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Geotechnical & Geoenvironmental Specialists

Geotechnical and Geoenvironmental Report

Site: Land off Tabernacle Terrace, Cwmafan

Prepared For: Edwards Properties South Wales

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Executive Summary

Site Location and Proposed Development	*Edwards Properties South Wales is proposing the development of six detached split level properties with associated car parking, hard and soft landscaped and garden areas. The site is located to the east of Tabernacle Terrace, Cwmafan, Port Talbot.*
Site History	*The earliest edition shows the site to be occupied by a terrace of structures which were subsequently removed in the 1960s. A number of minor structures are added to the site and steps are seen to be present in the southern half of the site. The site stands unoccupied at the present day.*
Geology	*Superficial Geology consists of MADE GROUND for the anthropogenic portion, followed by Alluvium and Glacial Till. Bedrock geology consists of the South Wales Lower Coal Measures.*
Radon	*Basic radon protection is required for the proposed buildings.*
Coal Mining Risk Assessment	*Two Coal Seams cross the site with the shallowest being the Four and Five foot seams at an approximate depth of 4.50m. The deeper seam is the Gelledig Seam at an approximate depth of 39m beneath surface level.*
Ground Conditions	• *VARIABLE MADE GROUND* • *VARIABLE NATURAL* • *MUDSTONE and SANDSTONE (Drillers Description)* • *COAL (Drillers Description)* • *MUDSTONE and SANDSTONE (Drillers Description)* • *COAL (Drillers Description)* *MUDSTONE and SANDSTONE (Drillers Description)*
Contamination of Concern	*Of the metals and metalloids above threshold levels; Arsenic and Lead were found at a maximum level of 43mg/kg and 340mg/kg respectively. Of the Hydrocarbons; Benzo(b)fluoranthene was found at a maximum of 5.5mg/kg, Benzo(a)pyrene is found at a maximum level of 4.1mg/kg and Dibenzo(ah)anthracene is also found at 2.2mg/kg*
Ground Gas Risk Assessment	*The site may be classified under Gas Characteristic situation CS2.*
Foundation Solution	*Due to the variability of the deposits encountered on the site it is recommended that engineering of the fill/natural material will be required in order to allow construction of a raft foundation.* *It is proposed that the variable soils are excavated and sieved on site to remove the fine fraction. Following removal of the fines, the granular remains should be compacted in layers in accordance with series 600. The acceptability of the compaction should be confirmed by in situ plate load tests. Following success engineering of the variable deposits, a raft may be used for the development.* *Alternatively a piled foundation may be adopted.* *Given the proximity of adjacent structures the use of a driven pile is likely to lead to excessive vibrations and a Continuous Flight Auger (CFA) or rotary type pile is therefore recommended. The piles are to be founded within the underlying bedrock.* *For a 300mm diameter pile installed to an appropriate length within the underlying competent bedrock a safe working load of typically 400kN should be achieved. Bedrock has been confirmed by rotary boreholes to be between 7.50m and 9.50m. Typical pile lengths will be in the order of 9.50m to 11.50m. Floor slabs should be designed as suspended.*

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Drawings

Drawing 01 Proposed Site Layout

Drawing 2: Sample Location Map

SECTION 1 Introduction and Proposed Development

1.1 Introduction

Edwards Properties South Wales (The Client) is proposing the development of five detached split-level properties on land off Tabernacle Terrace, Cwmafan, Port Talbot. The initial proposal was for 4 properties with a fifth subsequently added.

TFW Group Limited have been commissioned by the Client to undertake a geoenvironmental assessment and geotechnical investigation of the site.

The main objectives of the geoenvironmental assessment programme are:

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

The main objectives of the geotechnical site investigation are:

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

In order to achieve the above objectives, TFW Group Limited carried out an assessment programme including a review of existing data, followed by a field investigation to collect geotechnical and geoenvironmental data from selected locations.

1.2 Limitations and Exceptions of Investigation

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

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

1.3 Quality Assurance

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

SECTION 2 Review of Existing Data

2.1 Physical Setting and Current Site Use

The development site is triangular in shape and centres on an approximate National Grid Reference of 277890 192180, occupying a plan area of approximately 0.17 Hectares.

The site is confined within a parcel of land bound to the northwest by Tabernacle Terrace, residential housing to the southeast and mature woodland to the northeast adjacent to the playing field.

The site is currently occupied by a building site as construction has already commenced for the initial four houses.

The site level is between 40-45m AOD and descending steeply towards the southeast.

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

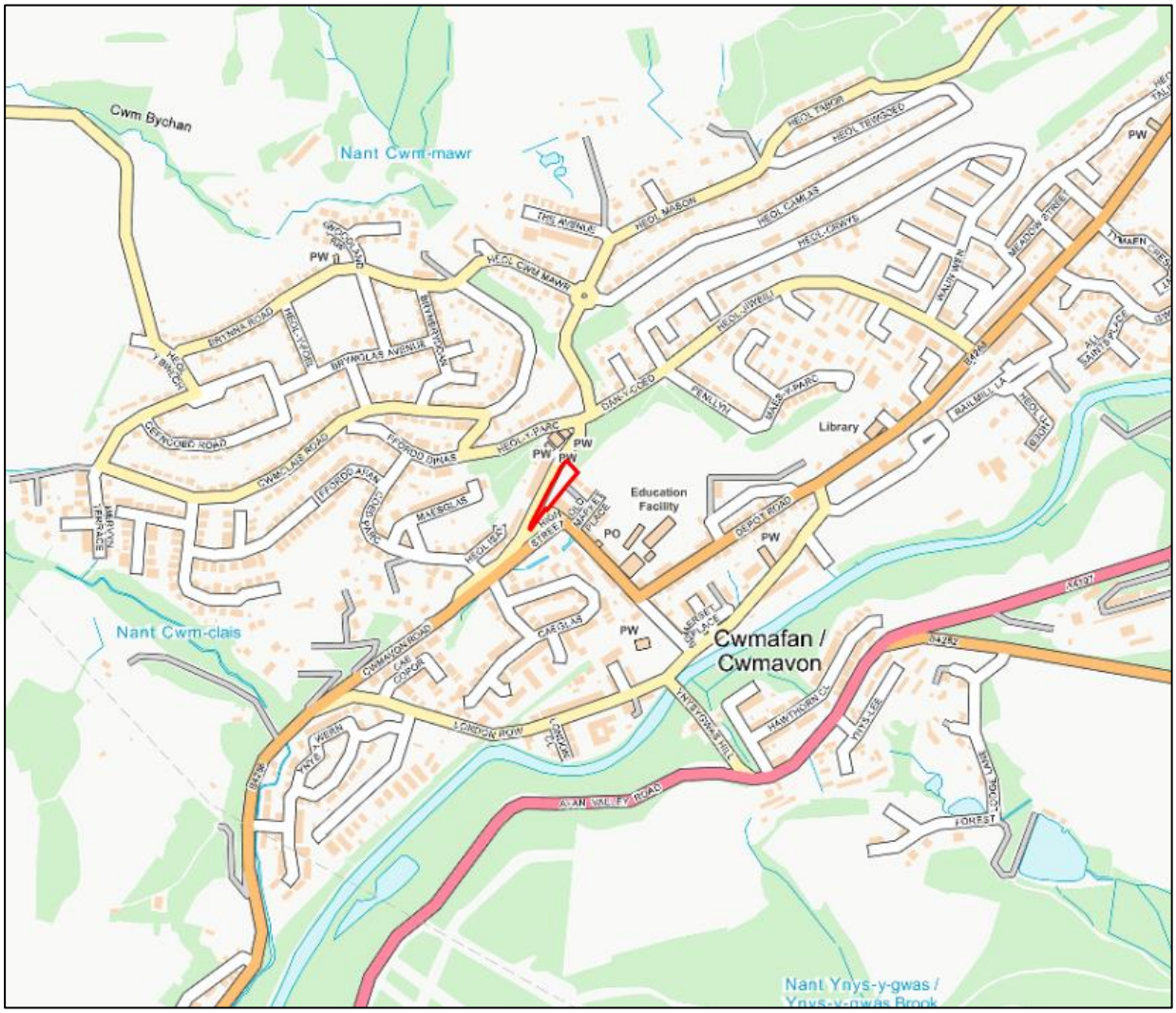

Figure 2.1 Site Location

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 in **Table 2.1**. Distances, where quoted are approximate, and any changes in-between map editions may not be recorded.

Table 2.1 Historical Development from Map Information

Map Edition & Scale	Key Features on Site	Key Features off Site
1877-78 1:2,500	A series of terraced structures, possibly housing, locates centrally across the site	Earliest mapping indicates that the No.1 Tin Works locates immediately to the northeast. Another tin works (the Express Tin Works) is present 215m to the southwest. There are stable blocks located immediately to the east. Tabernacle Terrace delineates the site's north-western boundary. There is a chapel 25m to north. There are railway lines located southeast of the stables, 38m from the site boundary. Residential housing locates immediately to the north, west and southwest. A brick works is located 105m to the northeast. To the southeast, there is a depot with associated workshops and further railway sidings. An air shaft is present 190m east. A chemical works is also present 190m to the northeast with associated railway sidings. A girls' school is present 140m north and a boys' school is present 170m southeast. Further afield, the Meadow Coal Pit is located 527m northeast of the site.
1899 1:2,500	Site remains unchanged.	The surrounding area remains mostly unchanged. The Meadow Coal Pit is now labelled as disused.
1918-19 1:2,500	Three additional structures have been built towards the north of site.	Part of the stable has now redeveloped to housing southeast of the site. Additional residential housing developed to northwest. The depot 130m to the southeast has been developed to contain a much larger school and the original boys' school has been altered to an infants' school. The associated workshops have now been dismantled.
1936-37 1:2,500	Site remains unchanged.	Tin Works to northeast, brickworks to the east, and chemical works to the northeast are now partly dismantled. Much of the associated railway sidings and lines have also been dismantled. Allotment Gardens now developed 25m to the north. The airshaft is now no longer labelled.
1951-52 1:10,560	Site remains unchanged.	Residential housing has been constructed on the previous site of the chemical works.
1965-67 1:2,500	The buildings that previously occupied the site are no longer present and a shelter is now located centrally adjacent to Tabernacle Terrace. Steps now located between Tabernacle Terrace and High Street towards south of site. .	Remaining stable structure now redeveloped. Allotment gardens now removed. All remaining Tin and Brick Works structures have now been removed.
1978 1:2,500	A square structure is present towards the northeast of the site.	A council yard 7m to the east is now in the location of the previous stable. Playing field developed to northeast and boundaries reprofiled.
1983 1:2,500	The site remains unchanged.	The surrounding area remains mostly unchanged.
1993 1:2,500	The site remains unchanged.	Council yard now redeveloped to residential housing.

2000 Aerial Photo	No structures are evident on site	The surrounding area remains mostly unchanged.
2006 1:10,000	Structures removed to northeast of site.	The surrounding area remains mostly unchanged.
2018 1:10,000	The site remains unchanged.	The surrounding area remains mostly unchanged.
2023 Aerial photo	Much of the site is now occupied by building works.	The surrounding area remains mostly unchanged.

2.3 Geological Setting

2.3.1 Geology

The 1:10,560 scale British Geological Map of the area (Sheet SS79SE) was consulted for geology underlying the site. The site is shown to be underlain by mudstone rock. Detailed stratigraphical information is provided in **Table 2.2**.

Table 2.2 Detailed Stratigraphical Information

Period	Group	Formation
Holocene	-	**Alluvium** – Poorly sorted clay, silt, sand, and gravel
Holocene	-	**Glacial Till** – Poorly sorted clay, silt, and sand
Carboniferous	South Wales Coal Measures	**South Wales Lower Coal Measures** – Grey coal bearing mudstone and siltstone with seatearth and minor sandstone.

Strata are typically dipping approximately 30º to the north-northeast in the local area.

Made ground comprising colliery and mineral smelting spoil may be encountered towards the north of the site.

2.3.2 BGS Borehole Information

There are no boreholes within 200m of the site.

2.3.3 Radon

The Envirocheck datasheet (**Annex A**) details that the site is in a low probability radon area, as less than 1% of homes are above the action level.

No radon protective measures are necessary in the construction of new dwellings or extensions.

2.3.4 Mining

Relevant BGS mineral sites as recorded in the Envirocheck Report datasheets (**Annex A**) are summarised in **Table 2.3**.

Table 2.3 BGS Recorded Mineral Sites

Site Name	Distance/ Direction from site	Type	Commodity
Meadow Pit	527m NE	Deep Mine	Coal

Mine workings are recorded by the Coal Authority at 28m below the surface to the north of the site. Further information presented by the Coal Authority Report about the risk posed by historic mining activity can be found in **SECTION 3**. The full Consultants Mining Report can be found in **Annex A**.

2.3.5 Natural Hazards

The Envirocheck Report identifies a potential moderate risk of compressible ground at the site.

The underlying geology is not prone to dissolution.

No other significant natural hazards were identified.

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

The bedrock and superficial 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. Locally the superficial aquifer designation is recorded as unproductive.

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.

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

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

2.4.2 Hydrology

The Envirocheck Report records the nearest surface water feature to locate 50m to the south. This feature comprises a river within the Afan catchment area.

The topography of the site generally slopes steeply towards the southeast; therefore the likely flow of surface and shallow groundwater would also be in this direction.

2.4.3 Flooding

The Envirocheck Report records the site is not at risk from extreme flooding from rivers of sea. However, the site is at risk from surface water flooding from 1 in -30, -100, and -1000 year flood events.

BGS groundwater flooding and susceptibility maps record the site to have potential for groundwater flooding to occur at the surface.

2.4.4 Waste

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

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

There are no discharge consents within 250m of the site.

2.4.5 Pollution

The Envirocheck Reports records no pollution incidents to have occurred to controlled waters within 250m radius of the site.

2.4.6 Sensitive Land Use

The Envirocheck Report details the site to not locate within a designated sensitive land use area.

2.4.7 Industrial Land Use

Relevant contemporary trade directory entries recorded within proximity of the site are summarised in **Table 2.4**.

Table 2.4 Relevant Contemporary Trade Summary

Company	Distance/Direction	Classification	Status
Brynbryddan Pest Control Services	205m Northwest	Pest & Vermin Control	Inactive
Sharps Auto Electrical Co Ltd	231m South	Garage Services	Inactive
Ibis Packaging	237m Southwest	Packaging & Wrapping Equipment & Supplies	Inactive

2.4.8 Infilled Land

Potentially infilled land features within 250m of the site are summarised in **Table 2.5**.

Table 2.5 Potentially Infilled Land

Feature	Distance/Direction
Unknown filled ground (pit, quarry, etc.)	On site
Unknown filled ground (pit, quarry, etc.)	98m northeast
Unknown filled ground (pond, marsh, river, stream, dock, etc.)	66m south
Unknown filled ground (pond, marsh, river, stream, dock, etc.)	163m northeast

2.5 Previous Investigations or Nearby Sites

Potential risks to the proposed development from past historical mining have been considered by others and reported separately. Details may be found in Blandford Consulting Mining Risk Assessment Report - Land at Tabernacle Terrace, Cwmavon, Port Talbot (Report No. BC/MB/02.17.08).

SECTION 3 Preliminary Coal Mining Risk Assessment

3.1 Geotechnical Risk

3.1.1 Underground Mining

Based upon geological map data, the stratigraphical sequence within 50m of the ground surface of the site is illustrated in **Figure 3.1**.

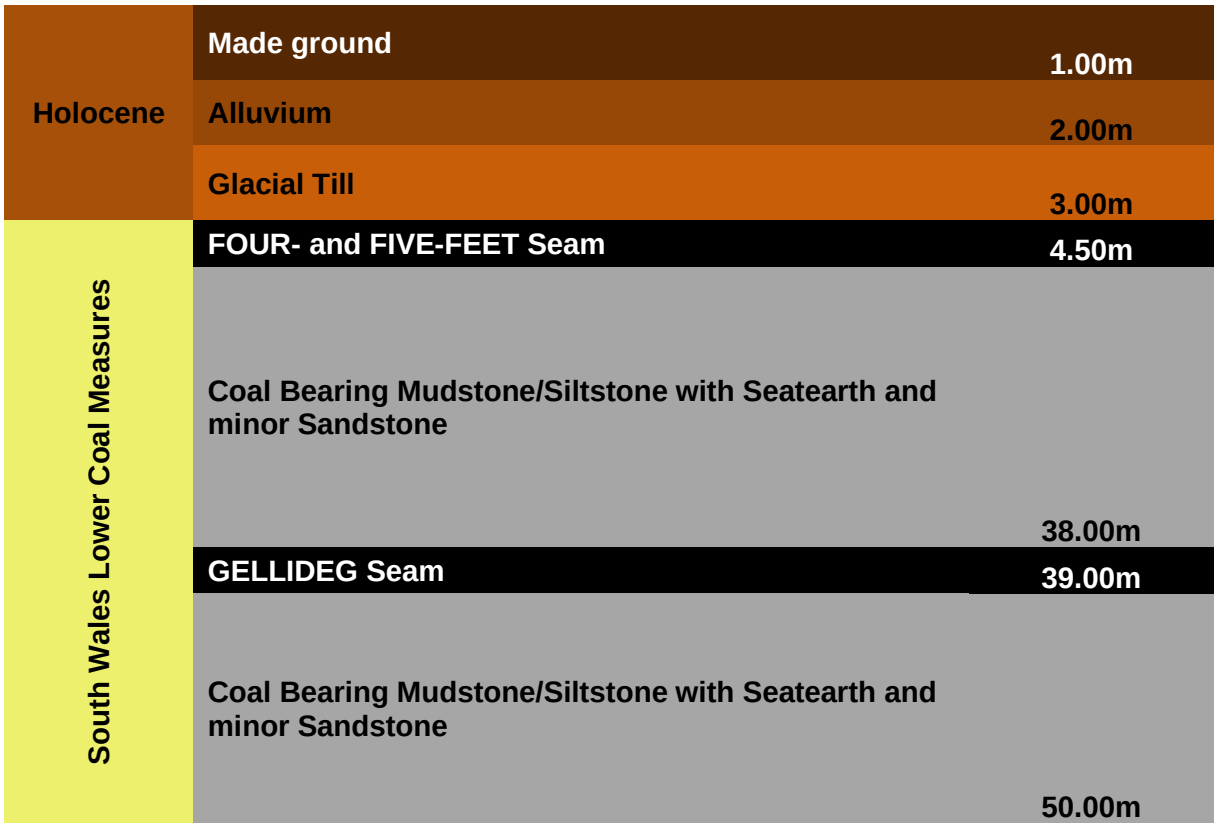

Figure 3.1 Geology and Strata Base below Ground Level

The Coal Authority Report states that there are two coal seams outcropping on the site, and that the site is in an area where there is coal at or close to the surface which may have been worked at some time in the past. These can be seen in **Figure 3.2** and are projected to outcrop in the southernmost extent and central north of the site, trending east-west. Due to the northwards dip of the local geology, this puts the entirety of the site at risk of potential shallow mine workings.

Figure 3.2 Extract from the map provided by the Coal Authority illustrating the coal seam outcrops in purple on site.

The seams that are on site are likely the Four-Foot and Five-Foot seams. This is based on information from the 1:10,560 geological map. However, the 1:10,560 geological map of the area conflates these two seams into one which appears to terminate abruptly 360m to the east of the site. It can be confidently assumed that this is a flaw in the mapping as there appears to be no practical reason why these seams would not continue onto site.

It is possible that following surface mining, the mining of these seams was continued underground. Following the general dip of the area, the southern seam would reach a depth of 64m in the north of the site and the northern seam a depth of 21m. Assuming a thickness of these seams of between 4 and 5 feet (1.2m and 1.5m), based on the geological map of the area, there is a potential risk of shallow coal mining related surface instability across much of the site.

With regards to the underground workings highlighted by the Coal Authority, these are not considered to be a significant risk to the site. This is because, firstly, they are recorded as being off site to the north, and secondly, the extraction thickness was 1.4m mined at a depth of 28m. In order to prevent crown holes migrating to the surface, a 10:1 rockhead to void ratio

is employed, and in this setting, this is more than achieved with over 14m of rockhead over 1.4m of void.

The Coal Authority has not received any damage notice or claim for the site or any property within 50m of the site since 31st October 1994.

3.1.2 Shafts & Adits

No known mine entries are recorded within 20m of the site boundary. The nearest recorded Shaft (278192-069) is located approximately 180m east of the site and remains untreated.

3.1.3 Spine Roadways

No spine roadways are recorded at shallow depth beneath the site.

3.1.4 Conclusion

Based on the presence of the Four- and Five-Feet seams on site, the potential for surface mining, and a potential risk of shallow underground mining, the site is considered to be at high risk from coal mining related subsidence.

It is recommended that an investigation takes place to establish the risk to the surface from these mines. This should comprise rotary boreholes extended to a minimum depth of 30m.

3.2 Geoenvironmental Risk

3.2.1 Mine Gas Risk Assessment

A detailed Mine Gas Risk Assessment will be carried out post-investigation works, as the primary data gathered during the investigation would give a higher degree of certainty in relation to gas risks. This full assessment may be found in **Section 9**.

SECTION 4 Preliminary Human Health and Environmental Risk Assessment

4.1 General

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

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

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

4.2 Potential Sources of Contamination

Potential or known sources of contamination associated the sites current and historical land use are summarised in **Table 4.1**.

Table 4.1 Contamination Sources

ID	Source	Contaminant
S1	Made ground	Metals, Metalloids, PAHs, TPHs, VPHs, PCBs Asbestos (Made ground can generally contain elevated levels of contaminants due to the history of the site and the unknown nature of the man made ground)
S2	Infilled land	Methane, Carbon Dioxide (infilled land can sometimes contain high levels of organics, which overtime may decay top produce gasses)
S3	Abandoned Coal Mines	Methane, Carbon Dioxide, Hydrogen Sulphide (The mines themselves

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

4.3 Potential Pollution Pathways

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

4.4 Potential Receptors

There are human and hydrological receptors to any contamination that may be present on site. Potential receptors include:
R1 – Construction and maintenance workers
R2 – Future site users (residents)
R3 – Passers-by or neighbouring site users
R4 – Groundwater (aquifer)
R5 – Surface waters (river/lake)
R6 – Area of public open space
R7 – Construction materials (concrete/potable water pipes)

4.5 Preliminary Conceptual Site Model

The preliminary conceptual site model establishes potential pollutant linkages between contaminants (source), pathways and receptors, realised during the preparation of the desk study report. Where a potential pollutant linkage is identified an assessment of risk is subsequently undertaken. The preliminary conceptual site model is tabulated in **Table 4.2** and an illustrated version is presented in **Figure 2.1**.

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

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

Table 4.2 Preliminary Conceptual Site Model

Source	Pathway	Receptor	Preliminary Risk Assessment		
			Consequence	Probability	Risk
Human Health					
Contaminated Soils S1	Direct soil and dust ingestion P1 Dermal contact P3 Inhalation of dust and vapours P4	Construction and maintenance workers R1	**Medium**	**Low Likelihood**	**Medium Risk -** COSHH assessment and good level of PPE/ hygiene by site workers/ staff; dust suppression measures if required. Suitably designed site investigation recommended
		Passers-by or neighbouring site users R3	**Medium**	**Unlikely**	**Low Risk** - Dust suppression measures if required.
		Future site users (residents) R2	**Medium**	**Low Likelihood**	**Medium Risk -** Suitably designed site investigation recommended.
Hazardous Ground Gas S2 Vapours S1 Mine Gas S3	Horizontal and vertical migration of ground gasses and vapours	Future site users (residents) R2	**Severe**	**Low Likelihood**	**Medium Risk** – Mine gas risk assessment required, and potential gas membranes installed in houses
Impacted Groundwaters S1	Horizontal and vertical migration of contaminants (saturated zone) P6 Dermal contact P3	Construction and maintenance workers R1	**Medium**	**Unlikely**	**Low Risk**
Contaminated Soils S1	Plant uptake P9 Consumption of home grown produce P2	Future site users (residents) R2	**Medium**	**Unlikely**	**Low Risk**
Contaminated Soils S1 Aggressive ground conditions - Sulphates S1	Direct Contact P11	Construction materials (water pipes) R7 Construction materials (concrete) R7	**Mild**	**Low Likelihood**	**Low Risk**
Aquatic Environment					
Contaminated Soils S1	Vertical migration of leachates (unsaturated zone) P5	Groundwater (aquifer) R4 Surface waters (river/lake) R5	**Mild**	**Unlikely**	**Low risk – filtration and attenuation of contaminants likely to occur before reaching aquifer**
	Surface run-off P8 Horizontal and vertical migration of contaminants (saturated zone) P6	Surface waters (river/lake) R5		**Low Likelihood**	**Low Risk – significant attenuation will occur before any mobile contaminants reach the River Afan.**

4.6 Preliminary Illustrative Conceptual Site Model

The following illustration represents a theorised cross section through the site. The drawing is generalised and not to scale.

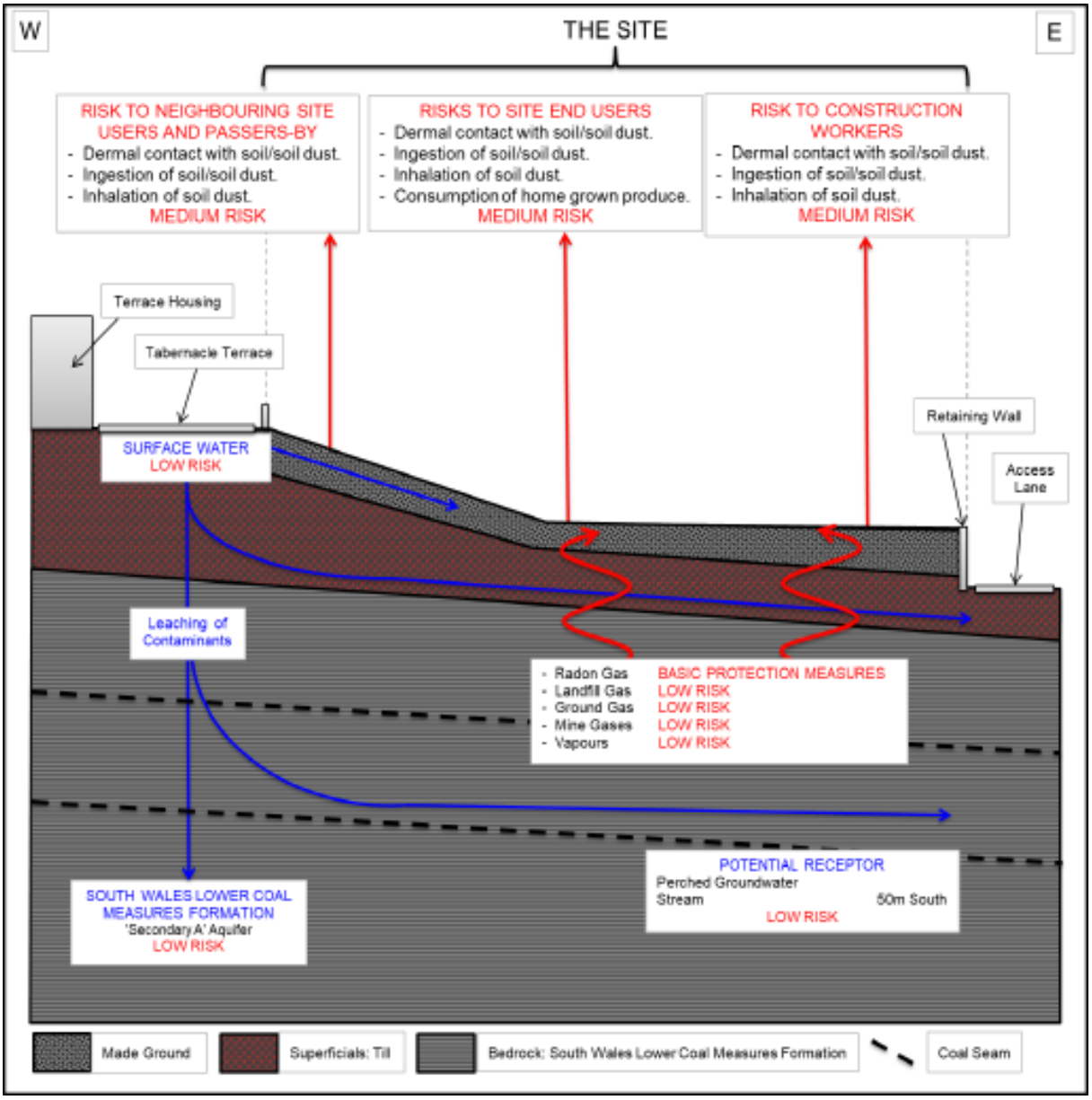

Figure 4.1 Preliminary Illustrative Site Conceptual Model (not to scale)

SECTION 5 Field Investigation

5.1 Site Works

A geotechnical and geoenvironmental site investigation comprising six trial pits and three rotary percussive boreholes was undertaken on 31st January to 1st February 2019 along with subsequent works on 12th February 2019. These works were to inform the initial four houses in the plan. The most recent investigation was conducted on the 8th of March 2024 which was to inform the design of the fifth house.

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

5.1.1 Trial Pits

Trial pits referenced TP01 to TP08, were formed using a 3-tonne tracked excavator.

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

On completion all trial pits were backfilled with materials arisings compacted in layers using the excavator bucket.

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

5.1.2 Boreholes

Boreholes reference BH01 to BH03 were formed using a track mounted rotary openhole drilling rig. The borehole was advanced from surface using tri-cone bit downhole hammer with compressed air/air-mist as the flushing medium.

Boreholes were monitored for groundwater ingress as drilling proceeded.

The borehole logs are presented in **Annex D**.

5.1.3 Mini Percussive Boreholes

The boreholes referenced WS01 to WS03, were formed using a Terrier 2000 rig. Dynamic sampling techniques were employed from surface to produce a continuous disturbed sample.

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

Boreholes were monitored for groundwater ingress as drilling proceeded.

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

The borehole logs are presented in **Annex D**.

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

5.2 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 Shallow Ground Conditions

Depth (m)			Thickness (m)	Stratum
0.00	-	0.90/1.50	0.90/1.50	**VARIABLE MADE GROUND**: Loose, brown, clayey sandy GRAVEL with brick, concrete, and occasional slag. Soft to firm, dark brown, gravelly cobbly CLAY with brick, concrete and occasional metal pipe, glass, ceramic and plastic / Firm, dark brown, very sandy gravelly CLAY with brick, concrete and occasional slag / (Loose to medium dense), greyish brown, ashy clayey gravelly SAND with concrete, brick and large building stone / (Medium dense to dense), dark brown, clayey sandy GRAVEL with brick and concrete
0.90/1.50	-	>2.30	Unknown	**VARIABLE NATURAL**: Firm to stiff, grey green and brown, slightly gravelly CLAY with occasional cobble / (Medium dense), grey, brown, clayey SAND and GRAVEL / Medium dense, grey silty SAND / Stiff, light grey, laminated slightly sandy silty CLAY / Soft to firm, greyish brown, silty sandy CLAY / Very soft, orangey brown and grey, sandy slightly gravelly CLAY

Table 5.2 Summary of Typical Ground Conditions Encountered by Rotary Boreholes

Depth (m)			Thickness (m)	Stratum
0.00	-	1.20/2.00	1.20/2.00	**Fill** (driller's description)
1.20/2.00	-	7.50/9.50	6.30/7.50	Gravelly **CLAY** (driller's description)
7.50/9.50	-	16.50/22.60	7.00/14.00	**MUDSTONE** and **SANDSTONE** (driller's description)
16.50/22.60	-	17.50/23.60	1.00	**COAL** (driller's description, not in BH01)
17.50/23.60	-	20.30/25.10	1.50/2.80	**MUDSTONE** and **SANDSTONE** (driller's description)
20.30/25.10	-	21.00/25.80	0.70	**COAL** (driller's description, not in BH01)
21.00/25.80	-	>37.00/40.00	Unknown	**MUDSTONE** and **SANDSTONE** (driller's description)

5.3 Groundwater

Groundwater information recorded during the site investigation is summarised in **Table 5.3**.

Table 5.3 Groundwater Summary

Location	Depth (m)	Details
TP01	1.20	Large inflow, possibly from an old pipe
TP02	1.00	Small seepage and inflow from base of made ground
TP04	0.80	Moderate inflow possible from old pipe, with hydrocarbon sheen and odour
TP05	1.20	Small inflow

TP06	0.90	Small inflow
BH01	6.50 & 7.50	No description
BH02	7.00 & 10.00	No description
BH03	6.00 & 8.00	No description

5.4 Stability and Obstructions

Short term instabilities were seen in the trail pits and collapses of the made ground were observed.

The sand and gravel deposits were seen to be strong in situ however upon excavation and with the addition of the water become quite sloppy.

A concrete obstruction, possibly a foundation, was also encountered in TP01.

5.5 Installation Well Construction

Ground gas well locations were selected on a targeted basis to investigate suspected sources of contamination and potential contamination migration pathways.

Gas installation well construction details are summarised in **Table 5.4**.

Table 5.4 Installation Well Summary

Location	Response Zone		Stratum
	From (m)	To (m)	
WS01	1.00	3.00	MADE GROUND and sandy gravelly CLAY
WS03	1.00	3.00	MADE GROUND and sandy gravelly CLAY

5.6 Laboratory Chemical Testing

5.6.1 Sampling Strategy

Soil sampling locations were selected on a targeted basis to investigate suspected sources of contamination or potential contamination migration pathways.

Sample locations, depths and suspected/known contamination source targets are summarised in **Table 5.5**:

Table 5.5 Sample Locations, Depths and Targets

Location	Depth (m)	Contamination Targets
TP01	0.50	S1
TP02	0.40	S1
TP03	0.30	S1
TP03	1.00	S1
TP04	0.30	S1
TP04	0.80	S1
TP05	0.60	S1
TP06	0.60	S1
TP07	0.40	S1
TP07	0.80	S1
TP08	0.20	S1
TP08	1.00	S1

5.6.2 Soil Laboratory Analysis

During the site investigation works soil samples were taken and despatched to the accredited laboratories of Eurofins Chemtest for laboratory chemical testing. Soil samples were tested for the determinants listed in **Table 5.6**.

Table 5.6 Soil Laboratory Analysis

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

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

5.6.3 Soil Leachate Laboratory Analysis

Substances found to be elevated in soils were further scheduled for leachate laboratory testing of the determinants listed in **Table 5.7**.

Table 5.7 Leachate Laboratory Analysis

Metals & Metalloids
Arsenic
Lead

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

5.7 Soil Property Testing

5.7.1 Laboratory Geotechnical Testing

A schedule of laboratory tests was prepared by TFW Group Ltd and samples were despatched to the accredited laboratories of GSTL. A summary of the testing carried out is presented in **Table 5.8**.

Table 5.8 Summary of Geotechnical Testing

Geotechnical Test	Standard (BS1377:1990)	No. Tested
Moisture Content	Part 2, Clause 3.2	3
4 Point Liquid and Plastic Limit	Part 2, Clause 4.3 & 5.3	3

The test results are presented in **Annex F** and discussed in **SECTION 7** of this report.

SECTION 6 Evaluation of Geoenvironmental Analytical Results

6.1 Assessment Methodology

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

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

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

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

6.2 Soil Test Results

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

6.2.1 Inorganics

Twelve samples were tested for a standard suite of inorganics, pH and organic matter. The summarised results are in **Table 6.1**.

Table 6.1 Summary of Soil Chemical Test Results – Inorganics

Substance	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Arsenic	37	LQM/CIEH	7.0	43	1
Cadmium	11	LQM/CIEH	<0.1	2.4	0
Chromium III	910	LQM/CIEH	10	33	0
Chromium VI	6	LQM/CIEH	<0.5	<0.5	0
Copper	2400	LQM/CIEH	9.0	210	0
Lead	200	pC4SL	20	340	3
Mercury (inorganic)	40	LQM/CIEH	0.05	0.26	0
Nickel	180	LQM/CIEH	16	65	0
Selenium	250	LQM/CIEH	<0.20	0.63	0
Zinc	3700	LQM/CIEH	36	950	0
Cyanide	-	-	<0.5	2.0	-
Sulphate (%)	0.24	BRE	<100	2300	0
Organic Matter (%)	-	-	1.7	3.5	-
pH	-	-	7.2	8.4	-
Phenols	120	LQM/CIEH	<0.30	<0.30	0

Notes:
- No available guideline

6.2.2 Organics

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

Table 6.2 Summary of Soil Chemical Test Results – Speciated Polycyclic Aromatic Hydrocarbons

Substance	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Naphthalene	2.3	LQM/CIEH	<0.1	1.3	0
Acenaphthylene	170	LQM/CIEH	<0.1	0.70	0
Acenaphthene	210	LQM/CIEH	<0.1	0.88	0
Fluorene	170	LQM/CIEH	<0.1	1.20	0
Phenanthrene	95	LQM/CIEH	<0.1	9.2	0
Anthracene	2400	LQM/CIEH	<0.1	1.6	0
Fluoranthene	280	LQM/CIEH	<0.1	12	0
Pyrene	620	LQM/CIEH	<0.1	9.2	0
Benzo(a)anthracene	7.2	LQM/CIEH	<0.1	6.1	0
Chrysene	15	LQM/CIEH	<0.1	6.6	0
Benzo(b)fluoranthene	2.6	LQM/CIEH	<0.1	5.3	2
Benzo(k)fluoranthene	77	LQM/CIEH	<0.1	2.3	0
Benzo(a)pyrene	2.2	LQM/CIEH	<0.1	4.1	3
Indeno(123cd)pyrene	27	LQM/CIEH	<0.1	2.6	0
Dibenzo(ah)anthracene	0.24	LQM/CIEH	<0.1	2.2	5
Benzo(ghi)perylene	320	LQM/CIEH	<0.1	3.0	0
Total PAH	-	-	<2.0	66	-

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

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

Table 6.3 Summary of Soil Chemical Test Results – Petroleum Hydrocarbons

Substance	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Aliphatic					
VPH C5 – C6 Ali	42	LQM/CIEH	<1.0	<1.0	0
VPH C6 – C8 Ali	100	LQM/CIEH	<1.0	<1.0	0
VPH C8 – C10 Ali	27	LQM/CIEH	<1.0	10	0
EPH C10 – C12 Ali	130	LQM/CIEH	<1.0	28	0
EPH C12 – C16 Ali	1100	LQM/CIEH	<1.0	67	0
EPH C16 – C21 Ali	65000	LQM/CIEH	<1.0	40	0
EPH C21– C35 Ali	65000	LQM/CIEH	<1.0	81	0
EPH C35– C44 Ali	65000	LQM/CIEH	<1.0	<1.0	0
Aromatic					
VPH >C5-C7	70	LQM/CIEH	<1.0	<1.0	0

VPH >C7-C8	130	LQM/CIEH	<1.0	<1.0	0
VPH >C8-C10	34	LQM/CIEH	<1.0	<1.0	0
EPH >C10-C12	74	LQM/CIEH	<1.0	1.6	0
EPH >C12-C16	140	LQM/CIEH	<1.0	18	0
EPH >C16-C21	260	LQM/CIEH	<1.0	470	1
EPH >C21-C35	1100	LQM/CIEH	<1.0	710	0
EPH >C35-C44	1100	LQM/CIEH	<1.0	<1.0	0

Notes:
VPH – Volatile Petroleum Hydrocarbon
EPH –Extractable Petroleum Hydrocarbon
Thresholds based on 1.0% soil organic matter
* – Ali C16-21 and C21-C35 based on criteria for Ali EC >16-35

Eight samples were tested for a full suite of volatile and semi-volatile organic compounds. Noteworthy compounds exceeding laboratory limits of detection are summarised in **Table 6.4**.

Table 6.4 Summary of Soil Chemical Test Results – Noteworthy VOC & SVOC

Substance	Location	GAC (mg/kg)	Source	Measured Concentrations (mg/kg)	Number of Exceedances
1,1-Dichloroethane	TP03 0.30m	0.011*	LQM/CIEH	0.063	1
1,1,1-Trichloroethane	TP03 0.30m	18^	LQM/CIEH	0.12	0
1,2-Dichlorobenzene	TP01 0.50m	55”	LQM/CIEH	1.9	0
2-Methyl-4,6-Dinitrophenol	TP04 0.80	<0.50	LDL	1.5	1

Notes:
- * No guideline available, residential with plant uptake value for 1,2-Dichloroethane has been used (2.5% SOM)
- ^ - Guideline value for residential with plant uptake (2.5% SOM)
- “ - Guideline value for residential with plant uptake (1% SOM)
- LDL - No guideline available and Laboratory Detection Limit has been used

Eight samples were tested for polychlorinated biphenyl (PCB). The testing has found all determinants in all samples to be below the laboratory detection limit of 0.20mg/kg.

6.2.3 Asbestos Testing

All made ground soil samples were scheduled for asbestos screening. Asbestos was not detected.

6.2.4 Leachate Test Results

Substances found to be elevated in soil samples were submitted for leachate testing. The results are summarised in **Table 6.5**.

Table 6.5 Summary of Leachate Chemical Test Results

Substance	Threshold Value (µg/l)	Locatoin	Source	Measured Concentrations (µg/l)	Number of Exceedances
Arsenic	50	TP01 0.50m	WFD2	1.9	0
Lead	1.2	TP06 0.60m	WFD1	11	1

Notes:
WFD1 - Water Framework Directive – Inland Surface Waters (AA)
WFD2 - Water Framework Directive – Freshwater (Long Term Mean)

SECTION 7 Geotechnical Testing Results

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

7.1 Plasticity Testing

During the investigation three samples of the shallow clay material were taken and submitted for plasticity testing. The test results are summarised in **Table 7.1**.

Table 7.1 Plasticity Content Test Results

Location	Depth (m)	Laboratory Principal Soil Type	Plasticity Index (%)	Passing 425µm Sieve (%)	Modified Plasticity Index (%)	Volume Change Potential
TP01	1.50	CLAY	14	100	14.00	Low
TP04	1.50	SILT	5	81	4.05	Non-plastic
TP05	1.50	CLAY	13	82	10.66	Low

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

SECTION 8 Coal Mining Risk Assessment

8.1 Coal Seam Stratigraphy

The three deep boreholes drilled across the site confirm that there are up to two coal seams within the top 30m of bedrock under areas of the site. The following generalised sequence of horizons has been recorded:

Based upon geological map data, the stratigraphical sequence within 50m of the ground surface of the site is illustrated in **Figure 3.1**.

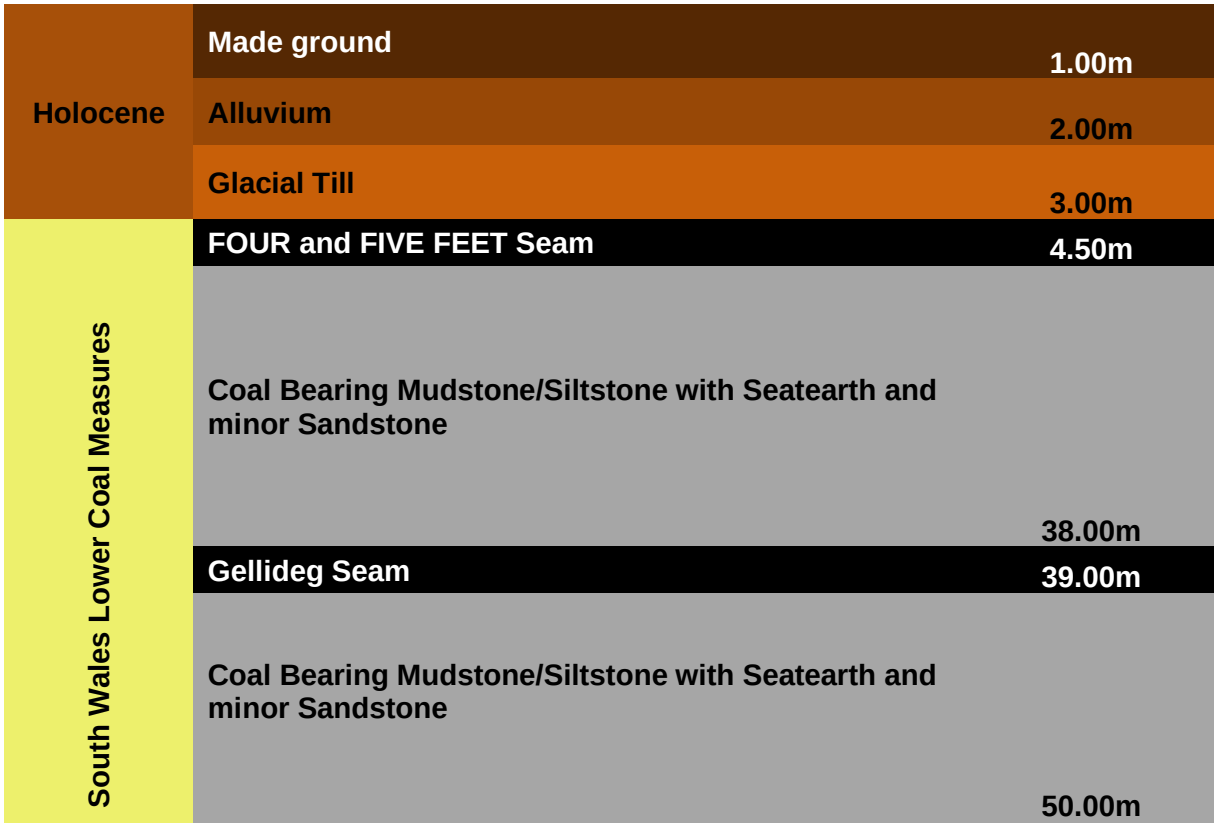

Figure 8.1 Geology and Strata Base below Ground Level

8.2 Summary of Boreholes

A summary of the boreholes sunk beneath the site with particular reference to coal seams is presented in **Table 8.1** below and on the following page.

Table 8.1 Summary of Site Investigation Boreholes

Borehole No	Depth (m)	Feature	Thickness (m)
BH01	7.50-40.00	Mudstone and Sandstone	32.50
BH02	16.50-17.50	Coal	1.00
	20.30-21.00	Coal	0.70
BH03	22.60-23.60	Coal	1.00
	25.10-25.80	Coal	0.70

8.3 Conclusions

All three boreholes have found intact sequences of coal measures and a thickness of rock head of 32.50m, 27.50m and 32.10m has been confirmed in BH01, BH02 and BH03 respectively.

The upper seams encountered is close to outcrop under the site and is therefore too shallow to have been worked by underground methods. There is no evidence on the historic maps of mining activities in the surrounding area and it is therefore considered that the seams would not have been worked under the site.

It is therefore considered that there is a negligible risk to the proposed development from past underground mining.

While the investigation works previously undertaken were for the four original properties the information collected and conclusions presented can be extended and apply to the fifth property added most recently.

SECTION 9 Mine Gas Risk Assessment

9.1 Risk Assessment Post Site Works

This assessment has been completed in accordance with guidance published in CL:AIRE, 2021, Good practice for risk assessment for coal mine gas emissions. In the first instance, the risk assessment process requires the screening out of 'potentially at risk sites' utilising the decision support tool for mine gas risk assessment, provided in Figure 13.1 - CLAIRE 2021. A summary of the decision tool and site outcome is presented in **Table 9.1**

Table 9.1 Mine Gas Risk Assessment Table

Step	Qualifier Question	Outcome	Comment
1	Is the site within a Coal Authority defined Coal Mining Reporting Area?	Yes	Go to step 2
2	Are all these statements true? Mine entries >50m from site boundary. Workings >150m depth. No faults or other potential pathways connecting surface to deeper unflooded workings. Outside area of past or probable shallow workings on Coal Authority Viewer.	No	Got to step 3
3	Are all these statements true? Workings between 30m and 150m but permanently flooded or covered by 10m+ of low permeable superficial deposits. Mine entries > 50m from site boundary. Low permeability superficial deposits of sufficient thickness - $<1x10^{-4}$ m/s hydraulic conductivity.	Yes	Stay at Step 3

9.2 Justification

The three deep borehole son site, referenced BH01, BH02 and BH03 are primarily used as evidence to justify the mine gas risk.

BH01 exhibits no coal seams, worked or otherwise with groundwater encountered at 6.50m.

BH02 exhibits groundwater at 10.0m depth, with a coal seam found at 16.50m depth.

BH03 exhibits groundwater at 8.0m with a coal seam found at 22.60m depth.

In these boreholes, the coal seams, none of which are found to have voids or workings within are all several meters below the encountered groundwater level. This would indicate that any deeper seams which could be worked, would be flooded by the naturally occurring groundwater. The flooding of the bedrock/workings would alleviate the gas risk, as gasses would have no open pore spaces to migrate through and into, thus providing no reservoir for gasses.

This may be further justified by the distances to the nearby River Afan. The site is located some 41m AOD, with the River Afan located ~35m AOD. The distances between the site and the river (5-6m) correlate with the encountered groundwater depths and the natural expected groundwater levels, further confirming any potential workings would be flooded.

9.3 Conclusions

Using the information gathered from the Site investigation, it may be concluded that the mine gas risk is low/negligible for the following reasons:

No open workings were encountered; therefore the presence of any mine gasses would not be likely as there are no open voids for the mine gas to occupy.

Any workings are deeper than the maximum depth of the boreholes drilled on site (30m) and groundwater was encountered between 6.00m and 10.00m depth, so any open voids beneath the site will be flooded with groundwater, closing available pore spaces for gasses to migrate into.

It may then be concluded that the risk to the site from mine gasses is considered low.

SECTION 10 Gas & Vapours Risk Assessment

10.1 Gas Risk Characterisation

Based on the guidance from CL:AIRE, 2021, Good practice for risk assessment for coal mine gas emissions, and with specific reference to Figure 13.1 found within, the site was designated as of being at high risk from mine gas emissions during the desk study phase. This was compounded by the confirmed presence of shallow coal though rotary drilling methods during the works undertaken between the 31st of January and 1st of February 2019. Shallow gas wells were subsequently installed on 12th February 2012 to allow for a quantitative assessment of the risk.

10.2 Gas Monitoring Results

Three ground gas monitoring wells were installed in WS01, WS02, and WS02. Installation details are shown on the relevant log.

All six rounds of gas monitoring have been carried out to date.

Recorded gas concentrations are summarised in **Table 10.1**.

Table 10.1 Measured Gas Concentration Summary

Gas	Minimum (% V/V)	Maximum (% V/V)
Methane	0.0	0.3
Carbon Dioxide	0.0	10.5
Oxygen	5.5	19.9

Methane levels peaked at 0.3% V/V. Carbon dioxide levels varied between 0.0% and 10.5% V/V. Oxygen concentrations varied between 5.5% and 19.9% V/V.

The gas flow rate from the boreholes was also assessed, no positive flow rate was recorded.

Based on the detection limit of the gas monitor a flow rate of 0.1l/hr and the highest recorded carbon dioxide concentration of 10.5%, a gas screening value of 0.0105l/hr is calculated, as follows:

(10.5/100) x 0.1 = 0.0105 l/hr

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

This data should not be taken as a single justification but instead should be used as a single line of evidence when conducting a full coal mining gas risk assessment in accordance with the guidance found in CL:AIRE, 2021, Good practice for risk assessment for coal mine gas emissions.

SECTION 11 Quantitative Risk Assessment

11.1 Contaminants of Concern

Contaminants identified as part of the investigation are summarised in **Table 11.1**, along with an interpretation of the likely contamination source. Where applicable, the contaminant, source relationship is based on the inferences made in the preliminary conceptual site model.

Table 11.1 Contaminants of Concern

Location and Depth	Contaminant	Source
TP01 0.50m	Lead	S1
	Benzo(b)fluoranthene	
	Benzo(a)pyrene	
	Dibenzo(a,h)anthracene	
TP02 0.40m	Dibenzo(a,h)anthracene	S1
TP03 0.30m	1-1,Dichloroethane	S1
TP04 at 0.80m	Dibenzo(a,h)anthracene	S1
	2-Methyl-4,6-Dinitrophenol	
TP06 at 0.60m	Arsenic	S1
	Benzo(a)pyrene	
	Benzo(a)pyrene	
	Dibenzo(a,h)anthracene	

11.2 Leachable Contaminants of Concern

Leachate testing has found lead to be above the guideline value. The concentration recorded is 11 ug/l above the guideline value of 1.2 ug/l.

11.3 Pollutant Linkages

Based on the findings of the intrusive site investigation and identified contaminants, the preliminary conceptual site model has been revised. Significant pollutant linkages are tabulated in the refined conceptual site model **Table 11.2**. Identified pollutant linkages will require detailed risk assessment, appropriate mitigation, or remedial measures.

Table 11.2 Refined Conceptual Site Model

Source	Pathway	Receptor
S1	P1, P2, P3, P4, P5, P6 (lead), P7, P8, P9, P10, P11, P12	R1, R2, R3, R4, R6, R7

11.4 Refined Illustrative Conceptual Site Model

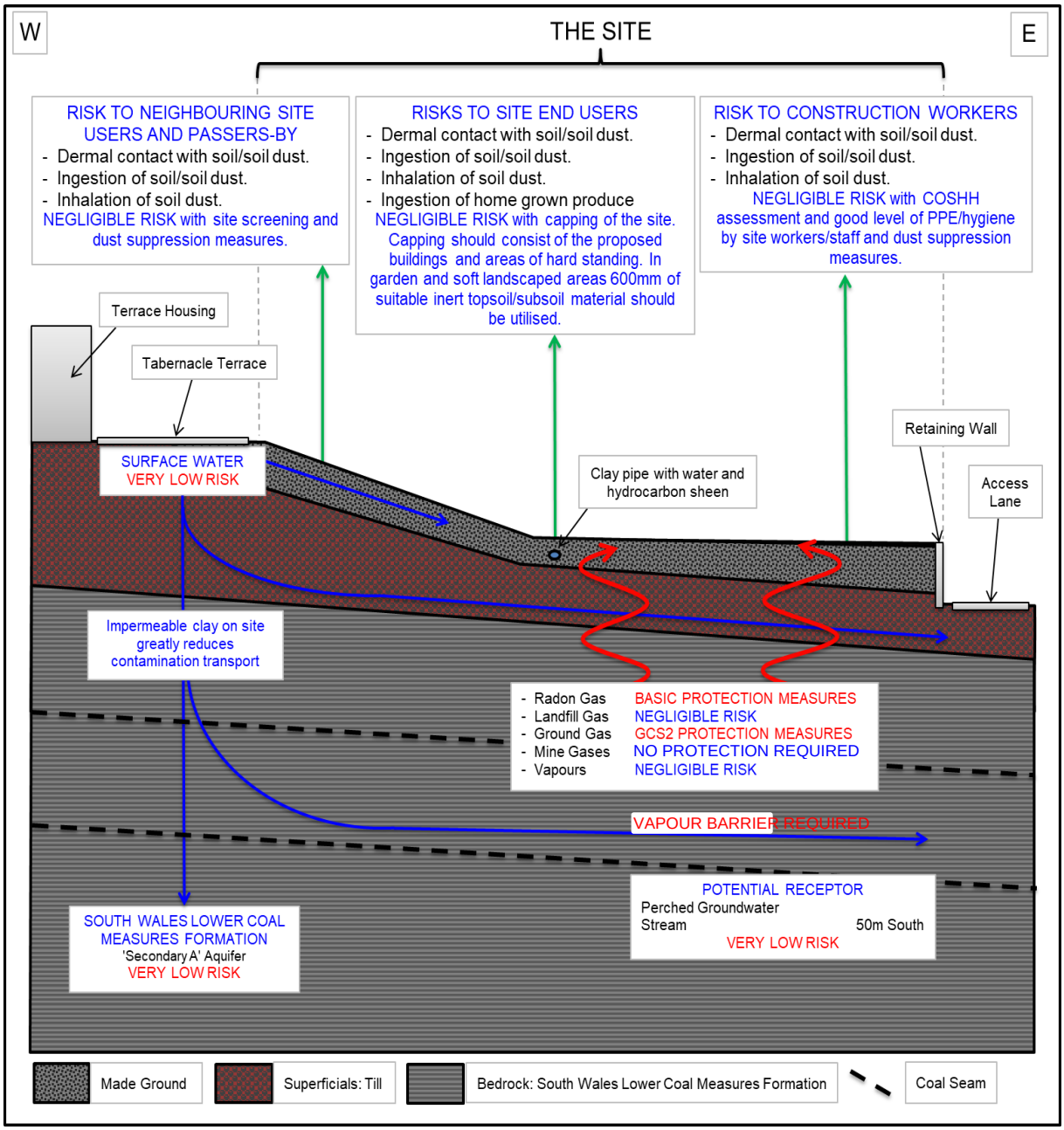

Figure 11.1 Refined Illustrative Conceptual Site Model

11.5 Mitigation and Remedial Measures

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

11.5.1 Human Health

11.5.1.1 Contaminated Soils

To protect future site users from the identified 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.

Alternatively made ground soils could be removed from site and disposed of at a suitably licenced landfill site.

The soils should also be physically suitable and contain no 'sharps' as defined in BS8332:2015 Specification for Topsoil and BS8601:2013 Specification for Subsoil and Requirements for Use.

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

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

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

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

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

11.5.1.2 Ground Gas

To protect the future site users from identified ground gas, proposed structures will need to incorporate within its construction a suitable ground gas protection system. The ground gas protection system should be designed, verified, installed and validated in accordance with the British Standard 8485:2015+A1:2019 and CIRIA guidance C735:2014.

It is recommended that a specialist consultant is retained to prepare a risk assessed ground gas protection system Verification Plan for the proposed development. The Verification Plan will detail the required protection measures based on the perceived risk associated with the complexity of design, experience of the installer, size of the site and gas characteristic situation. The Verification Plan also details the step-by-step process and requirements to allow for the completion of a Validation Report. TFW Group Ltd offer Verification and Validation services.

Validation of installed ground gas protection systems by an independent third party will be required upon completion of the development. Validation may only be achieved if processes prescribed in the Verification Plan are undertaken.

11.5.2 Aquatic Environment

One occurrence of leachable arsenic has been found in TP06 however it is considered that the risk to the aquatic environment is negligible. The leachate exceedance is above the guideline value, however in practice the guideline values are very conservative and difficult to achieve.

A hydrocarbon sheen was also seen on the perched water within the made ground in TP04. This water appeared to originate from a clay pipe that was encountered in the trial pit and slowed during the excavation. This is understood to be a finite volume of water.

The aquatic environment is not considered to be at risk from the PAH contamination identified on the site as according to the CL:AIRE publication titled Petroleum Hydrocarbons in Groundwater, the determinants in exceedance have very low relative mobility in groundwater.

The underlying materials are also clayey in nature and will have a low permeability. In addition to this capping of the site with the proposed development will reduce the available water for infiltration into the ground.

The aquatic environment is therefore not considered to be a risk and any contaminants would soon be rendered insignificant through the effects of dilution and attenuation given the distance to the nearest surface water feature.

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

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

The basic measures that should be taken are as follows:

- Prepare a drainage plan and mark the manholes to prevent pollutants accidently reaching the surface water sewers;
- Carry out any activities that could cause pollution in a designated, bunded area, away from rivers. 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 12 Engineering Recommendations

12.1 Preparation of Site

The existing retaining walls should be inspected by a suitably qualified structural engineer.

All existing hard standings, topsoil, scrub vegetation including all roots should be stripped and removed from beneath the proposed buildings and areas of hard standing.

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

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

Allowances should also be made for the temporary or permanent support of existing structures.

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

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.

12.2 Foundation and Floor Slab Solution

Due to the variability of the deposits encountered on the site it is recommended that engineering of the fill/natural material will be required in order to allow construction of a raft foundation.

It is proposed that the variable soils are excavated and sieved on site to remove the fine (clay) fraction. Following removal of the fines, the granular remains should be compacted in layers in accordance with Series 600 at optimum moisture content. The acceptability of the compaction should be confirmed by in situ plate load tests. It is recommended that plate bearing tests are carried out at the base of the Engineering works and at 0.4m lifts thereafter. Three tests should be conducted across each plot footprint for each 0.4m lift. The plate bearing test shall be taken to 150 kPa in three increments on a three-cycle loading. A 6mm settlement criteria should be used as an acceptable limit for each lift. The engineering works should be supervised by a qualified Geotechnical Engineer.

Following successful engineering of the variable deposits, a raft may be used for the development. The raft should be limited to an allowable bearing capacity of 50 kPa and bedded upon a minimum of 0.3m type 1 material. Alternatively, a piled foundation may also be adopted.

For a 275mm precast concrete pile driven to an appropriate set within the underlying weathered bedrock a safe working load of 350kN should be achievable. Based upon the site investigation information pile lengths should vary between 9 and 11m.

The estimated working loads, pile type and lengths should also be confirmed by a specialist piling contractor and it may be prudent to test drive piles at select locations.

A concrete obstruction was encountered in TP01, and pile locations may need to be pre bored or investigated for obstructions.

A careful check should be kept on pile vibrations. If vibrations exceed appropriate safe levels, then consideration should be given to a bored pile solution.

For a 300mm diameter bored pile installed to an appropriate length within the underlying competent bedrock a safe working load of typically 400kN should be achieved. Bedrock has been confirmed by rotary boreholes to be between 7.50m and 9.50m. Typical pile lengths will be in the order of 9.50m to 11.50m.

The estimated working loads, pile type and lengths should again be confirmed by a specialist piling contractor and it may be prudent to test drive piles at select locations.

For the quoted pile size, founded within the bedrock, total settlements should not exceed 10mm with differential movements between adjacent piles being less than half this value. Allowances should be made for re-installing piles where buried obstructions, may be encountered and pre boring may also be required.

Measurements should be kept on pile vibrations during installation. Measures should also be taken to dampen such vibrations. If, however, vibrations exceed permissible values then consideration should be given to an alternative pile solution.

Floor slabs should be designed as suspended.

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.

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 samples of the in-situ clay was taken and submitted for plasticity testing (**Annex F**). In line with the NHBC (Chapter 4.2), the modified plasticity index for the sample was calculated.

Soils on site should be assumed to have a low volume change potential and the foundations will need to penetrate a minimum of 750mm below ground level. All foundation formations should be inspected by a suitably qualified Engineer before being concreted.

12.3 Excavations and Formations

Excavations will be possible with normal soil excavating machinery however when dealing with historic foundations and areas of hard standing a mechanical breaker attachment will be required.

Groundwater was encountered in the majority of trial pits, any water inflows together with rainwater infiltration should be dealt with by conventional pumping techniques. It should be noted that during times of heavy rainfall a higher water table will be encountered.

Short term instabilities were seen in the trail pits and collapses of the made ground were observed. The sides of any excavations deeper than 1.0m, 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. Once again this does not apply to areas of bedrock.

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

12.4 Protection of Buried Concrete

Levels of total sulphate within the in-situ materials measured between <100mg/kg to 2300mg/kg and the pH varied between 7.2 and 8.4.

When these results are compared with Table C2 of BRE Digest 1:2005, it indicates that all buried concrete should as a minimum conform to Class AC-1.

12.5 Access Roads and Car Parking Areas

For access roads and car parking areas, formations within the shallow in-situ soils / made ground a CBR value of 2% may be used for design purposes. If the material is excavated and re-engineered an increased CBR value of 5% may be used.

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

12.6 Storm Water Drainage

It was beyond TFW Group’s remit to undertake soakaway testing on the site.

However, given the ground conditions encountered and the sloping nature of the site soakaway drainage systems are not considered feasible.

Evidence of the low permeability was observed on site as the perched water encountered was seen to pool in the base of the trial pits.

12.7 Filling Works

Filling works may be required as part of the preparatory works for the site.

The site won materials will not be suitable for reuse on site without the engineering works detailed in **Section 12.2**.

The reduced levels should be brought up to the required levels with well, compacted imported granular materials. Department of Transport (DoT) Type 2 sub-base or similar may be used and should be compacted in layers, in accordance with the Specification for Highway Works. Alternatively, appropriately selected inert imported fill could be used.

The materials should be compacted into layers as per the requirements of the Series 600 of the Specification for Highway Works, placed at or close to its optimum moisture

content/maximum dry density. Allowances should be made for the treatment/removal of soft spots.

The existing in-situ soils and the up-fill soils should be cut and benched into each-other to avoid the development of a preferential slip plane.

We recommend that a geotechnical engineer should have a watching brief of any earthworks activities to include inspections and in-situ testing to confirm the effectiveness of the compaction process. Terra Firma undertake this service if required.

12.8 Retaining Walls

Due to the sloping nature of the site retaining walls will be required. The effective angles of shearing resistance of the materials likely to be encountered have been determined based upon past experience of the materials and are presented in **Table 8.2**:

Stratum Description	Bulk Unit Weight (γ) kN/m^3	Effective Cohesion (c') kN/m^2	Effective Angle of Shearing Resistance (ϕ') degrees
Soft to firm cohesive soils	18	0	20 – 25
Firm to stiff cohesive soils	18	0	30
Loose granular soils	18	0	22
Medium dense granular soils	18	0	30
Well compacted, granular materials, compacted as per Specification for Highway Works and other relevant guidance such as British Standards (BS) 6031: 1981. Code of Practise for Earthworks.	19 – 20	0	30 - 35
Fresh/slightly weathered mudstone/siltstone bedrock	19-24	5	35 - 40
Moderately / highly weathered Mudstone/siltstone bedrock	19-24	0	30 – 35

The design and construction of the retaining walls and cut and fill should be in accordance with BS 6031: 1981 Code of Practise for Earthworks and other relevant guidance.

A 45° line taken from the outermost edge of the proposed foundation should not impinge on the face of the retaining walls unless they have been specifically designed to with stand these forces.

It is recommended that the construction of retaining walls be carried out in small sections. The cut face should be inspected by a suitably qualified engineer during the works to determine if any additional precautions are required.

Groundwater was not encountered in the trial pits however appropriate drainage measures should be constructed behind the walls to prevent the build-up of hydrostatic pressure.

If any wall is to be incorporated as part of the proposed building, then suitable ‘tanking’ should be incorporated in its construction.

Allowances should also be made for the removal of soft spots and their replacement with imported suitable selected inert granular materials or suitable inert site won materials.

It is recommended that the temporary cut face is covered with polythene sheeting to protect the face from weathering and also to prevent any minor debris falls impacting upon the site operatives.

The general condition of the temporary cut face should also be inspected on a regular basis. In addition the boundary walls and vicinity behind should be inspected for tension cracks indicative of movement of the temporary cut face. This is of critical importance with the public highway located topographically higher than the site.

ANNEX A
Envirocheck Report

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
158022017_1_1

Customer Reference:
14611

National Grid Reference:
277890, 192180

Slice:
A

Site Area (Ha):
0.17

Search Buffer (m):
1000

Site Details:

, 1, Ty r Owen Terrace
Cwmavon
Port Talbot
SA12 9BG

Client Details:

Ms H Brooke-Smith
Terra Firma (Wales) Ltd
5 Deryn Court
Wharfdale Road
Pentwyn
Cardiff
CF23 7HB

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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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terrafirma

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Integrated Pollution Prevention And Control					
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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (NW)	0	1	277889 192184
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	58	1	277850 192250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	115	1	277889 192350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	127	1	277800 192300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	159	1	277750 192300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	214	1	277700 192300
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	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	336	1	277900 191800
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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	A12SE (SW)	497	1	277450 191850
1	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Britannia P. H. Swo Cwmafan Port Ta, Cwmafan Port Talbot Authority: Natural Resources Wales Catchment Area: River Afan Reference: BM0003201 Permit Version: 1 Effective Date: 1st January 1901 Issued Date: 1st January 1901 Revocation Date: 11th March 2003 Discharge Type: Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Afan **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A8NW (S)	326	2	277820 191810
1	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso No 102 100m D/S Footbridge, Britannia Inn, Cwmafan Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bm0003201 Permit Version: 2 Effective Date: 12th March 2003 Issued Date: 11th March 2003 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Afan **Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	333	2	277798 191806
1	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Swo.Br'Nnia Inn Cwmafan Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bw0203001 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 14th March 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Afan **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8NW (S)	338	2	277800 191800
2	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: London Close Swo Cwmafan Port Talbo, Cwmafan Port Talbot Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bm0003202 Permit Version: 1 Effective Date: 1st January 1901 Issued Date: 1st January 1901 Revocation Date: 14th March 1994 Discharge Type: Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Afan **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A8NE (S)	359	2	277920 191780

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Swo Ynysygwas Bridge Approx Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bw0202401 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 14th March 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Afan **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8NE (S)	363	2	278000 191800
4	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Undefined Or Other Location: Ebbw Vale Row Swo Cwmafan Port Talb, Cwmafan Port Talbot Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bm0003203 Permit Version: 1 Effective Date: 1st January 1901 Issued Date: 1st January 1901 Revocation Date: 14th March 1994 Discharge Type: Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Afan **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A14SW (E)	439	2	278340 192070
5	**Discharge Consents** Operator: The Owner Property Type: Undefined Or Other Location: Coppr Miners Tinplate Works Cwmavon, Cwmavon Port Talbot Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bb4020801 Permit Version: 1 Effective Date: 31st January 1977 Issued Date: 31st January 1977 Revocation Date: 7th December 1993 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Nant Cwn Clais **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	709	2	277470 191540
5	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso No 135 Below Pantdu Cwmafon, Below Pantdu, Neath Port Talbot Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0305601 Permit Version: 1 Effective Date: 29th January 2003 Issued Date: 29th January 2003 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The Afon Afan **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	A7NE (SW)	722	2	277478 191520

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Discharge Consents** Operator: Mr David Llewellyn John Property Type: Domestic Property (Single) Location: Pantdu Farm Pantdu Cwmavon Port Tal, Pantdu Cwmavon Port Talbot Authority: Natural Resources Wales Catchment Area: Not Given Reference: BM0031301 Permit Version: 1 Effective Date: 10th June 1983 Issued Date: 10th June 1983 Revocation Date: Not Supplied Discharge Type: Unspecified Discharge Environment: Land/Soakaway Receiving Water: Underground Strata **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	765	2	277330 191580
7	**Discharge Consents** Operator: Barratt (South Wales) Ltd Property Type: Undefined Or Other Location: Outfall 4, Land At The Waun, Cwmafan Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0149204 Permit Version: 2 Effective Date: 2nd November 1989 Issued Date: 2nd November 1989 Revocation Date: 23rd October 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Afan **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A14NE (E)	794	2	278700 192400
7	**Discharge Consents** Operator: Barratt (South Wales) Ltd Property Type: Undefined Or Other Location: Outfall 4, Land At The Waun, Cwmafan Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0149204 Permit Version: 1 Effective Date: 1st January 1901 Issued Date: 1st January 1901 Revocation Date: 1st November 1989 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Afan **Status: Authorisation revokedRevoked** Positional Accuracy: Located by supplier to within 100m	A14NE (E)	794	2	278700 192400
8	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cwm Afan Rfc. Sw0 3 Authority: Natural Resources Wales Catchment Area: River Afan Reference: BW0200301 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 29th January 2003 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Afan **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	881	2	278490 191520

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	**Discharge Consents** Operator: Barratt (South Wales) Ltd Property Type: Undefined Or Other Location: Cwmafan Land At The Waun Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0149203 Permit Version: 1 Effective Date: 1st January 1901 Issued Date: 1st January 1901 Revocation Date: 1st November 1989 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Afan **Status: Authorisation revokedRevoked** Positional Accuracy: Located by supplier to within 100m	A14NE (E)	892	2	278800 192400
10	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Pelly Street Swo Cwmafan Port Talbo, Cwmafan Port Talbot Authority: Natural Resources Wales Catchment Area: River Afan Reference: BM0003204 Permit Version: 1 Effective Date: 1st January 1901 Issued Date: 1st January 1901 Revocation Date: 11th March 2003 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Afan **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A14NE (E)	934	2	278850 192360
10	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso 101 The Waun 200m U/S Footbride, The Waun, 200m U/S Footbridge Pelly Street, Cwmafan Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bm0003204 Permit Version: 2 Effective Date: 12th March 2003 Issued Date: 11th March 2003 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Afan **Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A14NE (E)	960	2	278873 192383
11	**Discharge Consents** Operator: Barratt (South Wales) Ltd Property Type: Undefined Or Other Location: Cwmafan Land At The Waun Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0149203 Permit Version: 2 Effective Date: 2nd November 1989 Issued Date: 2nd November 1989 Revocation Date: 23rd October 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Afan **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	953	2	278800 192600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	**Discharge Consents** Operator: Barratt (South Wales) Ltd Property Type: Undefined Or Other Location: Outfall 2, Land At The Waun, Cwmafan Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0149202 Permit Version: 2 Effective Date: 2nd November 1989 Issued Date: 2nd November 1989 Revocation Date: 23rd October 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Afan **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A14NE (E)	990	2	278900 192400
12	**Discharge Consents** Operator: Barratt (South Wales) Ltd Property Type: Undefined Or Other Location: Outfall 2, Land At The Waun, Cwmafan Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0149202 Permit Version: 1 Effective Date: 1st January 1901 Issued Date: 1st January 1901 Revocation Date: 1st November 1989 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Afan **Status: Authorisation revokedRevoked** Positional Accuracy: Located by supplier to within 100m	A14NE (E)	990	2	278900 192400
13	**Local Authority Pollution Prevention and Controls** Name: Davies Skips Limited Location: 1 Brunel Industrial Estate, Cwmavon, Port Talbot, Sa12 9db Authority: Neath Port Talbot County Borough Council, Environmental Health Department Permit Reference: E3/1/126 Dated: 10th December 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG3/16 Mobile screening and crushing processes **Status: Permitted** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	332	3	277764 191815
14	**Local Authority Pollution Prevention and Controls** Name: Western Logs Limited Location: Forest Products Centre, Cwmafan, PORT TALBOT, West Glamorgan, SA12 9AB Authority: Neath Port Talbot County Borough Council, Environmental Health Department Permit Reference: E3/1/13 Dated: 28th September 1994 Process Type: Local Authority Air Pollution Control Description: PG6/2 Manufacture of timber and wood-based products **Status: Authorisation has varied** Positional Accuracy: Automatically positioned to the address	A14SE (E)	783	3	278677 191995
	Nearest Surface Water Feature	A13SW (S)	49	-	277883 192092
15	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Ynysygwas Bridge Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Neglect; River Afan Incident Date: 16th November 1998 Incident Reference: 37164 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	A13SE (SE)	271	4	278100 192000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Gwaun Afan Authority: Environment Agency, Welsh Region Pollutant: Sewage Debris/Litter Note: River Afan; Overflow Incident Date: 19th September 1997 Incident Reference: 33620 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NW (S)	330	4	277825 191805
16	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Gwaun Afan Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Afan; Overflow Incident Date: 19th September 1997 Incident Reference: 33620 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NW (S)	331	4	277820 191805
16	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Brittania Inn, CWMAFAN Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Afan; Overflow Incident Date: 6th May 1998 Incident Reference: 35535 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NW (S)	338	4	277800 191800
17	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Treated Water Distribution System Location: Bridge By, Civic Centre Authority: Environment Agency, Welsh Region Pollutant: Contaminated Groundwater Note: Accidental Spillage/Leakage Incident Date: 14th June 1995 Incident Reference: 24554 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	A13SE (SE)	349	4	278200 192000
17	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: CWMAFAN Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 23rd September 1994 Incident Reference: 21185 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)	381	4	278200 191950
18	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Below Britannia Inn, CWMAFAN Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blockage Incident Date: 15th February 1997 Incident Reference: 31393 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	A8NW (SW)	369	4	277700 191800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Pipe Below Britannia Inn Footbridge, CWMAFAN Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blockage Incident Date: 15th February 1997 Incident Reference: 31393 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	A8NW (SW)	371	4	277705 191795
18	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Crude Sewage Overflow, Below Britannia Inn Bridge, CWMAFAN Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blockage Incident Date: 15th February 1997 Incident Reference: 31393 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	A8NW (SW)	374	4	277700 191795
19	**Pollution Incidents to Controlled Waters** Property Type: Waste Handling Facilities Location: Culvert Chute, Below Cwmafan Authority: Environment Agency, Welsh Region Pollutant: Sewage - Septic Tank Effluent Note: Inadequate Design/Capacity Incident Date: 27th October 1991 Incident Reference: 1595 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	A14NW (E)	373	4	278300 192200
20	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 23rd September 1994 Incident Reference: 21185 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)	384	4	278200 191945
20	**Pollution Incidents to Controlled Waters** Property Type: Private Sewage (Non-PLC): Other Location: Ynys Y Gwas Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Poor Operational Practise Incident Date: 18th February 1991 Incident Reference: 2649 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	A13SE (SE)	412	4	278200 191900
20	**Pollution Incidents to Controlled Waters** Property Type: Process Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Sewage - Treated Effluent Note: Poor Operational Practise Incident Date: 16th March 1995 Incident Reference: 23258 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	A13SE (SE)	415	4	278200 191895

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Ynysygwas, Cwmafan, PORT TALBOT Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Accidental Spillage/Leakage Incident Date: 22nd February 1996 Incident Reference: 27418 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Burst Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	419	4	278205 191895
21	**Pollution Incidents to Controlled Waters** Property Type: Other Location: End Of Ebbw, Vale Row, CWMAFAN Authority: Environment Agency, Welsh Region Pollutant: Rubble/Litter Or Solids Note: Neglect Incident Date: 2nd September 1994 Incident Reference: 21130 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Spillage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	391	4	278300 192100
21	**Pollution Incidents to Controlled Waters** Property Type: Other Location: End Of Ebbw, Vale Row On, John Edwards Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Neglect Incident Date: 2nd September 1994 Incident Reference: 21130 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Spillage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	393	4	278300 192095
21	**Pollution Incidents to Controlled Waters** Property Type: Waste Handling Facilities Location: Cwmafan Jet, Wash Garage Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Inadequate Design/Capacity Incident Date: 5th December 1991 Incident Reference: 1659 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	A14SW (E)	397	4	278305 192095
22	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Treated Water Distribution System Location: PORT TALBOT Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Accidental Spillage/Leakage Incident Date: 12th June 1995 Incident Reference: 24513 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Burst Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	432	4	278300 192000
22	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Treated Water Distribution System Location: Corlannau Weir Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Accidental Spillage/Leakage Incident Date: 12th June 1995 Incident Reference: 24513 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Burst Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	434	4	278300 191995

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Alongside Rafan At Ynys Y Gwas, Cwm-Yr-Onnen, PORT TALBOT Authority: Environment Agency, Welsh Region Pollutant: Agricultural: Carcasses Note: Inadequate Design/Capacity Incident Date: 7th March 1996 Incident Reference: 27698 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Burst Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	439	4	278305 191995
23	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewerage Location: Northern End, Of Cwmafan Rfc Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blocked Sewer Incident Date: 18th May 1991 Incident Reference: 3812 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	A14SW (E)	487	4	278400 192100
24	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Cwmafon, Rugby Fields Authority: Environment Agency, Welsh Region Pollutant: Sewage - Treated Effluent Note: Blocked Sewer Incident Date: 11th August 1991 Incident Reference: 1353 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	A14NW (E)	573	4	278500 192200
25	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Hope Road Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Poor Management Control Incident Date: 17th December 1996 Incident Reference: 30745 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	A9NW (SE)	631	4	278400 191800
26	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Surface Water Outfall Location: Fletchers Garage Garage, CWMAFAN Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Inadequate Design/Capacity Incident Date: 5th October 1994 Incident Reference: 21539 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)	631	4	277400 191700
27	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Cwmafan Down Stream Of, Fletchers Garage Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blocked Sewer Incident Date: 27th June 1995 Incident Reference: 24917 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	A7NE (SW)	660	4	277550 191550

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Fletchers Garage, CWMAVON Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blocked Sewer Incident Date: 27th June 1995 Incident Reference: 24917 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	A8NW (SW)	662	4	277555 191545
27	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Flethcers Garage, CWMAFAN Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blocked Sewer Incident Date: 27th June 1995 Incident Reference: 24917 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	A7NE (SW)	664	4	277550 191545
28	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewerage Location: 20 Metres Down Stream Of, Ynysafan Bridge Authority: Environment Agency, Welsh Region Pollutant: Heavy Fuel Oil Note: Neglect Incident Date: 10th January 1991 Incident Reference: 2655 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	A14NE (E)	697	4	278600 192400
29	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: PONTRHYDYFEN Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 23rd March 1995 Incident Reference: 23270 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	A7SE (SW)	728	4	277500 191500
30	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewerage Location: 20 Metres Down Stream Of, Ynysafan Bridge Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Not Supplied Incident Date: 3rd January 1991 Incident Reference: 2647 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	A14NE (E)	777	4	278700 192300
31	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: A4107 Top Road, Opposite Sawmills Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Unnamed Ditch Near 'Western Log Saw Mills'; Run-Off Incident Date: 3rd February 1998 Incident Reference: 34731 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Weather Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SE (E)	782	4	278700 192100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
32	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: New Barratt Houses, 400 Yards, Up Stream Of Ynysafan Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Inadequate Design/Capacity Incident Date: 20th November 1994 Incident Reference: 21790 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	A14NE (E)	793	4	278700 192395
32	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Gwaun Afan Estate, PORT TALBOT Authority: Environment Agency, Welsh Region Pollutant: Chemicals - Alkali Note: Blocked Sewer Incident Date: 21st March 1996 Incident Reference: 27793 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	A14NE (E)	794	4	278700 192400
32	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Porset Brook, Gwaun Afan Estate Authority: Environment Agency, Welsh Region Pollutant: Chemicals - Alkali Note: Blocked Sewer Incident Date: 21st March 1996 Incident Reference: 27793 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	A14NE (E)	795	4	278700 192405
32	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: All Saints Place Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Blocked Sewer Incident Date: 22nd March 1995 Incident Reference: 23325 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	A14NE (E)	798	4	278705 192395
32	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: CWMAFAN Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Blocked Sewer Incident Date: 24th June 1996 Incident Reference: 28926 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	A14NE (E)	799	4	278705 192400
32	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Sewage - Treated Effluent Note: Blocked Sewer Incident Date: 6th June 1996 Incident Reference: 28644 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	A14NE (E)	800	4	278705 192405

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Gwaun Afan, Behind Gaerwen Arms Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Blocked Sewer Incident Date: 2nd July 1996 Incident Reference: 29466 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	A14NE (E)	876	4	278800 192295
33	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Opposite The, Waun Club Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blocked Sewer Incident Date: 27th March 1996 Incident Reference: 27701 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	A14NE (E)	877	4	278800 192300
33	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Opposite The Watertonie Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blocked Sewer Incident Date: 27th March 1996 Incident Reference: 27701 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	A14NE (E)	881	4	278805 192295
33	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Opposite The Waun Club, CWMAFAN Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blocked Sewer Incident Date: 27th March 1996 Incident Reference: 27701 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	A14NE (E)	882	4	278805 192300
34	**Pollution Incidents to Controlled Waters** Property Type: Other Location: Tymian Street, CWMAFAN Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Deliberate Act Incident Date: 14th June 1992 Incident Reference: 4798 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	A14NE (E)	891	4	278800 192395
34	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Waunafan, Barretts, Site Cwmafan Authority: Environment Agency, Welsh Region Pollutant: Agricultural: Carcasses Note: Blocked Sewer Incident Date: 29th April 1992 Incident Reference: 4441 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	A14NE (E)	892	4	278800 192400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
35	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Crude Sewage Overflow Near Footbridge At, Rear Of Barrat Housing Estate, CWMAFAN Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Afan; Overflow Incident Date: 5th December 1997 Incident Reference: 34342 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NE (E)	923	4	278840 192355
35	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Gwaun Afan Cso, CWMAFAN Authority: Environment Agency, Welsh Region Pollutant: Miscellaneous - Fire water / Foam Note: Blocked Sewer Incident Date: 26th September 1996 Incident Reference: 30083 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	A14NE (E)	924	4	278840 192360
36	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Ynys Park, On Left Hand Side, Of River Bank Authority: Environment Agency, Welsh Region Pollutant: Stagnant Water Note: Neglect Incident Date: 10th January 1997 Incident Reference: 30933 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leachate Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	951	4	277400 191300
	River Quality Name: Afan GQA Grade: River Quality A Reach: M4 Motorway - Conf. Pelena Estimated Distance (km): 5.6 Flow Rate: Flow less than 5 cumecs Flow Type: River Year: 2000	A13SE (SE)	356	4	278132 191906
37	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 16th March 2004 Incident Reference: 223386 Water Impact: Category 2 - Significant Incident Air Impact: Category 3 - Minor Incident Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Crude Sewage	A13SE (SE)	343	2	278179 191984
38	**Water Abstractions** Operator: Ms Powell & Mr Spackman Licence Number: 21/58/61/0043 Permit Version: 1 Location: Unnamed Spring Authority: Environment Agency, Welsh Region Abstraction: Food And Drink: Water Bottling 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 January Authorised End: 31 December Permit Start Date: 20th November 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12SW (SW)	733	4	277170 191880

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (H3)- Coarse textured or moderately shallow soils which readily transmit non-absorbed pollutants and liquid discharges but which have some ability to attenuate absorbed pollutants because of their large clay or organic matter contents Map Sheet: Sheet 35 West Glamorgan Scale: 1:100,000	A13SW (NW)	0	4	277889 192184
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SW (NW)	0	1	277889 192184
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SE (SE)	0	1	277899 192177
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	A13SW (NW)	0	1	277889 192184
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	164	2	277993 192037
	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: 35.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A13SW (S)	50	5	277884 192091
40	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A13SW (S)	61	5	277851 192072
41	**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: Afan Primacy: 1	A13SW (SW)	130	5	277779 192030
42	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 539.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A13NE (NE)	185	5	278065 192341
43	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 243.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A13NE (N)	247	5	277941 192480

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
44	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 146.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A13NE (N)	247	5	277941 192480
45	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 64.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A13SE (SE)	272	5	278154 192069
46	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 115.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A13SE (SE)	322	5	278094 191915
47	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Ynys-y-gwas Catchment Name: Afan Primacy: 1	A13SE (SE)	322	5	278094 191915
48	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 265.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A13SE (SE)	322	5	278094 191915
49	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1008.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A8NW (S)	338	5	277822 191797
50	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 224.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A8NE (S)	338	5	278025 191825
51	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A8NW (S)	338	5	277822 191797
52	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 619.5 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14NW (E)	346	5	278273 192246

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
53	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A13SE (SE)	360	5	278122 191888
54	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 160.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A13SE (SE)	360	5	278122 191888
55	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 23.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A13SE (SE)	385	5	278129 191860
56	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 47.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SE (N)	390	5	277922 192625
57	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14SW (E)	398	5	278300 192078
58	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14SW (E)	402	5	278302 192072
59	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 76.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A8NE (SE)	408	5	278144 191843
60	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 71.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SW (N)	419	5	277726 192613
61	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 17.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SE (N)	426	5	277895 192660

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
62	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 35.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A14SW (E)	428	5	278321 192051
63	**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: Afan Primacy: 1	A18SE (N)	439	5	277905 192674
64	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14SW (E)	441	5	278346 192079
65	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 78.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14SW (SE)	447	5	278248 191904
66	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 28.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SW (N)	450	5	277883 192684
67	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 273.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A14SW (E)	450	5	278352 192070
68	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SW (N)	457	5	277876 192691
69	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 2	A18SW (N)	465	5	277845 192695
70	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 795.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SW (NW)	465	5	277682 192640

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
71	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 46.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SW (NW)	467	5	277694 192649
72	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SW (N)	469	5	277861 192702
73	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 364.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A12SE (SW)	478	5	277445 191892
74	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 59.5 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A12SE (SW)	478	5	277462 191865
75	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 81.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Nant Ynys-y-gwas Catchment Name: Afan Primacy: 1	A8NE (SE)	482	5	278186 191781
76	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 543.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A7NE (SW)	487	5	277492 191813
77	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 91.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SW (N)	504	5	277694 192690
78	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 55.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SW (N)	509	5	277682 192690
79	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 118.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SE (N)	511	5	278086 192716

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
80	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 202.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SE (N)	511	5	278086 192716
81	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 64.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14SW (SE)	524	5	278304 191851
82	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 61.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14SW (SE)	524	5	278304 191851
83	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A9NW (SE)	539	5	278275 191793
84	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SE (NE)	539	5	278201 192690
85	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 246.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Ynys-y-gwas Catchment Name: Afan Primacy: 1	A8NE (SE)	545	5	278189 191700
86	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SE (NE)	549	5	278197 192703
87	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SE (NE)	549	5	278197 192703
88	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 83.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SE (NE)	550	5	278188 192710

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
89	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 136.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Cwm-mawr Catchment Name: Afan Primacy: 1	A18SW (NW)	559	5	277647 192728
90	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 245.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SW (NW)	559	5	277647 192728
91	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SW (N)	569	5	277699 192763
92	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 131.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SW (N)	572	5	277703 192768
93	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A9NW (SE)	584	5	278356 191819
94	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SE (NE)	590	5	278140 192779
95	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 6.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SE (NE)	609	5	278145 192797
96	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 54.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SE (NE)	615	5	278148 192803
97	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 102.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A9NW (SE)	622	5	278394 191805

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
98	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A12SW (W)	647	5	277211 192089
99	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 78.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A12SW (W)	662	5	277216 191966
100	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 77.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A12SW (W)	676	5	277185 192056
101	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 225.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A14SE (E)	687	5	278610 192146
102	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 67.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14SE (E)	687	5	278610 192146
103	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 564.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Cwm-mawr Catchment Name: Afan Primacy: 1	A18SW (NW)	690	5	277569 192835
104	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SW (NW)	690	5	277569 192835
105	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 36.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A9NW (SE)	707	5	278470 191766
106	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 79.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A12NW (W)	714	5	277149 192223

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
107	**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: Afan Primacy: 1	A9NW (SE)	727	5	278470 191733
108	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 451.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Cwm-clais Catchment Name: Afan Primacy: 1	A12SW (W)	744	5	277114 192083
109	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 64.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A9NW (SE)	756	5	278486 191707
110	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 537.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14NE (E)	769	5	278647 192489
111	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 7.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Ynys-y-gwas Catchment Name: Afan Primacy: 1	A9NW (SE)	771	5	278315 191513
112	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 467.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Ynys-y-gwas Catchment Name: Afan Primacy: 1	A9SW (SE)	779	5	278321 191507
113	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A14NE (E)	790	5	278709 192331
114	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 322.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A14NE (E)	796	5	278715 192333
115	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 104.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14NE (E)	796	5	278716 192325

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
116	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 72.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A9NW (SE)	803	5	278544 191703
117	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A9NW (SE)	823	5	278565 191698
118	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14NE (E)	842	5	278769 192252
119	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 24.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A19SW (NE)	843	5	278510 192830
120	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14NE (E)	844	5	278770 192256
121	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 84.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A19SW (NE)	860	5	278509 192854
122	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 109.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A9NE (SE)	875	5	278603 191662
123	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 102.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14NE (E)	880	5	278807 192238
124	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 125.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14NE (E)	880	5	278807 192238

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
125	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 60.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14SE (E)	899	5	278821 192126
126	**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: Afan Primacy: 1	A14SE (E)	907	5	278821 192065
127	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 129.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14SE (E)	912	5	278824 192054
128	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 152.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A19NW (NE)	927	5	278517 192938
129	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 62.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A7SE (SW)	928	5	277316 191380
130	**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: Afan Primacy: 1	A7SE (SW)	928	5	277316 191380
131	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 312.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A7SE (SW)	940	5	277359 191336
132	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A9NE (SE)	949	5	278647 191598
133	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 63.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14NE (E)	960	5	278887 192194

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
134	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 65.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A9NE (SE)	965	5	278656 191584
135	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A9NE (SE)	981	5	278701 191615

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
136	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Cwmavon, Port Talbot Name: Disused Tip off Heol Tabor Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD34825 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: Not Supplied	A18SE (NE)	560	2	278173 192730
137	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Cwmavon Name: Tip - Disused Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD34811 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: Not Supplied	A18NE (N)	746	2	278108 192955
138	**Licensed Waste Management Facilities (Locations)** Licence Number: 34157 Location: 1 Brunel Ind Est , Cwmavon, Port Talbot, SA12 9DE Operator Name: Davies Glenville Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Modified** Issued: 1st June 1999 Last Modified: 23rd August 2012 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NW (S)	322	2	277745 191832
	Local Authority Landfill Coverage Name: Neath Port Talbot County Borough Council - Has supplied landfill data		0	3	277889 192184
139	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A13NE (NE)	0	-	277909 192205
140	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A13NE (NE)	98	-	277985 192299
141	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A18SW (NW)	456	-	277683 192631
142	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A19SW (NE)	485	-	278234 192598
143	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A19SW (NE)	557	-	278240 192685
144	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A18SE (NE)	594	-	278185 192763

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
145	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A17SE (NW)	727	-	277490 192828
146	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A14SE (E)	728	-	278612 191969
147	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A14SE (E)	761	-	278688 192183
148	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A14NE (E)	840	-	278766 192269
149	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A14SE (E)	887	-	278797 192041
150	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A9NE (SE)	944	-	278585 191531
151	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A13SW (S)	66	-	277857 192065
152	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A13NE (NE)	163	-	278085 192266
153	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1952	A14SW (SE)	421	-	278245 191942
154	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1952	A14SW (SE)	483	-	278267 191869
155	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A7NE (SW)	616	-	277422 191699
156	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A9NW (SE)	633	-	278406 191804
157	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1884	A8SW (SW)	737	-	277566 191457
158	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A7SE (SW)	751	-	277536 191455
159	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A7SE (SW)	783	-	277464 191456
160	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A14SE (E)	909	-	278826 192080

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
161	**Registered Landfill Sites** Licence Holder: K J Collier Licence Reference: 1/88 Site Location: Cwmbont 1 & 2 (Western Logs Ltd), Ynysygwas, Cwmafan, Port Talbot, West Glamorgan Licence Easting: 278800 Licence Northing: 192000 Operator Location: Ynysallan Farm, Llansamlet, Swansea, West Glamorgan Authority: Environment Agency Wales, South West Area Site Category: Landfill Max Input Rate: Undefined Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st June 1988 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Buiders Rubble,Stone,Bricks,Mortar Topsoil/Subsoil Prohibited Waste: Putrescible Materials	A14SW (E)	650	4	278555 192052
162	**Registered Waste Transfer Sites** Licence Holder: G Davies - G Davies Skip Hire Licence Reference: SWW 174L Site Location: 1 Brunel Industrial Estate, Cwmavon, PORT TALBOT, West Glamorgan, SA12 9DB Operator Location: 1 Brunel Industrial Estate, Cwmavon, PORT TALBOT, West Glamorgan, SA12 9DB Authority: Environment Agency Wales, South West Area Site Category: Transfer Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 1st June 1999 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Construction/Demolition/Building Wastes, Stone Inert Waste Scrap Metal Timber,Paper, Cardboard, Plastics Prohibited Waste: Household Degradable Waste Liquid Wastes Powders Sludge Wastes Spec.Waste (Epa'90:S62/1996 Regs) Waste N.O.S.	A8NW (S)	351	4	277750 191800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Pennine Lower Coal Measures Formation And South Wales Lower Coal Measures Formation (Undifferentiated)	A13SW (NW)	0	1	277889 192184
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SW (NW)	0	1	277889 192184
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (SE)	0	1	277899 192177
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (E)	73	1	278000 192184
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (NW)	81	1	277823 192268
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (SE)	195	1	278000 192000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (NE)	197	1	278000 192411

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NW (N)	207	1	277889 192442
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SE (SE)	291	1	278084 191945
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SE (S)	299	1	278000 191870
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SE (SE)	320	1	278163 192000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (SE)	328	1	278116 191926
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NE (S)	352	1	278000 191811

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A8NW (S)	356	1	277885 191778
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (SE)	359	1	278114 191883
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (SE)	367	1	278222 192000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NW (S)	368	1	277758 191779
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A8NE (S)	378	1	278000 191784
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NW (SW)	394	1	277682 191781

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NW (SW)	405	1	277652 191785
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NE (SE)	425	1	278121 191799
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NW (SW)	445	1	277566 191797
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (SE)	448	1	278318 192000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NE (SW)	486	1	277497 191808
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A7NE (SW)	490	1	277488 191813

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12SE (SW)	529	1	277411 191851
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A12SE (SW)	561	1	277353 191888
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9NW (SE)	610	1	278395 191827
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (E)	613	1	278500 192000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (E)	616	1	278482 191950
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (E)	624	1	278500 191971

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9NW (SE)	668	1	278476 191837
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (SE)	674	1	278500 191863
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9NW (SE)	685	1	278500 191842
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9NW (SE)	698	1	278500 191820
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A9NW (SE)	699	1	278519 191846
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7SE (SW)	725	1	277515 191495

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9NW (SE)	729	1	278500 191767
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7SE (SW)	775	1	277497 191448
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A9NW (SE)	794	1	278478 191638
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14NE (E)	812	1	278739 192206
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9NW (SE)	849	1	278500 191579
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14NE (E)	856	1	278783 192191

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12SW (W)	857	1	277000 192184
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12SW (W)	888	1	276979 192000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A17NE (NW)	927	1	277333 192960
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A17NE (NW)	942	1	277256 192913
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A17NE (NW)	959	1	277331 193000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7SE (SW)	986	1	277322 191306

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A19SE (NE)	992	1	278714 192822
163	**BGS Recorded Mineral Sites** Site Name: Meadow Pit Location: Cwmafan, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156617 Type: Underground **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	527	1	278403 192444
164	**BGS Recorded Mineral Sites** Site Name: Cwm Avan Location: Port Talbot, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156670 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Brithdir Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A8NW (S)	550	1	277750 191594
165	**BGS Recorded Mineral Sites** Site Name: Copper Row Location: Cwmafan, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156572 Type: Underground **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	661	1	278349 192731
166	**BGS Recorded Mineral Sites** Site Name: Cwm-Mawr Location: Cwmafan, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156573 Type: Underground **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	698	1	277576 192848
167	**BGS Recorded Mineral Sites** Site Name: Pen Y Castell Location: Cwmafan, Port Talbot, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156646 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14SE (E)	700	1	278583 191973

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
168	**BGS Recorded Mineral Sites** Site Name: Tewgoed-Bach Location: Cwmafan, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156571 Type: Underground **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NE (N)	769	1	278124 192974
168	**BGS Recorded Mineral Sites** Site Name: Tewgoed-Bach Location: Cwmafan, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156570 Type: Underground **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NE (N)	807	1	278158 193003
169	**BGS Recorded Mineral Sites** Site Name: Railmill House Location: Cwmafan, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156575 Type: Underground **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14NE (E)	878	1	278805 192249
170	**BGS Recorded Mineral Sites** Site Name: Railmill House Location: Cwmafan, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156576 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Middle Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14NE (E)	882	1	278809 192192
171	**BGS Recorded Mineral Sites** Site Name: Pen Y Castell Location: Cwmafan, Port Talbot, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156649 Type: Underground **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14SE (E)	903	1	278813 192044
172	**BGS Recorded Mineral Sites** Site Name: Pen Y Castell Gravel Pit Location: Cwmafan, Port Talbot, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156647 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Brithdir Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	940	1	278578 191530

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	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.	A13SW (NW)	0	6	277889 192184
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13SW (NW)	0	-	277889 192184
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13SW (NW)	0	1	277889 192184
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (NW)	0	1	277889 192184
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	14	1	277907 192170
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (NW)	0	1	277889 192184
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	5	1	277926 192226
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	14	1	277907 192170
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	34	1	277915 192134
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (NW)	0	1	277889 192184
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	277907 192170
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (NW)	0	1	277889 192184
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	75	1	277903 192310
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	116	1	277786 192042
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	179	1	277897 192414
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	249	1	277968 192477
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	277910 192220
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (NW)	0	1	277889 192184
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	14	1	277907 192170

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	179	1	277897 192414
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	248	1	277965 192477
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (NW)	0	1	277889 192184
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	75	1	277831 192268
	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	A13SW (NW)	0	1	277889 192184
	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	A13SW (NW)	0	1	277889 192184

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
173	**Contemporary Trade Directory Entries** Name: Brynbryddan Pest Control Services Location: 7, Brynbryddan, Cwmavon, Port Talbot, West Glamorgan, SA12 9LD Classification: Pest & Vermin Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	205	-	277735 192345
174	**Contemporary Trade Directory Entries** Name: Sharpes Auto Electrical Co Ltd Location: London Terrace, Cwmavon, Port Talbot, West Glamorgan, SA12 9AN Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	231	-	277949 191922
175	**Contemporary Trade Directory Entries** Name: Ibis Packaging Location: Craven Lodge, Cwmavon Road, Cwmavon, Port Talbot, West Glamorgan, SA12 9BT Classification: Packaging & Wrapping Equipment & Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	237	-	277676 191982
176	**Contemporary Trade Directory Entries** Name: A & I Engineering Ltd Location: 49, Depot Road, Cwmavon, Port Talbot, West Glamorgan, SA12 9BA Classification: Precision Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	296	-	278222 192186
177	**Contemporary Trade Directory Entries** Name: Gwendraegh Valley Cars Location: Heol Cwmmawr, Drefach, Llanelli, Dyfed, SA14 7AA Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18SW (N)	298	-	277844 192526
178	**Contemporary Trade Directory Entries** Name: Richard Morris Car Sales Ltd Location: Unit 1/2, Brunel Industrial Estate, Cwmavon, Port Talbot, West Glamorgan, SA12 9DE Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	357	-	277712 191808
179	**Contemporary Trade Directory Entries** Name: Wizard Chocolates Location: 53, Pine Valley, Cwmavon, Port Talbot, West Glamorgan, SA12 9NF Classification: Confectionery Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	360	-	277497 192159
179	**Contemporary Trade Directory Entries** Name: Wizard Chocolates Location: 53, Pine Valley, Cwmavon, Port Talbot, SA12 9NF Classification: Confectionery Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	361	-	277497 192159
180	**Contemporary Trade Directory Entries** Name: Millennium Motors Location: Unit 3, Brunel Industrial Estate, Cwmavon, PORT TALBOT, West Glamorgan, SA12 9DE Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	375	-	277708 191790
180	**Contemporary Trade Directory Entries** Name: R S Body Repair Centre Location: Unit 4, Brunel Industrial Estate, Cwmavon, Port Talbot, SA12 9DE Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	401	-	277687 191771
180	**Contemporary Trade Directory Entries** Name: Allen & Co Ltd Location: Unit 5-6, Brunel Industrial Estate, Cwmavon, Port Talbot, SA12 9DE Classification: Industrial Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	416	-	277674 191760

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
180	**Contemporary Trade Directory Entries** Name: Allen & Co Ltd Location: Unit 5/6, Brunel Industrial Estate, Cwmavon, Port Talbot, West Glamorgan, SA12 9DE Classification: Window Frame Manufacturers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	417	-	277674 191760
180	**Contemporary Trade Directory Entries** Name: Barber Location: Unit 7, Brunel Industrial Estate, Cwmavon, Port Talbot, West Glamorgan, SA12 9DE Classification: Air Conditioning & Refrigeration Contractors **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	453	-	277647 191733
181	**Contemporary Trade Directory Entries** Name: Boiler Maintenance Services Location: 8, Ynys y Gwas, Cwmavon, Port Talbot, West Glamorgan, SA12 9AB Classification: Boilers - Servicing, Replacements & Repairs **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	425	-	278201 191880
182	**Contemporary Trade Directory Entries** Name: Fibreglass Roofing Supplies Ltd Location: 37a, Pine Valley, Cwmavon, Port Talbot, SA12 9NE Classification: Glass Fibre Moulding, Materials & Manufacturers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	454	-	277422 192003
183	**Contemporary Trade Directory Entries** Name: The Private Cleaning Co Location: 71, Brynglas Avenue, Cwmavon, Port Talbot, West Glamorgan, SA12 9LF Classification: Cleaning Services - Domestic **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	468	-	277403 192251
184	**Contemporary Trade Directory Entries** Name: Gourlay Hire Ltd Location: Unit 10, Brunel Industrial Estate, Cwmavon, Port Talbot, West Glamorgan, SA12 9DE Classification: Fuel Dealers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	503	-	277608 191698
184	**Contemporary Trade Directory Entries** Name: Brunel Painting & Specialist Coatings Location: Unit 10, Brunel Industrial Estate, Cwmavon, Port Talbot, West Glamorgan, SA12 9DE Classification: Coating Specialists **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	503	-	277608 191698
184	**Contemporary Trade Directory Entries** Name: The Patio Centre Location: Unit 12, Brunel Industrial Estate, Cwmavon, Port Talbot, West Glamorgan, SA12 9DE Classification: Concrete Products **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	529	-	277587 191679
184	**Contemporary Trade Directory Entries** Name: European Plastics Ltd Location: Unit 13, Brunel Industrial Estate, Cwmavon, Port Talbot, SA12 9DE Classification: Plastic Products - Manufacturers **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	548	-	277576 191663
184	**Contemporary Trade Directory Entries** Name: European Plastics Ltd Location: Unit 13, Brunel Industrial Estate, Cwmavon, Port Talbot, West Glamorgan, SA12 9DE Classification: Plastics - Extrusion **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	548	-	277576 191663
184	**Contemporary Trade Directory Entries** Name: G R W Fabrications Ltd Location: Unit 14, Brunel Industrial Estate, Cwmavon, Port Talbot, West Glamorgan, SA12 9DE Classification: Engineers - General **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	562	-	277563 191655

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
185	**Contemporary Trade Directory Entries** Name: Cwmavon Animal Feed Location: 15, Cefn Coed Road, Cwmavon, Port Talbot, SA12 9LR Classification: Pet Foods & Animal Feeds **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (W)	507	-	277384 192320
186	**Contemporary Trade Directory Entries** Name: City Commercials Location: Abernant, Cwmavon Road, Cwmavon, Port Talbot, West Glamorgan, SA12 9HL Classification: Commercial Vehicle Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	524	-	277474 191778
187	**Contemporary Trade Directory Entries** Name: Apex Cleaning & Pest Control Location: 26, Ynys-Lee, Cwmavon, Port Talbot, SA12 9AQ Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	590	-	278436 191919
188	**Contemporary Trade Directory Entries** Name: Washed4u Location: 41, Heol Jiwbili, Cwmavon, Port Talbot, West Glamorgan, SA12 9NR Classification: Laundries & Launderettes **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	607	-	278492 192440
189	**Contemporary Trade Directory Entries** Name: Barber Refrigeration Location: Hazelwood Terrace, Cwmavon, Port Talbot, SA12 9DW Classification: Refrigerators & Freezers - Servicing & Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	701	-	278606 192395
190	**Fuel Station Entries** Name: Pantdu Garage Location: Pantdu , Cwmafon , Port Talbot, Neath Port Talbot, SA12 9HN Brand: OBSOLETE Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Manually positioned to the address or location	A7NE (SW)	592	-	277455 191700
191	**Fuel Station Entries** Name: Ageglory Service Station Location: Cunard Row , Cwmafon , Port Talbot, Neath Port Talbot, SA12 9ED Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Manually positioned to the road within the address or location	A14NE (E)	709	-	278591 192468
192	**Points of Interest - Commercial Services** Name: Brynbryddan Pest Control Services Location: 7 Brynbryddan, Cwmavon, Port Talbot, SA12 9LD Category: Contract Services Class Code: Pest and Vermin Control Positional Accuracy: Positioned to address or location	A13NW (NW)	205	7	277735 192344
193	**Points of Interest - Commercial Services** Name: Sharpes Auto Electrical Co Ltd Location: London Terrace, Cwmavon, Port Talbot, SA12 9AN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (S)	231	7	277949 191922
193	**Points of Interest - Commercial Services** Name: Sharpes Auto Electrical Co Ltd Location: London Terrace, Cwmavon, Port Talbot, SA12 9AN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (S)	231	7	277949 191922
194	**Points of Interest - Commercial Services** Name: Millennium Motors Location: Unit 3, Brunel Industrial Estate, Cwmavon, Port Talbot, SA12 9DE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SW)	375	7	277708 191790

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
194	**Points of Interest - Commercial Services** Name: Millennium Motors Location: Unit 3, Brunel Industrial Estate, Cwmavon, Port Talbot, SA12 9DE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SW)	376	7	277708 191789
194	**Points of Interest - Commercial Services** Name: R S Body Repair Centre Location: Unit 4, Brunel Industrial Estate, Cwmavon, Port Talbot, SA12 9DE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SW)	401	7	277686 191771
195	**Points of Interest - Manufacturing and Production** Name: C R Mortimer & Sons Location: Cwmavon Post Office 5, Tyr Owen Row, Cwmavon, Port Talbot, SA12 9BE Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A13SE (SE)	93	7	277960 192111
196	**Points of Interest - Manufacturing and Production** Name: Brunel Industrial Estate Location: SA12 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A8NW (SW)	440	7	277592 191783
197	**Points of Interest - Manufacturing and Production** Name: Shaft (Disused) Location: SA12 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	811	7	278509 192783
198	**Points of Interest - Manufacturing and Production** Name: Tanks Location: SA12 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	938	7	278832 191970
199	**Points of Interest - Public Infrastructure** Name: Graveyard Location: SA12 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A13SE (S)	189	7	277948 191968
199	**Points of Interest - Public Infrastructure** Name: Graveyard Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A13SE (S)	197	7	277961 191966
200	**Points of Interest - Public Infrastructure** Name: Cwmafan Police Office Location: 60 Depot Road, Cwmafan, Port Talbot, SA12 9BA Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A14SW (E)	348	7	278273 192178
201	**Points of Interest - Public Infrastructure** Name: Outfall Location: SA12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	440	7	278347 192085
202	**Points of Interest - Public Infrastructure** Name: Refuse Tip (Disused) Location: SA12 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A18SE (NE)	639	7	278183 192814
203	**Points of Interest - Public Infrastructure** Name: Cemetery Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	743	7	277391 191556

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
203	**Points of Interest - Public Infrastructure** Name: Cemetery Location: SA12 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	749	7	277379 191558
204	**Points of Interest - Public Infrastructure** Name: Refuse Tip (Disused) Location: SA12 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	785	7	278142 192985
204	**Points of Interest - Public Infrastructure** Name: Tip Location: SA12 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	809	7	278138 193012
205	**Points of Interest - Public Infrastructure** Name: Refuse Tip (Disused) Location: SA12 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	978	7	276884 192233
206	**Points of Interest - Recreational and Environmental** Name: Playground Location: (Cae Copor), SA12 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A13SW (SW)	184	7	277777 191968
207	**Points of Interest - Recreational and Environmental** Name: Skateboard Park Location: (Penllyn), SA12 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A13NE (E)	235	7	278160 192251
207	**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	A13NE (E)	277	7	278204 192223
208	**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	A13NW (NW)	396	7	277592 192471
208	**Points of Interest - Recreational and Environmental** Name: Playground Location: Nr Brynna Road, SA12 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A13NW (NW)	400	7	277591 192477
209	**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	A9NW (SE)	513	7	278256 191810
209	**Points of Interest - Recreational and Environmental** Name: Playground Location: Afan Valley Road, SA12 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	515	7	278257 191809
210	**Points of Interest - Recreational and Environmental** Name: Playground Location: (Ynys-Lee), SA12 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A14SW (SE)	613	7	278417 191849

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
211	**Points of Interest - Recreational and Environmental** Name: Playground Location: (Hoel-Y-Graig), SA12 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	728	7	278395 192779

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
212	**Ancient Woodland** Name: Not Supplied Reference: 13958 Area(m²): 62339.3 Type: Ancient and Semi-Natural Woodland	A13SW (SW)	187	2	277690 192047
213	**Ancient Woodland** Name: Not Supplied Reference: 13954 Area(m²): 10223.86 Type: Ancient and Semi-Natural Woodland	A8NE (SE)	365	2	278072 191817
214	**Ancient Woodland** Name: Not Supplied Reference: 13955 Area(m²): 3347.07 Type: Ancient and Semi-Natural Woodland	A13SE (SE)	368	2	278141 191897
215	**Ancient Woodland** Name: Not Supplied Reference: 41090 Area(m²): 2279.86 Type: Plantation on Ancient Woodland	A8NW (S)	415	2	277875 191719
216	**Ancient Woodland** Name: Not Supplied Reference: 13951 Area(m²): 5978.64 Type: Ancient and Semi-Natural Woodland	A8NW (S)	445	2	277771 191697
217	**Ancient Woodland** Name: Not Supplied Reference: 13949 Area(m²): 14670.54 Type: Ancient and Semi-Natural Woodland	A8NE (SE)	574	2	278179 191658
218	**Ancient Woodland** Name: Not Supplied Reference: 41088 Area(m²): 4871.4 Type: Plantation on Ancient Woodland	A8NE (SE)	667	2	278216 191571
219	**Ancient Woodland** Name: Not Supplied Reference: 13953 Area(m²): 3146.76 Type: Ancient and Semi-Natural Woodland	A9NW (SE)	683	2	278417 191738
220	**Ancient Woodland** Name: Not Supplied Reference: 7873 Area(m²): 4201.83 Type: Ancient and Semi-Natural Woodland	A9NW (SE)	711	2	278525 191834
221	**Ancient Woodland** Name: Not Supplied Reference: 13950 Area(m²): 7830.74 Type: Ancient and Semi-Natural Woodland	A9NW (SE)	774	2	278456 191644
222	**Ancient Woodland** Name: Not Supplied Reference: 13960 Area(m²): 2961.26 Type: Ancient and Semi-Natural Woodland	A17SE (NW)	802	2	277275 192725
223	**Ancient Woodland** Name: Not Supplied Reference: 13952 Area(m²): 1745.05 Type: Ancient and Semi-Natural Woodland	A9NW (SE)	813	2	278558 191706
224	**Ancient Woodland** Name: Not Supplied Reference: 11529 Area(m²): 10795.94 Type: Ancient and Semi-Natural Woodland	A12SW (W)	864	2	277029 191889
225	**Ancient Woodland** Name: Not Supplied Reference: 41089 Area(m²): 14871.52 Type: Plantation on Ancient Woodland	A9NE (SE)	898	2	278591 191612

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
226	**Ancient Woodland** Name: Not Supplied Reference: 13948 Area(m²): 38218.14 Type: Ancient and Semi-Natural Woodland	A7SE (S)	900	2	277524 191298
227	**Ancient Woodland** Name: Not Supplied Reference: 7874 Area(m²): 22191.36 Type: Ancient and Semi-Natural Woodland	A12SW (W)	975	2	276892 191991
228	**Forest Parks** Name: Not Given Multiple Area: N Area (m2): 1600081 Source: Forestry Commission	A19NW (NE)	853	8	278276 193007

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Bridgend County Borough Council - Environmental Health Department	January 2015	Annual Rolling Update
Neath Port Talbot County Borough Council - Environmental Health Department	March 2015	Annual Rolling Update
Discharge Consents		
Environment Agency - Welsh Region	August 2014	Quarterly
Natural Resources Wales	August 2017	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	October 2017	Quarterly
Natural Resources Wales	October 2017	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Neath Port Talbot County Borough Council - Environmental Health Department	August 2012	Variable
Bridgend County Borough Council - Environmental Health Department	July 2015	Variable
Local Authority Pollution Prevention and Controls		
Bridgend County Borough Council - Environmental Health Department	July 2015	Annual Rolling Update
Neath Port Talbot County Borough Council - Environmental Health Department	March 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Bridgend County Borough Council - Environmental Health Department	July 2015	Variable
Neath Port Talbot County Borough Council - Environmental Health Department	March 2014	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	March 2013	As notified
Natural Resources Wales	March 2013	As notified
Prosecutions Relating to Controlled Waters		
Environment Agency - Welsh Region	March 2013	As notified
Natural Resources Wales	March 2013	As notified
Registered Radioactive Substances		
Natural Resources Wales	January 2015	As notified
Environment Agency - Welsh Region	January 2015	
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
Substantiated Pollution Incident Register		
Environment Agency Wales - South West Area	October 2017	Quarterly
Natural Resources Wales	October 2017	Quarterly
Water Abstractions		
Environment Agency - Welsh Region	October 2017	Quarterly
Natural Resources Wales	October 2017	Quarterly
Water Industry Act Referrals		
Environment Agency - Welsh Region	October 2017	Quarterly
Natural Resources Wales	October 2017	Quarterly
Groundwater Vulnerability		
Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits		
Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations		
British Geological Survey - National Geoscience Information Service	August 2015	As notified

Agency & Hydrological	Version	Update Cycle
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	November 2017	Quarterly
Flooding from Rivers or Sea without Defences Natural Resources Wales	November 2017	Quarterly
Areas Benefiting from Flood Defences Natural Resources Wales	November 2017	Quarterly
Flood Water Storage Areas Natural Resources Wales	November 2017	Quarterly
Flood Defences Natural Resources Wales	November 2017	Quarterly
OS Water Network Lines Ordnance Survey	January 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	July 2017	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Welsh Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency Wales - South West Area	October 2017	Quarterly
Natural Resources Wales	October 2017	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency Wales - South West Area	October 2017	Quarterly
Natural Resources Wales	October 2017	Quarterly
Local Authority Landfill Coverage		
Bridgend County Borough Council	May 2000	Not Applicable
Neath Port Talbot County Borough Council - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Bridgend County Borough Council	May 2000	Not Applicable
Neath Port Talbot County Borough Council - Environmental Health Department	September 2003	Not Applicable
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites		
Environment Agency Wales - South West Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency Wales - South West Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency Wales - South West Area	March 2003	Not Applicable
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	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		
Bridgend County Borough Council - Planning Department	February 2016	Variable
Neath Port Talbot County Borough Council - Planning Department	October 2015	Variable
Planning Hazardous Substance Consents		
Bridgend County Borough Council - Planning Department	February 2016	Variable
Neath Port Talbot County Borough Council - Planning Department	October 2015	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	November 2017	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	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	November 2017	Quarterly
Fuel Station Entries Catalist Ltd - Experian	February 2018	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	December 2017	Quarterly
Points of Interest - Education and Health PointX	December 2017	Quarterly
Points of Interest - Manufacturing and Production PointX	December 2017	Quarterly
Points of Interest - Public Infrastructure PointX	December 2017	Quarterly
Points of Interest - Recreational and Environmental PointX	December 2017	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 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 Bridgend County Borough Council 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

Data Suppliers

A selection of organisations who provide data within this report

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

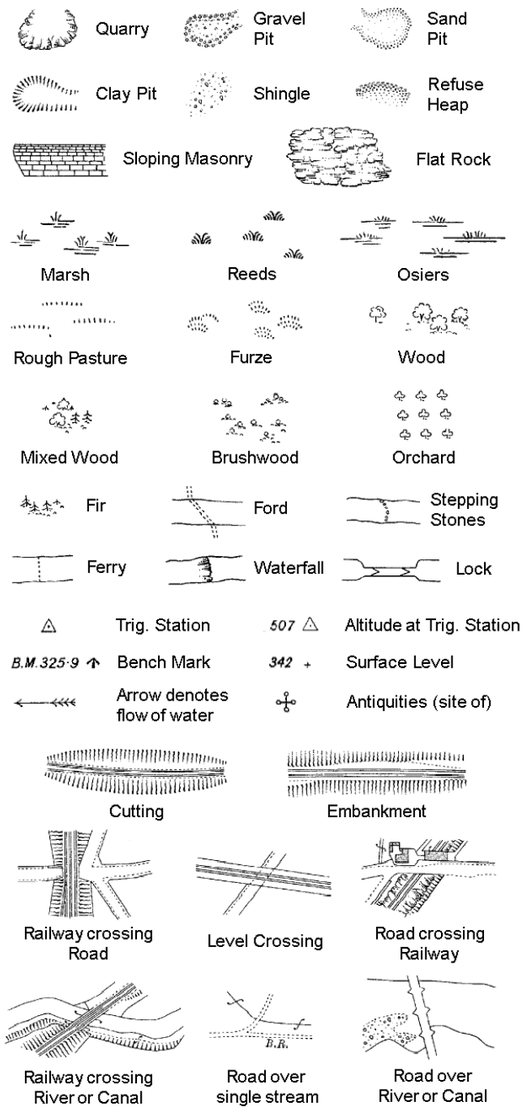
Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Natural Resources Wales** Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	**Neath Port Talbot County Borough Council - Environmental Health Department** Room 322, Neath Civic Centre, Neath, West Glamorgan, SA11 3QZ	Telephone: 01639 763333 Fax: 01693 763444 Website: www.neath-porttalbot.gov.uk
4	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**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
8	**Forestry Commission** 231 Corstorphine Road, Edinburgh, Midlothian, EH12 7AT	Telephone: 0131 334 0303 Fax: 0131 334 4473
-	**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.

Historical Mapping Legends

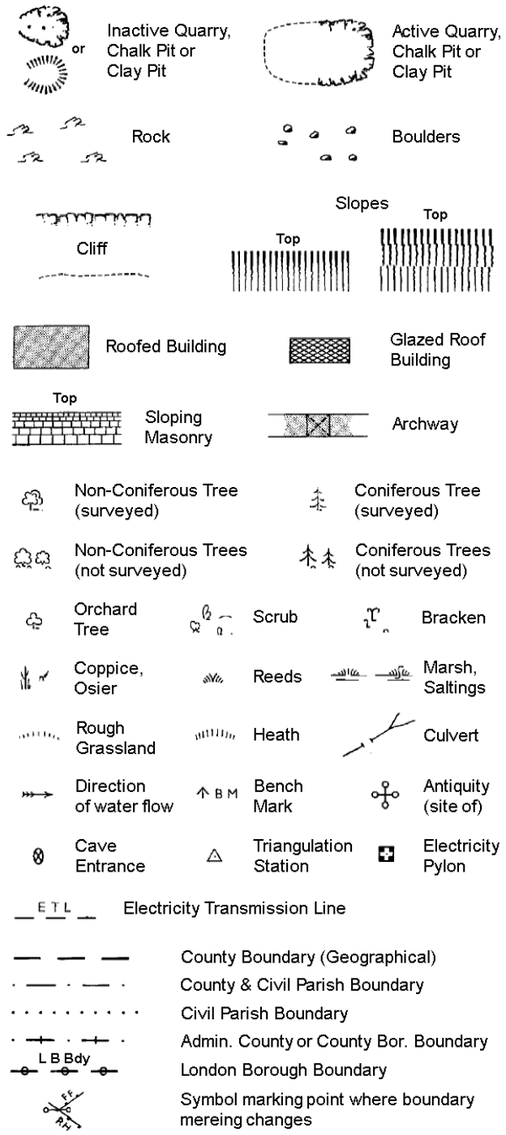
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy.
County Borough Boundary (England)
Co. Burgh Bdy.
County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

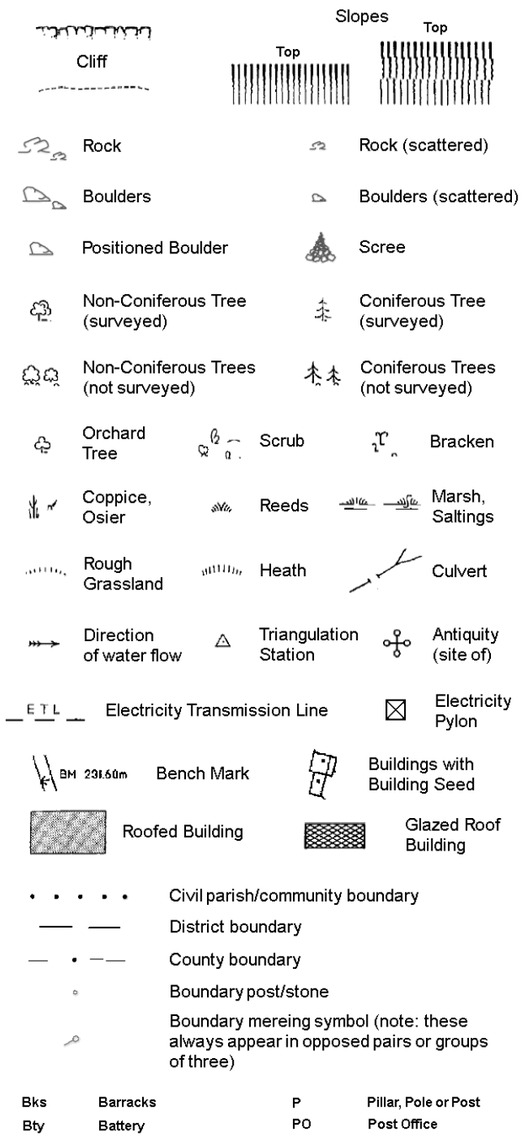
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy
London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

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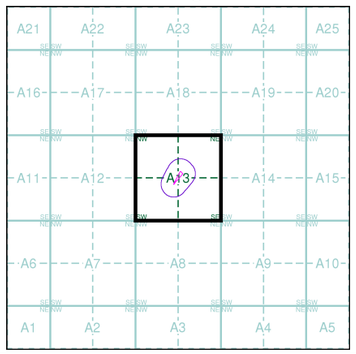
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:2,500	1877 - 1878	2
Glamorganshire	1:2,500	1899	3
Glamorganshire	1:2,500	1918 - 1919	4
Glamorganshire	1:2,500	1936 - 1937	5
Ordnance Survey Plan	1:2,500	1965 - 1967	6
Ordnance Survey Plan	1:2,500	1969 - 1978	7
Supply of Unpublished Survey Information	1:2,500	1973	8
Ordnance Survey Plan	1:2,500	1975 - 1984	9
Additional SIMs	1:2,500	1978 - 1983	10
Additional SIMs	1:2,500	1984	11
Large-Scale National Grid Data	1:2,500	1993	12
Large-Scale National Grid Data	1:2,500	1994 - 1995	13
Historical Aerial Photography	1:2,500	2000	14

Historical Map - Segment A13



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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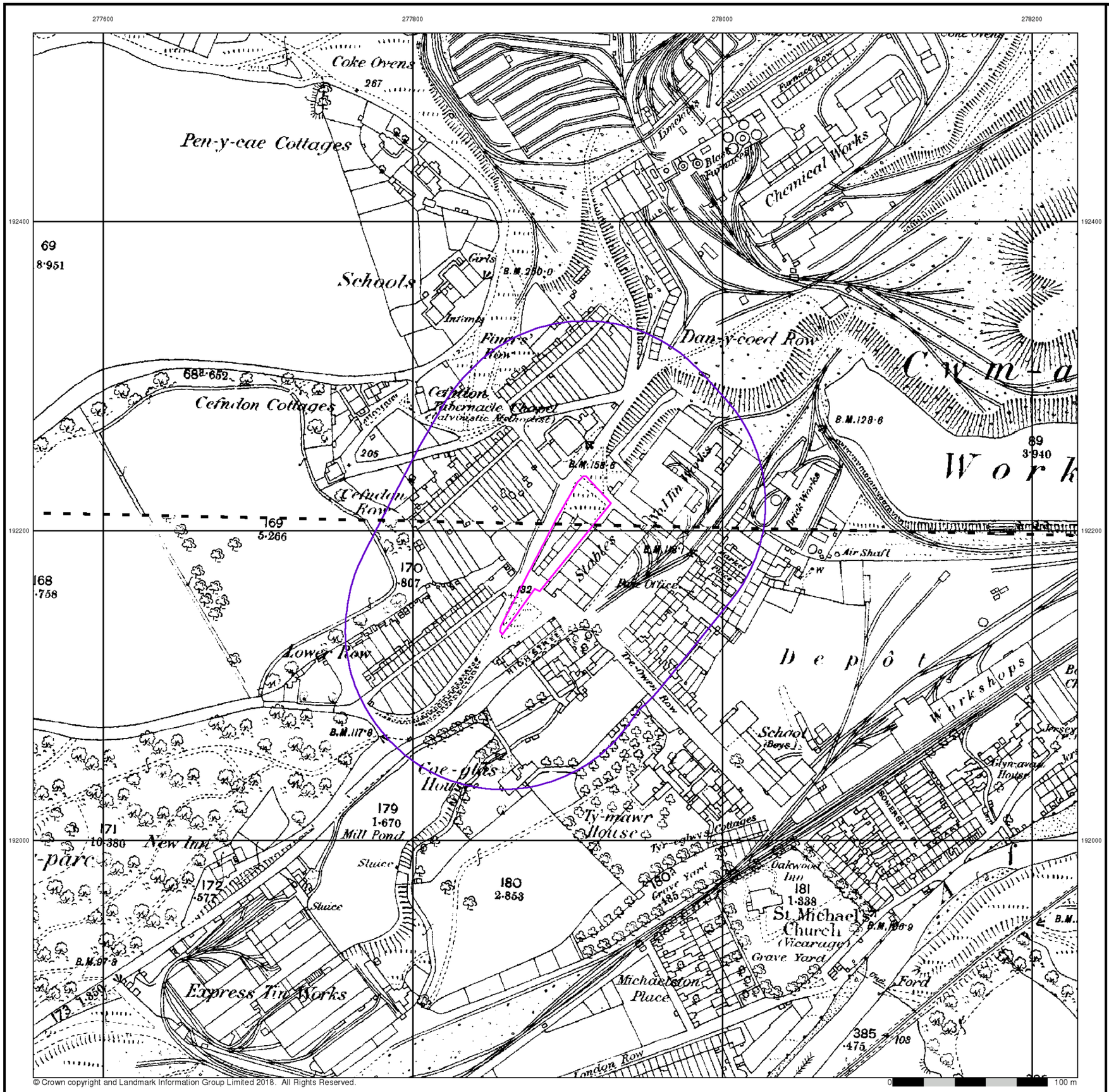
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Glamorganshire

Published 1877 - 1878

Source map scale - 1:2,500

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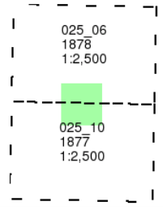
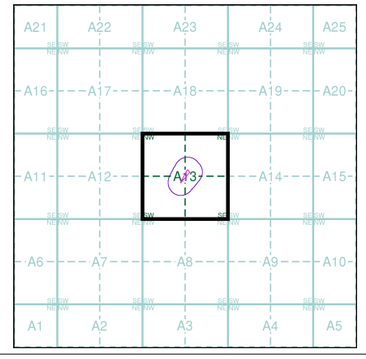
Map Name(s) and Date(s)



Historical Map - Segment A13



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Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

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, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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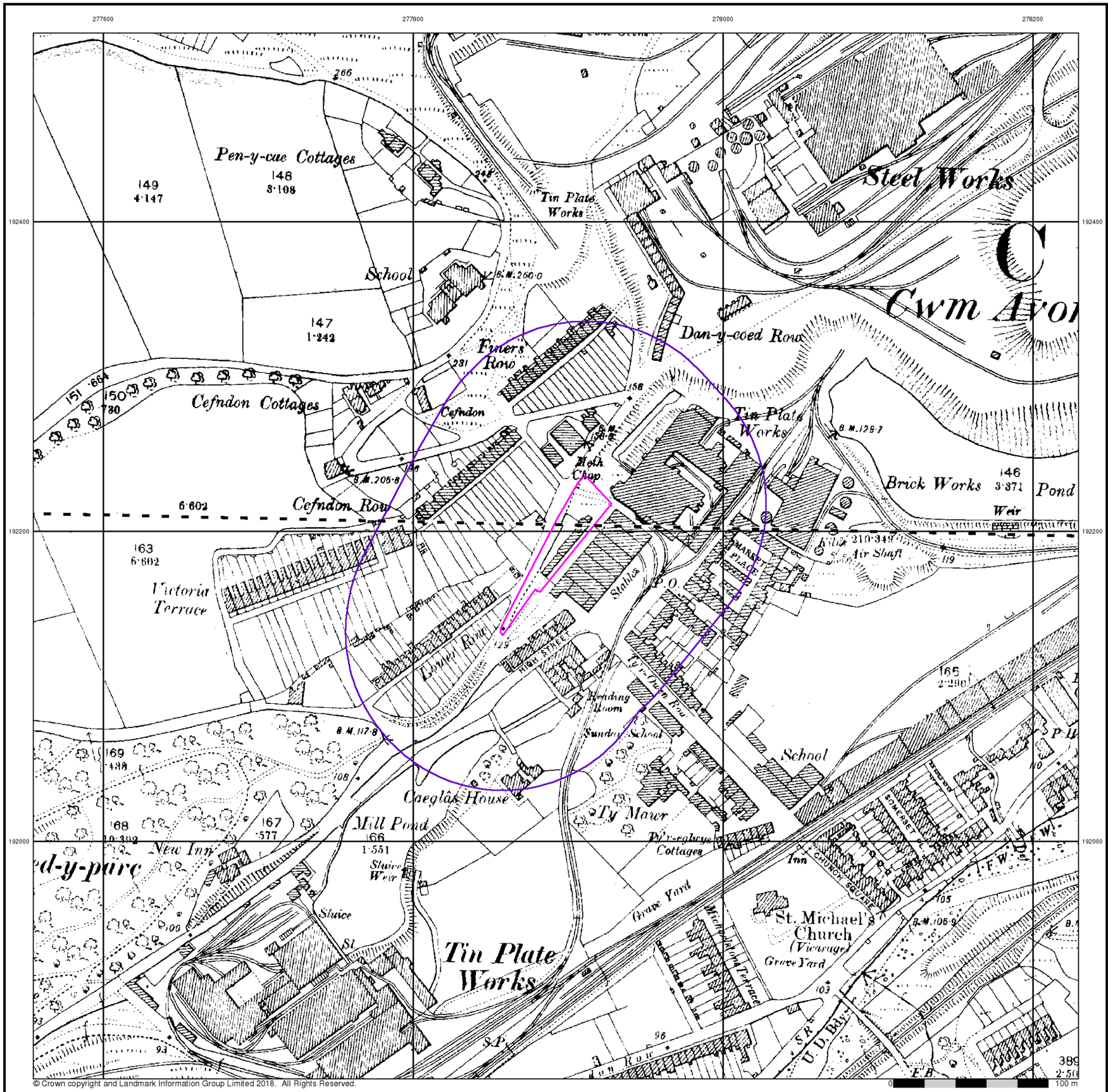

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Glamorganshire

Published 1899

Source map scale - 1:2,500

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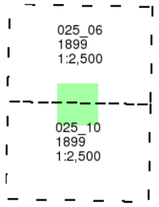
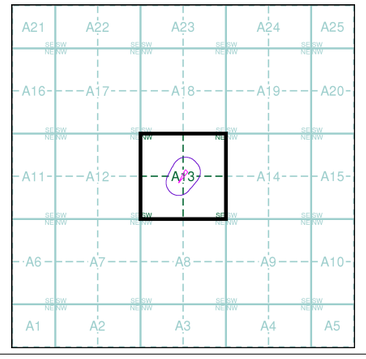
Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

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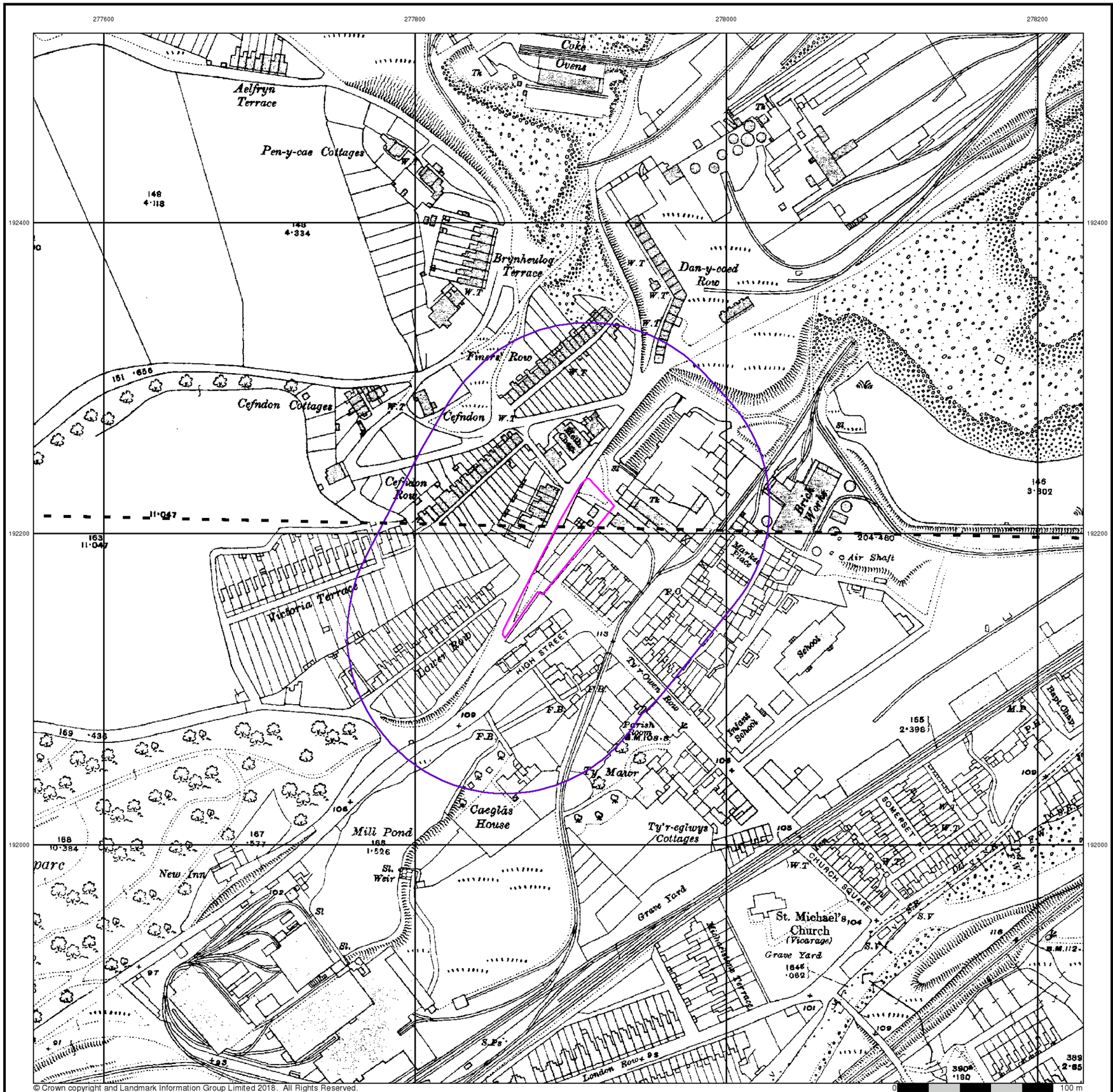

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Published 1918 - 1919

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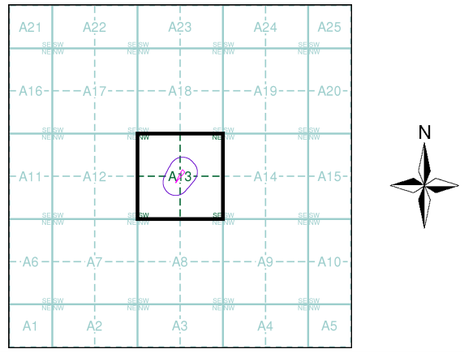
Map Name(s) and Date(s)

025_06
1919
1:2,500

025_10
1918
1:2,500

Historical Map - Segment A13



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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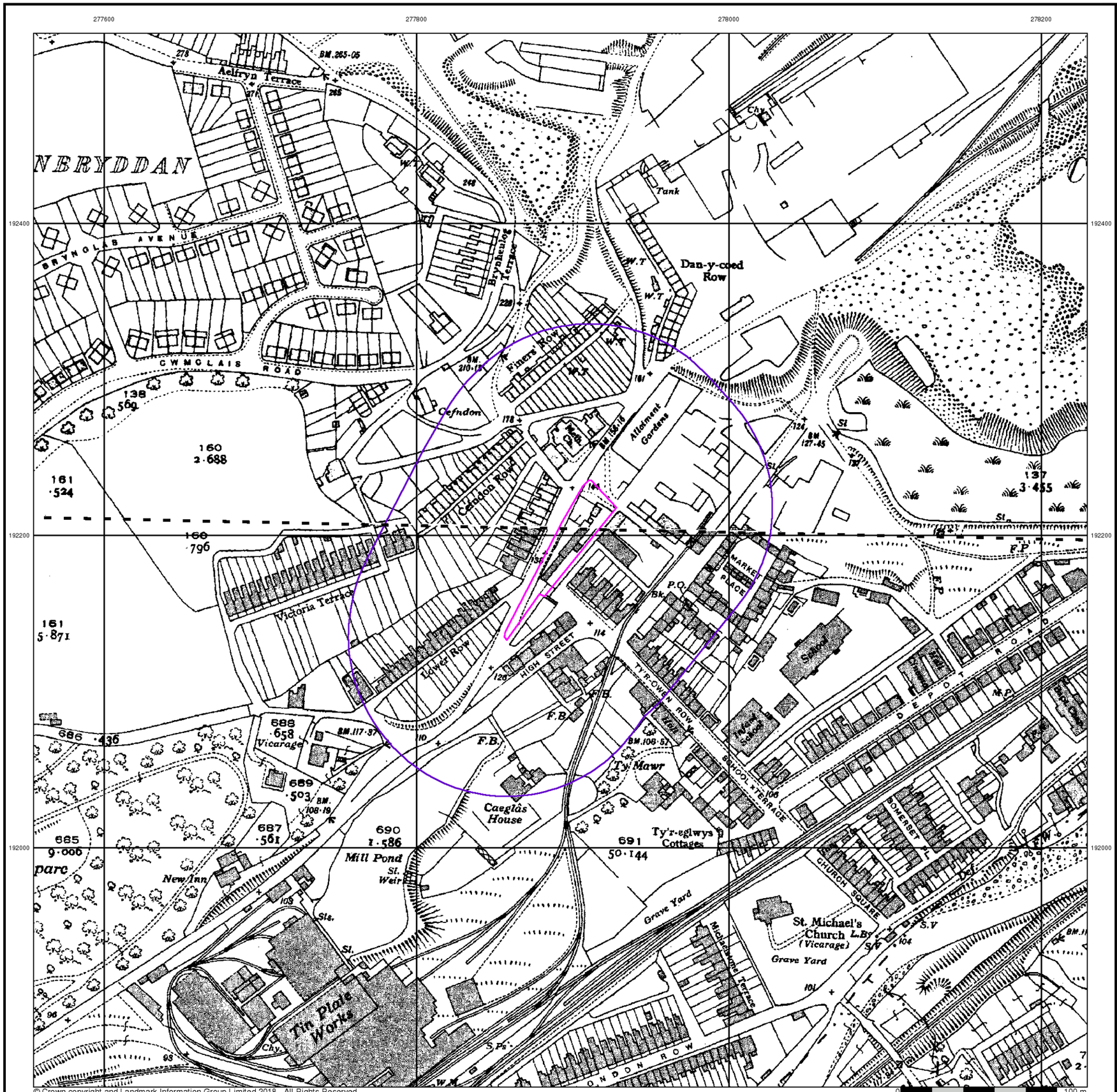

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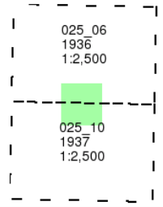
Glamorganshire

Published 1936 - 1937

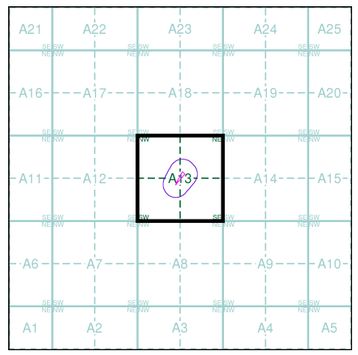
Source map scale - 1:2,500

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

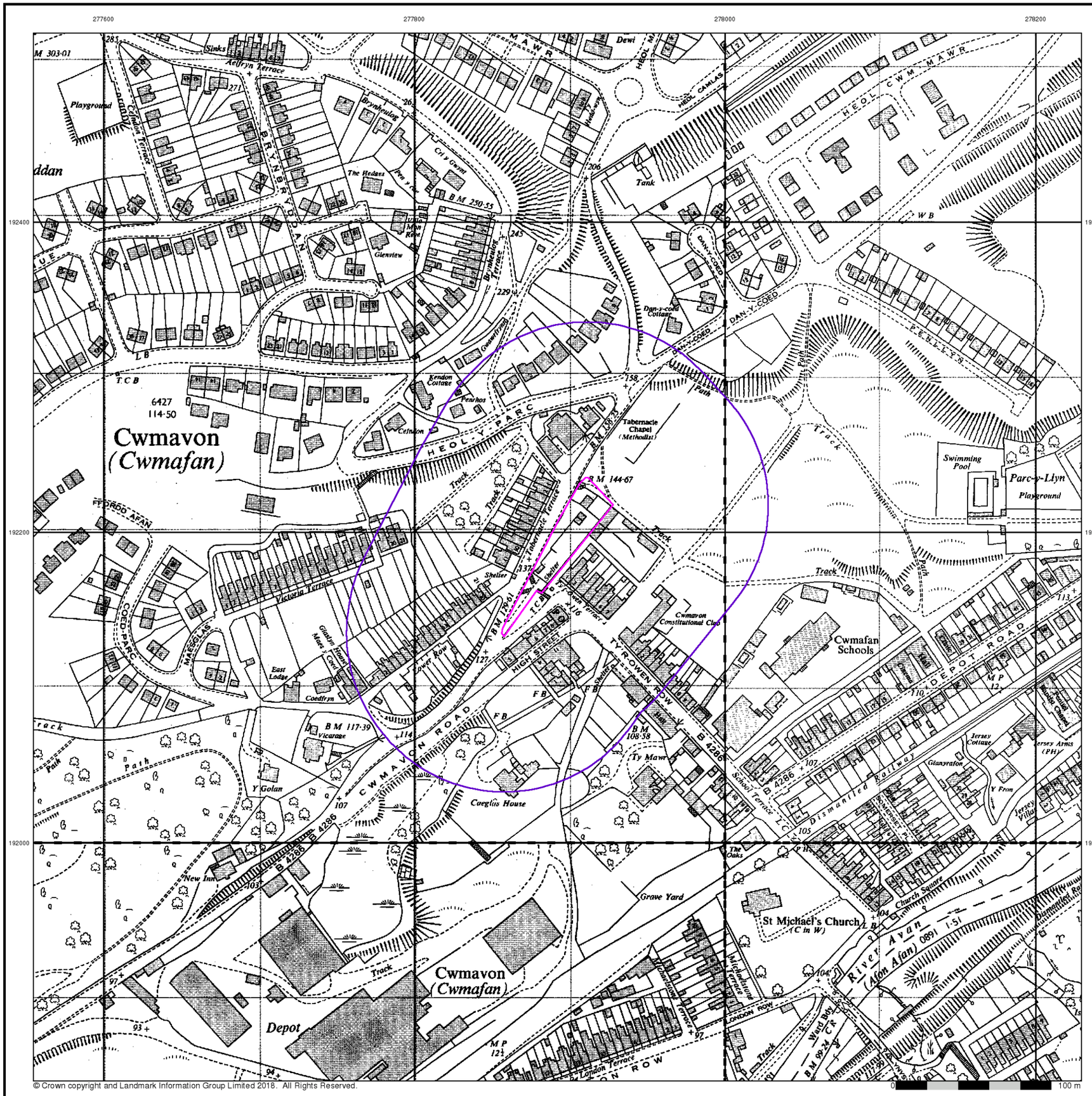


Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG



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Ordnance Survey Plan

Published 1965 - 1967

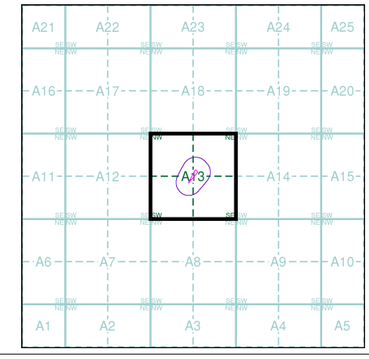
Source map scale - 1:2,500

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)

SS7792 1967 1:2,500	SS7892 1965 1:2,500
SS7791 1967 1:2,500	SS7891 1965 1:2,500

Historical Map - Segment A13

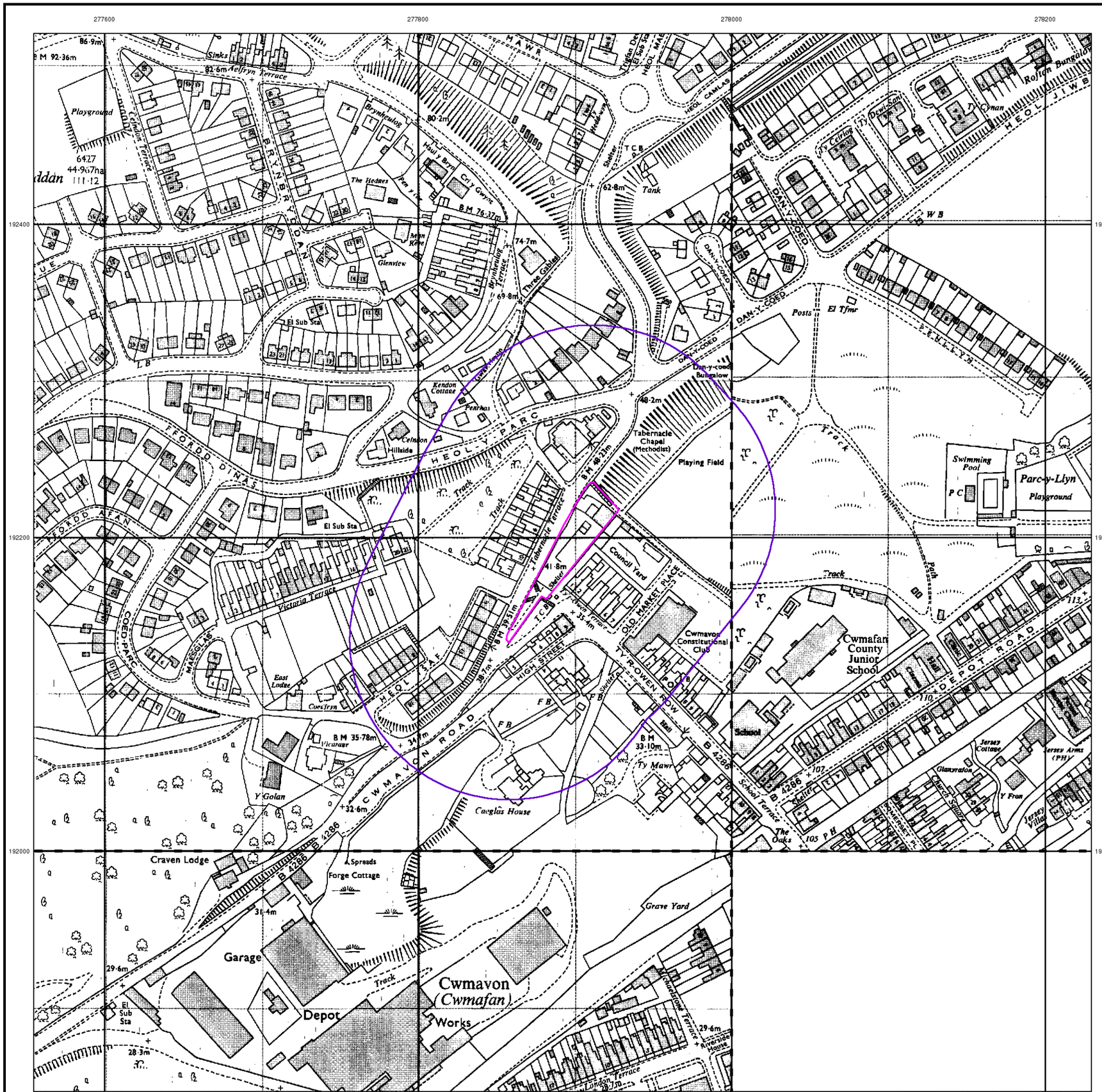


Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG



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0 100 m

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Ordnance Survey Plan

Published 1969 - 1978

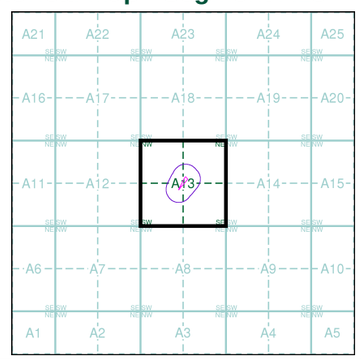
Source map scale - 1:2,500

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)

SS7792 1978 1:2,500
SS7892 1969 1:2,500
SS7791 1978 1:2,500

Historical Map - Segment A13



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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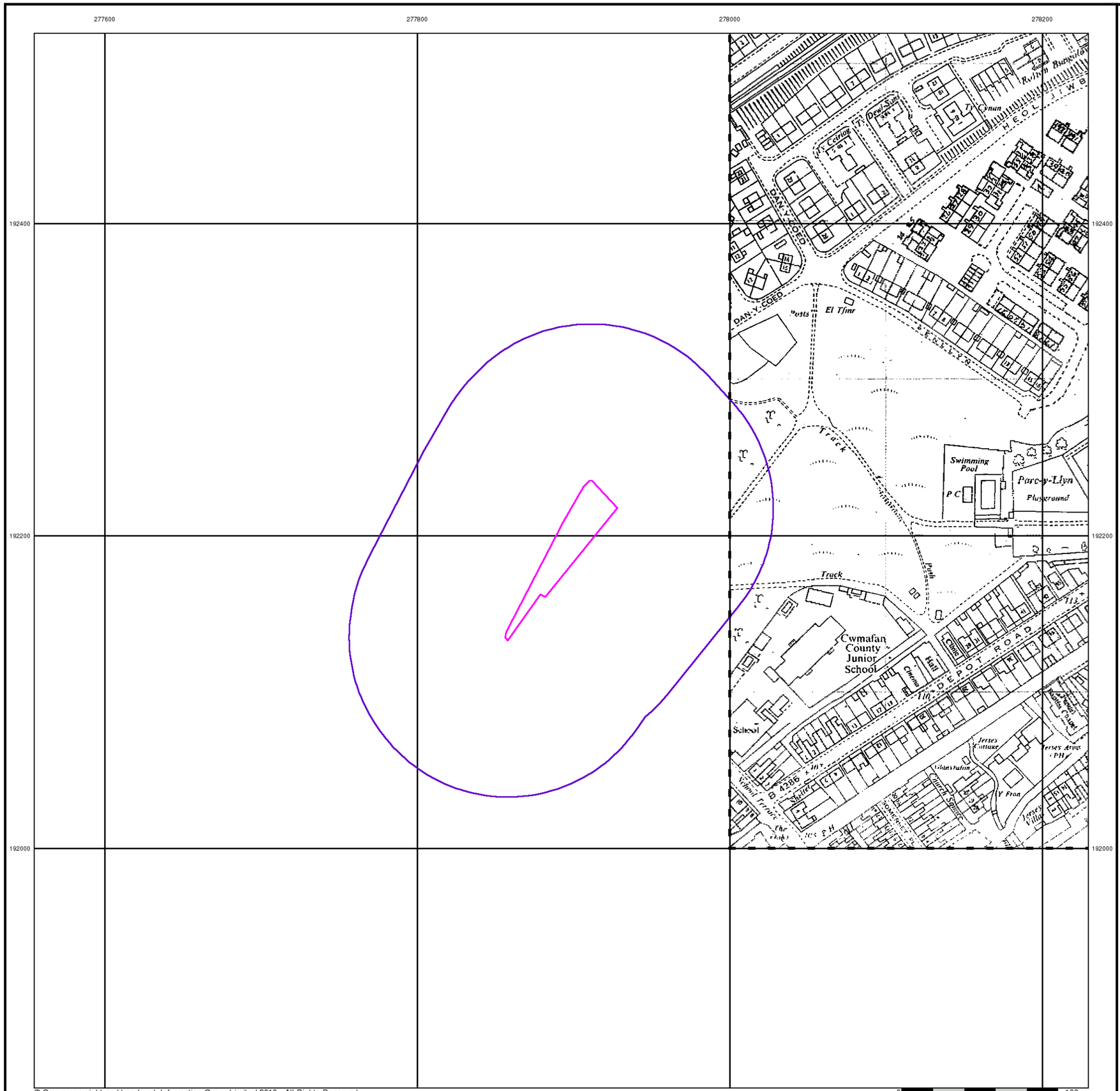
Web: www.envirocheck.co.uk



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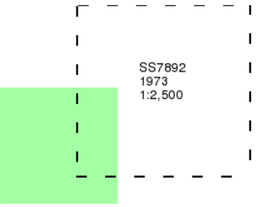
Supply of Unpublished Survey Information

Published 1973

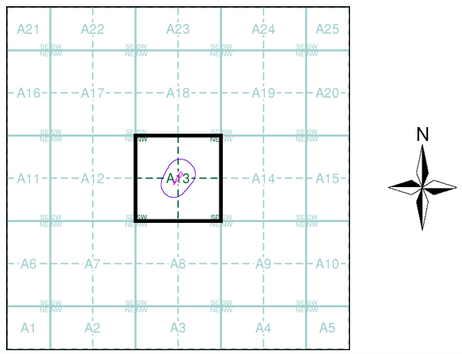
Source map scale - 1:2,500

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

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Site Details

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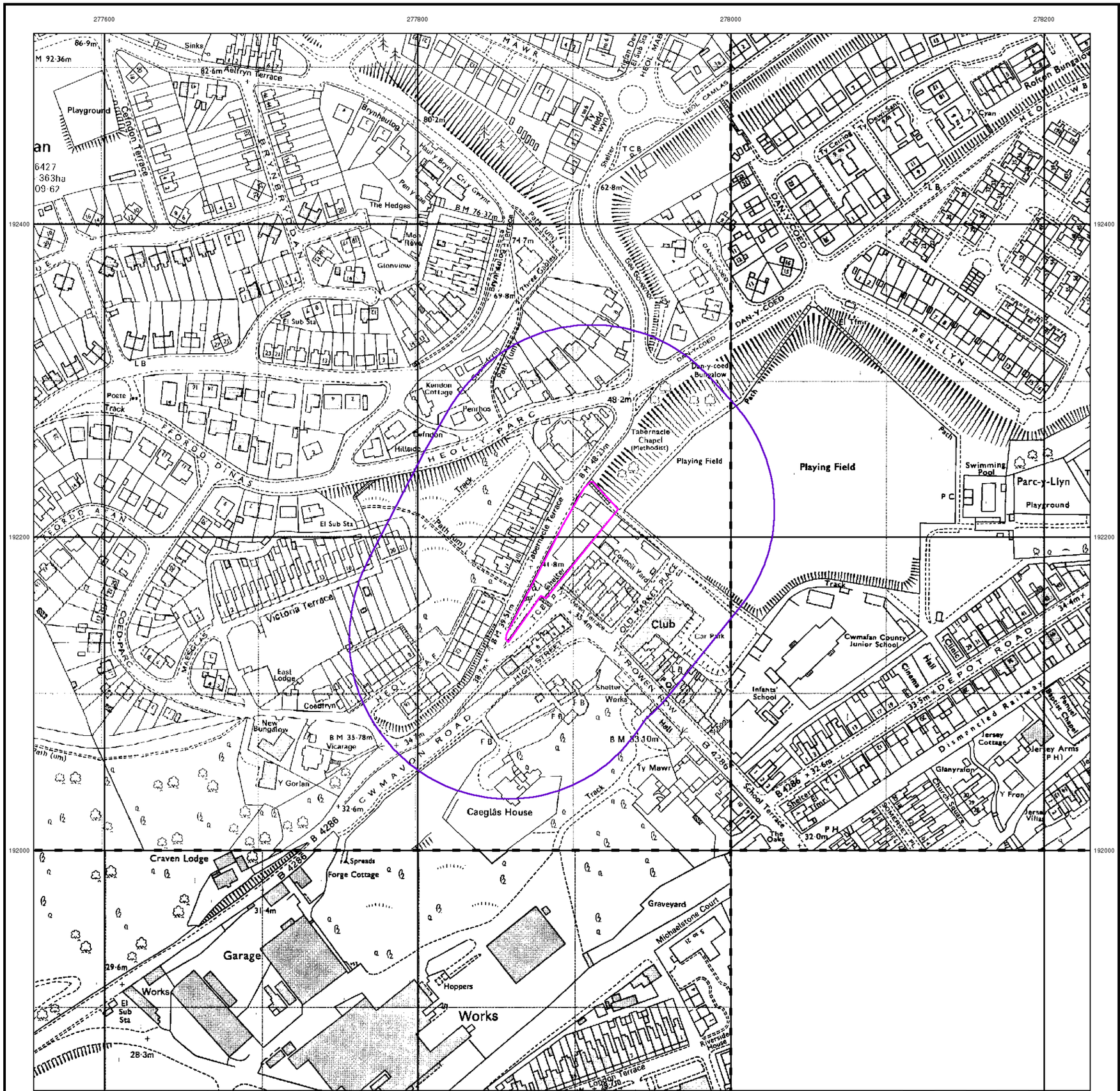
277600
277800
278000
278200
192400
192200
192000
Playground
Cefndon Terrace
Kellryn Terrace
Brynheulog
The Hedges
Glanview
Mon Nawr
Sinks
Ty Mawr
Ty Cerrig
Dan-y-coed Bungalow
DAN-Y-COED
PENLLYN
Swimming Pool
Parc-y-Llyn
Playground
Playing Field
Tabernacle Chapel (Methodist)
Kendon Cottage
Penrhos
Cefndon
Hillside
Victoria Terrace
East Lodge
Coedtryn
New Bungalow
Vicarage
Y Gorlan
Caeglâs House
Shelter
Works
Club
Car Park
Cwmafan County Junior School
Infants' School
Jersey Cottage
Jersey Arms (P H)
Glanyrafon
Y Fron
Craven Lodge
Forge Cottage
Garage
Graveyard
Michaelstone Court
Hoppers
Riverside House
London Terrace
Council Yard
Old Market Place
Dismantled Railway
Cwmavon Road
B 4286
Tŷ Rowen Terrace
Tŷ Rowen
Heol Maes Eglas
Heol Parc
Heol Camlas
Heol Llwyn
Ffordd Dinas
Ffordd Aman
Ffordd Parc
Ffordd Brynheulog
Ffordd Dan
Ffordd Glyn
Ffordd Gwynt
Ffordd Gwyn
Ffordd Gwyn
Ffordd Gwyn

277600 277800 278000 278200

192400 192200 192000

Playground Carnation Terrace Aelfryn Terrace Glenview The Hedges Mon Repos Three Gables Kendon Cottage Penrhos Gilndon Hillside Tabernacle Chapel Playing Field Swimming Pool Parc-y-Llyn Playground Victoria Terrace East Lodge Coedfryn New Bungalow Vicarage Y Gorlan Caeglas House Ty Mawr Shelter Works Club Car Park Council Yard Old Market Place Cwmafan County Junior School Infants' School Jersey Cottage Jersey Arms (P H) Glanyrafon Y Fron Jersey Villa Church Square St Michael's Church (C in W) River Afan Afon Afan Obsy (-5) Caravan Site Public Conv Rolton Bungalow Dan-y-coed Bungalow Dismantled Railway

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0 100 m

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Additional SIMs

Published 1978 - 1983

Source map scale - 1:2,500

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

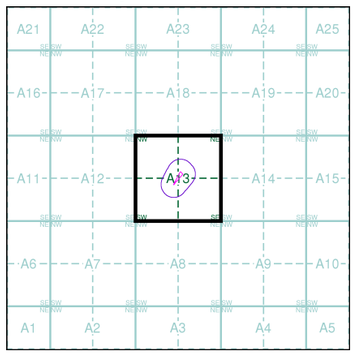
Map Name(s) and Date(s)

SS7792 1983 1:2,500

SS7892 1978 1:2,500

SS7891 1978 1:2,500

Historical Map - Segment A13



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

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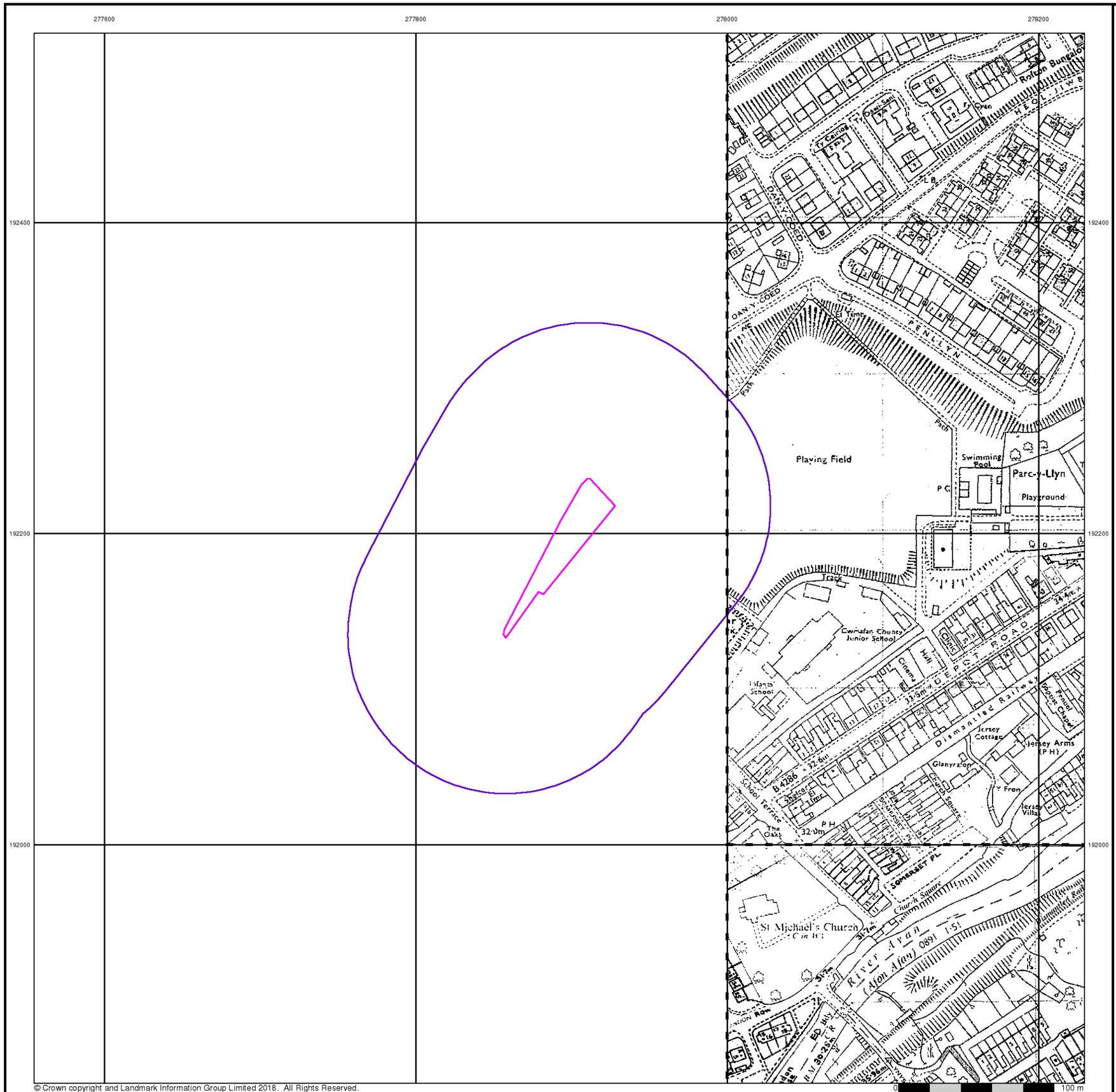
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Additional SIMs

Published 1984

Source map scale - 1:2,500

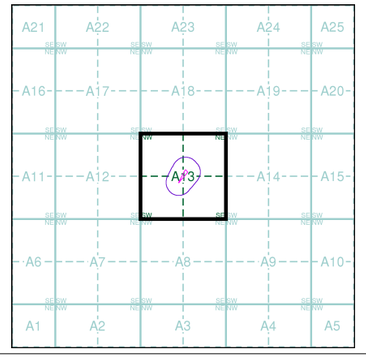
The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps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

Map Name(s) and Date(s)

SS7892
1984
1:2,500

SS7891
1984
1:2,500

Historical Map - Segment A13



Order Details

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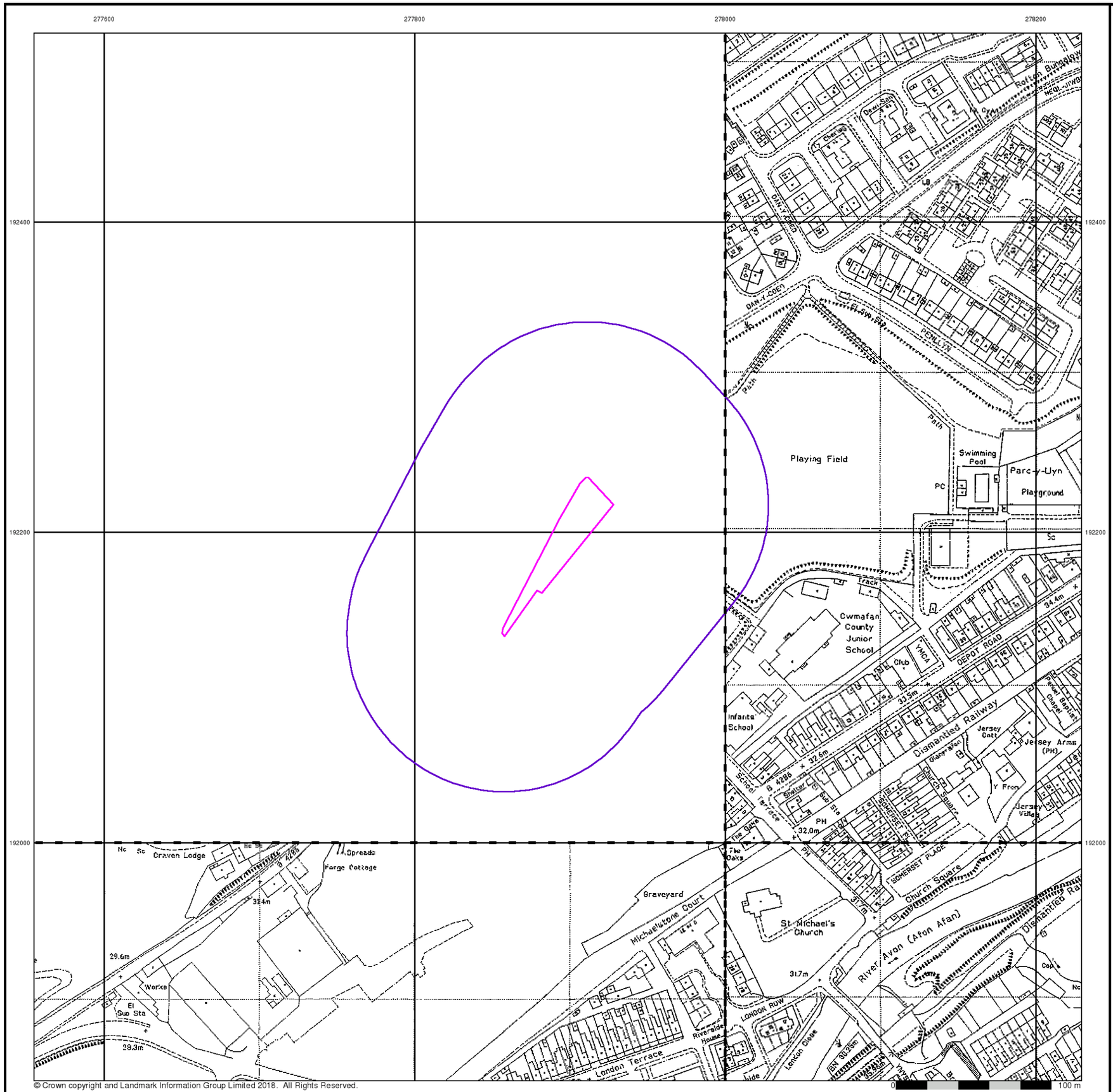
277600
277800
278000
278200
192400
192200
192000
Playground
Aelfryn Terrace
Brynhulog
Ty Hedd
Ty Gwyn
Ty Charlos
The Hedges
Glenview
Main Road
Three Gables
Kendon Cottage
Cefndon
Killivida
Tracks
Path
Playing Field
Swimming Pool
Parc-y-Llyn
Playground
PC
Tabernacle Chapel
Victoria Terrace
East Lodge
Coedfryn
New Bungalow
Vicarage
Y Gorlan
Craven Lodge
Forge Cottage
Spreads
Graveyard
Michaelstone Court
St Michael's Church
Garage
Hoppers
Works
Riverside House
London Terrace
London Close
Cwmavon Road
Cwmafan County Junior School
Infants' School
Club
Car Park
Shelter Works
Ty Mawr
Craigias House
Dismantled Railway
Jersey Cott
Jersey Villas
Jersey Arms (PH)
Y Fron
The Oaks
Somerset Place
Church Square
River Avon (Afon Afan)
Depot Road
High Street
Old Market Place
Ffordd Dinas
Heol-y-Parc
Heol Isaf
Dan-y-coed
Penrhiw
Ffordd Afan
Maesglas
Brynmorton
Cwm Mawr
Heol Dawel
Heol Jiwbili
Heol Dewi
Heol Dyfrig
Heol Dyfodol
Heol Dyfan
Heol Dyfnog



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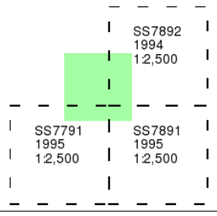
Large-Scale National Grid Data

Published 1994 - 1995

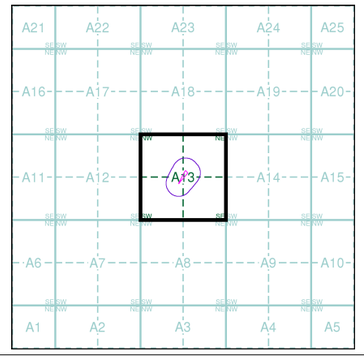
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

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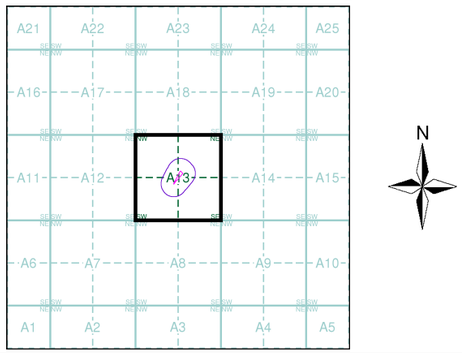
Historical Aerial Photography

Published 2000

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

Historical Aerial Photography - Segment A13



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

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

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Electricity Transmission Line
Pole
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
Standard Gauge Single Track
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

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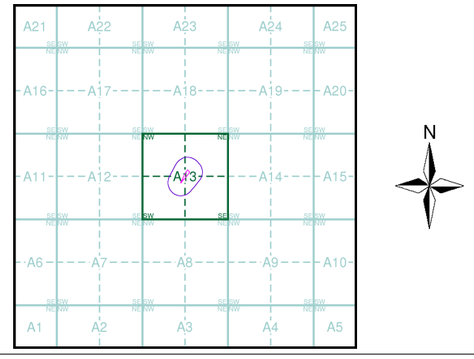
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:10,560	1884	2
Glamorganshire	1:10,560	1900	3
Glamorganshire	1:10,560	1921	4
Glamorganshire	1:10,560	1936	5
Glamorganshire	1:10,560	1938 - 1952	6
Historical Aerial Photography	1:10,560	1949	7
Glamorganshire	1:10,560	1951	8
Ordnance Survey Plan	1:10,000	1964	9
Ordnance Survey Plan	1:10,000	1974	10
Ordnance Survey Plan	1:10,000	1980	11
Ordnance Survey Plan	1:10,000	1996	12
10K Raster Mapping	1:10,000	1999	13
10K Raster Mapping	1:10,000	2006	14
VectorMap Local	1:10,000	2018	15

Historical Map - Slice A



Order Details

Order Number: 158022017_1_1
Customer Ref: 14611
National Grid Reference: 277890, 192180
Slice: A
Site Area (Ha): 0.17
Search Buffer (m): 1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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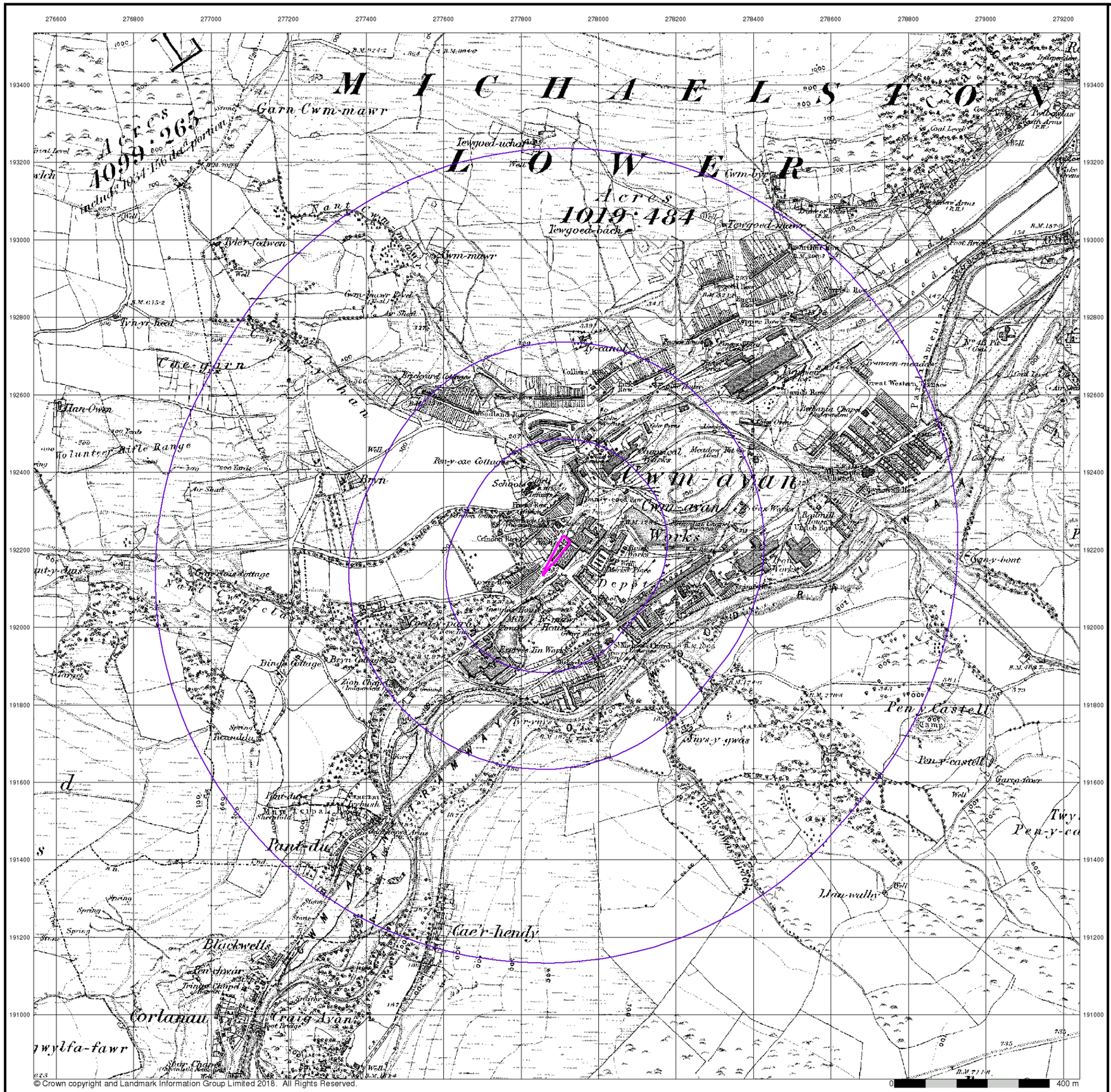

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Glamorganshire

Published 1884

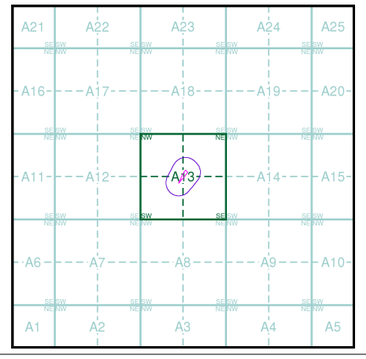
Source map scale - 1:10,560

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)

02500
1884
1:10,560

Historical Map - Slice A



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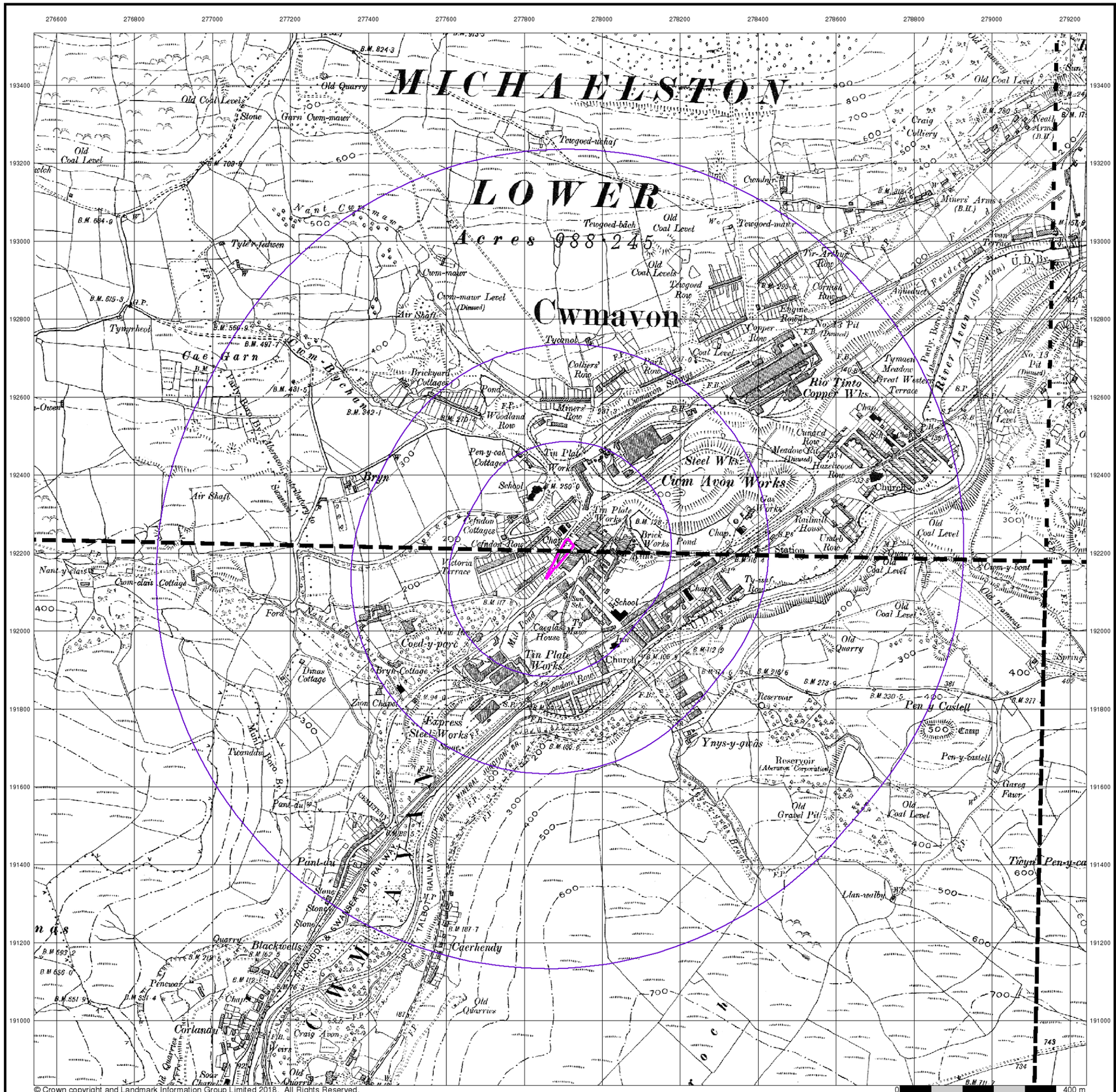
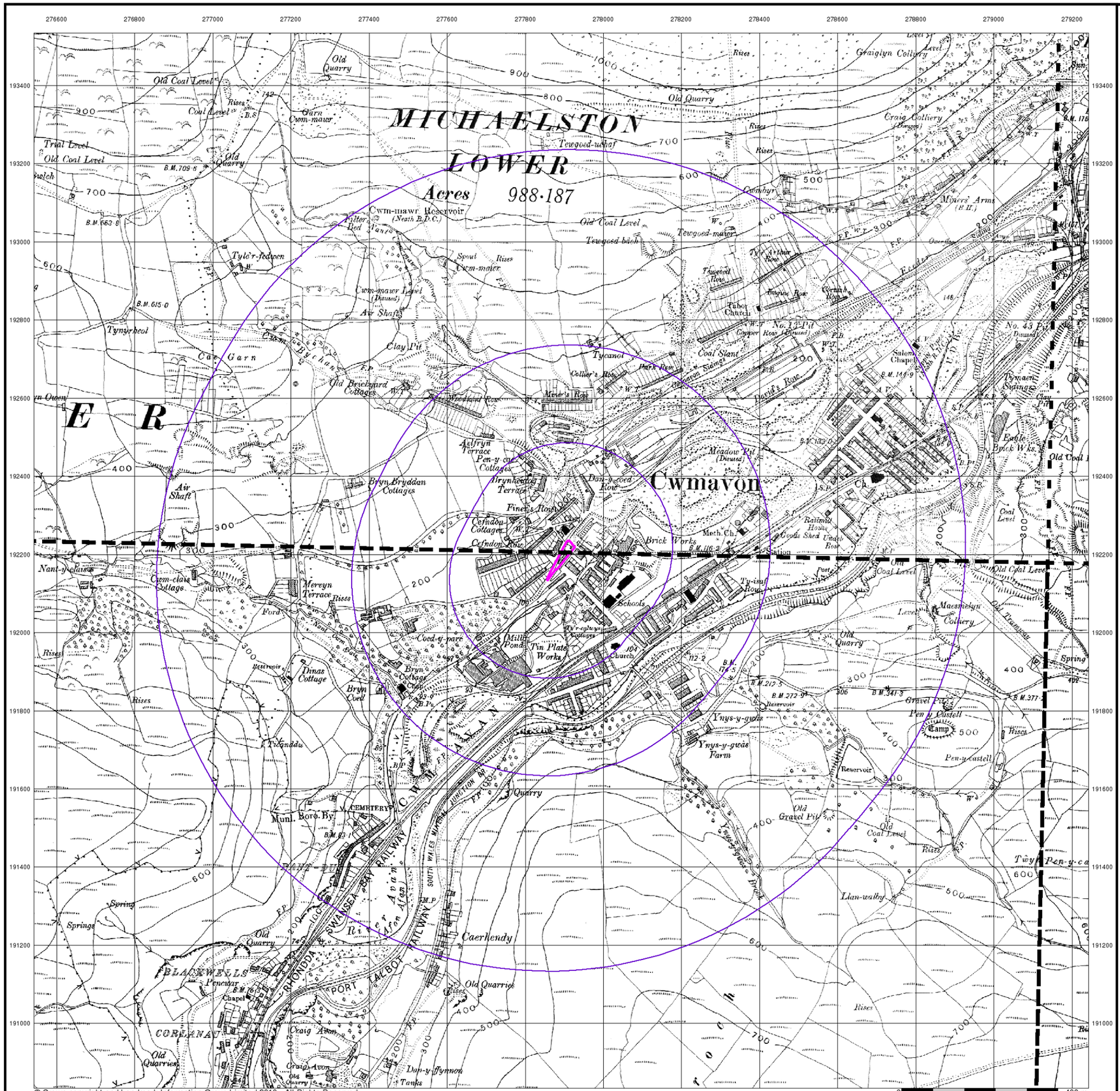

MICHAELSTON
LOWER
Acres 988·245
Cwmavon
Cwm Avon Works
Rio Tinto Copper Wks.
Steel Wks.
Tin Plate Works
Express Steel Works
Coed-y-parc
Cae Garn
Pen y Castell
Caerhendy
Blackwells
Corlandy
Pencwar
Paul-du
Ynys-y-gwas
Roseryoir
Old Gravel Pit
Nant Cwm-mawr
Cwm-mawr
Cwm-mawr Level
Tycanol
Tir-Arthur Row
Cornish Row
Copper Row
Colliers' Row
Park Row
Meadow Row
Hazelwood Row
Woodland Row
Brickyard Cottages
Pen-y-cae Cottages
Cefndon Cottages
Cefndon Row
Victoria Terrace
London Row
Railmill House
Brick Works
Pond
Gas Works
Chapel
Church
School
Station
Inclined Plane
Air Shaft
Old Quarry
Old Quarries
Old Coal Level
Old Coal Levels
Craig Colliery
Miners' Arms (B.H.)
Keal's Arms (B.H.)
Aqueduct Feeder
River Avon (Afon Afan)
Nant-y-clais
Cwm-clais Cottage
Dinas Cottage
Bryn Cottage
Zion Chapel
Pant-du
Tycanol Row
Tycwndin Row
Tyle'r-Jedrsen
Tynyrheol
Ty r Owen
Ty-isaf Row
Ty Mawr
Caeglas House
Mill Road
Old Tramway
Spring
Reservoir
Camp
Garreg Fawr
Llan-reilby
Tŷ'n y Pen-y-ca
Tramway Road By Afternoon
Swansea
Ford
Quarry
Stone
Weirs
Old Chimney
Soar Chapel
Mawr Brook
Nant Cwm-mawr
Tŷ-isaf Brook
Old Coal Level
Old Treamroad
Old Tramway
Old Coal Level
Old Quarry
Old Coal Level
Old Coal Level
Old Coal Level


MICHAELSTON
LOWER
Acres 988·187
Cwmavon
Old Quarry
Old Coal Level
Coal Level
Trial Level
Old Coal Level
Gurn Cwm-mawr
Cwm-mawr Reservoir (Neath R.D.C.)
Filter Bed
Tanks
Tyle'r-fedwen
Cwm-mawr Level (Disused)
Air Shaft
Tynyrheol
Cae Garn
Clay Pit
Old Brickyard Cottages
Aelfryn Terrace
Pen-y cae Cottages
Brynheulog Terrace
Bryn Bryddan Cottages
Air Shaft
Cefndon Cottages
Cefndon Row
Finer's Row
Meth. Ch.
Brick Works
Railway House
Goods Shed
Under Road
Schools
Nant-y-clause
Cwm-clais Cottage
Mervyn Terrace
Ford
Coed-y-parc
Mill Pond
Tin Plate Works
Church
Dinas Cottage
Bryn Cottage
Bryn Coed
Ty'n-y-graig Cottages
Ty'n-isaf Row
Maesmelyn Colliery
Craig Colliery (Drawn)
Miners' Arms (P.H.)
Graigiyn Colliery
Tycanol
Collier's Row
Coal Slant
Tabor Church
Copper Row (Disused)
Meyler's Row
Woodland Row
Tynycaeau Row
Tynycaeau Sidings
Tynycaeau Cottages
Salem Chapel
Eagle Brick Works
Meadow Pit (Disused)
Ty'r Arthur Row
Tynycaeau Colliery
Old Coal Level
Tynycaeau Pit
Ty'n-y-caeau
Ty'n-y-graig
Ty'n-y-graig Row
Ty'n-y-graig Reservoir
Ty'n-y-graig Pond
Ty'n-y-graig Farm
Ty'n-y-graig Quarry
Old Gravel Pit
Gravel Pit
Pen-y-Castell
Camp
Reservoir
Llan-walby
Old Coal Level
Spring
Springs
Old Quarry
Old Quarries
Caerhendy
Craig Arun
Dan-y-ffynnon
Tanks
Munl. Boro. By.
CEMETERY
Rhondda Branch
Swansea and Neath Railway
South Wales Mineral Junction Railway
Port Talbot Railway
River Avon (Afan)
BLACKWELLS
Penewar
Chapel
CORELANAU
Rises
Ford
Reservoir
Quarry
Old Coal Level
Coal Level
Old Quarry
Spring
Springs
Rises
Old Quarries
Craig Arun
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Tanks
Old Coal Level
Old Quarry
Old Coal Level
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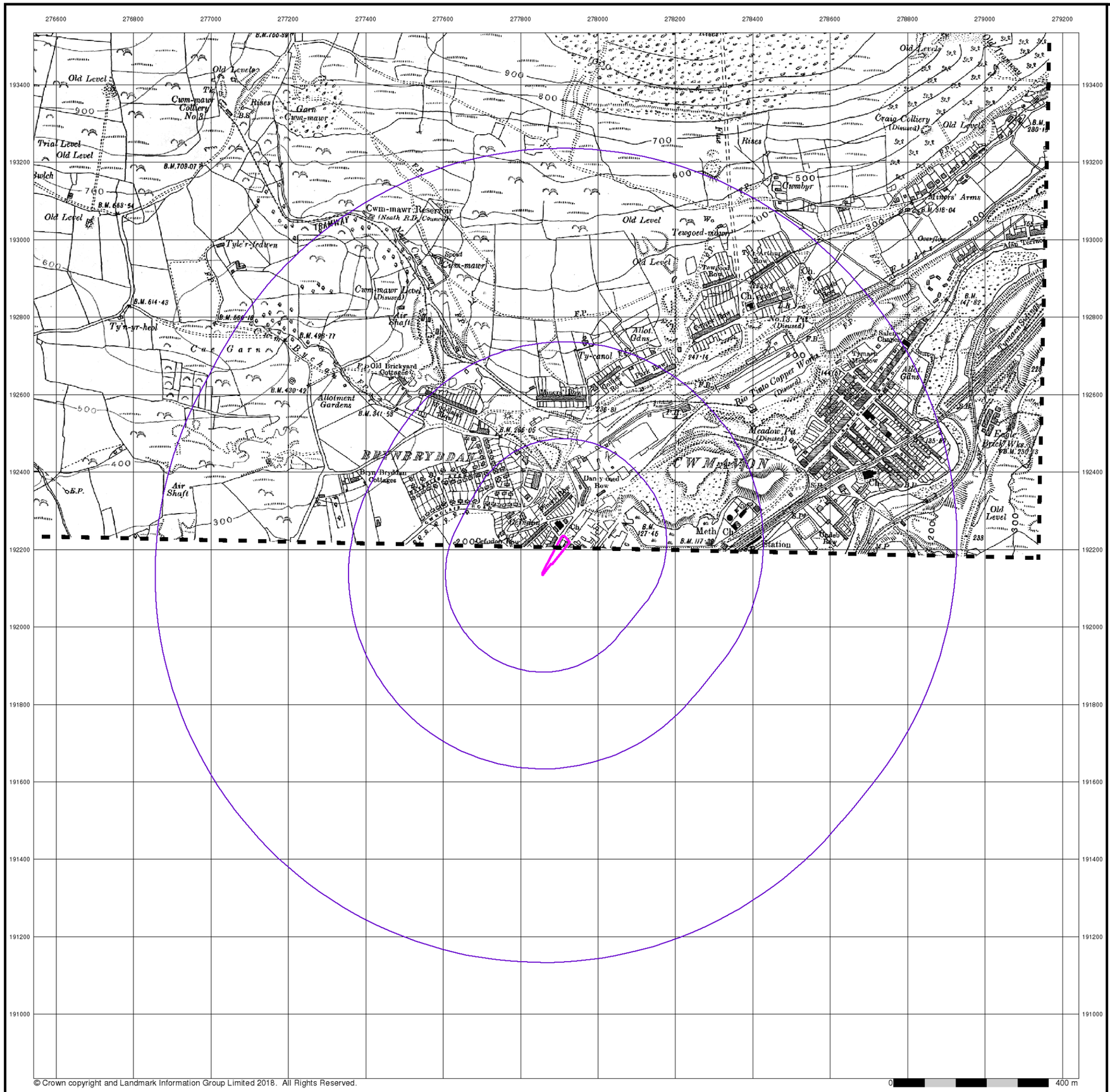
Old Quarry



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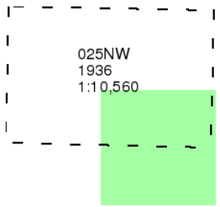
Glamorganshire

Published 1936

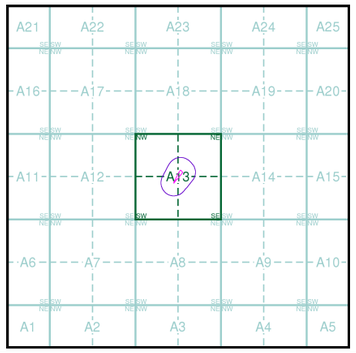
Source map scale - 1:10,560

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)



Historical Map - Slice A



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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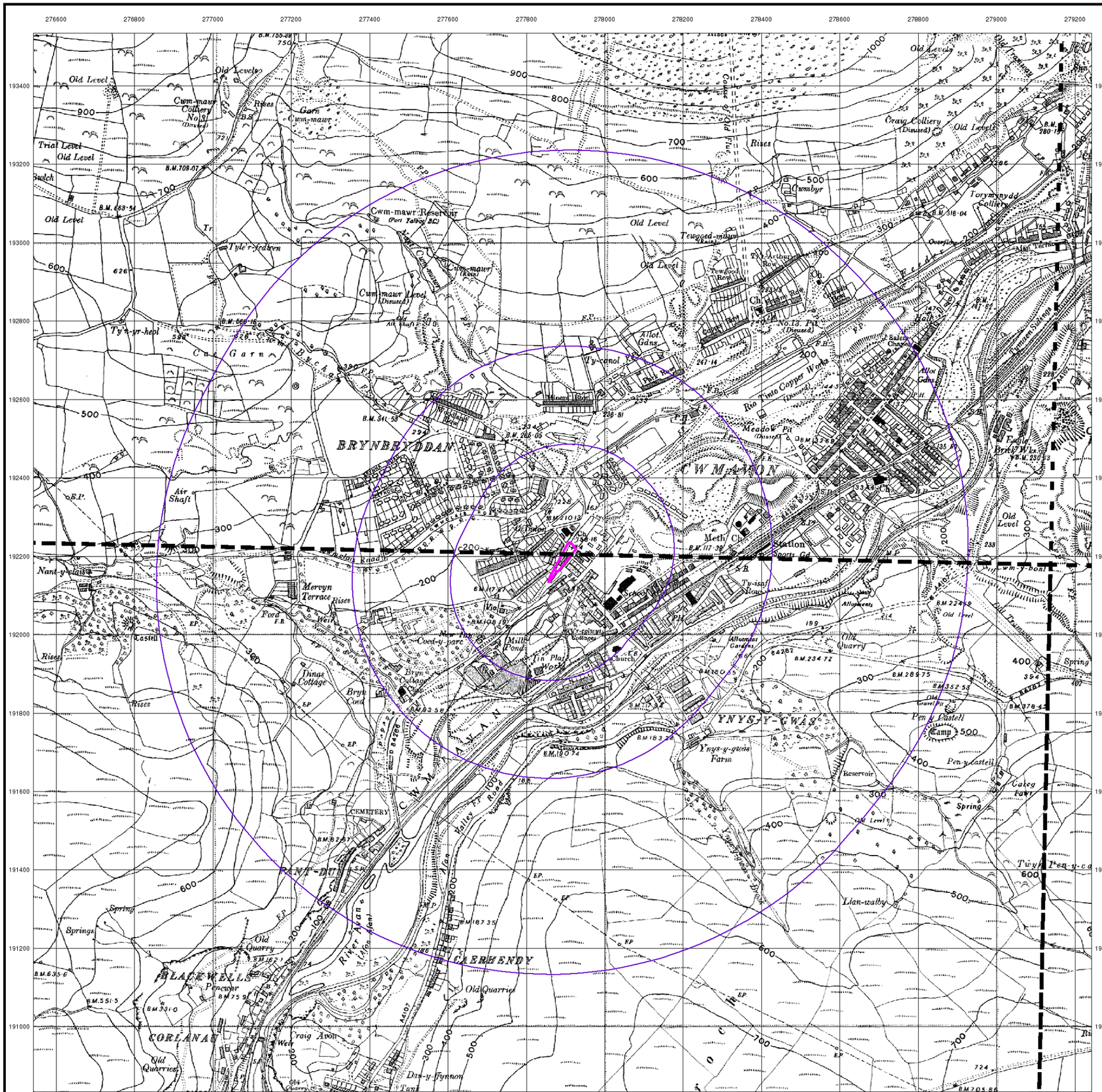
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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0 400 m

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Glamorganshire

Published 1938 - 1952

Source map scale - 1:10,560

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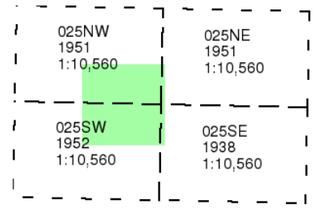
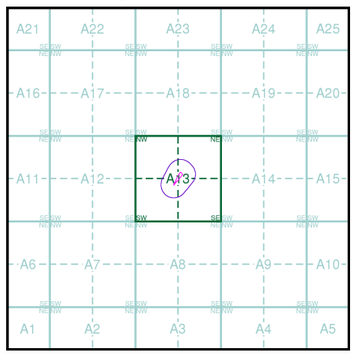
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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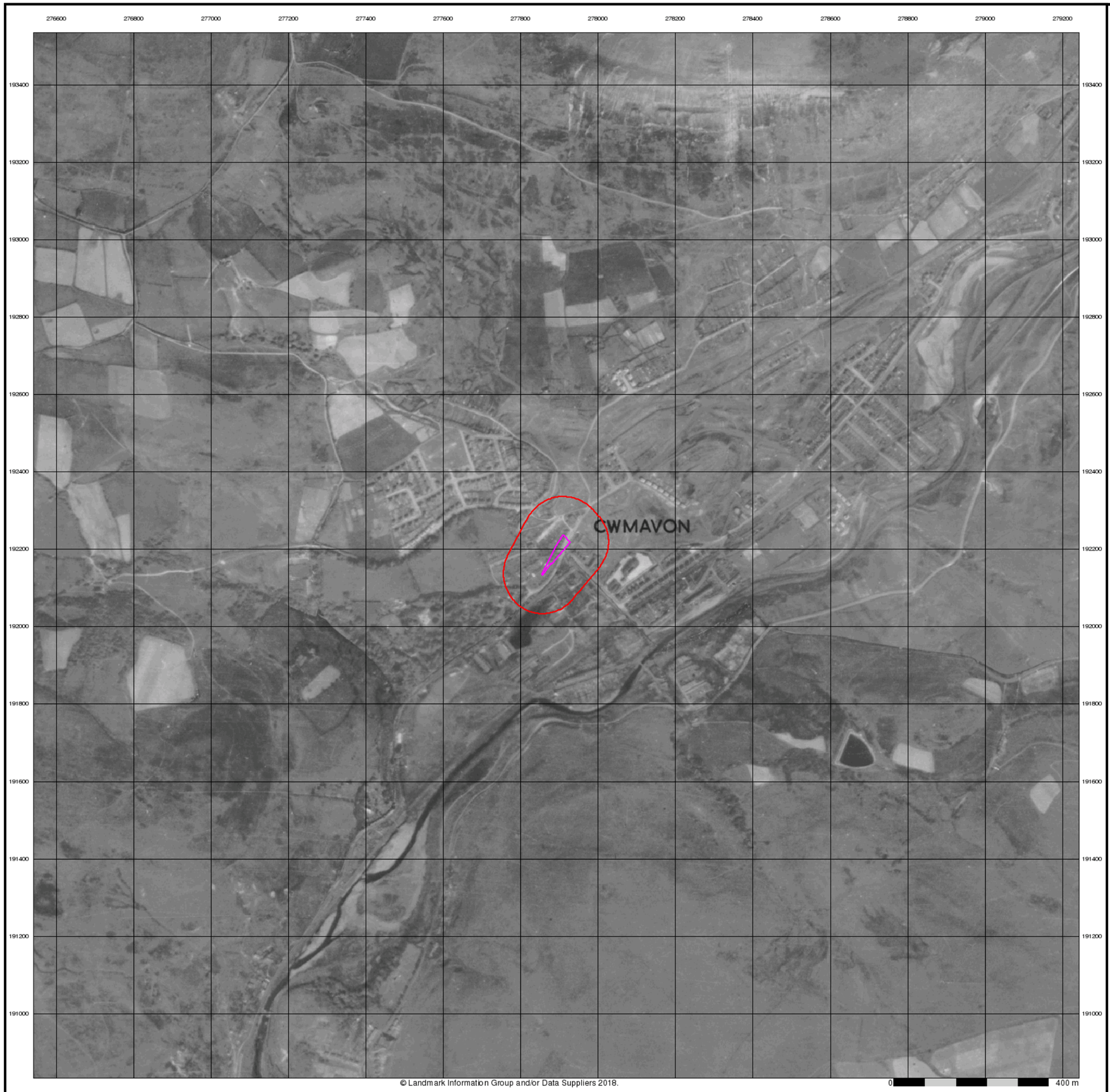

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Historical Aerial Photography

Published 1949

Source map scale - 1:10,560

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

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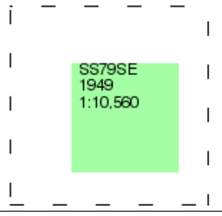
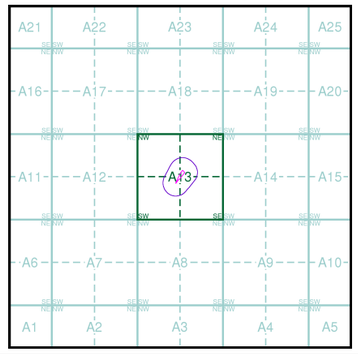
Map Name(s) and Date(s)



Historical Aerial Photography - Slice A



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Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

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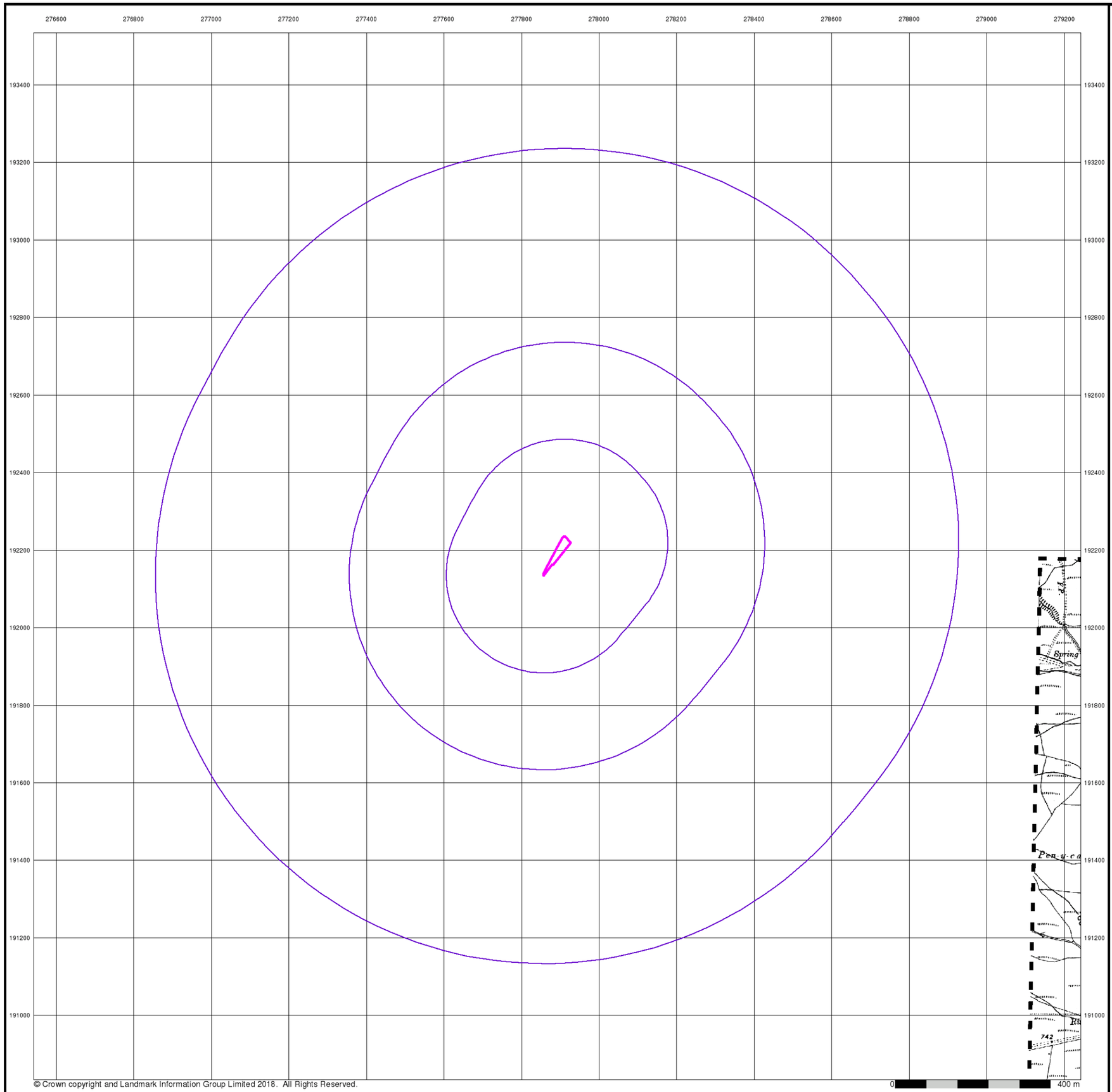

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Glamorganshire

Published 1951

Source map scale - 1:10,560

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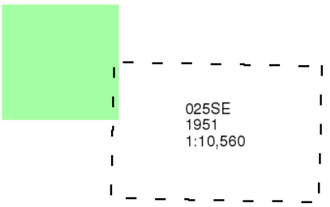
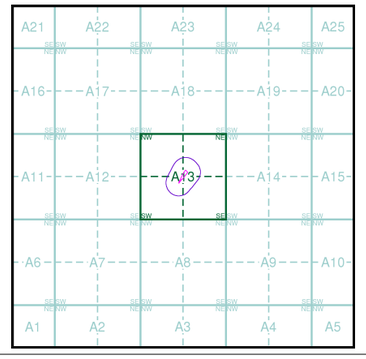
Map Name(s) and Date(s)



Historical Map - Slice A



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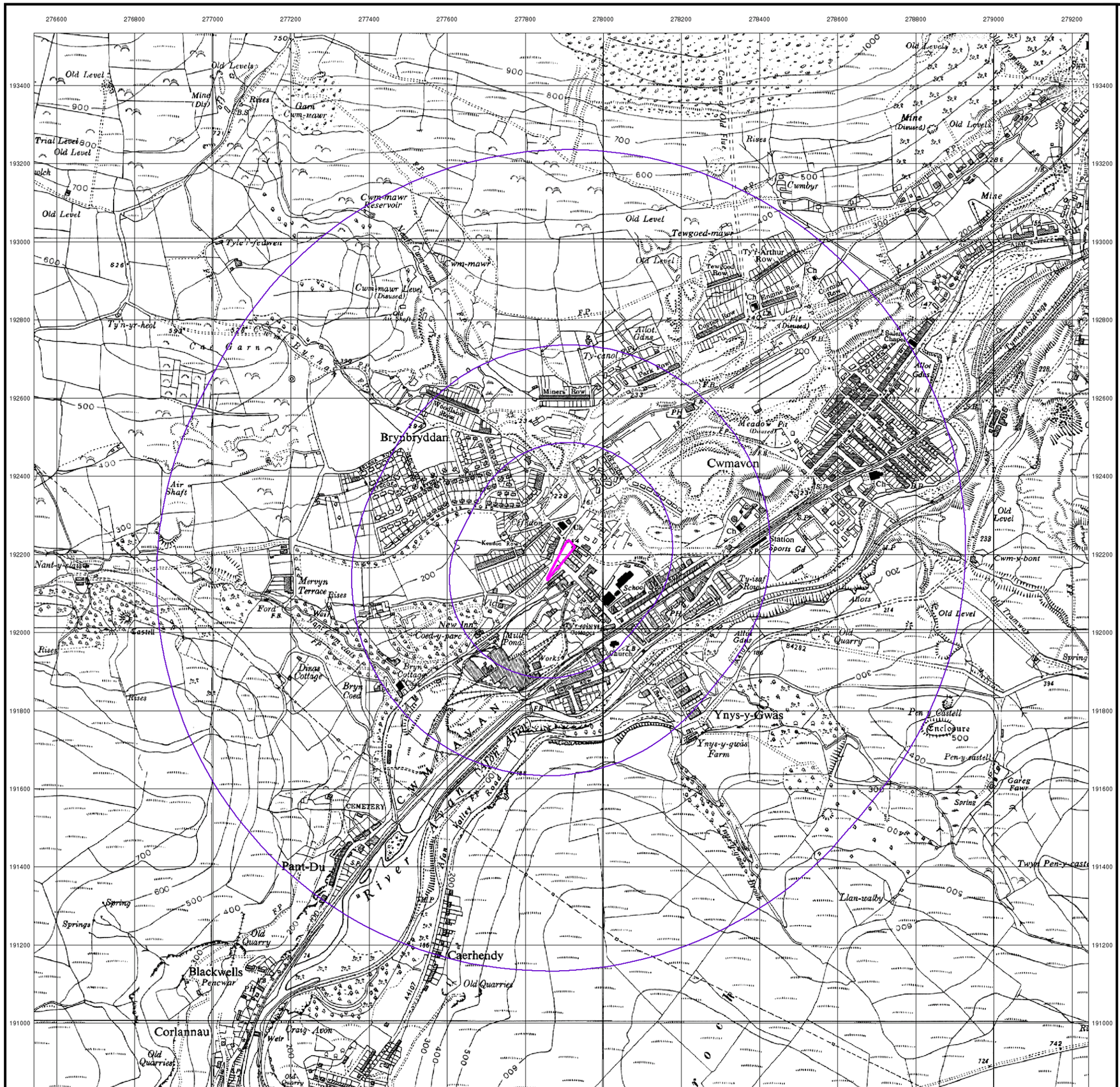
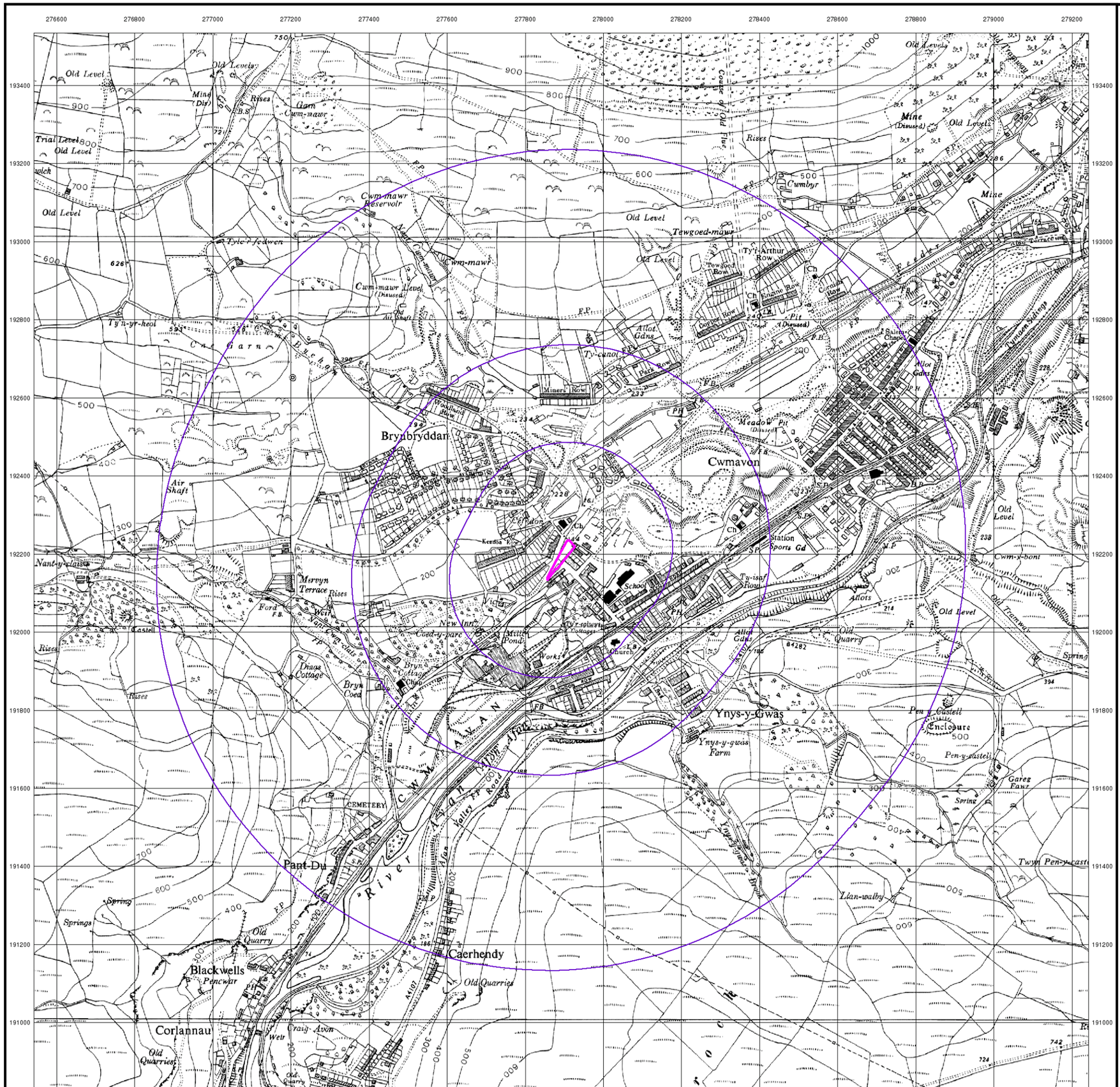

Brynbryddan
Cwmavon
Ynys-y-Gwas
Pant-Du
Caerhendy
Blackwells
Corlannau
Cwm-mawr Reservoir
Cwm-mawr Level (Disused)
Tewgoed-mawr
Ty'r-Arthur Row
Meadow Pit (Disused)
Pit (Disused)
Mine (Disused)
Old Level
Old Levels
Old Quarry
Old Quarries
Air Shaft
Rises
Spring
Springs
Ty-canol
Allot. Gdns
Miners' Row
Pen-y-castell Enclosure
Llan-walby
Ynys-y-gwas Farm
Craig-Avon
Mervyn Terrace
Dinas Cottage
Bryn Cottage
Coed-y-parc
New Inn
CEMETERY
Station
Sports Gd
River Afan
A.V.A.N
C.W.M.
Cwm Garn
Nant-y-cwm
Ty'n-yr-heol
Cwm-mawr
Tyle'r-felen
Cwmbyr
Gareg Fawr
Twyn Pen-y-castell
Cwm-y-bont
Tramway
Ford
Weir
Church
Works
Mault Pond
Kendon Row
Ty-isaf Row
Tewgood Row
Ynysgwas Terrace
Ty'r-Arthur Row
Coronation Row
Ty'r-Arthur Terrace
Miners' Row
Pant-Du Road
Valley Road
Old Tramway
Old Air Shaft
Old Quarry
Old Quarries
Allots
Allot. Gdns
Pen-y-castell
Pen-y-Castell
Enclosure
Cwm Garn Brook
Ty-canol Brook
Llan-walby Brook
Afan Valley
Afan Forest Park
M4107
Rises
Spring
Springs
Mine
Old Level
Old Levels
Trial Level
Old Level
Mine (Dis)
Gam
Cwm-mawr
Cwmbyr
Tewgoed-mawr
Ty'r-Arthur Row
Tewgood Row
Ynysgwas Terrace
Coronation Row
Ty'r-Arthur Terrace
Miners' Row
Meadow Pit (Disused)
Pit (Disused)
Mine (Disused)
Old Levels
Old Tramway
Old Air Shaft
Old Quarry
Old Quarries
Allots
Allot. Gdns


Brynbryddan
Cwmavon
Ynys-y-Gwas
Pant-Du
Caerhendy
Blackwells
Corlannau
River Avon
Cwm-mawr Reservoir
Cwm-mawr Level (Disused)
Ty'n-yr-heol
Tyle'r Fedwen
Tewgoed-mawr
Ty'r Arthur Row
Miners' Row
Meadow Pit (Disused)
Mine (Disused)
Old Level
Old Levels
Trial Level
Old Quarry
Old Quarries
Air Shaft
Station Sports Gd
Ynys-y-gwas Farm
Pen-y-castell Enclosure
Llan-walby
Twyn Pen-y-castell
Cwm-y-bont
Nant-y-glasse
Merwyn Terrace
Bryn Cottage
Coed-y-parc
Mill Pond
Works
Church
Ty-isaf Row
Allots
Springs
Spring
Rises
Ford
Weir
Craig-Avon
Valley Fp Road
CEMETERY
Old Tramway
Sidings
Garez Fawr
Ty-canol
Allot. Gdns
Chapel
Ch
School
PH
FB
FP
SP
MP
Works
Mill
Quarry
Enclosure
Pit
Rises
Spring
Springs
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Mine (Disused)
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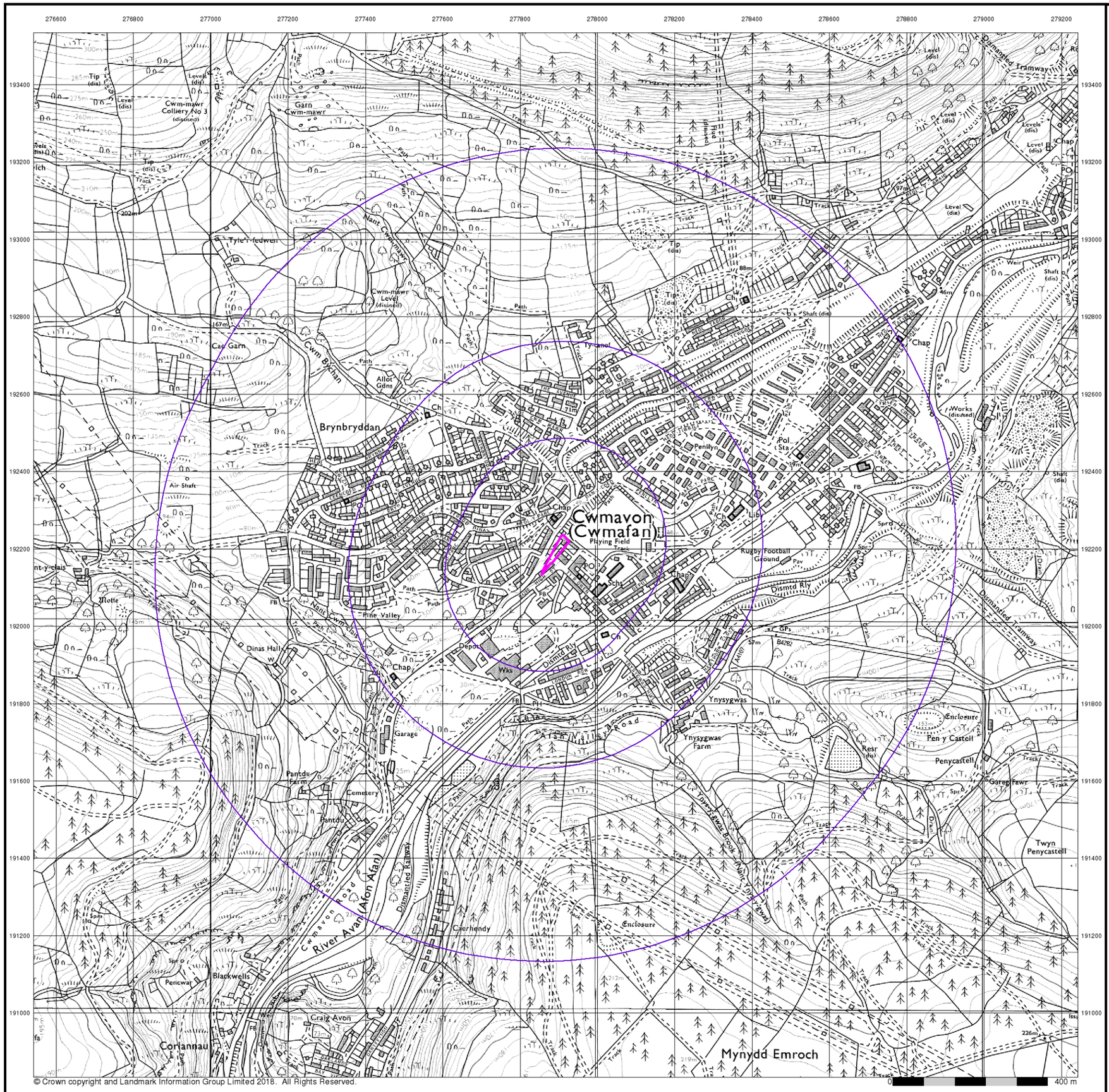
Allots



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Ordnance Survey Plan

Published 1980

Source map scale - 1:10,000

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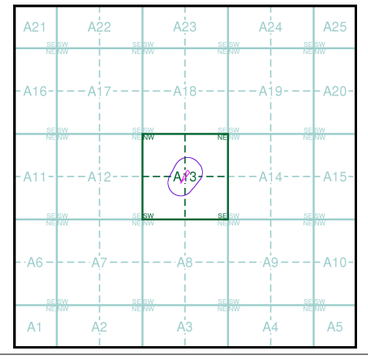
Map Name(s) and Date(s)

SS79SE
1980
1:10,000

Historical Map - Slice A



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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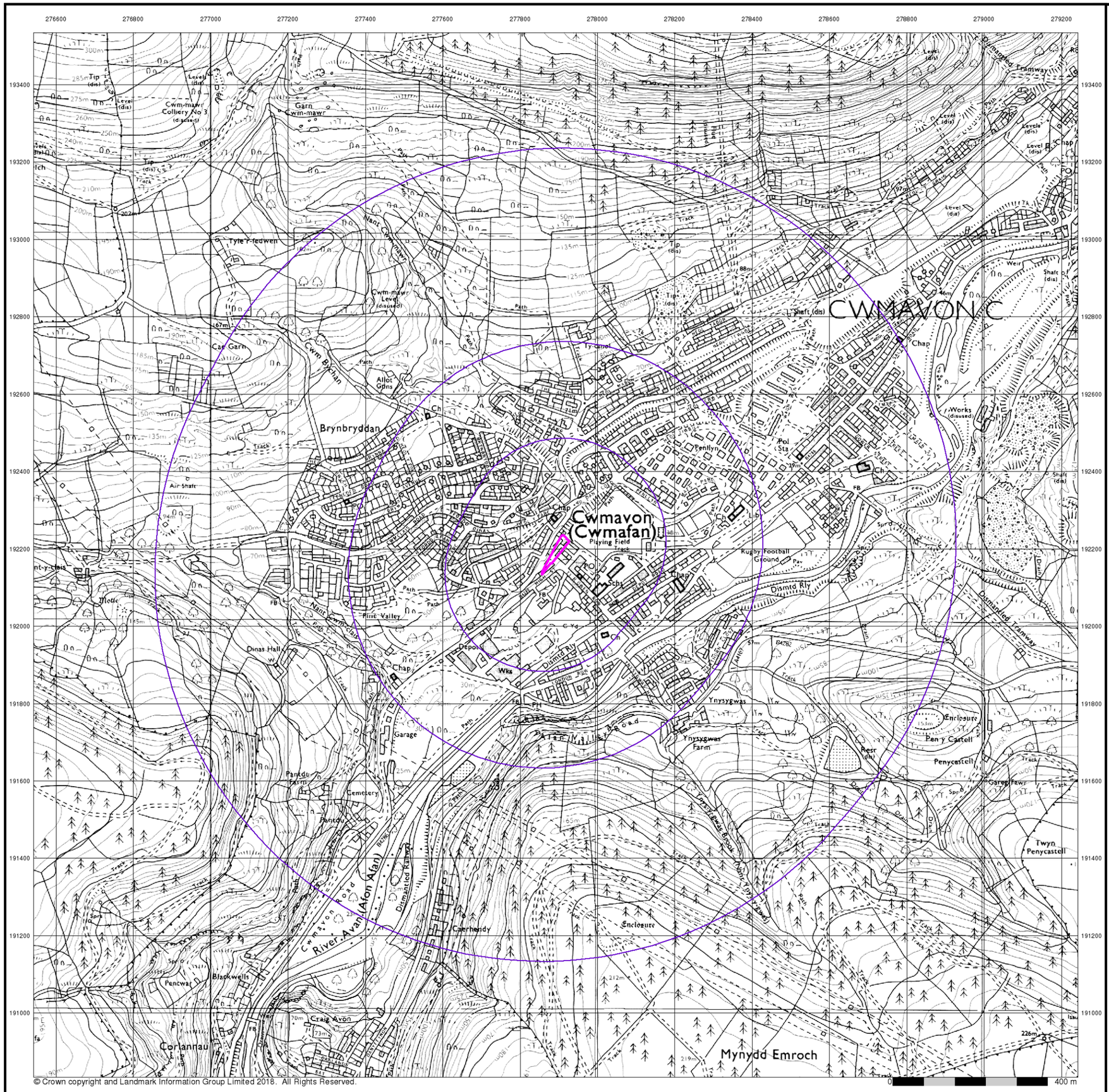

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Ordnance Survey Plan

Published 1996

Source map scale - 1:10,000

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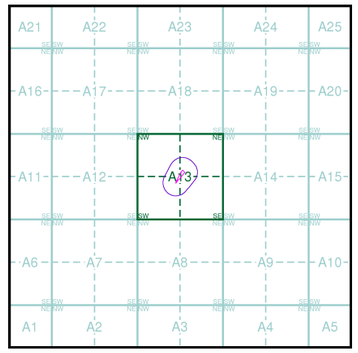
Map Name(s) and Date(s)

SS79SE
1996
1:10,000

Historical Map - Slice A



Order Details

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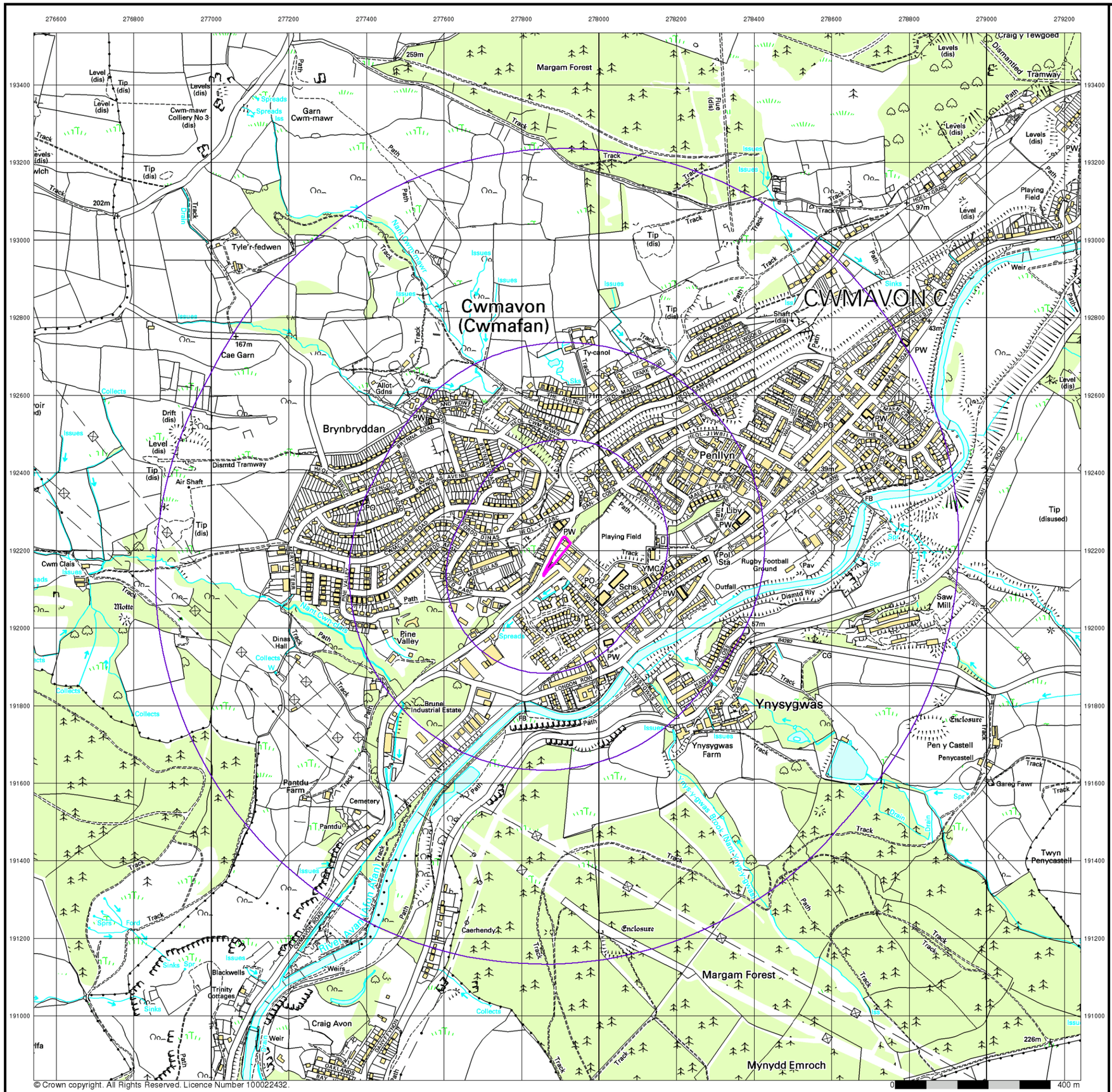

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10k Raster Mapping

Published 1999

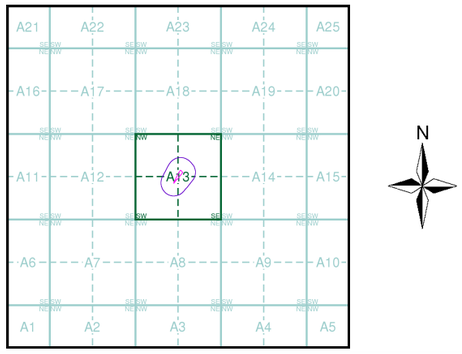
Source map scale - 1:10,000

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)

SS79SE
1999
1:10,000

Historical Map - Slice A



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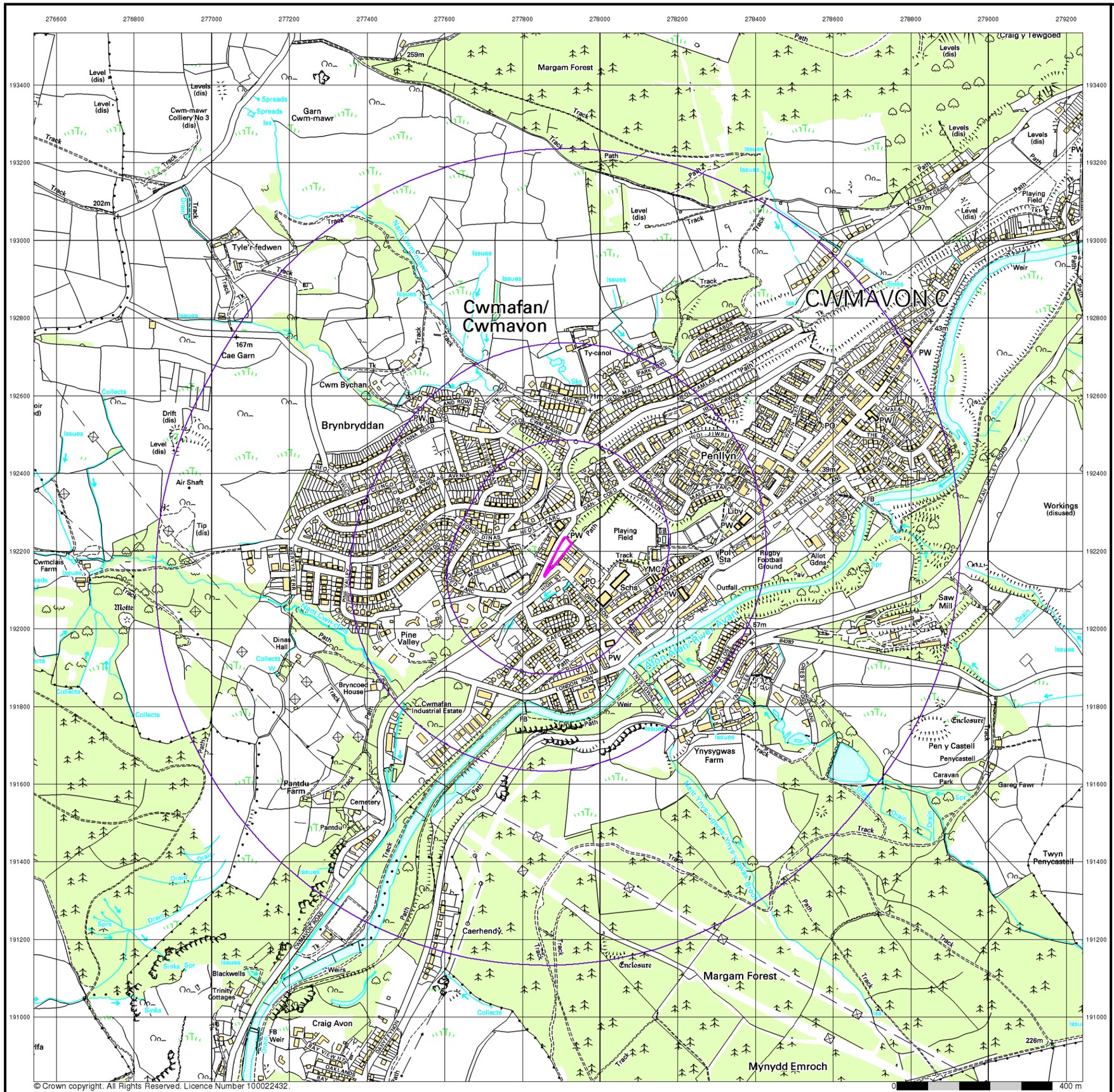

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10k Raster Mapping

Published 2006

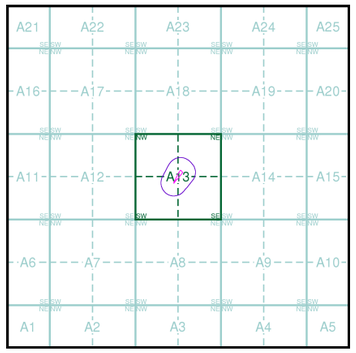
Source map scale - 1:10,000

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)

SS79SE
2006
1:10,000

Historical Map - Slice A



Order Details

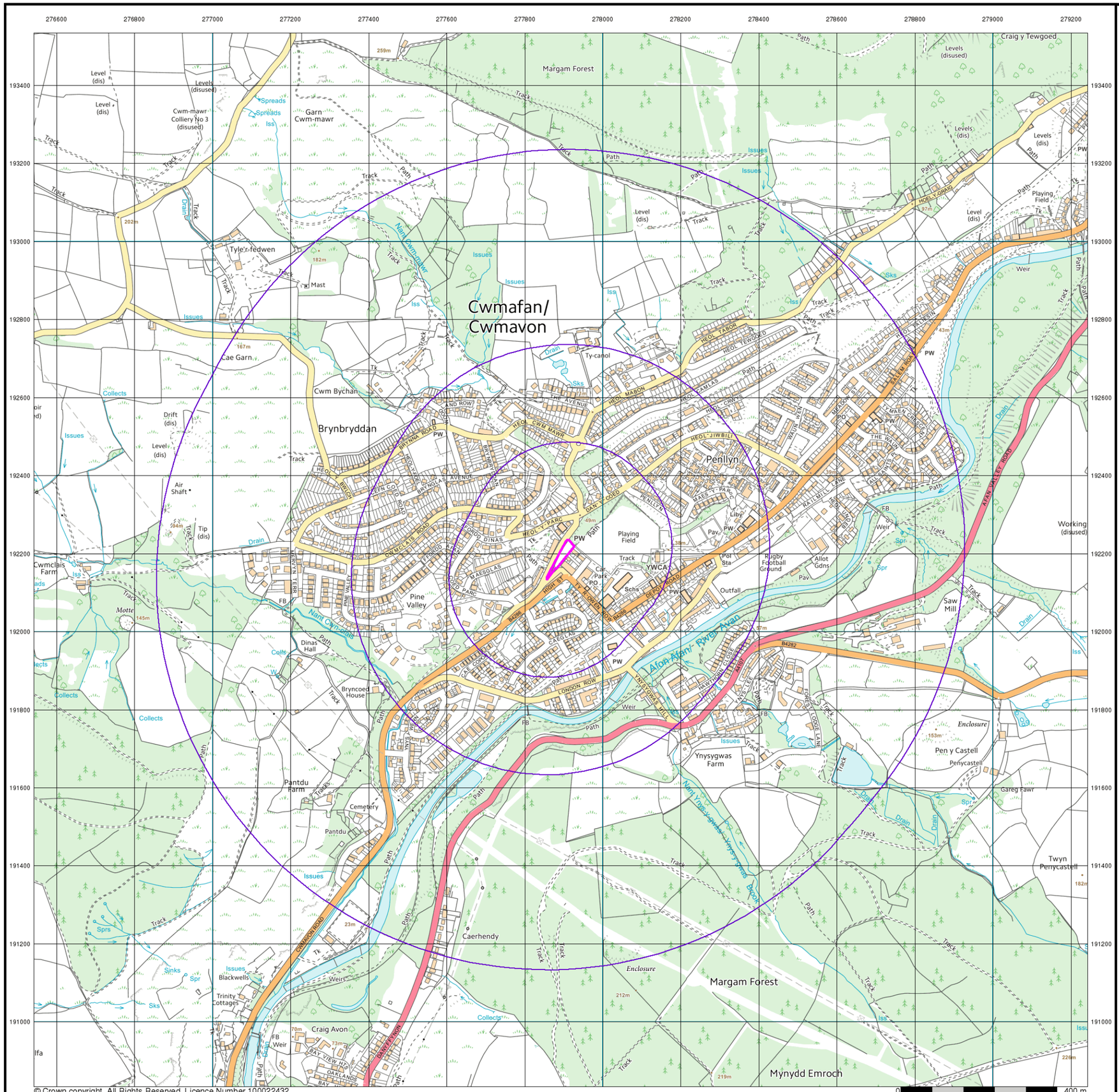
Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

Landmark INFORMATION GROUP

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



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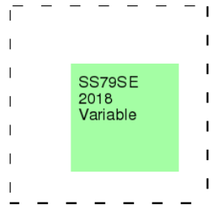
VectorMap Local

Published 2018

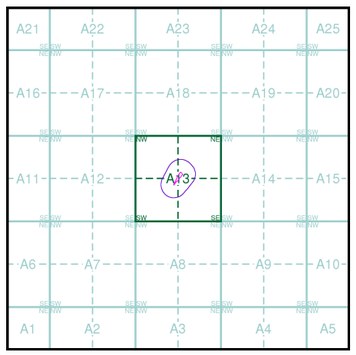
Source map scale - 1:10,000

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:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

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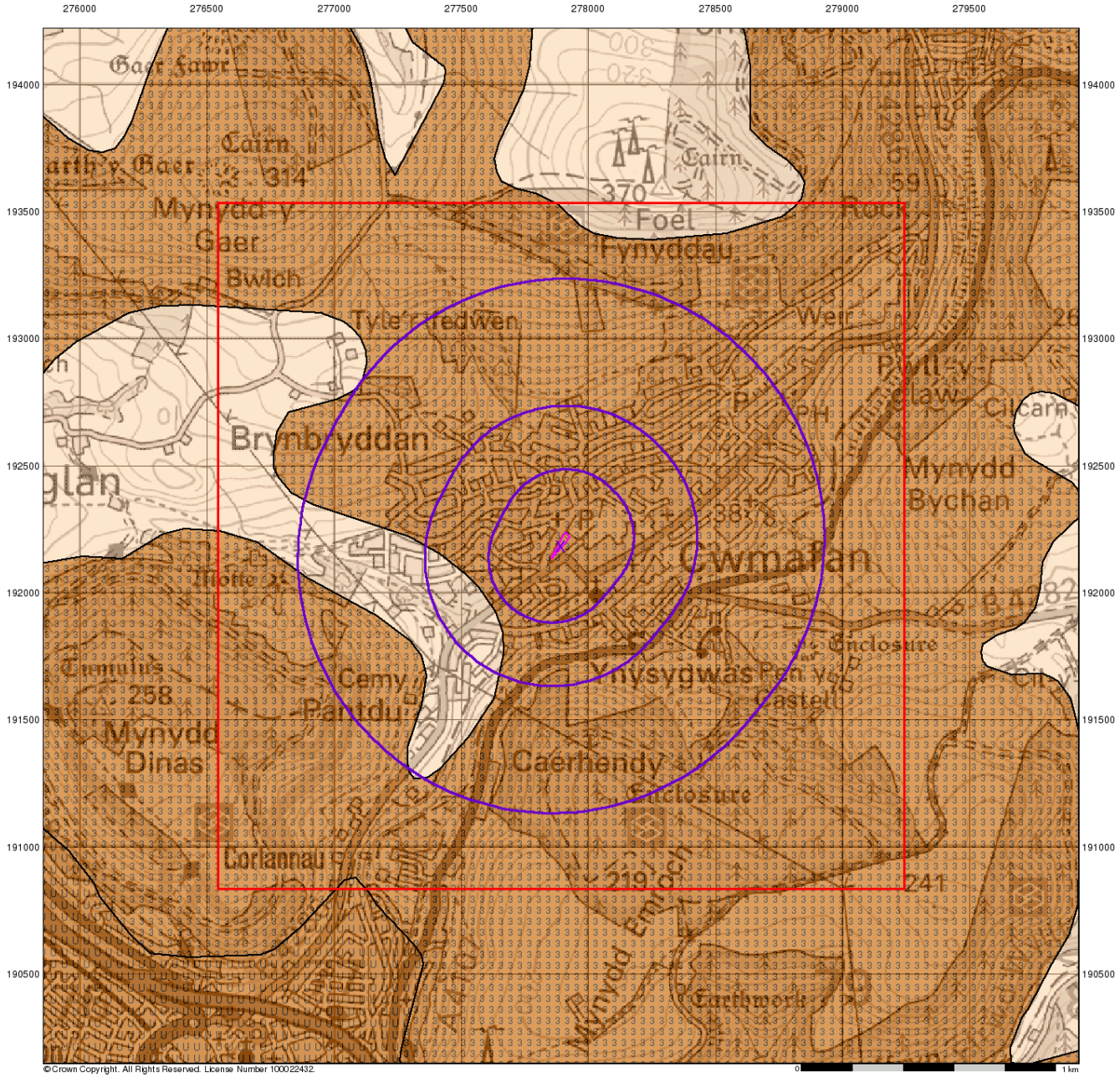

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Groundwater Vulnerability

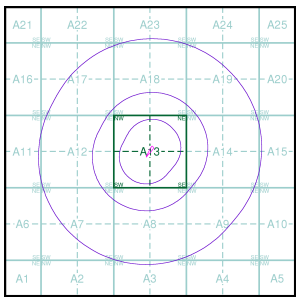
General

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

Agency and Hydrological

Geological Classes	Soil Classes
Major Aquifer (Highly Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Minor Aquifer (Variably Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Non Aquifer (Negligibly Permeable)	
Water or Sea	
Drift Deposit	

Site Sensitivity Context Map - Slice A



Order Details

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Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

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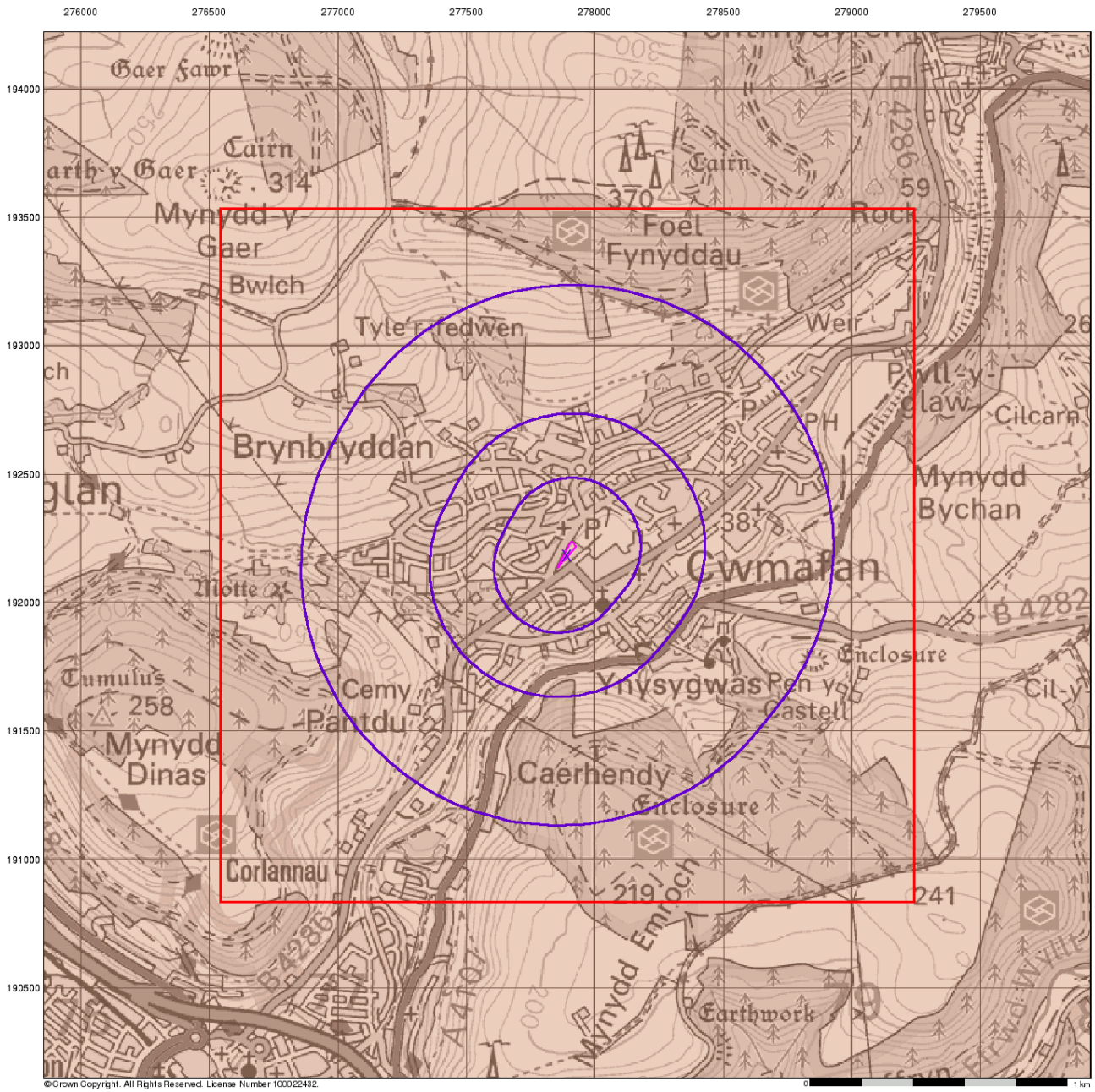

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Bedrock Aquifer Designation

General

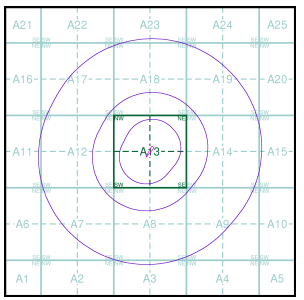
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

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



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National Grid Reference:	277890, 192180
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Site Details

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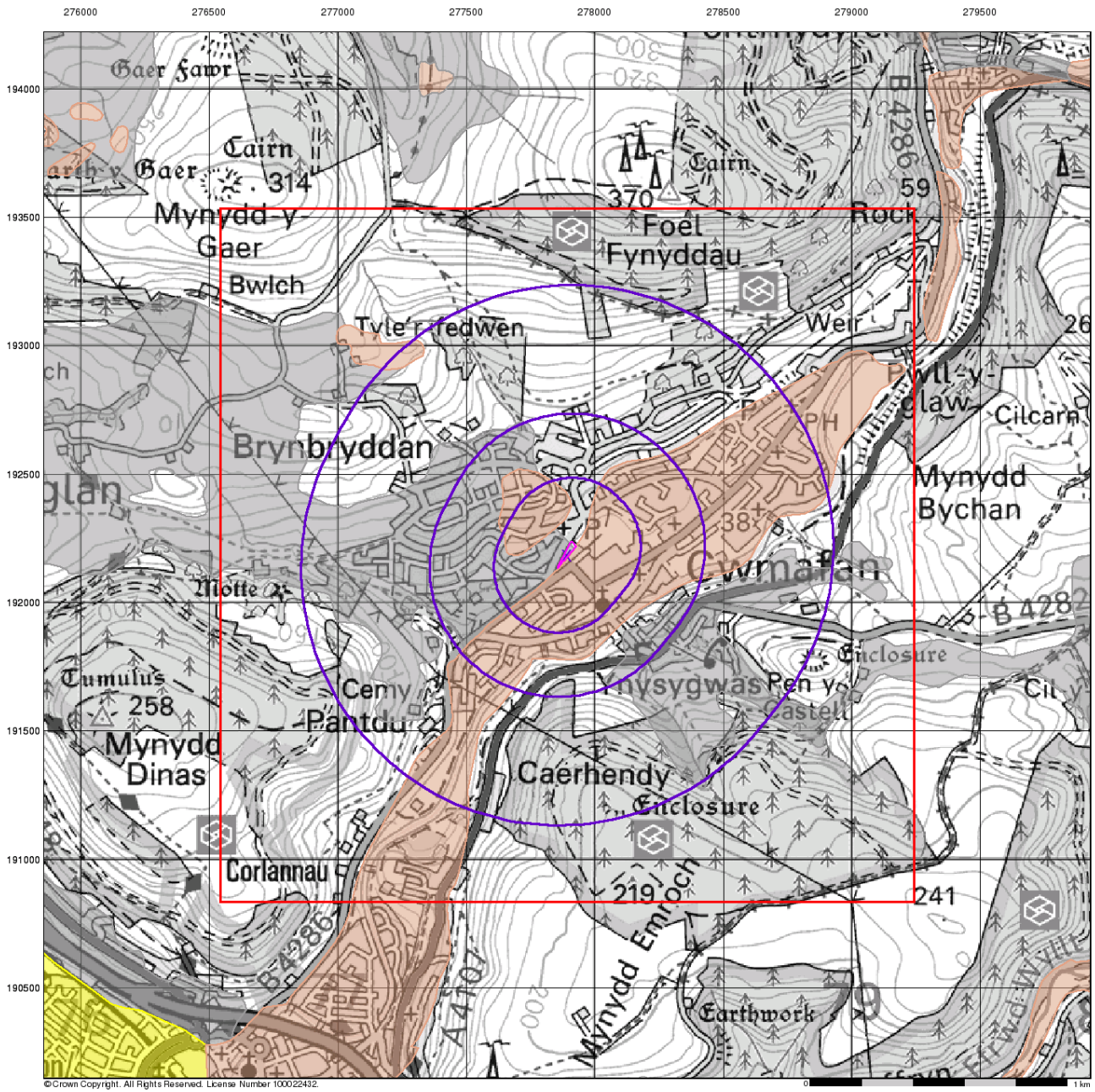

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Superficial Aquifer Designation

General

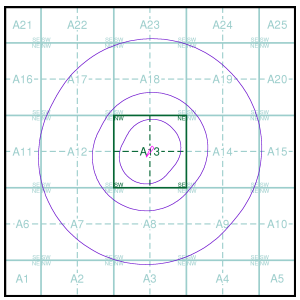
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

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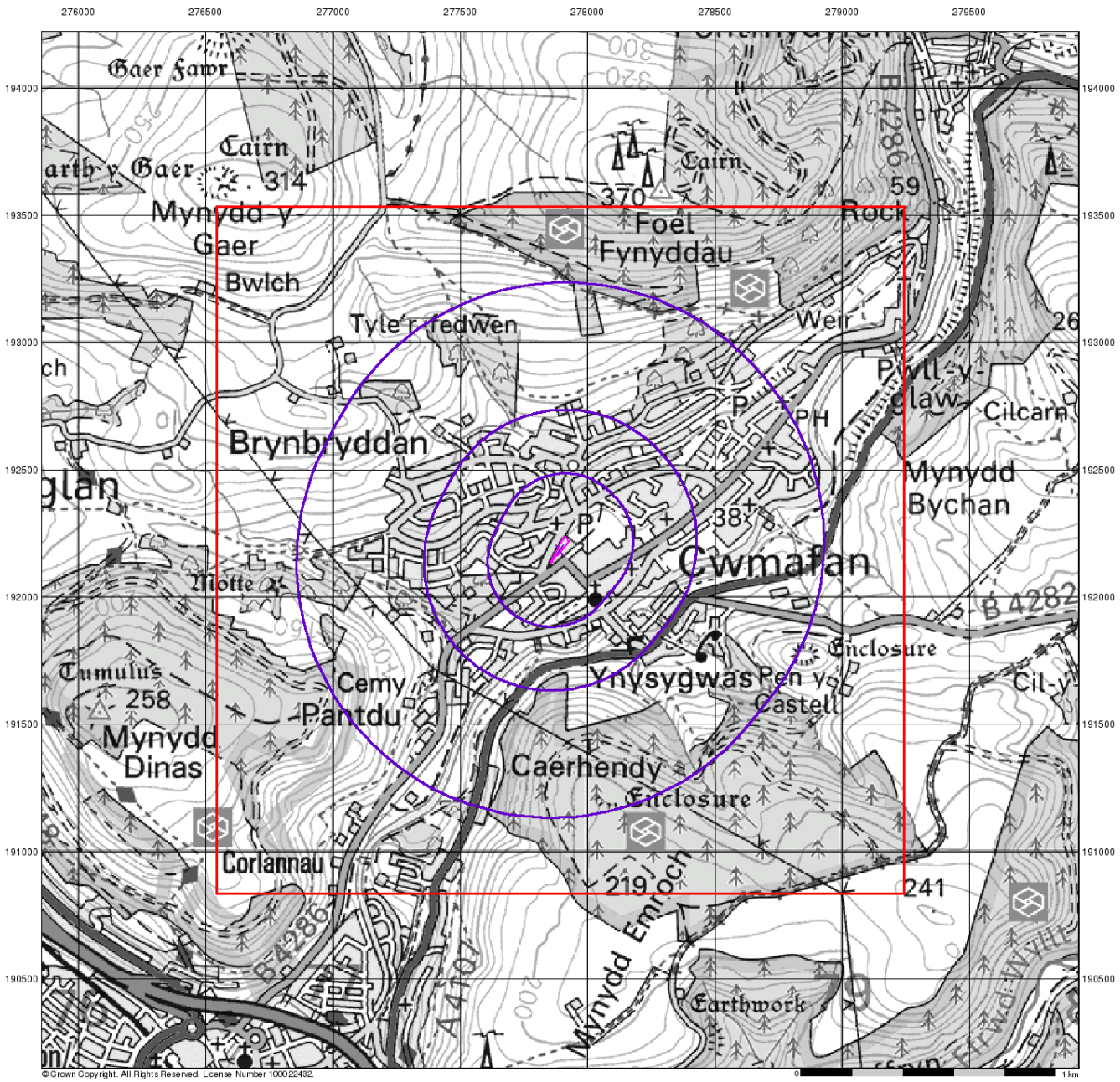
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG



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Source Protection Zones

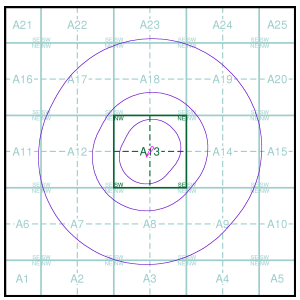
General

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)
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice A



Order Details

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Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

Landmark INFORMATION GROUP
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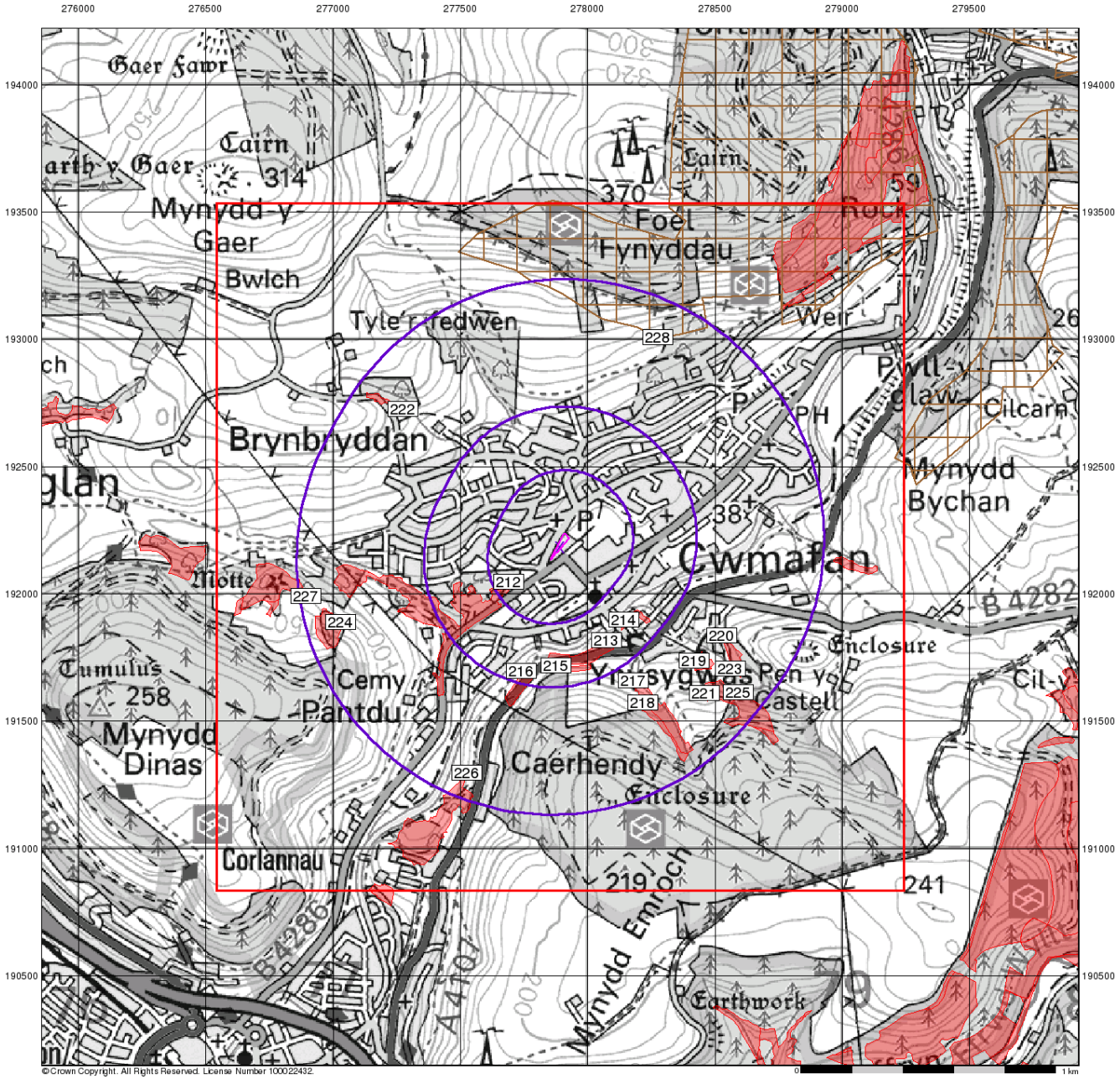

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Sensitive Land Uses

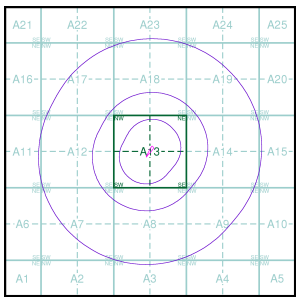
General

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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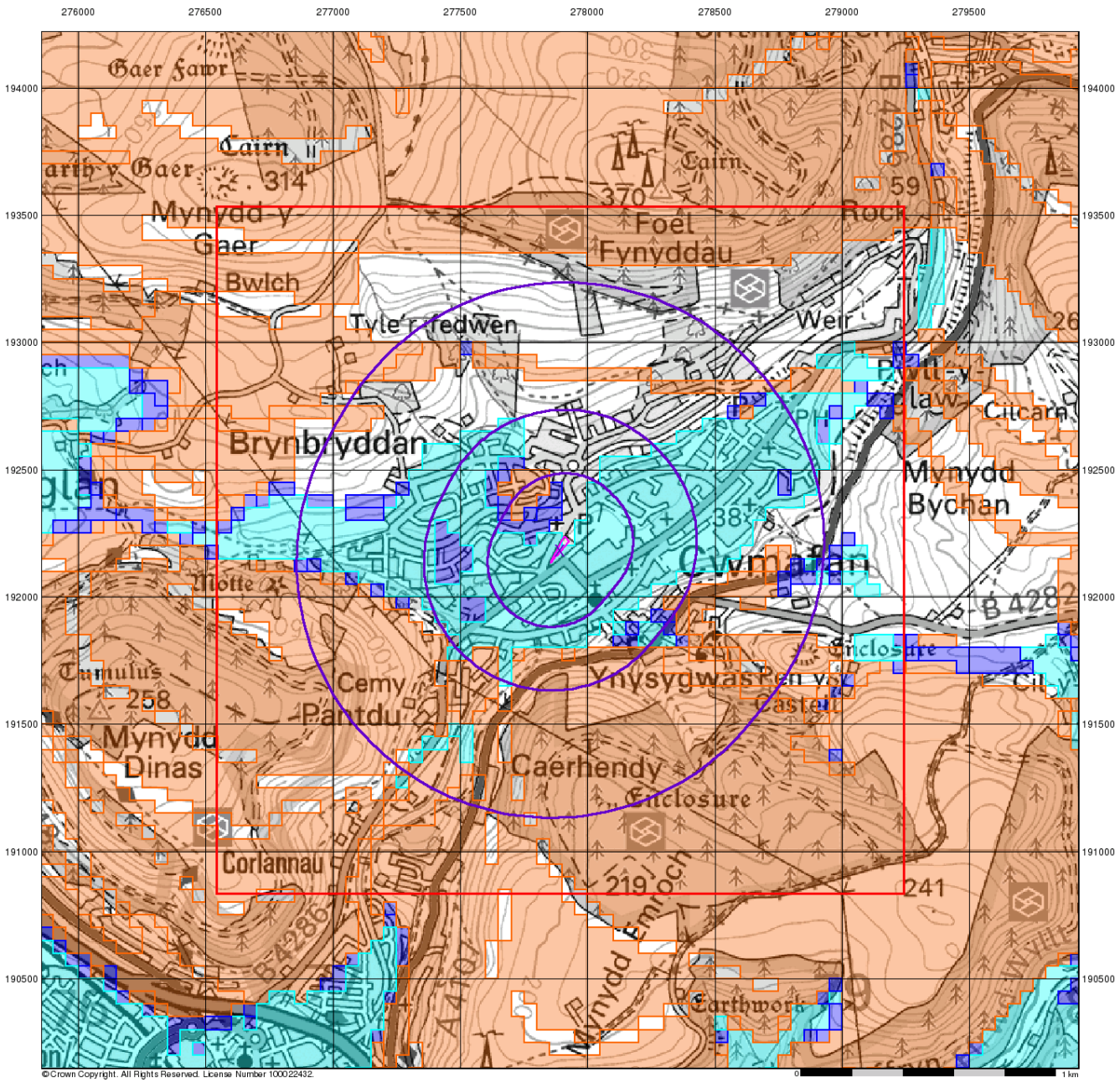
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG



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BGS Flood GFS Data

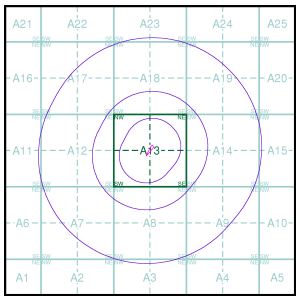
General

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

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National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

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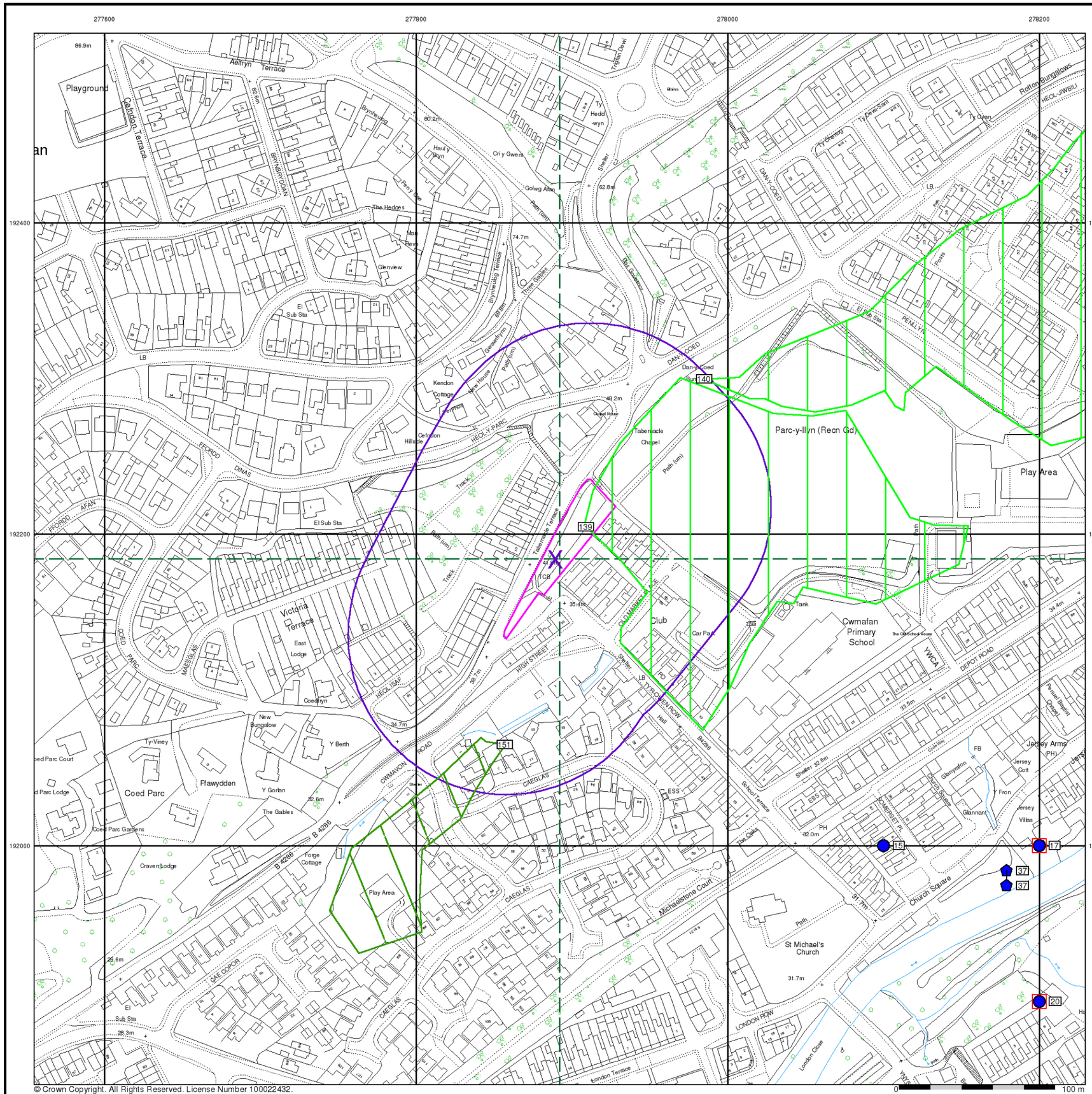

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General

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

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

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

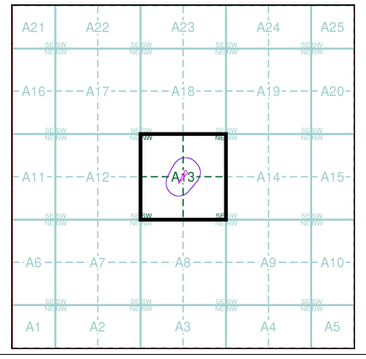
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A13



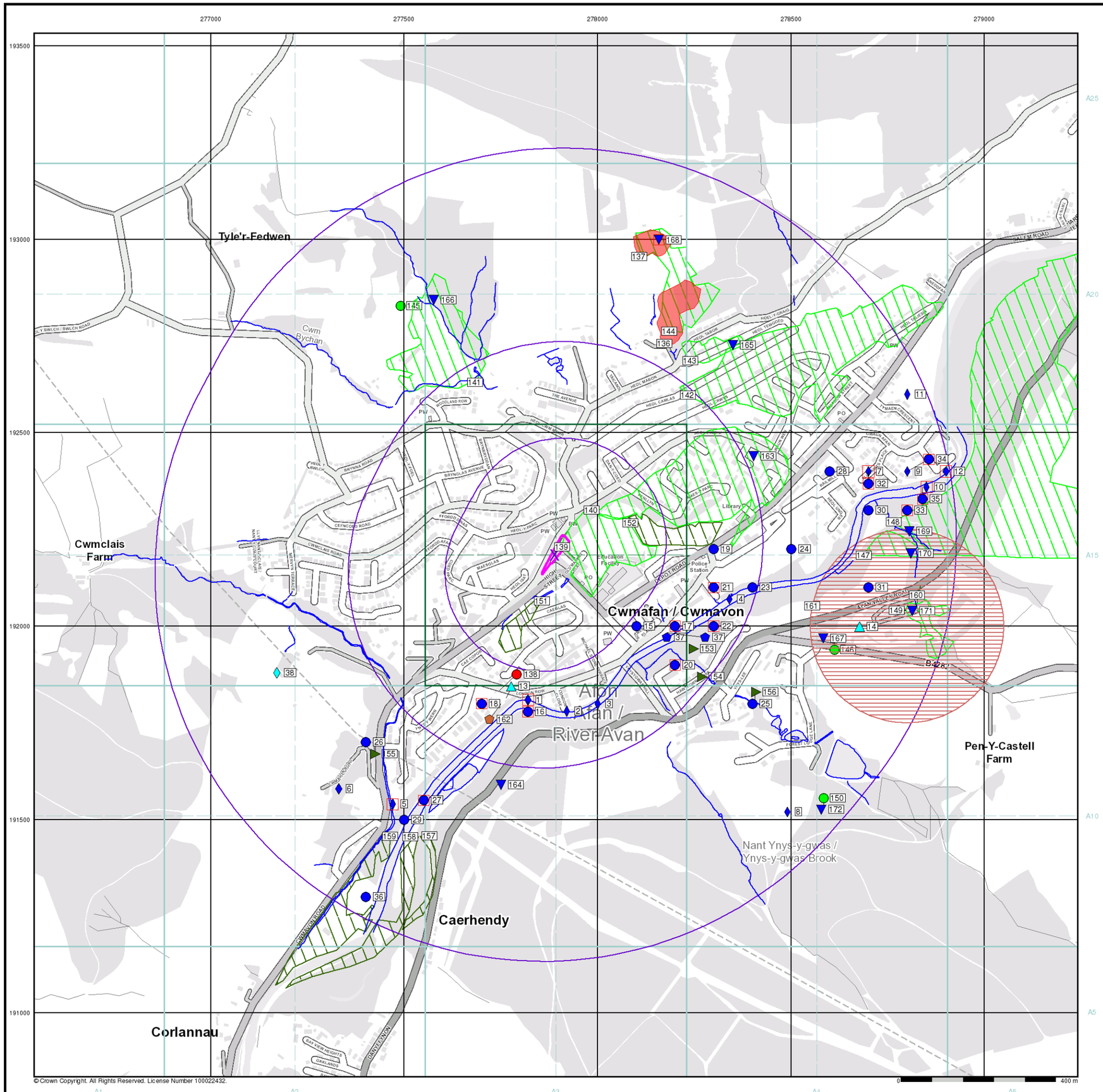
Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Plot Buffer (m):	100

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk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191000
A25
A20
A15
A10
A5
Tyle'r-Fedwen
Cwm Bychan
Cwmclais Farm
Cwmafan / Cwmavon
Afon Afan / River Afan
Pen-Y-Castell Farm
Nant Ynys-y-gwas / Ynys-y-gwas Brook
Caerhendy
Corlannau
Library
Education Facility
Police Station
PO
PW
SALEM ROAD
HEOL-Y-BWLCH / BWLCH ROAD
THE AVENUE
WOODLAND ROW
HEOL-Y-FARM
BRYNNA ROAD
BRYNOLA AVENUE
CEFNCOED ROAD
CWMCLAIS ROAD
HEOL-Y-FRANC
HEOL-Y-GAMAU
HEOL-TAWOD
HEOL-TERFYNOD
HEOL-MARION
HEOL-CAMLAS
HEOL-FFRWD
HEOL-MEIRION
HEOL-ISAF
HEOL-UCHAF
HEOL-GWYN
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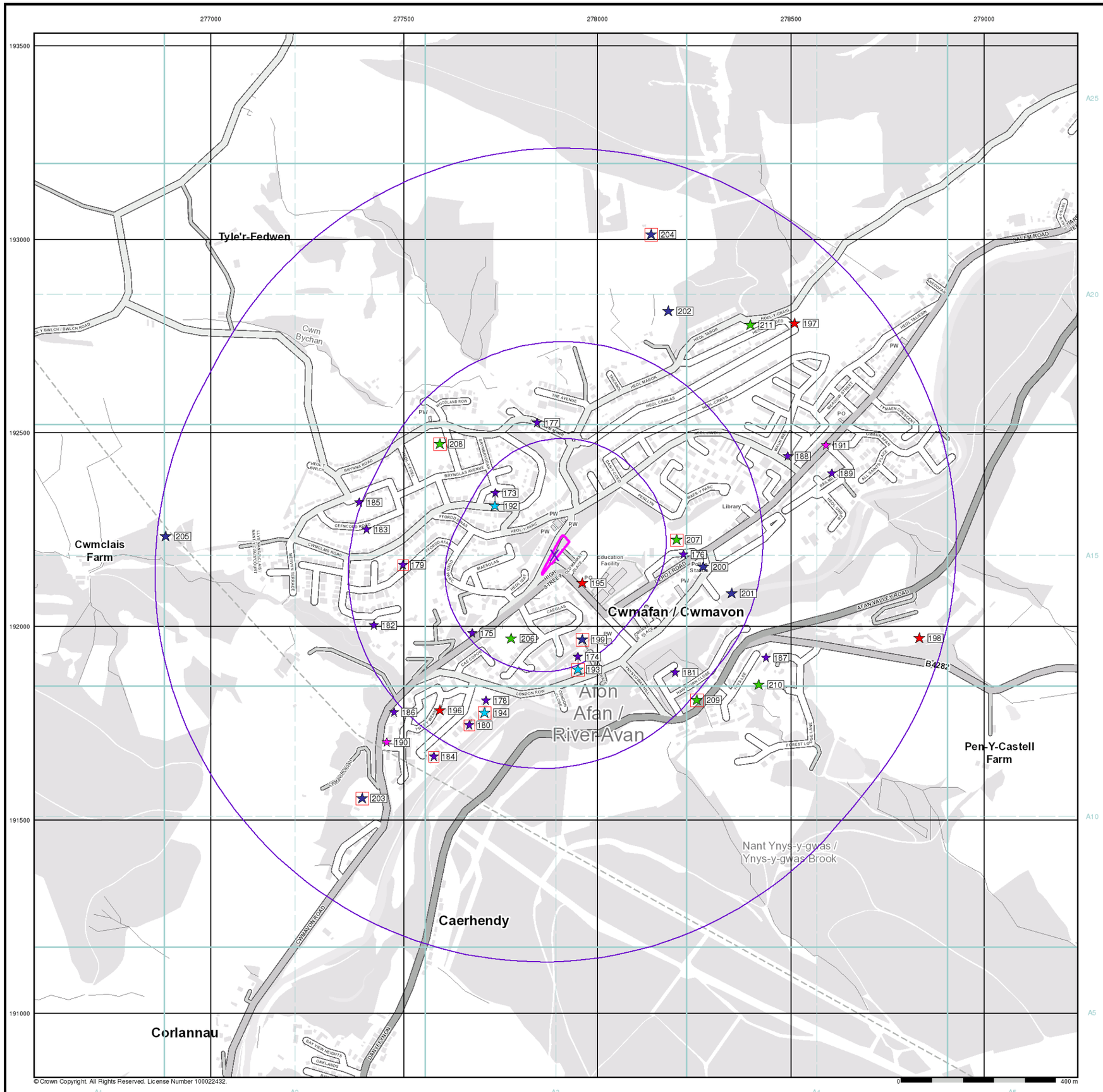
HEOL-GLANYRAFON
HEOL-GLANYMOR
HEOL-GLANYDON
HEOL-GLANYCOED



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Industrial Land Use Map

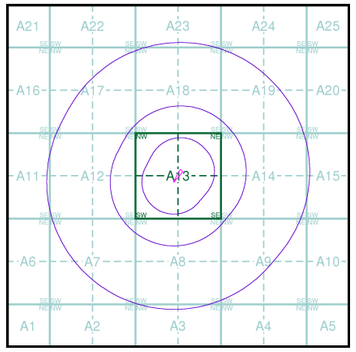
General

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

Industrial Land Use

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

Industrial Land Use Map - Slice A



Order Details

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Slice:	A
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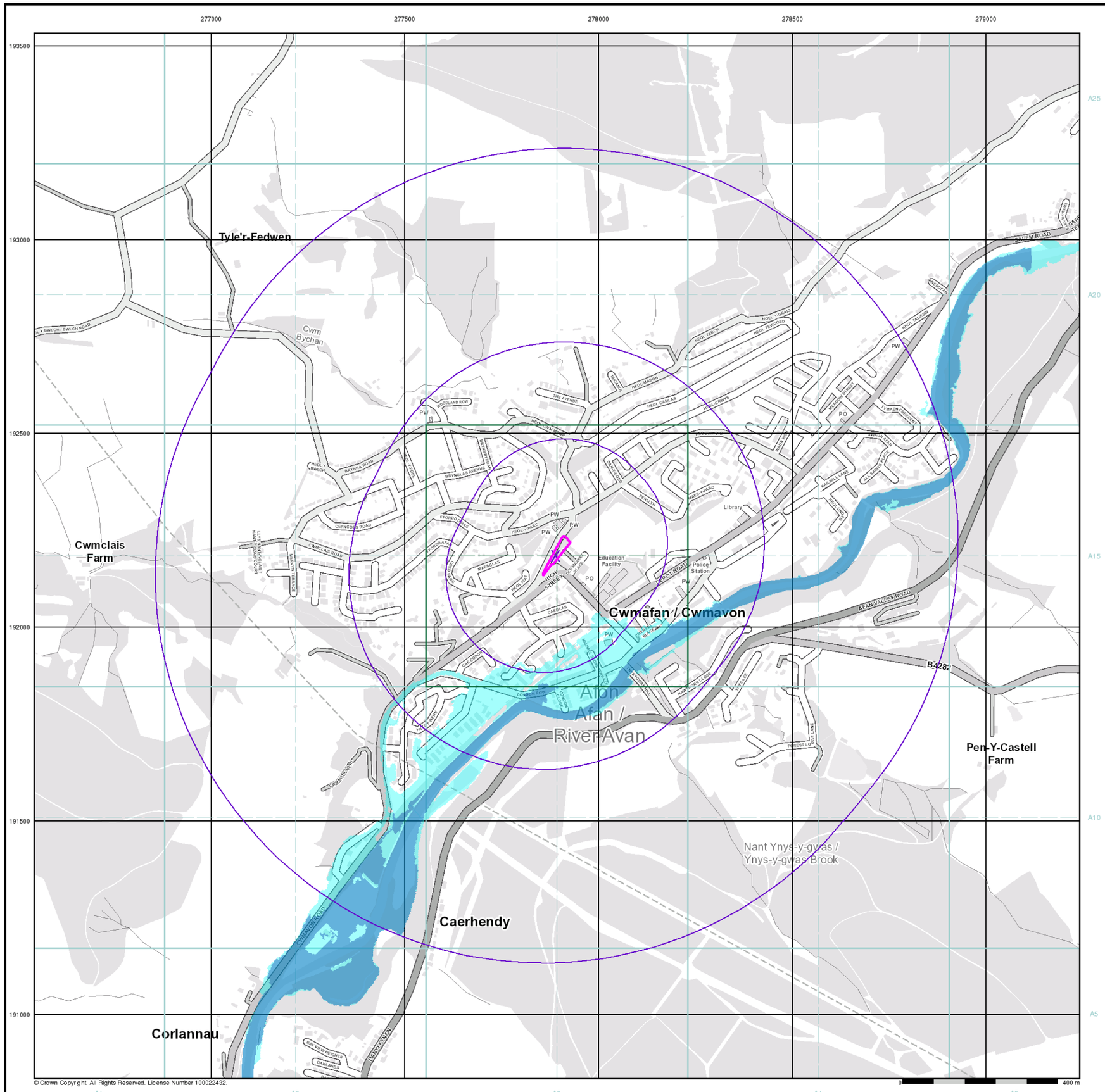

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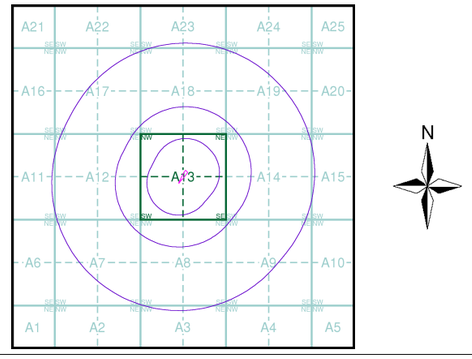
General

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

Agency and Hydrological (Flood)

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

Flood Map - Slice A



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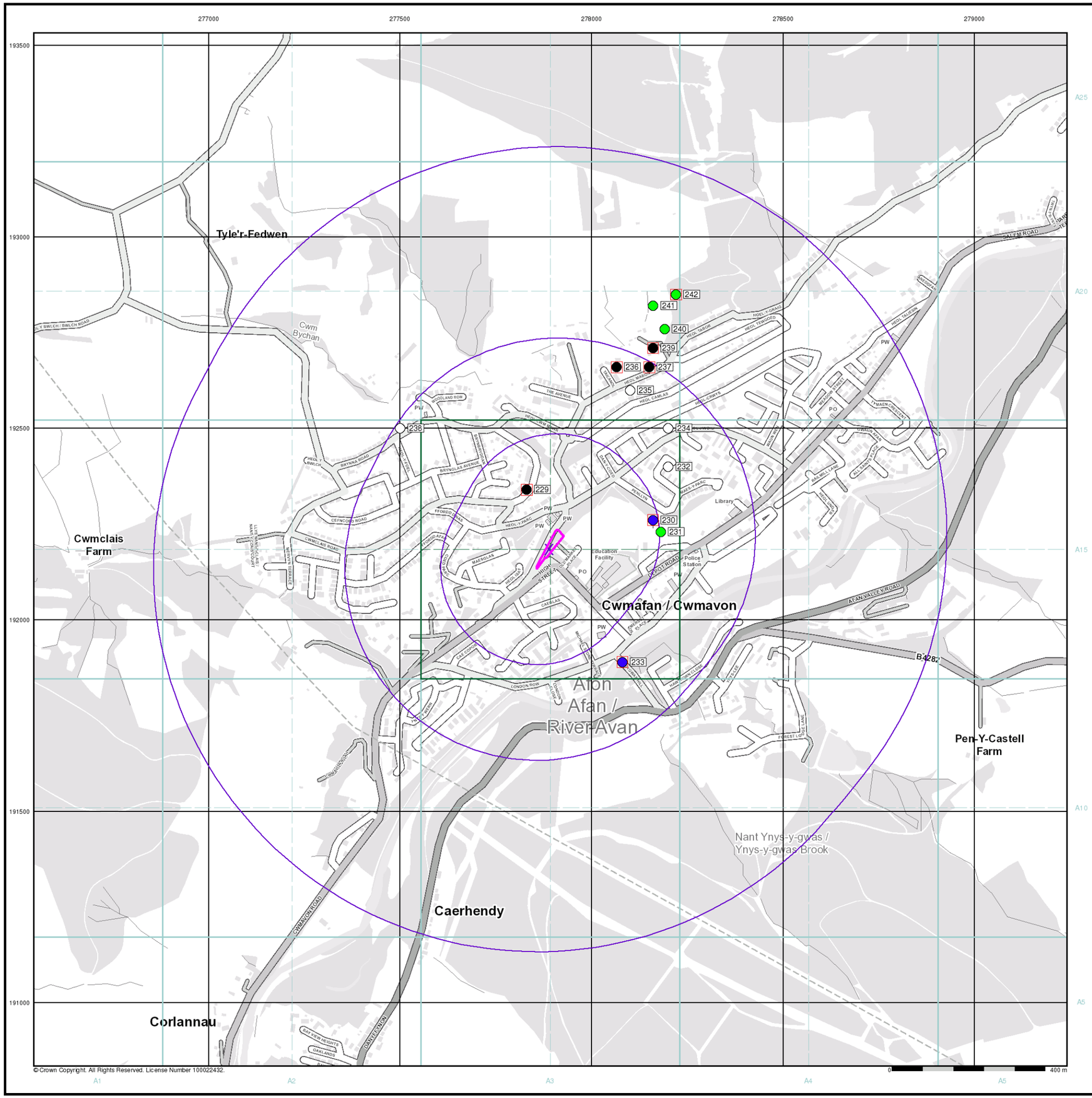

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General

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

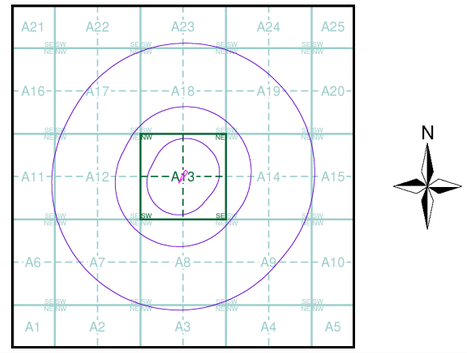
Agency and Hydrological (Boreholes)

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

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

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



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Slice:	A
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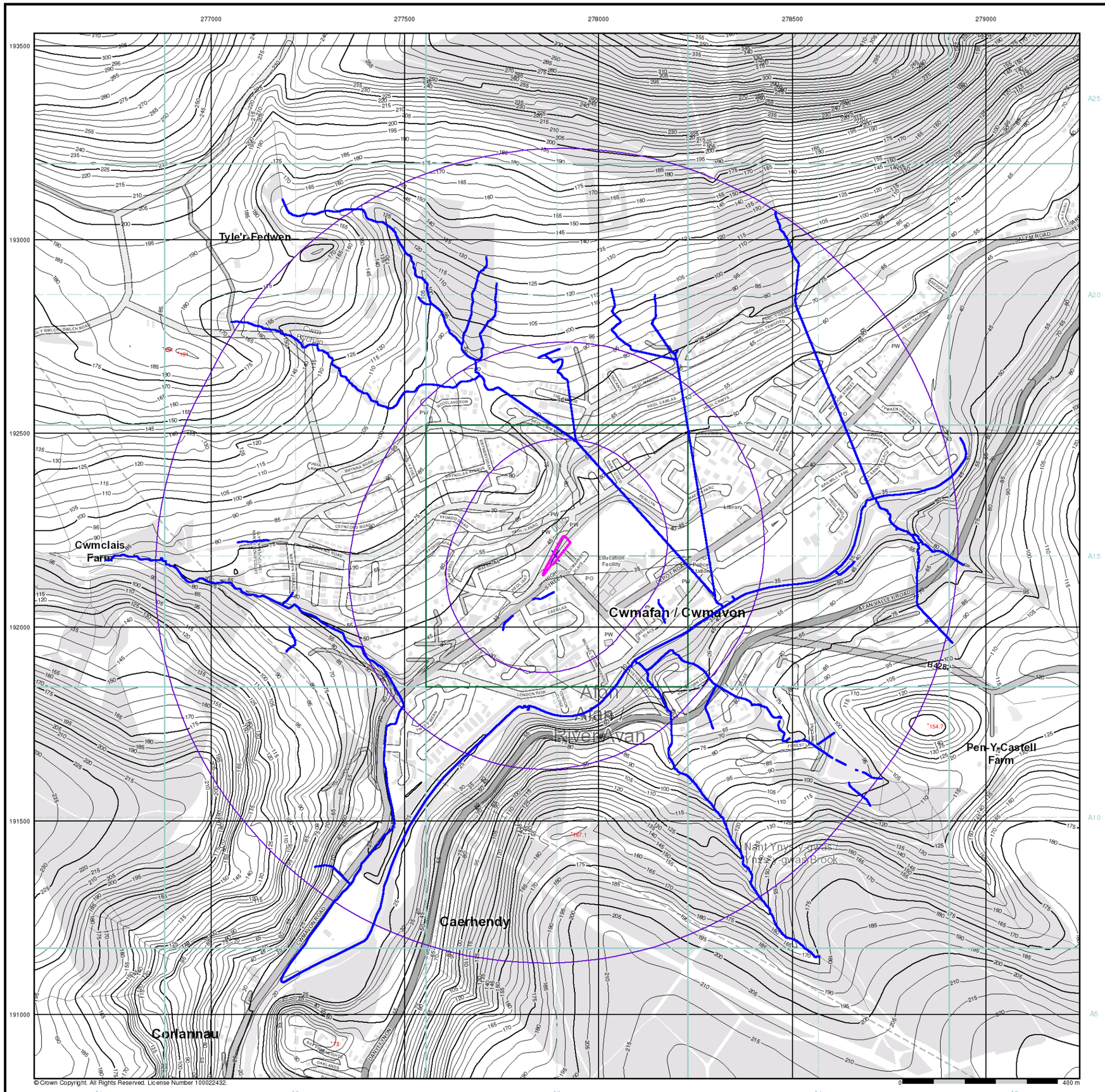

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General

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

OS Water Network Data

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

Contours (height in meters)

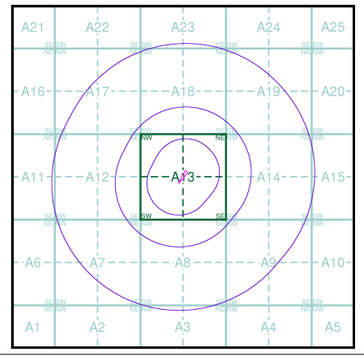
Standard Contour 105 100 95

Master Contour

Spot Height 167.3

- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



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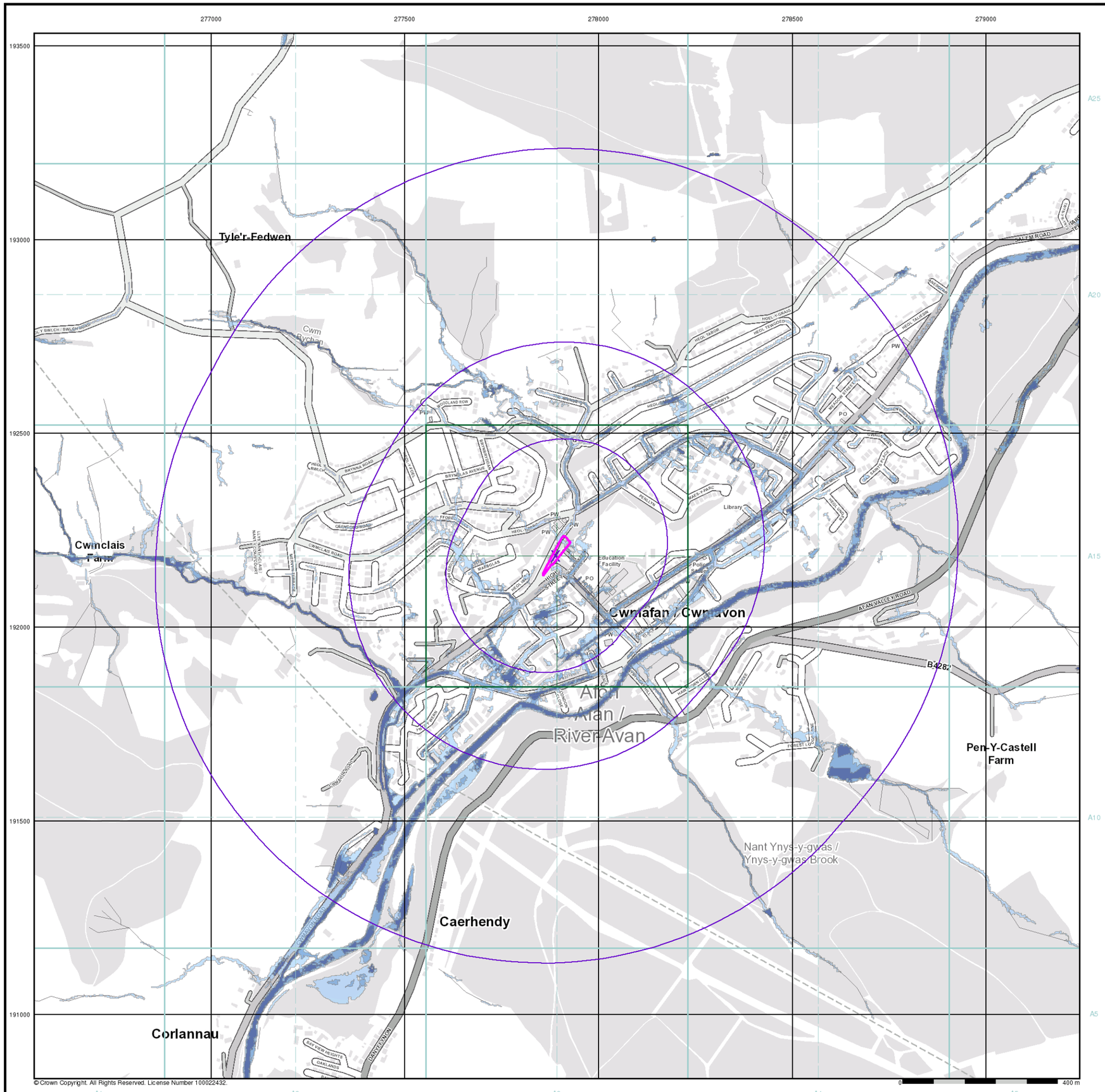

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General

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

Risk of Flooding from Surface Water

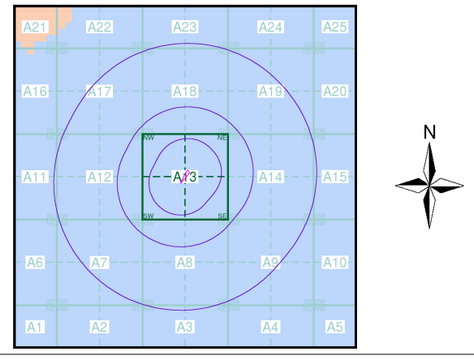
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

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

EA/NRW Suitability Map - Slice A



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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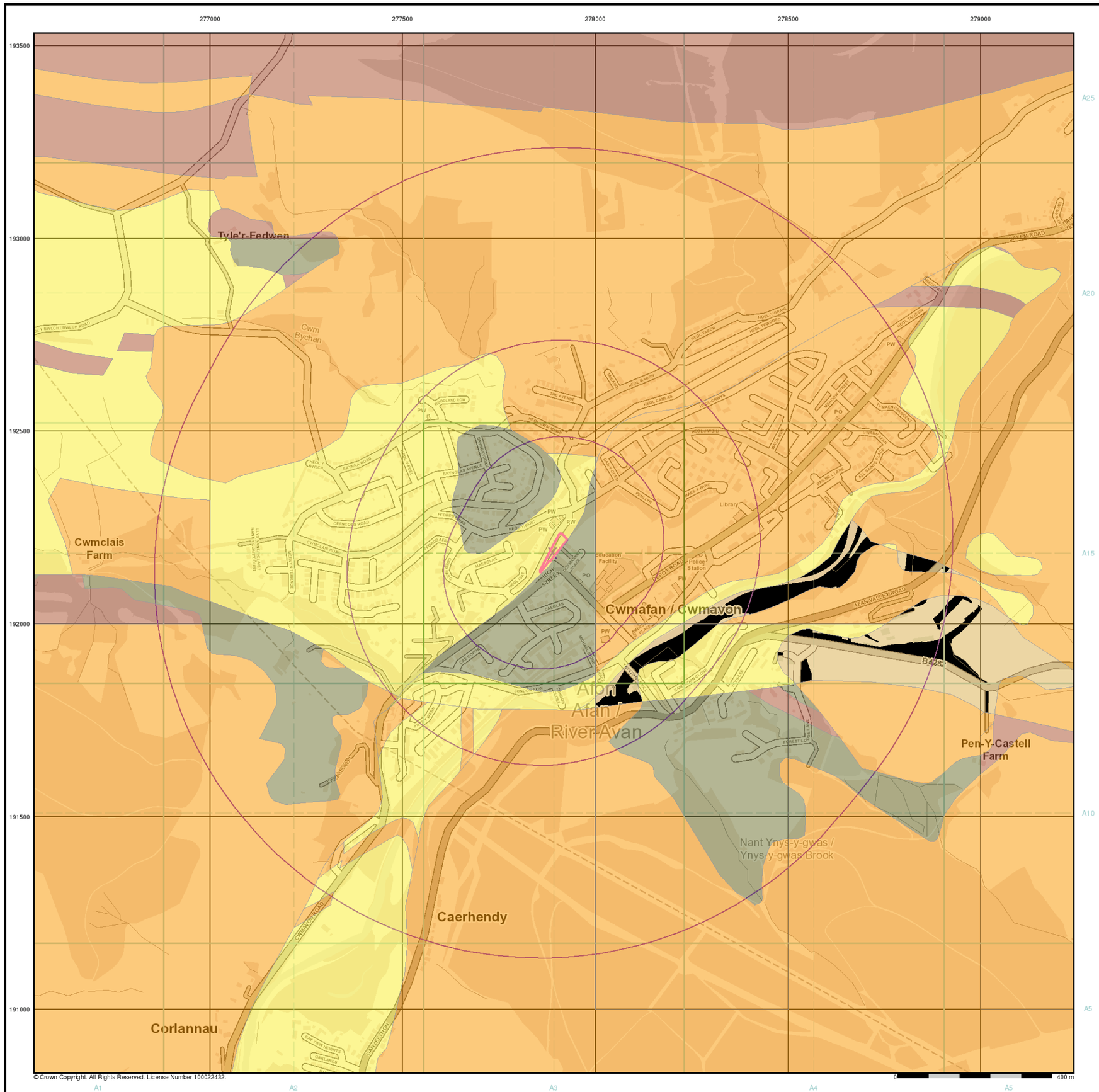

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General

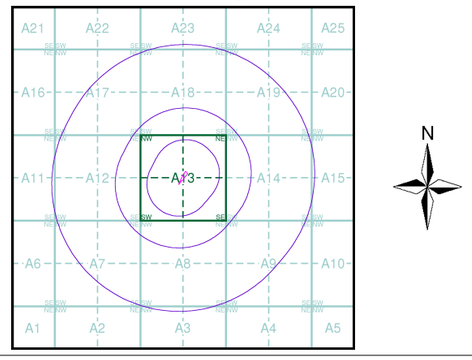
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

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

Estimated Soil Chemistry Arsenic - Slice A



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General

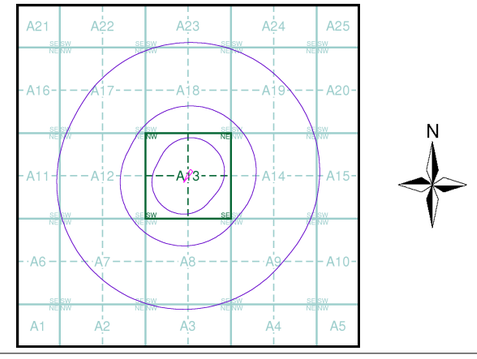
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice A



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General

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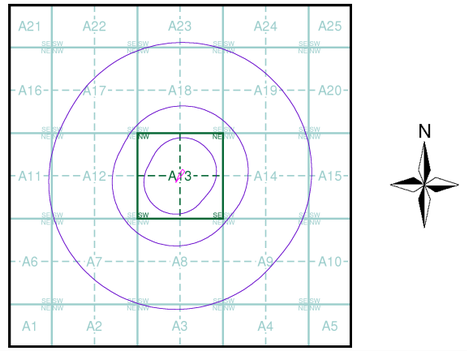
Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

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

Estimated Soil Chemistry Chromium - Slice A



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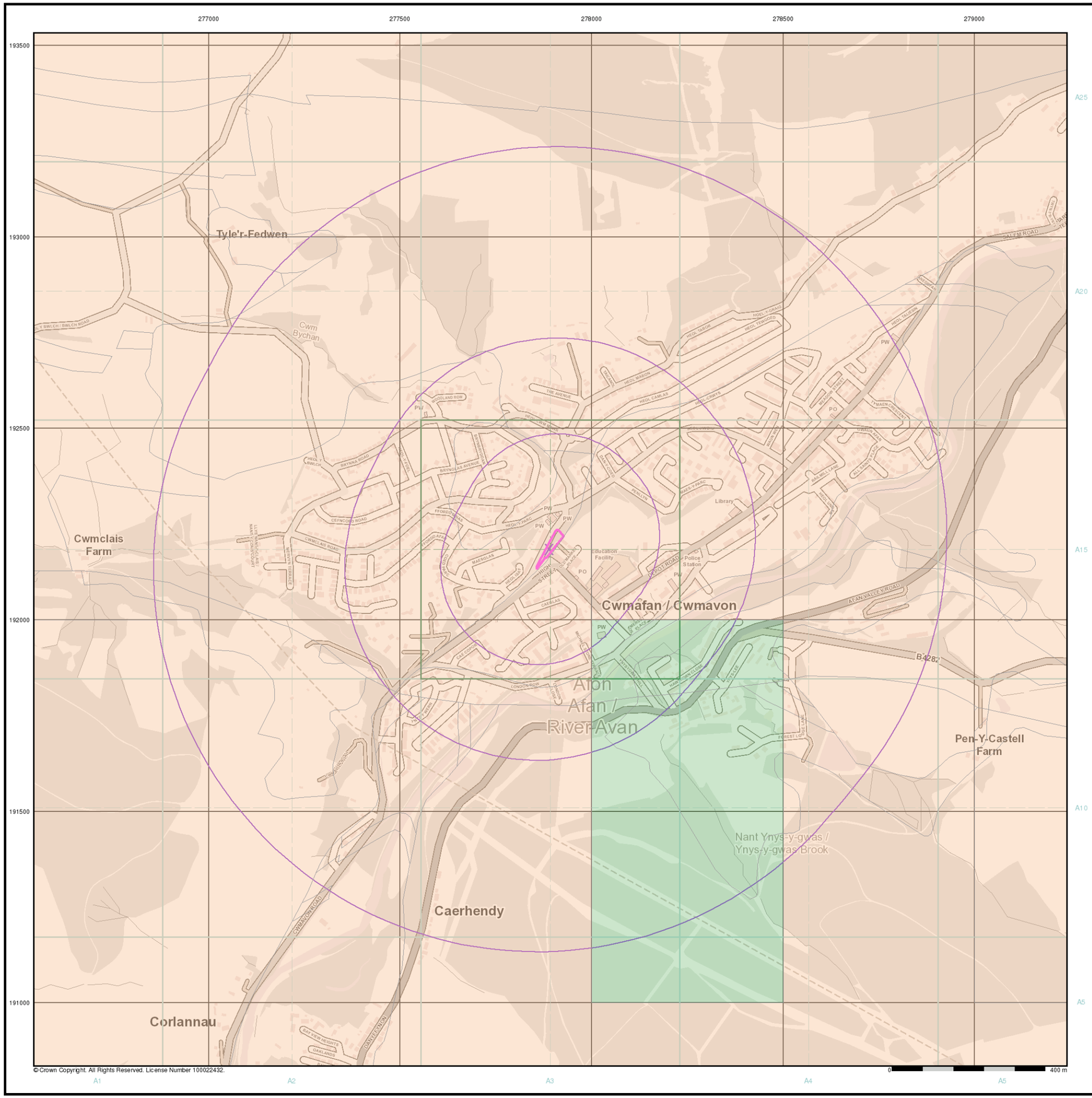

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General

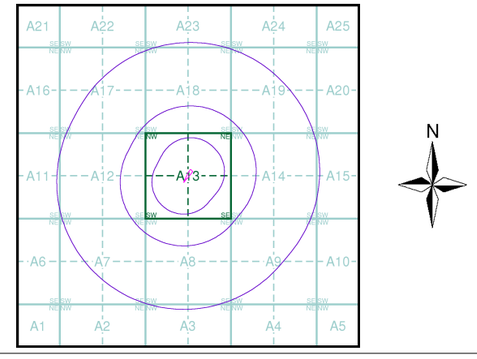
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

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

Estimated Soil Chemistry Lead - Slice A



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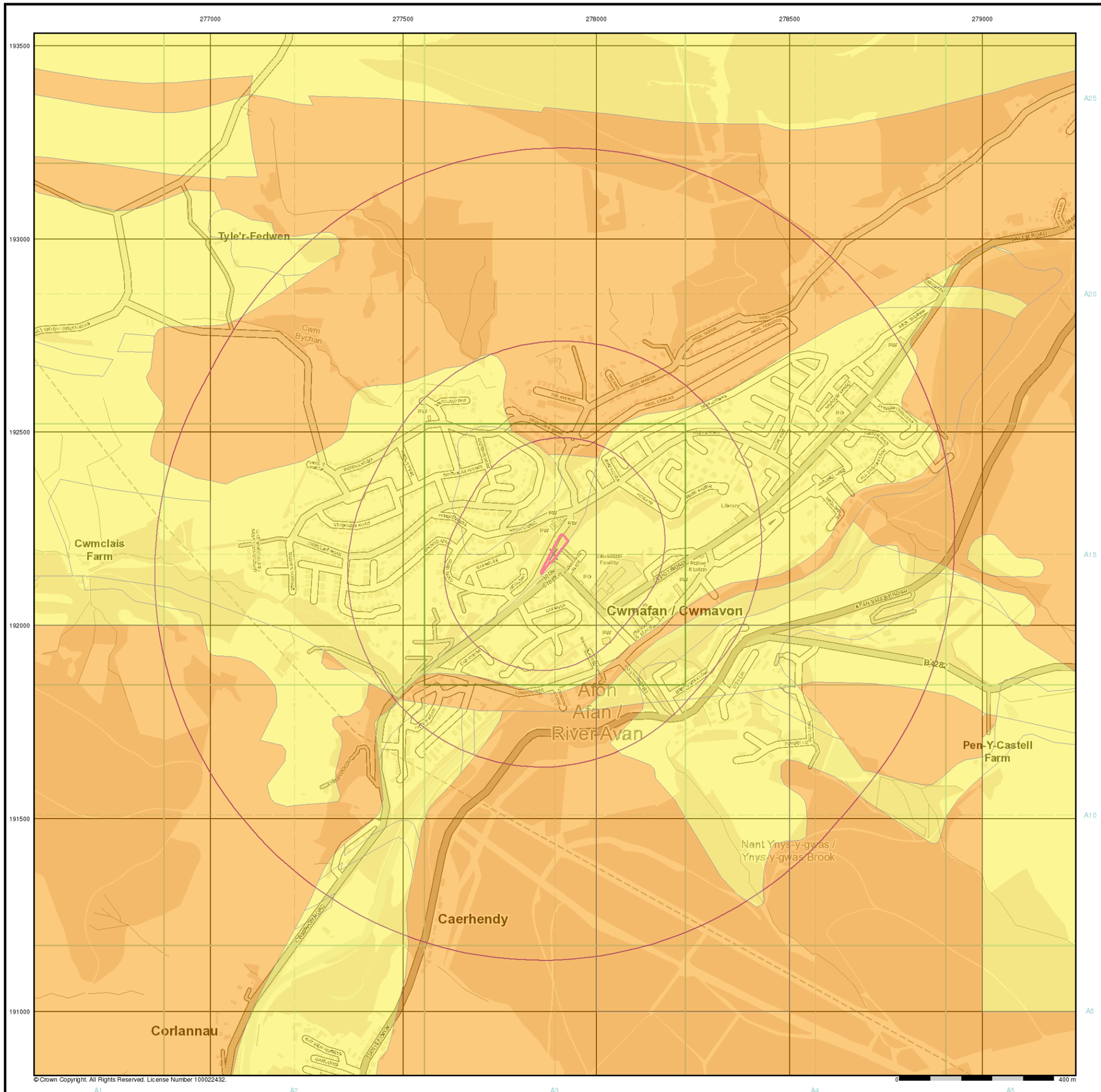

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General

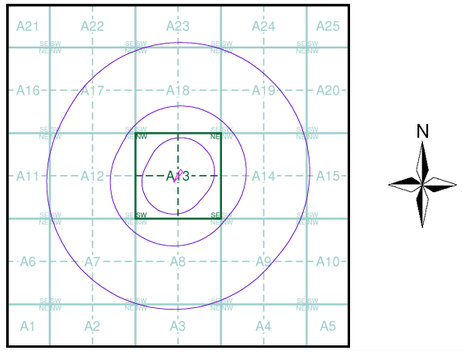
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

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

Estimated Soil Chemistry Nickel - Slice A



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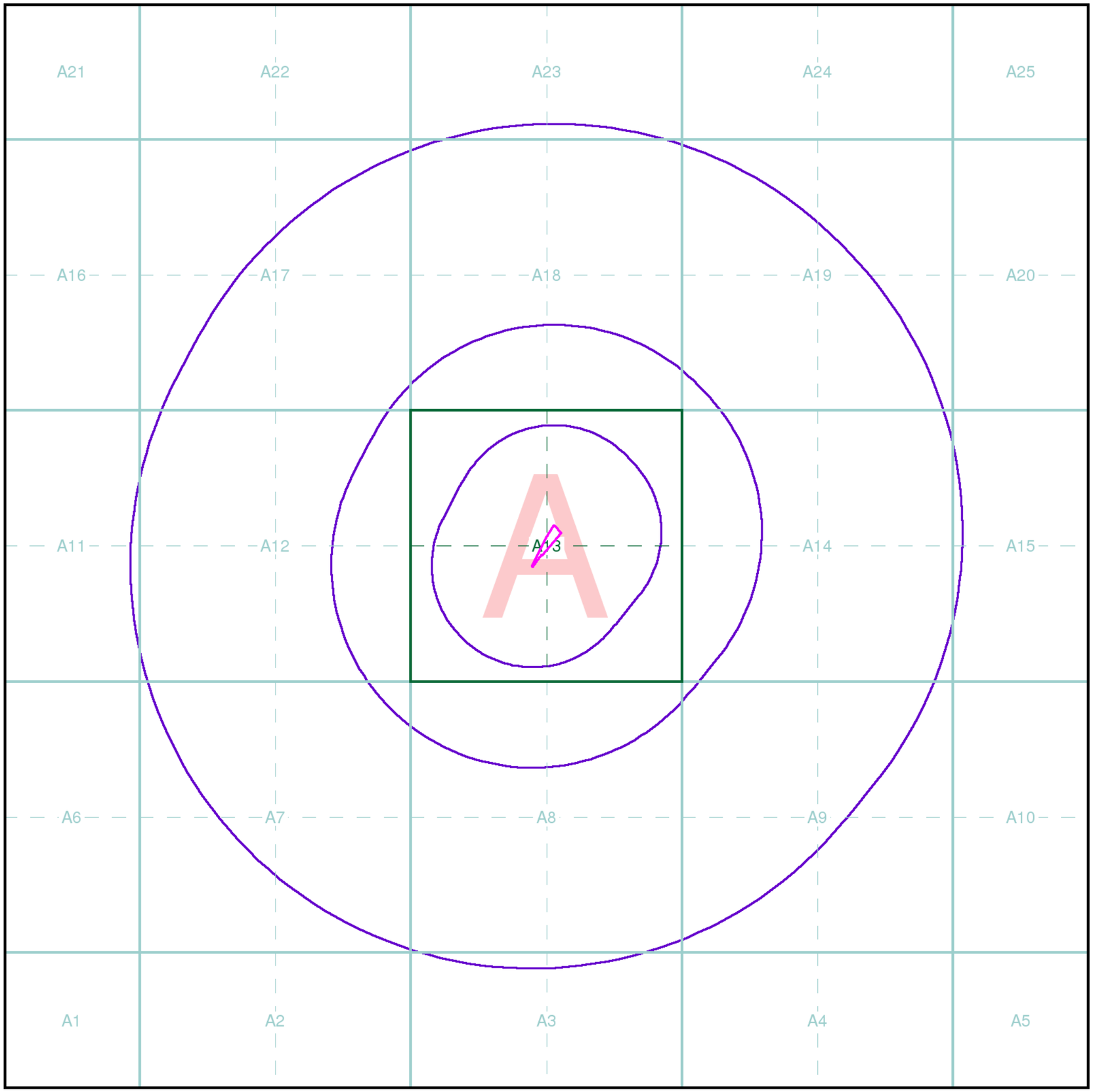

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Index Map

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

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

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

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

A selection of organisations who provide data within this report:

Map data

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Cyfoeth Naturiol Cymru
Natural Resources Wales

Envirocheck reports are compiled from 136 different sources of data.

Client Details

Ms H Brooke-Smith, Terra Firma (Wales) Ltd, 5 Deryn Court, Wharfdale Road, Pentwyn, Cardiff, CF23 7HB

Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277900, 192190
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

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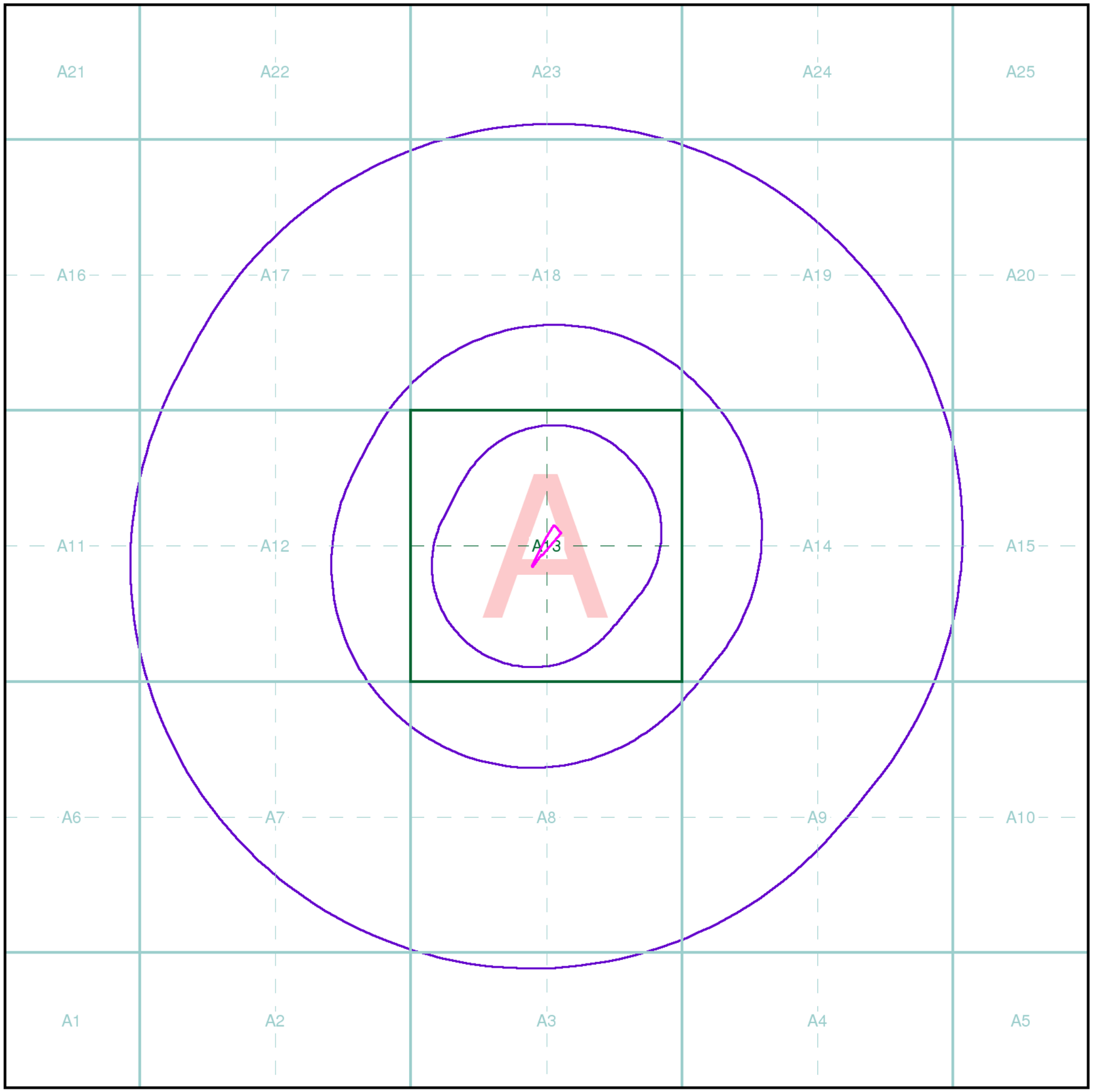

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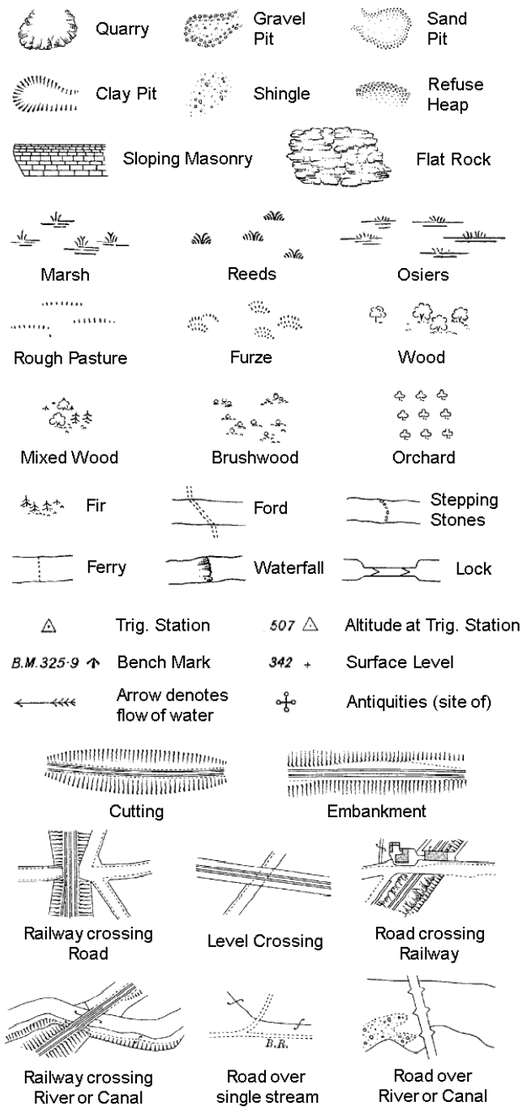
Historical Mapping Legends

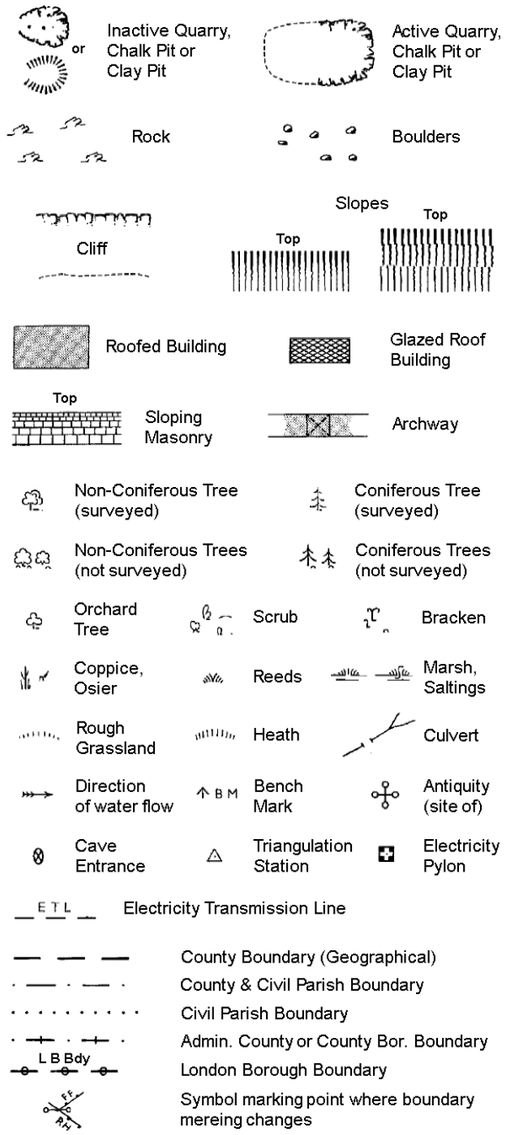
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy.
County Borough Boundary (England)
Co. Burgh Bdy.
County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

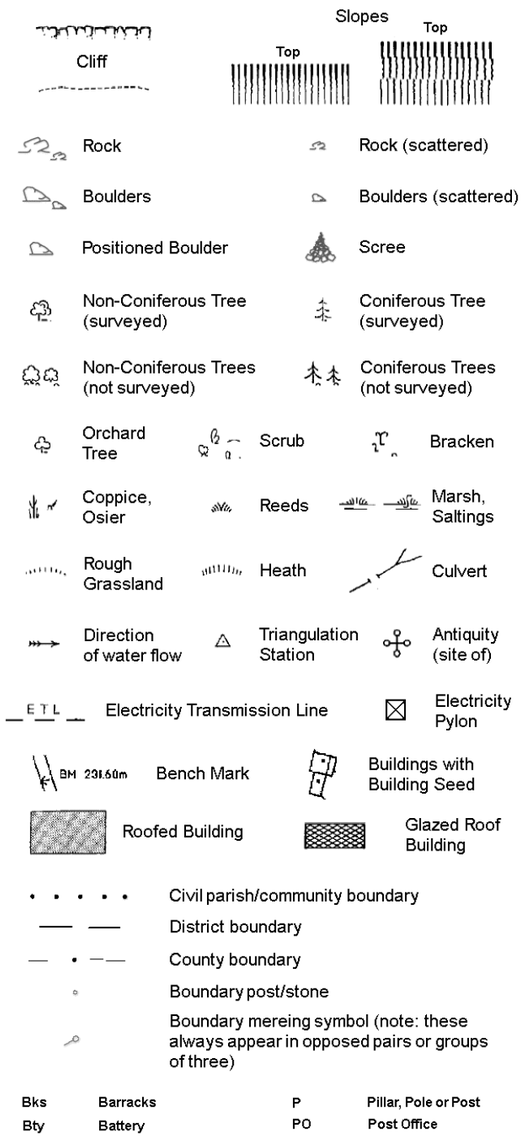
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy
London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

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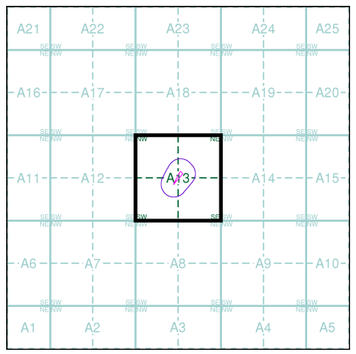
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:2,500	1877 - 1878	2
Glamorganshire	1:2,500	1899	3
Glamorganshire	1:2,500	1918 - 1919	4
Glamorganshire	1:2,500	1936 - 1937	5
Ordnance Survey Plan	1:2,500	1965 - 1967	6
Ordnance Survey Plan	1:2,500	1969 - 1978	7
Supply of Unpublished Survey Information	1:2,500	1973	8
Ordnance Survey Plan	1:2,500	1975 - 1984	9
Additional SIMs	1:2,500	1978 - 1983	10
Additional SIMs	1:2,500	1984	11
Large-Scale National Grid Data	1:2,500	1993	12
Large-Scale National Grid Data	1:2,500	1994 - 1995	13
Historical Aerial Photography	1:2,500	2000	14

Historical Map - Segment A13



Order Details

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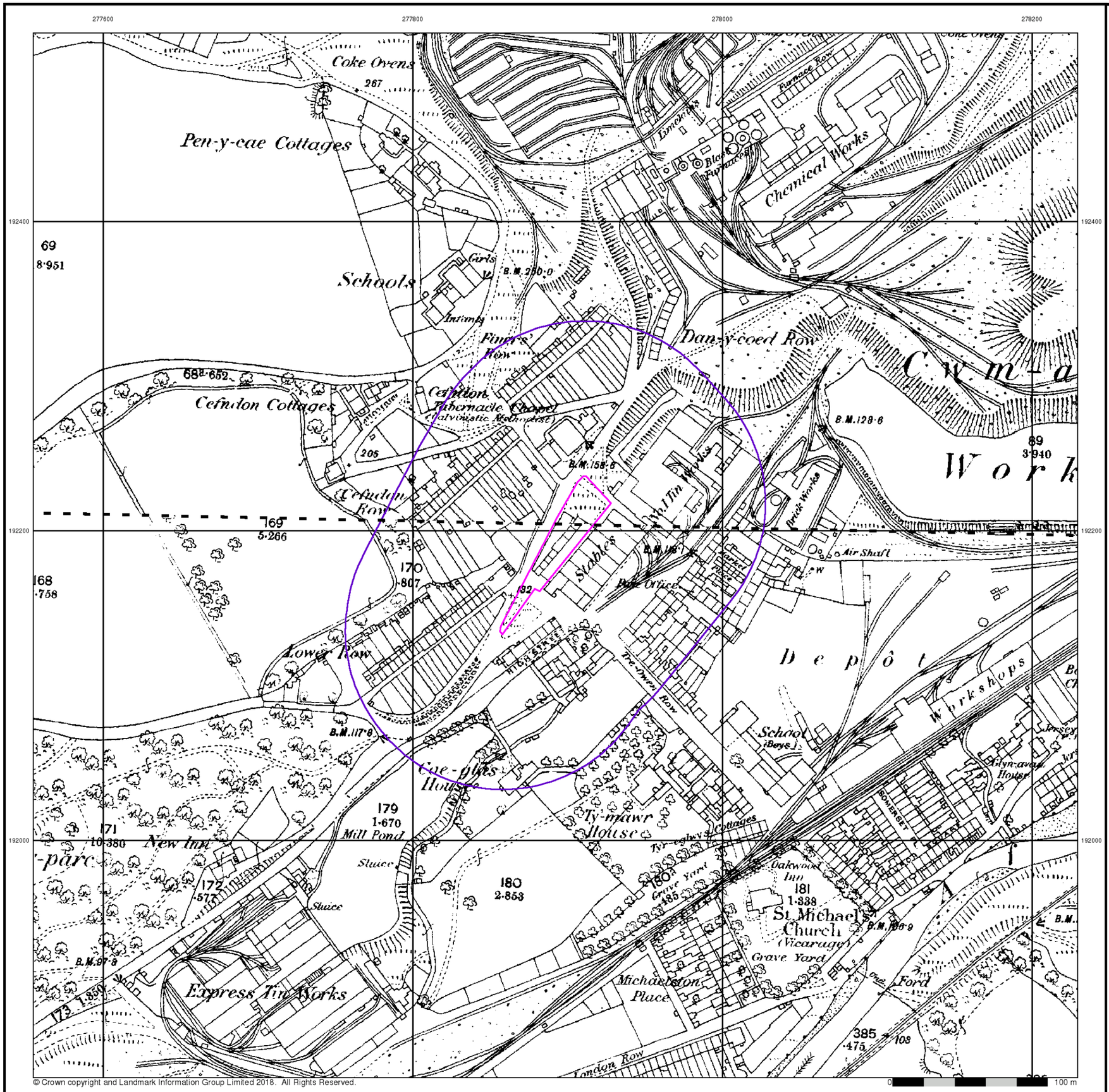

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Glamorganshire

Published 1877 - 1878

Source map scale - 1:2,500

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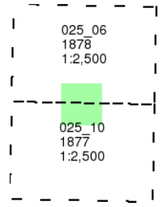
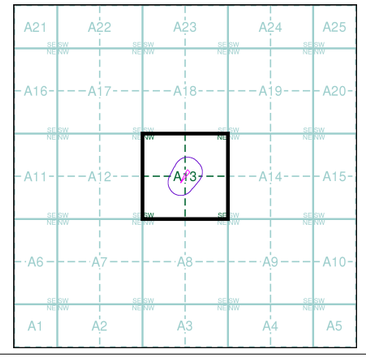
Map Name(s) and Date(s)



Historical Map - Segment A13



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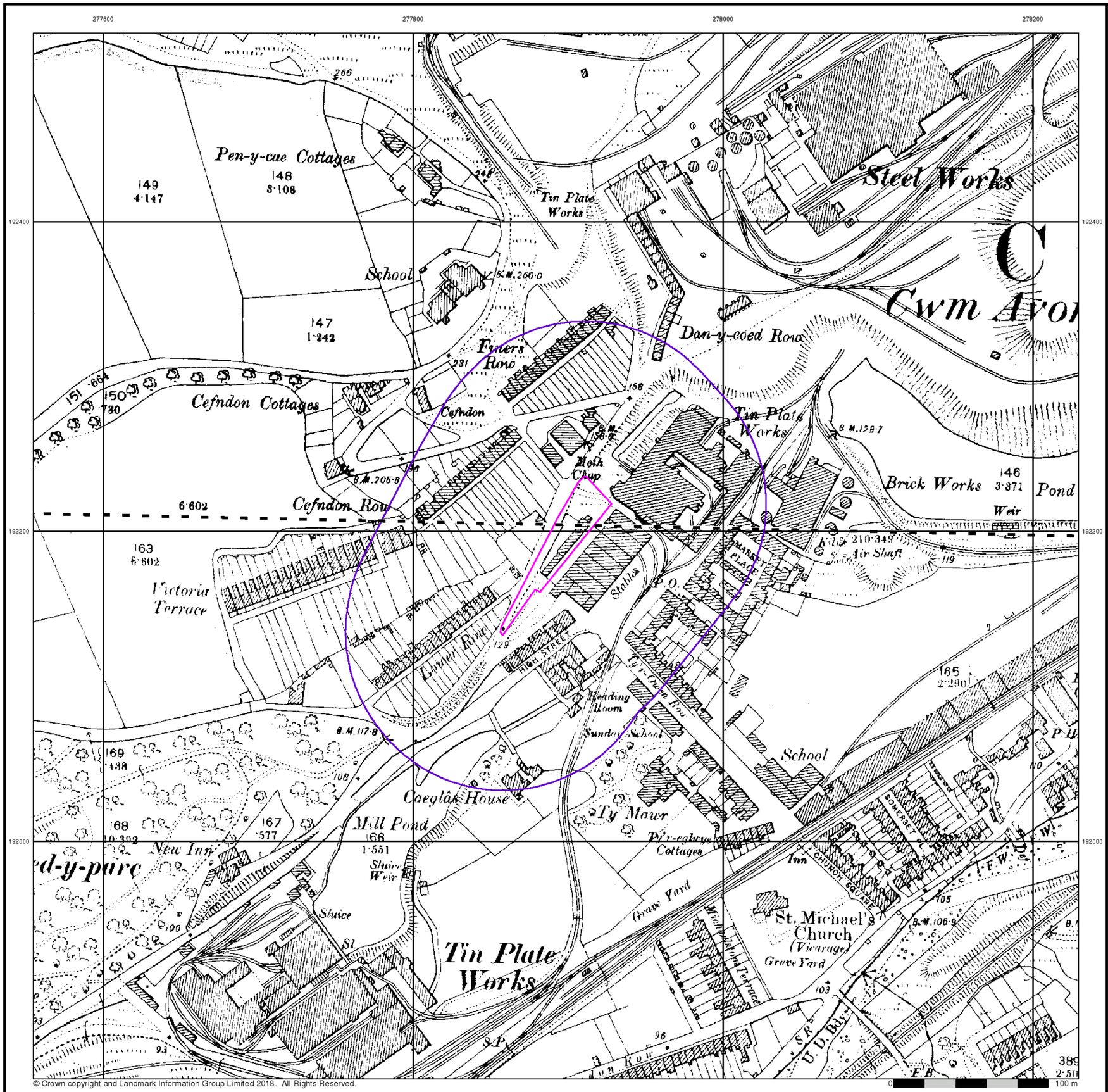

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Glamorganshire

Published 1899

Source map scale - 1:2,500

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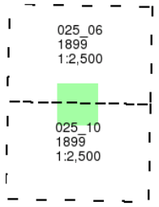
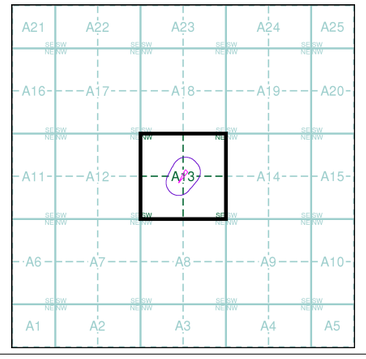


Historical Map - Segment A13



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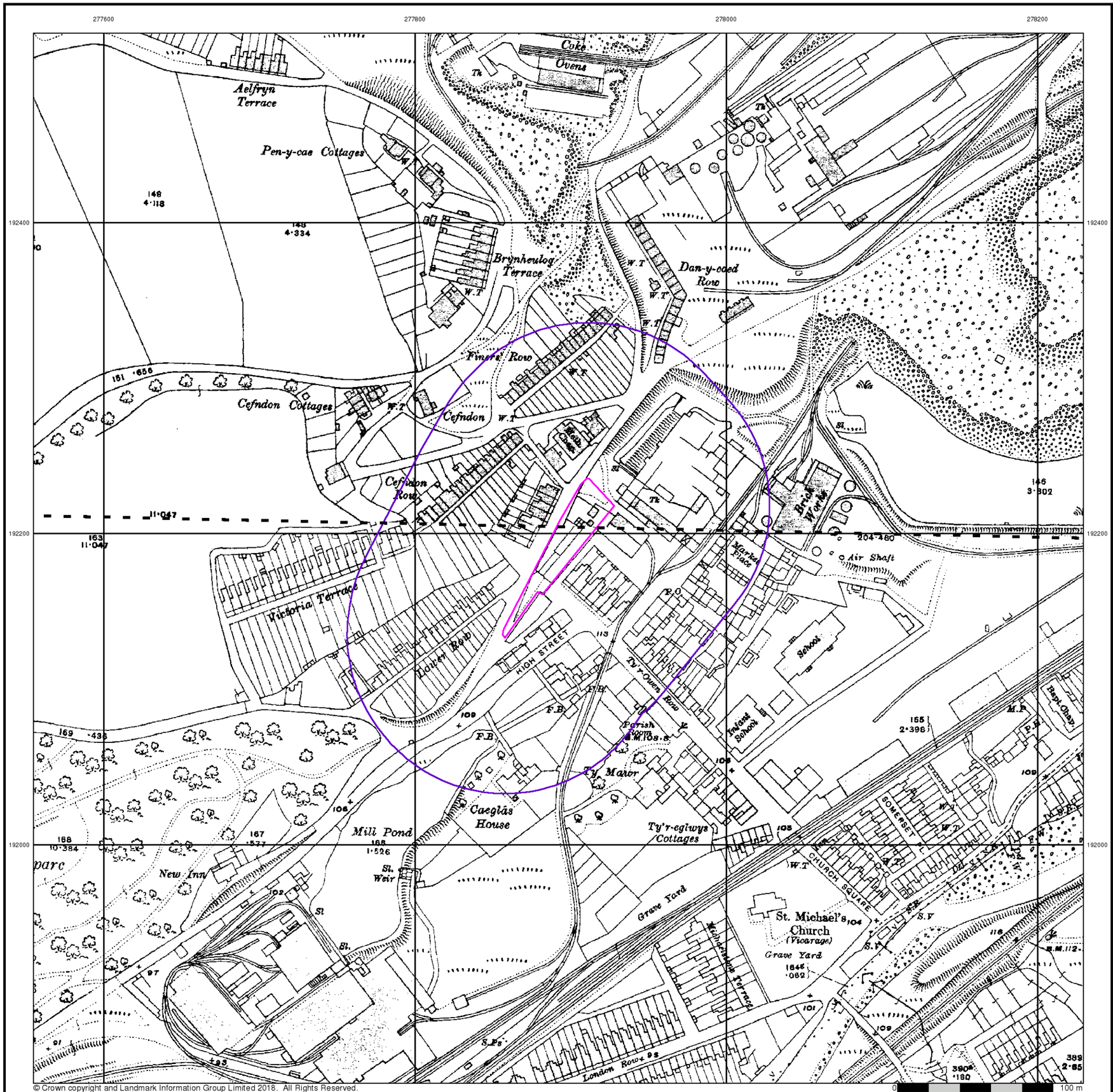

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Glamorganshire

Published 1918 - 1919

Source map scale - 1:2,500

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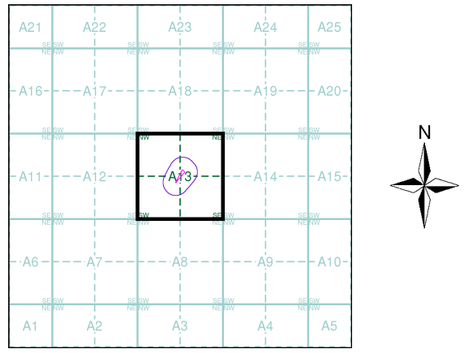
Map Name(s) and Date(s)

025_06
1919
1:2,500

025_10
1918
1:2,500

Historical Map - Segment A13



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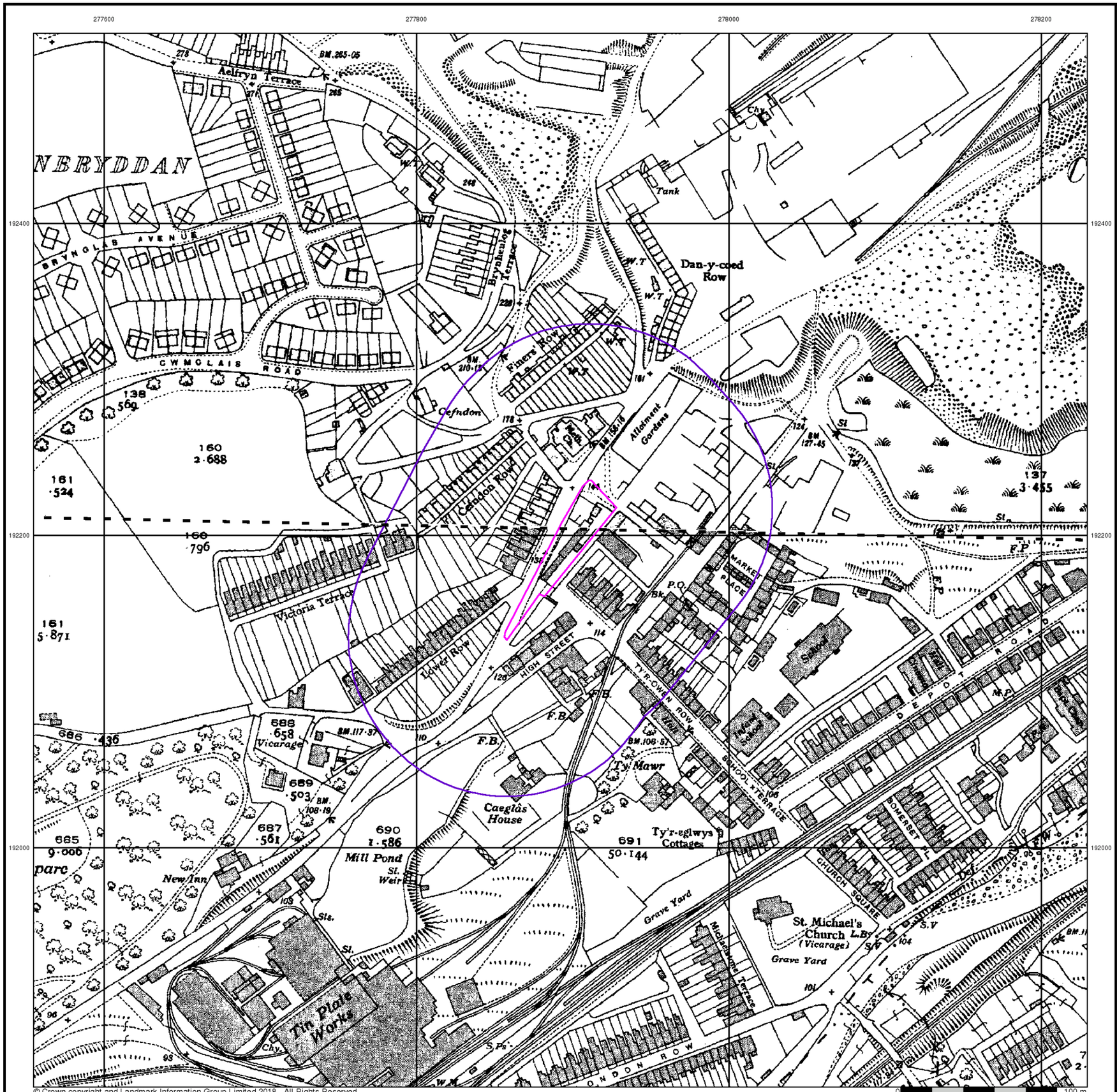

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Glamorganshire

Published 1936 - 1937

Source map scale - 1:2,500

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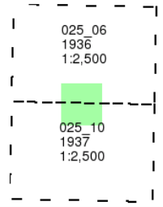
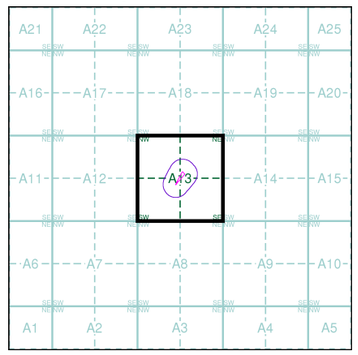
Map Name(s) and Date(s)



Historical Map - Segment A13

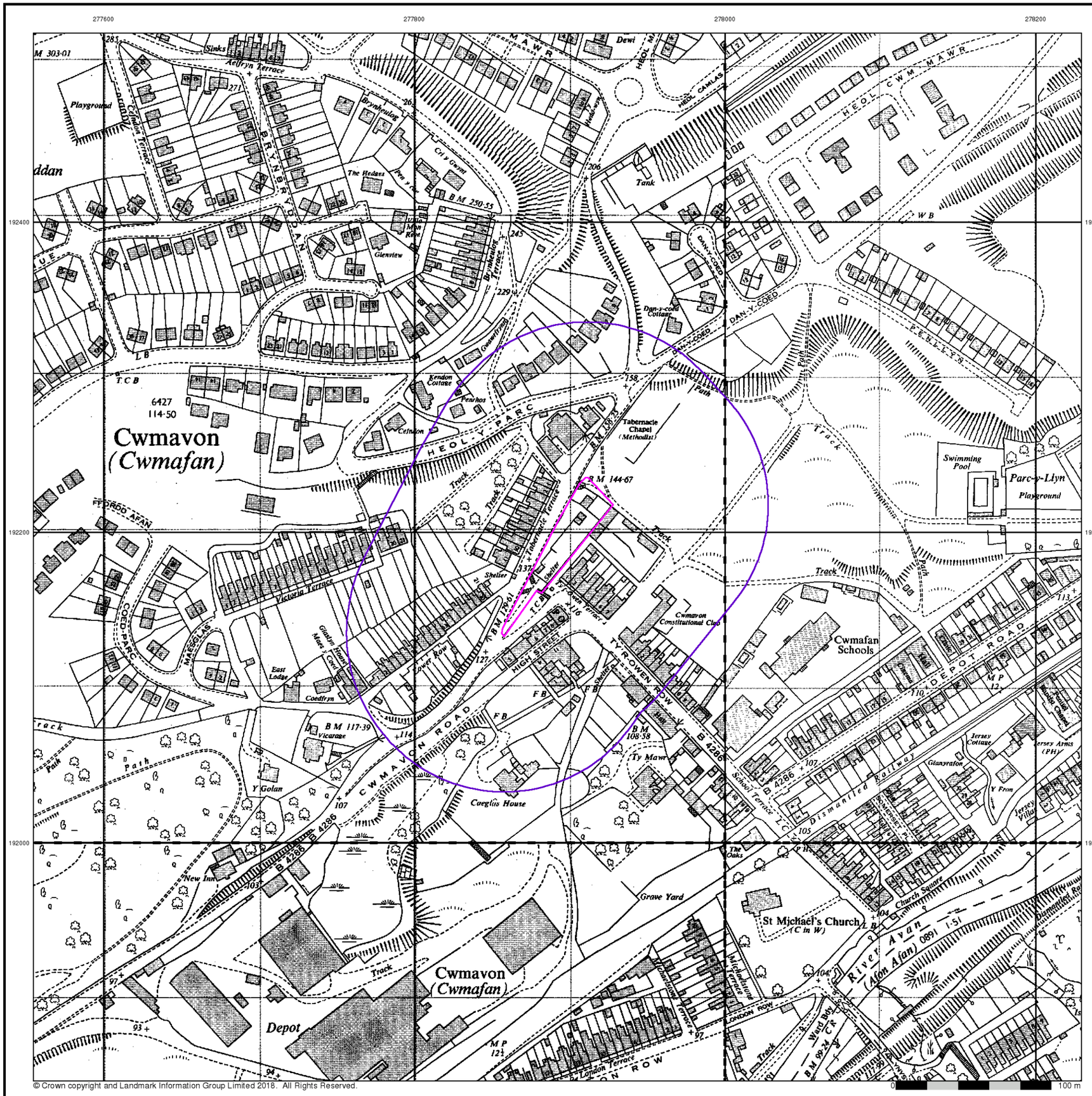


Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG



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Ordnance Survey Plan

Published 1965 - 1967

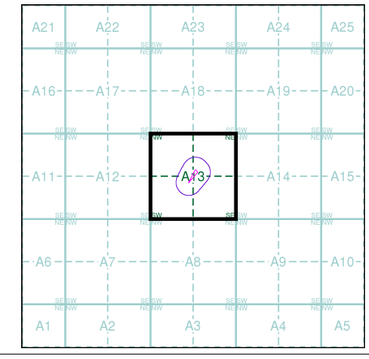
Source map scale - 1:2,500

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)

SS7792 1967 1:2,500	SS7892 1965 1:2,500
SS7791 1967 1:2,500	SS7891 1965 1:2,500

Historical Map - Segment A13

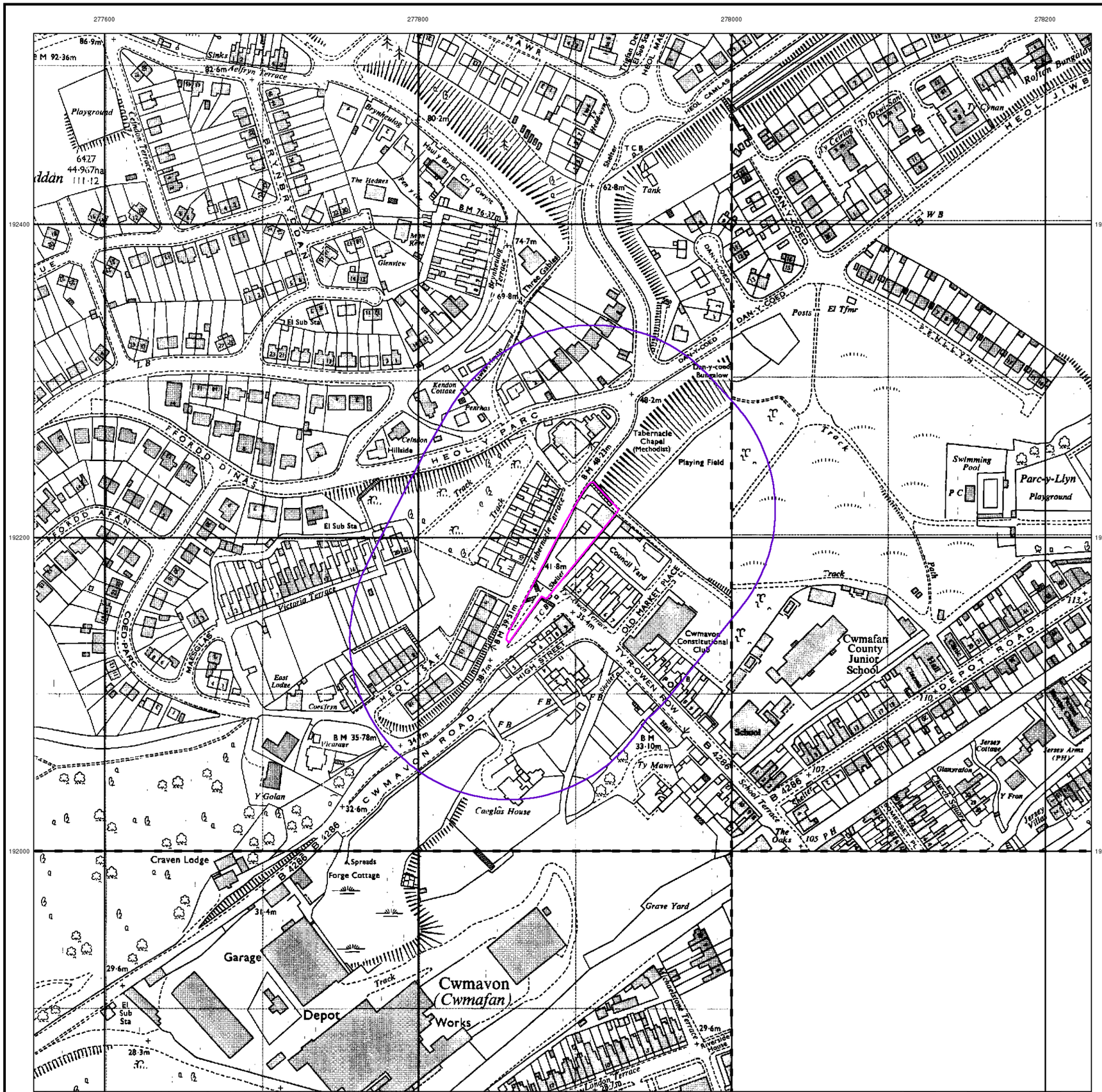


Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG



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0 100 m

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Ordnance Survey Plan

Published 1969 - 1978

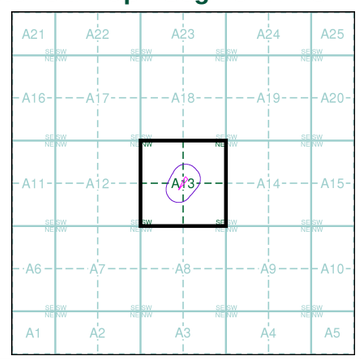
Source map scale - 1:2,500

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)

SS7792 1978 1:2,500
SS7892 1969 1:2,500
SS7791 1978 1:2,500

Historical Map - Segment A13



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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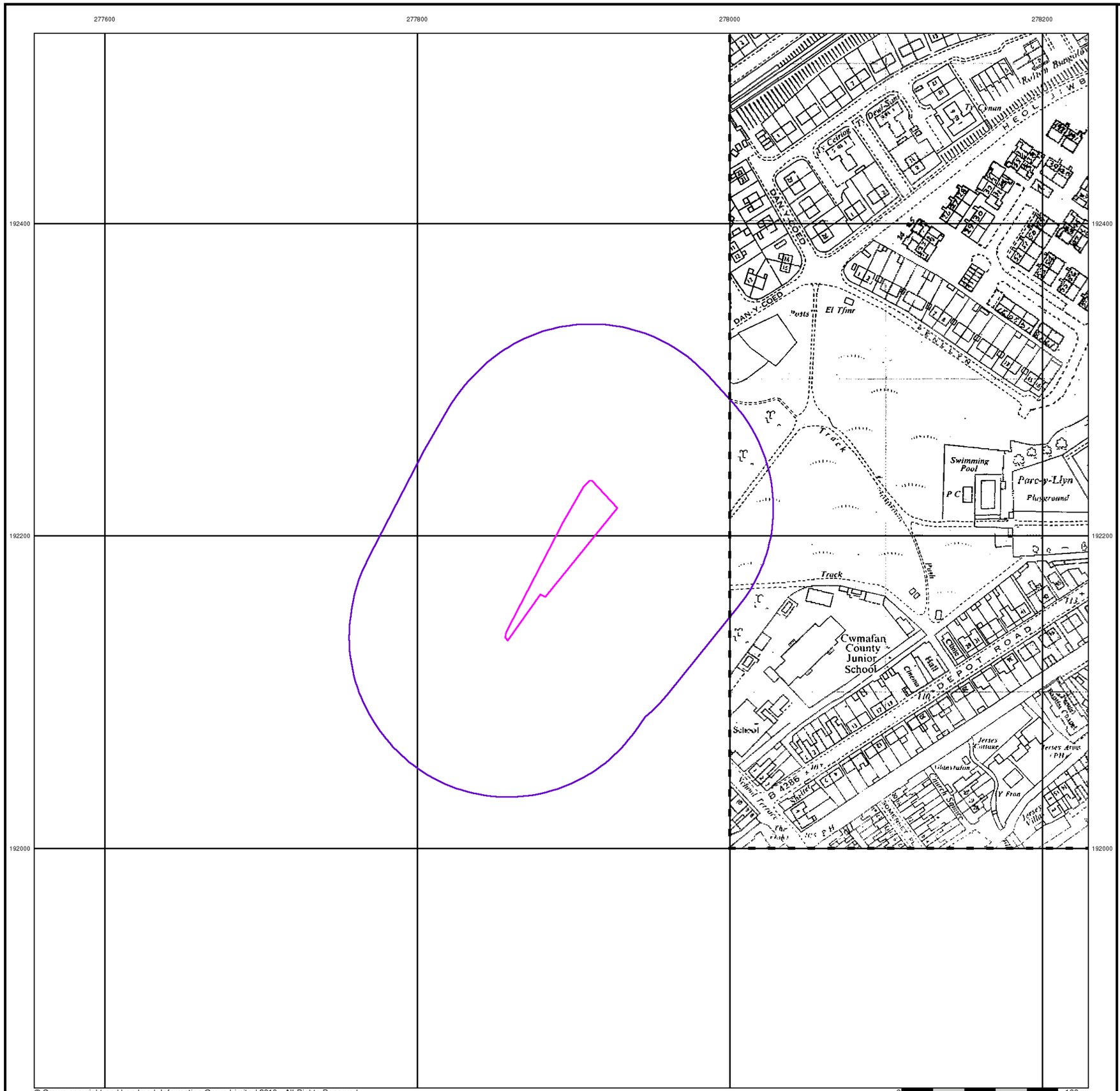
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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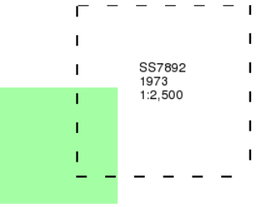
Supply of Unpublished Survey Information

Published 1973

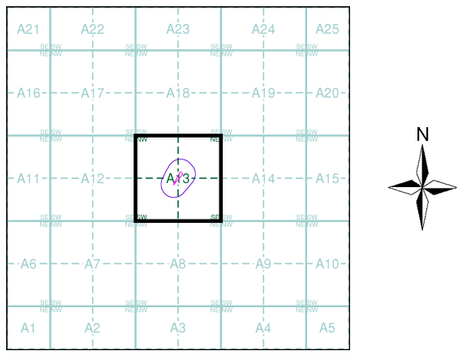
Source map scale - 1:2,500

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They 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:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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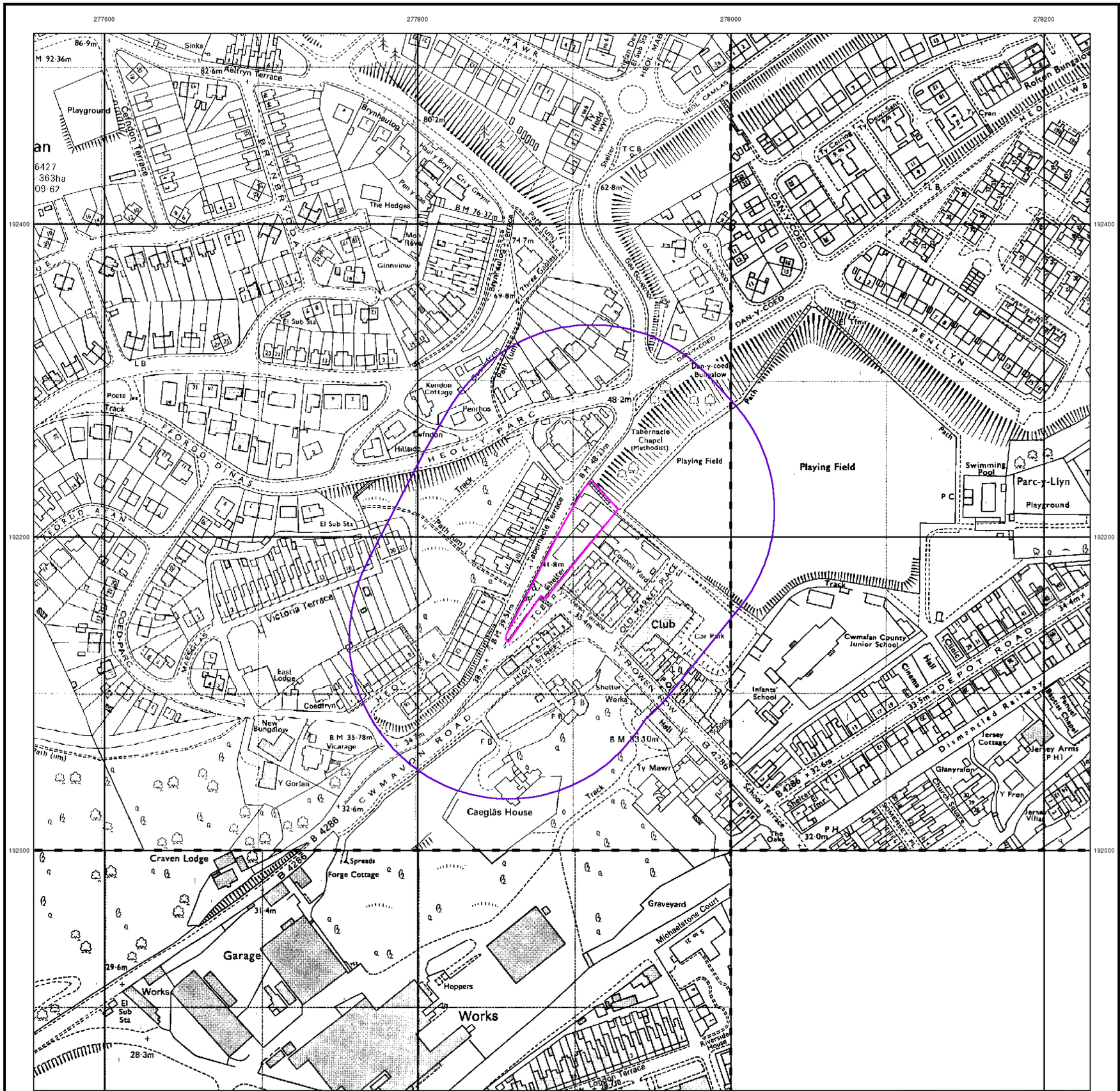
Web: www.envirocheck.co.uk


277600
277800
278000
278200
192400
192200
192000
Playground
Cefndon Terrace
Kellryn Terrace
Brynheulog
The Hedges
Glanview
Mon Nawr
Sinks
Ty Mawr
Ty Cerrig
Dan-y-coed Bungalow
DAN-Y-COED
PENLLYN
Swimming Pool
Parc-y-Llyn
Playground
Playing Field
Tabernacle Chapel (Methodist)
Kendon Cottage
Penrhos
Cefndon
Hillside
Victoria Terrace
East Lodge
Coedtryn
New Bungalow
Vicarage
Y Gorlan
Caeglâs House
Shelter
Works
Club
Car Park
Cwmafan County Junior School
Infants' School
Jersey Cottage
Jersey Arms (P H)
Glanyrafon
Y Fron
Craven Lodge
Forge Cottage
Garage
Graveyard
Michaelstone Court
Hoppers
Riverside House
London Terrace
Council Yard
Old Market Place
Dismantled Railway
Cwmavon Road
B 4286
Tŷ Rowen Terrace
Tŷ Rowen
Heol Maes Eglas
Heol Parc
Heol Camlas
Heol Llwyn
Ffordd Dinas
Ffordd Aman
Ffordd Parc
Ffordd Brynheulog
Ffordd Dan
Ffordd Glyn
Ffordd Gwynt
Ffordd Gwyn
Ffordd Gwyn
Ffordd Gwyn

277600 277800 278000 278200

192400 192200 192000

Playground Carnation Terrace Aelfryn Terrace Glenview The Hedges Mon Repos Three Gables Kendon Cottage Penrhos Gilndon Hillside Tabernacle Chapel Playing Field Swimming Pool Parc-y-Llyn Playground Victoria Terrace East Lodge Coedfryn New Bungalow Vicarage Y Gorlan Caeglas House Ty Mawr Shelter Works Club Car Park Council Yard Old Market Place Cwmafan County Junior School Infants' School Jersey Cottage Jersey Arms (P H) Glanyrafon Y Fron Jersey Villa Church Square St Michael's Church (C in W) River Afan Afon Afan Obsy (-5) Caravan Site Public Conv Rolton Bungalow Dan-y-coed Bungalow Dismantled Railway

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0 100 m

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Additional SIMs

Published 1978 - 1983

Source map scale - 1:2,500

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

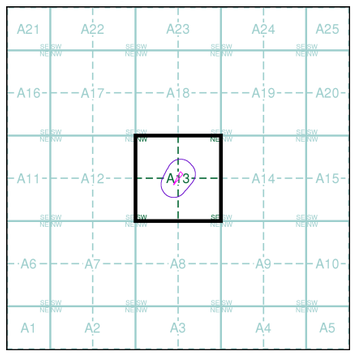
Map Name(s) and Date(s)

SS7792 1983 1:2,500

SS7892 1978 1:2,500

SS7891 1978 1:2,500

Historical Map - Segment A13



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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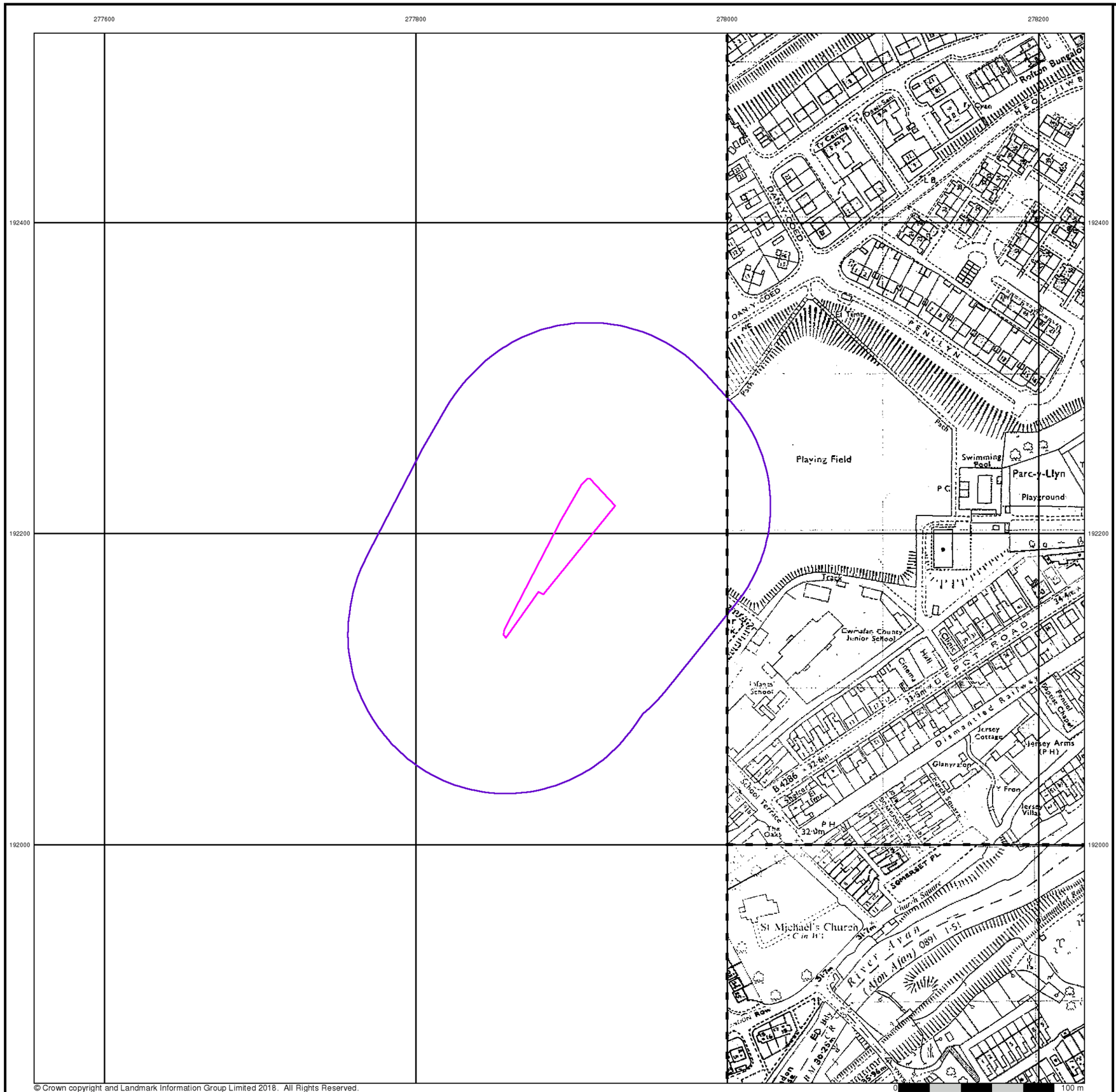

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Additional SIMs

Published 1984

Source map scale - 1:2,500

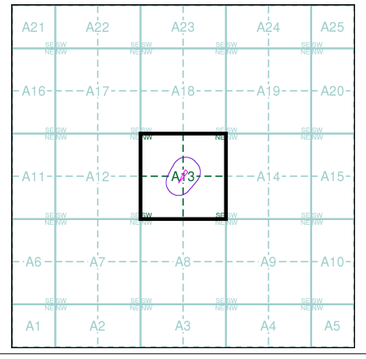
The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps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

Map Name(s) and Date(s)

SS7892
1984
1:2,500

SS7891
1984
1:2,500

Historical Map - Segment A13



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
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Site Details

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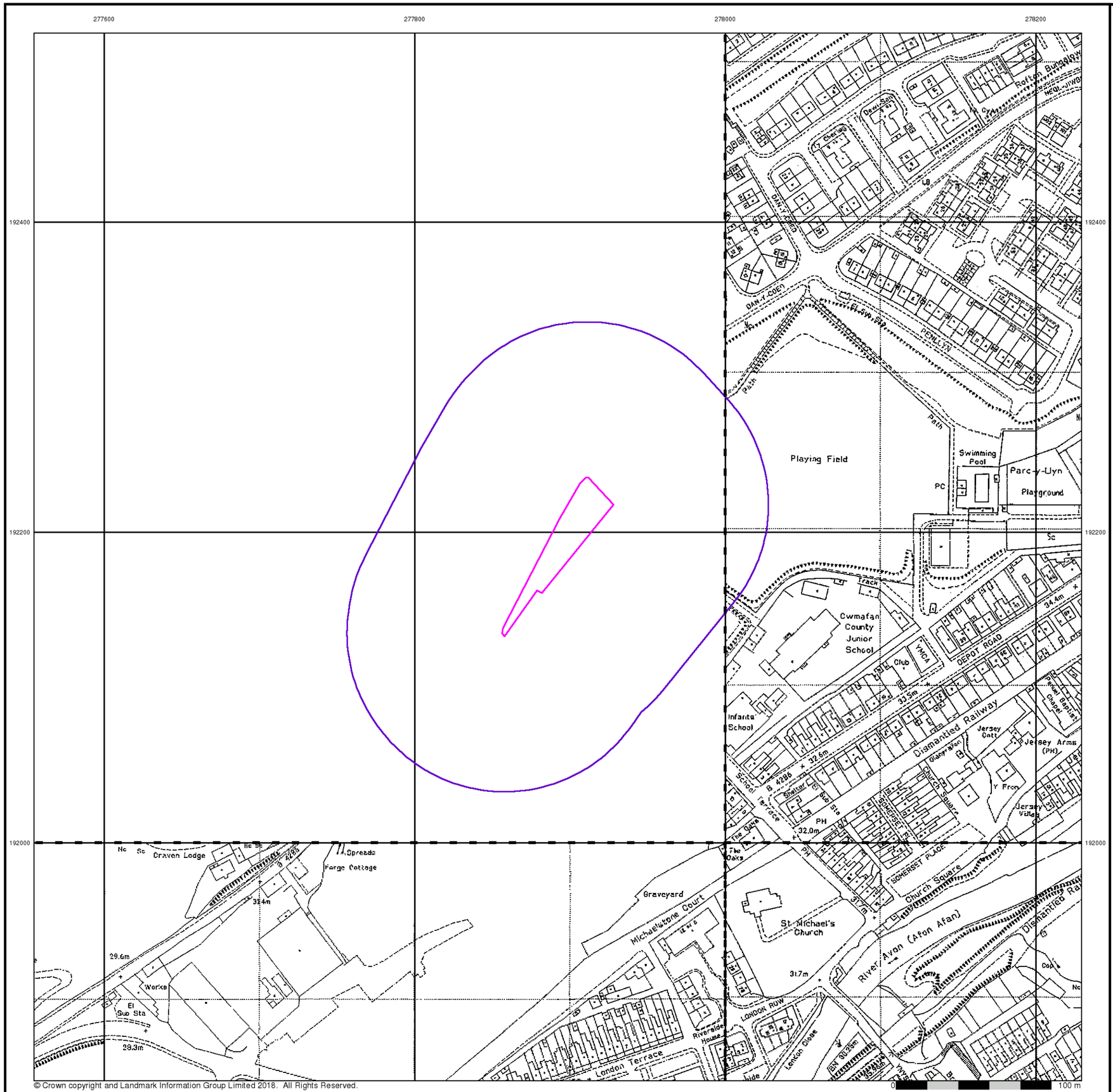
277600
277800
278000
278200
192400
192200
192000
Playground
Aelfryn Terrace
Brynhulog
Ty Hedd
Ty Gwyn
Ty Charlos
The Hedges
Glenview
Main Road
Three Gables
Kendon Cottage
Cefndon
Killivida
Tracks
Path
Playing Field
Swimming Pool
Parc-y-Llyn
Playground
PC
Tabernacle Chapel
Victoria Terrace
East Lodge
Coedfryn
New Bungalow
Vicarage
Y Gorlan
Craven Lodge
Forge Cottage
Spreads
Graveyard
Michaelstone Court
St Michael's Church
Garage
Hoppers
Works
Riverside House
London Terrace
London Close
Cwmavon Road
Cwmafan County Junior School
Infants' School
Club
Car Park
Shelter Works
Ty Mawr
Craigias House
Dismantled Railway
Jersey Cott
Jersey Villas
Jersey Arms (PH)
Y Fron
The Oaks
Somerset Place
Church Square
River Avon (Afon Afan)
Depot Road
High Street
Old Market Place
Ffordd Dinas
Heol-y-Parc
Heol Isaf
Dan-y-coed
Penrhiw
Ffordd Afan
Maesglas
Brynmorton
Cwm Mawr
Heol Dawel
Heol Jiwbili
Heol Dewi
Heol Dyfrig
Heol Dyfodol
Heol Dyfan
Heol Dyfnog



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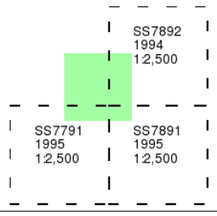
Large-Scale National Grid Data

Published 1994 - 1995

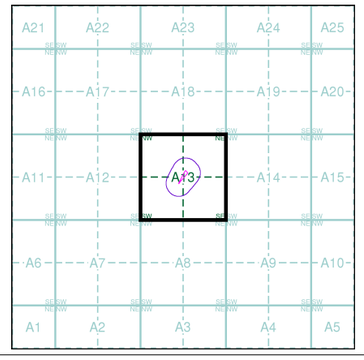
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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Web: www.envirocheck.co.uk

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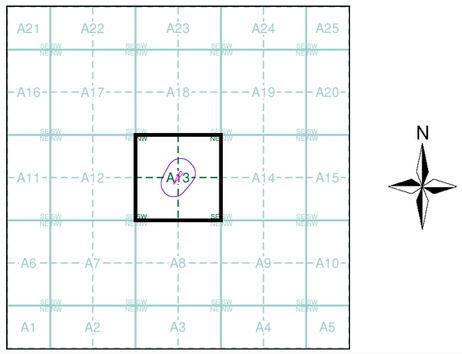
Historical Aerial Photography

Published 2000

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

Historical Aerial Photography - Segment A13



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	100

Site Details

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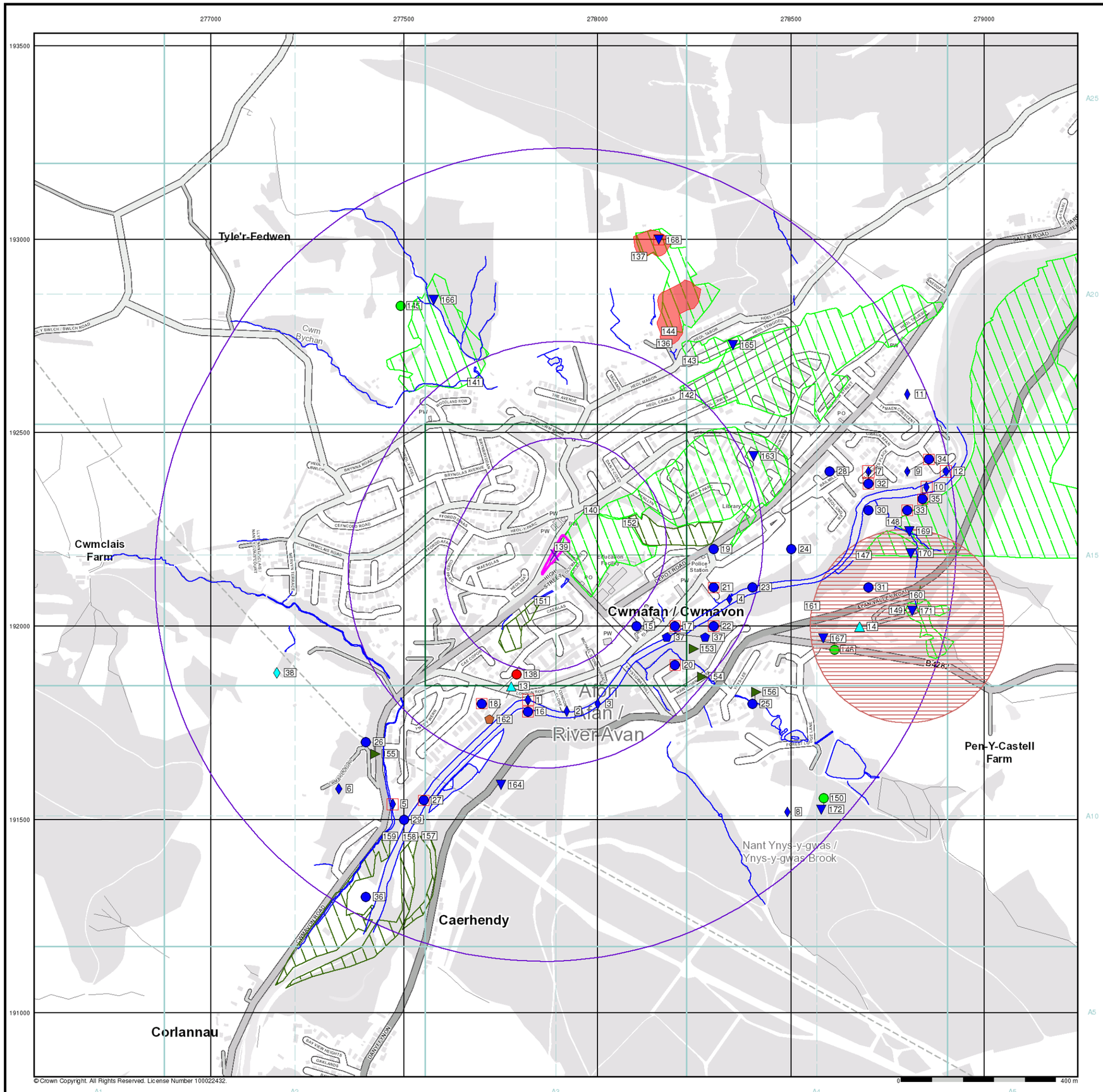
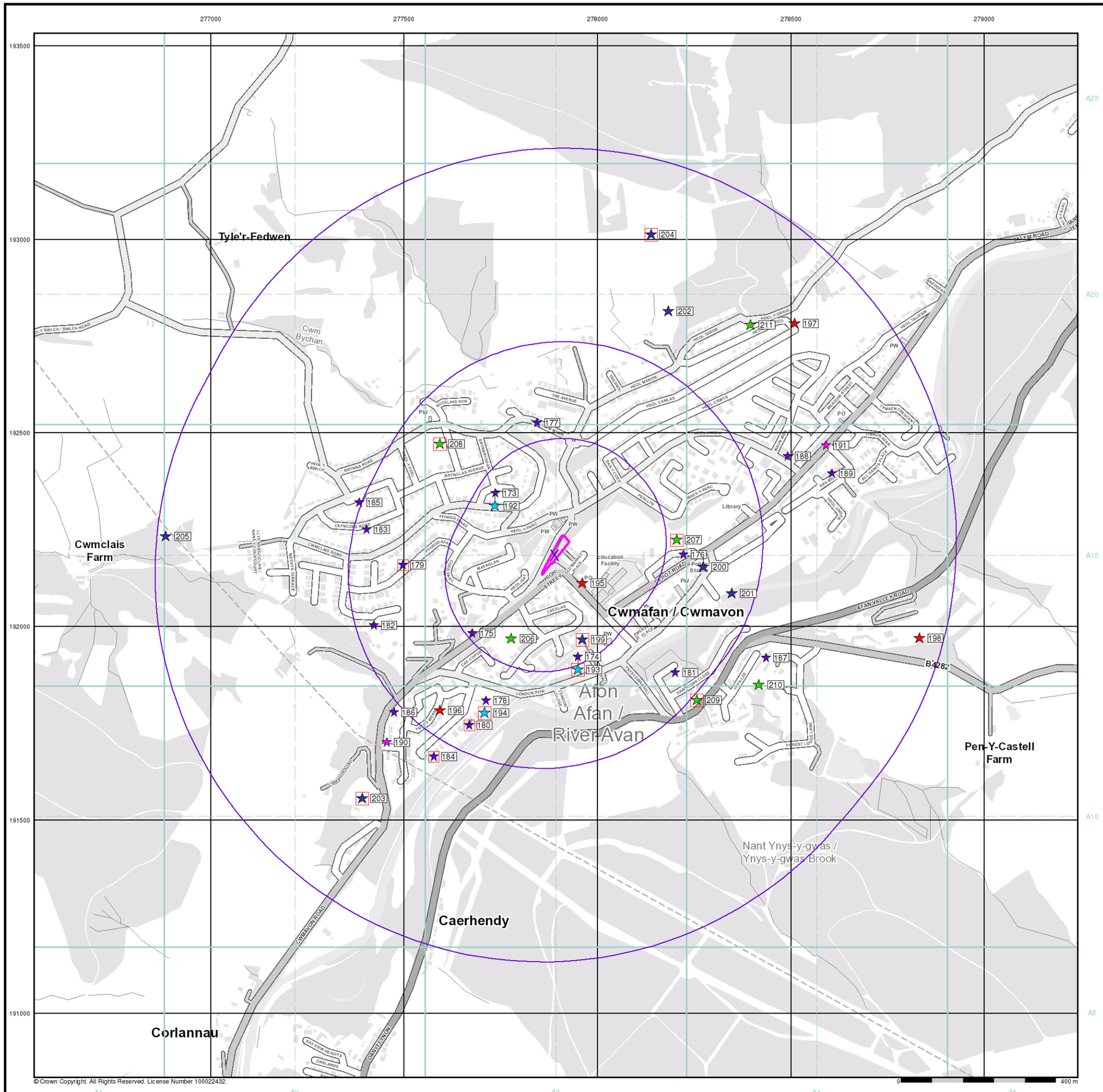

277000
277500
278000
278500
279000
193500
193000
192500
192000
191500
191000
A25
A20
A15
A10
A5
Tyle'r-Fedwen
Cwm Bychan
Cwmclais Farm
Cwmafan / Cwmavon
Afon Afan / River Afan
Pen-Y-Castell Farm
Nant Ynys-y-gwas / Ynys-y-gwas Brook
Caerhendy
Corlannau
Library
Education Facility
Police Station
PO
PW
SALEM ROAD
HEOL-Y-BWLCH / BWLCH ROAD
THE AVENUE
WOODLAND ROW
HEOL-Y-FARM
BRYNNA ROAD
BRYNOLA AVENUE
CEFNCOED ROAD
CWMCLAIS ROAD
HEOL-Y-FRANC
HEOL-Y-GAMAU
HEOL-TAWOD
HEOL-TERFYNOD
HEOL-MARION
HEOL-CAMLAS
HEOL-FFRWD
HEOL-MAWR
HEOL-ISAF
HEOL-UCHAF
HEOL-Y-GLYN
HEOL-Y-DERI
HEOL-Y-PARC
HEOL-Y-MYNYDD
HEOL-Y-GWAUN
HEOL-Y-CWM
HEOL-Y-GOLLEN
HEOL-Y-GRUG
HEOL-Y-GAER
HEOL-Y-DELYN
HEOL-Y-DERWEN
HEOL-Y-FFYNNON
HEOL-Y-GORS
HEOL-Y-GAMLAS
HEOL-Y-GAMFA
HEOL-Y-GAMFA
HEOL-Y-GAMFA



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Industrial Land Use Map

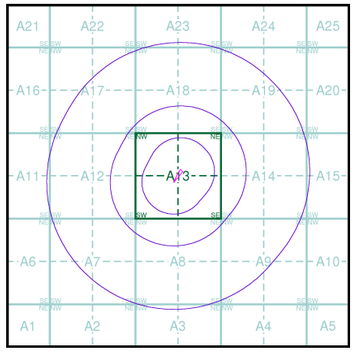
General

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

Industrial Land Use

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

Industrial Land Use Map - Slice A



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

Landmark INFORMATION GROUP

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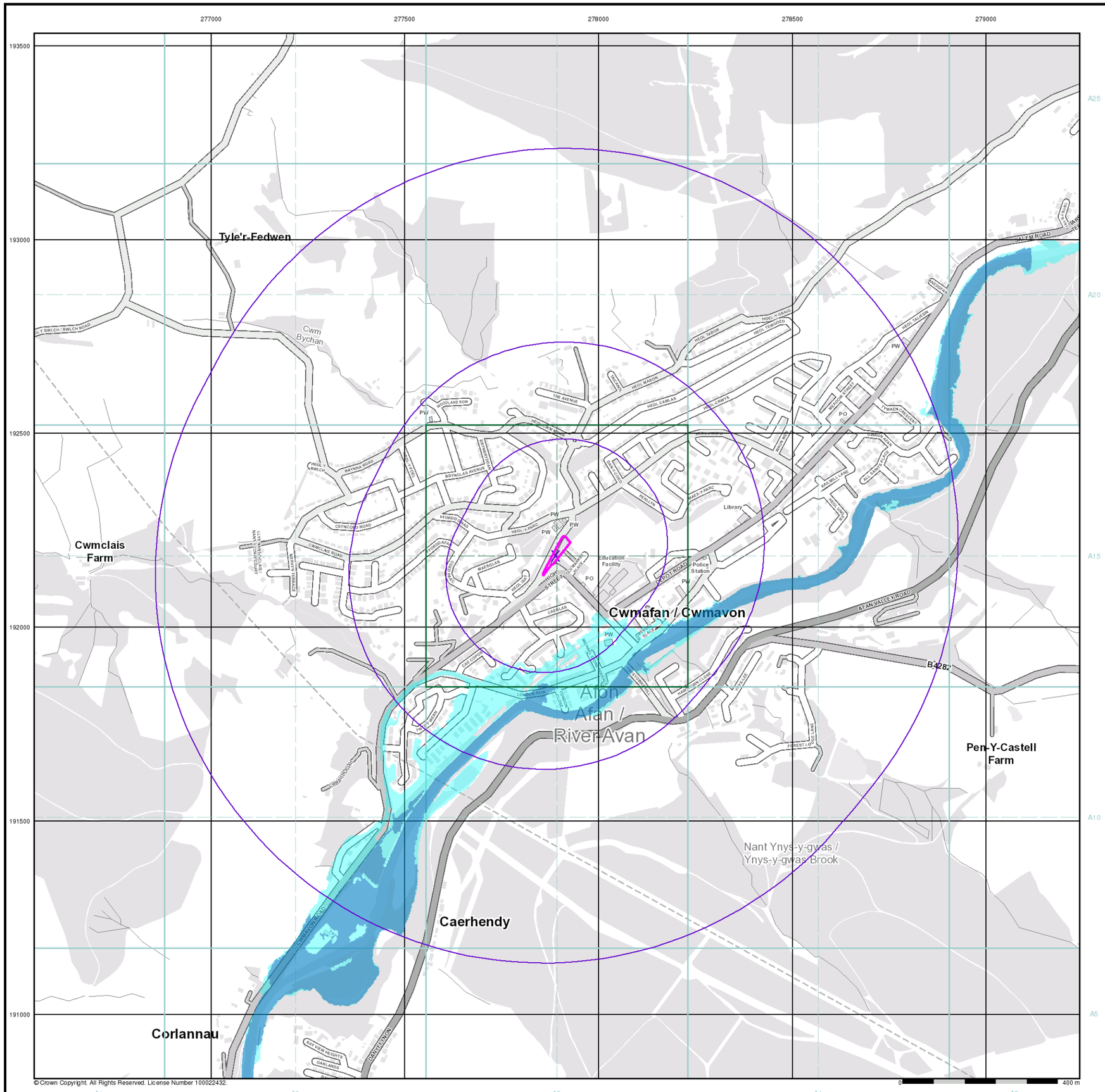

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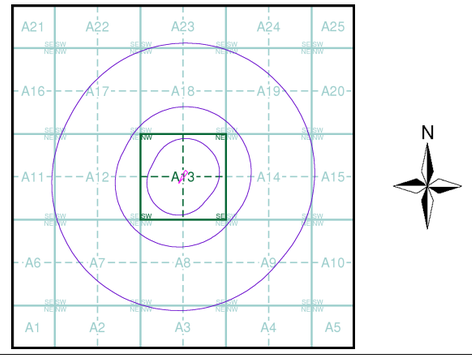
General

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

Agency and Hydrological (Flood)

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

Flood Map - Slice A



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

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Landmark INFORMATION GROUP

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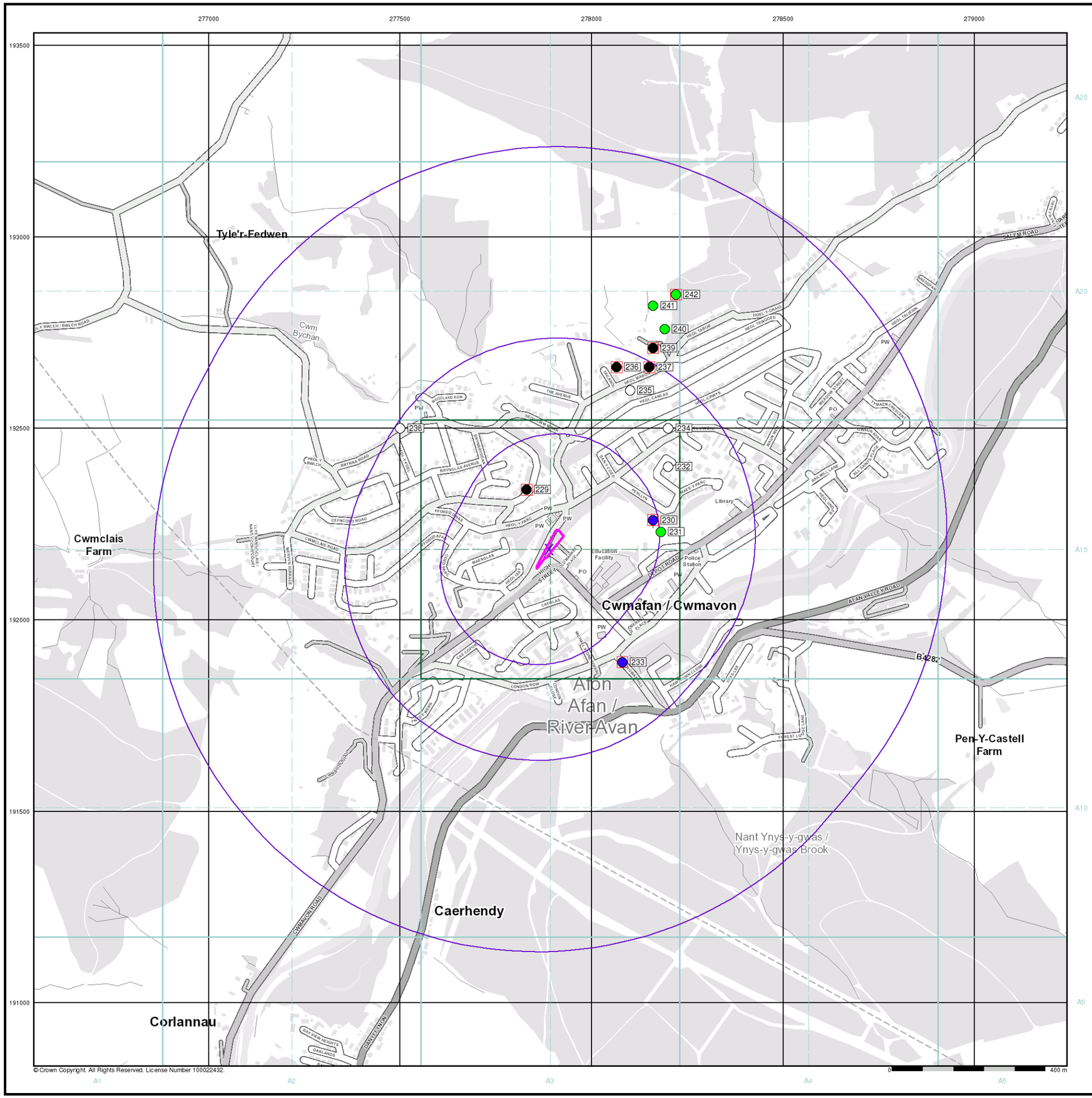
Web: www.envirocheck.co.uk



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General

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

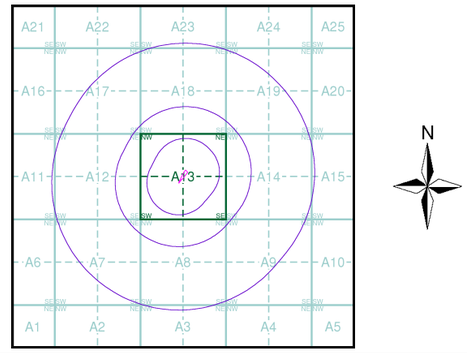
Agency and Hydrological (Boreholes)

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

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

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

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Landmark INFORMATION GROUP

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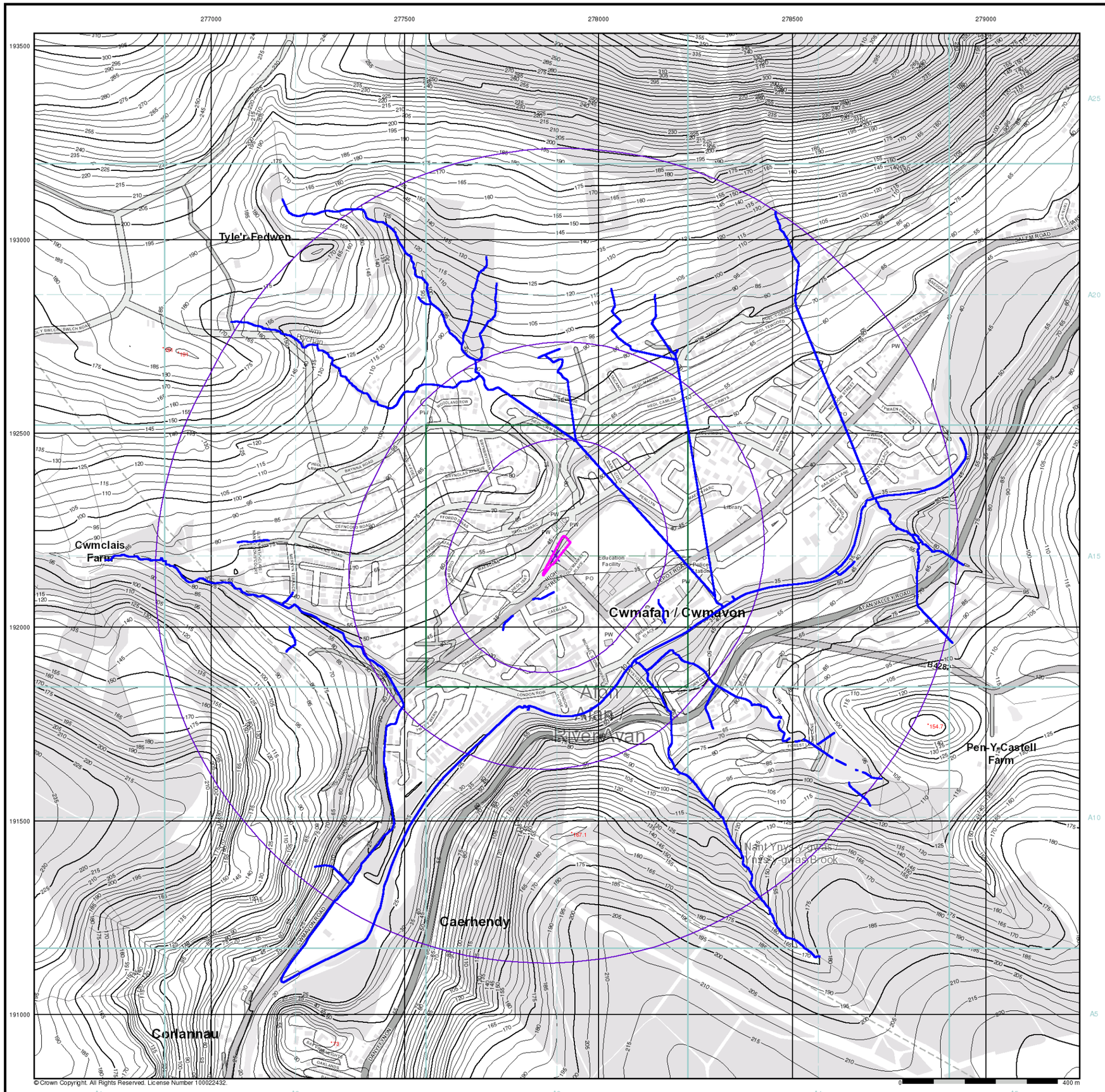
Web: www.envirocheck.co.uk



terrafirma

General

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

OS Water Network Data

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

Contours (height in meters)

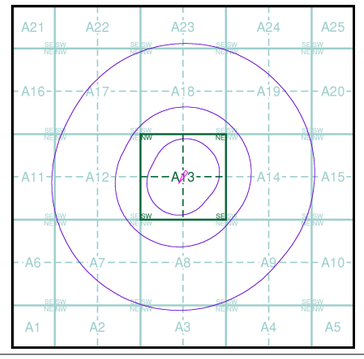
Standard Contour 105 100 95

Master Contour

Spot Height 167.3

- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



Order Details

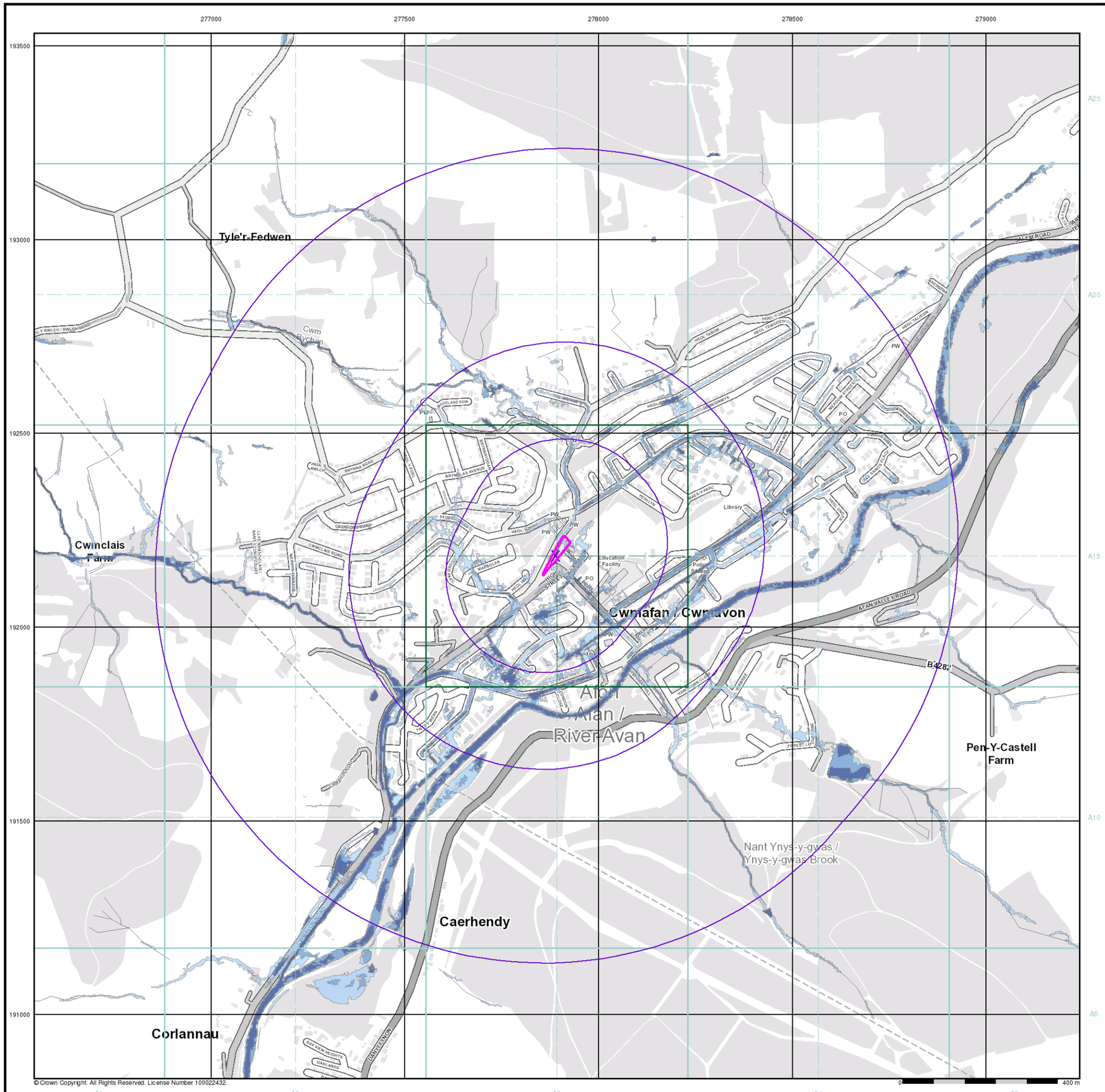
Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

Landmark INFORMATION GROUP

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



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General

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

Risk of Flooding from Surface Water

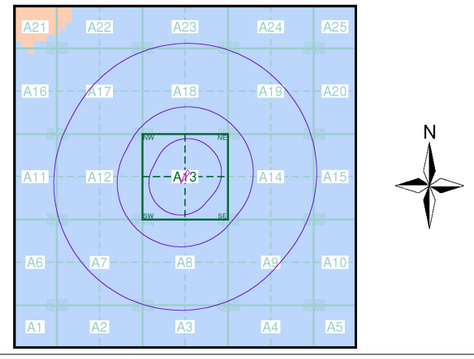
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

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

EA/NRW Suitability Map - Slice A



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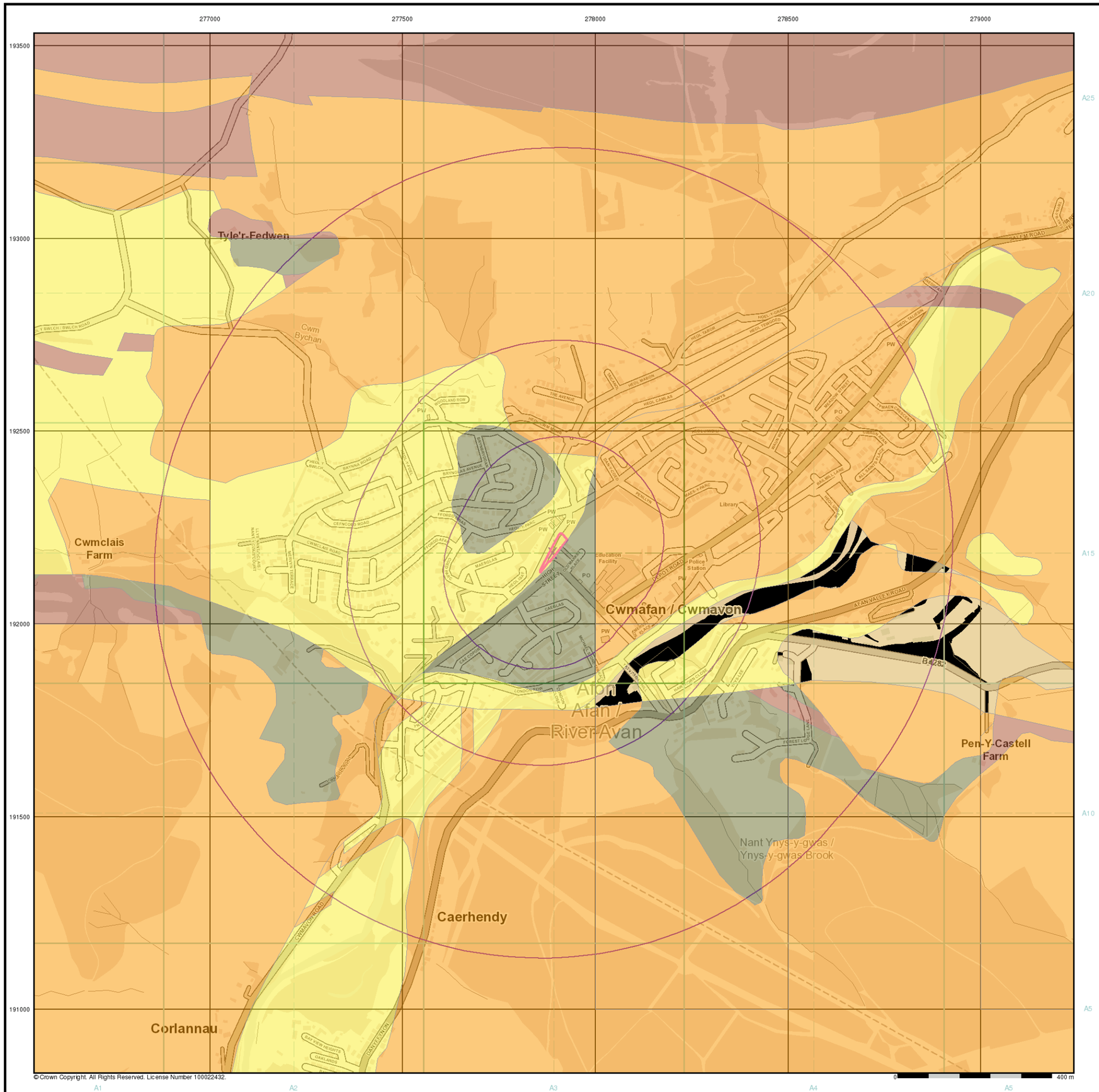

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General

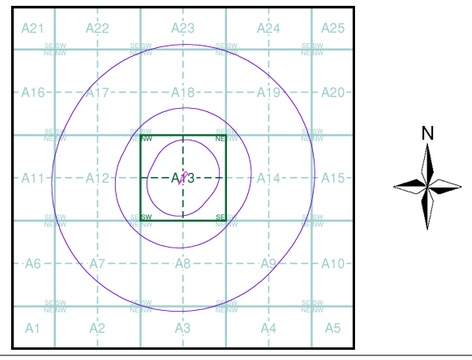
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

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

Estimated Soil Chemistry Arsenic - Slice A



Order Details

Order Details:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

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General

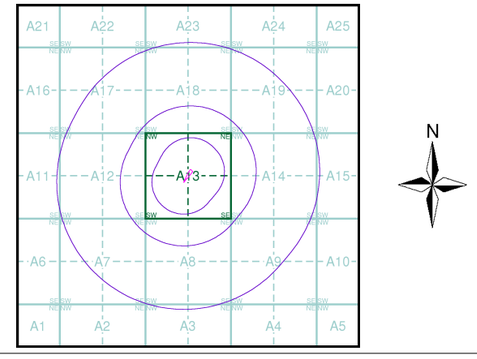
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice A



Order Details

Order Details:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

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General

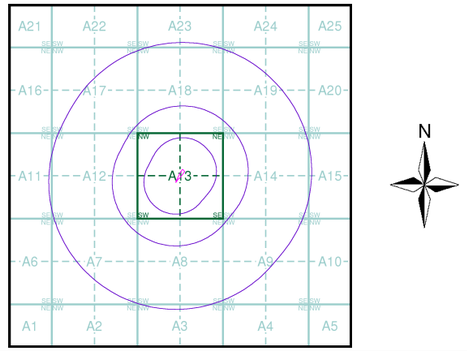
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

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

Estimated Soil Chemistry Chromium - Slice A



Order Details

Order Details:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
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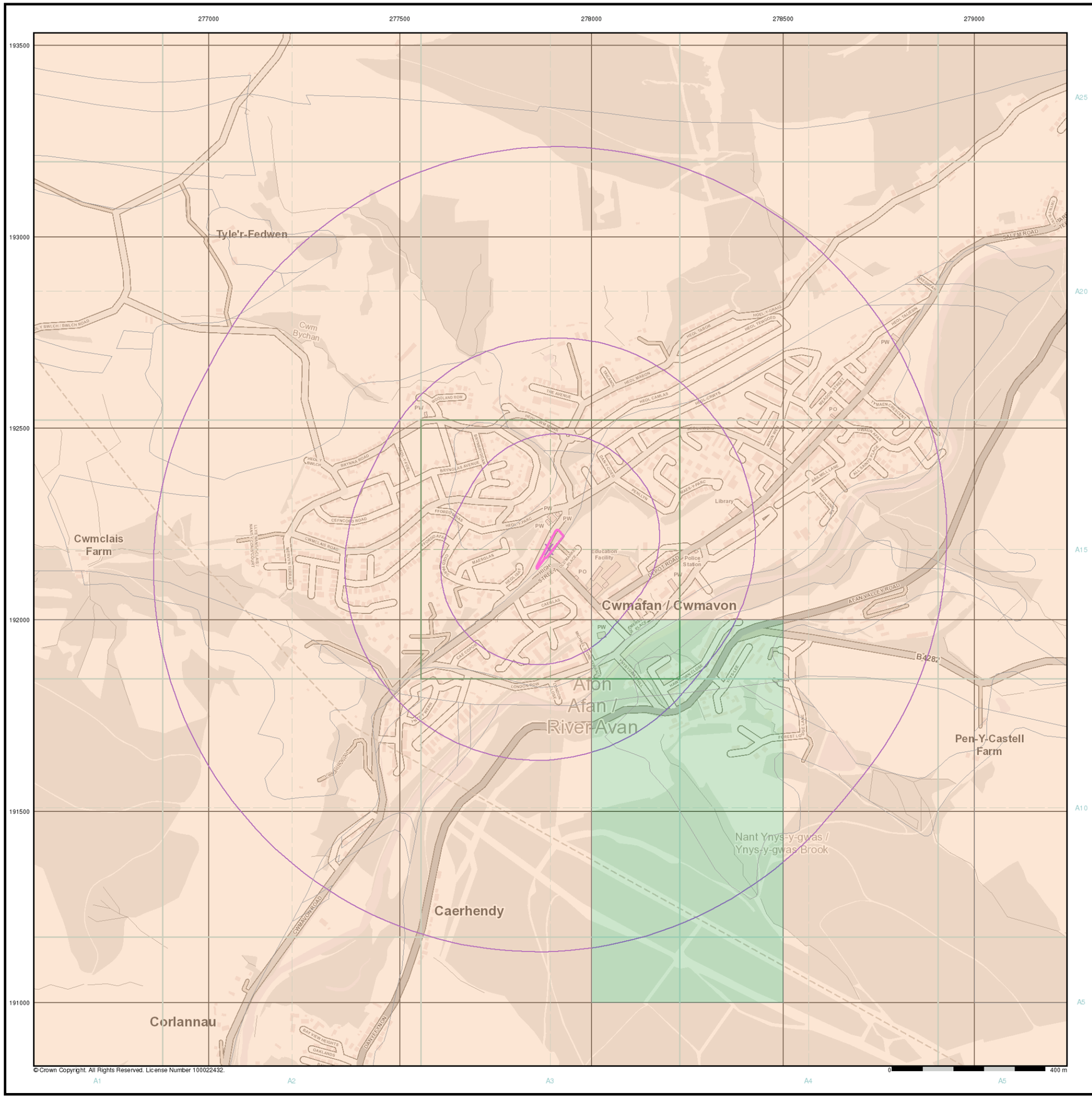

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General

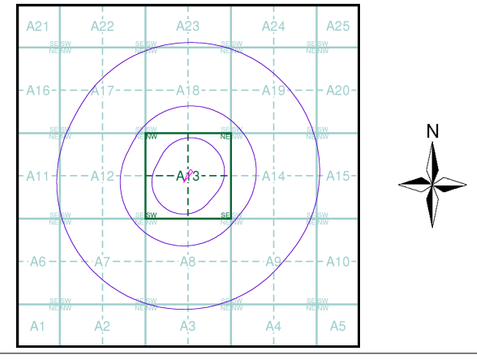
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

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

Estimated Soil Chemistry Lead - Slice A



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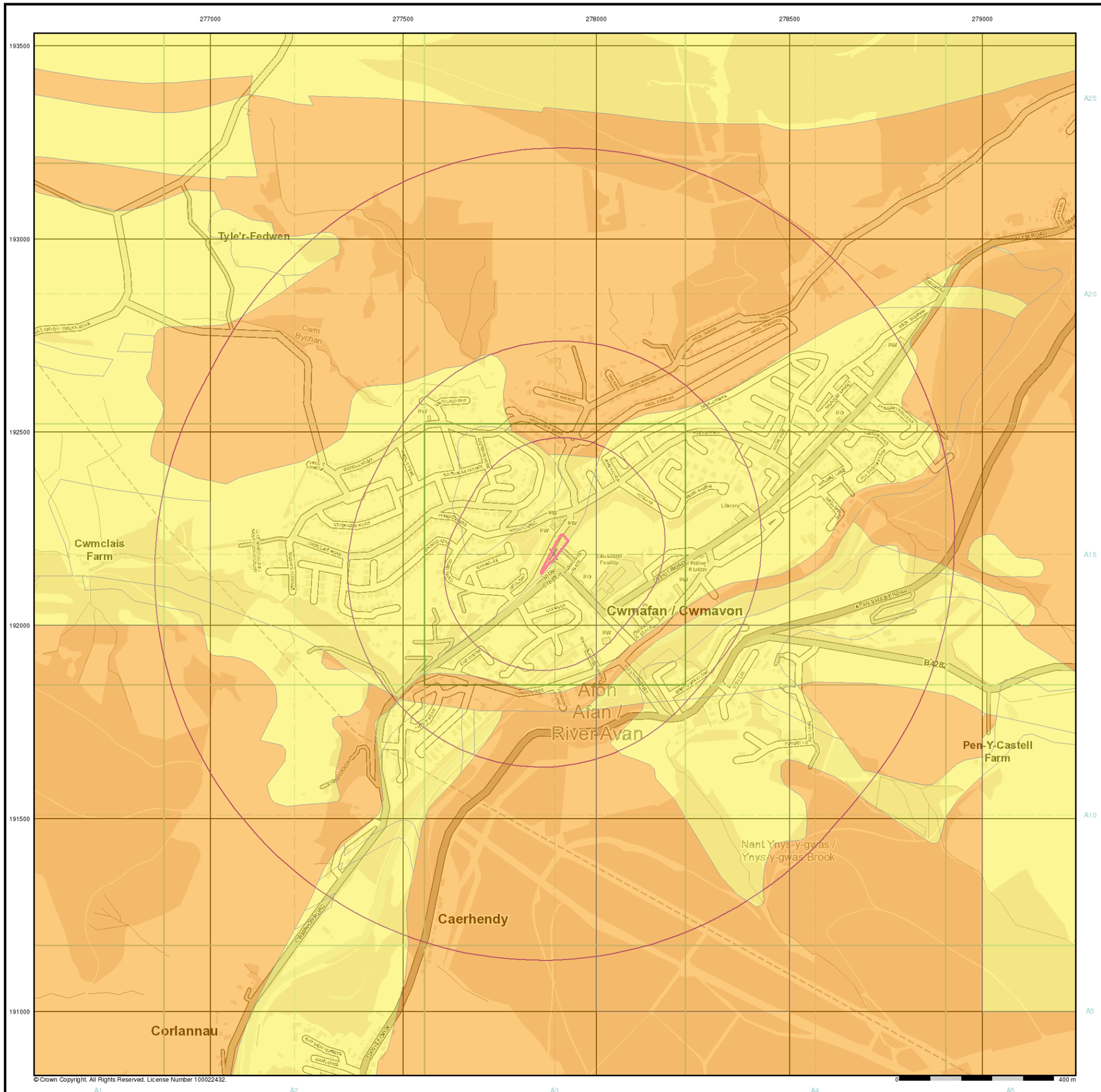

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General

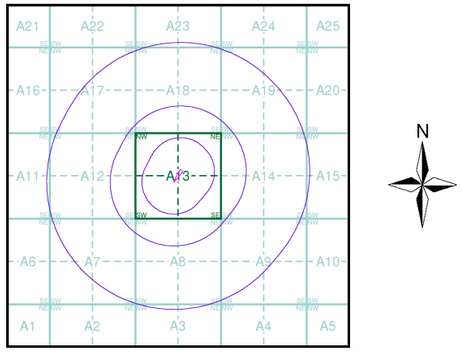
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

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

Estimated Soil Chemistry Nickel - Slice A



Order Details

Order Details:	158022017_1_1
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National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
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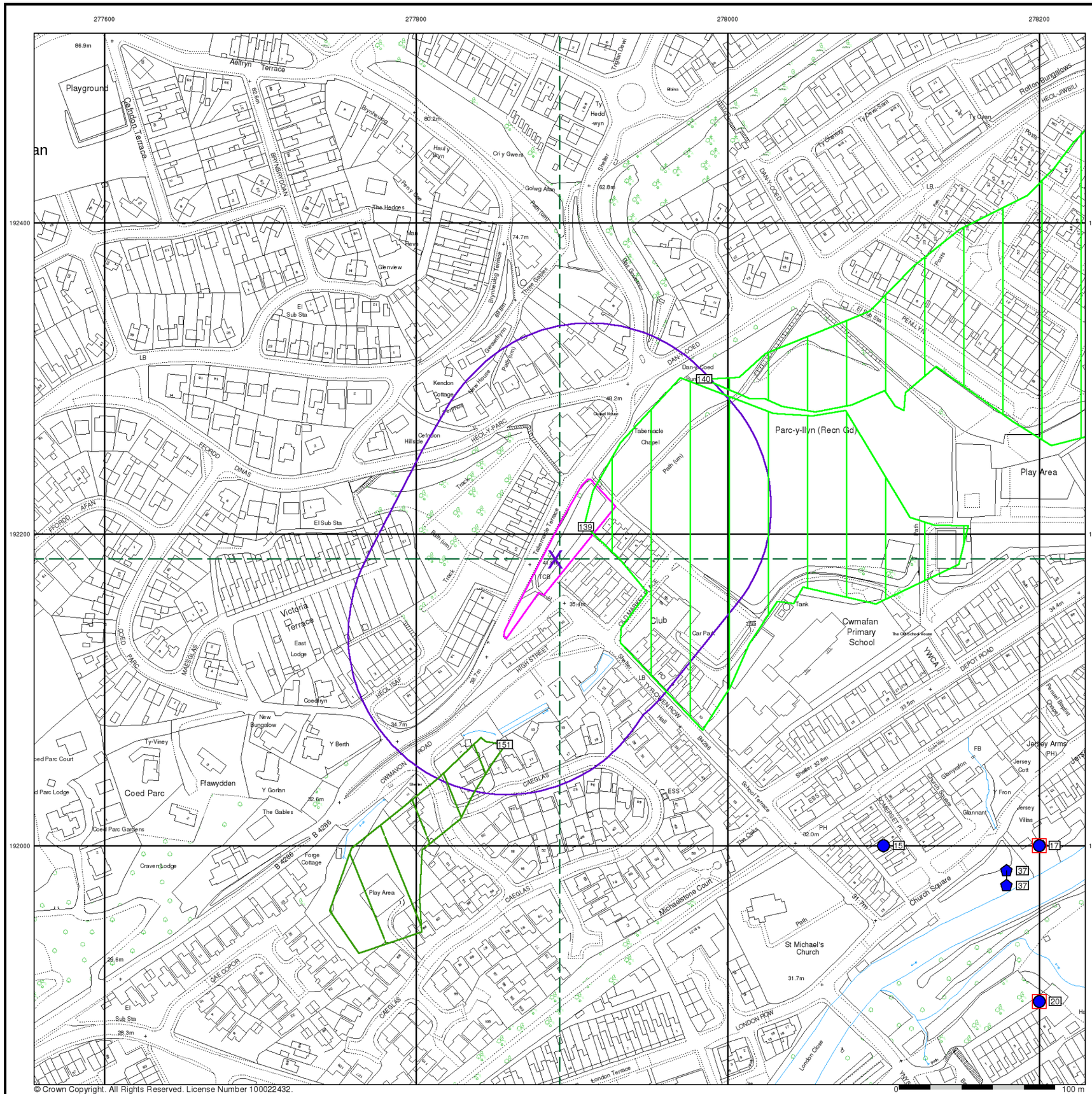

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General

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

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

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

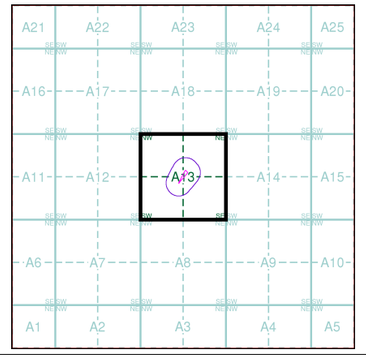
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A13



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Plot Buffer (m):	100

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

Landmark INFORMATION GROUP
Tel: 0844 844 9952
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Web: www.envirocheck.co.uk

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

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

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Electricity Transmission Line
Pole
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
Standard Gauge Single Track
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

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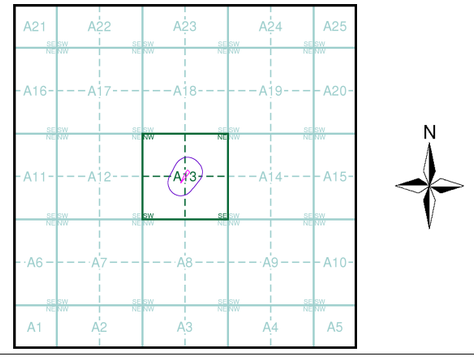
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:10,560	1884	2
Glamorganshire	1:10,560	1900	3
Glamorganshire	1:10,560	1921	4
Glamorganshire	1:10,560	1936	5
Glamorganshire	1:10,560	1938 - 1952	6
Historical Aerial Photography	1:10,560	1949	7
Glamorganshire	1:10,560	1951	8
Ordnance Survey Plan	1:10,000	1964	9
Ordnance Survey Plan	1:10,000	1974	10
Ordnance Survey Plan	1:10,000	1980	11
Ordnance Survey Plan	1:10,000	1996	12
10K Raster Mapping	1:10,000	1999	13
10K Raster Mapping	1:10,000	2006	14
VectorMap Local	1:10,000	2018	15

Historical Map - Slice A



Order Details

Order Number: 158022017_1_1
Customer Ref: 14611
National Grid Reference: 277890, 192180
Slice: A
Site Area (Ha): 0.17
Search Buffer (m): 1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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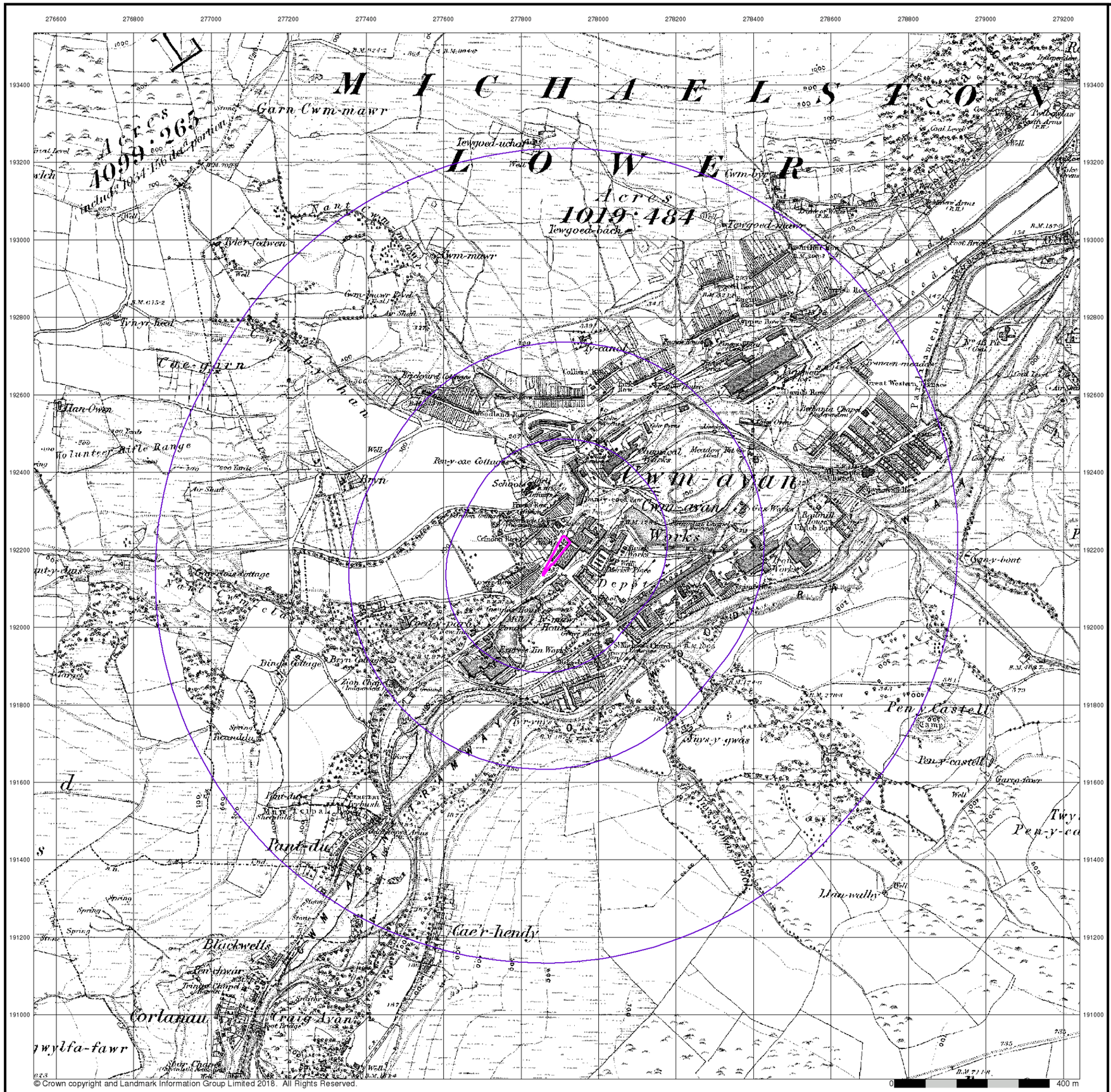

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Glamorganshire

Published 1884

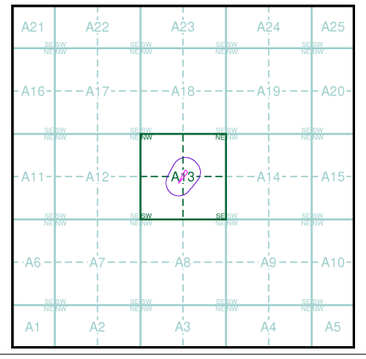
Source map scale - 1:10,560

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)

02500
1884
1:10,560

Historical Map - Slice A



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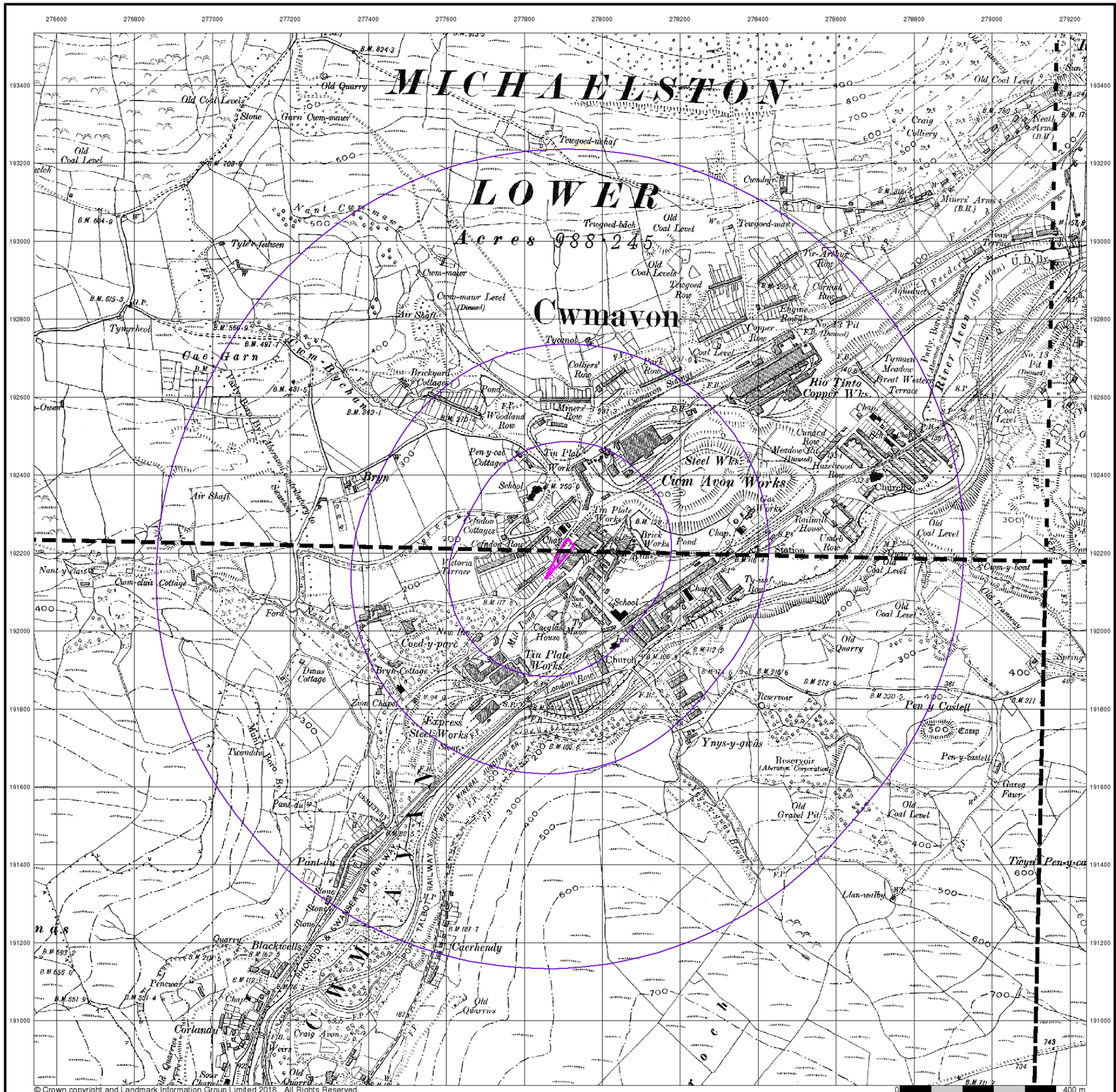
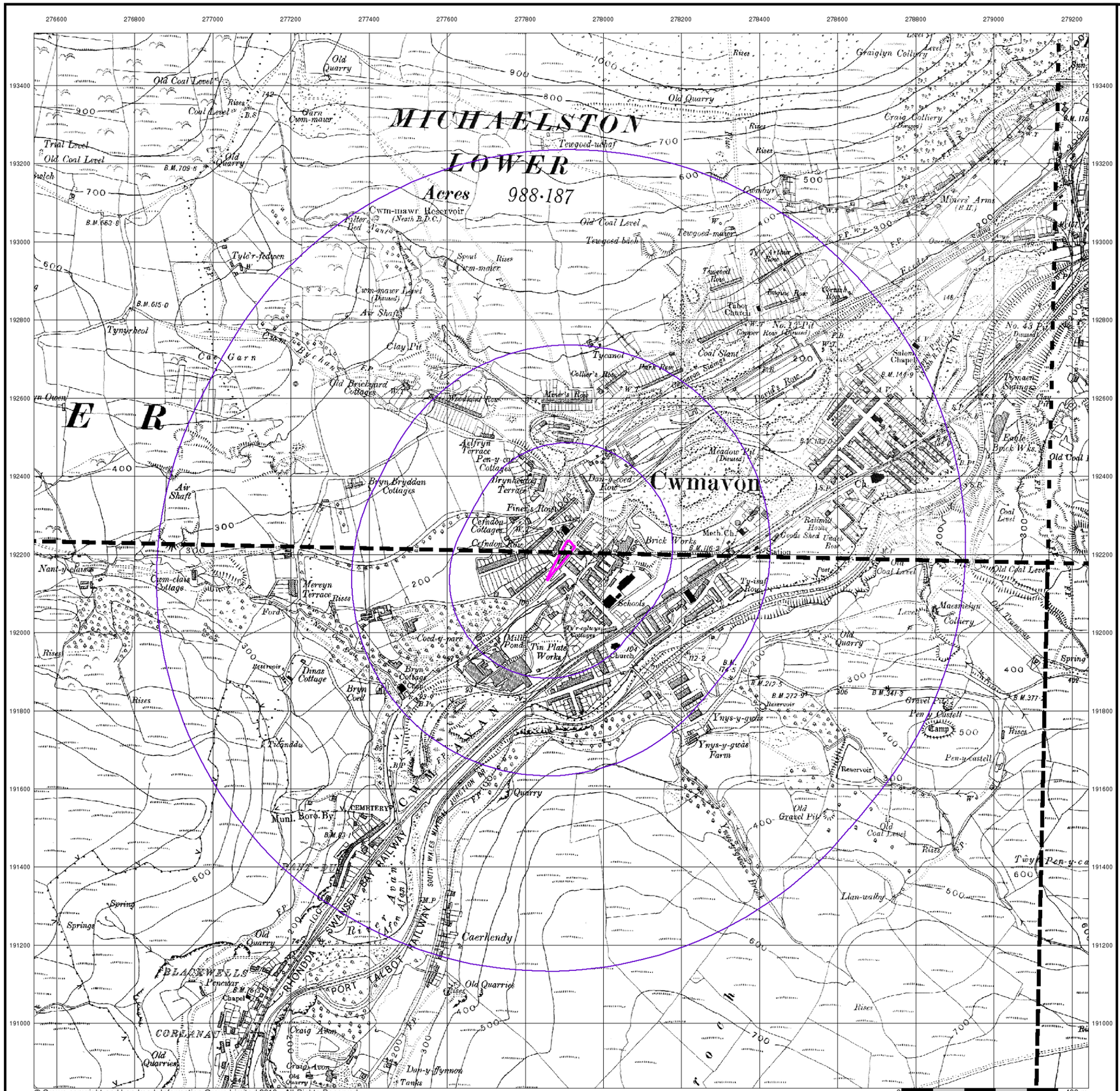
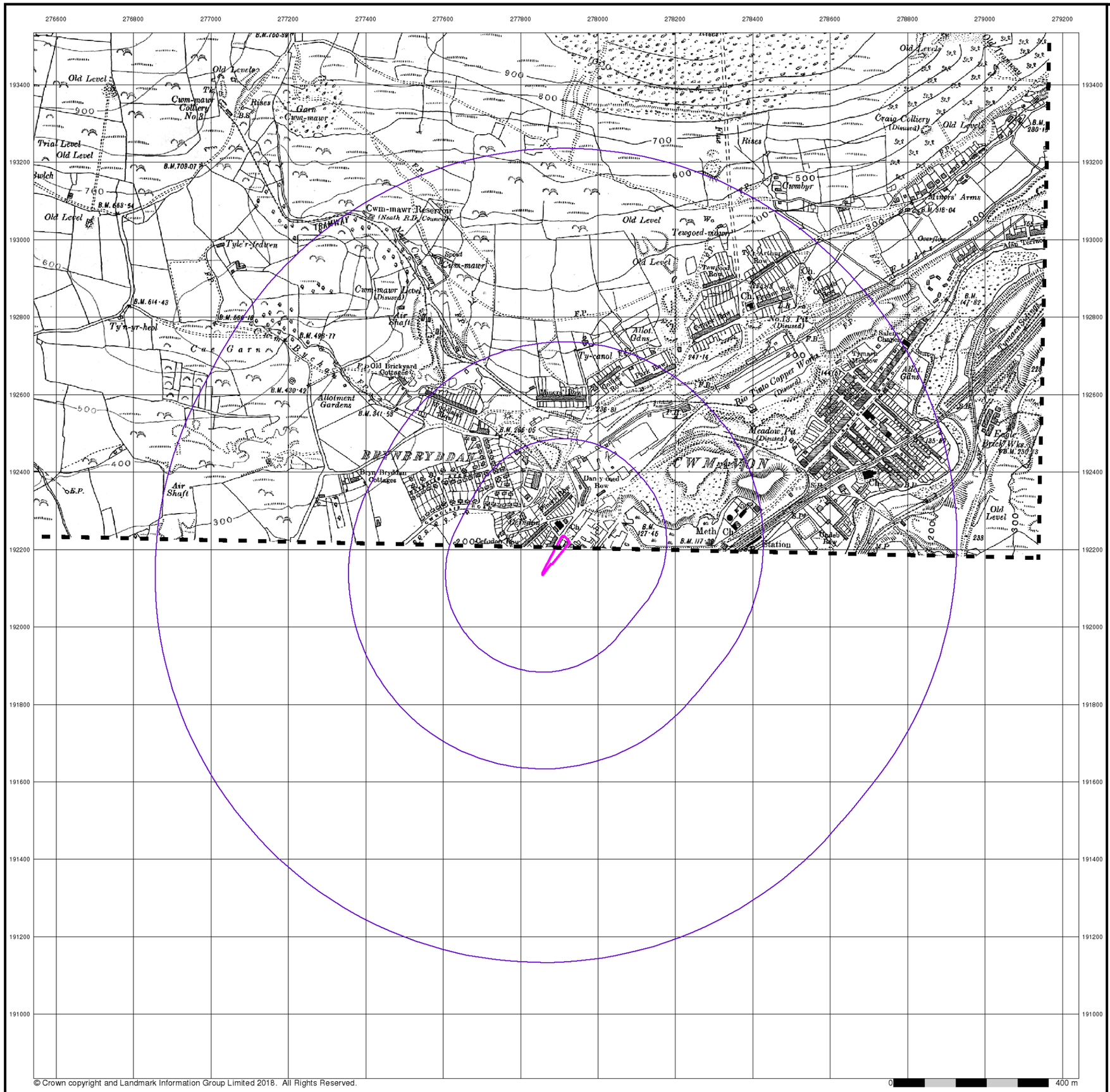

MICHAELSTON
LOWER
Acres 988·245
Cwmavon
Cwm Avon Works
Rio Tinto Copper Wks.
Steel Wks.
Tin Plate Works
Express Steel Works
Coed-y-parc
Cae Garn
Pen y Castell
Caerhendy
Blackwells
Corlandy
Pencwar
Paul-du
Ynys-y-gwas
Roseryoir
Old Gravel Pit
Nant Cwm-mawr
Cwm-mawr
Cwm-mawr Level
Tycanol
Tir-Arthur Row
Cornish Row
Copper Row
Colliers' Row
Park Row
Meadow Row
Hazelwood Row
Woodland Row
Brickyard Cottages
Pen-y-cae Cottages
Cefndon Cottages
Cefndon Row
Victoria Terrace
London Row
Railmill House
Brick Works
Pond
Gas Works
Chapel
Church
School
Station
Inclined Plane
Air Shaft
Old Quarry
Old Quarries
Old Coal Level
Old Coal Levels
Craig Colliery
Miners' Arms (B.H.)
Keal's Arms (B.H.)
Aqueduct Feeder
River Avon (Afon Afan)
Nant-y-clais
Cwm-clais Cottage
Dinas Cottage
Bryn Cottage
Zion Chapel
Pant-du
Tycanol Row
Tycwndin Row
Tyle'r-Jedrsen
Tynyrheol
Ty r Owen
Ty-isaf Row
Ty Mawr
Caeglas House
Mill Road
Old Tramway
Spring
Reservoir
Camp
Garreg Fawr
Llan-reilby
Tŷ'n y Pen-y-ca
Tramway Road By Afternoon
Swansea
Ford
Quarry
Stone
Weirs
Old Chimney
Soar Chapel
Mawr Brook
Nant Cwm-mawr
Tŷ-isaf Brook
Old Coal Level
Old Treamroad
Old Tramway
Old Coal Level
Old Quarry
Old Coal Level
Old Coal Level
Old Coal Level


MICHAELSTON
LOWER
Acres 988·187
Cwmavon
Old Quarry
Old Coal Level
Coal Level
Trial Level
Old Coal Level
Gurn Cwm-mawr
Cwm-mawr Reservoir (Neath R.D.C.)
Filter Bed
Tanks
Tyle'r-fedwen
Cwm-mawr Level (Disused)
Air Shaft
Tynyrheol
Cae Garn
Clay Pit
Old Brickyard Cottages
Aelfryn Terrace
Pen-y cae Cottages
Brynheulog Terrace
Bryn Bryddan Cottages
Air Shaft
Cefndon Cottages
Cefndon Row
Finer's Row
Meth. Ch.
Brick Works
Railway House
Goods Shed
Under Road
Schools
Nant-y-clause
Cwm-clais Cottage
Mervyn Terrace
Ford
Coed-y-parc
Mill Pond
Tin Plate Works
Church
Dinas Cottage
Bryn Cottage
Bryn Coed
Ty'n-y-graig Cottages
Ty'n-isaf Row
Maesmelyn Colliery
Craig Colliery (Drawn)
Miners' Arms (P.H.)
Graigiyn Colliery
Tycanol
Collier's Row
Coal Slant
Tabor Church
Copper Row (Disused)
Meyler's Row
Woodland Row
Tynycaeau Row
Tynycaeau Sidings
Tynycaeau Cottages
Salem Chapel
Eagle Brick Works
Meadow Pit (Disused)
Ty'r Arthur Row
Tynycaeau Colliery
Old Coal Level
Tynycaeau Pit
Ty'n-y-caeau
Ty'n-y-graig
Ty'n-y-graig Row
Ty'n-y-graig Reservoir
Ty'n-y-graig Pond
Ty'n-y-graig Farm
Ty'n-y-graig Quarry
Old Gravel Pit
Gravel Pit
Pen-y-Castell
Camp
Reservoir
Llan-walby
Old Coal Level
Spring
Springs
Old Quarry
Old Quarries
Caerhendy
Craig Arun
Dan-y-ffynnon
Tanks
Munl. Boro. By.
CEMETERY
Rhondda Branch
Swansea and Neath Railway
South Wales Mineral Junction Railway
Port Talbot Railway
River Avon (Afan)
BLACKWELLS
Penewar
Chapel
CORELANAU
Rises
Ford
Reservoir
Quarry
Old Coal Level
Coal Level
Old Quarry
Spring
Springs
Rises
Old Quarries
Craig Arun
Old Quarries
Dan-y-ffynnon
Tanks
Old Coal Level
Old Quarry
Old Coal Level
Old Quarry
Old Quarry
Old Quarry



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Glamorganshire

Published 1936

Source map scale - 1:10,560

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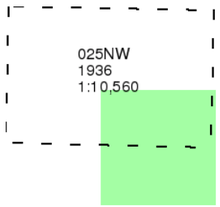
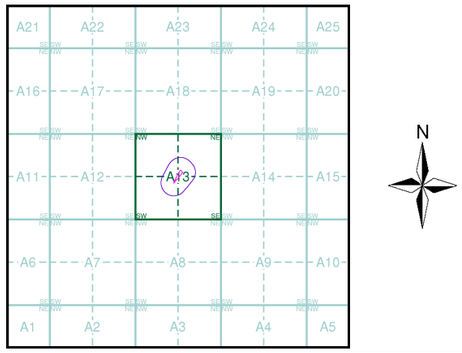
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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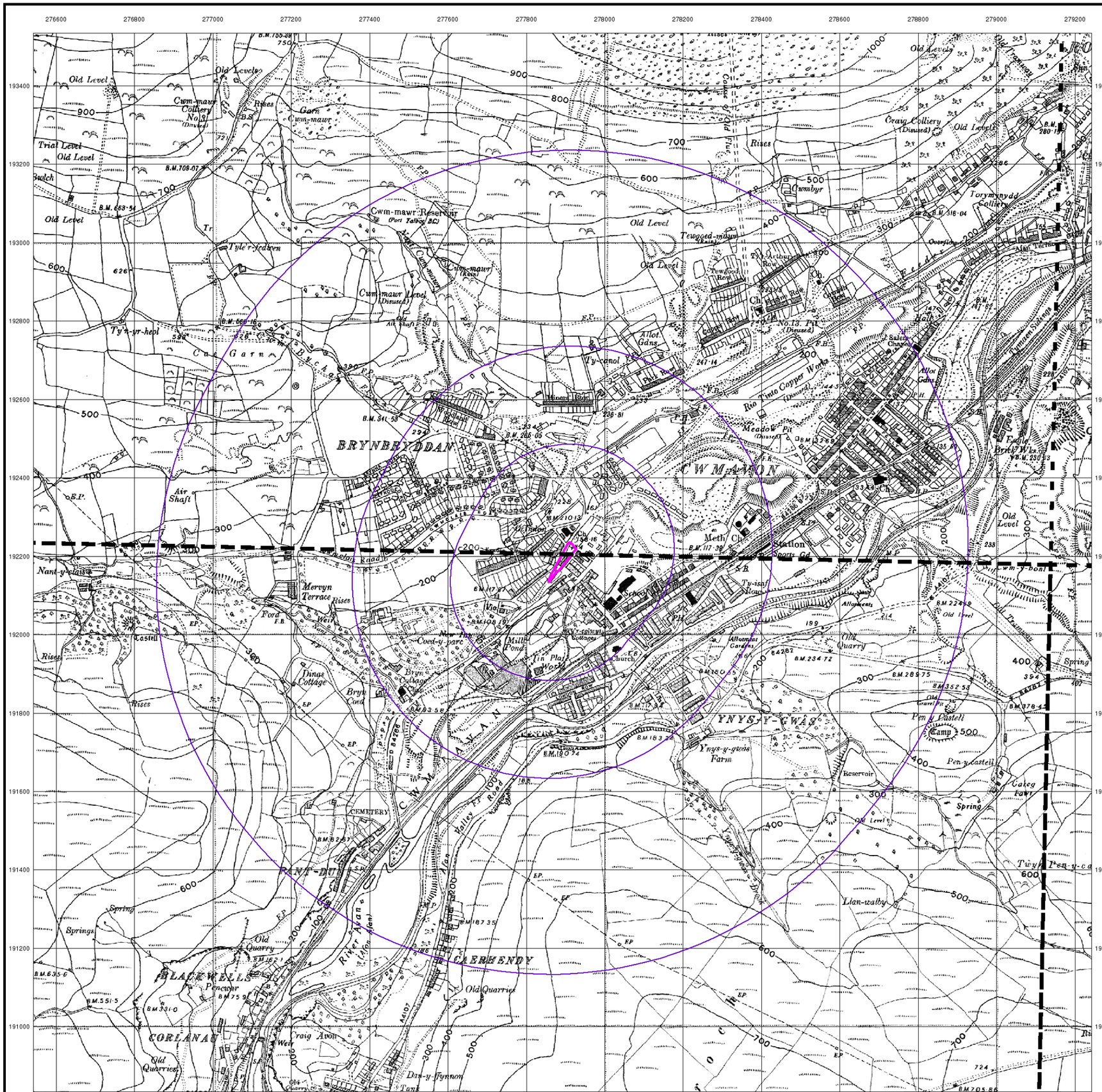
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Glamorganshire

Published 1938 - 1952

Source map scale - 1:10,560

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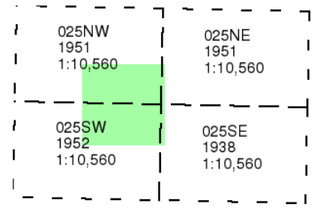
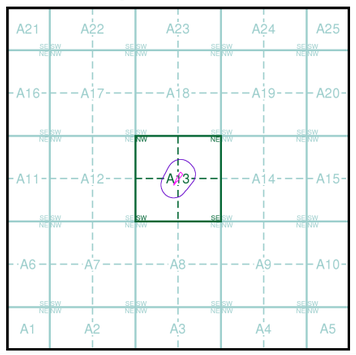
Map Name(s) and Date(s)



Historical Map - Slice A



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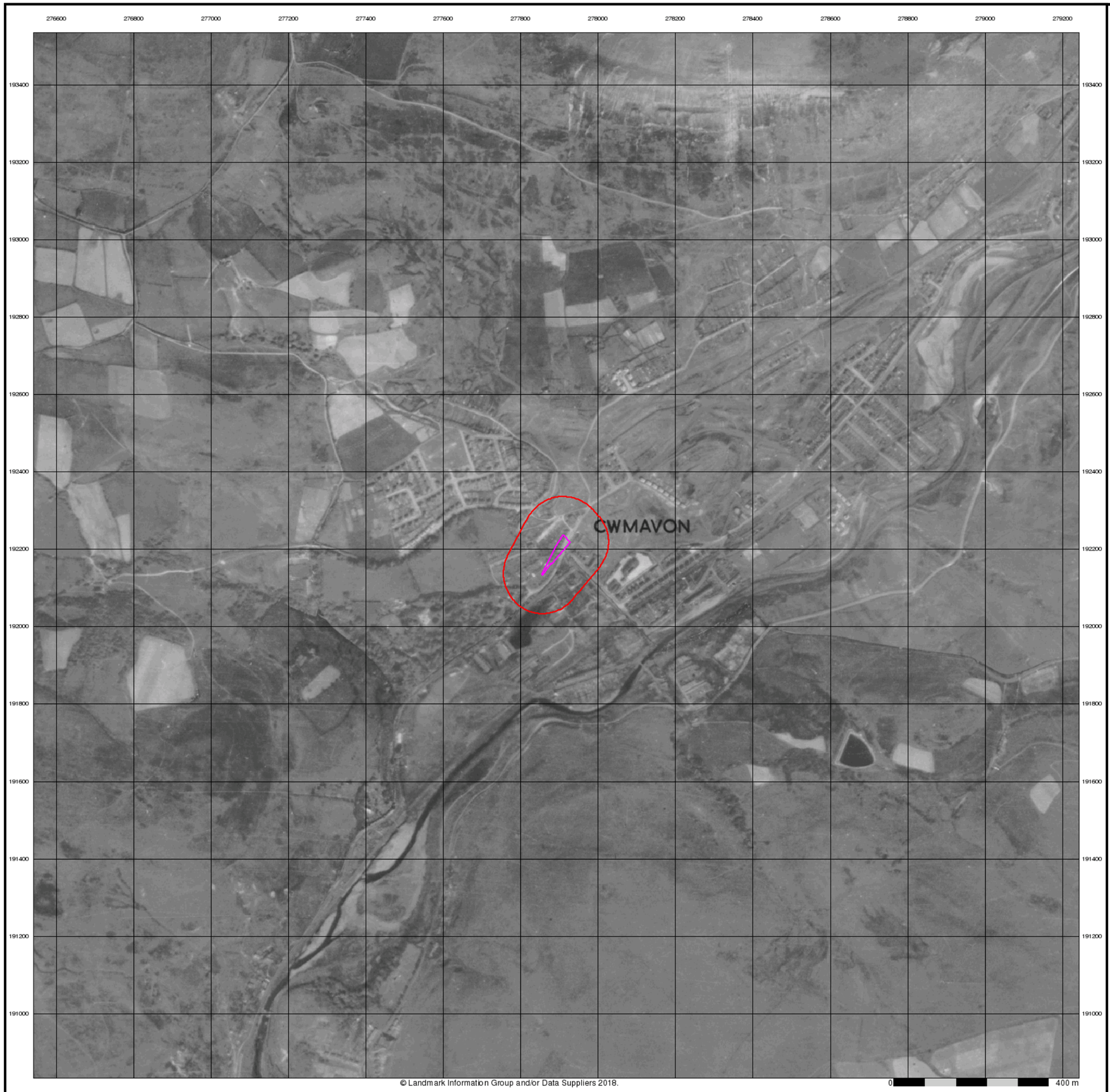

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Historical Aerial Photography

Published 1949

Source map scale - 1:10,560

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

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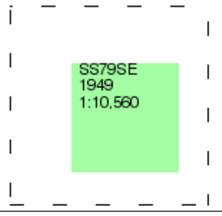
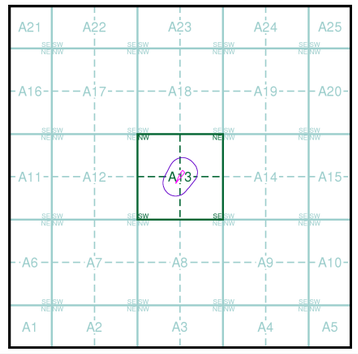
Map Name(s) and Date(s)



Historical Aerial Photography - Slice A



BRITISH LIBRARY

Order Details

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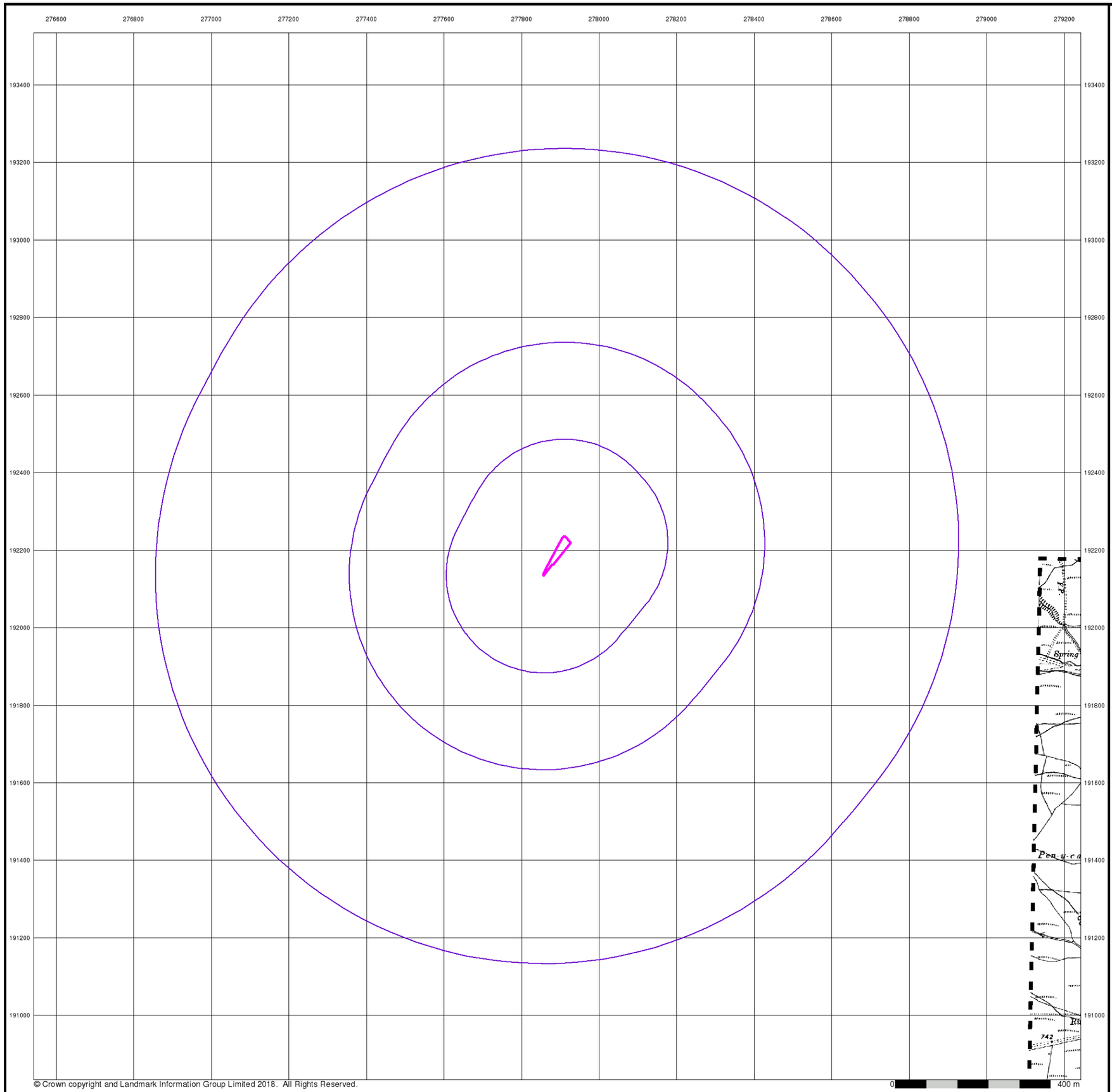

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Glamorganshire

Published 1951

Source map scale - 1:10,560

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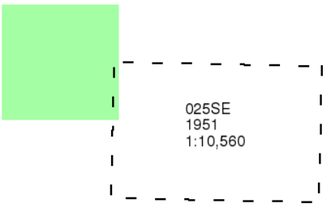
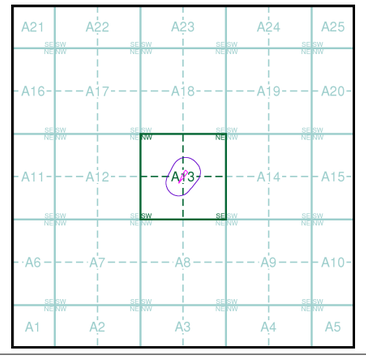
Map Name(s) and Date(s)



Historical Map - Slice A



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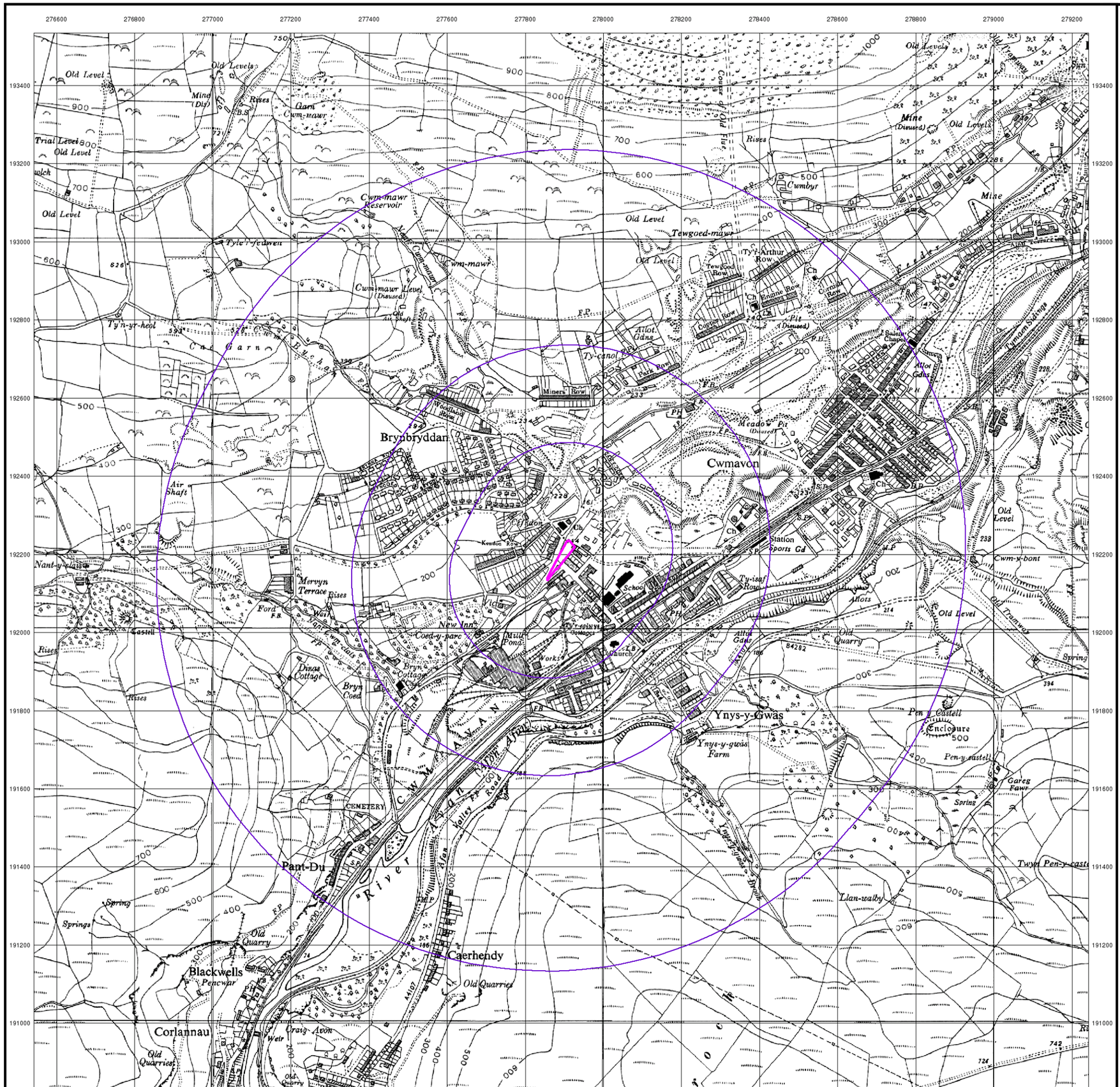

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Ordnance Survey Plan

Published 1964

Source map scale - 1:10,000

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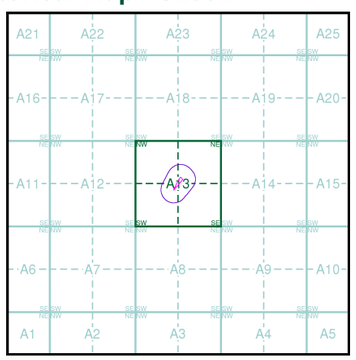
Map Name(s) and Date(s)

SS79SE
1964
1:10,560

Historical Map - Slice A



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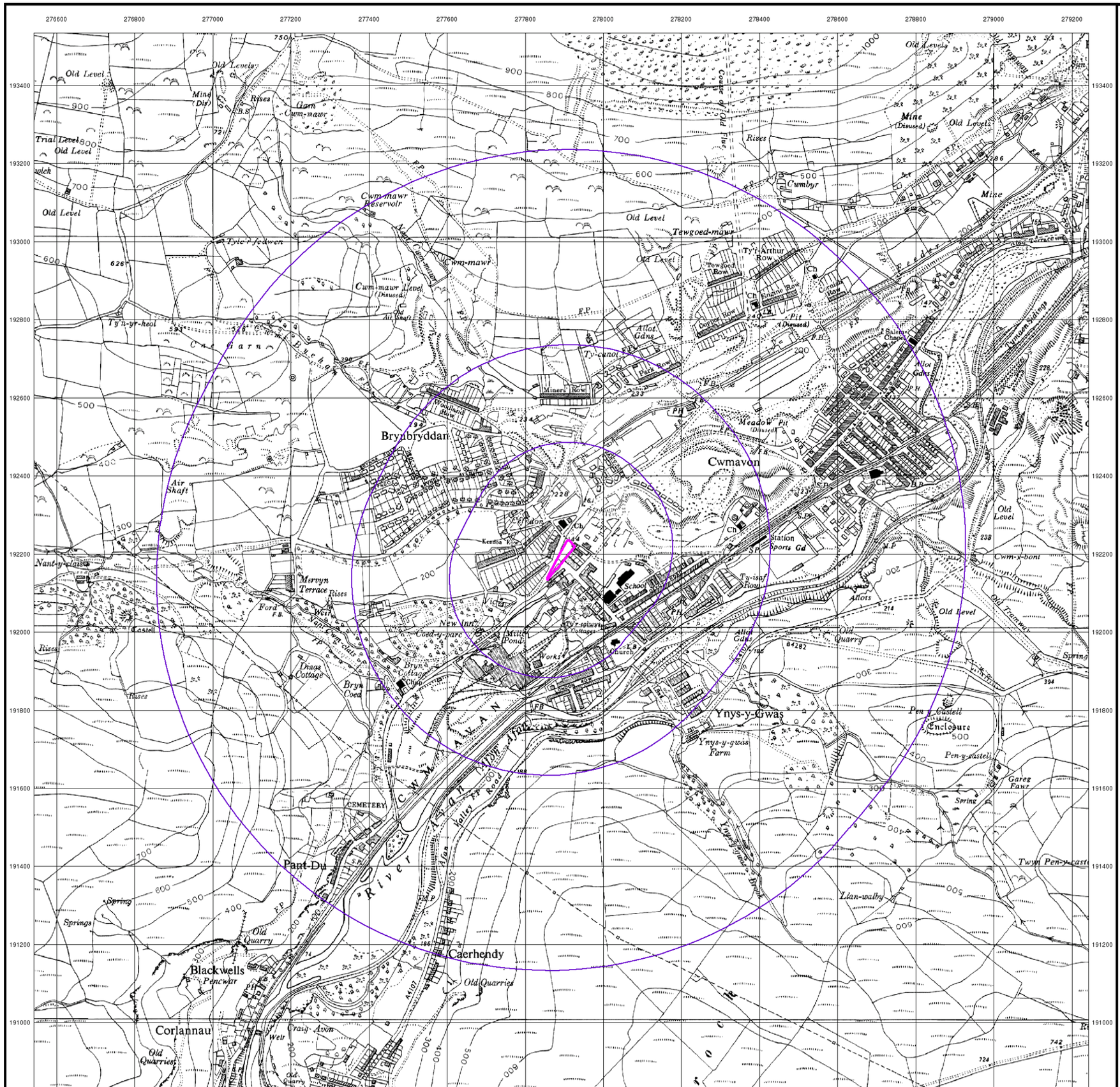
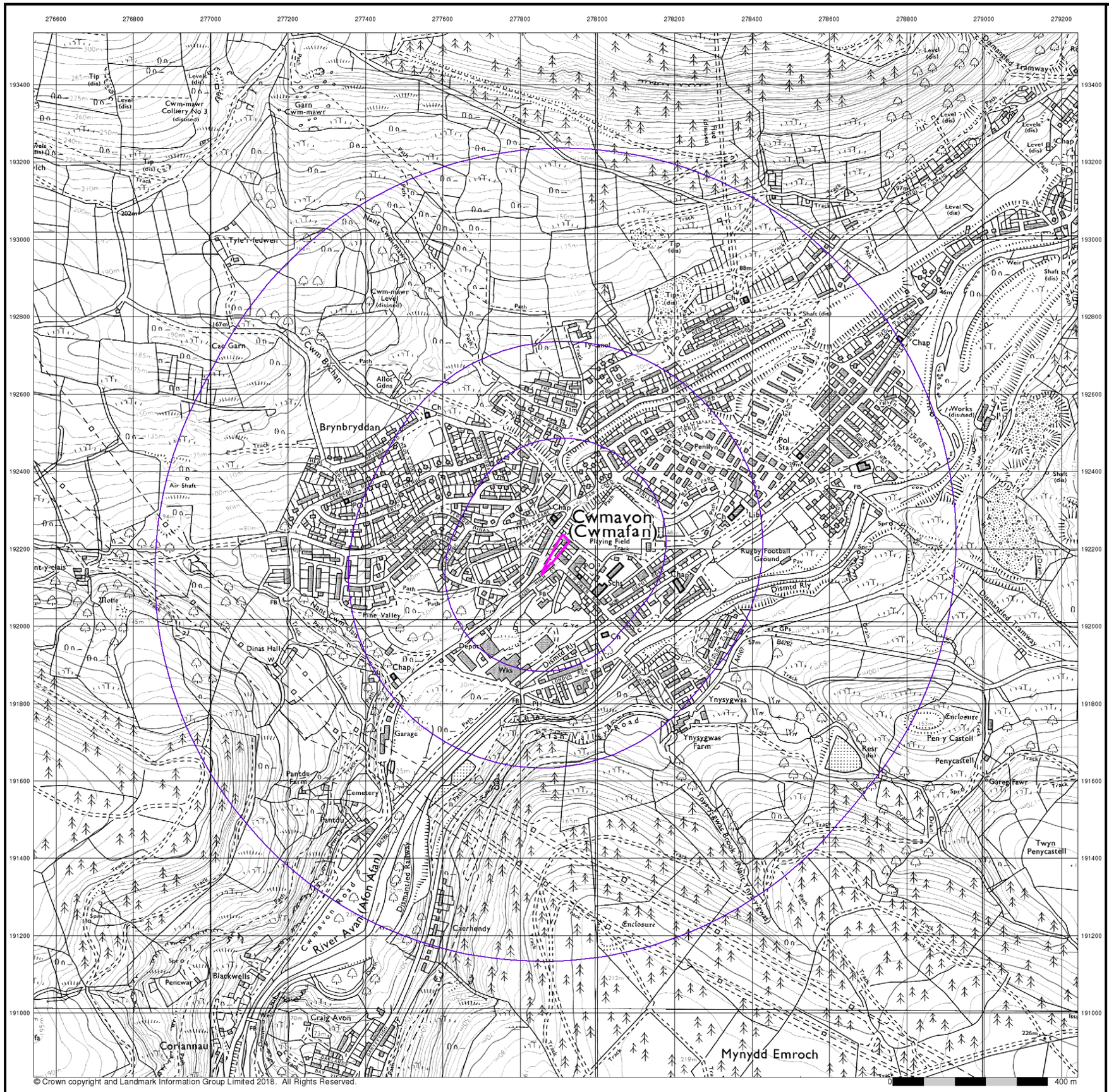

Brynbryddan
Cwmavon
Ynys-y-Gwas
Pant-Du
Caerhendy
Blackwells
Corlannau
River Avon
Cwm-mawr Reservoir
Cwm-mawr Level (Disused)
Ty'n-yr-heol
Tyle'r Fedwen
Tewgoed-mawr
Ty'r Arthur Row
Miners' Row
Meadow Pit (Disused)
Mine (Disused)
Old Level
Old Levels
Trial Level
Old Quarry
Old Quarries
Air Shaft
Station Sports Gd
Ynys-y-gwas Farm
Pen-y-castell Enclosure
Llan-walby
Twyn Pen-y-castell
Cwm-y-bont
Nant-y-glasse
Merwyn Terrace
Bryn Cottage
Coed-y-parc
Mill Pond
Works
Church
Ty-isaf Row
Allots
Springs
Spring
CEMETERY
Valley Fp Road
Craig Avon
Ford
Weir
Rises
Mine
Cumbyr
Terrace
Sidings
Garej Fawr
Ty-canol
Allot. Gdns
Pen Row
Coppice Row
Tow Goed Row
Crown Row
Ebenezer Row
Salem Chapel
Wellfield Row
Kendoa Row
Old Transway
Old Air Shaft
Old Quarry
Old Quarries
Old Level
Mine (Disused)
Pit (Disused)
Pit
Allot Gdns
Old Quarry
Old Quarries
Old Level
Old Levels
Old Level
Old Level
Old Level



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Ordnance Survey Plan

Published 1980

Source map scale - 1:10,000

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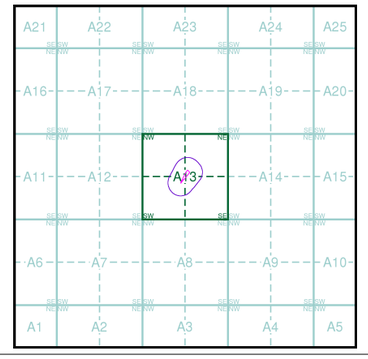
Map Name(s) and Date(s)

SS79SE
1980
1:10,000

Historical Map - Slice A



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
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Site Details

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Landmark INFORMATION GROUP

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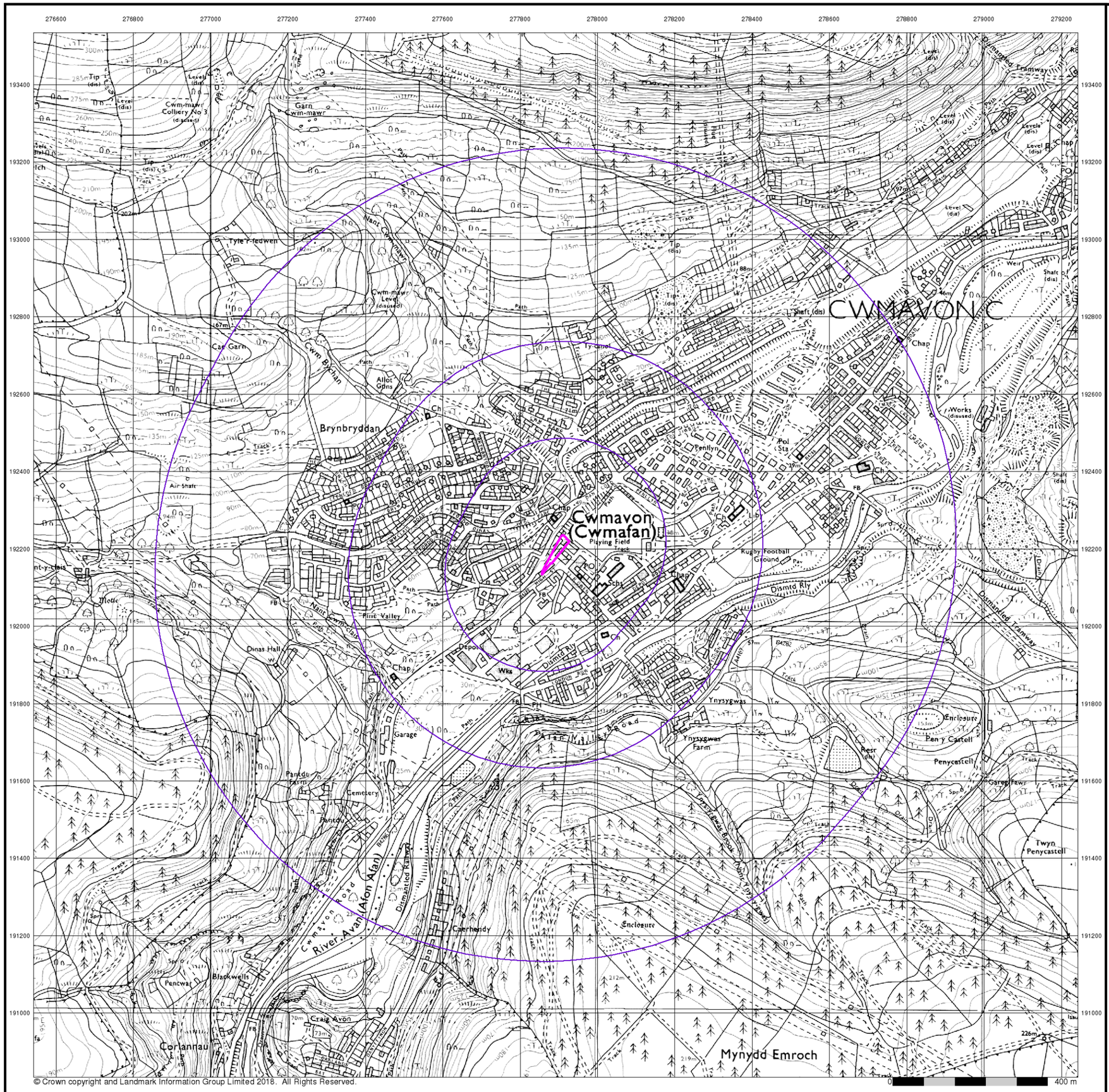

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Ordnance Survey Plan

Published 1996

Source map scale - 1:10,000

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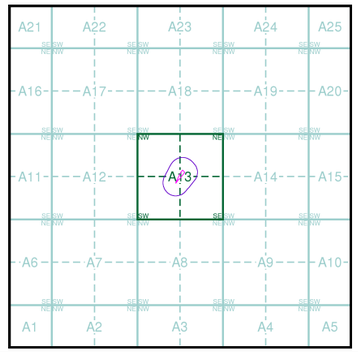
Map Name(s) and Date(s)

SS79SE
1996
1:10,000

Historical Map - Slice A



Order Details

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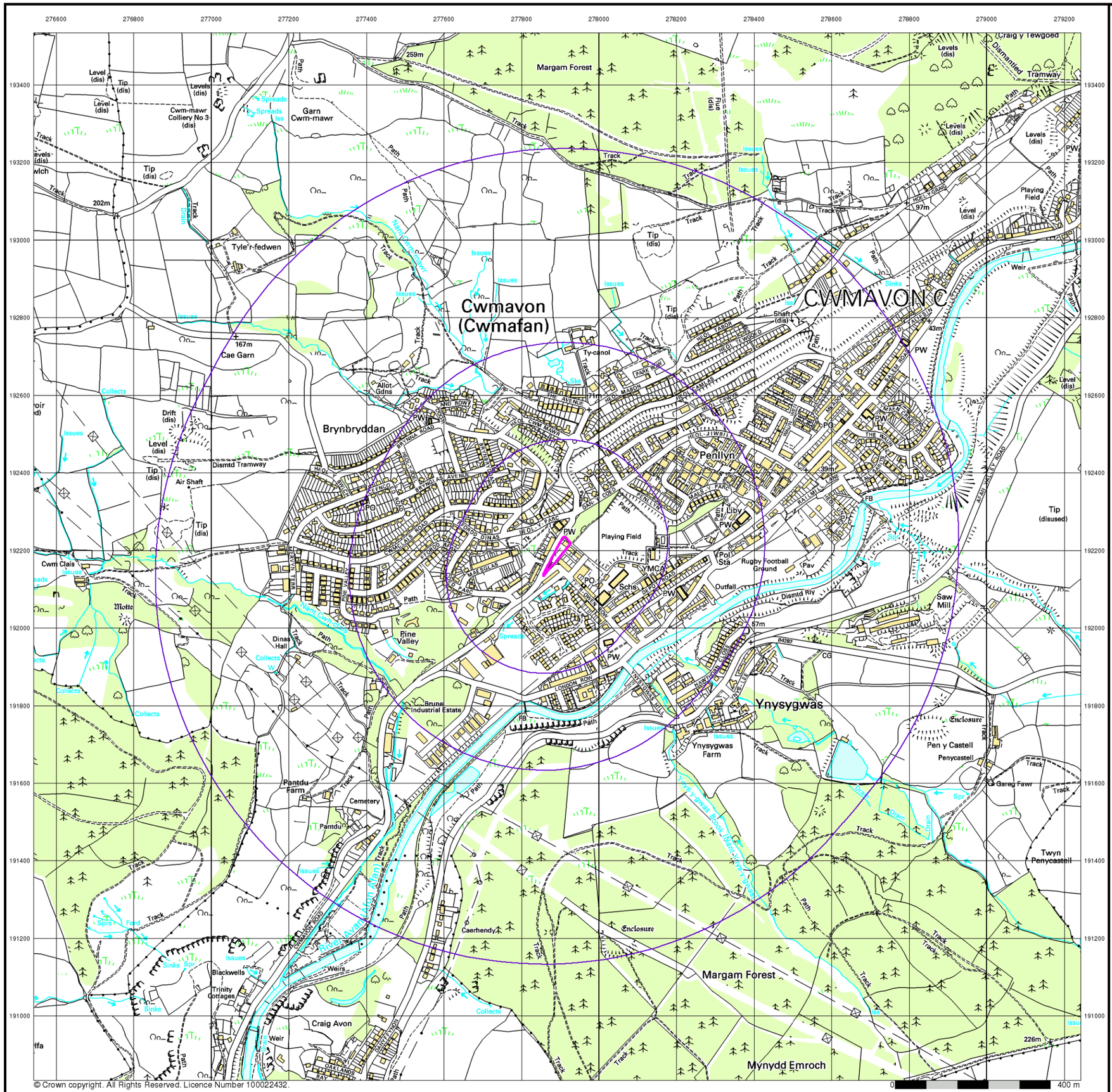

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10k Raster Mapping

Published 1999

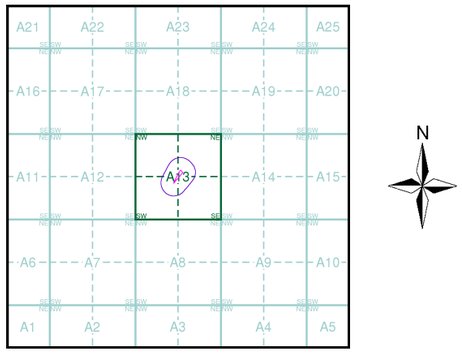
Source map scale - 1:10,000

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)

SS79SE
1999
1:10,000

Historical Map - Slice A



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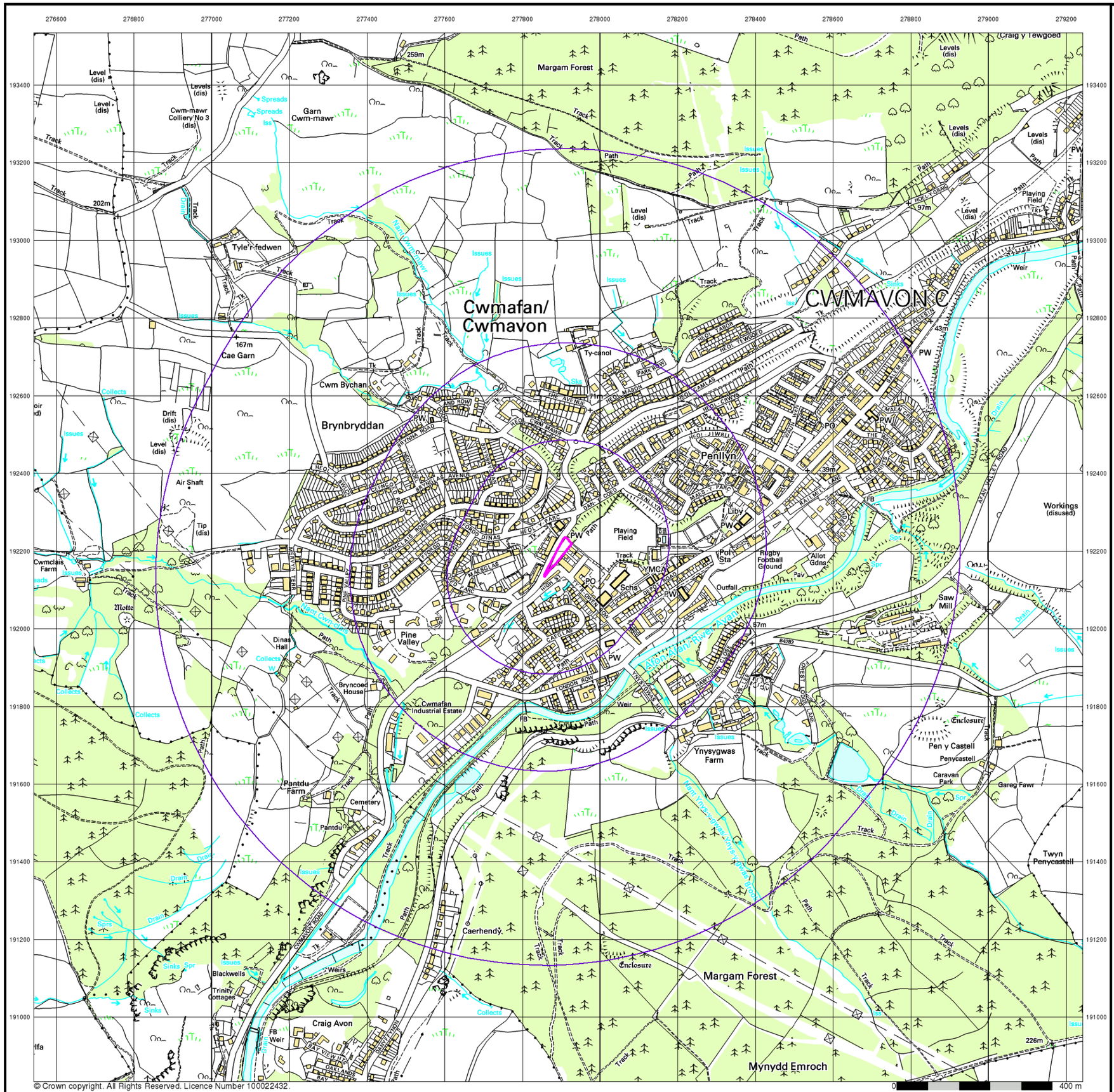

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10k Raster Mapping

Published 2006

Source map scale - 1:10,000

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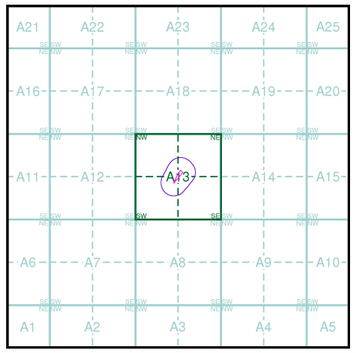
Map Name(s) and Date(s)

SS79SE
2006
1:10,000

Historical Map - Slice A



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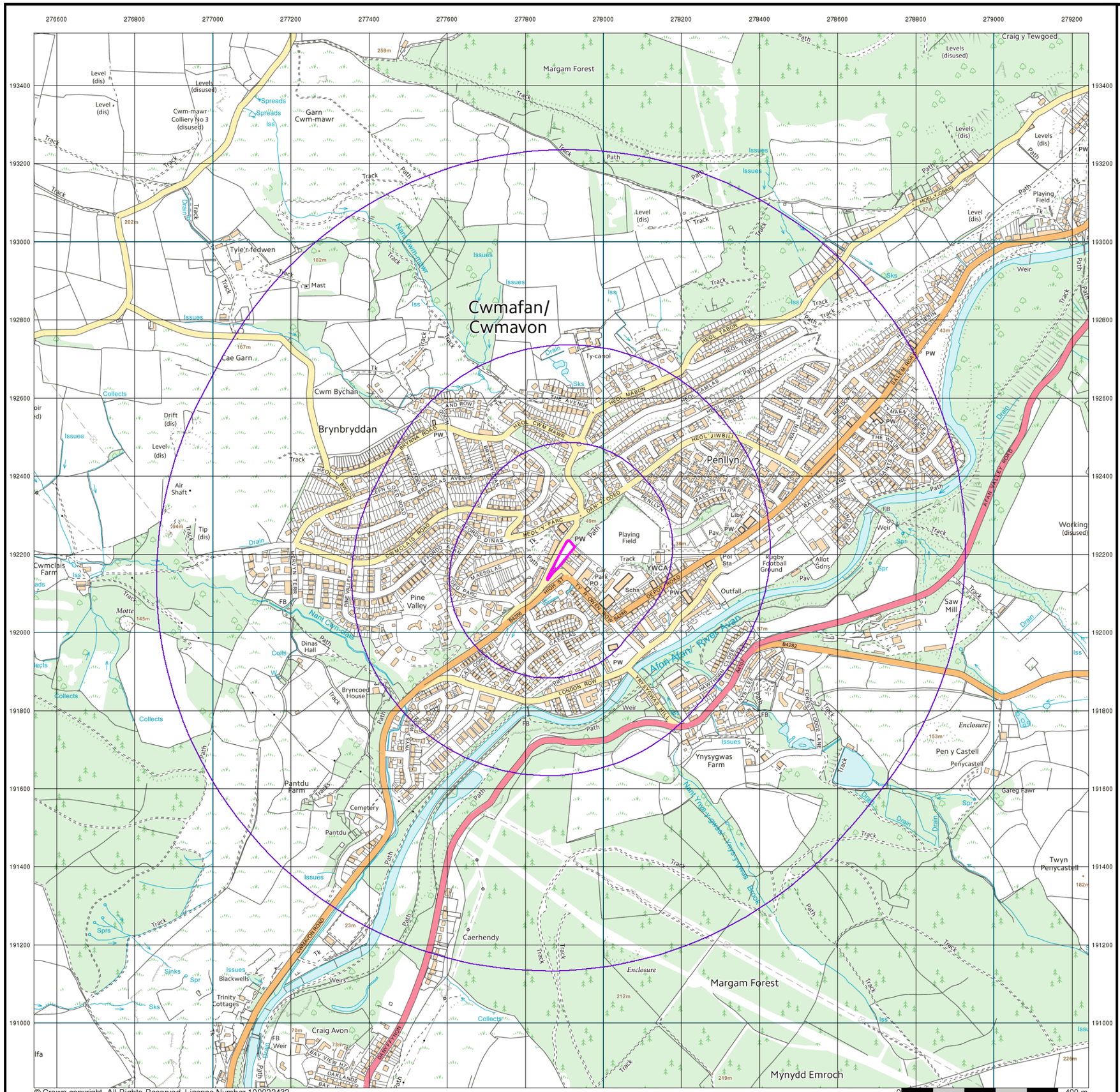
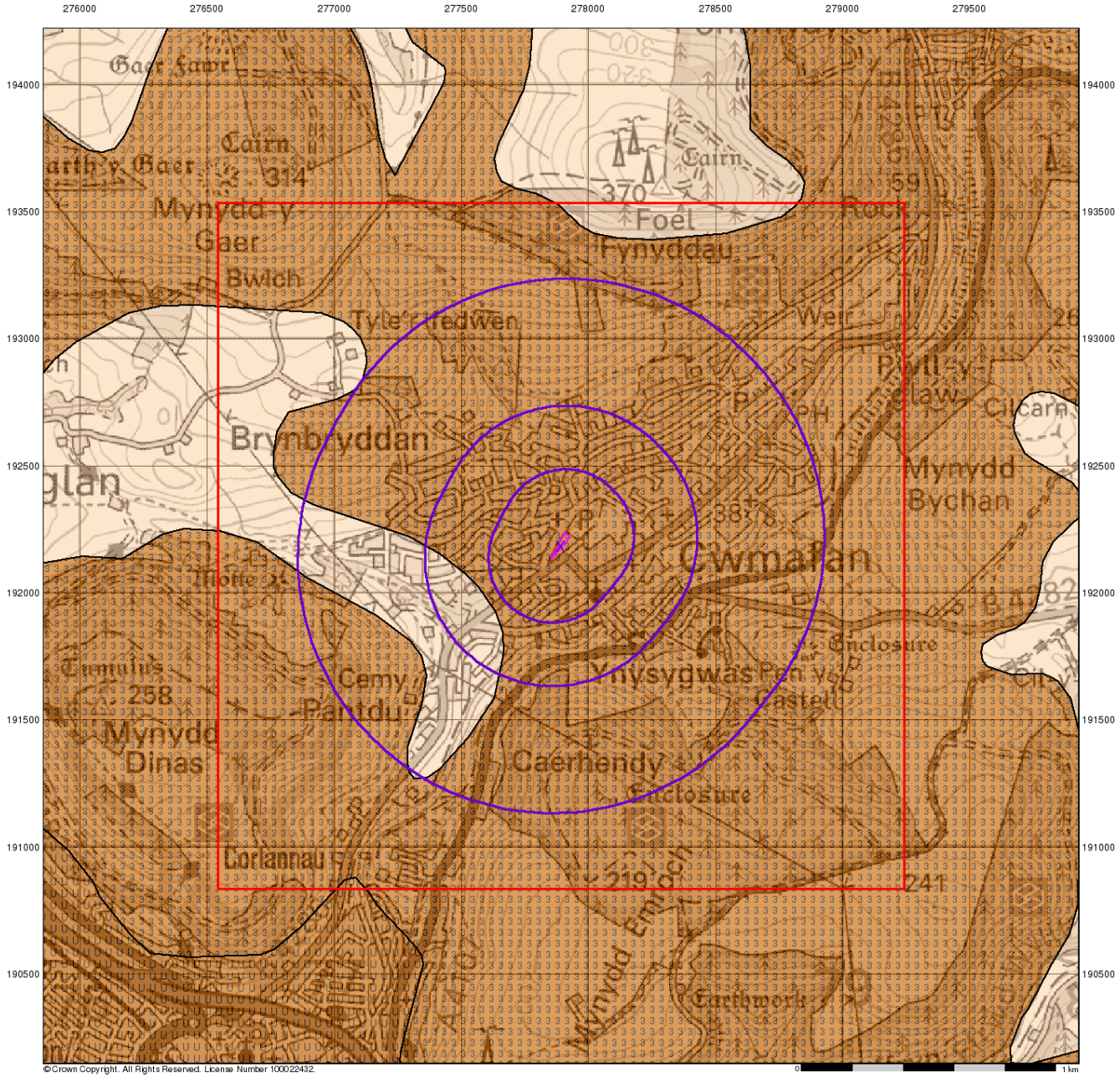

Cwmafan/
Cwmavon
Margam Forest
Brynbryddan
Penllyn
Pine Valley
Craig Avon
Caerhendy
Mynydd Emroch
Pen y Castell
Penycastell
Ynysygwas Farm
Pantdu Farm
Cae Garn
Cwm Bychan
Tyle'r-fedwen
Garn Cwm-mawr
Cwm-mawr Colliery No 3 (disused)
Craig y Tewgoed
Working (disused)
Twyn Penycastell
Saw Mill
Rugby Football Ground
Playing Field
Nant Cwmafan
Afon Afan/ Nant Rhyd-y-Rhwyn/ Afon Avan
Nant Ynysygwas/ Nant Ynys-y-rhos/ Afon Ynysygwas
Nant Cwm-clais
Margam Forest
Enclosure
Weir
Mast
Motte
Tip (disd)
Air Shaft
Cemetery
Dinas Hall
Bryncoed House
Trinity Cottages
Blackwells
Cwmclais Farm
Ty-canol
Gareg Fawr
Outfall
YWCA
Pav
Libry
Pol Sta
Allot Gdns
FB
Sks
Spr
Sprs
Tk
Path
Track
Drain
Issues
Collects
Level (dis)
Levels (disused)
Spreads
Iss
Drift (dis)
Sinks
Colls
Weirs
Enclosure
Car Park
PO
Schs
PW
B4282
A4107
A4229
A48
A4063
A4107
A4229
A48
A4063
HEOL TABOR
HEOL TEWGOED
HEOL MABOR
HEOL CAMLAS
HEOL CRWYS
HEOL PWLL MAWR
HEOL JIWBILI
HEOL Y PARC
HEOL DINAS
HEOL GLANYNANT
HEOL GLANYRAFON
HEOL CWMCLAIS
HEOL Y CWM
HEOL Y GAER
HEOL Y GRAIG
HEOL Y FELIN
HEOL Y FELIN
HEOL Y GAER
HEOL Y GRAIG
THE AVENUE
THE WAIN
MAES PARC
RAILWAY TERRACE
RAILWAY LANE
LONDON ROW
HIGH ST
BRYNNA ROAD
BRYNLLAS AVENUE
BRYNLLAS ROAD
PENLLYN
PENLLYN TERRACE
PENLLYN ROAD
PENLLYN VALLEY
FERNDALE ROAD
FERNDALE TERRACE
DERI VIEW ROAD
DERI VIEW TERRACE
DERI ROAD
DERI TERRACE
DERI LANE
DERI CLOSE
DERI PARK
DERI VALLEY
DERI VIEW



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Groundwater Vulnerability

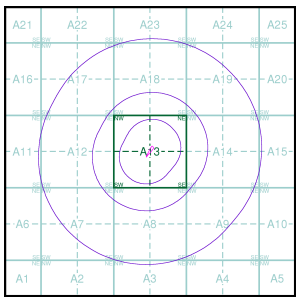
General

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

Agency and Hydrological

Geological Classes	Soil Classes
Major Aquifer (Highly Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Minor Aquifer (Variably Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Non Aquifer (Negligibly Permeable)	
Water or Sea	
Drift Deposit	

Site Sensitivity Context Map - Slice A



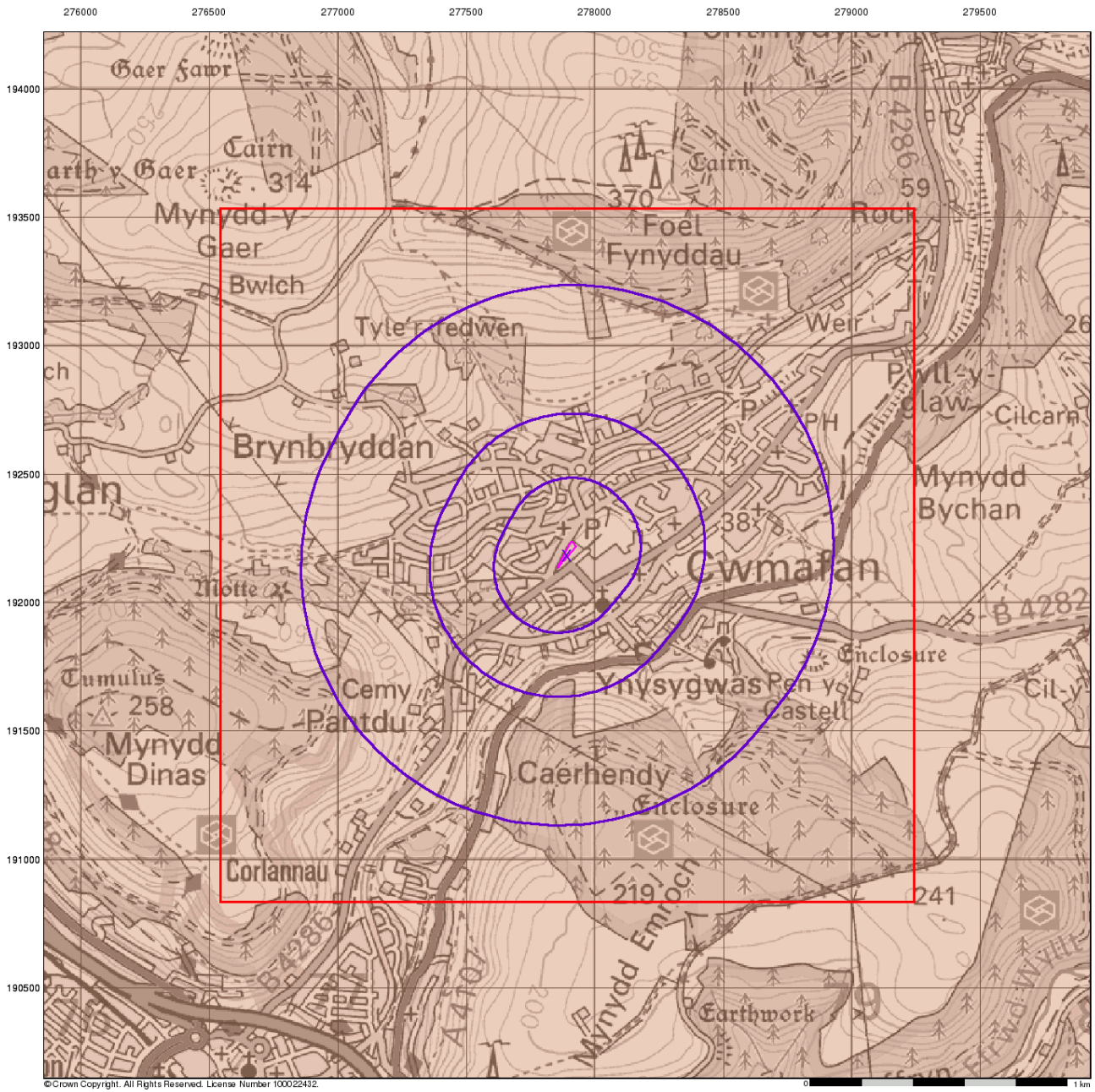
Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG

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



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Bedrock Aquifer Designation

General

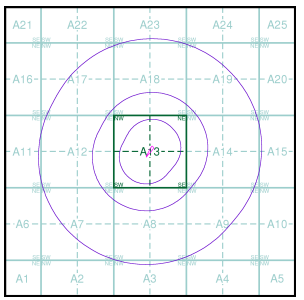
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

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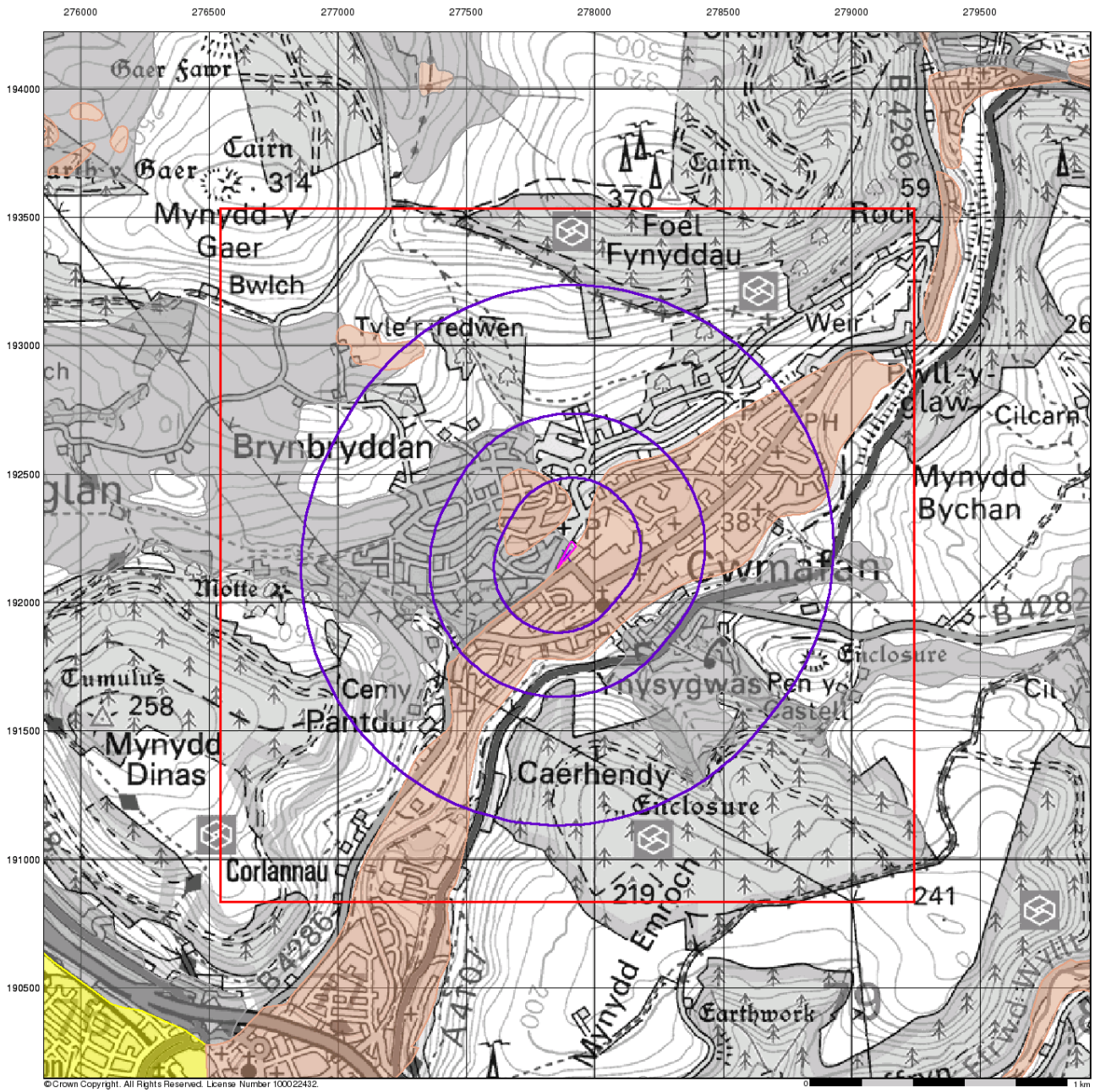

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Superficial Aquifer Designation

General

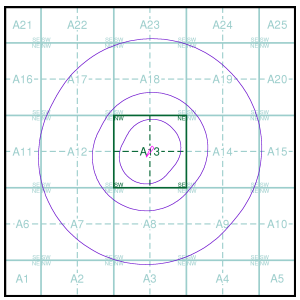
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A

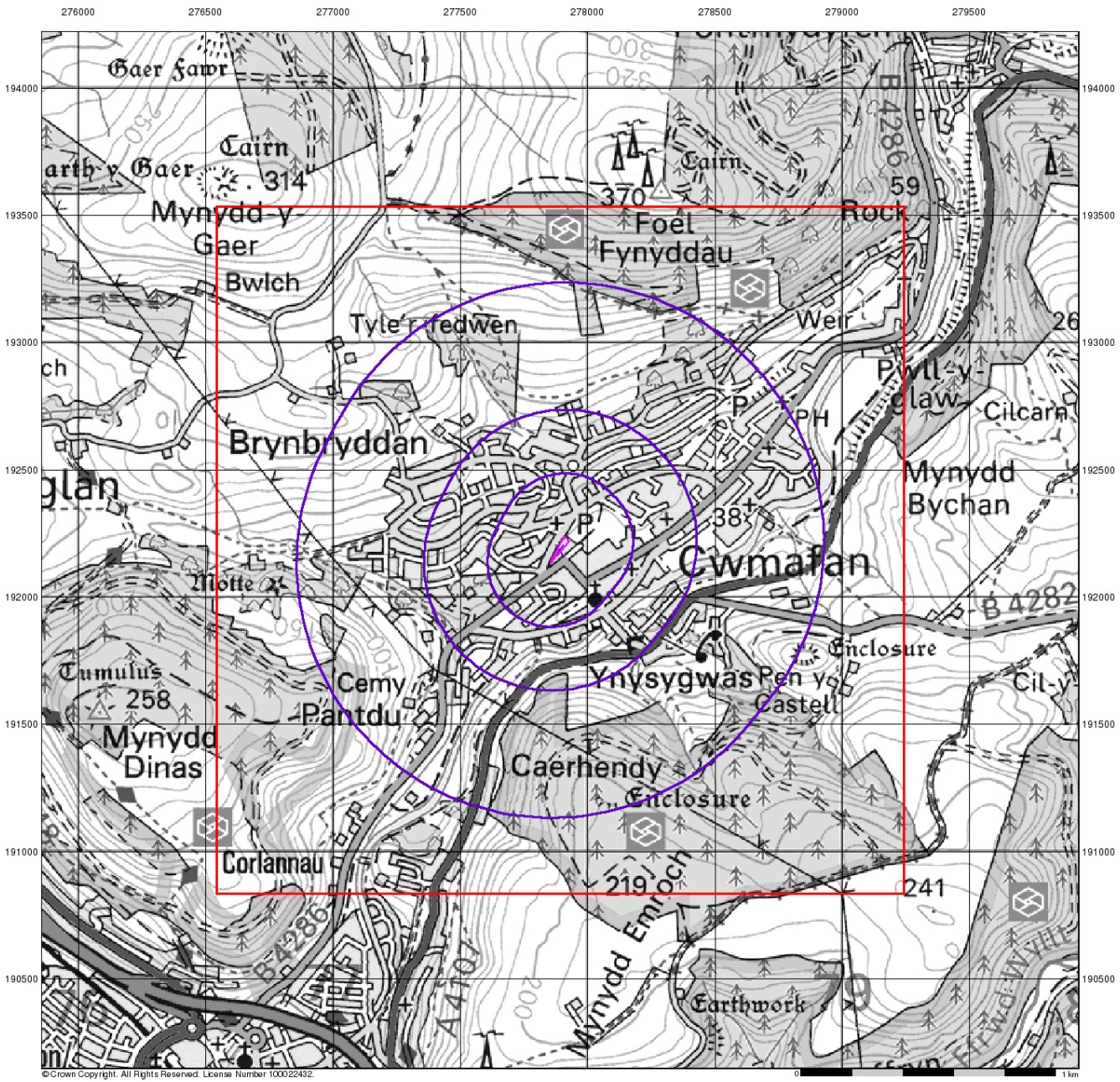


Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG



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Source Protection Zones

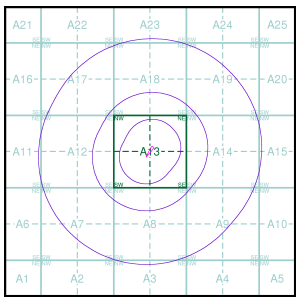
General

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)
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

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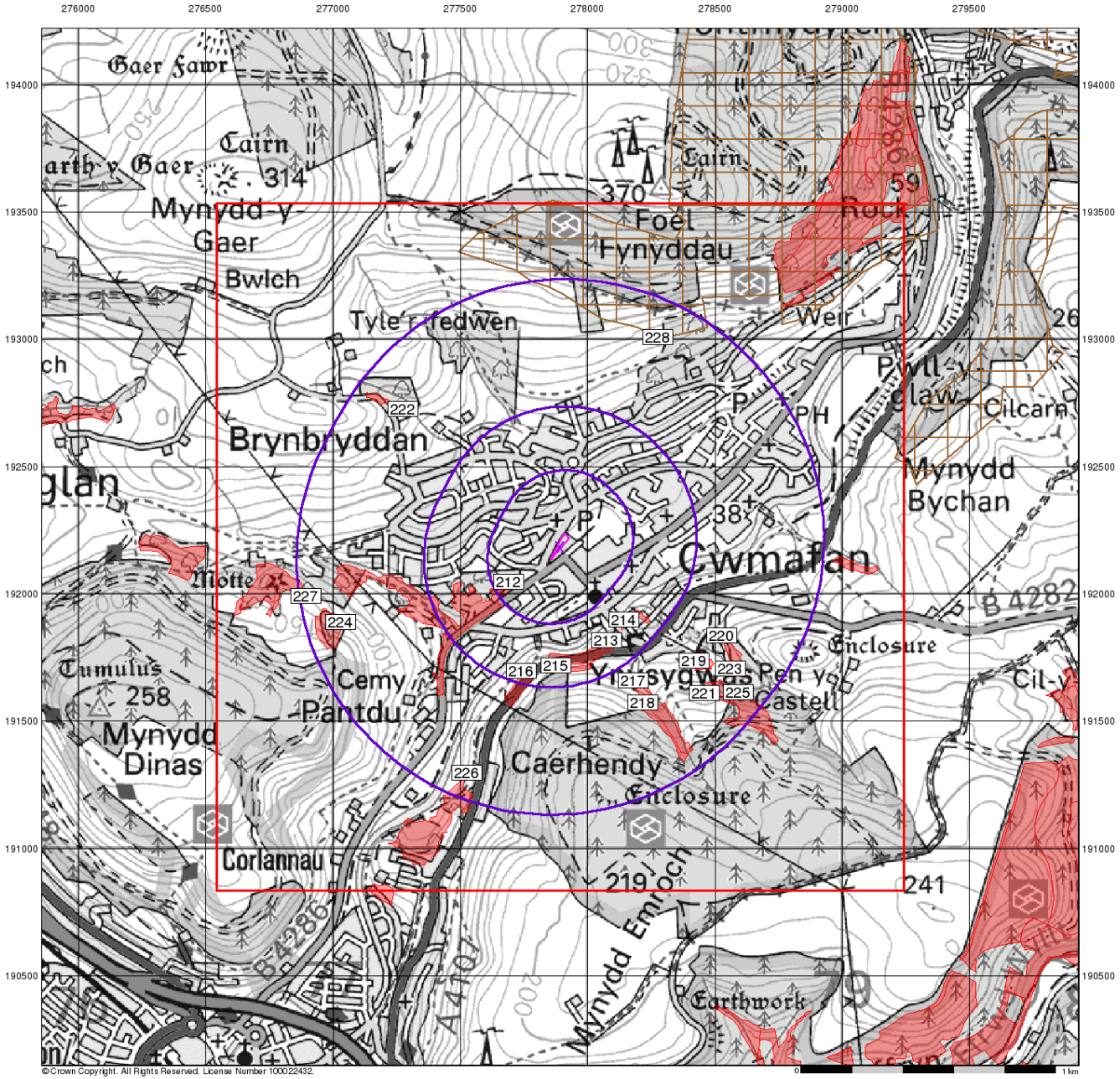

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Sensitive Land Uses

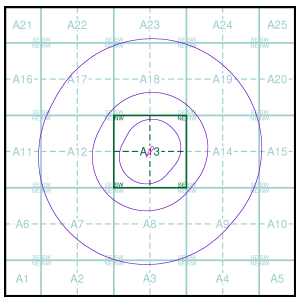
General

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

Sensitive Land Uses

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

Site Sensitivity Context Map - Slice A

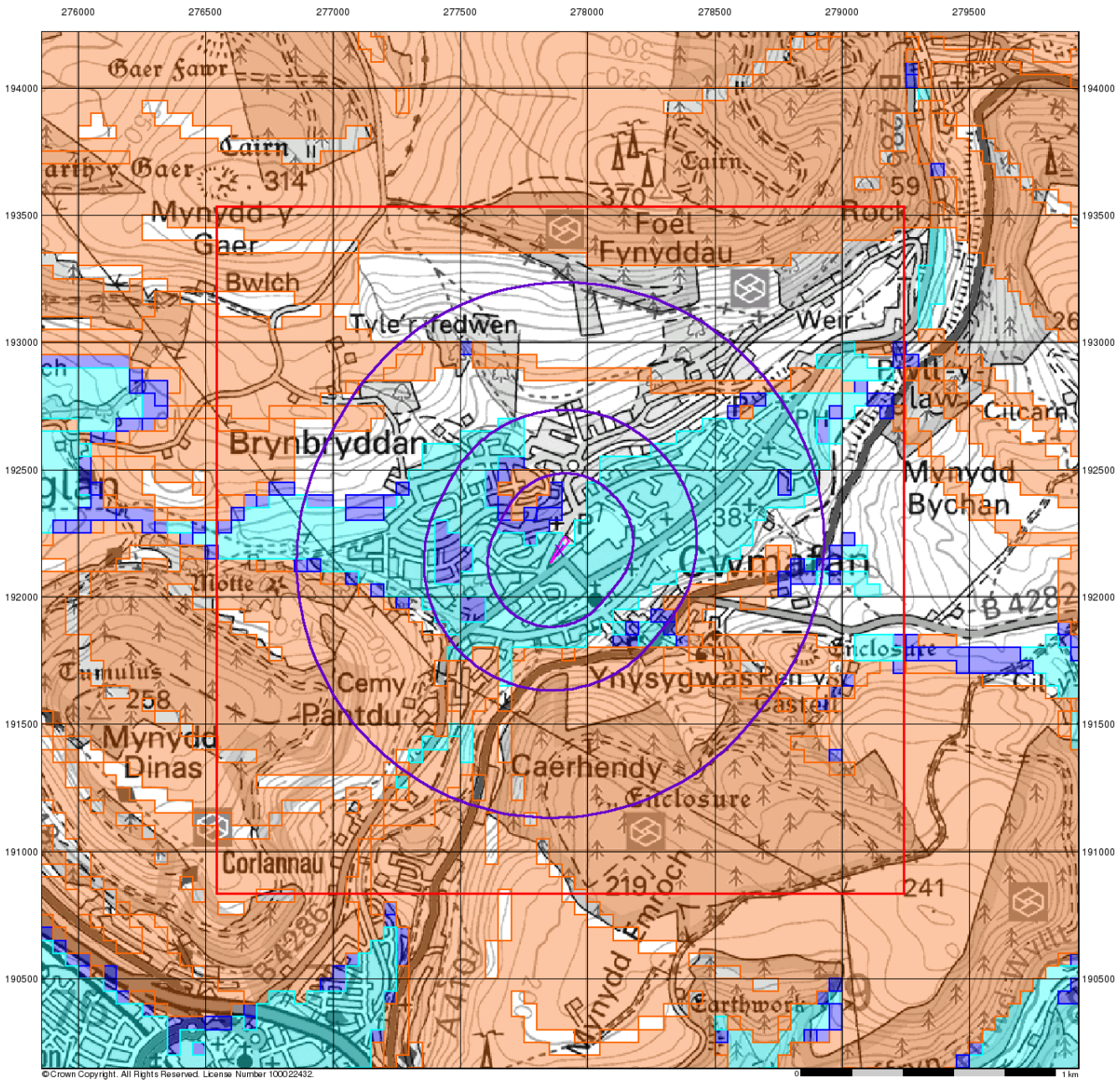


Order Details

Order Number:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

Site Details

, 1, Ty r Owen Terrace, Cwmavon, Port Talbot, SA12 9BG



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BGS Flood GFS Data

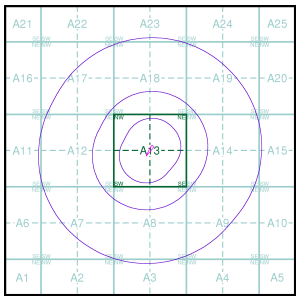
General

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:	158022017_1_1
Customer Ref:	14611
National Grid Reference:	277890, 192180
Slice:	A
Site Area (Ha):	0.17
Search Buffer (m):	1000

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ANNEX B
Risk Assessment Definitions

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

Part 2A was introduced to achieve three overreaching objectives:

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

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

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

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

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

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

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

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

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

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

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

Classification of Consequence

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

Classification of Probability

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

Risk Assessment Matrix

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

Table C Risk Assessment Matrix

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

Description of Risks and Likely Actions

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

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

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

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

ANNEX C
Trial Pit Logs

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Trial Pit No: TP01
Sheet 1 of 1

Project Name: Tabernacle Terrace	Project No: 14611	Co-ords: - Level:	Date: 31/01/2019
Location: Cwmafan		Dimensions: Depth 2.10	Scale: 1:25
Client:			Logged: ADB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.50	ES		0.60			MADE GROUND: Soft to firm, dark brown, gravelly cobbly CLAY. Gravel is fine to coarse, angular to subrounded sandstone, brick and concrete. Contains brick, concrete and occasional metal pipe, glass, ceramic and plastic.
▼				1.30			MADE GROUND: Firm, dark brown, very sandy gravelly CLAY. Gravel is fine to coarse, angular brick and concrete. Contains brick, concrete and occasional slag.
	1.50	D		1.40			MADE GROUND: Flat laid bricks.
				1.80			Firm to stiff, grey green and brown, slightly gravelly CLAY with occasional cobble. Gravel is fine to coarse, subangular to rounded sandstone.
				2.10			(Medium dense), grey brown, clayey SAND and GRAVEL. Sand is fine to coarse grained. Gravel is fine to coarse, subangular to rounded sandstone and mudstone.
							End of Pit at 2.100m

Stability: The sand and gravel deposits are slightly unstable with water ingress.

Remarks: 1. Large groundwater inflow encountered at 1.20m. 2. Density indicator in brackets is based on field judgment and is not in accordance with BS5930:2015 but for guidance only. 3. Trial pit terminated at limit of excavators reach. 4. Trial pit backfilled with arisings.

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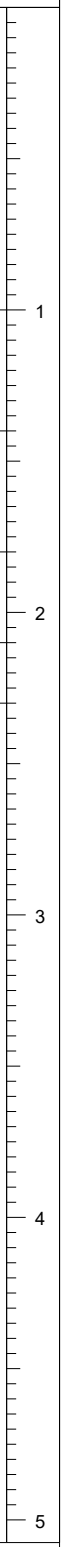
Trial Pit No: TP02
Sheet 1 of 1

Project Name: Tabernacle Terrace	Project No: 14611	Co-ords: - Level:	Date: 31/01/2019
Location: Cwmafan		Dimensions: Depth 2.30	Scale: 1:25
Client:			Logged: ADB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.40	ES					MADE GROUND: (Loose to medium dense), grey brown, ashy clayey gravelly SAND. Gravel is fine to coarse, angular sandstone, brick and concrete. Contains concrete, brick and large building stone.
▼				1.00			(Medium dense), grey, silty SAND. Sand is fine grained.
				1.40			Firm, grey and brown, sandy gravelly CLAY with occasional cobble and boulder. Gravel is fine to coarse, subangular to rounded sandstone and mudstone.
				1.80			(Medium dense), grey brown, slightly clayey SAND and GRAVEL with common cobbles. Gravel is fine to coarse, subangular to rounded sandstone.
				2.10			Stiff, light grey, laminated slightly sandy silty CLAY.
				2.30			End of Pit at 2.300m



Stability: The sand and gravel deposits are slightly unstable with water ingress.

Remarks: 1. Small seepage and groundwater inflow encountered at 1.00m. 2. Density indicator in brackets is based on field judgment and is not in accordance with BS5930:2015 but for guidance only. 3. Trial pit terminated at limit of excavators reach. 4. Trial pit backfilled with arisings.

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Trial Pit No: TP03
Sheet 1 of 1

Project Name: Tabernacle Terrace	Project No: 14611	Co-ords: - Level:	Date: 31/01/2019
Location: Cwmafan		Dimensions: Depth 2.30	Scale: 1:25
Client:			Logged: ADB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30	ES					MADE GROUND: (Medium dense), dark grey brown, clayey sandy GRAVEL with occasional cobble and boulder. Gravel is fine to coarse, angular to subrounded limestone and sandstone. Contains brick and concrete.
	1.00	ES		0.90			PROBABLE REWORKED NATURAL: Firm with occasional soft patches, orange brown and grey, very sandy, slightly gravelly CLAY. Sand is fine to coarse grained. Gravel is fine to coarse, subangular to subrounded sandstone.
				2.30			End of Pit at 2.300m

Stability: Trial pit walls are stable.

Remarks: 1. No groundwater encountered. 2. Density indicator in brackets is based on field judgment and is not in accordance with BS5930:2015 but for guidance only. 3. Trial pit terminated at limit of excavators reach. 4. Trial pit backfilled with arisings.

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Trial Pit No: TP04
Sheet 1 of 1

Project Name: Tabernacle Terrace	Project No: 14611	Co-ords: - Level:	Date: 31/01/2019
Location: Cwmafan		Dimensions: Depth 2.30	Scale: 1:25
Client:			Logged: ADB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30	ES		0.30			MADE GROUND: (Medium dense), dark brown, slightly clayey gravelly SAND. Gravel is fine to coarse, angular brick and concrete. Contains brick and concrete.
▼	0.80	ES					MADE GROUND: (Medium dense to dense), grey and brown, clayey SAND and GRAVEL. Sand is fine to coarse grained. Gravel is fine to coarse, angular sandstone. Contains brick, concrete and large building stone.
	1.50	D		1.50			Soft to firm, grey brown, silty sandy CLAY.
				2.30			End of Pit at 2.300m

1
2
3
4
5

Stability: Trial pit walls are unstable in made ground.

Remarks: 1. Moderate groundwater inflow with hydrocarbon sheen and odour encountered at 0.80m associated with old pipe. 2. Density indicator in brackets is based on field judgment and is not in accordance with BS5930:2015 but for guidance only. 3. Trial pit terminated at limit of excavators reach. 4. Trial pit backfilled with arisings.

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Trial Pit No: TP05
Sheet 1 of 1

Project Name: Tabernacle Terrace	Project No: 14611	Co-ords: - Level:	Date: 31/01/2019
Location: Cwmafan		Dimensions: Depth 2.30	Scale: 1:25
Client:			Logged: ADB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.60	ES					MADE GROUND: (Medium dense to dense), dark brown, slightly clayey sandy GRAVEL. Gravel is fine to coarse, angular limestone and slag. Contains brick, concrete, building stone and slag.
				1.30			
	1.50	D					Firm with soft patches, light grey and brown, very sandy CLAY. Sand is fine to coarse grained.
				2.30			End of Pit at 2.300m

Stability: Trial pit walls are stable.

Remarks: 1. Small groundwater inflow encountered at 1.20m. 2. Density indicator in brackets is based on field judgment and is not in accordance with BS5930:2015 but for guidance only. 3. Trial pit terminated at limit of excavators reach. 4. Trial pit backfilled with arisings.

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Trial Pit No: TP06
Sheet 1 of 1

Project Name: Tabernacle Terrace	Project No: 14611	Co-ords: - Level:	Date: 31/01/2019
Location: Cwmafan		Dimensions: Depth 2.30	Scale: 1:25
Client:			Logged: ADB

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.30			MADE GROUND: Soft, brown, gravelly CLAY with common cobbles and boulders. Gravel is fine to coarse, angular sandstone. Contains brick, concrete, building stone and occasional glass bottle.
	0.60	ES		0.90			MADE GROUND: (Medium dense), red brown and grey, slightly clayey very sandy GRAVEL. Gravel is fine to coarse, angular limestone and sandstone. Contains brick and concrete.
▼							Firm, yellow brown, very sandy slightly gravelly CLAY. Sand is fine to coarse grained. Gravel is fine to coarse, subangular to subrounded sandstone.
							... becoming very gravelly and cobbles and boulders become common below 1.50m.
				2.30			End of Pit at 2.300m

Stability: Trial pit walls are slightly unstable in the made ground:

Remarks: 1. Small groundwater encountered at 0.90m. 2. Density indicator in brackets is based on field judgment and is not in accordance with BS5930:2015 but for guidance only. 3. Trial pit terminated at limit of excavators reach. 4. Trial pit backfilled with arisings.

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Trial Pit Log

Trial Pit No: TP07
Sheet 1 of 1

Project Name: Tabernacle Terrace	Project No: 14611	Co-ords: -	Date: 08/03/2024
Location: Cwmafan		Dimensions: 2.00 × 0.60, Depth 2.10	Scale: 1:25
Client:			Logged: JM

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.40	ES					MADE GROUND (Loose) grass over dark greyish brown ashy sandy silty angular to subrounded fine to coarse sandstone, mudstone, brick, ceramic, slag and metal fragment GRAVEL.
				0.60			
	0.80	ES		0.70			MADE GROUND (Medium dense) grey and brown clayey sandy angular to subrounded fine to coarse limestone, sandstone and concrete fragment GRAVEL. PROBABLE REWORKED NATURAL Medium dense locally loose orangish brown sandy clayey subrounded to rounded fine to coarse sandstone and quartzite GRAVEL.
				1.40			Firm to stiff orangish brown sandy gravelly CLAY. Gravels are subrounded and rounded fine to coarse sandstone.
				2.10			End of Pit at 2.100m

1 2 3 4 5

Stability: Stable

Remarks: Trial Pit terminated at 2.10m depth due to reach of excavator on slope, upon completion, trial pit backfilled with materials arising.

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Trial Pit Log

Trial Pit No: TP08
Sheet 1 of 1

Project Name: Tabernacle Terrace	Project No: 14611	Co-ords: -	Date: 08/03/2024
Location: Cwmafan		Dimensions: Depth 1.80 (1.80 × 0.70)	Scale: 1:25
Client:			Logged: JM

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.20	ES		0.30			MADE GROUND (Loose) grass over dark greyish brown ashy sandy silty angular to subrounded fine to coarse sandstone, mudstone, brick, ceramic, slag and metal fragment GRAVEL.
				0.90			PROBABLE REWORKED NATURAL Medium dense locally loose orangish brown sandy clayey subrounded to rounded fine to coarse sandstone and quartzite GRAVEL.
	1.00	ES					Medium dense greyish brown clayey SAND and GRAVEL. Sand is fine to coarse. Gravels are subangular to rounded fine to coarse mudstone and sandstone.
				1.80			End of Pit at 1.800m

Stability: Stable

Remarks: Trial Pit terminated at 1.80m depth due to reach of excavator on slope, upon completion, trial pit backfilled with materials arising.

ANNEX D
Borehole Logs

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Borehole No.
BH01
Sheet 1 of 2

Project Name:	Tabernacle Terrace	Project No: 14611	Co-ords: 277889E - 192182N	Hole Type RO
Location:	Cwmafan		Level:	Scale 1:100
Client:			Dates: 01/02/2019 -	Logged By Apex

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
								Fill (Drillers Description)
				1.20				Gravelly CLAY (Drillers Description)
▼								
▼				7.50				MUDSTONE and SANDSTONE (Drillers Description)

Remarks: 1. Borehole cased to 8.50m. 2. Groundwater encountered at 6.50m and 7.50m. 3. Description is provided by the drillers based on the arisings at the surface. 4. Borehole terminated at scheduled depth 5. Borehole backfilled with arisings. 6. Grid references are approximate and were obtained online

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Borehole No.
BH01
Sheet 2 of 2

Project Name:	Tabernacle Terrace	Project No: 14611	Co-ords:	277889E - 192182N	Hole Type RO
Location:	Cwmafan		Level:		Scale 1:100
Client:			Dates:	01/02/2019 -	Logged By Apex

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
								MUDSTONE and SANDSTONE (Drillers Description)
				40.00				End of Borehole at 40.000m

Remarks: 1. Borehole cased to 8.50m. 2. Groundwater encountered at 6.50m and 7.50m. 3. Description is provided by the drillers based on the arisings at the surface. 4. Borehole terminated at scheduled depth 5. Borehole backfilled with arisings. 6. Grid references are approximate and were obtained online

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Borehole No.
BH02
Sheet 1 of 2

Project Name:	Tabernacle Terrace	Project No: 14611	Co-ords: 277899E - 192199N	Hole Type RO
Location:	Cwmafan		Level:	Scale 1:100
Client:			Dates: 31/01/2019 -	Logged By Apex

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
								Fill (Drillers Description)
				2.00				Gravelly CLAY (Drillers Description)
▼								
				9.50				MUDSTONE and SANDSTONE (Drillers Description)
▼								
				16.50				COAL (Drillers Description)
				17.50				MUDSTONE and SANDSTONE (Drillers Description)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Remarks: 1. Borehole cased to 10.00m. 2. Groundwater encountered at 7.00m and 10.00m. 3. Description is provided by the drillers based on the arisings at the surface. 4. Borehole terminated at scheduled depth 5. Borehole backfilled with arisings. 6. Grid references are approximate and were obtained online

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Borehole No.
BH02
Sheet 2 of 2

Project Name:	Tabernacle Terrace	Project No: 14611	Co-ords: 277899E - 192199N	Hole Type RO
Location:	Cwmafan		Level:	Scale 1:100
Client:			Dates: 31/01/2019 -	Logged By Apex

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
				20.30				MUDSTONE and SANDSTONE (Drillers Description)
								COAL (Drillers Description)
				21.00				MUDSTONE and SANDSTONE (Drillers Description)
				37.00				End of Borehole at 37.000m

Remarks: 1. Borehole cased to 10.00m. 2. Groundwater encountered at 7.00m and 10.00m. 3. Description is provided by the drillers based on the arisings at the surface. 4. Borehole terminated at scheduled depth 5. Borehole backfilled with arisings. 6. Grid references are approximate and were obtained online

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Borehole No.
BH03
Sheet 1 of 2

Project Name:	Tabernacle Terrace	Project No: 14611	Co-ords: 277906E - 192211N	Hole Type RO
Location:	Cwmafan		Level:	Scale 1:100
Client:			Dates: 01/02/2019 -	Logged By Apex

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
								Fill (Drillers Description)
				1.40				Gravelly CLAY (Drillers Description)
▼				7.00				GRAVEL (Drillers Description)
▼				7.90				MUDSTONE and SANDSTONE (Drillers Description)

Remarks: 1. Borehole cased to 8.50m. 2. Groundwater encountered at 6.00m and 8.00m. 3. Description is provided by the drillers based on the arisings at the surface. 4. Borehole terminated at scheduled depth 5. Borehole backfilled with arisings. 6. Grid references are approximate and were obtained online

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Borehole No.
BH03
Sheet 2 of 2

Project Name:	Tabernacle Terrace	Project No: 14611	Co-ords: 277906E - 192211N	Hole Type RO
Location:	Cwmafan		Level:	Scale 1:100
Client:			Dates: 01/02/2019 -	Logged By Apex

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
								MUDSTONE and SANDSTONE (Drillers Description)
				22.60				COAL (Drillers Description)
				23.60				MUDSTONE (Drillers Description)
				25.10				COAL (Drillers Description)
				25.80				MUDSTONE and SANDSTONE (Drillers Description)
				40.00				End of Borehole at 40.000m

Remarks: 1. Borehole cased to 8.50m. 2. Groundwater encountered at 6.00m and 8.00m. 3. Description is provided by the drillers based on the arisings at the surface. 4. Borehole terminated at scheduled depth 5. Borehole backfilled with arisings. 6. Grid references are approximate and were obtained online

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Borehole No.
WS01
Sheet 1 of 1

Project Name: Tabernacle Terrace	Project No: 14611	Co-ords:	Hole Type WLS
Location: Cwmafan		Level:	Scale 1:50
Client:		Dates: 15/02/2019 -	Logged By ADB

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
	1.00	SPT	N=6 (44,4/2,1,1,2)					MADE GROUND: (Loose), brown, clayey sandy GRAVEL. Gravel is fine to coarse, angular to subrounded sandstone and limestone. Contains brick, concrete and occasional slag.
				1.40				
	2.00	SPT	N=0 (0,0/0,0,0,0)					Very soft becoming firm, orange brown and grey, sandy slightly gravelly CLAY. Gravel is fine to coarse, subangular to rounded sandstone. Sand is fine to coarse.
	3.00	SPT	N=13 (1,2/2,4,4,3)	3.00				End of Borehole at 3.000m

Remarks: 1. No groundwater encountered. 2. Density indicator in brackets is based on field judgment and is not in accordance with BS5930:2015 but for guidance only. 3. Gas monitoring point installed in borehole

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Borehole No.
WS02
Sheet 1 of 1

Project Name: Tabernacle Terrace	Project No: 14611	Co-ords:	Hole Type WLS
Location: Cwmafan		Level:	Scale 1:50
Client:		Dates: 15/02/2019 -	Logged By ADB

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
	1.00	SPT	N=0 (0,0/0,0,0,0)					MADE GROUND: Soft to firm, dark brown, ashy sandy gravelly CLAY. Gravel is fine to coarse, angular limestone. Contains brick, concrete and slag.
				1.30				
	2.00	SPT	N=2 (1,0/0,0,2,0)					Very soft, orange brown and grey, very sandy slightly gravelly CLAY. Sand is fine to coarse grained. Gravel is fine to coarse, subangular to rounded sandstone.
				2.50				
	3.00	SPT	N=4 (1,1/2,0,0,2)	3.00				Very soft to soft, brown, sandy CLAY. Sand is fine to coarse grained.
								End of Borehole at 3.000m

Remarks: 1. No groundwater encountered. 2. Density indicator in brackets is based on field judgment and is not in accordance with BS5930:2015 but for guidance only. 3. Gas monitoring point installed in borehole

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Borehole No.
WS03
Sheet 1 of 1

Project Name:	Tabernacle Terrace	Project No: 14611	Co-ords:	Hole Type WLS
Location:	Cwmafan		Level:	Scale 1:50
Client:			Dates: 15/02/2019 -	Logged By ADB

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description
	Depth (m)	Type	Results					
	1.00	SPT	N=11 (2,4/2,2,3,4)	1.10				MADE GROUND: (Loose to medium dense), dark brown, ashy clayey sandy GRAVEL. Gravel is fine to coarse, angular sandstone. Contains brick and slag.
	2.00	SPT	N=22 (6,4/5,5,4,8)					Firm, grey brown, sandy slightly gravelly CLAY with occasional cobble. Gravel is fine to coarse, subangular to rounded sandstone.
	3.00	SPT	N=7 (1,2/4,0,0,3)	2.90 3.00				Soft, grey, sandy gravelly CLAY. Gravel is fine to coarse, subangular to rounded sandstone. End of Borehole at 3.000m

Remarks: 1. No groundwater encountered. 2. Density indicator in brackets is based on field judgment and is not in accordance with BS5930:2015 but for guidance only. 3. Gas monitoring point installed in borehole

ANNEX E
Laboratory Soil Chemical Test Results

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

Final Report

Report No.:	19-08921-1		
Initial Date of Issue:	22-Mar-2019		
Client	Terra Firma (Wales) Ltd		
Client Address:	5 Deryn Court Wharfedale Road Pentwyn Cardiff CF23 7HA		
Contact(s):	alan@terrafrimawales.co.uk		
Project	Tabernacle Terrace, Cwmafan		
Quotation No.:	Q18-15369	**Date Received:**	12-Mar-2019
Order No.:	14611AB	**Date Instructed:**	12-Mar-2019
No. of Samples:	2		
Turnaround (Wkdays):	7	**Results Due:**	20-Mar-2019
Date Approved:	22-Mar-2019		
Approved By:			
Details:	Martin Dyer, Laboratory Manager		

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd				**Chemtest Job No.:**	19-08921	19-08921
Quotation No.: Q18-15369				**Chemtest Sample ID.:**	791933	791934
				Client Sample ID.:	SAMPLE 1	SAMPLE 2
				Sample Type:	SOIL	SOIL
				Top Depth (m):	0.80	0.30
				Date Sampled:	08-Mar-2019	08-Mar-2019
				Time Sampled:	0:00	0:00
				Asbestos Lab:	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
ACM Type	U	2192		N/A	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-
Moisture	N	2030	%	0.020	18	20
Soil Colour	N	2040		N/A	Black	Black
Other Material	N	2040		N/A	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand
pH	M	2010		N/A	7.7	8.0
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	0.61
Cyanide (Complex)	M	2300	mg/kg	0.50	< 0.50	< 0.50
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50
Sulphate (Acid Soluble)	M	2430	%	0.010	0.059	0.10
Arsenic	M	2450	mg/kg	1.0	38	32
Beryllium	U	2450	mg/kg	1.0	1.1	< 1.0
Cadmium	M	2450	mg/kg	0.10	0.20	0.82
Chromium	M	2450	mg/kg	1.0	13	25
Mercury Low Level	M	2450	mg/kg	0.05	0.09	0.24
Manganese	M	2450	mg/kg	5.0	290	730
Molybdenum	M	2450	mg/kg	2.0	5.8	2.7
Antimony	N	2450	mg/kg	2.0	2.7	4.3
Copper	M	2450	mg/kg	0.50	67	110
Nickel	M	2450	mg/kg	0.50	44	27
Lead	M	2450	mg/kg	0.50	33	170
Selenium	M	2450	mg/kg	0.20	1.7	0.79
Zinc	M	2450	mg/kg	0.50	55	350
Chromium (Trivalent)	N	2490	mg/kg	1.0	13	25
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	11	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	3.1	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	35	42
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	49	42

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd			Chemtest Job No.:		19-08921	19-08921
Quotation No.: Q18-15369			Chemtest Sample ID.:		791933	791934
			Client Sample ID.:		SAMPLE 1	SAMPLE 2
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.80	0.30
			Date Sampled:		08-Mar-2019	08-Mar-2019
			Time Sampled:		0:00	0:00
			Asbestos Lab:		COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	30	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	100	39
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	420	370
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	18
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	550	420
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	600	460
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	0.23
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	0.45
Fluorene	M	2700	mg/kg	0.10	< 0.10	0.43
Phenanthrene	M	2700	mg/kg	0.10	< 0.10	3.2
Anthracene	M	2700	mg/kg	0.10	< 0.10	0.59
Fluoranthene	M	2700	mg/kg	0.10	1.8	5.1
Pyrene	M	2700	mg/kg	0.10	1.8	5.0
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	3.9
Chrysene	M	2700	mg/kg	0.10	< 0.10	4.4
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10	4.1
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10	2.5
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10	4.6
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	4.1
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	0.84
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	3.7
Total Of 16 PAH's	M	2700	mg/kg	2.0	3.6	43
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30
Organic Matter BS1377	N	2930	%	0.10	10	6.9

Results - 2 Stage WAC

Project: Tabernacle Terrace, Cwmafan

							Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	19-08921								
Chemtest Sample ID:	791933								
Sample Ref:									
Sample ID:	SAMPLE 1								
Sample Location:									
Top Depth(m):	0.80								
Bottom Depth(m):									
Sampling Date:	08-Mar-2019								
Determinand	**SOP**	**Accred.**	**Units**				**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	M	%			43	3	5	6
Loss On Ignition	2610	M	%			34	--	--	10
Total BTEX	2760	M	mg/kg			< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	M	mg/kg			< 0.10	1	--	--
TPH Total WAC (Mineral Oil)	2670	M	mg/kg			600	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg			3.6	100	--	--
pH	2010	M				7.7	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg			0.011	--	To evaluate	To evaluate
Eluate Analysis			**2:1 mg/l**	**8:1 mg/l**	**2:1 mg/kg**	**Cumulative mg/kg 10:1**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1450	U	0.0053	0.0051	< 0.050	0.051	0.5	2	25
Barium	1450	U	0.0059	0.0034	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	70
Copper	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	2	50	100
Mercury	1450	U	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	0.0041	0.0015	< 0.050	< 0.050	0.5	10	30
Nickel	1450	U	< 0.0010	0.0013	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.5	10	50
Antimony	1450	U	0.0017	< 0.0010	< 0.010	< 0.010	0.06	0.7	5
Selenium	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	U	< 0.0010	< 0.0010	< 0.50	< 0.50	4	50	200
Chloride	1220	U	4.4	1.6	< 10	20	800	15000	25000
Fluoride	1220	U	0.24	0.32	< 1.0	3.1	10	150	500
Sulphate	1220	U	14	1.4	27	32	1000	20000	50000
Total Dissolved Solids	1020	N	78	48	150	520	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-
Dissolved Organic Carbon	1610	U	13	14	< 50	140	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	18

Leachate Test Information	
Leachant volume 1st extract/l	0.311
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.244

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - 2 Stage WAC

Project: Tabernacle Terrace, Cwmafan

							Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	19-08921								
Chemtest Sample ID:	791934								
Sample Ref:									
Sample ID:	SAMPLE 2								
Sample Location:									
Top Depth(m):	0.30								
Bottom Depth(m):									
Sampling Date:	08-Mar-2019								
Determinand	**SOP**	**Accred.**	**Units**				**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	M	%			13	3	5	6
Loss On Ignition	2610	M	%			20	--	--	10
Total BTEX	2760	M	mg/kg			< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	M	mg/kg			< 0.10	1	--	--
TPH Total WAC (Mineral Oil)	2670	M	mg/kg			460	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg			43	100	--	--
pH	2010	M				8.0	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg			0.0070	--	To evaluate	To evaluate
Eluate Analysis			**2:1 mg/l**	**8:1 mg/l**	**2:1 mg/kg**	**Cumulative mg/kg 10:1**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1450	U	0.0091	0.0070	< 0.050	0.072	0.5	2	25
Barium	1450	U	0.027	0.020	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	70
Copper	1450	U	0.0045	0.0044	< 0.050	< 0.050	2	50	100
Mercury	1450	U	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	0.0041	0.0016	< 0.050	< 0.050	0.5	10	30
Nickel	1450	U	< 0.0010	0.0012	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	0.0014	0.0074	< 0.010	0.067	0.5	10	50
Antimony	1450	U	0.0068	0.0026	0.013	0.031	0.06	0.7	5
Selenium	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	U	0.0037	0.010	< 0.50	< 0.50	4	50	200
Chloride	1220	U	34	2.2	66	60	800	15000	25000
Fluoride	1220	U	0.36	0.24	< 1.0	2.5	10	150	500
Sulphate	1220	U	77	5.8	150	140	1000	20000	50000
Total Dissolved Solids	1020	N	170	91	330	1000	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-
Dissolved Organic Carbon	1610	U	14	8.1	< 50	88	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	20

Leachate Test Information	
Leachant volume 1st extract/l	0.306
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.207

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Test Methods

SOP	Title	Parameters included	Method summary
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1450	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2015	Acid Neutralisation Capacity	Acid Reserve	Titration
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection

Test Methods

SOP	Title	Parameters included	Method summary
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
2930	Organic Matter	Organic Matter	Acid Dichromate digestion/Titration
640	Characterisation of Waste (Leaching)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis
The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols
For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

Chemtest
The right chemistry to deliver results
Chemtest Ltd.
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Amended Report

Report No.:	19-03913-4		
Initial Date of Issue:	12-Feb-2019	**Date of Re-Issue:**	22-Mar-2019
Client	Terra Firma (Wales) Ltd		
Client Address:	5 Deryn Court Wharfedale Road Pentwyn Cardiff CF23 7HA		
Contact(s):	Alan@terrafirmawales.co.uk		
Project	Tabernacle Terrace, Cwmafan		
Quotation No.:	Q18-15369	**Date Received:**	04-Feb-2019
Order No.:	14611AB	**Date Instructed:**	04-Feb-2019
No. of Samples:	8		
Turnaround (Wkdays):	32	**Results Due:**	19-Mar-2019
Date Approved:	22-Mar-2019		
Approved By:			
Details:	Martin Dyer, Laboratory Manager		

Chemtest
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Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd				**Chemtest Job No.:**	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369				**Chemtest Sample ID.:**	766594	766595	766596	766597	766598	766599	766600	766601
				Client Sample ID.:	TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
				Date Sampled:	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
				Time Sampled:	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
				Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	25	22	18	24	11	24	26	28
Soil Colour	N	2040		N/A	Black	Black	Black	Brown	Black	Black	Black	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Clay	Sand	Clay	Sand	Sand
pH	M	2010		N/A	8.1	8.3	8.2	7.2	8.4	7.7	7.9	8.0
Cyanide (Total)	M	2300	mg/kg	0.50	2.0	0.50	< 0.50	< 0.50	0.60	< 0.50	< 0.50	0.80
Sulphate (Acid Soluble)	M	2430	%	0.010	0.078	0.23	0.036	< 0.010	0.11	0.040	0.042	0.10
Arsenic	M	2450	mg/kg	1.0	33	33	23	7.0	35	13	24	43
Cadmium	M	2450	mg/kg	0.10	2.4	0.84	< 0.10	< 0.10	0.53	< 0.10	< 0.10	0.78
Chromium	M	2450	mg/kg	1.0	33	14	13	14	15	15	10	24
Mercury Low Level	M	2450	mg/kg	0.05	0.26	0.21	0.12	0.05	0.09	0.06	0.07	0.19
Copper	M	2450	mg/kg	0.50	180	63	100	9.0	210	29	130	110
Nickel	M	2450	mg/kg	0.50	65	31	32	16	32	20	37	32
Lead	M	2450	mg/kg	0.50	330	180	140	15	69	20	180	130
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.63
Zinc	M	2450	mg/kg	0.50	950	250	67	36	110	52	69	620
Chromium (Trivalent)	N	2490	mg/kg	1.0	33	14	13	14	15	15	10	24
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	10	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	28	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	67	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0	40	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	55	12	81	< 1.0	23	16	< 1.0	42
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	56	13	82	< 5.0	23	160	< 5.0	42
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	1.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	5.4	< 1.0	< 1.0	18	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	9.0	30	36	< 1.0	17	4.1	< 1.0	13
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	120	710	260	< 1.0	390	< 1.0	< 1.0	140

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Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd					**Chemtest Job No.:**	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369					**Chemtest Sample ID.:**	766594	766595	766596	766597	766598	766599	766600	766601
					Client Sample ID.:	TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
					Date Sampled:	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
					Time Sampled:	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
					Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		130	740	310	< 5.0	400	23	< 5.0	150
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		180	760	390	< 10	430	180	< 10	190
Naphthalene	M	2700	mg/kg	0.10		1.3	0.74	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.0
Acenaphthylene	M	2700	mg/kg	0.10		0.70	0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.64
Acenaphthene	M	2700	mg/kg	0.10		0.53	0.17	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.88
Fluorene	M	2700	mg/kg	0.10		0.50	0.17	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.2
Phenanthrene	M	2700	mg/kg	0.10		3.4	1.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	9.2
Anthracene	M	2700	mg/kg	0.10		0.73	0.24	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.6
Fluoranthene	M	2700	mg/kg	0.10		4.5	2.0	0.40	< 0.10	0.52	1.5	< 0.10	12
Pyrene	M	2700	mg/kg	0.10		4.6	2.0	0.43	< 0.10	0.55	1.5	< 0.10	9.2
Benzo[a]anthracene	M	2700	mg/kg	0.10		3.7	1.7	< 0.10	< 0.10	< 0.10	1.9	< 0.10	6.1
Chrysene	M	2700	mg/kg	0.10		3.3	1.7	< 0.10	< 0.10	< 0.10	1.0	< 0.10	6.6
Benzo[b]fluoranthene	M	2700	mg/kg	0.10		4.5	2.2	< 0.10	< 0.10	< 0.10	1.7	< 0.10	5.3
Benzo[k]fluoranthene	M	2700	mg/kg	0.10		1.5	0.89	< 0.10	< 0.10	< 0.10	0.79	< 0.10	2.3
Benzo[a]pyrene	M	2700	mg/kg	0.10		3.1	1.4	< 0.10	< 0.10	< 0.10	1.2	< 0.10	4.1
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10		2.6	1.5	< 0.10	< 0.10	< 0.10	0.83	< 0.10	2.5
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10		2.2	0.72	< 0.10	< 0.10	< 0.10	1.3	< 0.10	1.4
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10		3.0	1.7	< 0.10	< 0.10	< 0.10	1.4	< 0.10	2.3
Total Of 16 PAH's	M	2700	mg/kg	2.0		40	19	< 2.0	< 2.0	< 2.0	13	< 2.0	66
Dichlorodifluoromethane	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	M	2760	µg/kg	20		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Chloroethane	U	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Trichlorofluoromethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans 1,2-Dichloroethene	N	2760	µg/kg	0.20		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	63	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	120	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Trichloroethene	N	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	M	2760	µg/kg	5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

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Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd			Chemtest Job No.:		19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369			Chemtest Sample ID.:		766594	766595	766596	766597	766598	766599	766600	766601
			Client Sample ID.:		TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
			Date Sampled:		31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
			Time Sampled:		0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
cis-1,3-Dichloropropene	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,1,2-Trichloroethane	M	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Tetrachloroethene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	U	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dibromochloromethane	U	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,2-Dibromoethane	M	2760	µg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	N	2760	µg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane	N	2760	µg/kg	50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
N-Propylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tert-Butylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Sec-Butylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Isopropyltoluene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Butylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulphide	N	2760	µg/kg	50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Tertiary Butyl Methyl Ether (TBME)	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Tetrahydrofuran	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
trans-1,4-Dichloro-2butene	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	N	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd					Chemtest Job No.:	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369					Chemtest Sample ID.:	766594	766595	766596	766597	766598	766599	766600	766601
					Client Sample ID.:	TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
					Date Sampled:	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
					Time Sampled:	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
					Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
2-Hexanone	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Nitropropane	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-Pentanone (MIBK)	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,1,2,2-Tetrachloroethane	N	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Pentachloroethane	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Ethyl Methacrylate	N	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Methyl Methacrylate	N	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Acetone	N	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Allyl Chloride	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Bromoform	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Butanone (MEK)	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Carbon Tetrachloride	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1-Chlorobutane	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Chloroform	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,2-Dichloropropane	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Diethyl Ether	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Freon 113	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Hexachloroethane	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylene Chloride	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-Nitrosodimethylamine	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Phenol	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Chlorophenol	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,3-Dichlorobenzene	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	M	2790	mg/kg	0.50		1.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methylphenol	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachloroethane	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Methylphenol	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nitrobenzene	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Isophorone	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Nitrophenol	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dimethylphenol	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dichlorophenol	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd			Chemtest Job No.:		19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369			Chemtest Sample ID.:		766594	766595	766596	766597	766598	766599	766600	766601
			Client Sample ID.:		TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
			Date Sampled:		31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
			Time Sampled:		0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Naphthalene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chloroaniline	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorobutadiene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methylnaphthalene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Chloronaphthalene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Nitroaniline	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acenaphthylene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dimethylphthalate	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,6-Dinitrotoluene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acenaphthene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acetophenone	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
2-Acetylaminofluorene	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
4-Aminobiphenyl	N	2790	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aniline	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzilate	N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
m/p-Cresol	N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
o-Cresol	N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
Diallate cis/trans	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
3,3-Dichlorobenzidine	N	2790	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Diphenylamine	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
m-Dinitrobenzene	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Ethyl methane sulfonate	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Hexachloropropene	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Isodrin	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Isosafrole cis/trans	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Dibenzofuran	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chlorophenylphenylether	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dinitrotoluene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Fluorene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Diethyl Phthalate	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Nitroaniline	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.5	< 0.50	< 0.50
Azobenzene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd					**Chemtest Job No.:**	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369					**Chemtest Sample ID.:**	766594	766595	766596	766597	766598	766599	766600	766601
					Client Sample ID.:	TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
					Date Sampled:	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
					Time Sampled:	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
					Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Hexachlorobenzene	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Pentachlorophenol	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Phenanthrene	M	2790	mg/kg	0.50		1.0	1.7	1.5	< 0.50	0.58	< 0.50	< 0.50	1.4
Anthracene	M	2790	mg/kg	0.50		< 0.50	0.95	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Carbazole	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Fluoranthene	M	2790	mg/kg	0.50		2.0	4.6	2.7	< 0.50	1.1	< 0.50	< 0.50	2.8
Pyrene	M	2790	mg/kg	0.50		2.3	4.2	2.3	< 0.50	1.2	< 0.50	< 0.50	2.4
Butylbenzyl Phthalate	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[a]anthracene	M	2790	mg/kg	0.50		1.5	2.9	1.8	< 0.50	0.90	< 0.50	< 0.50	1.5
Chrysene	M	2790	mg/kg	0.50		2.3	3.1	1.8	< 0.50	1.1	< 0.50	< 0.50	1.8
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[b]fluoranthene	M	2790	mg/kg	0.50		3.8	4.4	2.2	< 0.50	1.6	< 0.50	< 0.50	1.7
Benzo[k]fluoranthene	M	2790	mg/kg	0.50		1.7	1.9	0.80	< 0.50	0.67	< 0.50	< 0.50	0.72
Benzo[a]pyrene	M	2790	mg/kg	0.50		2.7	2.8	1.2	< 0.50	1.0	< 0.50	< 0.50	1.0
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50		2.0	2.3	0.98	< 0.50	0.88	< 0.50	< 0.50	< 0.50
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50		0.67	0.74	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50		2.5	2.7	1.1	< 0.50	1.1	< 0.50	< 0.50	< 0.50
Methyl Methane sulfonate	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Methyl parathion	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosodi-n-butylamine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosodiethylamine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosomorpholine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosopiperidine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosopyrrolidine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
5-Nitro-o-toluidine	N	2790	mg/kg	0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Pentachlorobenzene	N	2790	mg/kg	5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Phenacetin	N	2790	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pronamide	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Safrole	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
1,2,3,5-Tetrachlorobenzene	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Disulfoton	N	2790	mg/kg	0.20		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dinoseb	N	2790	mg/kg	0.050		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Benzyl Alcohol	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Thionazin	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
o-Toluidine	N	2790	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
o,o,o-Triethyl phosphorothioate	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075

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Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd			**Chemtest Job No.:**		19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369			**Chemtest Sample ID.:**		766594	766595	766596	766597	766598	766599	766600	766601
			Client Sample ID.:		TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
			Date Sampled:		31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
			Time Sampled:		0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
1,3,5-Trinitrobenzene	N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
Total PCBs (7 congeners)	N	2815	mg/kg	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Phorate	N	2820	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dimethoate	N	2820	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Parathion	N	2820	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Alpha-HCH	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Gamma-HCH (Lindane)	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Beta-HCH	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Delta-HCH	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Heptachlor	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Aldrin	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Heptachlor Epoxide	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
4,4-DDE	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dieldrin	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Endrin	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
4,4-DDD	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
4,4-DDT	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Endosulfan Sulphate	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Methoxychlor	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
2,3,4,6-Tetrachlorophenol	N	2900	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Organic Matter BS1377	N	2930	%	0.10	2.3	3.3	3.5	1.7	2.6	2.3	3.2	3.3

Results - 2 Stage WAC

Project: Tabernacle Terrace, Cwmafan

							Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	19-03913								
Chemtest Sample ID:	766594								
Sample Ref:									
Sample ID:	TP01								
Sample Location:									
Top Depth(m):	0.50								
Bottom Depth(m):									
Sampling Date:	31-Jan-2019								
Determinand	**SOP**	**Accred.**	**Units**				**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	M	%			14	3	5	6
Loss On Ignition	2610	M	%			22	--	--	10
Total BTEX	2760	M	mg/kg			< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	M	mg/kg			< 0.10	1	--	--
TPH Total WAC (Mineral Oil)	2670	M	mg/kg			180	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg			40	100	--	--
pH	2010	M				8.1	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg			0.021	--	To evaluate	To evaluate
Eluate Analysis			**2:1 mg/l**	**8:1 mg/l**	**2:1 mg/kg**	**Cumulative mg/kg 10:1**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1450	U	0.0018	0.0016	< 0.050	< 0.050	0.5	2	25
Barium	1450	U	0.039	0.045	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	70
Copper	1450	U	0.0081	0.0077	< 0.050	< 0.050	2	50	100
Mercury	1450	U	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	0.015	0.0075	< 0.050	0.094	0.5	10	30
Nickel	1450	U	0.0099	< 0.0010	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	< 0.0010	0.0062	< 0.010	0.045	0.5	10	50
Antimony	1450	U	0.0038	0.0023	< 0.010	0.027	0.06	0.7	5
Selenium	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	U	0.0049	0.011	< 0.50	< 0.50	4	50	200
Chloride	1220	U	5.7	3.0	11	37	800	15000	25000
Fluoride	1220	U	0.43	0.25	< 1.0	2.9	10	150	500
Sulphate	1220	U	25	21	48	220	1000	20000	50000
Total Dissolved Solids	1020	N	190	160	360	1700	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-
Dissolved Organic Carbon	1610	U	18	9.8	< 50	120	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	25

Leachate Test Information	
Leachant volume 1st extract/l	0.149
Leachant volume 2nd extract/l	0.720
Eluant recovered from 1st extract/l	0.232

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - 2 Stage WAC

Project: Tabernacle Terrace, Cwmafan

							Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	19-03913								
Chemtest Sample ID:	766601								
Sample Ref:									
Sample ID:	TP06								
Sample Location:									
Top Depth(m):	0.60								
Bottom Depth(m):									
Sampling Date:	31-Jan-2019								
Determinand	**SOP**	**Accred.**	**Units**				**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	M	%			23	3	5	6
Loss On Ignition	2610	M	%			13	--	--	10
Total BTEX	2760	M	mg/kg			< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	M	mg/kg			< 0.10	1	--	--
TPH Total WAC (Mineral Oil)	2670	M	mg/kg			190	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg			66	100	--	--
pH	2010	M				8.0	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg			0.049	--	To evaluate	To evaluate
Eluate Analysis			**2:1 mg/l**	**8:1 mg/l**	**2:1 mg/kg**	**Cumulative mg/kg 10:1**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1450	U	0.0023	0.0027	< 0.050	< 0.050	0.5	2	25
Barium	1450	U	0.015	0.0091	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	70
Copper	1450	U	0.0016	0.0020	< 0.050	< 0.050	2	50	100
Mercury	1450	U	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	0.0079	0.0036	< 0.050	< 0.050	0.5	10	30
Nickel	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.5	10	50
Antimony	1450	U	0.0031	0.0016	< 0.010	0.020	0.06	0.7	5
Selenium	1450	U	0.0016	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	U	0.0045	0.0030	< 0.50	< 0.50	4	50	200
Chloride	1220	U	3.2	1.6	< 10	20	800	15000	25000
Fluoride	1220	U	0.72	0.62	1.4	6.4	10	150	500
Sulphate	1220	U	44	19	83	260	1000	20000	50000
Total Dissolved Solids	1020	N	190	120	360	1400	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-
Dissolved Organic Carbon	1610	U	10	8.1	< 50	86	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	28

Leachate Test Information	
Leachant volume 1st extract/l	0.146
Leachant volume 2nd extract/l	0.720
Eluant recovered from 1st extract/l	0.251

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Test Methods

SOP	Title	Parameters included	Method summary
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1450	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2015	Acid Neutralisation Capacity	Acid Reserve	Titration
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection

Test Methods

SOP	Title	Parameters included	Method summary
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2790	Semi-Volatile Organic Compounds (SVOCs) in Soils by GC-MS	Semi-volatile organic compounds(cf. USEPA Method 8270)	Acetone/Hexane extraction / GC-MS
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
2820	Organophosphorus (O-P) Pesticides in Soils by GC-MS	Organophosphorus pesticide representative suite including Parathion, Malathion etc, plus client specific determinands	Dichloromethane extraction / GC-MS
2840	Organochlorine (O-Cl) Pesticides in Soils by GC-MS	Organochlorine pesticide representative suite including DDT and its metabolites, ‘drins’ and HCH etc, plus client specific determinands	Dichloromethane extraction / GC-MS
2900	Phenols in Soils by GC-MS	Approximately 24 substituted Phenols, including Chlorophenols	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
2930	Organic Matter	Organic Matter	Acid Dichromate digestion/Titration
640	Characterisation of Waste (Leaching)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

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Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis
The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols
For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Amended Report

Report No.:	19-03913-2		
Initial Date of Issue:	12-Feb-2019	**Date of Re-Issue:**	20-Feb-2019
Client	Terra Firma (Wales) Ltd		
Client Address:	5 Deryn Court Wharfedale Road Pentwyn Cardiff CF23 7HA		
Contact(s):	Alan@terrafirmawales.co.uk		
Project	Tabernacle Terrace, Cwmafan		
Quotation No.:	Q18-15369	**Date Received:**	04-Feb-2019
Order No.:	14611AB	**Date Instructed:**	04-Feb-2019
No. of Samples:	8		
Turnaround (Wkdays):	13	**Results Due:**	20-Feb-2019
Date Approved:	20-Feb-2019		
Approved By:			
Details:	Martin Dyer, Laboratory Manager Robert Monk, Technical Manager		

Results - Leachate

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd			**Chemtest Job No.:**		19-03913	19-03913
Quotation No.: Q18-15369			**Chemtest Sample ID.:**		766594	766601
			Client Sample ID.:		TP01	TP06
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.50	0.60
			Date Sampled:		31-Jan-2019	31-Jan-2019
			Time Sampled:		0:00	0:00
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Arsenic (Dissolved)	U	1450	µg/l	1.0		1.9
Lead (Dissolved)	U	1450	µg/l	1.0	11	

Chemtest
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Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd				**Chemtest Job No.:**	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369				**Chemtest Sample ID.:**	766594	766595	766596	766597	766598	766599	766600	766601
				Client Sample ID.:	TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
				Date Sampled:	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
				Time Sampled:	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
				Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	25	22	18	24	11	24	26	28
Soil Colour	N	2040		N/A	Black	Black	Black	Brown	Black	Black	Black	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Clay	Sand	Clay	Sand	Sand
pH	M	2010		N/A	8.1	8.3	8.2	7.2	8.4	7.7	7.9	8.0
Cyanide (Total)	M	2300	mg/kg	0.50	2.0	0.50	< 0.50	< 0.50	0.60	< 0.50	< 0.50	0.80
Sulphate (Acid Soluble)	M	2430	%	0.010	0.078	0.23	0.036	< 0.010	0.11	0.040	0.042	0.10
Arsenic	M	2450	mg/kg	1.0	33	33	23	7.0	35	13	24	43
Cadmium	M	2450	mg/kg	0.10	2.4	0.84	< 0.10	< 0.10	0.53	< 0.10	< 0.10	0.78
Chromium	M	2450	mg/kg	1.0	33	14	13	14	15	15	10	24
Mercury Low Level	M	2450	mg/kg	0.05	0.26	0.21	0.12	0.05	0.09	0.06	0.07	0.19
Copper	M	2450	mg/kg	0.50	180	63	100	9.0	210	29	130	110
Nickel	M	2450	mg/kg	0.50	65	31	32	16	32	20	37	32
Lead	M	2450	mg/kg	0.50	330	180	140	15	69	20	180	130
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.63
Zinc	M	2450	mg/kg	0.50	950	250	67	36	110	52	69	620
Chromium (Trivalent)	N	2490	mg/kg	1.0	33	14	13	14	15	15	10	24
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	10	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	28	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	67	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0	40	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	55	12	81	< 1.0	23	16	< 1.0	42
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	56	13	82	< 5.0	23	160	< 5.0	42
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	1.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	5.4	< 1.0	< 1.0	18	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	9.0	30	36	< 1.0	17	4.1	< 1.0	13
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	120	710	260	< 1.0	390	< 1.0	< 1.0	140

Chemtest
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Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd					**Chemtest Job No.:**	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369					**Chemtest Sample ID.:**	766594	766595	766596	766597	766598	766599	766600	766601
					Client Sample ID.:	TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
					Date Sampled:	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
					Time Sampled:	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
					Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		130	740	310	< 5.0	400	23	< 5.0	150
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		180	760	390	< 10	430	180	< 10	190
Naphthalene	M	2700	mg/kg	0.10		1.3	0.74	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.0
Acenaphthylene	M	2700	mg/kg	0.10		0.70	0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.64
Acenaphthene	M	2700	mg/kg	0.10		0.53	0.17	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.88
Fluorene	M	2700	mg/kg	0.10		0.50	0.17	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.2
Phenanthrene	M	2700	mg/kg	0.10		3.4	1.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	9.2
Anthracene	M	2700	mg/kg	0.10		0.73	0.24	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.6
Fluoranthene	M	2700	mg/kg	0.10		4.5	2.0	0.40	< 0.10	0.52	1.5	< 0.10	12
Pyrene	M	2700	mg/kg	0.10		4.6	2.0	0.43	< 0.10	0.55	1.5	< 0.10	9.2
Benzo[a]anthracene	M	2700	mg/kg	0.10		3.7	1.7	< 0.10	< 0.10	< 0.10	1.9	< 0.10	6.1
Chrysene	M	2700	mg/kg	0.10		3.3	1.7	< 0.10	< 0.10	< 0.10	1.0	< 0.10	6.6
Benzo[b]fluoranthene	M	2700	mg/kg	0.10		4.5	2.2	< 0.10	< 0.10	< 0.10	1.7	< 0.10	5.3
Benzo[k]fluoranthene	M	2700	mg/kg	0.10		1.5	0.89	< 0.10	< 0.10	< 0.10	0.79	< 0.10	2.3
Benzo[a]pyrene	M	2700	mg/kg	0.10		3.1	1.4	< 0.10	< 0.10	< 0.10	1.2	< 0.10	4.1
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10		2.6	1.5	< 0.10	< 0.10	< 0.10	0.83	< 0.10	2.5
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10		2.2	0.72	< 0.10	< 0.10	< 0.10	1.3	< 0.10	1.4
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10		3.0	1.7	< 0.10	< 0.10	< 0.10	1.4	< 0.10	2.3
Total Of 16 PAH's	M	2700	mg/kg	2.0		40	19	< 2.0	< 2.0	< 2.0	13	< 2.0	66
Dichlorodifluoromethane	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	M	2760	µg/kg	20		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Chloroethane	U	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Trichlorofluoromethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans 1,2-Dichloroethene	N	2760	µg/kg	0.20		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	63	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	120	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Trichloroethene	N	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	M	2760	µg/kg	5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd			**Chemtest Job No.:**		19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369			**Chemtest Sample ID.:**		766594	766595	766596	766597	766598	766599	766600	766601
			Client Sample ID.:		TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
			Date Sampled:		31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
			Time Sampled:		0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
cis-1,3-Dichloropropene	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,1,2-Trichloroethane	M	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Tetrachloroethene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	U	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dibromochloromethane	U	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,2-Dibromoethane	M	2760	µg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	N	2760	µg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane	N	2760	µg/kg	50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
N-Propylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tert-Butylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Sec-Butylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Isopropyltoluene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Butylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulphide	N	2760	µg/kg	50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Tertiary Butyl Methyl Ether (TBME)	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Tetrahydrofuran	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
trans-1,4-Dichloro-2butene	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	N	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd					**Chemtest Job No.:**	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369					**Chemtest Sample ID.:**	766594	766595	766596	766597	766598	766599	766600	766601
					Client Sample ID.:	TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
					Date Sampled:	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
					Time Sampled:	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
					Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
2-Hexanone	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Nitropropane	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-Pentanone (MIBK)	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,1,2,2-Tetrachloroethane	N	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Pentachloroethane	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Ethyl Methacrylate	N	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Methyl Methacrylate	N	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Acetone	N	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Allyl Chloride	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Bromoform	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Butanone (MEK)	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Carbon Tetrachloride	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1-Chlorobutane	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Chloroform	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,2-Dichloropropane	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Diethyl Ether	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Freon 113	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Hexachloroethane	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylene Chloride	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-Nitrosodimethylamine	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Phenol	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Chlorophenol	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,3-Dichlorobenzene	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	M	2790	mg/kg	0.50		1.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methylphenol	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachloroethane	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Methylphenol	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nitrobenzene	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Isophorone	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Nitrophenol	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dimethylphenol	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dichlorophenol	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd					**Chemtest Job No.:**	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369					**Chemtest Sample ID.:**	766594	766595	766596	766597	766598	766599	766600	766601
					Client Sample ID.:	TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
					Date Sampled:	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
					Time Sampled:	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
					Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Naphthalene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chloroaniline	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorobutadiene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methylnaphthalene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Chloronaphthalene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Nitroaniline	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acenaphthylene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dimethylphthalate	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,6-Dinitrotoluene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acenaphthene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acetophenone	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
2-Acetylaminofluorene	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
4-Aminobiphenyl	N	2790	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aniline	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzilate	N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
m/p-Cresol	N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
o-Cresol	N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
Diallate cis/trans	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
3,3-Dichlorobenzidine	N	2790	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Diphenylamine	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
m-Dinitrobenzene	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Ethyl methane sulfonate	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Hexachloropropene	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Isodrin	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Isosafrole cis/trans	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Dibenzofuran	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chlorophenylphenylether	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dinitrotoluene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Fluorene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Diethyl Phthalate	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Nitroaniline	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.5	< 0.50	< 0.50
Azobenzene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd					**Chemtest Job No.:**	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369					**Chemtest Sample ID.:**	766594	766595	766596	766597	766598	766599	766600	766601
					Client Sample ID.:	TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
					Date Sampled:	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
					Time Sampled:	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
					Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Hexachlorobenzene	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Pentachlorophenol	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Phenanthrene	M	2790	mg/kg	0.50		1.0	1.7	1.5	< 0.50	0.58	< 0.50	< 0.50	1.4
Anthracene	M	2790	mg/kg	0.50		< 0.50	0.95	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Carbazole	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Fluoranthene	M	2790	mg/kg	0.50		2.0	4.6	2.7	< 0.50	1.1	< 0.50	< 0.50	2.8
Pyrene	M	2790	mg/kg	0.50		2.3	4.2	2.3	< 0.50	1.2	< 0.50	< 0.50	2.4
Butylbenzyl Phthalate	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[a]anthracene	M	2790	mg/kg	0.50		1.5	2.9	1.8	< 0.50	0.90	< 0.50	< 0.50	1.5
Chrysene	M	2790	mg/kg	0.50		2.3	3.1	1.8	< 0.50	1.1	< 0.50	< 0.50	1.8
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[b]fluoranthene	M	2790	mg/kg	0.50		3.8	4.4	2.2	< 0.50	1.6	< 0.50	< 0.50	1.7
Benzo[k]fluoranthene	M	2790	mg/kg	0.50		1.7	1.9	0.80	< 0.50	0.67	< 0.50	< 0.50	0.72
Benzo[a]pyrene	M	2790	mg/kg	0.50		2.7	2.8	1.2	< 0.50	1.0	< 0.50	< 0.50	1.0
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50		2.0	2.3	0.98	< 0.50	0.88	< 0.50	< 0.50	< 0.50
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50		0.67	0.74	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50		2.5	2.7	1.1	< 0.50	1.1	< 0.50	< 0.50	< 0.50
Methyl Methane sulfonate	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Methyl parathion	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosodi-n-butylamine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosodiethylamine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosomorpholine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosopiperidine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosopyrrolidine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
5-Nitro-o-toluidine	N	2790	mg/kg	0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Pentachlorobenzene	N	2790	mg/kg	5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Phenacetin	N	2790	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pronamide	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Safrole	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
1,2,3,5-Tetrachlorobenzene	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Disulfoton	N	2790	mg/kg	0.20		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dinoseb	N	2790	mg/kg	0.050		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Benzyl Alcohol	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Thionazin	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
o-Toluidine	N	2790	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
o,o,o-Triethyl phosphorothioate	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd			**Chemtest Job No.:**		19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369			**Chemtest Sample ID.:**		766594	766595	766596	766597	766598	766599	766600	766601
			Client Sample ID.:		TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
			Date Sampled:		31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
			Time Sampled:		0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
1,3,5-Trinitrobenzene	N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
Total PCBs (7 congeners)	N	2815	mg/kg	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Phorate	N	2820	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dimethoate	N	2820	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Parathion	N	2820	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Alpha-HCH	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Gamma-HCH (Lindane)	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Beta-HCH	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Delta-HCH	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Heptachlor	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Aldrin	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Heptachlor Epoxide	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
4,4-DDE	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dieldrin	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Endrin	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
4,4-DDD	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
4,4-DDT	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Endosulfan Sulphate	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Methoxychlor	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
2,3,4,6-Tetrachlorophenol	N	2900	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Organic Matter BS1377	N	2930	%	0.10	2.3	3.3	3.5	1.7	2.6	2.3	3.2	3.3

Test Methods

SOP	Title	Parameters included	Method summary
1450	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2790	Semi-Volatile Organic Compounds (SVOCs) in Soils by GC-MS	Semi-volatile organic compounds(cf. USEPA Method 8270)	Acetone/Hexane extraction / GC-MS
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
2820	Organophosphorus (O-P) Pesticides in Soils by GC-MS	Organophosphorus pesticide representative suite including Parathion, Malathion etc, plus client specific determinands	Dichloromethane extraction / GC-MS
2840	Organochlorine (O-Cl) Pesticides in Soils by GC-MS	Organochlorine pesticide representative suite including DDT and its metabolites, 'drins' and HCH etc, plus client specific determinands	Dichloromethane extraction / GC-MS

Test Methods

SOP	Title	Parameters included	Method summary
2900	Phenols in Soils by GC-MS	Approximately 24 substituted Phenols, including Chlorophenols	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
2930	Organic Matter	Organic Matter	Acid Dichromate digestion/Titration
640	Characterisation of Waste (Leaching)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis
The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols
For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	19-03913-1
Initial Date of Issue:	12-Feb-2019
Client	Terra Firma (Wales) Ltd
Client Address:	5 Deryn Court Wharfedale Road Pentwyn Cardiff CF23 7HA
Contact(s):	Alan@terrafirmawales.co.uk
Project	Tabernacle Terrace, Cwmafan

Quotation No.:	Q18-15369	**Date Received:**	04-Feb-2019
Order No.:	14611AB	**Date Instructed:**	04-Feb-2019
No. of Samples:	8		
Turnaround (Wkdays):	5	**Results Due:**	08-Feb-2019
Date Approved:	12-Feb-2019		
Approved By:			

Details: Martin Dyer, Laboratory Manager

Chemtest
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Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd				**Chemtest Job No.:**	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369				**Chemtest Sample ID.:**	766594	766595	766596	766597	766598	766599	766600	766601
				Client Sample ID.:	TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
				Date Sampled:	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
				Time Sampled:	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
				Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	25	22	18	24	11	24	26	28
Soil Colour	N	2040		N/A	Black	Black	Black	Brown	Black	Black	Black	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Clay	Sand	Clay	Sand	Sand
pH	M	2010		N/A	8.1	8.3	8.2	7.2	8.4	7.7	7.9	8.0
Cyanide (Total)	M	2300	mg/kg	0.50	2.0	0.50	< 0.50	< 0.50	0.60	< 0.50	< 0.50	0.80
Sulphate (Acid Soluble)	M	2430	%	0.010	0.078	0.23	0.036	< 0.010	0.11	0.040	0.042	0.10
Arsenic	M	2450	mg/kg	1.0	33	33	23	7.0	35	13	24	43
Cadmium	M	2450	mg/kg	0.10	2.4	0.84	< 0.10	< 0.10	0.53	< 0.10	< 0.10	0.78
Chromium	M	2450	mg/kg	1.0	33	14	13	14	15	15	10	24
Mercury Low Level	M	2450	mg/kg	0.05	0.26	0.21	0.12	0.05	0.09	0.06	0.07	0.19
Copper	M	2450	mg/kg	0.50	180	63	100	9.0	210	29	130	110
Nickel	M	2450	mg/kg	0.50	65	31	32	16	32	20	37	32
Lead	M	2450	mg/kg	0.50	330	180	140	15	69	20	180	130
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.63
Zinc	M	2450	mg/kg	0.50	950	250	67	36	110	52	69	620
Chromium (Trivalent)	N	2490	mg/kg	1.0	33	14	13	14	15	15	10	24
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	10	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	28	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	67	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0	40	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	55	12	81	< 1.0	23	16	< 1.0	42
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	56	13	82	< 5.0	23	160	< 5.0	42
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	1.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	5.4	< 1.0	< 1.0	18	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	9.0	30	36	< 1.0	17	4.1	< 1.0	13
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	120	710	260	< 1.0	390	< 1.0	< 1.0	140

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd					**Chemtest Job No.:**	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369					**Chemtest Sample ID.:**	766594	766595	766596	766597	766598	766599	766600	766601
					Client Sample ID.:	TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
					Date Sampled:	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
					Time Sampled:	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
					Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		130	740	310	< 5.0	400	23	< 5.0	150
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		180	760	390	< 10	430	180	< 10	190
Naphthalene	M	2700	mg/kg	0.10		1.3	0.74	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.0
Acenaphthylene	M	2700	mg/kg	0.10		0.70	0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.64
Acenaphthene	M	2700	mg/kg	0.10		0.53	0.17	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.88
Fluorene	M	2700	mg/kg	0.10		0.50	0.17	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.2
Phenanthrene	M	2700	mg/kg	0.10		3.4	1.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	9.2
Anthracene	M	2700	mg/kg	0.10		0.73	0.24	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.6
Fluoranthene	M	2700	mg/kg	0.10		4.5	2.0	0.40	< 0.10	0.52	1.5	< 0.10	12
Pyrene	M	2700	mg/kg	0.10		4.6	2.0	0.43	< 0.10	0.55	1.5	< 0.10	9.2
Benzo[a]anthracene	M	2700	mg/kg	0.10		3.7	1.7	< 0.10	< 0.10	< 0.10	1.9	< 0.10	6.1
Chrysene	M	2700	mg/kg	0.10		3.3	1.7	< 0.10	< 0.10	< 0.10	1.0	< 0.10	6.6
Benzo[b]fluoranthene	M	2700	mg/kg	0.10		4.5	2.2	< 0.10	< 0.10	< 0.10	1.7	< 0.10	5.3
Benzo[k]fluoranthene	M	2700	mg/kg	0.10		1.5	0.89	< 0.10	< 0.10	< 0.10	0.79	< 0.10	2.3
Benzo[a]pyrene	M	2700	mg/kg	0.10		3.1	1.4	< 0.10	< 0.10	< 0.10	1.2	< 0.10	4.1
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10		2.6	1.5	< 0.10	< 0.10	< 0.10	0.83	< 0.10	2.5
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10		2.2	0.72	< 0.10	< 0.10	< 0.10	1.3	< 0.10	1.4
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10		3.0	1.7	< 0.10	< 0.10	< 0.10	1.4	< 0.10	2.3
Total Of 16 PAH's	M	2700	mg/kg	2.0		40	19	< 2.0	< 2.0	< 2.0	13	< 2.0	66
Dichlorodifluoromethane	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	M	2760	µg/kg	20		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Chloroethane	U	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Trichlorofluoromethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans 1,2-Dichloroethene	N	2760	µg/kg	0.20		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	63	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	120	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Trichloroethene	N	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	M	2760	µg/kg	5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd					**Chemtest Job No.:**	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369					**Chemtest Sample ID.:**	766594	766595	766596	766597	766598	766599	766600	766601
					Client Sample ID.:	TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
					Date Sampled:	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
					Time Sampled:	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
					Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
cis-1,3-Dichloropropene	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,1,2-Trichloroethane	M	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Tetrachloroethene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	U	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dibromochloromethane	U	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,2-Dibromoethane	M	2760	µg/kg	5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chlorobenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	N	2760	µg/kg	0.20		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane	N	2760	µg/kg	50		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
N-Propylbenzene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tert-Butylbenzene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Sec-Butylbenzene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Isopropyltoluene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Butylbenzene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulphide	N	2760	µg/kg	50		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Tertiary Butyl Methyl Ether (TBME)	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Tetrahydrofuran	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
trans-1,4-Dichloro-2butene	N	2760	µg/kg	10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	N	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd			**Chemtest Job No.:**		19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369			**Chemtest Sample ID.:**		766594	766595	766596	766597	766598	766599	766600	766601
			Client Sample ID.:		TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
			Date Sampled:		31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
			Time Sampled:		0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
2-Hexanone	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Nitropropane	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-Pentanone (MIBK)	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,1,2,2-Tetrachloroethane	N	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Pentachloroethane	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Ethyl Methacrylate	N	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Methyl Methacrylate	N	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Acetone	N	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Allyl Chloride	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Bromoform	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Butanone (MEK)	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Carbon Tetrachloride	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1-Chlorobutane	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Chloroform	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,2-Dichloropropane	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Diethyl Ether	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Freon 113	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Hexachloroethane	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylene Chloride	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-Nitrosodimethylamine	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Phenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Chlorophenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,3-Dichlorobenzene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	M	2790	mg/kg	0.50	1.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methylphenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachloroethane	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Methylphenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nitrobenzene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Isophorone	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Nitrophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dimethylphenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dichlorophenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd					**Chemtest Job No.:**	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369					**Chemtest Sample ID.:**	766594	766595	766596	766597	766598	766599	766600	766601
					Client Sample ID.:	TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
					Date Sampled:	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
					Time Sampled:	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
					Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Naphthalene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chloroaniline	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorobutadiene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methylnaphthalene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Chloronaphthalene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Nitroaniline	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acenaphthylene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dimethylphthalate	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,6-Dinitrotoluene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acenaphthene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acetophenone	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
2-Acetylaminofluorene	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
4-Aminobiphenyl	N	2790	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aniline	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzilate	N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
m/p-Cresol	N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
o-Cresol	N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
Diallate cis/trans	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
3,3-Dichlorobenzidine	N	2790	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Diphenylamine	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
m-Dinitrobenzene	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Ethyl methane sulfonate	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Hexachloropropene	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Isodrin	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Isosafrole cis/trans	N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Dibenzofuran	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chlorophenylphenylether	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dinitrotoluene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Fluorene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Diethyl Phthalate	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Nitroaniline	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.5	< 0.50	< 0.50
Azobenzene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd					**Chemtest Job No.:**	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369					**Chemtest Sample ID.:**	766594	766595	766596	766597	766598	766599	766600	766601
					Client Sample ID.:	TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
					Date Sampled:	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
					Time Sampled:	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
					Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Hexachlorobenzene	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Pentachlorophenol	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Phenanthrene	M	2790	mg/kg	0.50		1.0	1.7	1.5	< 0.50	0.58	< 0.50	< 0.50	1.4
Anthracene	M	2790	mg/kg	0.50		< 0.50	0.95	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Carbazole	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Fluoranthene	M	2790	mg/kg	0.50		2.0	4.6	2.7	< 0.50	1.1	< 0.50	< 0.50	2.8
Pyrene	M	2790	mg/kg	0.50		2.3	4.2	2.3	< 0.50	1.2	< 0.50	< 0.50	2.4
Butylbenzyl Phthalate	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[a]anthracene	M	2790	mg/kg	0.50		1.5	2.9	1.8	< 0.50	0.90	< 0.50	< 0.50	1.5
Chrysene	M	2790	mg/kg	0.50		2.3	3.1	1.8	< 0.50	1.1	< 0.50	< 0.50	1.8
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[b]fluoranthene	M	2790	mg/kg	0.50		3.8	4.4	2.2	< 0.50	1.6	< 0.50	< 0.50	1.7
Benzo[k]fluoranthene	M	2790	mg/kg	0.50		1.7	1.9	0.80	< 0.50	0.67	< 0.50	< 0.50	0.72
Benzo[a]pyrene	M	2790	mg/kg	0.50		2.7	2.8	1.2	< 0.50	1.0	< 0.50	< 0.50	1.0
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50		2.0	2.3	0.98	< 0.50	0.88	< 0.50	< 0.50	< 0.50
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50		0.67	0.74	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50		2.5	2.7	1.1	< 0.50	1.1	< 0.50	< 0.50	< 0.50
Methyl Methane sulfonate	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Methyl parathion	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosodi-n-butylamine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosodiethylamine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosomorpholine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosopiperidine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
N-Nitrosopyrrolidine	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
5-Nitro-o-toluidine	N	2790	mg/kg	0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Pentachlorobenzene	N	2790	mg/kg	5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Phenacetin	N	2790	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pronamide	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Safrole	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
1,2,3,5-Tetrachlorobenzene	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
Disulfoton	N	2790	mg/kg	0.20		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dinoseb	N	2790	mg/kg	0.050		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Benzyl Alcohol	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Thionazin	N	2790	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
o-Toluidine	N	2790	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
o,o,o-Triethyl phosphorothioate	N	2790	mg/kg	0.075		< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Tabernacle Terrace, Cwmafan

Client: Terra Firma (Wales) Ltd			**Chemtest Job No.:**		19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913	19-03913
Quotation No.: Q18-15369			**Chemtest Sample ID.:**		766594	766595	766596	766597	766598	766599	766600	766601
			Client Sample ID.:		TP01	TP02	TP03	TP03	TP04	TP04	TP05	TP06
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.50	0.40	0.30	1.00	0.30	0.80	0.60	0.60
			Date Sampled:		31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019	31-Jan-2019
			Time Sampled:		0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
1,3,5-Trinitrobenzene	N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
Total PCBs (7 congeners)	N	2815	mg/kg	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Phorate	N	2820	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dimethoate	N	2820	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Parathion	N	2820	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Alpha-HCH	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Gamma-HCH (Lindane)	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Beta-HCH	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Delta-HCH	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Heptachlor	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Aldrin	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Heptachlor Epoxide	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
4,4-DDE	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dieldrin	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Endrin	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
4,4-DDD	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
4,4-DDT	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Endosulfan Sulphate	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Methoxychlor	N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
2,3,4,6-Tetrachlorophenol	N	2900	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Organic Matter BS1377	N	2930	%	0.10	2.3	3.3	3.5	1.7	2.6	2.3	3.2	3.3

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2790	Semi-Volatile Organic Compounds (SVOCs) in Soils by GC-MS	Semi-volatile organic compounds(cf. USEPA Method 8270)	Acetone/Hexane extraction / GC-MS
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
2820	Organophosphorus (O-P) Pesticides in Soils by GC-MS	Organophosphorus pesticide representative suite including Parathion, Malathion etc, plus client specific determinands	Dichloromethane extraction / GC-MS
2840	Organochlorine (O-Cl) Pesticides in Soils by GC-MS	Organochlorine pesticide representative suite including DDT and its metabolites, 'drins' and HCH etc, plus client specific determinands	Dichloromethane extraction / GC-MS
2900	Phenols in Soils by GC-MS	Approximately 24 substituted Phenols, including Chlorophenols	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Test Methods

SOP	Title	Parameters included	Method summary
2930	Organic Matter	Organic Matter	Acid Dichromate digestion/Titration

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis
The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols
For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	24-07635-1
Initial Date of Issue:	25-Mar-2024
Re-Issue Details:	
Client	Terra Firma
Client Address:	5 Deryn Court Wharfedale Road Pentwyn Cardiff CF23 7HA
Contact(s):	j.mcananey@tfwgroup.co.uk
Project	14611 Tabernacle Terrace 2024

Quotation No.:		**Date Received:**	12-Mar-2024
Order No.:	14611 TABERNACLE TERRACE 2024	**Date Instructed:**	12-Mar-2024
No. of Samples:	4		
Turnaround (Wkdays):	5	**Results Due:**	18-Mar-2024
Date Approved:	25-Mar-2024		

Approved By:

Details:	Stuart Henderson, Technical Manager

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: 14611 Tabernacle Terrace 2024

Client: Terra Firma				**Chemtest Job No.:**		24-07635	24-07635	24-07635	24-07635
Quotation No.:				**Chemtest Sample ID.:**		1778875	1778876	1778877	1778878
Order No.: 14611 TABERNACLE TERRACE 2024				Client Sample Ref.:		TP01 0.40	TP01 0.80	TP02 0.20	TP02 1.00
				Client Sample ID.:		TP01 0.40	TP01 0.80	TP02 0.20	TP02 1.00
				Sample Location:		TP01 0.40	TP01 0.80	TP02 0.20	TP02 1.00
				Sample Type:		SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.40	0.80	0.20	1.00
				Date Sampled:		08-Mar-2024	08-Mar-2024	08-Mar-2024	08-Mar-2024
				Time Sampled:		12:00	12:00	12:00	12:00
				Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**				
ACM Type		U	2192		N/A	-	-	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020	8.4	49	19	17
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones	Stones	Stones	Stones
Soil Texture		N	2040		N/A	Sand	Sand	Sand	Sand
pH at 20C		M	2010		4.0	8.9	8.0	8.6	8.7
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	0.67	0.60	0.51	< 0.40
Cyanide (Complex)		M	2300	mg/kg	0.50	< 0.50	0.70	< 0.50	< 0.50
Cyanide (Free)		M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50	0.70	< 0.50	< 0.50
Sulphate (Acid Soluble)		U	2430	%	0.010	0.12	0.10	0.11	< 0.010
Arsenic		M	2455	mg/kg	0.5	28	18	26	4.4
Beryllium		U	2455	mg/kg	0.5	0.6	< 0.5	0.9	< 0.5
Cadmium		M	2455	mg/kg	0.10	0.48	< 0.10	0.36	< 0.10
Chromium		M	2455	mg/kg	0.5	21	8.6	24	14
Mercury Low Level		N	2450	mg/kg	0.05	0.20	0.08	0.25	0.08
Manganese		M	2455	mg/kg	1.0	620	400	760	190
Molybdenum		M	2455	mg/kg	0.5	4.4	2.2	2.9	< 0.5
Antimony		N	2455	mg/kg	2.0	5.3	3.1	6.3	4.6
Copper		M	2455	mg/kg	0.50	98	21	140	24
Nickel		M	2455	mg/kg	0.50	99	14	34	21
Lead		M	2455	mg/kg	0.50	210	170	340	130
Selenium		M	2455	mg/kg	0.25	0.76	2.4	0.77	0.32
Zinc		M	2455	mg/kg	0.50	260	150	480	140
Chromium (Trivalent)		N	2490	mg/kg	1.0	21	8.6	24	14
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	5.8	12	10	3.2
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	1.6	2.6	2.4	1.8

Results - Soil

Project: 14611 Tabernacle Terrace 2024

Client: Terra Firma				**Chemtest Job No.:**		24-07635	24-07635	24-07635	24-07635
Quotation No.:				**Chemtest Sample ID.:**		1778875	1778876	1778877	1778878
Order No.: 14611 TABERNACLE TERRACE 2024				Client Sample Ref.:		TP01 0.40	TP01 0.80	TP02 0.20	TP02 1.00
				Client Sample ID.:		TP01 0.40	TP01 0.80	TP02 0.20	TP02 1.00
				Sample Location:		TP01 0.40	TP01 0.80	TP02 0.20	TP02 1.00
				Sample Type:		SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.40	0.80	0.20	1.00
				Date Sampled:		08-Mar-2024	08-Mar-2024	08-Mar-2024	08-Mar-2024
				Time Sampled:		12:00	12:00	12:00	12:00
				Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**				
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0	< 2.0	< 2.0	< 2.0
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	3.5	9.0	5.3	< 3.0
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	11	25	20	7.2
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	11	25	20	< 10
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	2.3	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	55	< 1.0
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	2.5	< 2.0	470	< 2.0
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	12	5.6	690	2.2
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	11	2.1	99	1.0
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	14	5.6	1200	< 5.0
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	25	< 10	1300	< 10
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	26	30	1200	11
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	36	32	1300	12
Aliphatic TPH >C5-C6	EH_2D_AL_#1	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aliphatic TPH >C6-C8	EH_2D_AL_#1	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aliphatic TPH >C8-C10	EH_2D_AL_#1	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	EH_2D_AL_#1	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C12-C16	EH_2D_AL_#1	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C16-C21	EH_2D_AL_#1	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C21-C35	EH_2D_AL_#1	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C35-C44	EH_2D_AL_#1	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons		N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C5-C7	EH_2D_AR_#1	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aromatic TPH >C7-C8	EH_2D_AR_#1	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aromatic TPH >C8-C10	EH_2D_AR_#1	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	EH_2D_AR_#1	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C12-C16	EH_2D_AR_#1	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C16-C21	EH_2D_AR_#1	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C21-C35	EH_2D_AR_#1	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C35-C44	EH_2D_AR_#1	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: 14611 Tabernacle Terrace 2024

Client: Terra Firma				**Chemtest Job No.:**		24-07635	24-07635	24-07635	24-07635
Quotation No.:				**Chemtest Sample ID.:**		1778875	1778876	1778877	1778878
Order No.: 14611 TABERNACLE TERRACE 2024				Client Sample Ref.:		TP01 0.40	TP01 0.80	TP02 0.20	TP02 1.00
				Client Sample ID.:		TP01 0.40	TP01 0.80	TP02 0.20	TP02 1.00
				Sample Location:		TP01 0.40	TP01 0.80	TP02 0.20	TP02 1.00
				Sample Type:		SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.40	0.80	0.20	1.00
				Date Sampled:		08-Mar-2024	08-Mar-2024	08-Mar-2024	08-Mar-2024
				Time Sampled:		12:00	12:00	12:00	12:00
				Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**				
Total Aromatic Hydrocarbons		N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Petroleum Hydrocarbons	EH_2D_Total_#1	N	2680	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	0.79	< 0.10	4.2	0.16
Anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	1.1	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	1.3	< 0.10	8.0	0.22
Pyrene		M	2800	mg/kg	0.10	0.97	< 0.10	8.0	0.13
Benzo[a]anthracene		M	2800	mg/kg	0.10	0.64	< 0.10	3.3	< 0.10
Chrysene		M	2800	mg/kg	0.10	1.1	< 0.10	3.6	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	1.3	< 0.10	3.7	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	0.35	< 0.10	1.5	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	1.0	< 0.10	2.9	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	0.82	< 0.10	1.8	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10	0.41	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	0.76	< 0.10	1.6	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	9.0	< 2.0	40	< 2.0
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Organic Matter BS1377		N	2930	%	0.10	4.6	3.4	4.2	1.0

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2010	pH Value of Soils	pH at 20°C	pH Meter	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection	
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.	
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8-C10 Aromatics: >C5–C7,>C7-C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	
2930	Organic Matter	Organic Matter	Acid Dichromate digestion/Titration	

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable
PL - Prepared Leachate
PW - Processed Water

Report Information

RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

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

ANNEX F
Ground Gas Monitoring Results

In-Situ Gas Monitoring Results

Job Number 14611
Job Name Tabernacle Terrace, Cwmafan

Round 1

Date: 19.02.2019
Barometric Pressure: 1014mb
Weather: Sunny

Gas Monitoring Well Number	Methane (CH_4)	Oxygen (O_2)	Carbon Dioxide (CO_2)	Flow	GW Level
	(%)	(%)	(%)	(l/hr)	m bgl
WS01	N/D	7.6	1.6	No Flow	Dry
WS02	0.2	5.5	10.5	No Flow	Dry
WS03	0.1	9.8	5.1	No Flow	Dry

Round 2

Date: 07.03.2019
Barometric Pressure: 1005mb
Weather: Rain showers

Gas Monitoring Well Number	Methane (CH_4)	Oxygen (O_2)	Carbon Dioxide (CO_2)	Flow	GW Level
	(%)	(%)	(%)	(l/hr)	m bgl
WS01	N/D	19.4	0.1	No Flow	Dry
WS02	0.3	19.4	0.3	No Flow	Dry
WS03	0.2	17.6	0.1	No Flow	Dry

Round 3

Date: 19.03.2019
Barometric Pressure: 1024mb
Weather: Sunny spells

Gas Monitoring Well Number	Methane (CH_4)	Oxygen (O_2)	Carbon Dioxide (CO_2)	Flow	GW Level
	(%)	(%)	(%)	(l/hr)	m bgl
WS01	N/D	14.0	3.9	No Flow	Dry
WS02	N/D	16.7	4.0	No Flow	Dry
WS03	N/D	18.2	4.1	No Flow	Dry

Notes:

Gas Measuring Instrument
GA 2000

N/D - Not Detected

In-Situ Gas Monitoring Results

Job Number 14611
Job Name Tabernacle Terrace, Cwmafan

Round 4

Date: 03.04.2019
Barometric Pressure: 996mb
Weather: Overcast

Gas Monitoring Well Number	Methane (CH_4)	Oxygen (O_2)	Carbon Dioxide (CO_2)	Flow	GW Level
	(%)	(%)	(%)	(l/hr)	m bgl
WS01	N/D	19.7	0.6	No Flow	Dry
WS02	0.1	19.9	0.5	No Flow	Dry
WS03	N/D	17.1	N/D	No Flow	Dry

Round 5

Date: 16.04.2019
Barometric Pressure: 997mb
Weather: Overcast

Gas Monitoring Well Number	Methane (CH_4)	Oxygen (O_2)	Carbon Dioxide (CO_2)	Flow	GW Level
	(%)	(%)	(%)	(l/hr)	m bgl
WS01	N/D	19.6	0.2	No Flow	Dry
WS02	N/D	19.7	0.2	No Flow	Dry
WS03	N/D	18.2	N/D	No Flow	Dry

Round 6

Date: 01.05.2019
Barometric Pressure: 1005mb
Weather: Sunny

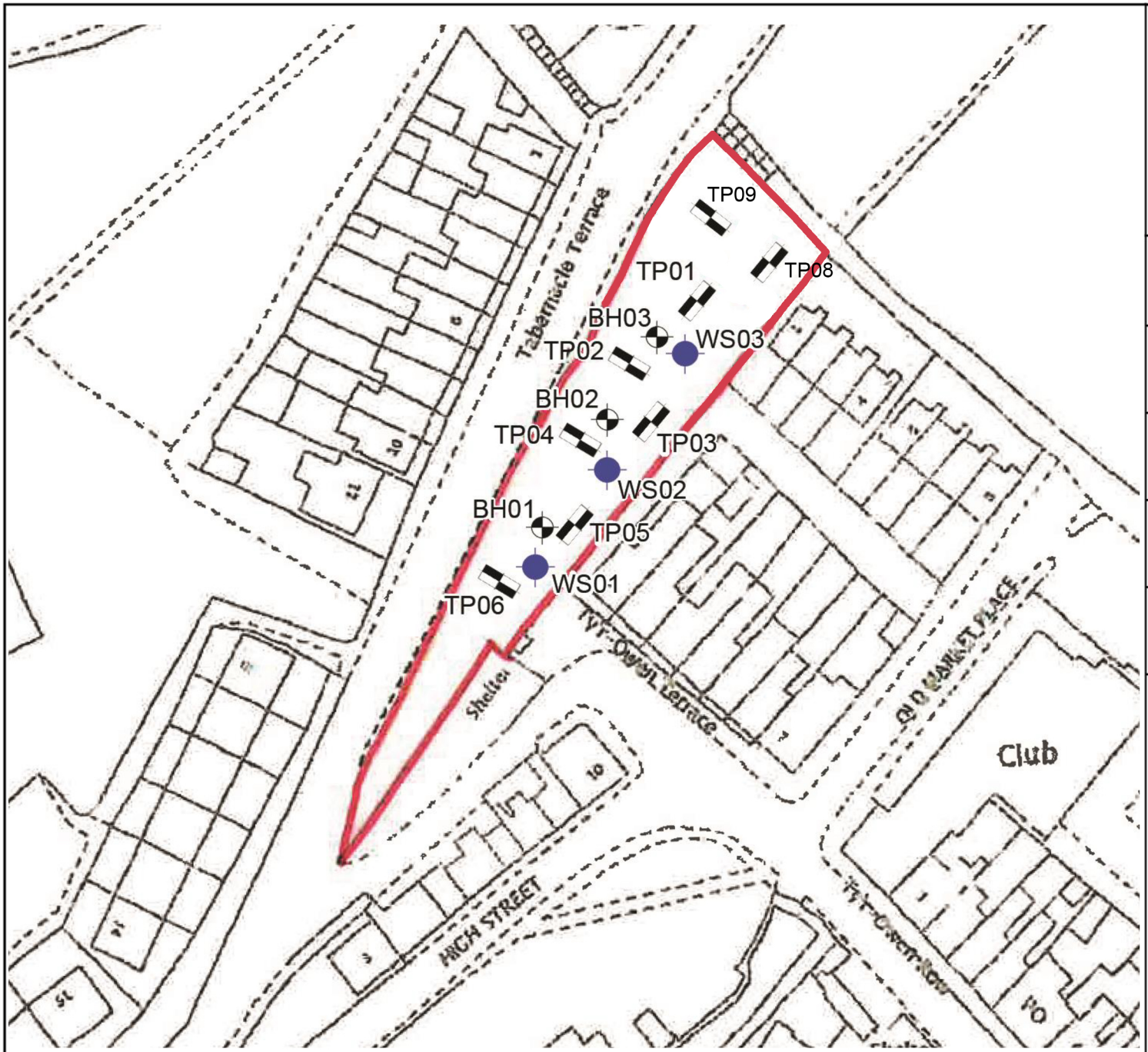
Gas Monitoring Well Number	Methane (CH_4)	Oxygen (O_2)	Carbon Dioxide (CO_2)	Flow	GW Level
	(%)	(%)	(%)	(l/hr)	m bgl
WS01	N/D	19.9	0.4	No Flow	Dry
WS02	N/D	19.4	0.3	No Flow	Dry
WS03	N/D	18.0	N/D	No Flow	Dry

Notes:

Gas Measuring Instrument
GA 2000

N/D - Not Detected

DRAWINGS



terrafirma

Job Number:
14611

Job Title:
Tabernacle Terrace, Cwmafan

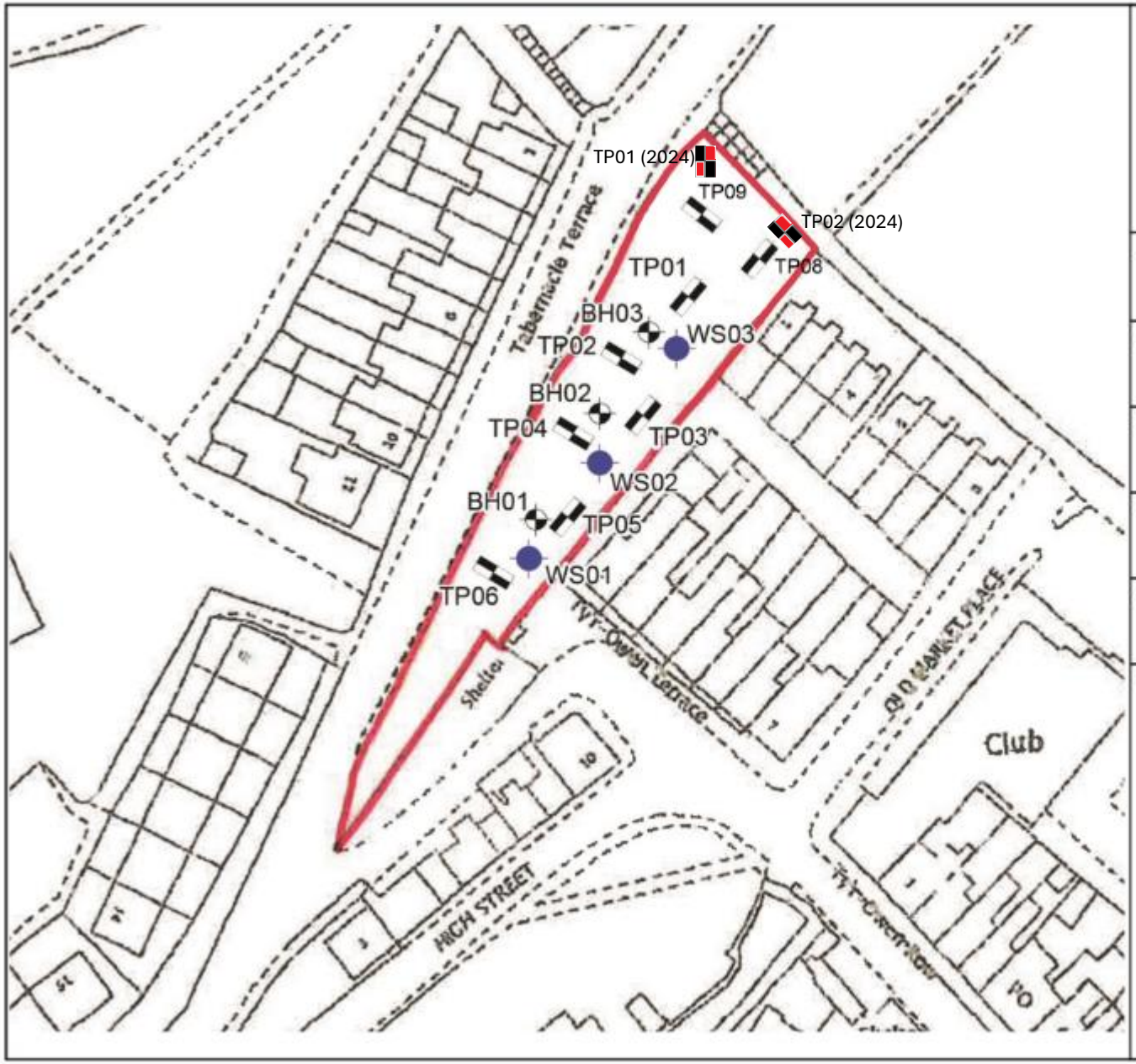
Drawing Title:
Current Site Layout

Drawing Number:
01

Scale:
Not To Scale

Legend:

- Approximate position of machine excavated trial pit
- Approximate position of mini percussive borehole
- Approximate position of rotary percussive borehole



terrafirma

Job Number:
14611

Job Title:
Tabernacle Terrace, Cwmafan

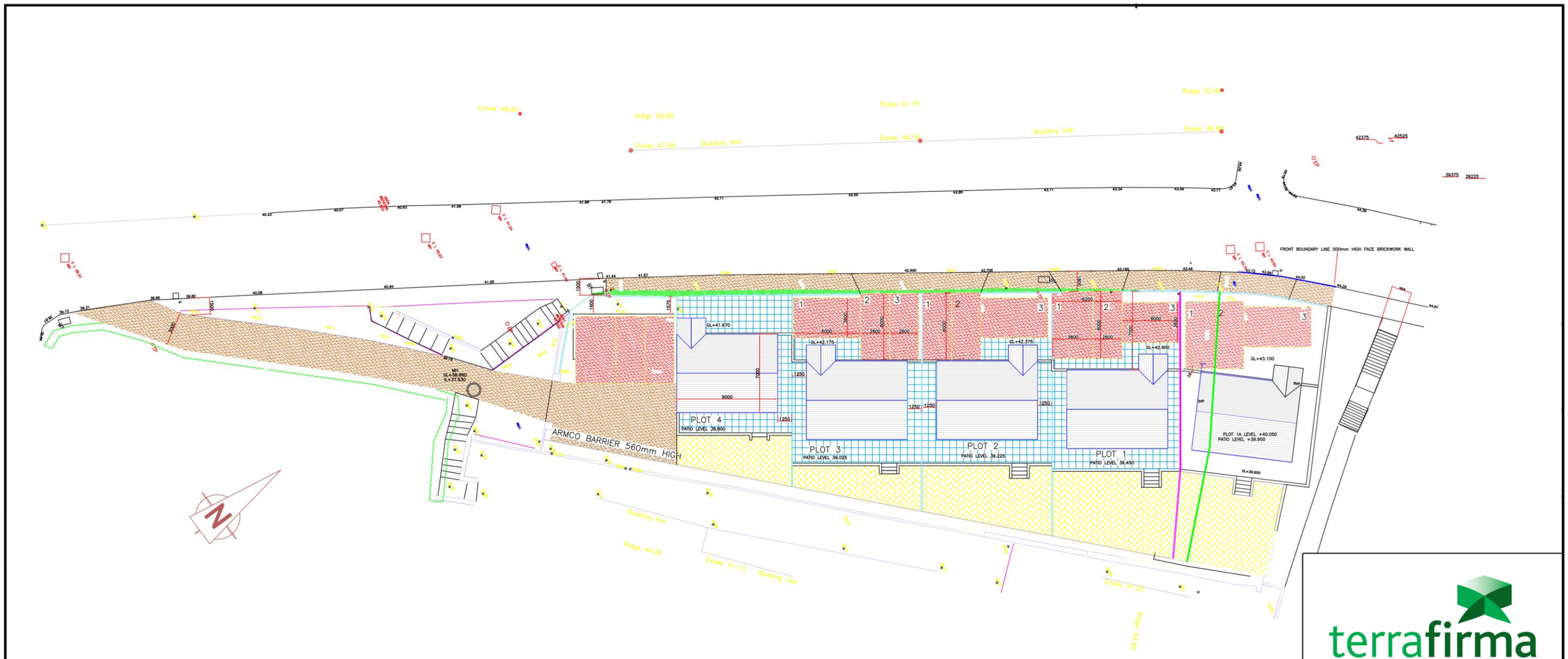
Drawing Title:
Chemical Sample Location Pits

Drawing Number:
2

Scale:
Not To Scale

Legend:

- Trial Pit Locations associated with Chemical Sample
- Gas Well Locations
- Borehole Locations associated with Chemical Sample



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Job Number:	14611
Job Title:	Tabernacle Terrace
Drawing Title:	Site Layout
Drawing Number:	02
Scale:	Not To Scale
Legend:	

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Geotechnical & Geoenvironmental Specialists

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