Geological Survey, National Geoscience Information Service Ground Water: Information not available Surface Water: Information not available Geology: N/A Positional Accuracy: Positioned by the supplier Boundary Accuracy: Moderate	A12SE (W)	357	-	270359 196906
180	**Historical Landfill Sites** Licence Holder: Mr W J F Leyshon Location: Crymlyn Road, Skewen, Neath Name: Pentwyn Farm Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14881 First Input Date: 31st March 1993 Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Inert and Industrial Waste EA Waste Ref: 34057 Regis Ref: WV1/L/LEY001 WRC Ref: 6930/0013 BGS Ref: Not Supplied Other Ref: SWW-65-L, NBWD 7	A13NE (N)	1	2	270906 197067
181	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Fredericks Place, Swansea, West Glamorgan Name: Crymlyn Quarry Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14460 First Input Date: 31st December 1965 Last Input Date: 31st December 1974 Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial, Household and Special Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6855/0010 BGS Ref: 2622 Other Ref: Not Supplied	A12SE (W)	351	2	270366 196899
182	**Licensed Waste Management Facilities (Landfill Boundaries)** Name: Pentwyn Farm Licence Number: 34057 Location: Crymlyn Road, Skewen, Neath, SA10 6NL Licence Holder: Leyshon W J E Authority: Natural Resources Wales Site Category: Landfills Taking Non-biodegradeable Wastes (Not Construction) Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) **Licence Status:** **Inactive** Issued: 7th January 1993 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A13NE (N)	1	2	270906 197067
183	**Licensed Waste Management Facilities (Landfill Boundaries)** Name: Pentwyn Farm Licence Number: 34057 Location: Crymlyn Road, Skewen, Neath, SA10 6NL Licence Holder: Leyshon W J E Authority: Natural Resources Wales Site Category: Landfills Taking Non-biodegradeable Wastes (Not Construction) Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) **Licence Status:** **Inactive** Issued: 7th January 1993 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A13NW (NW)	6	2	270829 197056

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
184	**Licensed Waste Management Facilities (Locations)** Licence Number: 34057 Location: Crymlyn Road, Skewen, Neath, N P T, SA10 6NL Operator Name: Leyshon W J E Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Landfills Taking Non-biodegradeable Wastes (Not Construction) **Licence Status: Surrendered** Issued: 7th January 1993 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 1st April 2005 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13NW (NW)	55	2	270800 197100
	Local Authority Landfill Coverage Name: Neath Port Talbot County Borough Council - Has supplied landfill data		0	3	270877 196973
	Local Authority Landfill Coverage Name: City and County of Swansea - Has no landfill data to supply		106	6	270814 197155
185	**Local Authority Recorded Landfill Sites** Location: Pentwyn Farm Reference: Not Supplied Authority: Neath Port Talbot County Borough Council, Environmental Health Department **Last Reported Status: Not Supplied** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Applicable	A13NW (NW)	55	3	270800 197100
186	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13NW (NW)	192	-	270712 197226
187	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A18SE (NE)	343	-	271073 197398
188	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A12NE (NW)	369	-	270384 197205
189	**Potentially Infilled Land (Non-Water)** Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A12NE (W)	380	-	270329 197066
190	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A18SW (N)	413	-	270860 197474
191	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A18SW (NW)	617	-	270541 197623
192	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A17SE (NW)	648	-	270375 197582
193	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A7NW (SW)	717	-	270199 196411
194	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A19SW (NE)	731	-	271503 197594

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
195	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A19SE (NE)	751	-	271678 197421
196	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A7NW (SW)	808	-	270114 196369
197	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A19SE (NE)	865	-	271799 197438
198	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7SW (SW)	985	-	269967 196269
199	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1940	A9NW (SE)	602	-	271252 196347
200	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1884	A9SW (SE)	699	-	271286 196256
201	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1884	A12NW (W)	705	-	270002 196991
202	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1884	A18NE (N)	733	-	270886 197799
203	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1940	A17NE (NW)	776	-	270517 197781
204	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15SW (E)	966	-	271999 196746
205	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15SW (E)	993	-	272023 196728
206	**Registered Landfill Sites** Licence Holder: Costain Civic Engineering Ltd Licence Reference: NB 12 Site Location: Old Railway Cutting, Lon Las, Skewen, Neath, West Glamorgan Licence Easting: 270900 Licence Northing: 197100 Operator Location: M4 Contract 3, Llandarcy, NEATH, West Glamorgan, SA10 6JL Authority: Environment Agency Wales, South West Area Site Category: Landfill - Railway cutting Max Input Rate: Undefined Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st June 1992 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Approximate location provided by supplier Boundary Accuracy: Not Applicable Authorised Waste: Broken Concrete Surplus Earthworks Mat'L	A13SE (NW)	0	4	270877 196973

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
207	**Registered Landfill Sites** Licence Holder: W J E Leyshon Licence Reference: NBWD 7 Site Location: Pentwyn Farm, Crymlyn Road, Skewen, NEATH, West Glamorgan, SA10 6NL Licence Easting: 270800 Licence Northing: 197080 Operator Location: As Site Address Authority: Environment Agency Wales, South West Area Site Category: Landfill - Railway cutting Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Operational as far as is knownOperational Dated: 7th January 1993 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste Sw Wales Cat. A 'Non-Decomp' Prohibited Waste Waste N.O.S.	A13NW (NW)	35	4	270800 197080
208	**Registered Landfill Sites** Licence Holder: Swansea D.C. City Of Licence Reference: L1/17 Site Location: Crymlyn Quarry Tip, Frederick Place, Llansamlet, Swansea, West Glamorgan Licence Easting: 270300 Licence Northing: 196900 Operator Location: The Guildhall, SWANSEA, West Glamorgan, SA1 4PE Authority: Environment Agency Wales, South West Area Site Category: Landfill Max Input Rate: Undefined Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: Not Supplied Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste Household Waste Prohibited Waste Toxic/Poisonous Wastes	A12SE (W)	416	4	270300 196900
209	**Registered Waste Treatment or Disposal Sites** Licence Holder: Bp Oil Llandarcy Refinery Licence Reference: 4 Site Location: Acid Tar Burnery, Llandarcy, Neath, West Glamorgan Operator Location: Britannic House, Llandarcy, Neath, West Glamorgan Authority: Environment Agency Wales, South West Area Site Category: Incineration Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st June 1977 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Approximate location provided by supplier Boundary Quality: Not Supplied Authorised Waste Acid Tars	A9SW (SE)	978	4	271400 196000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: South Wales Upper Coal Measures Formation	A13SE (NW)	0	1	270877 196973
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SE (NW)	0	1	270877 196973
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NE (E)	0	1	270960 197000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NW (N)	0	1	270864 197048
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (N)	0	1	270877 196996
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NW (N)	91	1	270867 197157
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NW (NW)	172	1	270601 197161

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (S)	200	1	270928 196700
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A12NE (W)	367	1	270368 197168
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A18SE (N)	382	1	270939 197459
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NE (SW)	590	1	270356 196436
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A7NE (SW)	596	1	270382 196409
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A7SE (SW)	695	1	270488 196241

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A9SW (SE)	700	1	271304 196261
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A12NW (W)	713	1	270000 197119
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8SW (S)	719	1	270582 196189
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A17NE (NW)	796	1	270523 197808
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: 3.0 - 6.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A15SW (E)	953	1	272000 196973
210	**BGS Recorded Mineral Sites** Site Name: Cwm Crymlyn Location: Llansamlet, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 154102 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Swansea Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A12NE (W)	367	1	270348 197102

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
211	**BGS Recorded Mineral Sites** Site Name: Llyshendy Location: Llansamlet, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 154101 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	384	1	270384 197233
212	**BGS Recorded Mineral Sites** Site Name: Crymlyn Location: Llansamlet, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 154103 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Swansea Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A12SE (W)	396	1	270320 196902
213	**BGS Recorded Mineral Sites** Site Name: Cwm Crymlyn Location: Llansamlet, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 154104 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Swansea Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	436	1	270327 196726
214	**BGS Recorded Mineral Sites** Site Name: Pant-Yr-Esgyrn Location: Skewen, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 154124 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14SW (E)	481	1	271492 196729
215	**BGS Recorded Mineral Sites** Site Name: Heol-Ddu Location: Birchgrove, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 154123 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Swansea Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	620	1	270552 197629
216	**BGS Recorded Mineral Sites** Site Name: Heol-Ddu Location: Llansamlet, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 154100 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	638	1	270437 197604

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
217	**BGS Recorded Mineral Sites** Site Name: Brithdir & Cwmdu Colliery Level Air Shaft Location: Moore Town, Skewen, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 229845 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Tir Edmond Coal (South Wales) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	838	1	271602 197650
217	**BGS Recorded Mineral Sites** Site Name: Brithdir & Cwmdu Colliery, West Brithdir Level Location: Moore Town, Skewen, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 154097 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Swansea Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	842	1	271638 197621
218	**BGS Recorded Mineral Sites** Site Name: Tal-Y-Wendda Drift Colliery Location: Llansamlet, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 154116 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Swansea Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	858	1	270050 196370
219	**BGS Recorded Mineral Sites** Site Name: Dynevor Main Colliery, New Slant Location: Moore Town, Skewen, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 229852 Type: Underground **Status: Ceased** Operator: Dynevor Main Colliery Co., Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Graigola Coal (South Wales) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	891	1	271796 197495
219	**BGS Recorded Mineral Sites** Site Name: Cwm Du Brick Works Quarries Location: Moore Town, Skewen, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 229851 Type: Opencast **Status: Ceased** Operator: Taylor J. Brooks & Co., Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	916	1	271827 197493
219	**BGS Recorded Mineral Sites** Site Name: Lower Graigola Colliery Location: Moore Town, Skewen, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 154122 Type: Underground **Status: Ceased** Operator: Dynevor Main Colliery Co., Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Graigola Coal (South Wales) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	925	1	271822 197518

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
220	**BGS Recorded Mineral Sites** Site Name: Dynevor Main Colliery, Old Slant Location: Moore Town, Skewen, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 229853 Type: Underground **Status: Ceased** Operator: Dynevor Main Colliery Co., Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Graigola Coal (South Wales) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	946	1	271866 197484
221	**BGS Recorded Mineral Sites** Site Name: Cwmdu Quarry Location: Moore Town, Skewen, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 154095 Type: Opencast **Status: Ceased** Operator: Taylor J. Brooks & Co., Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Swansea Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	970	1	271825 197595
221	**BGS Recorded Mineral Sites** Site Name: Cwmdu Quarry Location: Moore Town, Skewen, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 154095 Type: Opencast **Status: Ceased** Operator: Taylor J. Brooks & Co., Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	970	1	271825 197595
221	**BGS Recorded Mineral Sites** Site Name: Cwmdu Level Location: Moore Town, Skewen, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 229854 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Swansea Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	985	1	271832 197611
222	**BGS Recorded Mineral Sites** Site Name: Tal-Y-Wendda Drift Colliery Location: Llansamlet, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 154115 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Swansea Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7SW (SW)	991	1	269958 196272
223	**BGS Recorded Mineral Sites** Site Name: Brithdir & Cwmdu Colliery Location: Moore Town, Skewen, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 154096 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Tir Edmond Coal (South Wales) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A19NE (NE)	992	1	271710 197760

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 270750, 197260 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured Concentration: 63.20 mg/kg Cadmium Measured Concentration: 4.40 mg/kg Chromium Measured Concentration: 59.40 mg/kg Lead Measured Concentration: 144.20 mg/kg Nickel Measured Concentration: 40.00 mg/kg	A13NW (NW)	221	1	270750 197260
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 271190, 196740 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured Concentration: 58.40 mg/kg Cadmium Measured Concentration: 3.10 mg/kg Chromium Measured Concentration: 67.60 mg/kg Lead Measured Concentration: 132.40 mg/kg Nickel Measured Concentration: 35.60 mg/kg	A13SE (SE)	224	1	271190 196740
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 271240, 197240 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured Concentration: 49.20 mg/kg Cadmium Measured Concentration: 1.90 mg/kg Chromium Measured Concentration: 70.20 mg/kg Lead Measured Concentration: 146.30 mg/kg Nickel Measured Concentration: 39.30 mg/kg	A14NW (NE)	291	1	271240 197240
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 270250, 196750 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured Concentration: 106.20 mg/kg Cadmium Measured Concentration: 0.80 mg/kg Chromium Measured Concentration: 60.10 mg/kg Lead Measured Concentration: 238.10 mg/kg Nickel Measured Concentration: 56.90 mg/kg	A12SE (W)	501	1	270250 196750
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 270250, 197240 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured Concentration: 63.40 mg/kg Cadmium Measured Concentration: 4.90 mg/kg Chromium Measured Concentration: 66.10 mg/kg Lead Measured Concentration: 142.20 mg/kg Nickel Measured Concentration: 35.90 mg/kg	A12NE (NW)	505	1	270250 197240

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 270750, 197750 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured Concentration: 71.30 mg/kg Cadmium Measured Concentration: 3.40 mg/kg Chromium Measured Concentration: 71.30 mg/kg Lead Measured Concentration: 112.40 mg/kg Nickel Measured Concentration: 39.60 mg/kg	A18NW (N)	703	1	270750 197750
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 271240, 197760 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured Concentration: 73.90 mg/kg Cadmium Measured Concentration: 4.30 mg/kg Chromium Measured Concentration: 69.00 mg/kg Lead Measured Concentration: 111.80 mg/kg Nickel Measured Concentration: 39.10 mg/kg	A19NW (NE)	740	1	271240 197760
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 271760, 197220 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured Concentration: 61.60 mg/kg Cadmium Measured Concentration: 2.30 mg/kg Chromium Measured Concentration: 69.90 mg/kg Lead Measured Concentration: 307.20 mg/kg Nickel Measured Concentration: 58.60 mg/kg	A14NE (E)	749	1	271760 197220
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 270230, 196260 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured Concentration: 35.30 mg/kg Cadmium Measured Concentration: 1.70 mg/kg Chromium Measured Concentration: 89.70 mg/kg Lead Measured Concentration: 147.30 mg/kg Nickel Measured Concentration: 38.10 mg/kg	A7SE (SW)	806	1	270230 196260
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 270250, 197750 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured Concentration: 39.30 mg/kg Cadmium Measured Concentration: 2.70 mg/kg Chromium Measured Concentration: 83.30 mg/kg Lead Measured Concentration: 258.10 mg/kg Nickel Measured Concentration: 47.20 mg/kg	A17NE (NW)	856	1	270250 197750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 269730, 197220 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured Concentration: 61.50 mg/kg Cadmium Measured Concentration: 7.90 mg/kg Chromium Measured Concentration: 94.70 mg/kg Lead Measured Concentration: 230.20 mg/kg Nickel Measured Concentration: 47.60 mg/kg	A11NE (W)	996	1	269730 197220
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 269740, 196720 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured Concentration: 75.90 mg/kg Cadmium Measured Concentration: 2.90 mg/kg Chromium Measured Concentration: 58.20 mg/kg Lead Measured Concentration: 139.90 mg/kg Nickel Measured Concentration: 26.10 mg/kg	A11SE (W)	999	1	269740 196720
	BGS Urban Soil Chemistry Averages Source: British Geological Survey, National Geoscience Information Service Sample Area: Swansea Count Id: 368 Arsenic Minimum Concentration: 8.00 mg/kg Arsenic Average Concentration: 79.00 mg/kg Arsenic Maximum Concentration: 2161.00 mg/kg Cadmium Minimum Concentration: 0.10 mg/kg Cadmium Average Concentration: 2.90 mg/kg Cadmium Maximum Concentration: 61.90 mg/kg Chromium Minimum Concentration: 13.00 mg/kg Chromium Average Concentration: 72.00 mg/kg Chromium Maximum Concentration: 562.00 mg/kg Lead Minimum Concentration: 23.00 mg/kg Lead Average Concentration: 413.00 mg/kg Lead Maximum Concentration: 10000.00 mg/kg Nickel Minimum Concentration: 8.00 mg/kg Nickel Average Concentration: 52.00 mg/kg Nickel Maximum Concentration: 384.00 mg/kg	A13SE (NW)	0	1	270877 196973
	Coal Mining Affected Areas 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	7	270877 196973
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13SE (NW)	0	-	270877 196973

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Natural Cavities Easting: 271700 Northing: 197500 Distance: 813 Quadrant Reference: A19 Quadrant Reference: SE Bearing Ref: NE Cavity Type: Unknown x 1 Solid Geology Detail: Upper Coal Measures Superficial Geology Detail: No Details	A19SE (NE)	813	8	271700 197500
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	270877 196973
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	270877 196973
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	144	1	271178 197025
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	270877 196973
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	270877 196973
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	45	1	270768 197084
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	53	1	270911 197126
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	159	1	271130 197161
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	165	1	270907 197237
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	181	1	270615 197182
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	200	1	270958 196700
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	215	1	270838 197271
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A12NE (NW)	245	1	270502 197161
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	270877 196973
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	0	1	270876 197007
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	6	1	270859 197062
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	194	1	270943 197274

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	200	1	270958 196700
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	270877 196973
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	0	1	270876 197007
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	6	1	270859 197062
	Radon Potential - Radon Affected Areas 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	270877 196973
	Radon Potential - Radon Protection Measures 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	270877 196973

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
224	**Contemporary Trade Directory Entries** Name: D F & A M Bevan Location: Park Av, Skewen, Neath, West Glamorgan, SA10 6RY Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (N)	132	-	270950 197202
224	**Contemporary Trade Directory Entries** Name: D F & A M Bevan Co Ltd Location: Park Avenue, Skewen, NEATH, West Glamorgan, SA10 6RY Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (N)	132	-	270950 197202
224	**Contemporary Trade Directory Entries** Name: D F & A M Bevan Ltd Location: Park Avenue, Skewen, Neath, West Glamorgan, SA10 6RY Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (N)	132	-	270950 197202
224	**Contemporary Trade Directory Entries** Name: Texaco Location: Park Avenue, Skewen, Neath, SA10 6RY Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (N)	133	-	270949 197202
225	**Contemporary Trade Directory Entries** Name: Barcool Location: Heol Ffranc, Neath, West Glamorgan, SA10 6DH Classification: Air Conditioning & Refrigeration Contractors **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A14SW (SE)	259	-	271279 196798
226	**Contemporary Trade Directory Entries** Name: Bevan Location: Park Av, Skewen, Neath, West Glamorgan, SA10 6RY Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NE (NE)	268	-	271192 197250
226	**Contemporary Trade Directory Entries** Name: Livingstone Construction Materials Testing Ltd Location: 19, Park Avenue, Skewen, Neath, West Glamorgan, SA10 6RU Classification: Laboratories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	312	-	271227 197279
227	**Contemporary Trade Directory Entries** Name: Painted Lady Pine Location: 2, Back Drive, Neath, West Glamorgan, SA10 6SB Classification: Antiques - Repairing & Restoring **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	269	-	270873 197331
228	**Contemporary Trade Directory Entries** Name: Guaranteed Appliance Repairs Location: 16, Park Drive, Neath, West Glamorgan, SA10 6SF Classification: Cookers - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	322	-	271185 197319
229	**Contemporary Trade Directory Entries** Name: Junction 44 Motor Company Location: Peniel Green Road, Llansamlet, Swansea, West Glamorgan, SA7 9BU Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	324	-	270578 197323
229	**Contemporary Trade Directory Entries** Name: Autofix Service & Mot Services Location: Peniel Green Road, Llansamlet, Swansea, SA7 9BU Classification: Mot Testing Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	345	-	270553 197335
229	**Contemporary Trade Directory Entries** Name: Autofix Service Centre Swansea Location: Peniel Green Road, Llansamlet, Swansea, SA7 9BU Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	345	-	270553 197335

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
230	**Contemporary Trade Directory Entries** Name: Equilibrium Chemical Services Location: Cwmdu Ind Est, Neath, West Glamorgan, SA10 6RP Classification: Chemical Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A14NW (NE)	369	-	271354 197218
230	**Contemporary Trade Directory Entries** Name: Cymru Automation Location: Unit 1, Lonlas Village Workshops, Cwmdu Industrial Estate, Neath, West Glamorgan, SA10 6RP Classification: Distribution Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	383	-	271369 197220
230	**Contemporary Trade Directory Entries** Name: Mining & Tunneling Supplies Location: Unit C, Lonlas Cellars, Siding Terrace, Lonlas, SA10 6RD Classification: Coal Mining **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	403	-	271392 197218
231	**Contemporary Trade Directory Entries** Name: M C S R Location: 22, Blaencwm Road, Llansamlet, Swansea, SA7 9TA Classification: Caravans - Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	622	-	270086 197048
232	**Contemporary Trade Directory Entries** Name: J & J Motors Location: Siding Terrace, Neath, SA10 6RF Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	725	-	271717 197278
232	**Contemporary Trade Directory Entries** Name: Crownhawk Properties Location: Siding Terrace, Neath, West Glamorgan, SA10 6RF Classification: Commercial Vehicle Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	725	-	271717 197278
232	**Contemporary Trade Directory Entries** Name: J & J Motors Location: Siding Terrace, Neath, West Glamorgan, SA10 6RF Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	726	-	271717 197278
232	**Contemporary Trade Directory Entries** Name: Low Cost Vans Location: Siding Terrace, Neath, SA10 6RF Classification: Commercial Vehicle Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	759	-	271749 197290
233	**Contemporary Trade Directory Entries** Name: Solar 2 Energy Savings Location: Unit 1 Lon Las Industrial Estate, Lucy Road Skewen, Neath, West Glamorgan, SA10 6RR Classification: Electricity Generating & Distributing Equipment **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A19SE (NE)	746	-	271691 197388
234	**Contemporary Trade Directory Entries** Name: Peter Benjamin Ltd Location: 12, Heol y Cyw, Birchgrove, Swansea, SA7 9NF Classification: Garage Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	758	-	270818 197816
234	**Contemporary Trade Directory Entries** Name: P B Garage Equipment Location: 12, Heol y Cyw, Birchgrove, Swansea, SA7 9NF Classification: Garage Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	758	-	270818 197816

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
235	**Contemporary Trade Directory Entries** Name: J & J Motors Location: Unit 14, Lonlas Business Park, Lonlas, Neath, West Glamorgan, SA10 6SN Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	811	-	271733 197444
235	**Contemporary Trade Directory Entries** Name: Premier Concrete Products Location: Unit 12, Lonlas Business Park, Lonlas, Neath, West Glamorgan, SA10 6SN Classification: Concrete Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	844	-	271765 197457
236	**Contemporary Trade Directory Entries** Name: Carpoint Wales Location: Siding Ter, Neath, West Glamorgan, SA10 6RF Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A14NE (E)	823	-	271809 197310
236	**Contemporary Trade Directory Entries** Name: Stadium Service Garage Location: Sidings Terrace, Neath, West Glamorgan, SA10 6RF Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	823	-	271809 197310
236	**Contemporary Trade Directory Entries** Name: Stadium Service Garage Location: Sidings Terrace, Neath, West Glamorgan, SA10 6RF Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	823	-	271809 197310
236	**Contemporary Trade Directory Entries** Name: Stadium Cars Location: Siding Terrace, Neath, West Glamorgan, SA10 6RF Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	823	-	271809 197310
236	**Contemporary Trade Directory Entries** Name: Low Cost Vans Location: Main Road,Siding Ter, Neath, West Glamorgan, SA10 6RF Classification: Commercial Vehicle Dealers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A14NE (E)	823	-	271809 197310
237	**Contemporary Trade Directory Entries** Name: Elite Electroplating Ltd Location: Unit 10 Lonlas Business Park,Cwmdu Indust Est, Neath, West Glamorgan, SA10 6RP Classification: Metal Finishing Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	874	-	271793 197468
237	**Contemporary Trade Directory Entries** Name: W W Powder Coating Location: Unit 8 Cwmdu Industrial Estate, Neath, West Glamorgan, SA10 6RP Classification: Powder Coatings **Status: Active** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	905	-	271822 197478
237	**Contemporary Trade Directory Entries** Name: Clarkes Coatings (Uk) Ltd Location: Unit 8,Ionlas Business Park, Skewen, Neath, West Glamorgan, SA10 6RP Classification: Coating Specialists **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	905	-	271821 197480
237	**Contemporary Trade Directory Entries** Name: Silverline Trading Uk Ltd Location: Unit 7, Lonlas Business Park, Lonlas, Neath, SA10 6SN Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	918	-	271837 197479

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
237	**Contemporary Trade Directory Entries** Name: Stadium Auto Repairs Ltd Location: Unit 7,Cwmdu Ind Est, Neath, West Glamorgan, SA10 6RP Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	918	-	271833 197486
238	**Contemporary Trade Directory Entries** Name: Personal Services Location: 13, Trewen Road, Birchgrove, Swansea, SA7 9PH Classification: Scrap Metal Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	880	-	270396 197850
239	**Contemporary Trade Directory Entries** Name: Hi Q Motorway Tyres Ltd Location: Unit 1, Cwmdu Industrial Estate, Neath, West Glamorgan, SA10 6RP Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	926	-	271870 197431
239	**Contemporary Trade Directory Entries** Name: Awteq Engineering Ltd Location: Unit 2,Cwmdu Ind Est, Neath, West Glamorgan, SA10 6RP Classification: Precision Engineers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	953	-	271884 197464
239	**Contemporary Trade Directory Entries** Name: Stadium Service Station Location: Lucy Road, Neath, West Glamorgan, SA10 6RS Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A20SW (NE)	957	-	271909 197423
240	**Contemporary Trade Directory Entries** Name: A B C 24 7 Pest Control Location: 15, Eileen Road, Llansamlet, Swansea, SA7 9TR Classification: Pest & Vermin Control **Status: Active** Positional Accuracy: Automatically positioned to the address	A11NE (W)	939	-	269785 197205
241	**Contemporary Trade Directory Entries** Name: Nationwide Paging Location: Office 6,Cwmdu Ind Est, Neath, West Glamorgan, SA10 6RP Classification: Telecommunications Equipment & Systems **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A19SE (NE)	953	-	271846 197532
241	**Contemporary Trade Directory Entries** Name: Cambrian Refrigeration Location: Lonlas Village Workshops,Cwmdu Indust Est, Neath, West Glamorgan, SA10 6RP Classification: Refrigeration Equipment - Commercial **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	960	-	271876 197496
241	**Contemporary Trade Directory Entries** Name: Skewen Welding Location: Unit 30a,Lonlas Village Workshops,Cwmdu Ind Est, Neath, West Glamorgan, SA10 6RP Classification: Wrought Ironwork **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	969	-	271858 197544
241	**Contemporary Trade Directory Entries** Name: Kiwi Sports Neath Ltd Location: Unit 6, Lonlas Village Workshops, Cwmdu Industrial Estate, Neath, West Glamorgan, SA10 6RP Classification: Sports Equipment Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	980	-	271881 197528
241	**Contemporary Trade Directory Entries** Name: City Maintenance Services Location: Offices 5 & 6 Lon Las Village Workshops, Skewen, Neath, West Glamorgan, SA10 6RB Classification: Door Manufacturers - Industrial **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	980	-	271884 197522

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
241	**Contemporary Trade Directory Entries** Name: Argent Fabrications & Coatings Ltd Location: Unit 5, Lonlas Village Workshops, Cwmdu Industrial Estate, Neath, West Glamorgan, SA10 6RP Classification: Powder Coatings **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	981	-	271885 197522
241	**Contemporary Trade Directory Entries** Name: Xtreme Sportswear Location: Lonlas Village Workshops,Cwmdu Indust Est, Neath, West Glamorgan, SA10 6RP Classification: Sportswear - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	981	-	271885 197522
241	**Contemporary Trade Directory Entries** Name: Independent Packaging Services Location: Unit 5, Lonlas Village Workshops, Cwmdu Industrial Estate, Neath, West Glamorgan, SA10 6RP Classification: Pallets, Crates & Packing Cases **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	981	-	271885 197522
241	**Contemporary Trade Directory Entries** Name: Motor Star Garage Services Location: Unit 7, Cwmdu Industrial Estate, Neath, SA10 6RP Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	988	-	271889 197530
241	**Contemporary Trade Directory Entries** Name: Motor Star Location: Unit 7, Cwmdu Industrial Estate, Neath, SA10 6RP Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	988	-	271889 197530
241	**Contemporary Trade Directory Entries** Name: Stadium Of Skewen Location: Unit 7,Lonlas Village Workshops,Cwmdu Ind Est, Neath, West Glamorgan, SA10 6RP Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	990	-	271889 197533
241	**Contemporary Trade Directory Entries** Name: Stadium Auto Repairs Location: Unit 7, Cwmdu Industrial Estate, Neath, West Glamorgan, SA10 6RP Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	990	-	271889 197532
242	**Fuel Station Entries** Name: Baglan Bay Service Station Location: Park Avenue , Skewen , Neath, Neath Port Talbot, SA10 6RY Brand: TEXACO Premises Type: Petrol Station **Status: Open** Positional Accuracy: Manually positioned to the address or location	A13NE (N)	137	-	270954 197207
243	**Fuel Station Entries** Name: Peniel Green Road Service Station Location: Peniel Green Road , Llansamlet , Swansea, Swansea, SA7 9AP Brand: Bp Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Approximate location provided by supplier	A12NE (NW)	305	-	270483 197233
244	**Fuel Station Entries** Name: Stadium Garage Location: New Road , Skewen , Neath, Neath Port Talbot, SA10 6RF Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A14NE (E)	823	-	271809 197310
245	**Points of Interest - Commercial Services** Name: Baglan Bay Service Station Location: Park Avenue, Skewen, Neath, SA10 6RY Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A13NE (N)	137	9	270954 197207

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
245	**Points of Interest - Commercial Services** Name: Car Wash Location: Park Avenue, Skewen, Neath, SA10 6RY Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A13NE (N)	137	9	270954 197207
246	**Points of Interest - Commercial Services** Name: Autofix Service Centre Location: Peniel Green Road, Llansamlet, Swansea, SA7 9BU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18SW (NW)	345	9	270553 197334
246	**Points of Interest - Commercial Services** Name: Autofix Service & MOT Services Location: Peniel Green Road, Llansamlet, Swansea, SA7 9BU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18SW (NW)	345	9	270553 197335
246	**Points of Interest - Commercial Services** Name: Autofix Location: Peniel Green Road, Llansamlet, Swansea, SA7 9BU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18SW (NW)	345	9	270555 197335
247	**Points of Interest - Commercial Services** Name: Cymru Automation Location: Unit 1 Lonlas Village Workshops, Cwmdu Industrial Estate, Neath, SA10 6RP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A14NW (NE)	383	9	271369 197220
248	**Points of Interest - Commercial Services** Name: 24 / 7 Haulage Ltd Location: 98 Frederick Place, Llansamlet, Swansea, SA7 9TS Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12NW (W)	593	9	270122 197128
249	**Points of Interest - Commercial Services** Name: J & J Motors Location: Siding Terrace, Main Road, Neath, SA10 6RF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	725	9	271717 197278
250	**Points of Interest - Commercial Services** Name: Stadium Body Shop Location: Sidings Terrace, Skewen, Neath, SA10 6RE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	807	9	271793 197307
250	**Points of Interest - Commercial Services** Name: Stadium Service Garage Location: Sidings Terrace, Neath, SA10 6RF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	823	9	271809 197310
250	**Points of Interest - Commercial Services** Name: Stadium Service Garage Location: Siding Terrace, Neath, SA10 6RF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	823	9	271809 197310
251	**Points of Interest - Commercial Services** Name: J & J Motors Location: Unit 14, Lonlas Business Park, Lonlas, Neath, SA10 6SN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SE (NE)	811	9	271733 197444
252	**Points of Interest - Commercial Services** Name: Personal Services Location: 13 Trewen Road, Birchgrove, Swansea, SA7 9PH Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A17NE (NW)	880	9	270395 197850

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
253	**Points of Interest - Commercial Services** Name: Stadium Garage Workshop Location: Unit 7, Cwmdu Ind Est, Neath, West Glamorgan, SA10 6RP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SE (NE)	918	9	271833 197486
253	**Points of Interest - Commercial Services** Name: Skewen Tyre & Auto Centre Ltd Location: Unit 2, Lonlas Business Park, Lonlas, Neath, SA10 6SN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SE (NE)	953	9	271884 197464
253	**Points of Interest - Commercial Services** Name: Skewen Welding Location: Unit 30a, Lonlas Village Workshops, Cwmdu Ind Est, Neath, West Glamorgan, SA10 6RP Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A19SE (NE)	969	9	271858 197544
253	**Points of Interest - Commercial Services** Name: Skewen Welding Location: Unit 30a Lonlas Village Workshops, Cwmdu Industrial Estate, Neath, SA10 6RP Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A19SE (NE)	969	9	271858 197544
253	**Points of Interest - Commercial Services** Name: Cymru Automation Location: Unit 1 Lonlas Village Workshops, Cwmdu Industrial Estate, Neath, SA10 6RP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A20SW (NE)	978	9	271894 197500
253	**Points of Interest - Commercial Services** Name: Motor Star Location: Unit 7, Cwmdu Industrial Estate, Neath, SA10 6RP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SE (NE)	988	9	271889 197530
253	**Points of Interest - Commercial Services** Name: Motor Star Garage Services Location: Unit 7 Lonlas Village Workshops, Cwmdu Industrial Estate, Neath, SA10 6RP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SE (NE)	990	9	271889 197532
253	**Points of Interest - Commercial Services** Name: Stadium Auto Repairs Ltd Location: Unit 7, Cwmdu Industrial Estate, Neath, SA10 6RP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SE (NE)	990	9	271889 197532
253	**Points of Interest - Commercial Services** Name: Stadium Auto Repairs Ltd Location: Unit 7, Cwmdu Industrial Estate, Neath, SA10 6RP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SE (NE)	990	9	271889 197532
254	**Points of Interest - Commercial Services** Name: A B C 24 7 Pest Control Location: 15 Eileen Road, Llansamlet, Swansea, SA7 9TR Category: Contract Services Class Code: Pest and Vermin Control Positional Accuracy: Positioned to address or location	A11NE (W)	940	9	269784 197205
255	**Points of Interest - Commercial Services** Name: Stadium Body Shop Location: Dynevor Place, Skewen, Neath, SA10 6RG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A20SW (E)	952	9	271932 197353

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
256	**Points of Interest - Manufacturing and Production** Name: Crymlyn Quarry (Disused) Location: SA7 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to address or location	A12SE (W)	440	9	270276 196895
256	**Points of Interest - Manufacturing and Production** Name: Crymlyn Quarry (Disused) Location: SA7 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	446	9	270274 196877
257	**Points of Interest - Manufacturing and Production** Name: Oil Refinery Location: SA10 Category: Extractive Industries Class Code: Oil and Gas Extraction, Refinery and Product Manufacture Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	473	9	271352 196551
258	**Points of Interest - Manufacturing and Production** Name: Air Shaft Location: SA7 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to an adjacent address or location	A12NW (NW)	591	9	270170 197274
259	**Points of Interest - Manufacturing and Production** Name: Oil Refinery Location: SA10 Category: Extractive Industries Class Code: Oil and Gas Extraction, Refinery and Product Manufacture Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	697	9	271672 196604
260	**Points of Interest - Manufacturing and Production** Name: Oil Refinery Location: SA10 Category: Extractive Industries Class Code: Oil and Gas Extraction, Refinery and Product Manufacture Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	719	9	271178 196206
261	**Points of Interest - Manufacturing and Production** Name: Tal-Y-Wendda Drift Colliery (Disused) Location: SA7 Category: Extractive Industries Class Code: Coal Mining Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	781	9	270169 196350
262	**Points of Interest - Manufacturing and Production** Name: Oil Refinery Location: SA10 Category: Extractive Industries Class Code: Oil and Gas Extraction, Refinery and Product Manufacture Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	793	9	270911 196107
263	**Points of Interest - Manufacturing and Production** Name: Lonlas Business Park Location: SA10 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	812	9	271723 197463
263	**Points of Interest - Manufacturing and Production** Name: Lonlas Business Park Location: SA10 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	831	9	271739 197473
263	**Points of Interest - Manufacturing and Production** Name: G J Isaac & Son Ltd Location: Unit 9, Lonlas Business Park, Lonlas, Neath, SA10 6SN Category: Extractive Industries Class Code: Stone Quarrying and Preparation Positional Accuracy: Positioned to address or location	A19SE (NE)	893	9	271809 197476
263	**Points of Interest - Manufacturing and Production** Name: George J Isaac & Son Ltd Location: Unit 9, Lonlas Business Park, Lonlas, Neath, SA10 6SN Category: Extractive Industries Class Code: Stone Quarrying and Preparation Positional Accuracy: Positioned to address or location	A19SE (NE)	893	9	271809 197476

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
264	**Points of Interest - Manufacturing and Production** Name: Oil Refinery Location: SA10 Category: Extractive Industries Class Code: Oil and Gas Extraction, Refinery and Product Manufacture Positional Accuracy: Positioned to an adjacent address or location	A9SE (SE)	914	9	271717 196290
265	**Points of Interest - Manufacturing and Production** Name: Air Shaft Location: SA7 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to an adjacent address or location	A17SW (NW)	919	9	269899 197463
266	**Points of Interest - Manufacturing and Production** Name: Lonlas Village Workshops Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	965	9	271887 197485
266	**Points of Interest - Manufacturing and Production** Name: Workshops Location: SA10 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	965	9	271888 197483
267	**Points of Interest - Manufacturing and Production** Name: Quarry (Disused) Location: SA10 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	967	9	271811 197609
267	**Points of Interest - Manufacturing and Production** Name: Quarry (Disused) Location: SA10 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to address or location	A19SE (NE)	968	9	271805 197619
268	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA10 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A4NW (S)	991	9	271239 195940
269	**Points of Interest - Public Infrastructure** Name: Sewage Pumping Station Location: SA10 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	34	9	271032 197074
270	**Points of Interest - Public Infrastructure** Name: Texaco Location: Park Avenue, Skewen, Neath, SA10 6RY Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13NE (N)	132	9	270949 197201
270	**Points of Interest - Public Infrastructure** Name: Baglan Bay Sstn Location: Park Avenue, Skewen, Neath, SA10 6RY Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13NE (N)	132	9	270950 197202
270	**Points of Interest - Public Infrastructure** Name: Baglan Bay Station Location: Park Avenue, Skewen, Neath, SA10 6RY Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13NE (N)	137	9	270954 197207
270	**Points of Interest - Public Infrastructure** Name: Baglan Bay Service Station Location: Park Avenue, Skewen, Neath, West Glamorgan, SA10 6RY Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13NE (N)	137	9	270954 197207

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
271	**Points of Interest - Public Infrastructure** Name: Coedffranc Cemetery Location: SA10 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	189	9	271131 196743
271	**Points of Interest - Public Infrastructure** Name: Coedffranc Cemetery Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	190	9	271131 196742
272	**Points of Interest - Public Infrastructure** Name: Sluice Location: SA10 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	366	9	271162 196565
272	**Points of Interest - Public Infrastructure** Name: Sluice Location: SA10 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	367	9	271167 196566
273	**Points of Interest - Public Infrastructure** Name: Cemetery Location: SA7 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	421	9	270379 197290
274	**Points of Interest - Public Infrastructure** Name: Sluices Location: SA10 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	618	9	271387 196396
274	**Points of Interest - Public Infrastructure** Name: Sluice Location: SA10 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	619	9	271390 196397
274	**Points of Interest - Public Infrastructure** Name: Sluice Location: SA10 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	636	9	271333 196345
275	**Points of Interest - Public Infrastructure** Name: Sluice Location: SA10 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	626	9	271303 196341
276	**Points of Interest - Public Infrastructure** Name: Sewage Pumping Station Location: SA10 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	641	9	271656 197191
277	**Points of Interest - Public Infrastructure** Name: Sewage Pumping Station Location: SA7 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	646	9	270061 197006
278	**Points of Interest - Public Infrastructure** Name: Sluice Location: SA10 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	772	9	271747 196586

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
279	**Points of Interest - Recreational and Environmental** Name: Play Area Location: SA10 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	10	9	270781 196879
280	**Points of Interest - Recreational and Environmental** Name: Playground Location: (Heol Pentwyn), SA10 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	402	9	271448 196883
280	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	409	9	271455 196883
281	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A15NW (E)	915	9	271922 197255
281	**Points of Interest - Recreational and Environmental** Name: Playground Location: The Meadows (Y Waun), SA10 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A15NW (E)	915	9	271922 197255
282	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A23SW (N)	991	9	270718 198037
282	**Points of Interest - Recreational and Environmental** Name: Playground Location: (Llys-Y-Waun), SA7 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A23SW (N)	991	9	270718 198037
283	**Points of Interest - Recreational and Environmental** Name: Play Area Location: SA7 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A23SW (N)	993	9	270619 198021

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
284	**Ancient Woodland** Name: Not Supplied Reference: 12264 Area(m²): 5516.23 Type: Ancient and Semi-Natural Woodland	A13NE (N)	109	2	270964 197183
285	**Ancient Woodland** Name: Not Supplied Reference: 12265 Area(m²): 5511.19 Type: Ancient and Semi-Natural Woodland	A13NE (NE)	153	2	271102 197172
286	**Ancient Woodland** Name: Not Supplied Reference: 10092 Area(m²): 10760.42 Type: Ancient and Semi-Natural Woodland	A12SE (W)	274	2	270436 196960
287	**Ancient Woodland** Name: Not Supplied Reference: 18295 Area(m²): 38062.64 Type: Ancient and Semi-Natural Woodland	A12NE (W)	283	2	270425 196995
288	**Ancient Woodland** Name: Not Supplied Reference: 23153 Area(m²): 2998.42 Type: Restored Ancient Woodland Site	A18SE (NE)	339	2	271130 197370
289	**Ancient Woodland** Name: Not Supplied Reference: 23155 Area(m²): 5432.96 Type: Restored Ancient Woodland Site	A18SE (NE)	346	2	271063 197404
290	**Ancient Woodland** Name: Not Supplied Reference: 10091 Area(m²): 14998.64 Type: Ancient and Semi-Natural Woodland	A12SE (SW)	359	2	270423 196706
291	**Ancient Woodland** Name: Not Supplied Reference: 11356 Area(m²): 34083.64 Type: Restored Ancient Woodland Site	A18SE (NE)	365	2	271106 197409
292	**Ancient Woodland** Name: Not Supplied Reference: 7500 Area(m²): 1845.83 Type: Ancient and Semi-Natural Woodland	A12SE (SW)	378	2	270385 196741
293	**Ancient Woodland** Name: Not Supplied Reference: 12263 Area(m²): 4188.3 Type: Ancient and Semi-Natural Woodland	A8NW (S)	465	2	270861 196431
294	**Ancient Woodland** Name: Not Supplied Reference: 12262 Area(m²): 5337.61 Type: Ancient and Semi-Natural Woodland	A8NE (S)	491	2	271013 196423
295	**Ancient Woodland** Name: Not Supplied Reference: 12261 Area(m²): 3579.08 Type: Ancient and Semi-Natural Woodland	A8NE (S)	504	2	271065 196399
296	**Ancient Woodland** Name: Not Supplied Reference: 23154 Area(m²): 1588.21 Type: Restored Ancient Woodland Site	A19SW (NE)	573	2	271499 197368
297	**Ancient Woodland** Name: Not Supplied Reference: 23156 Area(m²): 5135.25 Type: Restored Ancient Woodland Site	A19SE (NE)	694	2	271621 197404

Sensitive Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
298	**Ancient Woodland** Name: Not Supplied Reference: 48516 Area(m²): 5682.1 Type: Ancient Woodland Site of Unknown Category	A7NW (SW)	822	2	270096 196370
299	**Ancient Woodland** Name: Not Supplied Reference: 14838 Area(m²): 4579.63 Type: Ancient and Semi-Natural Woodland	A19NW (NE)	870	2	271507 197764
300	**Ramsar Sites** Name: Crymlyn Bog Multiple Areas: Y Total Area (m2): 2675566.42 Source: Natural Resources Wales Reference: UK14006 Designation Date: 8th June 1993	A7SW (SW)	900	2	270125 196227
301	**Sites of Special Scientific Interest** Name: Cors Crymlyn / Crymlyn Bog Multiple Areas: Y Total Area (m2): 2809777.13 Source: Natural Resources Wales Reference: 47433wwp Designation Details: Biological Designation Date: 1st January 1975 Date Type: Notified	A8SW (SW)	614	2	270556 196303
302	**Special Areas of Conservation** Name: Crymlyn Bog / Cors Crymlyn Multiple Areas: Y Total Area (m2): 2997434.94 Source: Natural Resources Wales Reference: Uk0012885 **Status: Designated**	A8SW (SW)	614	2	270556 196303

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
City and County of Swansea - Environmental Health Department	January 2015	Annual Rolling Update
Natural Resources Wales	June 2020	Annually
Neath Port Talbot County Borough Council - Environmental Health Department	March 2015	Annual Rolling Update
Discharge Consents		
Environment Agency - Welsh Region	August 2014	Quarterly
Natural Resources Wales	December 2020	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Welsh Region	March 2013	Annual Rolling Update
Integrated Pollution Controls		
Environment Agency - Welsh Region	October 2008	Variable
Integrated Pollution Prevention And Control		
Natural Resources Wales	February 2021	Quarterly
Environment Agency - Welsh Region	January 2021	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Swansea Bay Port Health Authority	April 2014	Variable
Neath Port Talbot County Borough Council - Environmental Health Department	August 2012	Variable
City and County of Swansea - Environmental Health Department	June 2014	Variable
Local Authority Pollution Prevention and Controls		
Swansea Bay Port Health Authority	April 2014	Annually
City and County of Swansea - Environmental Health Department	June 2014	Annual Rolling Update
Neath Port Talbot County Borough Council - Environmental Health Department	March 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Swansea Bay Port Health Authority	April 2014	Variable
City and County of Swansea - Environmental Health Department	June 2014	Variable
Neath Port Talbot County Borough Council - Environmental Health Department	March 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	October 2020	
Pollution Incidents to Controlled Waters		
Environment Agency - Welsh Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Welsh Region	March 2013	Annual Rolling Update
Natural Resources Wales	March 2013	Annual Rolling Update
Prosecutions Relating to Controlled Waters		
Environment Agency - Welsh Region	March 2013	Annual Rolling Update
Natural Resources Wales	March 2013	Annual Rolling Update
Registered Radioactive Substances		
Natural Resources Wales	January 2015	Annually
Environment Agency - Welsh Region	June 2016	
Substantiated Pollution Incident Register		
Environment Agency Wales - South West Area	January 2021	Quarterly
Natural Resources Wales	January 2021	Quarterly
Water Abstractions		
Natural Resources Wales	February 2021	Quarterly
Environment Agency - Welsh Region	January 2021	Quarterly
Water Industry Act Referrals		
Natural Resources Wales	December 2021	Quarterly
Environment Agency - Welsh Region	October 2017	Quarterly
Groundwater Vulnerability Map		
Natural Resources Wales	June 2018	As notified
Bedrock Aquifer Designations		
Natural Resources Wales	January 2018	Annually

Data Currency

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

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Natural Resources Wales	July 2017	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Welsh Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency Wales - South West Area	January 2021	Quarterly
Natural Resources Wales	January 2021	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency Wales - South West Area	January 2021	Quarterly
Natural Resources Wales	January 2021	Quarterly
Local Authority Landfill Coverage		
City and County of Swansea - Environmental Health Department	May 2000	Not Applicable
Neath Port Talbot County Borough Council - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
City and County of Swansea - Environmental Health Department	May 2000	Not Applicable
Neath Port Talbot County Borough Council - Environmental Health Department	September 2003	Not Applicable
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites		
Environment Agency Wales - South West Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency Wales - South West Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency Wales - South West Area	March 2003	Not Applicable
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
City and County of Swansea - Planning Department	January 2016	Variable
Neath Port Talbot County Borough Council - Planning Department	October 2015	Variable
Planning Hazardous Substance Consents		
City and County of Swansea - Planning Department	January 2016	Variable
Neath Port Talbot County Borough Council - Planning Department	October 2015	Variable

Data Currency

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2020	Bi-Annually
BGS Urban Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Urban Soil Chemistry Averages British Geological Survey - National Geoscience Information Service	October 2015	Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	January 2021	Quarterly
Fuel Station Entries Catalist Ltd - Experian	September 2020	Quarterly
Gas Pipelines National Grid	January 2021	
Points of Interest - Commercial Services PointX	March 2021	Quarterly
Points of Interest - Education and Health PointX	March 2021	Quarterly
Points of Interest - Manufacturing and Production PointX	March 2021	Quarterly
Points of Interest - Public Infrastructure PointX	March 2021	Quarterly
Points of Interest - Recreational and Environmental PointX	March 2021	Quarterly
Underground Electrical Cables National Grid	December 2020	

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural Resources Wales	August 2018	Bi-Annually
Areas of Adopted Green Belt		
City and County of Swansea	June 2020	As notified
Neath Port Talbot County Borough Council - Planning Services	June 2020	As notified
Areas of Unadopted Green Belt		
City and County of Swansea	June 2020	As notified
Neath Port Talbot County Borough Council - Planning Services	June 2020	As notified
Areas of Outstanding Natural Beauty		
Natural Resources Wales	June 2019	Bi-Annually
Environmentally Sensitive Areas		
The National Assembly for Wales - GI Services (Department of Planning & Countryside)	January 2017	
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
City and County of Swansea	August 2018	Bi-Annually
Neath Port Talbot County Borough Council	August 2018	Bi-Annually
Marine Nature Reserves		
Natural Resources Wales	August 2018	Bi-Annually
National Nature Reserves		
Natural Resources Wales	June 2019	Bi-Annually
National Parks		
Natural Resources Wales	August 2018	Annually
Nitrate Vulnerable Zones		
Natural Resources Wales	July 2019	Bi-Annually
The National Assembly for Wales - GI Services (Department of Planning & Countryside)	October 2005	
Ramsar Sites		
Natural Resources Wales	July 2019	Bi-Annually
Sites of Special Scientific Interest		
Natural Resources Wales	March 2020	Bi-Annually
Special Areas of Conservation		
Natural Resources Wales	August 2020	Bi-Annually
Special Protection Areas		
Natural Resources Wales	August 2018	Bi-Annually

Data Suppliers

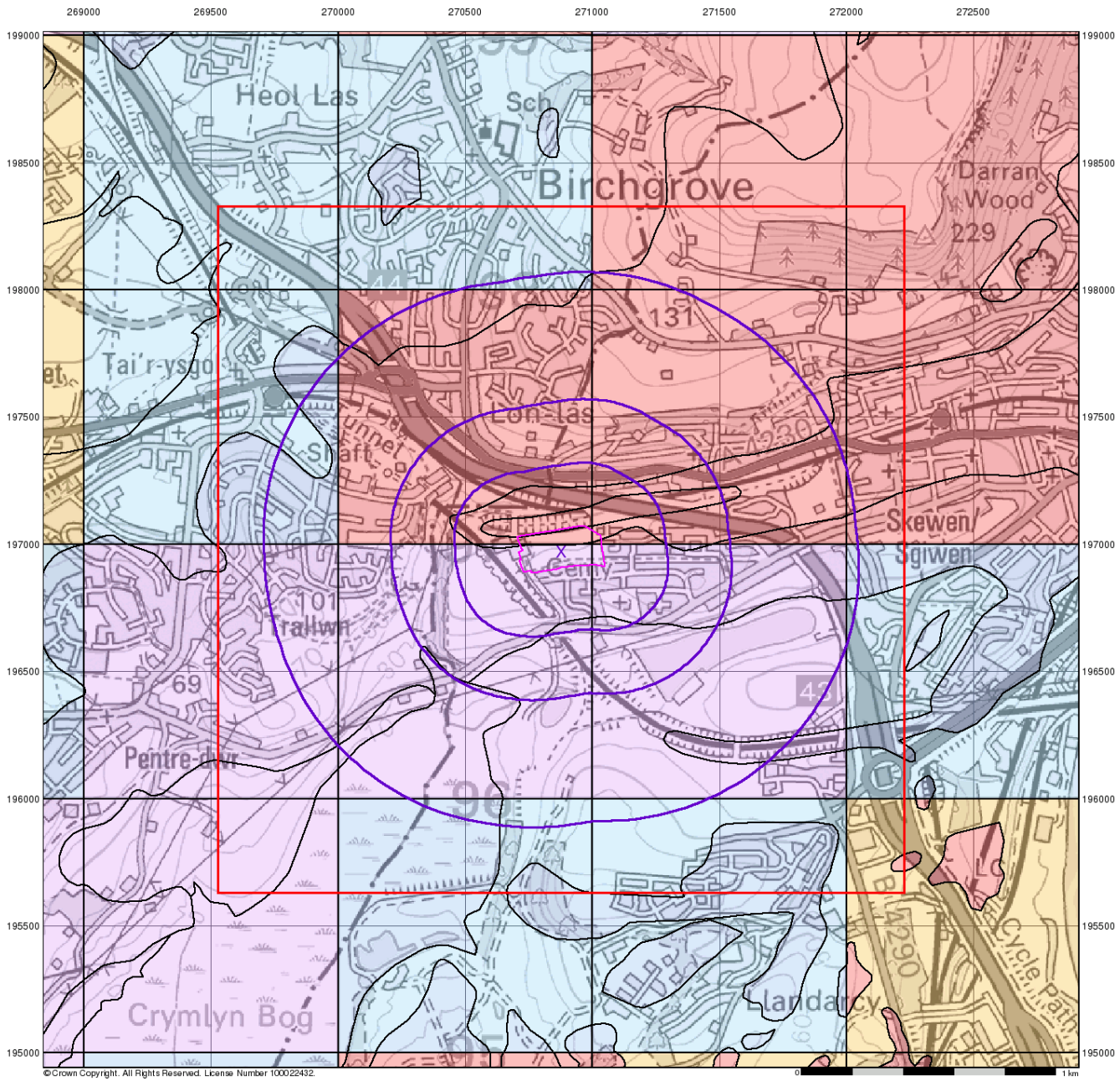
A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
Environment Agency	Environment Agency
Scottish Environment Protection Agency	SEPA Scottish Environment Protection Agency
The Coal Authority	The Coal Authority
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	Cyfoeth Naturiol Cymru Natural Resources Wales
Scottish Natural Heritage	SCOTTISH NATURAL HERITAGE
Natural England	NATURAL ENGLAND
Public Health England	Public Health England
Ove Arup	ARUP
Stantec UK Ltd	Stantec

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** 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	**Natural Resources Wales** Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	**Neath Port Talbot County Borough Council - Environmental Health Department** Room 322, Neath Civic Centre, Neath, West Glamorgan, SA11 3QZ	Telephone: 01639 763333 Fax: 01693 763444 Website: www.neath-porttalbot.gov.uk
4	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**City and County of Swansea - Environmental Health Department** The Guildhall, Swansea, West Glamorgan, SA1 4PE	Telephone: 01792 636000 extn 5651 Fax: 01792 635719
7	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
8	**Stantec UK Ltd** Caversham Bridge House, Waterman Place, Reading, RG1 8DN	Telephone: 0118 950 0761 Email: pba.reading@stantec.com Website: www.stantec.com
9	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** 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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Groundwater Vulnerability

General

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

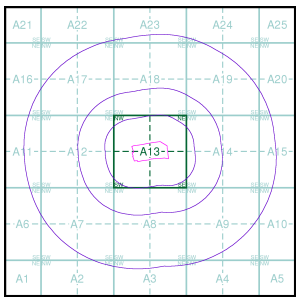
Agency and Hydrological

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

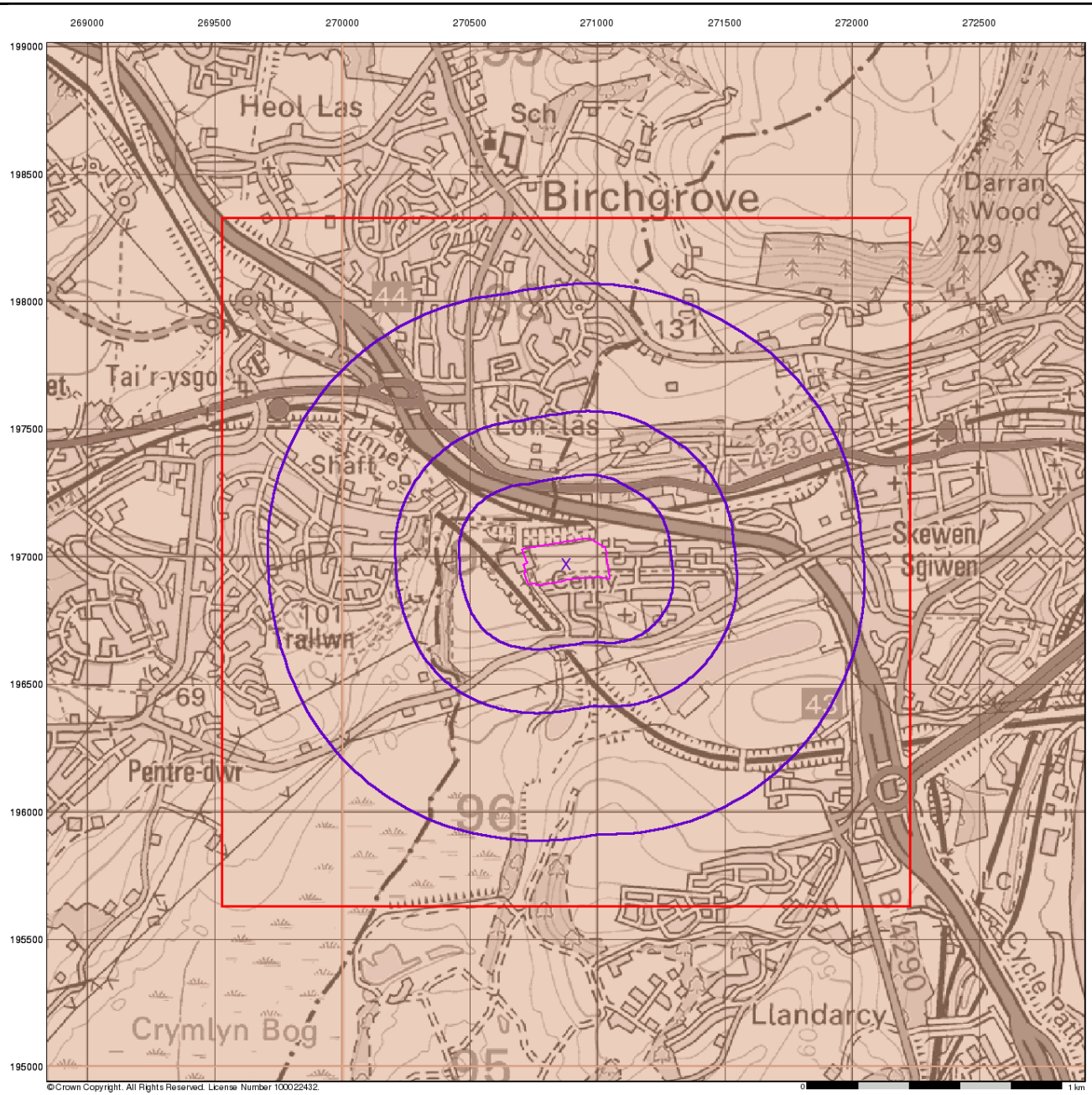
Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	1000

Site Details

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Bedrock Aquifer Designation

General

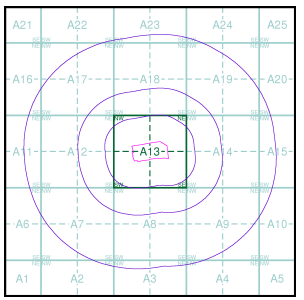
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

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

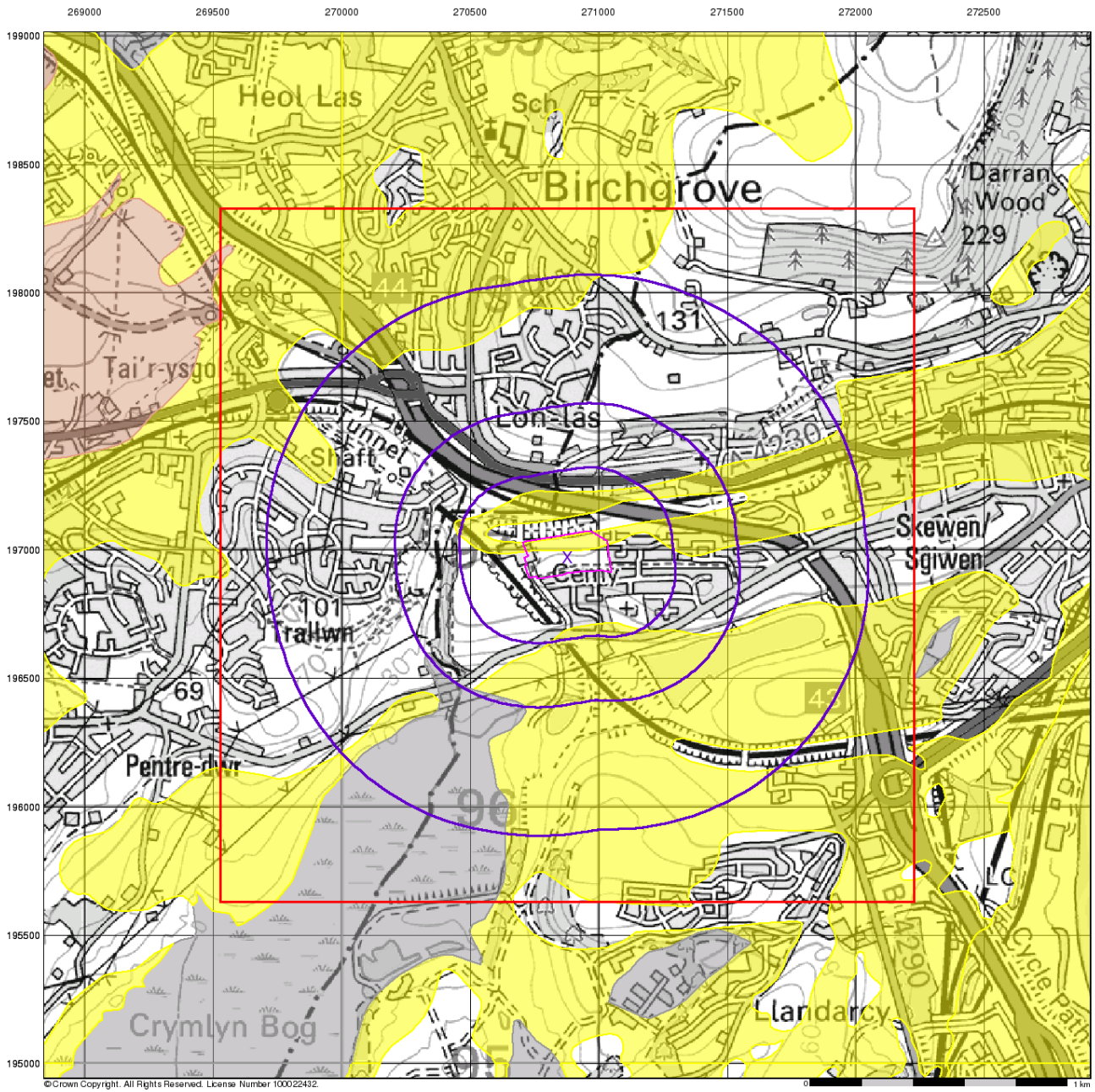
Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	1000

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Superficial Aquifer Designation

General

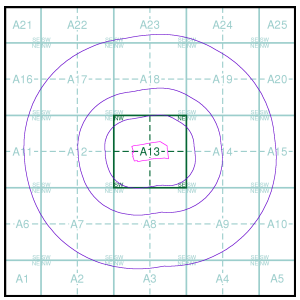
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

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

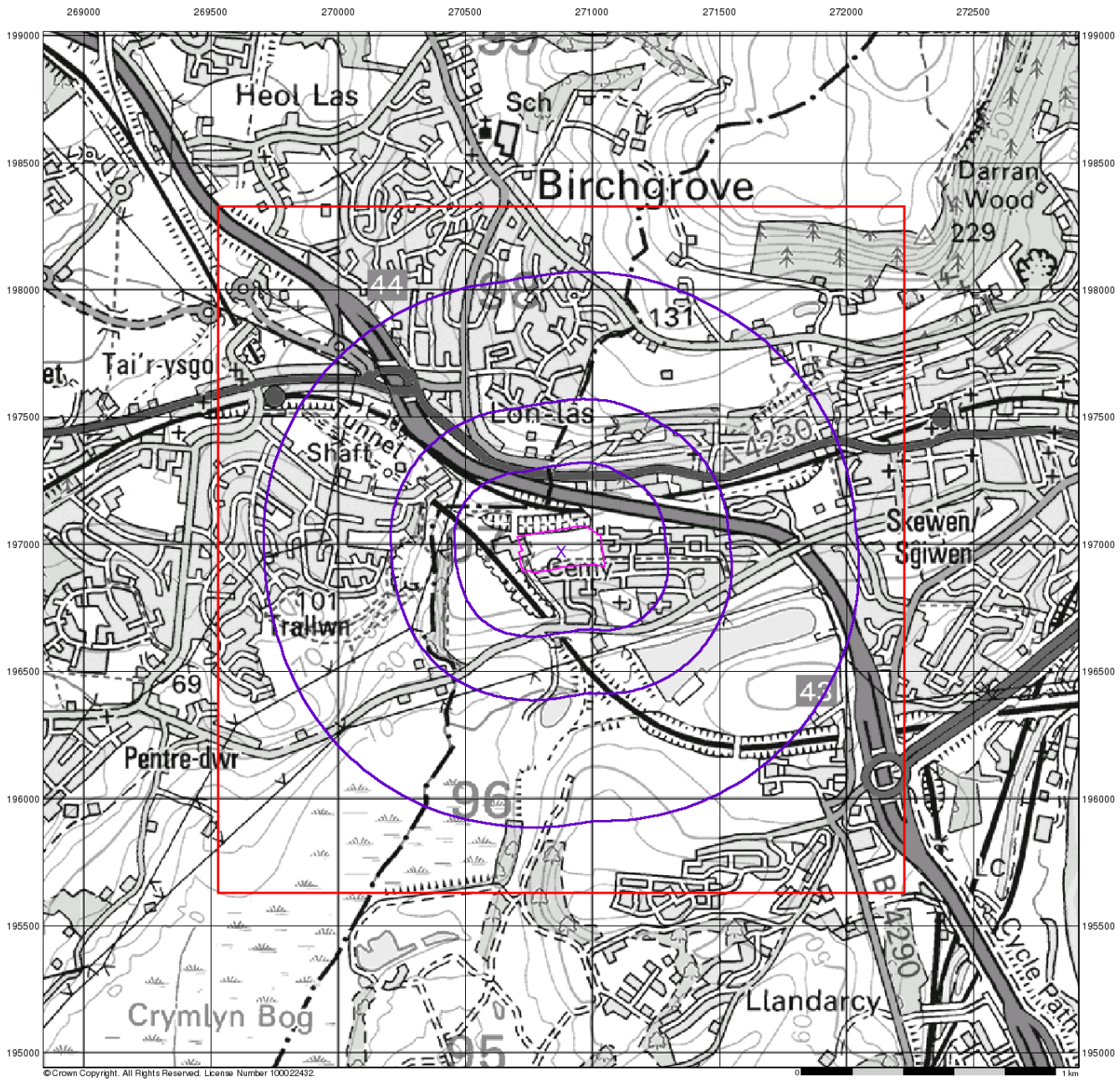


Order Details

Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	1000

Site Details

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Source Protection Zones

General

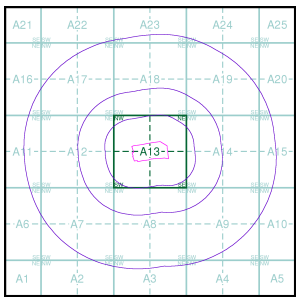
Specified Site | Specified Buffer(s) | Bearing Reference Point

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

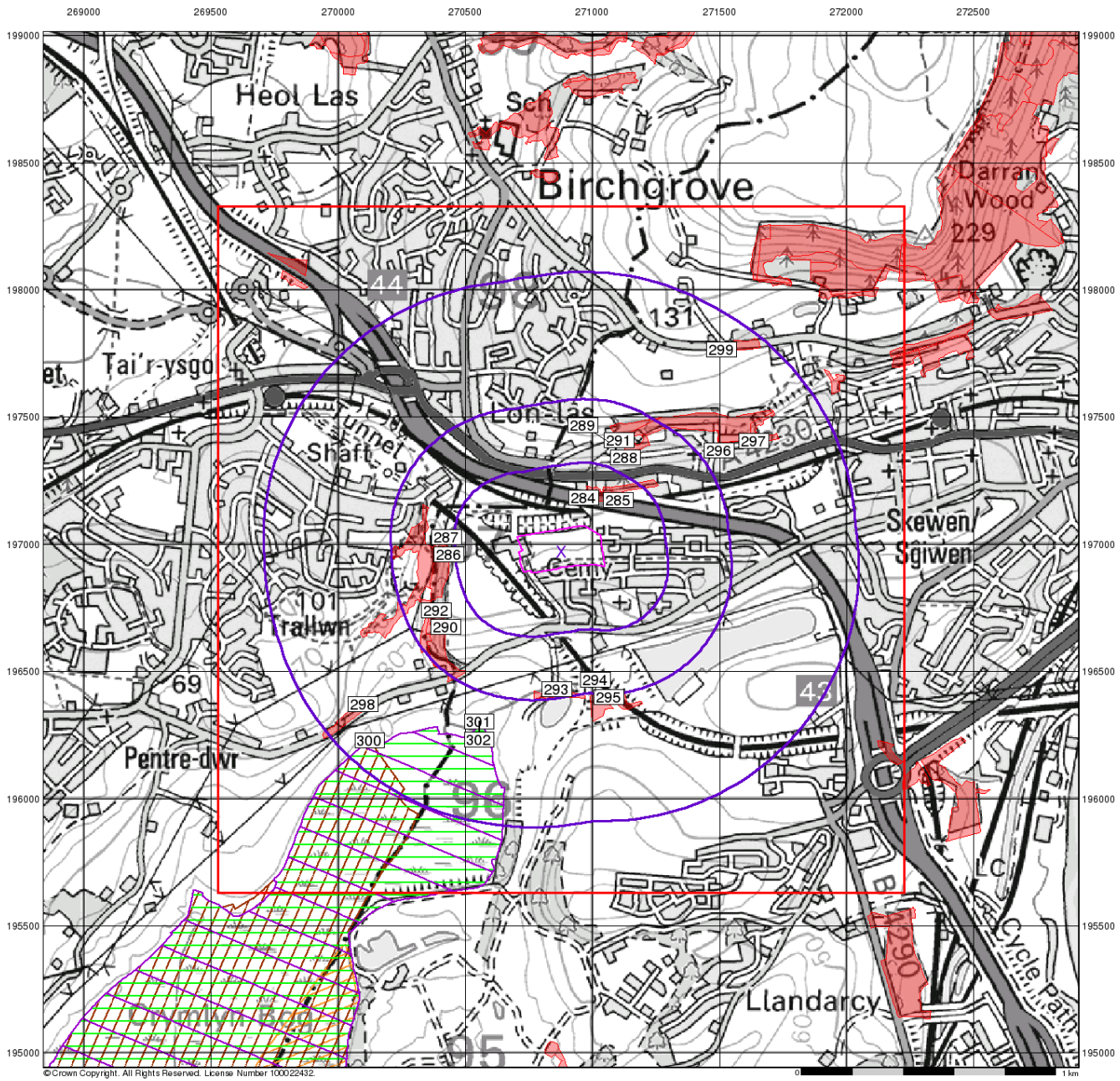


Order Details

Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	1000

Site Details

Phase 5 - Crymlyn Road, Skewen, Neath, SA10 6NL



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Sensitive Land Uses

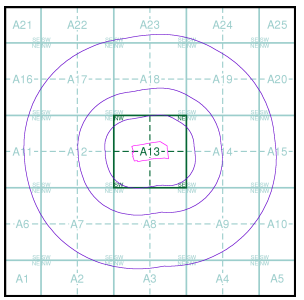
General

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

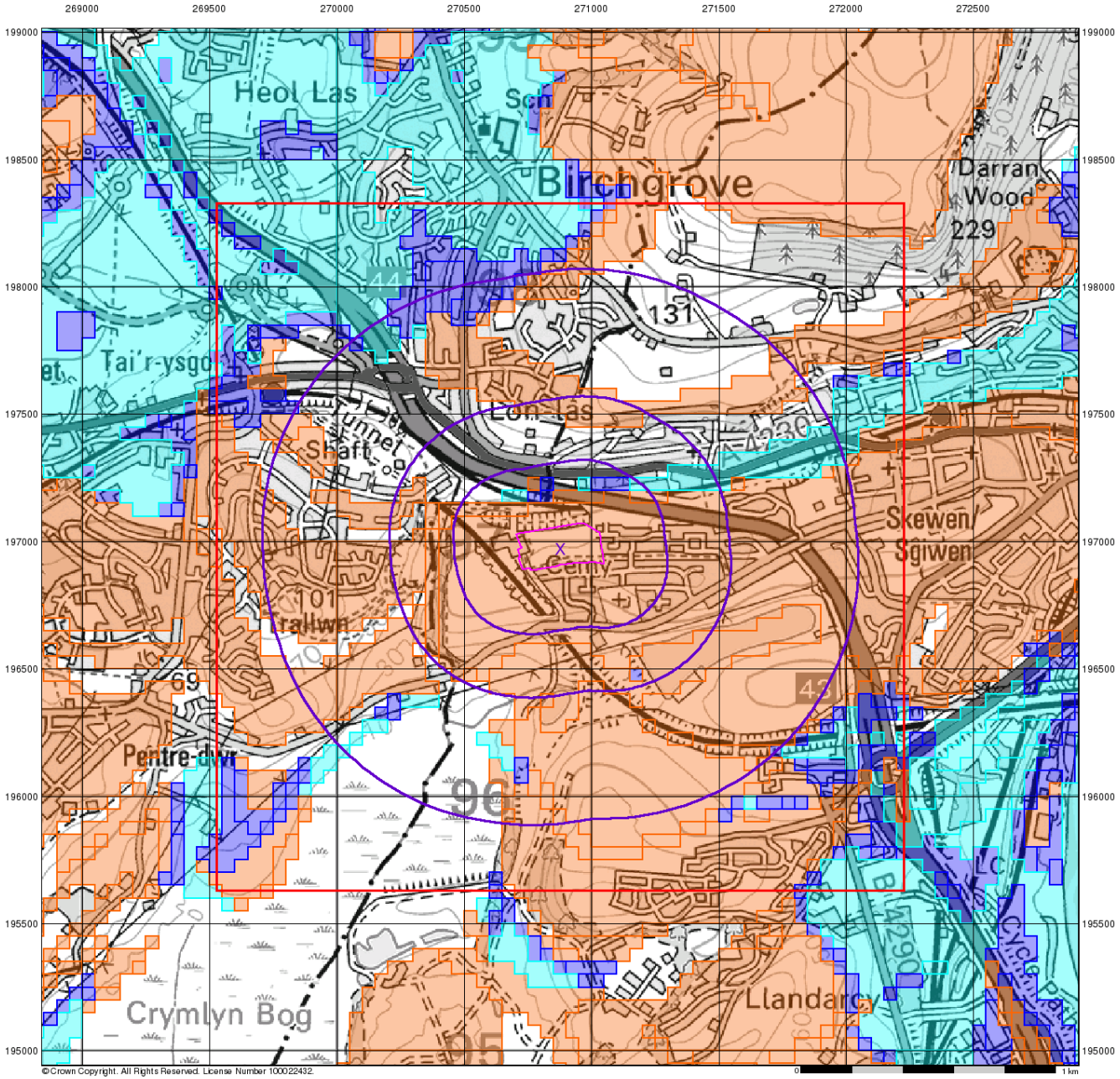
Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	1000

Site Details

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BGS Flood GFS Data

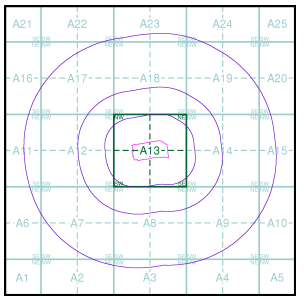
General

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

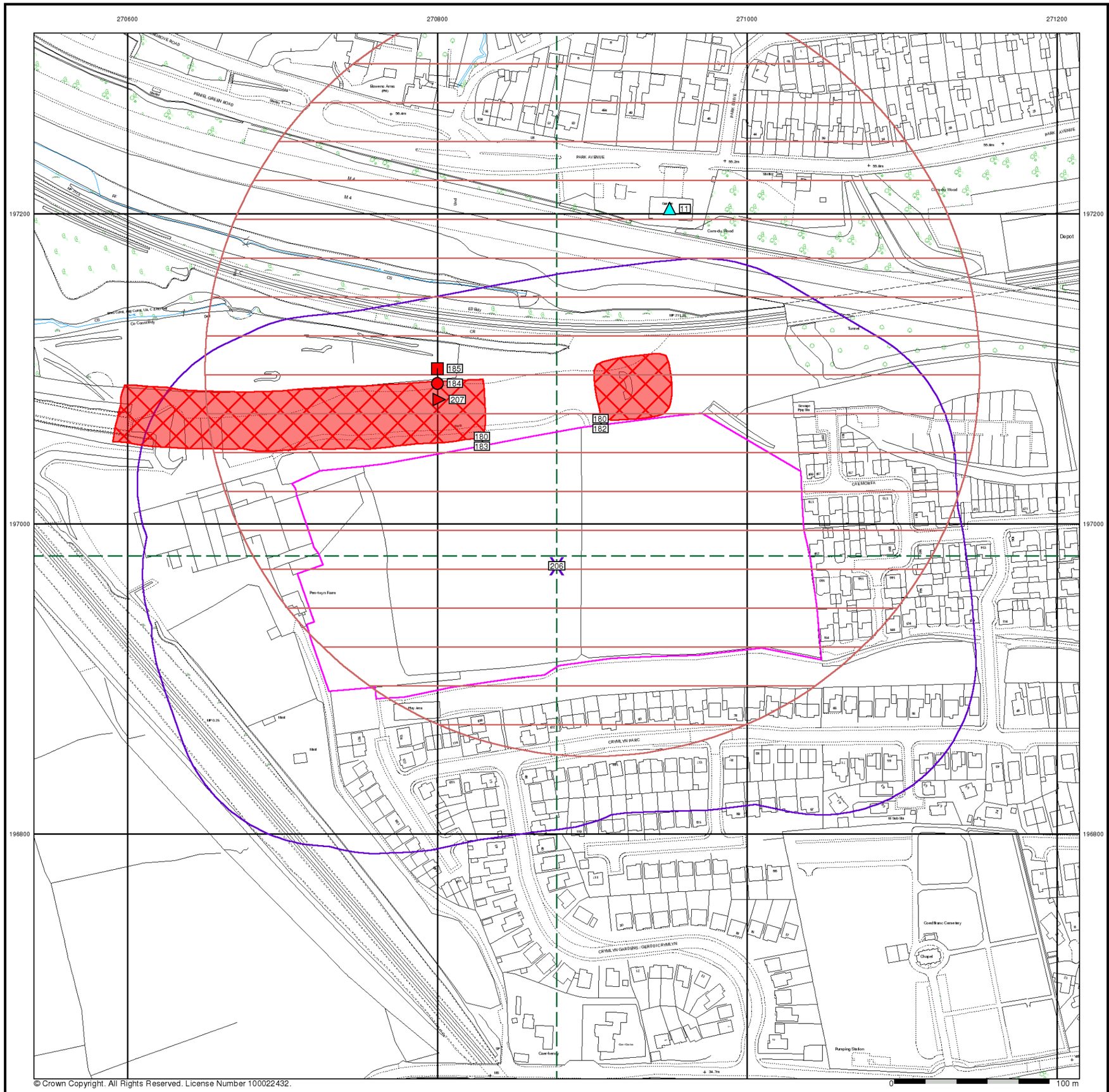


Order Details

Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	1000

Site Details

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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
- 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

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

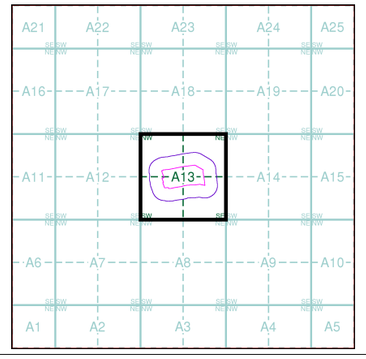
Geological

- BGS Recorded Mineral Site

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

Site Sensitivity Map - Segment A13



Order Details

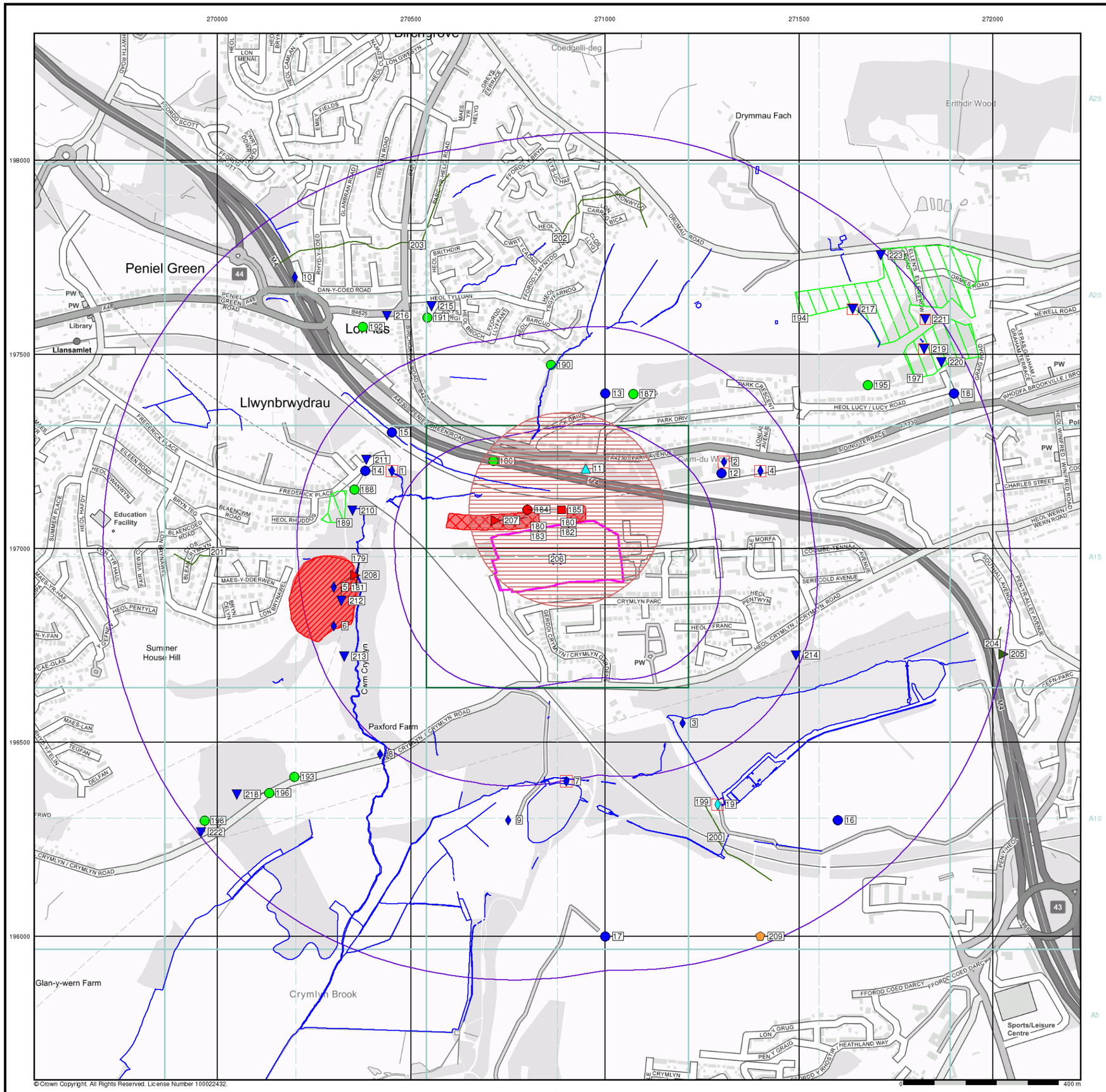
Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Plot Buffer (m):	100

Site Details

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General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

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

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

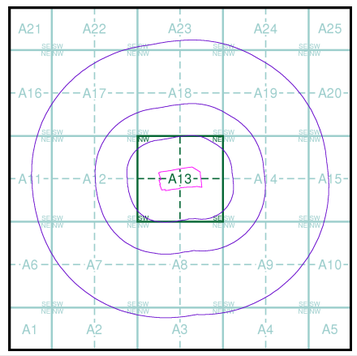
Geological

- BGS Recorded Mineral Site

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
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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

Site Sensitivity Map - Slice A



Order Details

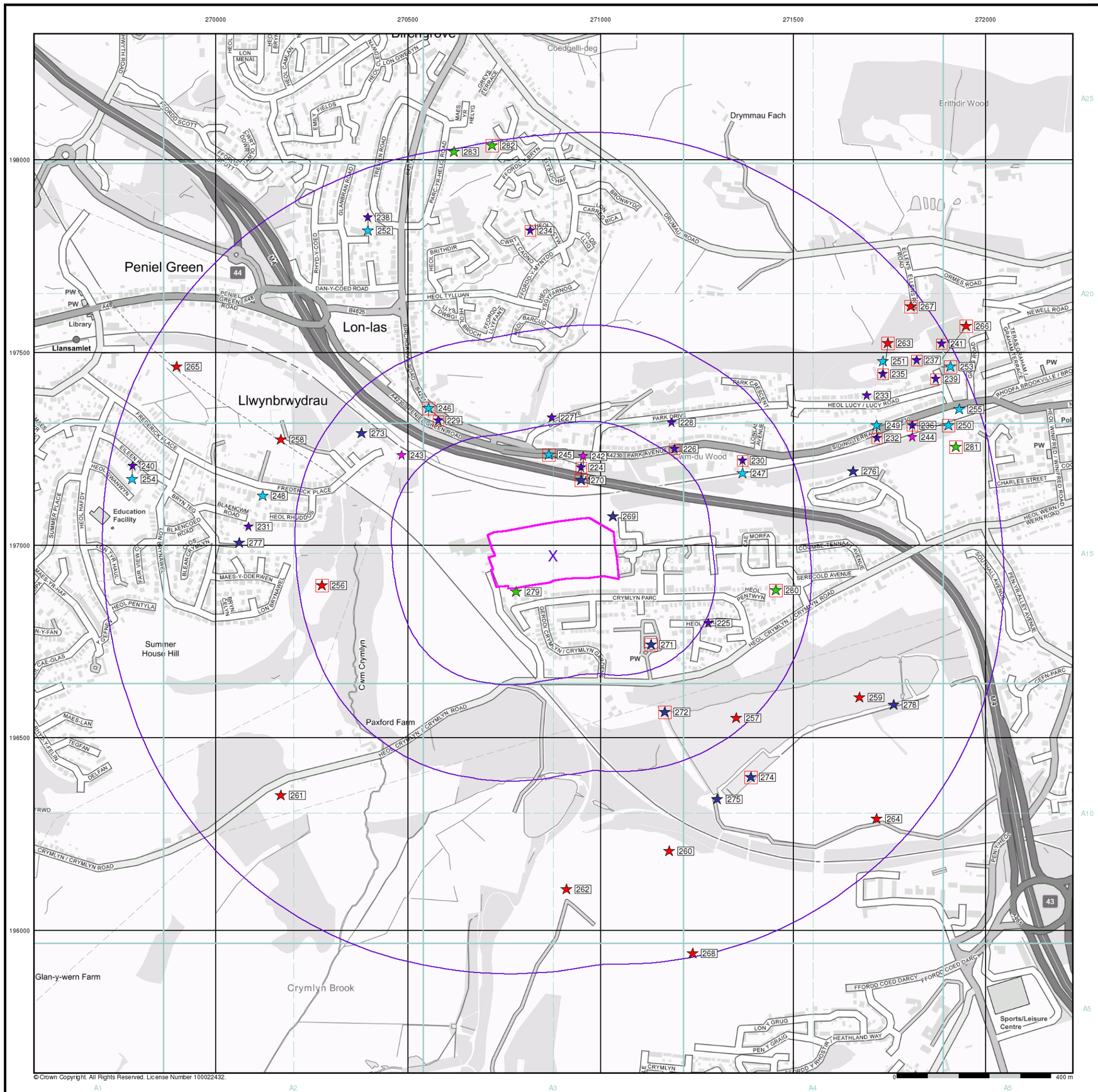
Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	1000

Site Details

Phase 5 - Crymlyn Road, Skewen, Neath, SA10 6NL

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Industrial Land Use Map

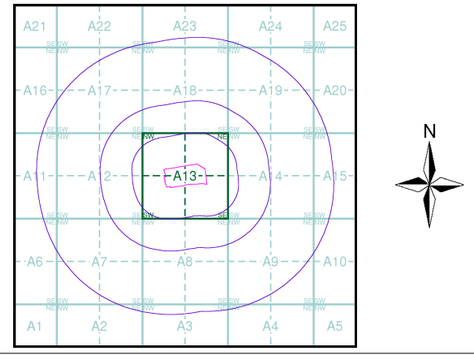
General

- 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

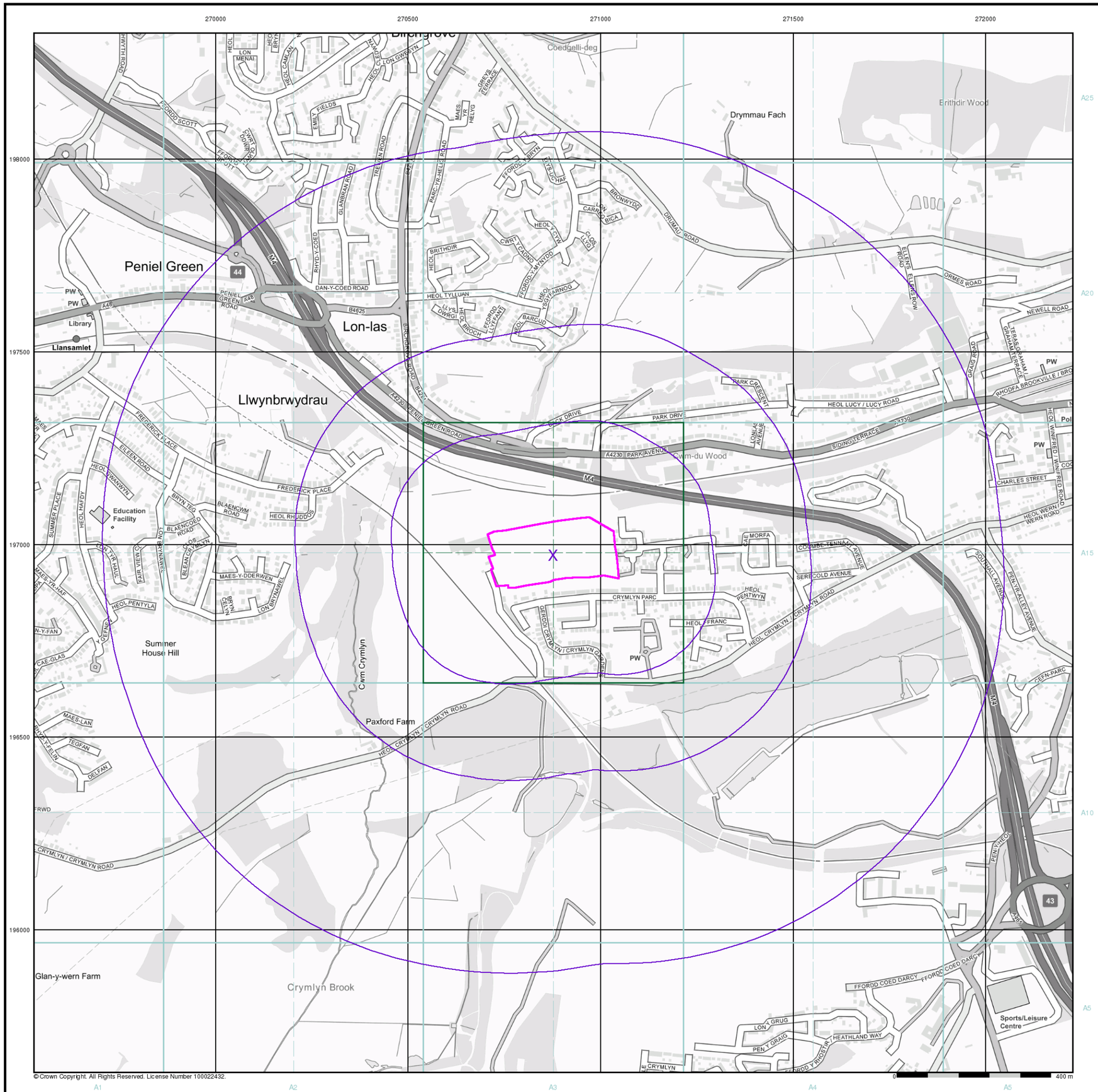
Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	1000

Site Details

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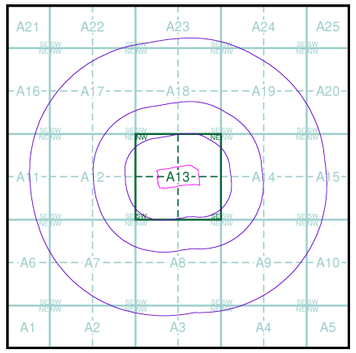
General

- Specified Site
- Specified Buffer(s)
- X 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



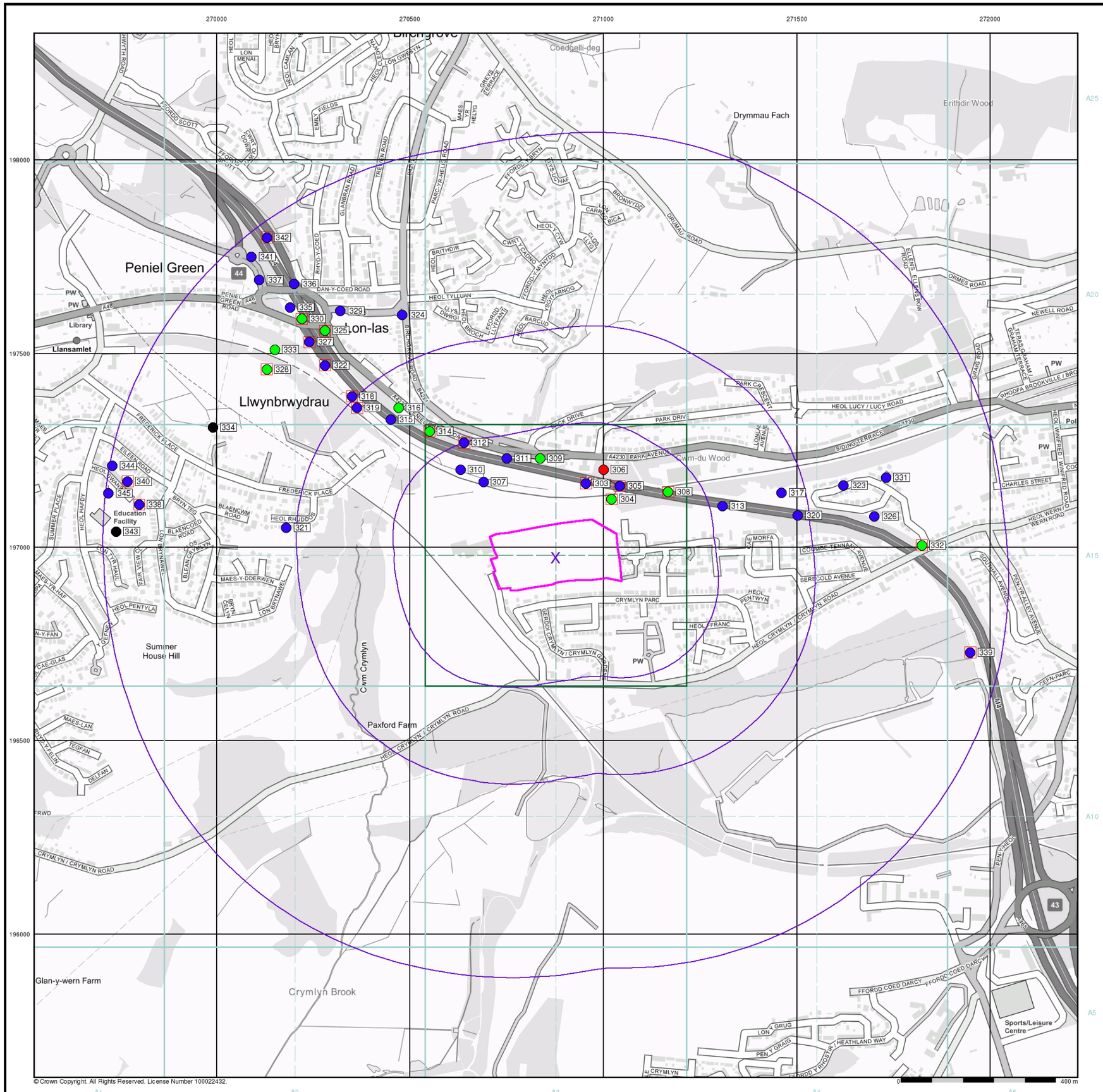
Order Details

Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	1000

Site Details

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General

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

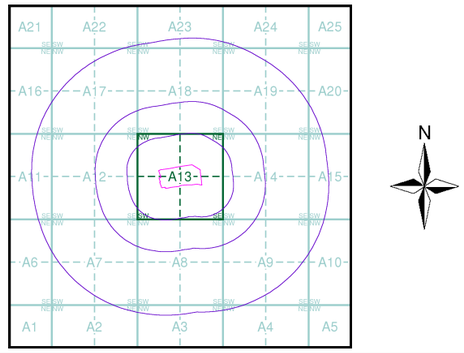
Agency and Hydrological (Boreholes)

- 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.

Borehole Map - Slice A



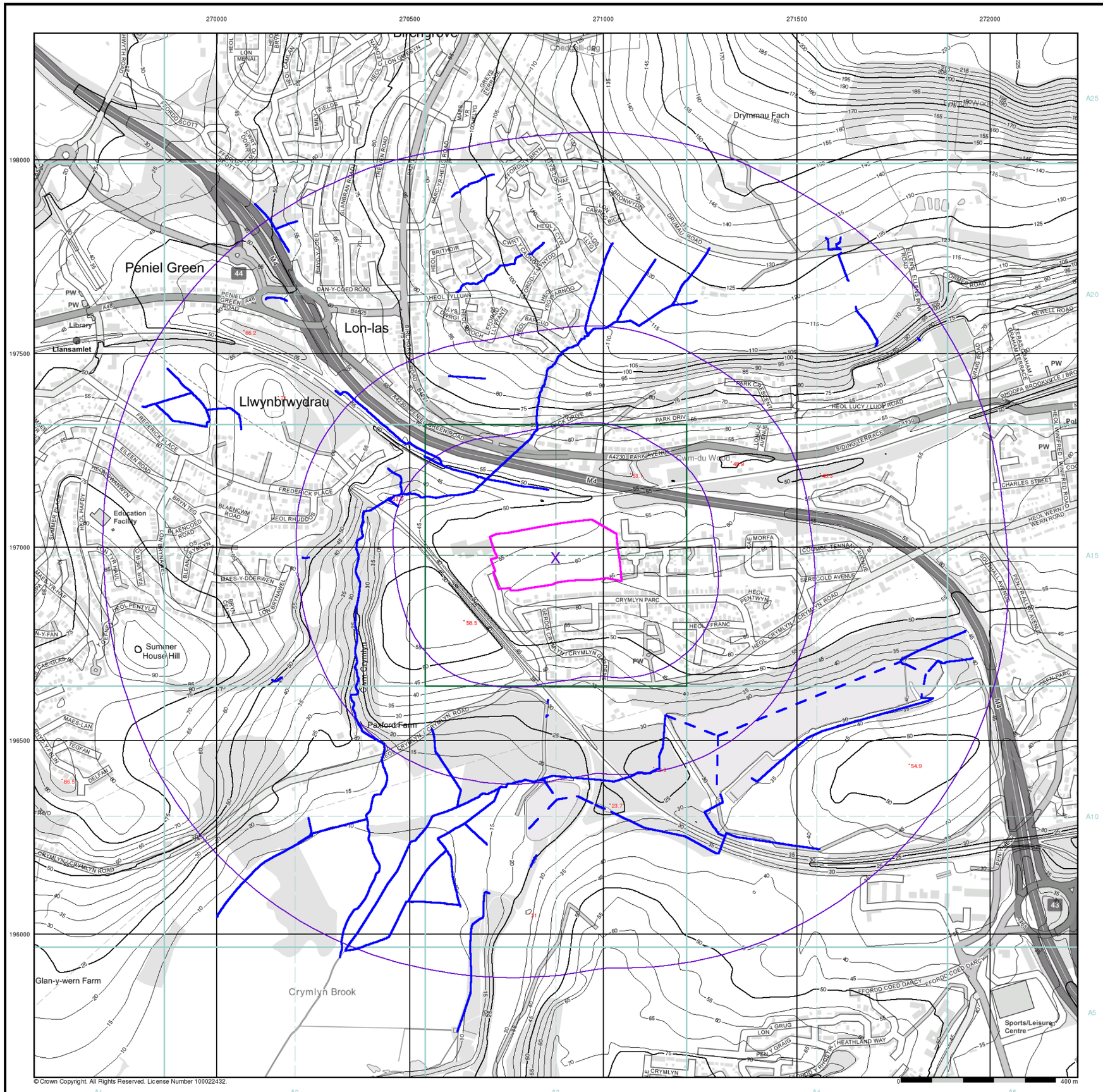
Order Details

Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	1000

Site Details

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General

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

OS Water Network Data

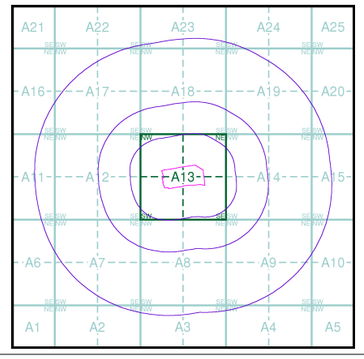
- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in meters)

Standard Contour 105 100 95
Master Contour
Spot Height 167.3

- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



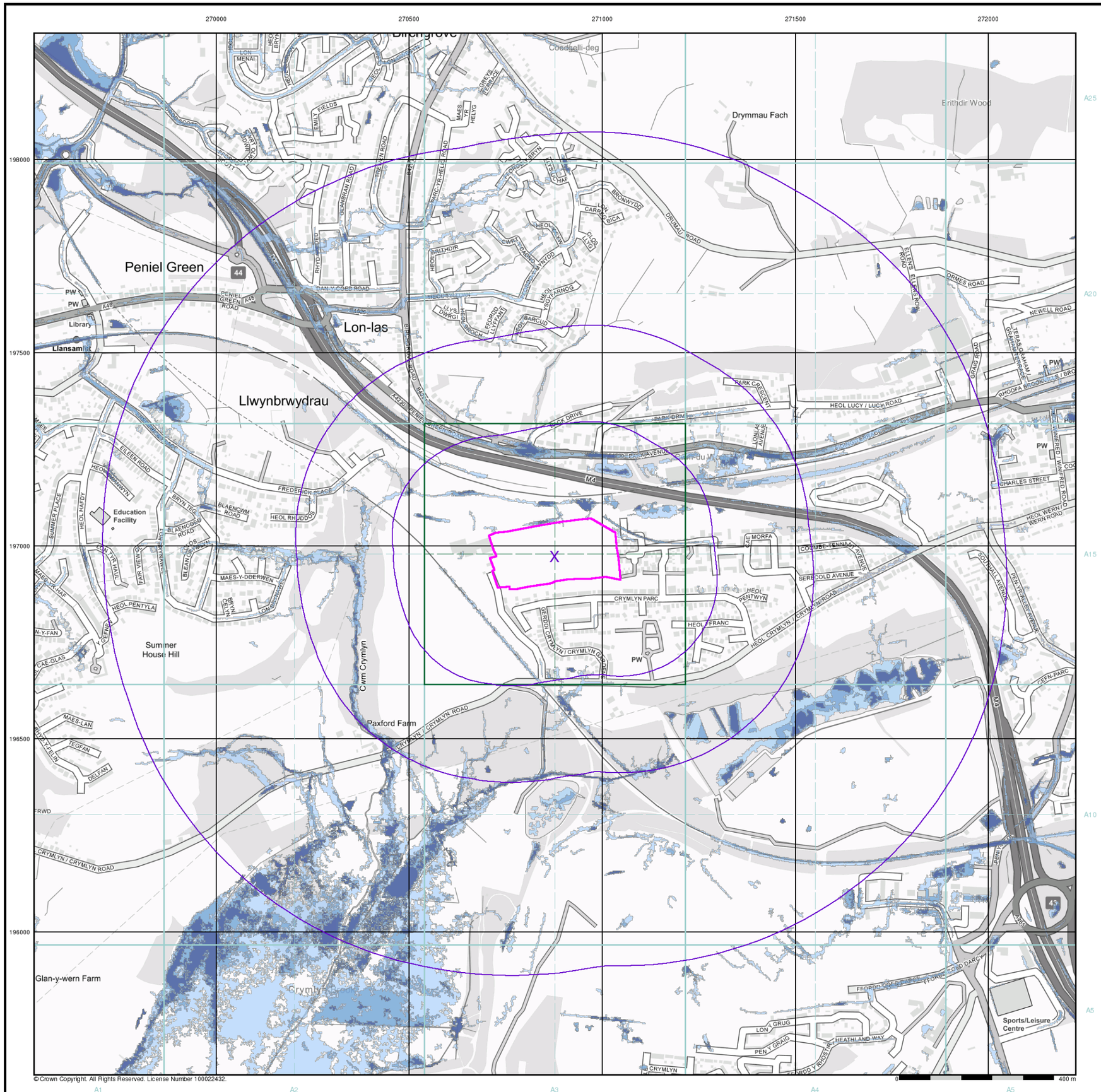
Order Details

Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	1000

Site Details

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Web: www.envirocheck.co.uk



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General

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

Risk of Flooding from Surface Water

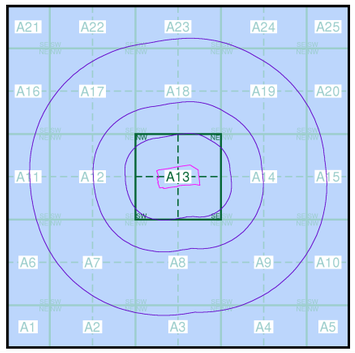
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



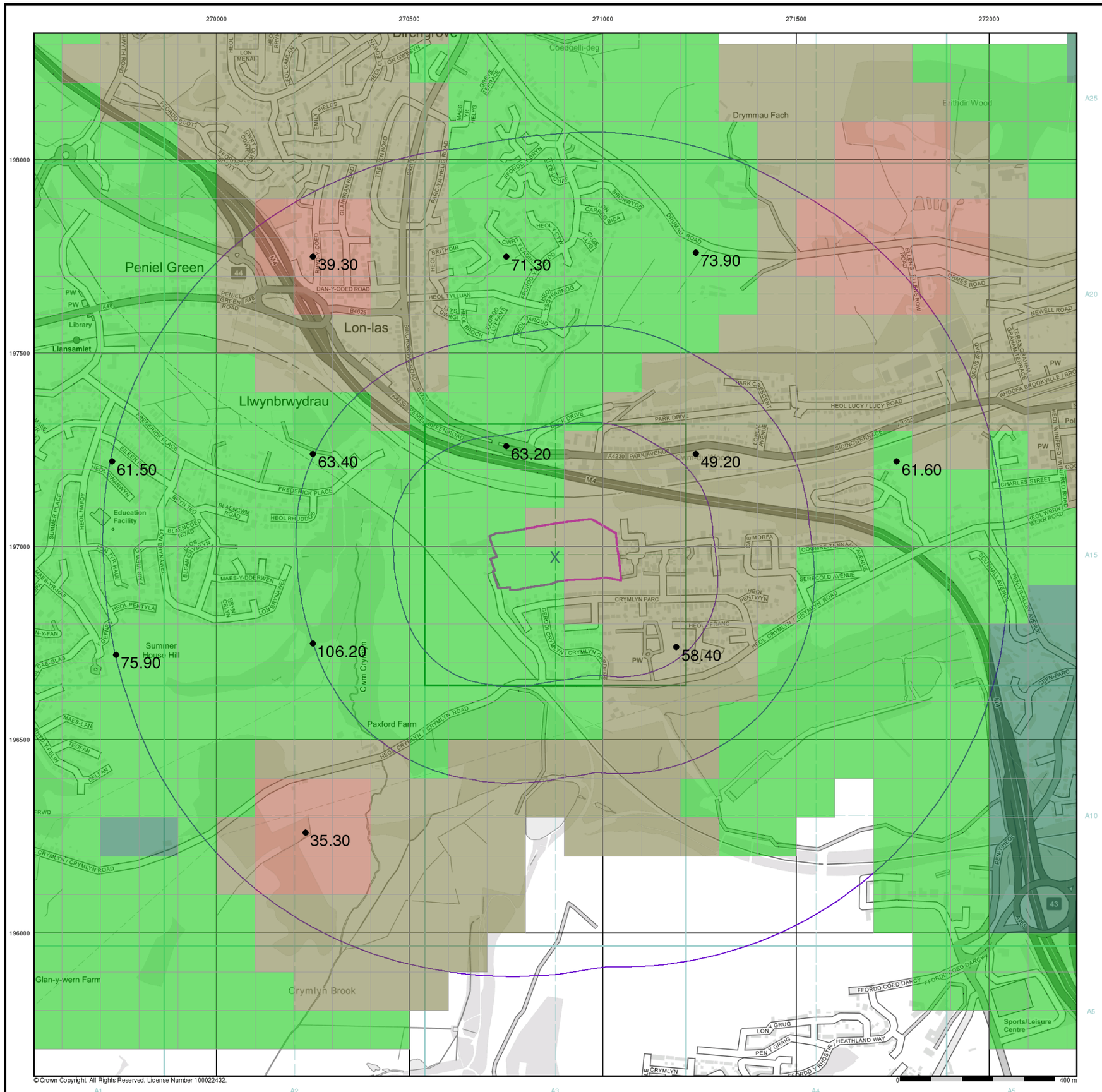
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Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	1000

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

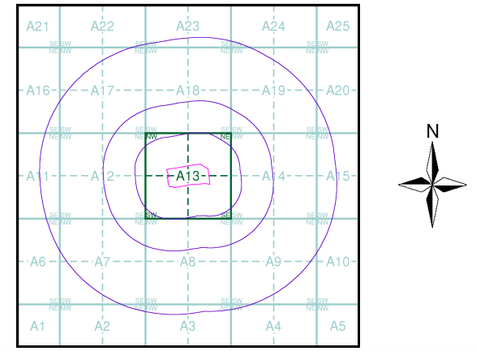
Urban Soil Chemistry Arsenic

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Arsenic Concentrations mg/kg

< 15
15 - 25
25 - 35
35 - 45
45 - 60
60 - 120
> 120

Urban Soil Chemistry Arsenic - Slice A



Order Details

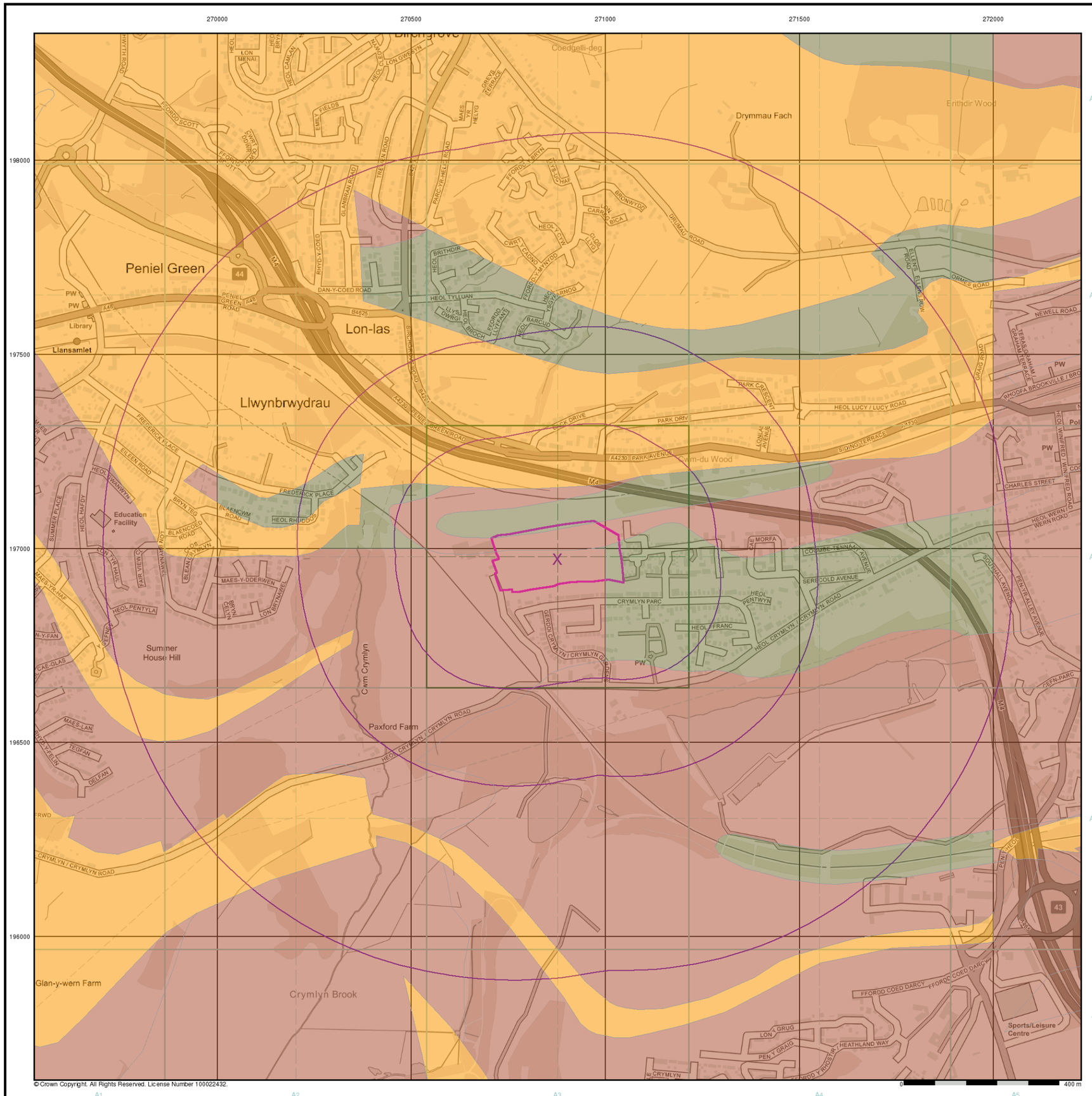
Order Details:	274471833_1_1
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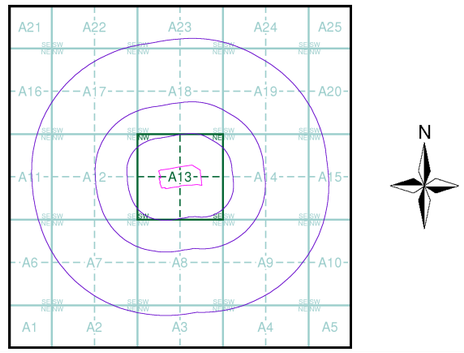
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice A



Order Details

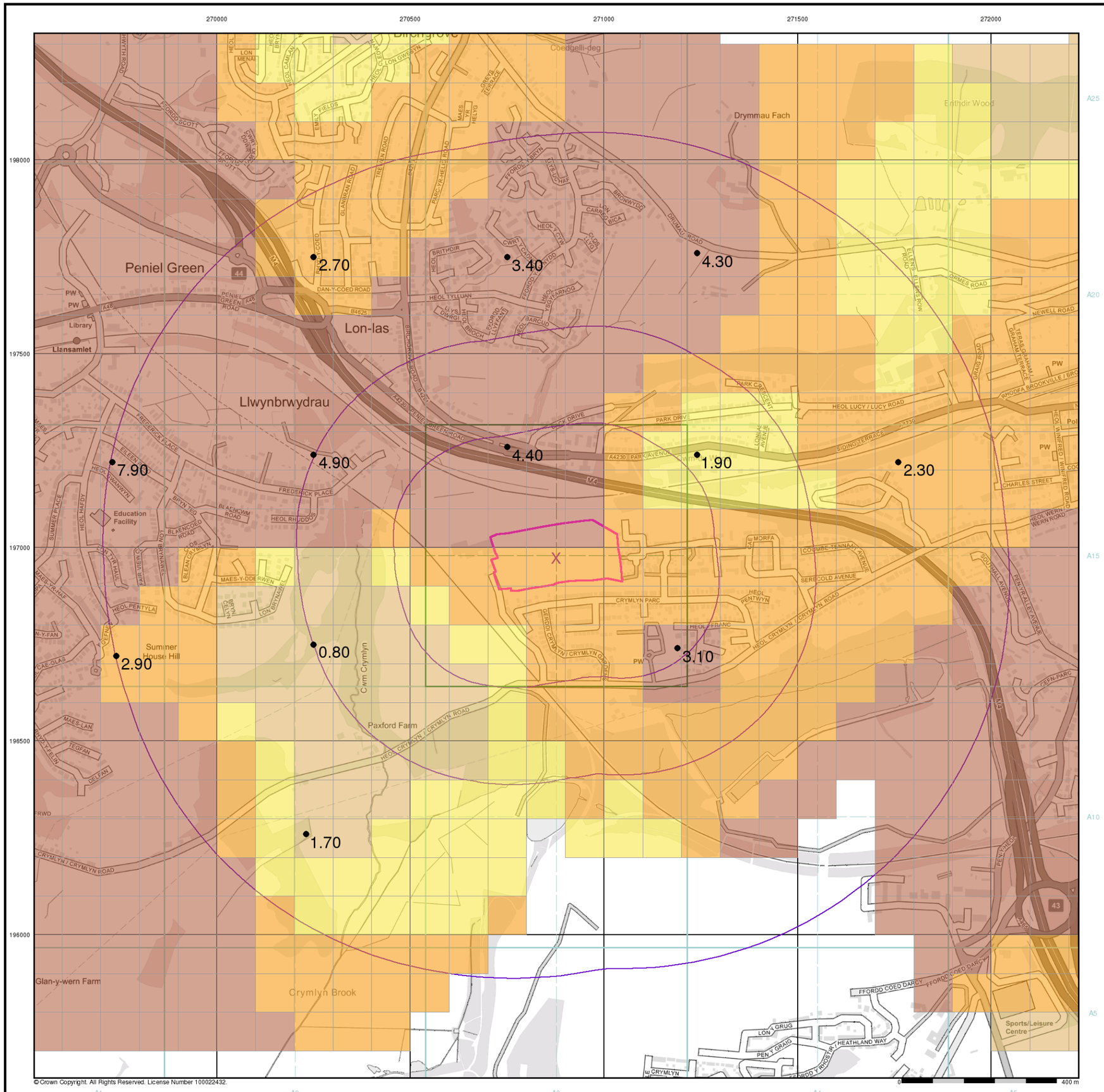
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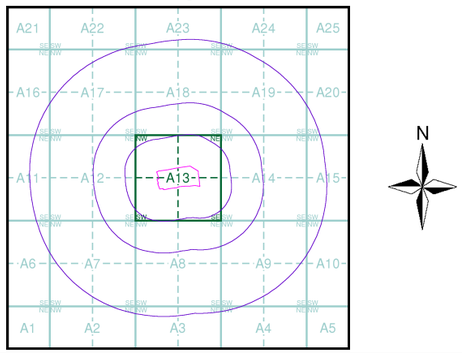
Urban Soil Chemistry Cadmium

BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Cadmium Concentrations mg/kg

< 1.8
1.8 - 2.2
2.2 - 3.0
> 3.0

Urban Soil Chemistry Cadmium - Slice A



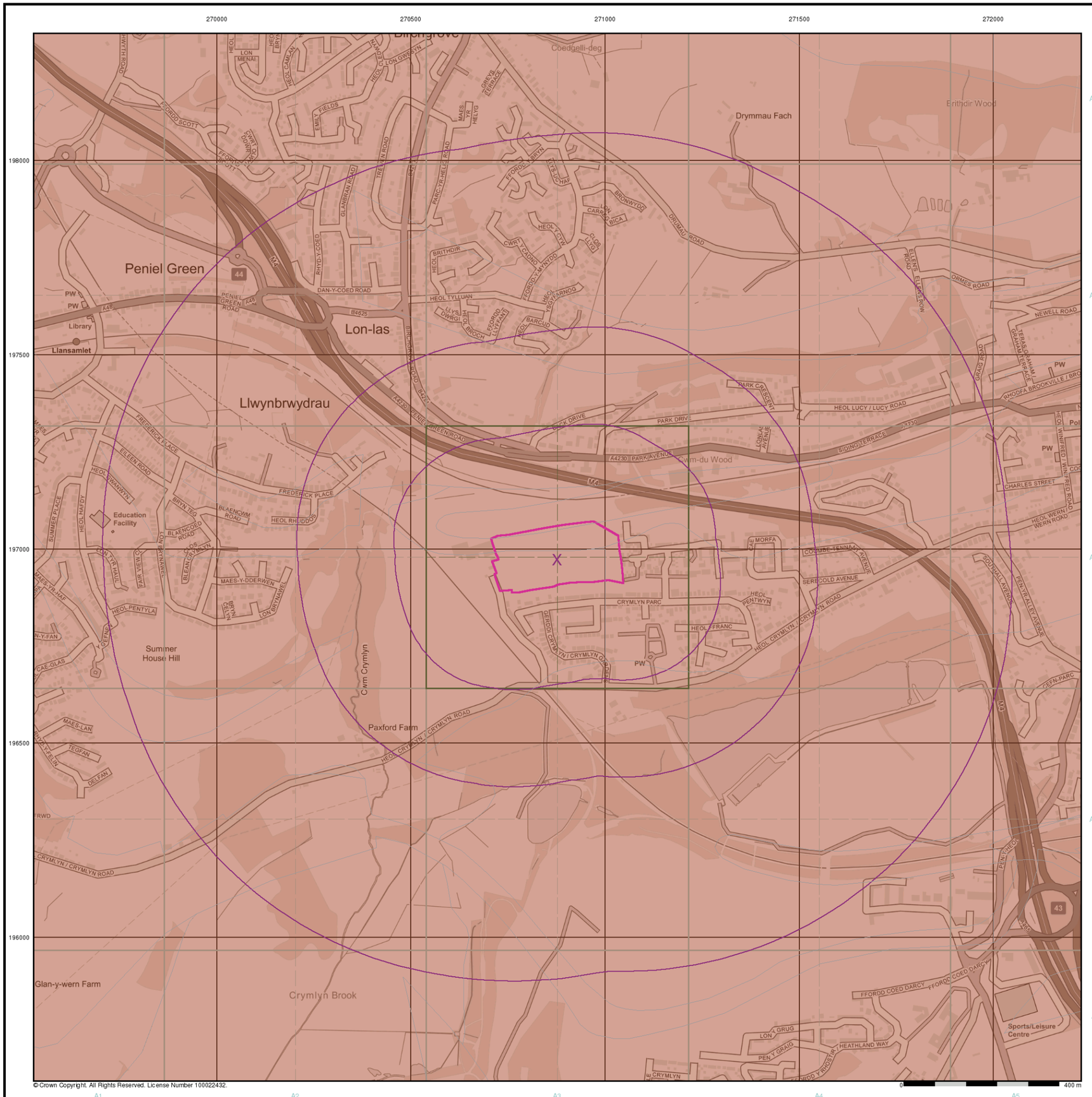
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Order Details:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
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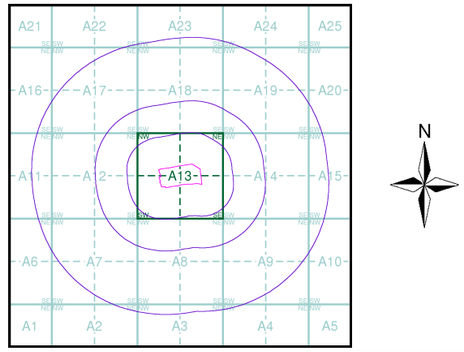
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

< 1.8
1.8 - 2.2
2.2 - 3.0
> 3.0

Estimated Soil Chemistry Cadmium - Slice A



Order Details

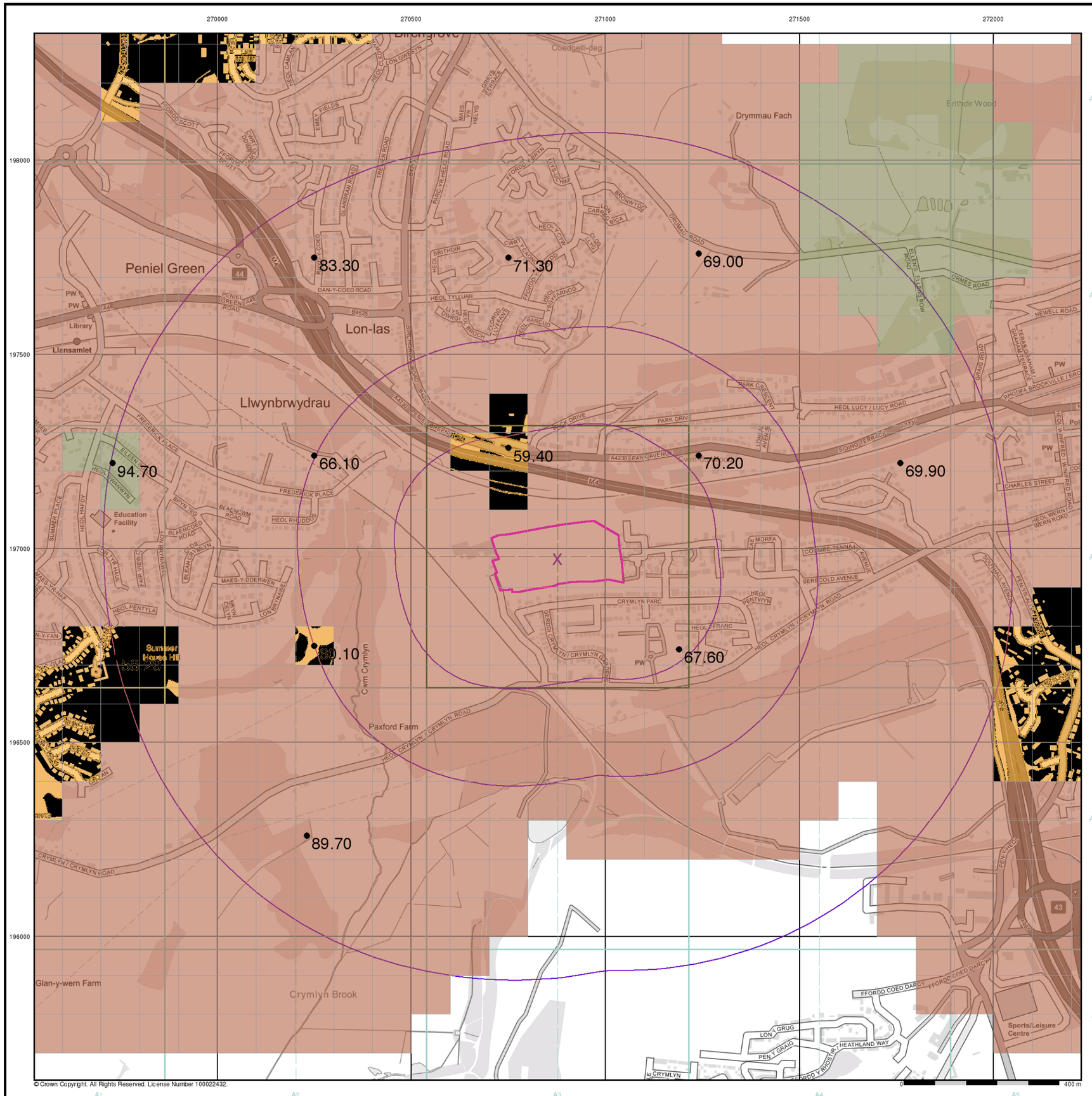
Order Details:	274471833_1_1
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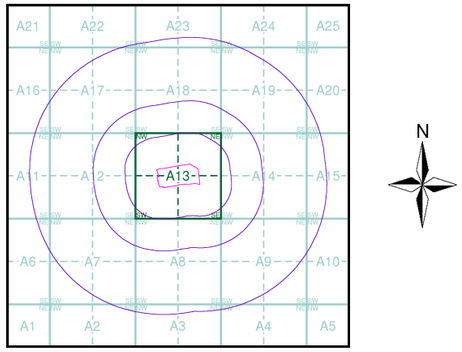
Urban Soil Chemistry Chromium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Urban Soil Chemistry Chromium - Slice A



Order Details

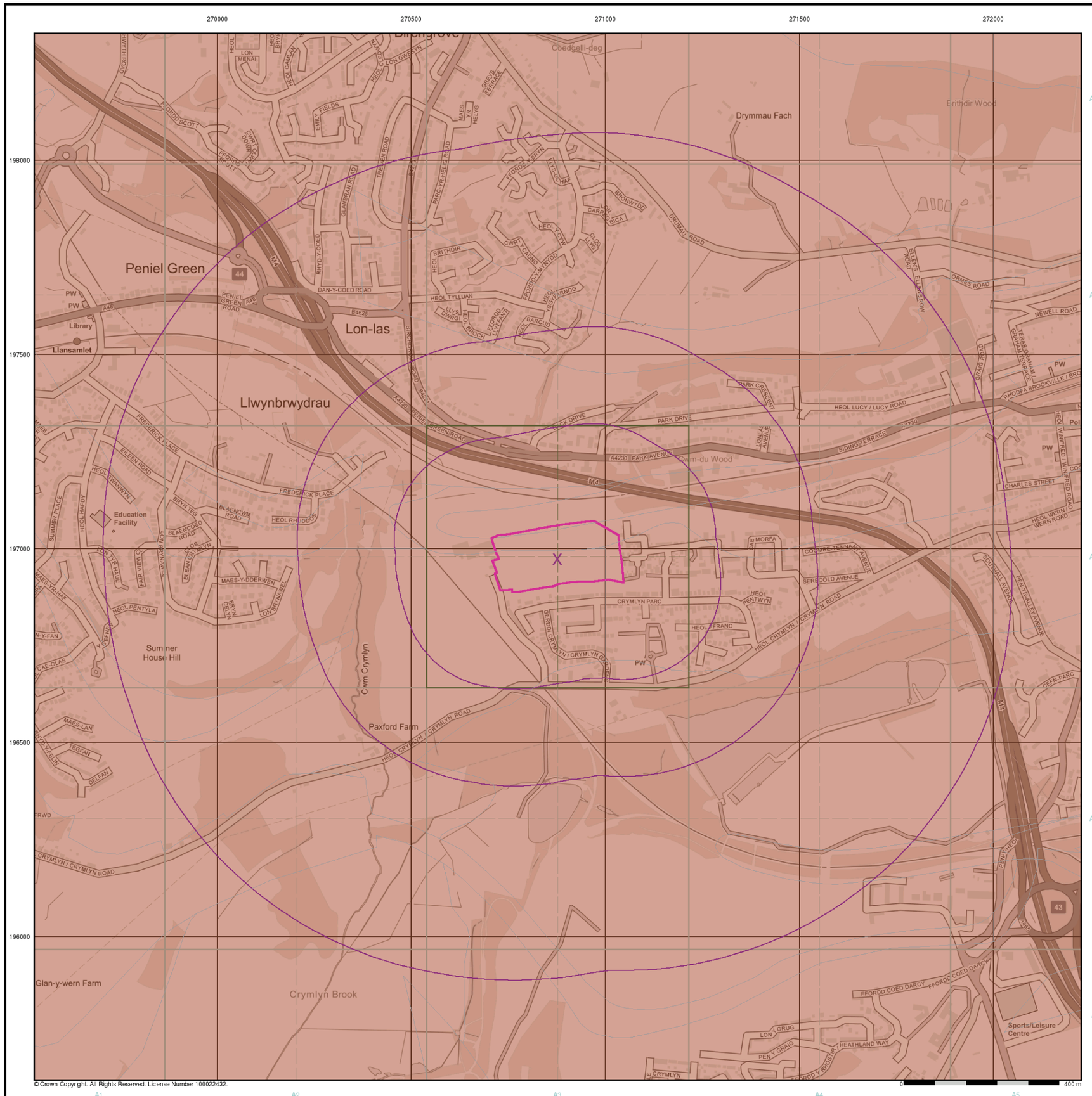
Order Details:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
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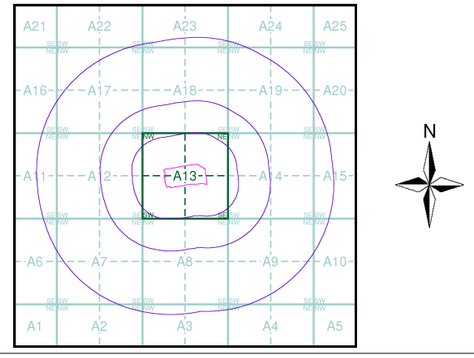
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Estimated Soil Chemistry Chromium - Slice A



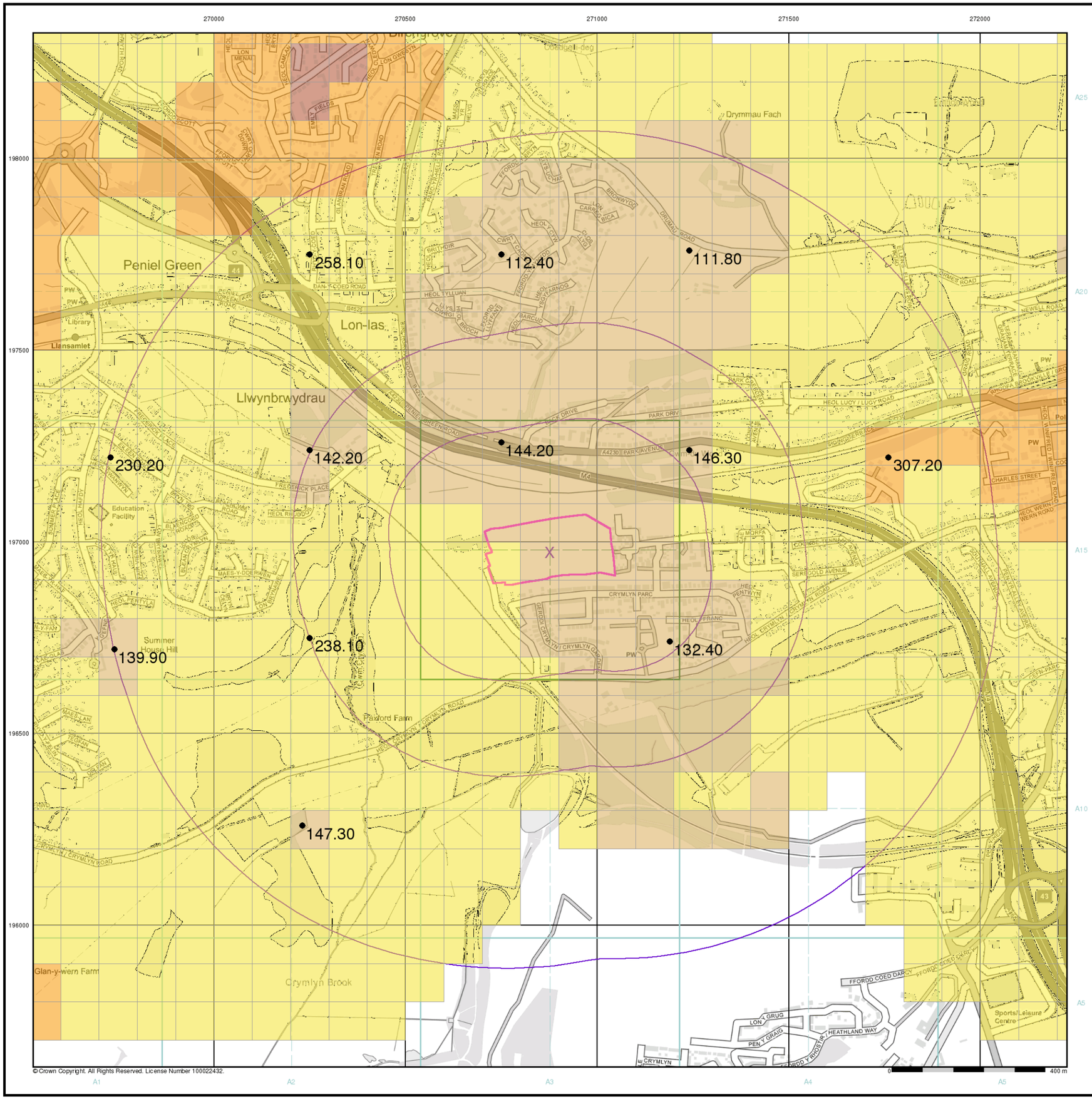
Order Details

Order Details:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
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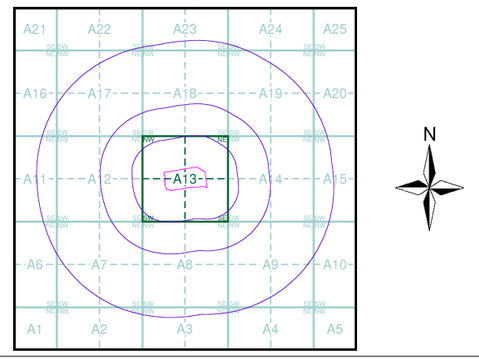
Urban Soil Chemistry Lead

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Lead Concentrations mg/kg

- < 150
- 150 - 300
- 300 - 600
- 600 - 900
- > 900

Urban Soil Chemistry Lead - Slice A



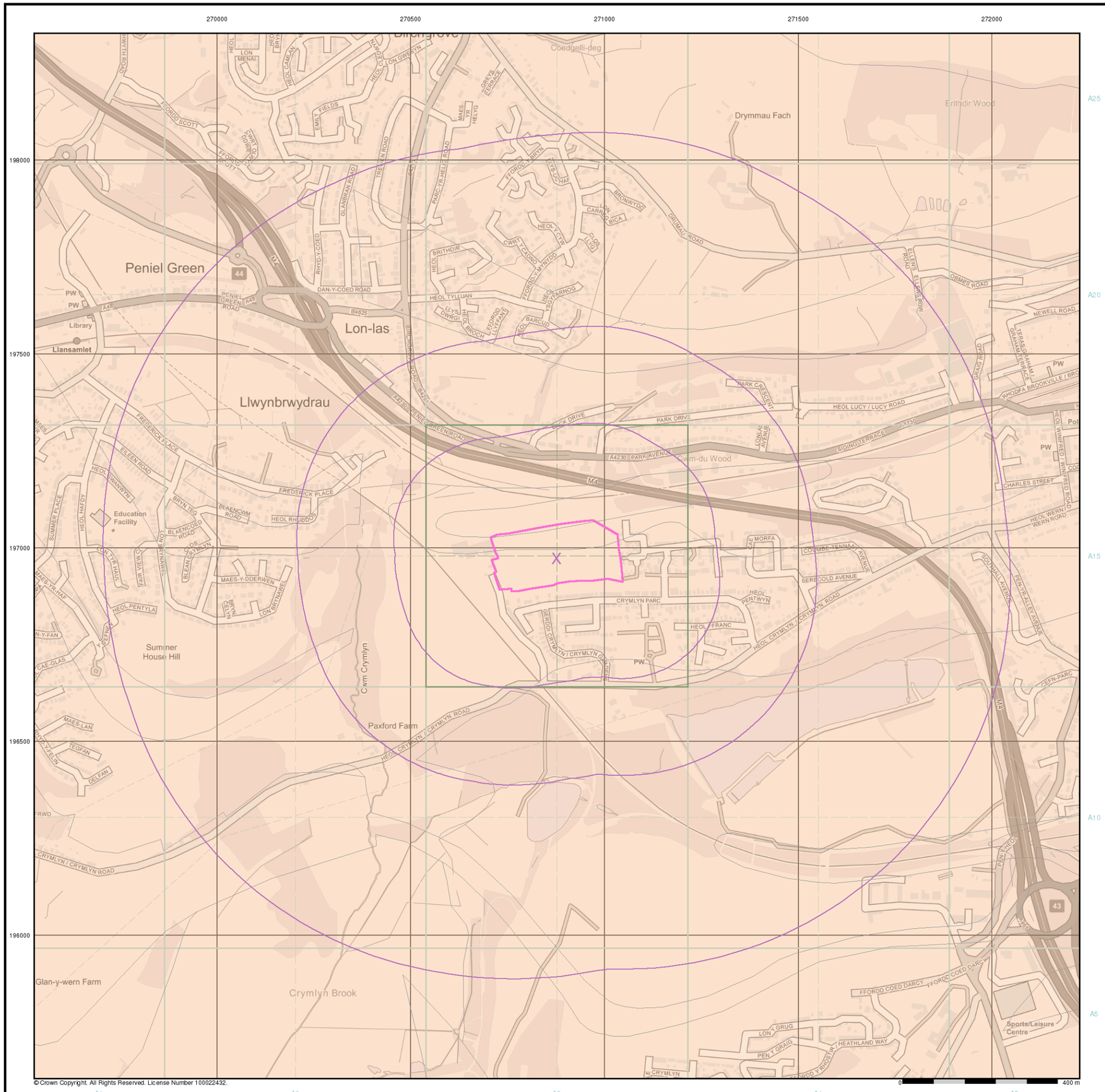
Order Details

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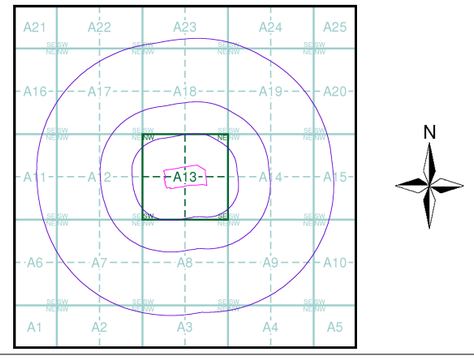
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice A



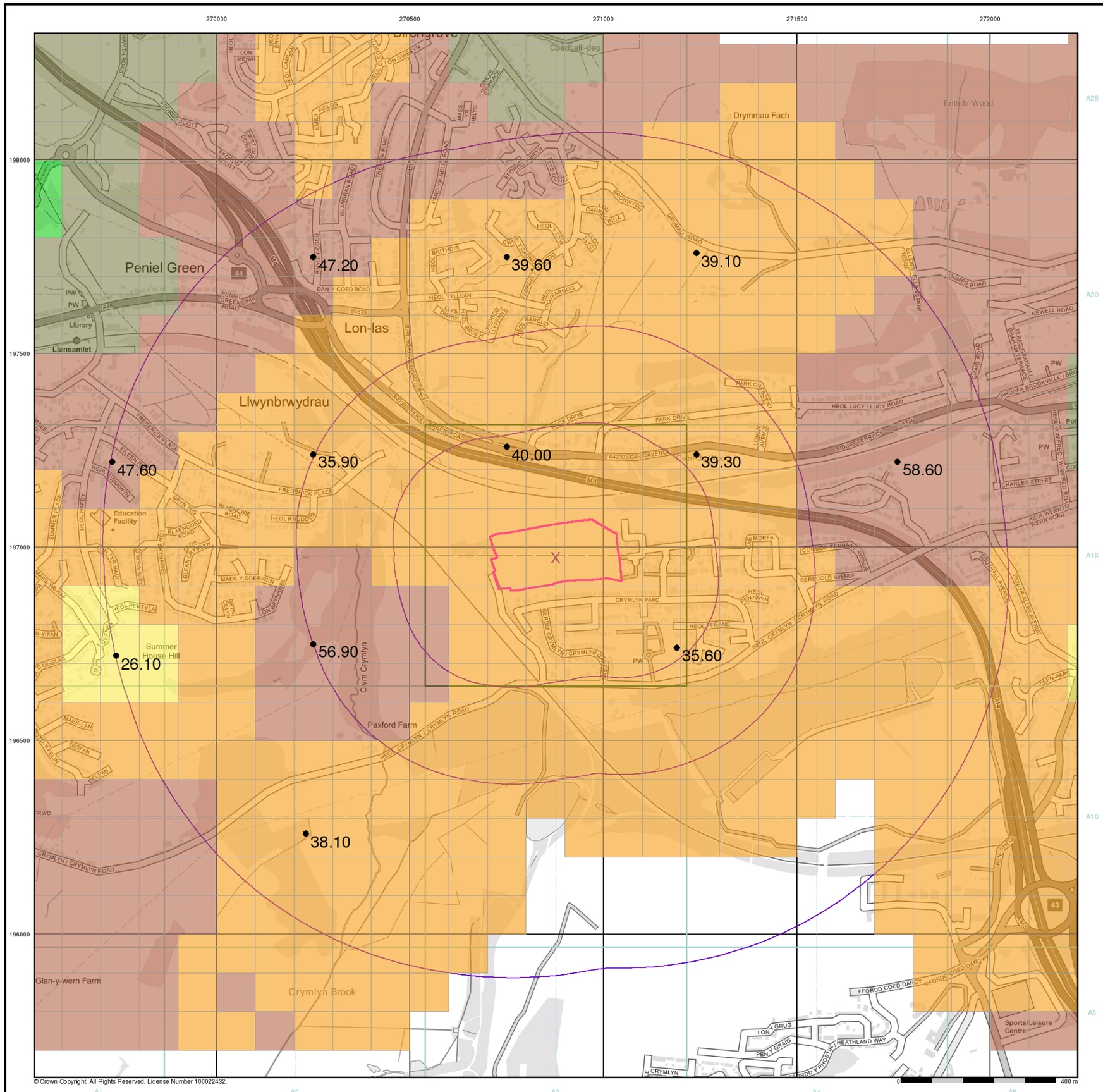
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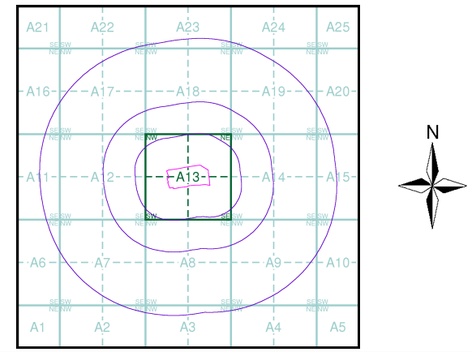
Urban Soil Chemistry Nickel

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Urban Soil Chemistry Nickel - Slice A



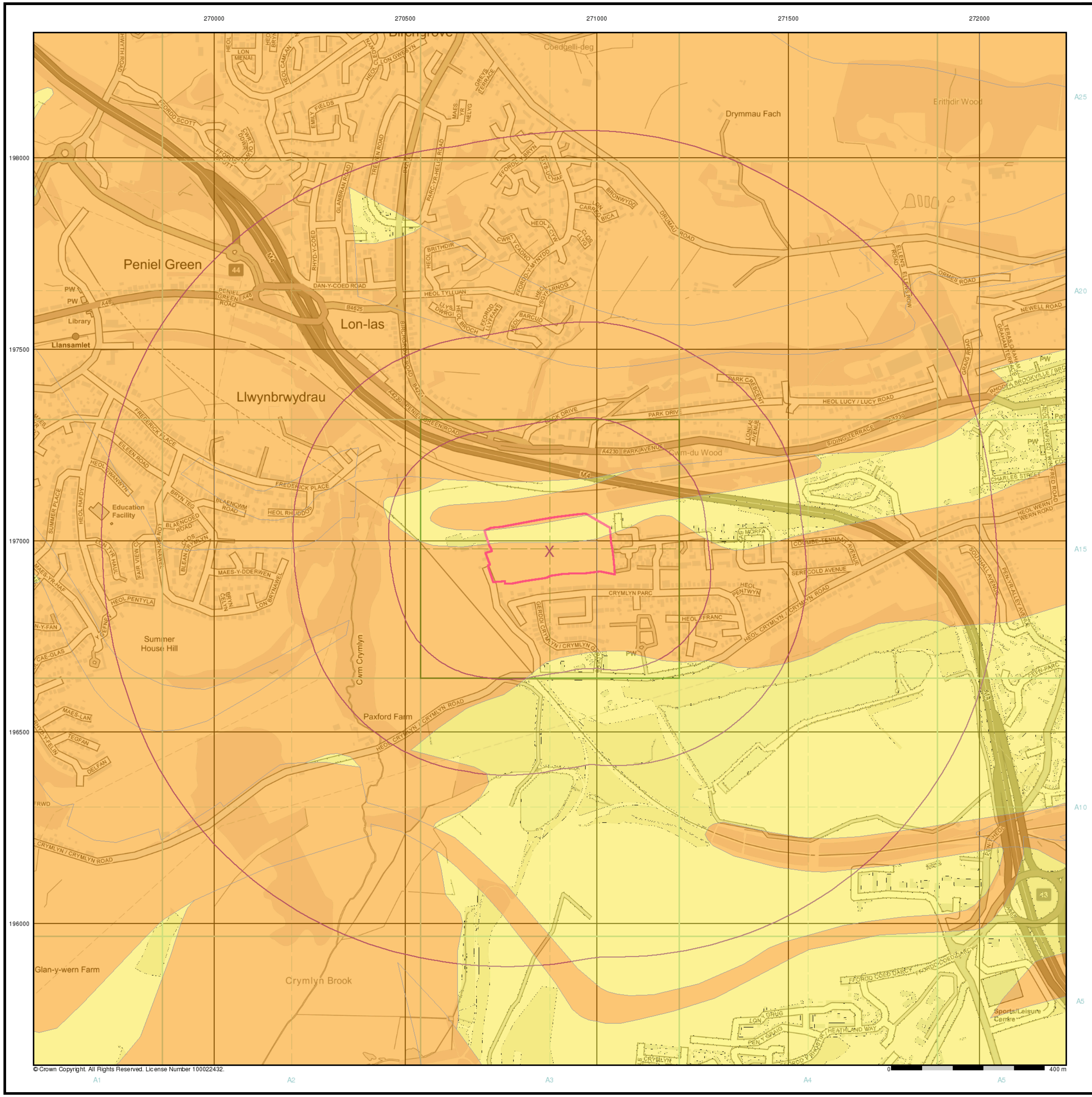
Order Details

Order Details:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search buffer (m):	1000

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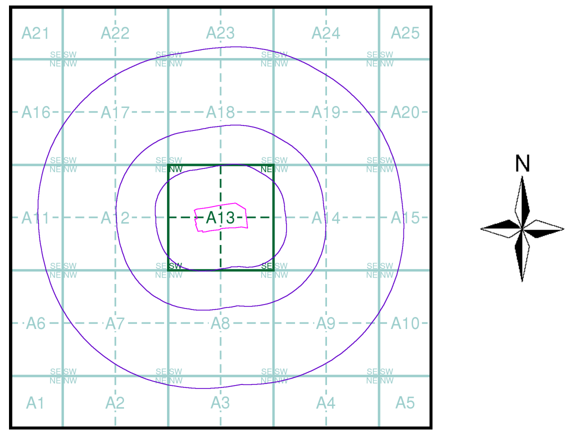
Specified Site   Specified Buffer(s)   X Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Estimated Soil Chemistry Nickel - Slice A

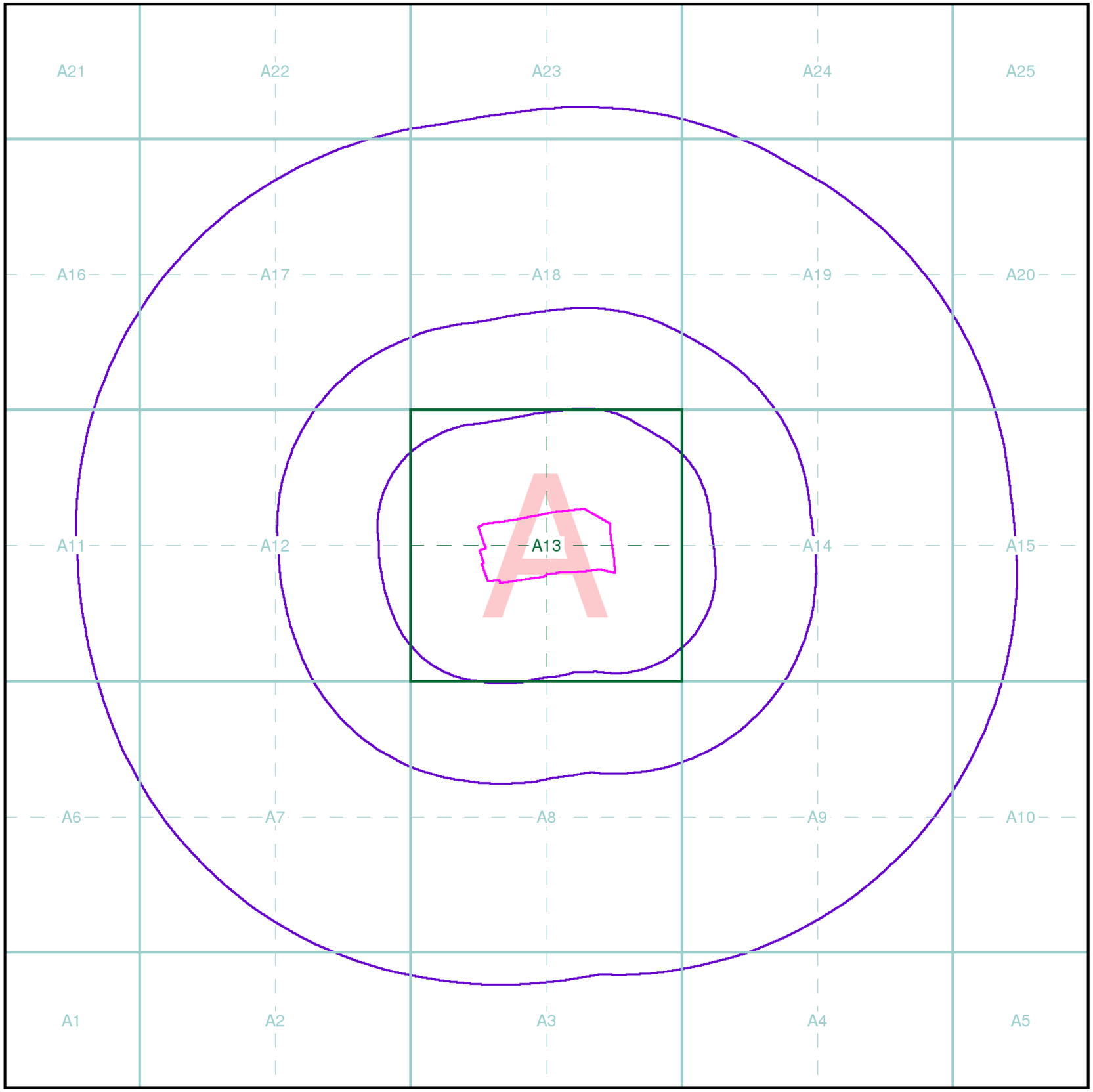


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Order Details: 274471833_1_1
Customer Ref: 16595-MW
National Grid Reference: 270880, 196970
Slice: A
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Index Map

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:

Map data

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Cyfoeth Naturiol Cymru
Natural Resources Wales

Envirocheck reports are compiled from 136 different sources of data.

Client Details

Mr M Watkins, Terra Firma (Wales) Ltd, 5 Deryn Court, Wharfdale Road, Pentwyn, Cardiff, CF23 7HB

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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
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene
	WGR	Worked Ground (Undivided)	Void	Not Supplied - Holocene
	LSGR	Landscaped Ground (Undivided)	Artificially Modified Ground	Not Supplied - Holocene
	SLIP	Landslide Deposit	Unknown/Unclassified Entry	Not Supplied - Quaternary

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	TFD	Tidal Flat Deposits	Clay, Silt and Sand	Not Supplied - Holocene
	TILLD	Till, Devensian	Diamicton	Not Supplied - Devensian
	GFICD	Glaciofluvial Ice Contact Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	PEAT	Peat	Peat	Not Supplied - Quaternary
	GFSD	Glaciofluvial Sheet Deposits	Sand and Gravel	Not Supplied - Quaternary
	RSBD	Raised Storm Beach Deposits	Sand and Gravel	Not Supplied - Quaternary
	GFDU	Glaciofluvial Deposits	Sand and Gravel	Not Supplied - Quaternary

Bedrock and Faults

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

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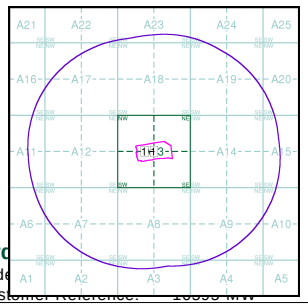
Geology 1:50,000 Maps

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

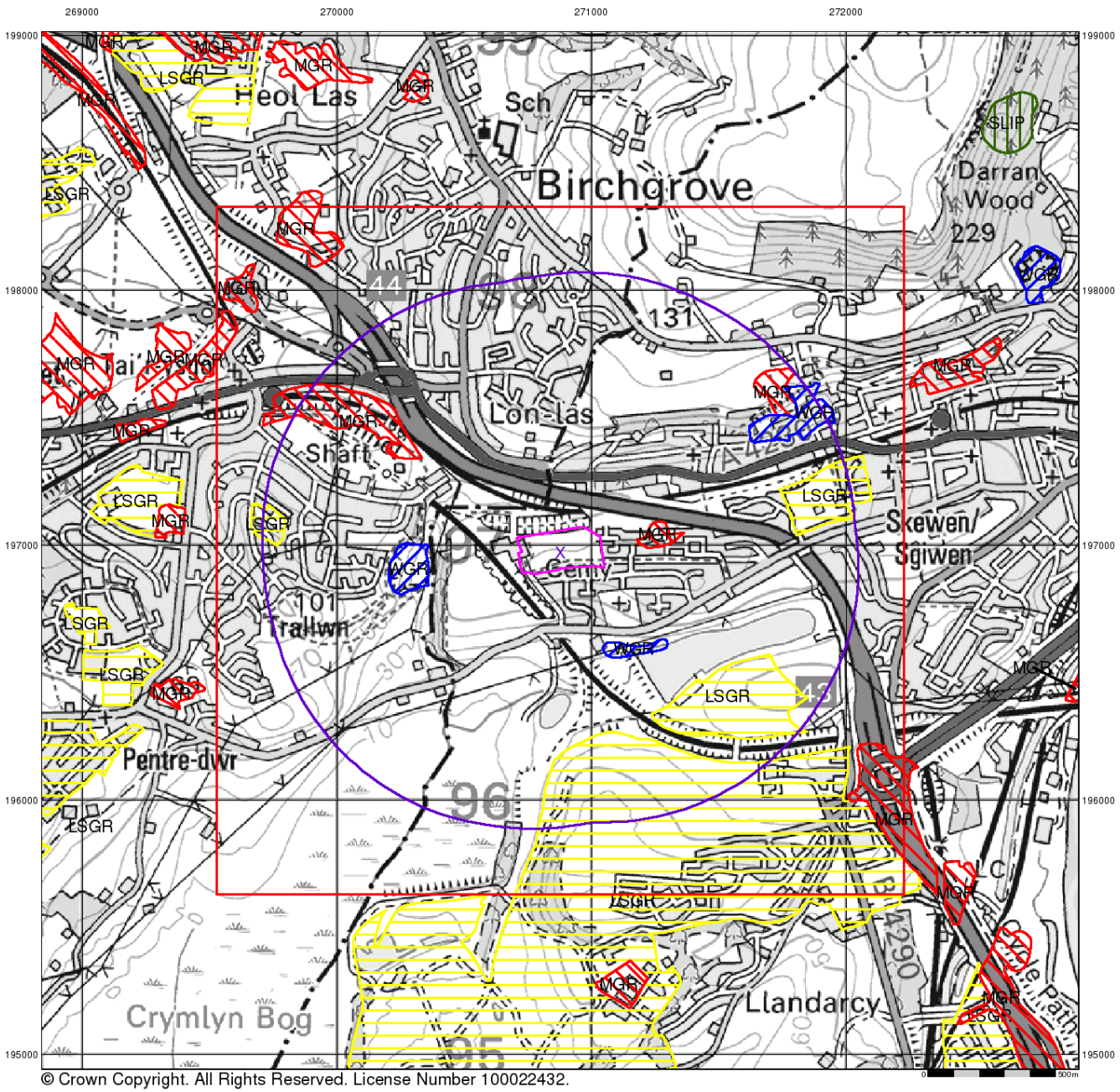


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Orde
Customer Reference: 10993 MW
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Artificial Ground and Landslip

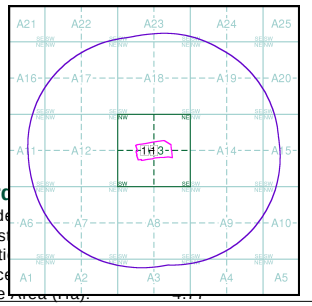
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions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



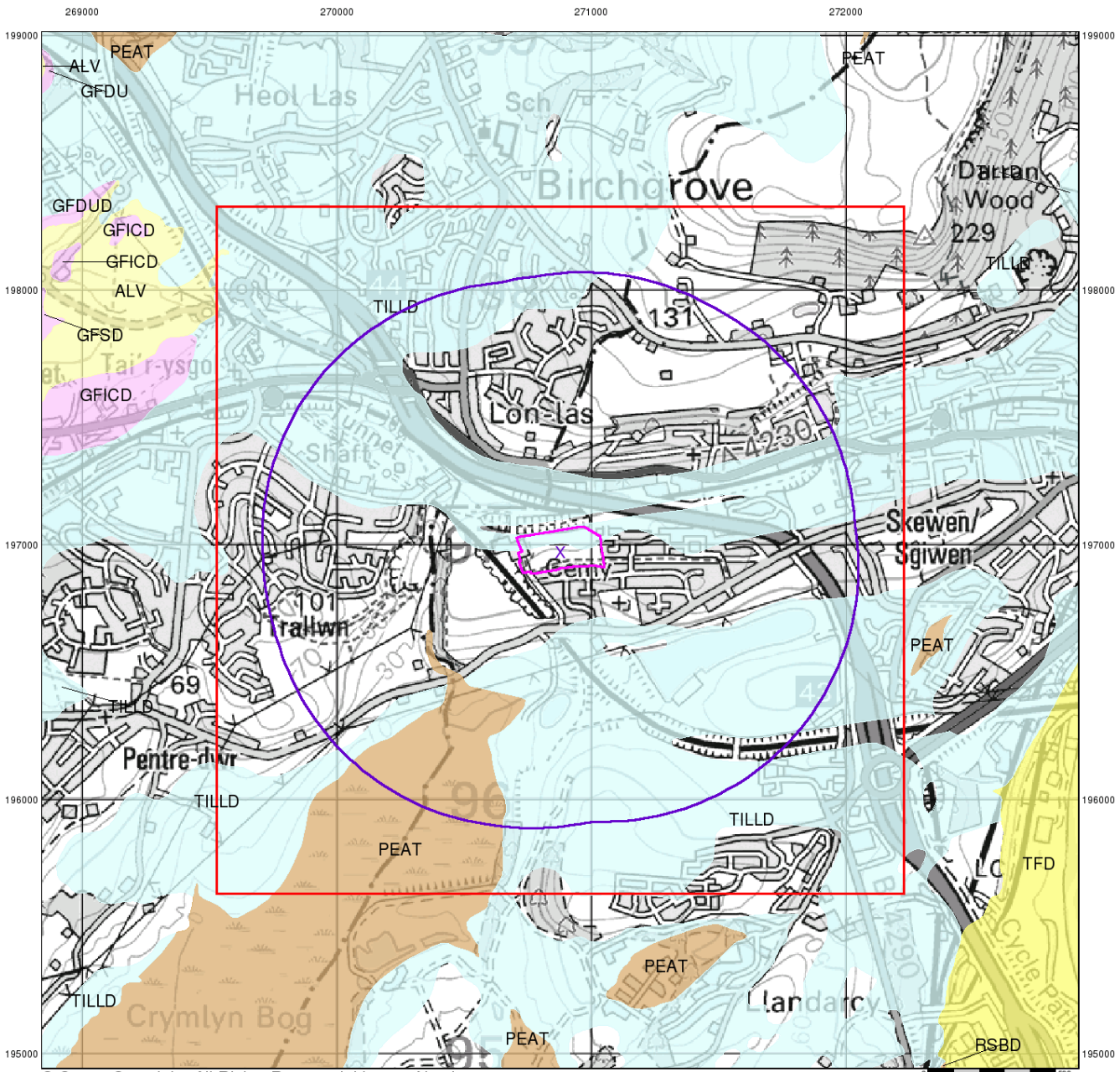
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Slice
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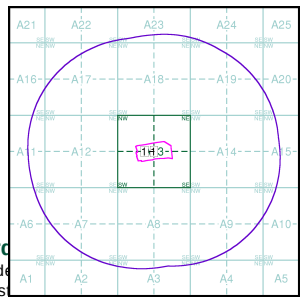
Superficial Geology

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

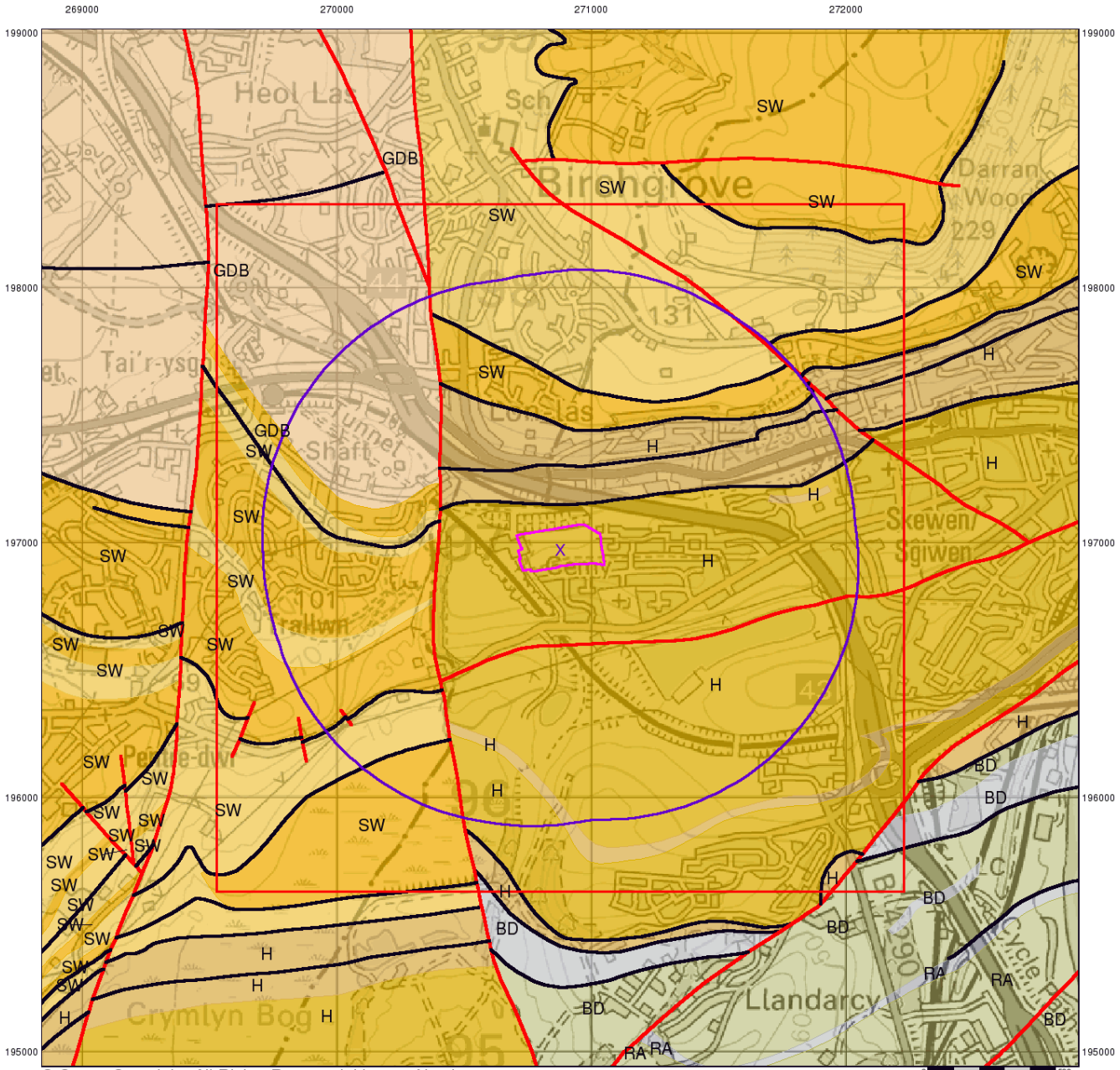


Orc
Orde
Cust

National Grid Reference: 270880, 196970
Slice: A
Site Area (Ha): 4.77
Search Buffer (m): 1000

Site Details:

Phase 5 - Crymlyn Road, Skewen, Neath, SA10 6NL



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Bedrock and Faults

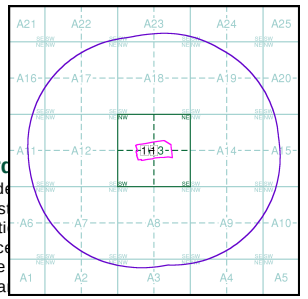
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

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



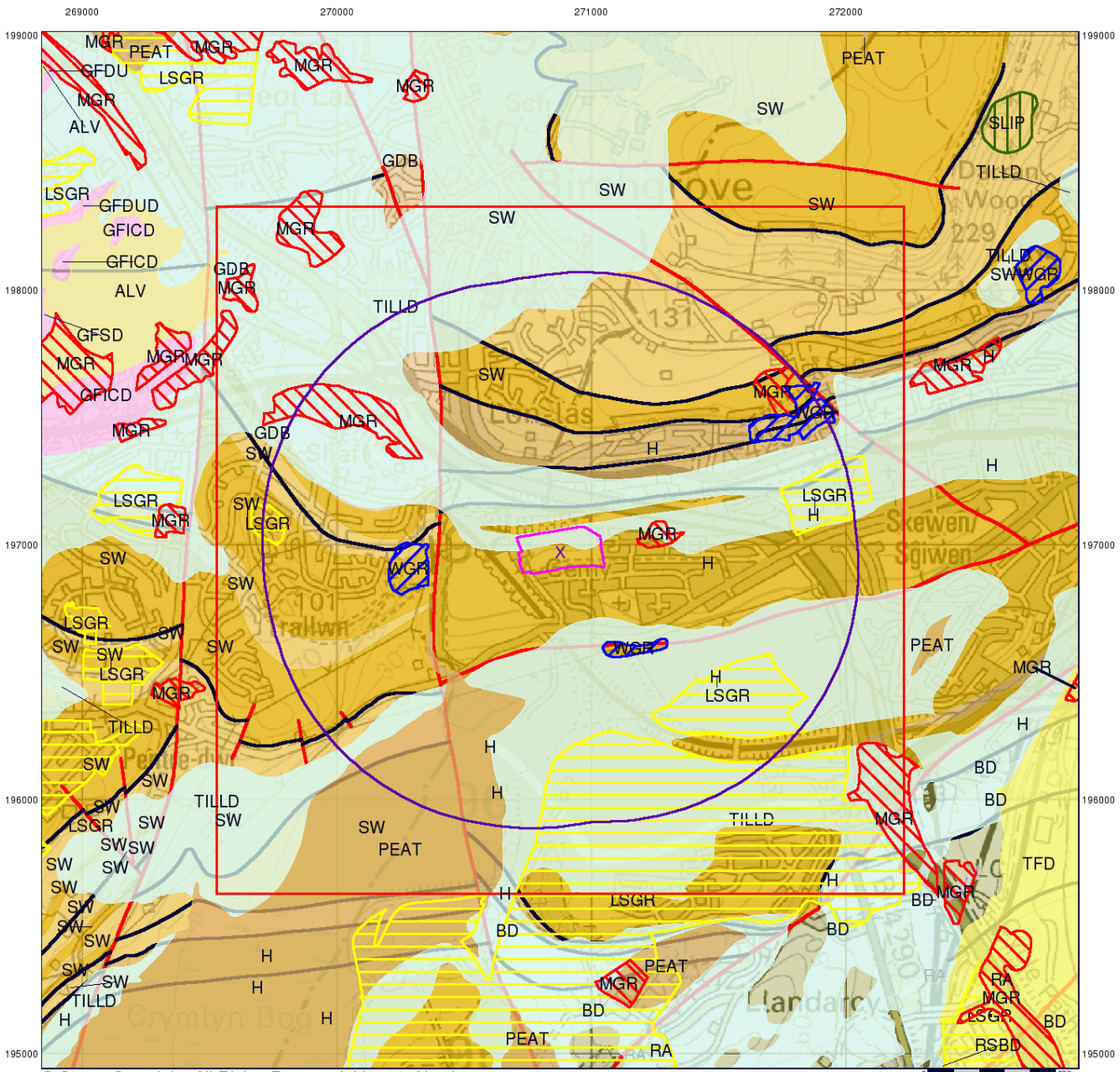


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Slice
Site
Sea

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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.

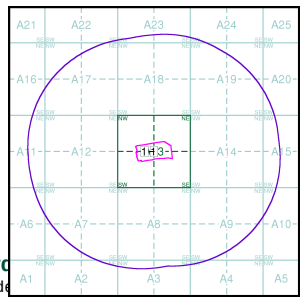
Additional Information

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



Orc
Orde
Customer Reference: 16595-MW
National Grid Reference: 270880, 196970
Slice: A
Site Area (Ha): 4.77
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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
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. 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
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Pylon
Electricity Transmission Line
Sloping Masonry
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	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

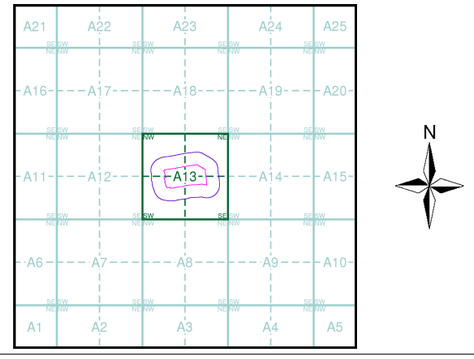
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Mud
Sand
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or 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)
BM 123.45 m 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

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:10,560	1884	3
Glamorganshire	1:10,560	1900	4
Glamorganshire	1:10,560	1921	5
Glamorganshire	1:10,560	1921	6
Glamorganshire	1:10,560	1938 - 1940	7
Glamorganshire	1:10,560	1938 - 1952	8
Historical Aerial Photography	1:10,560	1945 - 1949	9
Glamorganshire	1:10,560	1952	10
Ordnance Survey Plan	1:10,000	1964 - 1965	11
Ordnance Survey Plan	1:10,000	1970	12
Swansea	1:10,000	1976	13
Ordnance Survey Plan	1:10,000	1980	14
Ordnance Survey Plan	1:10,000	1989	15
Ordnance Survey Plan	1:10,000	1992 - 1993	16
10K Raster Mapping	1:10,000	1999	17
10K Raster Mapping	1:10,000	2006	18
VectorMap Local	1:10,000	2020	19

Historical Map - Slice A



Order Details

Order Number: 274471833_1_1
Customer Ref: 16595-MW
National Grid Reference: 270880, 196970
Slice: A
Site Area (Ha): 4.77
Search Buffer (m): 1000

Site Details

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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
- Subway Entrance
- Fireproof Building
- Prominent Fireproof Building
- Non-fireproof Building
- Non-fireproof Building (non-dwelling)
- Factory, mill, and flour mill, with chimneys
- Factory, mill, and flour mill, without chimneys
- Power Station, drawn to scale
- Hydroelectric Power Station
- Radio Station, drawn to scale
- Telephone Station, drawn to scale
- Abandoned Open-pit Mine or Quarry
- Open-pit Salt Mine
- Pit
- Oil Deposit or Well
- Oil Seepage
- Tailings Pile
- Fuel Storage Tanks
- Natural Gas Tank
- Bench Mark
- Drill Hole
- Burial Mound
- Triangulation Point on Burial Mound
- Single-track Railroad
- Double-track Railroad and Station Building
- Coniferous Forest
- Deciduous Forest
- Mixed Forest
- 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

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)

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

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
- Subway Entrance
- Partly Demolished Buildings
- Demolished Buildings
- Built-Up Area with Fireproof Buildings Predominant
- Built-Up Area with Non-Fireproof Buildings Predominant
- Individual Fireproof Building
- Prominent Industrial Building
- Individual Dwelling, Fireproof
- Ruins of an Individual Dwelling
- Factory or Mill Chimney
- Factory or Mill with Chimney
- Factory or Mill without Chimney
- Mine or Open Pit Mine
- Operating Shaft or Mine
- Non-Operating Shaft or Mine
- Salt Mine
- Tailings Pile
- Pit
- Stone Quarry
- Gas Pump or Service Station
- Fuel Storage or Natural Gas Tank
- Oil or Natural Gas Derrick
- Small Hydroelectric Power Station
- Power Station
- Transformer Station
- Cemetery
- Burial Mound (height in metres)
- Triangulation Point on Burial Mound
- Triangulation Point
- Bench Mark
- Bench Mark (monumented)
- Telegraph Office
- Telephone Station
- Radio Station
- Radio Tower
- Airfield or Seaplane Base
- Landing Strip
- 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
- Water Gauge
- Well
- Water Reservoir or Rain Water Pit
- Spring
- Isobath with value
- Heavy (Index) Contour Line
- Contour Line and Value
- Half Contour Line
- Spot Elevation Value
- Coniferous
- Deciduous
- Mixed
- Scrub

Key to Numbers on Mapping

SS79NW_Swansea

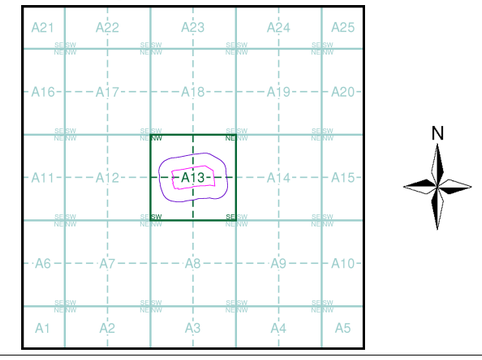
No.	Description
101	Tunnel (Railway)

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:10,560	1884	3
Glamorganshire	1:10,560	1900	4
Glamorganshire	1:10,560	1921	5
Glamorganshire	1:10,560	1921	6
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10K Raster Mapping	1:10,000	1999	17
10K Raster Mapping	1:10,000	2006	18
VectorMap Local	1:10,000	2020	19

Russian Map - Slice A



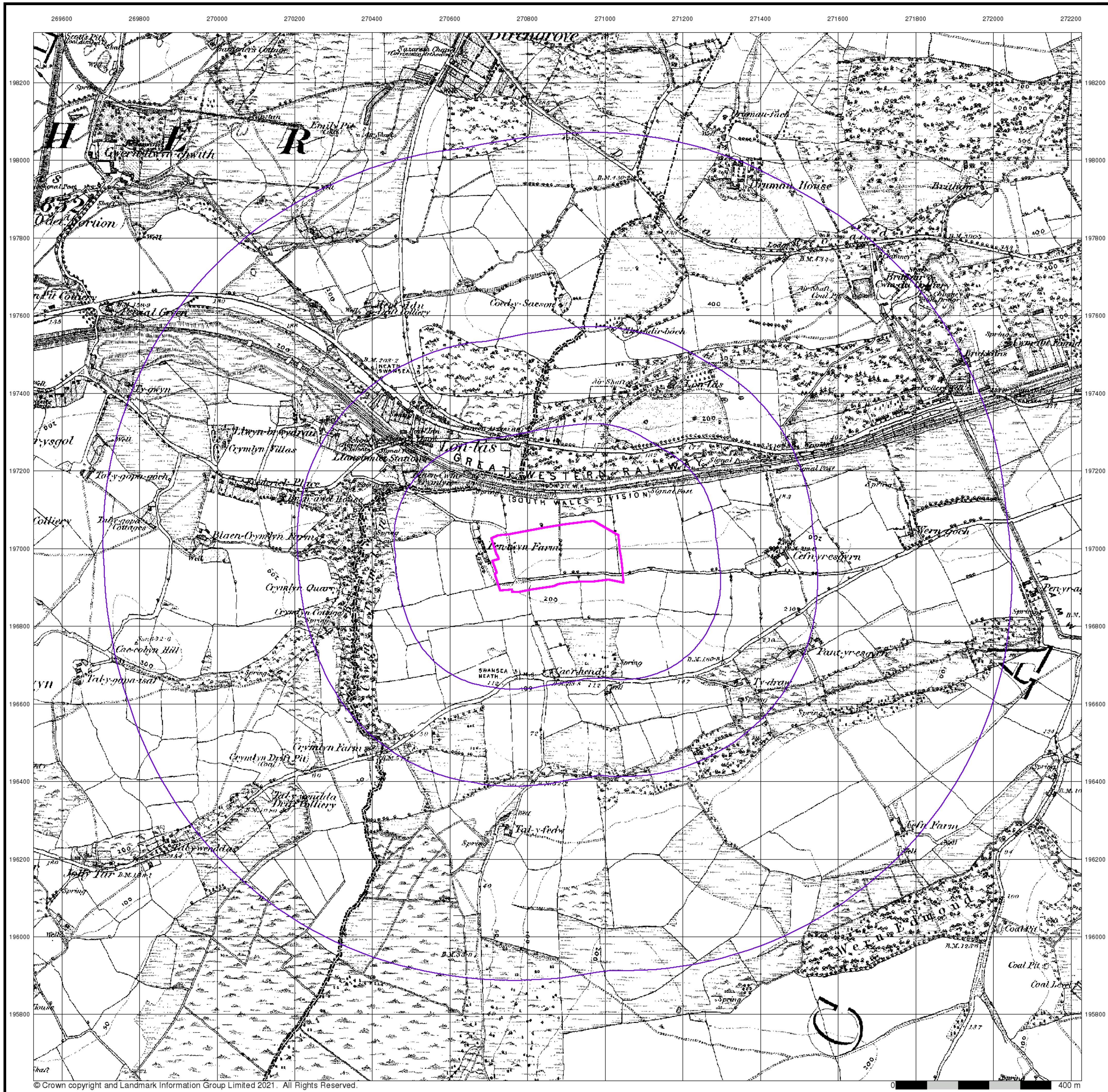
Order Details

Order Number: 274471833_1_1
Customer Ref: 16595-MW
National Grid Reference: 270880, 196970
Slice: A
Site Area (Ha): 4.77
Search Buffer (m): 1000

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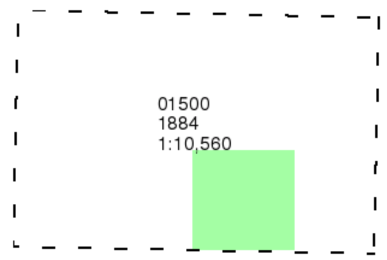
Glamorganshire

Published 1884

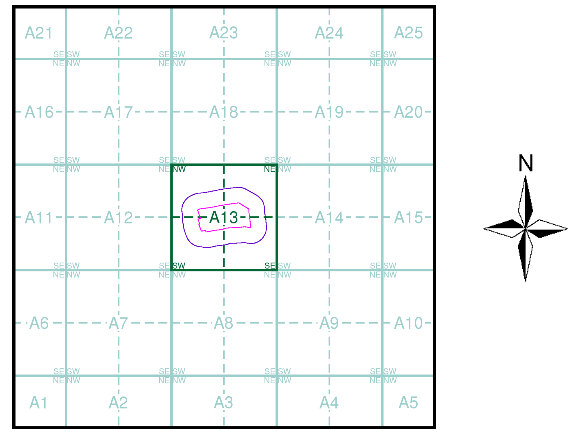
Source map scale - 1:10,560

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

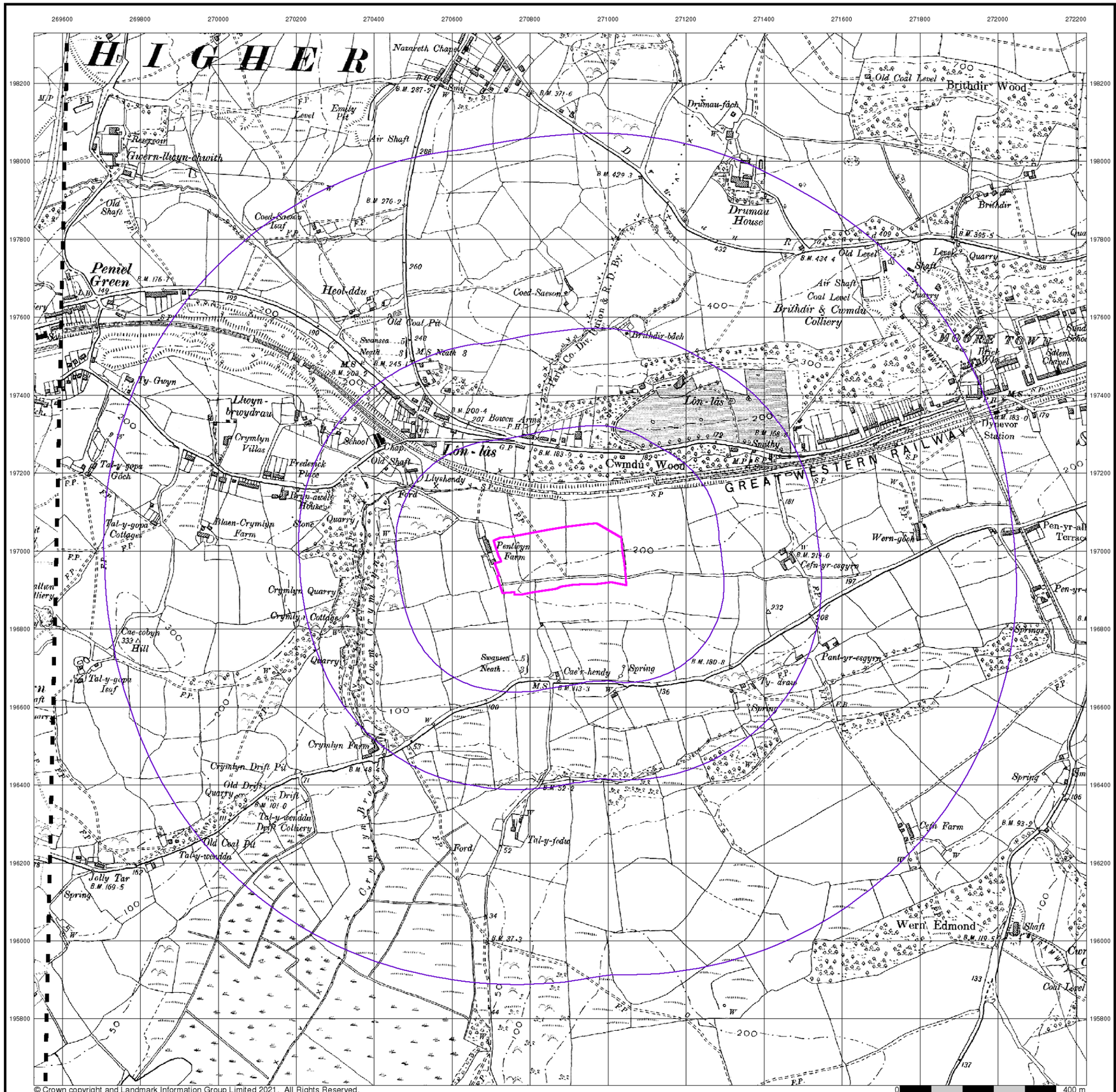
Order Number: 274471833_1_1
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National Grid Reference: 270880, 196970
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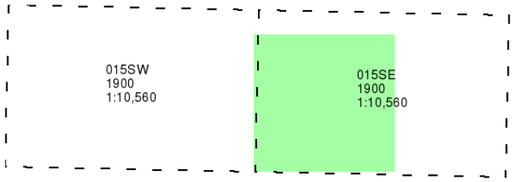
Glamorganshire

Published 1900

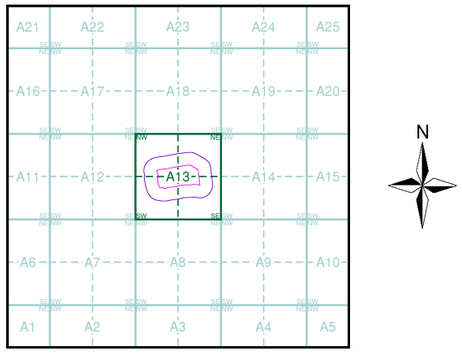
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

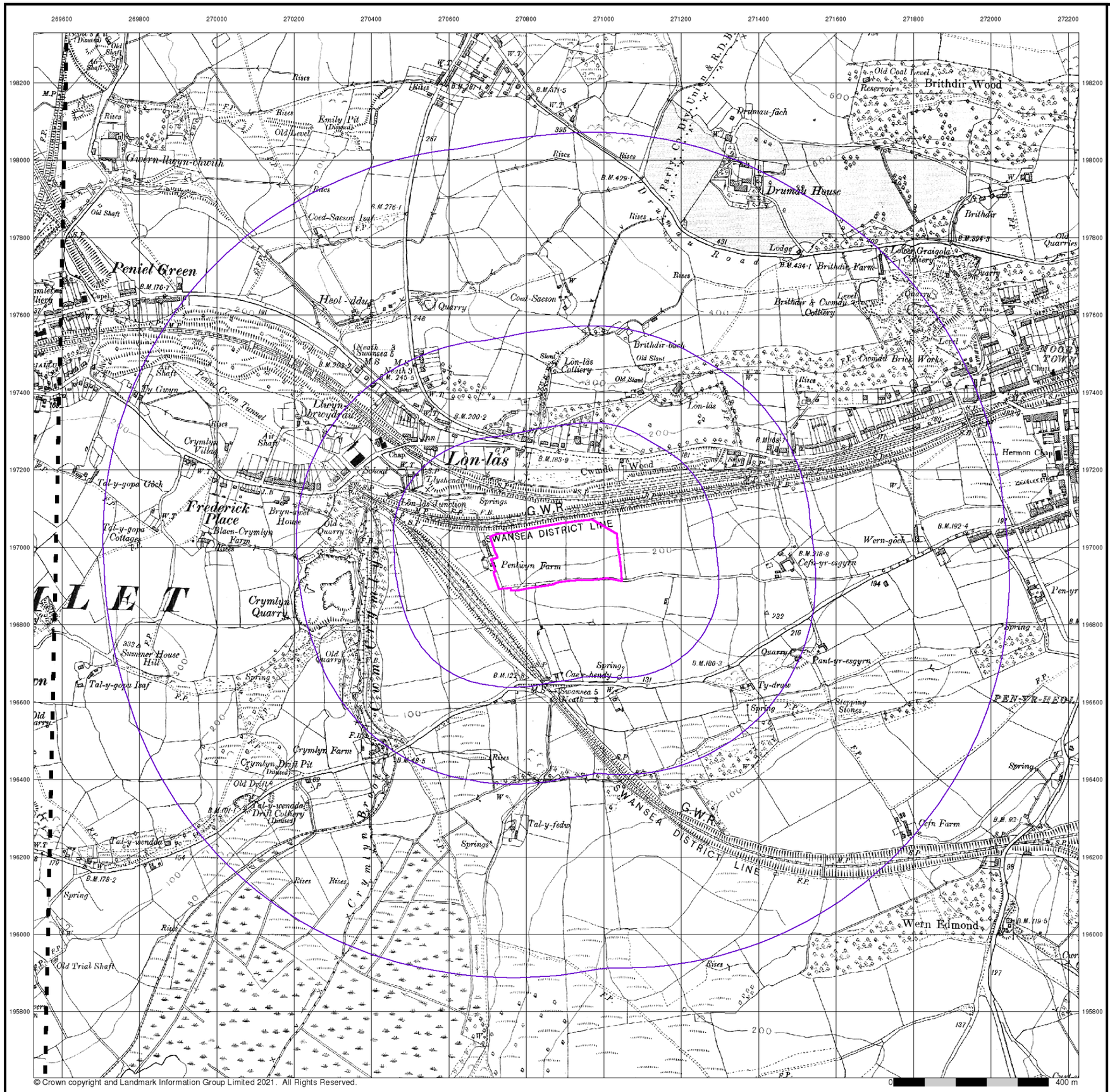
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National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	1000

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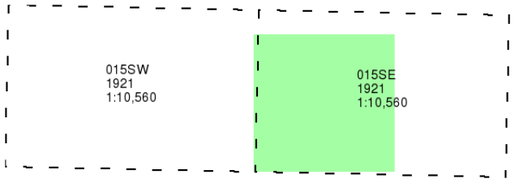
Glamorganshire

Published 1921

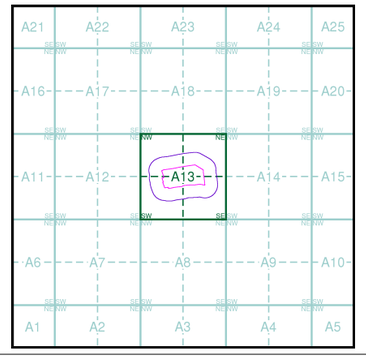
Source map scale - 1:10,560

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

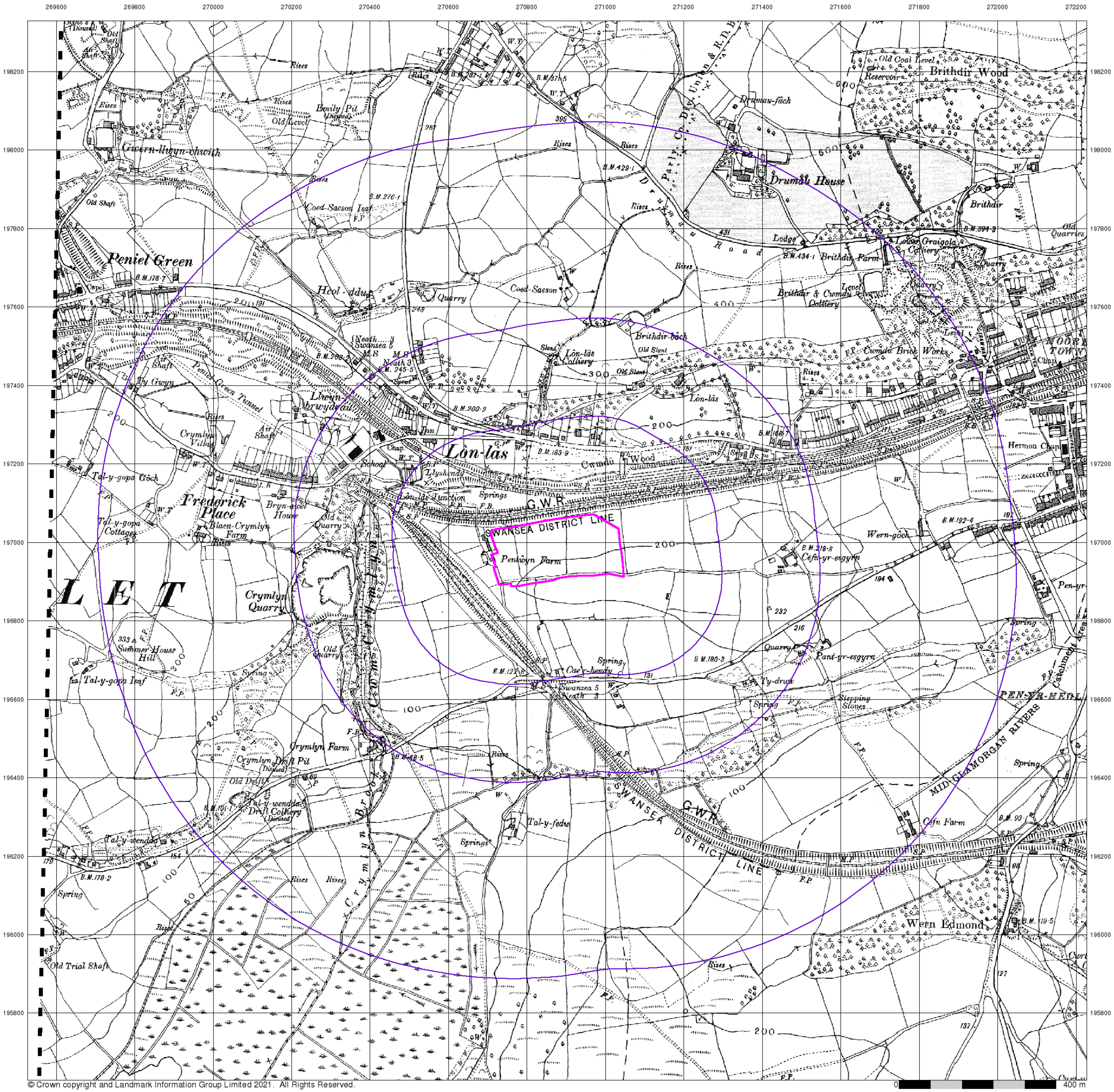
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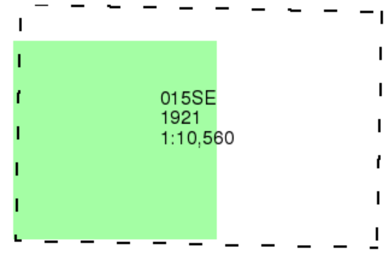
Glamorganshire

Published 1921

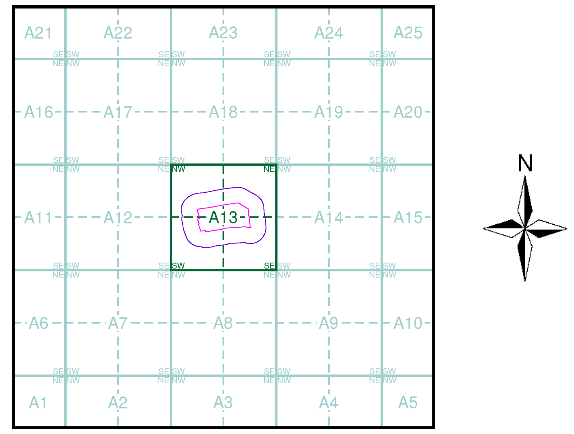
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

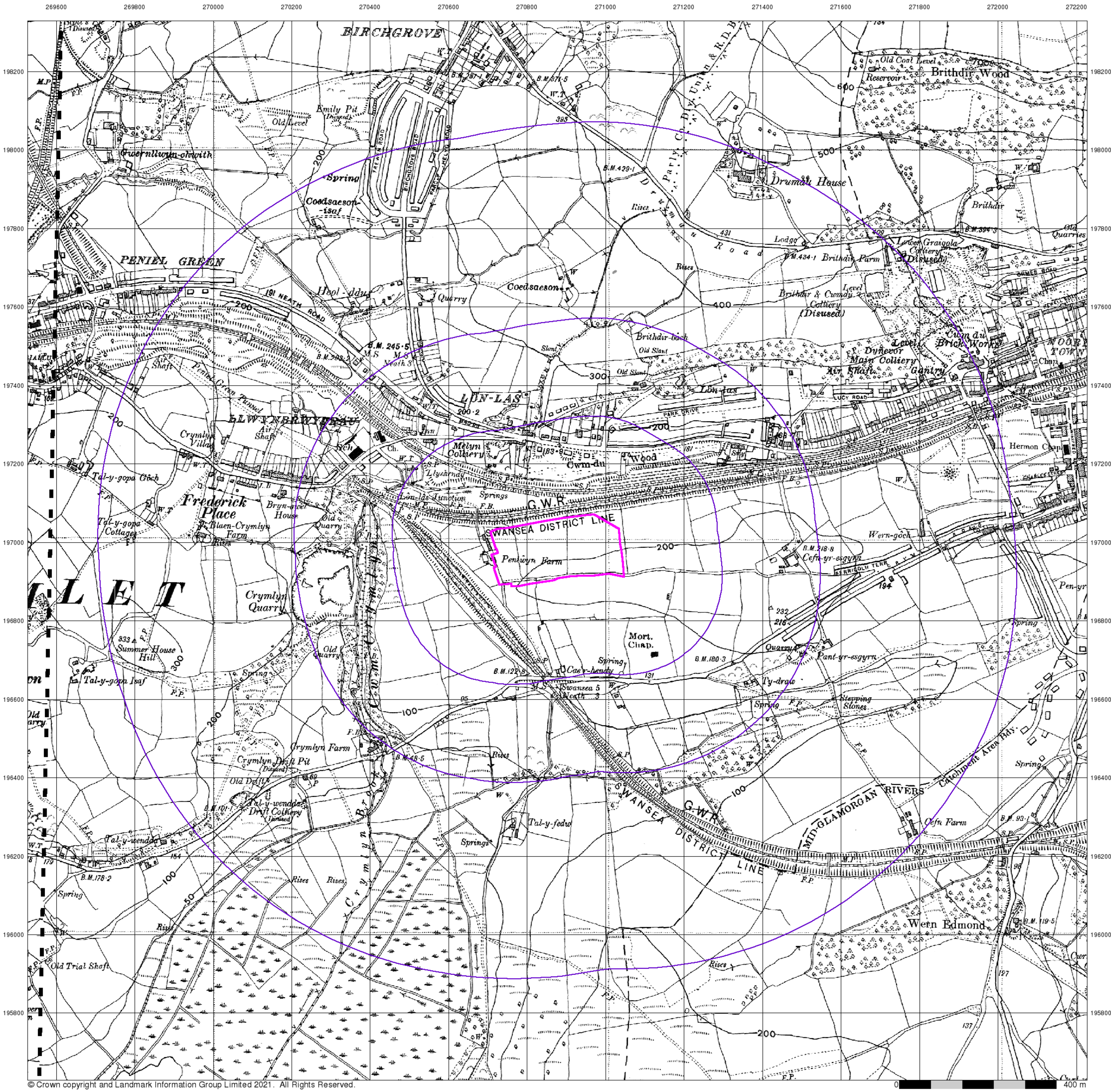
Order Number: 274471833_1_1
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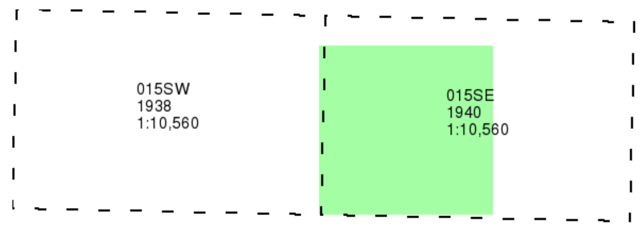
Glamorganshire

Published 1938 - 1940

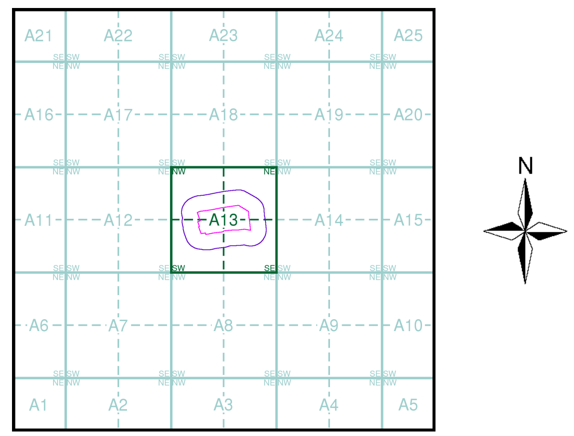
Source map scale - 1:10,560

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

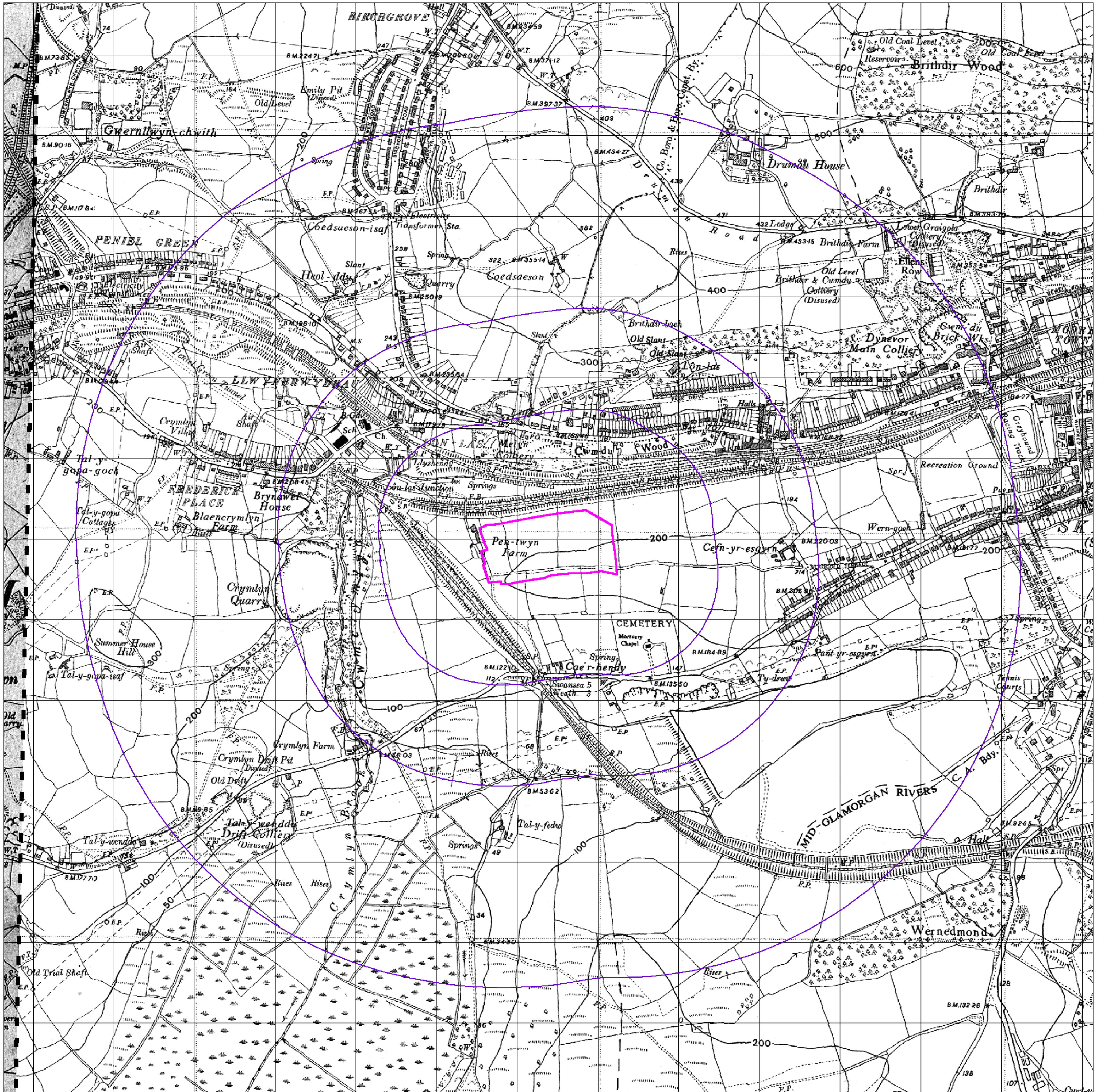
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National Grid Reference: 270880, 196970
Slice: A
Site Area (Ha): 4.77
Search Buffer (m): 1000

Site Details

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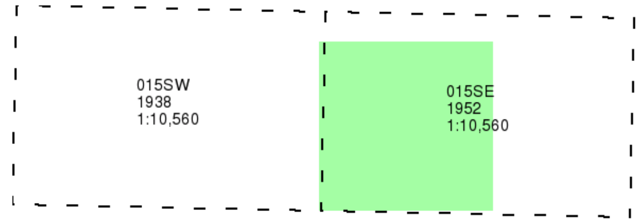
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Published 1938 - 1952

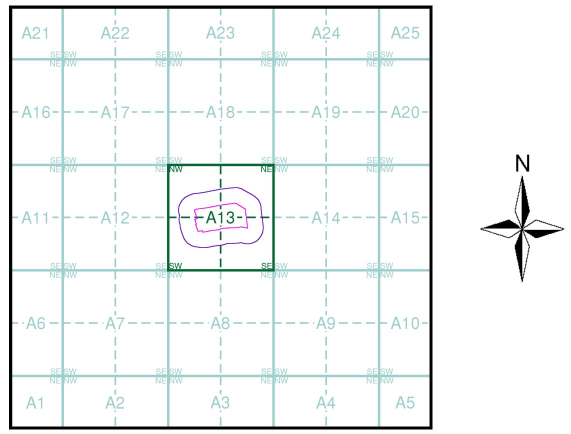
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Map Name(s) and Date(s)



Historical Map - Slice A



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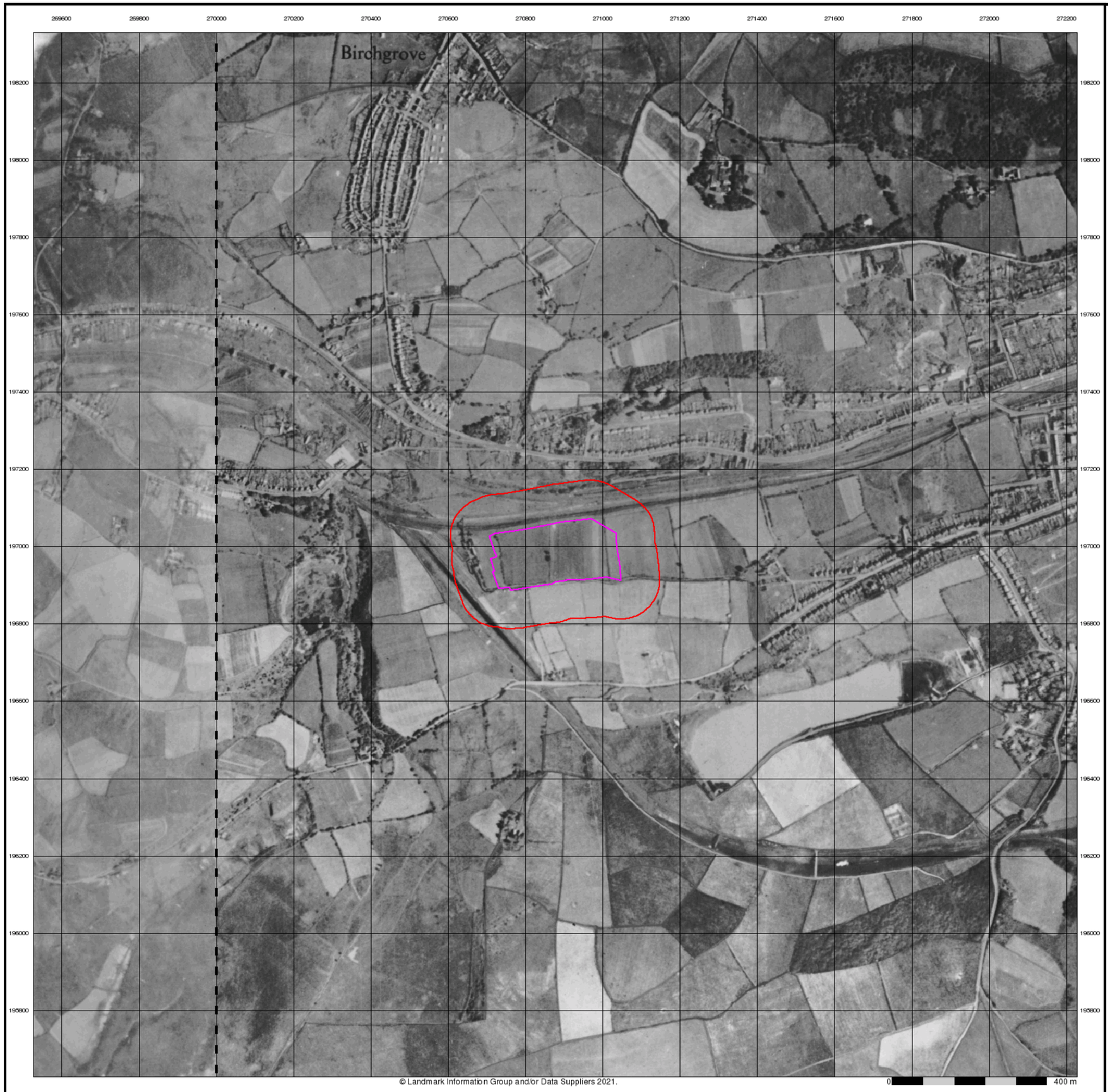
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Historical Aerial Photography

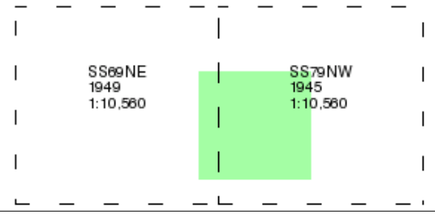
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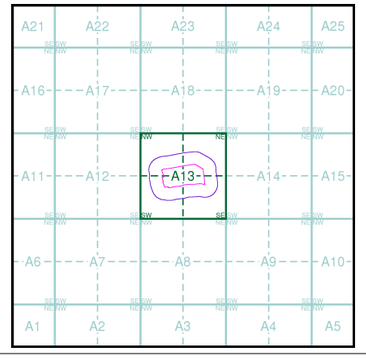
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

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Map Name(s) and Date(s)



Historical Aerial Photography - Slice A



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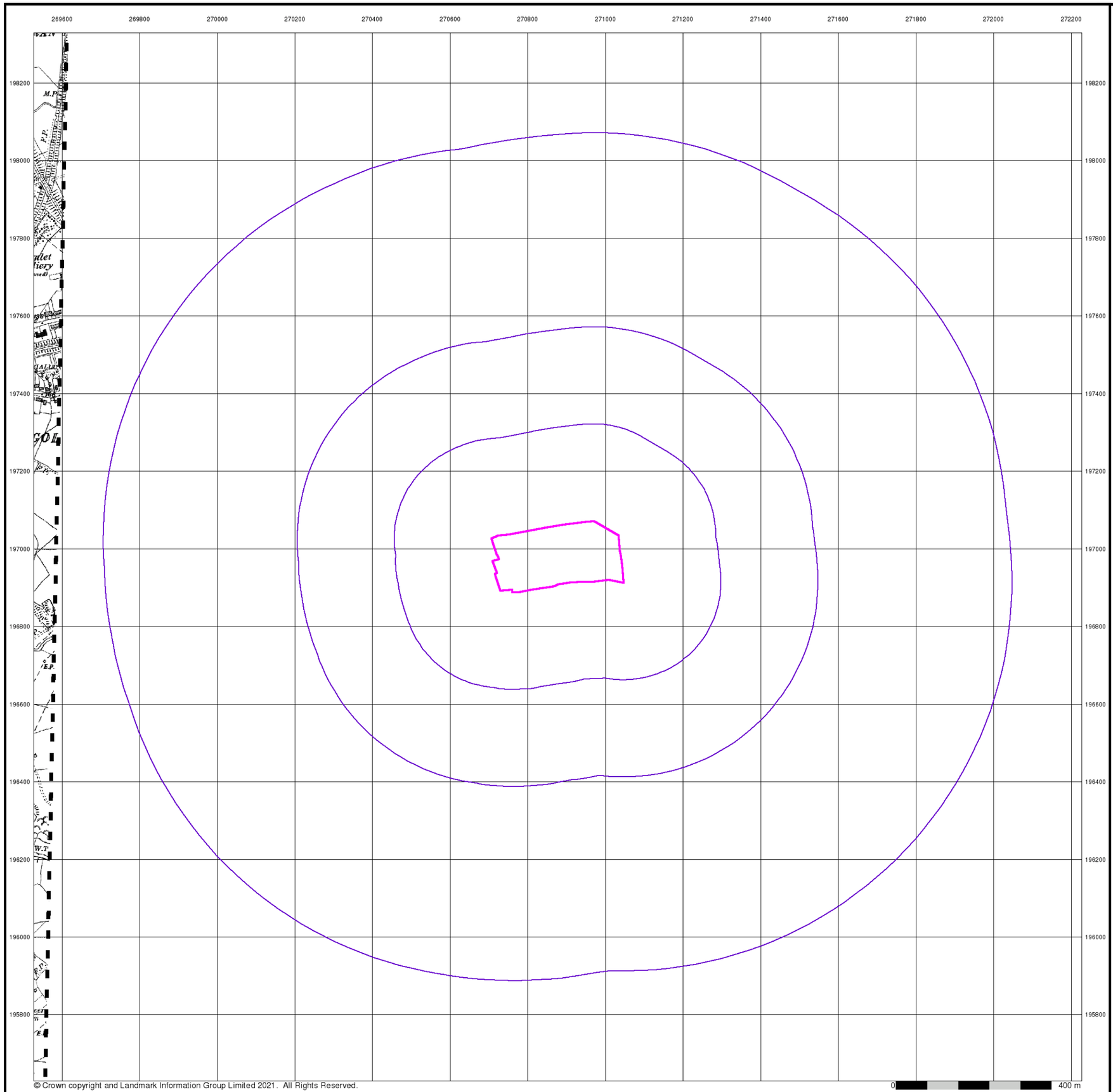
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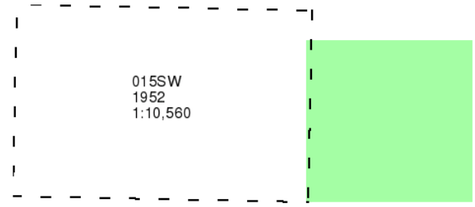
Glamorganshire

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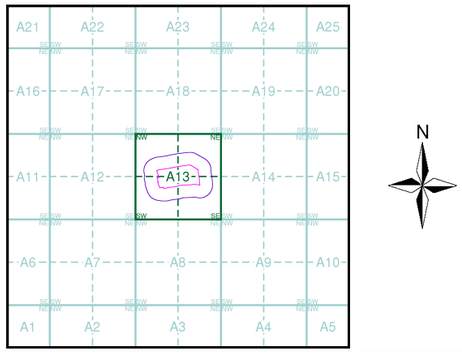
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Map Name(s) and Date(s)



Historical Map - Slice A



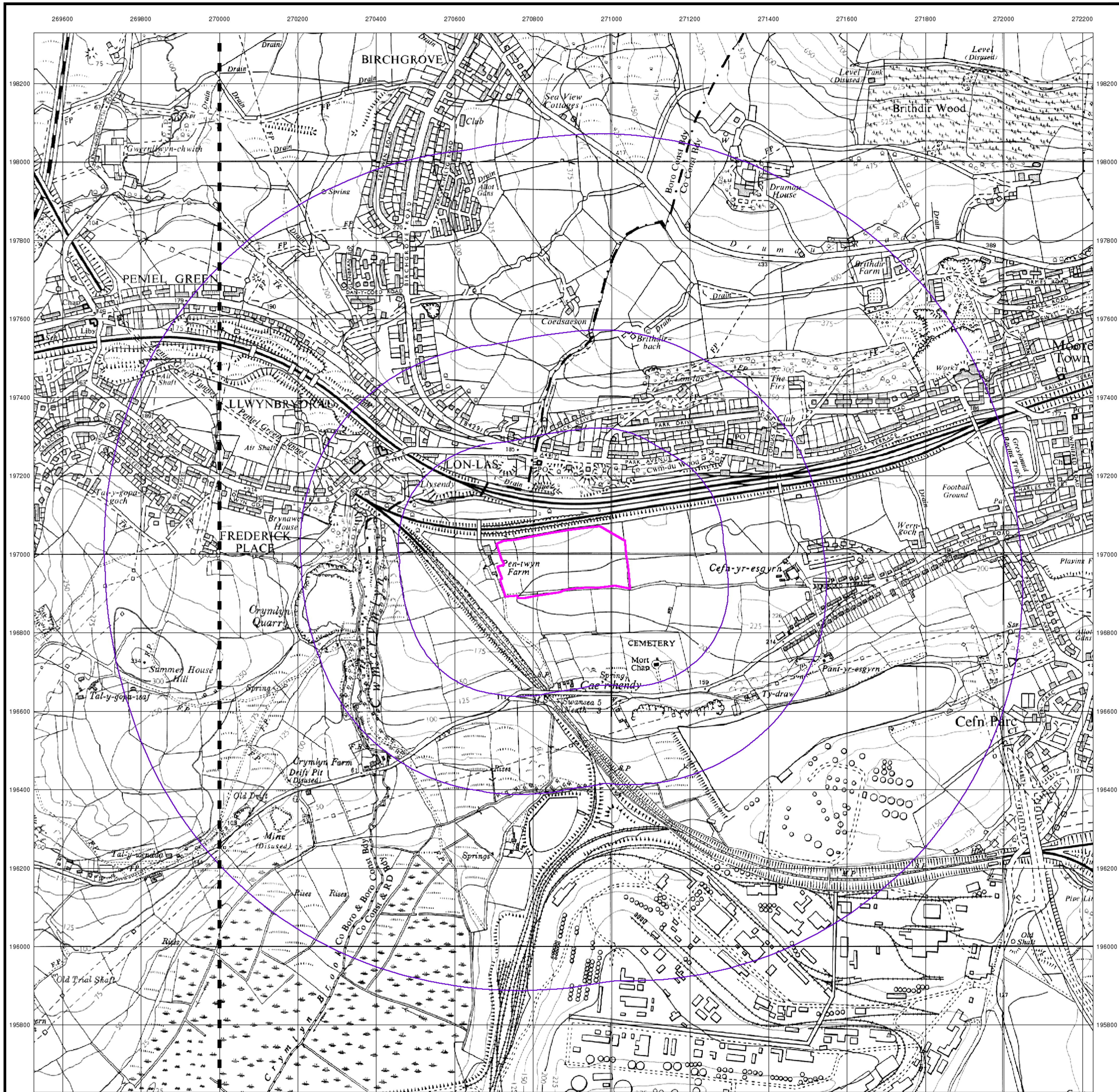
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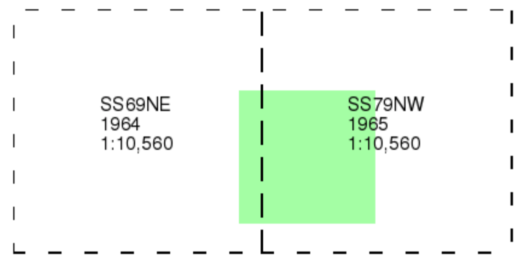
Ordnance Survey Plan

Published 1964 - 1965

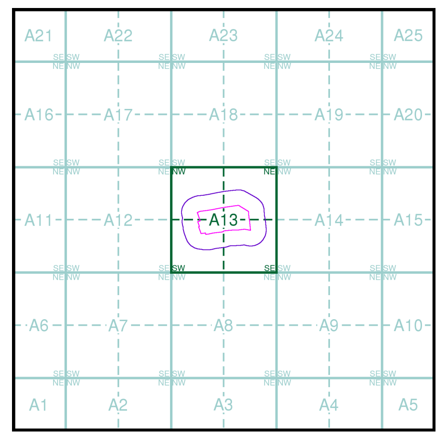
Source map scale - 1:10,000

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



N

Order Details

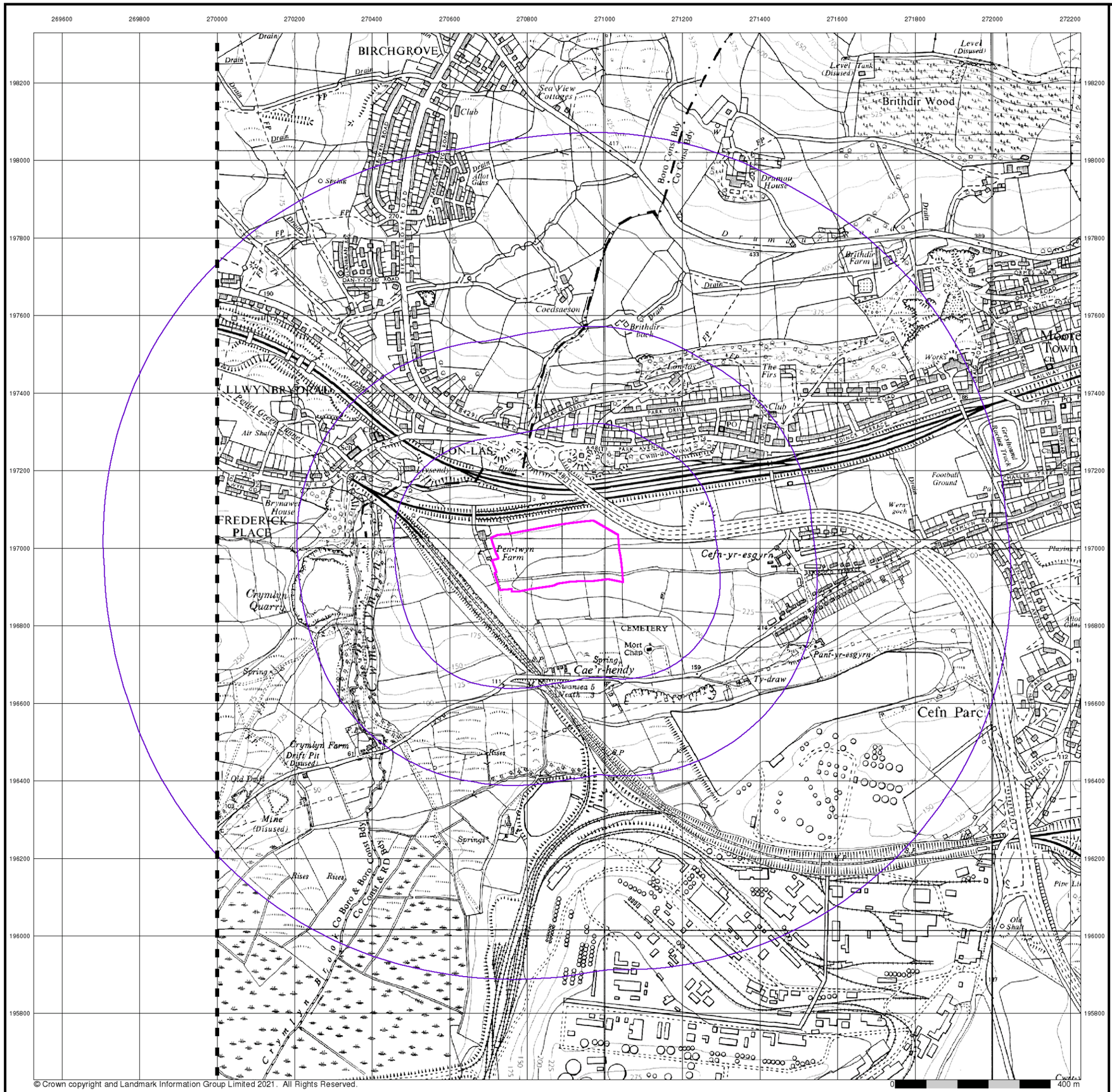
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Search Buffer (m): 1000

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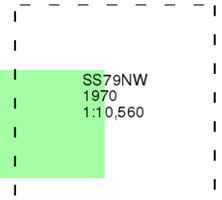
Ordnance Survey Plan

Published 1970

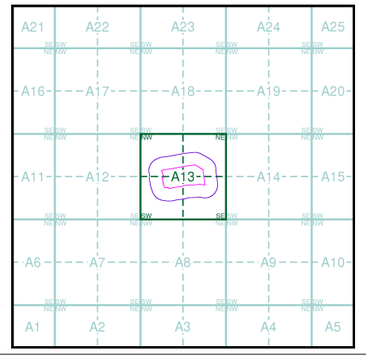
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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

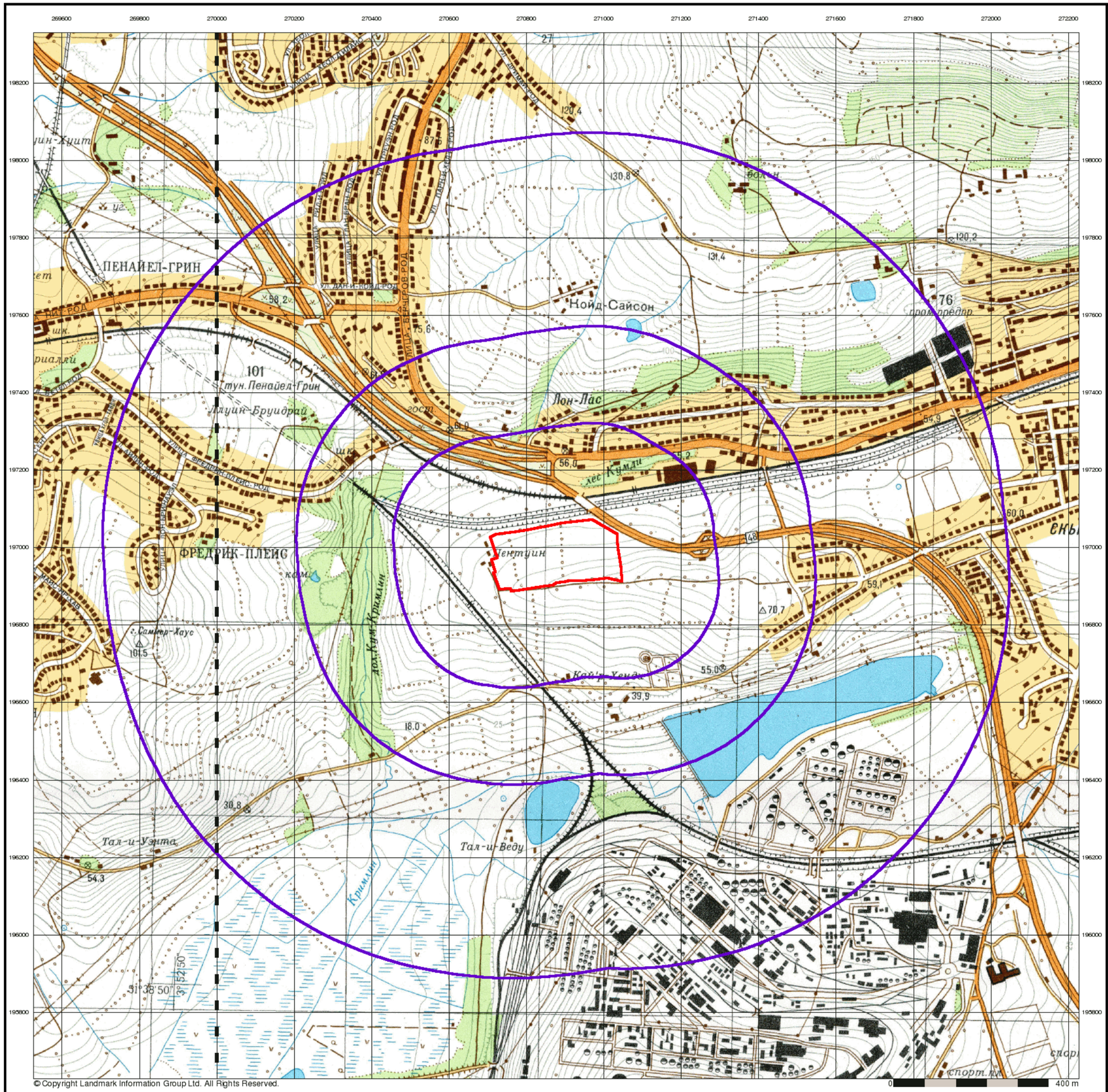
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Search Buffer (m):	1000

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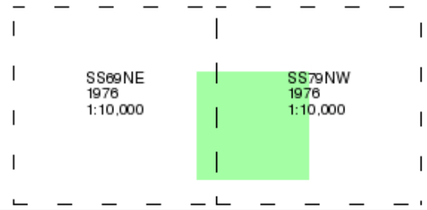
Swansea

Published 1976

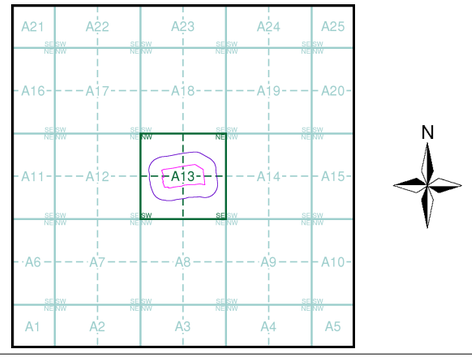
Source map scale - 1:10,000

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)



Russian Map - Slice A

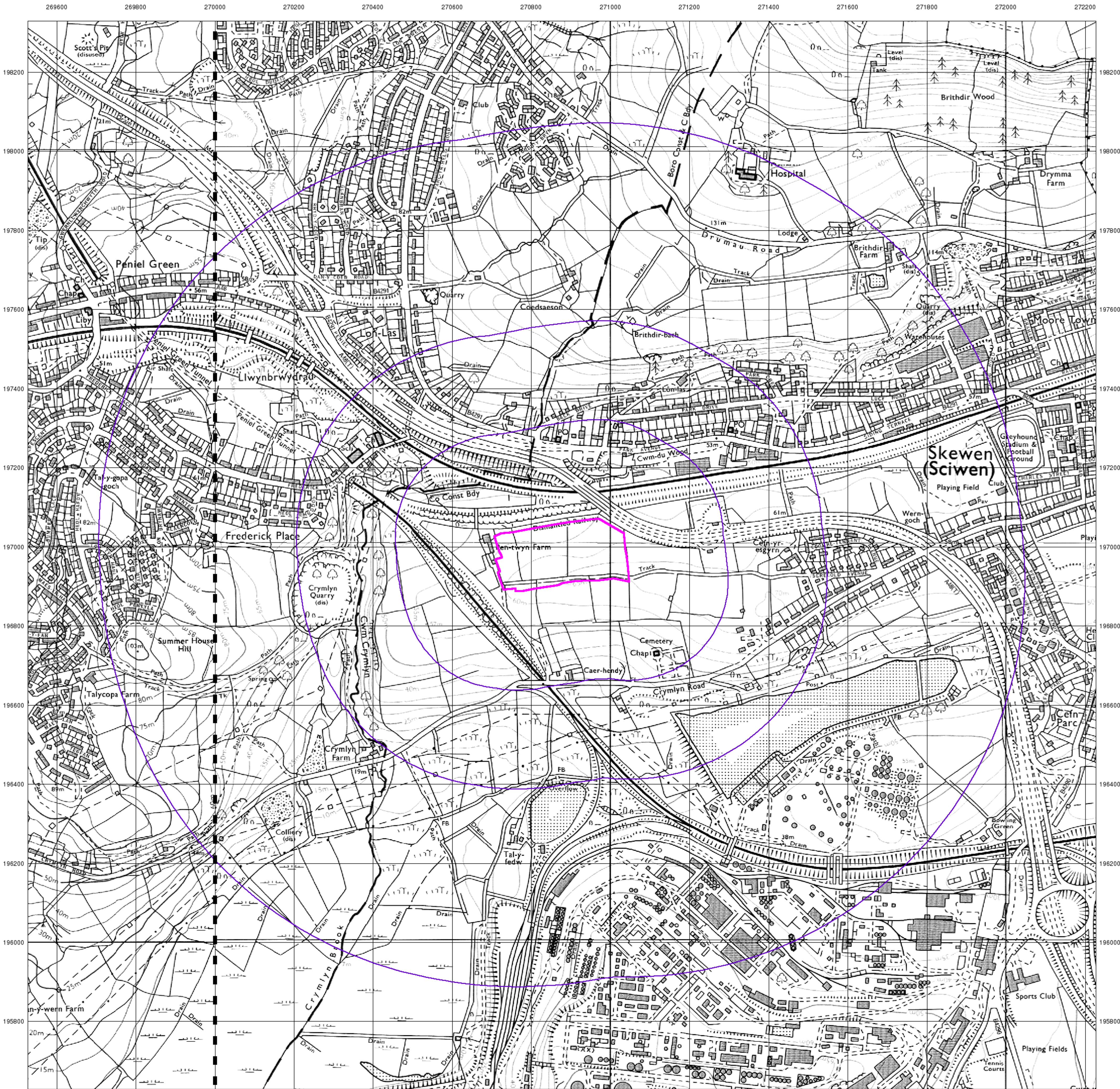


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Site Details

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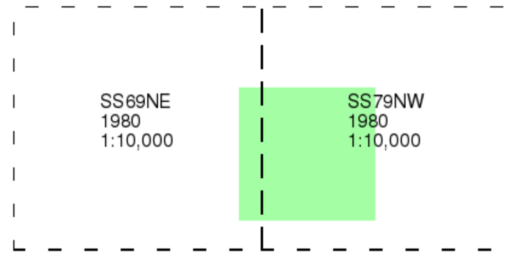
Ordnance Survey Plan

Published 1980

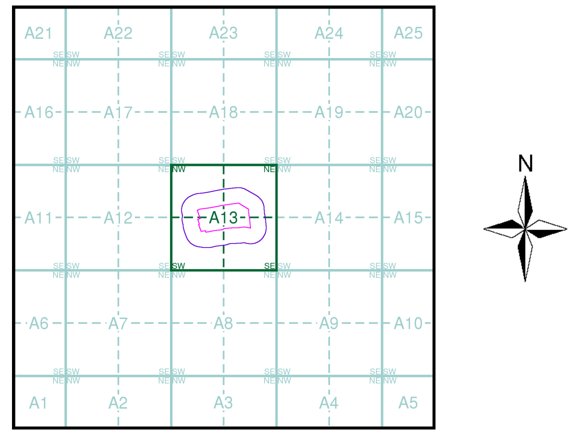
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Map Name(s) and Date(s)



Historical Map - Slice A



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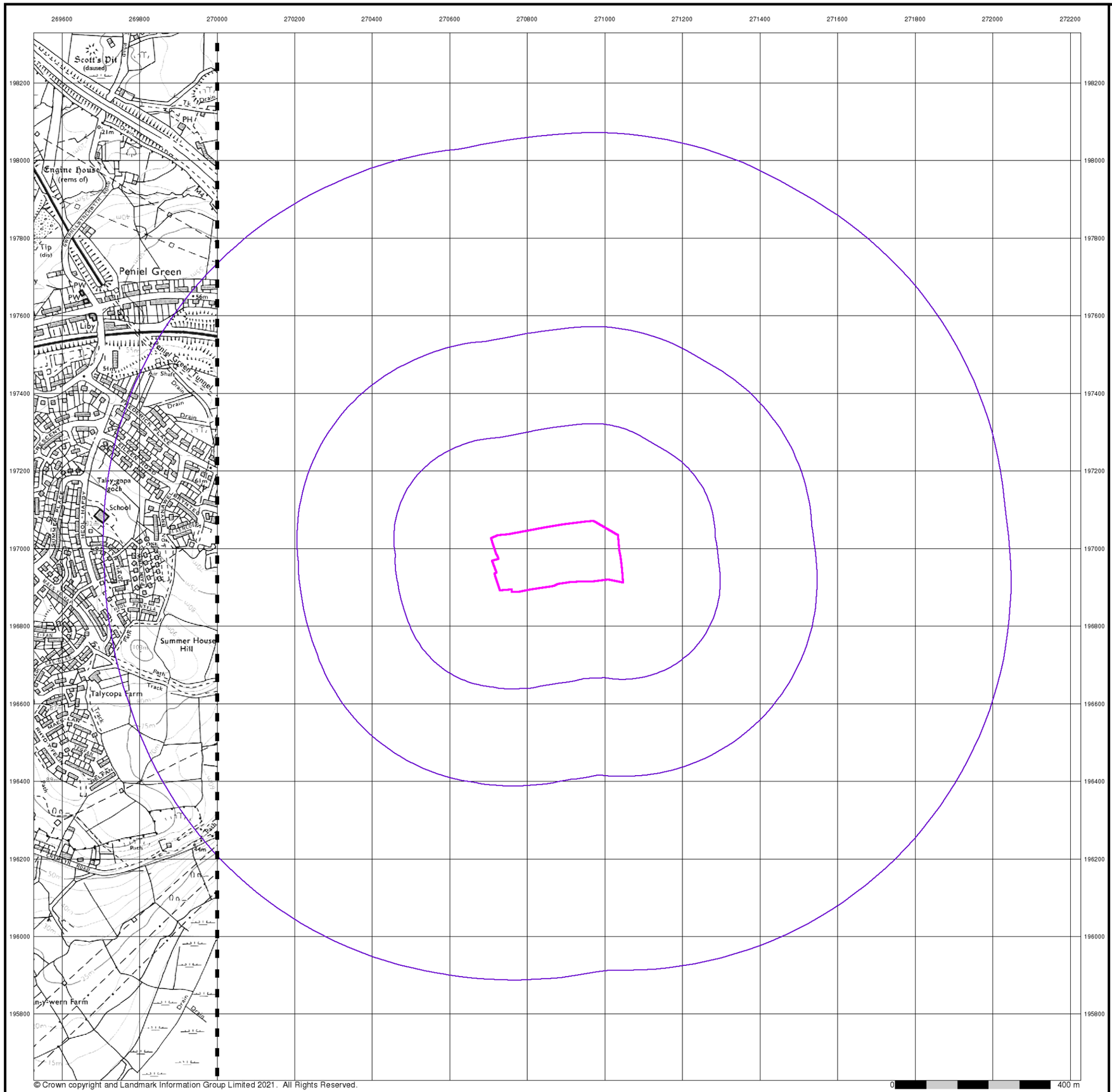
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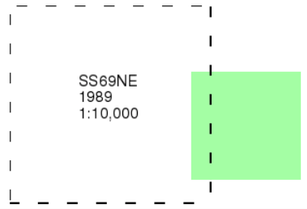
Ordnance Survey Plan

Published 1989

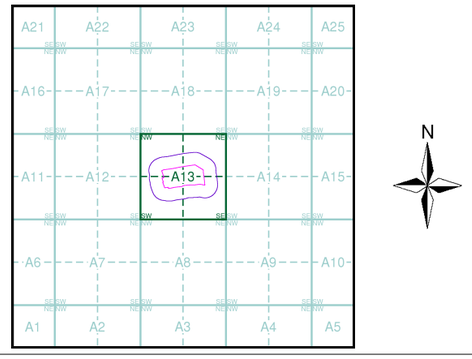
Source map scale - 1:10,000

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Map Name(s) and Date(s)



Historical Map - Slice A



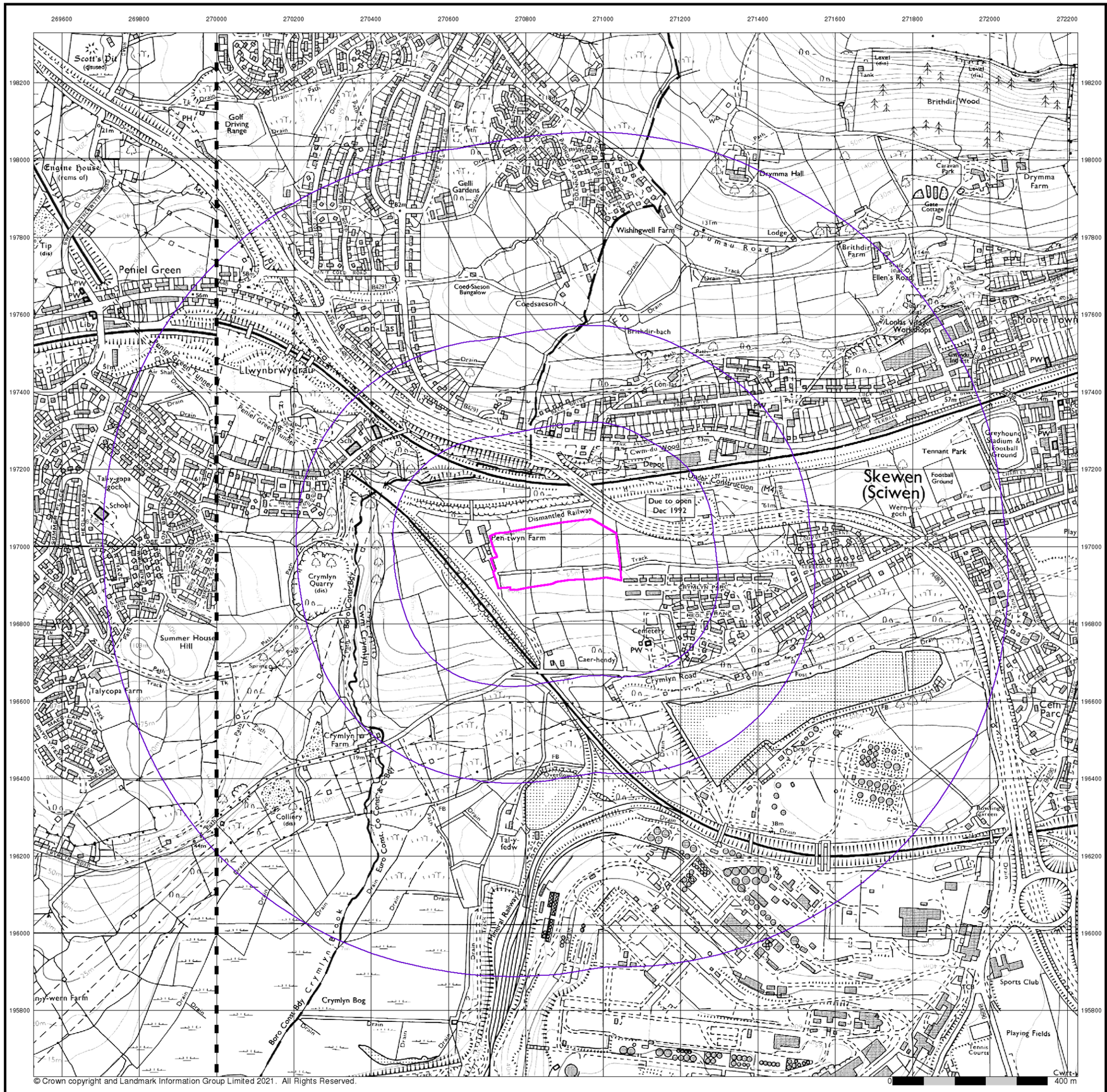
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Slice:	A
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Search Buffer (m):	1000

Site Details

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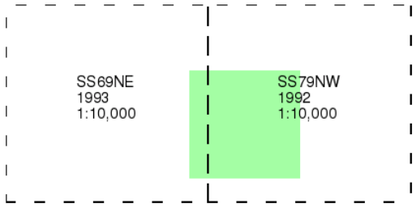
Ordnance Survey Plan

Published 1992 - 1993

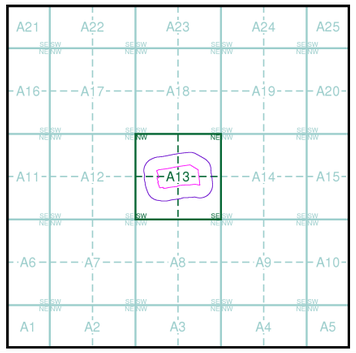
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Map Name(s) and Date(s)



Historical Map - Slice A



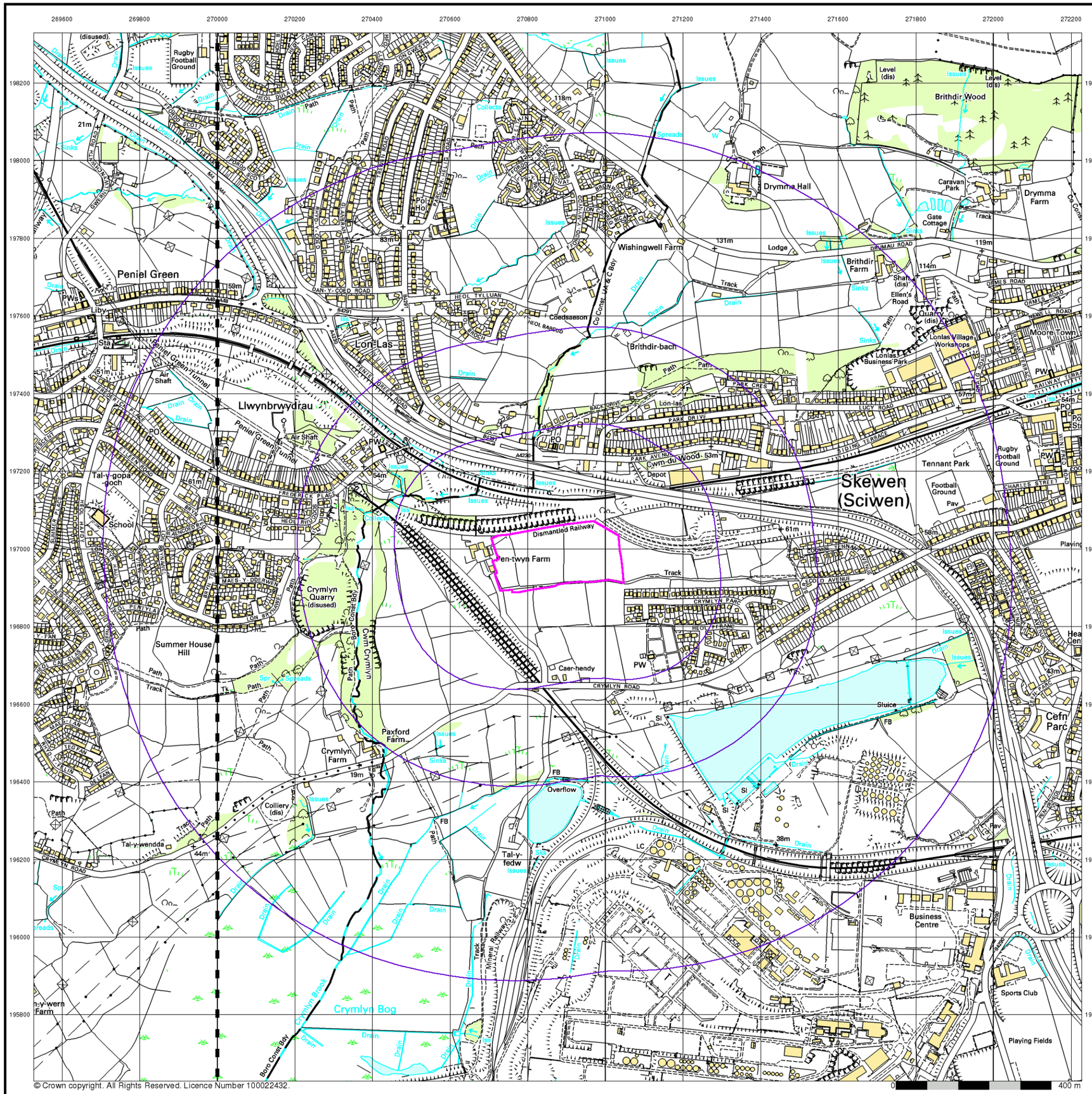
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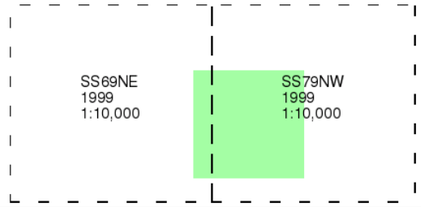
10k Raster Mapping

Published 1999

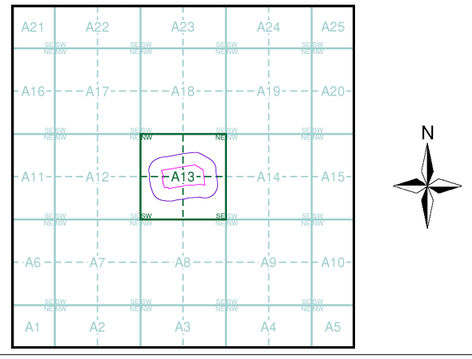
Source map scale - 1:10,000

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)



Historical Map - Slice A



Order Details

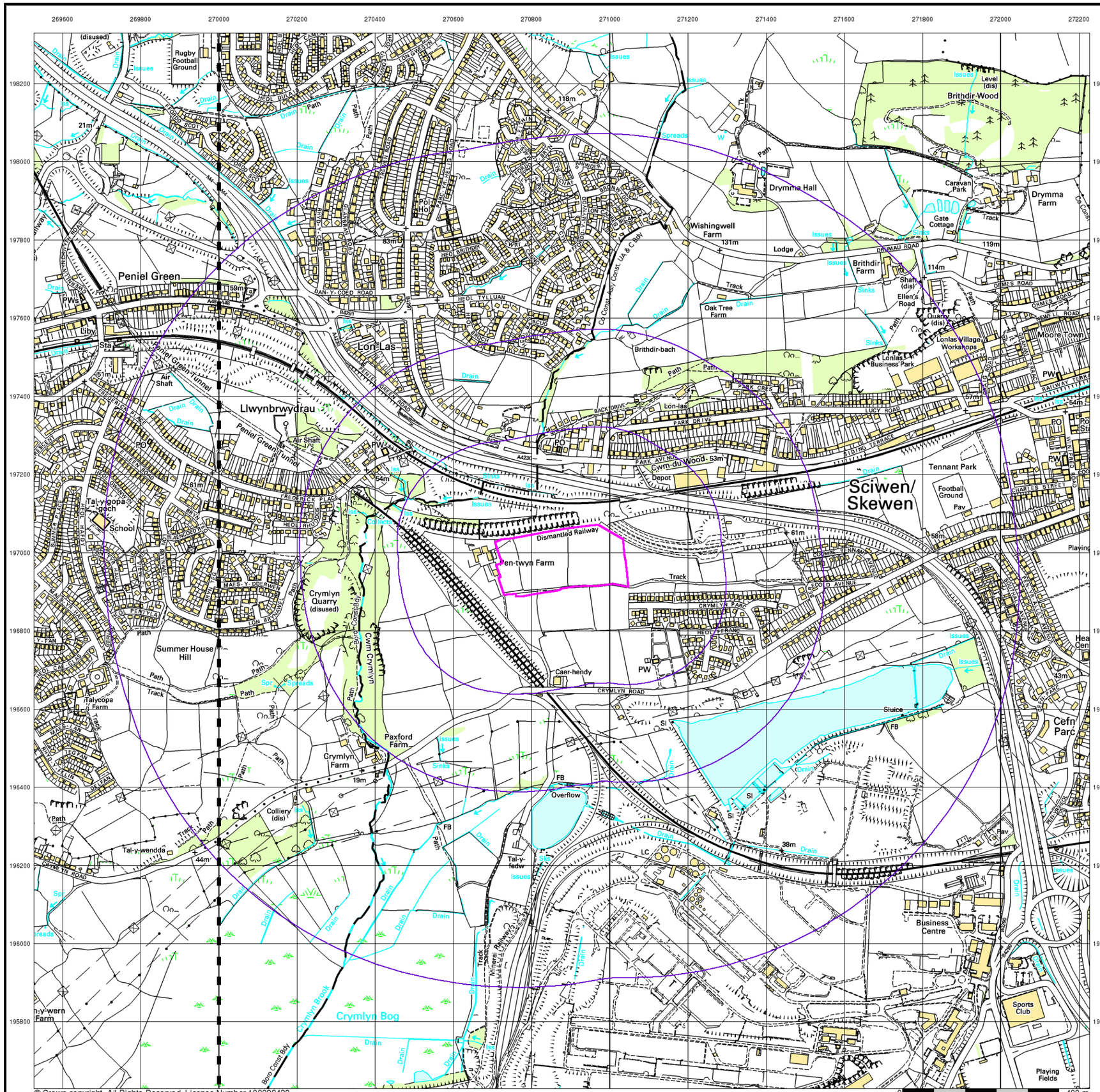
Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	1000

Site Details

Phase 5 - Crymlyn Road, Skewen, Neath, SA10 6NL

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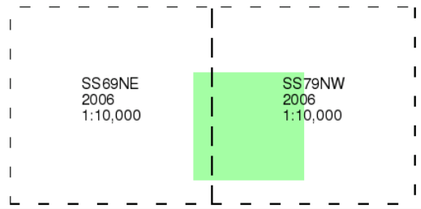
10k Raster Mapping

Published 2006

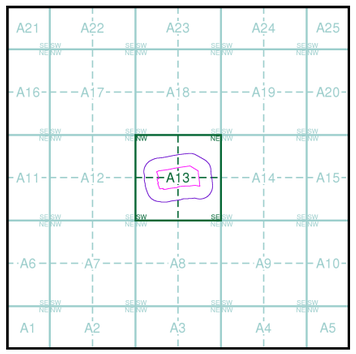
Source map scale - 1:10,000

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)



Historical Map - Slice A

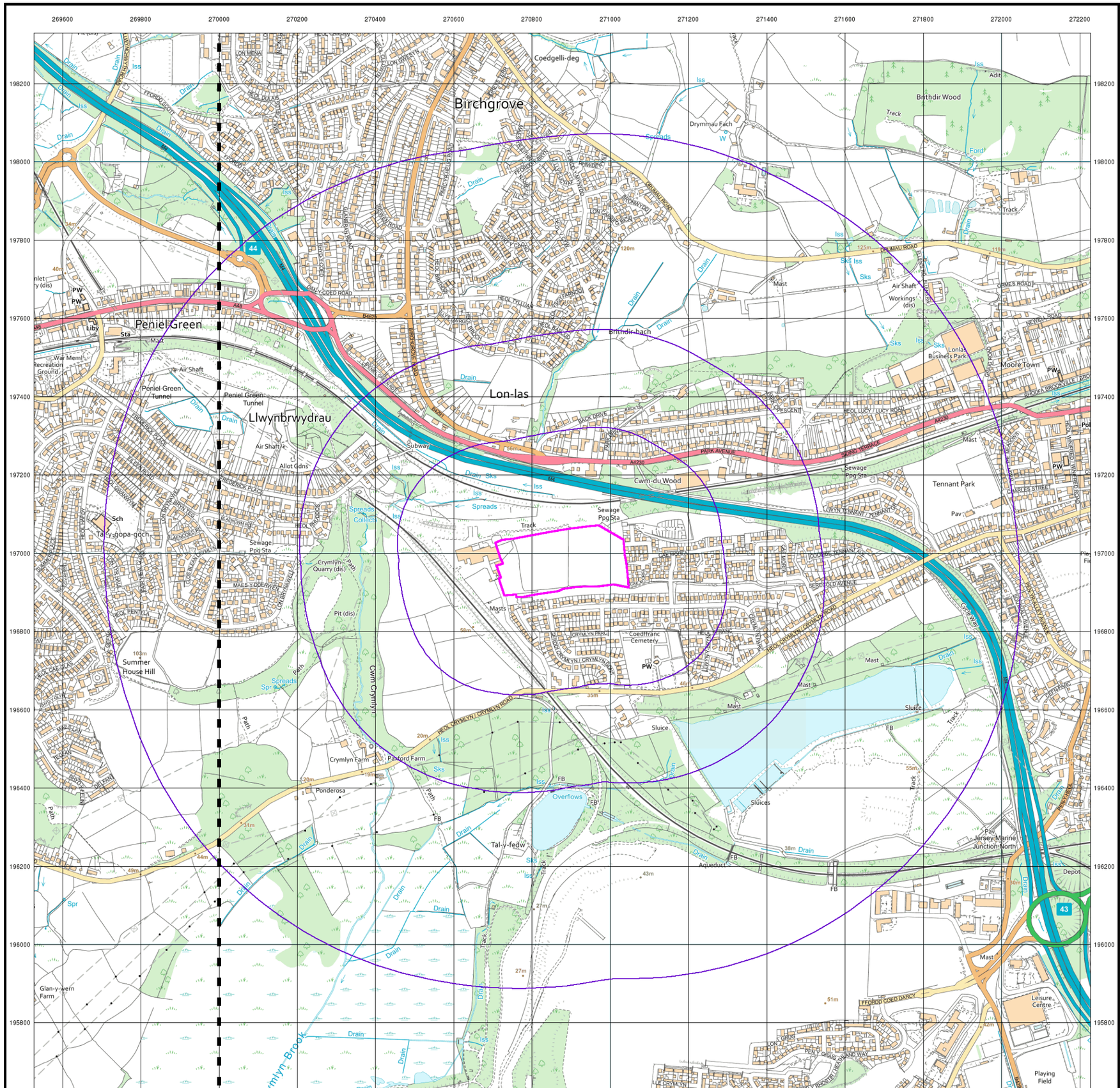


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Slice:	A
Site Area (Ha):	4.77
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Site Details

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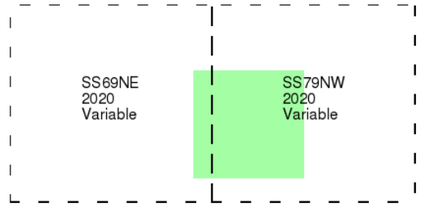
VectorMap Local

Published 2020

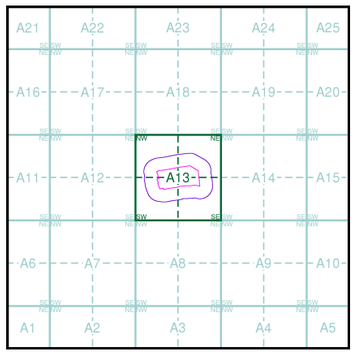
Source map scale - 1:10,000

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)



Historical Map - Slice A



Order Details

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Site Details

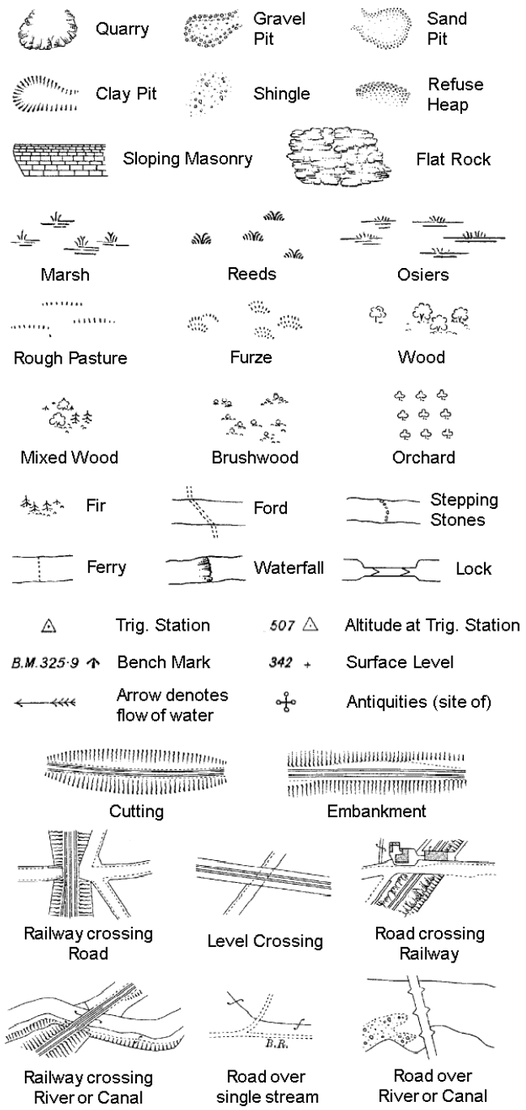
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Historical Mapping Legends

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



County Boundary (Geographical)

County & Civil Parish Boundary

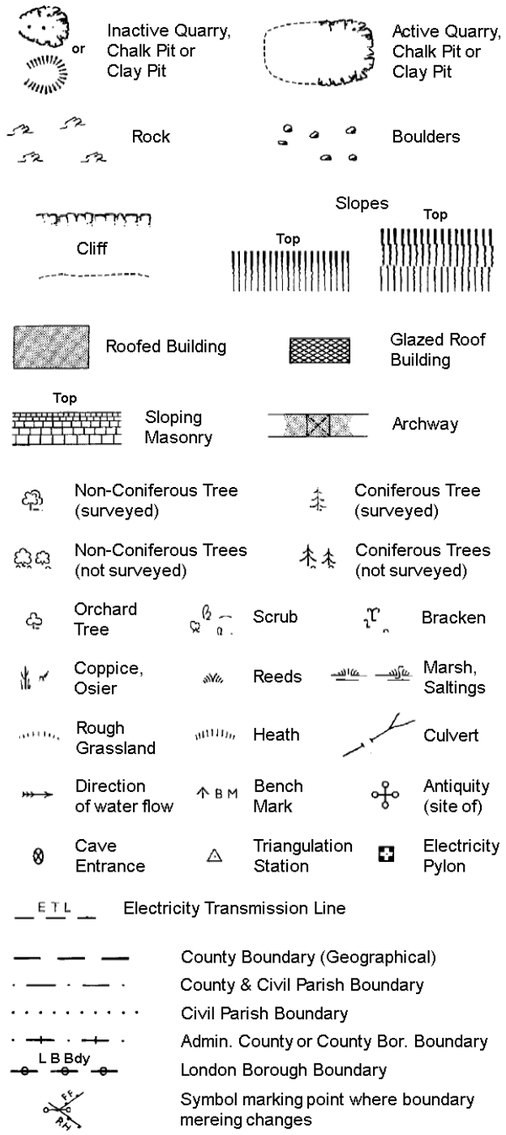
Administrative County & Civil Parish Boundary

Co. Boro. Bdy. County Borough Boundary (England)

Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	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	St.	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



County Boundary (Geographical)

County & Civil Parish Boundary

Civil Parish Boundary

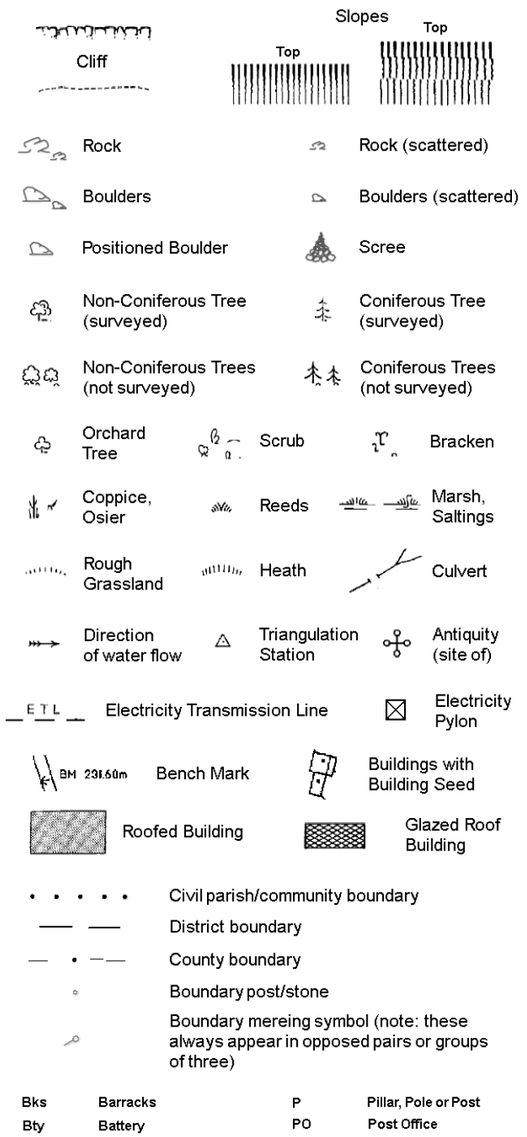
Admin. County or County Bor. Boundary

L B Bdy 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
El 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



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
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El 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 Governer	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

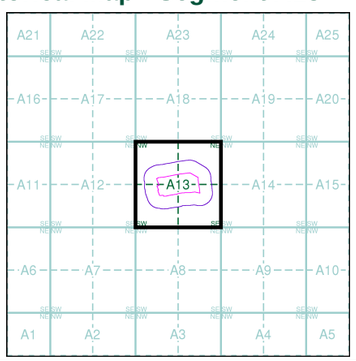
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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:2,500	1878 - 1879	2
Glamorganshire	1:2,500	1899	3
Glamorganshire	1:2,500	1918	4
Glamorganshire	1:2,500	1940	5
Historical Aerial Photography	1:1,250	1947	6
Ordnance Survey Plan	1:1,250	1957 - 1965	7
Ordnance Survey Plan	1:2,500	1958 - 1969	8
Ordnance Survey Plan	1:1,250	1965	9
Additional SIMs	1:1,250	1965 - 1991	10
Ordnance Survey Plan	1:2,500	1969	11
Ordnance Survey Plan	1:1,250	1975	12
Additional SIMs	1:1,250	1989	13
Large-Scale National Grid Data	1:1,250	1993	14
Large-Scale National Grid Data	1:1,250	1993	15
Historical Aerial Photography	1:2,500	2000	16

Historical Map - Segment A13



Order Details

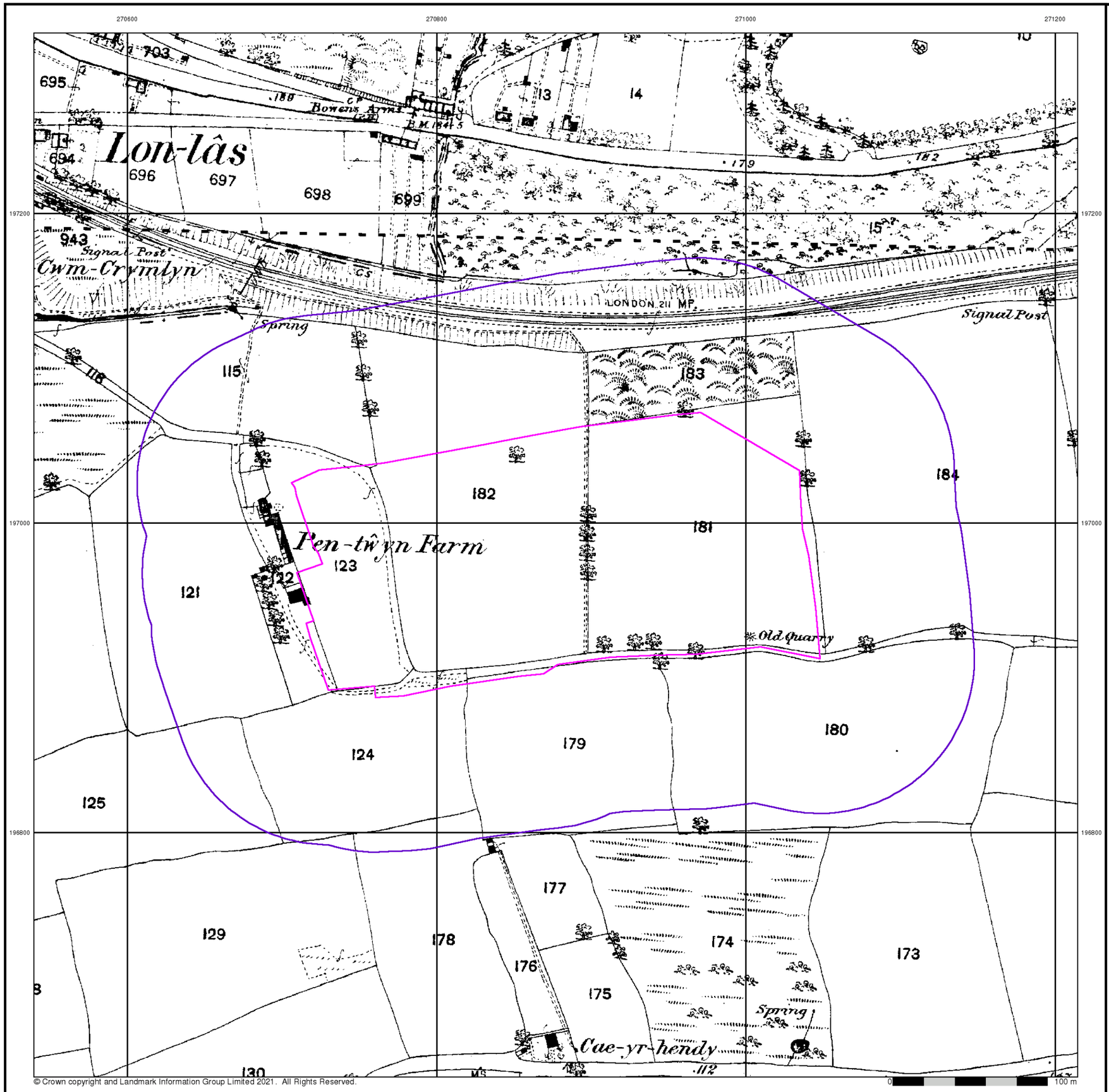
Order Number:	274471833_1_1
Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	100

Site Details

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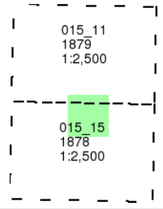
Glamorganshire

Published 1878 - 1879

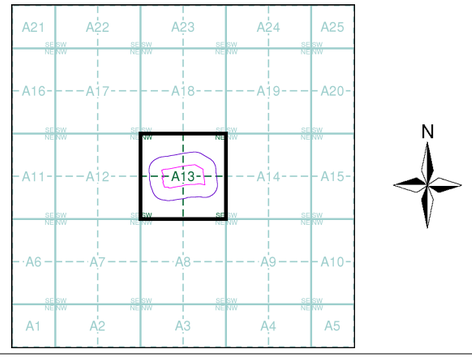
Source map scale - 1:2,500

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

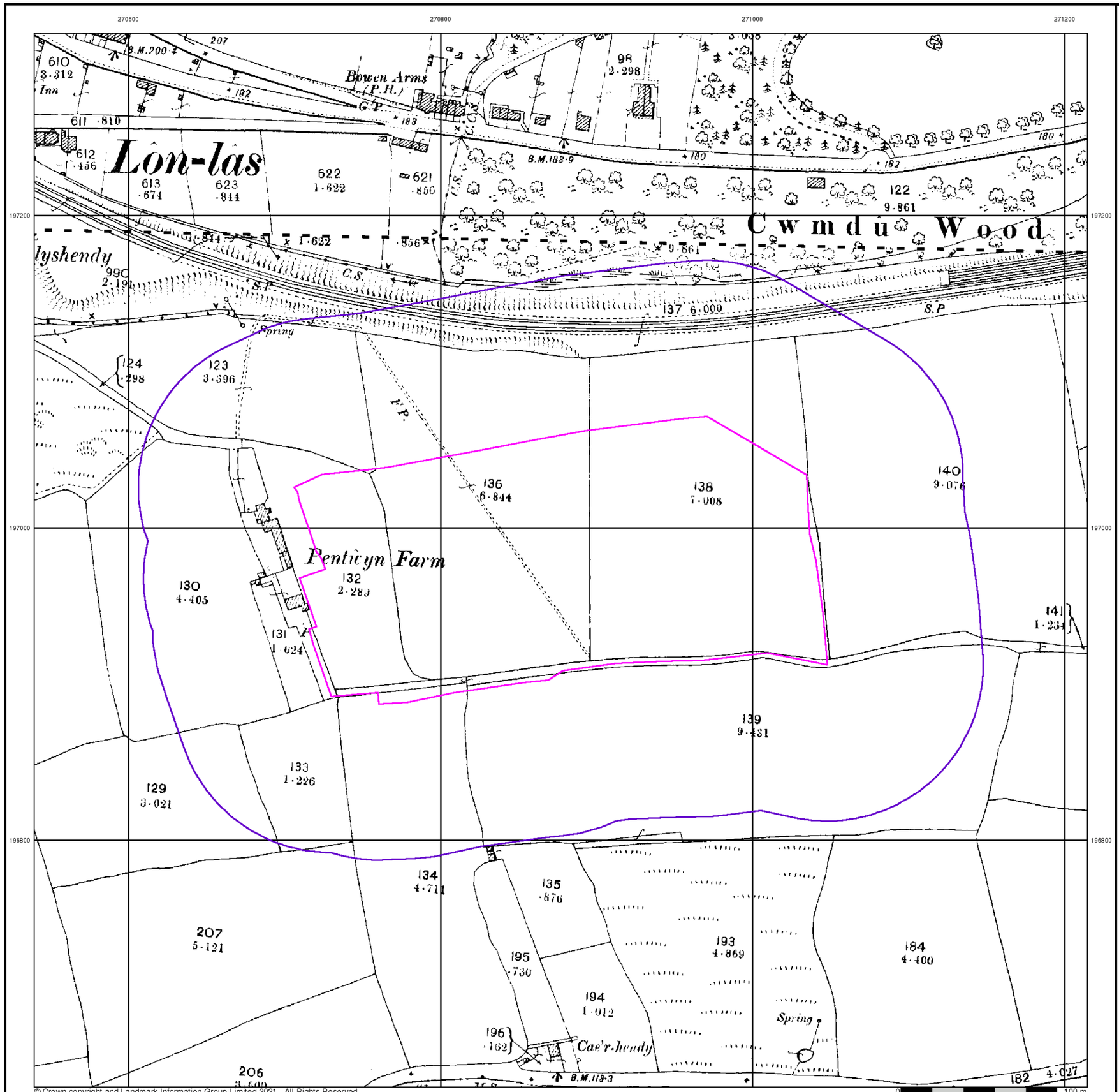
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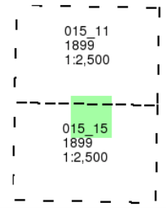
Glamorganshire

Published 1899

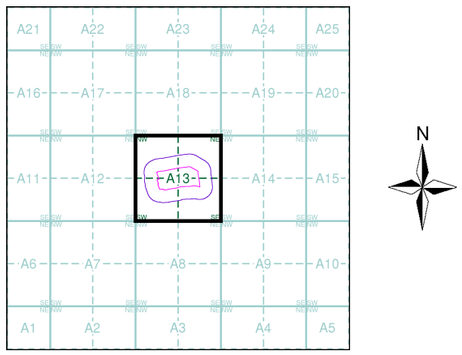
Source map scale - 1:2,500

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

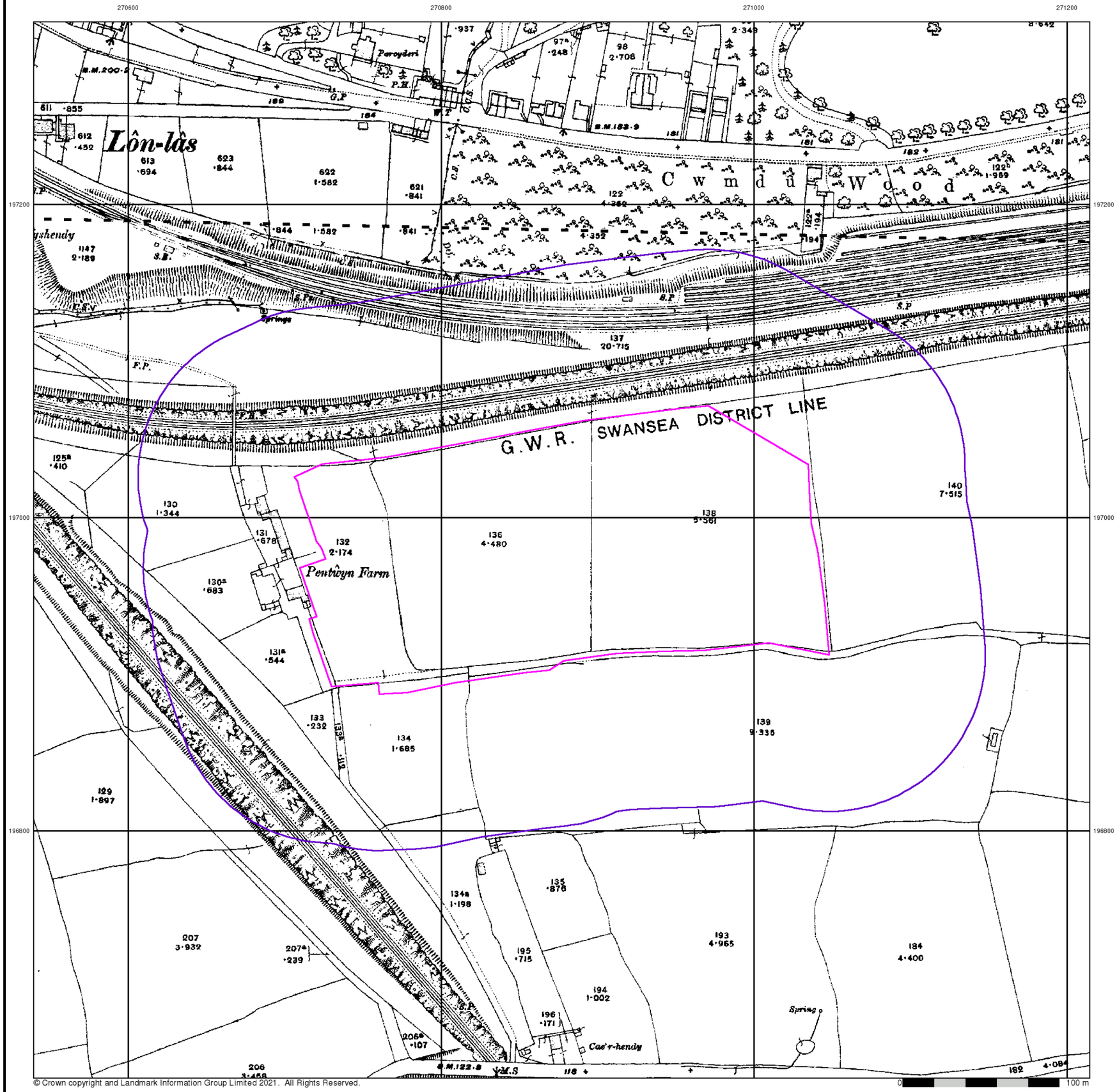
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Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
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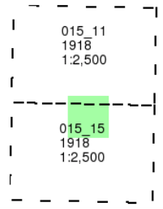
Glamorganshire

Published 1918

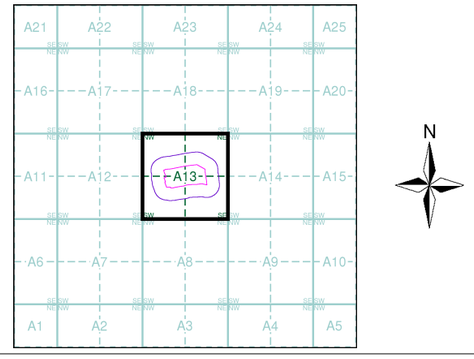
Source map scale - 1:2,500

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



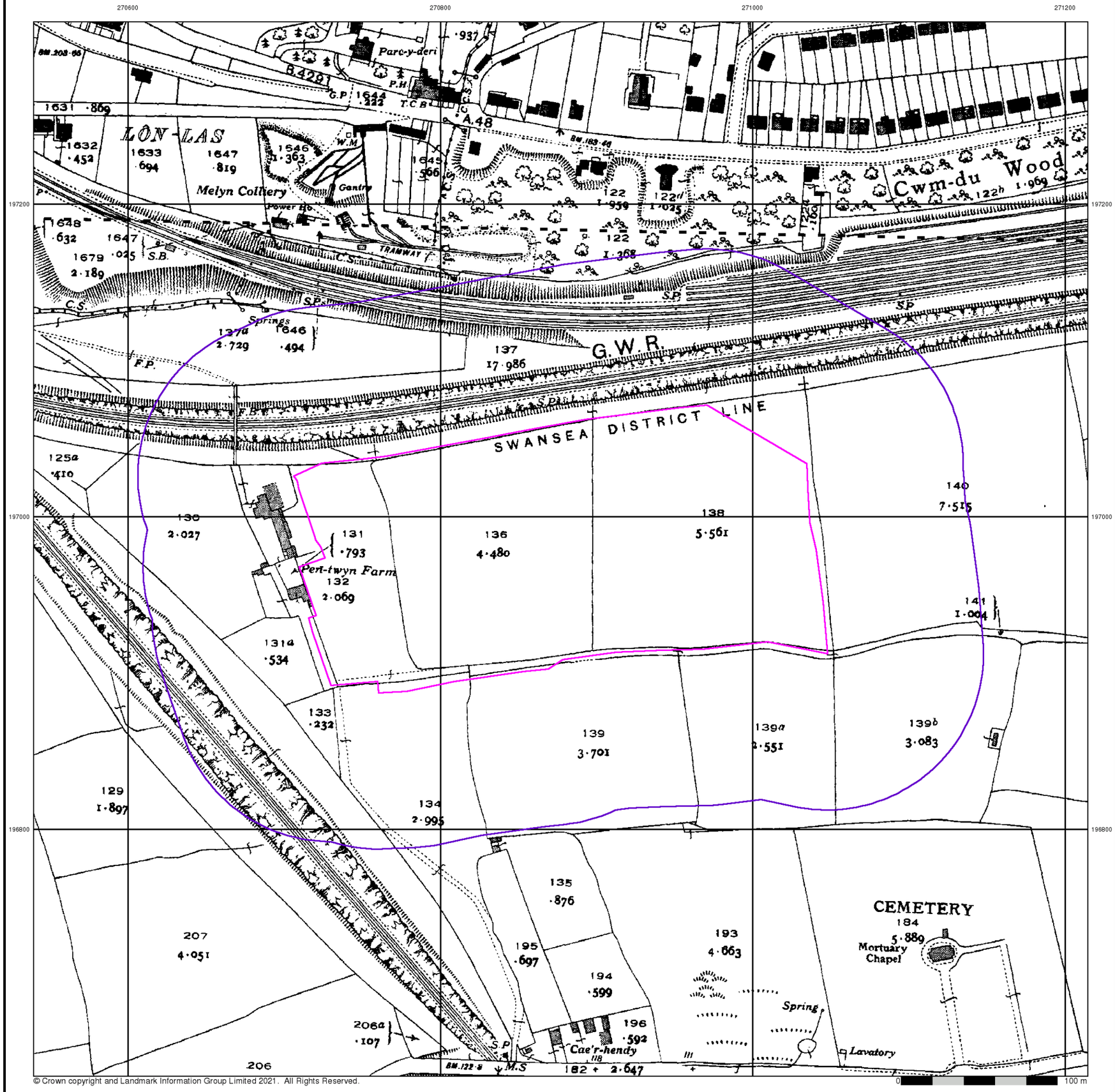
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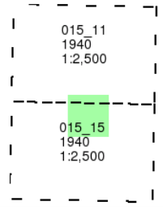
Glamorganshire

Published 1940

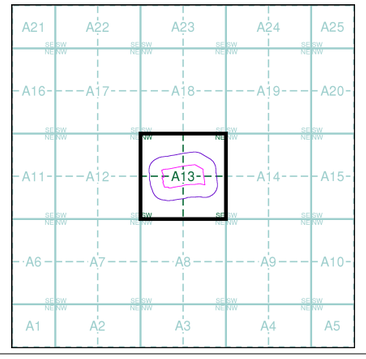
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



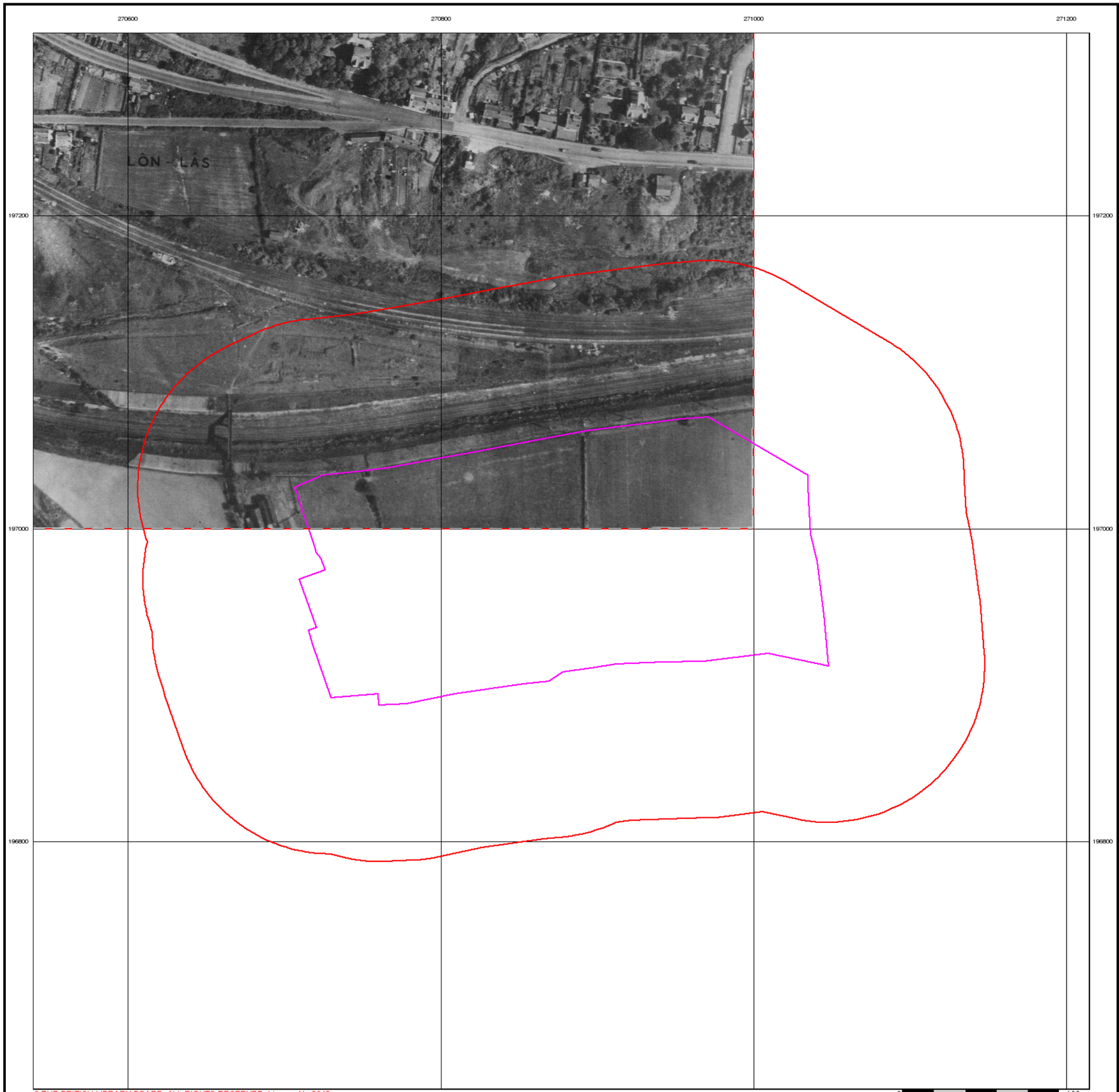
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Historical Aerial Photography

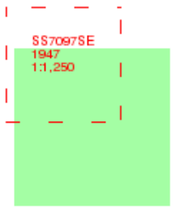
Published 1947

Source map scale - 1:1,250

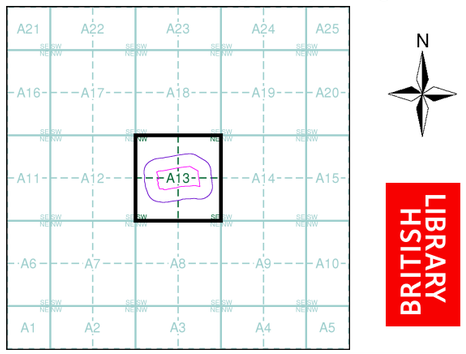
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

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Map Name(s) and Date(s)



Historical Aerial Photography - Segment A13



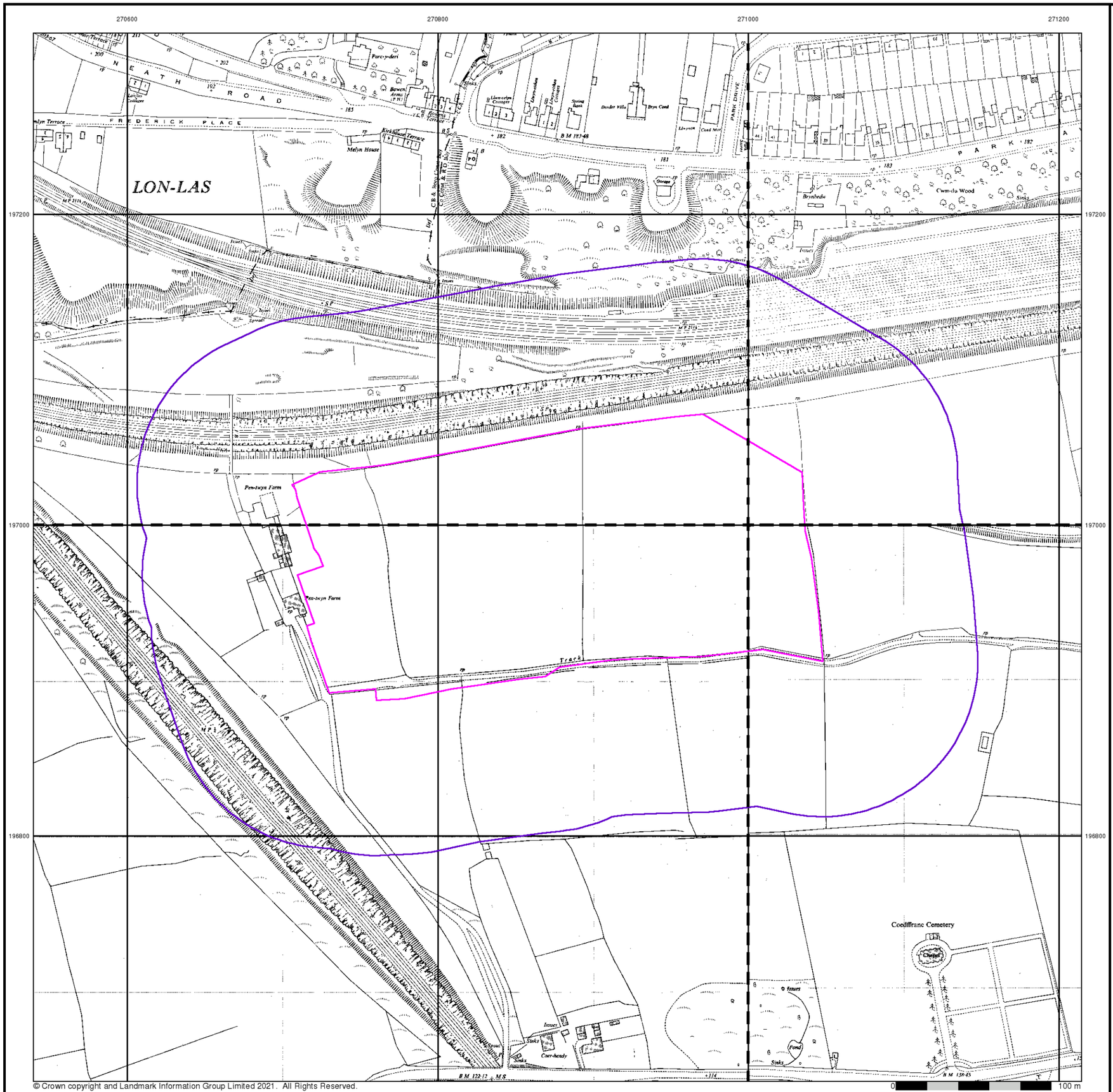
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Ordnance Survey Plan

Published 1957 - 1965

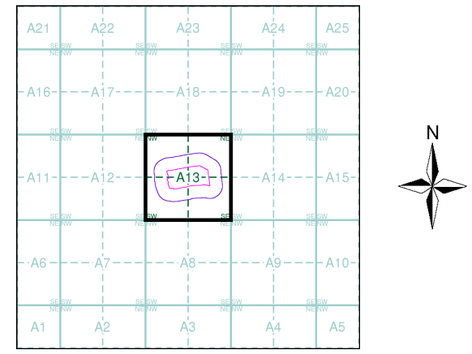
Source map scale - 1:1,250

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)

SS7097SE 1957 1:1,250	SS7197SW 1957 1:1,250
SS7096NE 1965 1:1,250	SS7196NW 1965 1:1,250

Historical Map - Segment A13



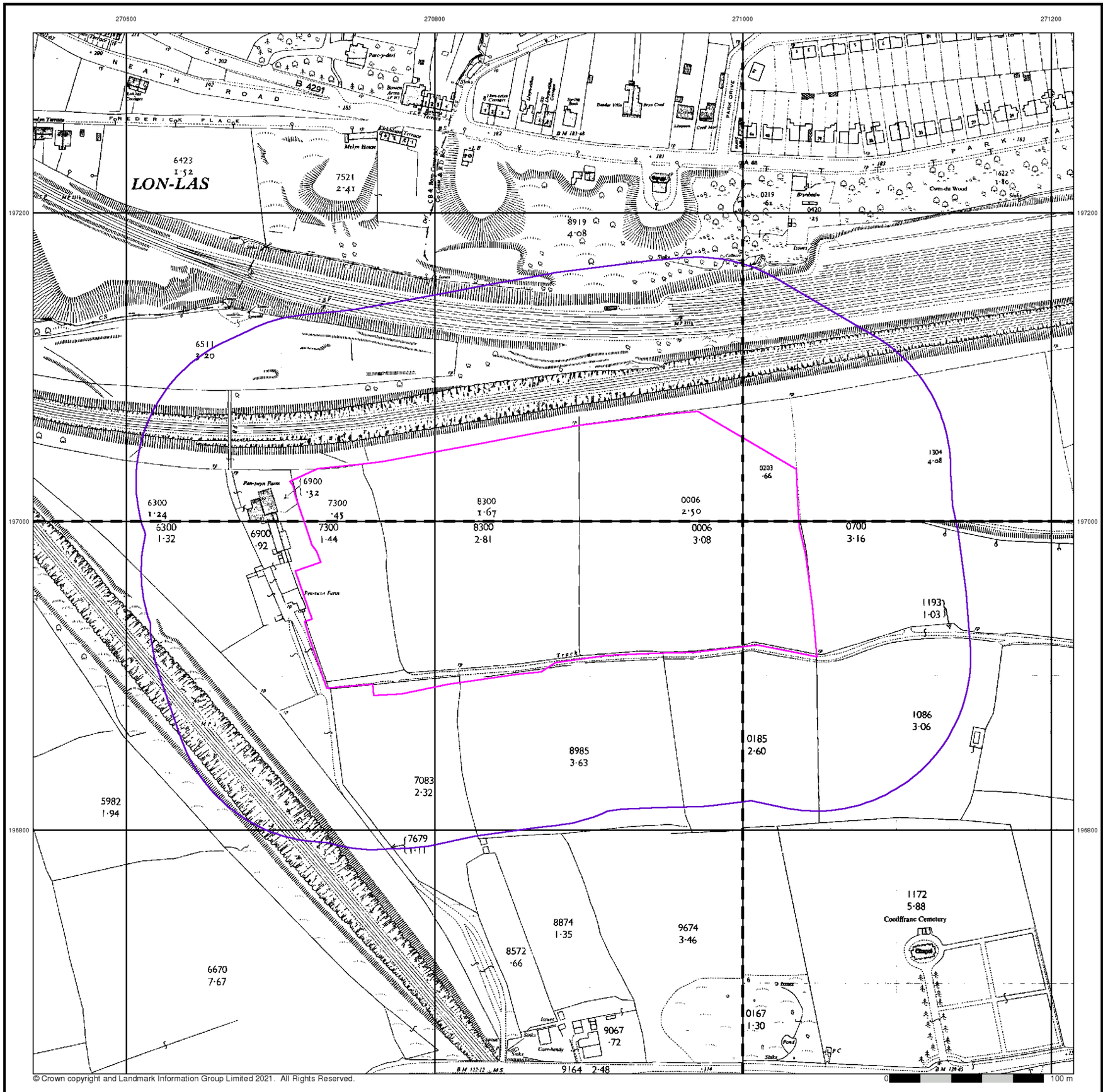
Order Details

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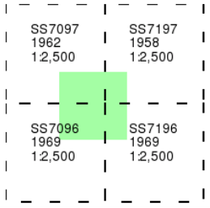
Ordnance Survey Plan

Published 1958 - 1969

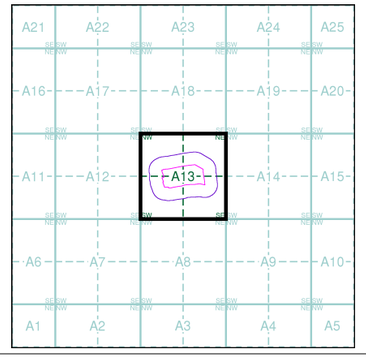
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



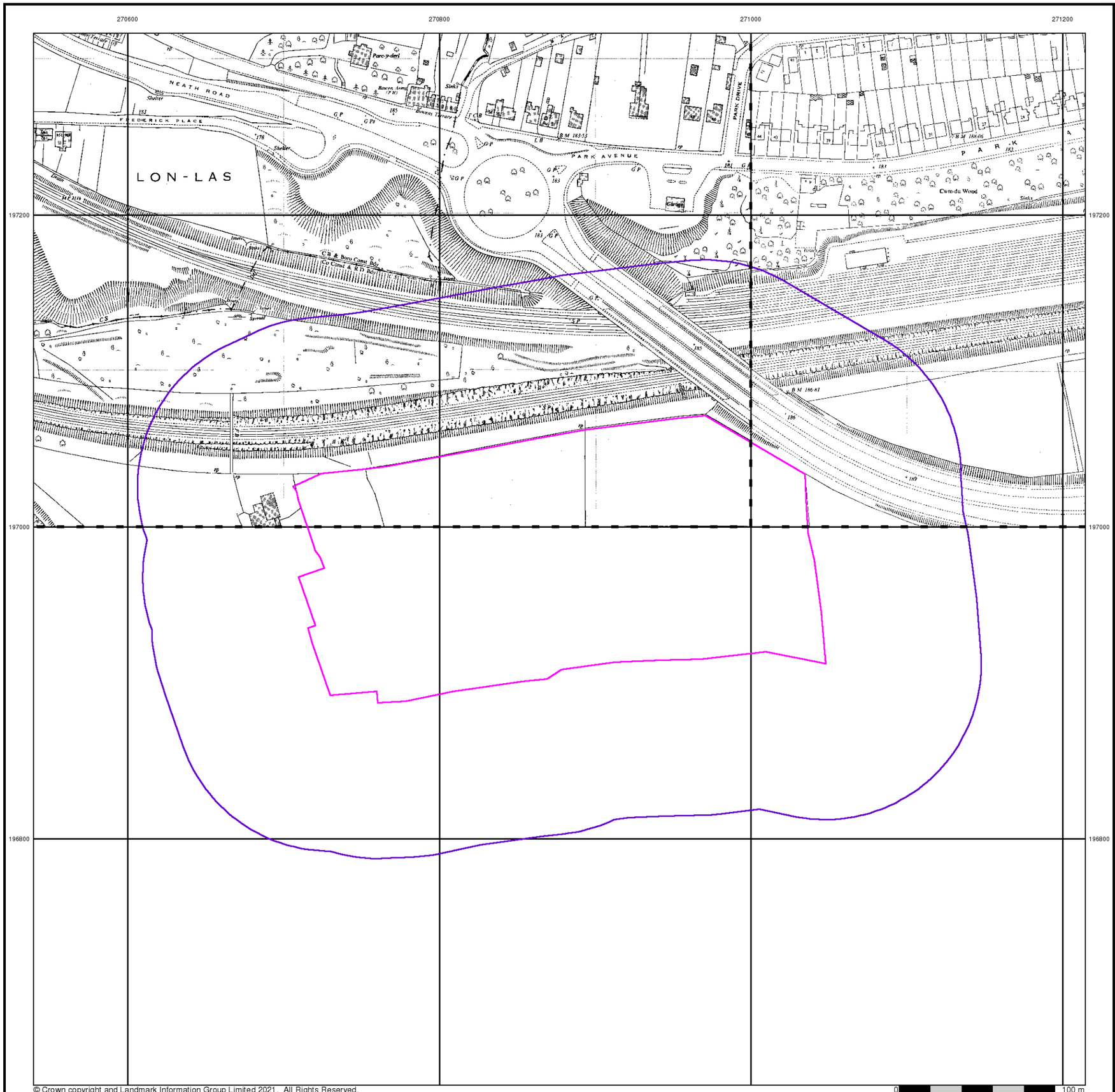
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Customer Ref:	16595-MW
National Grid Reference:	270880, 196970
Slice:	A
Site Area (Ha):	4.77
Search Buffer (m):	100

Site Details

Phase 5 - Crymlyn Road, Skewen, Neath, SA10 6NL

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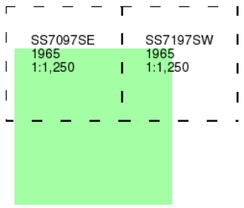
Ordnance Survey Plan

Published 1965

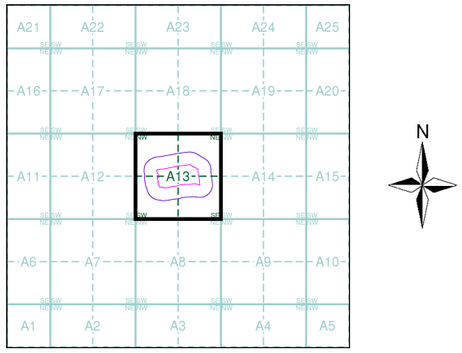
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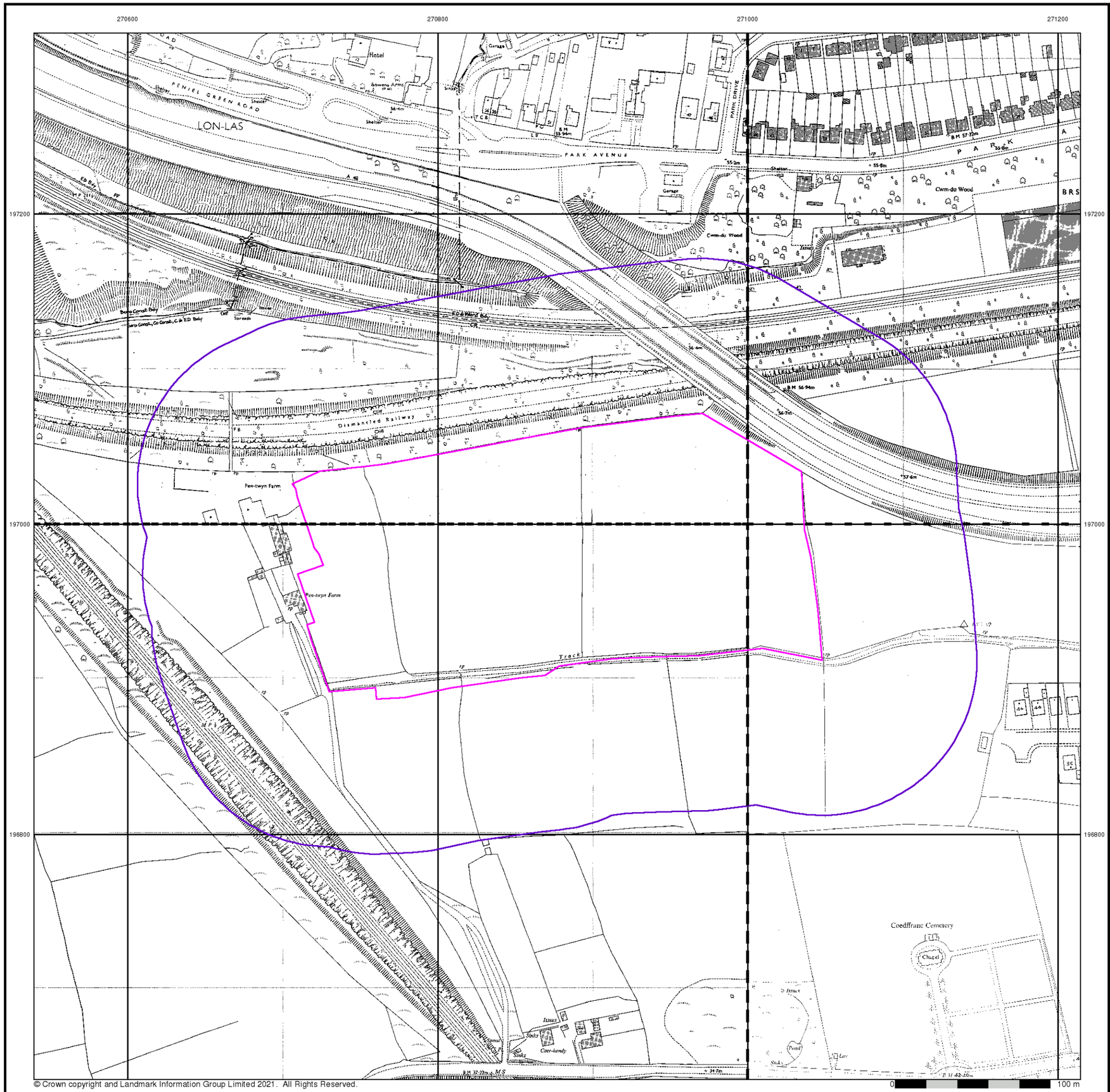
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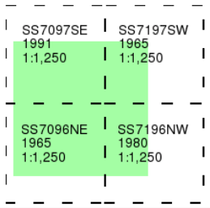
Additional SIMs

Published 1965 - 1991

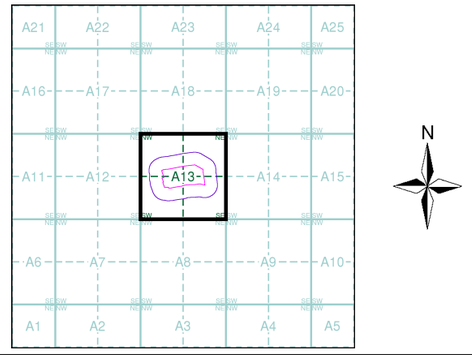
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Map Name(s) and Date(s)



Historical Map - Segment A13



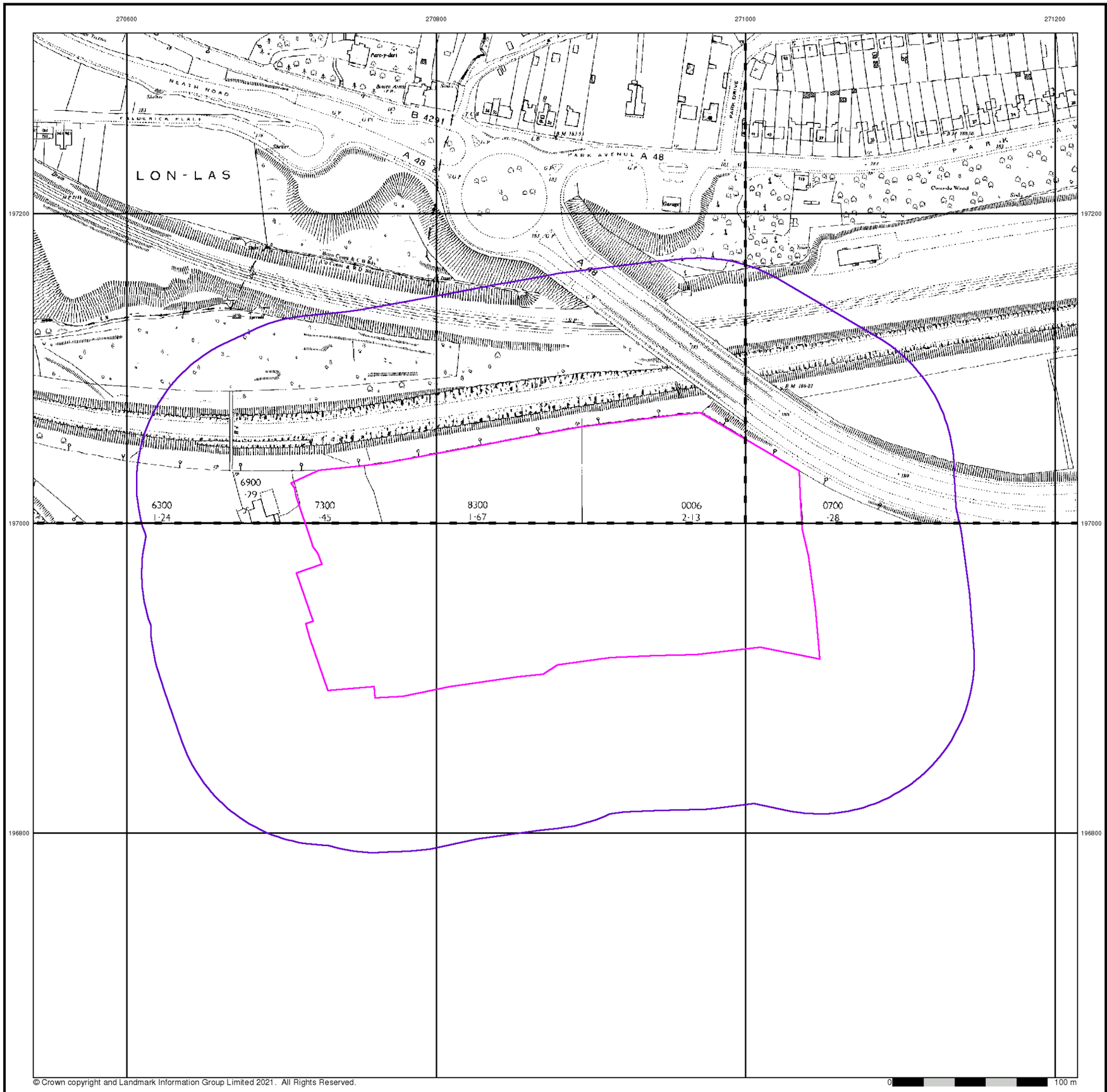
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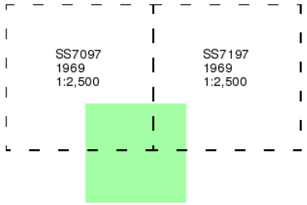
Ordnance Survey Plan

Published 1969

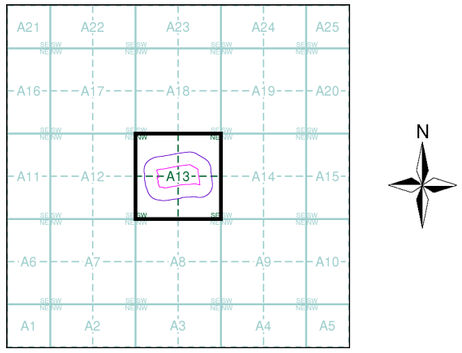
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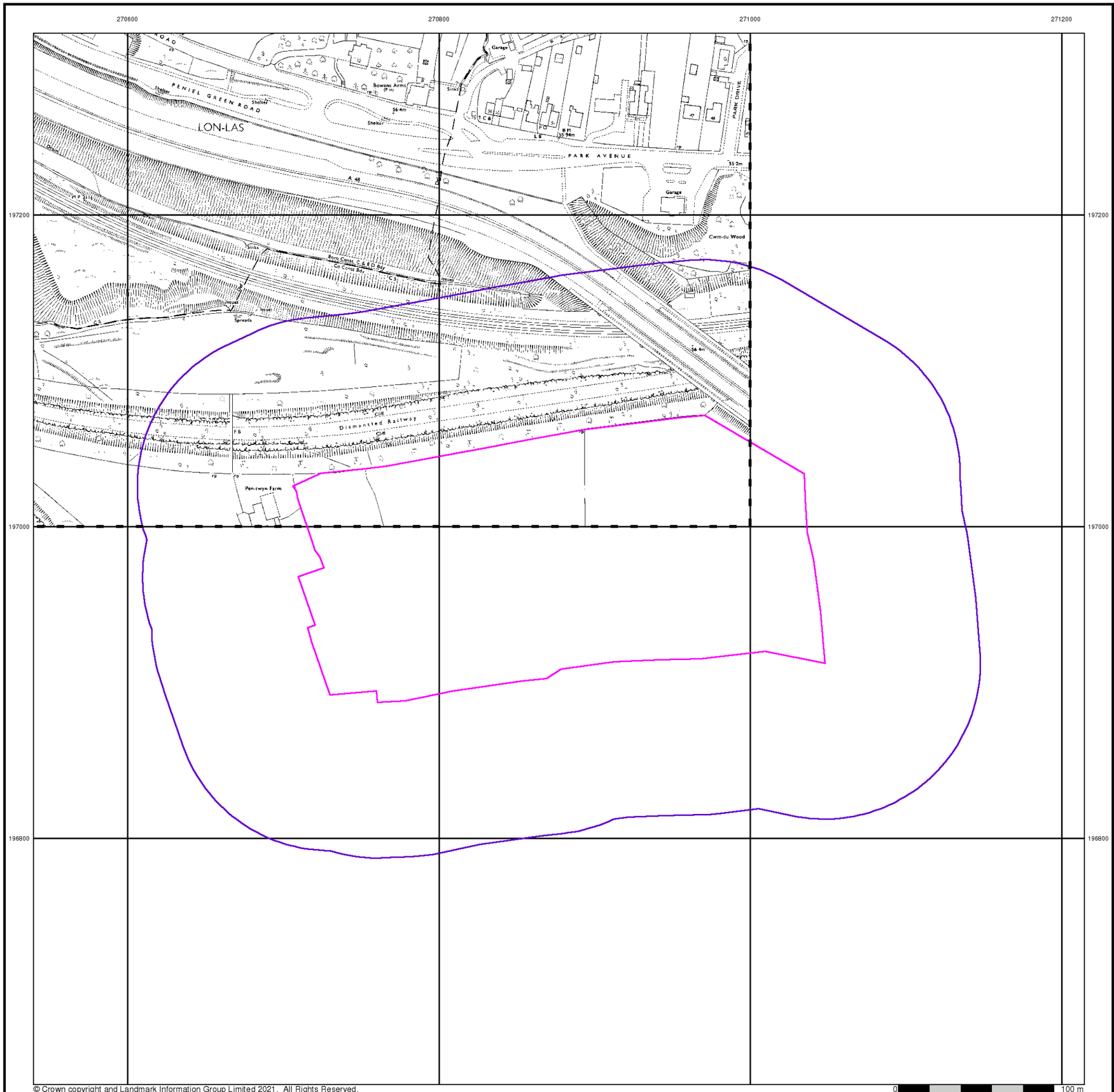
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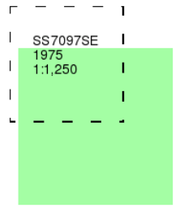
Ordnance Survey Plan

Published 1975

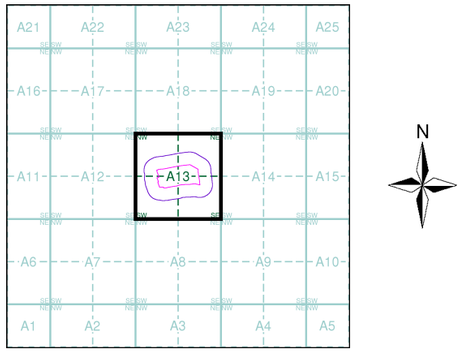
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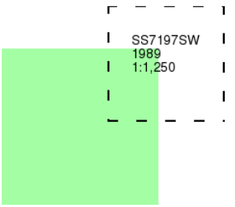
Additional SIMs

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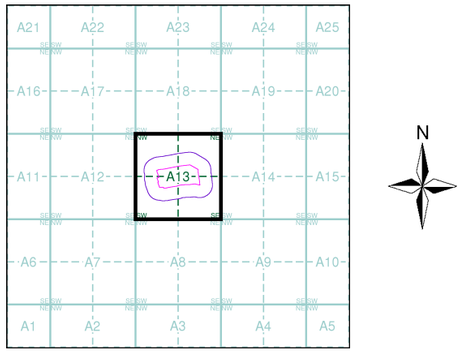
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Historical Map - Segment A13



Order Details

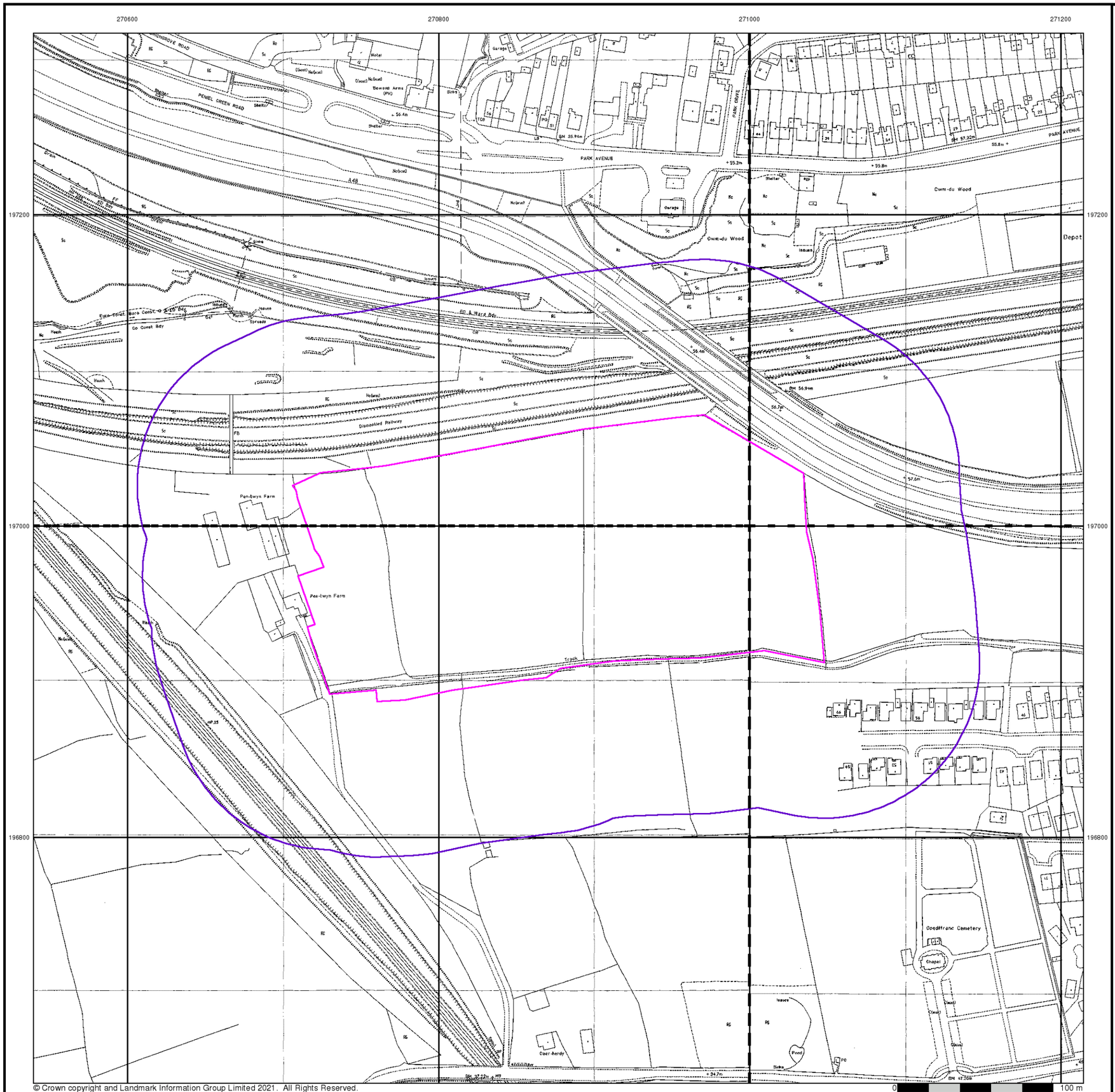
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Slice:	A
Site Area (Ha):	4.77
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Large-Scale National Grid Data

Published 1993

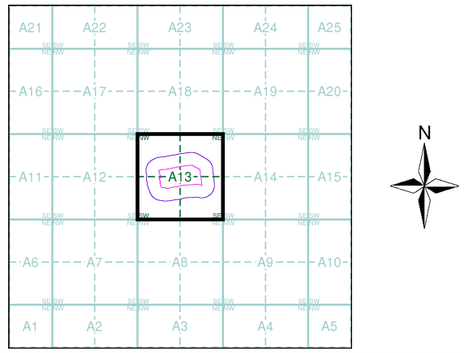
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'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information 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)

SS7097SE 1993 1:1,250	SS7197SW 1993 1:1,250
SS7096NE 1993 1:1,250	SS7196NW 1993 1:1,250

Historical Map - Segment A13



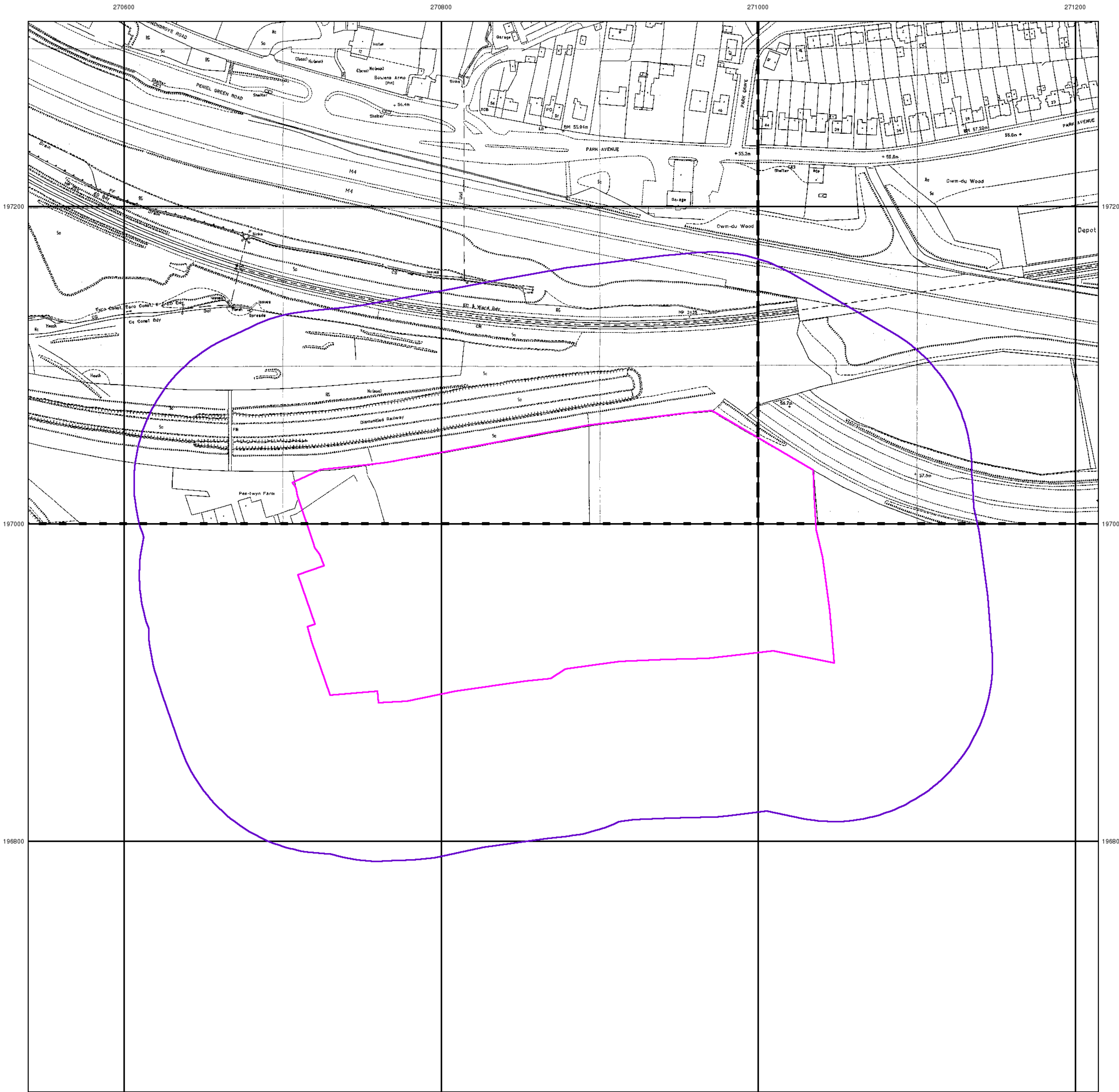
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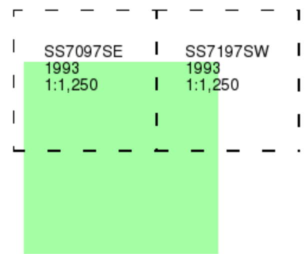
Large-Scale National Grid Data

Published 1993

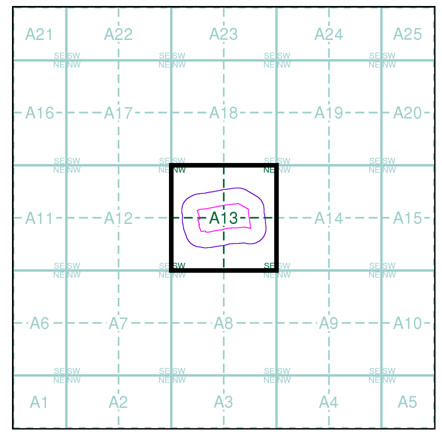
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Map Name(s) and Date(s)



Historical Map - Segment A13



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Order Details

Order Number: 274471833_1_1
Customer Ref: 16595-MW
National Grid Reference: 270880, 196970
Slice: A
Site Area (Ha): 4.77
Search Buffer (m): 100

Site Details

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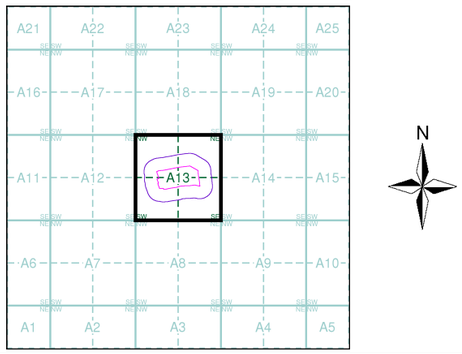
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Historical Aerial Photography

Published 2000

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:	274471833_1_1
Customer Ref:	16595-MW
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Slice:	A
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Site Details

Phase 5 - Crymlyn Road, Skewen, Neath, SA10 6NL

ANNEX B
Coal Mining Report

The Coal Authority

CON29M
coal mining report

PHASE 5 - CRYMLYN ROAD, SKEWEN, NEATH, NEATH PORT TALBOT, SA10 6NL

Known or potential coal mining risks

Past underground coal mining	Page 3
Future underground coal mining	Page 3

Further action

No further reports from the Coal Authority are required. Further information on any next steps can be found in our Professional opinion.

For more information on our reports please visit www.groundstability.com

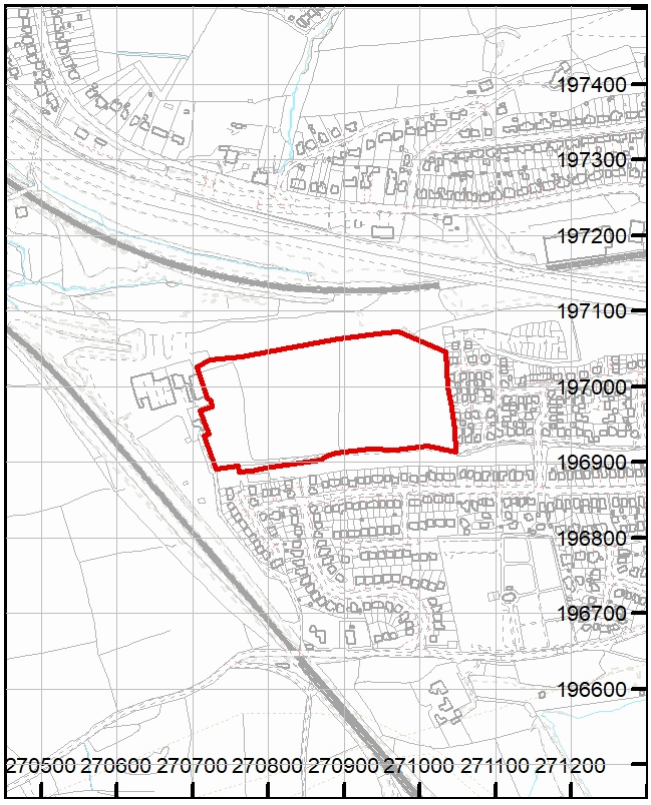
Professional opinion

According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. It is unlikely that these features will impact on the stability of the enquiry boundary.

Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is **on the coalfield**

Map data

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This report is prepared in accordance with the latest Law Society's Guidance Notes 2018, the User Guide 2018 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.

Accessibility

If you would like this information in an alternative format, please contact our communications team on 0345 762 6848 or email communications@coal.gov.uk.

Detailed findings

Information provided by the Coal Authority in this report is compiled in response to the Law Society's CON29M Coal Mining enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL.

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1 Past underground coal mining

The property is in a surface area that could be affected by underground mining in 1 seam of coal at 180m to 190m depth, and last worked in 1911.

Any movement in the ground due to coal mining activity associated with these workings should have stopped by now.

2 Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3 Future underground coal mining

The property is not in an area where the Coal Authority has received an application for, and is currently considering whether to grant a licence to remove or work coal by underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

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

4 Mine entries

There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

5 Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6 Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7 Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8 Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9 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.

10 Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11 Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

12 Withdrawal of support

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

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

13 Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14 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.

Statutory cover



Coal mining subsidence

In the unlikely event of any coal mining related subsidence damage, the Coal Authority or the mine operator has a duty to take remedial action in respect of subsidence caused by the withdrawal of support from land or property in connection with lawful coal mining operations.

When the works are the responsibility of the Coal Authority, our dedicated public safety and subsidence team will manage the claim. The house or land owner ("the owner") is covered for these works under the terms of the Coal Mining Subsidence Act 1991 (as amended by the Coal Industry Act 1994). Please note, this Act does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

If you believe your land or property is suffering from coal mining subsidence damage and you need more information on what to do next, please use the following link to our website which sets out what your rights are and what you need to consider before making a claim.
www.gov.uk/government/publications/coal-mining-subsidence-damage-notice-form



Coal mining hazards

Our public safety and subsidence team provide a 24 hour a day, 7 days a week hazard reporting service, to help protect the public from hazards caused by past coal workings, such as a mine shaft or shallow working collapse. To report any hazards please call 01623 646 333. Further information can be found on our website: www.gov.uk/coalauthority.

Glossary

Key terms

adit - horizontal or sloped entrance to a mine

coal mining subsidence - ground movement caused by the removal of coal by underground mining

Coal Mining Subsidence Act 1991 - the Act setting out the duties of the Coal Authority to repair damage caused by coal mining subsidence

coal mining subsidence damage - damage to land, buildings or structures caused by the removal of coal by underground mining

coal seams - bed of coal of varying thickness

future opencast coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal from the surface

future underground coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal underground. Although it is unlikely, remaining coal reserves could create a possibility for future mining, which would be licensed by the Coal Authority

mine entries - collective name for shafts and adits

payments to owners of former copyhold land - historically, copyhold land gave rights to coal to the copyholder. Legislation was set up to allow others to work this coal, but they had to issue a notice and pay compensation if a copyholder came forward

shaft - vertical entry into a mine

site investigation - investigations of coal mining risks carried out with the Coal Authority's permission

stop notice - a delay to repairs because further coal mining subsidence damage may occur and it would be unwise to carry out permanent repairs

subsidence claim - a formal notice of subsidence damage to the Coal Authority since it was established on 31 October 1994

withdrawal of support - a historic notice informing landowners that the coal beneath their property was going to be worked

working facilities orders - a court order which gave permission, restricted or prevented coal mine workings

ANNEX C
Risk Assessment Definitions

The contaminated land regime is set out in Part 2A of the Environmental Protection Act (EPA) 1990 and was introduced on the 1st April 2000 in England and 1st July 2001 in Wales. A similar regime was introduced in Scotland on 14th July 2000.

Part 2A was introduced to achieve three overreaching objectives:

(a) To identify and remove unacceptable risks to human health and the environment.
(b) To seek to ensure that contaminated land is made suitable for its current use.
(c) To ensure that the burdens faced by individuals, companies and society as a whole are proportionate, manageable and compatible with the principles of sustainable development.

Under Part 2A the statutory definition of 'contaminated land' is:

"any land which appears to the local authority in whose area it is situated, to be in such a condition, by reason of substances in, on, or under the land, that:

(a) Significant harm is being caused or there is a significant possibility of such harm being caused; or
(b) Pollution of controlled waters is being, or is likely to be, caused."

Under Part 2A, for land to be classified as 'Contaminated Land' there must be one or more contaminant, pathway, receptor linkages, known as the '**Pollutant Linkage**'. A pollutant linkage requires three essential elements:

(a) A **CONTAMINANT** (SOURCE) – a substance that is in, on or under the land and has the potential to cause harm or to cause pollution of controlled waters.
(b) A **RECEPTOR** – something which could be adversely affected by a contaminant.
(c) A **PATHWAY** – a route by which a receptor is or might be exposed to or affected by a contaminant.

The term 'Risk' is widely used in different contexts and situations, but a prescriptive definition is given by the Guidelines for Environmental Risk Assessment and Management (DEFRA *et al*, 2000):

'Risk is a combination of the probability, or frequency, of occurrence of a defined hazard and the magnitude of the consequences of the occurrence'.

Model Procedures for the Management of Land Contamination – Contamination Land Report 11 (2004) defines a 'Hazard' as

'*a property or situation that in particular circumstances could lead to harm'.*

A framework for qualitative risk assessment is provided in CIRIA publication C552 Contaminated Land Risk Assessment – A Guide to Good Practice (2001). The method requires an assessment of the magnitude of the probability of the risk occurring and the magnitude of the potential consequence. Classifications of consequences and probability, levels and descriptions of risk have been devised from the above publication and are defined in the following sections.

Classification of Consequence

Table A Classification of Consequence	
Classification	**Definition**
Severe	• Short term (acute) risk to human health likely to result in significant harm • Short term risk to controlled waters • Catastrophic damage to buildings/structures • Short term risk to an ecosystem or organism within the particular ecosystem
Medium	• Chronic damage to human health (long term risk) • Pollution of a sensitive water resource • A significant change in an ecosystem or organism within the ecosystem
Mild	• Pollution of non-sensitive water resources • Significant damage to buildings/structures • Damage to sensitive buildings/structure/services or the environment
Negligible	• Harm (not necessarily significant) which may result in financial loss • Non-permanent health effects to humans (easily prevented by PPE for example) • Easily repairable effects of structural (building) damage

Classification of Probability

Table B Classification of Probability	
Classification	**Definition**
High Likelihood	• There is a complete pollution linkage and an event appears very likely to occur in the short term and is inevitable in the long term. • Evidence of harm to the receptor
Likely	• There is a complete pollution linkage which means that is it probable that an event will occur • The event is not inevitable but possible in short term and likely in the long term
Low Likelihood	• There is a complete pollution linkage and circumstances are possible under which an event could occur • It is not certain that an event will occur in the long term, and it is less likely to occur in the short term
Unlikely	• There is a complete pollution linkage but circumstances are such that it is improbable that an event would occur even in the long term

Risk Assessment Matrix

By comparing the consequences of a risk and the probability of the risk of a pollution linkage, the likely risk category can be determined as shown in **Table C** below.

Table C Risk Assessment Matrix

Increasing acceptability →		Consequence			
		Severe	**Medium**	**Mild**	**Negligible**
Probability	**High Likelihood**	High risk	High risk	Medium risk	Low risk
	Likely	High risk	Medium risk	Low risk	Near zero risk
	Low Likelihood	Medium risk	Low risk	Low risk	Near zero risk
	Unlikely	Low risk	Near zero risk	Near zero risk	Near zero risk

Description of Risks and Likely Actions

High Risk
There is a high probability that severe harm could arise to a receptor, or there is evidence that a receptor is currently being severely harmed. The risk if realised is likely to result in liability, and urgent investigation or remediation will be required.

Medium Risk
It is probable that harm will arise to a receptor. However, it is relatively unlikely that such harm would be severe, or if harm does occur the harm is likely to be relatively mild. Investigation will be required to determine the liability, and some remedial works may be required in the long term.

Low Risk
It is possible that harm may arise to a receptor, but it is likely that the harm would be mild.

Near Zero Risk
There is a very low risk of harm to the receptor. In the event of harm being realised the harm is not likely to be severe.

ANNEX D
Trial Pit Logs

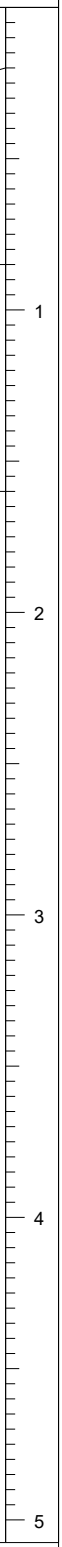
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Trial Pit Log

Trial Pit No: TP01
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 13/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: Depth 1.60 (2.00 × 0.70)	Scale: 1:25
Client: Hale Construction Limited			Logged: MW

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10	ES		0.20			Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
	0.50	ES		0.85			[Medium dense] orangish brown clayey gravelly SAND. Gravel is angular sandstone. Many roots.
				1.60			[Dense] grey and brown clayey sandy GRAVEL with medium cobble and low boulder content. Gravel, cobbles and boulders are angular and tabular sandstone.
							End of Pit at 1.600m



Stability: Slight spalling

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

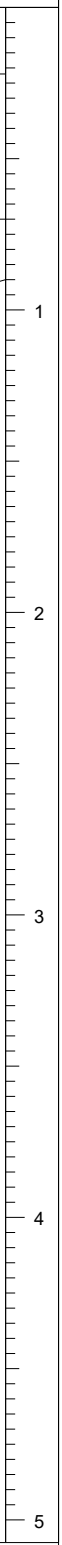
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Trial Pit Log

Trial Pit No: TP02
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 14/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.13 × 0.80	Scale: 1:25
Client: Hale Construction Limited		Depth 0.90	Logged: MD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.22			Grass over soft dark brown slightly gravely sandy CLAY. Gravels are fine grained. Gravels are sub angular - sub rounded. Many rootlets present.
				0.70			[Medium dense] orangish brown clayey gravelly SAND. Gravel is angular sandstone. Many roots.
				0.90			[Dense] grey clayey very gravelly SAND with medium cobble and low boulder content. Gravel, cobbles and boulders are angular sandstone.
							End of Pit at 0.900m



Stability: Pit was stable during excavation. No groundwater was present.

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP03
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 13/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.00 × 0.70, Depth 1.35	Scale: 1:25
Client: Hale Construction Limited			Logged: MW

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10	ES		0.20			Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
							Firm orangish brown mottled grey sandy slightly gravelly CLAY. Gravel is angular sandstone.
	0.80	D		1.20			[Medium dense] orangish brown and grey slightly clayey very gravelly SAND with medium cobble content. Gravel and cobbles are angular and tabular sandstone.
				1.30 1.35			Recovered as [very dense] grey slightly clayey sandy GRAVEL with high cobble content. Gravel and cobbles are angular and tabular sandstone. Possible SANDSTONE bedrock.
							End of Pit at 1.350m

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

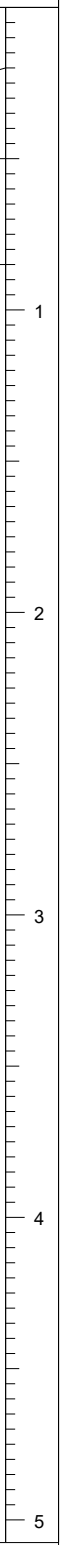
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Trial Pit Log

Trial Pit No: TP04
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 13/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.00 × 0.70	Scale: 1:25
Client: Hale Construction Limited		Depth 0.85	Logged: MW

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.30	ES		0.20			Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
				0.50			[Medium dense] orangish brown clayey gravelly SAND with medium cobble and low boulder content.
				0.85			Recovered as [very dense] grey slightly clayey sandy GRAVEL with high cobble content. Gravel and cobbles are angular and tabular sandstone. Possible SANDSTONE bedrock.
							End of Pit at 0.850m



Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP05
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 13/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.00 × 0.70, Depth 1.30	Scale: 1:25
Client: Hale Construction Limited			Logged: MW

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20			Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
	0.40	ES					[Medium dense] orangish brown clayey gravelly SAND. Gravel is angular sandstone. Many roots.
				0.70			[Dense] grey clayey very gravelly SAND with medium cobble and low boulder content. Gravel, cobbles and boulders are angular sandstone.
	1.00	D					
				1.30			End of Pit at 1.300m

Stability: Slight spalling

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

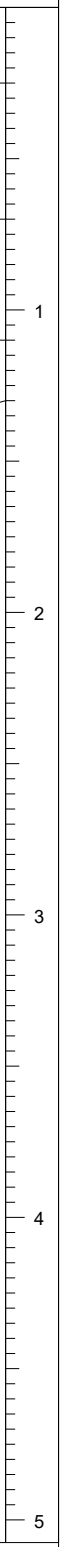
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Trial Pit Log

Trial Pit No: TP06
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 12/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.00 × 0.70, Depth 1.30	Scale: 1:25
Client: Hale Construction Limited			Logged: MW

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.25			Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
				0.70			[Medium dense] orangish brown clayey gravelly SAND. Gravel is angular sandstone.
				1.10			[Medium dense] grey sandy GRAVEL of angular and tabular sandstone.
				1.30			Recovered as [very dense] grey sandy GRAVEL with high cobble content. Gravel and cobbles are angular and tabular sandstone. Possible SANDSTONE bedrock.
							End of Pit at 1.300m



Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP07
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 12/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.00 × 0.70	Scale: 1:25
Client: Hale Construction Limited		Depth 0.70	Logged: MW

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.10	ES		0.20			Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
				0.50			[Medium dense] orangish brown clayey gravelly SAND. Gravel is angular and tabular sandstone.
				0.70			[Dense] grey and brown silty gravelly SAND. Gravel is angular and tabular sandstone.
							End of Pit at 0.700m

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP08
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 12/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.00 × 0.70, Depth 1.70	Scale: 1:25
Client: Hale Construction Limited			Logged: MW

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10	ES		0.25			Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
				0.60			[Medium dense] orangish brown clayey gravelly SAND. Gravel is angular sandstone.
	1.50	D		1.70			[Dense] grey sandy GRAVEL of tabular and angular sandstone.
							End of Pit at 1.700m

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP09
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 12/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.00 × 0.70, Depth 1.10	Scale: 1:25
Client: Hale Construction Limited			Logged: MW

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10	ES		0.25			Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
				0.60			[Medium dense] orangish brown clayey gravelly SAND. Gravel is angular sandstone.
				1.00			[Medium dense] grey sandy GRAVEL of angular and tabular sandstone.
				1.10			Recovered as [very dense] grey sandy GRAVEL with high cobble content. Gravel and cobbles are angular and tabular sandstone. Possible SANDSTONE bedrock.
							End of Pit at 1.100m

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP10
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 12/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: Depth 0.70 (2.00 × 0.70)	Scale: 1:25
Client: Hale Construction Limited			Logged: MW

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.40	ES		0.25			Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
				0.65			[Medium dense] orangish brown clayey gravelly SAND. Gravel is angular sandstone.
				0.70			Recovered as [very dense] grey sandy GRAVEL with high cobble content. Gravel and cobbles are angular and tabular sandstone. Possible SANDSTONE bedrock.
							End of Pit at 0.700m

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP11
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 12/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.00 × 0.70, Depth 1.40	Scale: 1:25
Client: Hale Construction Limited			Logged: MW

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.25			Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
	0.50	ES					
				1.00			[Medium dense] orangish brown clayey gravelly SAND. Gravel is angular and tabular sandstone.
	1.20	D					
				1.40			[Dense] grey mottled brown sandy silty GRAVEL of angular and tabular sandstone.
							End of Pit at 1.400m

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP12
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 12/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.00 × 0.70, Depth 1.60	Scale: 1:25
Client: Hale Construction Limited			Logged: MW

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10	ES		0.20			Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
	0.80	D		1.40			Firm light grey sandy slightly gravelly CLAY with low cobble content. Gravel and cobbles are angular sandstone.
				1.60			[Dense] grey silty very gravelly SAND with medium cobble and low boulder content. Gravel, cobbles and boulders are angular and tabular sandstone.
							End of Pit at 1.600m

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP13
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 12/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.00 × 0.70, Depth 1.70	Scale: 1:25
Client: Hale Construction Limited			Logged: MW

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.50	ES		0.20			Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
							[Medium dense] brownish orange clayey gravelly SAND. Gravel is angular sandstone.
	1.50	D		0.90			[Dense] grey clayey sandy GRAVEL with medium cobble content and low boulder content. Gravel, cobbles and boulders are angular sandstone. Boulders up to 0.7m in size.
				1.70			End of Pit at 1.700m

Stability: Slight spalling

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP14
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 12/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.00 × 0.70	Scale: 1:25
Client: Hale Construction Limited		Depth 0.90	Logged: MW

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.40	ES		0.20			Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
				0.80			[Medium dense brownish orange clayey gravelly SAND. Gravel is angular sandstone.
				0.90			Recovered as [very dense] grey sandy GRAVEL with high cobble content. Gravel and cobbles are angular and tabular sandstone. Possible SANDSTONE bedrock.
							End of Pit at 0.900m

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP15
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 12/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.00 × 0.70, Depth 1.50	Scale: 1:25
Client: Hale Construction Limited			Logged: MW

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.40	ES		0.20			Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
							[Medium dense] orangish brown silty gravelly SAND. Gravel is angular sandstone.
	1.20	D		1.00			[Dense] grey silty very gravelly SAND with medium cobble and low boulder content. Gravel, cobbles and boulders are angular to subangular sandstone.
				1.50			End of Pit at 1.500m

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP16
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 12/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 1.80 × 0.70, Depth 2.25	Scale: 1:25
Client: Hale Construction Limited			Logged: MW

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10	ES		0.30			Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
				0.60			Firm light brown sandy slightly gravelly CLAY with medium cobble content. Gravel and cobbles are angular sandstone.
							[Medium dense] grey silty very gravelly SAND with medium cobble and low boulder content. Gravel, cobbles and boulders are angular to subangular sandstone.
							Becoming dense from 1.5m.
				2.25			End of Pit at 2.250m

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP17
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 12/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: Depth 0.75 (2.00 × 0.70)	Scale: 1:25
Client: Hale Construction Limited			Logged: MW

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.10	ES		0.20			Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
							[Medium dense brownish orange clayey gravelly SAND. Gravel is angular sandstone.
	0.65	D		0.60 0.70 0.75			[Medium dense] grey silty very gravelly SAND with medium cobble and low boulder content. Gravel, cobbles and boulders are angular to subangular sandstone. Recovered as [very dense] grey sandy GRAVEL with high cobble content. Gravel and cobbles are angular and tabular sandstone. Possible SANDSTONE bedrock.
							End of Pit at 0.750m

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP18
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 12/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.00 × 0.70, Depth 1.90	Scale: 1:25
Client: Hale Construction Limited			Logged: MW

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20			Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
	0.40	ES		0.50			[Medium dense brownish orange clayey gravelly SAND. Gravel is angular sandstone.
							[Dense] grey silty very gravelly SAND with medium cobble and boulder content. Gravel, cobbles and boulders are angular and tabular sandstone.
				1.90			End of Pit at 1.900m

Stability: Slight spalling

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP19
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 14/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.10 × 0.75	Scale: 1:25
Client: Hale Construction Limited		Depth 0.81	Logged: MD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.10			Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
							Firm orangish brown mottled grey sandy slightly gravelly CLAY. Gravel is angular sandstone.
				0.85			Recovered as [very dense] grey slightly clayey sandy GRAVEL with high cobble content. Gravel and cobbles are angular and tabular sandstone. Possible SANDSTONE bedrock.
				0.88			End of Pit at 0.810m

Stability: Pit was stable during excavation. No groundwater was present.

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

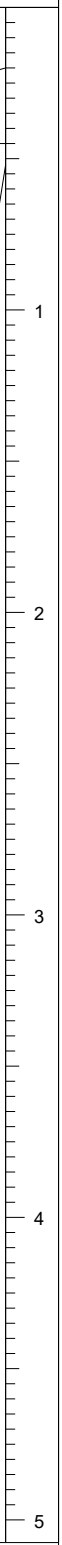
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Trial Pit Log

Trial Pit No: TP20
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: - Level:	Date: 14/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: Depth 0.52 (2.50 × 0.80)	Scale: 1:25
Client: Hale Construction Limited			Logged: MD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20			Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
				0.45			[Medium dense] orangish brown clayey gravelly SAND. Gravel is angular sandstone.
				0.52			Recovered as [very dense] grey slightly clayey sandy GRAVEL with high cobble content. Gravel and cobbles are angular and tabular sandstone. Possible SANDSTONE bedrock.
							End of Pit at 0.520m



Stability: Pit was stable during excavation . No groundwater was present

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP21
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 14/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.60 × 0.80	Scale: 1:25
Client: Hale Construction Limited		Depth 0.72	Logged: MD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20			Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
				0.60			[Medium dense] orangish brown clayey gravelly SAND. Gravel is angular and tabular sandstone.
				0.72			[Dense] grey and brown silty gravelly SAND. Gravel is angular and tabular sandstone.
							End of Pit at 0.720m

Stability: Pit was stable during excavation. No groundwater was present.

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP22
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 14/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: Depth 1.30 (2.20 × 0.75)	Scale: 1:25
Client: Hale Construction Limited			Logged: MD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20			Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
				0.80			Soft orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular sandstone.
				1.30			[Dense] orangish brown clayey gravelly SAND. Gravel is angular and tabular sandstone.
							End of Pit at 1.300m

Stability: Pit was stable during excavation. No groundwater was present.

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP23
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 14/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: 2.34 × 0.76, Depth 1.04	Scale: 1:25
Client: Hale Construction Limited			Logged: MD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20			Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
				0.60			Soft orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular sandstone.
				1.04			[Dense] grey and brown slightly clayey sandy GRAVEL of angular sandstone.
							End of Pit at 1.040m

Stability: Pit was stable during excavation. No groundwater was present.

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

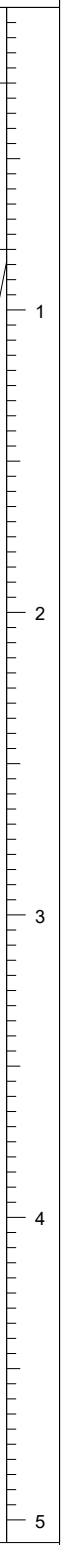
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Trial Pit Log

Trial Pit No: TP24
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: -	Date: 14/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: Depth 0.84 (2.22 × 0.66)	Scale: 1:25
Client: Hale Construction Limited			Logged: MD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.25			Grass over gravelly sandy CLAY. Gravels are fine - coarse grained. Sands are medium - coarse grained. Gravels are sub angular - sub rounded.
							Soft orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular sandstone.
				0.80			Recovered as [very dense] grey sandy GRAVEL with high cobble content. Gravel and cobbles are angular and tabular sandstone. Possible SANDSTONE bedrock.
				0.84			End of Pit at 0.840m



Stability: Pit was stable during excavation. No groundwater was present.

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP25
Sheet 1 of 1

Project Name: Phase 5 Crymlyn Road	Project No: 16595	Co-ords: - Level:	Date: 15/04/2021
Location: Skewen, Neath Port Talbot		Dimensions: Depth 0.90 (2.20 × 0.71)	Scale: 1:25
Client: Hale Construction Limited			Logged: MD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20			Grass over gravelly sandy CLAY. Gravels are fine - coarse grained. Sands are medium - coarse grained. Gravels are sub angular - sub rounded.
				0.60			[Medium dense brownish orange clayey gravelly SAND. Gravel is angular sandstone.
				0.90			Recovered as [very dense] grey sandy GRAVEL with high cobble content. Gravel and cobbles are angular and tabular sandstone. Possible SANDSTONE bedrock.
							End of Pit at 0.900m

Stability: Pit was stable during excavation. No groundwater was present.

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated due to hard strata and very slow progress. 4] Trial pit backfilled with arisings.

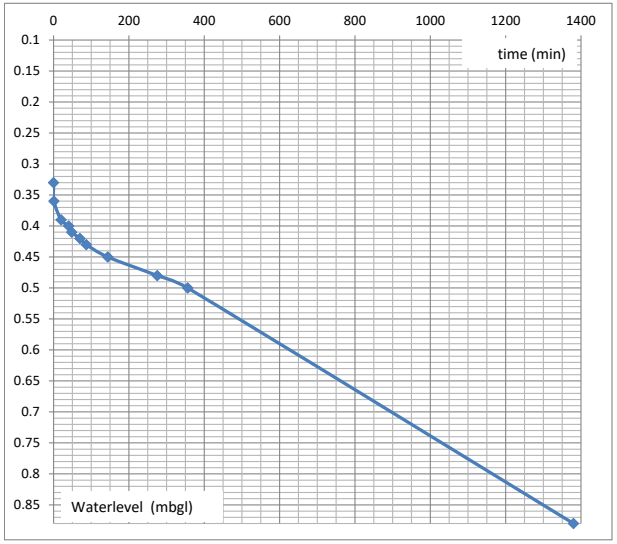
ANNEX E
Soakaway Results

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Site Name: Phase 5 Crymlyn
Number: 16595
Date Undertaken: 14/04/2021
Test No.: TP19 (Test 1)

	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	0.33
	1	0.36
	20	0.39
	40	0.40
	48	0.41
	70	0.42
	87	0.43
	144	0.45
	275	0.48
	356	0.50
Emptied overnight	1380	0.88
(Base of pit / effective depth - 0%)		0.880

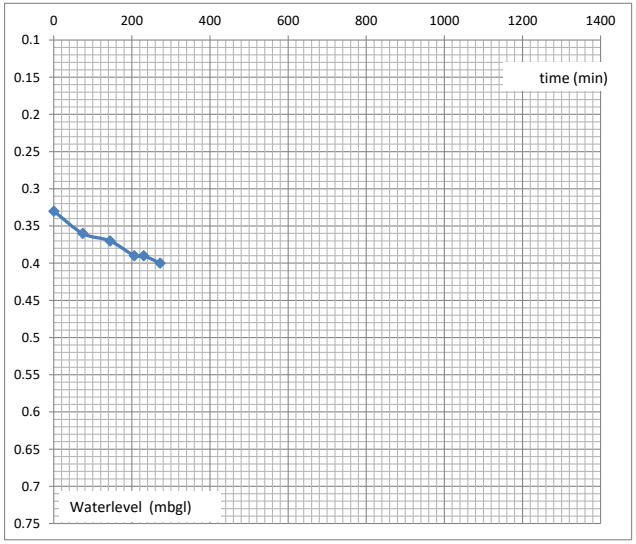
Length of Trial Pit (m)	2.00	
Width of Trial Pit (m)	0.75	
Depth of Trial Pit (m)	0.88	
Effective Storage Depth (m)	0.550	
Vp25	0.4675	
Vp50	0.6050	
Vp75	0.7425	
Vp75-25	0.413	
50% effective depth (m)	0.275	
Mean Surface area ap50 (m2)	3.013	
Time for 25% **Outflow** (t_{p25})	210	**Achieved**
Time for 75% **Outflow** (t_{p75})		**Not recorded due to pit emptying overnight**
tp75 - 25		
Soil Infiltration Rate (m/s)	**#DIV/0!**	



Date Undertaken: 15/04/2021
Test No.: TP19 (Test 2)

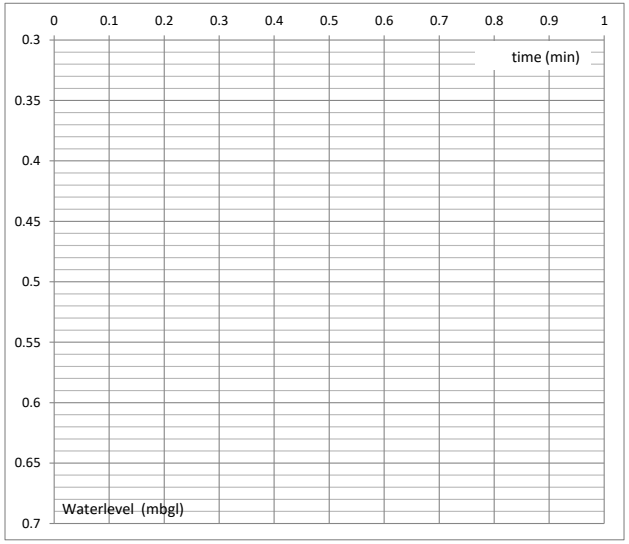
	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	0.33
	74	0.36
	144	0.37
	206	0.39
	230	0.39
	272	0.40
(Base of pit / effective depth - 0%)		0.880

Length of Trial Pit (m)	2.00	
Width of Trial Pit (m)	0.75	
Depth of Trial Pit (m)	0.88	
Effective Storage Depth (m)	0.550	
Vp25	0.4675	
Vp50	0.6050	
Vp75	0.7425	
Vp75-25	0.413	
50% effective depth (m)	0.275	
Mean Surface area ap50 (m2)	3.013	
Time for 25% **Outflow** (t_{p25})		**Not Achieved**
Time for 75% **Outflow** (t_{p75})		**Not Achieved**
tp75 - 25	0	**Extrapolated**
Soil Infiltration Rate (m/s)	**#DIV/0!**	



	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	
(Base of pit / effective depth - 0%)		

Length of Trial Pit (m)		
Width of Trial Pit (m)		
Depth of Trial Pit (m)		
Effective Storage Depth (m)	0.000	
Vp25	0.0000	
Vp50	0.0000	
Vp75	0.0000	
Vp75-25	0.000	
50% effective depth (m)	0.000	
Mean Surface area ap50 (m2)	0.000	
Time for 25% **Outflow** (t_{p25})		
Time for 75% **Outflow** (t_{p75})		
tp75 - 25	0	
Soil Infiltration Rate (m/s)	**#DIV/0!**	



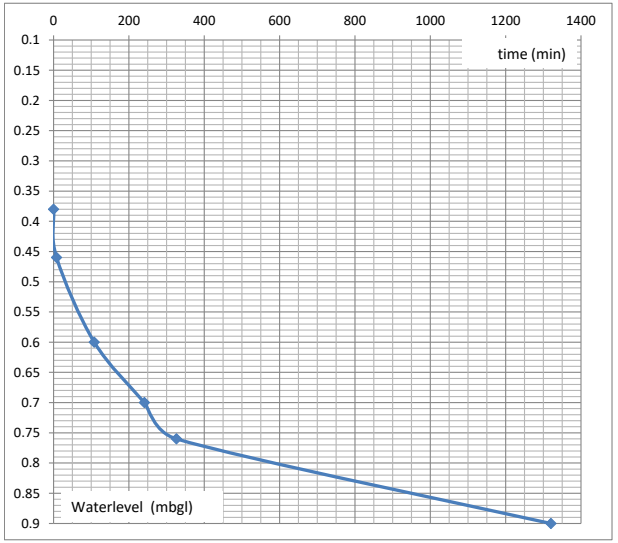
Soil Infiltration Worksheet: This worksheet has been produced in combination with the document 'BRE Digest 365- March 2007'

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Site Name: Phase 5 Crymlyn
Number: 16595
Date Undertaken: 14/04/2021
Test No.: TP02 (Test 1)

	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	0.38
	8	0.46
	108	0.60
	241	0.70
	326	0.76
Emptied overnight	1320	0.9
(Base of pit / effective depth - 0%)		0.900

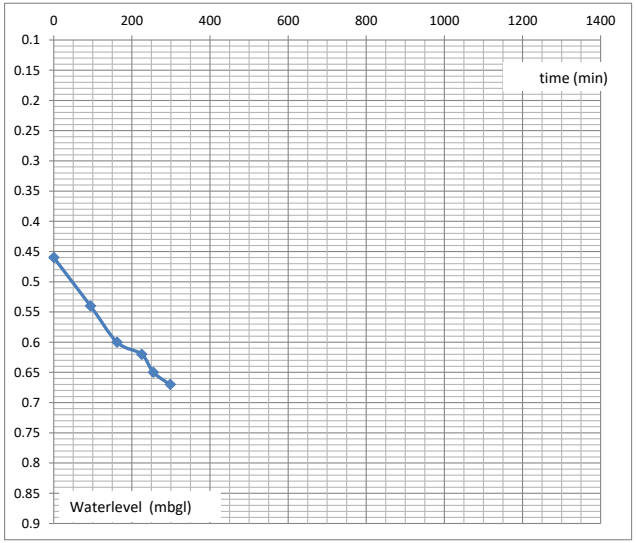
Length of Trial Pit (m)	2.13
Width of Trial Pit (m)	0.80
Depth of Trial Pit (m)	0.90
Effective Storage Depth (m)	0.520
Vp25	0.5100
Vp50	0.6400
Vp75	0.7700
Vp75-25	0.443
50% effective depth (m)	0.260
Mean Surface area ap50 (m2)	3.228
Time for 25% **Outflow** (t_{p25})	40 **Achieved**
Time for 75% **Outflow** (t_{p75})	**Not recorded due to pit emptying overnight**
tp75 - 25	
Soil Infiltration Rate (m/s)	**#DIV/0!**



Date Undertaken: 15/04/2021
Test No.: TP02 (Test 2)

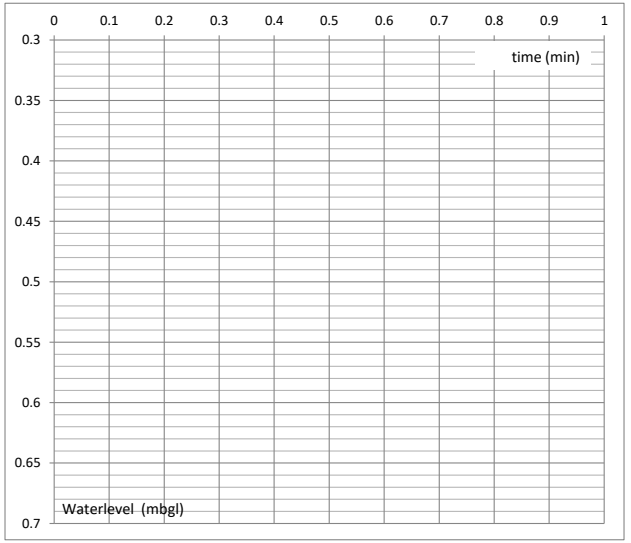
	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	0.46
	94	0.54
	162	0.60
	225	0.62
	255	0.65
	298	0.67
(Base of pit / effective depth - 0%)		0.880

Length of Trial Pit (m)	2.13
Width of Trial Pit (m)	0.80
Depth of Trial Pit (m)	0.86
Effective Storage Depth (m)	0.420
Vp25	0.5650
Vp50	0.6700
Vp75	0.7750
Vp75-25	0.358
50% effective depth (m)	0.210
Mean Surface area ap50 (m2)	2.935
Time for 25% **Outflow** (t_{p25})	120 **Achieved**
Time for 75% **Outflow** (t_{p75})	**Not achieved**
tp75 - 25	
Soil Infiltration Rate (m/s)	**#DIV/0!**



	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	
(Base of pit / effective depth - 0%)		

Length of Trial Pit (m)	
Width of Trial Pit (m)	
Depth of Trial Pit (m)	
Effective Storage Depth (m)	0.000
Vp25	0.0000
Vp50	0.0000
Vp75	0.0000
Vp75-25	0.000
50% effective depth (m)	0.000
Mean Surface area ap50 (m2)	0.000
Time for 25% **Outflow** (t_{p25})	
Time for 75% **Outflow** (t_{p75})	
tp75 - 25	0
Soil Infiltration Rate (m/s)	**#DIV/0!**



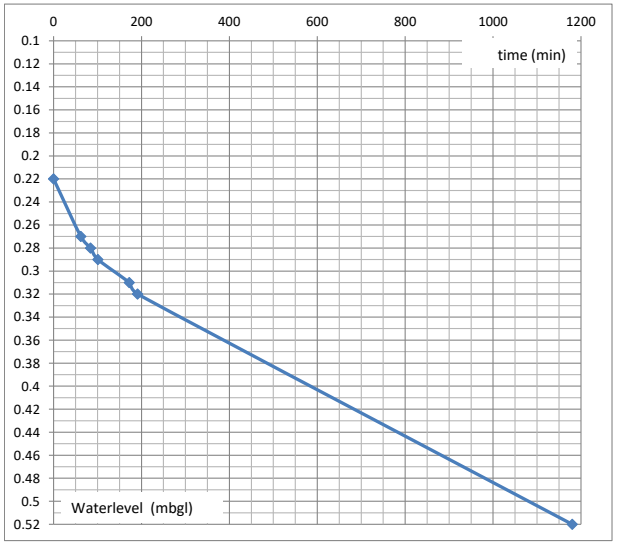
Soil Infiltration Worksheet: This worksheet has been produced in combination with the document 'BRE Digest 365- March 2007'

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Site Name: Phase 5 Crymlyn
Number: 16595
Date Undertaken: 14/04/2021
Test No.: TP20 (2) (Test 1)

	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	0.22
	62	0.27
	84	0.28
	101	0.29
	172	0.31
	191	0.32
Emptied overnight	1180	0.52
(Base of pit / effective depth - 0%)		0.520

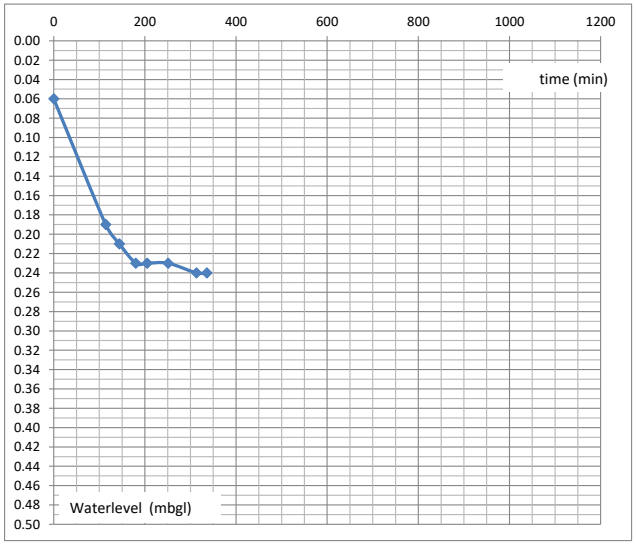
Length of Trial Pit (m)	2.50	
Width of Trial Pit (m)	0.80	
Depth of Trial Pit (m)	0.52	
Effective Storage Depth (m)	0.300	
Vp25	0.2950	
Vp50	0.3700	
Vp75	0.4450	
Vp75-25	0.300	
50% effective depth (m)	0.150	
Mean Surface area ap50 (m2)	2.990	
Time for 25% **Outflow** (t_{p25})	120	**Achieved**
Time for 75% **Outflow** (t_{p75})		**Not recorded due to pit emptying overnight**
tp75 - 25		
Soil Infiltration Rate (m/s)	**#DIV/0!**	



Date Undertaken: 15/04/2021
Test No.: TP19 (Test 2)

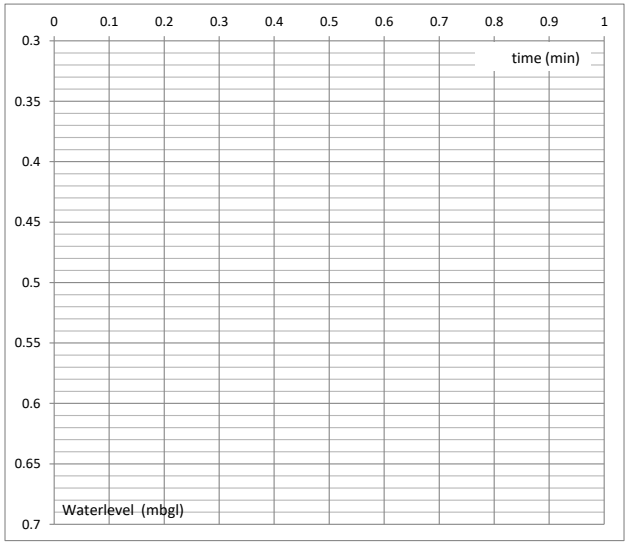
	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	0.06
	114	0.19
	144	0.21
	180	0.23
	205	0.23
	251	0.23
	313	0.24
	336	0.24
(Base of pit / effective depth - 0%)		0.520

Length of Trial Pit (m)	2.50	
Width of Trial Pit (m)	0.80	
Depth of Trial Pit (m)	0.46	
Effective Storage Depth (m)	0.460	
Vp25	0.1750	
Vp50	0.2900	
Vp75	0.4050	
Vp75-25	0.460	
50% effective depth (m)	0.230	
Mean Surface area ap50 (m2)	3.518	
Time for 25% **Outflow** (t_{p25})	100	**Achieved**
Time for 75% **Outflow** (t_{p75})		**Not achieved**
tp75 - 25		
Soil Infiltration Rate (m/s)	**#DIV/0!**	



	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	
(Base of pit / effective depth - 0%)		

Length of Trial Pit (m)		
Width of Trial Pit (m)		
Depth of Trial Pit (m)		
Effective Storage Depth (m)	0.000	
Vp25	0.0000	
Vp50	0.0000	
Vp75	0.0000	
Vp75-25	0.000	
50% effective depth (m)	0.000	
Mean Surface area ap50 (m2)	0.000	
Time for 25% **Outflow** (t_{p25})		
Time for 75% **Outflow** (t_{p75})		
tp75 - 25	0	
Soil Infiltration Rate (m/s)	**#DIV/0!**	



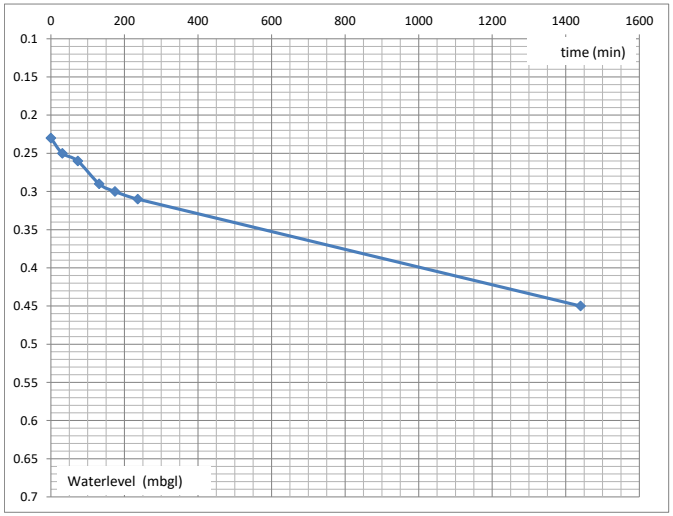
Soil Infiltration Worksheet: This worksheet has been produced in combination with the document 'BRE Digest 365- March 2007'

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Site Name: Phase 5 Crymlyn
Number: 16595
Date Undertaken: 14/04/2021
Test No.: TP21 (Test 1)

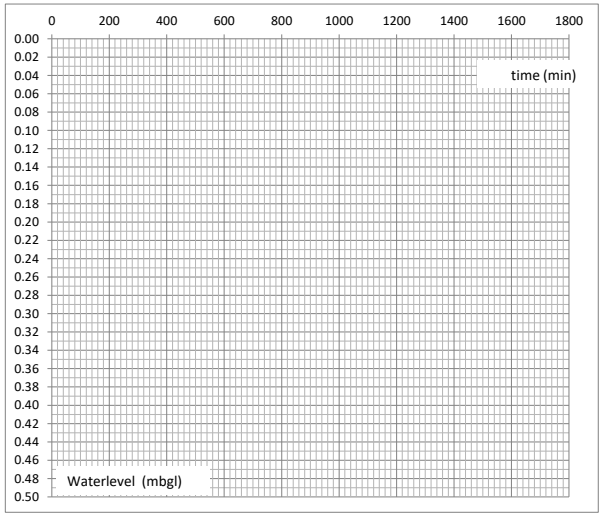
	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	0.23
	31	0.25
	73	0.26
	131	0.29
	174	0.30
	236	0.31
	1440	0.45
(Base of pit / effective depth - 0%)		0.720

Length of Trial Pit (m)	2.60	
Width of Trial Pit (m)	0.80	
Depth of Trial Pit (m)	0.72	
Effective Storage Depth (m)	0.490	
Vp25	0.3525	
Vp50	0.4750	
Vp75	0.5975	
Vp75-25	0.510	
50% effective depth (m)	0.245	
Mean Surface area ap50 (m2)	3.746	
Time for 25% **Outflow** (t_{p25})	600	Not recorded due to measurement having been achieved overnight
Time for 75% **Outflow** (t_{p75})		**Did Not Achieve**
tp75 - 25		**Did Not Achieve**
Soil Infiltration Rate (m/s)	**#DIV/0!**	



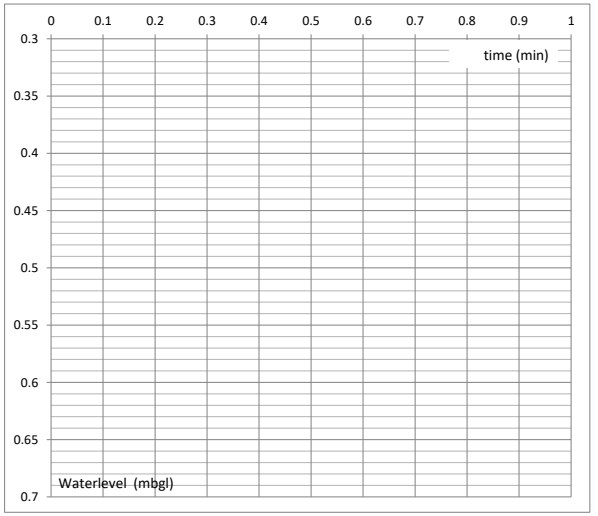
	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	
(Base of pit / effective depth - 0%)		

Length of Trial Pit (m)		
Width of Trial Pit (m)		
Depth of Trial Pit (m)		
Effective Storage Depth (m)	0.000	
Vp25	0.0000	
Vp50	0.0000	
Vp75	0.0000	
Vp75-25	0.000	
50% effective depth (m)	0.000	
Mean Surface area ap50 (m2)	0.000	
Time for 25% **Outflow** (t_{p25})		
Time for 75% **Outflow** (t_{p75})		
tp75 - 25	0	
Soil Infiltration Rate (m/s)	**#DIV/0!**	



	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	
(Base of pit / effective depth - 0%)		

Length of Trial Pit (m)		
Width of Trial Pit (m)		
Depth of Trial Pit (m)		
Effective Storage Depth (m)	0.000	
Vp25	0.0000	
Vp50	0.0000	
Vp75	0.0000	
Vp75-25	0.000	
50% effective depth (m)	0.000	
Mean Surface area ap50 (m2)	0.000	
Time for 25% **Outflow** (t_{p25})		
Time for 75% **Outflow** (t_{p75})		
tp75 - 25	0	
Soil Infiltration Rate (m/s)	**#DIV/0!**	



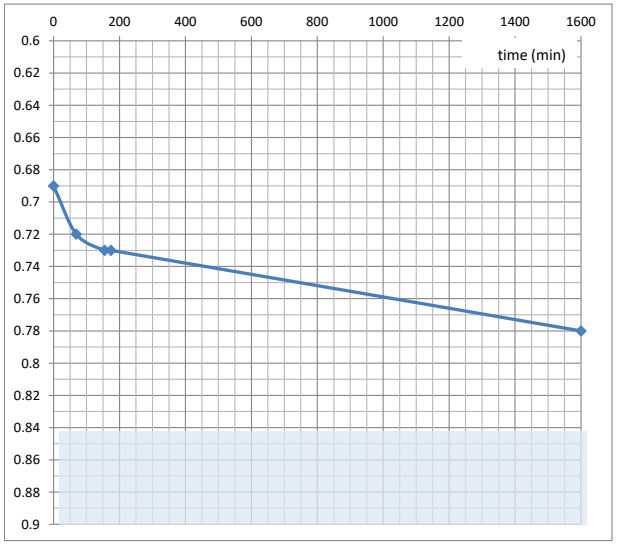
Soil Infiltration Worksheet: This worksheet has been produced in combination with the document 'BRE Digest 365- March 2007'

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Site Name: Phase 5 Crymlyn
Number: 16595
Date Undertaken: 14/04/2021
Test No.: TP21 (Test 1)

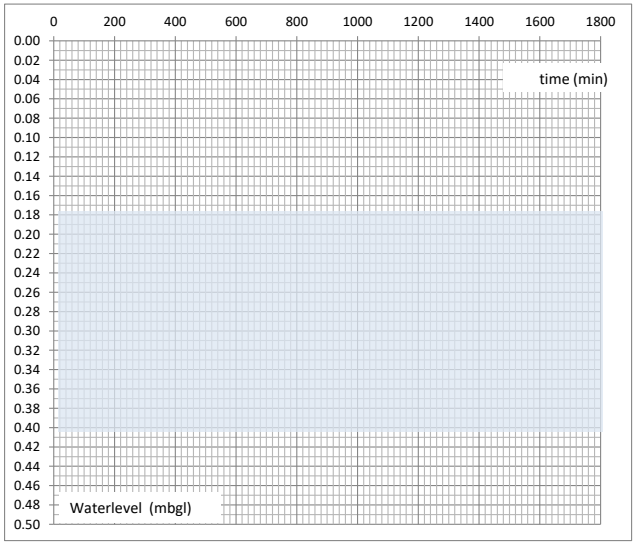
	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	0.69
	69	0.72
	155	0.73
	174	0.73
	1600	0.78
(Base of pit / effective depth - 0%)		1.300

Length of Trial Pit (m)	2.20	
Width of Trial Pit (m)	0.75	
Depth of Trial Pit (m)	1.30	
Effective Storage Depth (m)	0.610	
Vp25	0.8425	
Vp50	0.9950	
Vp75	1.1475	
Vp75-25	0.503	
50% effective depth (m)	0.305	
Mean Surface area ap50 (m2)	3.450	
Time for 25% **Outflow** (t_{p25})		**Did Not Achieve**
Time for 75% **Outflow** (t_{p75})		**Did Not Achieve**
tp75 - 25	0	**Did Not Achieve**
Soil Infiltration Rate (m/s)	**#DIV/0!**	



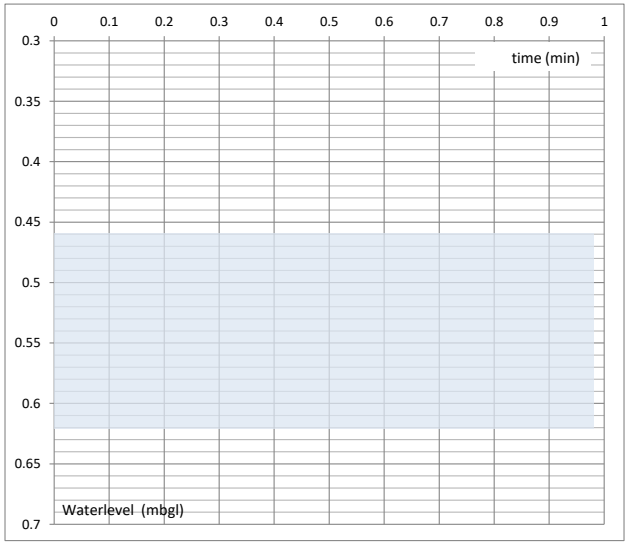
	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	
(Base of pit / effective depth - 0%)		

Length of Trial Pit (m)		
Width of Trial Pit (m)		
Depth of Trial Pit (m)		
Effective Storage Depth (m)	0.000	
Vp25	0.0000	
Vp50	0.0000	
Vp75	0.0000	
Vp75-25	0.000	
50% effective depth (m)	0.000	
Mean Surface area ap50 (m2)	0.000	
Time for 25% **Outflow** (t_{p25})		**Achieved**
Time for 75% **Outflow** (t_{p75})		**Extrapolated**
tp75 - 25	0	**Extrapolated**
Soil Infiltration Rate (m/s)	**#DIV/0!**	**Lowest Measured Infiltration Rate**



	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	
(Base of pit / effective depth - 0%)		

Length of Trial Pit (m)		
Width of Trial Pit (m)		
Depth of Trial Pit (m)		
Effective Storage Depth (m)	0.000	
Vp25	0.0000	
Vp50	0.0000	
Vp75	0.0000	
Vp75-25	0.000	
50% effective depth (m)	0.000	
Mean Surface area ap50 (m2)	0.000	
Time for 25% **Outflow** (t_{p25})		**Achieved**
Time for 75% **Outflow** (t_{p75})		**Achieved**
tp75 - 25	0	**Achieved**
Soil Infiltration Rate (m/s)	**#DIV/0!**	



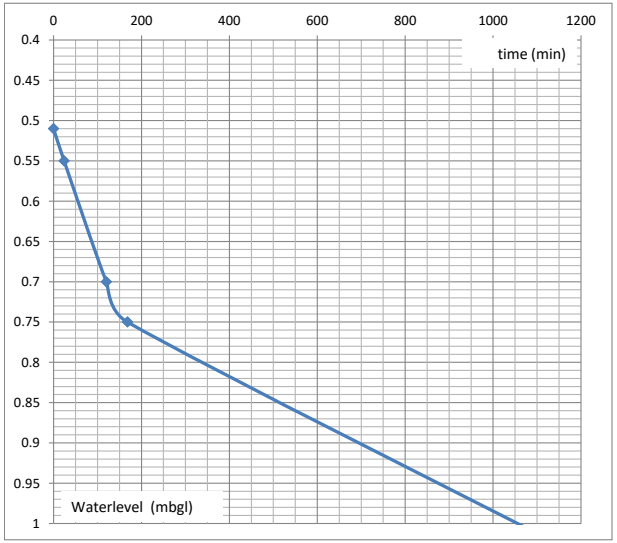
Soil Infiltration Worksheet: This worksheet has been produced in combination with the document 'BRE Digest 365- March 2007'

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Site Name: Phase 5 Crymlyn
Number: 16595
Date Undertaken: 14/04/2021
Test No.: TP23 (Test 1)

	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	0.51
	24	0.55
	120	0.70
	168	0.75
Emptied overnight	1200	1.04
(Base of pit / effective depth - 0%)		1.040

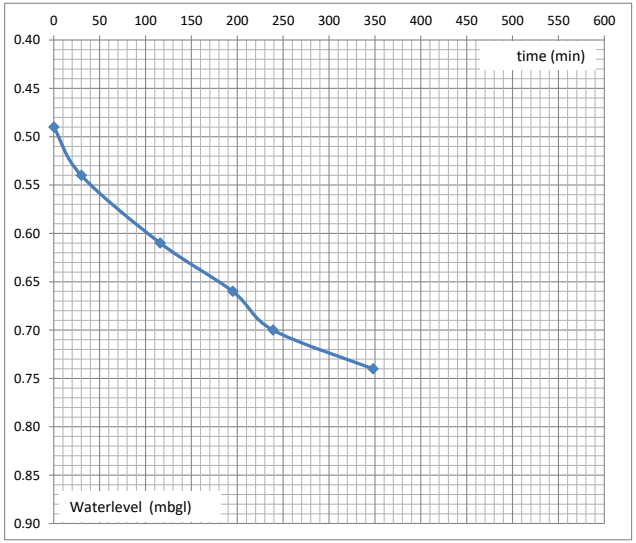
Length of Trial Pit (m)	2.34	
Width of Trial Pit (m)	0.76	
Depth of Trial Pit (m)	0.52	
Effective Storage Depth (m)	0.530	
Vp25	0.6425	
Vp50	0.7750	
Vp75	0.9075	
Vp75-25	0.471	
50% effective depth (m)	0.265	
Mean Surface area ap50 (m2)	3.421	
Time for 25% **Outflow** (t_{p25})	80	**Achieved**
Time for 75% **Outflow** (t_{p75})		**Not recorded due to pit emptying overnight**
tp75 - 25		
Soil Infiltration Rate (m/s)	**#DIV/0!**	



Date Undertaken: 15/04/2021
Test No.: TP23 (Test 2)

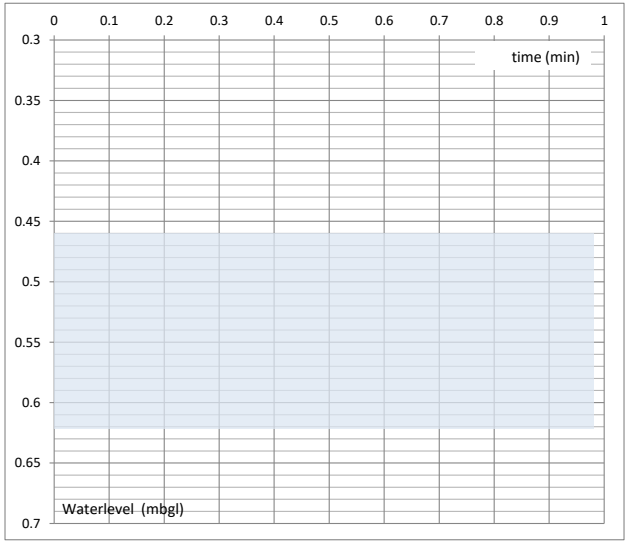
	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	0.49
	30	0.54
	116	0.61
	195	0.66
	239	0.70
	348	0.74
(Base of pit / effective depth - 0%)		0.990

Length of Trial Pit (m)	2.50	
Width of Trial Pit (m)	0.80	
Depth of Trial Pit (m)	0.46	
Effective Storage Depth (m)	0.500	
Vp25	0.6150	
Vp50	0.7400	
Vp75	0.8650	
Vp75-25	0.500	
50% effective depth (m)	0.250	
Mean Surface area ap50 (m2)	3.650	
Time for 25% **Outflow** (t_{p25})	125	**Achieved**
Time for 75% **Outflow** (t_{p75})		**Did Not Achieve**
tp75 - 25		
Soil Infiltration Rate (m/s)	**#DIV/0!**	



	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	
(Base of pit / effective depth - 0%)		

Length of Trial Pit (m)		
Width of Trial Pit (m)		
Depth of Trial Pit (m)		
Effective Storage Depth (m)	0.000	
Vp25	0.0000	
Vp50	0.0000	
Vp75	0.0000	
Vp75-25	0.000	
50% effective depth (m)	0.000	
Mean Surface area ap50 (m2)	0.000	
Time for 25% **Outflow** (t_{p25})		**Achieved**
Time for 75% **Outflow** (t_{p75})		**Achieved**
tp75 - 25	0	**Achieved**
Soil Infiltration Rate (m/s)	**#DIV/0!**	



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Site Name: Phase 5 Crymlyn
Number: 16595
Date Undertaken: 14/04/2021
Test No.: TP24 (Test 1)

	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	0.3
	105	0.45
	153	0.54
Emptied overnight	1200	0.84
(Base of pit / effective depth - 0%)		0.840

Length of Trial Pit (m)	2.22	
Width of Trial Pit (m)	0.66	
Depth of Trial Pit (m)	0.84	
Effective Storage Depth (m)	0.540	
Vp25	0.4350	
Vp50	0.5700	
Vp75	0.7050	
Vp75-25	0.396	
50% effective depth (m)	0.270	
Mean Surface area ap50 (m2)	3.020	
Time for 25% **Outflow** (t_{p25})	80.5	**Achieved**
Time for 75% **Outflow** (t_{p75})		**Not recorded due to pit emptying overnight**
tp75 - 25		
Soil Infiltration Rate (m/s)	**#DIV/0!**	

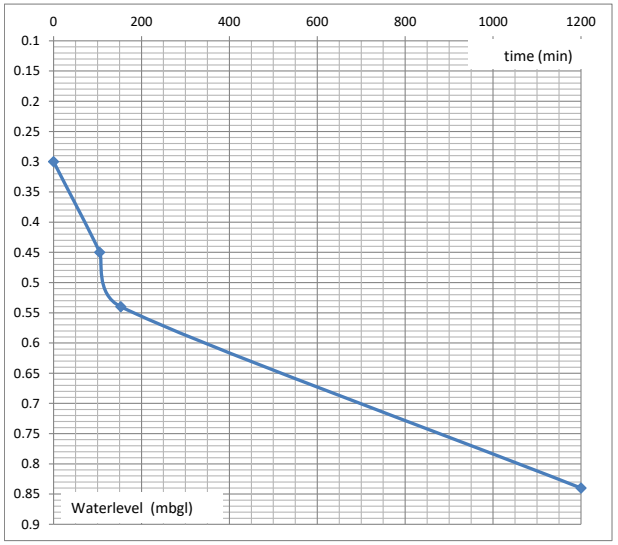
Date Undertaken: 15/04/2021
Test No.: TP24 (Test 2)

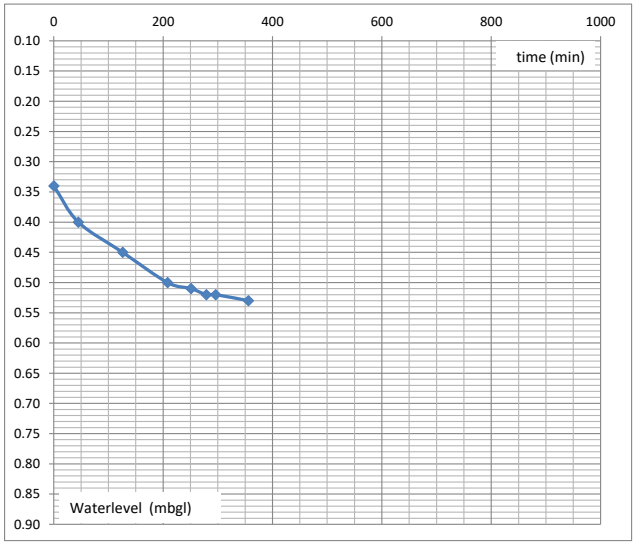
	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	0.34
	45	0.4
	126	0.45
	208	0.5
	251	0.51
	279	0.52
	296	0.52
	356	0.53
(Base of pit / effective depth - 0%)		0.830

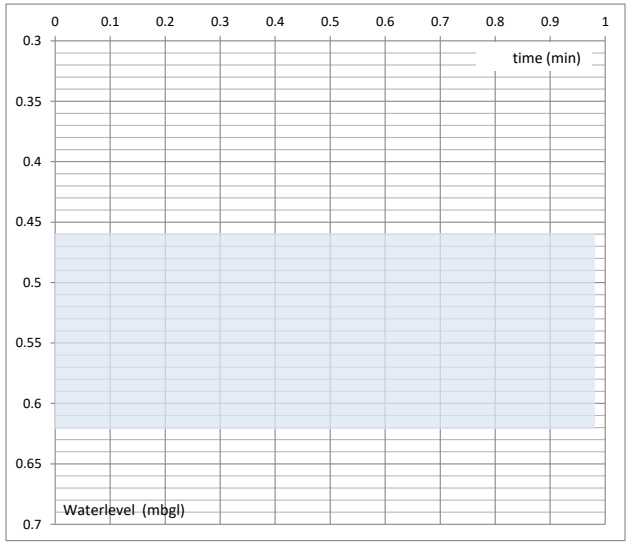
Length of Trial Pit (m)	2.22	
Width of Trial Pit (m)	0.66	
Depth of Trial Pit (m)	0.83	
Effective Storage Depth (m)	0.490	
Vp25	0.4625	
Vp50	0.5850	
Vp75	0.7075	
Vp75-25	0.359	
50% effective depth (m)	0.245	
Mean Surface area ap50 (m2)	2.876	
Time for 25% **Outflow** (t_{p25})	140	**Achieved**
Time for 75% **Outflow** (t_{p75})		**Not achieved**
tp75 - 25		**Extrapolated**
Soil Infiltration Rate (m/s)	**#DIV/0!**	**Lowest Measured Infiltration Rate**

	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	
(Base of pit / effective depth - 0%)		

Length of Trial Pit (m)		
Width of Trial Pit (m)		
Depth of Trial Pit (m)		
Effective Storage Depth (m)	0.000	
Vp25	0.0000	
Vp50	0.0000	
Vp75	0.0000	
Vp75-25	0.000	
50% effective depth (m)	0.000	
Mean Surface area ap50 (m2)	0.000	
Time for 25% **Outflow** (t_{p25})		
Time for 75% **Outflow** (t_{p75})		
tp75 - 25	0	
Soil Infiltration Rate (m/s)	**#DIV/0!**	







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Site Name: Phase 5 Crymlyn
Number: 16595
Date Undertaken: 15/04/2021
Test No.: TP25 (Test 1)

	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	0.51
	24	0.55
	120	0.70
	168	0.75
Emptied overnight	1200	0.9
(Base of pit / effective depth - 0%)		0.900

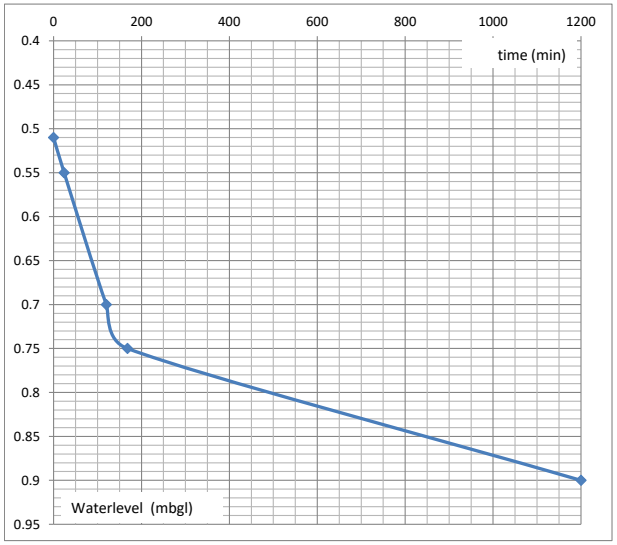
Length of Trial Pit (m)	2.20	
Width of Trial Pit (m)	0.71	
Depth of Trial Pit (m)	0.90	
Effective Storage Depth (m)	0.390	
Vp25	0.6075	
Vp50	0.7050	
Vp75	0.8025	
Vp75-25	0.305	
50% effective depth (m)	0.195	
Mean Surface area ap50 (m2)	2.697	
Time for 25% **Outflow** (t_{p25})	55	**Achieved**
Time for 75% **Outflow** (t_{p75})		**Not recorded due to pit emptying overnight**
tp75 - 25		
Soil Infiltration Rate (m/s)	**#DIV/0!**	

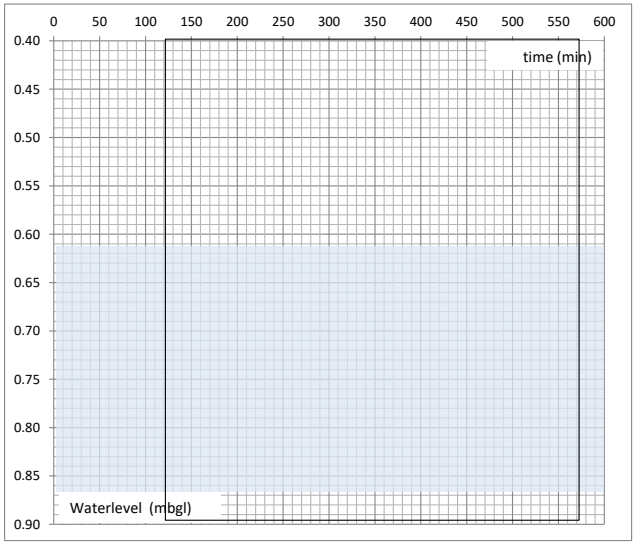
	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	
(Base of pit / effective depth - 0%)		

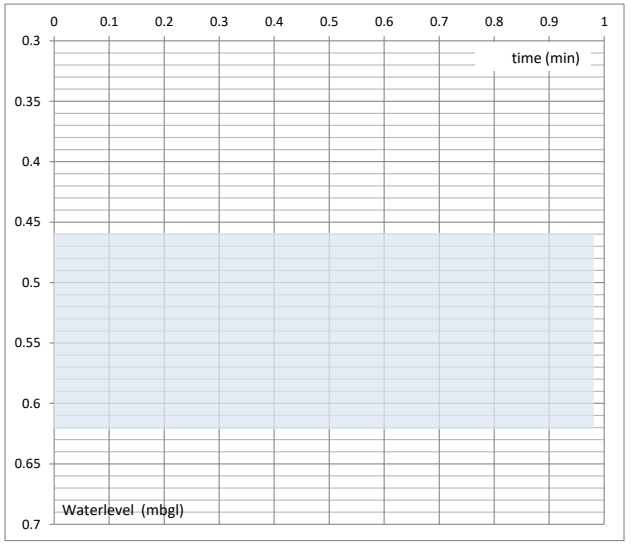
Length of Trial Pit (m)		
Width of Trial Pit (m)		
Depth of Trial Pit (m)		
Effective Storage Depth (m)	0.000	
Vp25	0.0000	
Vp50	0.0000	
Vp75	0.0000	
Vp75-25	0.000	
50% effective depth (m)	0.000	
Mean Surface area ap50 (m2)	0.000	
Time for 25% **Outflow** (t_{p25})		**Achieved**
Time for 75% **Outflow** (t_{p75})		**Extrapolated**
tp75 - 25	0	**Extrapolated**
Soil Infiltration Rate (m/s)	**#DIV/0!**	**Lowest Measured Infiltration Rate**

	Time (Mins)	Depth to Water (m)
(Top of test / effective depth - 100%)	0	
(Base of pit / effective depth - 0%)		

Length of Trial Pit (m)		
Width of Trial Pit (m)		
Depth of Trial Pit (m)		
Effective Storage Depth (m)	0.000	
Vp25	0.0000	
Vp50	0.0000	
Vp75	0.0000	
Vp75-25	0.000	
50% effective depth (m)	0.000	
Mean Surface area ap50 (m2)	0.000	
Time for 25% **Outflow** (t_{p25})		**Achieved**
Time for 75% **Outflow** (t_{p75})		**Achieved**
tp75 - 25	0	**Achieved**
Soil Infiltration Rate (m/s)	**#DIV/0!**	**Lowest Measured Infiltration Rate**







Soil Infiltration Worksheet: This worksheet has been produced in combination with the document 'BRE Digest 365- March 2007'

ANNEX F
Windowless Sampler Borehole Logs

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Borehole No.
WS01
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 14/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.20				Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
				0.70				Soft orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular sandstone.
	1.00	SPT	50 (7,12/50 for 270mm)	1.00				Very dense grey mottled brown slightly clayey very gravelly SAND. Gravel is angular sandstone.
								End of Borehole at 1.000m

1
2
3
4

Remarks: 1] On completion borehole backfilled with arisings.

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Borehole No.
WS02
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 16/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.25				Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
	1.00	SPT	50 (25 for 115mm/50 for 290mm)	1.00				Very dense brown and grey clayey very sandy GRAVEL of angular and tabular sandstone.
								End of Borehole at 1.000m

1
2
3
4

Remarks: 1] On completion a 50mm standpipe (50mm) was installed to 1.0m depth. Slotted pipe with granular response zone from 0.5m-1.0m, solid standpipe with bentonite seal GL-0.5m, and a flush cover.

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Borehole No.
WS03
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 16/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.30				Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
				0.60				Firm orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular sandstone.
	0.80	SPT	50 (25 for 105mm/50 for 230mm)	0.80				Very dense brown clayey very gravelly SAND. Gravel is angular and tabular sandstone.
								End of Borehole at 0.800m

1
2
3
4

Remarks: 1] On completion borehole backfilled with arisings.

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Borehole No.
WS04
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 15/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.20				Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
								Soft orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular sandstone.
				0.90				
	1.00	SPT	N=46 (6,9/10,9,12,15)					Very dense grey and brown clayey very gravelly SAND. Gravel is angular sandstone.
	1.60	SPT	50 (6,12/50 for 270mm)	1.60				End of Borehole at 1.600m

Remarks: 1] On completion a 50mm standpipe (50mm) was installed to 1.6m depth. Slotted pipe with granular response zone from 1.0m-1.6m, solid standpipe with bentonite seal GL-1.0m, and a flush cover.

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Borehole No.
WS05
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 15/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.20				Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
								Soft orangish brown sandy slightly gravelly CLAY. Gravel is angular sandstone.
	0.90	SPT	50 (25,/50 for 235mm)	0.85 0.90				Recovered as very dense grey GRAVEL of angular and tabular sandstone. Possible SANDSTONE bedrock.
								End of Borehole at 0.900m

1
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Remarks: 1] On completion borehole backfilled with arisings.

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Borehole No.
WS06
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 14/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.40				Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
				0.60				Soft orangish brown sandy CLAY.
	0.80	SPT	50 (25 for 115mm/50 for 275mm)	0.80				Recovered as very dense grey GRAVEL of angular and tabular sandstone. Possible SANDSTONE bedrock.
								End of Borehole at 0.800m

1
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Remarks: 1] On completion borehole backfilled with arisings.

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Borehole No.
WS07
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 15/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.20				Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
				0.45				Brown slightly clayey gravelly SAND. Gravel is angular sandstone.
	0.50	SPT	50 (25 for 85mm/50 for 245mm)	0.50				Recovered as very dense grey GRAVEL of angular sandstone. Possible SANDSTONE bedrock.
								End of Borehole at 0.500m

1
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Remarks: 1] On completion borehole backfilled with arisings.

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Borehole No.
WS08
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 14/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.30				Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
				0.70				Soft orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular sandstone.
	0.80	SPT	50 (25 for 110mm/50 for 265mm)	0.80				Recovered as very dense grey GRAVEL of angular and tabular sandstone. Possible SANDSTONE bedrock.
								End of Borehole at 0.800m

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Remarks: 1] On completion a 50mm standpipe (50mm) was installed to 0.8m depth. Slotted pipe with granular response zone from 0.5m-0.8m, solid standpipe with bentonite seal GL-0.5m, and a flush cover.

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Borehole No.
WS09
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 15/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.20				Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
				0.60				Orangish brown and grey clayey gravelly SAND. Gravel is angular sandstone.
	1.00	SPT	50 (25 for 100mm/50 for 235mm)	1.00				Very dense grey clayey very sandy GRAVEL of angular sandstone.
								End of Borehole at 1.000m

Remarks: 1] On completion a 50mm standpipe (50mm) was installed to 1.0m depth. Slotted pipe with granular response zone from 0.5m-1.0m, solid standpipe with bentonite seal GL-0.5m, and a flush cover.

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Borehole No.
WS10
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 15/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.20				Brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets and small root vegetables.
								Brown and grey clayey very gravelly SAND. Gravel is angular sandstone.
	1.00	SPT	50 (25,/50 for 295mm)	1.00				End of Borehole at 1.000m

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Remarks: 1] On completion borehole backfilled with arisings.

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Borehole No.
WS11
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 14/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.40				Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
								Soft orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular sandstone.
	1.00	SPT	50 (1,1/50 for 235mm)	1.00				End of Borehole at 1.000m

Remarks: 1] On completion borehole backfilled with arisings.

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Borehole No.
WS12
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 14/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.30				Soft orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium angular to subangular sandstone.
				0.45				Soft orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular sandstone.
	0.50	SPT	50 (25 for 110mm/50 for 265mm)	0.50				Very dense grey and brown slightly clayey sandy GRAVEL of angular sandstone.
								End of Borehole at 0.500m

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Remarks: 1] On completion borehole backfilled with arisings.

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Borehole No.
WS13
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 14/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.20				Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
								Soft orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium angular to subangular sandstone.
				0.80				Very dense grey and brown clayey sandy GRAVEL of angular sandstone.
	1.00	SPT	50 (25 for 115mm/50 for 245mm)	1.00				End of Borehole at 1.000m

Remarks: 1] On completion borehole backfilled with arisings.

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Borehole No.
WS14
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 14/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.20				Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
								Soft orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular sandstone.
				0.60				Recovered as very dense grey GRAVEL of angular and tabular sandstone. Possible SANDSTONE bedrock.
				0.70				End of Borehole at 0.700m
	1.00	SPT	50 (25 for 115mm/50 for 265mm)					

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Remarks: 1] On completion borehole backfilled with arisings.

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Borehole No.
WS15
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 14/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.20				Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
								Soft orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium angular to subangular sandstone.
	1.00	SPT	N=43 (4,13/14,10,10,9)	0.90				Very dense brown and grey silty gravelly SAND. Gravel is angular and tabular sandstone.
	2.00	SPT	N=50 (5,12/13,13,12,12)	2.00				End of Borehole at 2.000m

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Remarks: 1] On completion a 50mm standpipe (50mm) was installed to 2.0m depth. Slotted pipe with granular response zone from 1.0m-2.0m, solid standpipe with bentonite seal GL-1.0m, and a flush cover.

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Borehole No.
WS16
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 14/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.20				Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
								Firm orangish brown slightly sandy gravelly CLAY. Gravel is angular and tabular sandstone.
				0.90				
	1.00	SPT	N=44 (2,7/10,10,12,12)					Very dense grey clayey very gravelly SAND. Gravel is angular and tabular sandstone.
	1.70	SPT	50 (9,11/50 for 265mm)	1.70				End of Borehole at 1.700m

Remarks: 1] On completion borehole backfilled with arisings.

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Borehole No.
WS17
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 14/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.20				Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
								Firm orangish brown sandy slightly gravelly CLAY. Gravel is angular sandstone.
	1.00	SPT	50 (1,1/50 for 275mm)	1.00				End of Borehole at 1.000m

Remarks: 1] On completion a 50mm standpipe (50mm) was installed to 1.0m depth. Slotted pipe with granular response zone from 0.5m-1.0m, solid standpipe with bentonite seal GL-0.5m, and a flush cover.

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Borehole No.
WS18
Sheet 1 of 1

Project Name:	Phase 5 Crymlyn Road	Project No: 16595	Co-ords:
Location:	Skewen, Neath Port Talbot		Level:
Client:	Hale Construction Limited		Dates: 14/04/2021 -

Hole Type: WLS
Scale: 1:20
Logged By: MW

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				0.15				Grass over brown organic-rich sandy slightly gravelly CLAY. Gravel is fine to medium angular sandstone. Some rootlets.
	0.60	SPT	50 (25 for 80mm/50 for 230mm)	0.60				Very dense grey and brown slightly clayey sandy GRAVEL of angular sandstone.
								End of Borehole at 0.600m

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Remarks: 1] On completion borehole backfilled with arisings.

ANNEX G
CBR Correlations

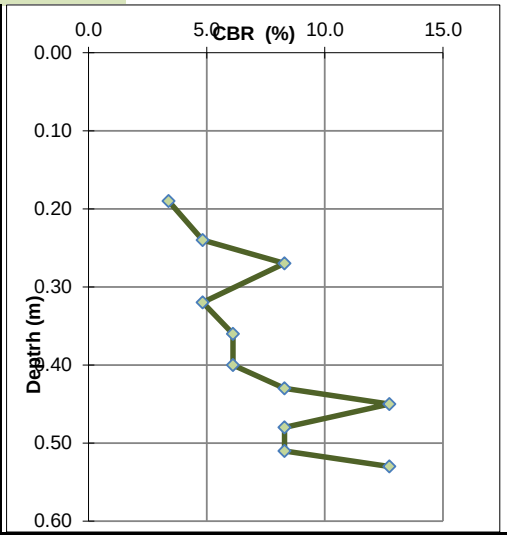
Dynamic Cone Penetrometer Testing

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP01

Initial Scale Reading (mm) 120 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	190	70	0.19	70	3.4
1	240	50	0.24	50	4.8
1	270	30	0.27	30	8.3
1	320	50	0.32	50	4.8
1	360	40	0.36	40	6.1
1	400	40	0.40	40	6.1
1	430	30	0.43	30	8.3
1	450	20	0.45	20	12.7
1	480	30	0.48	30	8.3
1	510	30	0.51	30	8.3
1	530	20	0.53	20	12.7



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

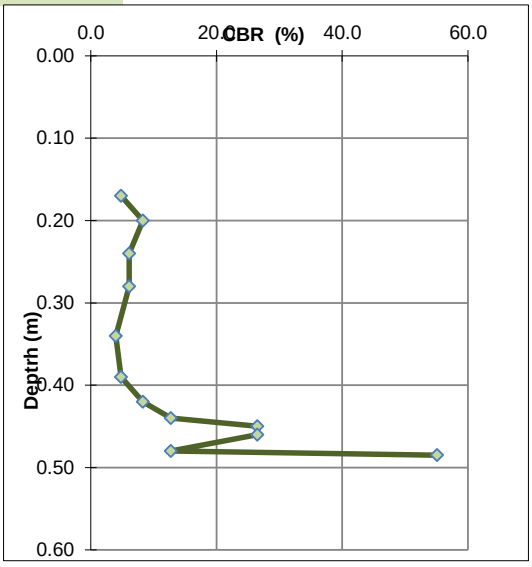
Dynamic Cone Penetrometer Testing

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP02

Initial Scale Reading (mm) 120 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	170	50	0.17	50	4.8
1	200	30	0.20	30	8.3
1	240	40	0.24	40	6.1
1	280	40	0.28	40	6.1
1	340	60	0.34	60	4.0
1	390	50	0.39	50	4.8
1	420	30	0.42	30	8.3
1	440	20	0.44	20	12.7
1	450	10	0.45	10	26.5
1	460	10	0.46	10	26.5
1	480	20	0.48	20	12.7
1	485	5	0.49	5	55.1



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

Dynamic Cone Penetrometer Testing

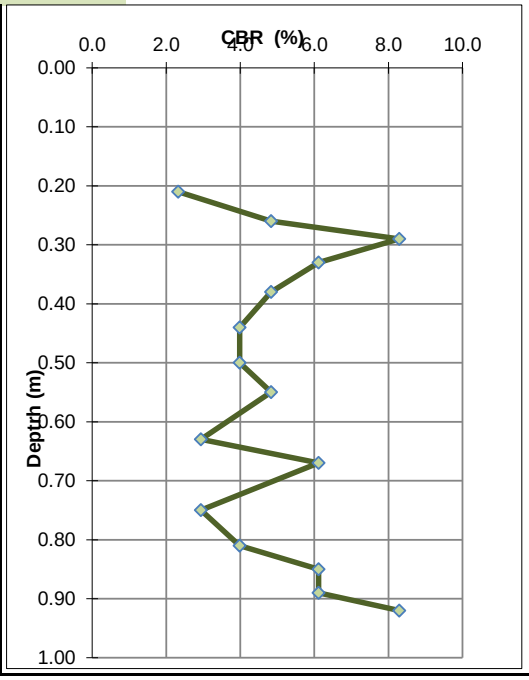
terrafirma

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP03

Initial Scale Reading (mm) 110 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	210	100	0.21	100	2.3
1	260	50	0.26	50	4.8
1	290	30	0.29	30	8.3
1	330	40	0.33	40	6.1
1	380	50	0.38	50	4.8
1	440	60	0.44	60	4.0
1	500	60	0.50	60	4.0
1	550	50	0.55	50	4.8
1	630	80	0.63	80	2.9
1	670	40	0.67	40	6.1
1	750	80	0.75	80	2.9
1	810	60	0.81	60	4.0
1	850	40	0.85	40	6.1
1	890	40	0.89	40	6.1
1	920	30	0.92	30	8.3



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

Dynamic Cone Penetrometer Testing

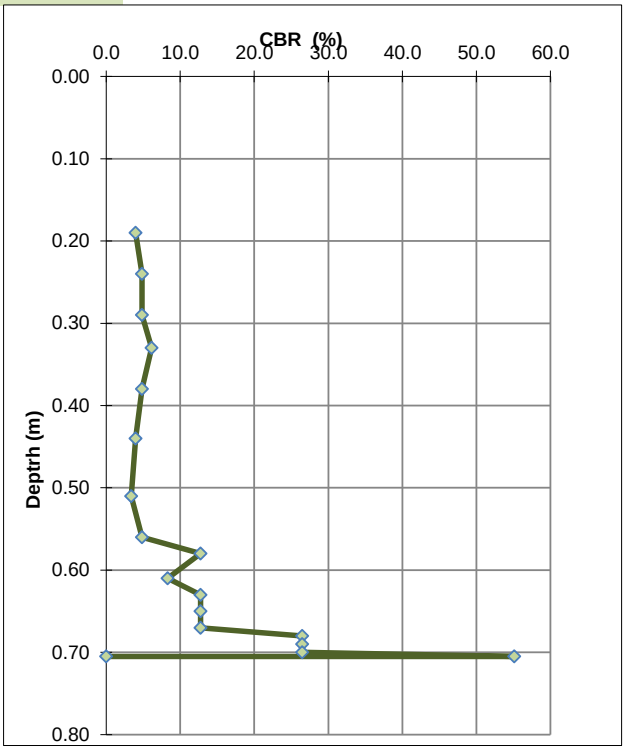
terrafirma

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP04

Initial Scale Reading (mm) 130 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	190	60	0.19	60	4.0
1	240	50	0.24	50	4.8
1	290	50	0.29	50	4.8
1	330	40	0.33	40	6.1
1	380	50	0.38	50	4.8
1	440	60	0.44	60	4.0
1	510	70	0.51	70	3.4
1	560	50	0.56	50	4.8
1	580	20	0.58	20	12.7
1	610	30	0.61	30	8.3
1	630	20	0.63	20	12.7
1	650	20	0.65	20	12.7
1	670	20	0.67	20	12.7
1	680	10	0.68	10	26.5
1	690	10	0.69	10	26.5
1	700	10	0.70	10	26.5
1	705	5	0.71	5	55.1
1	705	0	0.71	0	#NUM!



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

Dynamic Cone Penetrometer Testing

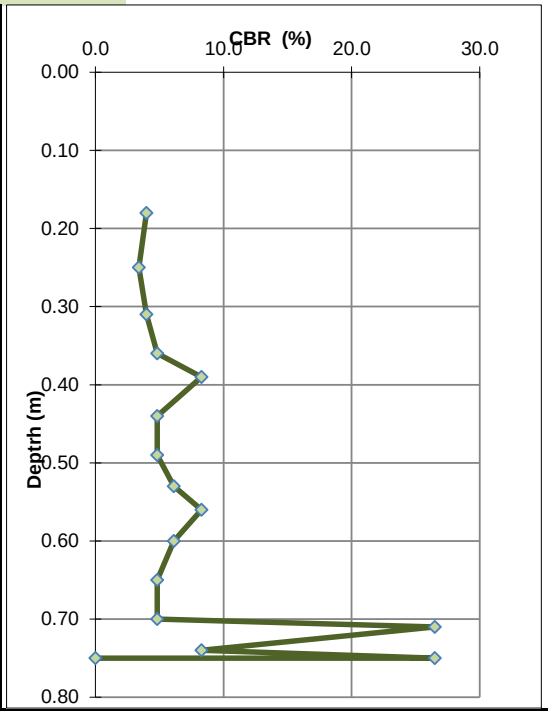
terrafirma

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP05

Initial Scale Reading (mm) 120 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	180	60	0.18	60	4.0
1	250	70	0.25	70	3.4
1	310	60	0.31	60	4.0
1	360	50	0.36	50	4.8
1	390	30	0.39	30	8.3
1	440	50	0.44	50	4.8
1	490	50	0.49	50	4.8
1	530	40	0.53	40	6.1
1	560	30	0.56	30	8.3
1	600	40	0.60	40	6.1
1	650	50	0.65	50	4.8
1	700	50	0.70	50	4.8
1	710	10	0.71	10	26.5
1	740	30	0.74	30	8.3
1	750	10	0.75	10	26.5
1	750	0	0.75	0	#NUM!



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

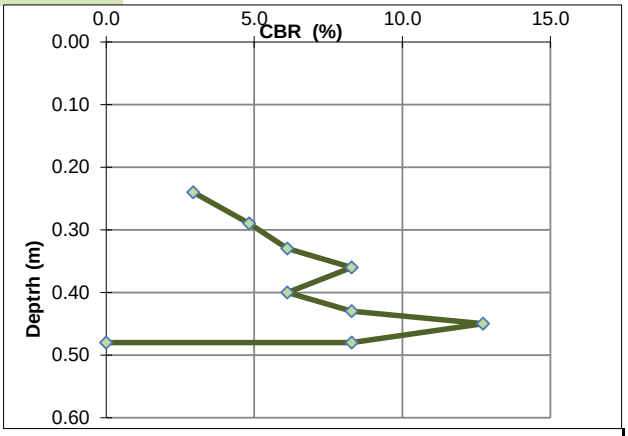
Dynamic Cone Penetrometer Testing

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP06

Initial Scale Reading (mm) 160 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	240	80	0.24	80	2.9
1	290	50	0.29	50	4.8
1	330	40	0.33	40	6.1
1	360	30	0.36	30	8.3
1	400	40	0.40	40	6.1
1	430	30	0.43	30	8.3
1	450	20	0.45	20	12.7
1	480	30	0.48	30	8.3
1	480	0	0.48	0	#NUM!



Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

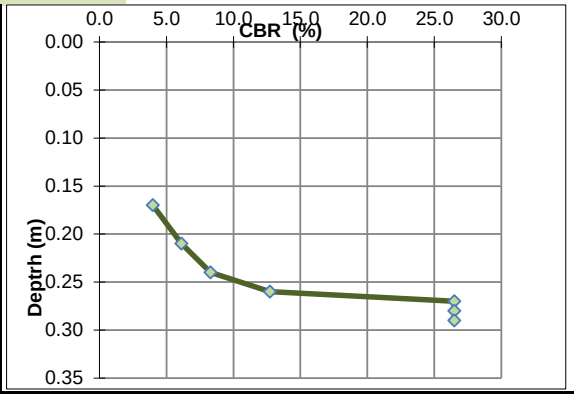
Dynamic Cone Penetrometer Testing

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP07

Initial Scale Reading (mm) 110 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	170	60	0.17	60	4.0
1	210	40	0.21	40	6.1
1	240	30	0.24	30	8.3
1	260	20	0.26	20	12.7
1	270	10	0.27	10	26.5
1	280	10	0.28	10	26.5
1	290	10	0.29	10	26.5



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

Dynamic Cone Penetrometer Testing

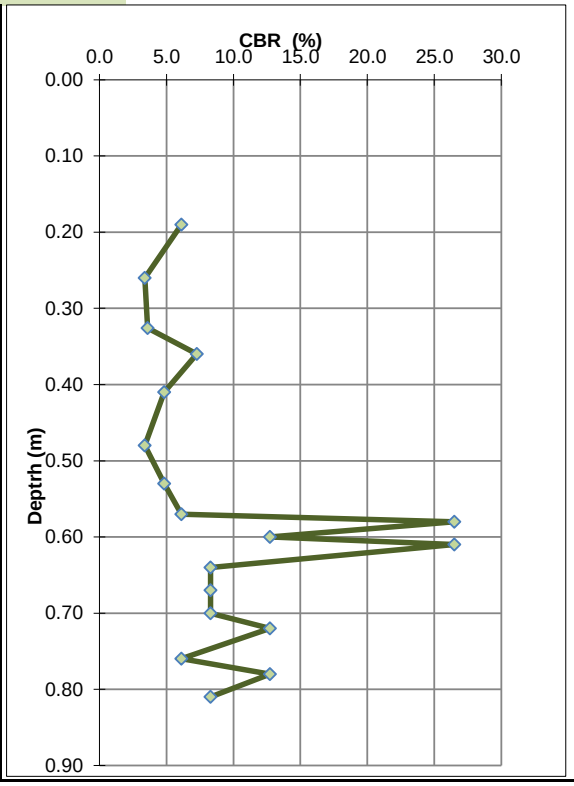
terrafirma

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP08

Initial Scale Reading (mm) 150 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	190	40	0.19	40	6.1
1	260	70	0.26	70	3.4
1	326	66	0.33	66	3.6
1	360	34	0.36	34	7.3
1	410	50	0.41	50	4.8
1	480	70	0.48	70	3.4
1	530	50	0.53	50	4.8
1	570	40	0.57	40	6.1
1	580	10	0.58	10	26.5
1	600	20	0.60	20	12.7
1	610	10	0.61	10	26.5
1	640	30	0.64	30	8.3
1	670	30	0.67	30	8.3
1	700	30	0.70	30	8.3
1	720	20	0.72	20	12.7
1	760	40	0.76	40	6.1
1	780	20	0.78	20	12.7
1	810	30	0.81	30	8.3



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

Dynamic Cone Penetrometer Testing

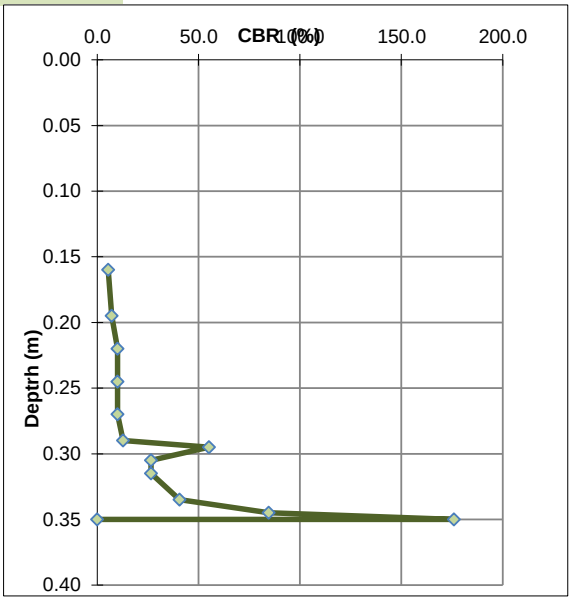
terrafirma

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP09

Initial Scale Reading (mm) 115 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	160	45	0.16	45	5.4
1	195	35	0.20	35	7.0
1	220	25	0.22	25	10.1
1	245	25	0.25	25	10.1
1	270	25	0.27	25	10.1
1	290	20	0.29	20	12.7
1	295	5	0.30	5	55.1
1	305	10	0.31	10	26.5
1	315	10	0.32	10	26.5
3	335	20	0.34	7	40.7
3	345	10	0.35	3	84.6
3	350	5	0.35	2	176.0
3	350	0	0.35	0	#NUM!



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

Dynamic Cone Penetrometer Testing

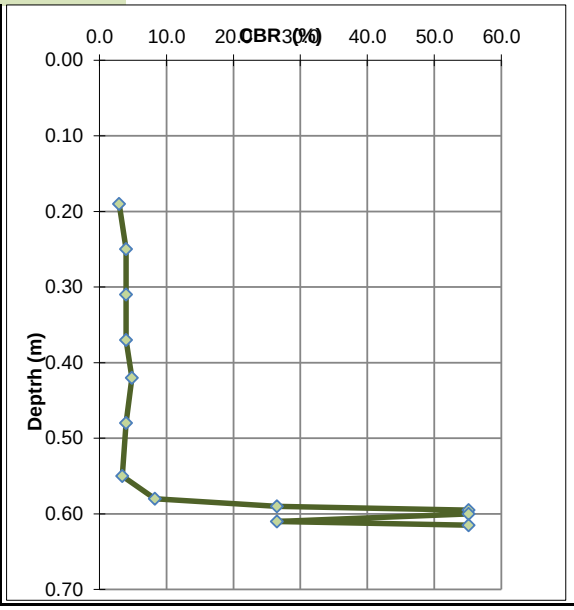
terrafirma

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP10

Initial Scale Reading (mm) 110 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	190	80	0.19	80	2.9
1	250	60	0.25	60	4.0
1	310	60	0.31	60	4.0
1	370	60	0.37	60	4.0
1	420	50	0.42	50	4.8
1	480	60	0.48	60	4.0
1	550	70	0.55	70	3.4
1	580	30	0.58	30	8.3
1	590	10	0.59	10	26.5
1	595	5	0.60	5	55.1
1	600	5	0.60	5	55.1
1	610	10	0.61	10	26.5
1	615	5	0.62	5	55.1



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

Dynamic Cone Penetrometer Testing

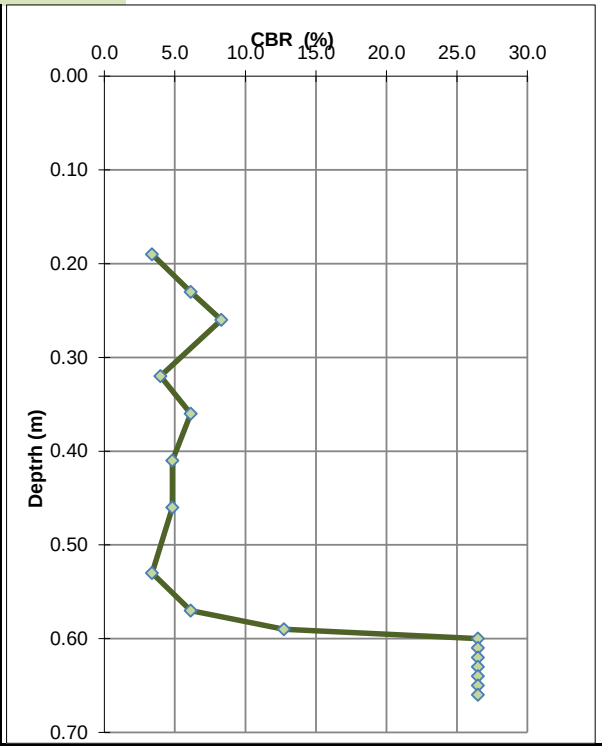
terrafirma

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP11

Initial Scale Reading (mm) 120 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	190	70	0.19	70	3.4
1	230	40	0.23	40	6.1
1	260	30	0.26	30	8.3
1	320	60	0.32	60	4.0
1	360	40	0.36	40	6.1
1	410	50	0.41	50	4.8
1	460	50	0.46	50	4.8
1	530	70	0.53	70	3.4
1	570	40	0.57	40	6.1
1	590	20	0.59	20	12.7
1	600	10	0.60	10	26.5
1	610	10	0.61	10	26.5
1	620	10	0.62	10	26.5
1	630	10	0.63	10	26.5
1	640	10	0.64	10	26.5
1	650	10	0.65	10	26.5
1	660	10	0.66	10	26.5



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

Dynamic Cone Penetrometer Testing

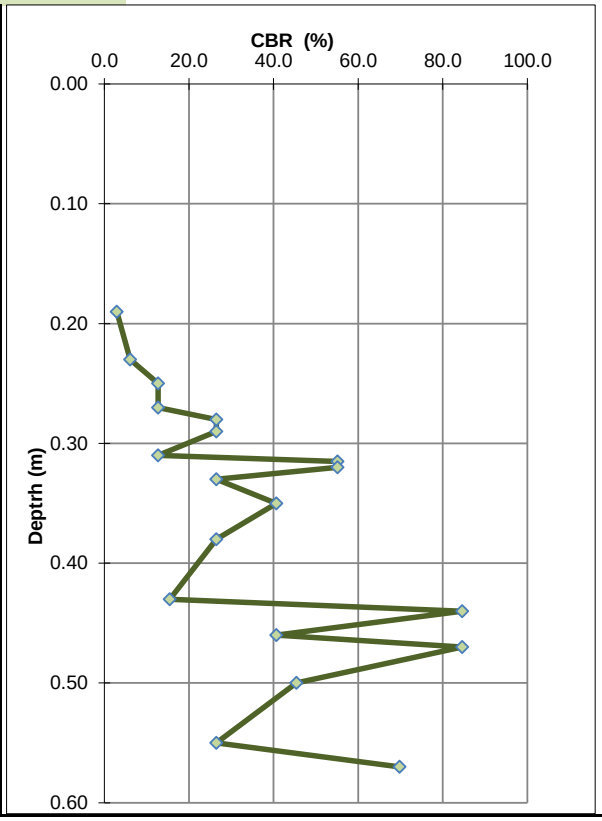
terrafirma

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP12

Initial Scale Reading (mm) 110 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	190	80	0.19	80	2.9
1	230	40	0.23	40	6.1
1	250	20	0.25	20	12.7
1	270	20	0.27	20	12.7
1	280	10	0.28	10	26.5
1	290	10	0.29	10	26.5
1	310	20	0.31	20	12.7
1	315	5	0.32	5	55.1
1	320	5	0.32	5	55.1
1	330	10	0.33	10	26.5
3	350	20	0.35	7	40.7
3	380	30	0.38	10	26.5
3	430	50	0.43	17	15.4
3	440	10	0.44	3	84.6
3	460	20	0.46	7	40.7
3	470	10	0.47	3	84.6
5	500	30	0.50	6	45.4
5	550	50	0.55	10	26.5
5	570	20	0.57	4	69.8



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

Dynamic Cone Penetrometer Testing

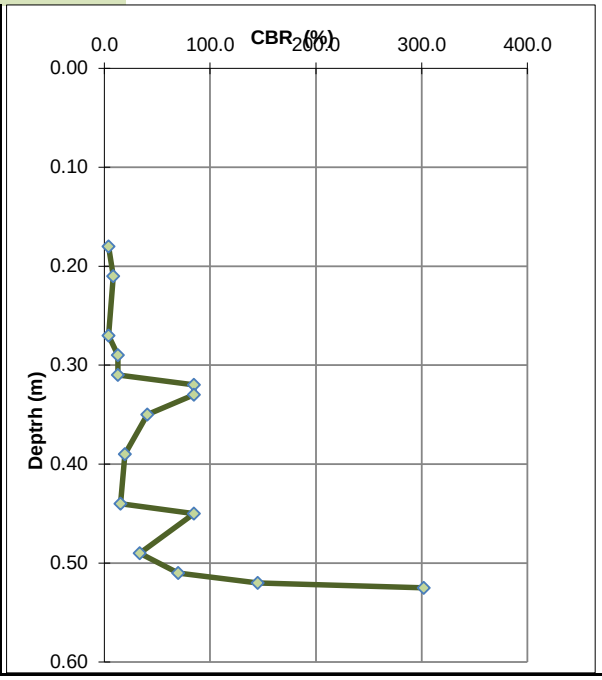
terrafirma

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP13

Initial Scale Reading (mm) 120 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	180	60	0.18	60	4.0
1	210	30	0.21	30	8.3
1	270	60	0.27	60	4.0
1	290	20	0.29	20	12.7
1	310	20	0.31	20	12.7
3	320	10	0.32	3	84.6
3	330	10	0.33	3	84.6
3	350	20	0.35	7	40.7
3	390	40	0.39	13	19.5
3	440	50	0.44	17	15.4
3	450	10	0.45	3	84.6
5	490	40	0.49	8	33.5
5	510	20	0.51	4	69.8
5	520	10	0.52	2	145.1
5	525	5	0.53	1	302.0



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

Dynamic Cone Penetrometer Testing

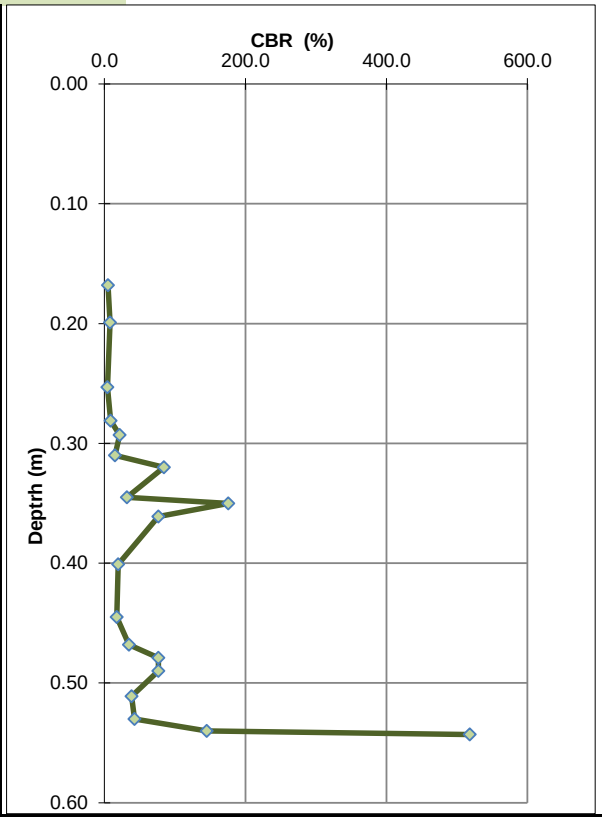
terrafirma

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP14

Initial Scale Reading (mm) 123 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	168	45	0.17	45	5.4
1	199	31	0.20	31	8.0
1	253	54	0.25	54	4.5
1	281	28	0.28	28	8.9
1	293	12	0.29	12	21.8
1	310	17	0.31	17	15.1
3	320	10	0.32	3	84.6
3	345	25	0.35	8	32.1
3	350	5	0.35	2	176.0
3	361	11	0.36	4	76.5
3	401	40	0.40	13	19.5
3	445	44	0.45	15	17.7
3	468	23	0.47	8	35.1
3	479	11	0.48	4	76.5
3	490	11	0.49	4	76.5
3	511	21	0.51	7	38.6
3	530	19	0.53	6	42.9
5	540	10	0.54	2	145.1
5	543	3	0.54	1	518.2



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

Dynamic Cone Penetrometer Testing

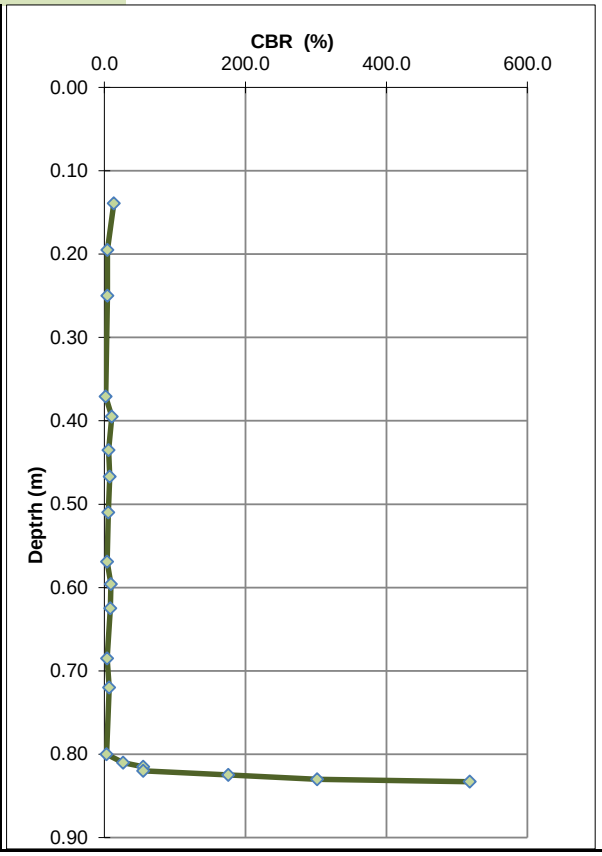
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Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP15

Initial Scale Reading (mm) 120 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	139	19	0.14	19	13.4
1	195	56	0.20	56	4.3
1	250	55	0.25	55	4.4
1	371	121	0.37	121	1.9
1	395	24	0.40	24	10.5
1	435	40	0.44	40	6.1
1	467	32	0.47	32	7.7
1	510	43	0.51	43	5.7
1	569	59	0.57	59	4.1
1	596	27	0.60	27	9.3
1	625	29	0.63	29	8.6
1	685	60	0.69	60	4.0
1	720	35	0.72	35	7.0
1	800	80	0.80	80	2.9
1	810	10	0.81	10	26.5
1	815	5	0.82	5	55.1
1	820	5	0.82	5	55.1
3	825	5	0.83	2	176.0
5	830	5	0.83	1	302.0
5	833	3	0.83	1	518.2



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

Dynamic Cone Penetrometer Testing

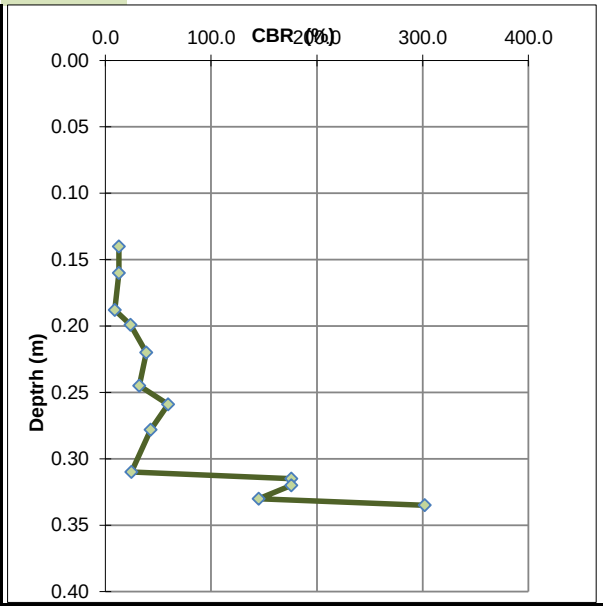
terrafirma

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP16

Initial Scale Reading (mm) 120 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	140	20	0.14	20	12.7
1	160	20	0.16	20	12.7
1	188	28	0.19	28	8.9
1	199	11	0.20	11	23.9
3	220	21	0.22	7	38.6
3	245	25	0.25	8	32.1
3	259	14	0.26	5	59.3
3	278	19	0.28	6	42.9
3	310	32	0.31	11	24.7
3	315	5	0.32	2	176.0
3	320	5	0.32	2	176.0
5	330	10	0.33	2	145.1
5	335	5	0.34	1	302.0



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

Dynamic Cone Penetrometer Testing

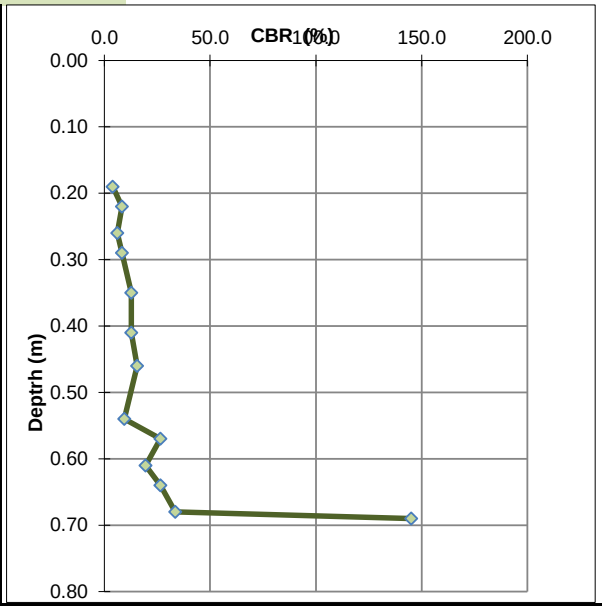
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Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP17

Initial Scale Reading (mm) 130 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	190	60	0.19	60	4.0
1	220	30	0.22	30	8.3
1	260	40	0.26	40	6.1
1	290	30	0.29	30	8.3
3	350	60	0.35	20	12.7
3	410	60	0.41	20	12.7
3	460	50	0.46	17	15.4
3	540	80	0.54	27	9.4
3	570	30	0.57	10	26.5
3	610	40	0.61	13	19.5
3	640	30	0.64	10	26.5
5	680	40	0.68	8	33.5
5	690	10	0.69	2	145.1



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

Dynamic Cone Penetrometer Testing

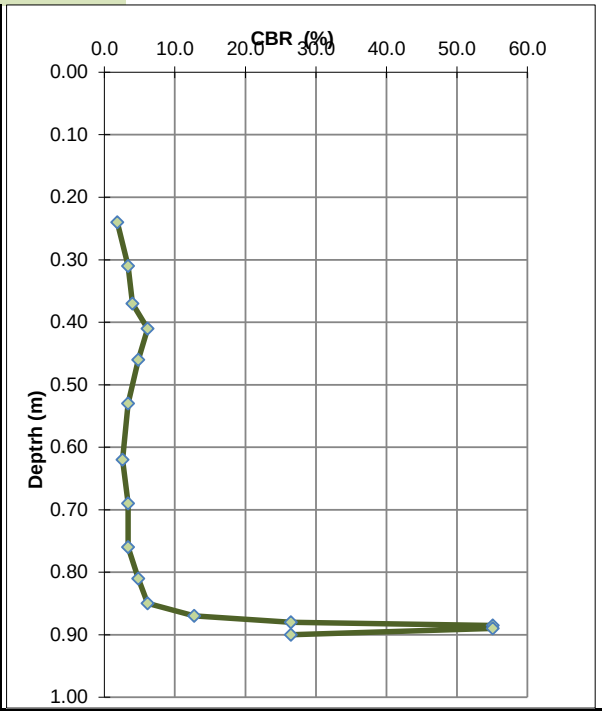
terrafirma

Client: Hale Construction Limited
Site Name: Phase 5 Crymlyn Road
Project Number: 16595
Date: 15/04/2021

TP18

Initial Scale Reading (mm) 115 Datum bgl (mm) 0

no. of blows	scale reading (mm)	penetration increment (mm)	depth bgl (m)	DCP (mm/blow)	CBR (%)
1	240	125	0.24	125	1.8
1	310	70	0.31	70	3.4
1	370	60	0.37	60	4.0
1	410	40	0.41	40	6.1
1	460	50	0.46	50	4.8
1	530	70	0.53	70	3.4
1	620	90	0.62	90	2.6
1	690	70	0.69	70	3.4
1	760	70	0.76	70	3.4
1	810	50	0.81	50	4.8
1	850	40	0.85	40	6.1
1	870	20	0.87	20	12.7
1	880	10	0.88	10	26.5
1	885	5	0.89	5	55.1
1	890	5	0.89	5	55.1
1	900	10	0.90	10	26.5



REMARKS:

Test carried out in accordance with operating instructions for the dynamic cone penetrometer Model A2465 by CNS Farnell Ltd.

CBR correlation based on the relationship Log10 (CBR) = 2.48 - 1.057 * Log10 (mm/blow) developed by TRL taken from The Highways Agency Interim Advice Note 73/06 - Design Guidance for Road Pavement Foundations (2009)

ANNEX H
Laboratory Soil Chemical Test Results

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Amended Report

Report No.:	21-11802-2		
Initial Date of Issue:	20-Apr-2021	**Date of Re-Issue:**	10-May-2021
Client	Terra Firma (Wales) Ltd		
Client Address:	5 Deryn Court Wharfedale Road Pentwyn Cardiff CF23 7HA		
Contact(s):	michael@terrafirmawales.co.uk		
Project	Skewen		
Quotation No.:	Q20-21666	**Date Received:**	14-Apr-2021
Order No.:	16595-MW	**Date Instructed:**	14-Apr-2021
No. of Samples:	17		
Turnaround (Wkdays):	19	**Results Due:**	11-May-2021
Date Approved:	10-May-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: Skewen

Client: Terra Firma (Wales) Ltd		**Chemtest Job No.:**			21-11802	21-11802	21-11802	21-11802	21-11802	21-11802	21-11802	21-11802	21-11802
Quotation No.: Q20-21666		**Chemtest Sample ID.:**			1178539	1178540	1178541	1178542	1178543	1178544	1178545	1178546	1178547
		Client Sample ID.:			TP01	TP01	TP03	TP04	TP05	TP07	TP08	TP09	TP10
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.1	0.5	0.1	0.3	0.1	0.1	0.1	0.1	0.4
		Date Sampled:			13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021
		Time Sampled:			12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Moisture	N	2030	%	0.020	19	18	21	14	13	24	23	22	18
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones and Roots	Stones	Roots	Stones and Roots	Stones	Stones and Roots	Roots	Stones and Roots	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	6.9	7.3	7.1	6.7	7.0	6.7	7.0	6.9	6.5
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	0.49	0.44	0.83
Sulphate (2:1 Water Soluble) as SO4	M	2120	mg/l	10	15	14		12			16		
Total Sulphur	M	2175	%	0.010	0.046	0.023		0.028			0.062		
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.70	0.80	0.50
Sulphate (Acid Soluble)	M	2430	%	0.010	0.048	0.018	0.036	0.019	0.033	0.046	0.059	0.045	0.023
Arsenic	M	2450	mg/kg	1.0	66	13	71	28	19	72	50	69	22
Cadmium	M	2450	mg/kg	0.10	5.2	0.41	6.3	2.4	1.6	4.3	3.2	4.0	1.9
Chromium	M	2450	mg/kg	1.0	14	13	16	14	15	16	12	14	16
Mercury Low Level	M	2450	mg/kg	0.05	0.23	0.08	0.24	0.10	0.09	0.15	0.16	0.15	0.09
Copper	M	2450	mg/kg	0.50	120	18	140	58	38	120	87	130	44
Nickel	M	2450	mg/kg	0.50	36	13	36	18	20	32	24	27	22
Lead	M	2450	mg/kg	0.50	130	17	170	33	34	130	100	110	35
Selenium	M	2450	mg/kg	0.20	1.2	0.77	1.3	0.88	0.83	1.1	0.95	1.3	0.91
Zinc	M	2450	mg/kg	0.50	380	59	430	250	180	340	230	270	170
Chromium (Trivalent)	N	2490	mg/kg	1.0	14	13	16	14	15	16	12	14	16
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0							
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0							
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0							
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0							
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0							
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0							
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	23	< 1.0							
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0							
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	23	< 5.0							
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0							
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0							
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0							
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0							
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0							
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	32	< 1.0							
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	110	< 1.0							
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0							

Results - Soil

Project: Skewen

Client: Terra Firma (Wales) Ltd			**Chemtest Job No.:**		21-11802	21-11802	21-11802	21-11802	21-11802	21-11802	21-11802	21-11802	21-11802
Quotation No.: Q20-21666			**Chemtest Sample ID.:**		1178539	1178540	1178541	1178542	1178543	1178544	1178545	1178546	1178547
			Client Sample ID.:		TP01	TP01	TP03	TP04	TP05	TP07	TP08	TP09	TP10
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.1	0.5	0.1	0.3	0.1	0.1	0.1	0.1	0.4
			Date Sampled:		13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021
			Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	140	< 5.0							
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	170	< 10							
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.14	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.14	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.12	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	1.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	1.6	< 0.10	< 0.10	< 0.10	< 0.10	0.41	< 0.10
Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	1.5	< 0.10	< 0.10	< 0.10	< 0.10	0.42	< 0.10
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.42	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.88	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.77	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.78	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	1.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.69	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.57	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2.0	< 2.0	< 2.0	9.9	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total PCBs (7 congeners)	N	2815	mg/kg	0.0010	< 0.0010	< 0.0010							
Total Phenols	M	2920	mg/kg	0.10	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Organic Matter BS1377	N	2930	%	0.10	1.8	1.1	2.5	1.2	0.70	2.3	3.3	2.4	1.8

Results - Soil

Project: Skewen

Client: Terra Firma (Wales) Ltd		**Chemtest Job No.:**			21-11802	21-11802	21-11802	21-11802	21-11802	21-11802	21-11802	21-11802
Quotation No.: Q20-21666		**Chemtest Sample ID.:**			1178548	1178549	1178550	1178551	1178552	1178553	1178554	1178555
		Client Sample ID.:			TP11	TP12	TP13	TP14	TP15	TP16	TP17	TP18
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.5	0.1	0.5	0.4	0.4	0.1	0.1	0.4
		Date Sampled:			13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021
		Time Sampled:			12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Moisture	N	2030	%	0.020	20	24	17	19	17	20	20	18
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Roots and Stones	Stones and Roots	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	6.8	6.8	7.3	6.7	7.0	7.6	7.0	6.7
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.61	1.2	0.61	0.63	< 0.40	1.1	0.94	0.68
Sulphate (2:1 Water Soluble) as SO4	M	2120	mg/l	10	< 10		< 10	< 10		< 10		< 10
Total Sulphur	M	2175	%	0.010	0.021		0.024	0.022		0.054		0.024
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50	0.60
Sulphate (Acid Soluble)	M	2430	%	0.010	0.017	0.054	0.011	0.021	0.032	0.065	0.038	0.023
Arsenic	M	2450	mg/kg	1.0	10	88	12	10	29	63	51	26
Cadmium	M	2450	mg/kg	0.10	0.40	5.5	0.38	0.62	2.2	3.6	3.0	1.7
Chromium	M	2450	mg/kg	1.0	15	22	15	11	11	16	14	15
Mercury Low Level	M	2450	mg/kg	0.05	0.06	0.21	0.06	0.07	0.10	0.13	0.11	0.09
Copper	M	2450	mg/kg	0.50	15	160	20	16	53	110	83	46
Nickel	M	2450	mg/kg	0.50	19	39	21	15	19	31	24	24
Lead	M	2450	mg/kg	0.50	15	170	17	14	31	130	86	39
Selenium	M	2450	mg/kg	0.20	0.34	1.5	0.28	0.63	1.2	1.1	1.2	1.1
Zinc	M	2450	mg/kg	0.50	87	410	67	110	160	330	250	160
Chromium (Trivalent)	N	2490	mg/kg	1.0	15	22	15	11	11	16	14	15
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0			< 1.0					
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0			< 1.0					
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0			< 1.0					
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0			< 1.0					
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0			< 1.0					
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0			< 1.0					
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0			< 1.0					
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0			< 1.0					
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0			< 5.0					
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0			< 1.0					
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0			< 1.0					
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0			< 1.0					
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0			< 1.0					
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0			< 1.0					
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0			< 1.0					
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0			< 1.0					
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0			< 1.0					

Results - Soil

Project: Skewen

Client: Terra Firma (Wales) Ltd			**Chemtest Job No.:**		21-11802	21-11802	21-11802	21-11802	21-11802	21-11802	21-11802	21-11802
Quotation No.: Q20-21666			**Chemtest Sample ID.:**		1178548	1178549	1178550	1178551	1178552	1178553	1178554	1178555
			Client Sample ID.:		TP11	TP12	TP13	TP14	TP15	TP16	TP17	TP18
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.5	0.1	0.5	0.4	0.4	0.1	0.1	0.4
			Date Sampled:		13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021	13-Apr-2021
			Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0			< 5.0					
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0			< 10					
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.10	< 0.10	0.41	< 0.10	< 0.10	< 0.10	0.27	< 0.10	< 0.10
Pyrene	M	2700	mg/kg	0.10	< 0.10	0.55	< 0.10	< 0.10	< 0.10	0.27	< 0.10	< 0.10
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total PCBs (7 congeners)	N	2815	mg/kg	0.0010			< 0.0010					
Total Phenols	M	2920	mg/kg	0.10	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Organic Matter BS1377	N	2930	%	0.10	0.50	1.6	0.80	1.5	1.6	3.5	2.8	2.0

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
2930	Organic Matter	Organic Matter	Acid Dichromate digestion/Titration

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Amended Report

Report No.:	21-12212-2		
Initial Date of Issue:	22-Apr-2021	**Date of Re-Issue:**	10-May-2021
Client	Terra Firma (Wales) Ltd		
Client Address:	5 Deryn Court Wharfedale Road Pentwyn Cardiff CF23 7HA		
Contact(s):	michael@terrafirmawales.co.uk		
Project	Skewen		
Quotation No.:	Q20-21666	**Date Received:**	16-Apr-2021
Order No.:	16595-MW	**Date Instructed:**	16-Apr-2021
No. of Samples:	2		
Turnaround (Wkdays):	17	**Results Due:**	11-May-2021
Date Approved:	10-May-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: Skewen

Client: Terra Firma (Wales) Ltd			**Chemtest Job No.:**		21-12212	21-12212
Quotation No.: Q20-21666			**Chemtest Sample ID.:**		1180559	1180560
			Client Sample ID.:		WS11	WS15
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.2	0.4
			Date Sampled:		14-Apr-2021	14-Apr-2021
			Time Sampled:		12:00	12:00
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Moisture	N	2030	%	0.020	19	16
Soil Colour	N	2040		N/A	Brown	Brown
Other Material	N	2040		N/A	Roots and Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand
pH	M	2010		4.0	7.5	7.7
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50
Sulphate (Acid Soluble)	M	2430	%	0.010	0.037	< 0.010
Arsenic	M	2450	mg/kg	1.0	80	24
Cadmium	M	2450	mg/kg	0.10	5.6	0.77
Chromium	M	2450	mg/kg	1.0	28	29
Mercury Low Level	M	2450	mg/kg	0.05	0.23	0.09
Copper	M	2450	mg/kg	0.50	170	44
Nickel	M	2450	mg/kg	0.50	47	30
Lead	M	2450	mg/kg	0.50	190	33
Selenium	M	2450	mg/kg	0.20	1.4	0.95
Zinc	M	2450	mg/kg	0.50	570	130
Chromium (Trivalent)	N	2490	mg/kg	1.0	28	29
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10

Results - Soil

Project: Skewen

Client: Terra Firma (Wales) Ltd		**Chemtest Job No.:**			21-12212	21-12212
Quotation No.: Q20-21666		**Chemtest Sample ID.:**			1180559	1180560
			Client Sample ID.:		WS11	WS15
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.2	0.4
			Date Sampled:		14-Apr-2021	14-Apr-2021
			Time Sampled:		12:00	12:00
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Fluorene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.10	0.55	< 0.10
Pyrene	M	2700	mg/kg	0.10	0.63	< 0.10
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Chrysene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2.0	< 2.0	< 2.0
Total PCBs (7 congeners)	N	2815	mg/kg	0.0010	< 0.0010	< 0.0010
Total Phenols	M	2920	mg/kg	0.10	< 0.30	< 0.30
Organic Matter BS1377	N	2930	%	0.10	1.6	1.1

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
2930	Organic Matter	Organic Matter	Acid Dichromate digestion/Titration

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

ANNEX I
Geotechnical Test Results

Laboratory Report

2788

GEO Site & Testing Services Ltd

Contract Number: 53519

Client Ref:

Client PO: **16595-MW**

Report Date: **29-04-2021**

Client **Terrafirma Wales Ltd**
5 Deryn Court
Wharfedale Road
Pentwyn
Cardiff
CF23 7HB

Contract Title: **Skewen**

For the attention of: **Michael Watkins**

Date Received: **16-04-2021**

Date Completed: **29-04-2021**

Test Description	Qty
Moisture Content BS 1377:1990 - Part 2 : 3.2 - * UKAS	4
4 Point Liquid & Plastic Limit BS 1377:1990 - Part 2 : 4.3 & 5.3 - * UKAS	4
BRE Reduced Suite **includes pH, water & acid soluble sulphate and total sulphur** Sub-contracted Test - @ Non Accredited Test	6
Samples Received - @ Non Accredited Test	10
Disposal of samples for job	1

Notes: **Observations and Interpretations are outside the UKAS Accreditation**
*** - denotes test included in laboratory scope of accreditation**
- denotes test carried out by approved contractor
@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved Signatories:
Emma Sharp (Office Manager) - Paul Evans (Director) - Richard John (Quality/Technical Manager)
Shaun Jones (Laboratory manager) - Wayne Honey (Administrative/Quality Assistant)

GEO Site & Testing Services Ltd
Unit 3-4, Heol Aur, Dafen Ind Estate, Dafen, Llanelli, Carmarthenshire SA14 8QN
Tel: 01554 784040 Fax: 01554 784041 info@gstl.co.uk gstl.co.uk

GSTL	NATURAL MOISTURE, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX (BS 1377 : Part 2 : 1990 Method 5)	
Contract Number	53519	
Site Name	Skewen	
Date Tested	28/04/2021	
	DESCRIPTIONS	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Descriptions
TP03			0.80	-		Brown fine to medium gravelly sandy silty CLAY
TP12			0.80	-		Brown fine to medium gravelly sandy silty CLAY
WS11			0.90	-		Brown fine to medium gravelly sandy silty CLAY
WS15			0.70	-		Brown fine to medium gravelly sandy silty CLAY
				-		
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Operators	Checked	29/04/2021	Richard John (Advanced Testing Manager)
Darren Bourne	Approved	29/04/2021	Paul Evans (Quality/Technical Manager)

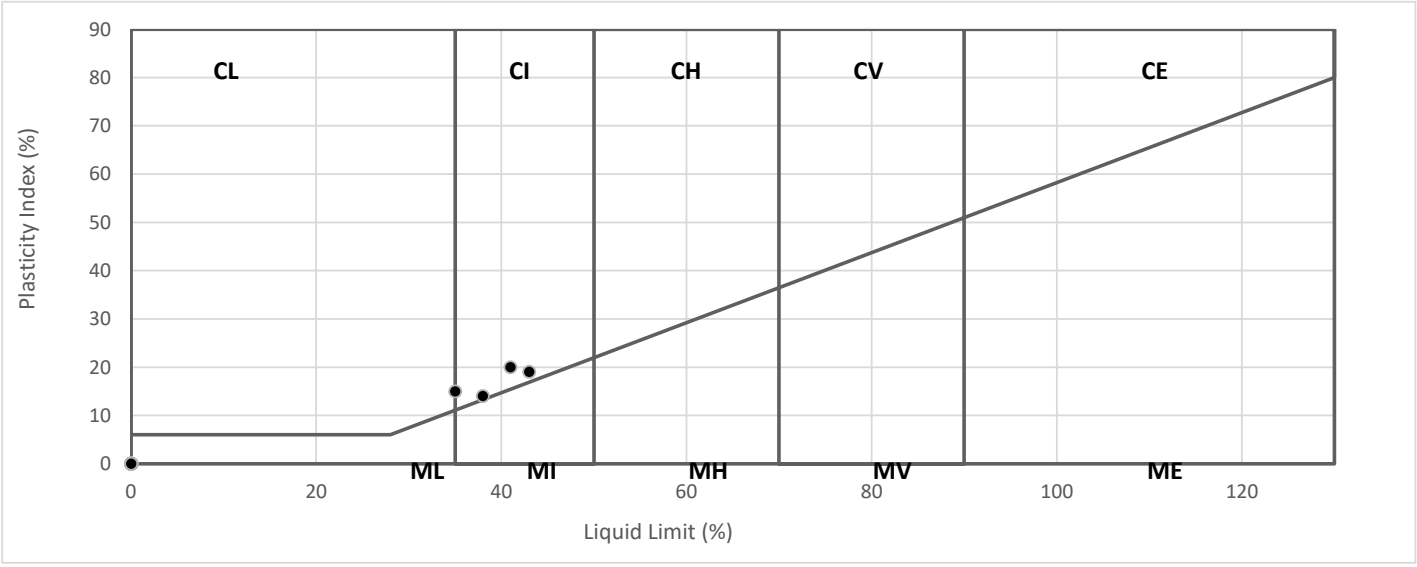
UKAS TESTING 2788

GSTL	NATURAL MOISTURE, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX (BS 1377 : Part 2 : 1990 Method 5)	
Contract Number	53519	
Project Location	Skewen	
Date Tested	28/04/2021	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity index %	Passing 0.425mm %	Remarks
TP03			0.80	-		19	41	21	20	90	CI Intermediate Plasticity
TP12			0.80	-		21	43	24	19	86	CI Intermediate Plasticity
WS11			0.90	-		21	38	24	14	90	CI Intermediate Plasticity
WS15			0.70	-		17	35	20	15	92	CL/I Low/Inter. Plasticity
				-							
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Symbols: NP : Non Plastic # : Liquid Limit and Plastic Limit Wet Sieved

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION
BS 5930:1999+A2:2010



Operators	Checked	29/04/2021	Richard John (Advanced Testing Manager)
Darren Bourne	Approved	29/04/2021	Paul Evans (Quality/Technical Manager)

UKAS TESTING
2788

Certificate of Analysis

Certificate Number	21-08407	*Issued:*	28-Apr-21

Client GEO Site and Testing Services Ltd
Unit 4
Heol Aur
Dafen Ind Est
Dafen
Carmarthenshire
SA14 8QN

Our Reference	21-08407
Client Reference	16595-mw
Order No	(not supplied)
Contract Title	Skewen
Description	6 Soil samples.
Date Received	22-Apr-21
Date Started	22-Apr-21
Date Completed	28-Apr-21
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Adam Fenwick
Contracts Manager

UKAS TESTING
2139

Summary of Chemical Analysis
Soil Samples

Our Ref 21-08407
Client Ref 16595-mw
Contract Title Skewen

			Lab No	1836032	1836033	1836034	1836035	1836036	1836037
			.Sample ID	TP03	TP05	TP08	TP13	TP15	TP16
			Depth	0.80	1.00	1.50	1.50	1.20	0.65
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	n/s	n/s	n/s	n/s	n/s	n/s
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Inorganics									
pH	DETSC 2008#		pH	6.5	6.0	6.4	6.2	6.3	6.1
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	19	< 10	13	12	11	15
Sulphur as S, Total	DETSC 2320	0.01	%	0.01	0.01	0.01	0.01	0.01	0.02
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.03	0.03	0.03	0.03	0.03	0.04

Key: # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 21-08407
Client Ref 16595-mw
Contract Skewen

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1836032	TP03 0.80 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1836033	TP05 1.00 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1836034	TP08 1.50 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1836035	TP13 1.50 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1836036	TP15 1.20 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1836037	TP16 0.65 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	

Key: P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

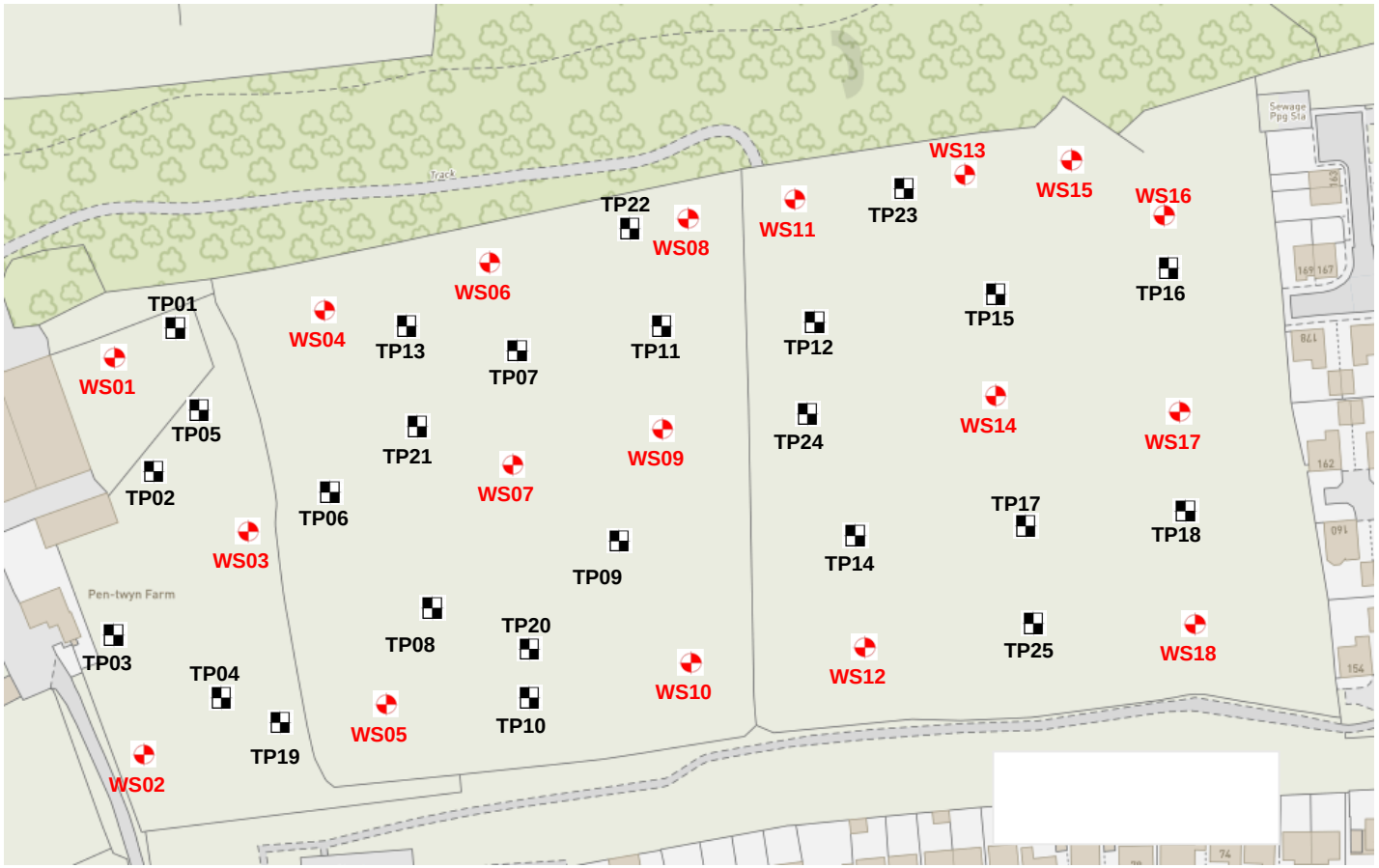
End of Report

ANNEX J
Ground Gas Monitoring Results

In-situ Gas Monitoring Results – Phase 5, Crymlyn Road, Skewen

Gas monitoring round 1 5/5/2021 **Barometric Pressure:** 999mb						
Weather: Dry and mild						
Gas	**WS02**	**WS04**	**WS08**	**W809**	**WS15**	**WS17**
CH_4 (%)	0.3	0.3	0.3	0.6	0.3	0.4
CO_2 (%)	3.0	2.9	1.6	1.2	2.4	1.4
O_2 (%)	19.5	19.9	20.3	20.4	19.1	19.4
CO (ppm)	0ppm	0ppm	0ppm	0ppm	0ppm	0ppm
H_2S (ppm)	0ppm	0ppm	0ppm	0ppm	0ppm	0ppm
Flow (l/hr)	0.0	0.0	0.0	0.0	0.0	0.0
Depth to Groundwater	Dry	Dry	Dry	Dry	Dry	Dry

DRAWINGS



terrafirma

Job Number:

16595

Job Title:

Phase 5, Crymlyn Road, Skewen

Drawing Title:

Exploratory Hole Layout

Drawing Number:

01

Scale:

Not To Scale

Legend:

Trial Pit Location

Windowless Sampler Borehole Location

North



Terra Firma (Wales) Ltd. 5 Deryn Court, Wharfedale Road, Pentwyn, Cardiff CF23 7HA
Tel: 029 2073 5354 **Fax:** 029 2073 5433 **Email:** info@terrafirmawales.co.uk **www.terrafirmawales.co.uk**