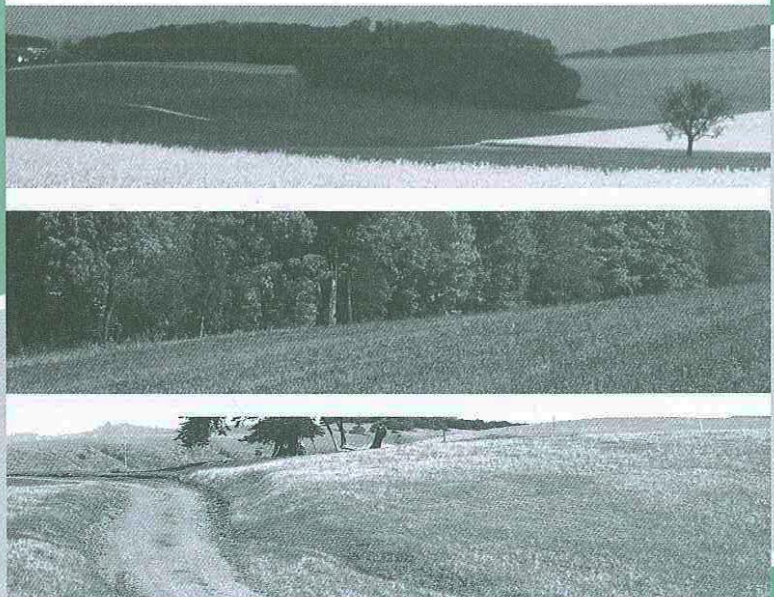


**Geotechnical and Geo-Environmental
Report:**
Proposed Residential Development
Llys Wern
Neath

PREPARED FOR:
Tai Tarian Ltd

August 2018

Job No: 14795



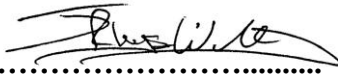

terrafirma

REPORT TITLE : **Geotechnical and Geo-environmental Report:**
Proposed Residential Development, Llys Wern,
Neath

REPORT STATUS : **Final**

JOB NUMBER : **14795**

DATE : **August 2018**

PREPARED BY : 
.....
Mr James Rhys-Williams

REVIEWED BY : 
.....
Mr Mathew Lake

APPROVED BY : 
.....
Dr Gwyn C Lake

Executive Summary

Site Location and Proposed Development	The development site is approximately triangular in shape and locates to the west of Llys Wern. The site centres on an approximate National Grid Reference of 274370 198620, occupying a plan area of approximately 0.30 Hectares. Tai Tarian Ltd is proposing the development of three residential houses.
Site History	Since the earliest map edition the site has remained undeveloped field land or public open space. By 1965 historical map evidence shows the development of residential housing to the east and south of the site.
Geology	The 1:10560 scale geological map of the area (SS79NW) was consulted for geology underlying the site. The site is shown to be underlain by the South Wales Upper Coal Measures Formation which is Carboniferous in age. The rocks comprise mudstone, sandstone and siltstone with seatearth and coal. Superficial deposits are recorded as Till with an anticipated thickness of 1.00m. Made ground associated with the development of adjacent structure is expected at the site.
Radon	Basic radon protective measures are required for new developments on the investigation site.
Coal Mining Risk Assessment	The overall risk to the surface stability of the site from possible recorded and unrecorded workings is considered to be Low.
Ground Conditions	Made ground comprising firm locally stiff friable dark brown clayey silt or silty clay was seen to a maximum depth of 1.00 and overlies firm orangish brown clay and medium dense sand.
Laboratory Chemical Testing	Arsenic was recorded to exceed guideline values in all four samples taken. Asbestos in the form of Chrysotile was identified in one sample from trial pit TP01 at 0.30m depth.
Foundation Solution	It is recommended that mass concrete strip or trench fill foundations be used; founded within the firm orangish brown CLAY at a depth of approximately 0.30m to 1.00m. An allowable bearing pressure of 100kN/m ² may be used. All 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. In order to prevent damage from the shrinking or swelling of the soil, and the effects of frost heave/and or thermal shrinkage foundations/edge beams should be taken down to a minimum depth of 900mm when founding in clay. All foundation formations should be inspected by a suitably qualified Engineer before being concreted.

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Drawings

Drawing 01 Proposed Site Layout

SECTION 1 Introduction and Proposed Development

1.1 Introduction

Tai Tarian Ltd is proposing the development of three residential houses at Llys Wern, Neath.

Terra Firma (Wales) Limited have been commissioned by Roger Casey Associates Ltd on behalf of Tai Tarian Ltd to undertake a geo-environmental assessment and geotechnical investigation of the site.

Roger Casey Associates Ltd is the Consulting Structural and Civil Engineers for the project.

The main objectives of the geo-environmental assessment programme were to:

- Investigate the potential environmental liabilities at the site associated with any soil contamination
- Provide a summary of the 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 were to:

- Determine the type, strength and bearing characteristics of the shallow superficial and underlying solid geology
- Provide engineering foundation and floor slab recommendations for the development
- Determine the risk, if any from past shallow underground mining
- Provide recommendations with regard to 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 environmental data from selected locations.

1.2 Limitations and Exceptions of Investigation

Tai Tarian Ltd has requested that a Geo-environmental Site Assessment (GSA) and Geotechnical Investigation (GI) be performed in order to determine if contamination is present beneath the site and to determine an appropriate foundation and floor slab solution for the proposed development.

The GSA and GI were conducted and this report has been prepared for the sole internal reliance of Tai Tarian Ltd and its 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 geo-environmental 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.

SECTION 2 Review of Existing Data

2.1 Physical Setting and Current Site Use

The development site is approximately triangular in shape and locates to the west of Llys Wern. The site centres on an approximate National Grid Reference of 274370 198620, occupying a plan area of approximately 0.30 Hectares.

The site is currently designated as public open space surrounded to the south and east by residential housing. A mature hedgerow delineates the sites north-western boundary beyond which is a community centre and public playing field.

The site elevation is between 40 and 45m AOD and generally slopes down towards the south.

The site location can be seen on **Figure 2.1** along with the proposed site layout on **Drawing 01**.



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 below. Distances are approximate, and any changes in-between map editions may not be recorded

Table 2.1 Historical Development from Map Information		
Map Edition and Scale	Key Features on Site	Key Features off Site
1876 1:2500	The site is located within field land.	Road orientated NW-SE adjacent to SW boundary. Stream adjacent to southern corner and flows in NE to E direction. Old Shaft 129m SE
1918 1:2500	The site remains unchanged.	The surrounding area remains unchanged.
1940 1:2500	The site remains unchanged.	Road to the SW now known as Dwr-y-felin Road.
1952 1:10560	The site remains unchanged.	The surrounding area remains unchanged.
1965 1:10560	The site remains unchanged.	Residential housing including Llys Wern has been developed to the east and south
1967 1:2500	A footpath crosses the site from Llys Wern to Dwr-Y-Felin Road. A stream is located along the sites NW boundary before it sinks 35m before Dwr-Y-Felin Road. An Issue is located to the southern corner of the site and is shown to drain to the SW.	The surrounding area remains unchanged.
1989 1:1250	The site remains unchanged.	The surrounding area remains unchanged.
1993 1:1250	The site remains unchanged.	The surrounding area remains unchanged.
1994 1:1250	The site remains unchanged.	Additional residential housing has been developed to the SW.
2018 1:10000	The site remains unchanged.	A community Centre has been developed 60m NW

2.3 Geological Setting

2.3.1 Geology

The 1:10560 scale geological map of the area (SS79NW) was consulted for geology underlying the site. The site is shown to be underlain by the South Wales Upper Coal Measures Formation which is Carboniferous in age. The rocks comprise mudstone, sandstone and siltstone with seatearth and coal.

Bedrock is shown to dip between 4-10° to the north in the local area.

The Swansea Four Feet coal seam outcrops 380m south.

Superficial deposits are recorded as Till with an anticipated thickness of 1.00m.

Made ground associated with the development of adjacent structure is expected at the site.

2.3.2 Radon

The Envirocheck Report (**Annex A**) details that the site is in an intermediate probability radon area, as between 3 and 5% of homes are estimated to be at or above the action level.

Basic radon protective measures are required for new developments on the investigation site.

2.3.3 Coal Mining

The Coal Authority Report states that the property is in a surface area that could be affected by underground mining in three coal seams at 40 to 130m depth and last worked in 1923.

The Report states there are no known mine entries within 20m of the site.

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 at the site.

The Report states that the Coal Authority has not received a damage notice or claim for the property, or any property within 50m, for the affects of mining subsidence since 31st October 1994.

The Coal Authority Report is presented in **Annex B**. This report also highlights the site boundary.

2.3.4 Natural Hazards

The underlying geology is not prone to dissolution and the risk of natural cavities in the bedrock is considered negligible.

It is considered that no other significant natural hazards present a risk to the proposed development.

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 and Hydrology

The Envirocheck Report records the nearest surface water feature to locate on site, running adjacent to and parallel with sites north-western boundary. This feature comprises an inland river within the Neath River catchment.

Generally the topography of the site slopes down towards the south.

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 bedrock deposits beneath the site have an aquifer designation of 'Secondary A'. These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. Superficial deposits are designated as unproductive strata.

2.4.2 Groundwater

The Envirocheck Report does not place the site within a groundwater source protection zone.

There is no recorded groundwater abstraction point within 250m of the site.

2.4.3 Flooding

The Envirocheck Report records the site is not at risk from extreme flooding from rivers or sea.

BGS Flooding susceptibility maps indicate the site to have potential for groundwater flooding of property situated below ground level.

2.4.4 Waste

There is no recorded historical or currently active landfill site within a 250m radius of the site.

There are no licensed waste management facilities or waste transfer sites within 250m of the site.

2.4.5 Pollution

The Envirocheck Reports records one pollution incident to have occurred to controlled waters within 250m radius of the site, located 15m northeast. The event occurred in 1994 and was recorded as a category three minor incident.

2.4.6 Sensitive Land Use

The Envirocheck Report details the site is not located within a sensitive land use area.

2.4.7 Estimated Soil Chemistry

The BGS have published estimated soil concentrations for a number of common contaminants, i.e. arsenic, cadmium, chromium, lead and nickel. All of the given determinants have anticipated concentrations on the site that are below the recognised trigger levels for a residential with plant uptake scenario.

2.4.8 Infilled Land

The Envirocheck Report records no potentially infilled land feature upon the site.

2.4.9 BGS Recorded Mineral Sites

An underground deep coal mine known as Bryn-Teg is recorded to have previously operated 120m south of the site. The geological map records the Swansea Four Feet to subcrop within the mine at a depth of 36m.

SECTION 3 Preliminary Human Health and Environmental Risk Assessment

3.1 General

The contaminated land regime is set out in Part IIA 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 IIA was introduced to achieve two aims:

- (1) The identification of contaminated land
- (2) The remediation of contaminated land that poses an unacceptable risk to human health and/or the environment

Under Part IIA 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."

For land to be classified as 'Contaminated Land' there must be a 'pollutant linkage'.

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 Preliminary Site Conceptual Model

The preceding sections enable a preliminary conceptual model of the site to be drawn up, to illustrate the likely ground conditions beneath the site together with a preliminary assessment of the nature of any underlying aquifers and groundwater movement. The preliminary site conceptual model is used as a model for the design and implementation of the site investigation, whereby areas of potential contamination can be targeted as well as investigating the site as a whole.

3.3 Potential Sources of Contamination and Gas

The potential contamination beneath the site, whether in the matrix of soil or groundwater is related to the sites past use.

Since the earliest map edition the site has remained undeveloped field land or public open space. By 1965 historical map evidence shows the development of residential housing to the east and south of the site. Given the proximity to the site of the adjacent structures made ground soils related to their construction may be present. Made ground soils may including waste building products or their by-products such as sulphates and asbestos containing materials. Other common determinants to consider include metals and domestic fuels.

Basic radon protection measures are required for the proposed development.

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

3.4 Potential Receptors and Pollution Pathways

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

Construction workers will be excavating in soils and will be exposed via dermal contact with soils and dust, ingestion of soil dust and inhalation of soil dust and asbestos fibres, if present.

A residential end use is proposed. Once developed, future site users (residents and visitors) will potentially be at risk from contaminated soils through the same pathways as well as through consumption of site grown produce and potable drinking water.

Radon gas presents a risk to site end users through inhalation.

Neighbouring site users and passers-by may potentially be exposed to soil dust and inhalation of potential asbestos fibres.

If contamination is identified it may be leachable, enabling it to mobilise through perched groundwater within site soils and impact on deeper groundwater or surface water.

A Preliminary Human Health and Environmental Risk Assessment summarises the above and is detailed in the **Table 3.1**.

3.5 Preliminary Human Health and Environmental Risk Assessment

Table 3.1 Preliminary Qualitative Human Health and Environmental Risk Assessment			
Potential Source	Potential Pathway	Potential Target	Preliminary Risk Assessment
Human Health			
Site Soil	Dermal contact with soil, ingestion of soil/soil dust, inhalation of soil dust/asbestos fibres	Construction workers	Low Risk COSHH assessment and good level of PPE/ hygiene by site workers/ staff; dust suppression measures if required. Potential made ground soils including asbestos
Site Soil	Dermal contact with soil, ingestion of soil/soil dust, inhalation of soil dust/asbestos fibres	Passers by/neighbouring site users	Low Risk Potential made ground soils including asbestos
Site Soil	Dermal contact with soil, ingestion of soil/soil dust or site grown vegetables, inhalation of soil dust/asbestos fibres	Site End Users – Residents and visitors.	Low Risk Potential made ground soils including asbestos
Radon Gas from underlying bedrock	Migration into indoor air	Site End Users – Residents and visitors.	Low Risk Basic radon protection measures required
Landfill gas	Migration through superficial deposits and bedrock and accumulation indoors	Site End Users – Residents and visitors.	No Risk Identified No source identified
Ground gas	Direct from any made ground/buried organic matter on site and accumulation indoors	Site End Users – Residents and visitors.	Low Risk No source identified
Vapours	Migration into indoor air	Site End Users – Residents and visitors.	Low Risk No source identified
Site Soils	Permeation of drinking water pipes	Site End Users – Residents and visitors.	Low Risk Potential made ground soils
Aquatic Environment			
Site Soils	Surface runoff and leaching of contamination into the perched groundwater	Perched groundwater beneath the site	Low Risk Potential made ground soils
Site Soils	Groundwater transport	Nearest surface water feature – On site River	Low Risk Potential made ground soils
Site Soils	Groundwater transport	Underlying bedrock: Secondary A Aquifer.	Low Risk Potential made ground soils
Vegetation			
Site Soils	Uptake of phytotoxic contaminants	Vegetation	Low Risk Potential made ground soils
Building Materials			
Site Soils	Damage of building materials	New buildings	Low Risk Correct class of concrete to be chosen. Potential made ground soils including sulphates.

SECTION 4 Assessment of the Risk from Past Shallow Coal Mining

4.1 Underground Mining

Based upon the geological map data the stratigraphical sequence within 100m of the ground surface of the site is shown in **Figure 4.1**. A worst case scenario of 4° bedrock dip has been used to establish the geological sequence beneath the site.

Made Ground		
Till	Clay	1.0m
South Wales Upper Coal Measures	Grovesend Beds (Mudstone minor sandstone and thin coals)	49.0m
	SWANSEA FOUR FEET COAL SEAM	50.5m
	Swansea Beds (Sandstone minor mudstone)	100.0m

Figure 4.1 – Geology and Strata Base below Ground Level

The Coal Authority Report states that the property is in a surface area that could be affected by underground mining in three coal seams at 40 to 130m depth and last worked in 1923. Based on the geological map information the coal seam at 40m depth is the Swansea Four Feet. Deeper seams are not considered a risk to the development site.

Working heights in the Swansea Four Feet coal seam are recorded as 1.20m. It is generally accepted that in order to prevent the future collapse of old workings funnelling up to the surface and forming crown holes, that there should be a minimum rock head to void ratio of 10:1. Superficial deposits up to 1.00m thick are expected beneath the site therefore a rock head cover to the Coal Authority recorded workings of 39.00m is expected. The required rock head to satisfy the 10:1 criteria is 12.00m. There will subsequently be sufficient rock head cover above the Swansea Four Feet coal seam to prevent the migration of voids to the surface and the subsequent formation of crown holes.

4.2 Shafts & Adits

The nearest recorded shaft is located 129m southeast and operated prior to 1876 as the Waun-Ceirch Pit.

The Coal Authority Report states there are no known mine entries within 20m of the site.

4.3 Conclusion

The overall risk to the surface stability of the site from possible recorded and unrecorded workings is considered to be Low.

SECTION 5 Field Investigation

5.1 Site Works

A geotechnical and geo-environmental site investigation comprising four mechanically excavated trial pits and two soakaway tests were undertaken on the 10th July 2018.

The fieldwork was supervised by Terra Firma (Wales) Limited, who logged the exploratory holes to the requirements of BS5930:2015. The proposed locations of the exploratory holes were determined by Terra Firma (Wales) Ltd.

The trial pits referenced TP01 to TP07, were formed using a JCB 3CX wheeled excavator with a 0.60m wide bucket.

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

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

On completion all trial pits were backfilled with materials arisings.

Soakaway tests were carried out in trial pits TP01 and TP04 in general accordance with BRE365 (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**.

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

5.2 Exploratory Strategy

It is considered that the number and spacing of exploratory holes was adequate to:

- Investigate the presence, nature and distribution of contamination on site in an efficient but cost effective manner.
- Optimise the chances of finding contamination hot spots of various sizes and orientations.
- Provide good representation of the ground conditions beneath the site.
- Provide sufficient data to determine suitable remedial measures if necessary.

5.3 Ground Conditions

The ground conditions encountered by the exploratory holes can in general be summarised as shown in **Table 5.1**.

Table 5.1 Summary of Typical Ground Conditions		
Depth (m)	Thickness (m)	Stratum
0.00 - 0.30/1.00	0.30/1.00	MADE GROUND comprising firm locally stiff friable dark brown clayey SILT or silty CLAY with fragments of plastic, ceramic, glass, ash brick etc.
0.30/1.00 - 1.70/1.90	1.00/1.60	Firm orangish brown mottled grey or greyish brown slightly sandy to sandy locally slightly gravelly CLAY .
1.70-1.90 - >2.60	-	Medium dense dark brownish grey clayey gravelly fine and medium SAND .

5.4 Water Strikes

Groundwater was not encountered during the investigation works.

5.5 Stability and Obstructions

Trial pits remained stable and vertical during excavation

5.6 Laboratory Chemical Testing

5.6.1 Quality Assurance

During the intrusive investigation, several small disturbed soil samples were collected.

Care was taken to ensure that sampling quality assurance occurred during site works. This included the following measures:

- Soil samples were collected by hand with nitrile gloves.
- Clean gloves were used for each sample.
- Soil samples were stored at a temperature below 4 degrees.
- No head space was left in sample containers.
- Appropriate sample containers were used.
- Samples were submitted for laboratory testing within holding times.

5.6.2 Sampling Regime

The sampling regime was conducted in accordance with BS10175 (2011) in order to satisfy the following criteria:

- Investigate suspected sources of contamination
- Investigate type and concentration of contamination
- Ensure good representation of the site
- Provide data to advise on remedial measures if necessary

Sample locations were selected on a non-targeted basis.

The sample locations and depths are summarised in the following table:

Table 5.2 Sample Locations and Depths		
Sample	Depth (m)	Laboratory Sample Description
TP01	0.3	Brown gravelly, sandy CLAY including odd rootlets (Possible made ground - brick, metal, tile)
TP02	0.5	Dark brown gravelly, sandy CLAY including odd rootlets (Possible made ground - brick)
TP03	0.1	Dark brown gravelly, sandy CLAY including odd rootlets
TP04	0.9	Dark brown gravelly, sandy CLAY including odd rootlets

5.6.3 Soil Laboratory Analysis

During the site works a number of soil samples were taken and despatched to the laboratories of Derwentside Environmental Testing Services for laboratory chemical testing;

Metals and Metalloids

Arsenic
Cadmium
Chromium III
Chromium VI
Copper
Lead
Mercury
Nickel
Selenium
Zinc

In-Organics

Cyanide
Sulphate

Others

pH (acidity)
Asbestos
Asbestos Quantification

Organic Chemicals

Phenols
Polycyclic Aromatic Hydrocarbons (PAH)
Petroleum Hydrocarbons (TPHCWG)

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

5.6.4 Soil Leachate Laboratory Analysis

Substances found to be elevated in soils were further scheduled for leachate laboratory testing of the below listed determinants;

Metals

Arsenic

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

5.7 Soil Property Testing

5.7.1 In-situ Permeability Testing

During the site investigation two trial pits soakaway tests were undertaken in TP01 and TP04 and carried out in accordance with BRE Digest 365 (2016).

The test results are discussed in **Section 8.6** and the calculation sheets may be found in **Annex E**.

5.7.2 Soil Plasticity Testing

During the fieldworks three small disturbed soil samples of in-situ material were taken and despatched to the laboratories of Apex Testing Solutions for plasticity testing.

The tests were undertaken to the appropriate British Standards.

The test results are presented in **Annex G** and discussed in **Section 8.2** of this report.

SECTION 6 Evaluation of Soil Analytical Results

6.1 Soil Assessment Methodology

Comparison of the analytical results has been made with the 2015 Sutable 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). Where S4UL or C4SL values are not available, reference has been made to Soil Guideline Values (SGV) sourced from the now withdrawn Environment Agency Contaminated Land Exposure Assessment (CLEA).

The soil leachate analytical results have been compared with available guidelines published in the Water Framework Directive.

Sulphate results have been compared to British Research Establishment (BRE) guidelines as sulphate levels need only be considered for buried concrete risk assessment only, not human health related.

6.2 Soil Test Results

A summary of the chemical test results which include the regulatory soil guideline values used in a residential setting are given in **Tables 6.1 to 6.3**. The complete results can be found in **Annex F**.

Four samples were tested for a standard suite of metals, inorganics and phenols. The summarised results are shown below in **Table 6.1**.

Table 6.1 Summary of Soil Chemical Test Results - Standard Suite					
Substance	GAC/SGV (mg/kg)	Source	Measured Concentrations of Tested Substances (mg/kg)		Number of Exceedences
			Minimum	Maximum	
Arsenic	37	LQM/CIEH	42	100	4
Cadmium	11	LQM/CIEH	1.4	3.0	0
Chromium III	910	LQM/CIEH	16	22	0
Chromium VI	6	LQM/CIEH	<1.0	<1.0	0
Copper	2400	LQM/CIEH	110	230	0
Lead	200	pC4SL	65	150	0
Mercury (inorganic)	40	LQM/CIEH	0.07	0.17	0
Nickel	180	LQM/CIEH	22	37	0
Selenium	250	LQM/CIEH	0.9	1.5	0
Zinc	3700	LQM/CIEH	170	670	0
Cyanide	8	CLEA	0.1	0.4	0
Phenols	120	LQM/CIEH	<0.3	0.8	0
Sulphate	2400	BRE	400	600	0
Organic Matter (%)	-	-	3.5	8.1	-
pH	-	-	6.3	7.6	-
Total PAH	-	-	0.81	8.2	See Table 6.2

Notes:

- GSC - Generic assessment criteria
- - No available guidelines

Four samples were tested for speciated polycyclic aromatic hydrocarbons. The summarised results are shown below in **Table 6.2**.

Table 6.2 Summary of Soil Chemical Test Results - Speciated Polycyclic Aromatic Hydrocarbons					
Substance	GAC (mg/kg)	Source	Measured Concentrations of Tested Substances (mg/kg)		Number of Exceedences
			Minimum	Maximum	
Naphthalene	2.3	LQM/CIEH	<0.03	0.34	0
Acenaphthylene	170	LQM/CIEH	<0.03	<0.03	0
Acenaphthene	210	LQM/CIEH	<0.03	0.04	0
Fluorene	170	LQM/CIEH	<0.03	<0.03	0
Phenanthrene	95	LQM/CIEH	0.07	0.78	0
Anthracene	2400	LQM/CIEH	<0.03	0.07	0
Fluoranthene	280	LQM/CIEH	0.15	0.97	0
Pyrene	620	LQM/CIEH	0.12	1.60	0
Benzo(a)anthracene	7.2	LQM/CIEH	0.07	0.51	0
Chrysene	15	LQM/CIEH	0.12	0.74	0
Benzo(b)fluoranthene	2.6	LQM/CIEH	0.11	0.73	0
Benzo(k)fluoranthene	77	LQM/CIEH	0.04	0.32	0
Benzo(a)pyrene	2.2	LQM/CIEH	0.05	0.75	0
Indeno(123cd)pyrene	27	LQM/CIEH	0.04	0.45	0
Dibenzo(ah)anthracene	0.24	LQM/CIEH	<0.03	0.15	0
Benzo(ghi)perylene	320	LQM/CIEH	0.04	0.75	0
Total PAH	-	-	0.81	8.2	-

Notes:

- GAC - Generic assessment criteria
- Thresholds based on 1.0% soil organic matter
- - No available guidelines

Four samples were tested for petroleum hydrocarbon. The summarised results are shown below in **Table 6.3**.

Table 6.3 Summary of Soil Chemical Test Results Petroleum Hydrocarbons					
Substance	GAC (mg/kg)	Source	Measured Concentrations of Tested Substances (mg/kg)		Number of Exceedences
			Minimum	Maximum	
<u>Aliphatic</u>					
PH C5 – C6 Ali	42	LQM/CIEH	<0.01	<0.01	0
PH C6 – C8 Ali	100	LQM/CIEH	<0.01	<0.01	0
PH C8 – C10 Ali	27	LQM/CIEH	<0.01	<0.01	0
PH C10 – C12 Ali	130	LQM/CIEH	<1.5	<1.5	0
PH C12 – C16 Ali	1100	LQM/CIEH	<1.2	<1.2	0
PH C16 – C21 Ali	65000*	LQM/CIEH	<1.5	<1.5	0
PH C21 – C35 Ali	65000*	LQM/CIEH	<3.4	<3.4	0
<u>Aromatic</u>					
PH C5 – C7 Arom	70	LQM/CIEH	<0.01	<0.01	0
PH C7 – C8 Arom	130	LQM/CIEH	<0.01	<0.01	0
PH C8 – C10 Arom	34	LQM/CIEH	<0.01	<0.01	0
PH C10 – C12 Arom	74	LQM/CIEH	<0.9	<0.9	0
PH C12 – C16 Arom	140	LQM/CIEH	<0.5	<0.5	0
PH C16 – C21 Arom	260	LQM/CIEH	<0.6	<0.6	0
PH C21 – C35 Arom	1100	LQM/CIEH	<1.4	<1.4	0

Notes:

- GAC - Generic assessment criteria
- 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

6.2.1 Soil Asbestos Screening

All soil samples were scheduled for asbestos screening. Asbestos was identified in one sample from trial pit TP01 at a depth of 0.30m. Microscopic cement fragments of Chrysotile were recorded. The positive sample was subsequently scheduled for asbestos quantification testing. Asbestos quantification recorded a total mass of 0.1% comprising both cement and board fragments.

6.2.2 Leachate Test Results

Substances found to be elevated in soil samples were submitted for leachate testing. The results are summarised below in **Table 6.4**.

Table 6.4 Summary of Leachate Chemical Test Results					
Substance	Threshold (µg/l)	Source	Measured Concentrations of Tested Substances (µg/l)		Number of Exceedences
			Minimum	Maximum	
<u>Metals</u>					
Arsenic	50 ⁽¹⁾	WFD	1.7	3.5	0

Notes:

- WFD - Water Framework Directive
- (1) – Standards for specific pollutants (Freshwater Long Term Mean)

SECTION 7 Quantitative Risk Assessment

7.1 Contaminants of Concern

7.1.1 Contaminants of Concern in Soil

Arsenic was recorded to exceed guideline values in all four samples taken.

Asbestos in the form of Chrysotile was identified in one sample from trial pit TP01 at 0.30m depth.

All other substances tested for were found to be present at concentrations below their respective human health threshold levels for a residential setting with home grown produce.

7.1.2 Gasses of Concern

No significant source of gas was identified during the ground investigation.

Basic radon protective measures are required for new developments on the investigation site.

7.1.3 Leachate of Concern

Soils samples were scheduled for arsenic leachate testing and results compared to the Water Framework Directive threshold. All samples recorded values below the guideline.

7.2 Potential Receptors and Pathways

7.2.1 Human Receptors

Construction workers may be in intimate contact with the site soils and are potentially at risk from exposure to determinants within the made ground through inhalation pathways, dermal contact and ingestion.

Construction workers are also at risk of inhalation of asbestos fibres identified within made ground.

Neighbouring site users and passers-by are similarly potentially at risk of exposure to determinants and asbestos fibres during construction works at the site.

Similarly future site users, residents and visitors, are potentially at risk of determinants through inhalation pathways, dermal contact, ingestion and inhalation of asbestos fibres if site soils are not remediated.

7.2.2 Aquatic Environment

There is not considered to be a risk to the aquatic environment.

7.3 Asbestos Risk Assessment

The chemical testing of the soils on site has identified asbestos to be present in the made ground materials.

Exposure to airborne asbestos fibres is known to cause lung cancer and mesothelioma. Paragraph 4.5 of the Welsh Government guidance document 'Contaminated Land Statutory Guidance - 2012' states that death, life threatening diseases (e.g. cancers), other diseases likely to have serious impacts on health, serious injury, birth defects and the impairment of reproductive functions constitute 'significant harm' to human health.

A potentially significant contaminant linkage has therefore been identified at the site, as summarised in **Table 7.1**.

Table 7.1 Contaminant Linkage for Assessment		
Source	Pathway	Receptors
Cement and board fragments containing Chrysotile asbestos within made ground on site	Inhalation of asbestos fibres	Construction workers, maintenance workers, neighbouring site users and future site users

7.3.1 Risk Assessment Methodology

7.3.1.1 General

A quantitative risk assessment has been carried out for the site in accordance with CIRIA C733 - Asbestos in Soil and Made Ground: A Guide to Understanding and Managing Risks. In the assessment, site investigation data along with published soil to air relationships have been used to calculate airborne fibre concentrations.

Overall excess lifetime cancer risks for a critical human health receptor have been calculated based upon exposure levels calculated using the airborne fibre concentrations.

7.3.1.2 Local Climate

Asbestos fibres within asbestos containing soils (ACS's) are only likely to be released when the soil surface is dry and dusty. The local temperature and rainfall has a significant influence over the period of time soils remain dry and dusty.

The number of days with an average daily rainfall of over 1mm has been obtained for the period of 1981-2010 at the Bute Park, Cardiff climate station. The data shows that the Cardiff area has 148.6 days a year where the average rainfall exceeded 1mm or conversely 216.4 dry days.

7.3.1.3 Calculation of Airborne Respirable Fibre Concentrations

Addison *et al* (1988) has been used to calculate airborne respirable fibre concentrations based upon bulk soil asbestos concentrations obtained through sample quantification.

This approach is considered acceptable on the basis that:

- The site soil is similar to the 'clay', 'sandy' or 'intermediate' soils prepared by Addison *et al*;
- Measured soil concentrations of asbestos fibres (per cent) are available; and
- The likely soil dust in air concentrations (mg/m³) can be estimated or measured.

7.3.1.4 Calculation of Exposure

The exposure of an event is the product of the airborne concentration of asbestos during the event and the period of time that the exposure lasts. The annual exposure (E_i) from each event, i , can be expressed in fibre/ml.hours as:

$$E_i = C_i \times F_i \times T_i$$

Where:

C_i = the estimated concentration (f/ml) for the event

F_i = the frequency of the event per year

T_i = the period of time that the event lasts in hours

Cumulative exposure for each event is the sum of the relevant annual exposures. So, the cumulative exposure for event i , CE_i , is the annual exposure for the event multiplied by the number of years that the event is predicted to occur.

$$CE_i = E_i \times Y_i$$

Where:

Y_i = the number of years that exposure event i will occur.

7.3.2 Risk Assessment

Overall excess lifetime cancer risks have been estimated in accordance with the guidance published in CIRIA C733. For the assessment, the worst case of asbestos contamination was used to produce two models with varying exposure times. A summary of the models is presented on the following page in **Table 7.2**.

Table 7.2 Model Data: Chrysotile

Parameter	Units	Model Run 1		Model Run 2	
		Model Data	Justification	Model Data	Justification
Soil Type	-	Clay	As defined in laboratory matrix description	Clay	As defined in laboratory matrix description
Appropriate test soil prepared by Addison <i>et al</i>	-	Clay	As defined in Addison <i>et al</i>	Clay	As defined in Addison <i>et al</i>
Highest measured Chrysotile concentration	Mass %	0.1	Laboratory gravimetric analysis	0.1	Laboratory gravimetric analysis
Predicted normalised fibre concentration	fibres/ml per mg/m ³	0.06	As per Graph a, Figure 6 of Addison <i>et al</i>	0.06	As per Graph a, Figure 6 of Addison <i>et al</i>
The concentration of soil dust during gardening activities in dry and dusty conditions	mg/m ³	0.1	Based on ambient urban dust levels and ART modelling of shovelling dry powders	0.1	based on ambient urban dust levels and ART modelling of shovelling dry powders
Airborne fibre concentration due to garden activities	f/ml	0.006	The product of the predicted normalised fibre concentration and concentration of soil dust during activities	0.006	The product of the predicted normalised fibre concentration and concentration of soil dust during activities
How long are residents/visitors assumed to be outside in dry and dusty conditions	h/yr	101	216.4 dry days per year based on Met office data. (170 days per year exposure based upon C4SL)	166	280 days considered a reasonable worst case.
Annual exposure	f/ml.hours/year	0.606	Product of airborne fibre concentration due to activities and child exposure time	0.996	Product of airborne fibre concentration due to activities and child exposure time
Cumulative exposure	f/ml.hours	3.636	6 years based on assumptions in C4SL final report	5.976	6 years based on assumptions in C4SL final report
Unit converted cumulative exposure	fibre/ml.years	0.0018	assuming an occupational year is 2,000 hours (CIRIA C733)	0.003	assuming an occupational year is 2,000 hours (CIRIA C733)

7.3.3 Risk Assessment Results

The quantitative risk assessment results based upon information published by Hodgson and Darnton (2000) are presented in **Table 7.3** below:

Table 7.3 Quantitative Risk Assessment Results

Health Risk	Lifetime Risk (per 100,000 exposed)	
	Chrysotile Model 1	Chrysotile Model 2
Age adjusted cumulative exposure (2.8 adjustment factor taking into account exposure from 0 to 60 years) fibre/ml.years	0.005	0.008
Mesothelioma Risk	Falls between insignificant and highest 4	Falls between insignificant and highest 4
Lung Cancer Risk	Probably Insignificant	Probably Insignificant

7.3.3.1 Acceptable Level of Risk

At present there is a lack of UK guidance as to what acceptable levels of lifetime cancer risk posed by ACS's are. The HSE (2001) categorise levels of risk as shown below:

- Unacceptable
- Tolerable
- Broadly Acceptable

For occupational activities, the HSE (2001) suggest that "an individual risk of death of one in a million per annum for both workers and the public corresponds to a very low level of risk and should be used as a guideline for the boundary between the broadly acceptable and tolerable regions". Assuming a 70 year lifetime, this equates to a risk of death of 7 in 100 000 over a lifetime (CIRIA C733).

The quantitative risk assessment revealed the level of risk falls between insignificant and 4 (highest). The worst case cumulative exposure of 0.003 fibre/ml.years falls below the broadly acceptable and tolerable boundary suggested by the HSE (2001).

7.4 Mitigation and Remedial Measures

7.4.1 Human Health

Whilst the asbestos risk assessment would suggest the levels of Chrysotile pose an acceptable risk, it is understood that the risk assessment is based on a number of uncertain assumptions such as the soil to air relationship set out by Addison *et al* (1988). In addition to this Arsenic has been found above the guideline values in all samples tested.

To protect site end users from the Arsenic and asbestos contamination the site will need to be capped. The capping should consist of the proposed buildings and hard standings. In garden and soft landscaped areas the capping should consist of 600mm of suitable inert topsoil, and subsoil if desired, over a no dig barrier.

It is considered that this would significantly reduce the calculated lifetime risk and negate the uncertainties in the assumptions made in the asbestos risk assessment.

Following the importation of topsoil and subsoil to all gardens and landscaped areas, it is considered that no further remedial measures will be required to render the site fit for its intended use.

Service runs on site through areas of made ground soils should be lined with clean inert material to prevent exposure to maintenance workers.

The advice of an asbestos specialist will be required and as a minimum the following precautions should be employed:

- Dust suppression and measures to dampen the material
- Suitable PPE for site workers
- Air monitoring on the site boundary
- Personal air monitors (for a time to determine actual personnel / fibre interaction)

In addition to the above it is best practise to clean down plant and change air filters on any plant used in the works with asbestos contaminated material.

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.

7.4.2 Aquatic Environment

The leachate testing has found the concentrations of lead to be below guideline values. The aquatic environment is therefore not considered to be at risk.

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 accidentally 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 8 Engineering Recommendations

8.1 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 should be 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.

8.2 Foundation and Floor Slab Solution

It is recommended that mass concrete strip or trench fill foundations be used; founded within the firm orangish brown CLAY at a depth of approximately 0.30m to 1.00m. An allowable bearing pressure of 100kN/m² may be used.

All 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.

In order to prevent damage from the shrinking or swelling of the soil, and the effects of frost heave/and or thermal shrinkage foundations should be taken down to a minimum depth of 900mm when founding in clay.

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.

Floor slabs should be designed as suspended.

There are several trees located within or near the site boundaries. 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 two samples of the in-situ clay were taken and submitted for plasticity testing. The test results are summarised in **Table 8.1**. The results in their entirety are presented in **Annex G**.

Table 8.1 Plasticity Test Results

Sample	Depth (m)	Laboratory Soil Description	Plasticity Index (%)	Passing 425µm Sieve (%)	Modified Plasticity Index (%)	Volume Change Potential
TP01	1.0	CLAY	16	100	16	Low
TP02	1.2	SILT	22	100	22	Medium

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 medium volume change potential.

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

8.3 Excavations and Formations

Most of the shallow excavations will be possible with normal soil excavating machinery.

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.

8.4 Protection of Buried Concrete

Levels of total sulphate within the in-situ materials measured between 400mg/kg to 600mg/kg and the pH varied between 6.3 and 7.6.

When the results are compared with Table C2 of BRE Digest 1:2005, it indicates that buried concrete should most likely as a minimum conform to Class AC-2z due to the lower pH value recorded.

8.5 Access Roads and Car Parking Areas

For car parking and road areas, formations within the in-situ made ground soils a CBR In order to prevent damage from the shrinking or swelling of the soil, and the effects of frost heave/and or thermal shrinkage foundations should be taken down to a minimum depth of 900mm when founding in clay.

In order to prevent damage from the shrinking or swelling of the soil, and the effects of frost heave/and or thermal shrinkage foundations should be taken down to a minimum depth of 900mm when founding in clay.

value of 3% may be used for design purposes.

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.

8.6 Storm Water Drainage

During the site investigation two soakaway tests were undertaken in general accordance of BRE 365 (2016) in trial pits. The soakaway tests were carried out in trial pits TP01 and TP04 within natural materials.

Soakaway tests recorded insufficient infiltration in both tests and were subsequently terminated early

Soakaway calculation sheets are presented in **Annex E** for reference.

**ANNEX A
Envirocheck Report**

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		Minor Roads		
	Sunken Road		Raised Road		
	Road over Railway		Railway over River		
	Railway over Road		Level Crossing		
	Road over River or Canal		Road over Stream		
	Road over Stream				
	County Boundary (Geographical)				
	County & Civil Parish Boundary				
	Administrative County & Civil Parish Boundary				
	County Borough Boundary (England)				
	County Burgh Boundary (Scotland)				
	Rural District Boundary				
	Civil Parish Boundary				

Ordnance Survey Plan 1:10,000

	Chalk Pit, Clay Pit or Quarry		Gravel Pit
	Sand Pit		Disused Pit or Quarry
	Refuse or Slag Heap		Lake, Loch or Pond
	Dunes		Boulders
	Coniferous Trees		Non-Coniferous Trees
	Orchard		Scrub
	Bracken		Heath
	Marsh		Reeds
	Building		Glasshouse
	Sloping Masonry		Pylon
	Cutting		Embankment
	Road Under		Road Over
	Level Crossing		Foot Bridge
	Standard Gauge Multiple Track		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
	Civil Parish		
	BP, BS Boundary Post or Stone		Police Station
	Church		Post Office
	Club House		Public Convenience
	Fire Engine Station		Public House
	Foot Bridge		Signal Box
	Fountain		Spring
	Guide Post		Telephone Call Box
	Mile Post		Telephone Call Post
	Mile Stone		Well

1:10,000 Raster Mapping

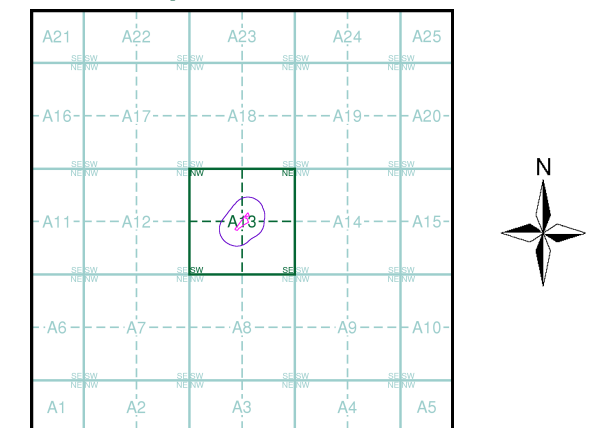
	Gravel Pit		Refuse tip or slag heap
	Rock		Rock (scattered)
	Boulders		Boulders (scattered)
	Shingle		Mud
	Sand		Sand Pit
	Slopes		Top of cliff
	General detail		Underground detail
	Overhead detail		Narrow gauge railway
	Multi-track railway		Single track railway
	County boundary (England only)		Civil,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



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	1935 - 1936	7
Glamorganshire	1:10,560	1938 - 1951	8
Historical Aerial Photography	1:10,560	1945 - 1949	9
Glamorganshire	1:10,560	1951 - 1952	10
Ordnance Survey Plan	1:10,000	1964 - 1965	11
Ordnance Survey Plan	1:10,000	1970 - 1973	12
Swansea	1:10,000	1976	13
Ordnance Survey Plan	1:10,000	1980 - 1983	14
Ordnance Survey Plan	1:10,000	1992	15
10K Raster Mapping	1:10,000	1999	16
10K Raster Mapping	1:10,000	2006	17
VectorMap Local	1:10,000	2018	18

Historical Map - Slice A



Order Details

Order Number: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 1000

Site Details

Site at 274390, 198640



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

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 Small Bridge 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

180/12 Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

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

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 ъ (-)

Д д (D) Л л (L) У у (U) Ы ы (Y)

Е е (E) М м (M) Ф ф (F) Ь 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

Telegraph/Telephone Lines Main Highway Highway under Construction Improved Dirt Road (former truck road)

Double-track Railroad with First Class Station Dismantled Railroad Railroad Under Construction

Shore Embankment River or Ditch with Embankment Direction and velocity of current Water Gauge Water Level Mark

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

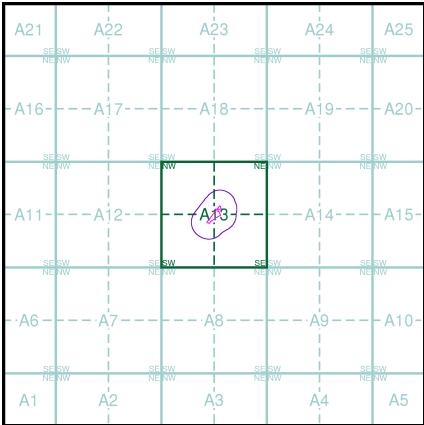
Key to Numbers on Mapping



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	1935 - 1936	7
Glamorganshire	1:10,560	1938 - 1951	8
Historical Aerial Photography	1:10,560	1945 - 1949	9
Glamorganshire	1:10,560	1951 - 1952	10
Ordnance Survey Plan	1:10,000	1964 - 1965	11
Ordnance Survey Plan	1:10,000	1970 - 1973	12
Swansea	1:10,000	1976	13
Ordnance Survey Plan	1:10,000	1980 - 1983	14
Ordnance Survey Plan	1:10,000	1992	15
10K Raster Mapping	1:10,000	1999	16
10K Raster Mapping	1:10,000	2006	17
VectorMap Local	1:10,000	2018	18

Russian Map - Slice A



Order Details

Order Number: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 1000

Site Details

Site at 274390, 198640



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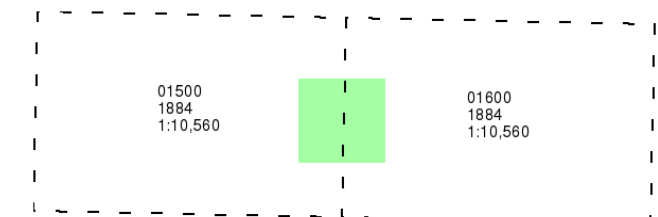
Glamorganshire

Published 1884

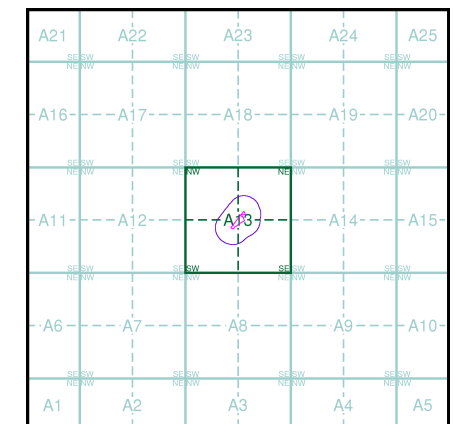
Source map scale - 1:10,560

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

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INFORMATION GROUP

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Glamorganshire

Published 1900

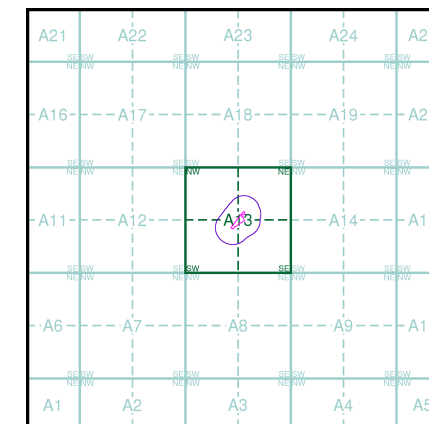
Source map scale - 1:10,560

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)

015NE 1900 1:10,560	016NW 1900 1:10,560
015SE 1900 1:10,560	016SW 1900 1:10,560

Historical Map - Slice A



Order Details

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Site Details

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Landmark
INFORMATION GROUP

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Glamorganshire

Published 1921

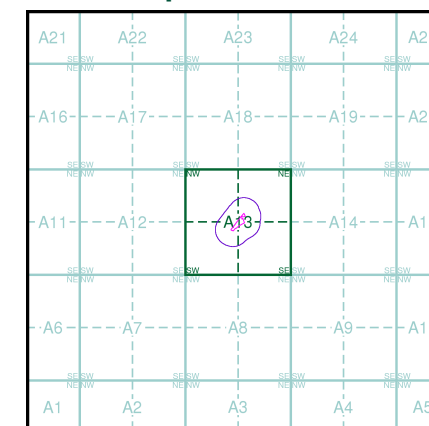
Source map scale - 1:10,560

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)

015NE 1921 1:10,560	016NW 1921 1:10,560
015SE 1921 1:10,560	016SW 1921 1:10,560

Historical Map - Slice A



Order Details

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Site Details

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INFORMATION GROUP

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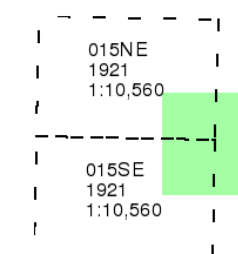
Glamorganshire

Published 1921

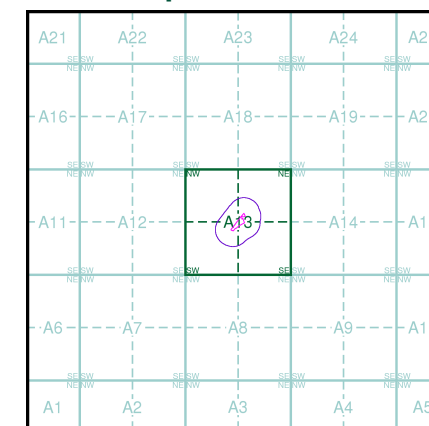
Source map scale - 1:10,560

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



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Glamorganshire

Published 1935 - 1936

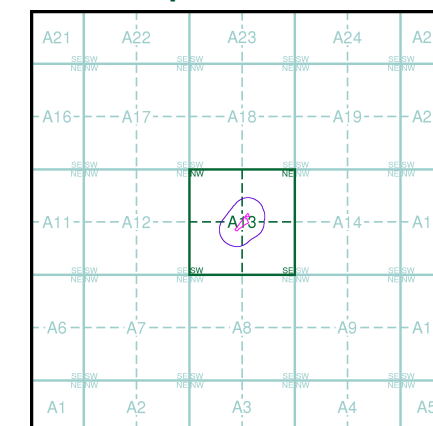
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

016NW
1935
1:10,560
016SW
1936
1:10,560

Historical Map - Slice A



Order Details

Order Number: 171268871_1_1
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Search Buffer (m): 1000

Site Details

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Glamorganshire

Published 1938 - 1951

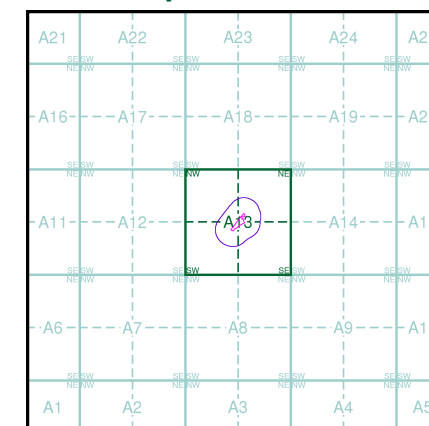
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

015NE 1938 1:10,560	016NW 1951 1:10,560
015SE 1940 1:10,560	016SW 1938 1:10,560

Historical Map - Slice A



Order Details

Order Number: 171268871_1_1
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Slice: A
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Search Buffer (m): 1000

Site Details

Site at 274390, 198640



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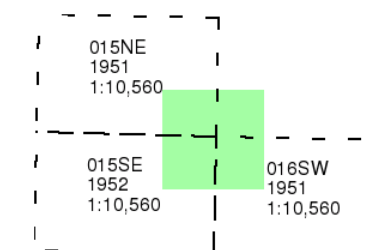
Glamorganshire

Published 1951 - 1952

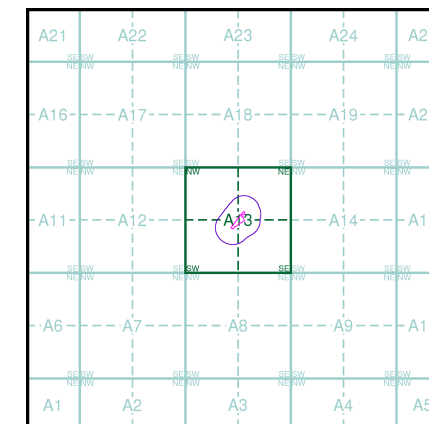
Source map scale - 1:10,560

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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Site Details

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Landmark
INFORMATION GROUP

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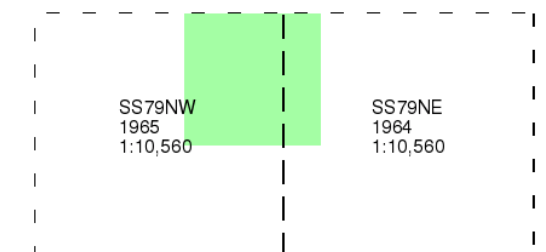
Ordnance Survey Plan

Published 1964 - 1965

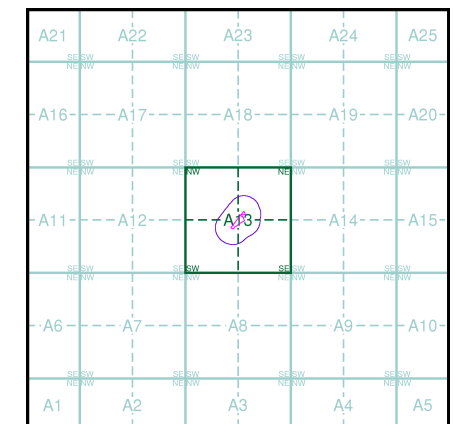
Source map scale - 1:10,000

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



Order Details

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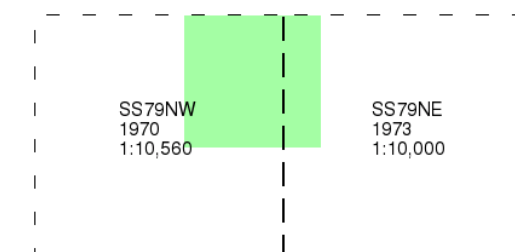
Ordnance Survey Plan

Published 1970 - 1973

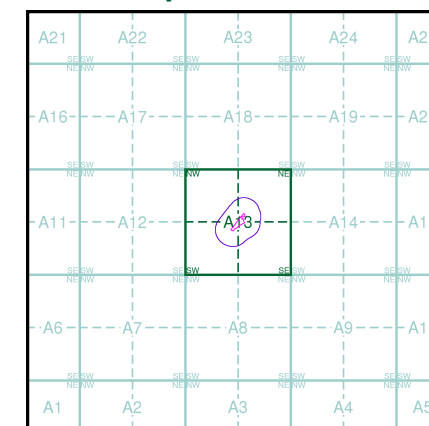
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 171268871_1_1
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Slice: A
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Site Details

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Landmark
INFORMATION GROUP

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Swansea

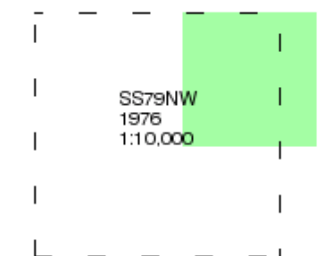
Published 1976

Source map scale - 1:10,000

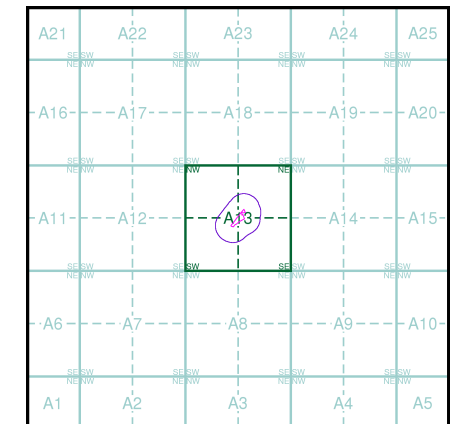
These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed 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



Order Details

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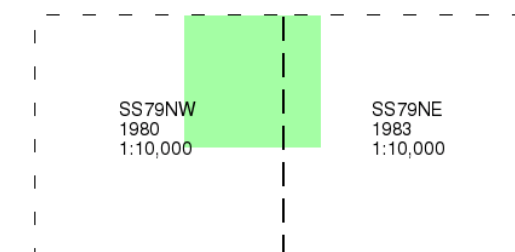
Ordnance Survey Plan

Published 1980 - 1983

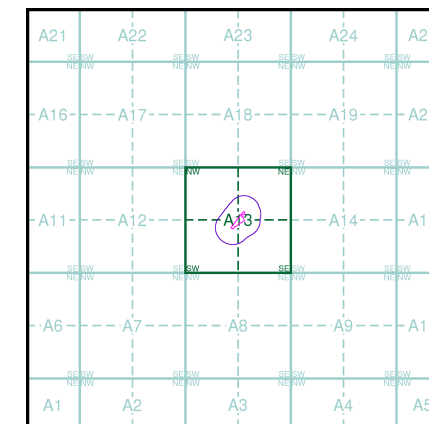
Source map scale - 1:10,000

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Map Name(s) and Date(s)



Historical Map - Slice A



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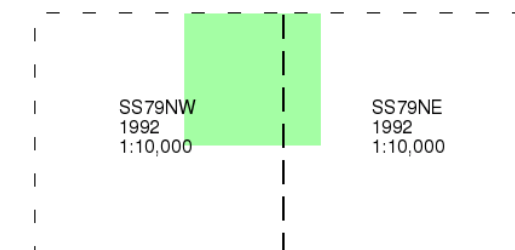
Ordnance Survey Plan

Published 1992

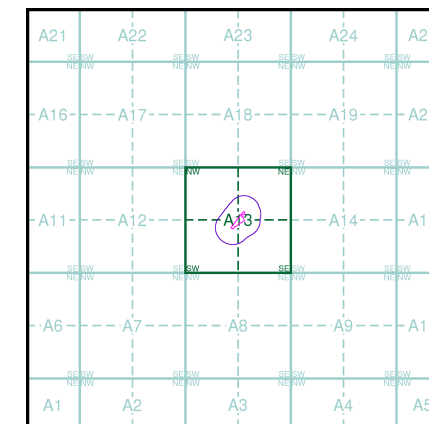
Source map scale - 1:10,000

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Order Details

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Landmark
INFORMATION GROUP

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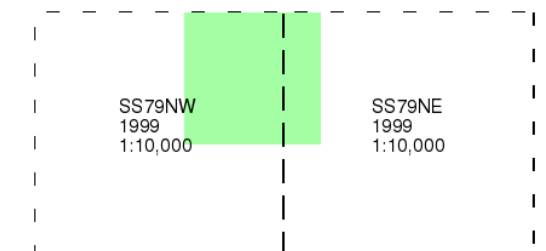
10k Raster Mapping

Published 1999

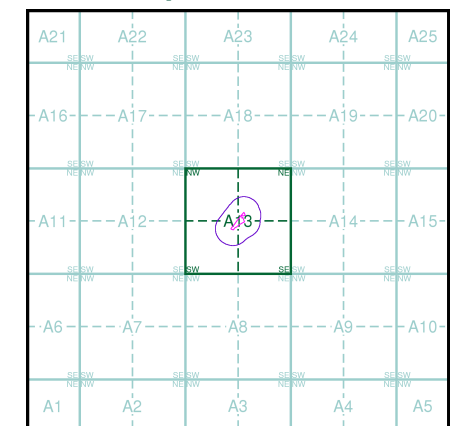
Source map scale - 1:10,000

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: 171268871_1_1
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Site Details

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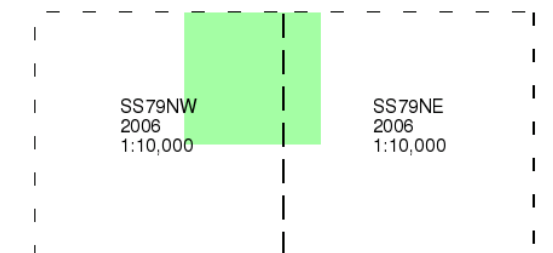
10k Raster Mapping

Published 2006

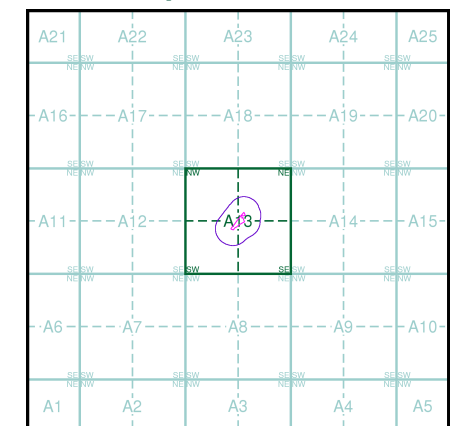
Source map scale - 1:10,000

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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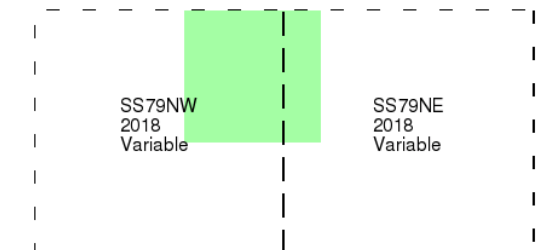
VectorMap Local

Published 2018

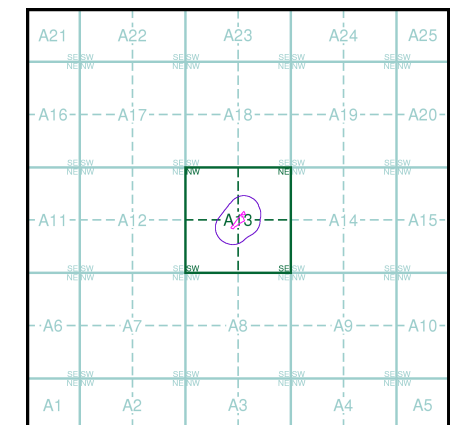
Source map scale - 1:10,000

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

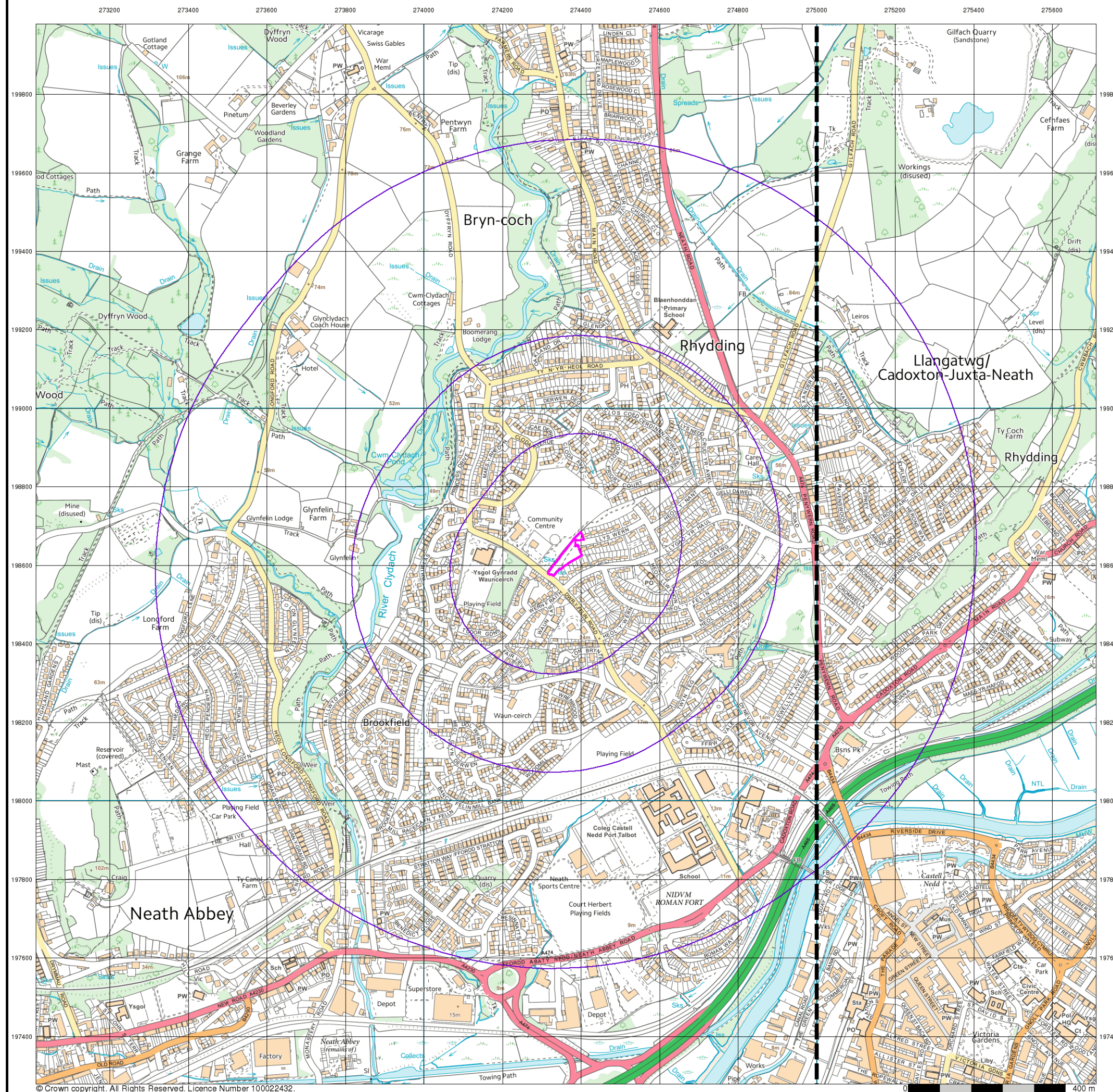
Order Number: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 1000

Site Details

Site at 274390, 198640



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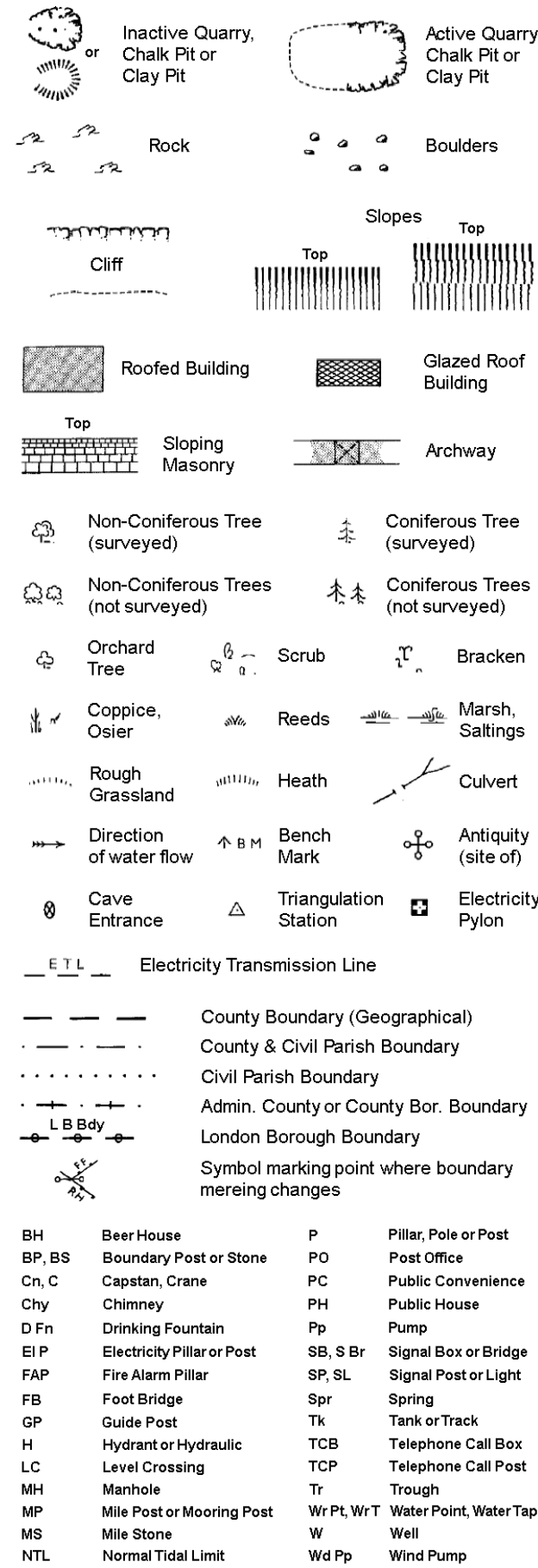


Historical Mapping Legends

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



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



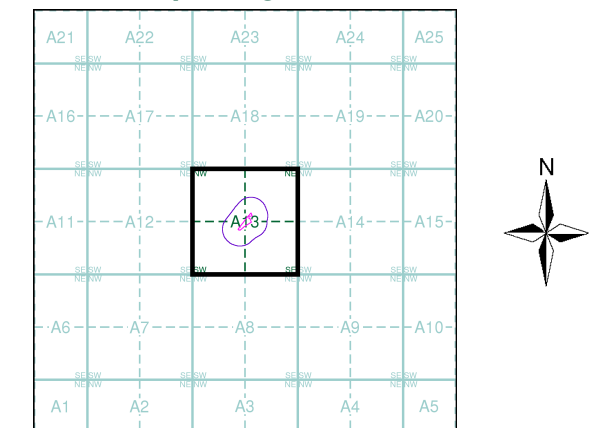
Large-Scale National Grid Data 1:2,500 and 1:1,250



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:2,500	1876 - 1881	2
Glamorganshire	1:2,500	1899	3
Glamorganshire	1:2,500	1918 - 1919	4
Glamorganshire	1:2,500	1935 - 1940	5
Ordnance Survey Plan	1:1,250	1967	6
Additional SIMs	1:1,250	1967 - 1986	7
Ordnance Survey Plan	1:2,500	1968	8
Ordnance Survey Plan	1:1,250	1977	9
Additional SIMs	1:1,250	1989	10
Large-Scale National Grid Data	1:1,250	1993	11
Large-Scale National Grid Data	1:1,250	1994	12
Large-Scale National Grid Data	1:1,250	1995	13
Large-Scale National Grid Data	1:1,250	1996	14
Large-Scale National Grid Data	1:1,250	1996	15
Historical Aerial Photography	1:2,500	2000	16

Historical Map - Segment A13



Order Details

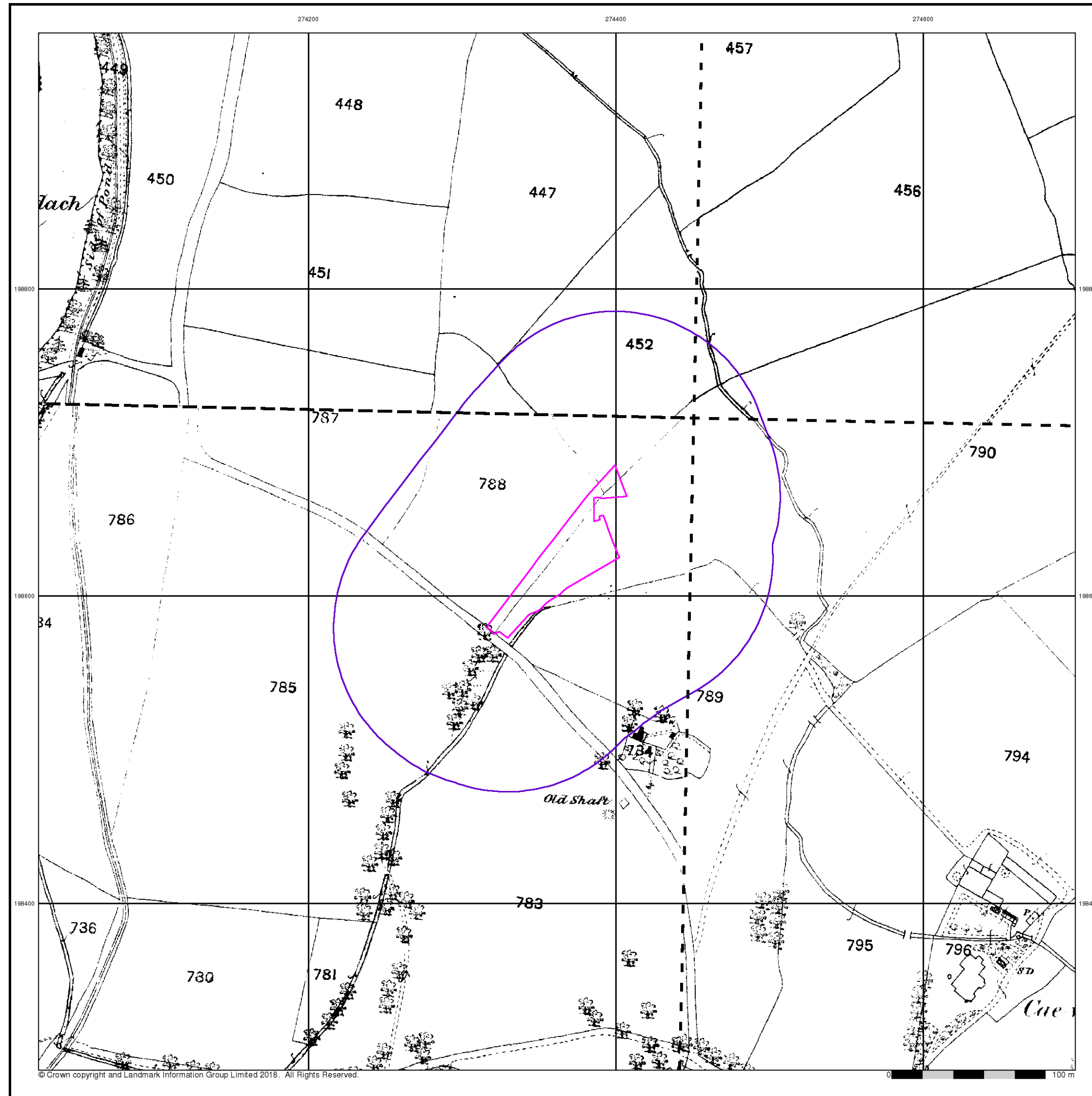
Order Number: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 100

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Glamorganshire

Published 1876 - 1881

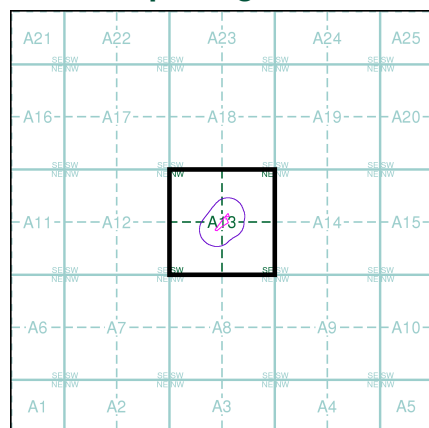
Source map scale - 1:2,500

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)

015_08 1879 1:2,500	016_05 1881 1:2,500
015_12 1876 1:2,500	016_09 1877 1:2,500

Historical Map - Segment A13



Order Details

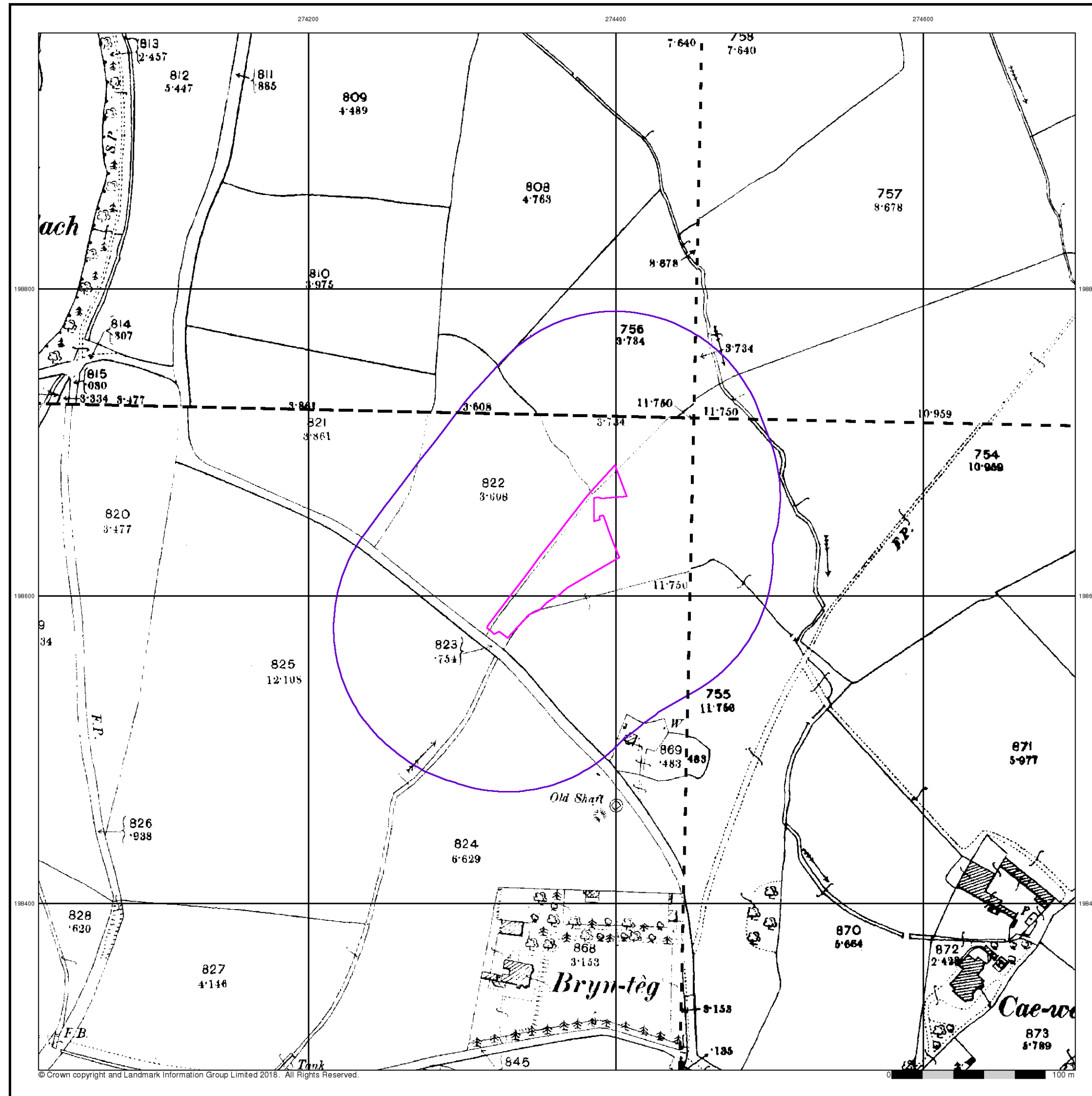
Order Number: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 100

Site Details

Site at 274390, 198640



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Glamorganshire

Published 1899

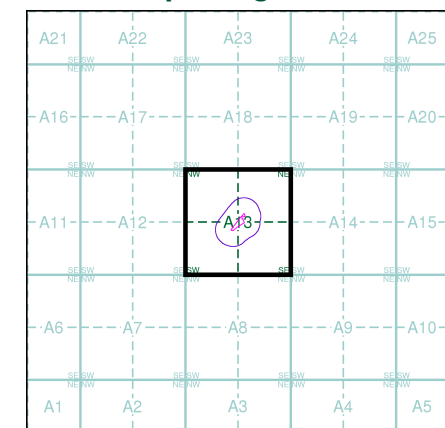
Source map scale - 1:2,500

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)

015_08 1899 1:2,500	016_05 1899 1:2,500
015_12 1899 1:2,500	016_09 1899 1:2,500

Historical Map - Segment A13



Order Details

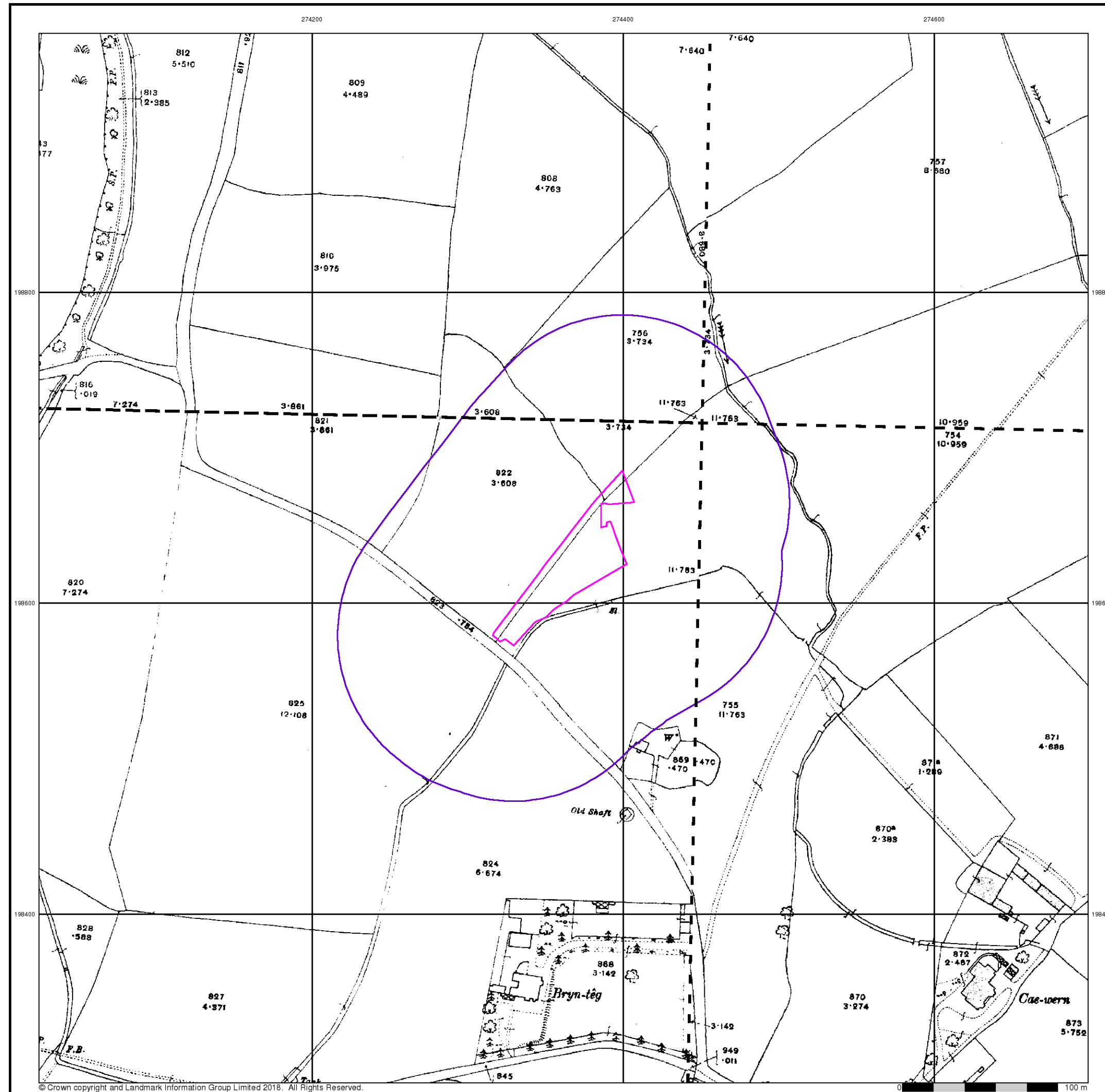
Order Number: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 100

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Glamorganshire

Published 1918 - 1919

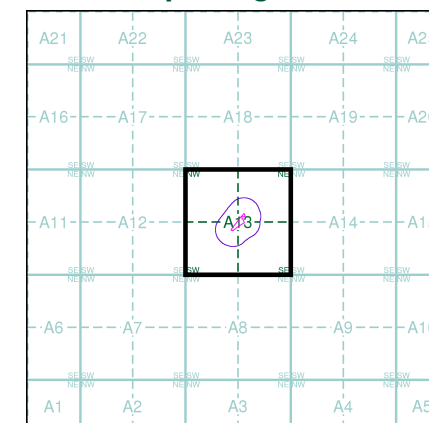
Source map scale - 1:2,500

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)

015_08 1918 1:2,500	016_05 1918 1:2,500
015_12 1918 1:2,500	016_09 1919 1:2,500

Historical Map - Segment A13



Order Details

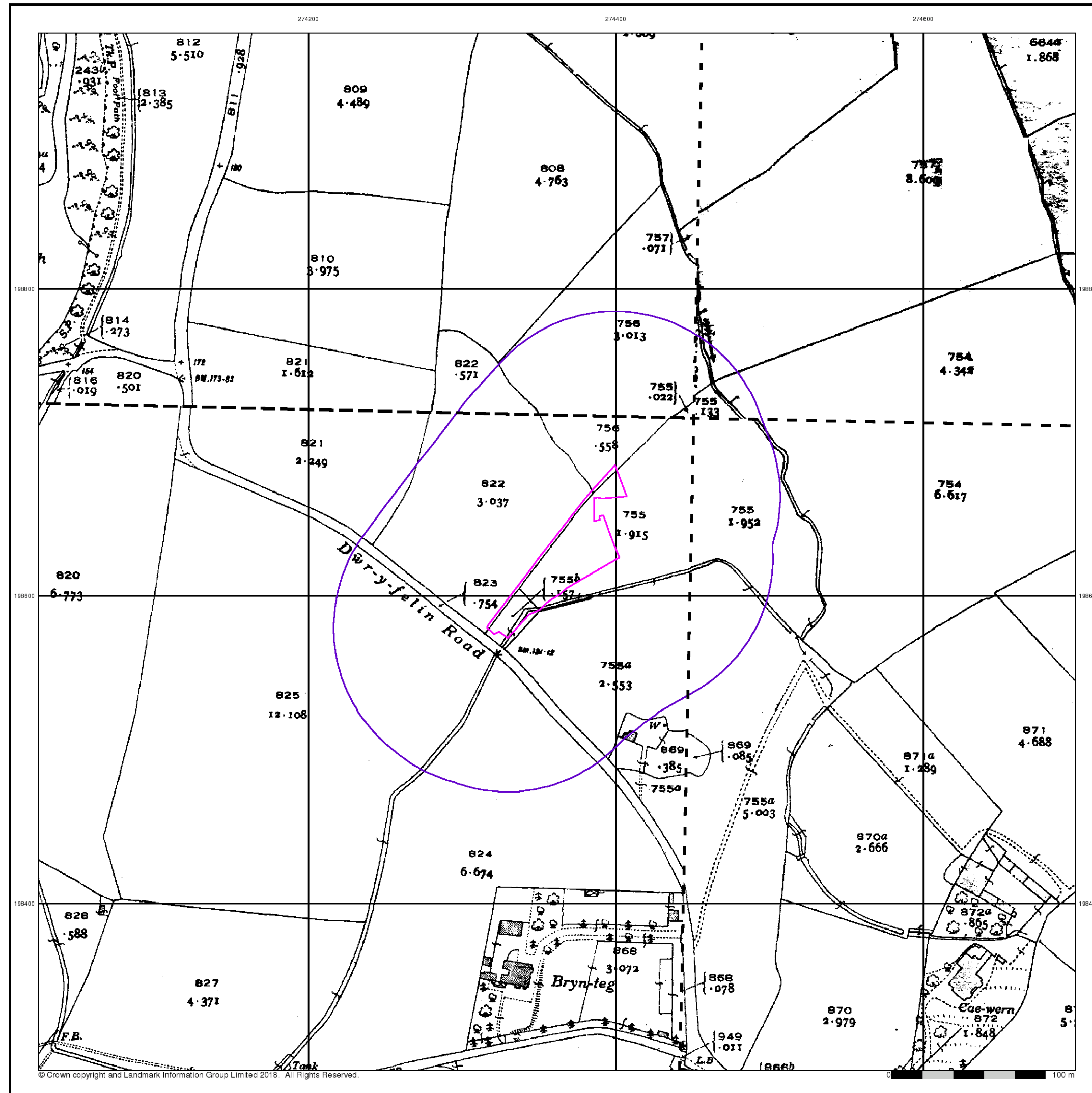
Order Number: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 100

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Glamorganshire

Published 1935 - 1940

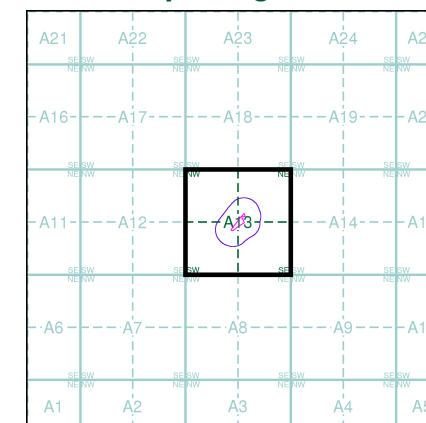
Source map scale - 1:2,500

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)

015_08 1936 1:2,500	016_05 1935 1:2,500
015_12 1940 1:2,500	016_09 1935 1:2,500

Historical Map - Segment A13



Order Details

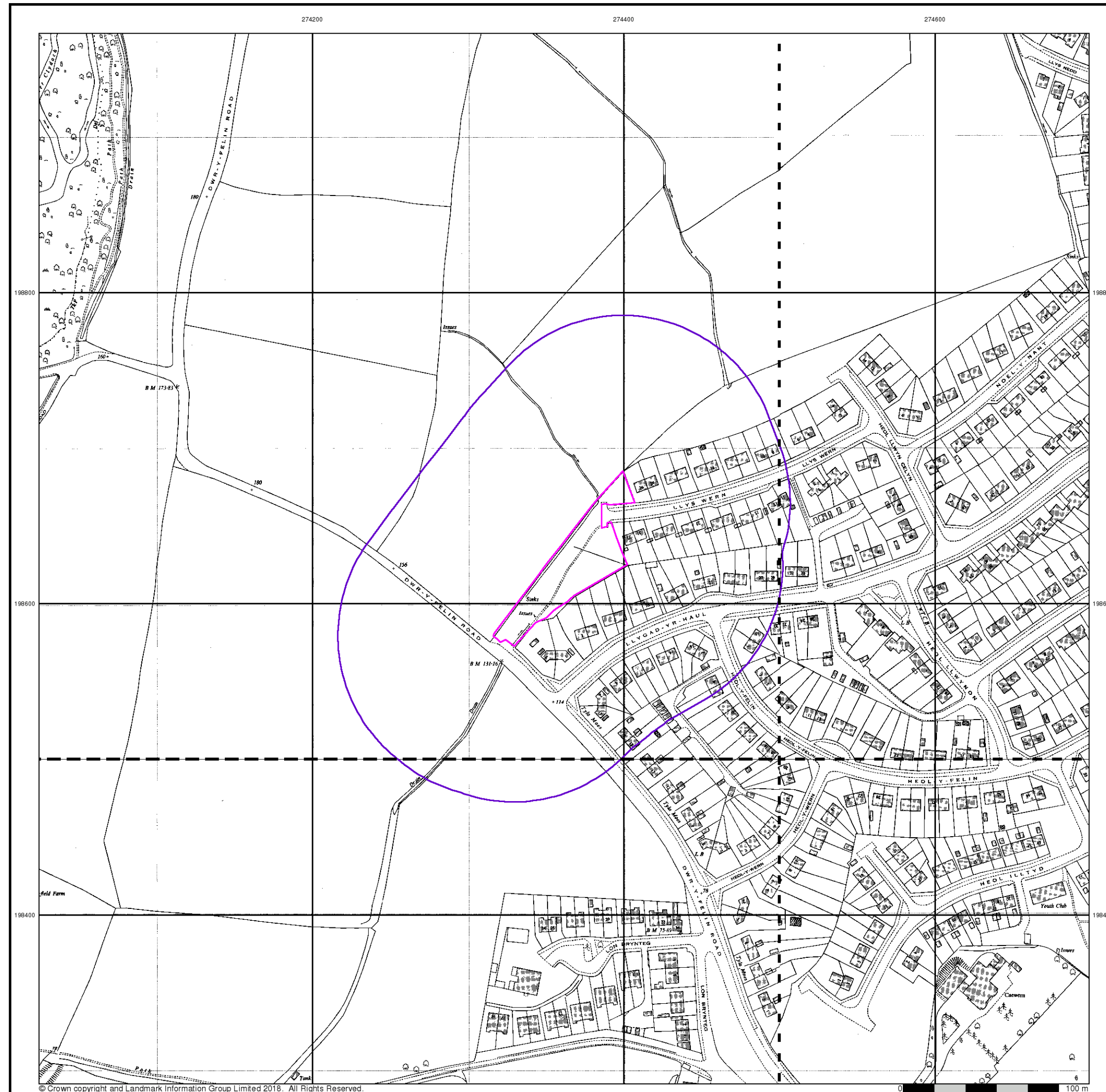
Order Number: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
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Search Buffer (m): 100

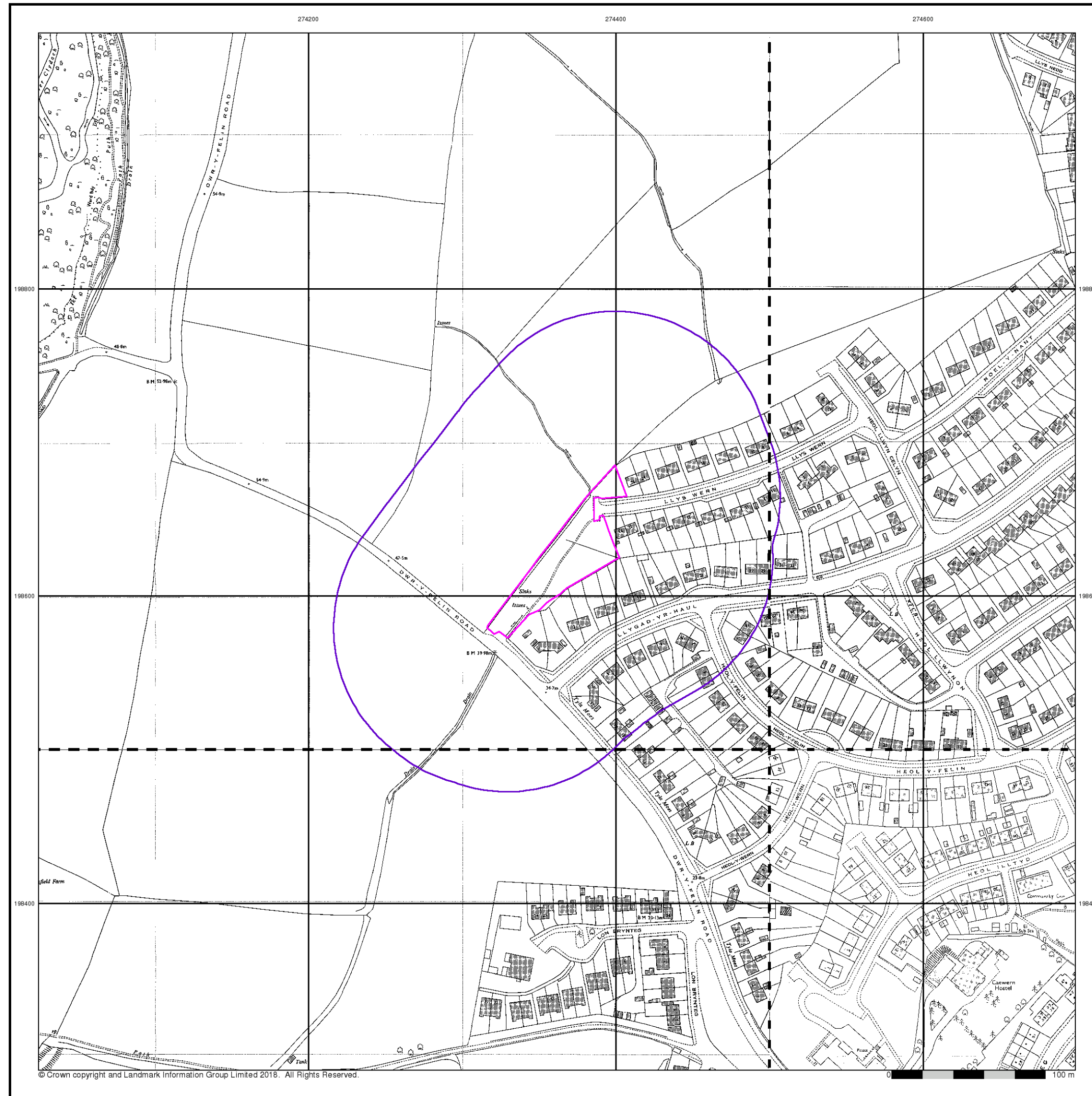
Site Details

Site at 274390, 198640

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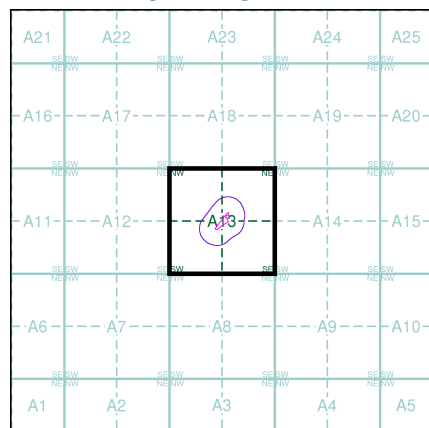
Additional SIMs
Published 1967 - 1986
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

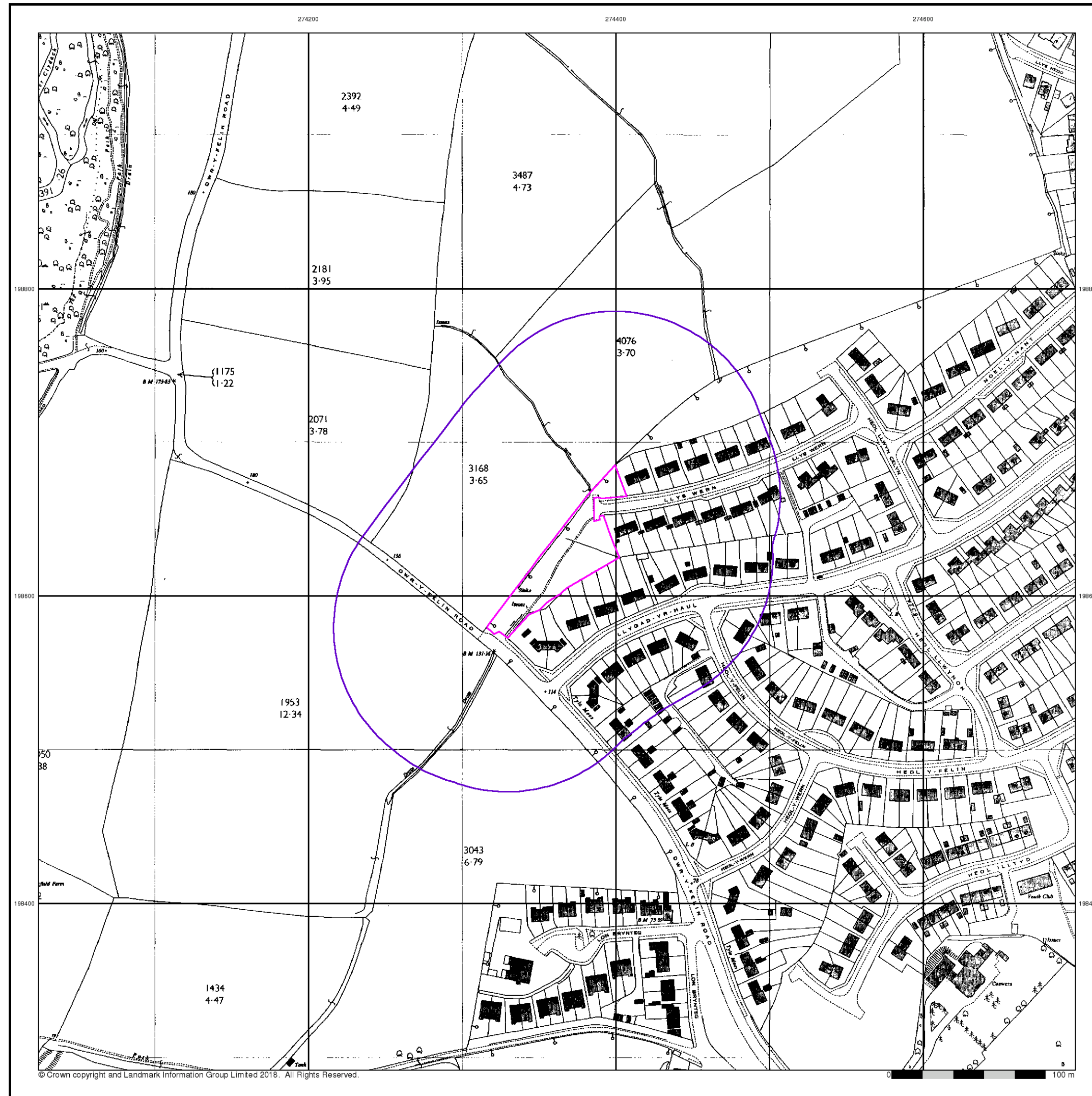
SS7498NW 1967 1:1,250	SS7498NE 1967 1:1,250
SS7498SW 1967 1:1,250	SS7498SE 1986 1:1,250

Historical Map - Segment A13



Order Details
Order Number: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 100

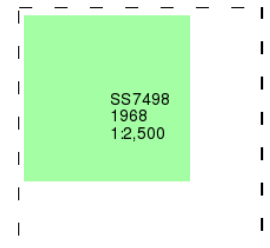
Site Details
Site at 274390, 198640



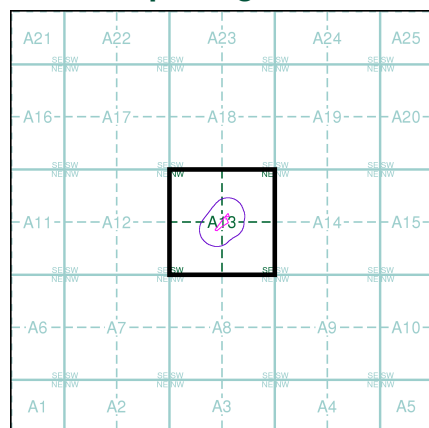
Ordnance Survey Plan
Published 1968
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	171268871_1_1
Customer Ref:	14795/JRW
National Grid Reference:	274360, 198630
Slice:	A
Site Area (Ha):	0.3
Search Buffer (m):	100

Site Details
Site at 274390, 198640



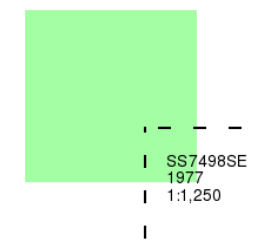
Ordnance Survey Plan

Published 1977

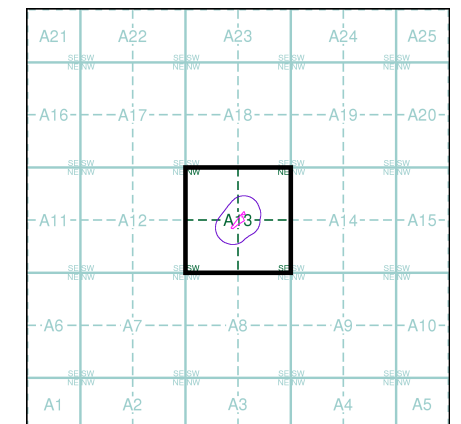
Source map scale - 1:1,250

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)



Historical Map - Segment A13



Order Details

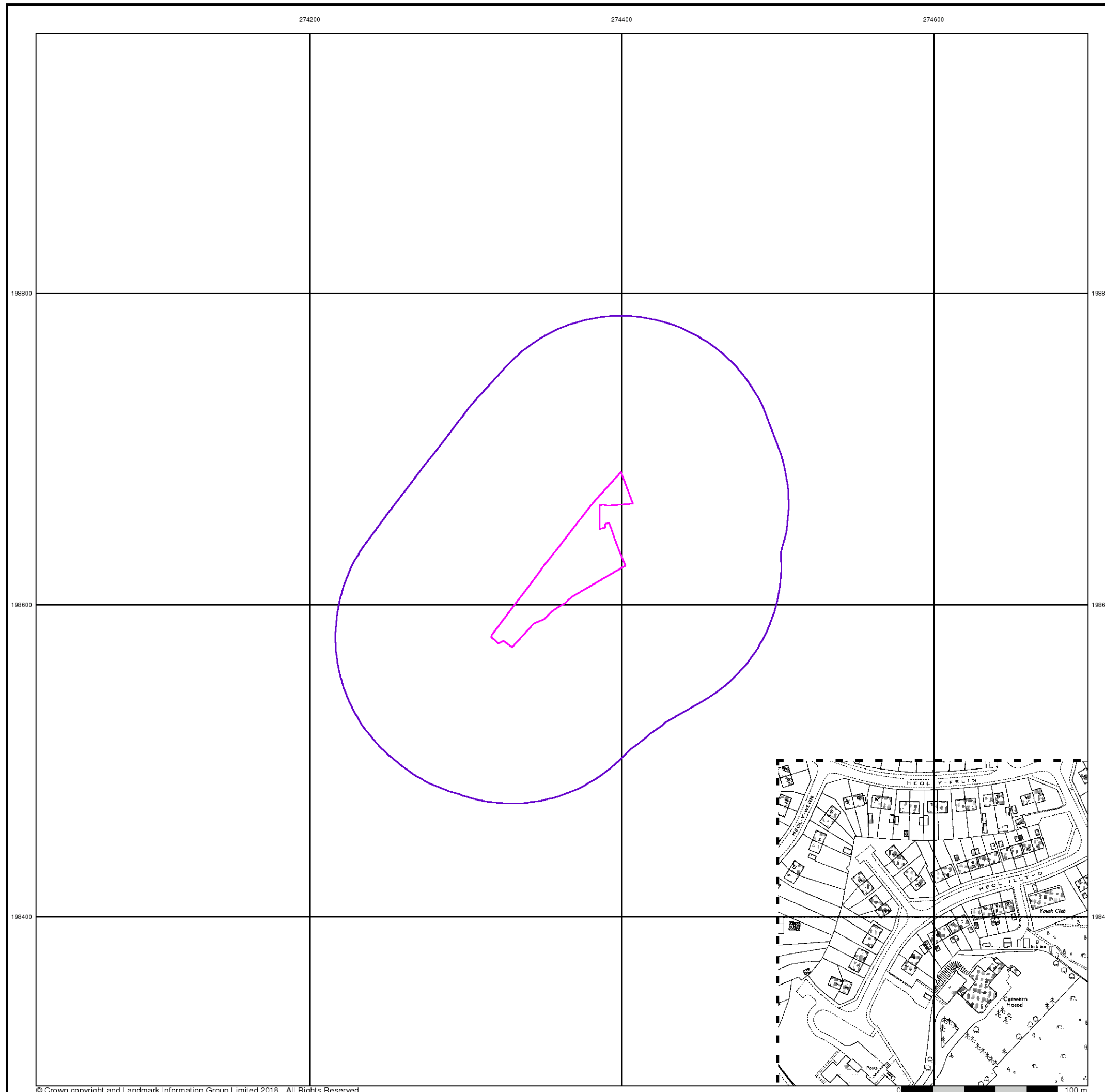
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Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 100

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Large-Scale National Grid Data

Published 1993

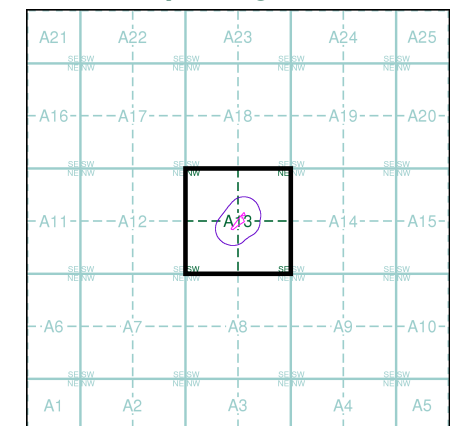
Source map scale - 1:1,250

'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)

SS7498NW	SS7498NE
1993	1993
1:1,250	1:1,250
SS7498SW	SS7498SE
1993	1993
1:1,250	1:1,250

Historical Map - Segment A13



Order Details

Order Number: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 100

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Large-Scale National Grid Data

Published 1995

Source map scale - 1:1,250

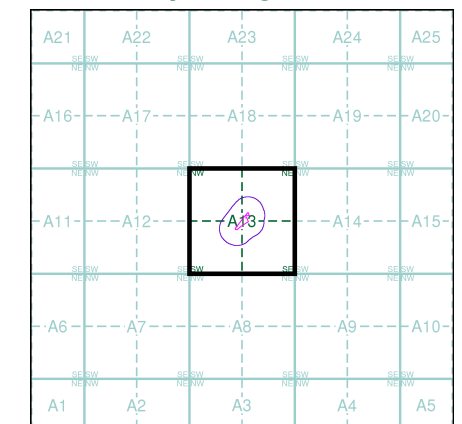
'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic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

Map Name(s) and Date(s)

SS7498NW
1995
1:1,250

SS7498SW
1995
1:1,250

Historical Map - Segment A13



Order Details

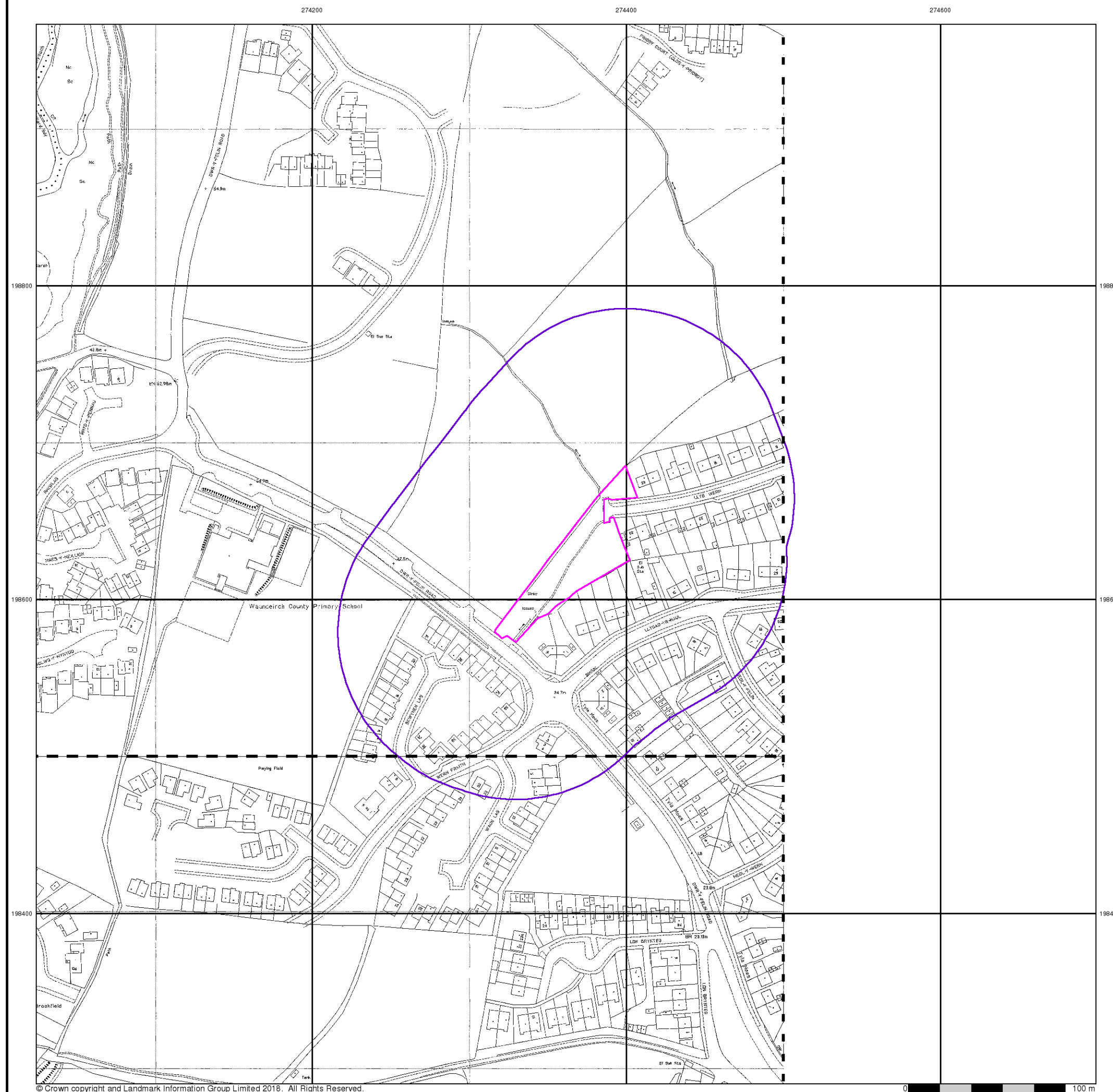
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Site Area (Ha): 0.3
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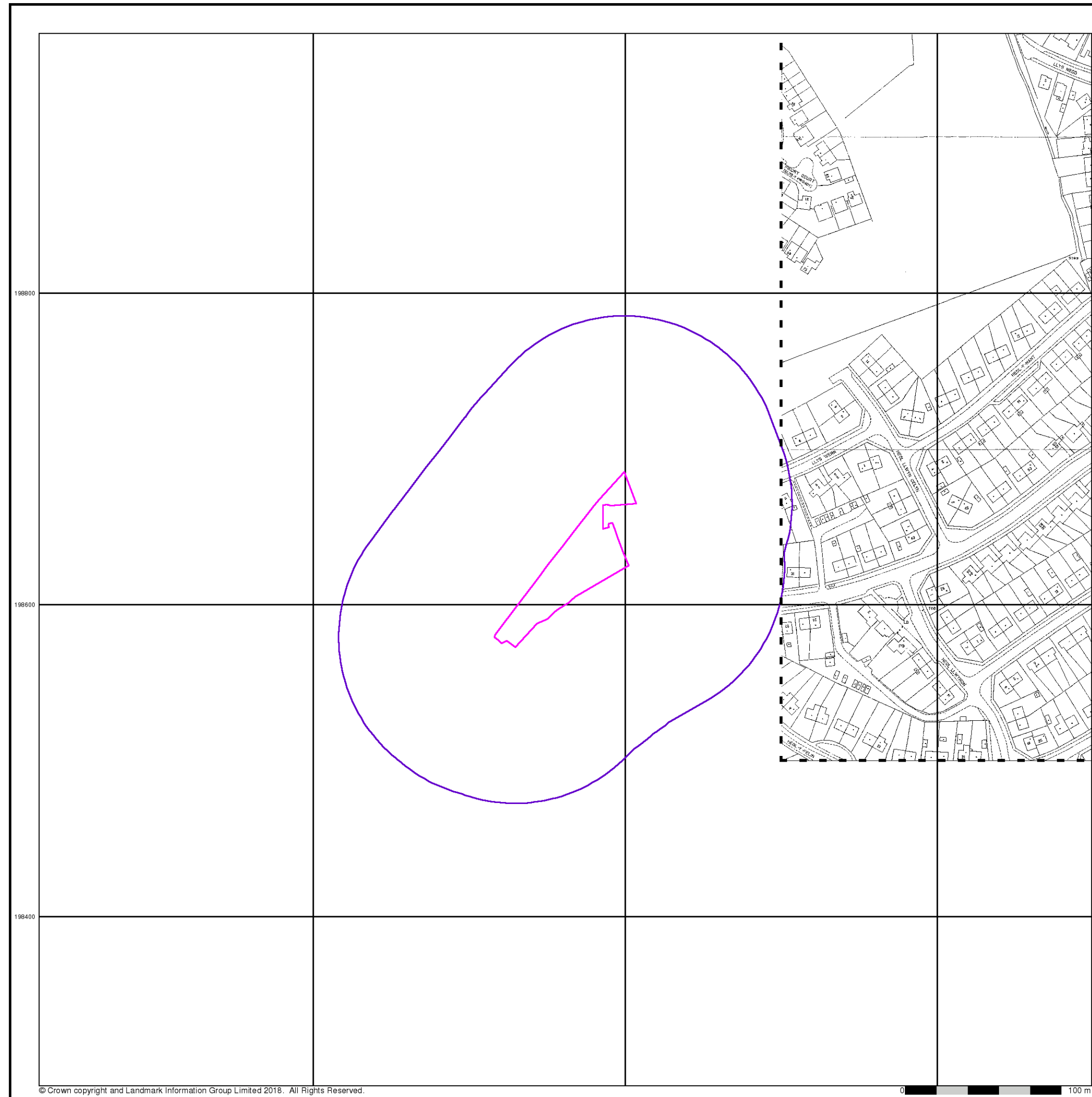
Site Details

Site at 274390, 198640

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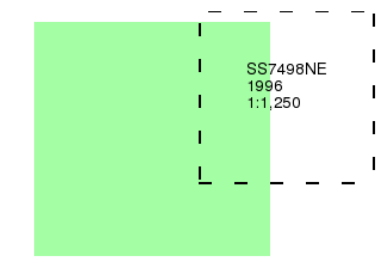
Large-Scale National Grid Data

Published 1996

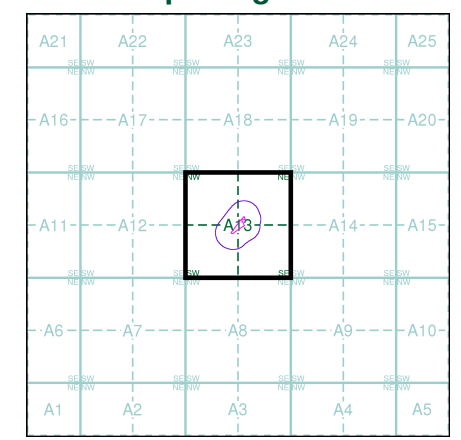
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 100

Site Details

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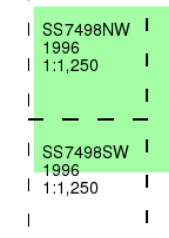
Large-Scale National Grid Data

Published 1996

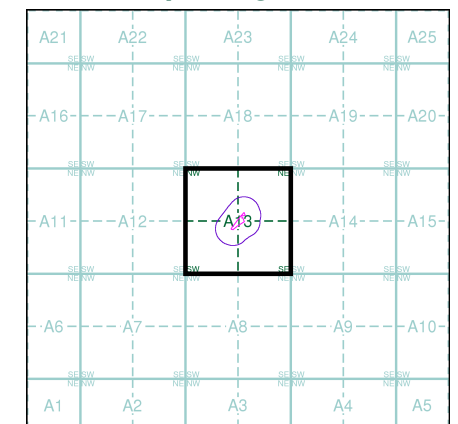
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 100

Site Details

Site at 274390, 198640



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0 100 m

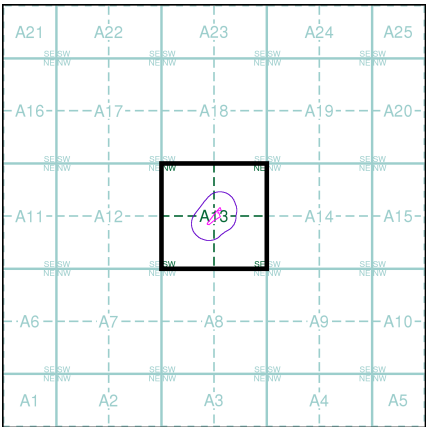


Historical Aerial Photography

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: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 100

Site Details

Site at 274390, 198640



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Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

171268871_1_1

Customer Reference:

14795/JRW

National Grid Reference:

274360, 198630

Slice:

A

Site Area (Ha):

0.3

Search Buffer (m):

1000

Site Details:

Site at 274390, 198640

Client Details:

Mr J Rhys-Williams
Terra Firma (Wales) Ltd
5 Deryn Court
Wharfdale Road
Pentwyn
Cardiff
CF23 7HB

Report Section	Page Number
Summary	-
Agency & Hydrological	1
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Data Suppliers	64
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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 the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 4			4	16
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 9	Yes			
Pollution Incidents to Controlled Waters	pg 9		1	5	27
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 14			1	
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 14			1	2
Water Abstractions	pg 15				(*7)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 16	Yes	n/a	n/a	n/a
Drift Deposits	pg 17	1	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 17	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 17	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				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 17	4	1	41	135

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 38	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 38		1	4	9
Potentially Infilled Land (Water)	pg 38		4	7	15
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
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					

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 41	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 41	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 47		1	2	12
BGS Urban Soil Chemistry	pg 50			Yes	Yes
BGS Urban Soil Chemistry Averages	pg 52	Yes			
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 52	Yes	n/a	n/a	n/a
Mining Instability	pg 52	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 52	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 52	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 52	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 52	Yes		n/a	n/a
Radon Potential - Radon Affected Areas	pg 53	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures	pg 53	Yes	n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 54		1	2	8
Fuel Station Entries					
Points of Interest - Commercial Services	pg 55			1	
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 55			1	4
Points of Interest - Public Infrastructure	pg 55				2
Points of Interest - Recreational and Environmental	pg 55		1	2	6
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 57			5	14
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
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: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SW)	0	1	274365 198626
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (E)	0	1	274400 198626
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (W)	0	1	274350 198626
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	0	1	274365 198600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (W)	17	1	274300 198626
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	21	1	274400 198600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (S)	73	1	274350 198500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	79	1	274300 198500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	82	1	274350 198750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	117	1	274300 198750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	172	1	274350 198850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	194	1	274550 198500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	194	1	274500 198850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (E)	212	1	274600 198550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (N)	221	1	274450 198900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	223	1	274250 198850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	224	1	274550 198850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	232	1	274600 198800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	235	1	274600 198500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	238	1	274500 198900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	263	1	274550 198900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (N)	265	1	274400 198950

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (N)	265	1	274365 198950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	305	1	274100 198800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (E)	306	1	274700 198750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	316	1	274050 198750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (W)	317	1	274000 198626
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (NE)	322	1	274700 198800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	325	1	274000 198650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	329	1	274150 198900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	332	1	274200 198950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	336	1	274100 198850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	339	1	274000 198700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (NW)	345	1	274050 198800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	364	1	274100 198900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (W)	367	1	273950 198600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NE)	369	1	274750 198800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (W)	375	1	273950 198500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (S)	380	1	274400 198200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (SW)	389	1	273950 198450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	402	1	274150 199000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	416	1	274200 199050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (SE)	422	1	274600 198250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	423	1	273900 198650

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	A8NW (S)	423	1	274350 198150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	424	1	274365 198150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	429	1	274550 198200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	434	1	273900 198700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (SE)	435	1	274700 198300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	441	1	274250 199100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	442	1	274150 199050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	450	1	273900 198750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	454	1	273900 198400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	455	1	273950 198850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	461	1	274200 199100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (W)	467	1	273850 198600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (W)	467	1	273850 198626
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	471	1	273900 198800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	472	1	273850 198650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (SW)	476	1	273900 198350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	476	1	274300 199150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (N)	476	1	274500 199150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	479	1	274400 198100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	494	1	274900 198626
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	497	1	273900 198850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (SW)	500	1	273850 198400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: 25 Gelli Dawel Bryn Coch Neath P T, Bryncoch, Neath, Neath Port Talbot Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bw2901301 Permit Version: 2 Effective Date: 31st March 2007 Issued Date: 7th March 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Surface Drain Status: Effective Positional Accuracy: Located by supplier to within 100m	A14NW (E)	395	2	274800 198700
1	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: 25 Gelli Dawel Bryn Coch Neath P T, Bryncoch, Neath, Neath Port Talbot Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bw2901301 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 30th March 2007 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Surface Drain Status: Consent expired Positional Accuracy: Located by supplier to within 100m	A14NW (E)	395	2	274800 198700
2	Discharge Consents Operator: Brian Sheppard Property Type: Hotel Trade Location: Glynclydach Hotel Longford Rd Dyffr, Longford Rd Dyffryn Neath Authority: Natural Resources Wales Catchment Area: CLYDACH - HEADWATERS TO CONF WITH RIVER NEATH Reference: BM0044301 Permit Version: 1 Effective Date: 4th April 1985 Issued Date: 4th April 1985 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Pond - No Outlet Environment: Receiving Water: Clydach Pond Status: Effective Positional Accuracy: Located by supplier to within 100m	A12NE (W)	471	2	273900 198800
3	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works Location: Heol Illtyd Cso Bryncoch Npt, Bryncoch, Neath, Neath Port Talbot, Sa10 7sg Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0362001 Permit Version: 1 Effective Date: 31st March 2007 Issued Date: 21st March 2007 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib River Neath Status: Effective Positional Accuracy: Located by supplier to within 10m	A14SW (E)	478	2	274875 198555

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	Discharge Consents Operator: West Glamorgan County Council Property Type: Undefined Or Other Location: Waunceirch Primary School Neath Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bb4006201 Permit Version: 1 Effective Date: 8th October 1973 Issued Date: 8th October 1973 Revocation Date: 28th September 1992 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Dwr-Y-Felin Brook Thence River Status: Consent expired Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	561	2	273800 198360
5	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso 8 Bryncoch Swo 7b Bryncoch, Adjacent 46 Main Road, Neath Port Talbot Cbc Authority: Natural Resources Wales Catchment Area: CLYDACH - HEADWATERS TO CONF WITH RIVER NEATH Reference: Bw2901501 Permit Version: 2 Effective Date: 1st April 2004 Issued Date: 31st March 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of The River Clydach Status: Effective Positional Accuracy: Located by supplier to within 10m	A18SE (N)	617	2	274441 199300
6	Discharge Consents Operator: Evans G Property Type: Domestic Property (Single) Location: Neath 4 Cwm Clydach Cottages Dyffry, 4 Cwm Clydach Cottages Dyffryn R, Dyffryn Rd Bryncoch Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bp0021901 Permit Version: 1 Effective Date: 21st July 1986 Issued Date: 21st July 1986 Revocation Date: 10th October 1994 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: To Land Status: Consent expired Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	676	2	274080 199280
7	Discharge Consents Operator: Histow Overalls Ltd Property Type: Not Supplied Location: Abbey Mills Neath Abbey Neath, Neath Abbey, Neath Port Talbot Cbc, Sa10 7dy Authority: Natural Resources Wales Catchment Area: CLYDACH - HEADWATERS TO CONF WITH RIVER NEATH Reference: BB4024101 Permit Version: 1 Effective Date: 20th October 1977 Issued Date: 20th October 1977 Revocation Date: Not Supplied Discharge Type: Not Supplied Discharge: Freshwater Stream/River Environment: Receiving Water: River Clydach Status: Effective Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	782	2	273760 198030

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Longford Swo 8 Op.S.Stel Opp.S Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bw2901101 Permit Version: 2 Effective Date: 18th March 2005 Issued Date: 18th March 2005 Revocation Date: 30th March 2006 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of River Clydach (Ne Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	793	2	273670 198120
8	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Longford Swo 8 Op.S.Stel Opp.S Authority: Natural Resources Wales Catchment Area: River Neath Reference: BW2901101 Permit Version: 1 Effective Date: 17th June 1963 Issued Date: 17th June 1963 Revocation Date: 17th March 2005 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Tributary Of River Clydach (Ne Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	793	2	273670 198120
8	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Longford Road Cso Longford Road, Neath, Neath Port Talbot Authority: Natural Resources Wales Catchment Area: CLYDACH - HEADWATERS TO CONF WITH RIVER NEATH Reference: Bw2901101 Permit Version: 3 Effective Date: 31st March 2006 Issued Date: 31st March 2006 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of River Clydach (Ne Status: Effective Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	798	2	273664 198120
9	Discharge Consents Operator: The Land Authority For Wales Property Type: Domestic Property (Multiple) Location: Res Developement Caerwern Waunceirc, Caerwern Waunceirch Neath Authority: Natural Resources Wales Catchment Area: Not Given Reference: Bb4025201 Permit Version: 1 Effective Date: 26th January 1978 Issued Date: 26th January 1978 Revocation Date: 1st August 1996 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: River Clydach Status: Consent expired Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	833	2	273820 197910

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	Discharge Consents Operator: West Glamorgan County Council Property Type: Undefined Or Other Location: Waunceirch Primary School Neath Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bb4006202 Permit Version: 1 Effective Date: 8th October 1973 Issued Date: 8th October 1973 Revocation Date: 28th September 1992 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Dwr-Y-Felin Brook Thence River Status: Consent expired Positional Accuracy: Located by supplier to within 10m	A7SE (SW)	844	2	273830 197890
10	Discharge Consents Operator: Mr & Mrs B Richards Property Type: Public Houses & Bars Location: Glynclydach Coach House Longford Ro, Longford Road Neath Abbey Neath Authority: Natural Resources Wales Catchment Area: Not Given Reference: BM0002301 Permit Version: 1 Effective Date: 19th September 1979 Issued Date: 19th September 1979 Revocation Date: 1st March 2002 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: To Land Nr. River Clydach Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m	A17SE (NW)	866	2	273700 199200
11	Discharge Consents Operator: Cemex Uk Materials Ltd Property Type: Not Supplied Location: Gilfach Quarry Gilfach Road Neath Authority: Natural Resources Wales Catchment Area: CLYDACH - HEADWATERS TO CONF WITH RIVER NEATH Reference: BB4012201 Permit Version: 2 Effective Date: 8th March 1994 Issued Date: 8th March 1994 Revocation Date: Not Supplied Discharge Type: Trade And Other Matter Discharge Discharge: Freshwater Stream/River Environment: Receiving Water: Unnamed Trib Of River Clydach Status: Effective Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	908	2	274800 199500
11	Discharge Consents Operator: Rmc Roadstone Ltd (South Wales) Property Type: Extraction Of Stone, Gravel Etc. Location: Gilfach Quarry Gilfach Road Neath Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bb4012201 Permit Version: 1 Effective Date: 27th November 1974 Issued Date: 27th November 1974 Revocation Date: 7th March 1994 Discharge Type: Trade Effluent Discharge: Not Supplied Environment: Receiving Water: Unnamed Trib Of River Clydach Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	908	2	274800 199500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	Discharge Consents Operator: Mr Timothy Burden Property Type: Domestic Property (Single) Location: 2 Taillwyd Road, Neath Abbey, Neath, West Glamorgan, Sa10 7dt Authority: Natural Resources Wales Catchment Area: River Neath Reference: Npswqd007510 Permit Version: 1 Effective Date: 28th April 2009 Issued Date: 28th April 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: The River Clydach Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A7SE (SW)	954	2	273839 197753
12	Discharge Consents Operator: David Walsh Gibbon And Sarah Lousie Walsh Gibbon Property Type: Domestic Property (Single) Location: No2 Taillwydd Road Neath Abbey, Neath Port Talbot, Wales, Sa10 7dt Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0315701 Permit Version: 1 Effective Date: 15th December 2003 Issued Date: 15th December 2003 Revocation Date: 3rd April 2009 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: A Trib Of The Afon Clydach Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A7SE (SW)	957	2	273833 197753
13	Discharge Consents Operator: Lidl Uk Gmbh Property Type: Sewerage Network - Pumping Staions Location: Vale Of Neath Retail Park Ps, Cadoxton Road, Neath, Sa10 7ay Authority: Natural Resources Wales Catchment Area: NEATH - CONF WITH NEDD FECHAN AND MELLTE TO TL Reference: Bp0271701 Permit Version: 1 Effective Date: 21st August 1998 Issued Date: 21st August 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Neath Estuary Via Culvert Status: Effective Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	987	2	275157 197990
13	Discharge Consents Operator: Lidl Uk Gmbh Property Type: Sewerage Network - Pumping Station - Water Company Location: Vale Of Neath Retail Park Ps, Cadoxton Road, Neath, Sa10 7ay Authority: Natural Resources Wales Catchment Area: Not Given Reference: BP027170101 Permit Version: 1 Effective Date: 21st August 1998 Issued Date: 21st August 1998 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Neath Estuary Via Culvert Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	987	2	275157 197990
14	Prosecutions Relating to Controlled Waters Location: River Clydach, Taillwyd Road Area, Bryncoch, Skewen, Sa10 Prosecution Text: Allowing suspended solids to enter a nearby watercourse Prosecution Act: Wra91 S85(1) Hearing Date: 28th February 2005 Verdict: Guilty Fine: 4000 Cost: 1300 Positional Accuracy: Manually positioned within the geographical locality	A7NE (SW)	625	3	273779 198260

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Nearest Surface Water Feature	A13SW (SW)	0	-	274342 198594
15	Pollution Incidents to Controlled Waters Property Type: Building Sites Location: Adjacent Dwr Y Felin Road, NEATH Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Poor Operational Practise Incident Date: 11th November 1994 Incident Reference: 21783 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	15	3	274400 198700
16	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Dwr Y Felin Road Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 25th August 1994 Incident Reference: 20815 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	A13SE (SE)	300	3	274600 198400
16	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Dwr Y Felin Road Authority: Environment Agency, Welsh Region Pollutant: Oils - Other Oil Note: Not Supplied Incident Date: 12th September 1994 Incident Reference: 21148 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	A13SE (SE)	304	3	274600 198395
17	Pollution Incidents to Controlled Waters Property Type: Building Sites Location: WATERFALL Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Not Supplied Incident Date: 9th October 1994 Incident Reference: 21654 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NW (NW)	367	3	274100 198900
18	Pollution Incidents to Controlled Waters Property Type: Not Given Location: River Adjacent To, Taff Taff Confluence, NEATH ABBEY Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 20th September 1996 Incident Reference: 30136 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NE (W)	469	3	273900 198795

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	Pollution Incidents to Controlled Waters Property Type: Council Premises Location: Pumping Station, At Woodlands Drive Authority: Environment Agency, Welsh Region Pollutant: Coal Solids Note: Emergency Overflow Incident Date: 27th August 1991 Incident Reference: 1408 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 (W)	471	3	273900 198800
19	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Tyn Yr Heol Pumping Station, Bryncoch, NEATH Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Mechanical/Electrical Failure Incident Date: 6th May 1997 Incident Reference: 32177 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SW (NW)	512	3	274100 199100
20	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Manhole At Sewage Pumping Station, BRYNCOCH Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Clydach; Overflow Incident Date: 25th January 1998 Incident Reference: 34694 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Mechanical/Electrical Plant Failure Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SW (N)	519	3	274305 199195
20	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Tyr Yr Awel Road, Bryncoch, NEATH Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Clydach; Overflow Incident Date: 25th January 1998 Incident Reference: 34694 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Mechanical/Electrical Plant Failure Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SW (N)	520	3	274300 199195
20	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Other Location: Tyn Yr Heol, Pumping Station Authority: Environment Agency, Welsh Region Pollutant: Heavy Fuel Oil Note: Mechanical Failure Incident Date: 27th October 1994 Incident Reference: 21652 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	A18SW (N)	525	3	274300 199200
21	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Other Location: Tyn Yr Heol, Pumping Station Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Mechanical Failure Incident Date: 9th November 1994 Incident Reference: 21729 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	A18SW (N)	546	3	274205 199195

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Tyn Yr Heol, Pumping Station Authority: Environment Agency, Welsh Region Pollutant: Algae Note: Not Supplied Incident Date: 2nd September 1994 Incident Reference: 20928 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	A18SW (N)	548	3	274200 199195
21	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Other Location: Tyn Yr Heol, Pumping Station Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Mechanical Failure Incident Date: 3rd November 1994 Incident Reference: 21751 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	A18SW (N)	551	3	274205 199200
21	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Other Location: Tyn Yr Heol, Pumping Station Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Blocked Sewer Incident Date: 1st September 1994 Incident Reference: 20926 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	A18SW (N)	552	3	274200 199200
21	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Other Location: Tyn Yr Heol, Pumping Station, BRYNCOCH Authority: Environment Agency, Welsh Region Pollutant: Algae Note: Mechanical Failure Incident Date: 3rd February 1995 Incident Reference: 23345 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	A18SW (N)	555	3	274205 199205
22	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Clydach; Overflow Incident Date: 2nd January 1998 Incident Reference: 34481 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Mechanical/Electrical Plant Failure Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SW (N)	562	3	274350 199245
22	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Bryncoch Pumping Station Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Clydach; Overflow Incident Date: 2nd January 1998 Incident Reference: 34481 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Mechanical/Electrical Plant Failure Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SW (N)	567	3	274350 199250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	Pollution Incidents to Controlled Waters Property Type: Not Given Location: 200 Yards Upstream, Dunvant Square Authority: Environment Agency, Welsh Region Pollutant: Oils - Fats And Grease Note: Not Supplied Incident Date: 16th April 1996 Incident Reference: 28128 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	A17SE (NW)	573	3	274000 199095
23	Pollution Incidents to Controlled Waters Property Type: Sheep Location: 200 Yards Up Stream Of, Dyffryn Pant Authority: Environment Agency, Welsh Region Pollutant: Oils - Fats And Grease Note: Not Supplied Incident Date: 16th April 1996 Incident Reference: 28128 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	A17SE (NW)	576	3	274000 199100
24	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Sewage Pumping, St Teilo Street, Ty'n Heol Road, BRYNCOCH Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Mechanical/Electrical Plant Failure Incident Date: 1st November 1996 Incident Reference: 30442 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)	615	3	274400 199300
25	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Longford Road, Opposite Telephone Kiosk, NEATH Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Poor Management Control Incident Date: 16th August 1996 Incident Reference: 29469 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	641	3	273800 198200
26	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Tyn Yr Heolp S, BRYNCAE Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Mechanical/Electrical Plant Failure Incident Date: 18th February 1996 Incident Reference: 27423 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	A19SW (NE)	715	3	274900 199195
26	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Other Location: Tyn Yr Heol, Pumping Station, BRYNCOCH Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Mechanical Failure Incident Date: 18th February 1996 Incident Reference: 27423 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	A19SW (NE)	719	3	274900 199200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	Pollution Incidents to Controlled Waters Property Type: Not Given Location: No 16 Tailwyd Road Authority: Environment Agency, Welsh Region Pollutant: Chemicals - Other Inorganic Note: Natural Causes Incident Date: 28th April 1995 Incident Reference: 23729 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Natural Causes Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	724	3	273700 198200
28	Pollution Incidents to Controlled Waters Property Type: Quarrying (Hard Rock) Location: Gilfach Quarry Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Weather Incident Date: 3rd January 1991 Incident Reference: 2560 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	734	3	274800 199300
29	Pollution Incidents to Controlled Waters Property Type: Road (Lost Load) Location: Dwrffelin Road Authority: Environment Agency, Welsh Region Pollutant: Farm Land Run-Off Note: Accidental Spillage/Leakage Incident Date: 6th December 1995 Incident Reference: 27070 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Spillage Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	741	3	274800 198000
30	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Quarry Bryncoch Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 23rd June 1991 Incident Reference: 900 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	A19NW (NE)	776	3	274700 199400
31	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Bridge Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 19th June 1996 Incident Reference: 28932 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	A9NW (SE)	796	3	275001 198101
31	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Under Old Bridge, Along Footbridge Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 19th June 1996 Incident Reference: 28932 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	A9NW (SE)	800	3	275001 198096

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
32	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Dyffryn Clydach Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Inadequate Design/Capacity Incident Date: 15th July 1996 Incident Reference: 29290 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	810	3	273650 198120
33	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Not Supplied Incident Date: 10th July 1991 Incident Reference: 998 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	A18NW (N)	839	3	274200 199500
34	Pollution Incidents to Controlled Waters Property Type: Private Sewage (Non-PLC): Other Location: Glynclwydach, Coach House Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 27th January 1992 Incident Reference: 2871 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	A17SE (NW)	859	3	273800 199300
35	Pollution Incidents to Controlled Waters Property Type: Other Location: Roundabout Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Vandalism Incident Date: 25th March 1991 Incident Reference: 1939 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A3NW (S)	974	3	274300 197600
	River Quality Name: Clydach GQA Grade: River Quality A Reach: Tidal Limit - Dyffryn Arms Bryncoch Estimated Distance (km): 4.3 Flow Rate: Flow less than 0.62 cumecs Flow Type: River Year: 2000	A13NW (W)	309	3	274057 198748
36	Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 4th December 2003 Incident Reference: 205023 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Contaminated Water: Suspended Solids	A12SE (SW)	486	2	273870 198387

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 14th May 2013 Incident Reference: 1112478 Water Impact: Category 4 - No Impact Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Crude Sewage	A17SE (NW)	815	2	273720 199141
38	Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 27th July 2006 Incident Reference: 421608 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Crude Sewage	A18NW (N)	916	2	274239 199587
	Water Abstractions Operator: Cemex Uk Materials Ltd Licence Number: 21/58/74/0017 Permit Version: 101 Location: Stream West Of Gilfach Quarry, Neath Authority: Natural Resources Wales Abstraction: Mineral Products: Mineral Washing 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: 13th June 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	1085	2	274950 199620
	Water Abstractions Operator: Rmc Materials Limited Licence Number: 21/58/74/0017 Permit Version: 100 Location: Stream West Of Gilfach Quarry, Neath Authority: Environment Agency, Welsh Region Abstraction: Mineral Products: Mineral Washing Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Stream West Of Gilfach Quarry; Neath 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	A19NW (NE)	1085	3	274950 199620
	Water Abstractions Operator: Neath Golf Club Licence Number: Wa/058/0074/0010 Permit Version: Not Supplied Location: Neath Golf Club, Neath Golf Club, Cadoxton, Neath, Neath Port Talbot, Sa10 8ah Authority: Natural Resources Wales Abstraction: Golf courses: General Washing/Process Washing 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: 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	A20SE (E)	1608	2	275909 199239

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Neath Golf Club Licence Number: Wa/058/0074/0010 Permit Version: Not Supplied Location: Neath Golf Club, Neath Golf Club, Cadoxton, Neath, Neath Port Talbot, Sa10 8ah Authority: Natural Resources Wales Abstraction: Golf Courses: Spray Irrigation - Storage 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: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A20SE (E)	1608	2	275909 199239
	Water Abstractions Operator: Neath Golf Club Licence Number: 21/58/74/0027 Permit Version: 2 Location: U/G Strata, Pennant Measures Sandstone At Neath Golf Club Authority: Natural Resources Wales Abstraction: Golf Courses: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 4th September 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A20SE (E)	1610	2	275910 199240
	Water Abstractions Operator: Neath Golf Club Licence Number: 21/58/74/0027 Permit Version: 1 Location: U/G Strata, Pennant Measures Sandstone At Neath Golf Club Authority: Environment Agency, Welsh Region Abstraction: Golf Courses: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 1st April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A20SE (E)	1610	3	275910 199240
	Water Abstractions Operator: Neath Golf Club Licence Number: 21/58/74/0018 Permit Version: 100 Location: Spring 1 Authority: Environment Agency, Welsh Region Abstraction: Golf Courses: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Spring 1 Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(E)	1849	3	276150 199280
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 35 West Glamorgan Scale: 1:100,000	A13SE (SW)	0	3	274365 198626

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Soil Classification: Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Map Sheet: Sheet 35 West Glamorgan Scale: 1:100,000	A13NE (N)	0	3	274362 198638
	Drift Deposits Drift Deposit: Low permeability drift deposits occurring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints, brickearth, peat, river terrace deposits and marine and estuarine alluvium Map Sheet: Sheet 35 West Glamorgan Scale: 1:100,000	A13SE (SW)	0	3	274365 198626
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SE (SW)	0	1	274365 198626
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	A13SE (SW)	0	1	274365 198626
	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				
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 479.8 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13SW (SW)	0	4	274342 198593
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 22.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13SW (SW)	0	4	274341 198593
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 92.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (NW)	0	4	274357 198632
42	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13SW (SW)	0	4	274342 198593
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 42.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (N)	158	4	274439 198838

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 82.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (N)	253	4	274375 198937
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 320.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (NE)	324	4	274693 198821
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 177.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (NE)	324	4	274693 198821
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 128.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (W)	326	4	274036 198746
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 369.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (NW)	327	4	274051 198771
49	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 39.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SE (N)	344	4	274434 199027
50	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 134.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A12NE (W)	363	4	274005 198766
51	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 81.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 2	A12NE (NW)	380	4	274005 198798
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 113.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A12NE (NW)	380	4	274005 198798

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
53	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 32.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SE (NE)	386	4	274637 198989
54	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 488.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A12NE (W)	389	4	273939 198674
55	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 136.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 2	A13NW (NW)	397	4	274050 198886
56	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SE (NE)	402	4	274624 199018
57	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 112.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A13NW (NW)	402	4	274040 198880
58	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: Neath Primacy: 1	A12NE (NW)	435	4	273993 198874
59	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	A12NE (NW)	436	4	274000 198885
60	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 13.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (NW)	440	4	273974 198857
61	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 27.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A12NE (NW)	445	4	273933 198806

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
62	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 59.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (NW)	445	4	273961 198855
63	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 9.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 2	A12NE (NW)	450	4	273961 198855
64	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 145.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 2	A12NE (NW)	450	4	273990 198895
65	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 23.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SW (SE)	454	4	274738 198321
66	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A12NE (W)	456	4	273910 198786
67	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 21.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (W)	459	4	273910 198793
68	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 189.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NW (E)	466	4	274873 198629
69	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SW (E)	467	4	274871 198621
70	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 63.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SW (E)	469	4	274873 198619

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
71	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 17.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A18SW (NW)	473	4	274034 198986
72	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 2	A18SW (NW)	473	4	274034 198986
73	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 390.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SE (N)	475	4	274489 199152
74	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 26.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SW (SE)	477	4	274755 198306
75	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 20.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SW (E)	477	4	274873 198556
76	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 61.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (W)	478	4	273897 198809
77	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 139.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A18SW (NW)	479	4	274041 199002
78	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 98.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SW (N)	482	4	274182 199115
79	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 173.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SW (E)	482	4	274861 198481

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
80	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 113.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SW (SE)	486	4	274823 198382
81	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 7.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SW (SE)	486	4	274824 198384
82	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 86.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NW (E)	489	4	274872 198816
83	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 131.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SW (E)	492	4	274886 198540
84	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 38.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SW (SE)	493	4	274832 198385
85	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 49.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NW (SE)	502	4	274771 198285
86	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A18SW (N)	504	4	274166 199132
87	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 15.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 2	A18SW (N)	506	4	274170 199135
88	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 132.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A18SW (N)	506	4	274170 199135

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
89	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 15.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (NW)	508	4	273888 198852
90	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 108.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A18SW (N)	510	4	274156 199133
91	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (NW)	518	4	273874 198848
92	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 56.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (NW)	519	4	273873 198849
93	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 44.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (NW)	519	4	273873 198849
94	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: Neath Primacy: 1	A14SW (SE)	521	4	274874 198404
95	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SW (SE)	523	4	274872 198398
96	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 53.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SW (SE)	526	4	274870 198386
97	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 108.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SE (W)	545	4	273782 198462

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
98	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 285.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A12SE (SW)	545	4	273809 198380
99	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NW (SE)	548	4	274794 198243
100	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SW (N)	550	4	274266 199218
101	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 63.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A18SW (N)	551	4	274259 199218
102	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 368.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (NW)	551	4	273861 198890
103	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 25.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SE (W)	552	4	273775 198471
104	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 2	A12SE (W)	552	4	273775 198471
105	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 58.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (NW)	552	4	273857 198886
106	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 22.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NW (NE)	555	4	274919 198877

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
107	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 40.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SW (NW)	556	4	274057 199123
108	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NW (SE)	561	4	274801 198232
109	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 121.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SE (NE)	561	4	274668 199177
110	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 193.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SE (NE)	562	4	274687 199167
111	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 54.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SE (N)	564	4	274407 199249
112	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 367.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SE (W)	566	4	273760 198482
113	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 174.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (NW)	573	4	273817 198861
114	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 75.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SW (NW)	574	4	274073 199157
115	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 24.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8NE (S)	575	4	274543 198039

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
116	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 63.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8NE (S)	576	4	274521 198030
117	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 68.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NW (NE)	576	4	274937 198891
118	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 13.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NW (SE)	577	4	274809 198217
119	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 519.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8NE (S)	578	4	274461 198010
120	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 140.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NW (SE)	589	4	274816 198206
121	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 99.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SW (N)	595	4	274292 199270
122	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 68.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SW (N)	607	4	274358 199290
123	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 254.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SW (N)	607	4	274358 199290
124	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 332.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A18SW (N)	608	4	274268 199278

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
125	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 67.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SW (NW)	629	4	274084 199229
126	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 145.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19SW (NE)	662	4	274724 199261
127	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 122.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SW (NW)	693	4	274071 199295
128	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 21.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NW (SE)	700	4	274848 198086
129	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 79.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NW (SE)	708	4	274837 198068
130	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NW (SE)	731	4	274789 198005
131	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 174.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NW (SE)	732	4	274789 198003
132	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 58.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 2	A7NE (SW)	740	4	273718 198144
133	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 51.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A7NE (SW)	744	4	273735 198115

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
134	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 180.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A7NE (SW)	744	4	273735 198115
135	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19SW (NE)	747	4	274832 199294
136	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 64.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19SW (NE)	747	4	274832 199294
137	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19SW (NE)	747	4	274837 199290
138	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 549.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19SW (NE)	747	4	274848 199281
139	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 24.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19SW (NE)	750	4	274829 199299
140	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 13.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A7NE (SW)	754	4	273695 198153
141	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 47.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19SW (NE)	755	4	275005 199135
142	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 149.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19NW (NE)	758	4	274815 199319

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
143	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NE (SW)	762	4	273694 198140
144	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NE (SW)	770	4	273687 198136
145	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 76.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NW (SW)	772	4	273686 198135
146	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 399.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	784	4	273567 198810
147	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 173.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18NE (N)	788	4	274679 199422
148	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 165.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A7SE (SW)	806	4	273810 197952
149	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 34.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19SE (NE)	806	4	275061 199146
150	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: Underground Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A7NE (SW)	807	4	273805 197956
151	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19NW (NE)	819	4	274724 199437

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
152	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: Neath Primacy: 1	A17SE (NW)	819	4	273700 199121
153	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 14.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17SE (NW)	819	4	273706 199130
154	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 55.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17SE (NW)	822	4	273712 199143
155	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 32.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19NW (NE)	824	4	274718 199445
156	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 85.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	825	4	273500 198694
157	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 28.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	825	4	273500 198696
158	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 59.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NE (E)	840	4	275209 198914
159	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 3.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18NE (N)	843	4	274698 199473
160	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 11.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18NE (N)	843	4	274698 199473

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
161	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 3.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19NW (N)	844	4	274701 199473
162	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 124.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	844	4	273483 198714
163	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 60.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19NW (N)	846	4	274704 199474
164	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 23.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18NE (N)	847	4	274690 199480
165	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NW (SW)	848	4	273619 198098
166	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 174.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A18NW (N)	852	4	274312 199532
167	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18NW (N)	852	4	274312 199532
168	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 75.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18NW (N)	853	4	274321 199534
169	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 123.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18NW (N)	855	4	274320 199536

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
170	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: Neath Primacy: 1	A18NE (N)	860	4	274675 199499
171	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 26.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7SE (SW)	863	4	273834 197863
172	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 51.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NW (SW)	863	4	273607 198088
173	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9SW (SE)	865	4	274793 197843
174	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 152.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18NE (N)	867	4	274667 199509
175	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 35.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18NE (N)	867	4	274667 199509
176	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 92.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9SW (SE)	869	4	274795 197840
177	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 90.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17SW (NW)	877	4	273672 199181
178	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 202.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NE (E)	893	4	275260 198926

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
179	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	893	4	273438 198738
180	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 128.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19NW (NE)	894	4	274755 199505
181	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 34.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	904	4	273418 198677
182	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 74.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	904	4	273418 198677
183	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 78.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NW (SW)	911	4	273578 198046
184	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 54.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SW (W)	917	4	273401 198541
185	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 47.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17SW (W)	917	4	273487 198969
186	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17SW (NW)	924	4	273501 199014
187	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 31.5 Watercourse Level: Underground Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A7SE (SW)	925	4	273830 197792

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
188	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 90.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17SW (NW)	932	4	273563 199129
189	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 101.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	933	4	273387 198663
190	OS Water Network Lines Watercourse Form: Canal Watercourse Length: 299.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Tennant Canal Catchment Name: Neath Primacy: 1	A9NE (SE)	937	4	275062 197960
191	OS Water Network Lines Watercourse Form: Canal Watercourse Length: 592.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Tennant Canal Catchment Name: Neath Primacy: 1	A9SE (SE)	941	4	275037 197931
192	OS Water Network Lines Watercourse Form: Canal Watercourse Length: 9.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Tennant Canal Catchment Name: Neath Primacy: 1	A9SE (SE)	941	4	275046 197939
193	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 21.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18NW (N)	947	4	274231 199617
194	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 128.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A7SE (SW)	949	4	273835 197761
195	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 2	A18NW (N)	956	4	274225 199625
196	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 58.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9SW (SE)	961	4	274883 197788

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
197	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: Neath Primacy: 1	A9SW (SE)	961	4	274843 197761
198	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 296.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SW (W)	961	4	273356 198571
199	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SW (W)	961	4	273356 198571
200	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 0.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SW (W)	961	4	273356 198572
201	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 97.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	962	4	273366 198726
202	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9SW (SE)	963	4	274844 197760
203	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 154.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SW (W)	963	4	273354 198569
204	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 442.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17SW (NW)	966	4	273612 199249
205	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: Neath Primacy: 1	A17SW (NW)	966	4	273612 199248

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
206	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18NW (N)	967	4	274223 199636
207	OS Water Network Lines Watercourse Form: Tidal river Watercourse Length: 946.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A9SE (SE)	968	4	275078 197933
208	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 18.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A3NW (S)	975	4	274285 197599
209	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 59.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9SW (SE)	982	4	274852 197741
210	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9SW (SE)	982	4	274852 197741
211	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 22.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 1	A23SW (N)	986	4	274196 199649
212	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 29.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Clydach Catchment Name: Neath Primacy: 2	A23SW (N)	986	4	274196 199649
213	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 99.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9SW (SE)	992	4	274858 197735
214	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 71.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A3NW (S)	993	4	274282 197581

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
215	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 28.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	994	4	273352 198820
216	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 211.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 2	A19NW (NE)	997	4	274777 199608
217	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 133.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	997	4	273352 198830
218	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 159.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	997	4	273352 198830
219	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 109.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19NW (NE)	998	4	274779 199608

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Neath Port Talbot County Borough Council - Has supplied landfill data		0	5	274365 198626
220	Potentially Infilled Land (Non-Water) Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13SE (S)	114	-	274403 198486
221	Potentially Infilled Land (Non-Water) Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A12SE (W)	421	-	273899 198525
222	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A7NE (SW)	439	-	274010 198265
223	Potentially Infilled Land (Non-Water) Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NW (E)	456	-	274860 198708
224	Potentially Infilled Land (Non-Water) Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A18SW (N)	491	-	274176 199123
225	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A7NE (SW)	545	-	273974 198156
226	Potentially Infilled Land (Non-Water) Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NW (E)	570	-	274972 198744
227	Potentially Infilled Land (Non-Water) Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NW (NE)	607	-	274958 198921
228	Potentially Infilled Land (Non-Water) Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A12SW (W)	654	-	273663 198569
229	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A12SE (SW)	672	-	273699 198316
230	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A7NE (SW)	713	-	273733 198170
231	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A7NE (SW)	726	-	273801 198069
232	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A17SW (NW)	952	-	273477 199029
233	Potentially Infilled Land (Non-Water) Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A3NW (S)	997	-	274162 197590
234	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1935	A13SE (E)	84	-	274485 198612
235	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A13NE (NE)	93	-	274485 198727

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
236	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1940	A13SE (S)	97	-	274408 198513
237	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1935	A13NE (E)	99	-	274505 198672
238	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1935	A14NW (E)	318	-	274714 198748
239	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1940	A12SE (SW)	332	-	274018 198433
240	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A13NW (NW)	334	-	274043 198773
241	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A13SE (SE)	364	-	274672 198381
242	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14NW (E)	425	-	274826 198734
243	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14SW (E)	440	-	274843 198609
244	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14NW (E)	449	-	274855 198636
245	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A18SE (NE)	525	-	274633 199155
246	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A18SE (NE)	566	-	274683 199175
247	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A18SE (N)	574	-	274587 199227
248	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1935	A19SW (NE)	620	-	274950 198970
249	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A18NE (N)	627	-	274462 199309
250	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A7NE (SW)	629	-	273874 198133
251	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A14NE (E)	631	-	275037 198657
252	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A19SW (NE)	684	-	275005 199003
253	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A9NW (SE)	684	-	274724 198015
254	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A19SE (NE)	734	-	275038 199045
255	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A18NE (N)	825	-	274453 199508
256	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1884	A18NE (N)	862	-	274551 199534

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
257	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1940	A7NW (SW)	967	-	273507 198049
258	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1935	A9SW (SE)	994	-	274844 197723
259	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A3NW (S)	994	-	274289 197580

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 (SW)	0	1	274365 198626
	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 (SW)	0	1	274365 198626
	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	A13SE (S)	69	1	274375 198521
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: 2.2 - 3.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SE (E)	94	1	274500 198626
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: 2.2 - 3.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SE (SE)	219	1	274500 198430
	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: 15 - 30 mg/kg	A8NE (S)	403	1	274486 198199
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: 2.2 - 3.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NE (S)	408	1	274500 198203

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 25 - 35 mg/kg Concentration: Cadmium 3.0 - 6.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12NE (W)	419	1	273919 198718
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 25 - 35 mg/kg Concentration: Cadmium 3.0 - 6.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SE (W)	433	1	273884 198576
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 35 - 45 mg/kg Concentration: Cadmium 2.2 - 3.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8NE (SE)	454	1	274690 198273
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 25 - 35 mg/kg Concentration: Cadmium 3.0 - 6.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 30 - 45 mg/kg Concentration:	A12SE (W)	458	1	273873 198467
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium 2.2 - 3.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8NE (SE)	461	1	274656 198241
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 35 - 45 mg/kg Concentration: Cadmium >6.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 30 - 45 mg/kg Concentration:	A17SE (NW)	508	1	274000 199000

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 35 - 45 mg/kg Concentration: Cadmium 3.0 - 6.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SE (SW)	519	1	273879 198301
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium 3.0 - 6.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8NE (S)	546	1	274500 198055
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 25 - 35 mg/kg Concentration: Cadmium 3.0 - 6.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 30 - 45 mg/kg Concentration:	A12SE (W)	579	1	273742 198510
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 25 - 35 mg/kg Concentration: Cadmium 3.0 - 6.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 30 - 45 mg/kg Concentration:	A12SE (SW)	604	1	273758 198350
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 45 - 60 mg/kg Concentration: Cadmium 3.0 - 6.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7NE (SW)	659	1	274000 198000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 45 - 60 mg/kg Concentration: Cadmium 2.2 - 3.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SE (E)	661	1	275065 198594

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: 25 - 35 mg/kg Concentration: Cadmium: 2.2 - 3.0 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A14NE (E)	662	1	275068 198666
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 35 - 45 mg/kg Concentration: Cadmium: 1.8 - 2.2 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A19SW (NE)	679	1	275000 199000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 25 - 35 mg/kg Concentration: Cadmium: 3.0 - 6.0 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A12SW (SW)	699	1	273675 198302
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 25 - 35 mg/kg Concentration: Cadmium: 2.2 - 3.0 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A14NE (E)	707	1	275075 198895
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 25 - 35 mg/kg Concentration: Cadmium: 1.8 - 2.2 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A19SE (NE)	746	1	275045 199058
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 25 - 35 mg/kg Concentration: Cadmium: 2.2 - 3.0 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A19SE (NE)	755	1	275086 199000

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 35 - 45 mg/kg Concentration: Cadmium 3.0 - 6.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8SW (S)	774	1	274297 197800
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 25 - 35 mg/kg Concentration: Cadmium 3.0 - 6.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8SW (S)	792	1	274229 197788
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 25 - 35 mg/kg Concentration: Cadmium 3.0 - 6.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 30 - 45 mg/kg Concentration:	A7NE (SW)	810	1	273751 198000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 35 - 45 mg/kg Concentration: Cadmium 1.8 - 2.2 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A19SE (NE)	817	1	275078 199139
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 25 - 35 mg/kg Concentration: Cadmium >6.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 30 - 45 mg/kg Concentration:	A12NW (W)	819	1	273500 198643
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 25 - 35 mg/kg Concentration: Cadmium 3.0 - 6.0 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 30 - 45 mg/kg Concentration:	A7SE (SW)	826	1	274000 197814

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: 25 - 35 mg/kg Concentration: Cadmium: 3.0 - 6.0 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A7SE (SW)	863	1	273819 197874
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 45 - 60 mg/kg Concentration: Cadmium: 3.0 - 6.0 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A8SW (S)	880	1	274143 197713
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 45 - 60 mg/kg Concentration: Cadmium: 3.0 - 6.0 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A7SE (SW)	883	1	273838 197837
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 25 - 35 mg/kg Concentration: Cadmium: 2.2 - 3.0 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A9NW (SE)	917	1	275032 197959
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 35 - 45 mg/kg Concentration: Cadmium: 3.0 - 6.0 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A7NW (SW)	919	1	273603 198000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 25 - 35 mg/kg Concentration: Cadmium: 3.0 - 6.0 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A9SW (SE)	929	1	275000 197914

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: 25 - 35 mg/kg Concentration: Cadmium: 3.0 - 6.0 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A8SW (S)	961	1	274122 197635
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 25 - 35 mg/kg Concentration: Cadmium: 3.0 - 6.0 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A7SE (SW)	990	1	273842 197710
260	BGS Recorded Mineral Sites Site Name: Bryn-Teg Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 154088 Type: Underground Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A13SE (S)	120	1	274395 198473
261	BGS Recorded Mineral Sites Site Name: Ty-Draw Farm Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 154084 Type: Underground Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12SE (W)	433	1	273892 198496
262	BGS Recorded Mineral Sites Site Name: Ty-llwyd Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 154086 Type: Underground Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	435	1	274001 198280
263	BGS Recorded Mineral Sites Site Name: Waun-Ceirch Coal Slant Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 229863 Type: Underground Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Swansea Foor Foot Coal (South Wales) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	527	1	274001 198157

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
264	BGS Recorded Mineral Sites Site Name: Fire Engine Pit Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 154181 Type: Underground Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SW (N)	571	1	274239 199233
265	BGS Recorded Mineral Sites Site Name: Bryn-Tirion Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 154274 Type: Underground Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14NW (E)	593	1	274993 198753
266	BGS Recorded Mineral Sites Site Name: Bryn-Tirion Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 154273 Type: Underground Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	627	1	274978 198925
267	BGS Recorded Mineral Sites Site Name: Ty-Draw Farm Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 154083 Type: Underground Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12SW (W)	648	1	273669 198586
268	BGS Recorded Mineral Sites Site Name: Ty-Llwyd Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 154085 Type: Underground Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	681	1	273690 198312
269	BGS Recorded Mineral Sites Site Name: Bryn-Clydach Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 154087 Type: Underground Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Swansea Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	704	1	273806 198095

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
270	BGS Recorded Mineral Sites Site Name: Court Herbert Quarry Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 154090 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Swansea Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A8SW (S)	776	1	274165 197815
271	BGS Recorded Mineral Sites Site Name: Crown Inn Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 154389 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14SE (E)	817	1	275204 198470
272	BGS Recorded Mineral Sites Site Name: Heol-Darw Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 154089 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Swansea Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	825	1	273776 197956
273	BGS Recorded Mineral Sites Site Name: Leiros Gravel Pit Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 154272 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	916	1	275198 199132
274	BGS Recorded Mineral Sites Site Name: Stanley Pit Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 154182 Type: Underground Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Swansea Four Feet Coal (South Wales) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NW (W)	939	1	273455 198952

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: 274220, 198270 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured 73.50 mg/kg Concentration: Cadmium Measured 2.70 mg/kg Concentration: Chromium Measured 56.80 mg/kg Concentration: Lead Measured 268.60 mg/kg Concentration: Nickel Measured 46.60 mg/kg Concentration:	A8NW (S)	322	1	274220 198270
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 274750, 198730 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured 51.80 mg/kg Concentration: Cadmium Measured 1.40 mg/kg Concentration: Chromium Measured 74.40 mg/kg Concentration: Lead Measured 200.10 mg/kg Concentration: Nickel Measured 32.10 mg/kg Concentration:	A14NW (E)	350	1	274750 198730
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 274750, 198750 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured 57.10 mg/kg Concentration: Cadmium Measured 2.20 mg/kg Concentration: Chromium Measured 56.40 mg/kg Concentration: Lead Measured 90.00 mg/kg Concentration: Nickel Measured 28.30 mg/kg Concentration:	A14NW (E)	354	1	274750 198750
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 274750, 198250 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured 90.60 mg/kg Concentration: Cadmium Measured 2.30 mg/kg Concentration: Chromium Measured 84.50 mg/kg Concentration: Lead Measured 447.70 mg/kg Concentration: Nickel Measured 47.80 mg/kg Concentration:	A9NW (SE)	512	1	274750 198250
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 273760, 198750 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured 95.60 mg/kg Concentration: Cadmium Measured 3.30 mg/kg Concentration: Chromium Measured 73.40 mg/kg Concentration: Lead Measured 134.90 mg/kg Concentration: Nickel Measured 38.30 mg/kg Concentration:	A12NE (W)	582	1	273760 198750

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: 273760, 198270 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured 71.80 mg/kg Concentration: Cadmium Measured 1.60 mg/kg Concentration: Chromium Measured 55.30 mg/kg Concentration: Lead Measured 270.70 mg/kg Concentration: Nickel Measured 34.70 mg/kg Concentration:	A7NE (SW)	637	1	273760 198270
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 274280, 197740 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured 156.70 mg/kg Concentration: Cadmium Measured 3.00 mg/kg Concentration: Chromium Measured 57.50 mg/kg Concentration: Lead Measured 221.30 mg/kg Concentration: Nickel Measured 48.30 mg/kg Concentration:	A8SW (S)	835	1	274280 197740
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 275260, 198730 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured 84.00 mg/kg Concentration: Cadmium Measured 1.50 mg/kg Concentration: Chromium Measured 65.20 mg/kg Concentration: Lead Measured 113.50 mg/kg Concentration: Nickel Measured 33.40 mg/kg Concentration:	A14NE (E)	856	1	275260 198730
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 274750, 197730 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured 77.60 mg/kg Concentration: Cadmium Measured 2.20 mg/kg Concentration: Chromium Measured 80.00 mg/kg Concentration: Lead Measured 480.20 mg/kg Concentration: Nickel Measured 43.30 mg/kg Concentration:	A9SW (SE)	942	1	274750 197730
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 275260, 198230 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured 48.30 mg/kg Concentration: Cadmium Measured 2.80 mg/kg Concentration: Chromium Measured 127.90 mg/kg Concentration: Lead Measured 661.00 mg/kg Concentration: Nickel Measured 106.90 mg/kg Concentration:	A9NE (SE)	945	1	275260 198230

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	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 (SW)	0	1	274365 198626
	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 (SW)	0	6	274365 198626
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13SE (SW)	0	-	274365 198626
	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 (SW)	0	1	274365 198626
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	274365 198626
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	274365 198626
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	274365 198626
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	75	1	274398 198526
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	274365 198626
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	75	1	274398 198526
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	274365 198626

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Radon Potential - Radon Affected Areas Affected Area: The property is an Intermediate probability radon area (3 to 5% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	0	1	274365 198601
	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 (SW)	0	1	274365 198626
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	0	1	274365 198601
	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 (SW)	0	1	274365 198626

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
275	Contemporary Trade Directory Entries Name: Winking Clean Location: 34, Fernlea Park, Neath, West Glamorgan, SA10 7SX Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address	A13NW (NW)	250	-	274159 198786
276	Contemporary Trade Directory Entries Name: Country Style Blinds Location: 80, Llygad yr Haul, Neath, West Glamorgan, SA10 7SP Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (E)	385	-	274790 198703
277	Contemporary Trade Directory Entries Name: T L D Mobile Vehicle Repair Location: 81, Brookfield, Neath, SA10 7EL Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A7NE (SW)	472	-	273951 198281
278	Contemporary Trade Directory Entries Name: Pacetech Ltd Location: 11, Glendale, Neath, West Glamorgan, SA10 7PF Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A18SE (N)	519	-	274385 199204
279	Contemporary Trade Directory Entries Name: Tynyarn Meat Supplies Location: 15, Ffrwd Vale, Neath, West Glamorgan, SA10 7BA Classification: Meat - Wholesale Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	602	-	274772 198151
280	Contemporary Trade Directory Entries Name: Fire Supplies Direct Location: Unit 5 Neath Abbey Business Park, Taillywd Road, Neath Abbey, Neath, West Glamorgan, SA10 7DY Classification: Firefighting Equipment Status: Active Positional Accuracy: Manually positioned within the geographical locality	A7NE (SW)	633	-	273786 198234
281	Contemporary Trade Directory Entries Name: Galaxy Cleaning Location: 43, Mill Race, Neath Abbey, Neath, West Glamorgan, SA10 7FL Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NW (SW)	651	-	274062 197979
282	Contemporary Trade Directory Entries Name: West Coast Cooling Location: 12, Gilfach Road, Neath, West Glamorgan, SA10 8EH Classification: Air Conditioning & Refrigeration Contractors Status: Active Positional Accuracy: Automatically positioned to the address	A19SW (NE)	664	-	274926 199089
283	Contemporary Trade Directory Entries Name: Ovensclean Swansea Location: 16b, Taillywd Road, Neath Abbey, Neath, West Glamorgan, SA10 7DY Classification: Oven cleaning Status: Active Positional Accuracy: Automatically positioned to the address	A7NE (SW)	684	-	273740 198212
283	Contemporary Trade Directory Entries Name: Clean Care Location: B, 16, Taillywd Road, Neath Abbey, Neath, West Glamorgan, SA10 7DY Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	684	-	273740 198212
284	Contemporary Trade Directory Entries Name: B G Lewis Location: 15, Kestrel Close, Bryncoch, Neath, West Glamorgan, SA10 8DX Classification: Gas Appliances - Sales & Service Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NE (E)	927	-	275326 198782

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
285	Points of Interest - Commercial Services Name: T L D Mobile Vehicle Repair Location: 81 Brookfield, Neath, SA10 7EL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7NE (SW)	472	7	273951 198281
286	Points of Interest - Manufacturing and Production Name: Trevor G Thomas Location: Tyn yr Heol Farm, Main Road, Bryncoch, Neath, SA10 7PD Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A18SE (NE)	438	7	274584 199082
287	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	A18SE (N)	566	7	274585 199219
288	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	A8SW (S)	774	7	274170 197816
289	Points of Interest - Manufacturing and Production Name: Vale of Neath Business Park Location: SA10 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	837	7	275075 198128
290	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	A9SW (SE)	958	7	274919 197818
291	Points of Interest - Public Infrastructure Name: Weir Location: SA10 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	733	7	273745 198120
292	Points of Interest - Public Infrastructure Name: Weir Location: SA10 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	804	7	273805 197959
293	Points of Interest - Recreational and Environmental Name: Playground Location: (Llys Wern), SA10 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A13NW (NW)	38	7	274335 198666
294	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)	437	7	274840 198608
294	Points of Interest - Recreational and Environmental Name: Playground Location: (Heol-Y-Felin), SA10 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A14SW (E)	443	7	274846 198608
295	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	A12SE (W)	608	7	273721 198459

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
295	Points of Interest - Recreational and Environmental Name: Playground Location: (Lon Glynfelin), SA10 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A12SE (W)	609	7	273720 198457
296	Points of Interest - Recreational and Environmental Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	786	7	275180 198804
296	Points of Interest - Recreational and Environmental Name: Play Area Location: Curlew Close, SA10 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	786	7	275180 198804
297	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	A23SE (N)	962	7	274445 199646
297	Points of Interest - Recreational and Environmental Name: Playground Location: Elias Drive, SA10 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A23SE (N)	962	7	274445 199646

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
298	Ancient Woodland Name: Not Supplied Reference: 14007 Area(m ²): 6642.56 Type: Ancient and Semi-Natural Woodland	A13NW (W)	323	2	274047 198757
299	Ancient Woodland Name: Not Supplied Reference: 14003 Area(m ²): 23282.31 Type: Ancient and Semi-Natural Woodland	A12NE (W)	403	2	273920 198648
300	Ancient Woodland Name: Not Supplied Reference: 21393 Area(m ²): 4275.75 Type: Restored Ancient Woodland Site	A13NW (NW)	441	2	274025 198926
301	Ancient Woodland Name: Not Supplied Reference: 10802 Area(m ²): 22808.35 Type: Restored Ancient Woodland Site	A18SW (N)	473	2	274170 199099
302	Ancient Woodland Name: Not Supplied Reference: 14006 Area(m ²): 2790.42 Type: Ancient and Semi-Natural Woodland	A12NE (NW)	475	2	273984 198928
303	Ancient Woodland Name: Not Supplied Reference: 14005 Area(m ²): 4636.71 Type: Ancient and Semi-Natural Woodland	A12NE (NW)	523	2	273879 198867
304	Ancient Woodland Name: Not Supplied Reference: 10804 Area(m ²): 25867.06 Type: Restored Ancient Woodland Site	A18SW (N)	591	2	274158 199225
305	Ancient Woodland Name: Not Supplied Reference: 22334 Area(m ²): 1452.51 Type: Restored Ancient Woodland Site	A18SE (N)	595	2	274363 199278
306	Ancient Woodland Name: Not Supplied Reference: 9072 Area(m ²): 108675.75 Type: Ancient and Semi-Natural Woodland	A14SE (E)	764	2	275130 198392
307	Ancient Woodland Name: Not Supplied Reference: 21394 Area(m ²): 3580.24 Type: Restored Ancient Woodland Site	A12NW (NW)	812	2	273599 198961
308	Ancient Woodland Name: Not Supplied Reference: 10341 Area(m ²): 4726.95 Type: Restored Ancient Woodland Site	A17SW (NW)	846	2	273608 199041
309	Ancient Woodland Name: Not Supplied Reference: 22336 Area(m ²): 13621.76 Type: Restored Ancient Woodland Site	A18NW (N)	865	2	274314 199546
310	Ancient Woodland Name: Not Supplied Reference: 8872 Area(m ²): 4093.04 Type: Ancient and Semi-Natural Woodland	A17SW (NW)	897	2	273589 199105
311	Ancient Woodland Name: Not Supplied Reference: 21395 Area(m ²): 6282.47 Type: Restored Ancient Woodland Site	A17SW (NW)	930	2	273666 199259

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
312	Ancient Woodland Name: Not Supplied Reference: 10803 Area(m ²): 1672.92 Type: Restored Ancient Woodland Site	A18NW (N)	940	2	274237 199610
313	Ancient Woodland Name: Not Supplied Reference: 42572 Area(m ²): 5590.56 Type: Plantation on Ancient Woodland	A12NW (W)	986	2	273354 198793
314	Ancient Woodland Name: Not Supplied Reference: 10340 Area(m ²): 2051.89 Type: Restored Ancient Woodland Site	A17SW (W)	995	2	273412 198995
315	Ancient Woodland Name: Not Supplied Reference: 40183 Area(m ²): 135254.97 Type: Plantation on Ancient Woodland	A17SW (NW)	996	2	273471 199106
316	Ancient Woodland Name: Not Supplied Reference: 40182 Area(m ²): 3251.78 Type: Plantation on Ancient Woodland	A12NW (W)	1000	2	273365 198884

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices City and County of Swansea - Environmental Health Department Neath Port Talbot County Borough Council - Environmental Health Department	January 2015 March 2015	Annual Rolling Update Annual Rolling Update
Discharge Consents Natural Resources Wales Environment Agency - Welsh Region	April 2018 August 2014	Quarterly Quarterly
Enforcement and Prohibition Notices Environment Agency - Welsh Region	March 2013	As notified
Integrated Pollution Controls Environment Agency - Welsh Region	October 2008	Variable
Integrated Pollution Prevention And Control Environment Agency - Welsh Region Natural Resources Wales	April 2018 April 2018	Quarterly Quarterly
Local Authority Integrated Pollution Prevention And Control Swansea Bay Port Health Authority Neath Port Talbot County Borough Council - Environmental Health Department City and County of Swansea - Environmental Health Department	April 2014 August 2012 June 2014	Variable Variable Variable
Local Authority Pollution Prevention and Controls Swansea Bay Port Health Authority City and County of Swansea - Environmental Health Department Neath Port Talbot County Borough Council - Environmental Health Department	April 2014 June 2014 March 2014	Annually Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Swansea Bay Port Health Authority City and County of Swansea - Environmental Health Department Neath Port Talbot County Borough Council - Environmental Health Department	April 2014 June 2014 March 2014	Variable Variable Variable
Nearest Surface Water Feature Ordnance Survey	September 2017	
Pollution Incidents to Controlled Waters Environment Agency - Welsh Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - Welsh Region Natural Resources Wales	March 2013 March 2013	As notified As notified
Prosecutions Relating to Controlled Waters Environment Agency - Welsh Region Natural Resources Wales	March 2013 March 2013	As notified As notified
Registered Radioactive Substances Natural Resources Wales Environment Agency - Welsh Region	January 2015 January 2015	As notified
River Quality Environment Agency - Head Office	November 2001	Not Applicable
Substantiated Pollution Incident Register Environment Agency Wales - South West Area Natural Resources Wales	April 2018 April 2018	Quarterly Quarterly
Water Abstractions Environment Agency - Welsh Region Natural Resources Wales	April 2018 April 2018	Quarterly Quarterly
Water Industry Act Referrals Natural Resources Wales Environment Agency - Welsh Region	April 2018 October 2017	Quarterly Quarterly
Groundwater Vulnerability Environment Agency - Head Office	April 2015	Not Applicable

Agency & Hydrological	Version	Update Cycle
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Natural Resources Wales	November 2016	As notified
Extreme Flooding from Rivers or Sea without Defences Natural Resources Wales	February 2018	Quarterly
Flooding from Rivers or Sea without Defences Natural Resources Wales	February 2018	Quarterly
Areas Benefiting from Flood Defences Natural Resources Wales	February 2018	Quarterly
Flood Water Storage Areas Natural Resources Wales	February 2018	Quarterly
Flood Defences Natural Resources Wales	July 2017	Quarterly
OS Water Network Lines Ordnance Survey	May 2018	Quarterly
Surface Water 1 in 30 year Flood Extent Natural Resources Wales	October 2013	As notified
Surface Water 1 in 100 year Flood Extent Natural Resources Wales	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent Natural Resources Wales	October 2013	As notified
Surface Water Suitability Natural Resources Wales	October 2013	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified

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	April 2018	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 Natural Resources Wales	April 2018 January 2018	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency Wales - South West Area Natural Resources Wales	April 2018 April 2018	Quarterly Quarterly
Local Authority Landfill Coverage City and County of Swansea - Environmental Health Department Neath Port Talbot County Borough Council - Environmental Health Department	May 2000 May 2000	Not Applicable Not Applicable
Local Authority Recorded Landfill Sites City and County of Swansea - Environmental Health Department Neath Port Talbot County Borough Council - Environmental Health Department	May 2000 September 2003	Not Applicable 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	September 2017	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Variable
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 Neath Port Talbot County Borough Council - Planning Department	January 2016 October 2015	Variable Variable
Planning Hazardous Substance Consents City and County of Swansea - Planning Department Neath Port Talbot County Borough Council - Planning Department	January 2016 October 2015	Variable Variable

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	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2018	Bi-Annually
BGS Urban Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Urban Soil Chemistry Averages British Geological Survey - National Geoscience Information Service	October 2015	As notified
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
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	June 2015	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	May 2018	Quarterly
Fuel Station Entries Catalist Ltd - Experian	April 2018	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	June 2018	Quarterly
Points of Interest - Education and Health PointX	June 2018	Quarterly
Points of Interest - Manufacturing and Production PointX	June 2018	Quarterly
Points of Interest - Public Infrastructure PointX	June 2018	Quarterly
Points of Interest - Recreational and Environmental PointX	June 2018	Quarterly
Underground Electrical Cables National Grid	December 2015	Bi-Annually
Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural Resources Wales	October 2017	Bi-Annually
Areas of Adopted Green Belt City and County of Swansea	February 2018	As notified
Areas of Outstanding Natural Beauty Natural Resources Wales	February 2018	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 Neath Port Talbot County Borough Council	February 2018 February 2018	Bi-Annually Bi-Annually
Marine Nature Reserves Natural Resources Wales	October 2017	Bi-Annually
National Nature Reserves Natural Resources Wales	February 2018	Bi-Annually
National Parks Natural Resources Wales	February 2018	Annually
Nitrate Vulnerable Zones Natural Resources Wales The National Assembly for Wales - GI Services (Department of Planning & Countryside)	July 2017 October 2005	Bi-Annually
Ramsar Sites Natural Resources Wales	February 2018	Bi-Annually
Sites of Special Scientific Interest Natural Resources Wales	February 2018	Bi-Annually
Special Areas of Conservation Natural Resources Wales	February 2018	Bi-Annually
Special Protection Areas Natural Resources Wales	February 2018	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

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	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
4	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	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
6	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
7	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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0 1 km



Groundwater Vulnerability

General

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

Agency and Hydrological

Geological Classes

Major Aquifer (Highly Permeable)

Minor Aquifer (Variably Permeable)

Non Aquifer (Negligibly Permeable)

Water or Sea

Drift Deposit

Soil Classes

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

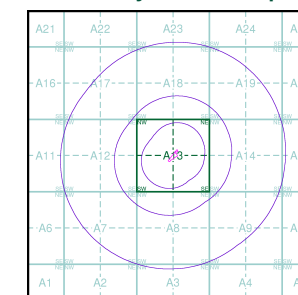
Low

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

Low

Site Sensitivity Context Map - Slice A



Order Details

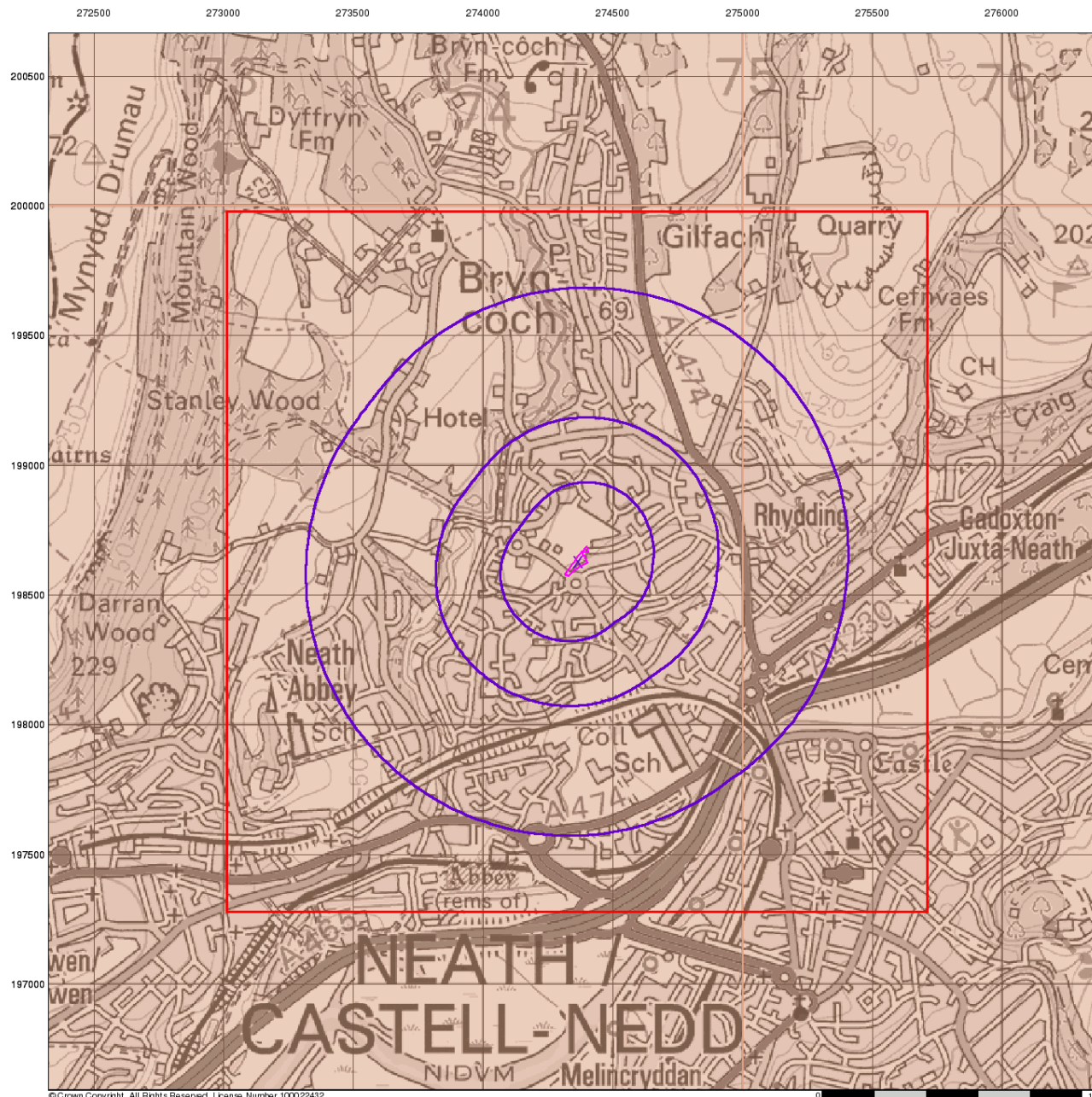
Order Number: 171268871_1_1
 Customer Ref: 14795/JRW
 National Grid Reference: 274360, 198630
 Slice: A
 Site Area (Ha): 0.3
 Search Buffer (m): 1000

Site Details

Site at 274390, 198640



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Bedrock Aquifer Designation

General

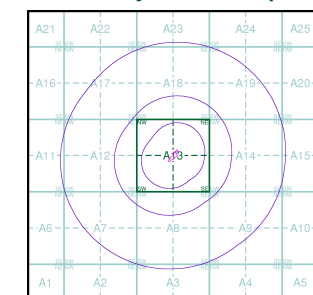
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

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

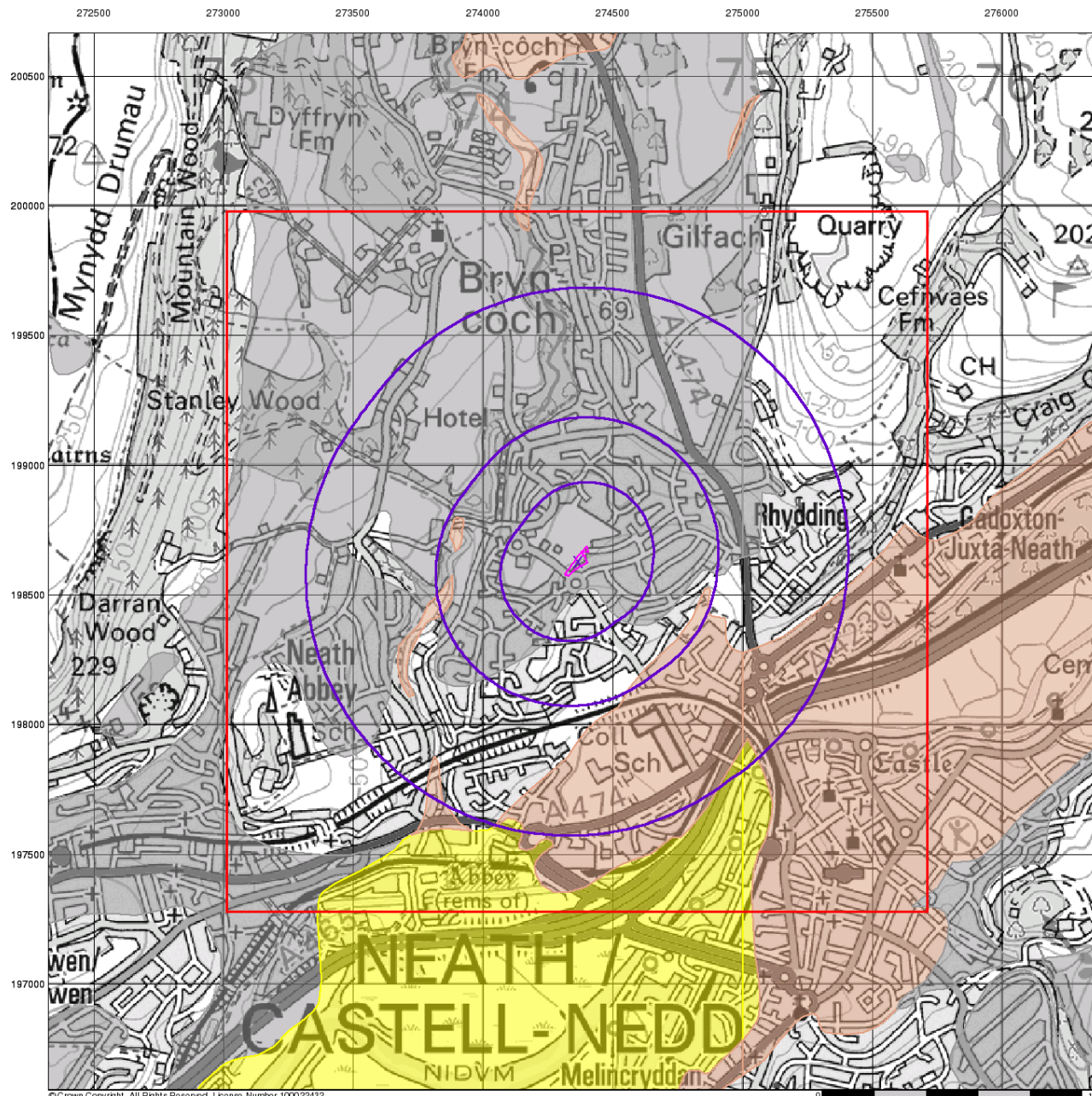
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 Site Area (Ha): 0.3
 Search Buffer (m): 1000

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Superficial Aquifer Designation

General

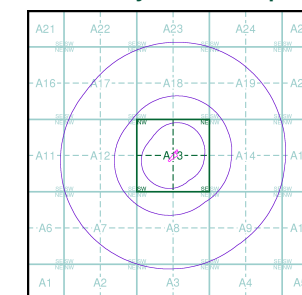
- Specified Site
- Specified Buffer(s)
- Slice
- Bearing Reference Point
- Map ID

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

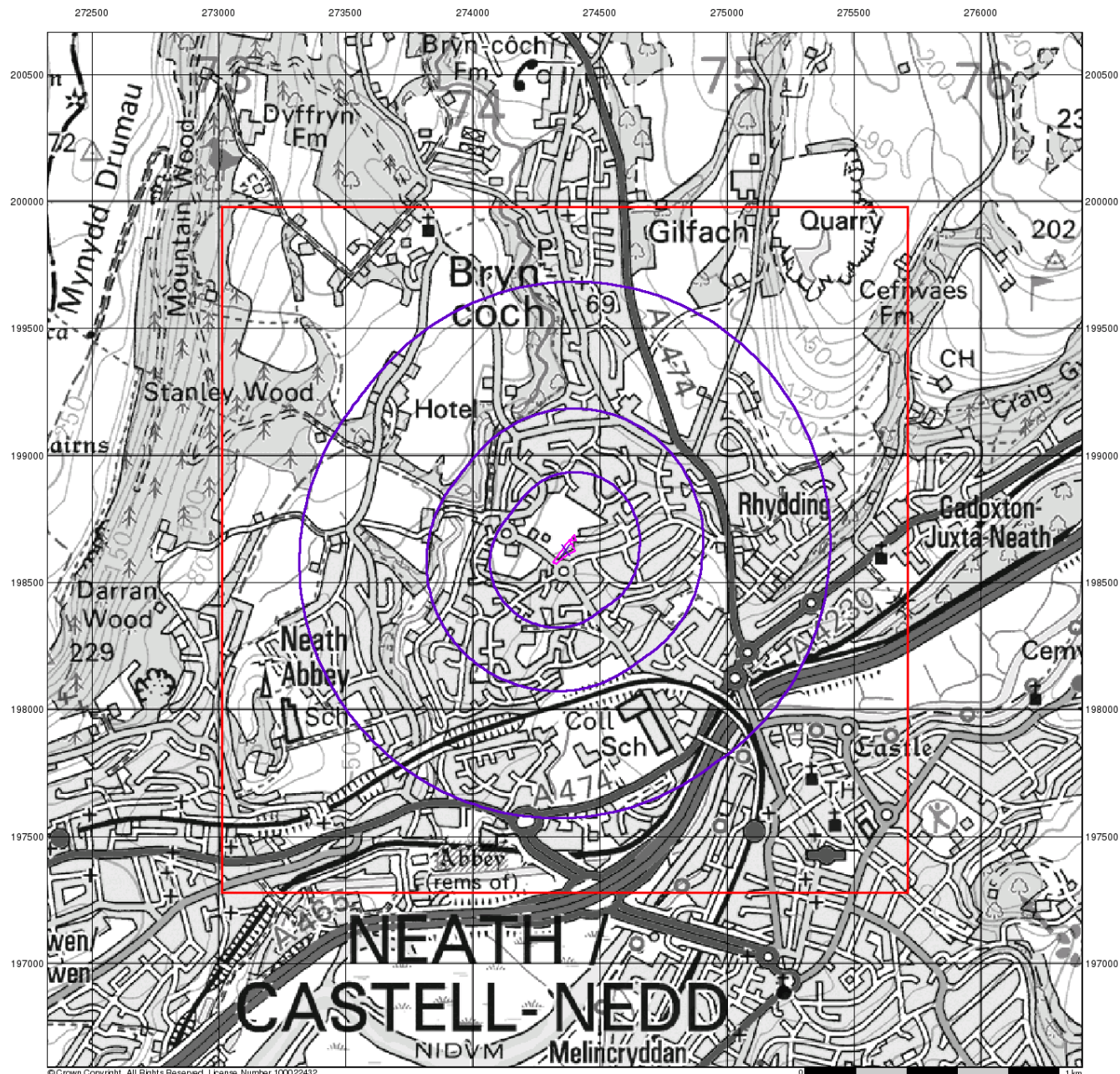
Order Number: 171268871_1_1
 Customer Ref: 14795/JRW
 National Grid Reference: 274360, 198630
 Slice: A
 Site Area (Ha): 0.3
 Search Buffer (m): 1000

Site Details

Site at 274390, 198640



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Source Protection Zones

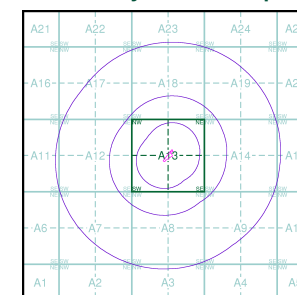
General

- 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

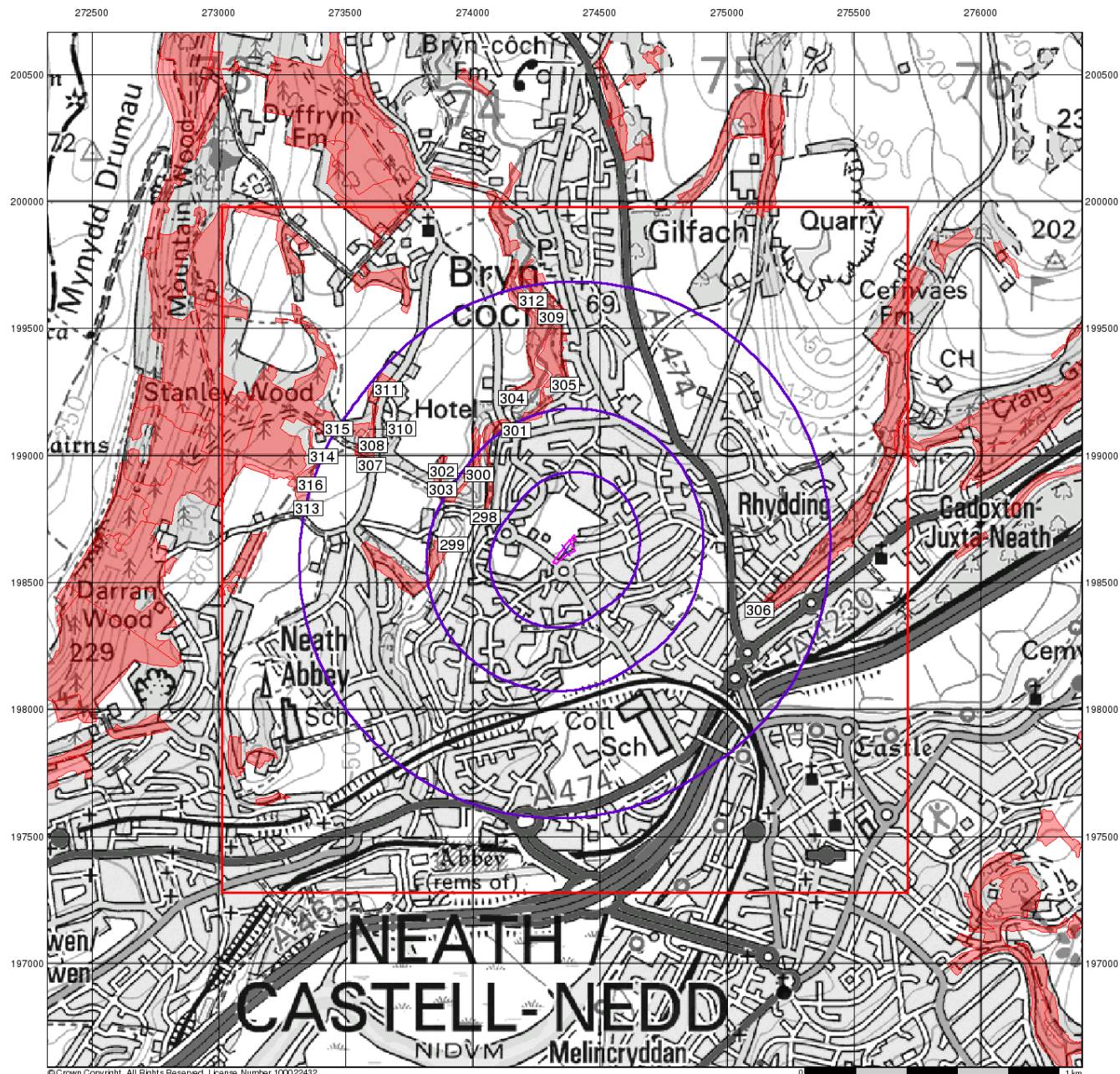
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 Customer Ref: 14795/JRW
 National Grid Reference: 274360, 198630
 Slice: A
 Site Area (Ha): 0.3
 Search Buffer (m): 1000

Site Details

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Landmark
 INFORMATION GROUP

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Sensitive Land Uses

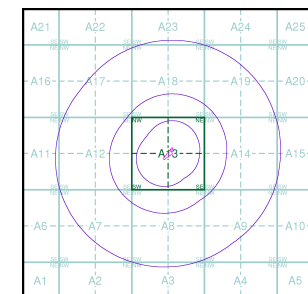
General

- 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

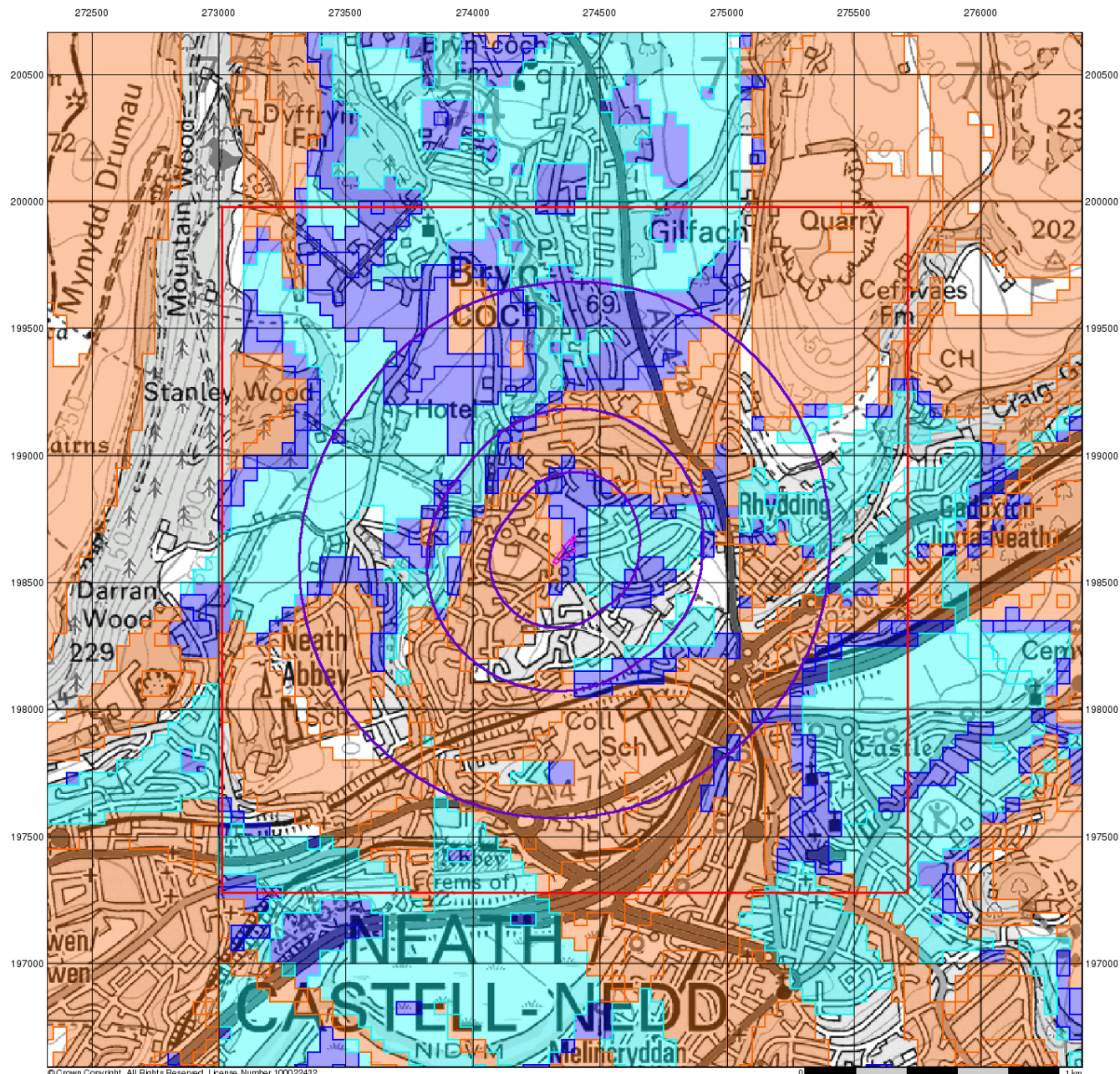
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 Site Area (Ha): 0.3
 Search Buffer (m): 1000

Site Details

Site at 274390, 198640



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BGS Flood GFS Data

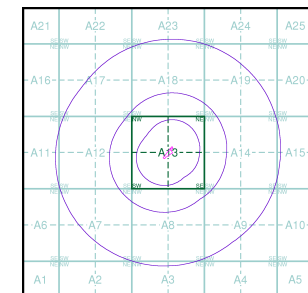
General

- 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: 171268871_1_1
 Customer Ref: 14795/JRW
 National Grid Reference: 274360, 198630
 Slice: A
 Site Area (Ha): 0.3
 Search Buffer (m): 1000

Site Details

Site at 274390, 198640

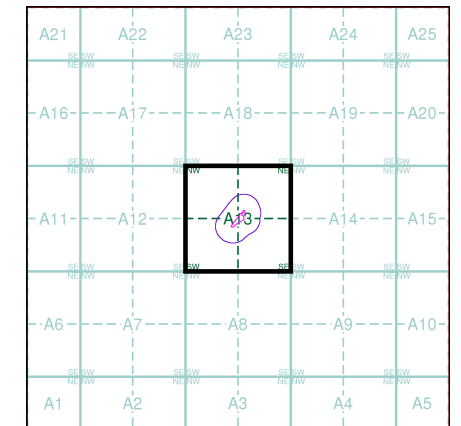


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 Fax: 0844 844 9951
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General

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

Site Sensitivity Map - Segment A13

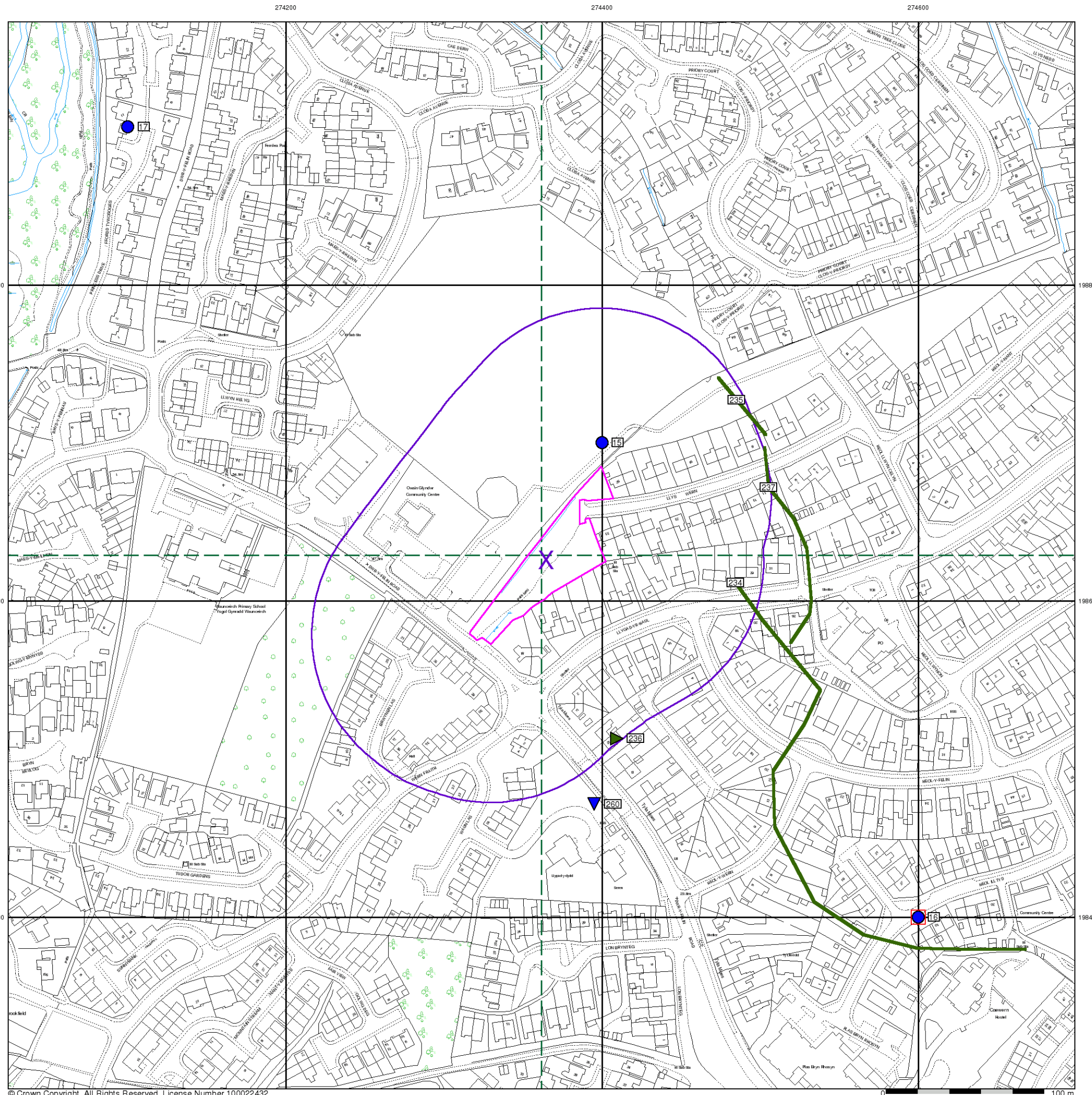


Order Details

Order Number: 171268871_1_1
 Customer Ref: 14795/JRW
 National Grid Reference: 274360, 198630
 Slice: A
 Site Area (Ha): 0.3
 Plot Buffer (m): 100

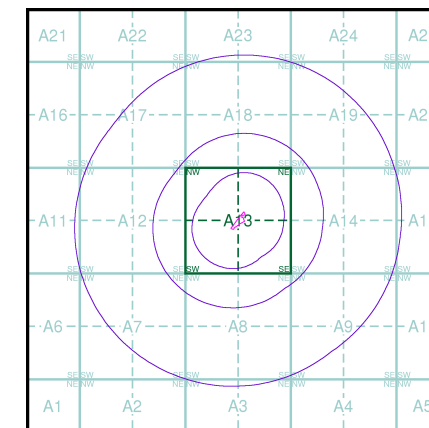
Site Details

Site at 274390, 198640



- 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
- 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 (Location)
 - Registered Landfill Site (Point Buffered to 100m)
 - Registered Landfill Site (Point Buffered to 250m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site (Location)
 - Registered Waste Treatment or Disposal Site
- Hazardous Substances**
- COMAH Site
 - Explosive Site
 - NIHHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
- Geological**
- BGS Recorded Mineral Site

Site Sensitivity Map - Slice A

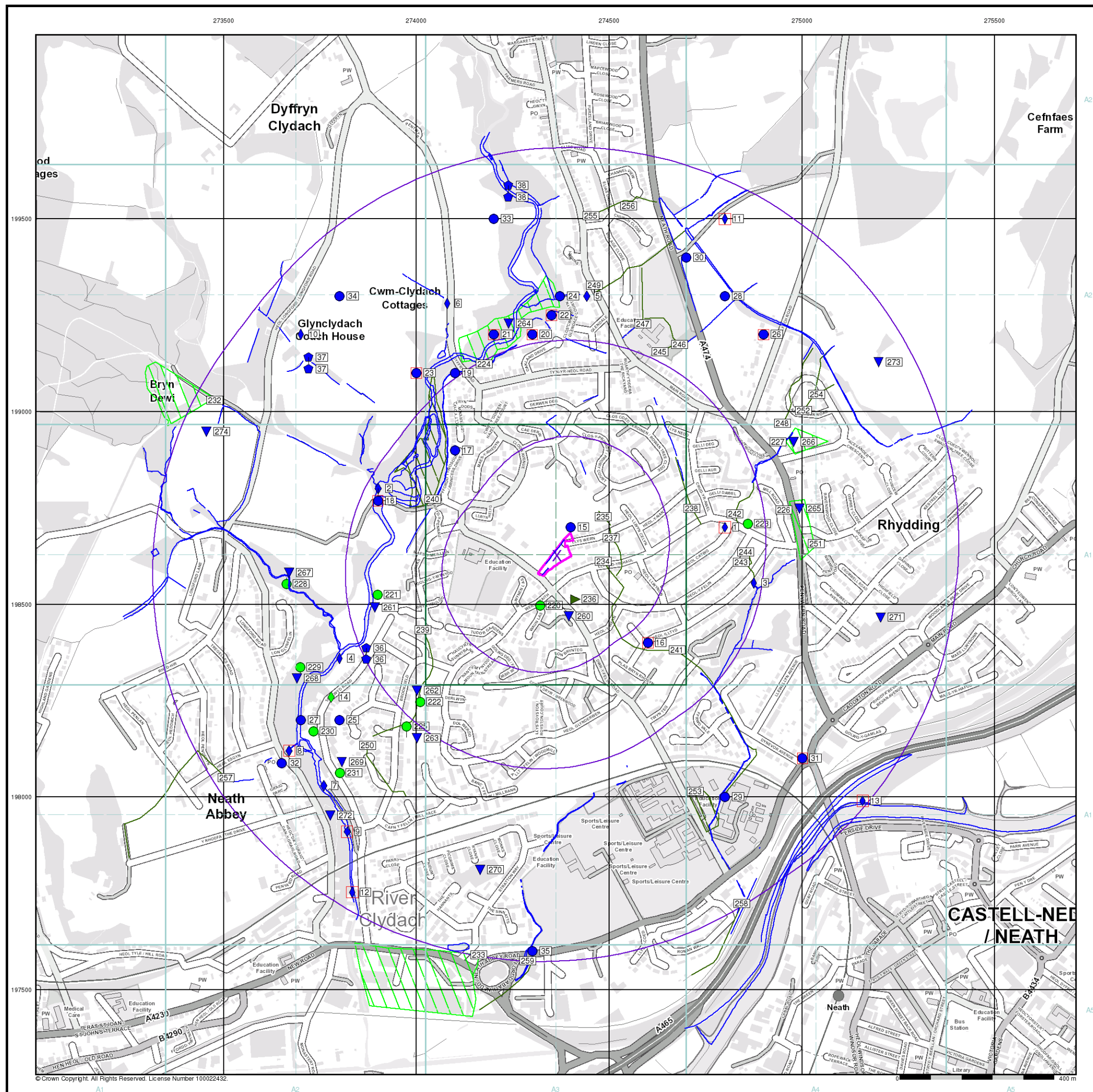


Order Details

Order Number: 171268871_1_1
 Customer Ref: 14795/JRW
 National Grid Reference: 274360, 198630
 Slice: A
 Site Area (Ha): 0.3
 Search Buffer (m): 1000

Site Details

Site at 274390, 198640





Industrial Land Use Map

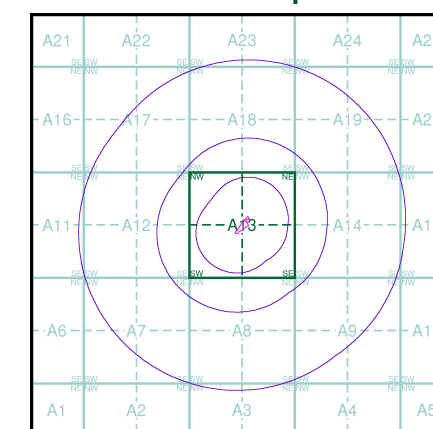
General

- 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

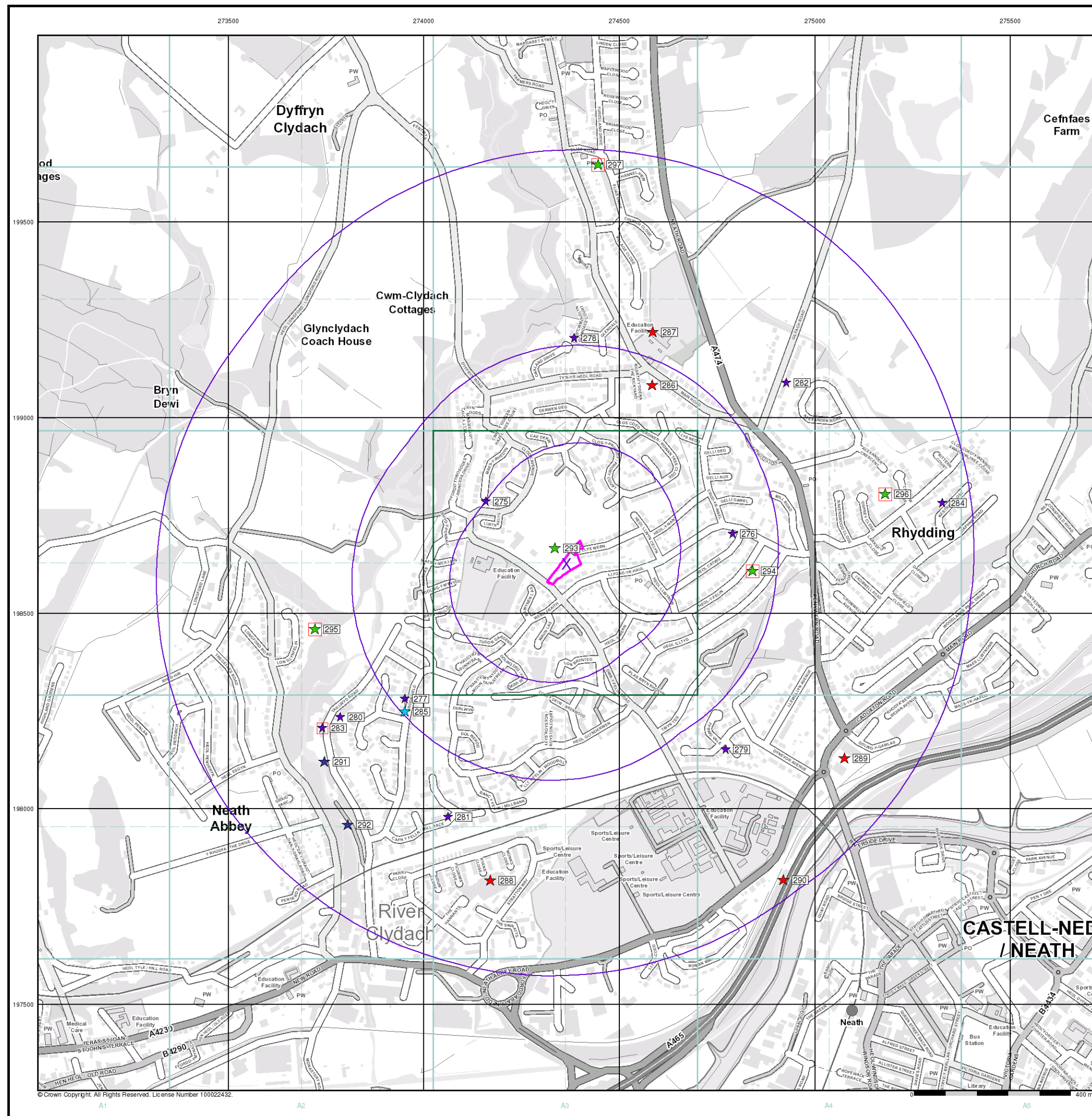
Order Number: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search Buffer (m): 1000

Site Details

Site at 274390, 198640

Landmark
INFORMATION GROUP

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



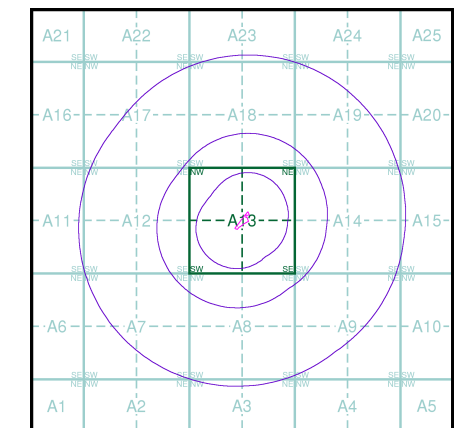
General

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

Agency and Hydrological (Flood)

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

Flood Map - Slice A

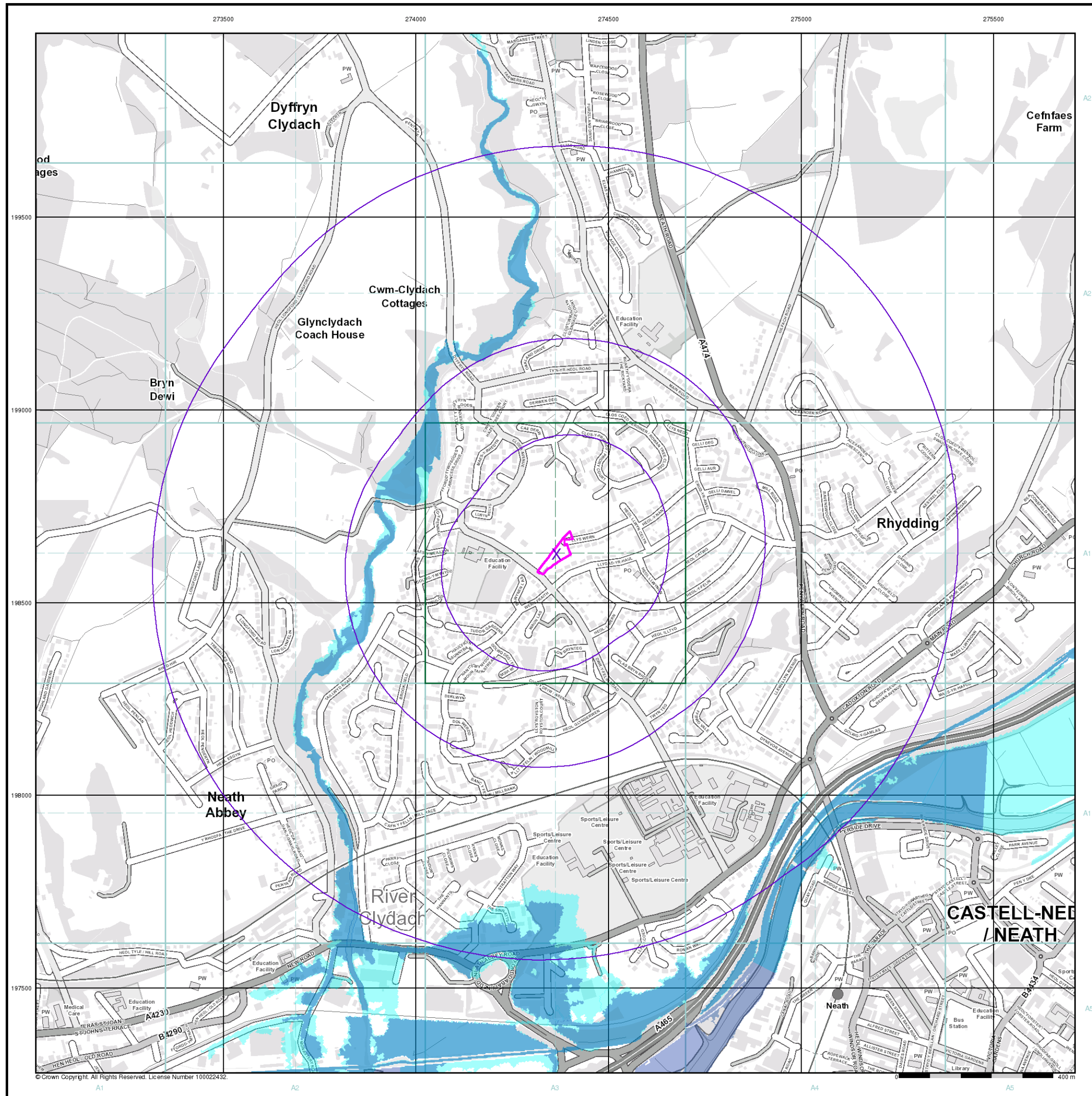


Order Details

Order Number: 171268871_1_1
 Customer Ref: 14795/JRW
 National Grid Reference: 274360, 198630
 Slice: A
 Site Area (Ha): 0.3
 Search Buffer (m): 1000

Site Details

Site at 274390, 198640



General

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

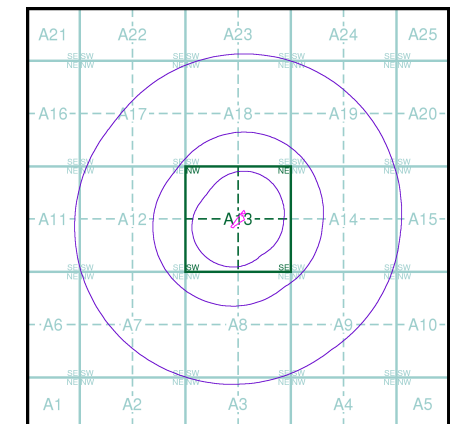
Agency and Hydrological (Boreholes)

-  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

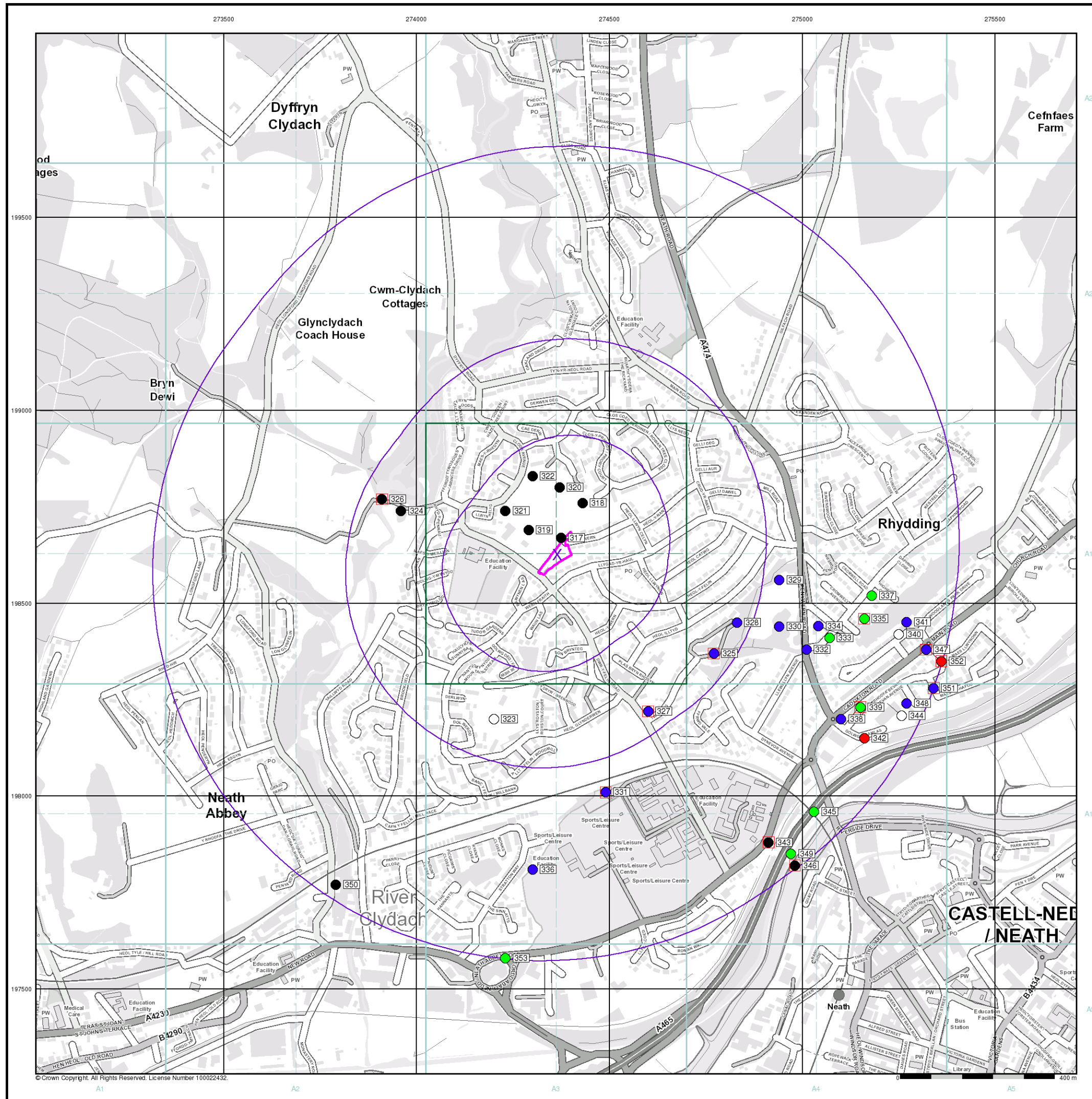


Order Details

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 Customer Ref: 14795/JRW
 National Grid Reference: 274360, 198630
 Slice: A
 Site Area (Ha): 0.3
 Search Buffer (m): 1000

Site Details

Site at 274390, 198640





General

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

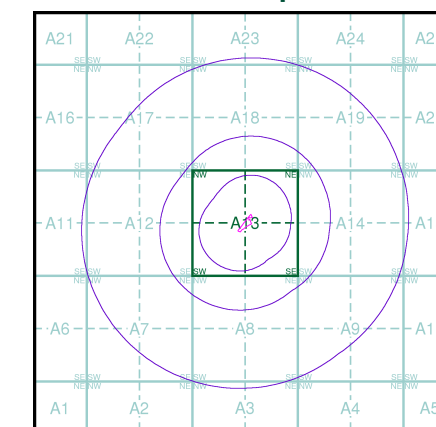
OS Water Network Data

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

Contours (height in meters)

- Standard Contour 105
- Master Contour 100
- Spot Height 167.3
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



Order Details

Order Number: 171268871_1_1
Customer Ref: 14795/JRW
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Slice: A
Site Area (Ha): 0.3
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Site Details

Site at 274390, 198640

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General

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

Risk of Flooding from Surface Water

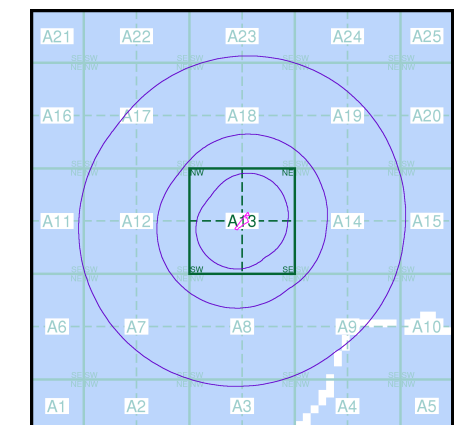
-  High - 30 Year Return
-  Medium - 100 Year Return
-  Low - 1000 Year Return

Suitability

See the suitability map below

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

E/NRW Suitability Map - Slice A

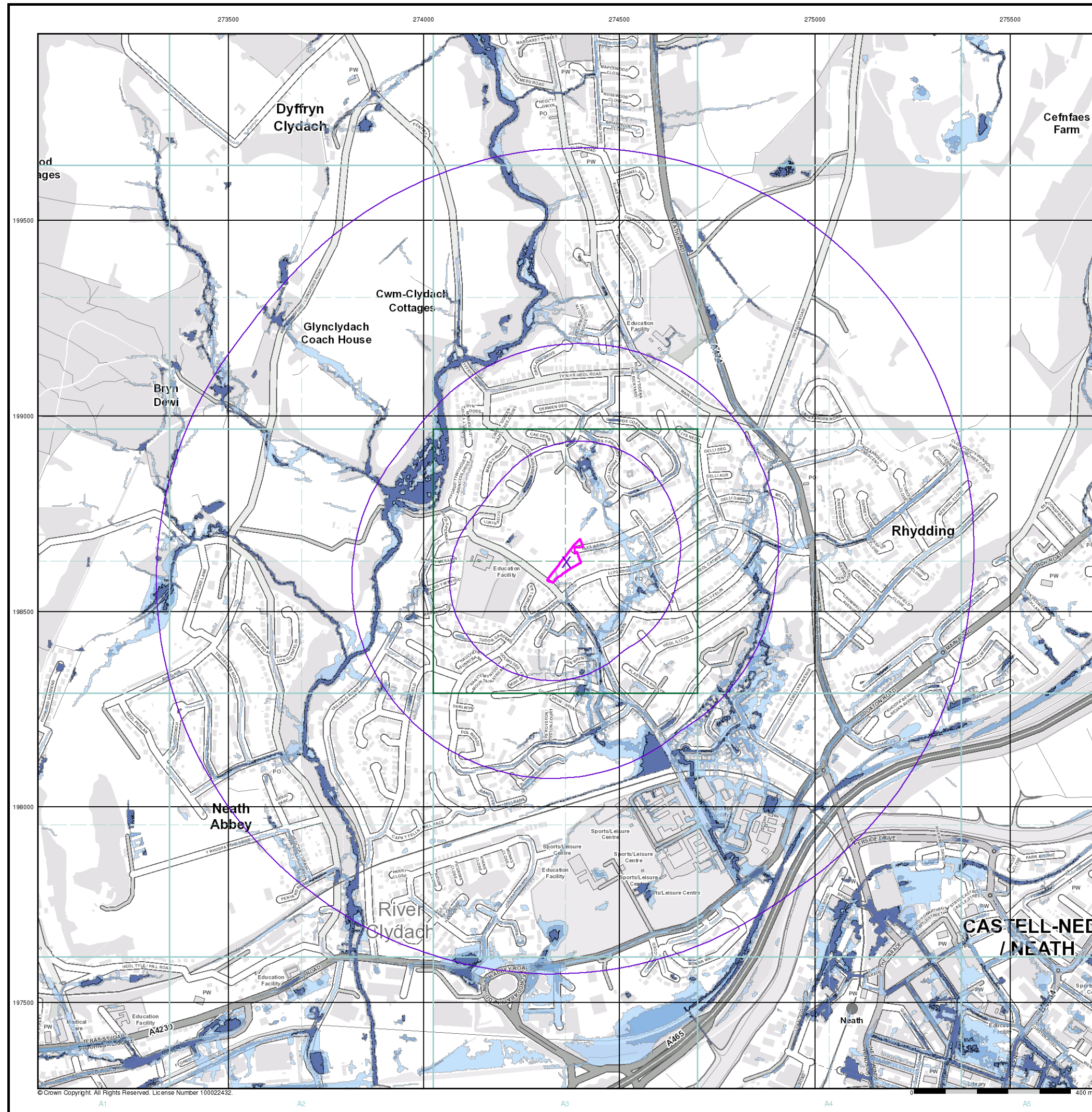


Order Details

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 National Grid Reference: 274360, 198630
 Slice: A
 Site Area (Ha): 0.3
 Search Buffer (m): 1000

Site Details

Site at 274390, 198640





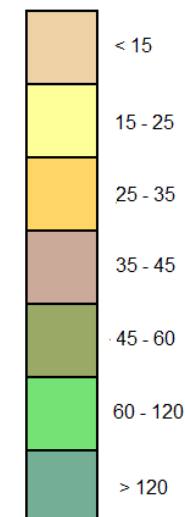
General

Specified Site Specified Buffer(s) Bearing Reference Point

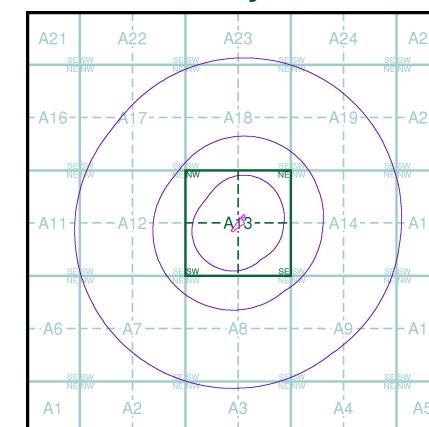
Urban Soil Chemistry Arsenic

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

Arsenic Concentrations mg/kg



Urban Soil Chemistry Arsenic - Slice A



Order Details

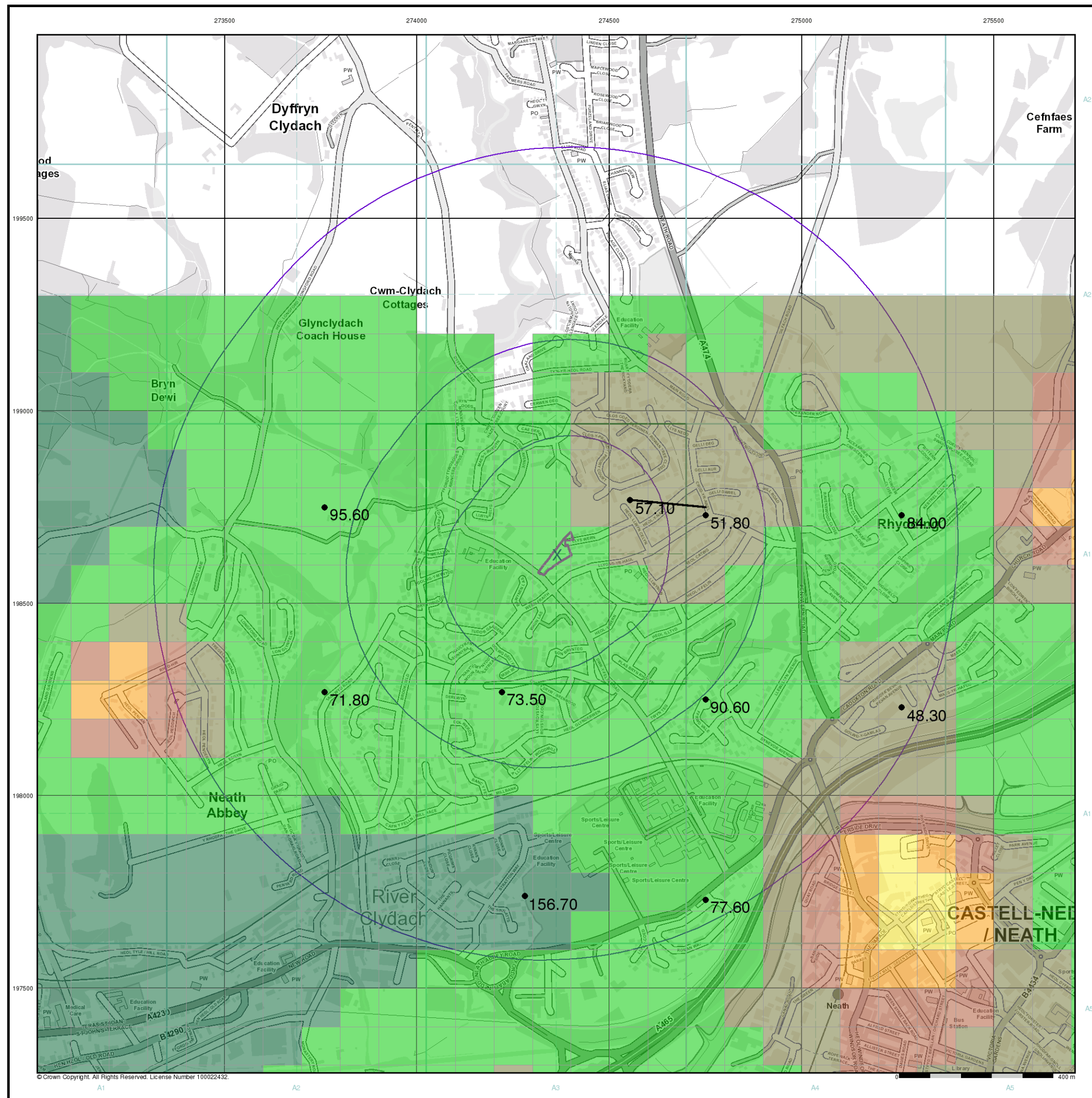
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Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
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Site Details

Site at 274390, 198640

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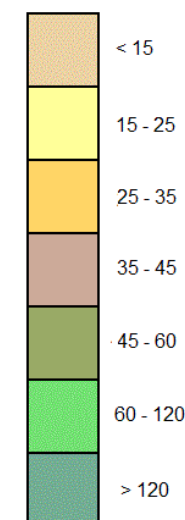


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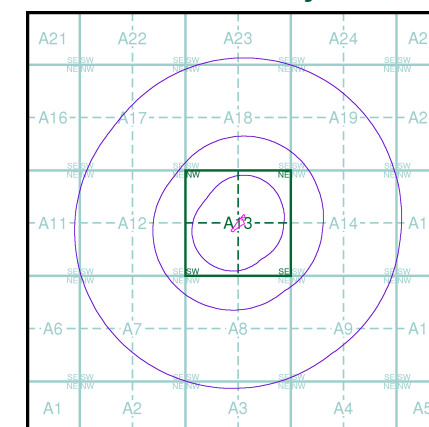
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice A



Order Details

Order Details: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
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Site Details

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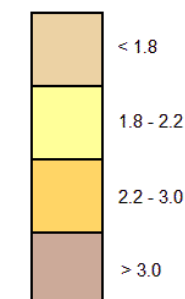
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Specified Site Specified Buffer(s) Bearing Reference Point

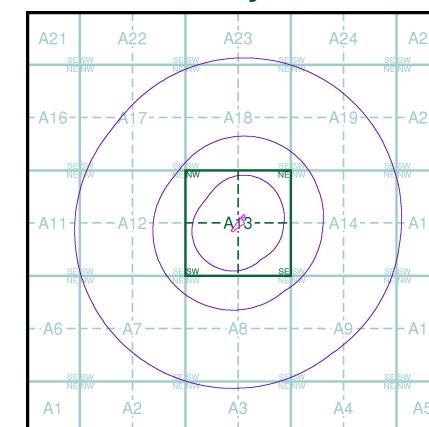
Urban Soil Chemistry Cadmium

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

Cadmium Concentrations mg/kg



Urban Soil Chemistry Cadmium - Slice A



Order Details

Order Details: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search buffer (m): 1000

Site Details

Site at 274390, 198640

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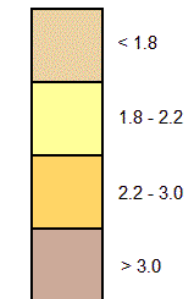


General

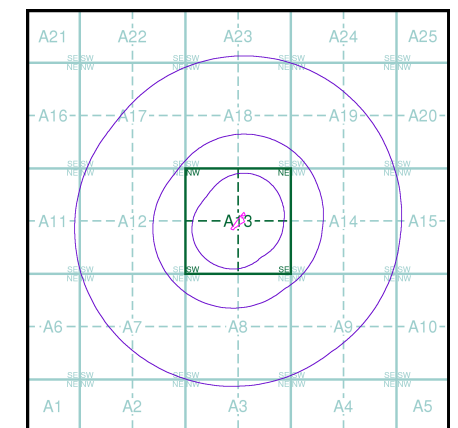
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A



Order Details

Order Details: 171268871_1_1
Customer Ref: 14795/JRW
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Slice: A
Site Area (Ha): 0.3
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Site Details

Site at 274390, 198640



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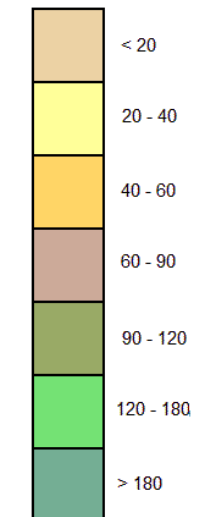
General

Specified Site Specified Buffer(s) Bearing Reference Point

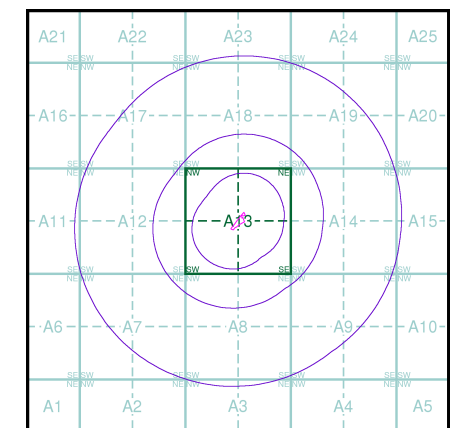
Urban Soil Chemistry Chromium

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

Chromium Concentrations mg/kg



Urban Soil Chemistry Chromium - Slice A



Order Details

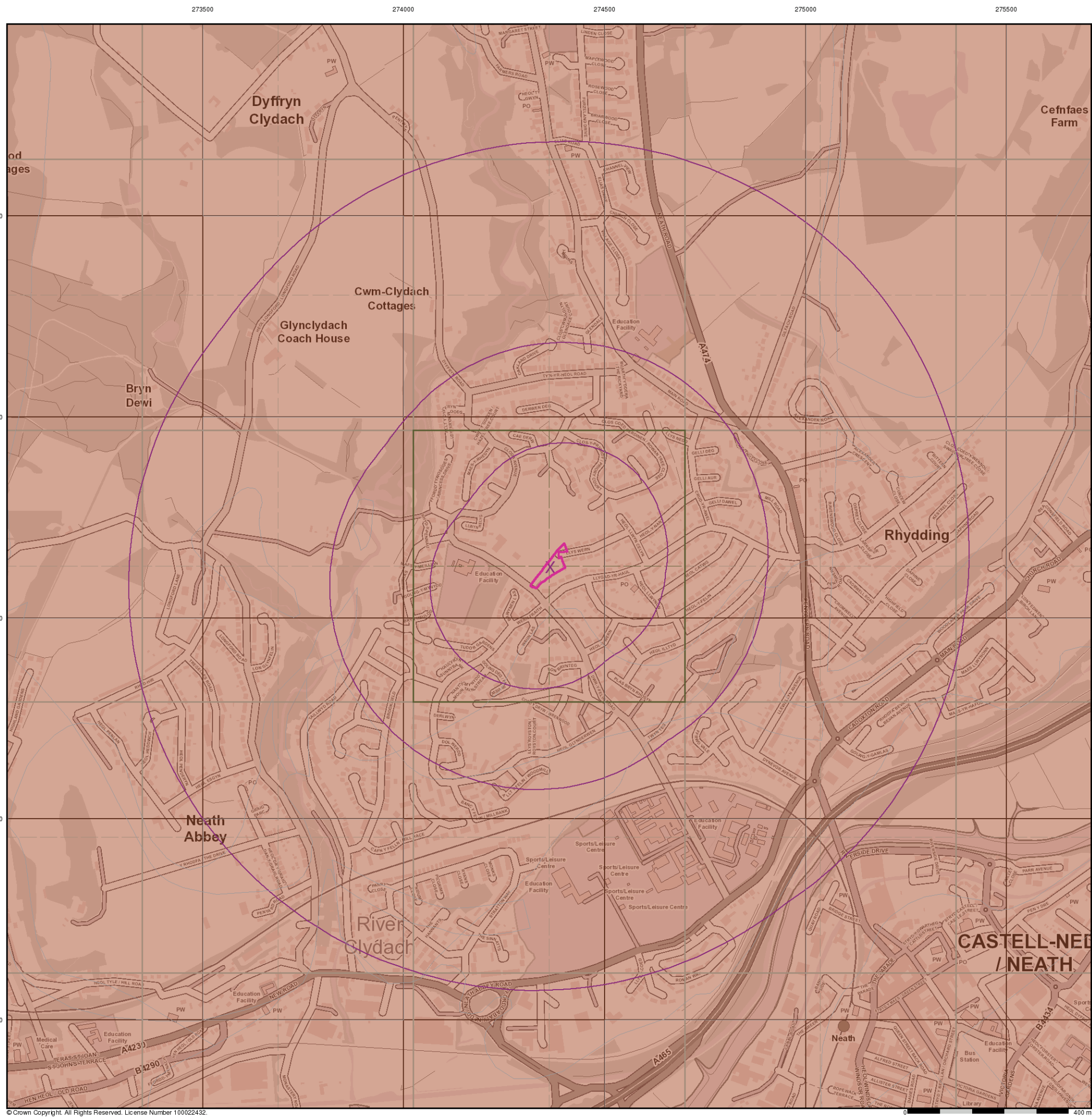
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Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
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Site Details

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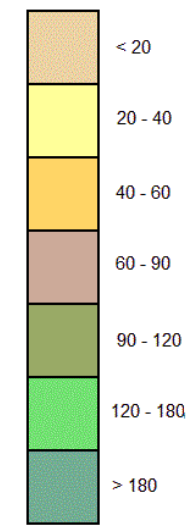


General

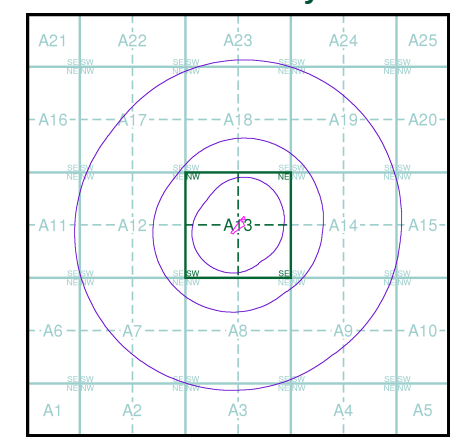
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice A



Order Details

Order Details: 171268871_1_1
Customer Ref: 14795/JRW
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Site Area (Ha): 0.3
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Site Details

Site at 274390, 198640



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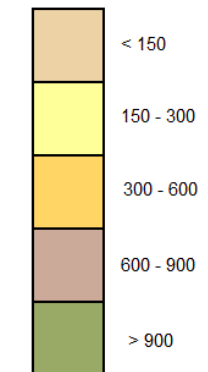
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Specified Site Specified Buffer(s) Bearing Reference Point

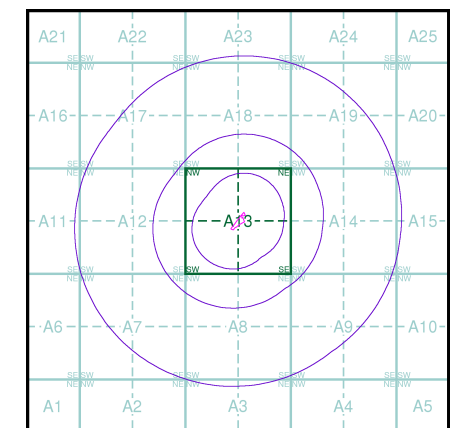
Urban Soil Chemistry Lead

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

Lead Concentrations mg/kg



Urban Soil Chemistry Lead - Slice A



Order Details

Order Details: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search buffer (m): 1000

Site Details

Site at 274390, 198640

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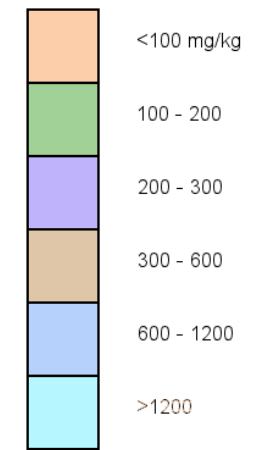


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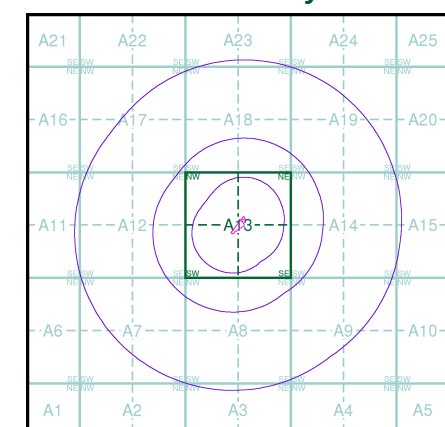
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A



Order Details

Order Details: 171268871_1_1
Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search buffer (m): 1000

Site Details

Site at 274390, 198640



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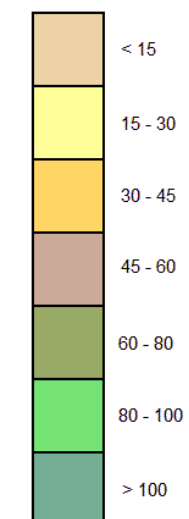
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Specified Site Specified Buffer(s) Bearing Reference Point

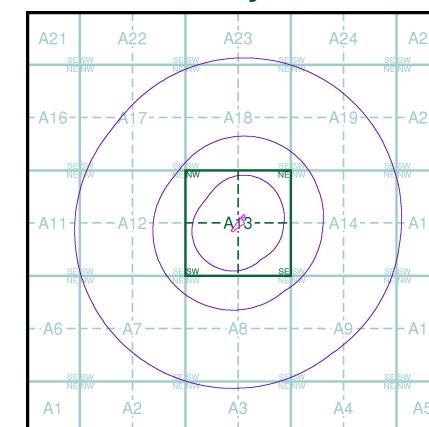
Urban Soil Chemistry Nickel

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

Nickel Concentrations mg/kg



Urban Soil Chemistry Nickel - Slice A



Order Details

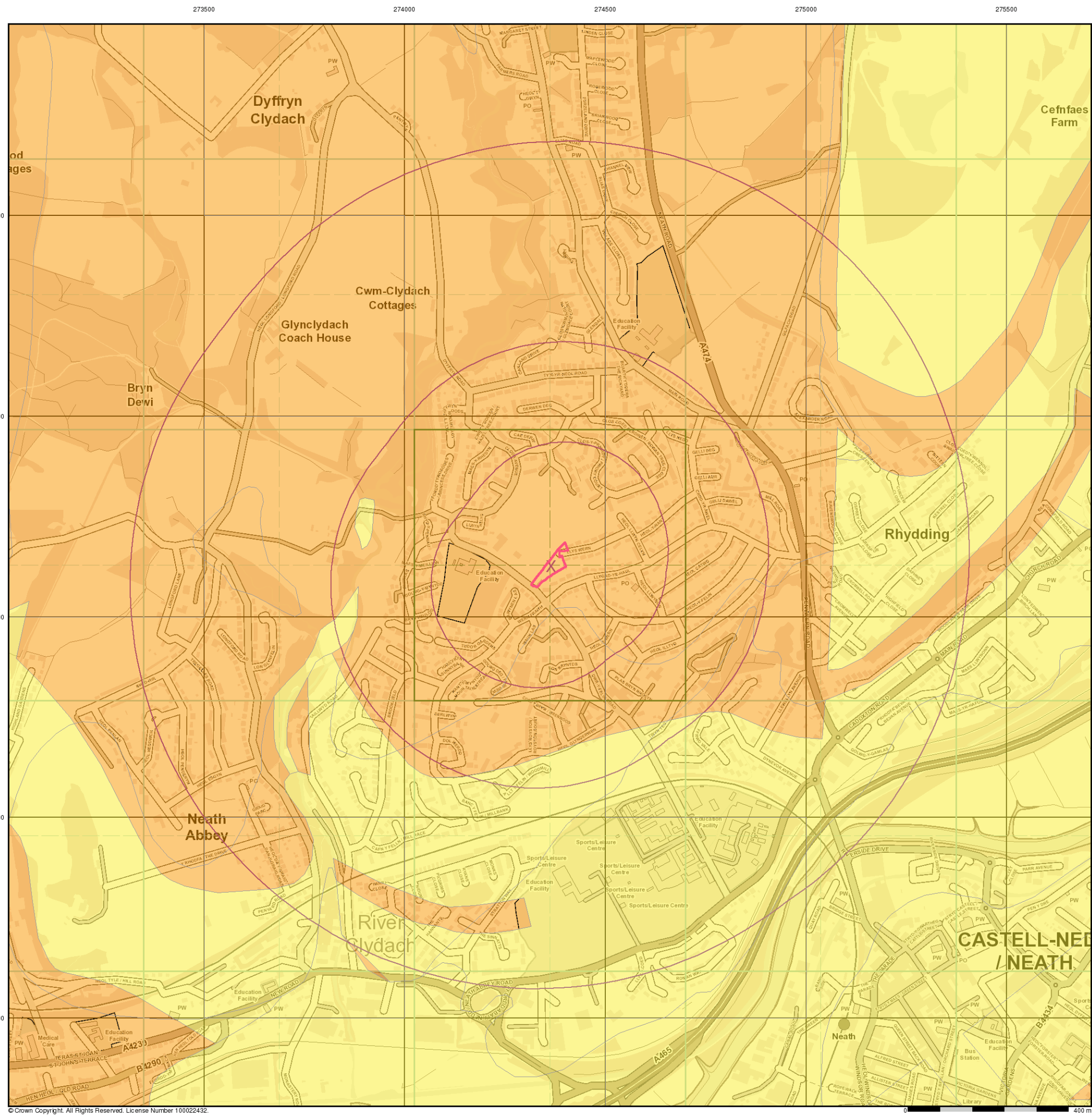
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Customer Ref: 14795/JRW
National Grid Reference: 274360, 198630
Slice: A
Site Area (Ha): 0.3
Search buffer (m): 1000

Site Details

Site at 274390, 198640

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Web: www.envirocheck.co.uk

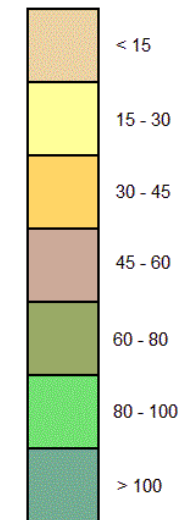


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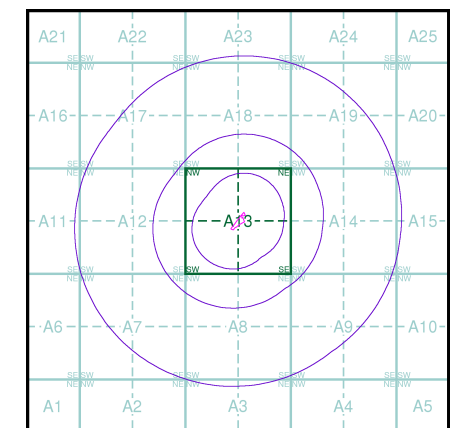
- Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A



Order Details

Order Details: 171268871_1_1
Customer Ref: 14795/JRW
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Slice: A
Site Area (Ha): 0.3
Search buffer (m): 1000

Site Details

Site at 274390, 198640



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ANNEX B
Coal Authority Report



The Coal
Authority

Resolving the **impacts** of mining

CON29M Non-Residential Mining Report

SITE AT 274390, 198640
NEATH PORT TALBOT



Date of enquiry:	26 June 2018
Date enquiry received:	26 June 2018
Issue date:	26 June 2018

Our reference:	51001861061001
Your reference:	171268871_2



CON29M Non-Residential Mining Report

This report is based on, and limited to, the records held by the Coal Authority, at the time we answer the search.

Client name

LANDMARK INFORMATION GROUP LIMITED

Enquiry address

SITE AT 274390, 198640, NEATH PORT TALBOT

How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

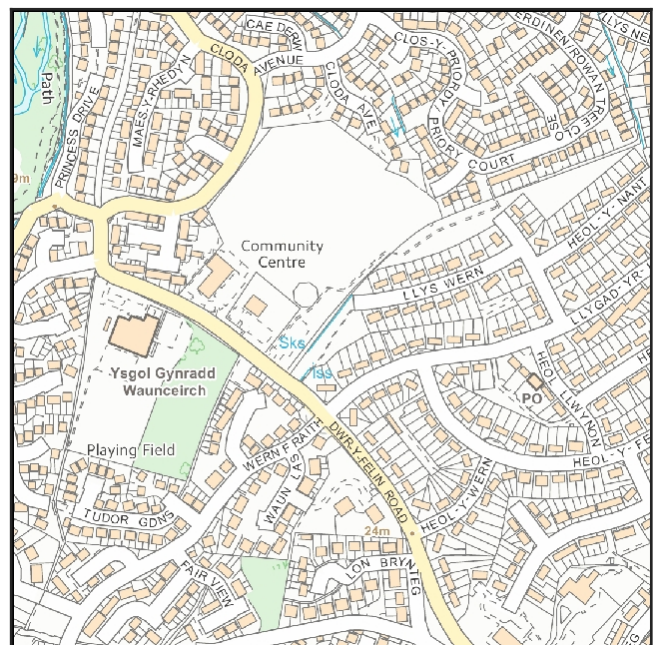
200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

[in](#) /company/the-coal-authority

 /thecoalauthority

 /coalauthority



Approximate position of property



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Summary

Has the search report highlighted evidence or potential of		
1	Past underground coal mining	Yes
2	Present underground coal mining	No
3	Future underground coal mining	Yes
4	Mine entries	Yes
5	Coal mining geology	No
6	Past opencast coal mining	No
7	Present opencast coal mining	No
8	Future opencast coal mining	No
9	Coal mining subsidence	No
10	Mine gas	No
11	Hazards related to coal mining	No
12	Withdrawal of support	No
13	Working facilities order	No
14	Payments to owners of former copyhold land	No

For detailed findings, please go to page 4.

Detailed findings

1. Past underground coal mining

The property is in a surface area that could be affected by underground mining in 3 seams of coal at 40m to 310m depth, and last worked in 1923.

Any movement in the ground due to coal mining activity should have stopped.

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 plans to grant a licence to remove coal using 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 known coal mine entries within, or within 20 metres of, the boundary of the property.

There may however be mine entries/additional mine entries in the local area which the Coal Authority has no knowledge of.

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 31st 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 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.

Additional remarks

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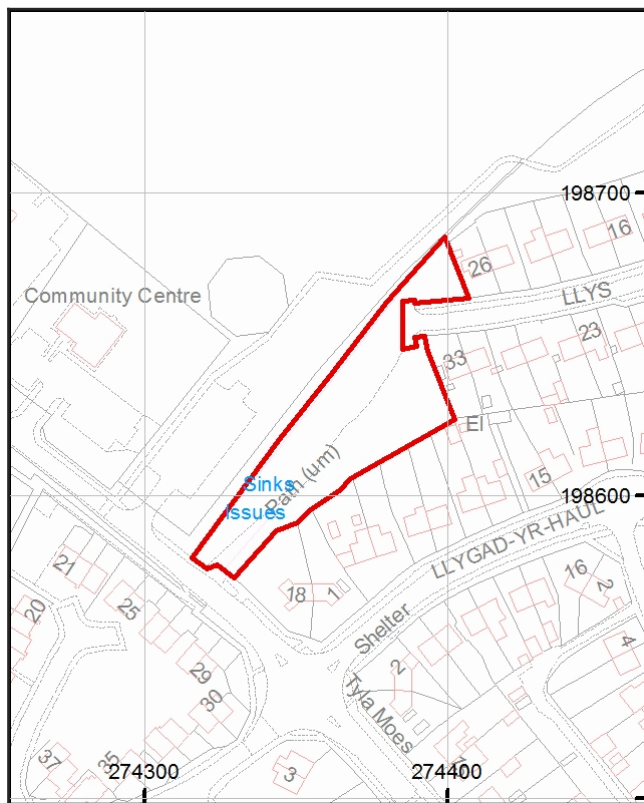
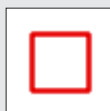
Alternative formats

If you would like this report in an alternative format, please contact our communications team.

Enquiry boundary

Key

Approximate position of enquiry boundary shown



How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com



 /company/the-coal-authority



 /thecoalauthority



 /coalauthority



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ANNEX C
Risk Assessment Definitions

The contaminated land regime is set out in Part IIA 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 IIA was introduced to achieve two aims:

- (1) The identification of contaminated land
- (2) The remediation of contaminated land that poses an unacceptable risk to human health and/or the environment

Under Part IIA 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."

For land to be classified as 'Contaminated Land' there must be a '**pollutant linkage**'. A pollutant linkage requires three essential elements:

- (1) A **CONTAMINANT** (hazard) - a substance that is in, on or under the land and has the potential to cause harm or to cause pollution of controlled waters
- (2) A **RECEPTOR** (target) - something which could be adversely affected by a contaminant
- (3) A **PATHWAY** - a route or means which either allows the contaminant to cause significant harm to that receptor, or that there is a significant possibility of such harm being caused to the receptor, or that pollution of controlled waters is being or likely to be caused.

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'.

A 'Hazard' is defined as '*a property or situation that in particular circumstances could lead to harm*'.

The classification of consequences and probability and determining the risk category are defined in the following sections.

Classification of Consequence

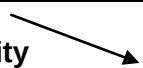
Table A Classification of Consequence	
Classification	Definition
Severe	• Short term (acute) risk to human health likely to result in significant harm • Short term risk to controlled waters • Catastrophic damage to buildings/structures • Short term risk to an ecosystem or organism within the particular 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
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	• 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
Medium	• There is a complete pollution linkage which means that it is probable that an event will occur • The event is not inevitable but possible in short term and likely in the long term
Low	• 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
Negligible	• 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	High	High	Medium / Low	Near zero
	Medium	High	Medium	Low	Near zero
	Low	High / medium	Medium / Low	Low	Near zero
	Negligible	High / medium / Low	Medium / Low	Low	Near zero

High Risk

There is a high probability that severe harm could risk a receptor, or there is evidence that a receptor is being 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**



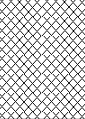
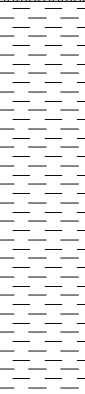
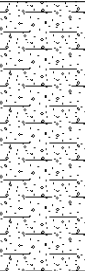
Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Trial Pit No:
TP01
Sheet 1 of 1

Project Name: Llys Wern	Project No: 14795	Co-ords: - Level:	Date: 10/07/2018
-------------------------	-------------------	----------------------	------------------

Location: Neath	Dimensions: 1.90 Depth 2.60	Scale: 1:25 Logged: JRW
-----------------	--------------------------------	----------------------------

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30	ES		0.40			Grass over firm friable dark brown slightly sandy slightly gravelly clayey SILT. Gravel is angular fine to coarse brick, ash and sandstone. With rare tile and metal fragments. (MADE GROUND)
	1.00	D		1.70			Firm orangish brown or greyish brown slightly sandy CLAY with low cobble content.
				2.60			Medium dense dark brownish grey clayey gravelly fine and medium SAND. Gravel is subrounded and rounded fine to coarse sandstone, siltstone and mudstone.
							End of Pit at 2.600m

Stability: Trial pit remained stable and vertical.

Remarks: Groundwater not encountered. On completion, trial pit backfilled with materials arising.



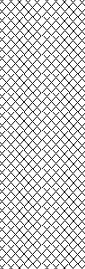
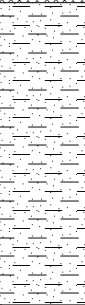
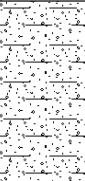
Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Trial Pit No:
TP02
Sheet 1 of 1

Project Name: Llys Wern	Project No: 14795	Co-ords: - Level:	Date: 10/07/2018
-------------------------	-------------------	----------------------	------------------

Location: Neath	Dimensions: 2.60 Depth 2.50	Scale: 1:25 Logged: JRW
-----------------	--------------------------------	----------------------------

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.50	ES		0.90			Grass over firm friable dark brown slightly sandy slightly gravelly silty CLAY. Gravel is angular fine to coarse brick, ash and sandstone. With rare tile, glass, plastic and metal fragments. (MADE GROUND)	
	1.20	D		1.90			Firm orangish brown to greyish brown slightly sandy to sandy CLAY with low cobble content. <i>Redundant stone box culvert (300x300x300mm)</i>	1
				2.50			Medium dense dark greyish brown clayey gravelly fine and medium SAND. Gravel is subrounded and rounded fine to coarse sandstone, siltstone and mudstone.	2
							End of Pit at 2.500m	3
								4
								5

Stability: Trial pit remained stable and vertical.

Remarks: Groundwater not encountered. On completion, trial pit backfilled with materials arising.



Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Trial Pit No:

TP03

Sheet 1 of 1

Project Name: Llys Wern

Project No:
14795

Co-ords: -
Level:

Date:
10/07/2018

Location: Neath

Dimensions: 2.00

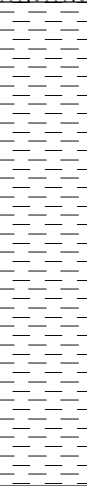
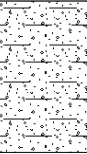
Depth
2.40

0.60

Scale:
1:25

Logged:
JRW

Client: Tai Tarian Ltd

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10	ES		0.30			Grass over firm friable dark brown slightly sandy slightly gravelly clayey SILT. Gravel is angular to subrounded fine to coarse brick, ash, mudstone and sandstone. With rare glass fragments. (MADE GROUND)	
							Firm orangish brown mottled grey slightly sandy slightly gravelly CLAY with medium cobble content.	1
				1.90			Medium dense dark greyish brown clayey gravelly fine and medium SAND with low cobble content. Gravel is subrounded and rounded fine to coarse sandstone, siltstone and mudstone.	2
				2.40			End of Pit at 2.400m	3
								4
								5

Stability: Trial pit remained stable and vertical.

Remarks: Groundwater not encountered. On completion, trial pit backfilled with materials arising.

ANNEX E
Soakaway Results

SOAKAWAY TEST



Site Name: Llys Wern
Project Number: 14795
Date: 10/07/2018

Trial Pit: **TP01**

TEST 1 Length 1.90 m Breadth 0.60 m Depth 2.60 m Fill Level 1.71 m V_{p75-25} 0.507 m³ a_{p50} 3.365 m² t_{p75-25} 0 minutes Soil Infiltration Rate, f - ms⁻¹ Too little water take to calculate infiltration rate	Time (minutes)
TEST 2 Length m Breadth m Depth m Fill Level m V_{p75-25} 0 m³ a_{p50} 0 m² t_{p75-25} 0 minutes Soil Infiltration Rate, f - ms⁻¹	Time (minutes)
TEST 3 Length m Breadth m Depth m Fill Level m V_{p75-25} 0 m³ a_{p50} 0 m² t_{p75-25} 0 minutes Soil Infiltration Rate, f - ms⁻¹	Time (minutes)
REMARKS: Test carried out in general accordance with BRE DIGEST 365 (2016)	

SOAKAWAY TEST



Site Name: Llys Wern
Project Number: 14795
Date: 10/07/2018

Trial Pit: **TP04**

TEST 1 Length 1.60 m Breadth 0.60 m Depth 1.10 m Fill Level 0.56 m V_{p75-25} 0.259 m³ a_{p50} 2.148 m² t_{p75-25} 0 minutes Soil Infiltration Rate, f - ms⁻¹ Too little water take to calculate infiltration rate	Time (minutes)
TEST 2 Length m Breadth m Depth m Fill Level m V_{p75-25} 0 m³ a_{p50} 0 m² t_{p75-25} 0 minutes Soil Infiltration Rate, f - ms⁻¹	Time (minutes)
TEST 3 Length m Breadth m Depth m Fill Level m V_{p75-25} 0 m³ a_{p50} 0 m² t_{p75-25} 0 minutes Soil Infiltration Rate, f - ms⁻¹	Time (minutes)
REMARKS: Test carried out in general accordance with BRE DIGEST 365 (2016)	

ANNEX F
Laboratory Soil Chemical Test Results



Certificate of Analysis

Certificate Number 18-16478-1

27-Jul-18

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

Our Reference 18-16478-1

Client Reference 14795

Order No (not supplied)

Contract Title Llys Wern

Description 4 Soil samples, 4 Leachate samples.

Date Received 11-Jul-18

Date Started 11-Jul-18

Date Completed 27-Jul-18

Test Procedures Identified by prefix DETSn (details on request).

Notes This report supersedes 18-16478, extra testing added

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



Summary of Chemical Analysis

Matrix Descriptions

Our Ref 18-16478-1

Client Ref 14795

Contract Title Llys Wern

Sample ID	Depth	Lab No	Completed	Matrix Description
TP01	0.3	1364836	18/07/2018	Brown gravelly, sandy CLAY including odd rootlets (Possible made ground - brick,metal,tile)
TP02	0.5	1364837	18/07/2018	Dark brown gravelly, sandy CLAY including odd rootlets (Possible made ground - brick)
TP03	0.1	1364838	18/07/2018	Dark brown gravelly, sandy CLAY including odd rootlets
TP04	0.9	1364839	18/07/2018	Dark brown gravelly, sandy CLAY including odd rootlets

Summary of Chemical Analysis

Soil Samples

Our Ref 18-16478-1

Client Ref 14795

Contract Title Llys Wern

Lab No	1364836	1364837	1364838	1364839
Sample ID	TP01	TP02	TP03	TP04
Depth	0.30	0.50	0.10	0.90
Other ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sampling Date	10/07/18	10/07/18	10/07/18	10/07/18
Sampling Time	n/s	n/s	n/s	n/s

Test	Method	LOD	Units				
Asbestos Quantification	DETSC 1102	0		Y			
Metals							
Arsenic	DETSC 2301#	0.2	mg/kg	73	62	100	42
Cadmium	DETSC 2301#	0.1	mg/kg	1.6	2.5	3.0	1.4
Chromium	DETSC 2301#	0.15	mg/kg	22	22	20	16
Chromium III	DETSC 2301*	0.15	mg/kg	22	22	20	16
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	160	140	230	110
Lead	DETSC 2301#	0.3	mg/kg	120	120	150	65
Mercury	DETSC 2325#	0.05	mg/kg	0.11	0.17	0.15	0.07
Nickel	DETSC 2301#	1	mg/kg	27	37	28	22
Selenium	DETSC 2301#	0.5	mg/kg	1.1	1.5	0.9	0.7
Zinc	DETSC 2301#	1	mg/kg	250	670	370	170
Inorganics							
pH	DETSC 2008#			6.3	7.0	6.3	7.6
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.4	0.3	0.4	0.1
Organic matter	DETSC 2002#	0.1	%	6.7	6.4	8.1	3.5
Sulphate as SO ₄ , Total	DETSC 2321#	0.01	%	0.06	0.06	0.06	0.04
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10
TPH Ali/Aro Total	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10

Summary of Chemical Analysis

Soil Samples

Our Ref 18-16478-1

Client Ref 14795

Contract Title Llys Wern

Lab No	1364836	1364837	1364838	1364839
Sample ID	TP01	TP02	TP03	TP04
Depth	0.30	0.50	0.10	0.90
Other ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sampling Date	10/07/18	10/07/18	10/07/18	10/07/18
Sampling Time	n/s	n/s	n/s	n/s

Test	Method	LOD	Units				
PAHs							
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.34
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.04
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.07	0.07	0.09	0.78
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.07
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.28	0.15	0.36	0.97
Pyrene	DETSC 3303#	0.03	mg/kg	0.26	0.12	0.31	1.6
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.13	0.07	0.17	0.51
Chrysene	DETSC 3303	0.03	mg/kg	0.20	0.12	0.25	0.74
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.27	0.11	0.36	0.73
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.09	0.04	0.14	0.32
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.13	0.05	0.18	0.75
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.08	0.04	0.13	0.45
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.03	0.15
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.08	0.04	0.13	0.75
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	1.6	0.81	2.2	8.2
Phenols							
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.8	0.5	< 0.3	< 0.3

Summary of Chemical Analysis

Leachate Samples

Our Ref 18-16478-1

Client Ref 14795

Contract Title Llys Wern

Lab No	1369954	1369955	1369956	1369957
Sample ID	TP01	TP02	TP03	TP04
Depth	0.30	0.50	0.10	0.90
Other ID				
Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE
Sampling Date	10/07/18	10/07/18	10/07/18	10/07/18
Sampling Time	n/s	n/s	n/s	n/s

Test	Method	LOD	Units				
Preparation							
NRA Leachate Preparation	DETS 036*			Y	Y	Y	Y
Metals							
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	3.5	2.3	2.2	1.7

Summary of Asbestos Analysis

Soil Samples

Our Ref 18-16478-1

Client Ref 14795

Contract Title Llys Wern

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
1364836	TP01 0.30	SOIL	Chrysotile	Microscopic Cement fragment	Keith Wilson
1364837	TP02 0.50	SOIL	NAD	none	Keith Wilson
1364838	TP03 0.10	SOIL	NAD	none	Keith Wilson
1364839	TP04 0.90	SOIL	NAD	none	Keith Wilson

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Summary of Asbestos Quantification Analysis

Soil Samples

Our Ref 18-16478-1

Client Ref 14795

Contract Title Llys Wern

Lab No	1364836
Sample ID	TP01
Depth	0.30
Other ID	
Sample Type	SOIL
Sampling Date	10/07/18
Sampling Time	

Test	Method	Units	
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	0.100
Gravimetric Quantification (a)	DETSC 1102	Mass %	0.100
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	na
Quantification by PCOM (c)	DETSC 1102	Mass %	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na

Breakdown of Gravimetric Analysis (a)

Mass of Sample		g	805.03	
ACMs present*		type	Cement	Board
Mass of ACM in sample		g	0.26	1.92
% ACM by mass		%	0.03	0.24
% asbestos in ACM		%	15.00	40
% asbestos in sample		%	0.00	0.095

Breakdown of Detailed Gravimetric Analysis (b)

% Amphibole bundles in sample		Mass %	na	
% Chrysotile bundles in sample		Mass %	na	

Breakdown of PCOM Analysis (c)

% Amphibole fibres in sample		Mass %	na	
% Chrysotile fibres in sample		Mass %	na	

Breakdown of Potentially Respirable Fibre Analysis (d)

Amphibole fibres		Fibres/g	na	
Chrysotile fibres		Fibres/g	na	

* Denotes test or material description outside of UKAS accreditation.
 % asbestos in Asbestos Containing Materials (ACMs) is determined by
 by reference to HSG 264.
 Recommended sample size for quantification is approximately 1kg
 # denotes deviating sample

Information in Support of the Analytical Results

Our Ref 18-16478-1

Client Ref 14795

Contract Llys Wern

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1364836	TP01 0.30 SOIL	10/07/18	GJ 250ml, PT 1L		
1364837	TP02 0.50 SOIL	10/07/18	GJ 250ml, PT 1L		
1364838	TP03 0.10 SOIL	10/07/18	GJ 250ml, PT 1L		
1364839	TP04 0.90 SOIL	10/07/18	GJ 250ml, PT 1L		
1369954	TP01 0.30 LEACHATE	10/07/18	GJ 250ml, PT 1L		
1369955	TP02 0.50 LEACHATE	10/07/18	GJ 250ml, PT 1L		
1369956	TP03 0.10 LEACHATE	10/07/18	GJ 250ml, PT 1L		
1369957	TP04 0.90 LEACHATE	10/07/18	GJ 250ml, PT 1L		

Key: G-Glass P-Plastic J-Jar 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

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETSC 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETSC 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETSC 2024	Sulphide	mg/kg	10	Air Dried	No	Yes	Yes
DETSC 2076	Sulphate Aqueous Extract as SO ₄	mg/l	10	Air Dried	No	Yes	Yes
DETSC 2084	Total Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETSC 2321	Total Sulphate as SO ₄	%	0.01	Air Dried	No	Yes	Yes
DETSC 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETSC 3049	Sulphur (free)	mg/kg	0.75	Air Dried	No	Yes	Yes
DETSC2123	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETSC2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETSC2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETSC2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETSC2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETSC2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETSC2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETS 062	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

ANNEX G
Plasticity Test Results

TEST REPORT
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX
BS 1377:Part 2:1990: Clause 4.3/5.3/5.4

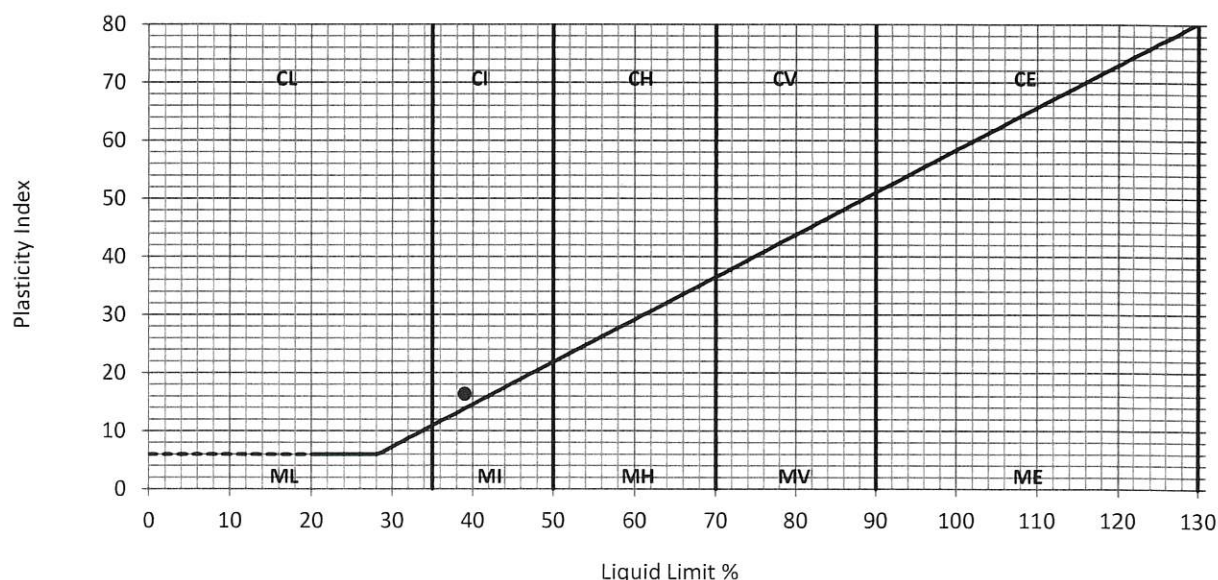
Project No: D8212	Client: Terra Firma Wales Ltd
Project Name: Llys Wern	Email: Deryn Court 5 Wharfdale Road Cardiff CF23 7HA
ATS Sample No: N/A	

Site Ref / Hole ID: TP01	Depth (m): 1.00 - 1.00
Sample No:	Sample Type: Disturbed
Sampling Certificate Received: No	Material Description: Dark grey brown slightly sandy CLAY.
Location in Works: Unknown	Material Source: N/A
Date Sampled: N/A	Material Supplier: N/A
Sampled By: N/A	Specification: BS 1377
Date Received: 05 July 2018	Date Tested: 13 July 2018

Test Results

Liquid Limit	39	%
Plastic Limit	23	%
Plasticity Index	16	%

Preparation:	4.2.3 Natural Specimen
Proportion retained on 425µm sieve:	0 %



Remarks:

QA Ref.

BS1377-2
Rev 3.0



Apex Testing Solutions

Sturmi Way, Village Farm Industrial Est, Pyle,
Bridgend, CF33 6BZ
Tel: 01656 746762 Fax: 01656 749096



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Approver

D Simon

Date

16/07/2018

Fig.

ATT

D Simon, Laboratory Manager

TEST REPORT
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX
BS 1377:Part 2:1990: Clause 4.3/5.3/5.4

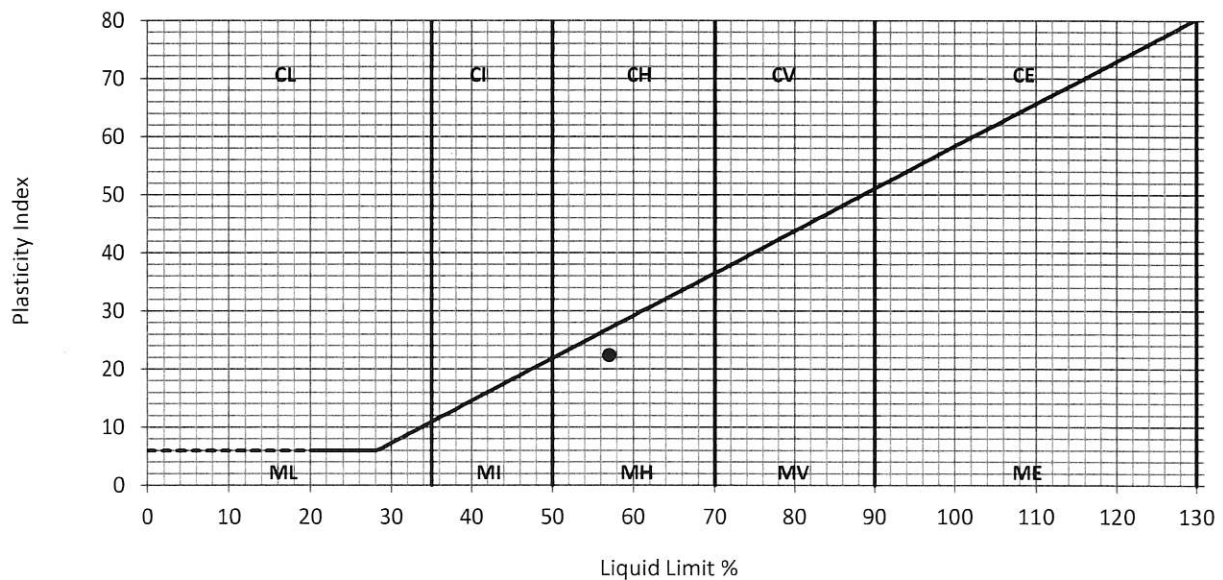
Project No: D8212	Client: Terra Firma Wales Ltd
Project Name: Llys Wern	Email: Deryn Court 5 Wharfdale Road Cardiff CF23 7HA
ATS Sample No: N/A	

Site Ref / Hole ID: TP02	Depth (m): 1.20 - 1.20
Sample No:	Sample Type: Disturbed
Sampling Certificate Received: No	Material Description: Grey brown slightly sandy SILT.
Location in Works: Unknown	Material Source: N/A
Date Sampled: N/A	Material Supplier: N/A
Sampled By: N/A	Specification: BS 1377
Date Received: 05 July 2018	Date Tested: 12 July 2018

Test Results

Liquid Limit	57	%
Plastic Limit	35	%
Plasticity Index	22	%

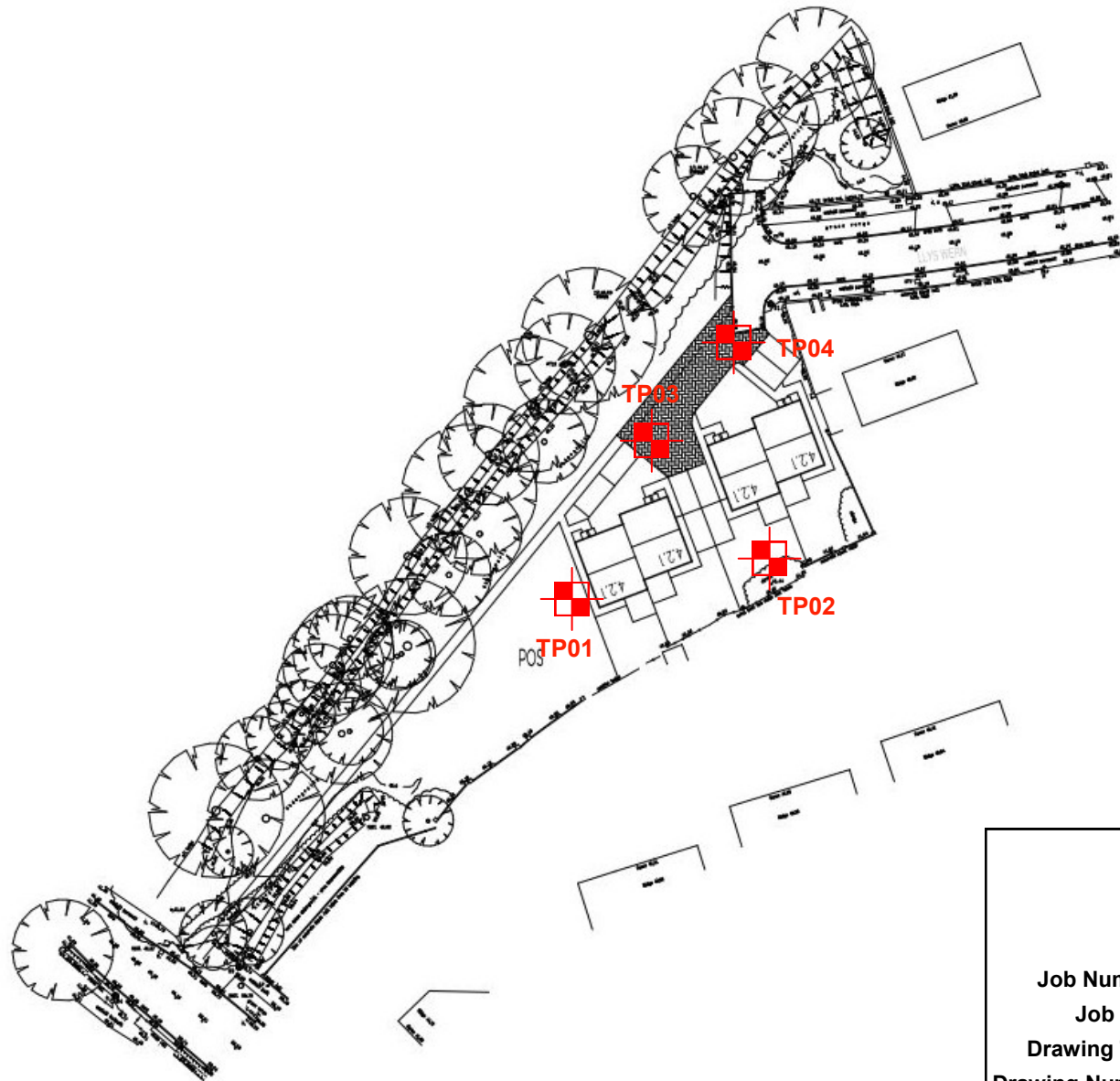
Preparation:	4.2.3 Natural Specimen
Proportion retained on 425µm sieve:	0 %



Remarks:

QA Ref. BS1377-2 Rev 3.0	 Apex Testing Solutions Sturmi Way, Village Farm Industrial Est, Pyle, Bridgend, CF33 6BZ Tel: 01656 746762 Fax: 01656 749096	 7771	Approver <i>D Simon</i> D Simon, Laboratory Manager	Date 16/07/2018	Fig. ATT
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DRAWINGS



Job Number: 14795

Job Title: Lllys Wern

Drawing Title: Proposed Site Layout

Drawing Number: 01

Scale: Not to Scale