

**Geotechnical & Geo-environmental Site
Investigation Report:**

Proposed Residential Development
Former Social Club
Fairwater
Cardiff

Prepared For:
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terrafirma


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Executive Summary

Proposed Development	<i>Fairwater Social Club is located off Plas-mawr Road, Fairwater. It centres on an approximate National Grid Reference of 313850 177840 and occupies a plan area of approximately 0.61 Hectares.</i>
Site History	<i>In 1880 the site situated across field land. By 1901 several farm buildings had been erected in the southwest of the site. Between 1963 and 1968 the farm buildings were demolished. The social club was established between 1977 and 1990. The site buildings still remain but are disused.</i>
Ground Conditions	<p><i>Made ground was identified across the site to depths of between 0.45m and 1.7m, primarily comprising re-worked very soft to firm clay deposits with some deleterious content.</i></p> <p><i>In-situ clay soils prevail below the made ground in most areas.</i></p> <p><i>Medium dense to dense sand and gravel deposits lie directly below the made ground or in-situ clays.</i></p>
Ground Gas	<i>There are no risks from ground gas.</i>
Radon	<i>No radon protection is required.</i>
Laboratory Chemical Testing and Proposed Remediation	<p><i>PAH contamination was identified in made ground at the location of TP2.</i></p> <p><i>TP2 situated in the private garden area of the former dwelling in the far northwest of the site.</i></p> <p><i>In order to protect future site residents it is recommended that the soils in the private garden area be removed and/or capped, which may comprise hardstanding, buildings or 600mm of clean soils.</i></p>
Foundation Solution	<p><i>The ground conditions across the site were found to be variable in competency comprising made ground and bands of soft or very soft clays soils/loose sand.</i></p> <p><i>The most suitable foundation solution will be dependent on the nature of the proposed new buildings and required loads.</i></p> <p><i>A mini-piled foundation, founded within underlying competent soils or mudstone bedrock are recommended. This solution will cater for any localised variabilities in the underlying soils. However, the depth to a competent horizon should be confirmed by the sinking of several cable percussive boreholes. For a 115mm diameter mini pile a safe working load of typically 150kN should be achievable. Floor slabs should be designed as suspended with underfloor void.</i></p> <p><i>A reinforced concrete raft/floor slab solution and/or mass or concrete strip foundations may prove suitable for some areas of the site, but this should be confirmed by further, more localised investigation once the proposed layout of any new development has been determined.</i></p>

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SECTION 1 Introduction and Proposed Development

1.1 Introduction

Cardiff Council is proposing the residential development of an area of land currently occupied by the disused Fairwater social club.

Terra Firma (Wales) Limited has been commissioned to undertake a geo-environmental assessment and geotechnical investigation of the site.

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

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

The main objectives of the geotechnical site investigation were to:

- Determine the type, strength and bearing characteristics of the shallow superficial and underlying solid geology
- Provide engineering foundation and floor slab recommendations for the development
- Provide recommendations with regard to any other geotechnical aspects pertaining to the development

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

1.2 Limitations and Exceptions of Investigation

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

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

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

SECTION 2 Review of Existing Data

2.1 Physical Setting and Current Site Use

The site is located off Plas-mawr Road, Fairwater.

It centres on approximate National Grid Reference of 313850 177840 and occupies a plan area of approximately 0.61 Hectares.

A site location plan is provided in **Figure 2.1** below.

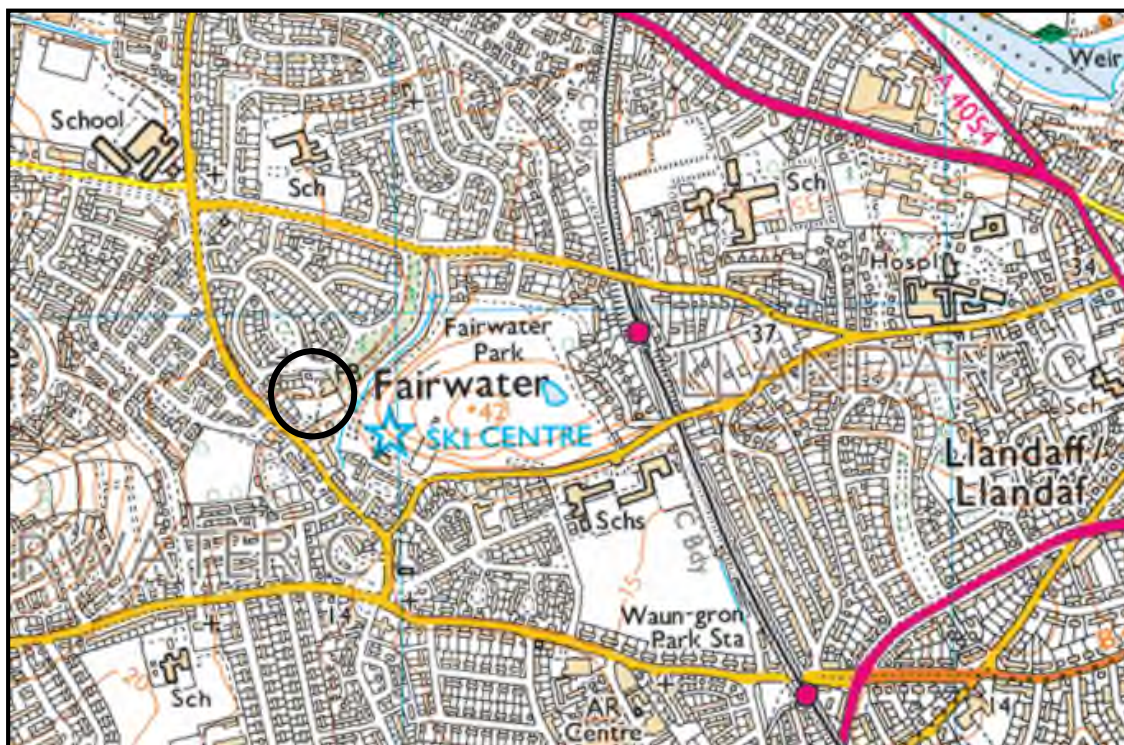


Figure 2.1: Site Location - OS Map 151 Cardiff and Bridgend

Presently the site is occupied by two vacant buildings, with areas of hard surfaced car park and grassed landscaping.

The main club building stands in the northeast of the site and the second smaller building lies in the far northwest corner of the site.

The landscaped area comprising the south-eastern portion of the site is overgrown with shrubs. Numerous mature trees stand in the far southeast site corner.

The site generally slopes gently down towards the south and southeast. The south-eastern edge of the site comprises a steep slope of up to approximately 4m in height. The northern section of the site (north of the club building) is elevated above the remainder of the site.

The site boundaries are generally defined by walls, fencing and trees/vegetation. Ferrier Avenue runs adjacent to the far northern site boundary.

2.2 Site History

Historical maps of the site have been obtained in an Envirocheck History Report, provided by Landmark Information Group, which may be found in **Annex A**.

1880

The site situates across field land just north of the small settlement of Fairwater. A single building is recorded in the far southwest corner of the site. A road runs adjacent to the south-western corner of the site. A stream is seen to pass very close to the site's south-eastern corner, flowing towards the southwest.

1901

Several buildings have been erected along the lower part of the site's south-eastern boundary.

1940

The buildings in the south of the site are now shown to belong to Upper House Farm. The road to the west is now named Plas-mawr Road.

1951

Residential development of land west of Plas-mawr Road is recorded.

1954

Significant residential development has now occurred. Housing has been erected on land directly west of the site and Ferrier Avenue defines the far northern edge of the site. A tank is denoted at Upper House Farm, just south of the site boundary.

1963

The farm building closest to Plas-mawr road has been demolished.

1968

Upper House Farm no longer exists, and all farm buildings have been demolished. The site is now entirely vacant.

1977

The site remains undeveloped, with the exception of a building of unspecified use erected in the far south-western corner of the site.

1990

The building present in 1977 has been removed. The site is now seen to have taken the same layout as remains today. The club has been established and a smaller building in the north of the site built. Steep slopes are denoted along the south-eastern edge of the site and between the club and far northern section of the site, indicating that some filling has occurred.

2020

The site remains unchanged since 1990.

2.3 Geological Setting

2.3.1 Geology

Geologically the site is underlain by rocks of the Mercia Mudstone Group, which comprise red and green-grey mudstone and subordinate siltstones.

Superficial till deposits are recorded to overlie the solid geology.

Historical plans suggest filling in the north and southeast of the site has occurred. Therefore, soils of unknown origin and composition are anticipated to be present in these areas.

Building rubble materials may be present in connection with buildings that previously stood in the southwest of the site.

2.3.2 Radon

The Envirocheck Report (**Annex A**) details that the site area is a lower probability radon area (less than 1% of homes are estimated to be at or above the action level).

No radon protective measures are necessary in the construction of new buildings.

2.4 Environmental Setting

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

2.4.1 Hydrogeology and Hydrology

The underlying bedrock has been classed as a Secondary B Aquifer. Any superficial deposits have been classified as Secondary Undifferentiated.

Surface and shallow groundwater flow on site are likely to flow to the south/southeast, following the local topography.

Given the urban nature of the surrounding area most surface water is currently likely to be collected by surface drainage systems.

Surface or shallow water may be received by the stream that flows south of the site. The stream converges with the River Ely approximately 600m to the south.

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

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

The Envirocheck Report confirms that the site does not situate within a groundwater source protection zone.

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

No premises with previous or current consent to discharge waste waters are present within 250m of the site.

2.4.2 Waste

No landfill sites or licensed waste management facilities are present on site or within a 250m radius of the site.

2.4.3 Potentially Infilled Land

Potentially infilled land listed in the Envirocheck Report within 250m of the site is summarised in **Table 2.1**.

Table 2.1 Potentially Infilled Land	
Distance/Direction from site	Feature
61m Southeast	Stream, partially culverted along its route. Not infilled.
151m East	Small pond
198m Southeast	Infilled drain

2.4.4 Pollution

No pollution incidents to controlled waters have occurred within a 250m radial area around the site since 1995.

2.4.5 Flooding

The site is shown to not be at risk from flooding of rivers.

2.4.6 Sensitive Land Use

The site is not situated within an area of sensitive land use.

2.4.7 Contemporary Trades

The Envirocheck Report does not record any active contemporary trades or fuel stations within 100m of the site.

SECTION 3 Preliminary Human Health and Environmental Risk Assessment

3.1 General

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

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

Under Part IIA the statutory definition of 'contaminated land' is: any land which appears to the local authority in whose area it is situated, to be in such a condition, by reason of substances in, on, or under the land, that:

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

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

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

3.2 Preliminary Site Conceptual Model

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

3.3 Potential Sources of Contamination and Gas

The potential contamination beneath the site, whether in the matrix of soil or any groundwater will be related to the sites past use and the history of the surrounding area.

Several farm buildings of unspecified use historically situated in the southwest of the site. Later the site was developed as the social club. No specific potential sources of contamination can therefore be identified in connection with past site use.

Rubble materials may remain from demolition of the former farm buildings, which could include asbestos containing materials.

Prior to development of the social club historical maps suggest some site earthworks with filling of some areas. Fill from an unknown origin could have been imported and is therefore identified as a potential source of contamination.

3.3 Potential Sources of Contamination and Gas (Continued)

No potential sources of contamination are identified in relation to the use of neighbouring sites.

A tank at the former farm was recorded just south of the site. If the tank was used to store fuel or oils then leaks or spills could have impacted the underlying soils. Any such contamination would unlikely affect the site as this is up-gradient of the former tank.

No potential sources of ground gas or landfill gas are identified.

3.4 Potential Receptors and Pollution Pathways

There are both human and hydrological receptors to be considered should any contamination be detected on site.

Construction workers will be excavating in soils and will be exposed via dermal contact with soils and dust, ingestion of soil /soil dust and inhalation of soil dust. Inhalation of asbestos fibres is also a potential pathway.

Residential end use is proposed. Once developed, future site users will potentially be at risk from any contamination from the same pathways as well as through consumption of potable water and home grown produce.

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

A qualitative preliminary Human Health and Environmental Risk Assessment summarises the above and is detailed in the **Tables 3.1 and 3.2** on the following pages.

Table 3.1 - Qualitative Preliminary Human Health Risk Assessment

Potential Source	Pathway	Receptor During Construction	Level of Risk	Receptor Post Construction	Level of Risk
Made Ground <i>Possible building rubble and imported fill</i>	Ingestion, inhalation and dermal contact with soil and soil dust	Construction Workers	Medium	Future residents	Medium
	Ingestion of home grown vegetables/fruit	N/A	N/A	Future residents	Medium
	Inhalation of Asbestos	Construction Workers	Medium	Future residents	Medium
Radon Gas	Inhalation <i>Accumulation of gas indoors in confined spaces- asphyxiation and explosion</i>	N/A	N/A	Future residents	Acceptable Risk <i>No Radon Protection required for new buildings</i>
Landfill Gas	Inhalation <i>Accumulation of gas indoors in confined spaces- asphyxiation and explosion</i>	N/A	N/A	Future residents	No Risk <i>No sources of landfill gas identified</i>
Ground Gas	Inhalation <i>Accumulation of gas indoors in confined spaces- asphyxiation and explosion</i>	N/A	N/A	Future residents	No Risk <i>No sources of ground gas identified.</i>
Made Ground <i>Possible building rubble and imported fill</i>	Ingestion of potable water <i>Absorption of contamination from made ground into potable water pipes</i>	N/A	N/A	Future residents	Medium

Table 3.2 – Qualitative Preliminary Environmental Risk Assessment

Potential Source	Pathway	Receptor During Construction	Level of Risk	Receptor Post Construction	Level of Risk
Surface Water	Run-off	Site and Adjacent Sites Shallow/Perched Groundwater	Low	Site and Adjacent Sites Shallow/Perched Groundwater	Low
Accidental spillage	Run-off , digging foundations, moving contaminated soil, drainage misconnections, discharges to local surface waters or the ground, construction materials and/or exposed ground, wheel washings, oil or chemical spills	Site and Adjacent Sites	Low <i>On site procedures will ensure that all efforts are made to prevent accidental spillage</i>	N/A	N/A
Made Ground <i>Possible building rubble and imported fill</i>	Leaching of contamination	Shallow/Perched Groundwater	Low	Shallow/Perched Groundwater	Low
Contaminated Groundwater	Direct migration and Perched Groundwater migration	Stream to the south Secondary B Aquifer	Low	Stream to the south Secondary B Aquifer	Low
Contaminated Groundwater	Groundwater Migration	River Ely 600m South	Negligible	River Ely 600m South	Negligible

SECTION 4 Field Investigation

4.1 Site Works

Geotechnical and geo-environmental investigation of the site was performed in July 2020 comprising six windowless sampling boreholes (WS1 – WS6) and five trial pits, including two soakaway tests (SA1, SA2, TP1 – TP3).

The trial holes were excavated with a JCB.

The mini percussive boreholes were sunk with a Dando mini-percussive drilling rig. Within the boreholes, Standard Penetration (SPT) tests were undertaken at close and regular intervals.

The fieldworks were supervised by Terra Firma (Wales) Limited and the boreholes and trial pits were logged to the requirements of BS5930:2015.

Trial pit logs may be found in **Annex C** and borehole logs in **Annex D**.

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

4.2 Ground Conditions

A summary of the ground conditions identified are summarised in **Table 4.1**.

Table 4.1 Summary of Ground Conditions (SA1, SA2, TP3, WS1 – WS6)		
Depth (m)	Thickness (m)	Stratum
0.0 - 0.45/1.7	0.45/1.7	MADE GROUND: GRAVEL SUB-BASE / Brown gravelly CLAY / Red brown gravelly cobbly CLAY / Grey and orange CLAY . In places fragments of glass, brick, plastic, metal and china
0.6/1.2 - 1.8/2.17	-/0.75/2.25	Firm brown CLAY / soft to very soft to firm and occasionally stiff red brown gravelly cobbly CLAY / Orange brown silty CLAY / Very soft grey and yellow grey CLAY (SA1, SA2, WS2, WS3, WS5)
1.6/2.7 - 2.6/4.0	-	Occasionally loose becoming/or medium dense to dense brown/red brown slightly clayey SAND and GRAVEL and COBBLE (WS1, WS2, WS3, WS6, TP3)

TP1 and TP2 were positioned at the northern end of the site, which is raised above the remainder of the site. TP1 extended to only 0.9m due to the proximity of a sewer. Here made ground was identified comprising a 0.6m layer of brown gravelly cobbly clay and underlying brown gravelly clay with low content of plastic, glass and polystyrene. TP2 identified made ground to the full investigation depth of 2.5m comprising variable soft and/to firm clays with occasional brick, tile and metal fragments.

In WS2 a band of red brown/brown slightly sandy gravelly CLAY was recorded below the granular layer, between 3.5m and the full exploratory depth of 4.0m.

4.2 Ground Conditions (Continued)

Within WS4 probable highly weathered very weak mudstone was encountered at 2.55m depth.

4.3 Groundwater Strikes

Groundwater was not encountered in the trial pits or windowless sampling boreholes.

4.4 Stability and Obstructions

Exploratory holes remained stable during excavation.

4.5 Soil Laboratory Chemical Testing

During the intrusive investigation, small disturbed soil samples were collected. The sampling regime was conducted in accordance with BS5930: 1999 in order to satisfy the following criteria:

- Identify and confirm suspected sources of contamination
- Determine type and concentration of contamination
- Determine lateral and vertical spread of contaminants
- Ensure representation of the entire site
- Provide sufficient data to determine suitable remedial measures if necessary

The soil samples taken were despatched to the laboratories of Eurofins Chemtest.

The sample locations and depths as well as scheduled laboratory tests are listed in the following table.

Table 4.2 Soil Sample Details			
Sample	Depth (m)	Sample Description	Testing Schedule
WS1	0.2 – 0.6	Made Ground: Brown gravelly clay. Glass and brick fragments	SF1
WS2	0.6	Orange brown silty clay	
WS3	0.8 – 1.0	Red brown gravelly clay	
WS5	0.5 – 0.7	Grey silty clay	
WS6	0.3 – 0.6	Made Ground: Brown gravelly cobbly clay	
TP1	0.2	Made Ground: Brown gravelly clay	
TP2	0.3	Made Ground: Dark brown gravelly clay with bricks, paving slab, and plastic	
TP3	0.4	Made Ground: Grey brown gravelly clay with occasional brick, china and plastic	

Notes

- SF1 - antimony, arsenic, beryllium, boron, cadmium, chromium III, chromium VI, manganese, mercury, molybdenum, copper, nickel, lead, selenium, zinc, speciated PAH, cyanide, sulphate, pH, phenol, soil organic matter, TPHCWG, Asbestos

The soil test results certificate may be found in **Annex G**. Results are summarised in **Section 5**.

4.6 Soakaway Testing

Two in-situ soakaway tests were performed, in SA1 and SA2 in accordance with BRE365.

Please refer to **Section 7.7**.

SECTION 5 Soil Analytical Results

5.1 Soil Assessment Methodology

Comparison of the analytical results has been made residential (including plant uptake) Suitable 4 Use Levels (S4ULs) provided by Land Quality Management Limited and the Chartered Institute of Environmental Health (CIEH). Where CIEH thresholds are not available reference has been made to Category 4 Screening Levels (C4SLs) or CLEA SGVs.

5.2 Soil Test Results

A summary of the chemical test results which include the regulatory soil guideline values used in the Tier 1 assessment are given in **Tables 5.1 and 5.2**.

Table 5.1 Summary of Soil Chemical Test Results Standard Suite					
Substance	SGV/GAC (mg/kg)	Source	Measured Concentrations of Tested Substances (mg/kg)		Number of Exceedences
			Minimum	Maximum	
Arsenic	37	CIEH	9.0	24	0
Cadmium	11	CIEH	0.18	0.52	0
Chromium III	910	CIEH	15	26	0
Chromium VI	6	CIEH	<0.5	<0.5	0
Copper	2400	CIEH	13	35	0
Lead	200	C4SL	28	140	0
Mercury	40	CIEH	0.07	0.12	0
Nickel	130	CIEH	18	31	0
Selenium	250	CIEH	<0.2	0.4	0
Zinc	3700	CIEH	72	160	0
Cyanide	8	CLEA	<0.5	<0.5	0
Phenols	120	CIEH	<0.3	<0.3	0
Organic Matter	-	-	0.9	2.7	-
pH	-	-	6.7	8.5	-
Total PAH	-	-	<2.0	79	See Table 5.2
Asbestos	-	-	Not detected	Not detected	-

Notes:

- no available guideline

5.2 Soil Test Results (Continued)

Table 5.2 Summary of Soil Chemical Test Results Speciated Polyaromatic Hydrocarbons and Petroleum Hydrocarbons					
Substance	GAC (mg/kg)	Source	Measured Concentrations of Tested Substances (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Naphthalene	2.3	CIEH	<0.1	0.15	0
Acenaphthylene	170	CIEH	<0.1	0.14	0
Acenaphthene	210	CIEH	<0.1	0.29	0
Fluorene	170	CIEH	<0.1	0.37	0
Phenanthrene	95	CIEH	<0.1	3.5	0
Anthracene	2400	CIEH	<0.1	0.84	0
Fluoranthene	280	CIEH	<0.1	13	0
Pyrene	620	CIEH	<0.1	13	0
Benzo(a)anthracene	7.2	CIEH	<0.1	7.4	1
Chrysene	15	CIEH	<0.1	7.6	0
Benzo(b)fluoranthene	2.6	CIEH	<0.1	10	1
Benzo(k)fluoranthene	77	CIEH	<0.1	4.2	0
Benzo(a)pyrene	2.2	CIEH	<0.1	7.5	1
Indeno(123cd)pyrene	27	CIEH	<0.1	4.9	0
Dibenzo(ah)anthracene	0.24	CIEH	<0.1	1.4	1
Benzo(ghi)perylene	320	CIEH	<0.1	4.9	0
Aliphatic					
PH C5 – C6 Ali	42	CIEH	<1.0	<1.0	0
PH C6 – C8 Ali	100	CIEH	<1.0	<1.0	0
PH C8 – C10 Ali	27	CIEH	<1.0	<1.0	0
PH C10 – C12 Ali	130	CIEH	<1.0	<1.0	0
PH C12 – C16 Ali	1100	CIEH	<1.0	<1.0	0
PH C16 – C21 Ali*	65000	CIEH	<1.0	<1.0	0
PH C21 – C35 Ali*	65000	CIEH	<1.0	<1.0	0
PH C35 – C44 Ali	65000	CIEH	<1.0	<1.0	0
Aromatic					
PH C5 – C7 Arom	70	CIEH	<1.0	<1.0	0
PH C7 – C8 Arom	130	CIEH	<1.0	<1.0	0
PH C8 – C10 Arom	34	CIEH	<1.0	<1.0	0
PH C10 – C12 Arom	74	CIEH	<1.0	<1.0	0
PH C12 – C16 Arom	140	CIEH	<1.0	<1.0	0
PH C16 – C21 Arom	260	CIEH	<1.0	<1.0	0
PH C21 – C35 Arom	1100	CIEH	<1.0	<1.0	0
PH C35 – C44 Arom	1100	CIEH	<1.0	<1.0	0

Notes:

- Thresholds based on 1.0% SOM
- CIEH for Ali C16 - 21 and C21 - C35 based on CIEH for EC >16 – 35

SECTION 6 Quantitative Risk Assessment

6.1 Contaminants of Concern

Contaminants of concern are those that are found to exceed their residential threshold level.

Benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene and Dibenz(a,h)anthracene were found to be elevated above residential thresholds levels in made ground in TP2 present between ground level and 0.7m depth.

6.2 Potential Receptors and Pathways

6.2.1 Human Receptors

The presence of PAH in soils at TP2 presents a risk to human health (construction workers and future site residents) via dermal contact with soils and dust, ingestion of soil /soil dust and inhalation of soil dust.

The contamination may also present a risk to future site users from consumption of home grown produce and potable water.

6.2.2 Aquatic Environment

No substances were detected at level sufficiently high as deemed to present a risk from leaching. There are not, therefore, considered to be any risks to the aquatic environment

6.3 Mitigation and Remedial Measures

6.3.1 Human Health

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.

TP2 situated in the private garden area of the former dwelling in the far northwest of the site.

In order to protect future site residents it is recommended that the soils in the private garden area defined in **Figure 6.1** on the following page (shaded blue) be removed and/or capped, which may comprise hardstanding, buildings or 600mm of clean soils.

6.3.1 Human Health (Continued)



Figure 6.1: Area of Required Remediation

Any soils removed may be disposed of off-site or re-used in garden or landscaped areas at a depth more than 600mm below finished ground level.

Any imported soils should be validated as clean and suitable for use.

There are not deemed to be any risks from ground gas relating to made ground on site as this primarily comprised re-worked natural soils and no degradable materials were recorded.

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.

If during development works any other unexpected ground conditions or evidence of contamination is found, inspection by a geo-environmental engineer should be made, and any required testing or investigation carried out prior to continuation of works.

6.3.2 Aquatic Environment

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

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

6.3.2 Aquatic Environment (Continued)

The basic measures that should be taken are as follows:

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

SECTION 7 Engineering Recommendations

7.1 Preparation of Site

Prior to demolition an asbestos survey should be carried out and any asbestos containing materials removed.

Site buildings should then be demolished, and all foundations, buried foundations and areas of hardstanding should be excavated out and removed.

Any vegetation or trees, including roots, should be stripped from beneath the proposed development area.

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

Contingencies should also be made for the protection and any necessary temporary/permanent support of structures adjacent to the site, including pedestrian footpaths.

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

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.

7.2 Foundation and Floor Slab Solution

The ground conditions across the site were found to be variable in competency comprising made and bands of soft or very soft clays soils/loose sand.

The most suitable foundation solution will be dependent on the nature of the proposed new buildings and required loads.

A mini-piled foundation, founded within underlying competent soils or mudstone bedrock are recommended. This solution will cater for any localised variabilities in the underlying soils. However, the depth to a competent horizon should be confirmed by the sinking of several cable percussive boreholes.

For a 115mm diameter mini pile a safe working load of typically 150kN should be achievable.

The above estimated working loads, type and length of piles are for guidance only and should be confirmed by a specialist piling contractor. It may also be prudent to drive a number of test piles at selected locations.

7.2 Foundation and Floor Slab Solution (Continued)

During the piling operations a rigorous check should be kept on vibrations. Should these vibrations exceed permissible levels then measures should be taken to reduce levels to acceptable levels. Should such vibrations exceed acceptable limits and they cannot be reduced then consideration should also be given to a bored pile solution.

Floor slabs should be designed as suspended with underfloor void.

A reinforced concrete raft/floor slab solution and/or mass or concrete strip foundations may prove suitable for some areas of the site, but this should be confirmed by further, more localised investigation once the proposed layout of any new development has been determined.

A 45 degree line taken from the base of the foundations should not intersect current or any proposed slopes or retaining walls.

7.3 Soil Property Testing

7.3.1 Plasticity Testing

During the investigation samples of the in-situ clays were taken for plasticity testing.

Test results may be found in **Annex F** and are summarised below.

In line with the NHBC (Chapter 4.2), the modified plasticity index for the samples was calculated.

Table 7.1 Plasticity Test Results				
Sample	Depth (mbgl)	Plasticity Index (%)	Modified Plasticity Index (%)	Volume Change Potential
WS1	1.4	19	16	Low
WS2	1.0	14	12	Low
WS6	1.2	20	14	Low
TP2	1.5	24	17	Low

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

7.4 Excavations and Formations

Allowances should be made for specific machinery and breaker attachments to enable the breaking floors slabs, foundations and possible buried obstructions.

The shallow excavations should not encounter significant perched water/groundwater inflows. Any inflows together with rainwater infiltration should be dealt with by suitable pumping techniques. Allowances should be made for seasonal fluctuations in groundwater level.

7.4 Excavations and Formations (Continued)

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.

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

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

7.5 Protection of Buried Concrete

Levels of total sulphate within the site soils measured between 170mg/kg to 490mg/kg and the pH varied between 6.7 and 8.5.

When these results are compared with Tables C1 and C2 of BRE Digest 1:2005, it indicates that all buried concrete should most likely as a minimum conform to Class AC-1.

7.6 Access and Car Parking Areas

New access and car parking areas should be newly constructed with imported fill.

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

It is recommended that field testing be carried out to confirm the California Bearing Ratio of all new formations.

7.7 Storm Drainage

Two soakaway tests were undertaken in accordance with BRE 365. The locations of soakaway SA1 and SA2 are shown on **Drawing 01** and their logs are presented within **Annex C**.

Both tests were performed in in-situ clay deposits.

Calculated infiltration rates are provided in **Table 7.2** on the following page.

Table 7.2 Soakaway Test Results		
Test Fill	Infiltration Rate	Comments
SA1		
Fill 1	1.05×10^{-4} m/s	-
Fill 2	1.69×10^{-5} m/s	-
Fill 3	1.30×10^{-5} m/s	-
SA2		
Fill 1	2.49×10^{-5} m/s	-
Fill 2	9.59×10^{-6} m/s	-
Fill 3	7.80×10^{-6} m/s	Final infiltration rate based on extrapolated results

Test calculation sheets may be found in **Annex G**.

7.8 Retaining Walls

Retaining walls may be required for the new development. The effective angles of shearing resistance of the encountered materials have been determined based upon past experience of the materials. Laboratory testing of representative soil samples should be undertaken at a future date to confirm the quoted parameters.

Table 7.3 Effective Shear Stress Parameters			
Stratum Description	Bulk Unit Weight (γ) kN/m ³	Effective Cohesion (c') kN/m ²	Effective Angle of Shearing Resistance (ϕ') degrees
Made Ground	18	0	18°
Soft to firm cohesive soils	19 - 20	0	20° - 25°
Firm to stiff cohesive soils	19 - 20	0	25° - 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 Practice for Earthworks.	19 - 20	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 Practice for Earthworks and other relevant guidance.

7.8 Retaining Walls (Continued)

It is recommended that the construction of retaining walls be carried out in small sections.

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.

The cohesive deposits will have a tendency to flake and soften with weathering as they are less resistant. Measures should be put in place to prevent deterioration.

Appropriate drainage should be installed to prevent the build up of hydrostatic pressure behind the retaining wall.

Unless incorporated into the design and build of any retaining walls, post development, the retaining walls, the retained soil or the top of the cutting/embankment slopes and slope faces themselves should not be surcharged with buildings, car parking or access roads etc.

If any future infrastructure developments become likely to impart a load upon the retaining walls/retained soils/slope crests or slope faces, appropriate slope face stability assessments should be undertaken to ensure their long term stability after such developments.

It is also recommended that periodic appraisal of the retaining wall and drainage is undertaken by a qualified engineer to ensure their continued integrity.

ANNEX A
Envirocheck Report

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

248403750_1_1

Customer Reference:

16155RH

National Grid Reference:

313850, 177840

Slice:

A

Site Area (Ha):

0.61

Search Buffer (m):

1000

Site Details:

Fairwater Social & Athletic Club, Ferrier Avenue
Cardiff
CF5 3LA

Client Details:

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

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	18
Hazardous Substances	-
Geological	21
Industrial Land Use	27
Sensitive Land Use	37
Data Currency	38
Data Suppliers	44
Useful Contacts	45

Introduction

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

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2			1	14
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 6				1
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 6		Yes		
Pollution Incidents to Controlled Waters	pg 6		1	2	7
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 8				2
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 8				4 (*5)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 10	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 11	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 11	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 11		Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 11		Yes	n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 11		15	5	33

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 18				2
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 18				1
Local Authority Landfill Coverage	pg 18	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 18			1	2
Potentially Infilled Land (Water)	pg 18		3	11	24
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 21	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 21	Yes		Yes	Yes
BGS Recorded Mineral Sites	pg 21			1	2
BGS Urban Soil Chemistry	pg 22		Yes	Yes	Yes
BGS Urban Soil Chemistry Averages	pg 25	Yes			
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 25	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 25	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 25	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 26	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 27		2	4	48
Fuel Station Entries	pg 31				2
Points of Interest - Commercial Services	pg 31		1	2	15
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 33				4
Points of Interest - Public Infrastructure	pg 33				19
Points of Interest - Recreational and Environmental	pg 35		3	2	6
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 37		1		9
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (W)	0	1	313848 177840
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	0	1	313848 177850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	30	1	313800 177900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	45	1	313950 177840
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (E)	50	1	313950 177850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (E)	99	1	314000 177800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	117	1	314000 177900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	124	1	314000 177750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	140	1	313700 177950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	162	1	314050 177900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	164	1	313650 177750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	165	1	314050 177750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	184	1	314050 177950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	207	1	313600 177800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (E)	211	1	314100 177750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (W)	213	1	313600 177750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	230	1	313600 177950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (W)	257	1	313550 177800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (W)	262	1	313550 177750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	274	1	314150 177950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	275	1	313550 177700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	295	1	314150 178000

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	A12NE (W)	303	1	313500 177850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	319	1	313600 177550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (E)	319	1	314200 177950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (E)	353	1	314250 177900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	353	1	313650 178200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	355	1	313550 177550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	358	1	313450 177900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (NW)	364	1	313500 178050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (E)	385	1	314250 178000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	413	1	313550 178200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	417	1	313400 177950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NE)	452	1	314300 178050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	490	1	314050 177350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (E)	496	1	314400 177800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (NW)	498	1	313350 178050
1	Discharge Consents Operator: Brosley Estates Ltd Property Type: Undefined Or Other Location: Cardiff - Brosley Estates Dev. Llan, Llantrisant Rd Authority: Natural Resources Wales Catchment Area: River Ely Reference: An0002401 Permit Version: 1 Effective Date: 12th April 1985 Issued Date: 12th April 1985 Revocation Date: 23rd September 1992 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Fairwater Brook Status: Consent expired Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	295	2	314080 178100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Ely Mill Rd/Muston Rd Cso, Cardiff, 119 Mill Road, Ely, Cf5 4af Authority: Natural Resources Wales Catchment Area: ELY R - CONF NANT CLUN TO ALLOT GARDENS, ELY Reference: An0086201 Permit Version: 4 Effective Date: 21st August 2019 Issued Date: 21st August 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Ely Status: Effective Positional Accuracy: Located by supplier to within 10m	A8SE (S)	767	2	314034 177045
2	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Mill Muston Road Cso Asset 32549, A Combined Sewer Overflow, Mill/Muston Road, Asset No 32549, Ely Cardiff Authority: Natural Resources Wales Catchment Area: ELY R - CONF NANT CLUN TO ALLOT GARDENS, ELY Reference: An0086201 Permit Version: 2 Effective Date: 31st March 2007 Issued Date: 17th December 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Lake/Reservoir - with outlet Environment: Receiving Water: The River Ely Status: Effective Positional Accuracy: Located by supplier to within 10m	A8SE (S)	767	2	314034 177045
2	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Mill Muston Road Cso Asset 32549, A Combined Sewer Overflow, Mill/Muston Road, Asset No 32549, Ely Cardiff Authority: Natural Resources Wales Catchment Area: ELY R - CONF NANT CLUN TO ALLOT GARDENS, ELY Reference: An0086201 Permit Version: 2 Effective Date: 31st March 2007 Issued Date: 17th December 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Lake/Reservoir - with outlet Environment: Receiving Water: The River Ely Status: Effective Positional Accuracy: Located by supplier to within 10m	A8SE (S)	767	2	314034 177045
3	Discharge Consents Operator: Dwr Cymru Welsh Water Property Type: Sewerage Network - Pumping Stations Location: Ps At Former Lp Hire Yard Fairways, Fairways Crescent Fairwater Card, Fairwater Cardiff Authority: Natural Resources Wales Catchment Area: ELY R - CONF NANT CLUN TO ALLOT GARDENS, ELY Reference: An0245401 Permit Version: 1 Effective Date: 22nd December 1993 Issued Date: 22nd December 1993 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Ely Status: Effective Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	800	2	313400 177100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	Discharge Consents Operator: Dwr Cymru Welsh Water Property Type: Sewerage Network - Pumping Stations Location: Ps At Former Lp Hire Yard Fairways, Fairways Crescent Fairwater Card, Fairwater Cardiff Authority: Natural Resources Wales Catchment Area: ELY R - CONF NANT CLUN TO ALLOT GARDENS, ELY Reference: AN0245401 Permit Version: 1 Effective Date: 22nd December 1993 Issued Date: 22nd December 1993 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Ely Status: Effective Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	800	2	313400 177100
4	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Not Supplied Location: Pentrebane South Housing Estat Authority: Natural Resources Wales Catchment Area: ELY R - CONF NANT CLUN TO ALLOT GARDENS, ELY Reference: Af3003301 Permit Version: 1 Effective Date: 26th October 1967 Issued Date: 26th October 1967 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge: Freshwater Stream/River Environment: Receiving Water: Ely Status: Effective Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	814	2	313250 177200
4	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Not Supplied Location: Pentrebane South Housing Estat Authority: Natural Resources Wales Catchment Area: ELY R - CONF NANT CLUN TO ALLOT GARDENS, ELY Reference: AF3003301 Permit Version: 1 Effective Date: 26th October 1967 Issued Date: 26th October 1967 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge: Freshwater Stream/River Environment: Receiving Water: Ely Status: Effective Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	814	2	313250 177200
5	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso At Cardiff Ely Plymouth Rd No 108, 109 Plymouth Road, Cardiff, Cf5 4df Authority: Natural Resources Wales Catchment Area: ELY R - CONF NANT CLUN TO ALLOT GARDENS, ELY Reference: An0086301 Permit Version: 3 Effective Date: 21st August 2019 Issued Date: 21st August 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Ely Status: Effective Positional Accuracy: Located by supplier to within 10m	A8SW (S)	896	2	313574 176920

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Plymouth Wood Road Cso Ely Cardiff, A Combined Sewer Overflow, Asset No 32250, Plymouth Wood Road, Ely Cardiff Authority: Natural Resources Wales Catchment Area: ELY R - CONF NANT CLUN TO ALLOT GARDENS, ELY Reference: An0086301 Permit Version: 2 Effective Date: 31st March 2004 Issued Date: 17th December 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: The River Ely Status: Effective Positional Accuracy: Located by supplier to within 10m	A8SW (S)	897	2	313574 176919
5	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Plymouth Wood Road Cso Ely Cardiff, A Combined Sewer Overflow, Asset No 32250, Plymouth Wood Road, Ely Cardiff Authority: Natural Resources Wales Catchment Area: ELY R - CONF NANT CLUN TO ALLOT GARDENS, ELY Reference: An0086301 Permit Version: 2 Effective Date: 31st March 2004 Issued Date: 17th December 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: The River Ely Status: Effective Positional Accuracy: Located by supplier to within 10m	A8SW (S)	897	2	313574 176919
5	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Not Supplied Location: Cardiff Ely Land Adj. To Herbert Th, Ely Land Adj. To Herbert Thompson Authority: Natural Resources Wales Catchment Area: ELY R - CONF NANT CLUN TO ALLOT GARDENS, ELY Reference: Af4001001 Permit Version: 1 Effective Date: 30th November 1972 Issued Date: 30th November 1972 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge: Freshwater Stream/River Environment: Receiving Water: River Ely Status: Effective Positional Accuracy: Located by supplier to within 10m	A8SW (S)	897	2	313570 176920
5	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Not Supplied Location: Cardiff Ely Land Adj. To Herbert Th, Ely Land Adj. To Herbert Thompson Authority: Natural Resources Wales Catchment Area: ELY R - CONF NANT CLUN TO ALLOT GARDENS, ELY Reference: AF4001001 Permit Version: 1 Effective Date: 30th November 1972 Issued Date: 30th November 1972 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge: Freshwater Stream/River Environment: Receiving Water: River Ely Status: Effective Positional Accuracy: Located by supplier to within 100m	A8SW (S)	897	2	313570 176920

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cardiff Mill Rd/Muston Rd Sso Authority: Natural Resources Wales Catchment Area: River Ely Reference: AN0086201 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 30th March 2004 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Mill Race Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	A8SE (S)	921	2	314050 176890
7	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cardiff-Ely Plymouthwood Rd Ss Authority: Natural Resources Wales Catchment Area: River Ely Reference: AN0086301 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 30th March 2004 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Ely Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	A3NW (S)	998	2	313640 176800
8	Local Authority Pollution Prevention and Controls Name: Radyr Service Station Location: Llantrisant Road, Radyr, CARDIFF, West Glamorgan, CF5 2PY Authority: Cardiff Council, Pollution Control Division Permit Reference: PPC/87/1.2 Dated: 20th March 2000 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station Status: Permitted Positional Accuracy: Manually positioned to the address or location	A19NW (NE)	805	3	314329 178554
	Nearest Surface Water Feature	A13SE (SE)	6	-	313901 177813
9	Pollution Incidents to Controlled Waters Property Type: Warehouses Location: FAIRWATER Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Accidental Spillage/Leakage Incident Date: 31st August 1995 Incident Reference: 25727 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	A13NE (NE)	139	4	314000 177950
10	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Pwllmellin Road, CARDIFF Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Not Supplied Incident Date: 8th July 1995 Incident Reference: 25098 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	A8NW (SW)	436	4	313650 177380

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Pwllmellin Road, CARDIFF Authority: Environment Agency, Welsh Region Pollutant: Sewage Fungus Note: Not Supplied Incident Date: 8th July 1995 Incident Reference: 25098 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	A8NW (SW)	440	4	313650 177375
11	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: River Ely Incident Date: 27th November 1997 Incident Reference: 34196 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	705	4	314000 177100
11	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Ely Bridge, CARDIFF Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: River Ely Incident Date: 27th November 1997 Incident Reference: 34196 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	707	4	314005 177100
11	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Fairwater, CARDIFF Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: River Ely Incident Date: 27th November 1997 Incident Reference: 34196 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	711	4	314005 177095
12	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Underground Petrol Tank Authority: Environment Agency, Welsh Region Pollutant: Oils - Petrol Note: Accident; Drainage Ditch; Tributary Of River Ely Incident Date: 30th October 1998 Incident Reference: 37031 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	A19NW (NE)	824	4	314300 178595
12	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Texaco Filling Station, Llantrisant Road Authority: Environment Agency, Welsh Region Pollutant: Oils - Petrol Note: Accident; Drainage Ditch; Tributary Of River Ely Incident Date: 30th October 1998 Incident Reference: 37031 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	A19NW (NE)	828	4	314300 178600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Adjacent Landwade Close, FAIRWATER Authority: Environment Agency, Welsh Region Pollutant: Sewage - Treated Effluent Note: Blockage Incident Date: 18th March 1997 Incident Reference: 31543 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	A7SE (SW)	857	4	313300 177100
14	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Culvert From, Under Street Fagans Road Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 2nd September 1994 Incident Reference: 21160 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	A9NE (SE)	997	4	314750 177300
	River Quality Name: Ely GQA Grade: River Quality B Reach: Conf.Fairwater Bk.-Nant Dowlais Estimated Distance (km): 4.7 Flow Rate: Flow less than 5 cumecs Flow Type: River Year: 2000	A8SE (S)	757	4	313919 177031
	River Quality Name: Ely GQA Grade: River Quality B Reach: Tidal Limit - Conf.Fairwater Bk. Estimated Distance (km): 1.4 Flow Rate: Flow less than 5 cumecs Flow Type: River Year: 2000	A8SE (S)	757	4	313919 177031
15	Water Abstractions Operator: Rwe Npower Plc Licence Number: 21/57/31/0040 Permit Version: 103 Location: Ely Wells Authority: Natural Resources Wales Abstraction: Production of Energy: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Aberthaw Power Station Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 26th August 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8SE (S)	732	2	313940 177060
15	Water Abstractions Operator: Innogy Plc Licence Number: 21/57/31/0040 Permit Version: 102 Location: Ely Wells Authority: Environment Agency, Welsh Region Abstraction: Production of Energy: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Aberthaw Power Station Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 8th September 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8SE (S)	732	4	313940 177060

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	Water Abstractions Operator: Npower Licence Number: 21/57/31/0040 Permit Version: 101 Location: Ely Wells Authority: Environment Agency, Welsh Region Abstraction: Electricity: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: ELY WELLS Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th August 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A8SE (S)	732	4	313940 177060
15	Water Abstractions Operator: Rwe Npower Plc Licence Number: 21/57/31/0040 Permit Version: Not Supplied Location: Abstraction From Ely Wells To Aberthaw Power Station Authority: Natural Resources Wales Abstraction: Production of Energy: General Use (Medium Loss) 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: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8SE (S)	732	2	313940 177060
	Water Abstractions Operator: British Broadcasting Corporation Licence Number: 21/57/25/0054 Permit Version: 100 Location: Well At Llandaff Authority: Environment Agency, Welsh Region Abstraction: Other Industrial/Commercial/Public Services: Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: WELL AT LLANDAFF Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 27th April 1977 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A20SW (NE)	1194	4	314969 178372
	Water Abstractions Operator: Arjo Wiggins Carbonless Papers Limited Licence Number: 21/57/31/0017 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, Welsh Region Abstraction: Paper And Printing: General Use (Medium Loss) Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 22730 Yearly Rate (m3): 3000000 Details: RIVER ELY Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A9SE (SE)	1266	4	314720 176860

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Arjo Wiggins Carbonless Papers Limited Licence Number: 21/57/31/0018 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, Welsh Region Abstraction: Paper And Printing: General Use (Medium Loss) Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 1954 Yearly Rate (m3): 681914.27 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A5NW (SE)	1495	4	314960 176770
	Water Abstractions Operator: Arjo Wiggins Carbonless Papers Limited Licence Number: 21/57/31/0018 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, Welsh Region Abstraction: Paper And Printing: General Use (Medium Loss) Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 218 Yearly Rate (m3): 6819 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A5NW (SE)	1549	4	315040 176775
	Water Abstractions Operator: Ely Bridge Development Company Limited Licence Number: Wa/057/0031/0006 Permit Version: Not Supplied Location: The Mill Sluice Structure, Near 15-54 Dyfrig Road, Ely, Cardiff, Cardiff, Cf5 5ad Authority: Natural Resources Wales Abstraction: Impounding Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A5NW (SE)	1567	2	314917 176633
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	A13NW (W)	0	2	313848 177840

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	A13NE (NE)	0	2	313858 177859
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	A13NW (W)	0	2	313848 177840
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13NW (W)	0	2	313848 177840
	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)	3	2	313900 177815
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	3	2	313900 177815
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
16	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 139.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (SE)	7	5	313902 177812
17	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13NE (E)	25	5	313926 177843
18	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 226.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13NE (E)	28	5	313928 177844
19	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 97.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (S)	97	5	313898 177717

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 59.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (S)	110	5	313901 177703
21	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 25.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (S)	169	5	313926 177650
22	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 45.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (SE)	194	5	313941 177630
23	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13NE (NE)	226	5	314056 178023
24	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13NE (NE)	227	5	314059 178021
25	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 11.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13NE (NE)	229	5	314061 178021
26	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 11.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (SE)	237	5	313975 177599
27	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 13.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13NE (NE)	238	5	314065 178031
28	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 74.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13NE (NE)	238	5	314065 178031

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13NE (NE)	248	5	314079 178029
30	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 60.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (SE)	248	5	313980 177589
31	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 691.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13NE (NE)	280	5	314037 178118
32	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 35.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (SE)	302	5	313985 177529
33	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 13.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NE (S)	329	5	313978 177494
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 59.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NE (S)	337	5	313973 177482
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 152.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NE (S)	374	5	313945 177429
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NE (S)	515	5	313956 177285
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NE (S)	535	5	313964 177267

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 7.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NE (S)	544	5	313968 177258
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 14.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NE (S)	551	5	313971 177252
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 18.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NE (S)	565	5	313977 177239
41	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: Cynon, Ely and Rhondda Primacy: 1	A8NE (S)	584	5	313984 177222
42	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NE (S)	588	5	313986 177218
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 24.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NE (S)	598	5	313990 177209
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 200.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14SW (E)	611	5	314511 177750
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 113.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8NE (S)	621	5	314001 177188
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A17SE (NW)	689	5	313484 178492

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A17SE (NW)	696	5	313475 178496
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 506.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A17SE (NW)	700	5	313470 178497
49	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 671.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Elŷi Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8SE (S)	711	5	313932 177080
50	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14SE (E)	720	5	314573 177560
51	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: Cynon, Ely and Rhondda Primacy: 1	A8SE (S)	727	5	313992 177075
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 124.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14SE (E)	734	5	314580 177543
53	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 748.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Elŷi Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A8SE (S)	738	5	313990 177063
54	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 21.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SW)	778	5	313438 177103
55	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 18.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SW)	793	5	313441 177084

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
56	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: Cynon, Ely and Rhondda Primacy: 1	A7SE (SW)	810	5	313439 177066
57	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 519.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon ElĀĵi Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7NE (SW)	819	5	313229 177213
58	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 27.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SW)	821	5	313439 177054
59	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 107.5 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NE (SE)	825	5	314625 177426
60	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SW)	842	5	313282 177132
61	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SW)	848	5	313430 177028
62	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 201.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon ElĀĵi Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SW)	851	5	313272 177129
63	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 100.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NE (SE)	895	5	314641 177320
64	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 88.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NE (SE)	962	5	314685 177265

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
65	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NE (SE)	967	5	314657 177221
66	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 338.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NE (SE)	969	5	314657 177218
67	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NE (SE)	981	5	314717 177279
68	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9NE (SE)	982	5	314718 177279

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
69	Historical Landfill Sites Licence Holder: Not Supplied Location: Llandaff Name: Watermill Road Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15249 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Deposited Waste included Industrial and Household Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: 6815/9999	A18NW (N)	716	2	313744 178607
70	Historical Landfill Sites Licence Holder: Not Supplied Location: Ely Name: Plymouth Wood Close Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15234 First Input Date: 31st December 1925 Last Input Date: 31st December 1943 Specified Waste: Deposited Waste included Inert, Industrial, Commercial, Household and Special Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6815/0086 BGS Ref: Not Supplied Other Ref: Not Supplied	A3NW (S)	987	2	313824 176795
71	Licensed Waste Management Facilities (Locations) Licence Number: VP3999FM Location: Waungron Road Household Waste Recycling Centre, Fairwater, Cardiff, Glamorgan, Cardiff, CF5 2JJ Operator Name: Cardiff County Council Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household Waste Amenity Sites Licence Status: Surrendered Issued: 4th December 1992 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 21st January 2020 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	983	2	314740 177311
	Local Authority Landfill Coverage Name: Cardiff Council - Has no landfill data to supply		0	6	313848 177840
72	Potentially Infilled Land (Non-Water) Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989	A12SE (W)	471	-	313347 177701
73	Potentially Infilled Land (Non-Water) Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989	A12SE (W)	554	-	313267 177677
74	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989	A17NE (NW)	859	-	313242 178523
75	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A13SE (SE)	61	-	313885 177751
76	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A13SE (E)	151	-	314056 177826
77	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A13SE (SE)	198	-	314056 177701

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
78	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A13NE (NE)	289	-	314050 178119
79	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14SW (E)	323	-	314227 177835
80	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922	A8NE (S)	329	-	313977 177493
81	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922	A8NE (S)	356	-	313960 177455
82	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A18SE (NE)	361	-	314049 178206
83	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A8NE (S)	379	-	313944 177424
84	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922	A8NE (S)	417	-	313925 177378
85	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A18SW (N)	451	-	313836 178347
86	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A14NW (E)	471	-	314375 177848
87	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922	A8NE (S)	476	-	313967 177329
88	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A14NW (E)	495	-	314394 177905
89	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922	A19SW (NE)	508	-	314209 178271
90	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A8NE (S)	508	-	313956 177292
91	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A14NW (E)	525	-	314427 177876
92	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A14SW (SE)	562	-	314384 177535
93	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1886	A9NW (SE)	615	-	314378 177435
94	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1886	A18SW (NW)	622	-	313533 178443
95	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A8SE (S)	648	-	313988 177156
96	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A12NW (W)	664	-	313140 177870
97	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A7NE (SW)	686	-	313266 177373
98	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A17SE (NW)	708	-	313460 178500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
99	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A14NE (E)	734	-	314596 178075
100	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922	A7NE (SW)	752	-	313268 177269
101	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A7NE (SW)	774	-	313323 177187
102	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A8SE (S)	776	-	314007 177027
103	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922	A7NE (SW)	776	-	313254 177250
104	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A19NW (NE)	791	-	314354 178518
105	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922	A18NE (N)	797	-	314056 178668
106	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1886	A9NE (SE)	807	-	314597 177414
107	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922	A8SE (S)	814	-	314108 177021
108	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A7NW (SW)	814	-	313145 177321
109	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1886	A9NE (SE)	847	-	314650 177427
110	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1886	A12SW (W)	876	-	312930 177732
111	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922	A9SW (SE)	960	-	314280 176940
112	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922	A19SE (E)	967	-	314804 178184

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	A13NW (W)	0	1	313848 177840
	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	A13NW (W)	0	1	313848 177840
	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	A13SW (W)	266	1	313552 177723
	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	A19NW (NE)	835	1	314407 178532
	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	A8SE (S)	944	1	313866 176838
113	BGS Recorded Mineral Sites Site Name: Graig Location: Fairwater, Cardiff, Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 66879 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Jurassic Geology: Blue Lias Formation (Marginal Facies) Commodity: Limestone Positional Accuracy: Located by supplier to within 10m	A12SE (W)	474	1	313345 177695
114	BGS Recorded Mineral Sites Site Name: Graig Location: St Fagans, Cardiff, Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 127916 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Jurassic Geology: Blue Lias Formation (Marginal Facies) Commodity: Limestone Positional Accuracy: Located by supplier to within 10m	A12SE (W)	550	1	313270 177680

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
115	BGS Recorded Mineral Sites Site Name: Graig Location: St Fagans, Cardiff, Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 127915 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Jurassic Geology: Blue Lias Formation (Marginal Facies) Commodity: Limestone Positional Accuracy: Located by supplier to within 10m	A12NW (W)	855	1	312996 178126
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 313740, 177750 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 12.90 mg/kg Concentration: Cadmium Measured 0.10 mg/kg Concentration: Chromium Measured 64.00 mg/kg Concentration: Lead Measured 48.10 mg/kg Concentration: Nickel Measured 26.60 mg/kg Concentration:	A13SW (SW)	81	1	313740 177750
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 313750, 178250 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 19.70 mg/kg Concentration: Cadmium Measured 0.50 mg/kg Concentration: Chromium Measured 70.30 mg/kg Concentration: Lead Measured 85.00 mg/kg Concentration: Nickel Measured 33.30 mg/kg Concentration:	A18SW (N)	363	1	313750 178250
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 314260, 177740 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 19.80 mg/kg Concentration: Cadmium Measured 0.60 mg/kg Concentration: Chromium Measured 73.60 mg/kg Concentration: Lead Measured 195.90 mg/kg Concentration: Nickel Measured 40.90 mg/kg Concentration:	A14SW (E)	366	1	314260 177740
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 313320, 177750 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 18.20 mg/kg Concentration: Cadmium Measured 0.50 mg/kg Concentration: Chromium Measured 60.60 mg/kg Concentration: Lead Measured 80.30 mg/kg Concentration: Nickel Measured 29.60 mg/kg Concentration:	A12SE (W)	490	1	313320 177750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 313730, 177260 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 15.50 mg/kg Concentration: Cadmium Measured 0.50 mg/kg Concentration: Chromium Measured 77.10 mg/kg Concentration: Lead Measured 135.00 mg/kg Concentration: Nickel Measured 48.50 mg/kg Concentration:	A8NW (S)	529	1	313730 177260
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 314220, 178330 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 16.30 mg/kg Concentration: Cadmium Measured 0.10 mg/kg Concentration: Chromium Measured 71.40 mg/kg Concentration: Lead Measured 182.50 mg/kg Concentration: Nickel Measured 29.10 mg/kg Concentration:	A19SW (NE)	560	1	314220 178330
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 314240, 177230 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 17.00 mg/kg Concentration: Cadmium Measured 0.60 mg/kg Concentration: Chromium Measured 56.90 mg/kg Concentration: Lead Measured 140.10 mg/kg Concentration: Nickel Measured 33.30 mg/kg Concentration:	A9NW (SE)	686	1	314240 177230
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 313250, 178300 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 15.90 mg/kg Concentration: Cadmium Measured 0.20 mg/kg Concentration: Chromium Measured 61.70 mg/kg Concentration: Lead Measured 45.80 mg/kg Concentration: Nickel Measured 24.40 mg/kg Concentration:	A17SE (NW)	706	1	313250 178300
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 313250, 177250 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 22.80 mg/kg Concentration: Cadmium Measured 0.50 mg/kg Concentration: Chromium Measured 60.90 mg/kg Concentration: Lead Measured 139.70 mg/kg Concentration: Nickel Measured 34.10 mg/kg Concentration:	A7NE (SW)	779	1	313250 177250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 314730, 177760 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 16.60 mg/kg Concentration: Cadmium Measured 0.30 mg/kg Concentration: Chromium Measured 61.50 mg/kg Concentration: Lead Measured 136.50 mg/kg Concentration: Nickel Measured 43.40 mg/kg Concentration:	A14SE (E)	828	1	314730 177760
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 313770, 178750 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 16.20 mg/kg Concentration: Cadmium Measured 0.30 mg/kg Concentration: Chromium Measured 60.50 mg/kg Concentration: Lead Measured 98.30 mg/kg Concentration: Nickel Measured 26.50 mg/kg Concentration:	A18NW (N)	856	1	313770 178750
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 314310, 178710 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 14.80 mg/kg Concentration: Cadmium Measured 0.20 mg/kg Concentration: Chromium Measured 60.80 mg/kg Concentration: Lead Measured 60.90 mg/kg Concentration: Nickel Measured 20.80 mg/kg Concentration:	A19NW (NE)	928	1	314310 178710
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 314770, 178240 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 13.10 mg/kg Concentration: Cadmium Measured 0.20 mg/kg Concentration: Chromium Measured 67.70 mg/kg Concentration: Lead Measured 61.00 mg/kg Concentration: Nickel Measured 40.70 mg/kg Concentration:	A19SE (NE)	958	1	314770 178240
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 314710, 177290 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 15.40 mg/kg Concentration: Cadmium Measured 0.40 mg/kg Concentration: Chromium Measured 65.60 mg/kg Concentration: Lead Measured 155.70 mg/kg Concentration: Nickel Measured 40.20 mg/kg Concentration:	A9NE (SE)	969	1	314710 177290

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Urban Soil Chemistry Averages Source: British Geological Survey, National Geoscience Information Service Sample Area: Cardiff Count Id: 506 Arsenic Minimum Concentration: 6.00 mg/kg Arsenic Average Concentration: 18.00 mg/kg Arsenic Maximum Concentration: 149.00 mg/kg Cadmium Minimum Concentration: 0.10 mg/kg Cadmium Average Concentration: 0.90 mg/kg Cadmium Maximum Concentration: 100.60 mg/kg Chromium Minimum Concentration: 28.00 mg/kg Chromium Average Concentration: 86.00 mg/kg Chromium Maximum Concentration: 2933.00 mg/kg Lead Minimum Concentration: 20.00 mg/kg Lead Average Concentration: 190.00 mg/kg Lead Maximum Concentration: 8158.00 mg/kg Nickel Minimum Concentration: 8.00 mg/kg Nickel Average Concentration: 35.00 mg/kg Nickel Maximum Concentration: 482.00 mg/kg	A13NW (W)	0	1	313848 177840
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	0	1	313848 177840
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	0	1	313848 177840
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	0	1	313848 177840
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	0	1	313848 177840
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	56	1	313961 177822
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	124	1	314009 177761
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	249	1	313561 177762
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	313858 177859
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	0	1	313848 177840
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	89	1	313993 177842

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	0	1	313848 177840
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	0	1	313848 177840
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	0	1	313848 177840

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
116	Contemporary Trade Directory Entries Name: A F Farmer The Coal Merchants Location: 18, Ferrier Avenue, Cardiff, CF5 3LD Classification: Coal & Smokeless Fuel Merchants & Distributors Status: Inactive Positional Accuracy: Automatically positioned to the address	A13NE (NE)	127	-	313959 177984
117	Contemporary Trade Directory Entries Name: Vision Clean Ltd Location: 1, Birch Walk, Cardiff, CF5 3HL Classification: Commercial Cleaning Services Status: Active Positional Accuracy: Automatically positioned to the address	A13SW (SW)	207	-	313696 177615
118	Contemporary Trade Directory Entries Name: Black Round & Sticky Location: 161, Pwllmelin Road, Cardiff, CF5 3QB Classification: Tyre Dealers Status: Active Positional Accuracy: Automatically positioned to the address	A13NW (N)	255	-	313816 178151
119	Contemporary Trade Directory Entries Name: Welsh Electrical Services Location: 2, Gorse Place, Cardiff, CF5 3HP Classification: Electrical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SW (SW)	327	-	313629 177516
120	Contemporary Trade Directory Entries Name: Reliable Cleaning Location: 4, Greenland Crescent, Cardiff, CF5 3HE Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (SW)	469	-	313396 177571
121	Contemporary Trade Directory Entries Name: 1st Nationwide C.U.C Location: 14, Fairwood Road, Cardiff, CF5 3QJ Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A19SW (NE)	488	-	314262 178185
122	Contemporary Trade Directory Entries Name: K Howard Location: 51, Everswell Road, Cardiff, CF5 3DH Classification: Boilers - Servicing, Replacements & Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NW (S)	501	-	313846 177281
123	Contemporary Trade Directory Entries Name: Greentree Gardening & Cleaning Maintenance Services Location: 129, Lavender Grove, Cardiff, CF5 3SZ Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	505	-	313317 177980
124	Contemporary Trade Directory Entries Name: Adroit Cleaning Services Location: 618, Beechley Drive, Cardiff, CF5 3SR Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (W)	527	-	313277 177805
125	Contemporary Trade Directory Entries Name: County Pest Control Services Ltd Location: 51, Llanbedr Road, Cardiff, CF5 3BU Classification: Pest & Vermin Control Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NE (S)	591	-	314072 177247
126	Contemporary Trade Directory Entries Name: Aga Building Clean Location: 7, Firs Avenue, Cardiff, CF5 3TF Classification: Cleaning Services - Commercial Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (W)	602	-	313209 177741
127	Contemporary Trade Directory Entries Name: John Rasmussen Location: 284, St. Fagans Road, Cardiff, CF5 3EY Classification: Washing Machines - Servicing & Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	602	-	313322 177440

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
128	Contemporary Trade Directory Entries Name: Heaven Scent Domestic Angels Location: 27, Llanbedr Road, Cardiff, CF5 3BU Classification: Commercial Cleaning Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NE (SE)	642	-	314157 177237
129	Contemporary Trade Directory Entries Name: Class Cleaners Location: 57, Hill View, Cardiff, CF5 3UD Classification: Cleaning Services - Commercial Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (SW)	649	-	313220 177521
130	Contemporary Trade Directory Entries Name: Fairwater Press Location: 89, St. Fagans Road, Cardiff, CF5 3AE Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	689	-	314396 177345
130	Contemporary Trade Directory Entries Name: Cardiff Blinds Location: 1a Norbury Road, Cardiff, South Glamorgan, CF5 3AS Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Manually positioned to the address or location	A9NW (SE)	701	-	314396 177329
131	Contemporary Trade Directory Entries Name: N Butcher Location: 36, Glan Ely Close, Cardiff, CF5 3EJ Classification: Cleaning Services - Commercial Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	694	-	313356 177264
131	Contemporary Trade Directory Entries Name: Celtic Plumbing & Heating Ltd Location: 36, Glan Ely Close, Cardiff, South Glamorgan, CF5 3EJ Classification: Boilers - Servicing, Replacements & Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	694	-	313356 177264
132	Contemporary Trade Directory Entries Name: A P S Dampproofing & Restoration Ltd Location: Flat 3, Meadowbank Court, Waterhall Road, Cardiff, CF5 3LU Classification: Damp & Dry Rot Control Status: Inactive Positional Accuracy: Automatically positioned to the address	A18NW (N)	712	-	313636 178581
133	Contemporary Trade Directory Entries Name: Clive Burford Location: 84, St. Fagans Road, Cardiff, CF5 3AL Classification: Coal & Smokeless Fuel Merchants & Distributors Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	747	-	314491 177365
134	Contemporary Trade Directory Entries Name: Scrap My Car Now For Money Cardiff Kws Location: Unit 4, Cardiff, South Glamorgan, CF5 3AU Classification: Car Breakers & Dismantlers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A9NW (SE)	763	-	314389 177239
134	Contemporary Trade Directory Entries Name: Crest Design Ltd Location: Unit 8, 24, Norbury Road, Cardiff, CF5 3AU Classification: Electrical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	764	-	314398 177245
135	Contemporary Trade Directory Entries Name: Industrial Gases Wales Ltd Location: 72, Fairwater Grove West, Cardiff, CF5 2JQ Classification: Engineering Services Status: Active Positional Accuracy: Automatically positioned to the address	A14SE (E)	784	-	314659 177616
136	Contemporary Trade Directory Entries Name: R G Motors Location: Llantrisant Road, Cardiff, CF5 2PW Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address	A19NW (NE)	788	-	314348 178519

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
136	Contemporary Trade Directory Entries Name: Texaco Location: Llantrisant Road, Cardiff, South Glamorgan, CF5 2PW Classification: Petrol Filling Stations Status: Active Positional Accuracy: Manually positioned to the address or location	A19NW (NE)	809	-	314375 178525
136	Contemporary Trade Directory Entries Name: Texaco Location: Llantrisant Rd, Cardiff, South Glamorgan, CF5 2PW Classification: Petrol Filling Stations - 24 Hour Status: Inactive Positional Accuracy: Manually positioned to the address or location	A19NW (NE)	809	-	314375 178525
136	Contemporary Trade Directory Entries Name: Co-Operative Filling Station Location: Llantrisant Road, Cardiff, South Glamorgan, CF5 2PW Classification: Petrol Filling Stations Status: Inactive Positional Accuracy: Automatically positioned to the address	A19NW (NE)	812	-	314378 178526
136	Contemporary Trade Directory Entries Name: Texaco Location: Llantrisant Road, Pontyclun, CF72 9DP Classification: Petrol Filling Stations Status: Inactive Positional Accuracy: Manually positioned to the address or location	A19NW (NE)	813	-	314380 178526
137	Contemporary Trade Directory Entries Name: T E I Ltd Location: 28, Norbury Road, Cardiff, CF5 3AU Classification: Industrial Engineers Status: Active Positional Accuracy: Automatically positioned to the address	A9NW (SE)	801	-	314384 177187
138	Contemporary Trade Directory Entries Name: General Cleaning Services Location: 18, Cedar Grove, Cardiff, CF5 3RS Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	821	-	313168 178383
139	Contemporary Trade Directory Entries Name: First Stop Car Sales Location: 32, Norbury Road, Cardiff, CF5 3AU Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	824	-	314426 177191
139	Contemporary Trade Directory Entries Name: Auto Body Spray Location: Cardiff, CF5 3AU Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	824	-	314426 177191
139	Contemporary Trade Directory Entries Name: A1 Auto Repairs Location: 32, Norbury Road, Cardiff, CF5 3AU Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	824	-	314426 177191
139	Contemporary Trade Directory Entries Name: Fairwater Garages Ltd Location: Norbury Road, Cardiff, CF5 3AT Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A9NW (SE)	824	-	314426 177191
139	Contemporary Trade Directory Entries Name: Food Quality Engineering Location: Unit 14, Fairwater Workshops, Norbury Road, Cardiff, CF5 3BG Classification: Machine Shops Status: Active Positional Accuracy: Automatically positioned to the address	A9NW (SE)	825	-	314469 177228
139	Contemporary Trade Directory Entries Name: Corinthian Press Location: Unit 7 & 13, Fairwater Workshops, Norbury Road, Cardiff, CF5 3BG Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	844	-	314469 177202

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
139	Contemporary Trade Directory Entries Name: Century Cleaning Services Location: Unit 1, Fairwater Workshops, Norbury Road, Cardiff, CF5 3BG Classification: Commercial Cleaning Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	844	-	314469 177202
139	Contemporary Trade Directory Entries Name: Do-Fit Blinds Location: Unit 16, Fairwater Workshops, Norbury Road, Cardiff, CF5 3BG Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	845	-	314489 177218
139	Contemporary Trade Directory Entries Name: Cardiff Gemini Blinds Ltd Location: Unit 6, Fairwater Workshops, Norbury Road, Cardiff, CF5 3BG Classification: Blinds, Awnings & Canopies Status: Active Positional Accuracy: Automatically positioned to the address	A9NW (SE)	847	-	314464 177193
139	Contemporary Trade Directory Entries Name: Cardiff Gemini Blinds Location: Unit 6, Fairwater Workshops, Norbury Road, Cardiff, CF5 3BG Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	847	-	314464 177193
139	Contemporary Trade Directory Entries Name: Fault Finders Location: Unit 17, Fairwater Workshops, Norbury Road, Cardiff, CF5 3BG Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	856	-	314496 177209
140	Contemporary Trade Directory Entries Name: K Murdock Ornamental Wrought Iron Location: 53, St. Fagans Road, Cardiff, CF5 3AE Classification: Wrought Ironwork Status: Active Positional Accuracy: Automatically positioned to the address	A9NE (SE)	869	-	314601 177308
141	Contemporary Trade Directory Entries Name: High Motive Ltd Location: Unit 10, Wroughton Place, Ely, Cardiff, CF5 4AB Classification: Radio Communication Equipment Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	900	-	314371 177059
141	Contemporary Trade Directory Entries Name: L McGowan Refrigeration Engineers Location: Unit 8 Ely Bridge Industrial Estate, Ely, Cardiff, South Glamorgan, CF5 4AB Classification: Refrigerators & Freezers - Servicing & Repairs Status: Active Positional Accuracy: Manually positioned to the address or location	A9SW (SE)	932	-	314416 177049
142	Contemporary Trade Directory Entries Name: Mr G Piper Location: 9, Finchley Road, Cardiff, CF5 3AX Classification: Car Dealers - Used Status: Active Positional Accuracy: Automatically positioned to the address	A9SW (SE)	907	-	314461 177112
143	Contemporary Trade Directory Entries Name: Sparkles Location: Unit 9, Ely Bridge Industrial Estate, Cardiff, South Glamorgan, CF5 4AQ Classification: Jewellery Manufacturers & Repairers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	922	-	314402 177053
143	Contemporary Trade Directory Entries Name: European Radio Location: Unit 10, Wroughton Place, Ely, Cardiff, CF5 4AB Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned in the proximity of the address	A9SW (SE)	954	-	314386 177006
144	Contemporary Trade Directory Entries Name: Cleaning Resource & Maintenance Location: 42c Greenwood Llantrisant Road, Cardiff, South Glamorgan, CF5 2PX Classification: Commercial Cleaning Services Status: Active Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	924	-	314621 178433

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
145	Contemporary Trade Directory Entries Name: All Clean Industrial Cleaning Services Ltd Location: 35, Frank Road, Cardiff, CF5 4DJ Classification: Commercial Cleaning Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SW (S)	942	-	313642 176856
146	Contemporary Trade Directory Entries Name: Anthony Russell Location: 1, Fairwater Grove West, Cardiff, CF5 2JN Classification: Laundries & Launderettes Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NE (SE)	950	-	314729 177357
147	Contemporary Trade Directory Entries Name: East Grove Motors Location: 40, Fairwater Grove East, Cardiff, CF5 2JU Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A9NE (E)	961	-	314801 177480
148	Contemporary Trade Directory Entries Name: S K Y Shimmer & Shine Cleaning Services Ltd Location: 88, Heol Muston, Cardiff, CF5 4BD Classification: Commercial Cleaning Services Status: Active Positional Accuracy: Automatically positioned to the address	A8SE (S)	972	-	314058 176840
149	Contemporary Trade Directory Entries Name: Fix A Dent Location: 49, Maple Road, Cardiff, CF5 3TY Classification: Car Body Repairs Status: Active Positional Accuracy: Automatically positioned to the address	A12NW (W)	992	-	312854 178129
150	Contemporary Trade Directory Entries Name: Ironing Services Location: 72, Mill Road, Ely, Cardiff, CF5 4AH Classification: Ironing & Home Laundry Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (S)	994	-	314217 176871
151	Fuel Station Entries Name: Co-Op Llandaff Location: Llantrisant Road , Llandaff , Cardiff, Cardiff, CF5 2PW Brand: TEXACO Premises Type: Petrol Station Status: Open Positional Accuracy: Manually positioned to the address or location	A19NW (NE)	811	-	314377 178525
152	Fuel Station Entries Name: Fairwater Garage Location: Norbury Road , Fairwater , Cardiff, Cardiff, CF5 3AT Brand: Unbranded Premises Type: Petrol Station Status: Closed Positional Accuracy: Manually positioned to the address or location	A9NW (SE)	829	-	314435 177192
153	Points of Interest - Commercial Services Name: Mitchells Valeting Service Location: 23 Sycamore Place, Cardiff, CF5 3PN Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A13NW (W)	228	7	313580 177888
154	Points of Interest - Commercial Services Name: Black Round & Sticky Location: 161 Pwllmelin Road, Cardiff, CF5 3QB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NW (N)	255	7	313816 178151
155	Points of Interest - Commercial Services Name: 1st Choice Vehicle Care Location: 5 Carter Place, Cardiff, CF5 3NP Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18SE (N)	438	7	313980 178317

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
156	Points of Interest - Commercial Services Name: Cardiff Auto-Screens Location: 50 Cartwright Lane, Cardiff, CF5 3DB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NE (S)	584	7	313961 177215
157	Points of Interest - Commercial Services Name: Co-Op Llandaff Location: Llantrisant Road, Llandaff, Cardiff, CF5 2PW Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A19NW (NE)	799	7	314337 178540
158	Points of Interest - Commercial Services Name: Auto Body Spray Location: 32 Norbury Road, Fairwater, Cardiff, CF5 3AU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NW (SE)	824	7	314426 177191
158	Points of Interest - Commercial Services Name: A1 Auto Repairs Location: 32 Norbury Road, Cardiff, CF5 3AU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NW (SE)	824	7	314426 177191
158	Points of Interest - Commercial Services Name: Fairwater Garages Ltd Location: Norbury Road, Cardiff, CF5 3AT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NW (SE)	824	7	314426 177191
158	Points of Interest - Commercial Services Name: A1 Auto Repairs Location: 32 Norbury Road, Cardiff, CF5 3AU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NW (SE)	824	7	314426 177191
158	Points of Interest - Commercial Services Name: Food Quality Engineering Location: Unit 14 Fairwater Workshops, Norbury Road, Cardiff, CF5 3BG Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A9NW (SE)	825	7	314469 177228
158	Points of Interest - Commercial Services Name: Food Quality Engineering Location: Unit 14 Fairwater Workshops, Norbury Road, Cardiff, CF5 3BG Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A9NW (SE)	825	7	314469 177228
158	Points of Interest - Commercial Services Name: Fairwater Garage Location: Cardiff West Division Police Headquarters 61, Norbury Road, Cardiff, CF5 3AT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NW (SE)	882	7	314489 177169
159	Points of Interest - Commercial Services Name: K Murdock Ornamental Wrought Iron Location: 53 St. Fagans Road, Cardiff, CF5 3AE Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A9NE (SE)	869	7	314600 177308
160	Points of Interest - Commercial Services Name: Appletree Leasing Ltd Location: Fairwood Lodge, Llantrisant Road, Cardiff, CF5 2PW Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18NE (N)	889	7	313894 178782
161	Points of Interest - Commercial Services Name: Transportacar Location: 54 Elderberry Road, Cardiff, CF5 3RH Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A17SW (NW)	938	7	312957 178247

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
161	Points of Interest - Commercial Services Name: Transportacar Location: 54 Elderberry Road, Cardiff, CF5 3RH Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A17SW (NW)	938	7	312957 178247
162	Points of Interest - Commercial Services Name: East Grove Motors Location: 40 Fairwater Grove East, Cardiff, CF5 2JU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NE (E)	961	7	314801 177480
162	Points of Interest - Commercial Services Name: East Grove Motors Location: 40 Fairwater Grove East, Cardiff, CF5 2JU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NE (E)	961	7	314800 177480
163	Points of Interest - Manufacturing and Production Name: Workshops Location: CF5 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	849	7	314466 177192
164	Points of Interest - Manufacturing and Production Name: Tank Location: CF5 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SW (W)	904	7	312943 177532
165	Points of Interest - Manufacturing and Production Name: Tank Location: CF5 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	912	7	312896 177942
166	Points of Interest - Manufacturing and Production Name: Industrial Estate Location: CF5 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A9SW (SE)	951	7	314412 177025
167	Points of Interest - Public Infrastructure Name: Fairwater Rail Station Location: Pwllmelin Lane, CF5 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A14NW (E)	541	7	314434 177941
167	Points of Interest - Public Infrastructure Name: Fairwater (Tyllgoed) Halt Location: Pwllmelin Lane, CF5 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A14NW (E)	541	7	314434 177941
168	Points of Interest - Public Infrastructure Name: Sewage Pumping Station Location: CF5 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	769	7	313378 177151
169	Points of Interest - Public Infrastructure Name: Weir Location: CF5 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	779	7	313870 177004
169	Points of Interest - Public Infrastructure Name: Weir Location: CF5 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A8SW (S)	791	7	313830 176991

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
170	Points of Interest - Public Infrastructure Name: Somerfield Llandaff 3478-5 Location: Llantrisant Road, Cardiff, CF5 2PW Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A19NW (NE)	788	7	314348 178519
170	Points of Interest - Public Infrastructure Name: Texaco Location: Llantrisant Road, Cardiff, CF5 2PW Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A19NW (NE)	809	7	314375 178525
170	Points of Interest - Public Infrastructure Name: Co-Op Llandaff Location: Llantrisant Road, Llandaff, Cardiff, CF5 2PW Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A19NW (NE)	811	7	314377 178525
171	Points of Interest - Public Infrastructure Name: Outfall Location: CF5 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	806	7	313264 177197
171	Points of Interest - Public Infrastructure Name: Outfall Location: CF5 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	842	7	313286 177130
172	Points of Interest - Public Infrastructure Name: Fairwater Garage Location: Norbury Road, Cardiff, CF5 3AT Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A9NW (SE)	829	7	314435 177192
172	Points of Interest - Public Infrastructure Name: South Wales Police Location: Cardiff West Division Police Headquarter 61, Norbury Road, Cardiff, CF5 3AT Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A9NW (SE)	882	7	314489 177169
172	Points of Interest - Public Infrastructure Name: Fairwater (Cardiff) Police Station Location: Cardiff West Division Police Headquarters 61, Norbury Road, Cardiff, CF5 3AT Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A9NW (SE)	882	7	314489 177169
173	Points of Interest - Public Infrastructure Name: Sewage Tank (Disused) Location: CF5 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	832	7	313146 177290
173	Points of Interest - Public Infrastructure Name: Sewage Tank (Disused) Location: CF5 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	840	7	313137 177290
174	Points of Interest - Public Infrastructure Name: Danescourt Rail Station Location: Baynton Close, CF5 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A19NW (NE)	976	7	314455 178673
174	Points of Interest - Public Infrastructure Name: Danescourt Halt Location: Baynton Close, CF5 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A19NW (NE)	976	7	314455 178673

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
175	Points of Interest - Public Infrastructure Name: Waun-Gron Park Rail Station Location: Waun-Gron Road, CF5 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A9NE (SE)	977	7	314730 177305
175	Points of Interest - Public Infrastructure Name: Waun-Gron Park Halt Location: Waun-Gron Road, CF5 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A9NE (SE)	977	7	314730 177305
176	Points of Interest - Recreational and Environmental Name: Playground Location: Nr Reardon Smith Court, CF5 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A13SE (SE)	47	7	313917 177782
176	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	A13SE (SE)	53	7	313933 177784
176	Points of Interest - Recreational and Environmental Name: Play Area Location: CF5 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	83	7	313966 177773
177	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 (NE)	328	7	314053 178164
177	Points of Interest - Recreational and Environmental Name: Playground Location: Amethyst Road, CF5 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A13NE (NE)	334	7	314051 178173
178	Points of Interest - Recreational and Environmental Name: Play Area Location: CF5 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	533	7	313285 177691
179	Points of Interest - Recreational and Environmental Name: Play Area Location: CF5 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A12SW (W)	628	7	313175 177828
180	Points of Interest - Recreational and Environmental Name: Play Area Location: CF5 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	761	7	313236 177293
181	Points of Interest - Recreational and Environmental Name: Skatepark Location: CF5 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A17NE (NW)	778	7	313449 178575
181	Points of Interest - Recreational and Environmental Name: Fairwater Leisure Centre, Cardiff Location: Ashcroft Crescent, Waterhall Road, Cardiff, CF5 3LL Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A17NE (NW)	785	7	313397 178551

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
182	Points of Interest - Recreational and Environmental Name: Play Area Location: CF5 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	845	7	313985 176953

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
183	Ancient Woodland Name: Not Supplied Reference: 14177 Area(m ²): 8364.65 Type: Ancient and Semi-Natural Woodland	A13NE (E)	26	2	313921 177859
184	Ancient Woodland Name: Not Supplied Reference: 21467 Area(m ²): 5548.57 Type: Restored Ancient Woodland Site	A7NE (SW)	766	2	313334 177189
185	Ancient Woodland Name: Not Supplied Reference: 21473 Area(m ²): 5788.03 Type: Restored Ancient Woodland Site	A18NE (N)	797	2	313869 178692
186	Ancient Woodland Name: Not Supplied Reference: 14175 Area(m ²): 4240.81 Type: Ancient and Semi-Natural Woodland	A12SW (W)	817	2	313041 177516
187	Ancient Woodland Name: Not Supplied Reference: 10361 Area(m ²): 12207.56 Type: Restored Ancient Woodland Site	A8SW (S)	820	2	313804 176962
188	Ancient Woodland Name: Not Supplied Reference: 21468 Area(m ²): 5057.58 Type: Restored Ancient Woodland Site	A7NW (SW)	821	2	313143 177314
189	Ancient Woodland Name: Not Supplied Reference: 21464 Area(m ²): 3463.86 Type: Restored Ancient Woodland Site	A7SE (SW)	870	2	313435 177001
190	Ancient Woodland Name: Not Supplied Reference: 21465 Area(m ²): 3499.94 Type: Restored Ancient Woodland Site	A7SE (SW)	929	2	313182 177105
191	Ancient Woodland Name: Not Supplied Reference: 10362 Area(m ²): 181447.15 Type: Restored Ancient Woodland Site	A7SE (SW)	945	2	313214 177055
192	Ancient Woodland Name: Not Supplied Reference: 21466 Area(m ²): 9329.06 Type: Restored Ancient Woodland Site	A7SW (SW)	957	2	313122 177126

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Caerphilly County Borough Council - Environmental Health Department Cardiff Council - Pollution Control Division Vale Of Glamorgan County Borough Council - Environmental Health Department Natural Resources Wales Rhondda Cynon Taff County Borough Council - Environmental Services	August 2013 January 2020 January 2020 June 2020 October 2017	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annually Annual Rolling Update
Discharge Consents Natural Resources Wales Environment Agency - Welsh Region	April 2020 August 2014	Quarterly Quarterly
Enforcement and Prohibition Notices Environment Agency - Welsh Region	March 2013	Annual Rolling Update
Integrated Pollution Controls Environment Agency - Welsh Region	October 2008	Variable
Integrated Pollution Prevention And Control Environment Agency - Welsh Region Natural Resources Wales	April 2020 April 2020	Quarterly Quarterly
Local Authority Integrated Pollution Prevention And Control Caerphilly County Borough Council - Environmental Health Department Vale Of Glamorgan County Borough Council - Environmental Health Department Cardiff Council - Pollution Control Division Rhondda Cynon Taff County Borough Council - Public Health and Protection Division	February 2013 June 2014 March 2016 September 2014	Variable Variable Variable Variable
Local Authority Pollution Prevention and Controls Vale Of Glamorgan County Borough Council - Environmental Health Department Cardiff Council - Pollution Control Division Rhondda Cynon Taff County Borough Council - Public Health and Protection Division Caerphilly County Borough Council - Environmental Health Department	June 2014 March 2016 September 2014 September 2014	Annual Rolling Update Annual Rolling Update Annual Rolling Update Not Applicable
Local Authority Pollution Prevention and Control Enforcements Vale Of Glamorgan County Borough Council - Environmental Health Department Cardiff Council - Pollution Control Division Caerphilly County Borough Council - Environmental Health Department Rhondda Cynon Taff County Borough Council - Public Health and Protection Division	June 2014 March 2016 September 2014 September 2014	Variable Variable Variable Variable
Nearest Surface Water Feature Ordnance Survey	May 2020	
Pollution Incidents to Controlled Waters Environment Agency - Welsh Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - Welsh Region Natural Resources Wales	March 2013 March 2013	Annual Rolling Update Annual Rolling Update
Prosecutions Relating to Controlled Waters Environment Agency - Welsh Region Natural Resources Wales	March 2013 March 2013	Annual Rolling Update Annual Rolling Update
Registered Radioactive Substances Natural Resources Wales Environment Agency - Welsh Region	January 2015 June 2016	Annually
River Quality Environment Agency - Head Office	November 2001	Not Applicable
Substantiated Pollution Incident Register Environment Agency Wales - South East Area Natural Resources Wales	April 2020 April 2020	Quarterly Quarterly
Water Abstractions Environment Agency - Welsh Region Natural Resources Wales	April 2020 April 2020	Quarterly Quarterly

Agency & Hydrological	Version	Update Cycle
Water Industry Act Referrals Natural Resources Wales Environment Agency - Welsh Region	April 2020 October 2017	Quarterly Quarterly
Groundwater Vulnerability Map Natural Resources Wales	June 2018	As notified
Bedrock Aquifer Designations Natural Resources Wales	January 2018	Annually
Superficial Aquifer Designations Natural Resources Wales	January 2018	Annually
Source Protection Zones Natural Resources Wales	November 2016	Annual Rolling Update
Extreme Flooding from Rivers or Sea without Defences Natural Resources Wales	August 2019	Quarterly
Flooding from Rivers or Sea without Defences Natural Resources Wales	May 2020	Quarterly
Areas Benefiting from Flood Defences Natural Resources Wales	November 2019	Quarterly
Flood Water Storage Areas Natural Resources Wales	August 2019	Quarterly
Flood Defences Natural Resources Wales	November 2019	Quarterly
OS Water Network Lines Ordnance Survey	March 2020	Quarterly
Surface Water 1 in 30 year Flood Extent Natural Resources Wales	October 2013	Annually
Surface Water 1 in 100 year Flood Extent Natural Resources Wales	October 2013	Annually
Surface Water 1 in 1000 year Flood Extent Natural Resources Wales	October 2013	Annually
Surface Water Suitability Natural Resources Wales	October 2013	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Natural Resources Wales	July 2017	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Welsh Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency Wales - South East Area Natural Resources Wales	April 2020 April 2020	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency Wales - South East Area Natural Resources Wales	April 2020 April 2020	Quarterly Quarterly
Local Authority Landfill Coverage Caerphilly County Borough Council - Environmental Health Department Cardiff Council Rhondda Cynon Taff County Borough Council Vale Of Glamorgan County Borough Council	May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Caerphilly County Borough Council - Environmental Health Department Cardiff Council Rhondda Cynon Taff County Borough Council Vale Of Glamorgan County Borough Council	May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites Environment Agency Wales - South East Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency Wales - South East Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency Wales - South East Area	March 2003	Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Caerphilly County Borough Council - Planning Department Rhondda Cynon Taff County Borough Council - Planning Department Vale Of Glamorgan County Borough Council - Planning Department Cardiff Council - Regulatory Services	February 2016 February 2016 January 2016 October 2015	Variable Variable Variable Variable
Planning Hazardous Substance Consents Caerphilly County Borough Council - Planning Department Rhondda Cynon Taff County Borough Council - Planning Department Vale Of Glamorgan County Borough Council - Planning Department Cardiff Council - Regulatory Services	February 2016 February 2016 January 2016 October 2015	Variable Variable Variable Variable

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

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	April 2020	Quarterly
Fuel Station Entries Catalist Ltd - Experian	June 2020	Quarterly
Gas Pipelines National Grid	July 2014	
Points of Interest - Commercial Services PointX	June 2020	Quarterly
Points of Interest - Education and Health PointX	June 2020	Quarterly
Points of Interest - Manufacturing and Production PointX	June 2020	Quarterly
Points of Interest - Public Infrastructure PointX	June 2020	Quarterly
Points of Interest - Recreational and Environmental PointX	June 2020	Quarterly
Underground Electrical Cables National Grid	October 2019	

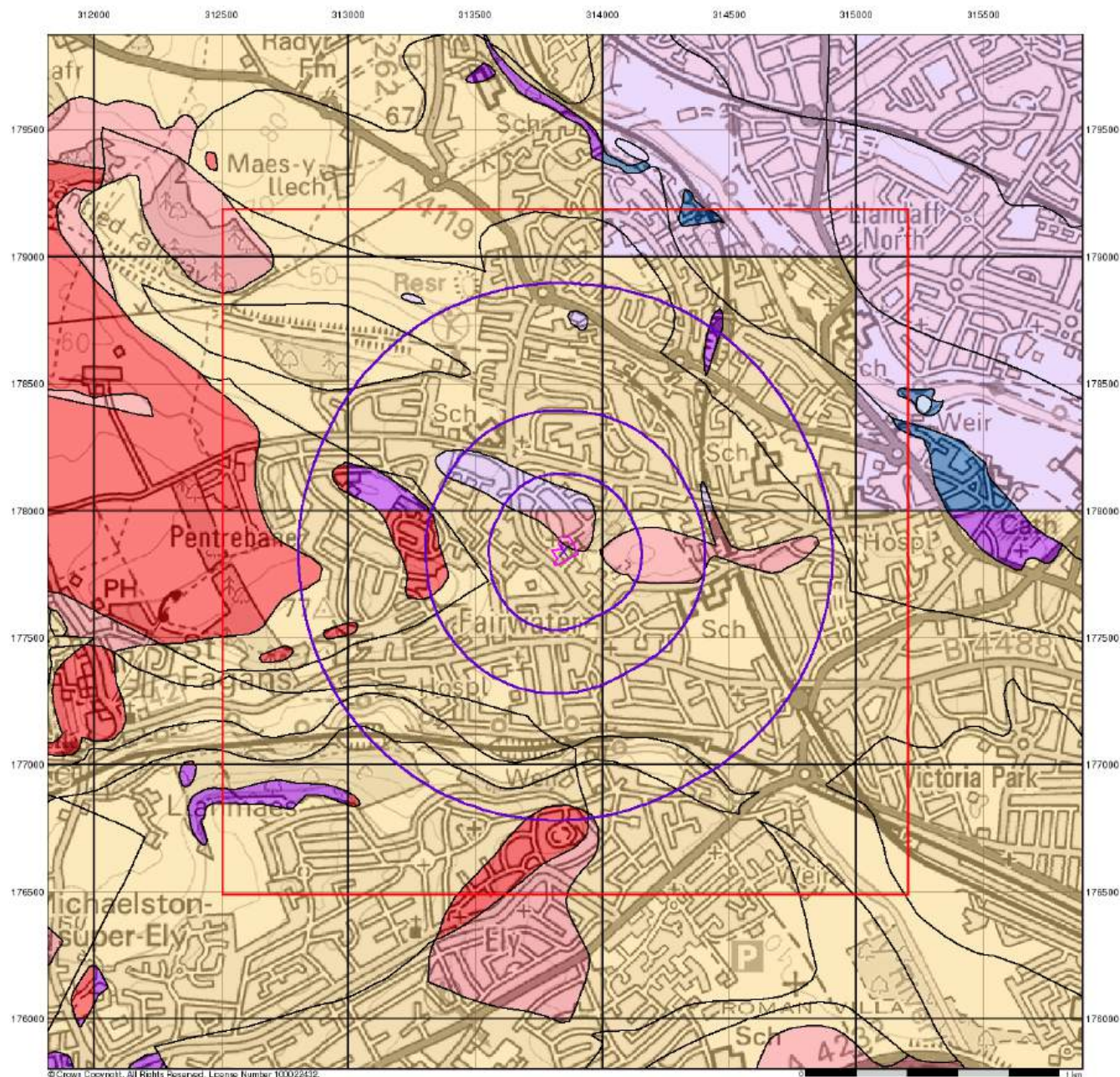
Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural Resources Wales	August 2018	Bi-Annually
Areas of Adopted Green Belt Caerphilly County Borough Council Cardiff Council Rhondda Cynon Taff County Borough Council Vale Of Glamorgan County Borough Council	June 2020 June 2020 June 2020 June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

A selection of organisations who provide data within this report

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

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Natural Resources Wales Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	Cardiff Council - Pollution Control Division Regulatory Services, City Hall, Cardiff, Mid Glamorgan, CF10 3ND	Telephone: 029 20872000 Fax: 01222 873212 Website: www.cardiff.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	Cardiff Council County Hall, Atlantic Wharf, Cardiff, Mid Glamorgan, CF1 5UW	Telephone: 029 2087 2000 Fax: 029 2087 3212 Website: www.cardiff.gov.uk
7	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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



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Groundwater Vulnerability

General

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

Agency and Hydrological

Bedrock Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

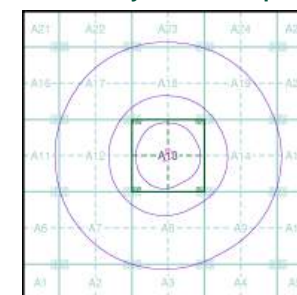
Superficial Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

Site Sensitivity Context Map - Slice A



Order Details

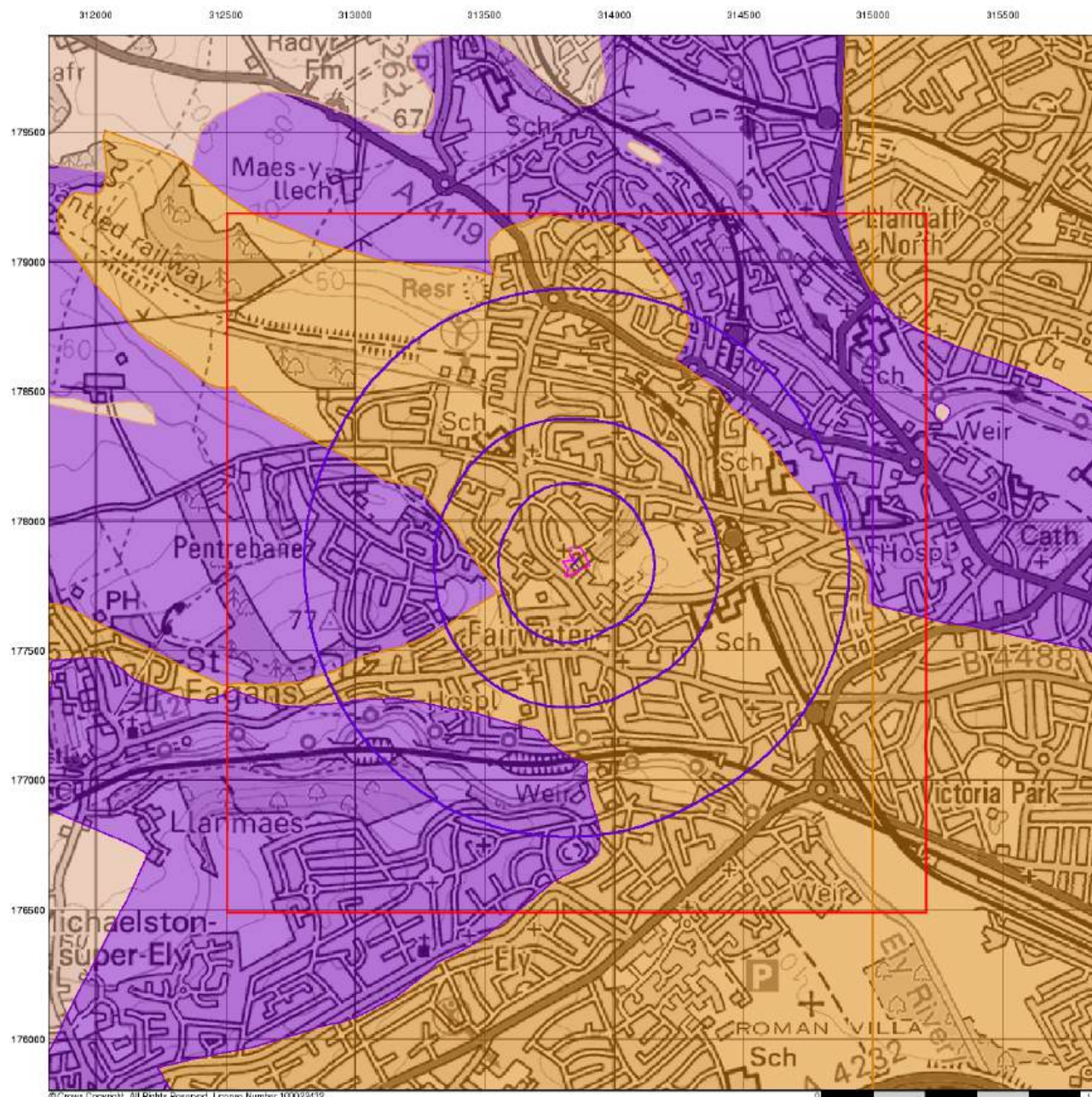
Order Number: 248403750_1_1
 Customer Ref: 16155RH
 National Grid Reference: 313850, 177840
 Slice: A
 Site Area (Ha): 0.61
 Search Buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA



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Bedrock Aquifer Designation

General

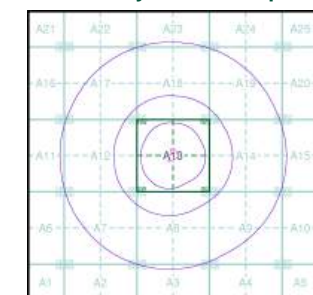
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

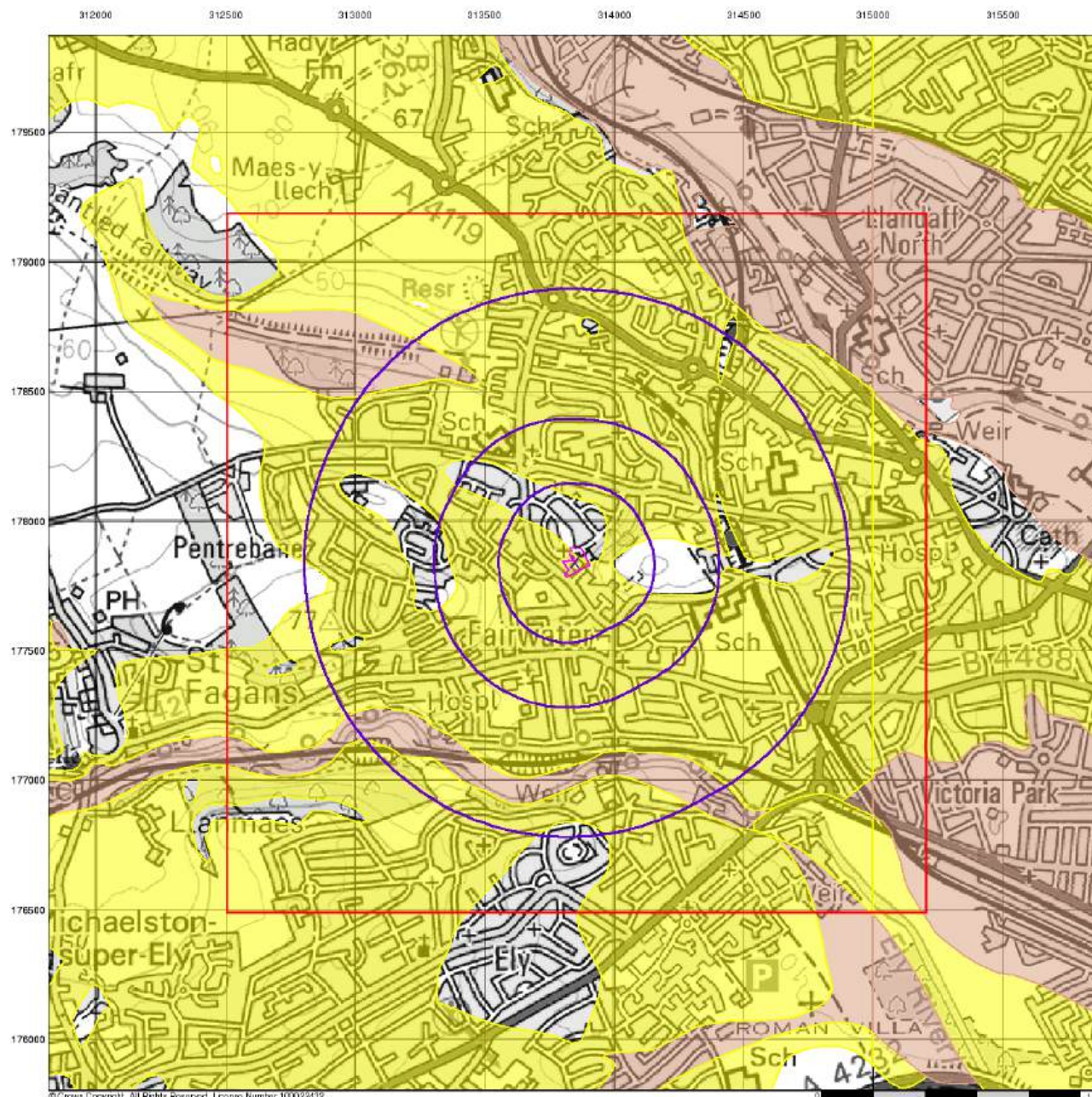
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 Site Area (Ha): 0.61
 Search Buffer (m): 1000

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Superficial Aquifer Designation

General

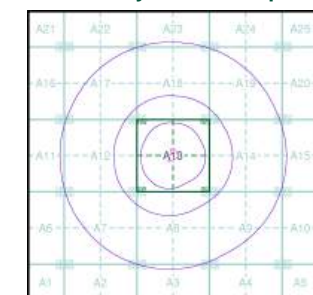
- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

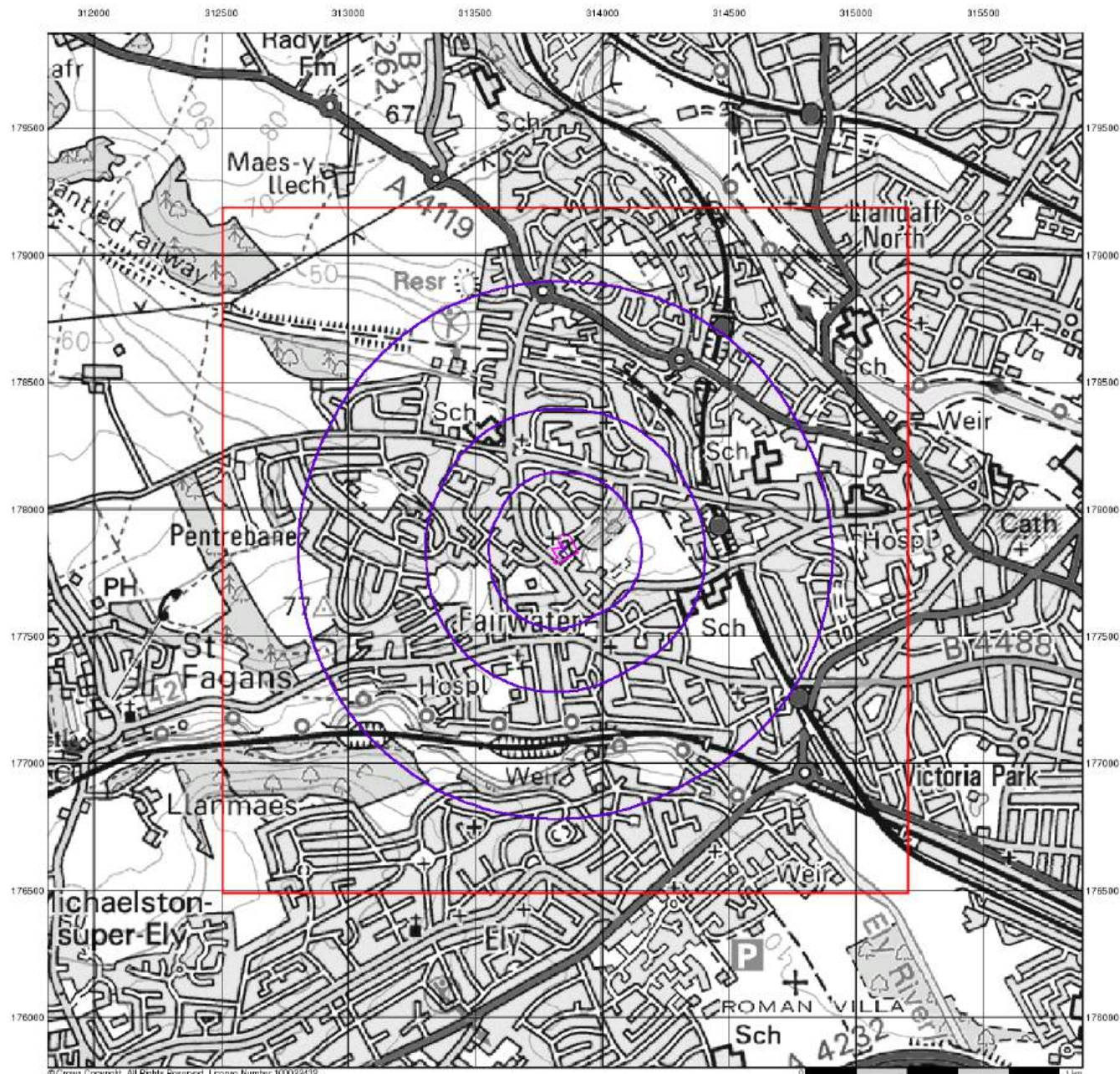
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 Site Area (Ha): 0.61
 Search Buffer (m): 1000

Site Details

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Source Protection Zones

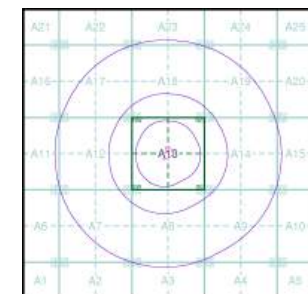
General

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

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



Order Details

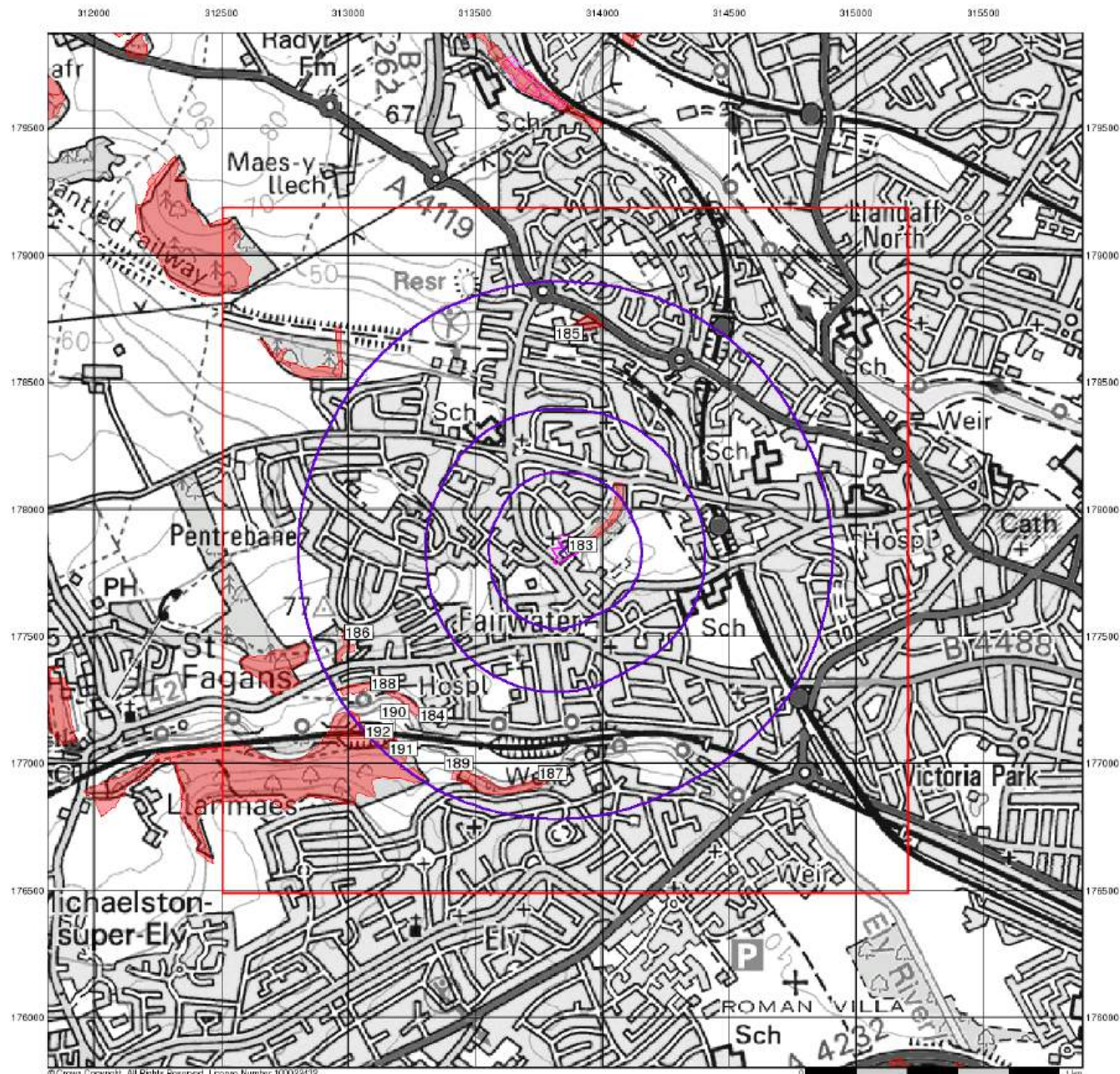
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 Slice: A
 Site Area (Ha): 0.61
 Search Buffer (m): 1000

Site Details

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Sensitive Land Uses

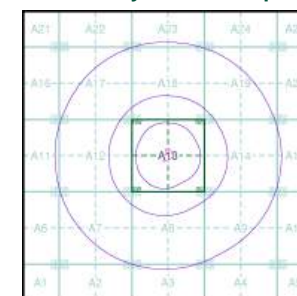
General

- 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

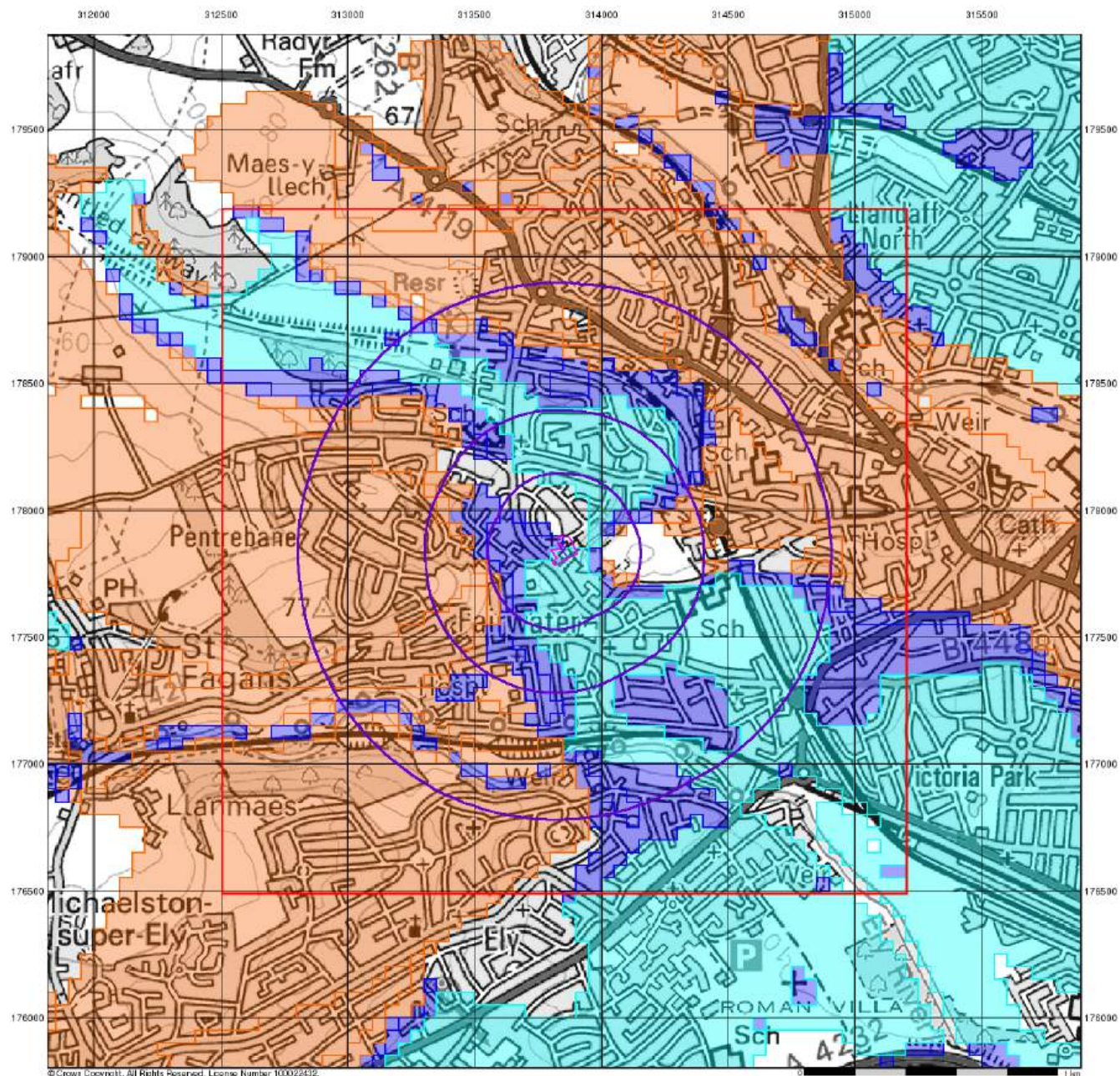
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 Search Buffer (m): 1000

Site Details

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Geotechnical & Geoenvironmental Specialists

BGS Flood GFS Data

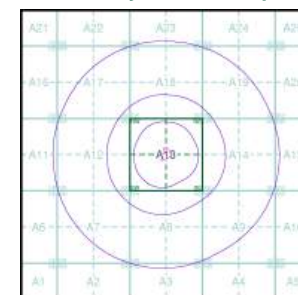
General

- 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: 248403750_1_1
 Customer Ref: 16155RH
 National Grid Reference: 313850, 177840
 Slice: A
 Site Area (Ha): 0.61
 Search Buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA

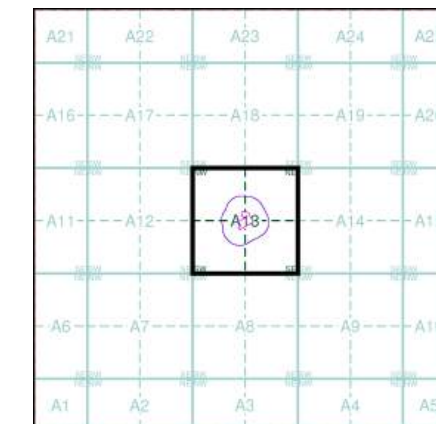


Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

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

Site Sensitivity Map - Segment A13

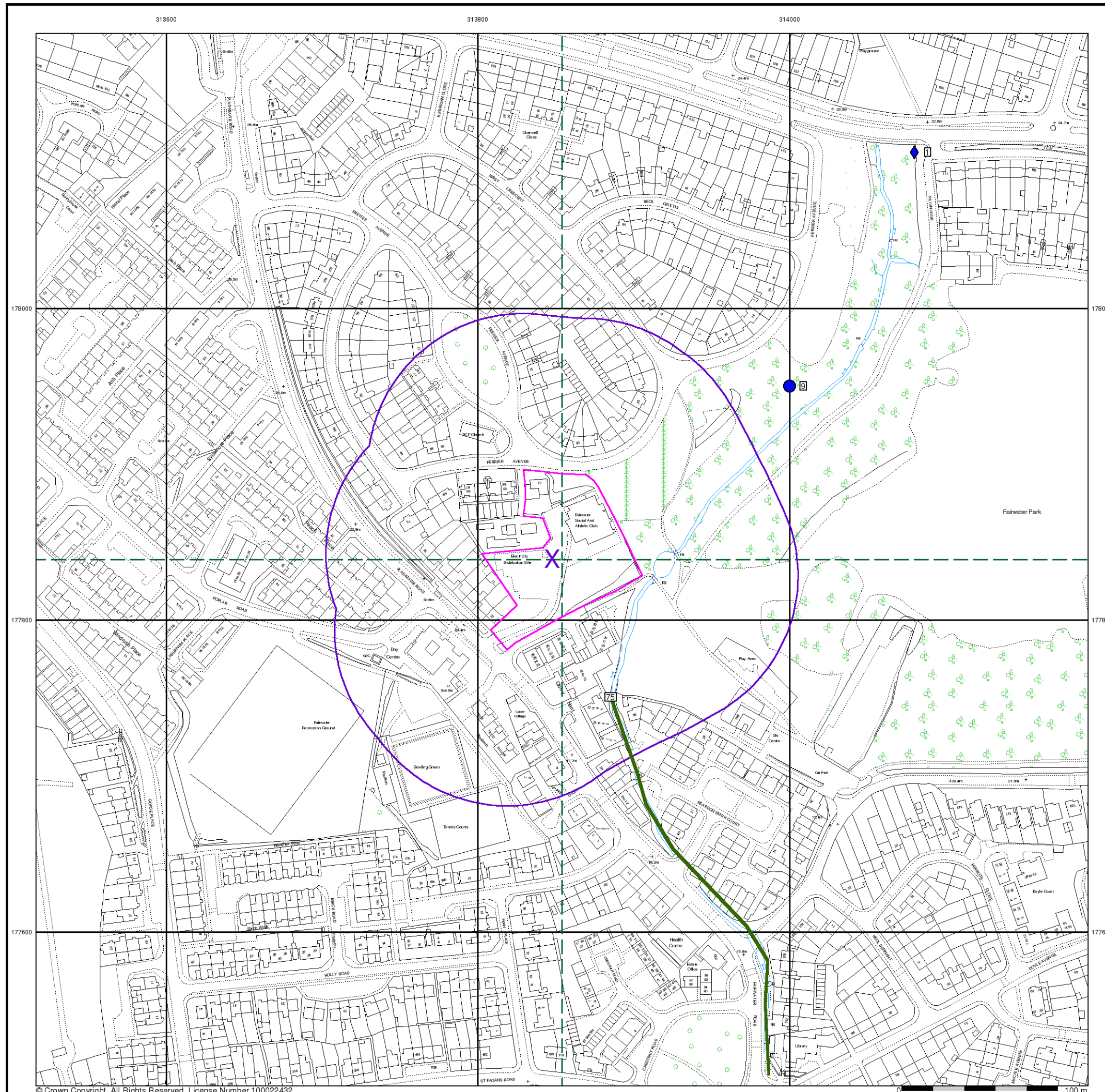


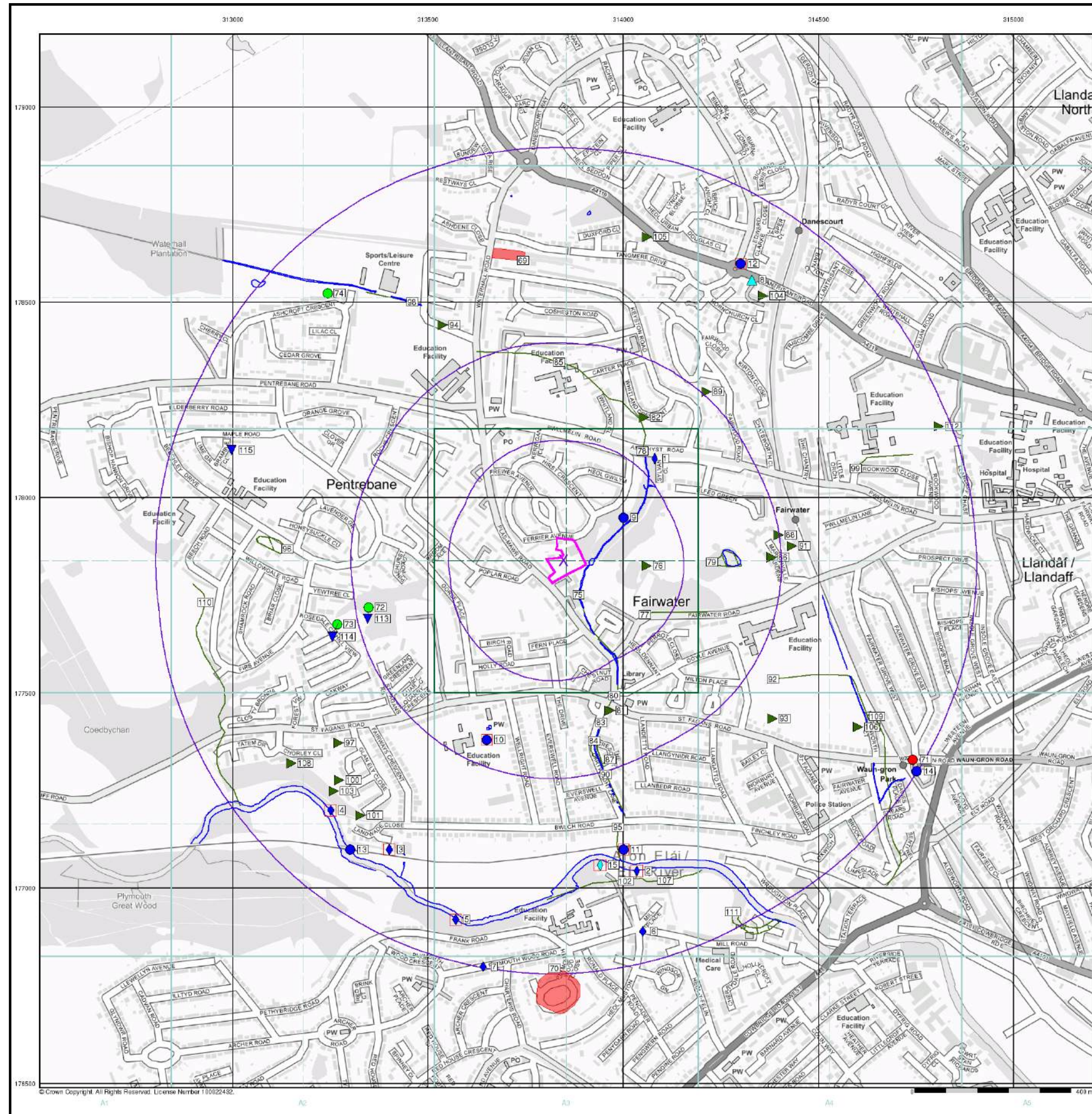
Order Details

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 Slice: A
 Site Area (Ha): 0.61
 Plot Buffer (m): 100

Site Details

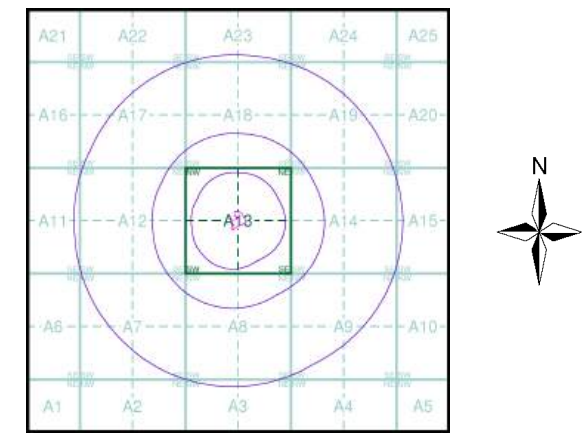
Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA





- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
 - Several of Type at Location
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Integrated Pollution Prevention Control
 - Local Authority Integrated Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control Enforcement
 - Pollution Incident to Controlled Waters
 - Prosecution Relating to Authorised Processes
 - Prosecution Relating to Controlled Waters
 - Registered Radioactive Substance
 - River Network or Water Feature
 - River Quality Sampling Point
 - Substantiated Pollution Incident Register
 - Water Abstraction
 - Water Industry Act Referral
- Hazardous Substances**
- COMAH Site
 - Explosive Site
 - NIHHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
 - 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 (Location)
 - Registered Landfill Site (Point Buffered to 100m)
 - Registered Landfill Site (Point Buffered to 250m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site (Location)
 - Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A

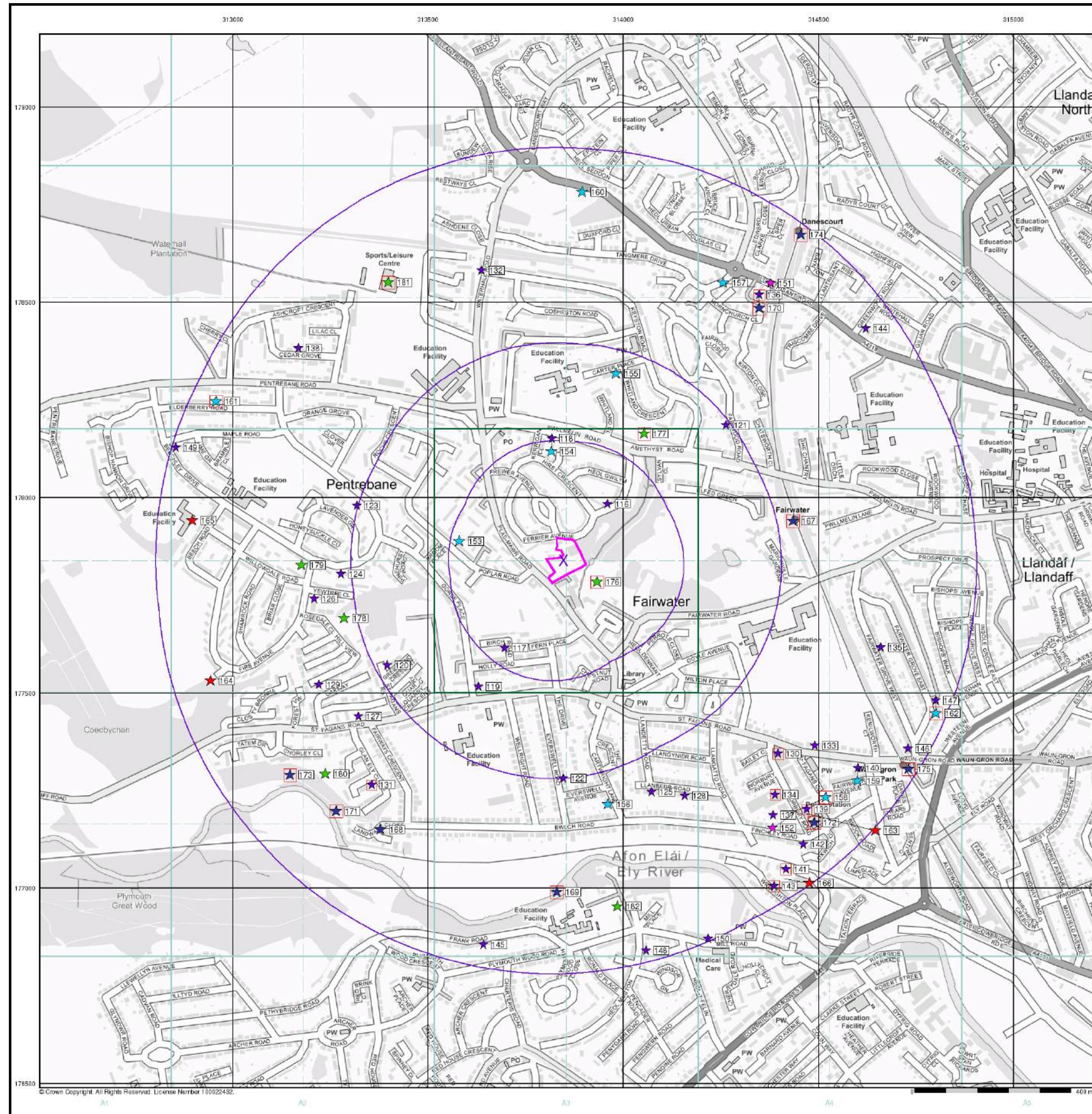


Order Details

Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA



Geotechnical & Geoenvironmental Specialists
Industrial Land Use Map

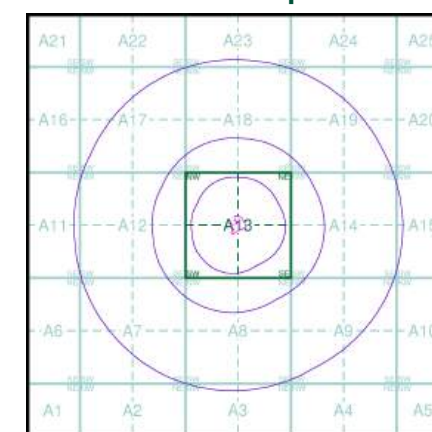
General

- 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: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA



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

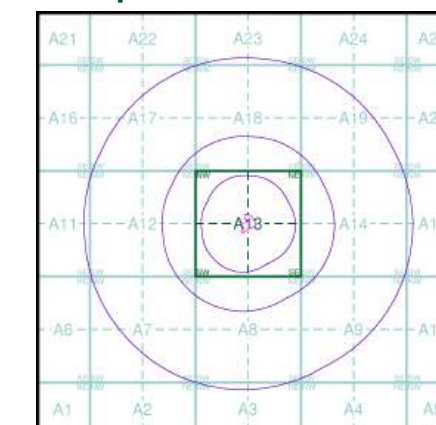
General

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

Agency and Hydrological (Flood)

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

Flood Map - Slice A

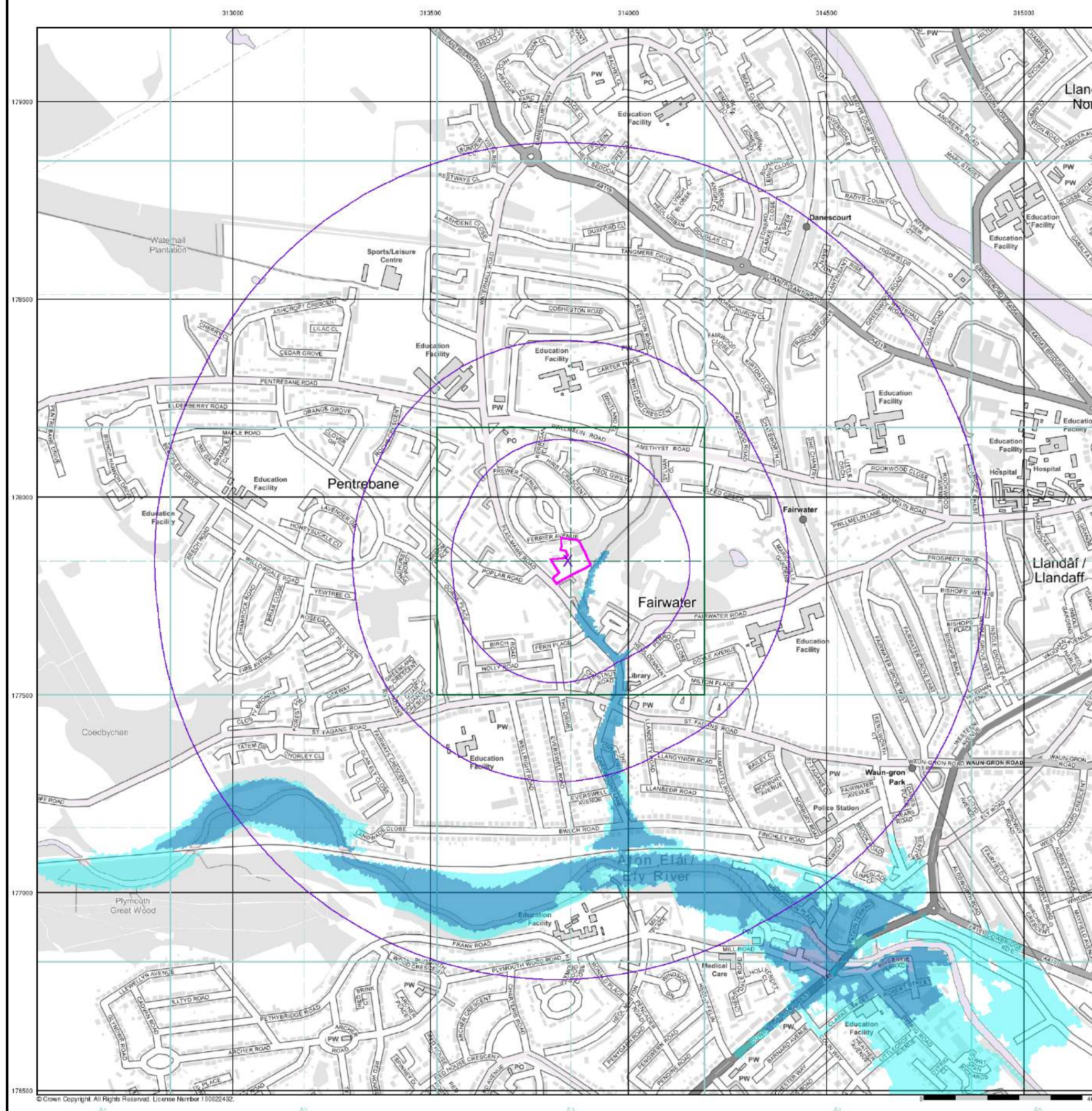


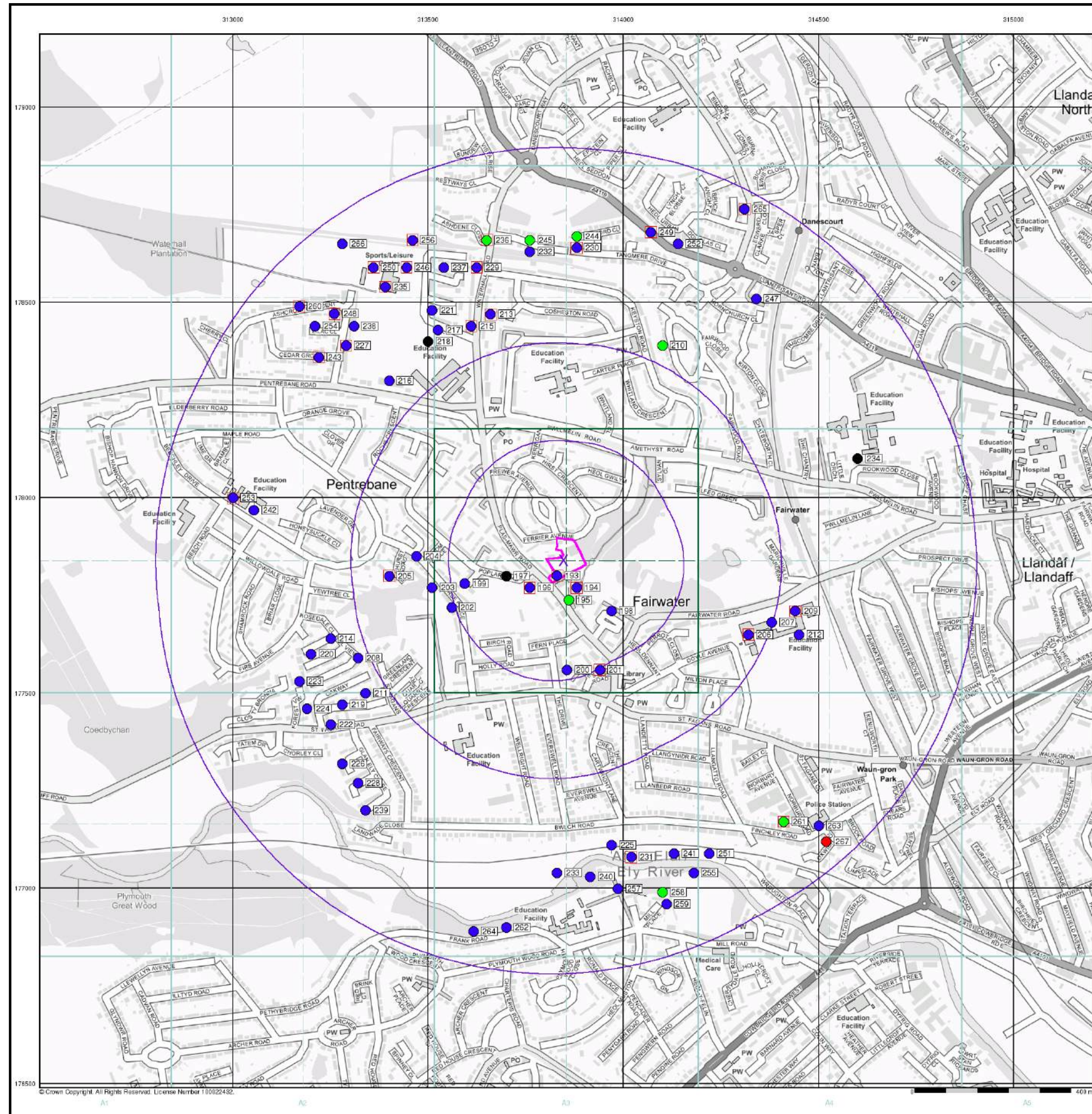
Order Details

Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA





General

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

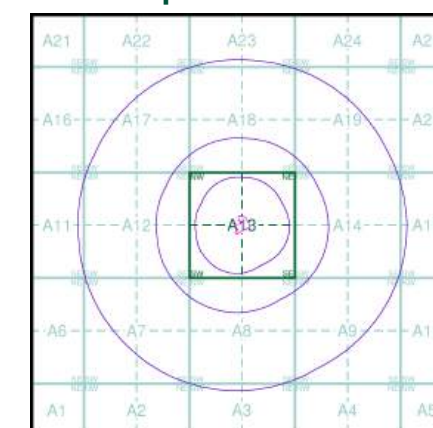
Agency and Hydrological (Boreholes)

- 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: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA

General

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

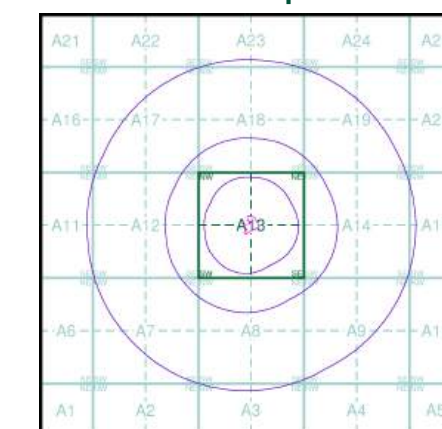
OS Water Network Data

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

Contours (height in meters)

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

OS Water Network Map - Slice A

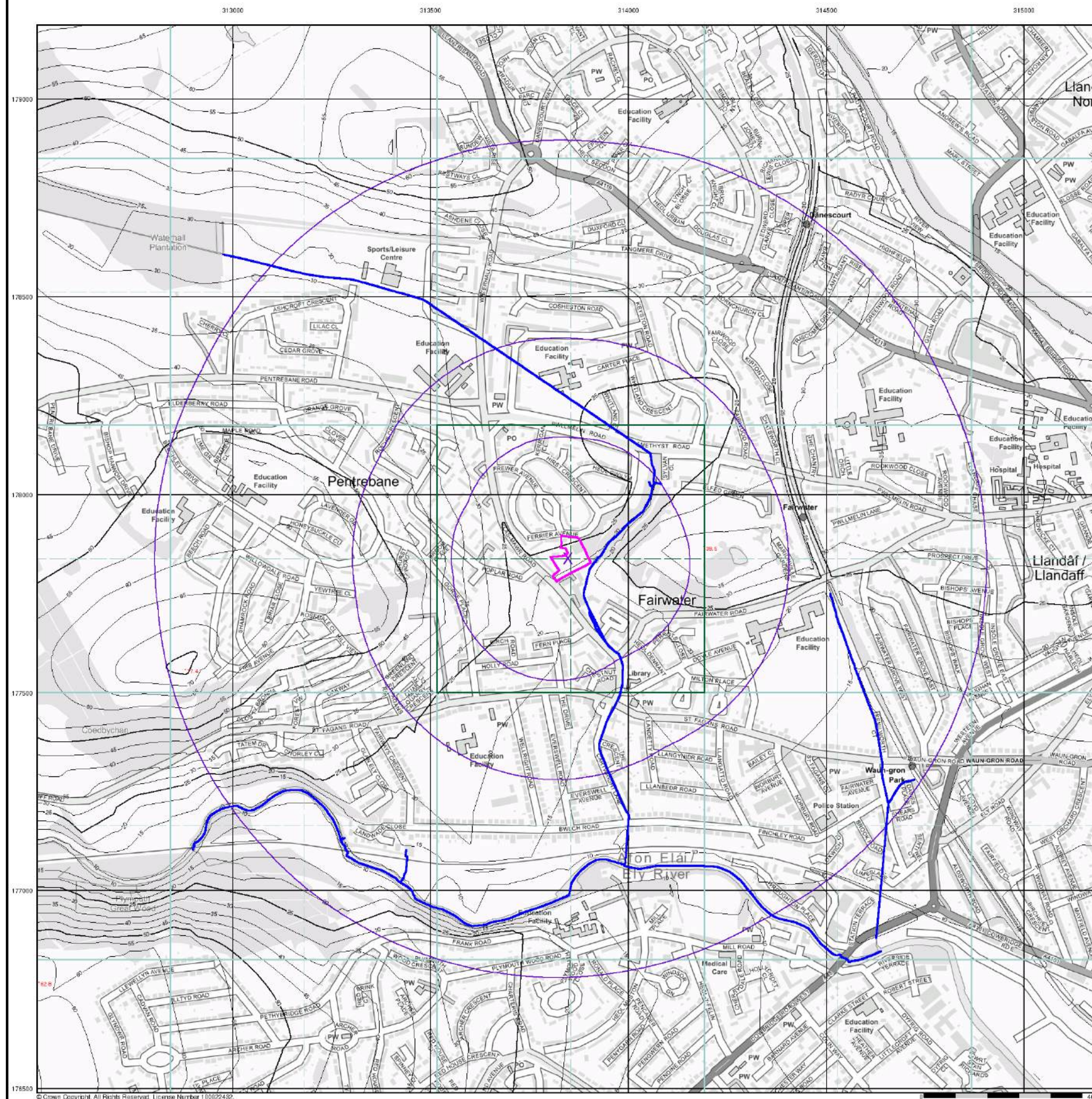


Order Details

Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA



General

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

Risk of Flooding from Surface Water

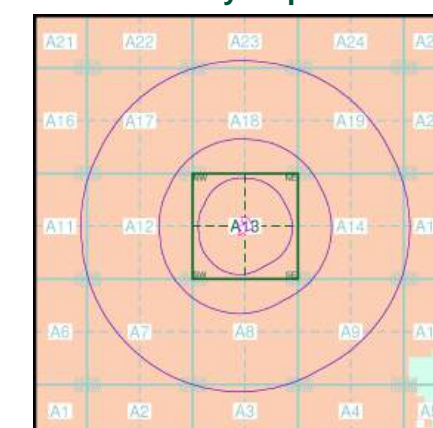
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

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

EANRW Suitability Map - Slice A

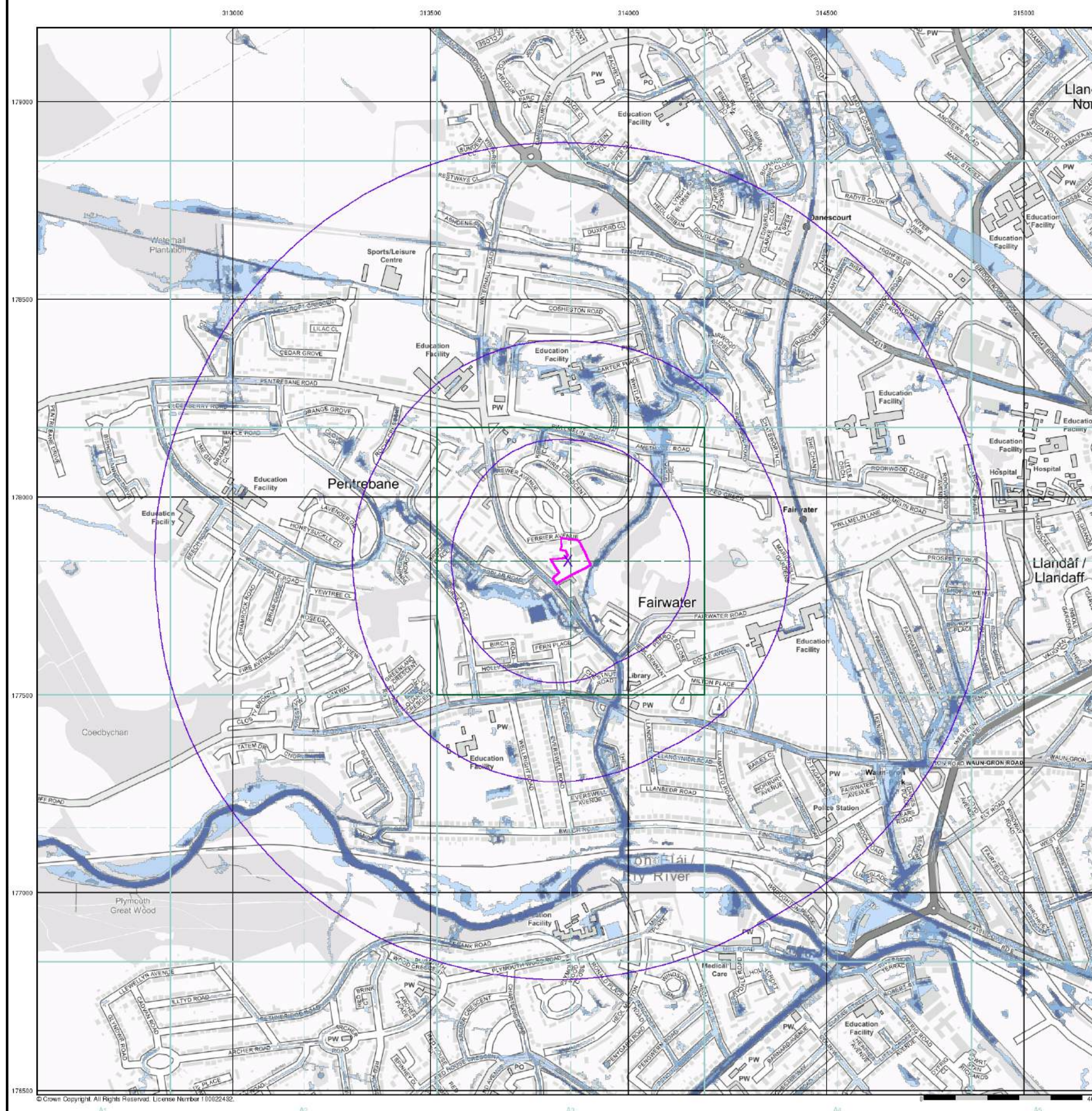


Order Details

Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA



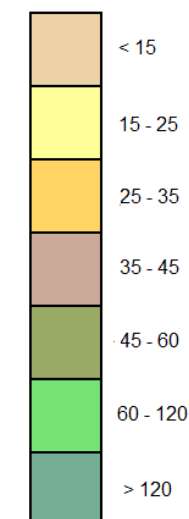
General

Specified Site Specified Buffer(s) Bearing Reference Point

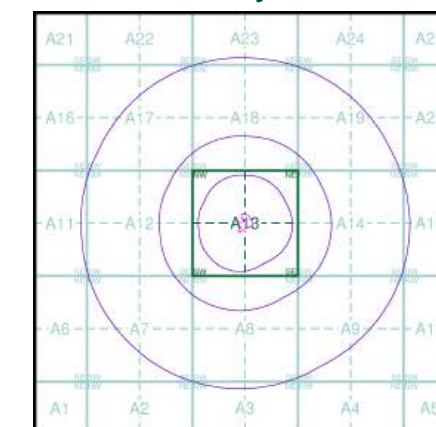
Urban Soil Chemistry Arsenic

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

Arsenic Concentrations mg/kg



Urban Soil Chemistry Arsenic - Slice A

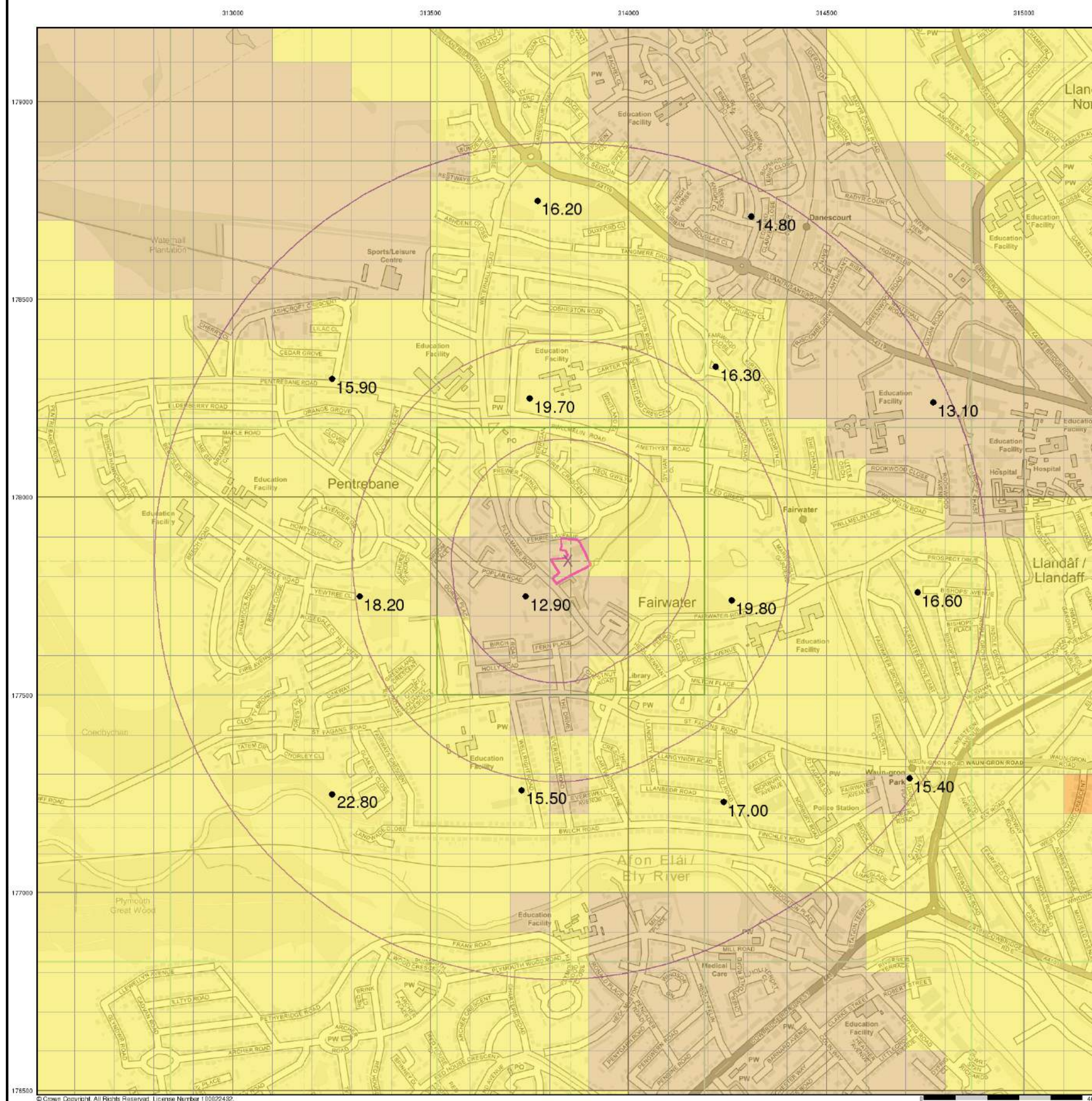


Order Details

Order Details: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA

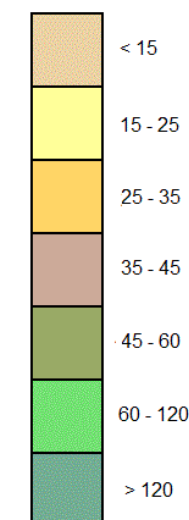


General

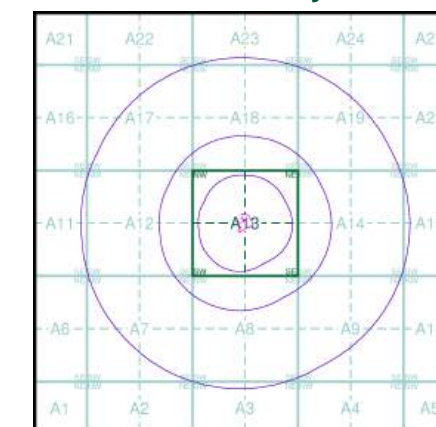
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice A

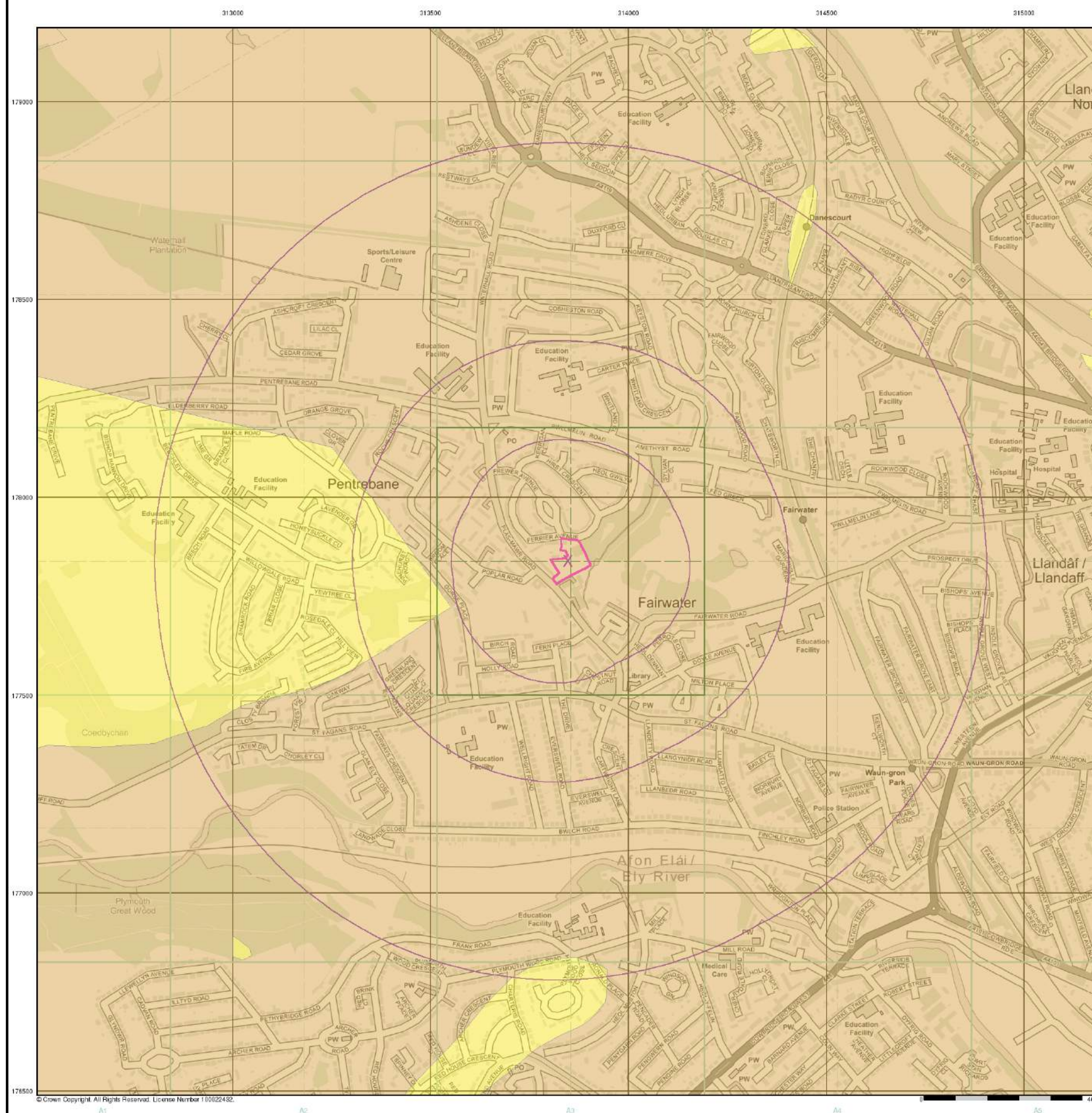


Order Details

Order Details: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA



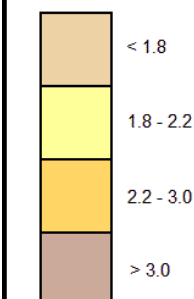
General

Specified Site Specified Buffer(s) Bearing Reference Point

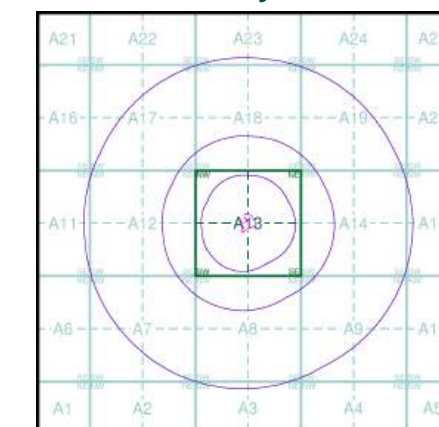
Urban Soil Chemistry Cadmium

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

Cadmium Concentrations mg/kg



Urban Soil Chemistry Cadmium - Slice A

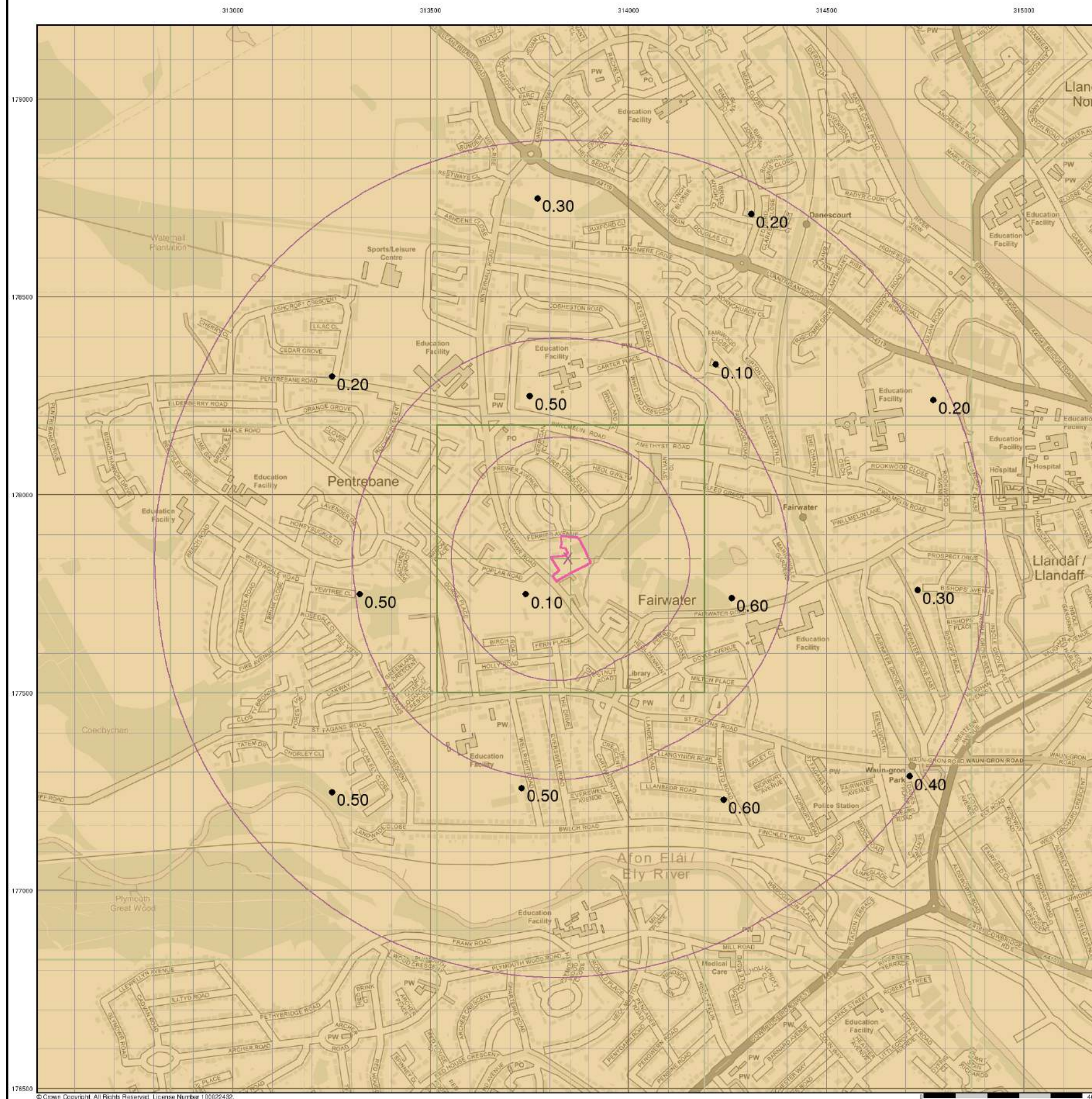


Order Details

Order Details: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA

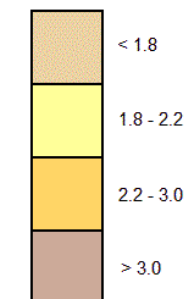


General

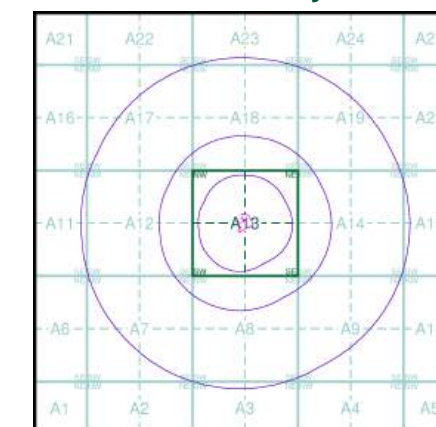
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A

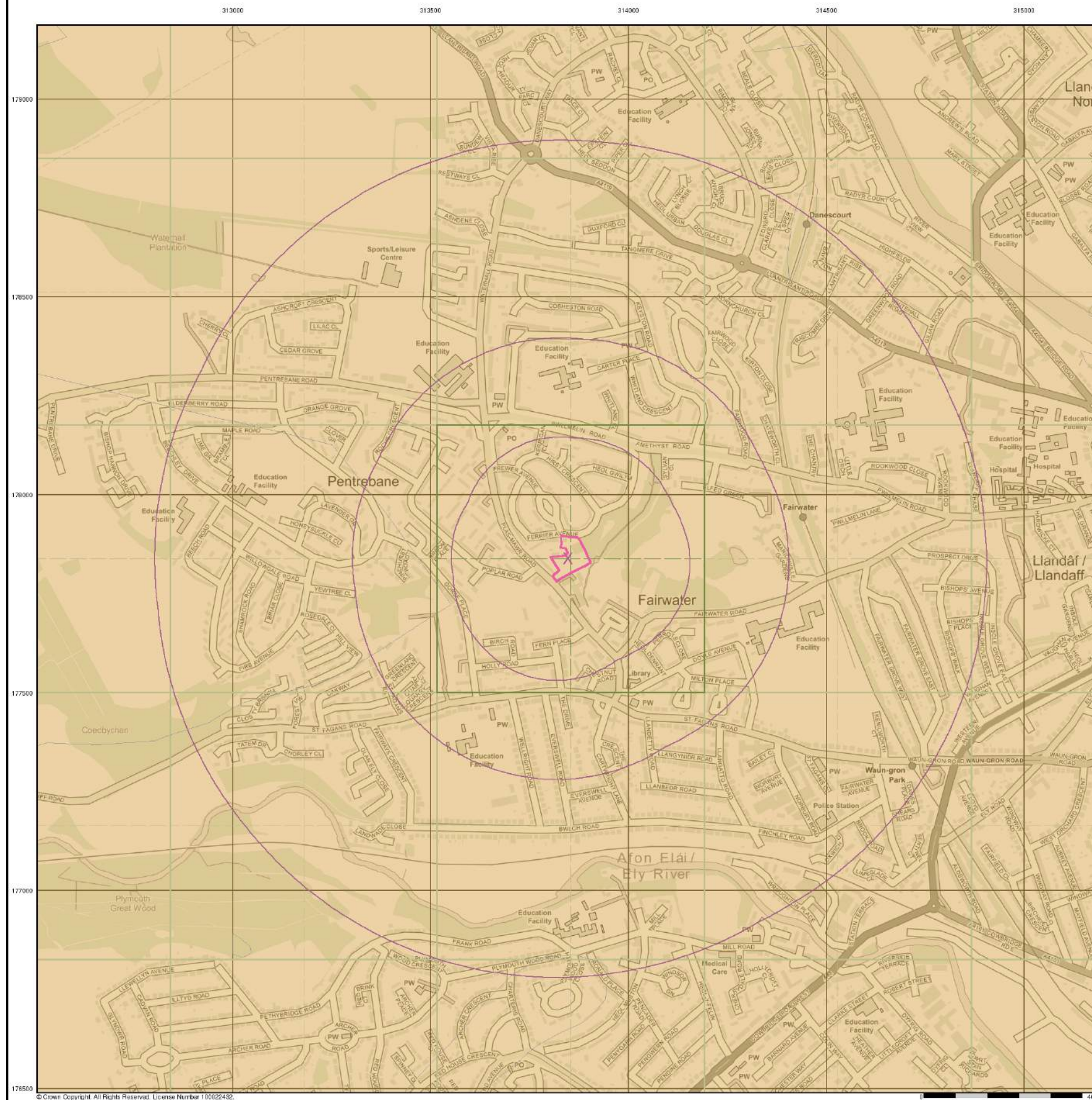


Order Details

Order Details: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA



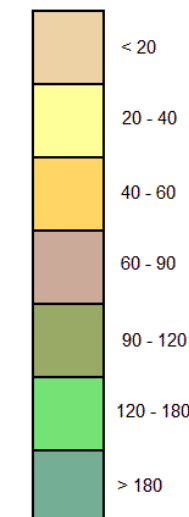
General

Specified Site Specified Buffer(s) Bearing Reference Point

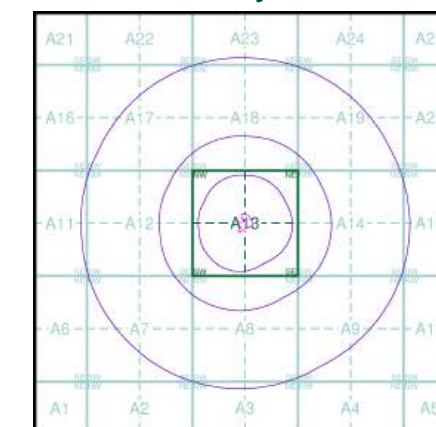
Urban Soil Chemistry Chromium

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

Chromium Concentrations mg/kg



Urban Soil Chemistry Chromium - Slice A

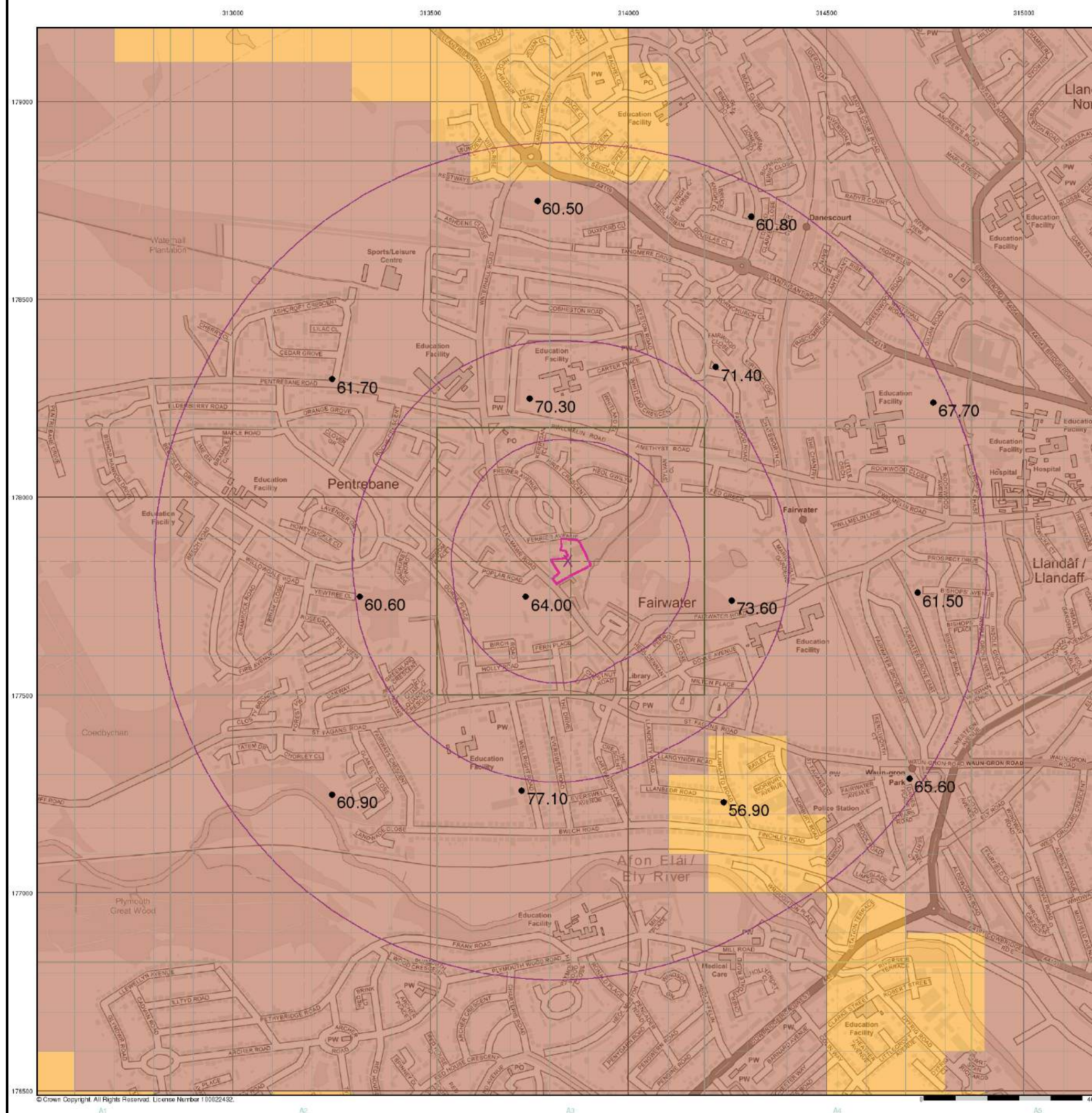


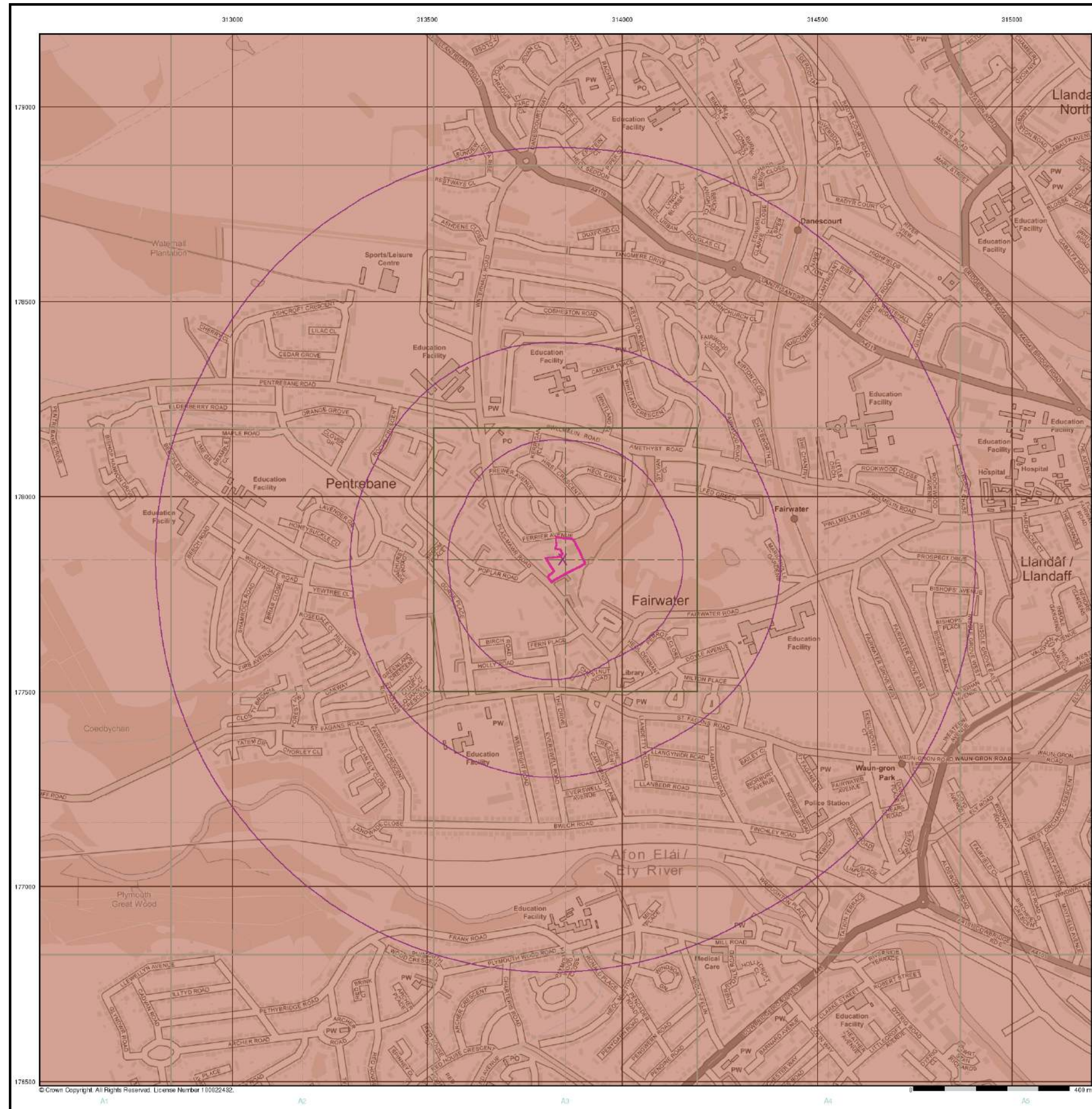
Order Details

Order Details: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA

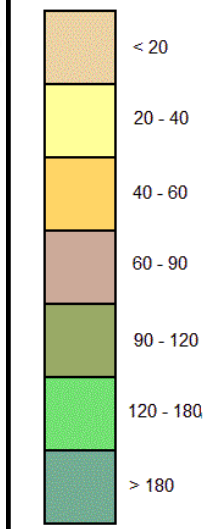




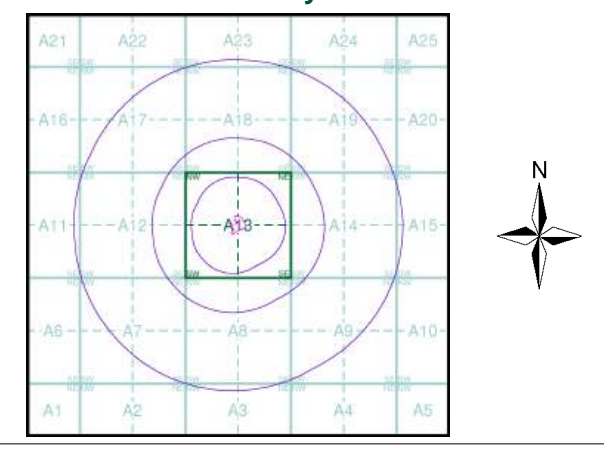
- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice A



Order Details
Order Details: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search buffer (m): 1000

Site Details
Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA

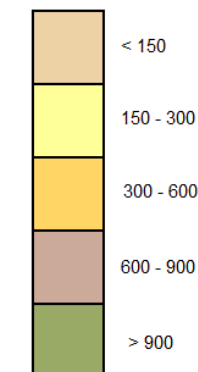
General

Specified Site Specified Buffer(s) Bearing Reference Point

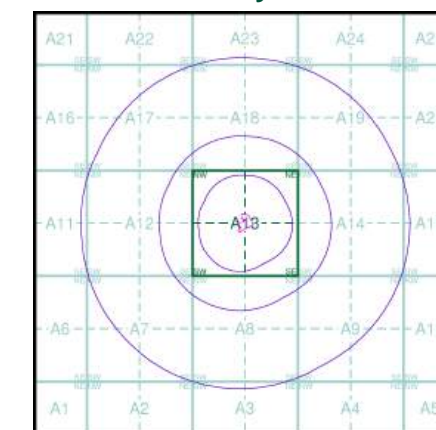
Urban Soil Chemistry Lead

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

Lead Concentrations mg/kg



Urban Soil Chemistry Lead - Slice A

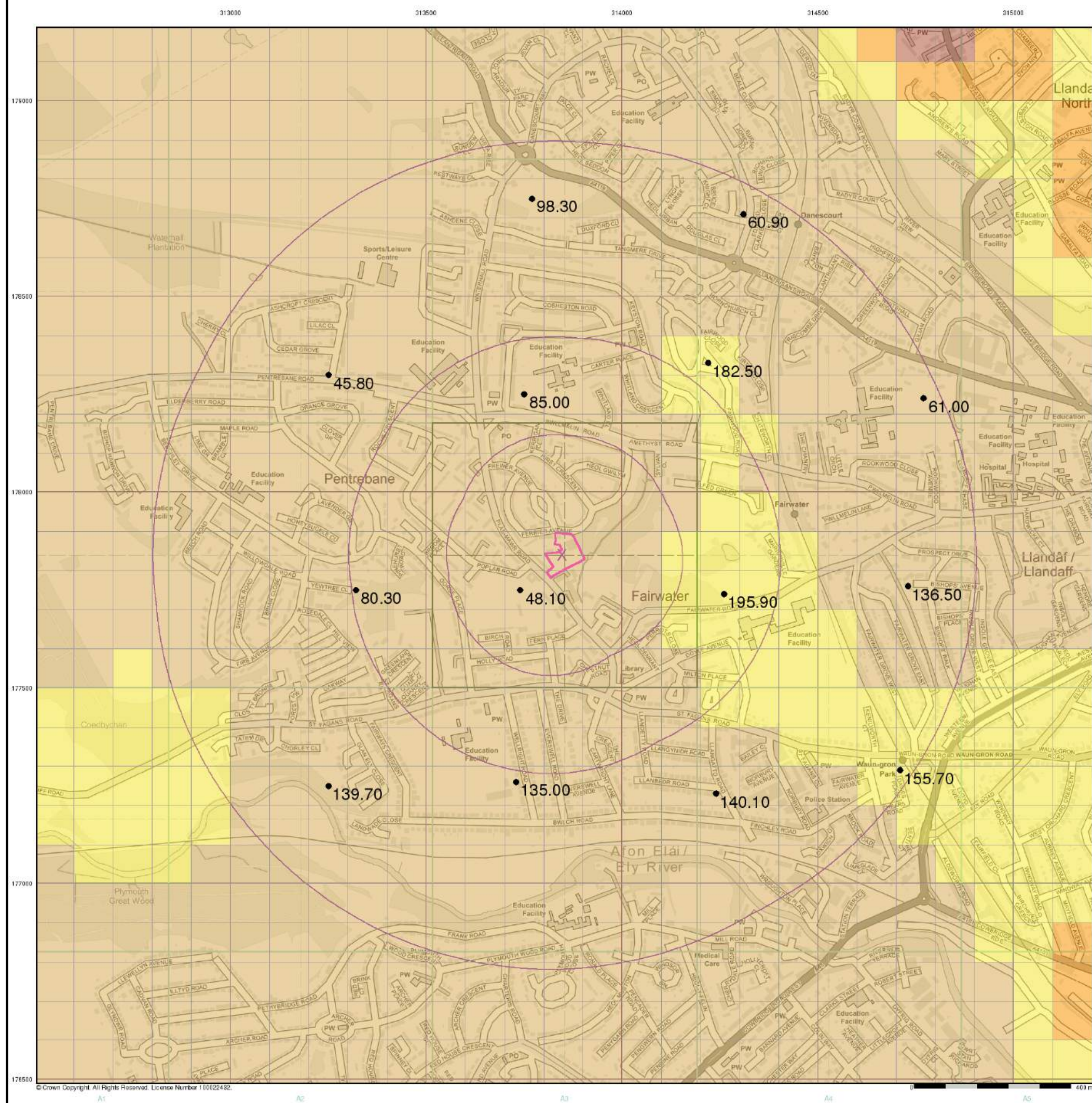


Order Details

Order Details: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA

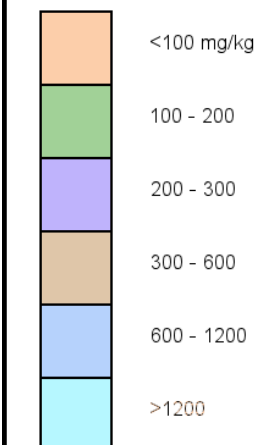


General

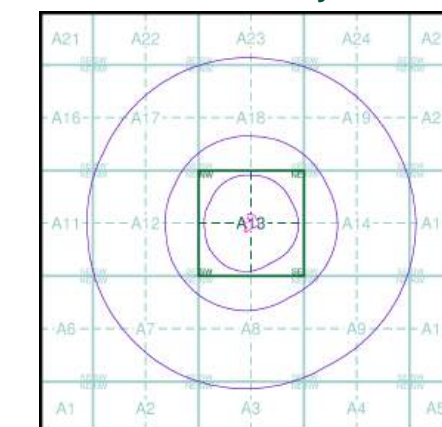
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A

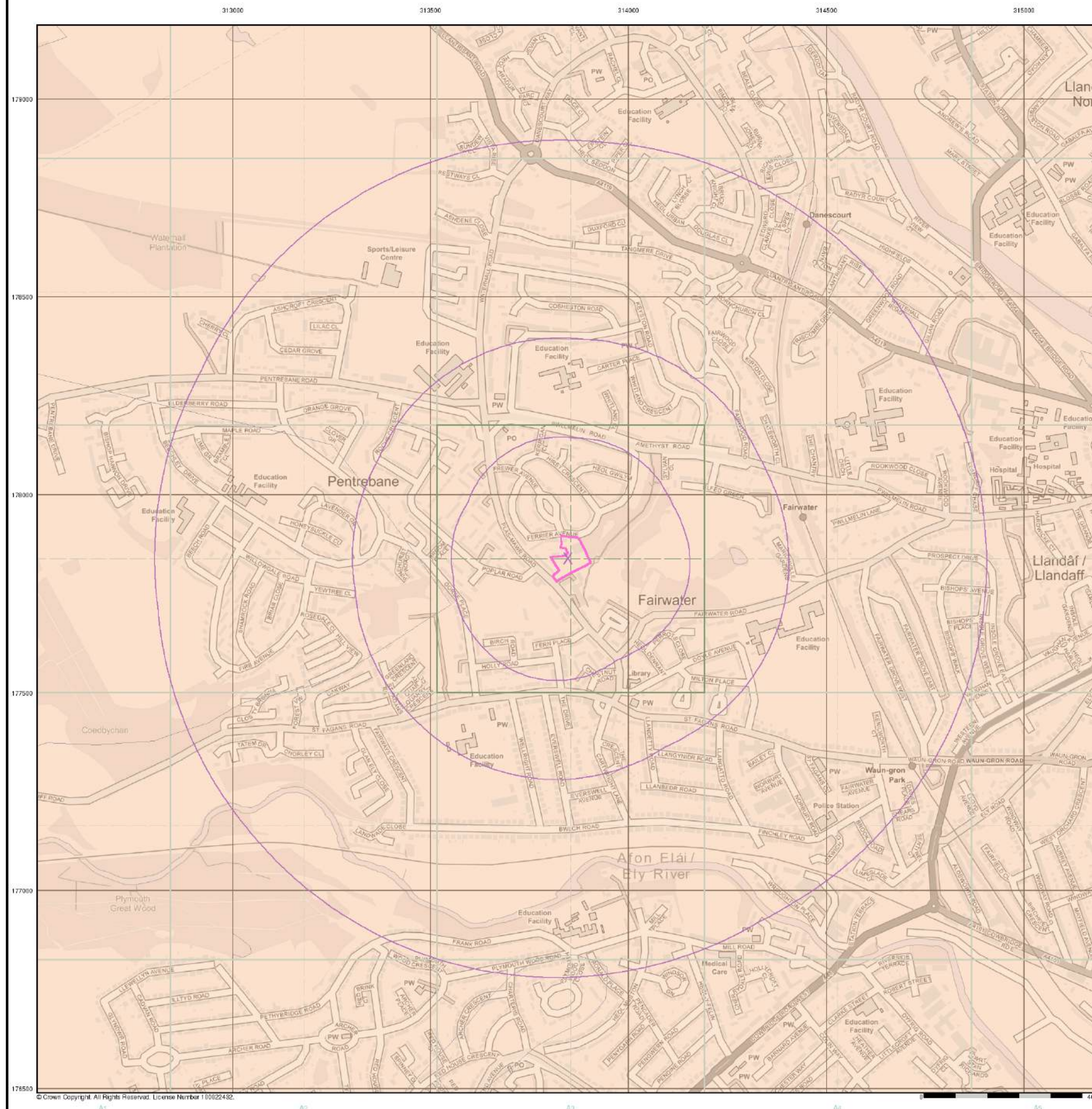


Order Details

Order Details: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA



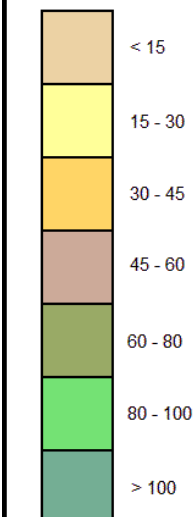
General

Specified Site Specified Buffer(s) Bearing Reference Point

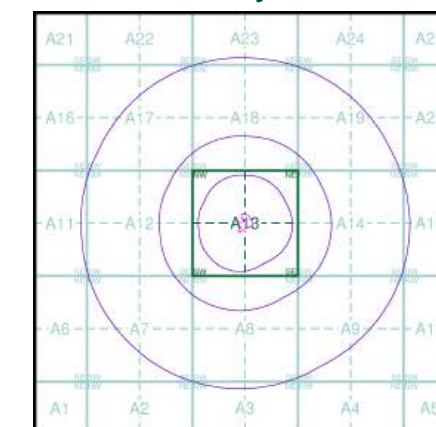
Urban Soil Chemistry Nickel

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

Nickel Concentrations mg/kg



Urban Soil Chemistry Nickel - Slice A

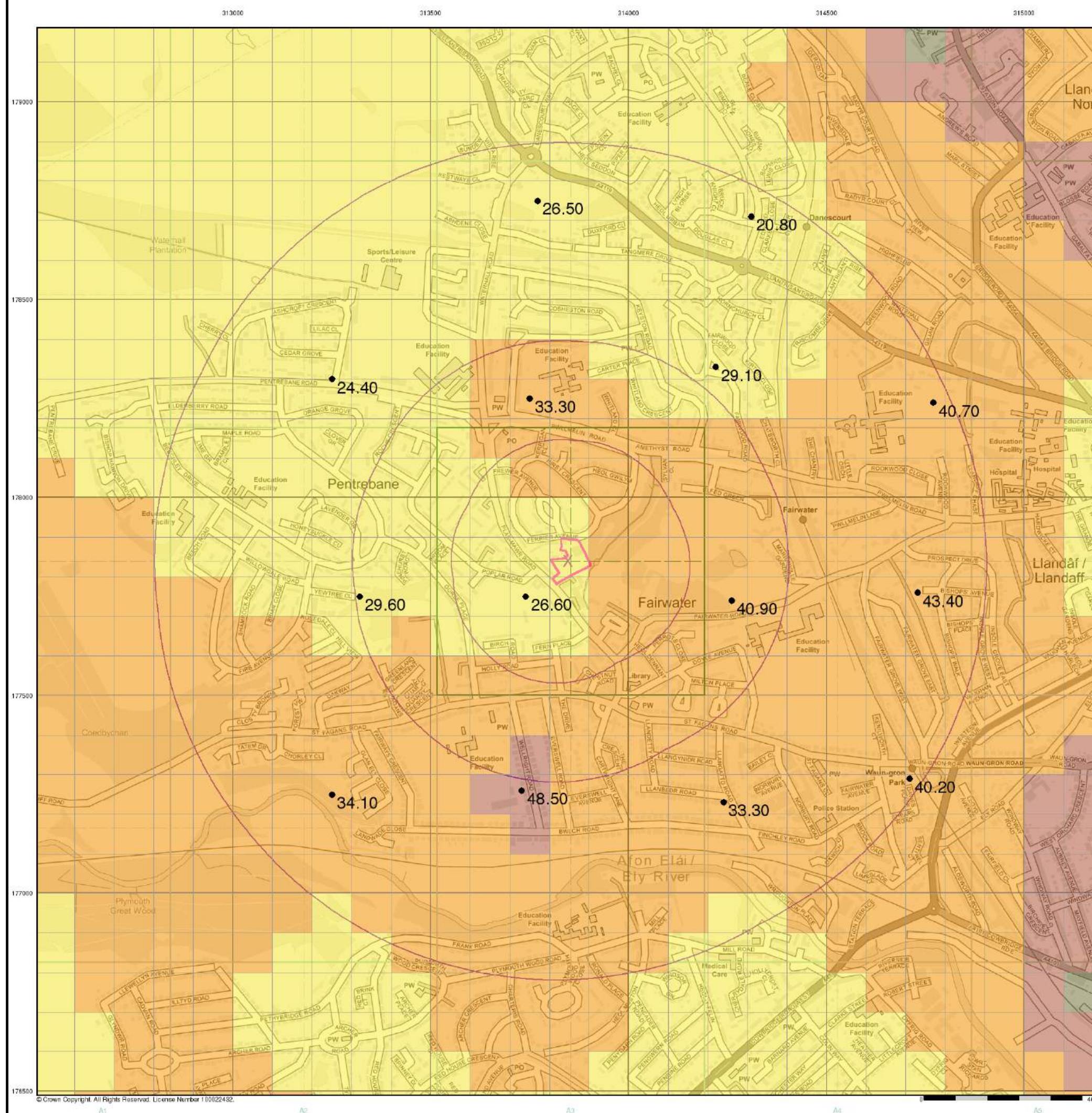


Order Details

Order Details: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA

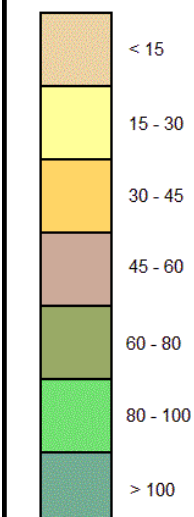


General

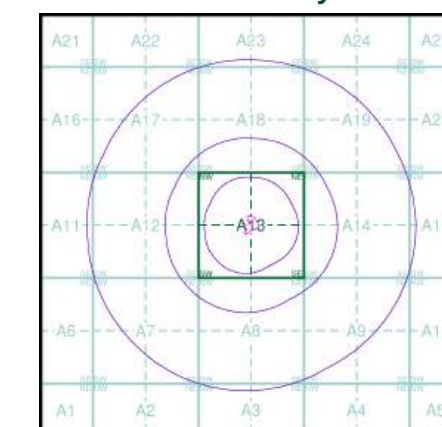
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A

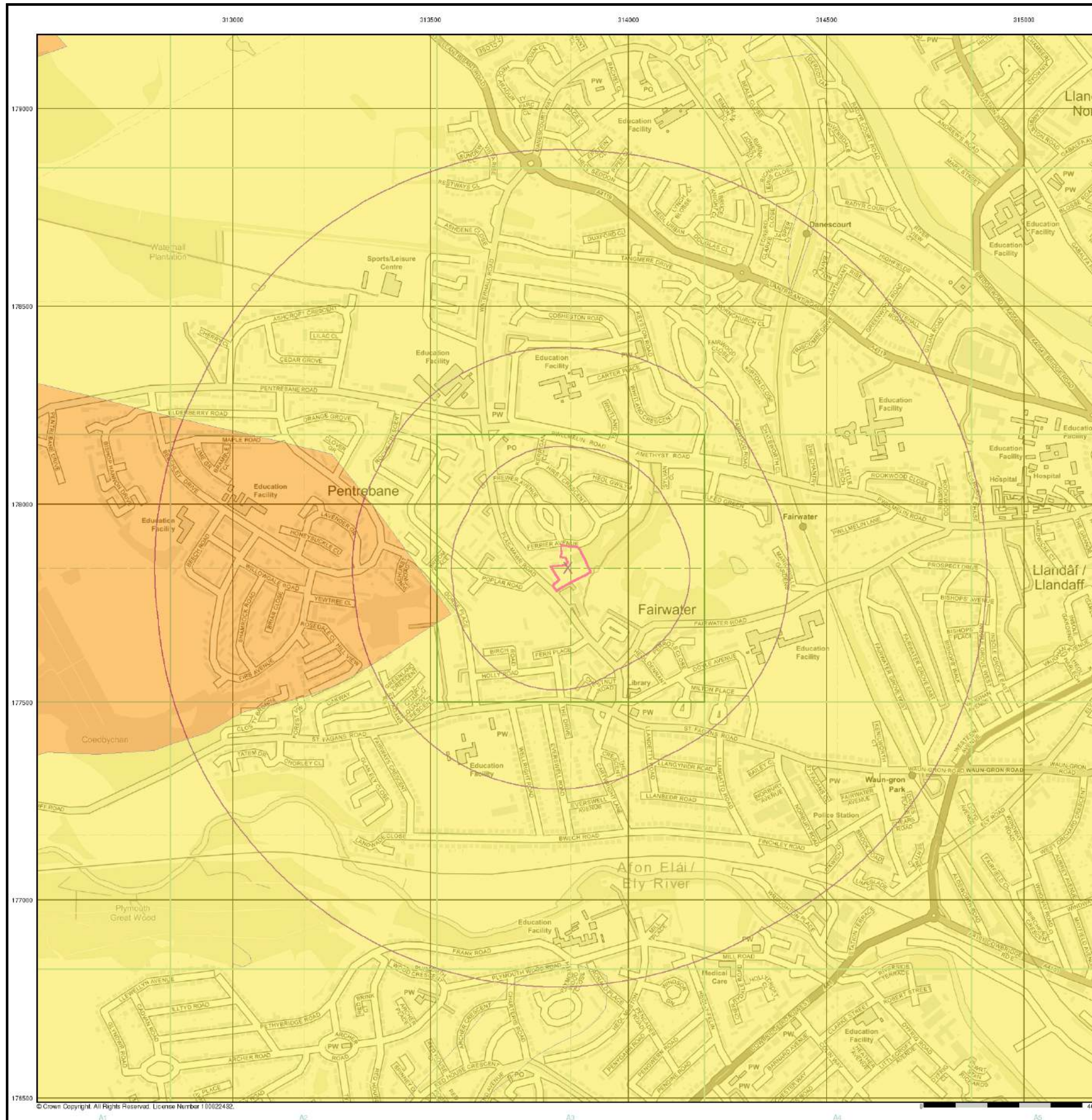


Order Details

Order Details: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA



Historical Mapping Legends

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



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



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

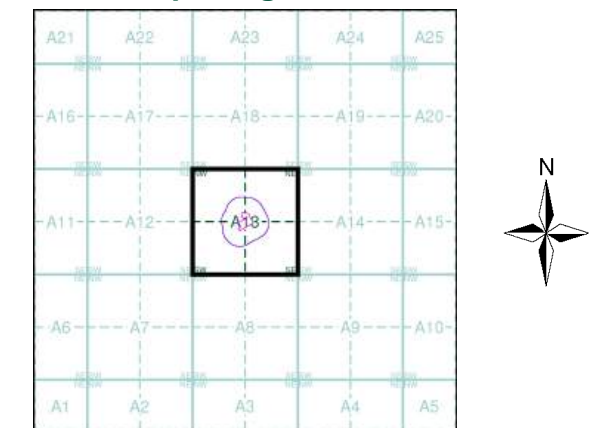


Geotechnical & Geoenvironmental Specialists

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:2,500	1880	2
Glamorganshire	1:2,500	1901	3
Glamorganshire	1:2,500	1920	4
Glamorganshire	1:2,500	1940	5
Ordnance Survey Plan	1:1,250	1954 - 1959	6
Ordnance Survey Plan	1:2,500	1954 - 1970	7
Ordnance Survey Plan	1:1,250	1961 - 1969	8
Additional SIMs	1:1,250	1964 - 1990	9
Ordnance Survey Plan	1:1,250	1968 - 1970	10
Ordnance Survey Plan	1:2,500	1969 - 1970	11
Supply of Unpublished Survey Information	1:1,250	1973	12
Ordnance Survey Plan	1:1,250	1977	13
Additional SIMs	1:1,250	1990	14
Large-Scale National Grid Data	1:1,250	1992	15
Large-Scale National Grid Data	1:1,250	1994	16
Historical Aerial Photography	1:2,500	2000	17

Historical Map - Segment A13



Order Details

Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 100

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA



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Web: www.envirocheck.co.uk



Geotechnical & Geoenvironmental Specialists

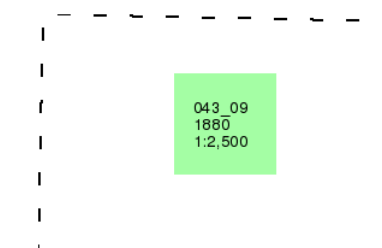
Glamorganshire

Published 1880

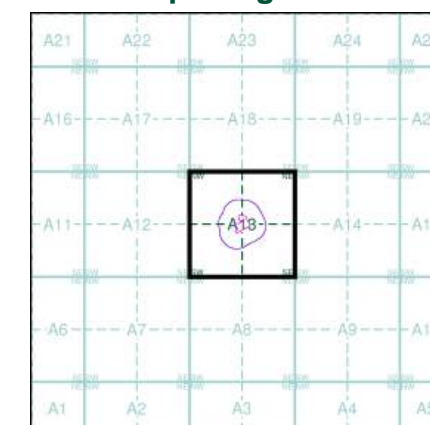
Source map scale - 1:2,500

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

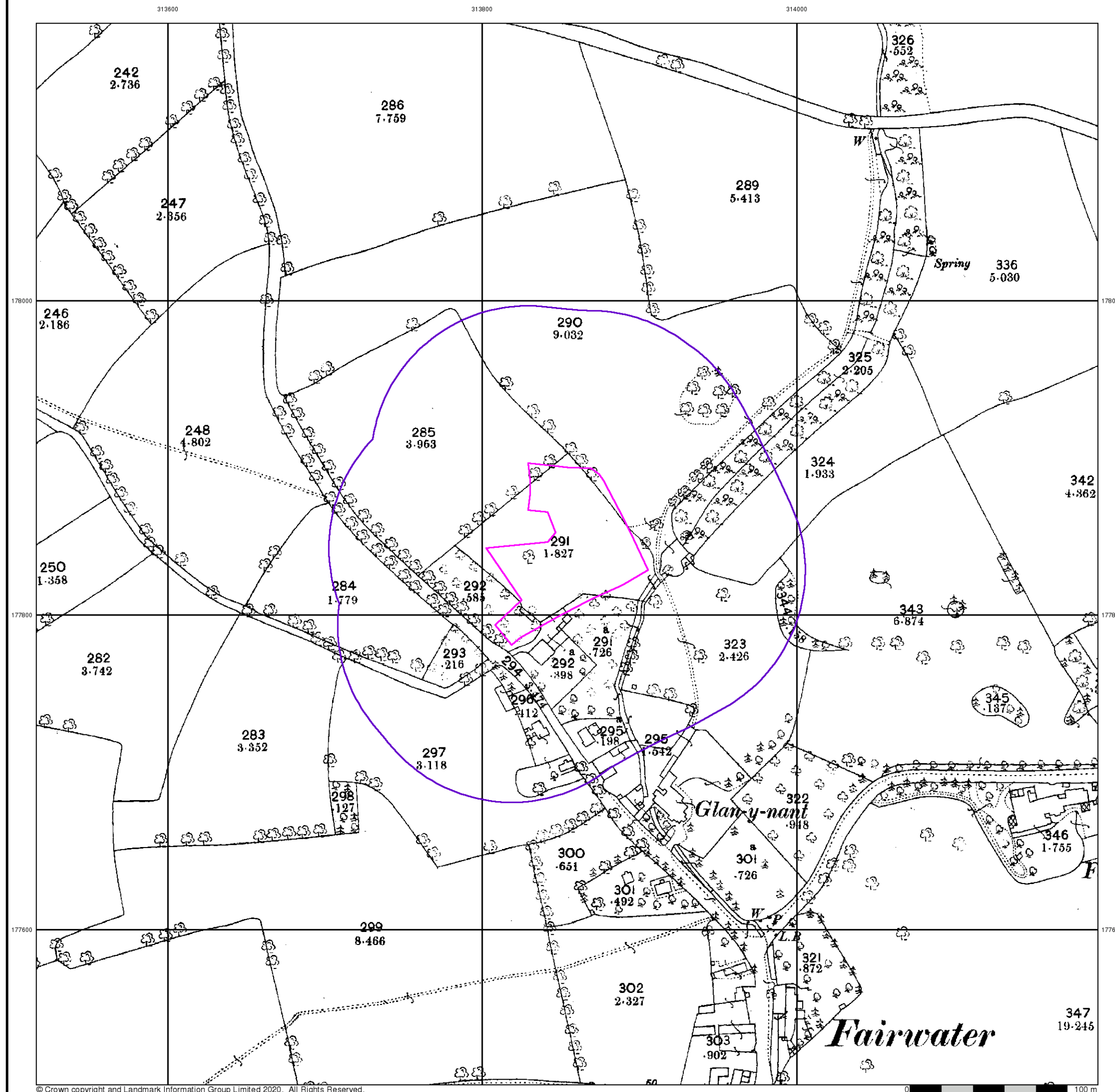
Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 100

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA

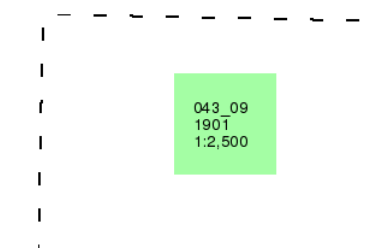


Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

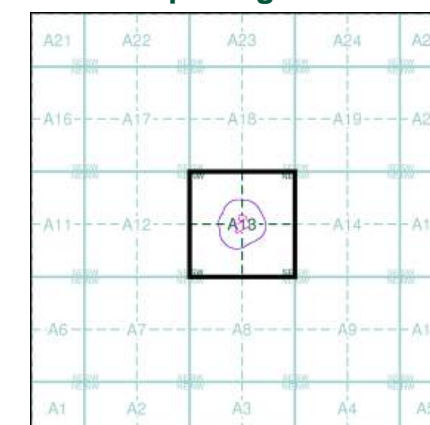


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain.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

Map Name(s) and Date(s)



Historical Map - Segment A13

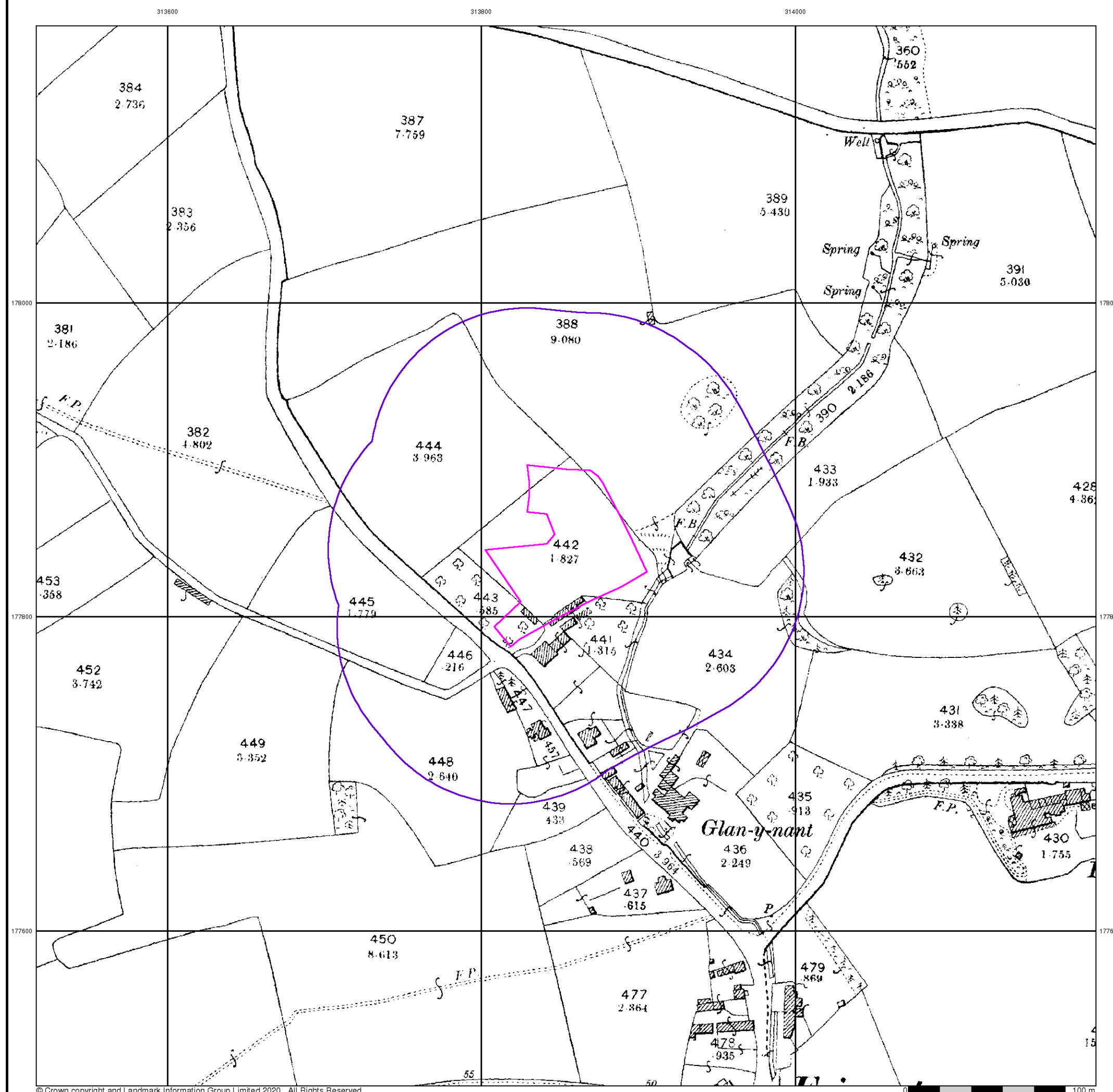


Order Details

Order Number: 248403750_1_1
 Customer Ref: 16155RH
 National Grid Reference: 313850, 177840
 Slice: A
 Site Area (Ha): 0.61
 Search Buffer (m): 100

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA





Geotechnical & Geoenvironmental Specialists

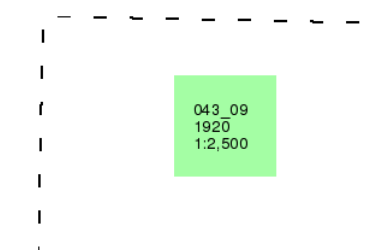
Glamorganshire

Published 1920

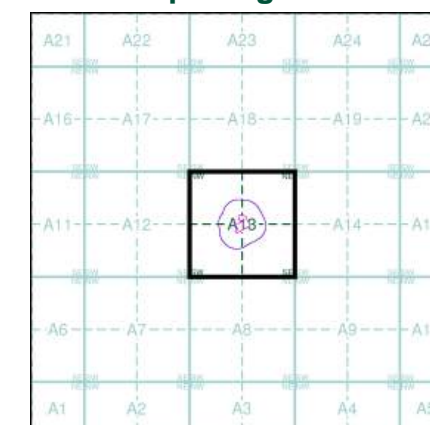
Source map scale - 1:2,500

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

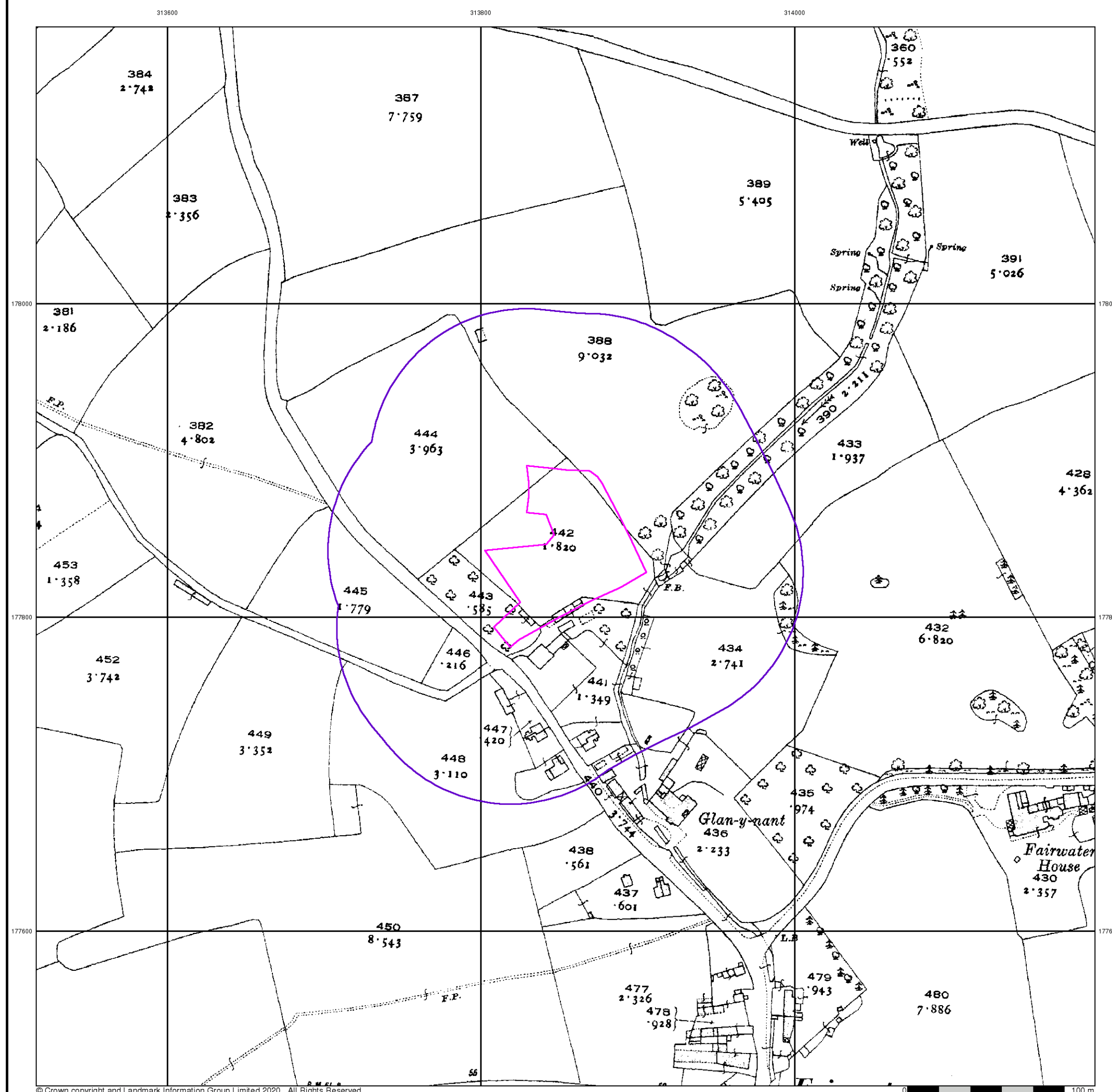
Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 100

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA



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Geotechnical & Geoenvironmental Specialists

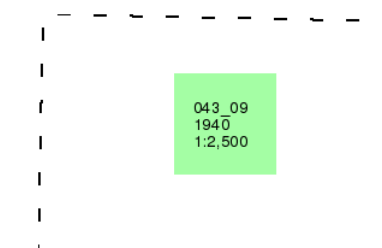
Glamorganshire

Published 1940

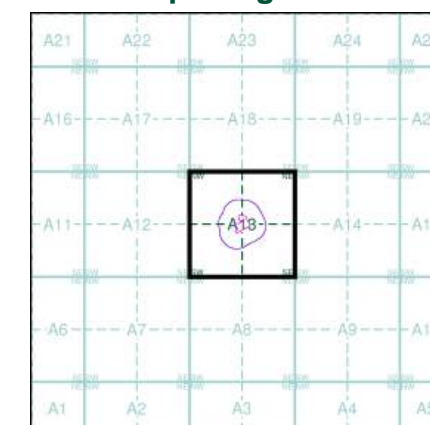
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

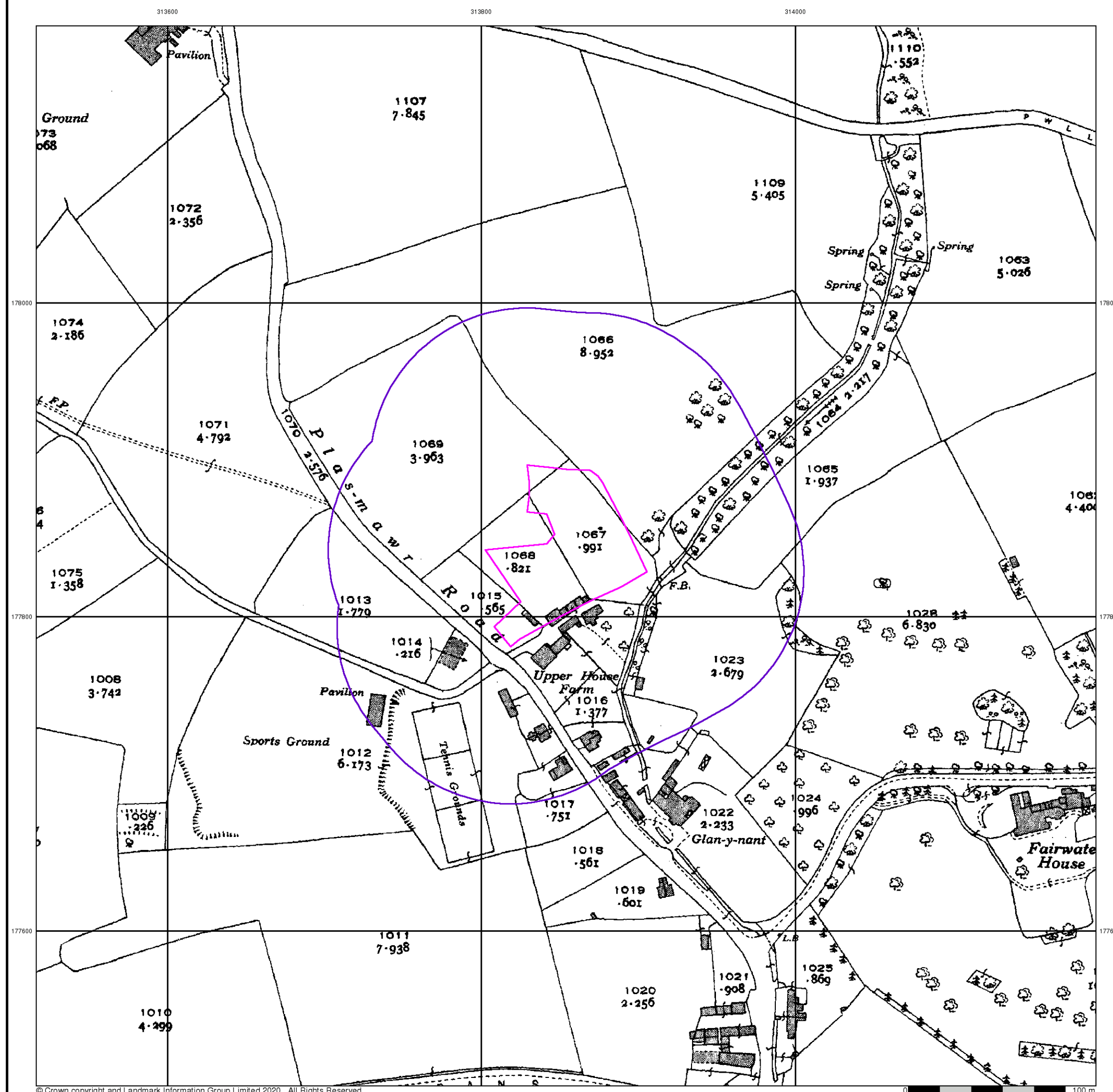
Order Number: 248403750_1_1
Customer Ref: 16155RH
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Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 100

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Ordnance Survey Plan

Published 1954 - 1959

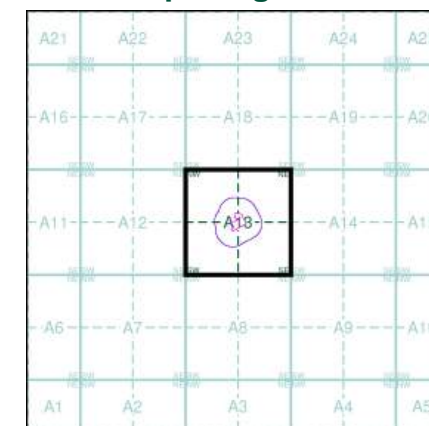
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

ST1378SE 1959 1:1,250	ST1478SW 1955 1:1,250
ST1377NE 1954 1:1,250	ST1477NW 1954 1:1,250

Historical Map - Segment A13



Order Details

Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 100

Site Details

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Geotechnical & Geoenvironmental Specialists

Ordnance Survey Plan

Published 1954 - 1970

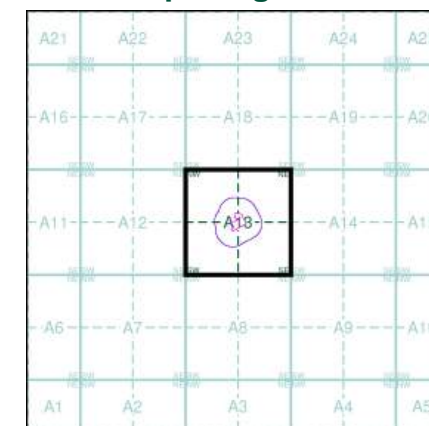
Source map scale - 1:2,500

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)

ST1378 1970 1:2,500	ST1478 1955 1:2,500
ST1377 1954 1:2,500	ST1477 1954 1:2,500

Historical Map - Segment A13



Order Details

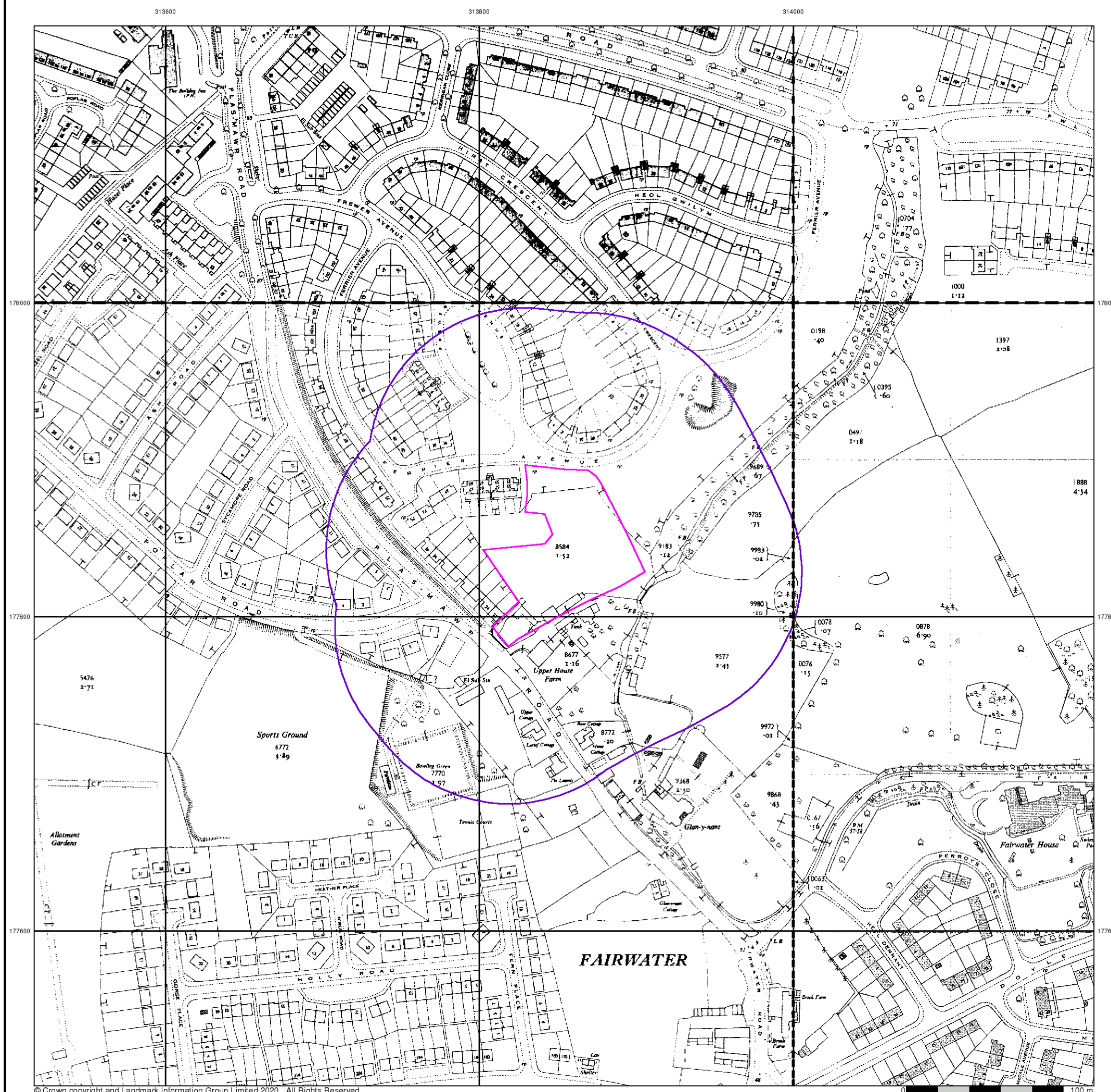
Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 100

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Geotechnical & Geoenvironmental Specialists

Ordnance Survey Plan

Published 1961 - 1969

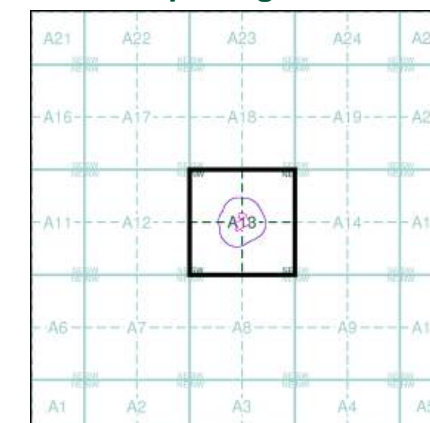
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

ST1378SE 1969 1:1,250	ST1478SW 1961 1:1,250
ST1377NE 1963 1:1,250	ST1477NW 1964 1:1,250

Historical Map - Segment A13



Order Details

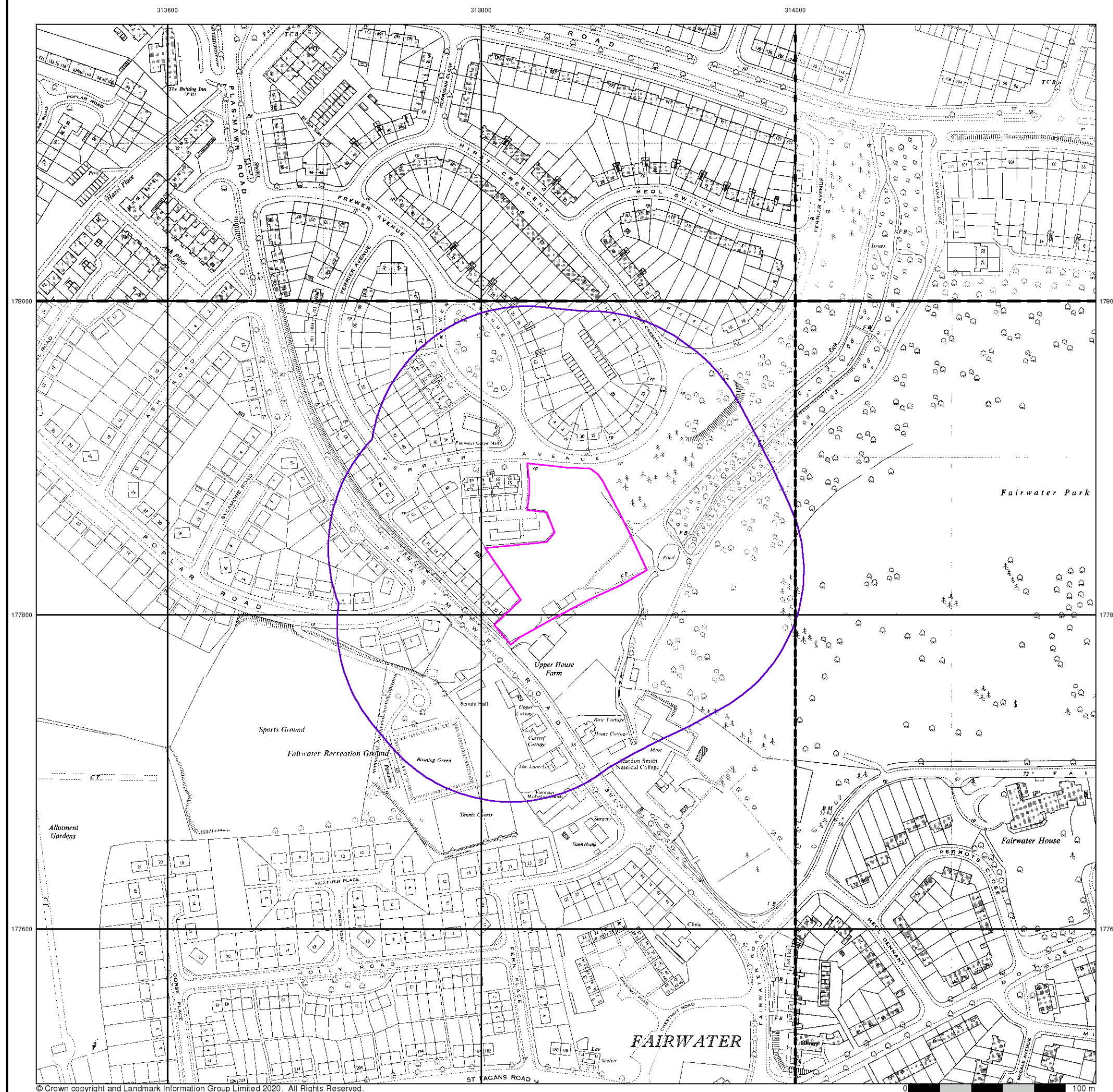
Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 100

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Geotechnical & Geoenvironmental Specialists

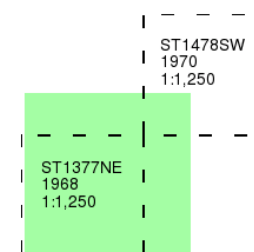
Ordnance Survey Plan

Published 1968 - 1970

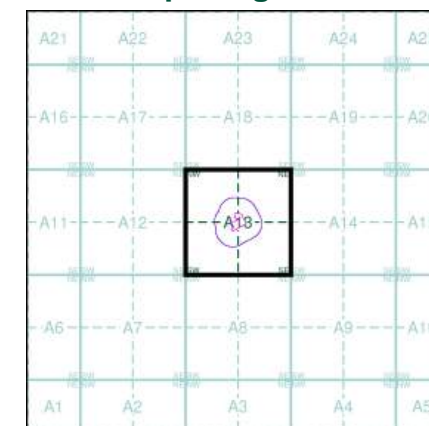
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 100

Site Details

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Geotechnical & Geoenvironmental Specialists

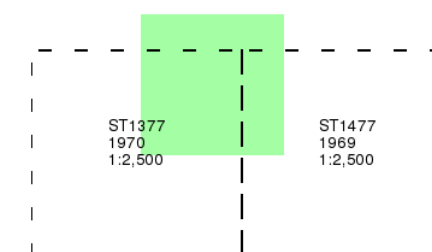
Ordnance Survey Plan

Published 1969 - 1970

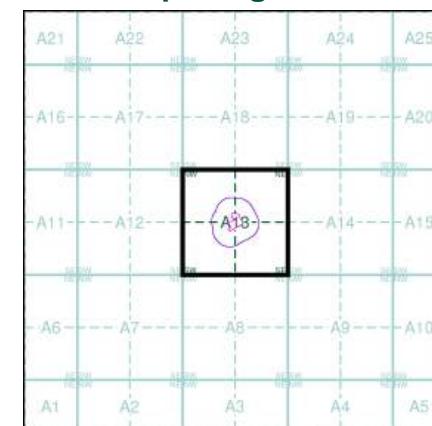
Source map scale - 1:2,500

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

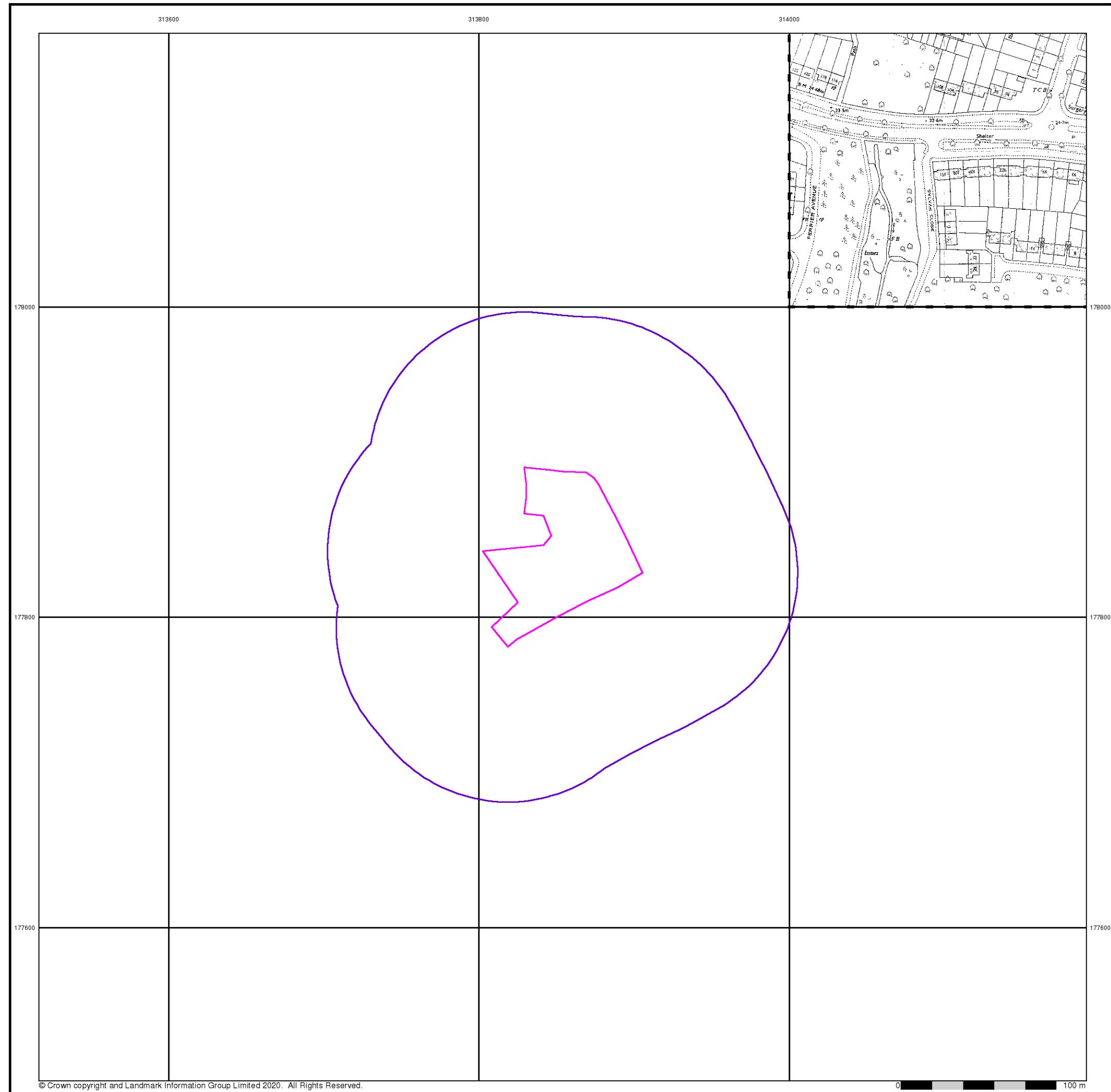
Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 100


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Geotechnical & Geoenvironmental Specialists

Supply of Unpublished Survey Information

Published 1973

Source map scale - 1:1,250

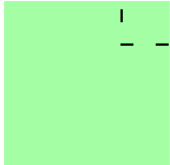
SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a 'work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment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

Map Name(s) and Date(s)

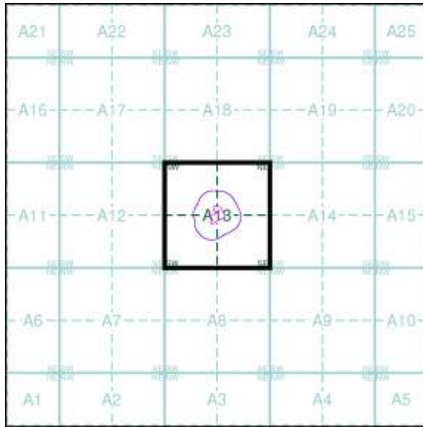
ST1478SW

1973

1:1,250



Historical Map - Segment A13




Order Details

Order Number:	248403750_1_1
Customer Ref:	16155RH
National Grid Reference:	313850, 177840
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

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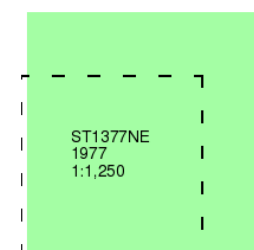
INFORMATION GROUP

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

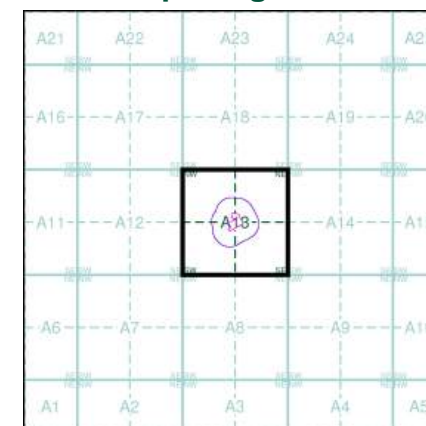
A Landmark Information Group Service v50.0 16-Jul-2020 Page 12 of 17

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

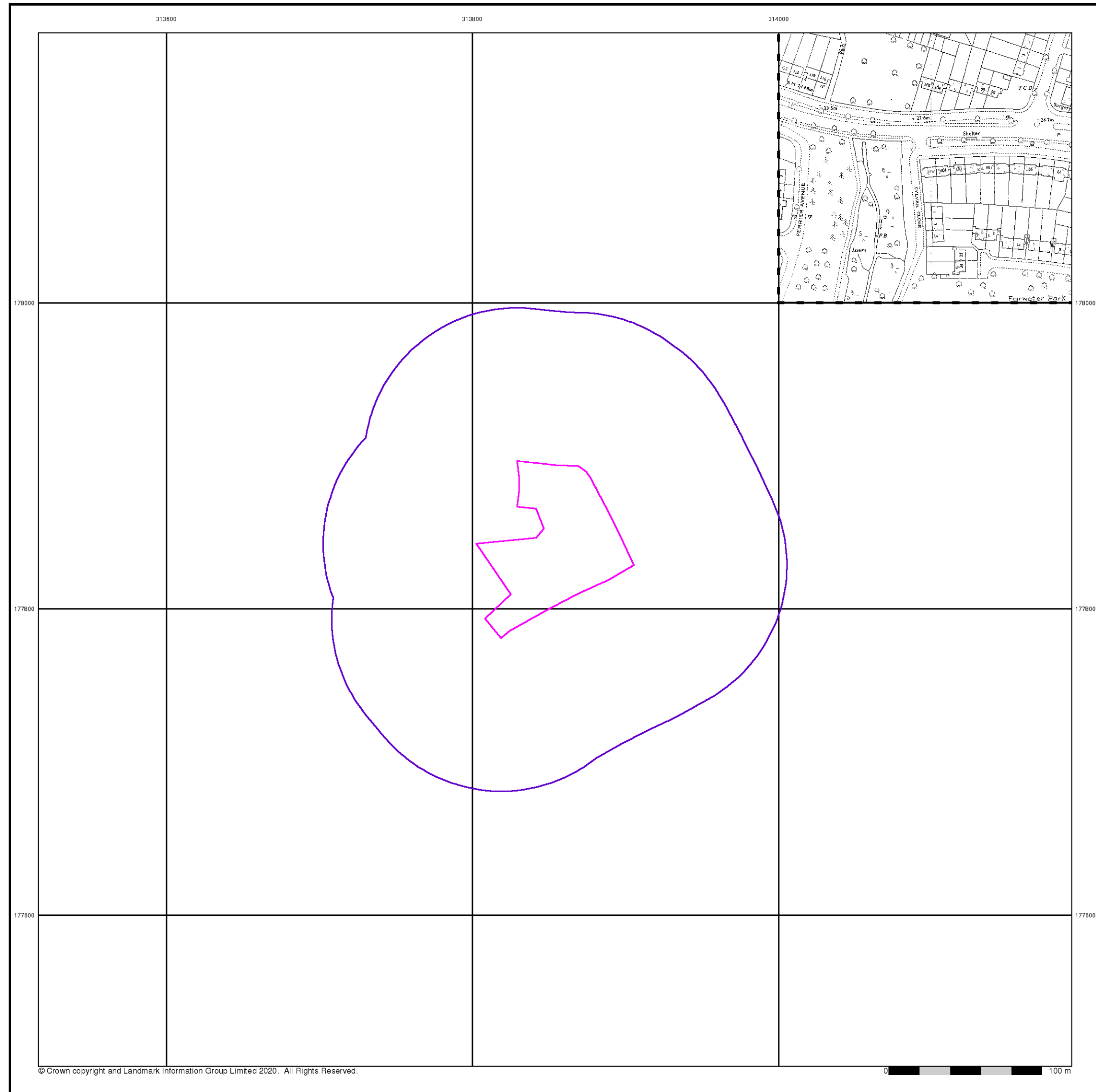



Order Details

Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 100

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA





Geotechnical & Geoenvironmental Specialists

Additional SIMs

Published 1990

Source map scale - 1:1,250

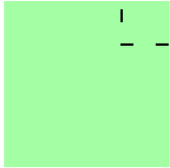
The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps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

Map Name(s) and Date(s)

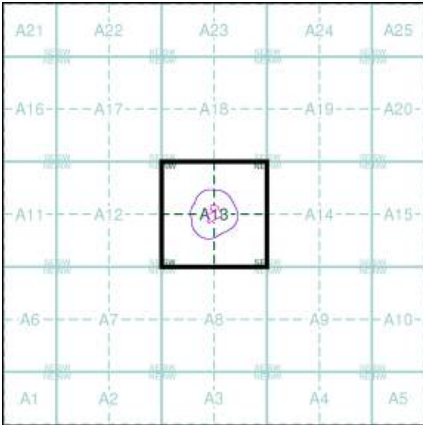
ST1478SW

1990

1:1,250



Historical Map - Segment A13




Order Details

Order Number:	248403750_1_1
Customer Ref:	16155RH
National Grid Reference:	313850, 177840
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	100

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA



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A Landmark Information Group Service v50.0 16-Jul-2020 Page 14 of 17



Geotechnical & Geoenvironmental Specialists

Large-Scale National Grid Data

Published 1992

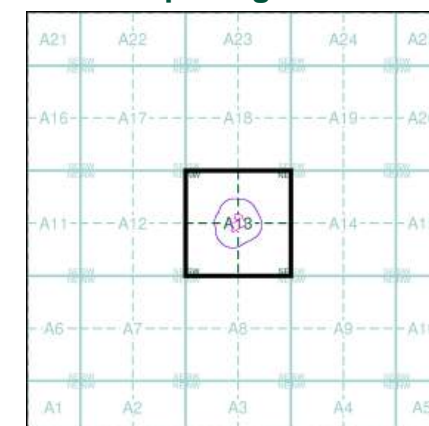
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

ST1378SE	ST1478SW
1992	1992
1:1,250	1:1,250
ST1377NE	ST1477NW
1992	1992
1:1,250	1:1,250

Historical Map - Segment A13



Order Details

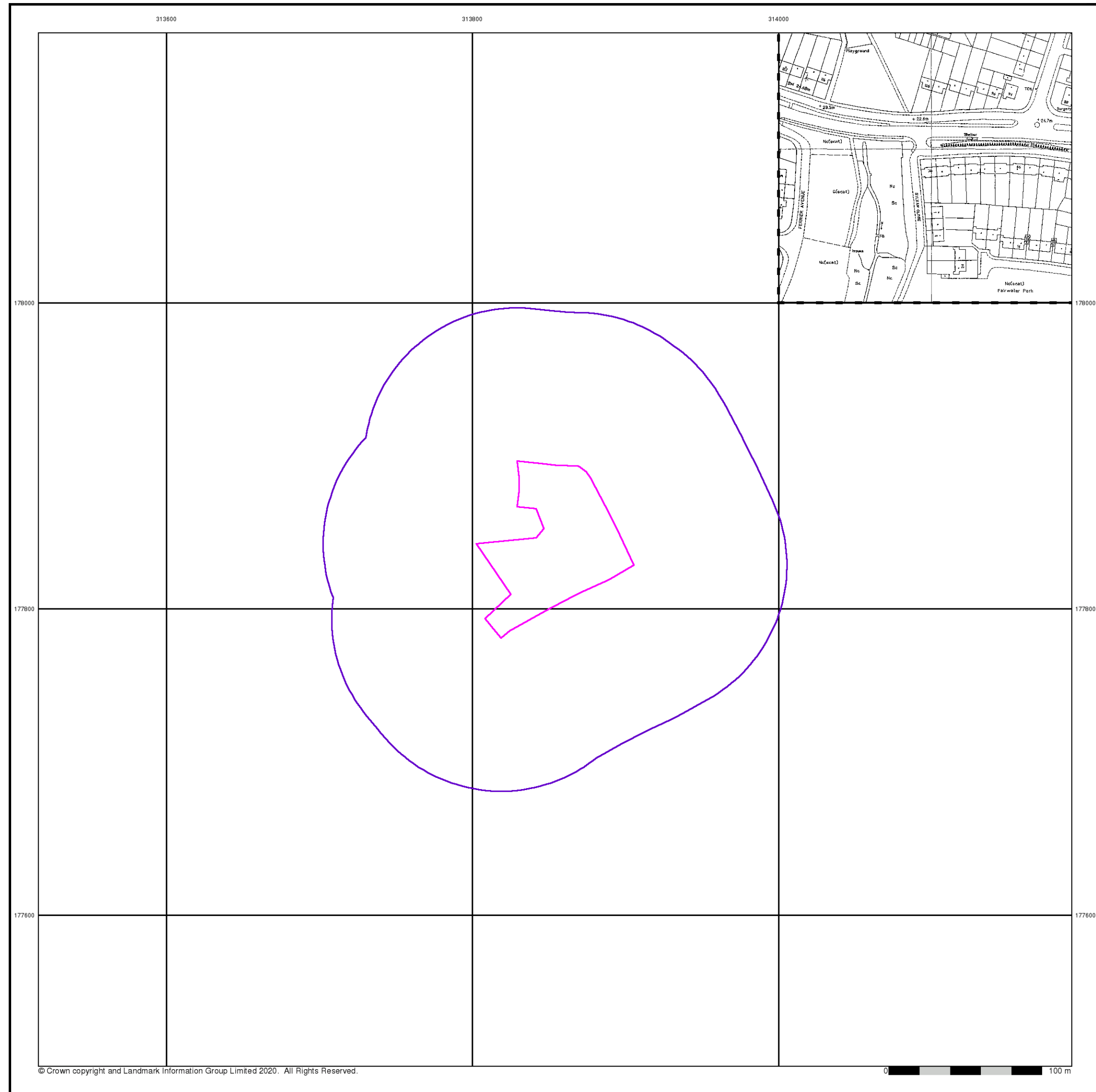
Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 100

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA

Landmark
INFORMATION GROUP

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Geotechnical & Geoenvironmental Specialists

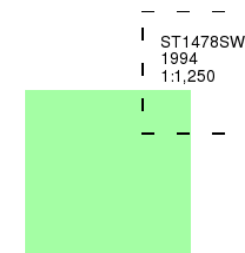
Large-Scale National Grid Data

Published 1994

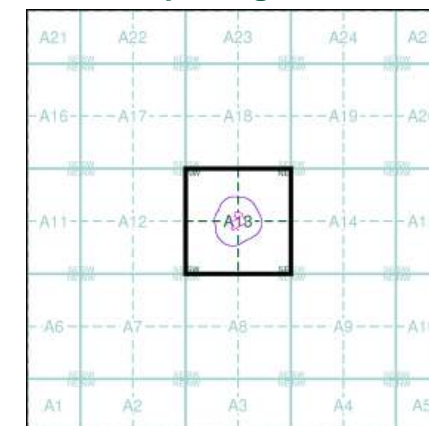
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 100

Site Details

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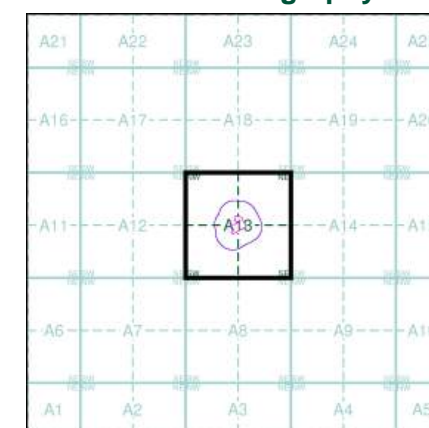
Geotechnical & Geoenvironmental Specialists

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: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
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		Minor Roads		
	Sunken Road		Raised Road		
	Road over Railway		Railway over River		
	Railway over Road		Level Crossing		
	Road over River or Canal		Road over Stream		
	Road over Stream				
	County Boundary (Geographical)				
	County & Civil Parish Boundary				
	Administrative County & Civil Parish Boundary				
	County Borough Boundary (England)				
	County Burgh Boundary (Scotland)				
	Rural District Boundary				
	Civil Parish Boundary				

Ordnance Survey Plan 1:10,000

	Chalk Pit, Clay Pit or Quarry		Gravel Pit
	Sand Pit		Disused Pit or Quarry
	Refuse or Slag Heap		Lake, Loch or Pond
	Dunes		Boulders
	Coniferous Trees		Non-Coniferous Trees
	Orchard		Scrub
	Bracken		Heath
	Marsh		Reeds
	Building		Glasshouse
	Sloping Masonry		Pylon
	Cutting		Embankment
	Road Under		Road Over
	Level Crossing		Foot Bridge
	Standard Gauge Multiple Track		Standard Gauge Single Track
	Siding, Tramway or Mineral Line		Narrow Gauge
	Geographical County		Administrative County, County Borough or County of City
	Municipal Borough, Urban or Rural District, Burgh or District Council		Borough, Burgh or County Constituency
	Civil Parish		
	BP, BS Boundary Post or Stone		Police Station
	Church		Post Office
	Club House		Public Convenience
	Fire Engine Station		Public House
	Foot Bridge		Signal Box
	Fountain		Spring
	Guide Post		Telephone Call Box
	Mile Post		Telephone Call Post
	Mile Stone		Well

1:10,000 Raster Mapping

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

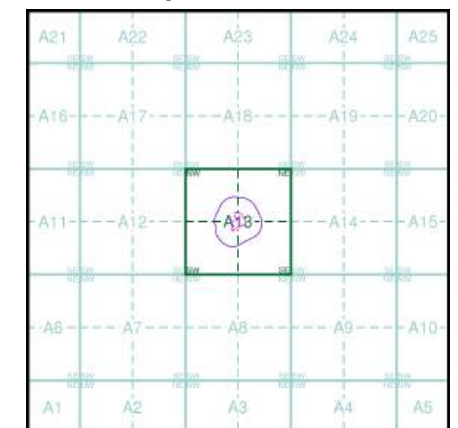


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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:10,560	1885 - 1886	3
Glamorganshire	1:10,560	1900 - 1901	4
Glamorganshire	1:10,560	1921 - 1922	5
Glamorganshire	1:10,560	1922	6
Glamorganshire	1:10,560	1936	7
Glamorganshire	1:10,560	1938 - 1951	8
Glamorganshire	1:10,560	1947 - 1952	9
Historical Aerial Photography	1:10,560	1947	10
Historical Aerial Photography	1:10,560	1947	11
Ordnance Survey Plan	1:10,000	1965	12
Ordnance Survey Plan	1:10,000	1975	13
Cardiff	1:10,000	1982	14
Ordnance Survey Plan	1:10,000	1986 - 1989	15
Ordnance Survey Plan	1:10,000	1991	16
Ordnance Survey Plan	1:10,000	1995	17
10K Raster Mapping	1:10,000	1999	18
10K Raster Mapping	1:10,000	2006	19
VectorMap Local	1:10,000	2020	20

Historical Map - Slice A



Order Details

Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

Site Details

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Russian Military Mapping Legends

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

a. Not drawn to scale b. Drawn to scale

Government and Administrative Buildings Military and Industrial Buildings

Military and Communication Areas Subway Entrance

Fireproof Building Prominent Fireproof Building

Non-fireproof Building Non-fireproof Building (non-dwelling)

Factory, mill, and flour mill, with chimneys Factory, mill, and flour mill, without chimneys

Power Station, drawn to scale Hydroelectric Power Station

Radio Station, drawn to scale Telephone Station, drawn to scale

Abandoned Open-pit Mine or Quarry Open-pit Salt Mine

Pit Oil Deposit or Well Oil Seepage

Tailings Pile Fuel Storage Tanks Natural Gas Tank

Bench Mark Drill Hole Burial Mound Triangulation Point on Burial Mound

Single-track Railroad Double-track Railroad and Station Building

Coniferous Forest Deciduous Forest Mixed Forest

Lawns Citrus Orchard Wet Ground Scattered Vegetation

243.8 Values for prominent elevations

186.0 Numbers for spot elevations, depth soundings, contour lines, etc.

0.2 Velocity of the current, width of river bed, depth of river

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

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

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

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

Government and Administrative Buildings Military and Industrial Buildings

Military and Communication Areas Subway Entrance

Partly Demolished Buildings Demolished Buildings

Built-Up Area with Fireproof Buildings Predominant Built-Up Area with Non-Fireproof Buildings Predominant

Individual Fireproof Building Prominent Industrial Building

Individual Dwelling, Fireproof Ruins of an Individual Dwelling

Factory or Mill Chimney Factory or Mill with Chimney Factory or Mill without Chimney Mine or Open Pit Mine

Operating Shaft or Mine Non-Operating Shaft or Mine Salt Mine Tailings Pile

Pit Stone Quarry Gas Pump or Service Station Fuel Storage or Natural Gas Tank

Oil or Natural Gas Derrick Small Hydroelectric Power Station Power Station Transformer Station

Cemetery Burial Mound (height in metres) Triangulation Point on Burial Mound Triangulation Point

Bench Mark Bench Mark (monumented) Telegraph Office Telephone Station

Radio Station Radio Tower Airfield or Seaplane Base Landing Strip

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

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

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

Well Water Reservoir or Rain Water Pit Spring Isobath with value

Heavy (Index) Contour Line Contour Line and Value Half Contour Line Spot Elevation Value

Coniferous Deciduous Mixed Scrub

Key to Numbers on Mapping

ST17NW_Cardiff

No.	Description
62	Education Establishment (Naval)
78	Post Office
79	Post Office

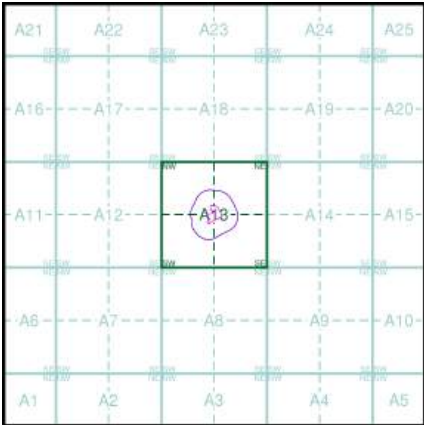


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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:10,560	1885 - 1886	3
Glamorganshire	1:10,560	1900 - 1901	4
Glamorganshire	1:10,560	1921 - 1922	5
Glamorganshire	1:10,560	1922	6
Glamorganshire	1:10,560	1936	7
Glamorganshire	1:10,560	1938 - 1951	8
Glamorganshire	1:10,560	1947 - 1952	9
Historical Aerial Photography	1:10,560	1947	10
Historical Aerial Photography	1:10,560	1947	11
Ordnance Survey Plan	1:10,000	1965	12
Ordnance Survey Plan	1:10,000	1975	13
Cardiff	1:10,000	1982	14
Ordnance Survey Plan	1:10,000	1986 - 1989	15
Ordnance Survey Plan	1:10,000	1991	16
Ordnance Survey Plan	1:10,000	1995	17
10K Raster Mapping	1:10,000	1999	18
10K Raster Mapping	1:10,000	2006	19
VectorMap Local	1:10,000	2020	20

Russian Map - Slice A



Order Details

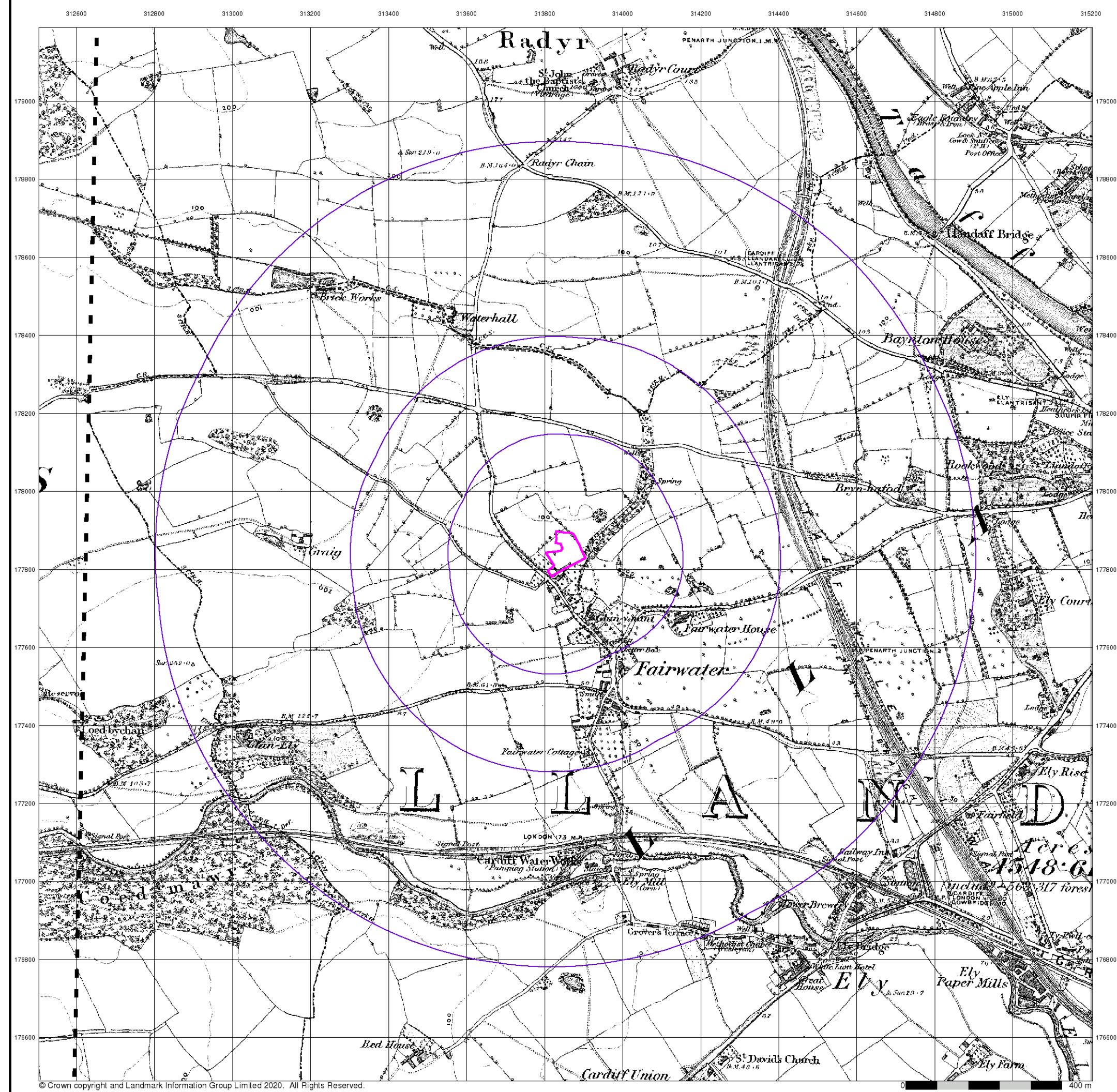
Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

Site Details

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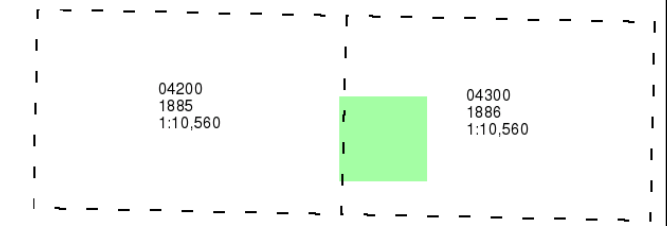
Glamorganshire

Published 1885 - 1886

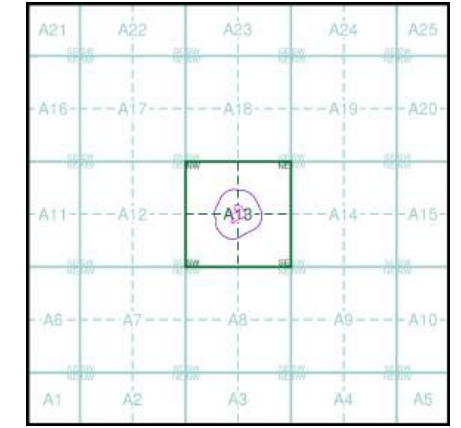
Source map scale - 1:10,560

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

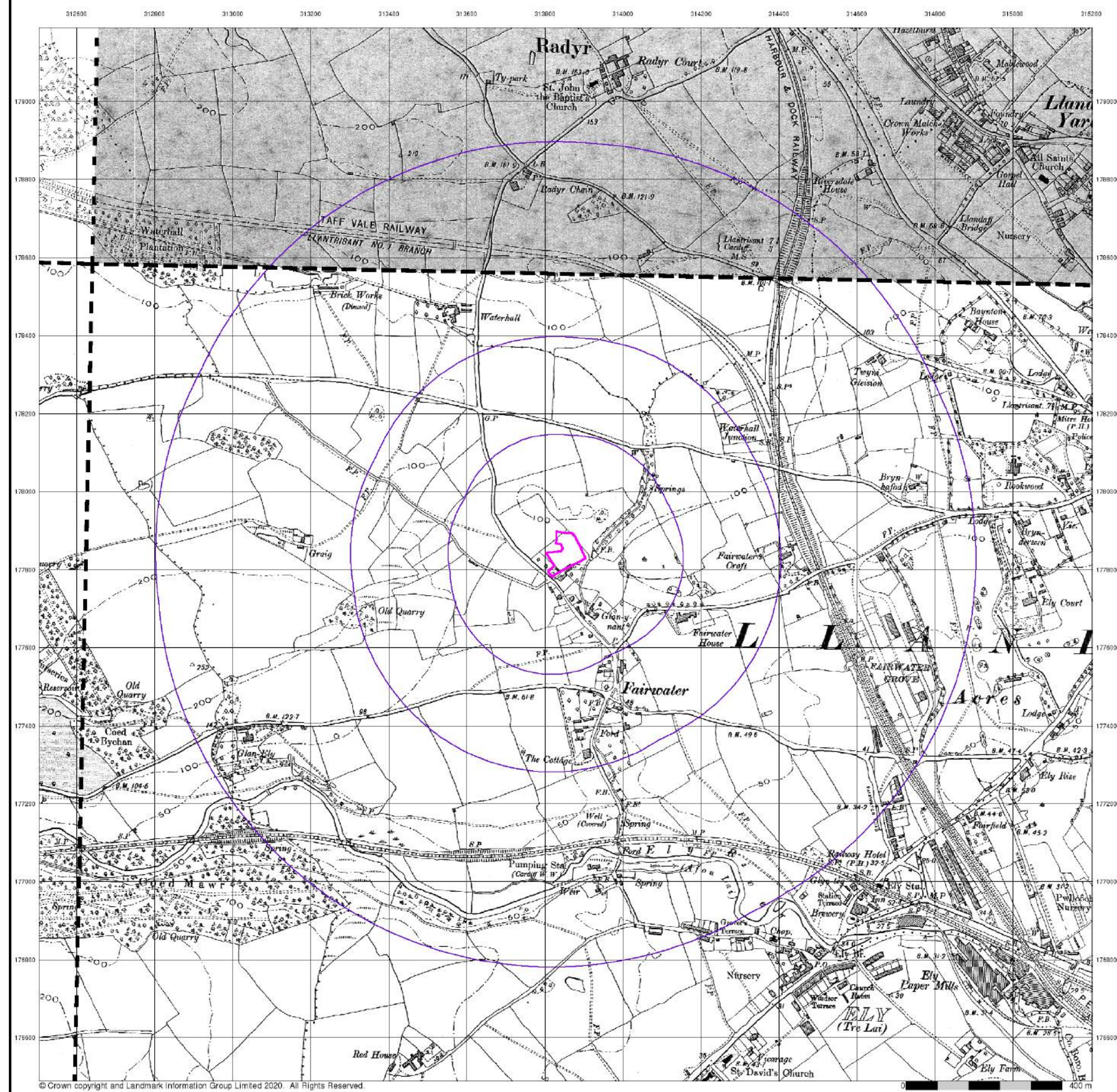
Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
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Glamorganshire

Published 1900 - 1901

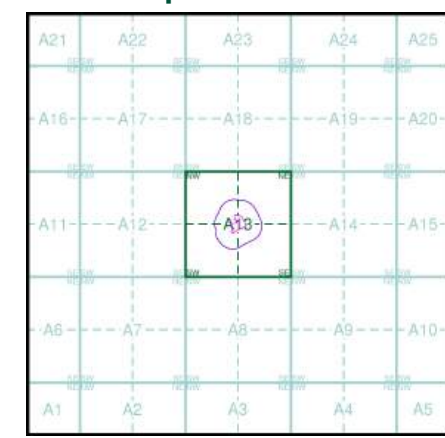
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

042NE 1900 1:10,560	043NW 1901 1:10,560
042SE 1900 1:10,560	043SW 1901 1:10,560

Historical Map - Slice A



Order Details

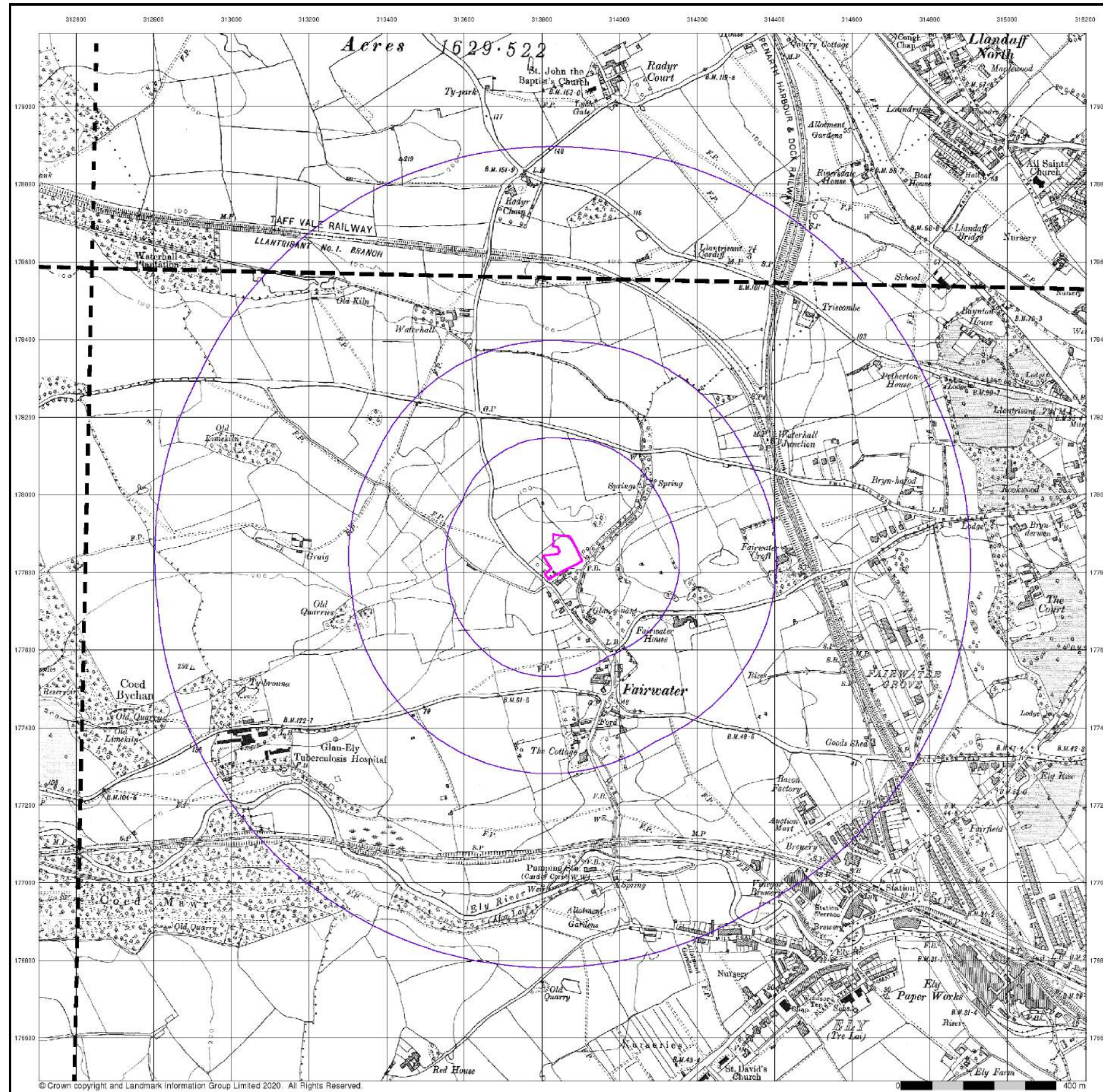
Order Number: 248403750_1_1
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Search Buffer (m): 1000

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Glamorganshire

Published 1921 - 1922

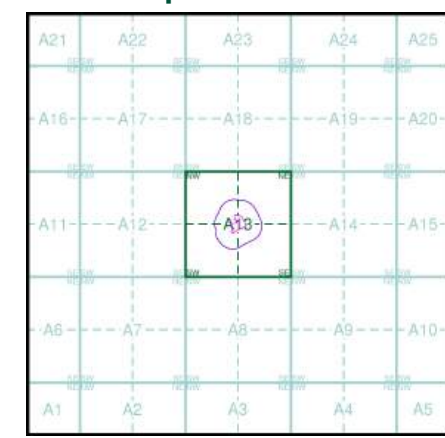
Source map scale - 1:10,560

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)

042NE 1921 1:10,560	043NW 1922 1:10,560
042SE 1921 1:10,560	043SW 1922 1:10,560

Historical Map - Slice A



Order Details

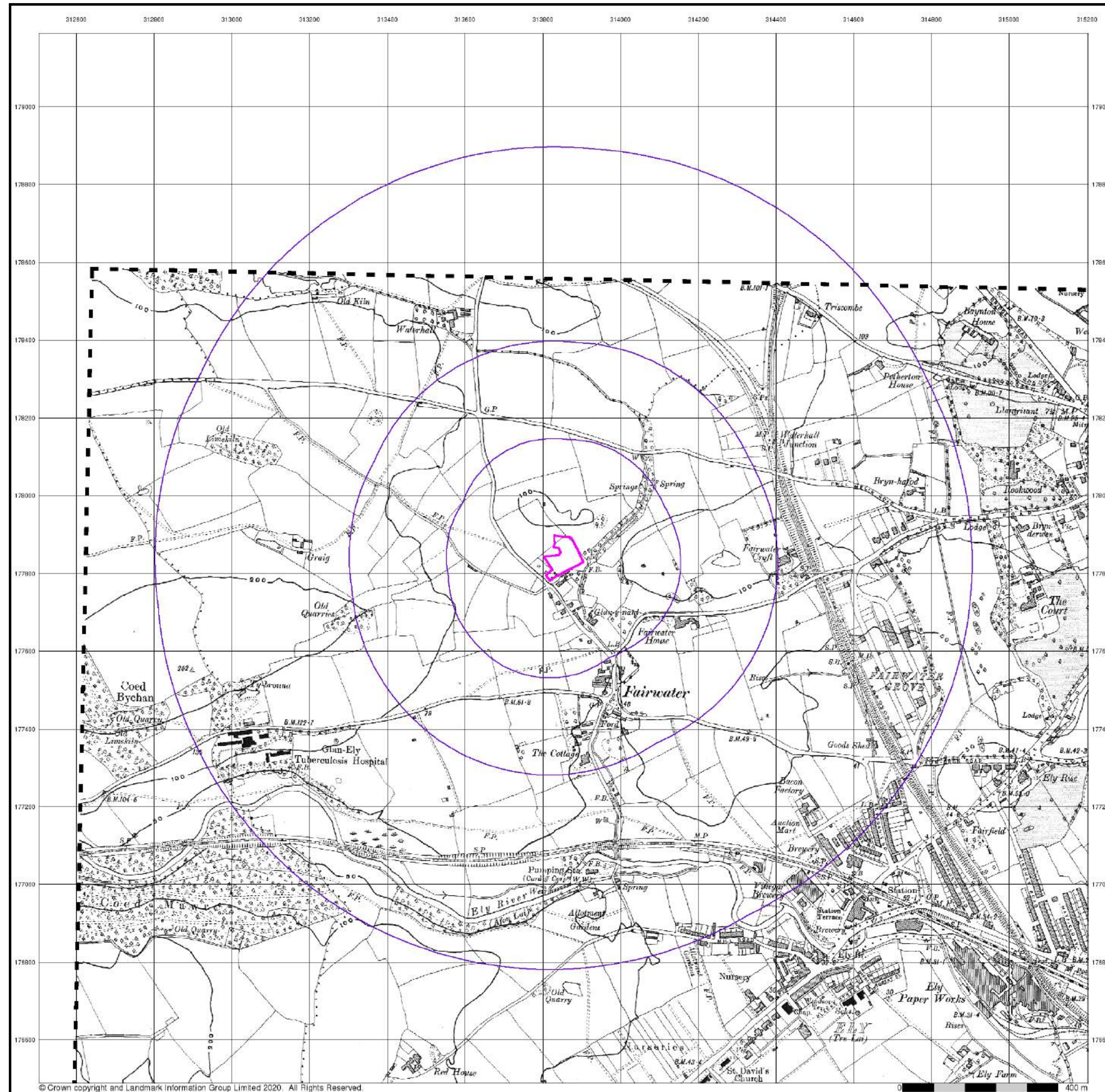
Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

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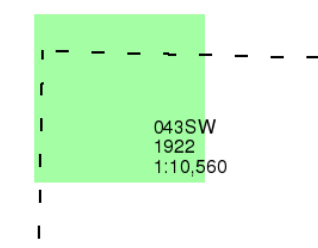
Glamorganshire

Published 1922

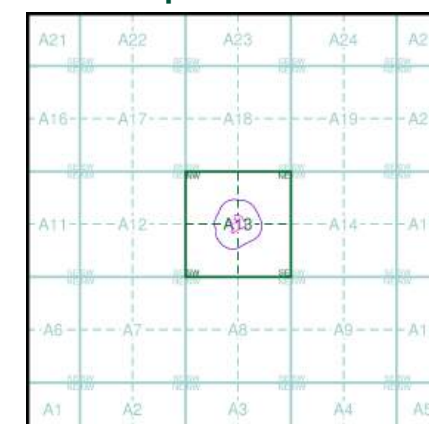
Source map scale - 1:10,560

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

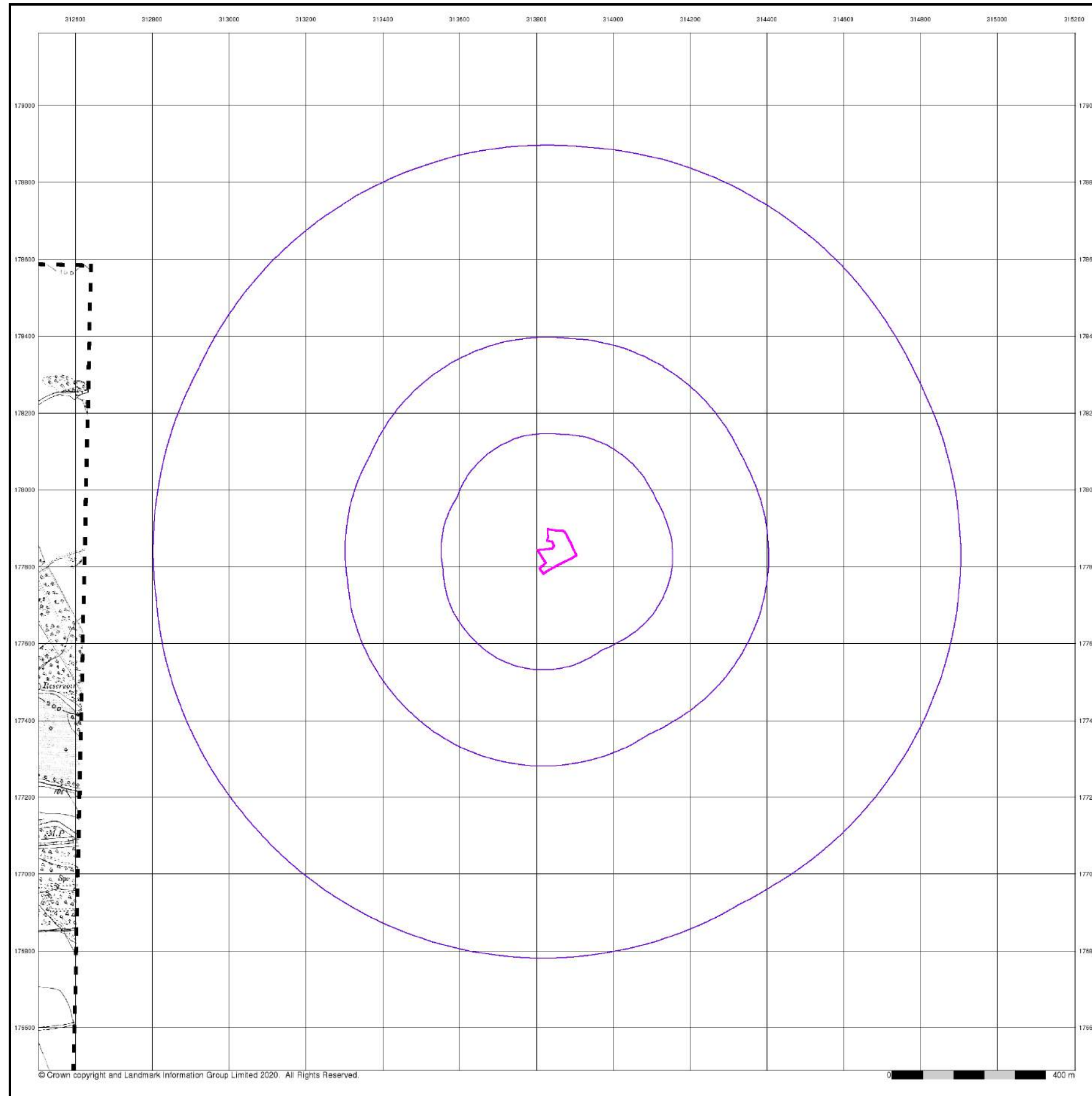
Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
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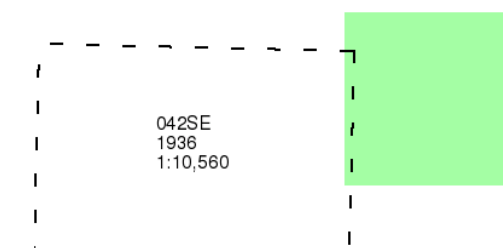
Glamorganshire

Published 1936

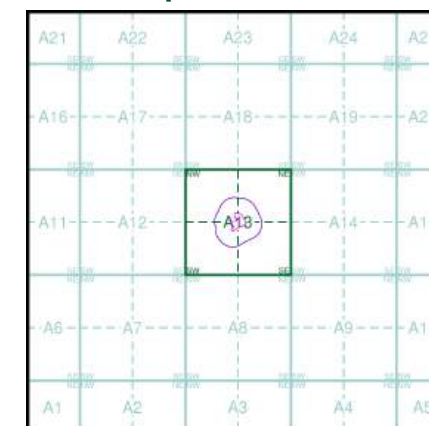
Source map scale - 1:10,560

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

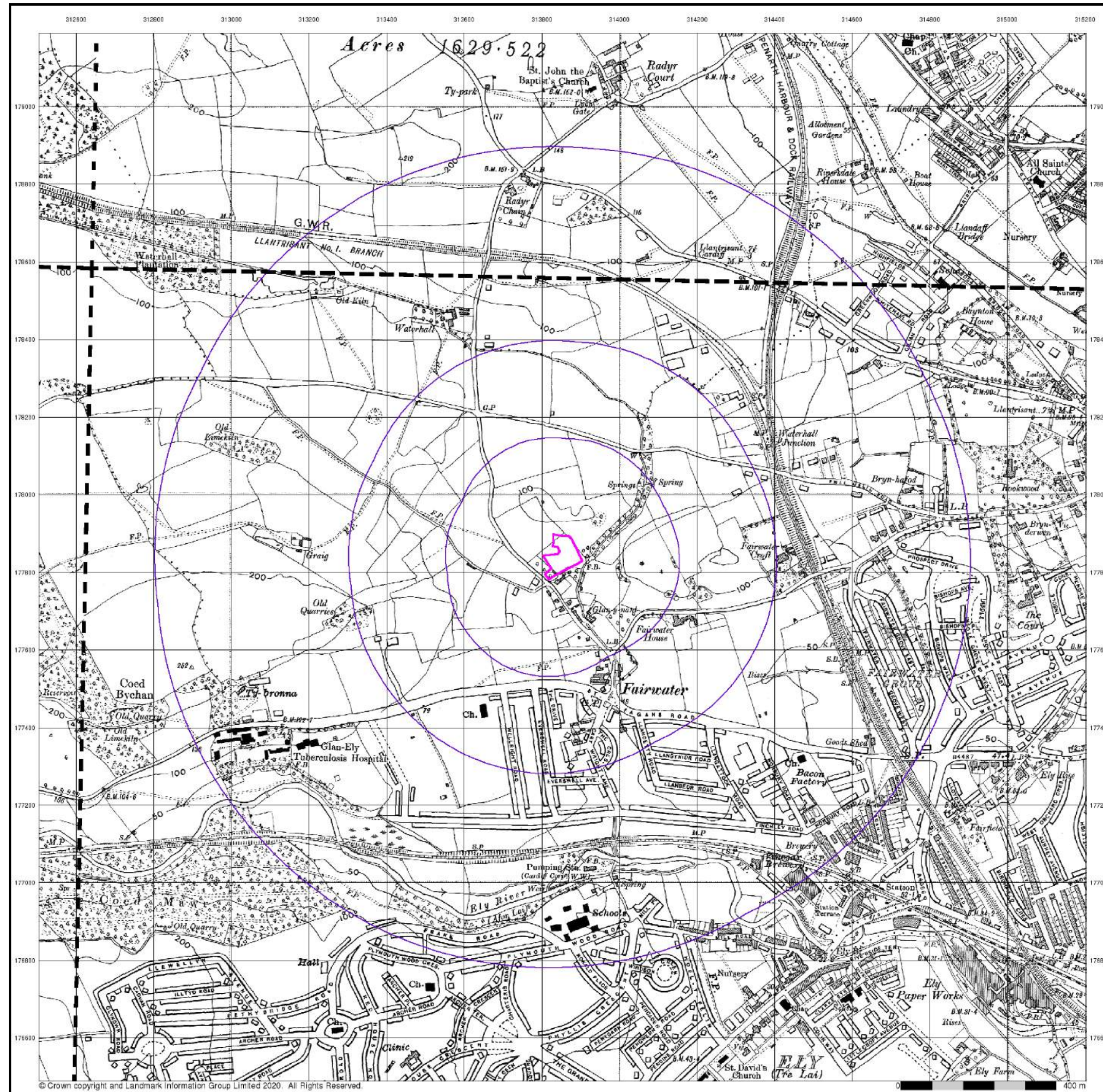
Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

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Glamorganshire

Published 1938 - 1951

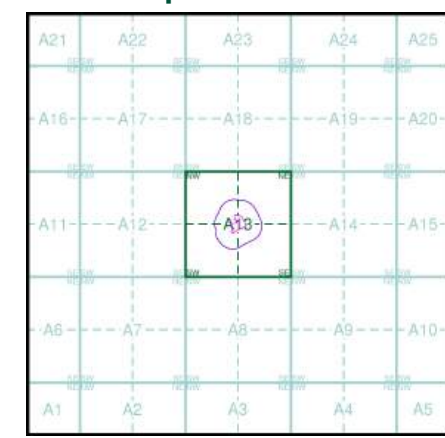
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

042NE 1951 1:10,560	043NW 1938 1:10,560
042SE 1938 1:10,560	043SW 1938 1:10,560

Historical Map - Slice A



Order Details

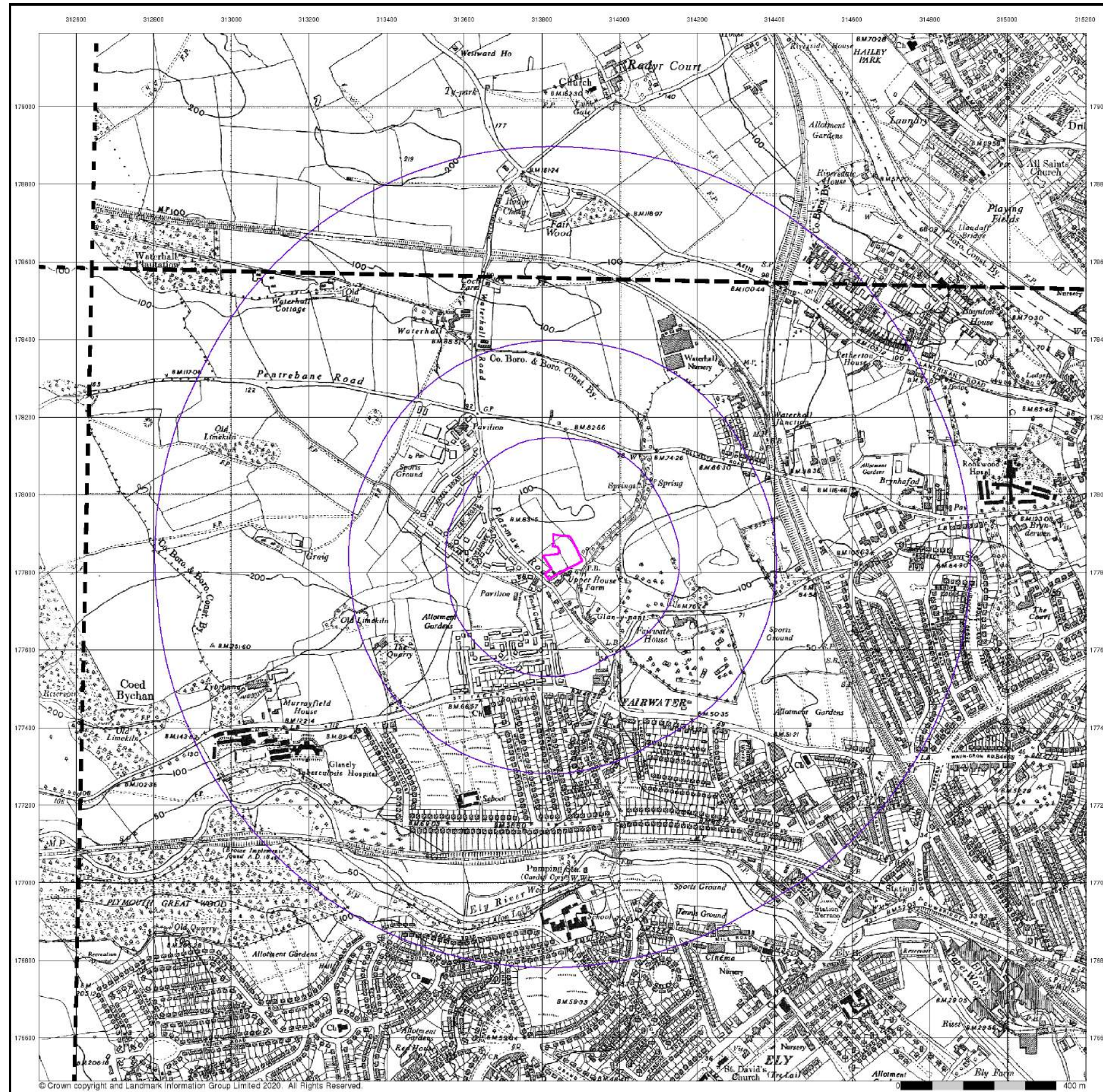
Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
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Site Area (Ha): 0.61
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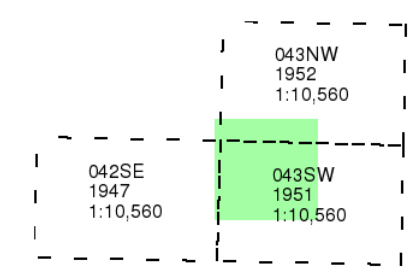
Glamorganshire

Published 1947 - 1952

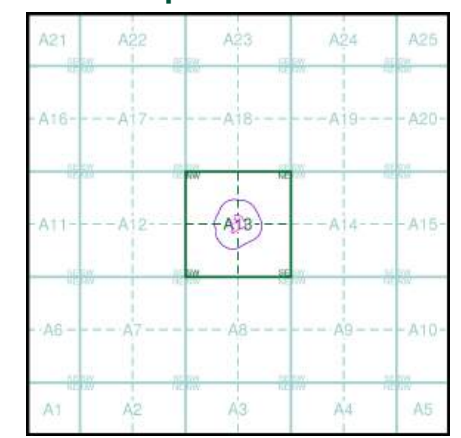
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

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Historical Aerial Photography

Published 1947

Source map scale - 1:10,560



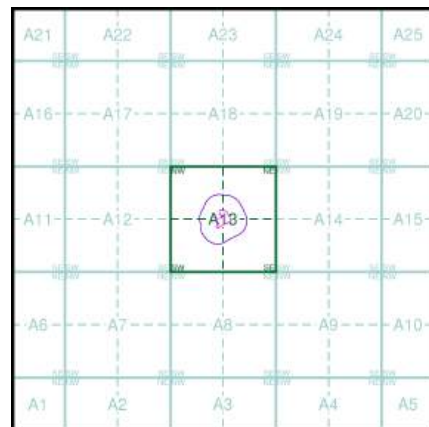
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 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)

ST17NW 1947 1:10,560	ST17NE 1947 1:10,560
----------------------------	----------------------------

Historical Aerial Photography - Slice A



Order Details

Order Number:	248403750_1_1
Customer Ref:	16155RH
National Grid Reference:	313850, 177840
Slice:	A
Site Area (Ha):	0.61
Search Buffer (m):	1000

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Historical Aerial Photography

Published 1947

Source map scale - 1:10,560



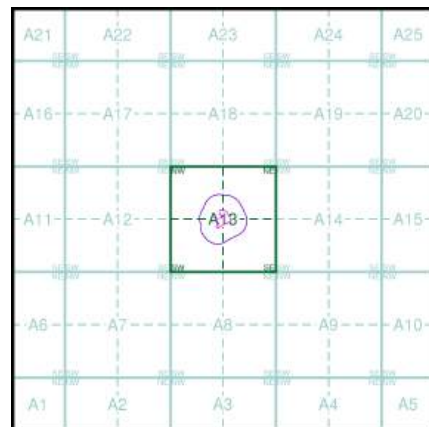
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 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)

ST17NW 1947 1:10,560	ST17NE 1947 1:10,560
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Historical Aerial Photography - Slice A



Order Details

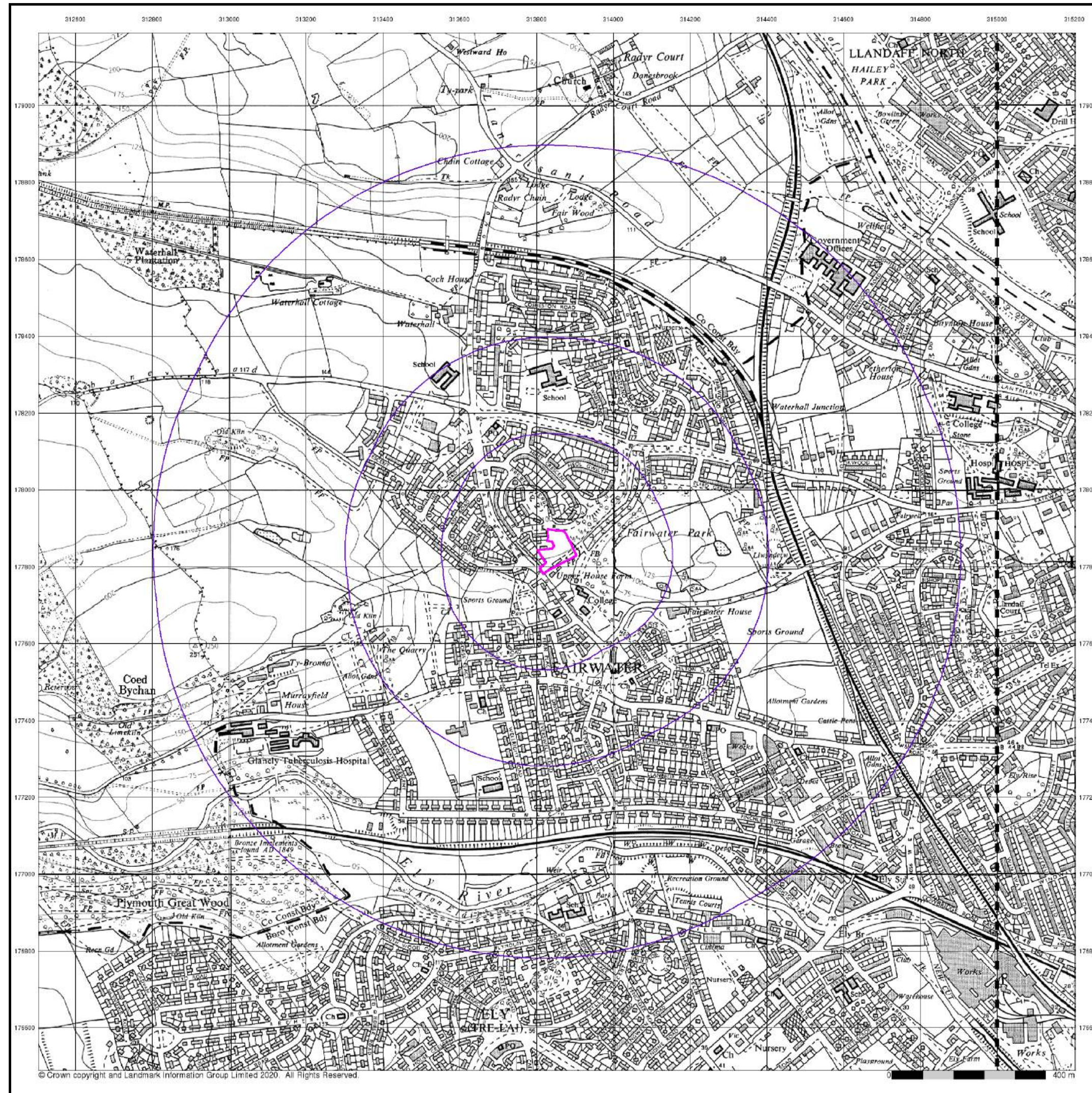
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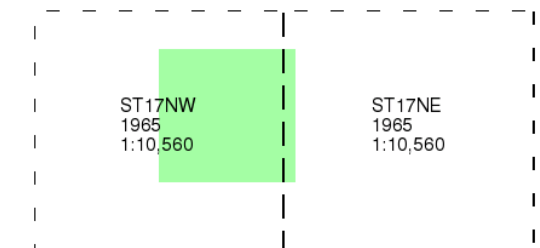
Ordnance Survey Plan

Published 1965

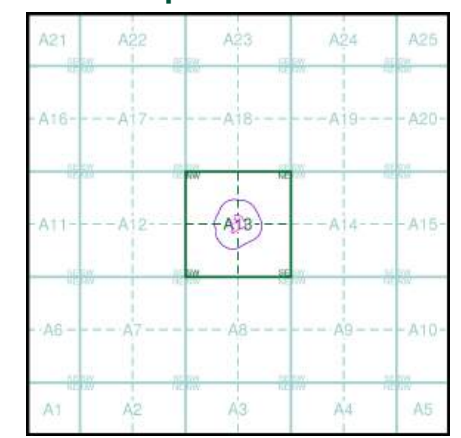
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

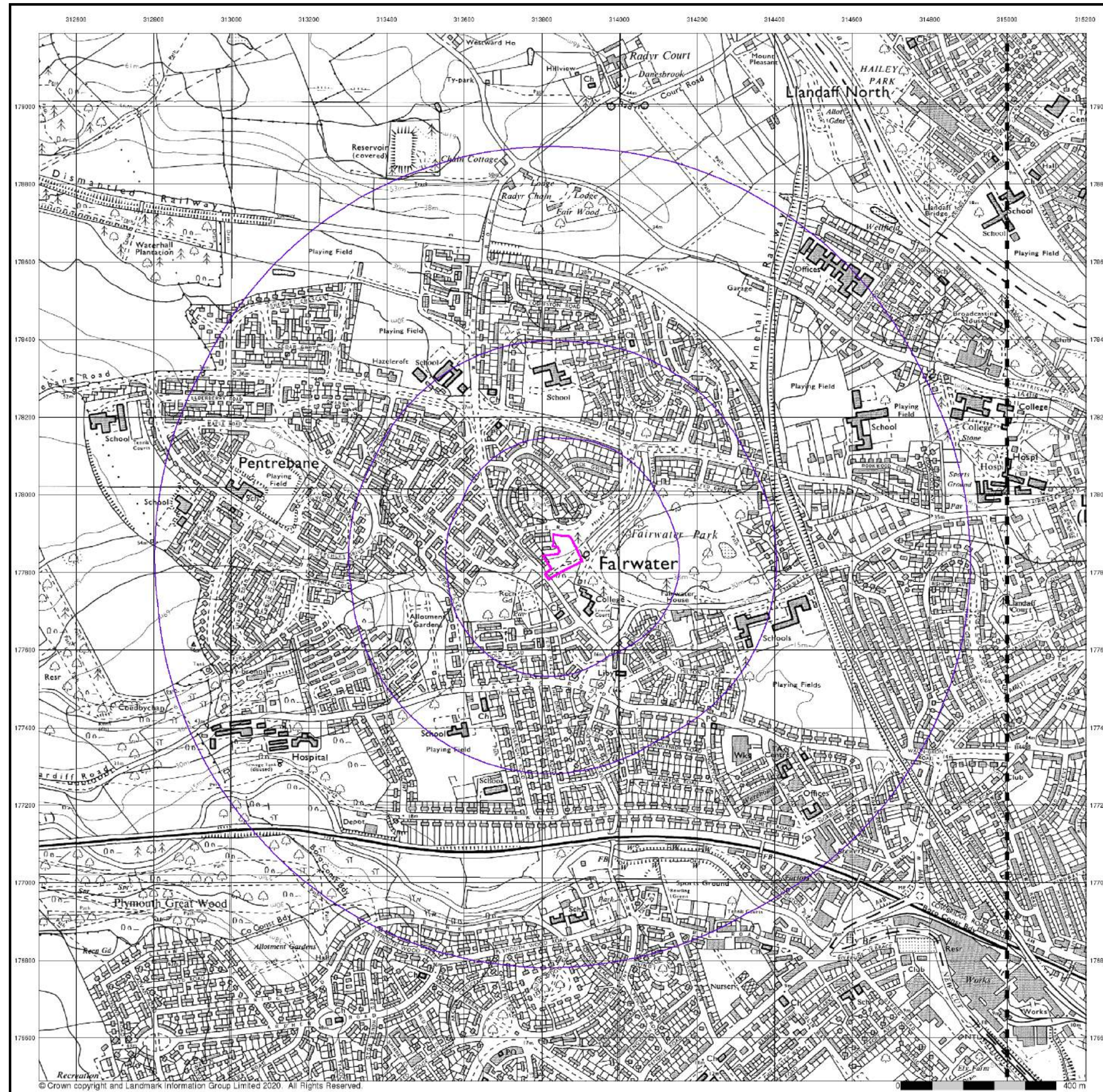
Order Number: 248403750_1_1
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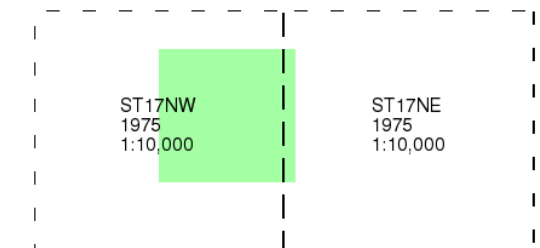
Ordnance Survey Plan

Published 1975

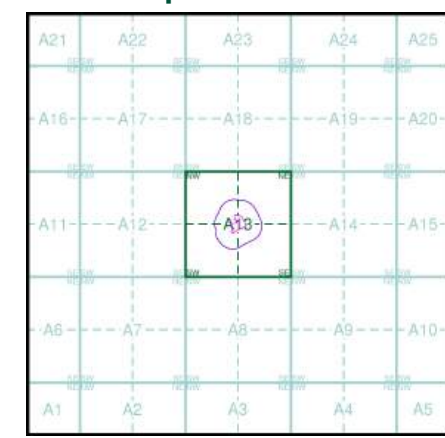
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps.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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

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Cardiff

Published 1982

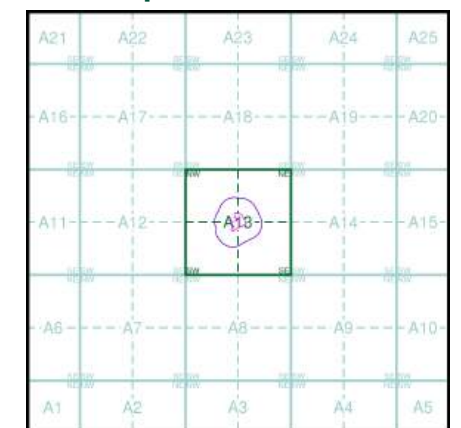
Source map scale - 1:10,000

These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use. They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)

ST17NW 1982 1:10,000	ST17NE 1982 1:10,000
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Russian Map - Slice A



Order Details

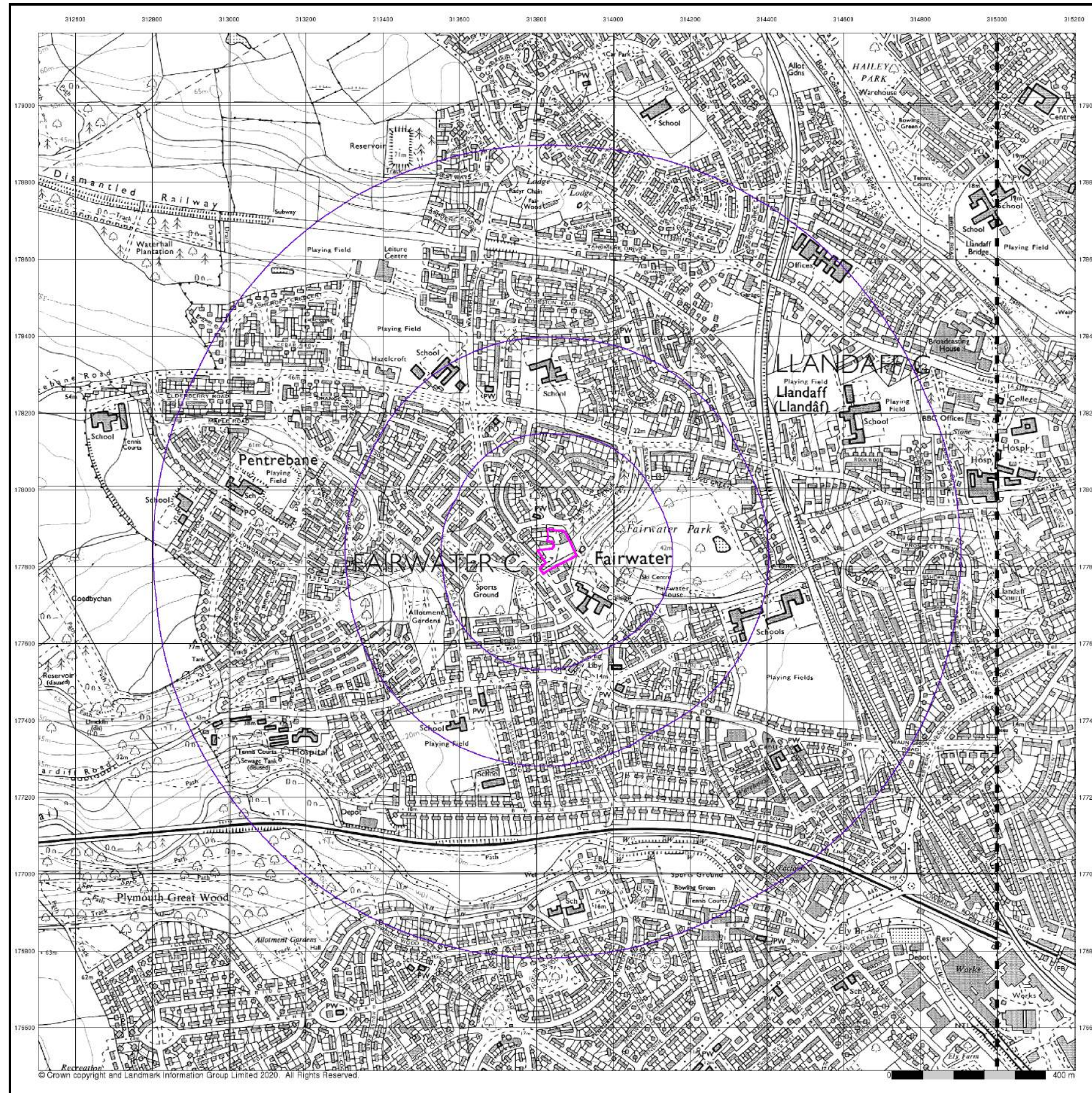
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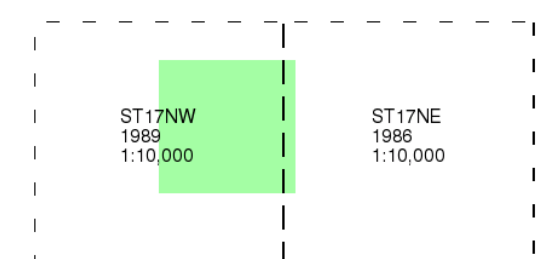
Ordnance Survey Plan

Published 1986 - 1989

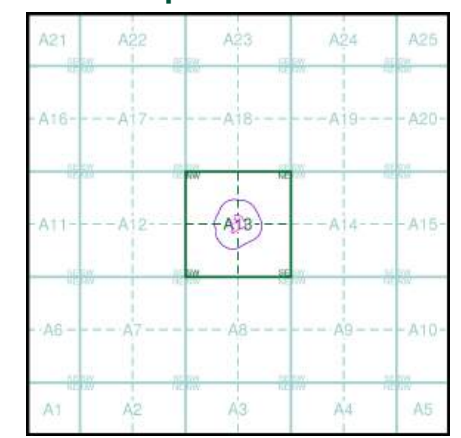
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

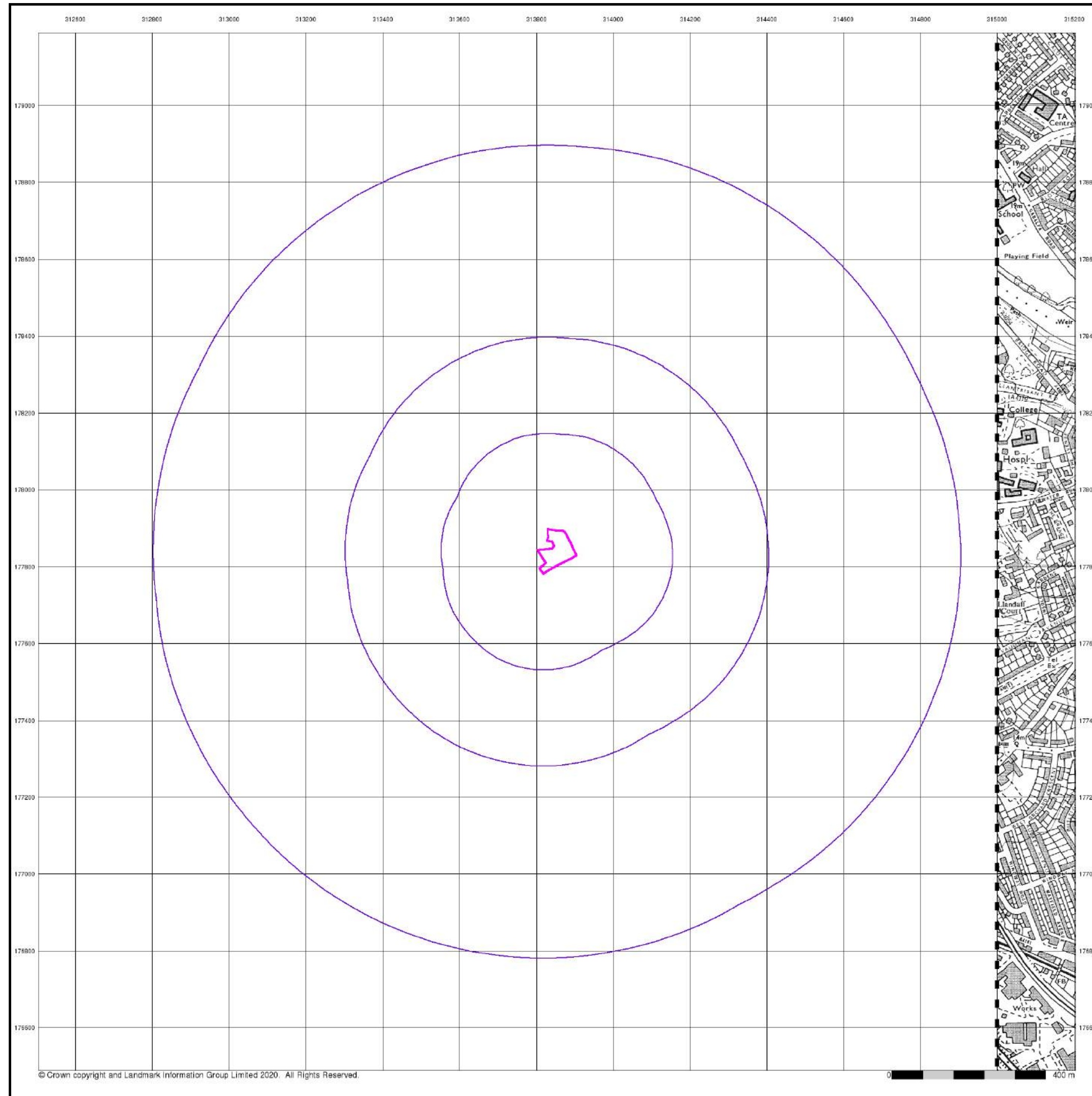
Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
Search Buffer (m): 1000

Site Details

Fairwater Social & Athletic Club, Ferrier Avenue, Cardiff, CF5 3LA



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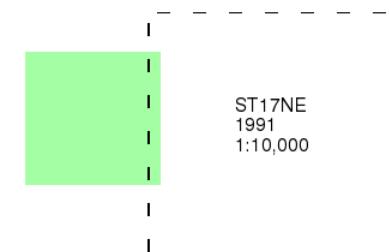
Ordnance Survey Plan

Published 1991

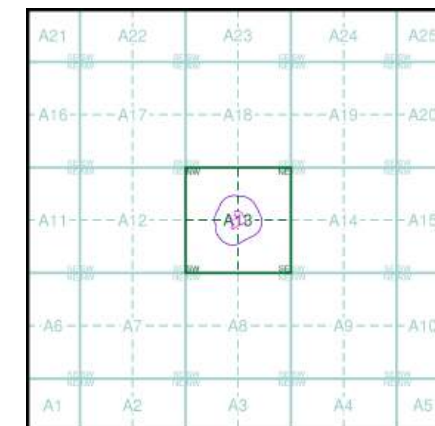
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps.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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

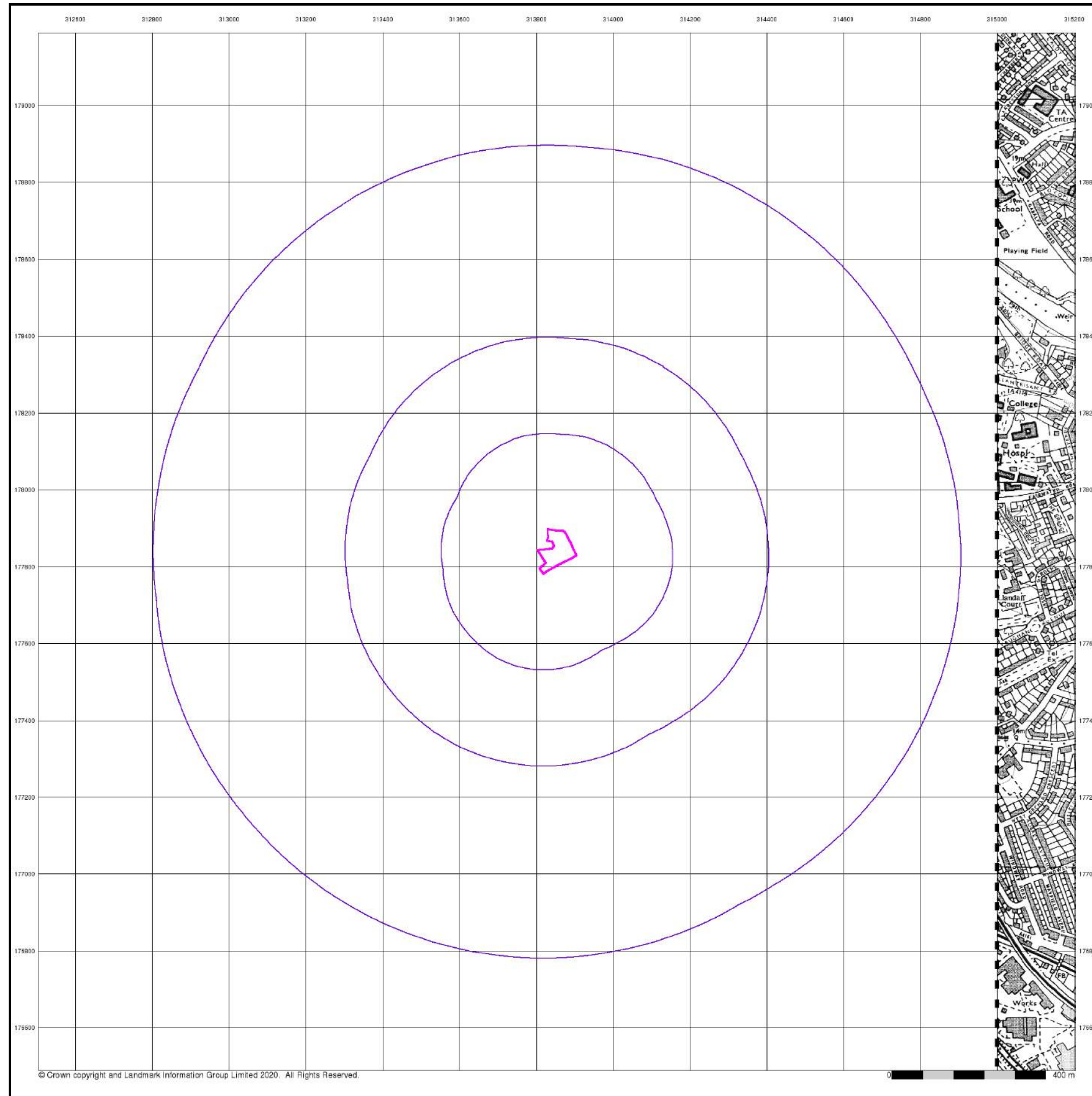
Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
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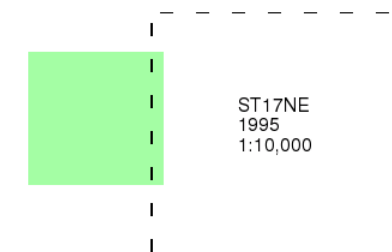
Ordnance Survey Plan

Published 1995

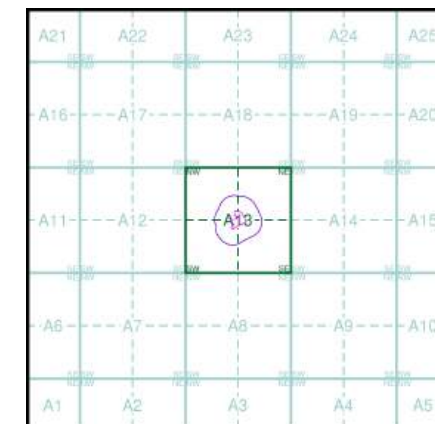
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps.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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
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Site Details

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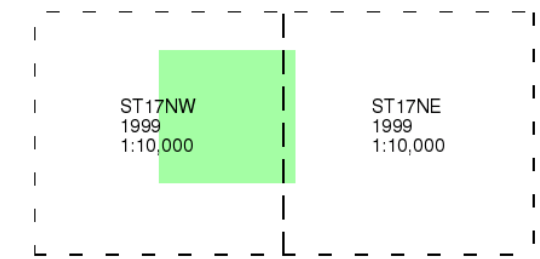
10k Raster Mapping

Published 1999

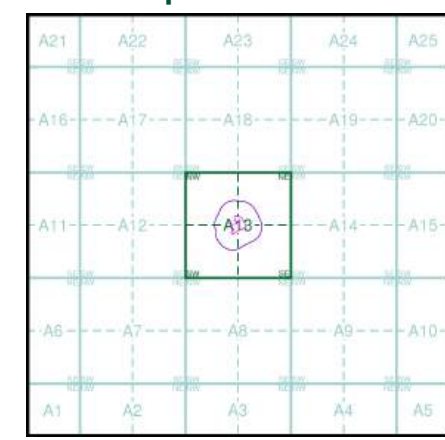
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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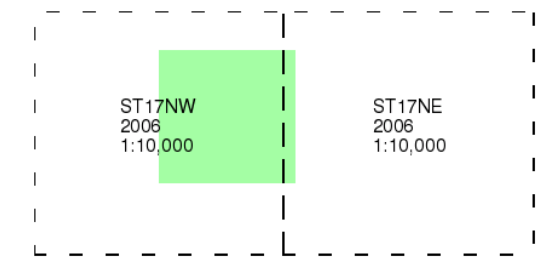
10k Raster Mapping

Published 2006

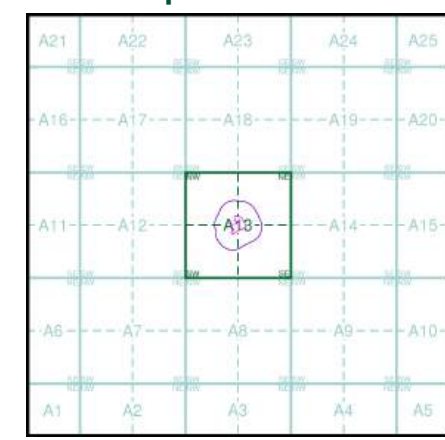
Source map scale - 1:10,000

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Map Name(s) and Date(s)



Historical Map - Slice A



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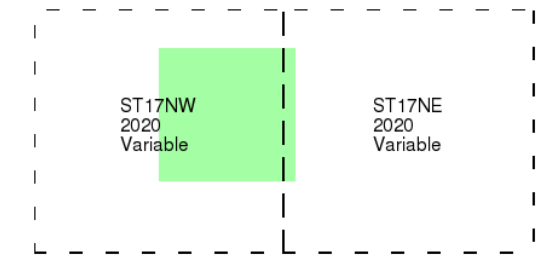
VectorMap Local

Published 2020

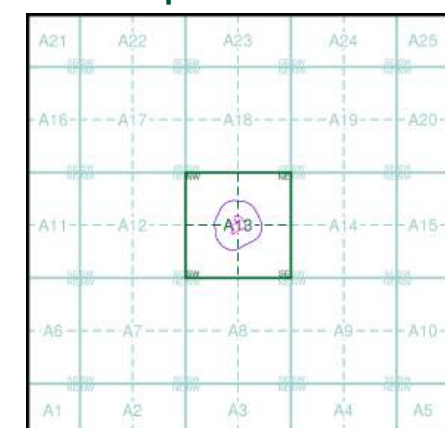
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 248403750_1_1
Customer Ref: 16155RH
National Grid Reference: 313850, 177840
Slice: A
Site Area (Ha): 0.61
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Site Details

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ANNEX B
Risk Assessment Definitions

Risk Assessment Definitions

Environmental risk assessment evaluates the risk to receptors via an analysis of the 'source-pathway-receptor' linkage.

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

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

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

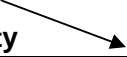
A 'Hazard' is defined as *'a property or situation that in particular circumstances could lead to harm'*.

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

Table 1 Classification of Consequence	
Classification	Definition
Severe	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Pollution of non-sensitive water resources• Significant damage to buildings/structures
Negligible	<ul style="list-style-type: none">• 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

Table 2 Classification of Probability	
Classification	Definition
High	<ul style="list-style-type: none"> • There is a complete pollution linkage and an event appears very likely to occur in the short term and is inevitable in the long term. • Evidence of harm to the receptor
Medium	<ul style="list-style-type: none"> • There is a complete pollution linkage which means that it is probable that an event will occur • The event is not inevitable but possible in short term and likely in the long term
Low	<ul style="list-style-type: none"> • There is a complete pollution linkage and circumstances are possible under which an event could occur • It is not certain that an event will occur in the long term, and it is less likely to occur in the short term
Negligible	<ul style="list-style-type: none"> • There is a complete pollution linkage but circumstances are such that it is improbable that an event would occur even in the long term

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 3** below.

Table 3 Risk Assessment Matrix					
Increasing acceptability 		Consequence			
		Severe	Medium	Mild	Negligible
Probability	High	High	High	Medium / Low	Near zero
	Medium	High	Medium	Low	Near zero
	Low	High / medium	Medium / Low	Low	Near zero
	Negligible	High / medium / Low	Medium / Low	Low	Near zero

High Risk

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

Medium Risk

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

Low Risk

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

Near Zero Risk

There is a very low risk of harm to the receptor. In the event of harm being realised the harm is

ANNEX C
Trial Pit Logs



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5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Trial Pit No:

TP3

Sheet 1 of 1

Project Name: Fairwater Social Club

Project No:
16155

Co-ords: -
Level:

Date:
17/07/2020

Location: Fairwater, Cardiff

Dimensions:

Depth
2.60

Scale:

1:25

Logged:
RH

Client: Cardiff Council

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.15			MADE GROUND: Soft grey CLAY. Fine to medium roots	
				0.20			MADE GROUND: Pink silty fine to angular GRAVEL (HARDCORE)	
				0.30			MADE GROUND: Soft dark grey CLAY. Fine to medium roots	
							MADE GROUND: Soft grey brown gravelly CLAY with cobble and small boulder of stone, bricks, occasional china and plastic fragments	
				0.80			MADE GROUND: Firm red brown gravelly CLAY. Gravel is fine to coarse angular of sandstone	1
				1.20			MADE GROUND: Firm becoming soft red brown sandy gravelly cobbly CLAY. Gravel and cobble are fine to coarse angular to sub-rounded of limestone.	
				1.60			Medium dense red brown slightly clayey SAND and fine to coarse angular to sub-rounded GRAVEL and COBBLE of sandstone	2
				2.60			End of Pit at 2.600m	3
								4
								5

Stability:

Remarks:



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CF23 7HA

Trial Pit No:

TP2

Sheet 1 of 1

Project Name: Fairwater Social Club Project No: 16155 Co-ords: - Level: Date: 17/07/2020

Location: Fairwater, Cardiff Dimensions: Depth 2.50 Scale: 1:25 Client: Cardiff Council Logged: RH

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.70			MADE GROUND: Soft dark brown gravelly CLAY. Bricks, paving slab, rare plastic fragment.	
				1.10			MADE GROUND: Firm orange brown slightly sandy gravelly CLAY	1
				1.35			MADE GROUND: Soft light brown silty CLAY	
							MADE GROUND: Firm becoming soft red brown/brown mottled slightly sandy gravelly cobbly CLAY. Gravel and cobble are fin to coarse angular to sub-angular of limestone and sandstone. Rare metal, brick and tile fragments	2
				2.50			End of Pit at 2.500m	3
								4
								5

Stability:

Remarks:



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CF23 7HA

Trial Pit No:

TP1

Sheet 1 of 1

Project Name: Fairwater Social Club

Project No:
16155

Co-ords: -
Level:

Date:
17/07/2020

Location: Fairwater, Cardiff

Dimensions:

Depth
0.90



Scale:
1:25

Logged:
RH

Client: Cardiff Council

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.60			MADE GROUND: Firm brown gravelly cobbly CLAY. Fine to medium roots	
				0.90			MADE GROUND: Firm brown gravelly CLAY. Occasional plastic, glass and polystyrene	
							End of Pit at 0.900m	1
								2
								3
								4
								5

Stability:

Remarks: Pit terminated at 0.9m depth due to risk of buried sewer



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Trial Pit No:

SA2

Sheet 1 of 1

Project Name: Fairwater Social Club

Project No:
16155

Co-ords: -
Level:

Date:
17/07/2020

Location: Fairwater, Cardiff

Dimensions:

Depth
2.17



Scale:
1:25

Logged:
RH

Client: Cardiff Council

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.30			MADE GROUND: Soft brown sandy gravelly CLAY. Bricks. Fine roots.	
				0.90			MADE GROUND: Loose grey SAND with bricks, brick fragments, wire, nails, glass, plastic, slate and cobble of building stone	
				1.20			MADE GROUND: Firm brown mottled slightly sandy gravelly CLAY. Gravel is fine to coarse angular to sub-angular of sandstone	1
				1.50			Firm brown CLAY. Fine rootlets. (BURIED TOPSOIL)	
				2.17			Firm red brown gravelly cobbly CLAY. Gravel and cobble are fine to coarse sub-angular to sub-rounded of sandstone	2
							End of Pit at 2.170m	
								3
								4
								5

Stability:

Remarks:



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CF23 7HA

Trial Pit No:

SA1

Sheet 1 of 1

Project Name: Fairwater Social Club

Project No:
16155

Co-ords: -
Level:

Date:
17/07/2020

Location: Fairwater, Cardiff

Dimensions:

Depth
1.80



Scale:
1:25

Logged:
RH

Client: Cardiff Council

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.60			MADE GROUND: Soft brown gravelly CLAY. Fine to medium roots	
				1.80			Firm red brown gravelly CLAY. Gravel is fine to coarse sub-angular to sub-rounded of sandstone.	1
							End of Pit at 1.800m	2
								3
								4
								5

Stability:

Remarks:

ANNEX D
Windowless Sampling Borehole Logs



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Borehole No.

WS1

Sheet 1 of 1

Project Name:	Fairwater Social Club	Project No:	16155	Co-ords:		Hole Type	WLS
Location:	Fairwater, Cardiff	Level:		Scale	1:50	Logged By	RH
Client:	Cardiff Council	Dates:	17/07/2020 -				

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
				0.60				MADE GROUND: Brown gravelly CLAY. Many fine to medium roots. Occasional glass and brick fragments.	
	1.00	SPT	N=5 (1,1/1,1,2,1)	1.30				MADE GROUND: Soft brown gravelly CLAY. Gravel is fine to coarse angular of sandstone. Occasional glass. Occasional fine roots	1
				1.70				MADE GROUND: Red brown gravelly CLAY. Gravel and cobble are fine to coarse angular to sub-angular of chalk	
	2.00	SPT	N=0 (1,1/0,0,0,0)					Loose becoming medium dense at 3.0m becoming dense brown/red brown gravelly SAND. Clayey in places. Gravel is fine to coarse angular of sandstone and mudstone	2
	3.00	SPT	N=22 (2,2/4,4,6,8)						3
	4.00	SPT	50 (3,6/50 for 200mm)	4.00				End of Borehole at 4.000m	4
									5
									6
									7
									8
									9
									10

Remarks:



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Borehole No.

WS2

Sheet 1 of 1

Project Name:	Fairwater Social Club	Project No:	16155	Co-ords:		Hole Type	WLS
Location:	Fairwater, Cardiff	Level:				Scale	1:50
Client:	Cardiff Council	Dates:	17/07/2020 -			Logged By	RH

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
				0.10				TARMAC	
				0.45				MADE GROUND: Grey fine to medium angular GRAVEL SUB-BASE	
				0.55				Grey brown silty CLAY	
								Orange brown silty CLAY	
	1.00	SPT	N=26 (6,7/7,6,5,8)	1.10				Stiff red brown gravelly CLAY	1
				1.50				Soft to very soft becoming firm red brown very sandy CLAY	
	2.00	SPT	N=14 (4,6/4,4,3,3)						2
				2.70				Dense red brown/brown clayey SAND and fine to coarse angular to sub-angular GRAVEL of mudstone and sandstone	3
	3.00	SPT	N=50 (9,9/10,12,8,20)	3.50				Red brown/brown slightly sandy gravelly CLAY. Gravel is fine to coarse angular to sub-angular of sandstone and mudstone	
				4.00				End of Borehole at 4.000m	4
									5
									6
									7
									8
									9
									10

Remarks:



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Borehole No.

WS3

Sheet 1 of 1

Project Name:	Fairwater Social Club	Project No:	16155	Co-ords:		Hole Type	WLS
Location:	Fairwater, Cardiff	Level:				Scale	1:50
Client:	Cardiff Council	Dates:	17/07/2020 -			Logged By	RH

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
				0.09				TARMAC	
								MADE GROUND: Pink grey silty fine to medium angular GRAVEL SUB-BASE	
				0.60				MADE GROUND: Grey and orange CLAY with black inclusions	
	1.00	SPT	N=14 (2,2/3,3,4,4)	0.75				Firm red brown gravelly CLAY. Gravel is fine to coarse angular to sub-angular of sandstone and siltstone	1
				1.50				Dense red brown clay bound fine to coarse angular GRAVEL and COBBLE of mudstone and sandstone	2
	2.00	SPT	N=35 (5,5/7,8,9,11)						
	2.45	SPT	N=48 (8,9/10,12,11,15)						
				3.00				End of Borehole at 3.000m	3
									4
									5
									6
									7
									8
									9
									10

Remarks:



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Borehole No.

WS4

Sheet 1 of 1

Project Name:	Fairwater Social Club	Project No:	16155	Co-ords:		Hole Type	WLS
Location:	Fairwater, Cardiff	Level:		Scale	1:50	Logged By	RH
Client:	Cardiff Council	Dates:	17/07/2020 -				

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
				0.04				PAVING SLAB	
				0.20				MADE GROUND: Fine GRAVEL SUB-BASE	
								MADE GROUND: Red brown mottled very gravelly cobbly CLAY. Gravel and cobble are fine to coarse angular to sub-angular of sandstone	
				0.70				Brown slightly clayey SAND	
	1.00	SPT	N=4 (2,1/1,1,1,1)	1.00				Loose brown, grey, red brown clayey to very clayey SAND and fine to coarse angular GRAVEL of sandstone	1
				1.50				Yellow grey silty CLAY	
	2.00	SPT	N=3 (0,0/0,1,1,1)	1.75				Stiff grey silty CLAY	
				1.90				Very soft grey and yellow grey CLAY	2
				2.55				Highly weathered very weak MUDSTONE	
	3.00	SPT	50 (4,10/50 for 255mm)	3.00				End of Borehole at 3.000m	3
									4
									5
									6
									7
									8
									9
									10

Remarks:



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










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

Borehole No.

WS5

Sheet 1 of 1

Project Name:	Fairwater Social Club	Project No:	16155	Co-ords:		Hole Type	WLS
Location:	Fairwater, Cardiff	Level:				Scale	1:50
Client:	Cardiff Council	Dates:	17/07/2020 -			Logged By	RH

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
				0.10				TARMAC	
								MADE GROUND: Grey GRAVEL SUB-BASE	
				0.50				Soft grey silty CLAY	
				0.70				Orange brown silty CLAY	
	1.00	SPT	N=10 (1,1/2,3,3,2)						1
				1.30				Firm becoming stiff below 3.0m red brown gravelly cobbly CLAY. Gravel and cobble are fine to coarse angular of limestone and occasional mudstone	
	2.00	SPT	N=13 (1,5/3,3,3,4)						2
	3.00	SPT	N=21 (2,5/5,6,5,5)						3
	4.00	SPT	N=24 (3,4/5,6,6,7)						4
	4.45	SPT	N=50 (2,10/12,12,14,12)	4.50					
								End of Borehole at 4.500m	5
									6
									7
									8
									9
									10

Remarks:



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

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Borehole No.

WS6

Sheet 1 of 1

Project Name:	Fairwater Social Club	Project No:	16155	Co-ords:		Hole Type	WLS
Location:	Fairwater, Cardiff	Level:		Scale	1:50	Logged By	RH
Client:	Cardiff Council	Dates:	17/07/2020 -				

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
				0.10				MADE GROUND: Soft brown CLAY. Plastic membrane at base	
				0.25				MADE GROUND: Grey slightly clayey fine to medium angular GRAVEL HARDCORE	
				0.60				MADE GROUND: Brown gravelly cobbly CLAY. Gravel and cobble are fine to coarse angular to sub-angular of sandstone and mudstone	
	1.00	SPT	N=12 (2,2/2,3,3,4)	0.75				MADE GROUND: Red brown mottled gravelly cobbly CLAY. Gravel and cobble are fine to coarse angular to sub-angular of sandstone. Brick fragments	1
				0.95				MADE GROUND: Fine to coarse angular GRAVEL of mudstone	
				1.70				MADE GROUND: Firm grey brown mottled silty gravelly CLAY. Gravel is fine to medium angular to sub-rounded of mudstone and siltstone	
	2.00	SPT	N=10 (0,2/2,3,2,3)	2.00				Grey orange brown/red brown mottled silty gravelly CLAY. Gravel is fine to medium angular to sub-rounded of mudstone and siltstone	2
				2.60				Firm orange brown sandy to very sandy CLAY	
	3.00	SPT	50 (8,17/50 for 200mm)	3.00				Medium dense red brown SAND and fine to coarse angular to sub-angular GRAVEL of sandstone	3
								End of Borehole at 3.000m	
									4
									5
									6
									7
									8
									9
									10

Remarks:

ANNEX E
Laboratory Soil Chemical Test Results



Final Report

Report No.:	20-18635-1		
Initial Date of Issue:	24-Jul-2020		
Client	Terra Firma (Wales) Ltd		
Client Address:	5 Deryn Court Wharfedale Road Pentwyn Cardiff CF23 7HA		
Contact(s):	ruth@terrafirmawales.co.uk		
Project	Fairwater		
Quotation No.:		Date Received:	20-Jul-2020
Order No.:	16155	Date Instructed:	20-Jul-2020
No. of Samples:	8		
Turnaround (Wkdays):	5	Results Due:	24-Jul-2020
Date Approved:	24-Jul-2020		
Approved By:			
Details:	Glynn Harvey, Technical Manager		

Results - Soil

Project: Fairwater

Client: Terra Firma (Wales) Ltd	Chemtest Job No.:				20-18635	20-18635	20-18635	20-18635	20-18635	20-18635	20-18635	20-18635
Quotation No.:	Chemtest Sample ID.:				1034527	1034528	1034529	1034530	1034531	1034532	1034533	1034534
Order No.: 16155	Client Sample Ref.:				WS1	WS2	WS3	TP1	TP2	WS5	TP3	WS6
	Client Sample ID.:				WS1	WS2	WS3	TP1	TP2	WS5	TP3	WS6
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.2	0.6	0.8	0.2	0.3	0.5	0.4	0.3
	Bottom Depth (m):				0.6		1.0			0.7		0.6
	Date Sampled:				17-Jul-2020	17-Jul-2020	17-Jul-2020	17-Jul-2020	17-Jul-2020	17-Jul-2020	17-Jul-2020	17-Jul-2020
	Time Sampled:				12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	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	10	16	13	9.6	12	19	11	8.0
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Loam	Clay	Sand	Sand	Clay	Sand	Clay
pH	M	2010		4.0	7.7	7.3	6.7	8.0	8.3	8.0	8.5	8.5
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	0.43	0.46	0.56	0.94	0.87	0.95	0.47
Cyanide (Complex)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Sulphate (Acid Soluble)	M	2430	%	0.010	0.049	0.029	0.017	0.031	0.056	0.032	0.047	0.019
Arsenic	M	2450	mg/kg	1.0	13	9.0	11	11	21	12	24	17
Beryllium	U	2450	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium	M	2450	mg/kg	0.10	0.52	0.18	0.42	0.37	0.41	0.37	0.41	0.25
Chromium	M	2450	mg/kg	1.0	20	17	22	17	15	16	26	16
Mercury Low Level	M	2450	mg/kg	0.05	0.12	0.07	0.07	0.08	0.09	0.08	0.11	0.08
Manganese	M	2450	mg/kg	5.0	930	950	940	870	640	870	1200	980
Molybdenum	M	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.9	< 2.0	< 2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Copper	M	2450	mg/kg	0.50	20	13	16	19	35	17	30	13
Nickel	M	2450	mg/kg	0.50	20	20	31	25	21	20	18	19
Lead	M	2450	mg/kg	0.50	51	28	31	49	72	86	140	45
Selenium	M	2450	mg/kg	0.20	0.40	0.24	0.31	0.32	< 0.20	0.30	< 0.20	< 0.20
Zinc	M	2450	mg/kg	0.50	120	97	130	120	160	120	97	72
Chromium (Trivalent)	N	2490	mg/kg	1.0	20	17	22	17	15	16	26	16
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
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	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: Fairwater

Client: Terra Firma (Wales) Ltd	Chemtest Job No.: 20-18635											
Quotation No.:	Chemtest Sample ID.: 1034527											
Order No.: 16155	Client Sample Ref.: WS1											
	Client Sample ID.: WS1											
	Sample Type: SOIL											
	Top Depth (m): 0.2											
	Bottom Depth (m): 0.6											
	Date Sampled: 17-Jul-2020											
	Time Sampled: 12:00											
	Asbestos Lab: DURHAM											
Determinand	Accred.	SOP	Units	LOD								
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	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.15	< 0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.14	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.29	< 0.10	< 0.10	< 0.10
Fluorene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.37	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.5	< 0.10	< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.84	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.10	0.52	< 0.10	< 0.10	0.51	13	0.53	0.57	0.87
Pyrene	M	2700	mg/kg	0.10	0.48	< 0.10	< 0.10	0.47	13	0.55	0.64	0.51
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	7.4	< 0.10	< 0.10	< 0.10
Chrysene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	7.6	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	4.2	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	7.5	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	4.9	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.4	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	4.9	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	79	< 2.0	< 2.0	< 2.0
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	2.7	1.5	0.90	1.8	2.0	1.4	1.8	1.1

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline 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-diphenylcarbazine.
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)
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"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

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

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

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

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com

ANNEX F
Plasticity Test Results

TEST REPORT
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX
BS EN ISO 17892-12:2018 Clauses 5.3/5.5/6.5

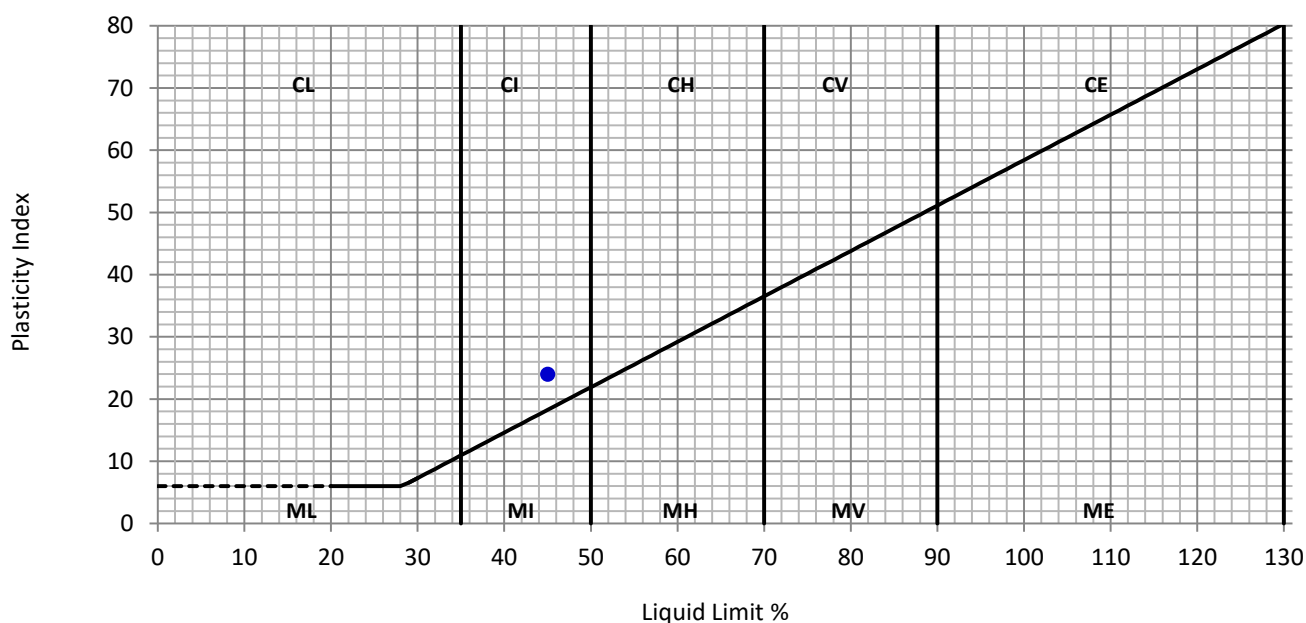
Project No:	D20219	Client:	Terra Firma
Project Name:	Fairwater	Address:	Deryn Court 5 Wharfdale Road Cardiff CF23 7HA
ATS Sample No:	20979		

Site Ref / Hole ID:	TP2	Depth (m):	1.50
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Brown slightly gravelly CLAY
Location in Works:	N/A	Material Source:	Unknown
Date Sampled:	Unknown	Material Supplier:	Unknown
Sampled By:	Client	Specification:	ISO 17892
Date Received:	20 July 2020	Date Tested:	22 July 2020

Test Results

Liquid Limit	45	%
Plastic Limit	21	%
Plasticity Index	24	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	31 %



Remarks:

TEST REPORT
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX
BS EN ISO 17892-12:2018 Clauses 5.3/5.5/6.5

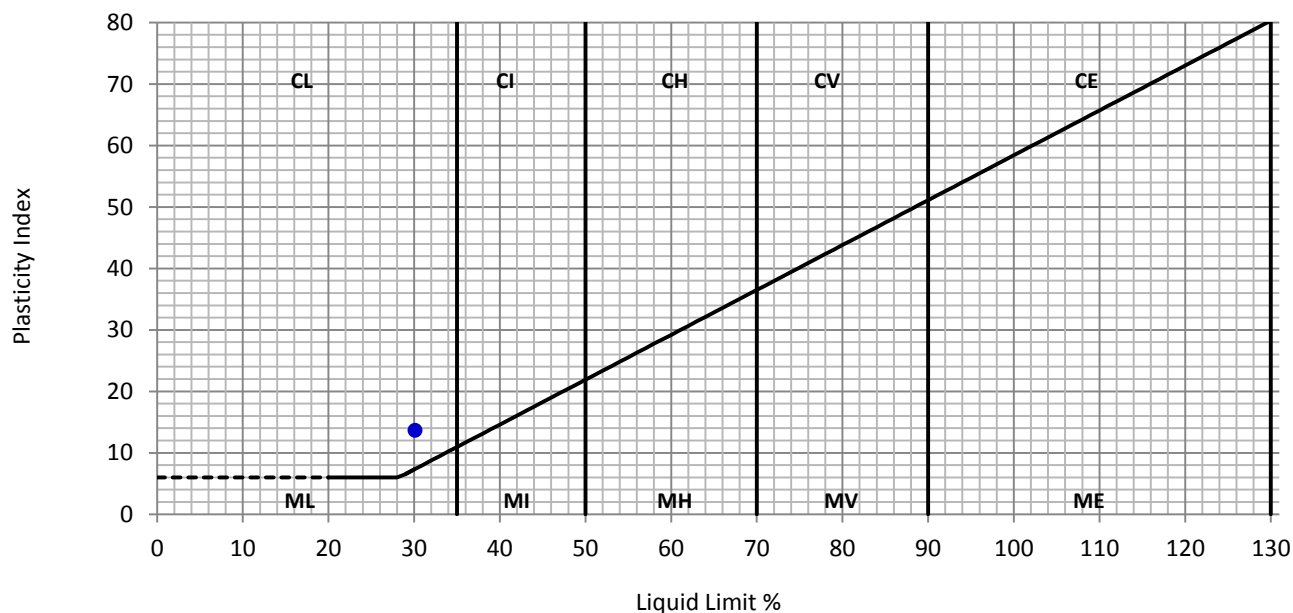
Project No:	D20219	Client:	Terra Firma
Project Name:	Fairwater	Address:	Deryn Court 5 Wharfdale Road Cardiff CF23 7HA
ATS Sample No:	20976		

Site Ref / Hole ID:	WS2	Depth (m):	1.00
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Brown slightly gravelly CLAY
Location in Works:	N/A	Material Source:	Unknown
Date Sampled:	Unknown	Material Supplier:	Unknown
Sampled By:	Client	Specification:	ISO 17892
Date Received:	20 July 2020	Date Tested:	27 July 2020

Test Results

Liquid Limit	30	%
Plastic Limit	16	%
Plasticity Index	14	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	14 %



Remarks:

QA Ref.

ENTSO
17892-
12:2018:E



Apex Testing Solutions

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



7771

Approver

L Davis

Date

28/07/2020

Fig.

ATT

L Davis, Quality Manager

TEST REPORT
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX
BS EN ISO 17892-12:2018 Clauses 5.3/5.5/6.5

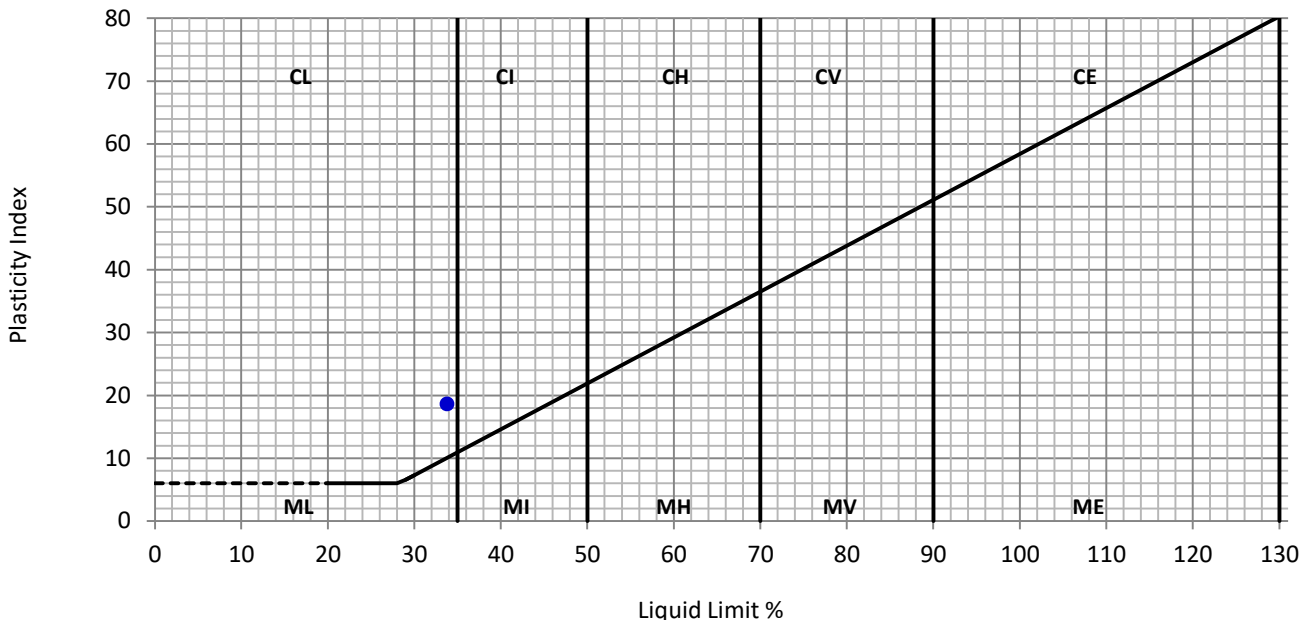
Project No:	D20219	Client:	Terra Firma
Project Name:	Fairwater	Address:	Deryn Court 5 Wharfdale Road Cardiff CF23 7HA
ATS Sample No:	20977		

Site Ref / Hole ID:	WS1	Depth (m):	1.40
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Brown slightly gravelly slightly sandy CLAY
Location in Works:	N/A	Material Source:	Unknown
Date Sampled:	Unknown	Material Supplier:	Unknown
Sampled By:	Client	Specification:	ISO 17892
Date Received:	20 July 2020	Date Tested:	23 July 2020

Test Results

Liquid Limit	34	%
Plastic Limit	15	%
Plasticity Index	19	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	14 %



Remarks:

QA Ref.

EN ISO
17892-
12:2018:E



Apex Testing Solutions

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



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Approver

L Davis

Date

24/07/2020

L Davis, Quality Manager

Fig.

ATT

TEST REPORT
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX
BS EN ISO 17892-12:2018 Clauses 5.3/5.5/6.5

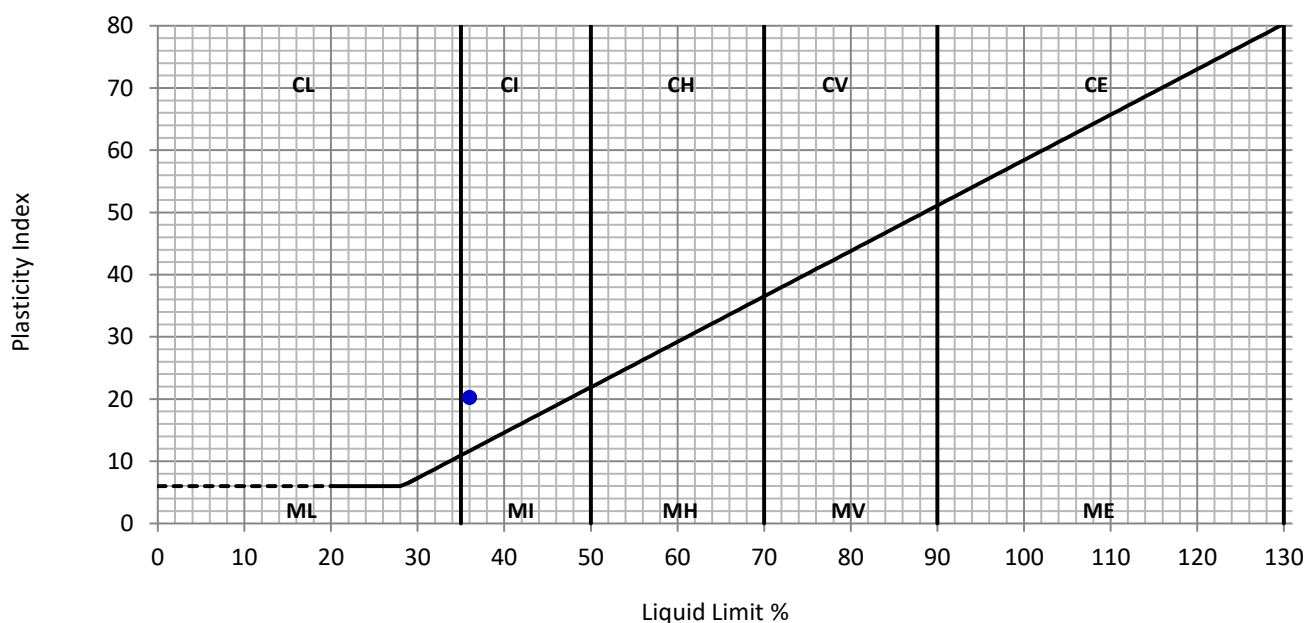
Project No: D20219 Project Name: Fairwater ATS Sample No: 20978	Client: Terra Firma Address: Deryn Court 5 Wharfdale Road Cardiff CF23 7HA
--	--

Site Ref / Hole ID: WS6 Sample No: Sampling Certificate Received: No Location in Works: N/A Date Sampled: Unknown Sampled By: Client Date Received: 20 July 2020	Depth (m): 1.20 Sample Type: Disturbed Material Description: Brown slightly gravelly CLAY Material Source: Unknown Material Supplier: Unknown Specification: ISO 17892 Date Tested: 22 July 2020
---	---

Test Results

Liquid Limit	36	%
Plastic Limit	16	%
Plasticity Index	20	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	29 %



Remarks:

QA Ref.

EN ISO
17892-
12:2018:E



Apex Testing Solutions

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



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Approver

L DAVIS

L Davis, Quality Manager

Date

23/07/2020

Fig.

ATT

ANNEX G
Soakaway Test Results

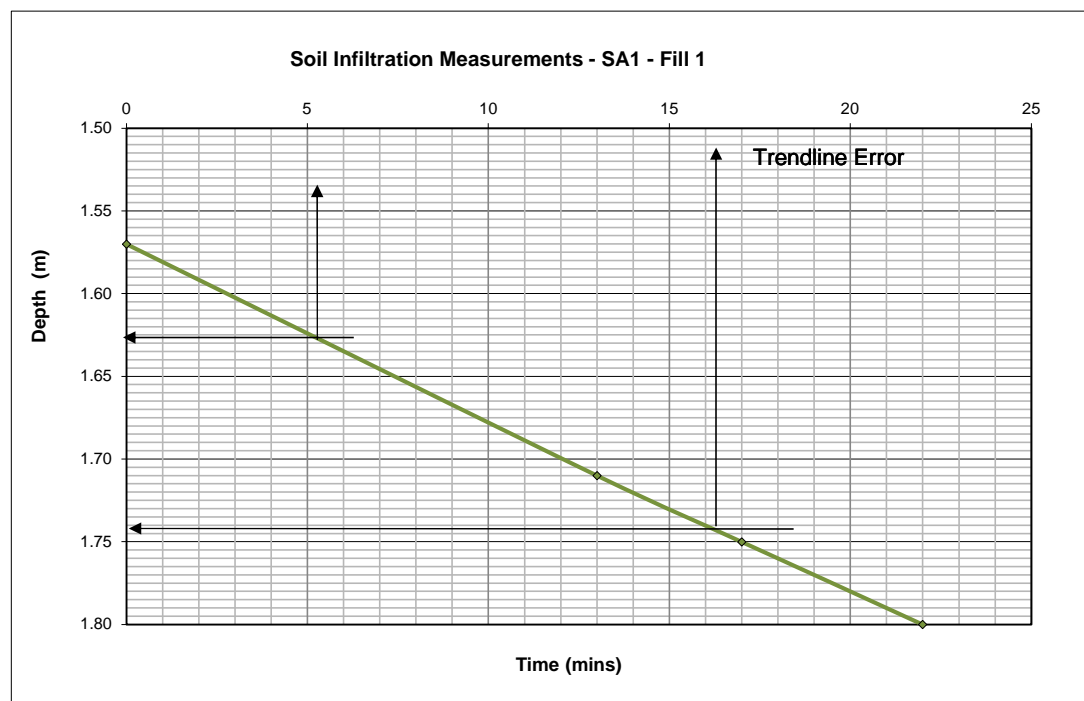
Site Name: Fairwater Social

Number: 16155

Date Undertaken: 17.07.2020

Test No.: Sa1 - Fill 1

	Depth to Water (m)	Time (Mins)
(effective depth - 100%)	1.57	0
	1.71	13
	1.75	17
(effective depth - 0%)	1.80	22
Length of Trial Pit (m)	1.60	
Width of Trial Pit (m)	0.45	
Depth of Trial Pit (m)	1.80	
Effective Storage Depth (m)	0.23	
Vp25	1.6275	
Vp75	1.7425	
Vp75-25	0.083	
Outflow (%)	100	
50% effective depth (m)	0.115	
Mean Surface area ap50 (m2)	1.192	
Time for 25% Outflow (tp25)	5.3	From Graph
Time for 75% Outflow (tp75)	16.3	From Graph
tp75 - 25	11	
Soil Infiltration Rate (m/s)	0.000105291	



Soil Infiltration Worksheet: This worksheet has been produced in combination with the document 'BRE Digest 365- September 1991'

This worksheet can be used to determine soil infiltration rates from trial pit field measurements

Worksheet options are identified by a green background

Site Name: Fairwater Social
Number: 16155
Date Undertaken: 17.07.2020
Test No.: SA1 - Fill 2

	Depth to Water (m)	Time (Mins)
(effective depth - 100%)	1.41	0
	1.44	3
	1.48	13
	1.54	29
	1.59	48
	1.61	63
	1.66	86
(effective depth - 0%)	1.71	115

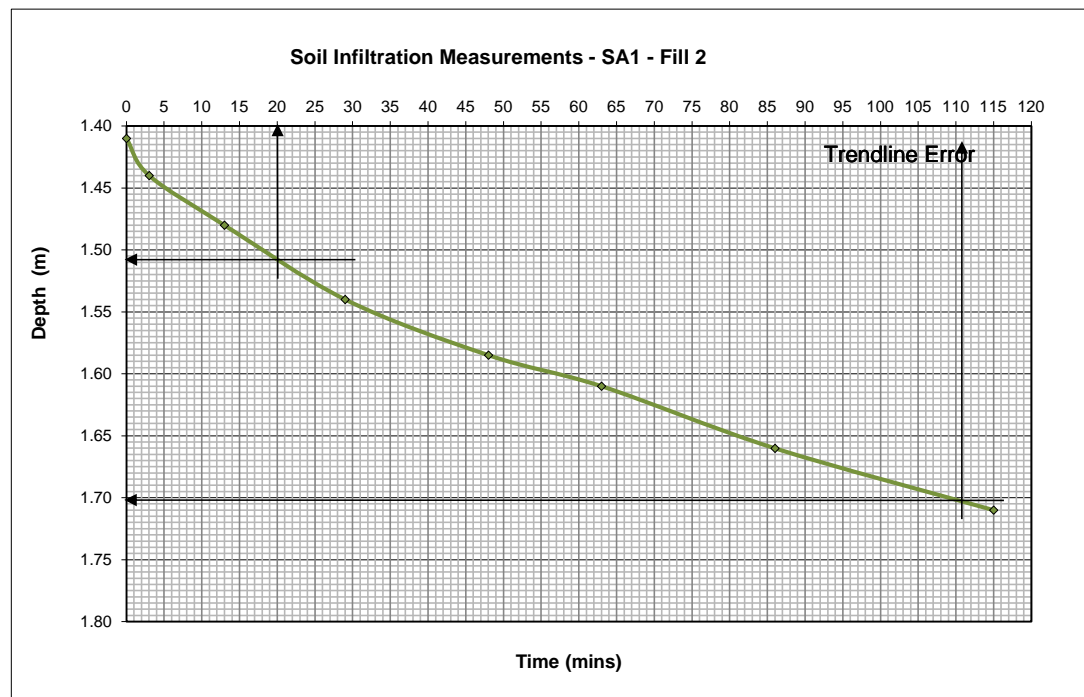
Length of Trial Pit (m)	1.60
Width of Trial Pit (m)	0.45
Depth of Trial Pit (m)	1.80

Effective Storage Depth (m)	0.39
Vp25	1.5075
Vp75	1.7025
Vp75-25	0.140
Outflow (%)	77

50% effective depth (m)	0.195
Mean Surface area ap50 (m ²)	1.520

Time for 25% Outflow (tp25)	20	From Graph
Time for 75% Outflow (tp75)	111	From Graph
tp75 - 25	91	

Soil Infiltration Rate (m/s) **1.69229E-05**



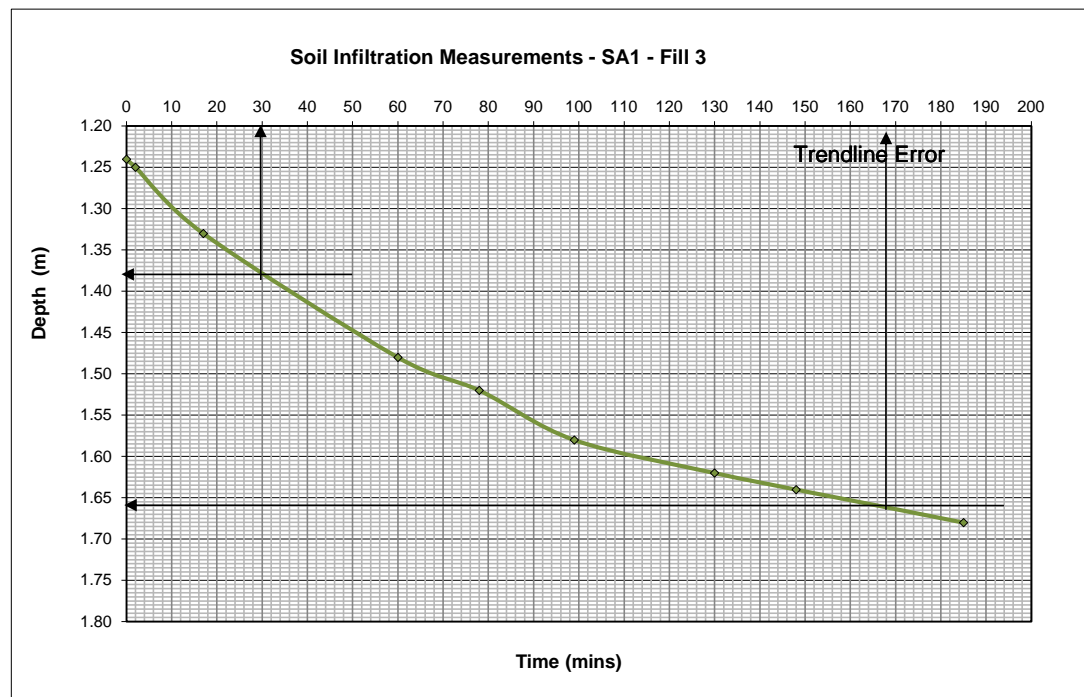
Soil Infiltration Worksheet: This worksheet has been produced in combination with the document 'BRE Digest 365- September 1991'
This worksheet can be used to determine soil infiltration rates from trial pit field measurements
Worksheet options are identified by a green background

Site Name: Fairwater Social
Number: 16155
Date Undertaken: 17.07.2020
Test No.: SA1 - Fill 3

	Depth to Water (m)	Time (Mins)
(effective depth - 100%)	1.24	0
	1.25	2
	1.33	17
	1.48	60
	1.52	78
	1.58	99
	1.62	130
	1.64	148
(effective depth - 0%)	1.68	185

Length of Trial Pit (m)	1.60
Width of Trial Pit (m)	0.45
Depth of Trial Pit (m)	1.80
Effective Storage Depth (m)	0.56
Vp25	1.3800
Vp75	1.6600
Vp75-25	0.202
Outflow (%)	79
50% effective depth (m)	0.280
Mean Surface area ap50 (m ²)	1.868

Time for 25% Outflow (tp25)	30	From Graph
Time for 75% Outflow (tp75)	168	From Graph
tp75 - 25	138	
Soil Infiltration Rate (m/s)	1.30342E-05	



Soil Infiltration Worksheet: This worksheet has been produced in combination with the document 'BRE Digest 365- September 1991'
This worksheet can be used to determine soil infiltration rates from trial pit field measurements
Worksheet options are identified by a green background

Site Name: Fairwater Social
Number: 16155
Date Undertaken: 17.07.2020
Test No.: SA2 - Fill 1

	Depth to Water (m)	Time (Mins)
(effective depth - 100%)	1.74	0
	1.79	3
	1.80	5
	1.83	7
	1.91	23
	1.95	35
	1.99	46
(effective depth - 0%)	2.08	77

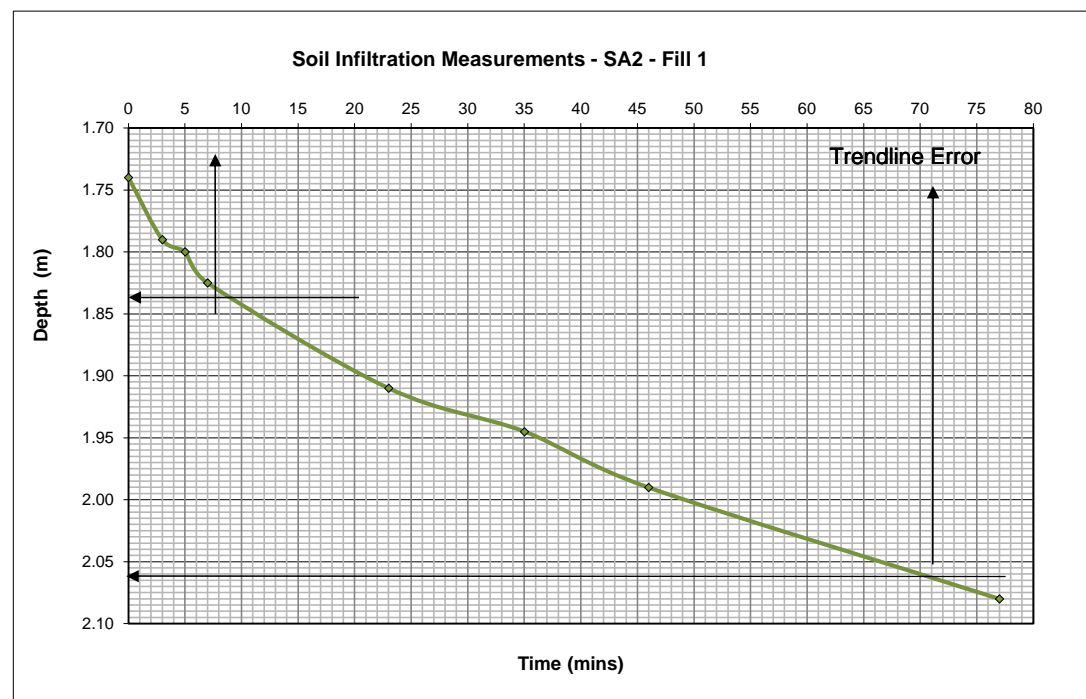
Length of Trial Pit (m)	1.20
Width of Trial Pit (m)	0.45
Depth of Trial Pit (m)	2.17

Effective Storage Depth (m)	0.43
Vp25	1.8475
Vp75	2.0625
Vp75-25	0.116
Outflow (%)	79

50% effective depth (m)	0.215
Mean Surface area ap50 (m2)	1.250

Time for 25% Outflow (tp25)	9	From Graph
Time for 75% Outflow (tp75)	71	From Graph
tp75 - 25	62	

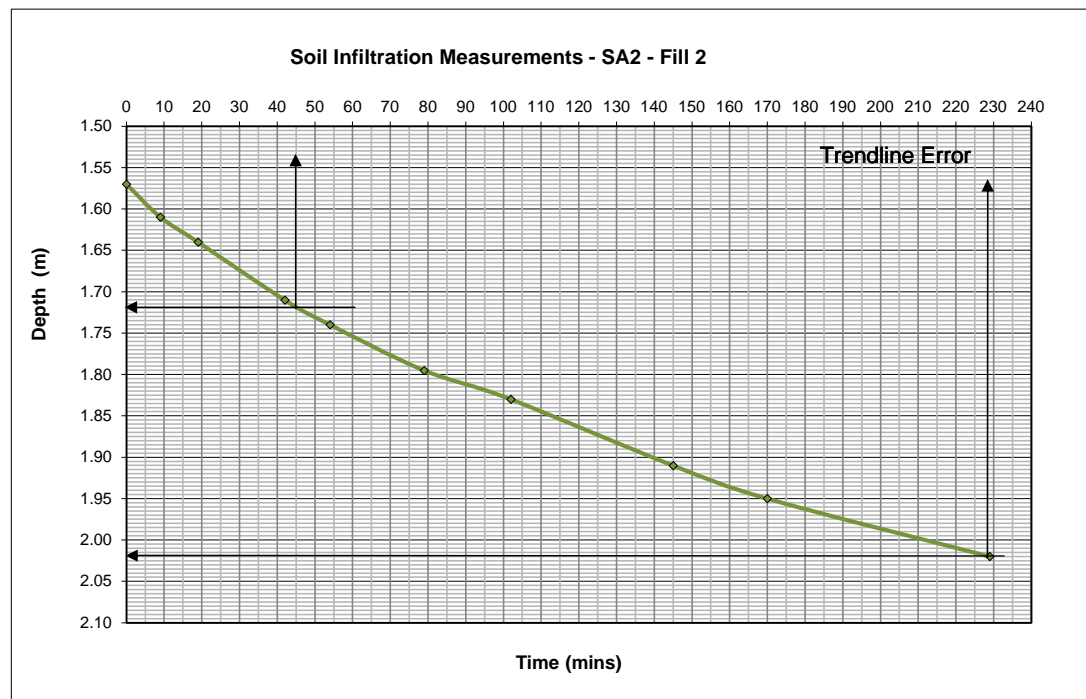
Soil Infiltration Rate (m/s) **2.49777E-05**



Soil Infiltration Worksheet: This worksheet has been produced in combination with the document 'BRE Digest 365- September 1991'
This worksheet can be used to determine soil infiltration rates from trial pit field measurements
Worksheet options are identified by a green background

Site Name: Fairwater Social
Number: 16155
Date Undertaken: 17.07.2020
Test No.: SA2 - Fill 2

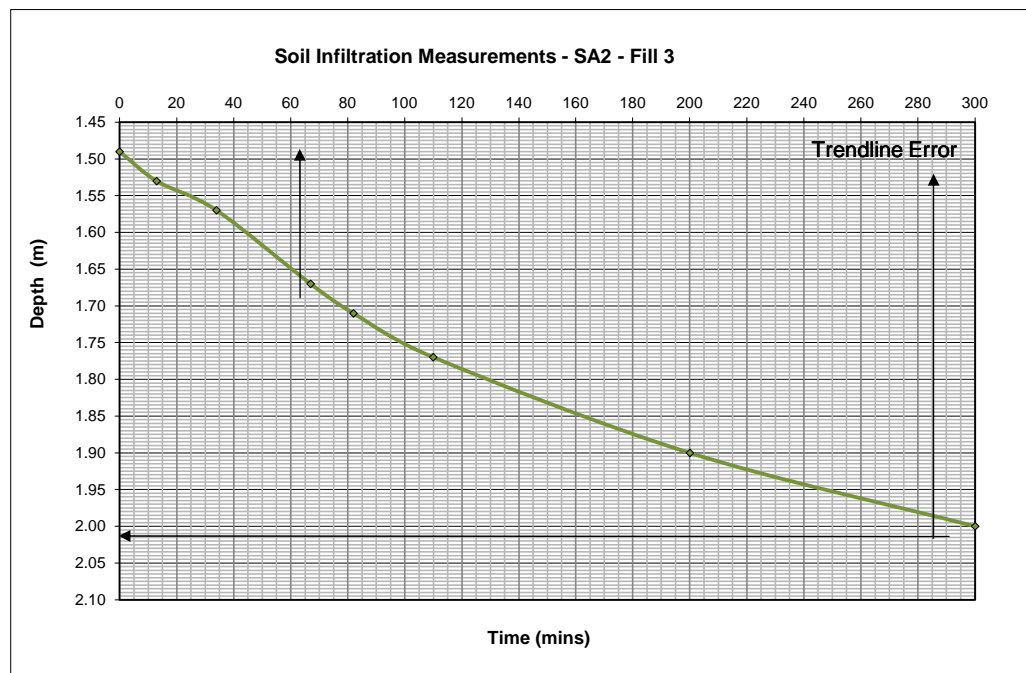
	Depth to Water (m)	Time (Mins)
(effective depth - 100%)	1.57	0
	1.61	9
	1.64	19
	1.71	42
	1.74	54
	1.80	79
	1.83	102
	1.91	145
	1.95	170
(effective depth - 0%)	2.02	229
Length of Trial Pit (m)	1.20	
Width of Trial Pit (m)	0.45	
Depth of Trial Pit (m)	2.17	
Effective Storage Depth (m)	0.60	
Vp25	1.7200	
Vp75	2.0200	
Vp75-25	0.162	
Outflow (%)	75	
50% effective depth (m)	0.300	
Mean Surface area ap50 (m2)	1.530	
Time for 25% Outflow (tp25)	45	From Graph
Time for 75% Outflow (tp75)	229	From Graph
tp75 - 25	184	
Soil Infiltration Rate (m/s)	9.59079E-06	



Soil Infiltration Worksheet: This worksheet has been produced in combination with the document 'BRE Digest 365- September 1991'
This worksheet can be used to determine soil infiltration rates from trial pit field measurements
Worksheet options are identified by a green background

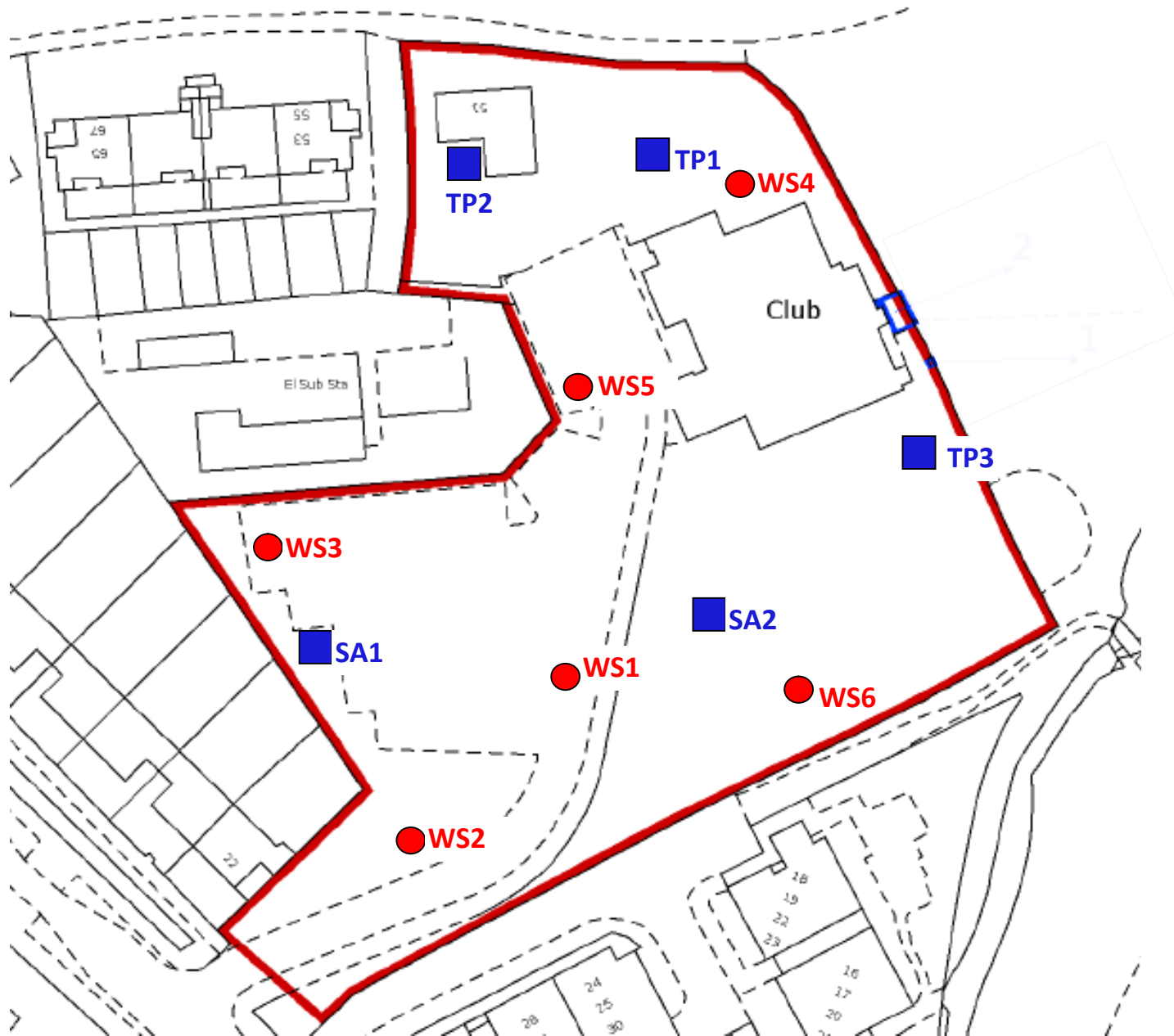
Site Name: Fairwater Social
Number: 16155
Date Undertaken: 17.07.2020
Test No.: SA2 - Fill 3

	Depth to Water (m)	Time (Mins)	
(effective depth - 100%)	1.49	0	
	1.53	13	
	1.57	34	
	1.67	67	
	1.71	82	
	1.77	110	
	1.90	200	extrapolated
(effective depth - 0%)	2.00	300	extrapolated
Length of Trial Pit (m)	1.20		
Width of Trial Pit (m)	0.45		
Depth of Trial Pit (m)	2.17		
Effective Storage Depth (m)	0.68		
Vp25	1.6600		
Vp75	2.0000		
Vp75-25	0.184		
Outflow (%)	75		
50% effective depth (m)	0.340		
Mean Surface area ap50 (m2)	1.662		
Time for 25% Outflow (tp25)	64	From Graph	
Time for 75% Outflow (tp75)	300	From Graph	
tp75 - 25	236		
Soil Infiltration Rate (m/s)	7.80151E-06		



Soil Infiltration Worksheet: This worksheet has been produced in combination with the document 'BRE Digest 365- September 1991'
This worksheet can be used to determine soil infiltration rates from trial pit field measurements
Worksheet options are identified by a green background

DRAWINGS



Drawing Number
01

Drawing Title
SITE LAYOUT

Job Number
16155

Job Title
FAIRWATER SOCIAL CLUB

NOT TO SCALE



Terra Firma (Wales) Ltd.

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Site Investigation Contractors

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