



Report Title

POLLUTION PREVENTION PLAN

Project

GLAN MYDDYFI, PENTREFELIN

Report Reference

CC2013-CAM-ZZ-XX-RP-C-00-0002

Client

JCR PLANNING

Date

OCTOBER 2019

REPORT CONTROL SHEET

Client: JCR Planning

Project: Glan Myddyfi, Pentrefelin

Job Number: CC2013

Report Title: Pollution Prevention Plan

Report Reference: CC2013-CAM-ZZ-XX-RP-C-00-0002

Prepared By: B Whyman MEng (Hons) GMICE MCIHT

Reviewed and Authorised By: B Whyman MEng (Hons) GMICE MCIHT

Revision	Date	Description	Prepared By	Authorised By
P01	03/10/19	First Issue	B Whyman	B Whyman

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1 INTRODUCTION

- 1.1 Cambria Consulting Ltd have been commissioned by JCR Planning Consultants on behalf of their client to produce a Pollution Prevention Plan for a Poultry farm in Carmarthenshire. The proposed poultry farm, located at Glan Myddyfi, is to house 16,000 chickens for free range egg production in Pentre-felin, Carmarthenshire.
- 1.2 This report has been produced to support the planning application, reference no. E/37351 and to address NRW consultation comments. The report should be read in conjunction with the drainage strategy report.
- 1.3 The objectives of this report are to outline pollution prevention measures specifically in relation to surface water and groundwater pollution to ensure the risk of pollution is maintained at acceptable levels.

2 SITE SETTING & POTENTIAL RECEPTORS

- 2.1 The development site is made up of two separate sites as shown in the Figure 2.1 below.
- 2.2 The northern site is 1.28ha and is a greenfield site bounded by other greenfield sites and a watercourse on the Western boundary. The existing use of the northern site is as a cattle ground.
- 2.3 The southern site is 0.24 ha greenfield site and is significantly smaller.
- 2.4 The northern site is centred around OS coordinates E: 259849, N: 224055 and the southern site is centred around OS coordinates E: 259895, N: 223906.

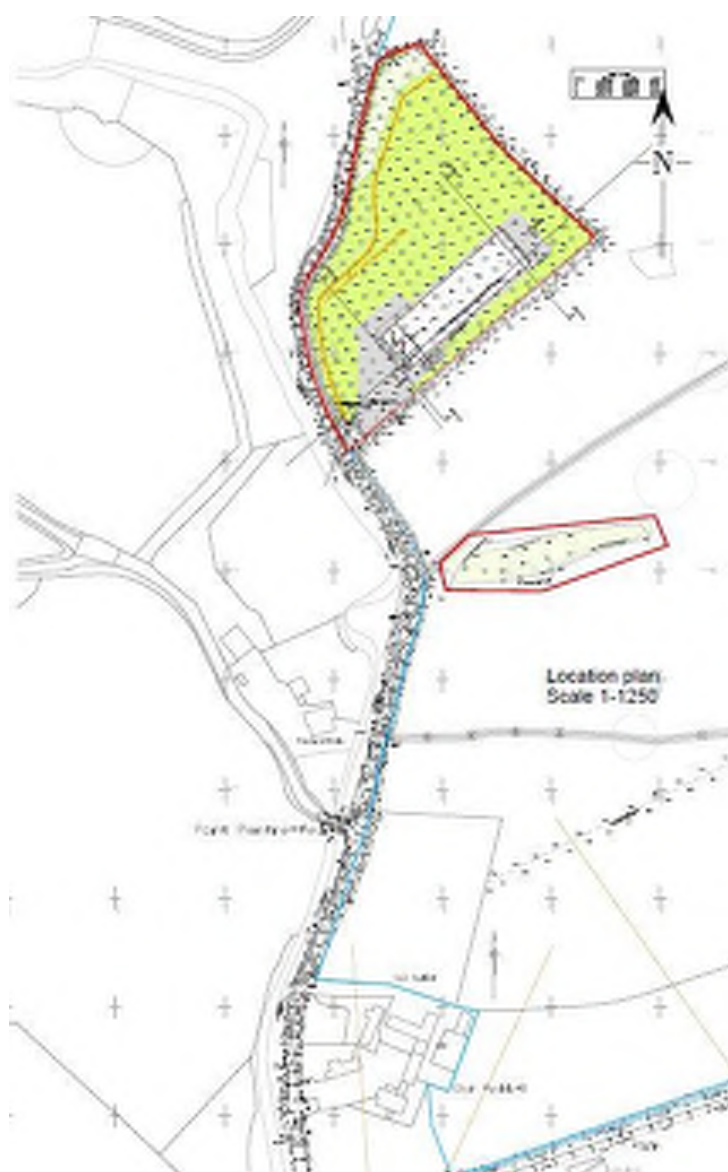


Figure 2.1 - Location Plan

Glan Myddyfi, Pentrefelin– Pollution Prevention Plan

- 2.5 The site for the Poultry Farm is located in close proximity to the Afon Myddyfi. The river runs parallel to the road running along the southern corner of the site. The top of bank is approximately 10m from the existing gated entrance into the site. The proposed poultry farm building is approximately 41m away from the top of bank of the river at its closest point.
- 2.6 There is a significant buffer between the site and northern boundary, typically 45m between top of bank and the north western boundary.
- 2.7 The Afon Myddyfi runs in a southerly direction away from the site and joins the Afon Tywi approximately 2km south of the site near Cilsan, shown in Figure 2.2 below. The Afon Tywi is designated a Special Area of Conservation (SAC) and therefore is a sensitive receptor that needs to be considered within the pollution prevention plan.

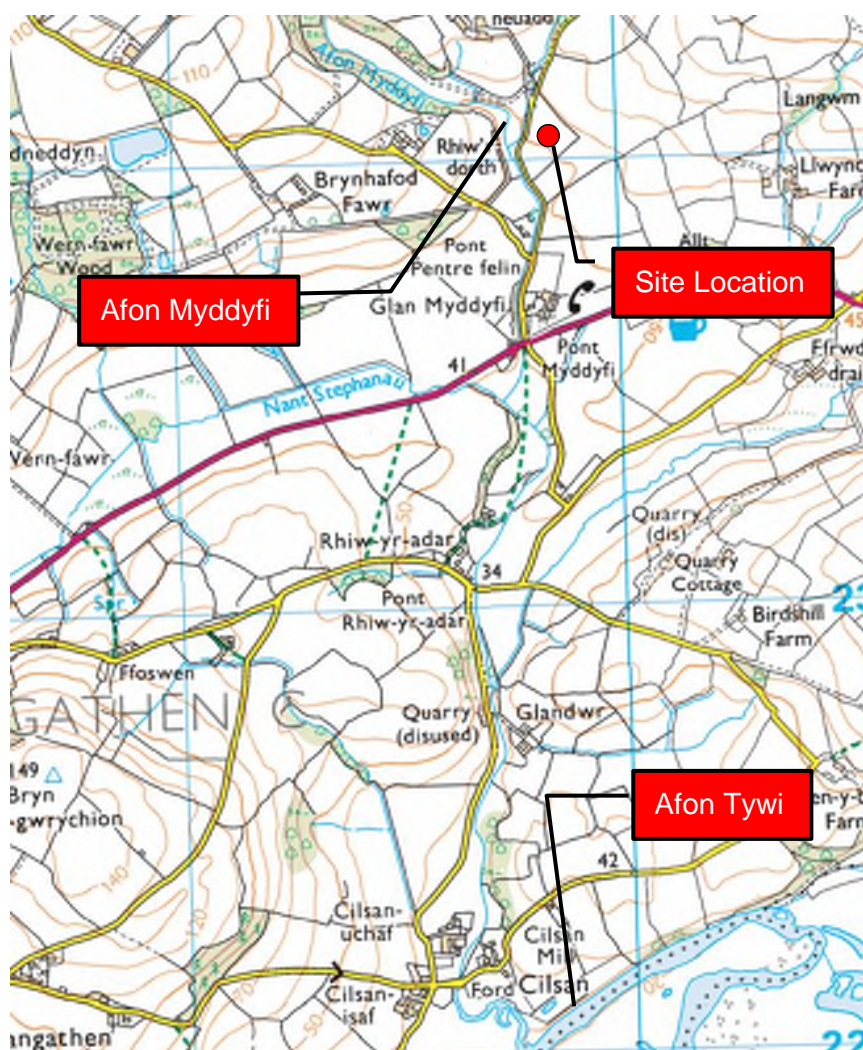


Figure 2.2 – Proximity to Watercourses

Glan Myddyfi, Pentrefelin– Pollution Prevention Plan

- 2.8 An Envirocheck Report is included within **Appendix A**. This shows the site is not within a groundwater source protection zone. The site is underlain by a Secondary B bedrock aquifer and Secondary Undifferentiated superficial aquifer and the groundwater vulnerability is classified as medium vulnerability. The local groundwater table will need to be considered within the pollution prevention plan although there are no water abstractions near to the site.
- 2.9 The Historical mapping shows there has been no previous development on or near to the site.

3 POTENTIAL POLLUTANTS

- 3.1 Potential pollutants can arise during the construction phase and operation of the facility. Both of these phases are considered in further detail below;

Construction Phase

- 3.2 During the construction of the Poultry Farm facility, the main potential pollution sources are considered as follows;
- Fuel & Chemical Spills
 - Silt & Dust
 - Construction Traffic
 - Flooding Incidents
 - Washdown Activities

Operational Phase

- 3.3 During the operational phase of the Poultry Farm facility, the main potential pollution sources are considered as follows;
- Fuel & Chemical Spills
 - Silt
 - Flooding Incidents
 - Washdown Activities
 - Foul Drainage
 - Livestock Range Area

4 POLLUTION PREVENTION

Construction Phase

- 4.1 A wheel wash facility will be installed to prevent pollutants being transported out of the site and onto the access road which runs close to the Afon Myddyfi. The drainage from the wheel wash facility will be collected in a sealed dirty water tank and transported off site.
- 4.2 To avoid the risk of flooding on site and the potential for this to transport pollutants the SuDs system serving the site will be setup early in the construction programme to deal with surface water run-off during the works.
- 4.3 Suitable silt controls and dust suppression methods will be employed during the works. Desilting basins/lagoons or silt fences/bales will be used to remove suspended solids prior to entering the SUDs system.
- 4.4 The site entrance will be cleaned and swept during the construction phase.
- 4.5 If refuelling of plant takes place on site, the following steps will be taken;
 - Refuel mobile plant in a designated hardstanding area away from any drainage infrastructure or watercourses
 - Supervise all refuelling activities and bulk deliveries with trained operatives
 - Keep spill kits in close proximity to any refuelling activities
 - Provide incident response training to the staff and contractors
 - Position drip trays under pumps to catch minor spills
 - Use bunded bowers
- 4.6 The water quality of the surface water runoff should be monitored on a regular basis.
- 4.7 All pollution control measures shall be checked at the start of every working day to ensure they are fully operational.

Operation Phase

- 4.8 In accordance with best practice the proposed roof and externals surface water drainage will be segregated, as shown in the drainage strategy drawing CC2013-CAM-ZZ-00-GA-C-90-1101, included in **Appendix B**.
- 4.9 The roof drainage will be piped to a cellular infiltration tank sited beneath the southern yard area. The external hardstanding areas will be drained via channel drains into an infiltration trench. Downstream of the channel drains, manhole chambers will be installed with penstock controls which can be closed in the event of any pollution incidents.
- 4.10 The Surface Water drainage infrastructure is designed to accommodate the 1 in 100 yr +30% storm event, therefore reducing the risk of pluvial flooding on site.

Glan Myddyfi, Pentrefelin– Pollution Prevention Plan

- 4.11 The washdown area to the north of the building will drain to a sealed dirty water tank and the wastewater will be removed off site and disposed offsite by a licensed operator once the tank is near capacity.
- 4.12 A septic tank will be installed to service the 1no. WC including with the building proposals. Again this waste will be removed and disposed offsite by a licensed operator.
- 4.13 No fuels or chemicals will be stored on the site.
- 4.14 As a precautionary measure, a 1m deep surface water interception ditch will be installed at the perimeter of the range area.
- 4.15 A pollution risk assessment has been produced to assess the levels of pollution risk and residual risk as a result of the employment of these pollution control measures in the construction and operational phases of the site. The pollution risk assessment is included in **Appendix C**.

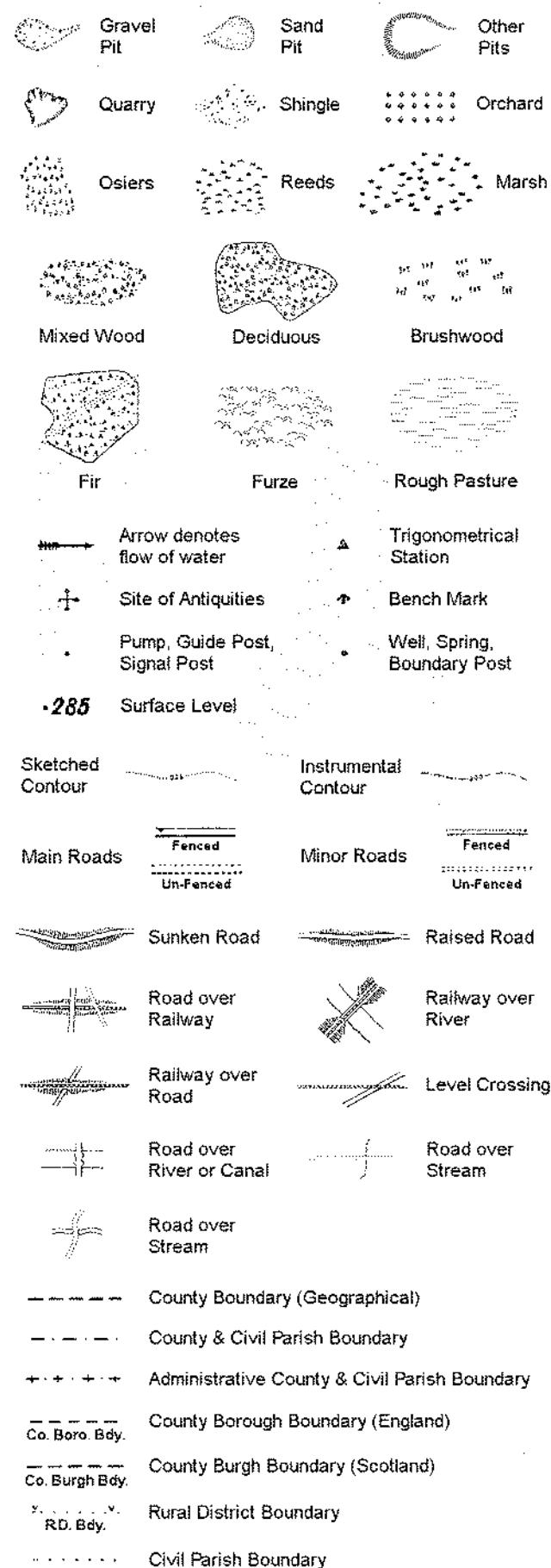
5 CONCLUSIONS

- 5.1 The proposed development is situated near to the Afon Myddyfi, which connects to the Afon Tywi approximately 2km south of the site. The Afon Tywi is classified as a SAC and therefore deemed a sensitive receptor.
- 5.2 The Envirocheck report shows the site is not in a groundwater source protection zone. The groundwater underlying the site is classed as medium vulnerability.
- 5.3 Pollution prevention measures will be employed during the construction stage and operation of the development. A pollution risk assessment has been undertaken; this shows there are minimal residual risks as a result of the development.
- 5.4 The drainage strategy ensures that the roof and external hardstanding run-off is segregated. All surface water systems are designed to work via infiltration and sized for the 1 in 100 year +30% storm event.
- 5.5 Foul drainage generated from the single WC on site will be served by a Septic tank and waste will be taken offsite.
- 5.6 Run-off from Washdown operations will be segregated and enter a sealed dirty water tank which will be emptied and taken off site.
- 5.7 As a precautionary measure a 1m wide surface water interception ditch will be installed at the perimeter of the range area.

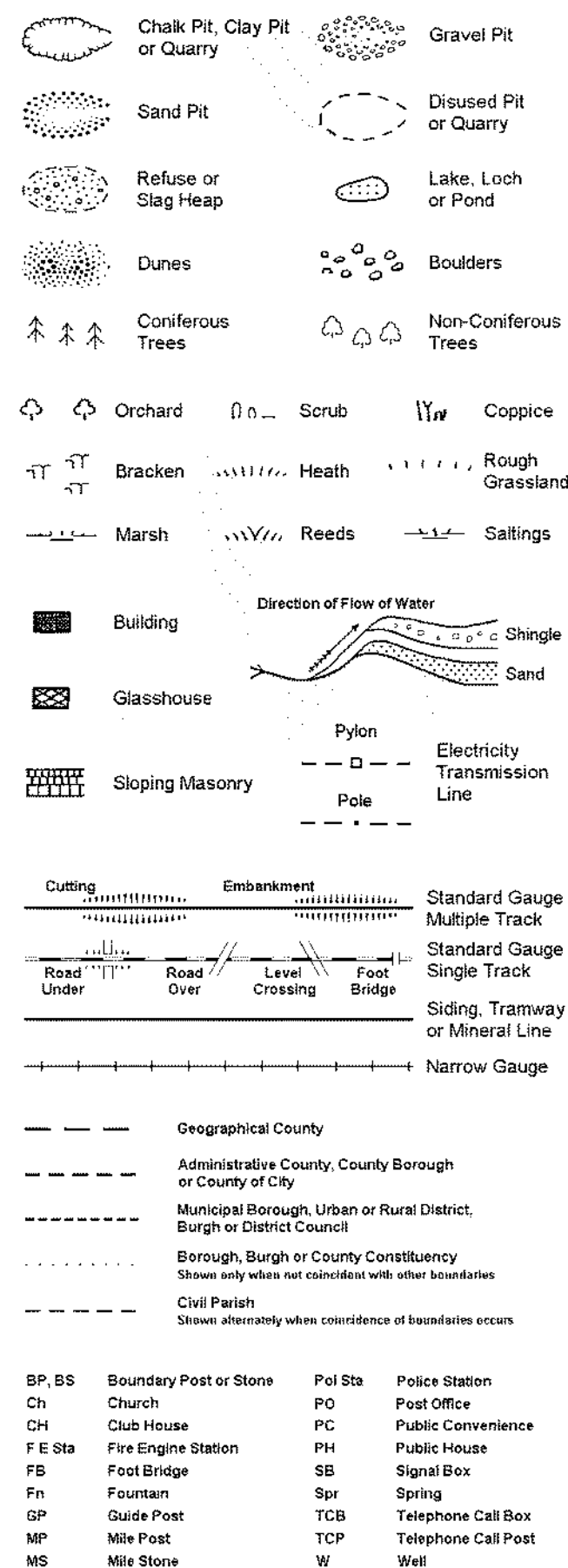
APPENDIX A – Envirocheck Report

Historical Mapping Legends

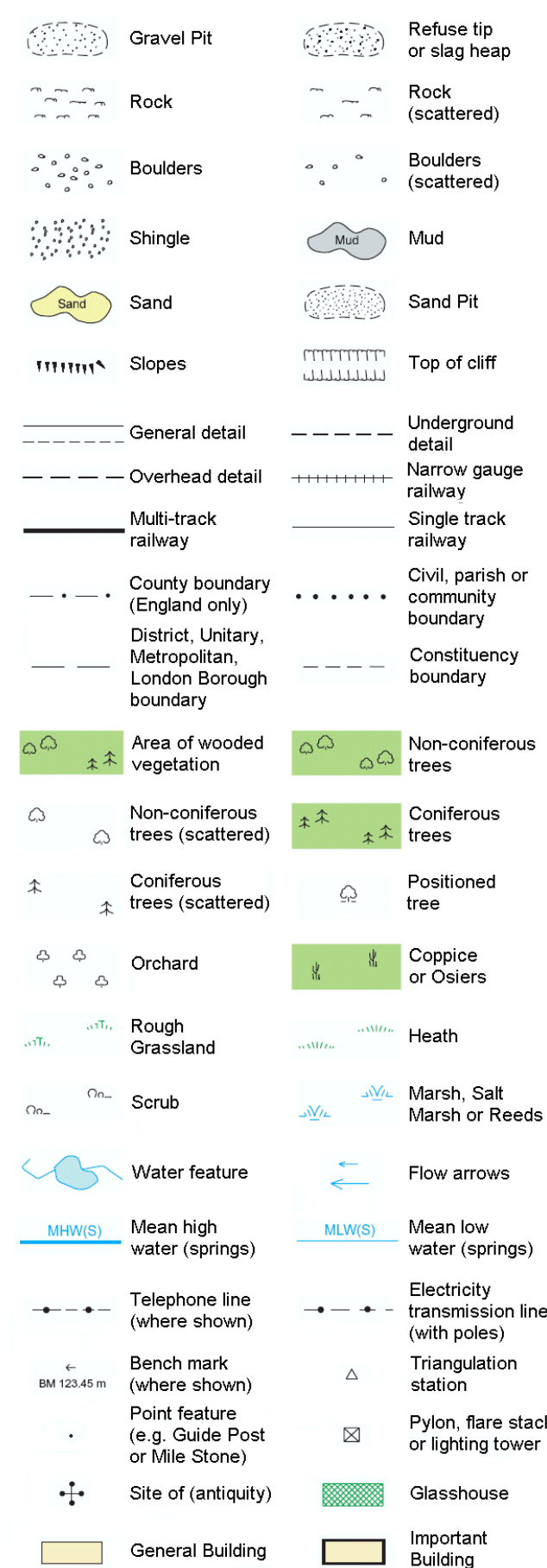
Ordnance Survey County Series 1:10,560



Ordnance Survey Plan 1:10,000



1:10,000 Raster Mapping



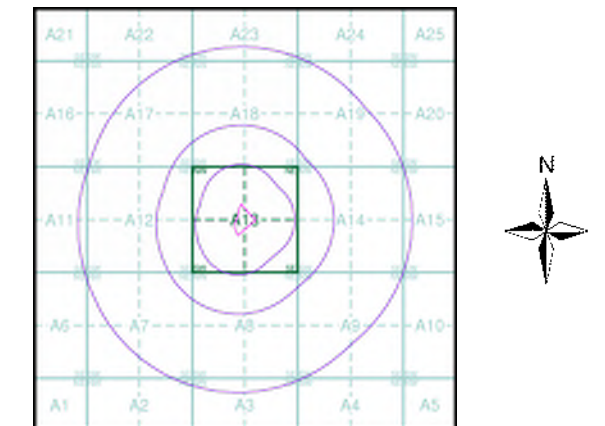
Envirocheck

LANDMARK INFORMATION GROUP

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Carmarthenshire	1:10,560	1885 - 1886	2
Carmarthenshire	1:10,560	1907	3
Carmarthenshire	1:10,560	1938 - 1953	4
Carmarthenshire	1:10,560	1953	5
Ordnance Survey Plan	1:10,000	1964	6
Ordnance Survey Plan	1:10,000	1975 - 1977	7
Ordnance Survey Plan	1:10,000	1983 - 1987	8
10K Raster Mapping	1:10,000	2000	9
Street View	Variable		10

Historical Map - Slice A



Order Details

Order Number: 220157716_1_1
Customer Ref: CC2013
National Grid Reference: 259840, 224050
Slice: A
Site Area (Ha): 1.33
Search Buffer (m): 1000

Site Details

Site at 259850, 224060

Landmark
INFORMATION GROUP

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

Carmarthenshire

Published 1885 - 1886

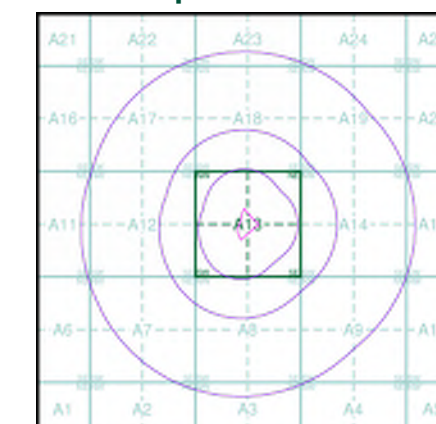
Source map scale - 1:10,560

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)

033NW 1886 1:10,560	033NE 1886 1:10,560
033SW 1886 1:10,560	033SE 1885 1:10,560

Historical Map - Slice A

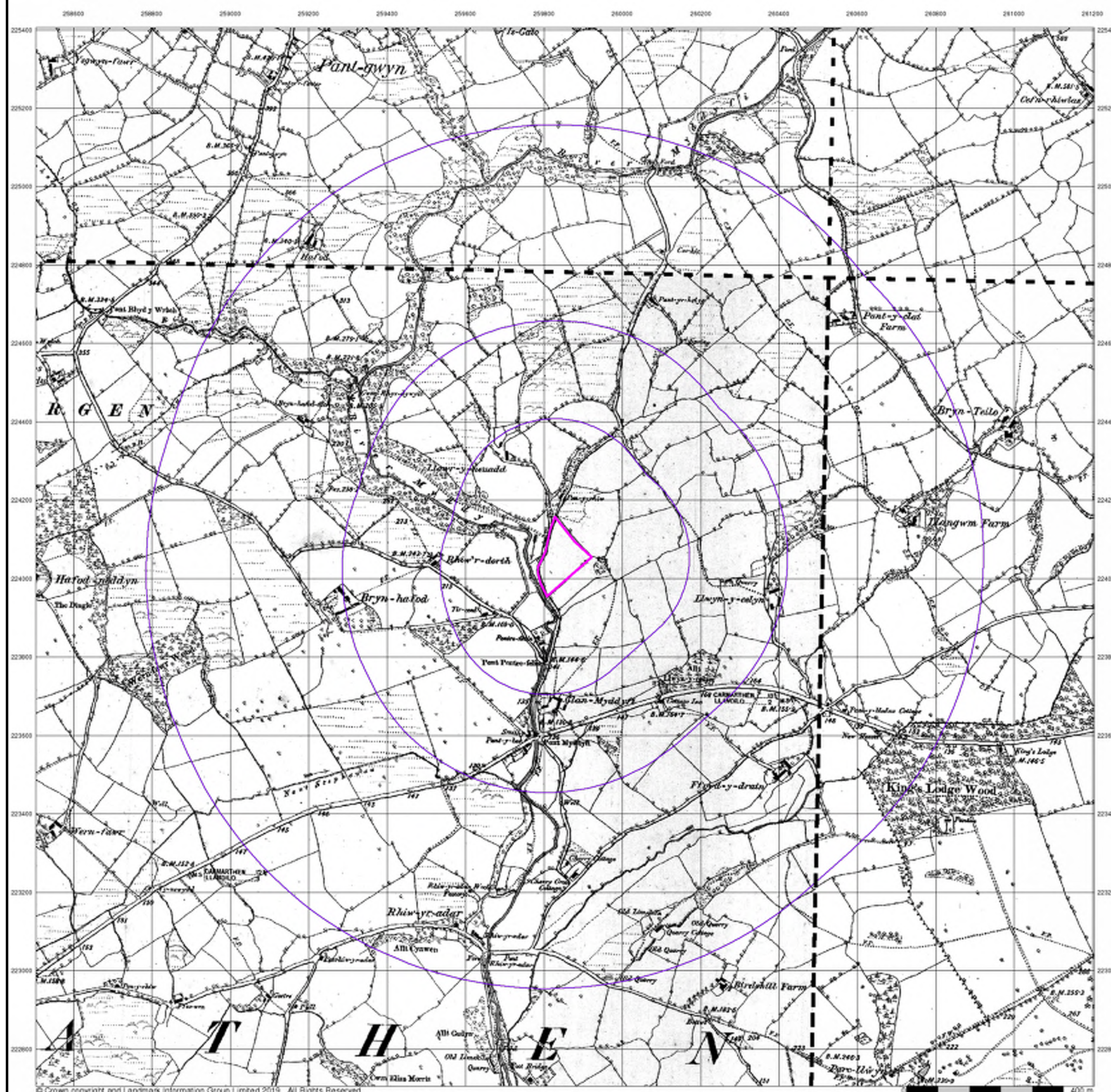


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Site Details

Site at 259850, 224060



Carmarthenshire

Published 1907

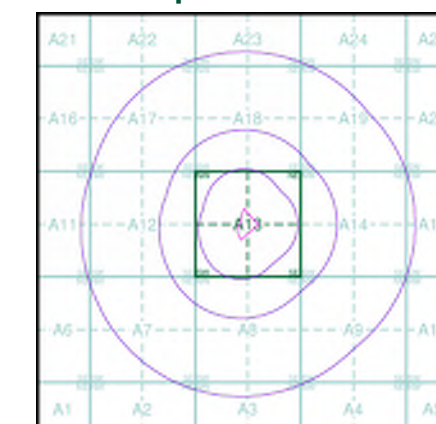
Source map scale - 1:10,560

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)

033NW 1907 1:10,560	033NE 1907 1:10,560
033SW 1907 1:10,560	033SE 1907 1:10,560

Historical Map - Slice A

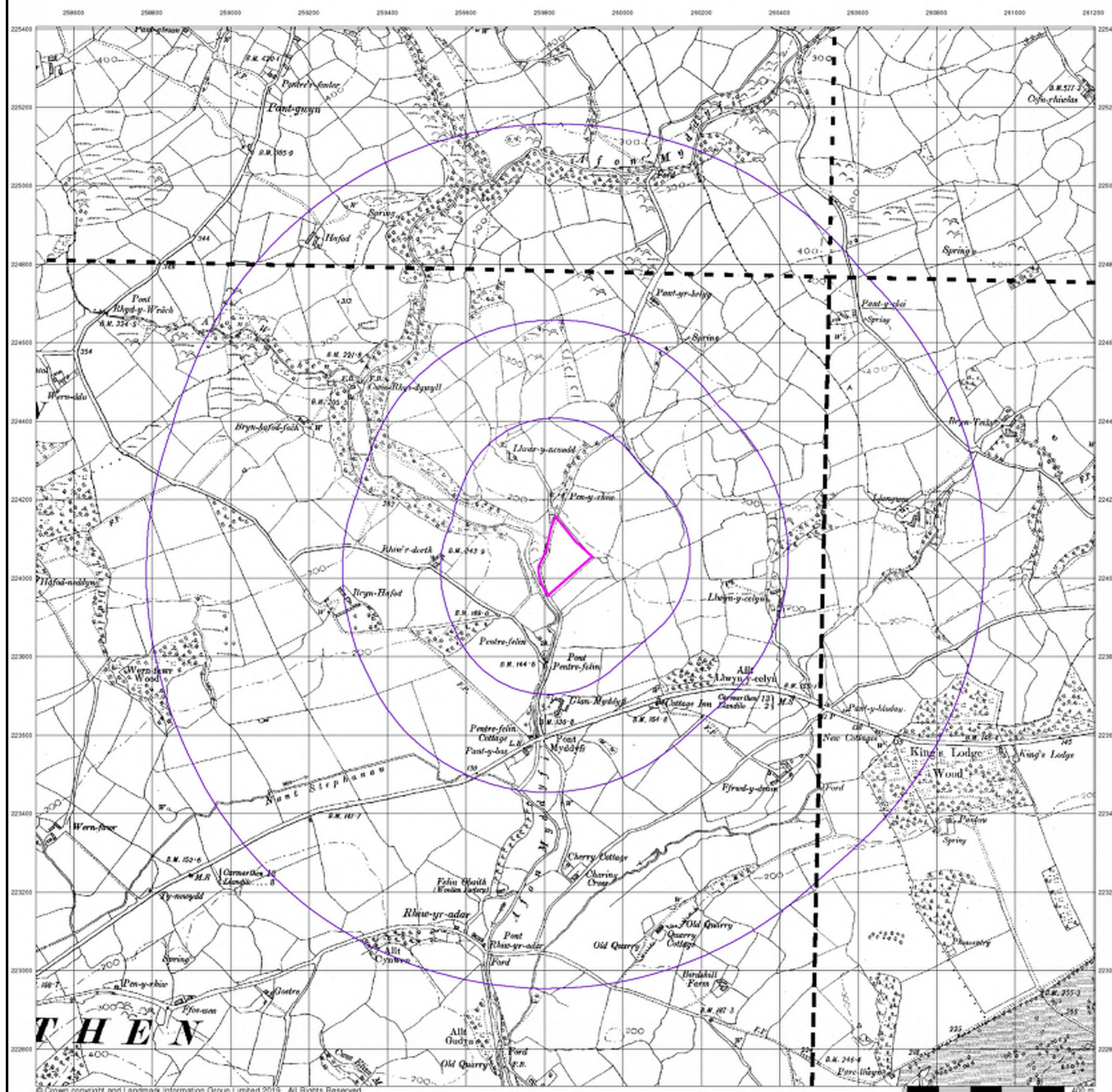


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Carmarthenshire

Published 1938 - 1953

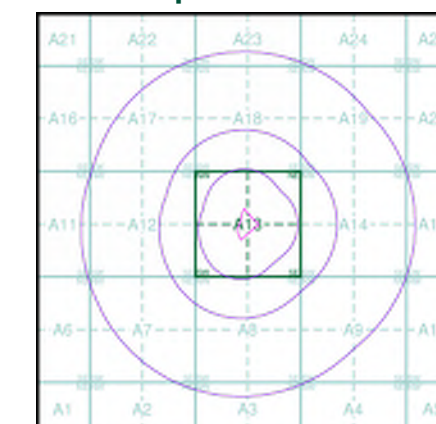
Source map scale - 1:10,560

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Map Name(s) and Date(s)

033NW 1952 1:10,560	033NE 1952 1:10,560
033SW 1953 1:10,560	033SE 1938 1:10,560

Historical Map - Slice A

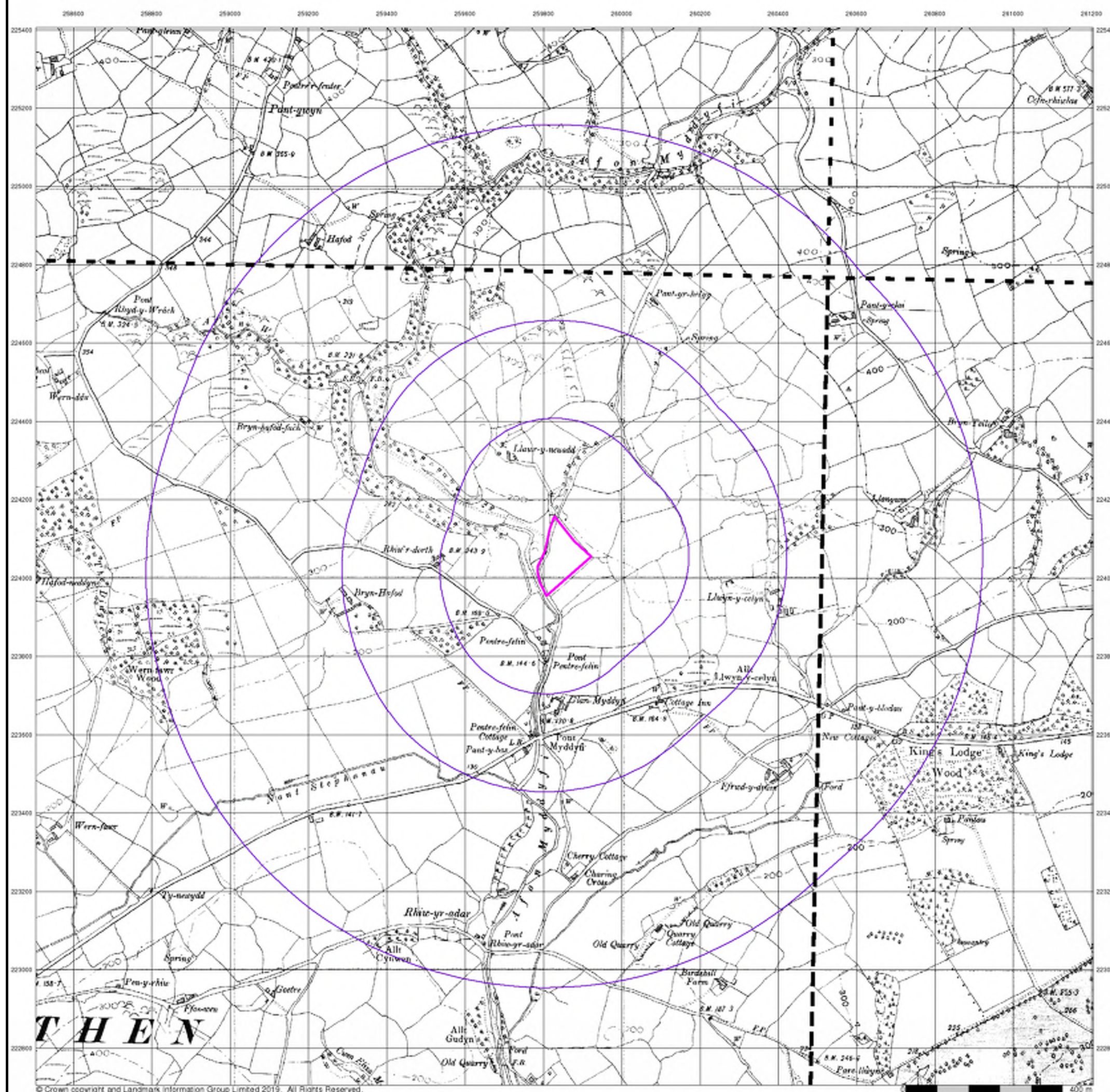


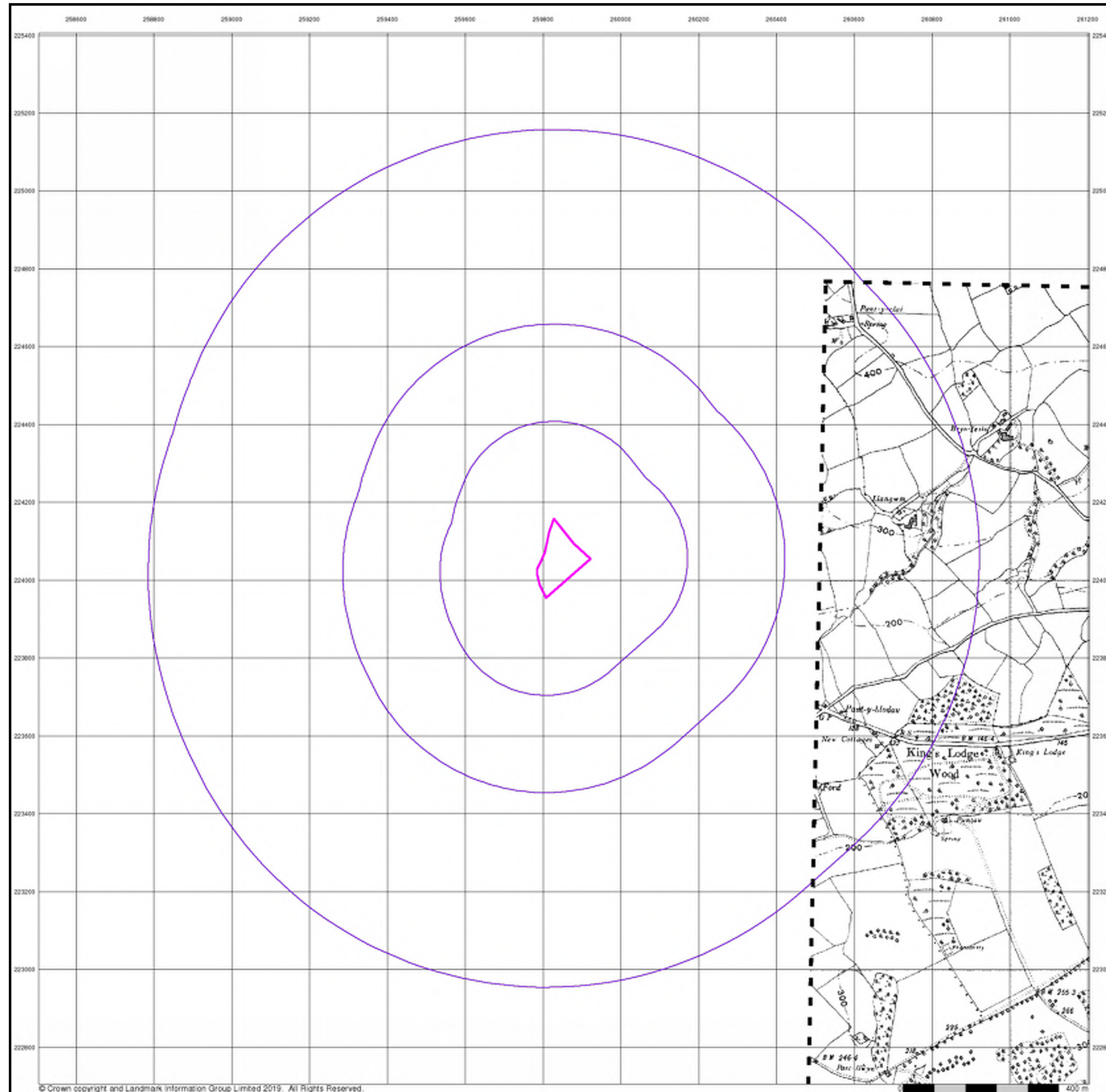
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Site Details

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Envirocheck®

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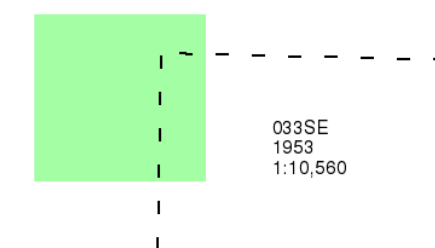
Carmarthenshire

Published 1953

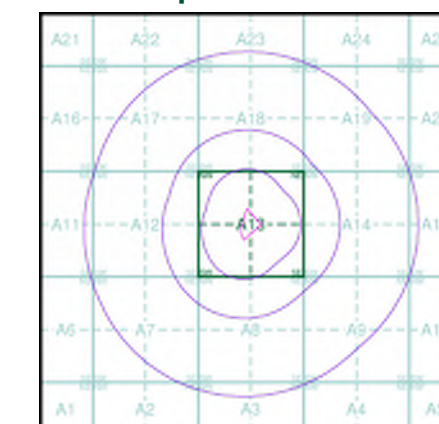
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



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

Ordnance Survey Plan

Published 1964

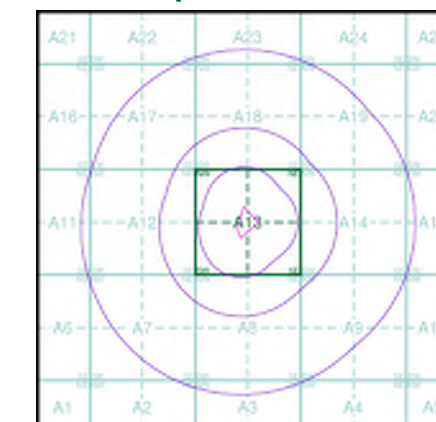
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Map Name(s) and Date(s)

SN52NE	SN62NW
1964	1964
1:10,560	1:10,560
SN52SE	SN62SW
1964	1964
1:10,560	1:10,560

Historical Map - Slice A

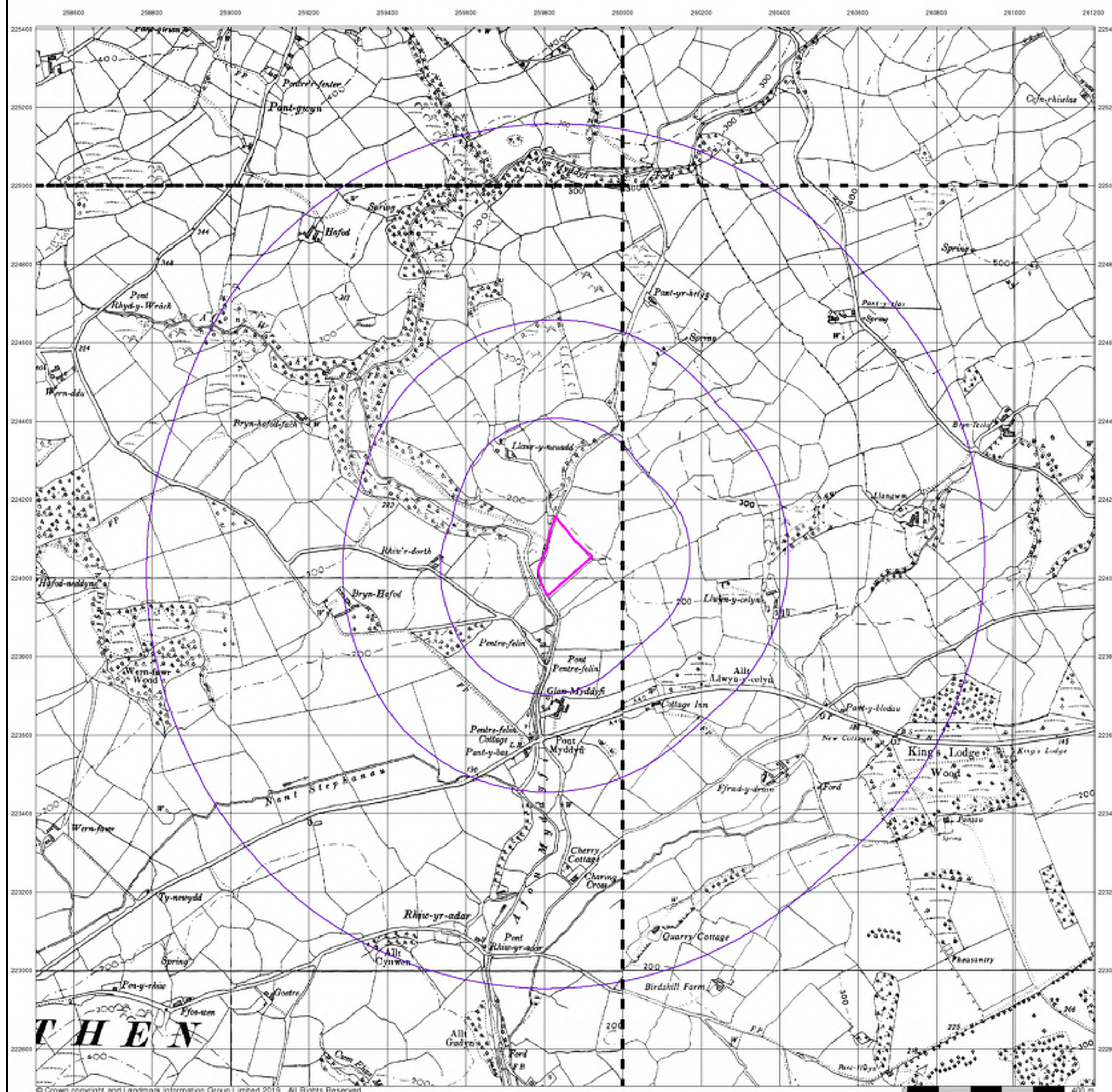


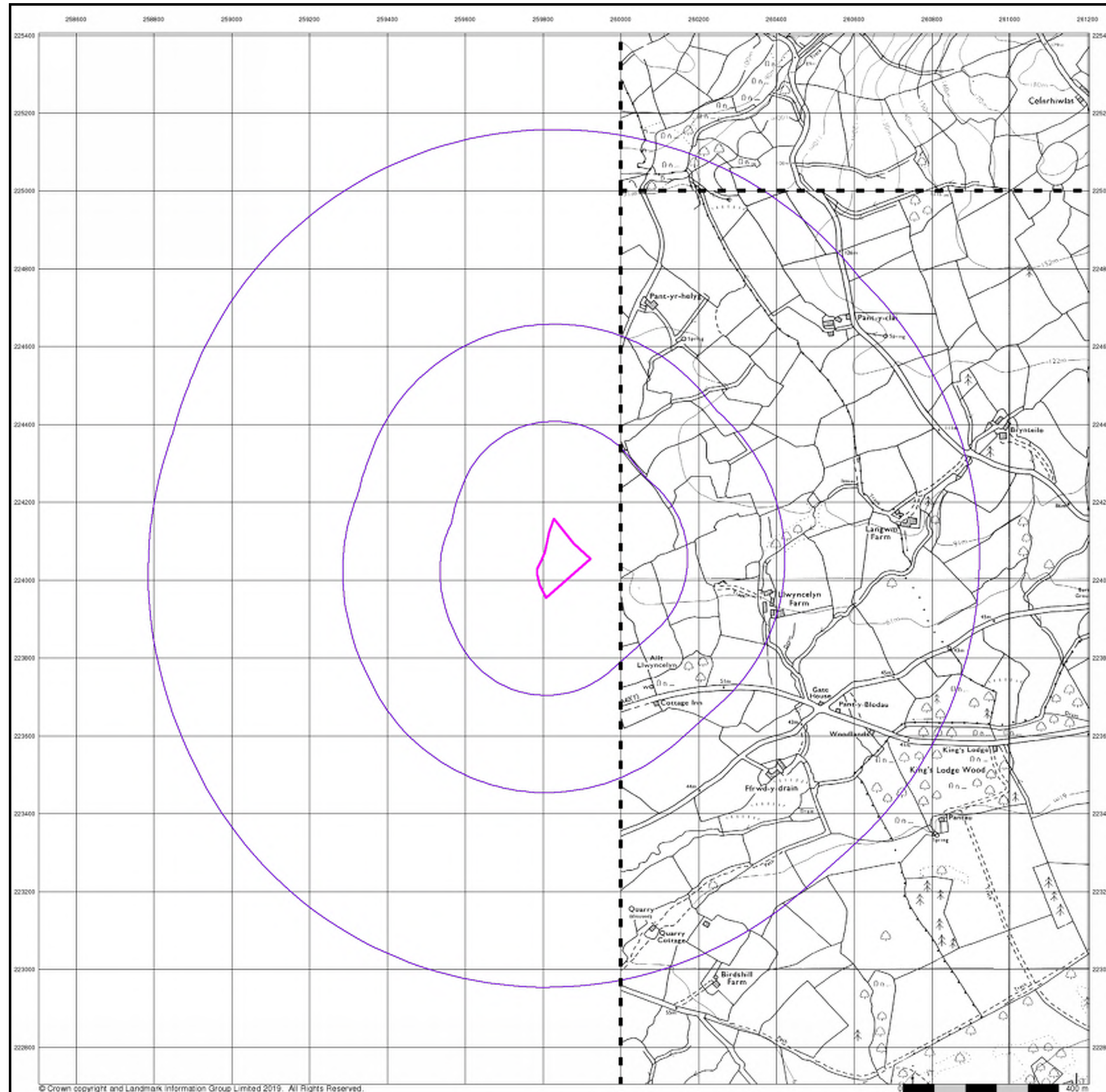
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 Slice: A
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Site Details

Site at 259850, 224060





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Ordnance Survey Plan

Published 1975 - 1977

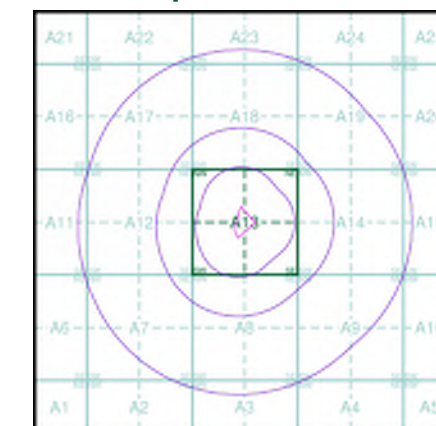
Source map scale - 1:10,000

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Map Name(s) and Date(s)

SN62NW	1977	1:10,000
SN62SW	1975	1:10,000

Historical Map - Slice A



Order Details

Order Number: 220157716_1_1
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National Grid Reference: 259840, 224050
Slice: A
Site Area (Ha): 1.33
Search Buffer (m): 1000

Site Details

Site at 259850, 224060

Ordnance Survey Plan

Published 1983 - 1987

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.

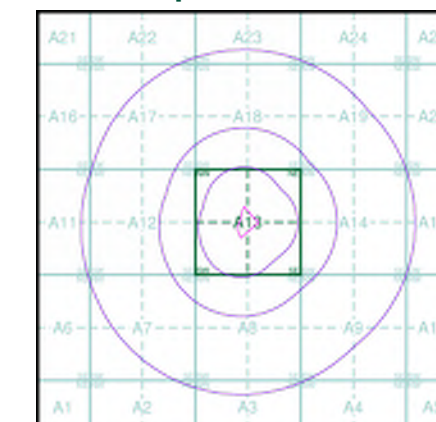
Map Name(s) and Date(s)

SN52NE
1983
1:10,000

SN52SE
1983
1:10,000

SN62SW
1987
1:10,000

Historical Map - Slice A

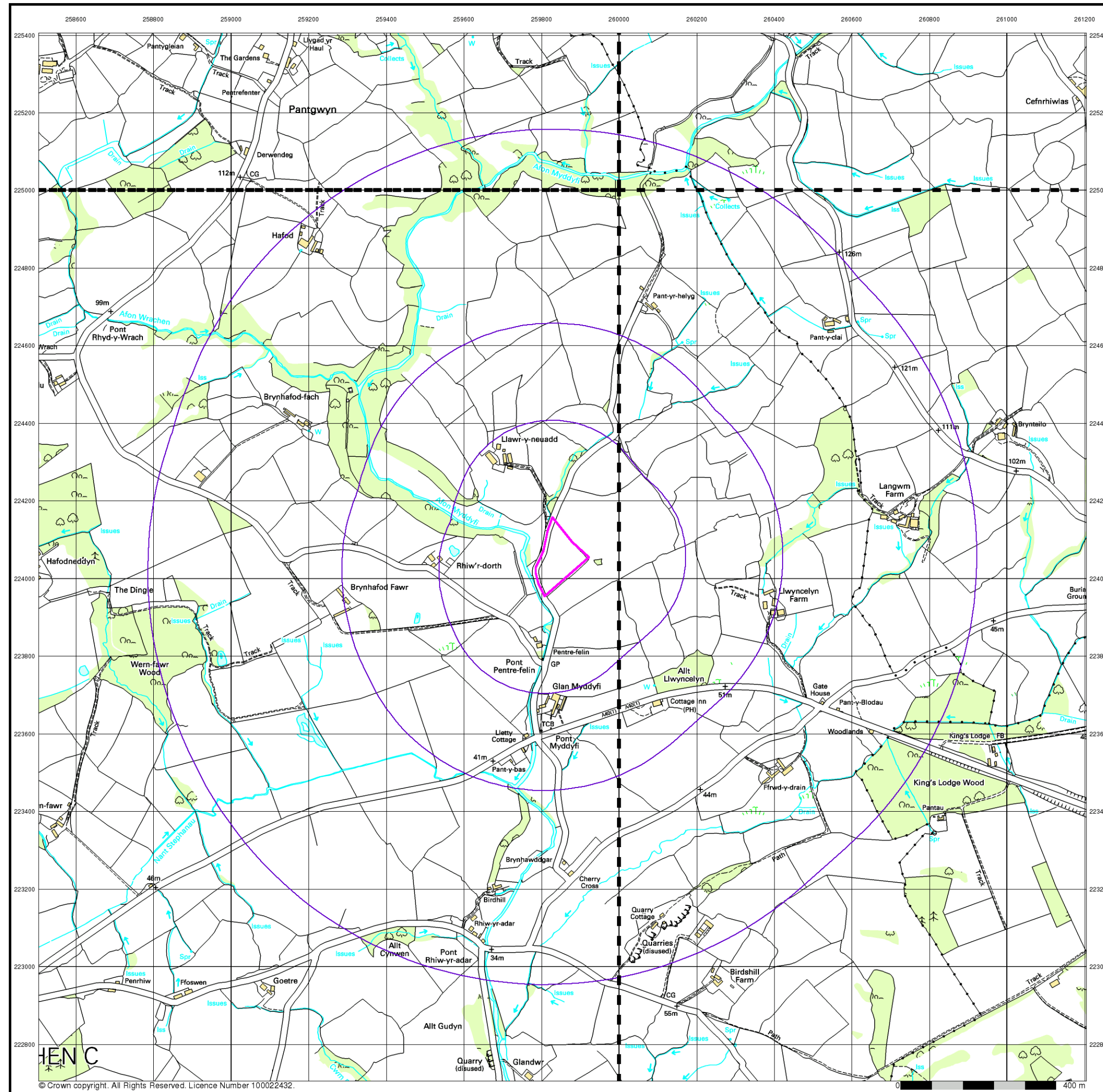


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Site Area (Ha): 1.33
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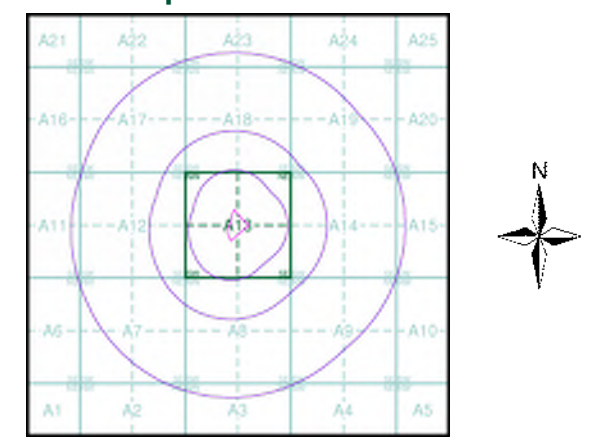
10k Raster Mapping
Published 2000
Source map scale - 1:10,000

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)

SN52NE	SN62NW
2000	2000
1:10,000	1:10,000
SN52SE	SN62SW
2000	2000
1:10,000	1:10,000

Historical Map - Slice A



Order Details
Order Number: 220157716_1_1
Customer Ref: CC2013
National Grid Reference: 259840, 224050
Slice: A
Site Area (Ha): 1.33
Search Buffer (m): 1000

Site Details
Site at 259850, 224060

Street View

Published 2019

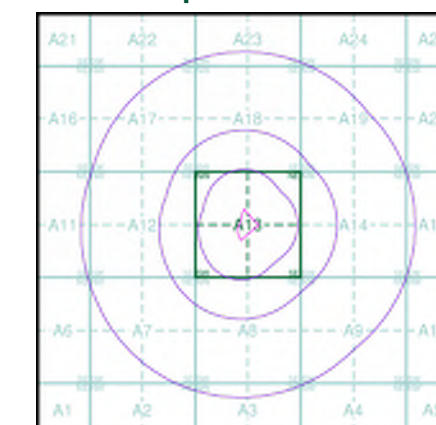
Source map scale - 1:10,000

Street View is a street-level map for the whole of Great Britain produced by the Ordnance Survey. These maps are provided at a nominal scale of 1:10,000

Map Name(s) and Date(s)



Street View Map - Slice A

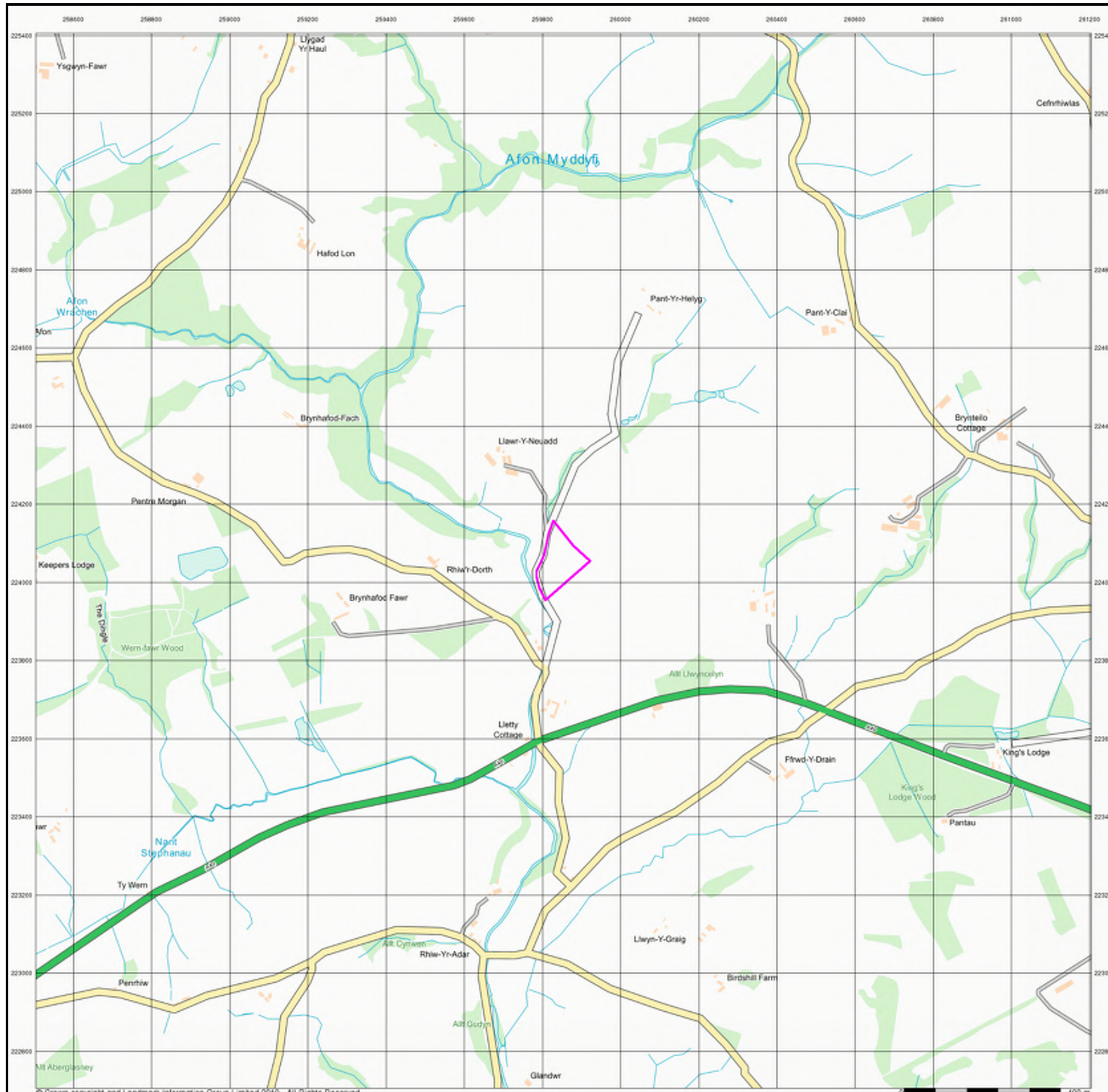


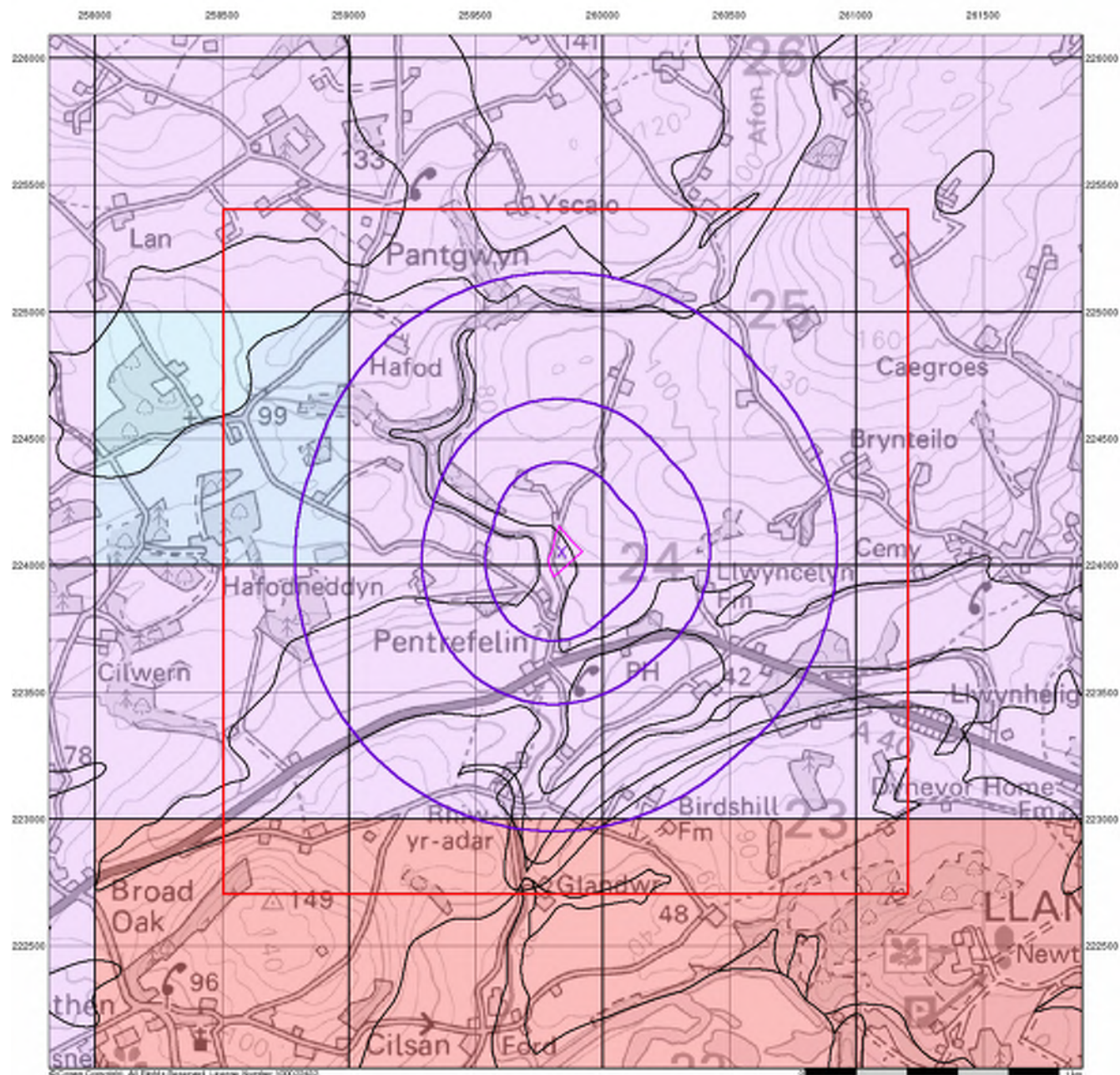
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 Search Buffer (m): 1000

Site Details

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Groundwater Vulnerability

General

- ◇ Specified Site ○ Specified Buffer(s) X Bearing Reference Point
- Slice 8 Map ID

Agency and Hydrological

Bedrock Aquifers

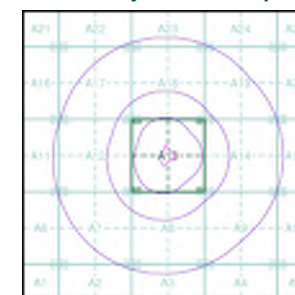
- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

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

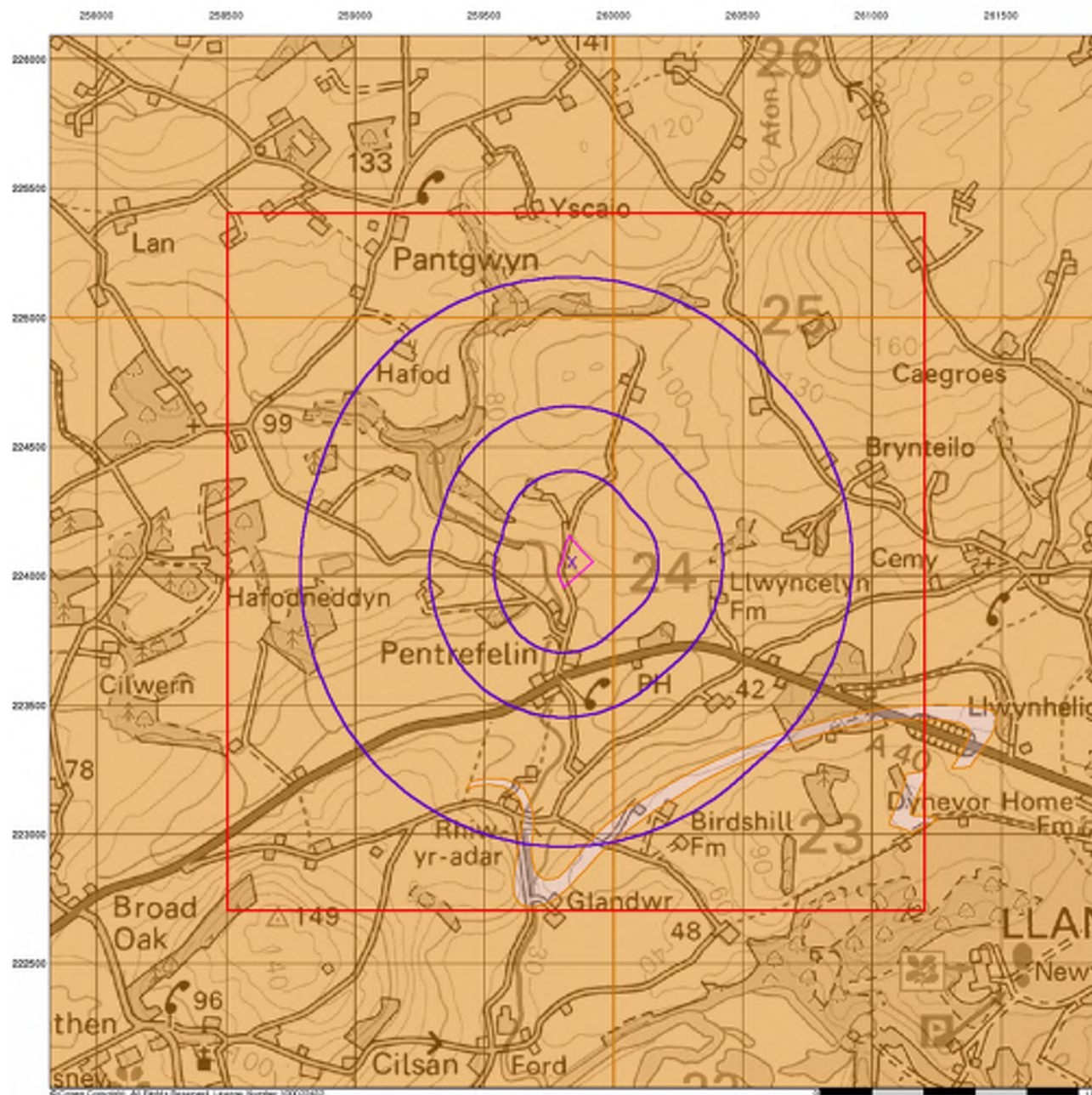


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 Slice: A
 Site Area (Ha): 1.33
 Search Buffer (m): 1000

Site Details

Site at 259850, 224060



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Bedrock Aquifer Designation

General

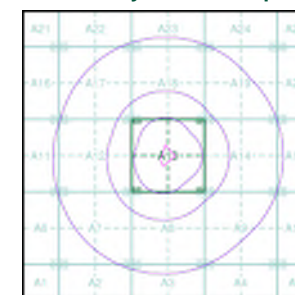
- ◇ Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

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

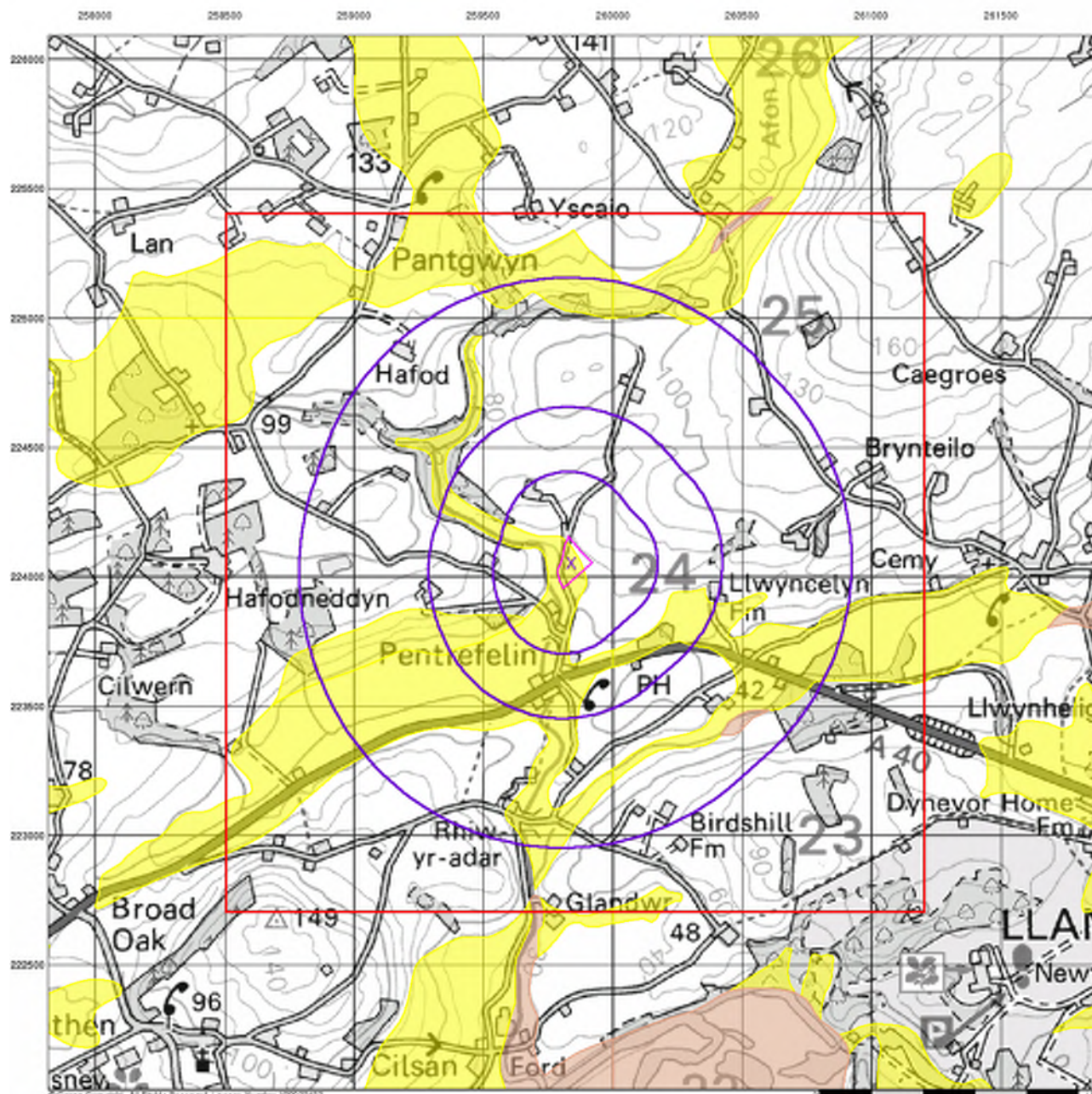


Order Details

Order Number: 220157716_1_1
 Customer Ref: CC2013
 National Grid Reference: 259840, 224050
 Slice: A
 Site Area (Ha): 1.33
 Search Buffer (m): 1000

Site Details

Site at 259850, 224060



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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

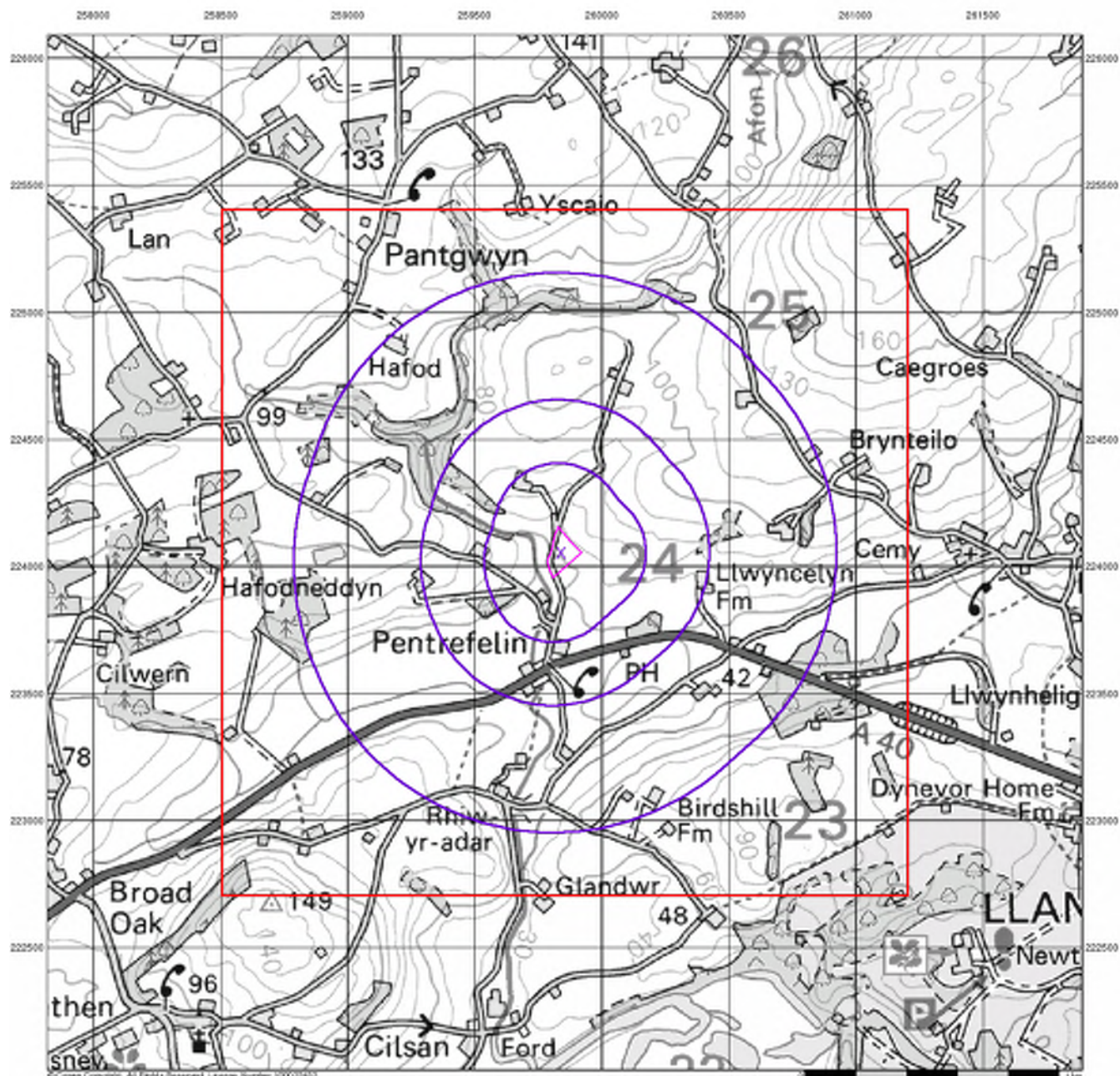
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 Customer Ref: CC2013
 National Grid Reference: 259840, 224050
 Slice: A
 Site Area (Ha): 1.33
 Search Buffer (m): 1000

Site Details

Site at 259850, 224060

Landmark
 LANDMARK INFORMATION GROUP

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



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Source Protection Zones

General

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

Agency and Hydrological

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

Site Sensitivity Context Map - Slice A



Order Details

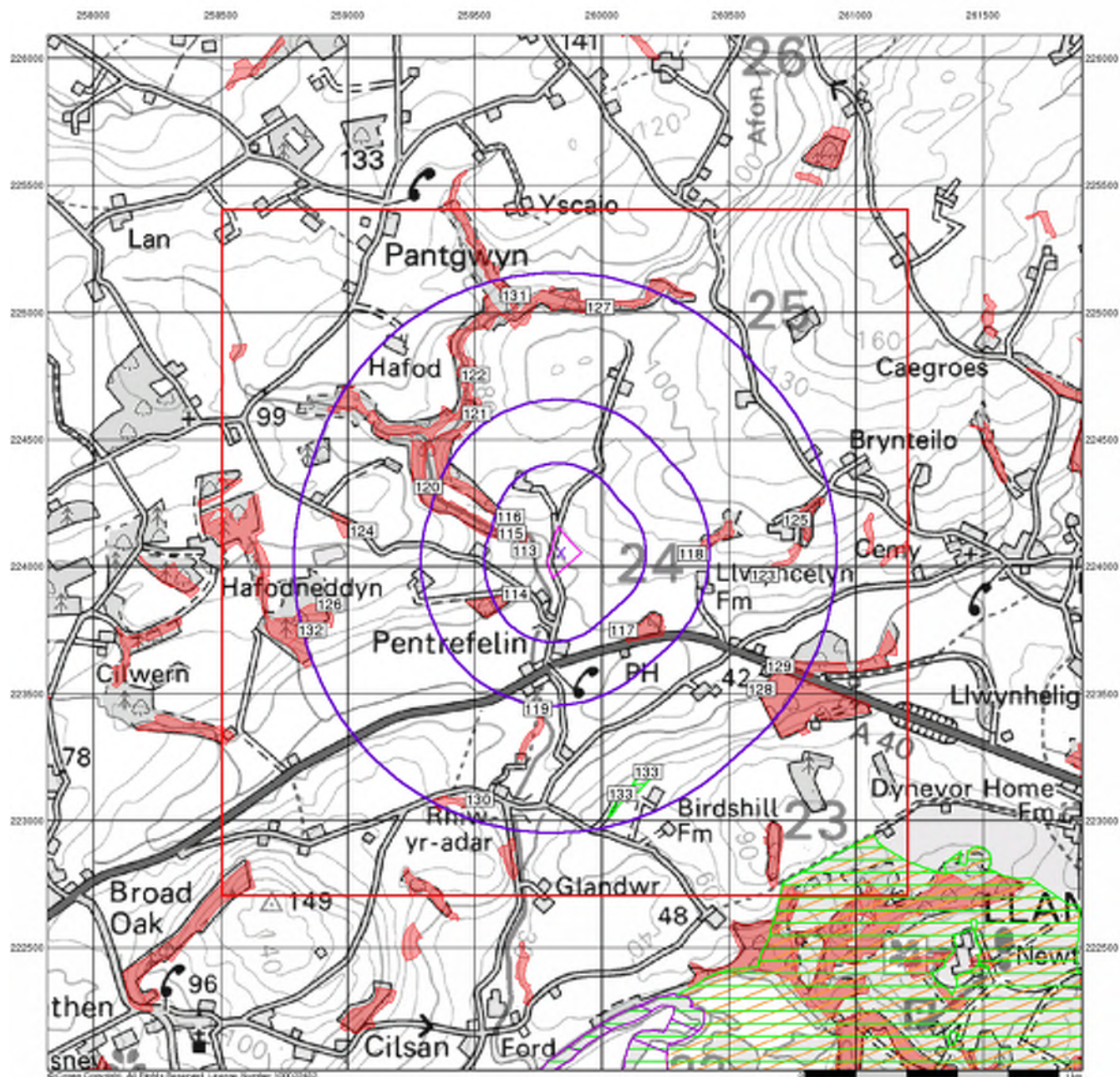
Order Number: 220157716_1_1
Customer Ref: CC2013
National Grid Reference: 259840, 224050
Slice: A
Site Area (Ha): 1.33
Search Buffer (m): 1000

Site Details

Site at 259850, 224060

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Fax: 0844 844 9951
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Sensitive Land Uses

General

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

Sensitive Land Uses

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

Site Sensitivity Context Map - Slice A

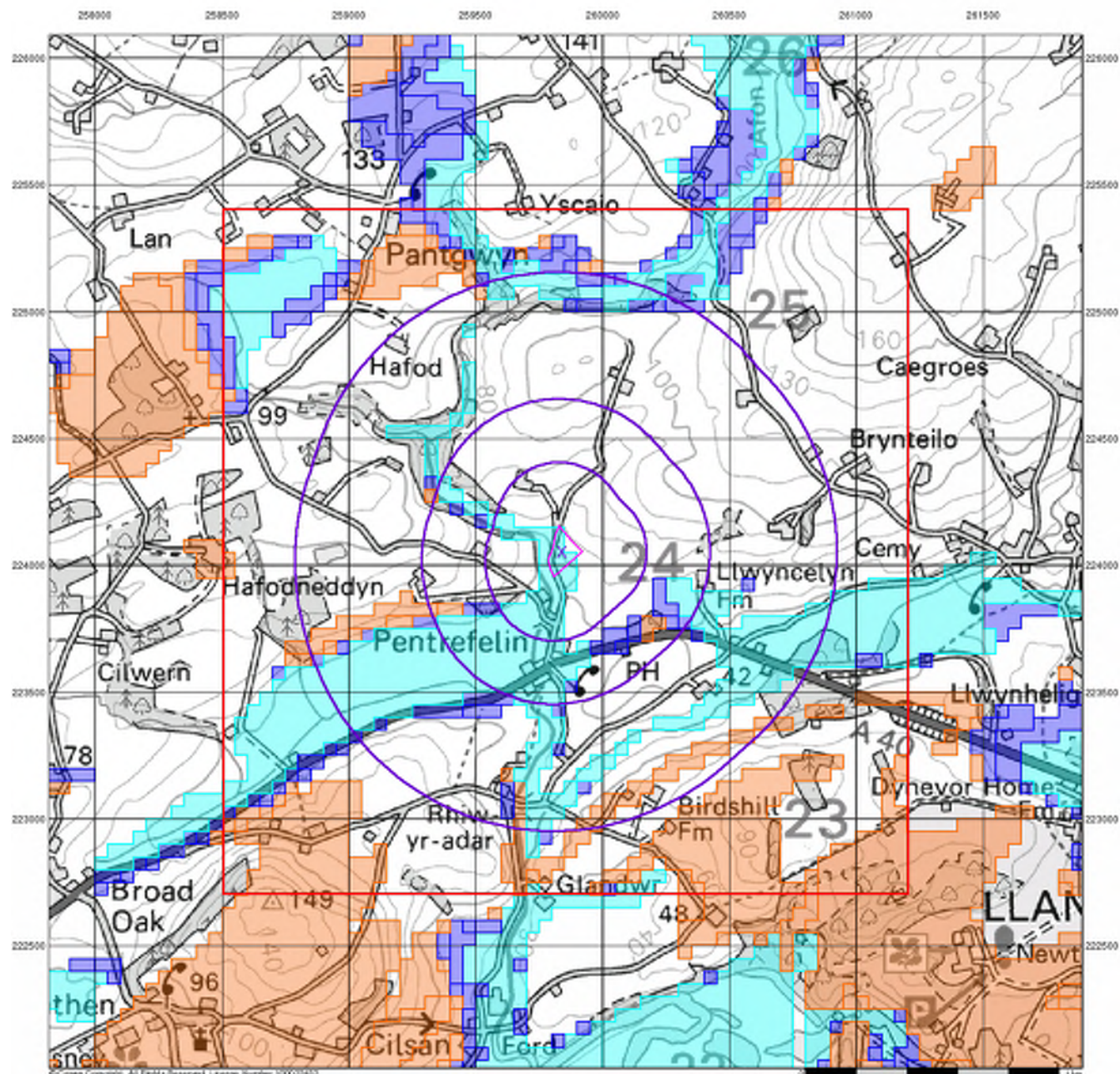


Order Details

Order Number: 220157716_1_1
 Customer Ref: CC2013
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 Slice: A
 Site Area (Ha): 1.33
 Search Buffer (m): 1000

Site Details

Site at 259850, 224060



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BGS Flood GFS Data

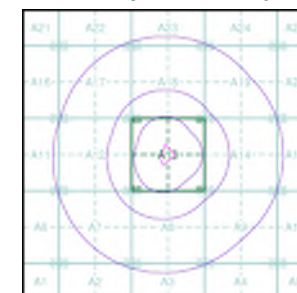
General

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

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: 220157716_1_1
 Customer Ref: CC2013
 National Grid Reference: 259840, 224050
 Slice: A
 Site Area (Ha): 1.33
 Search Buffer (m): 1000

Site Details

Site at 259850, 224060

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General

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

Agency and Hydrological

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

Waste

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

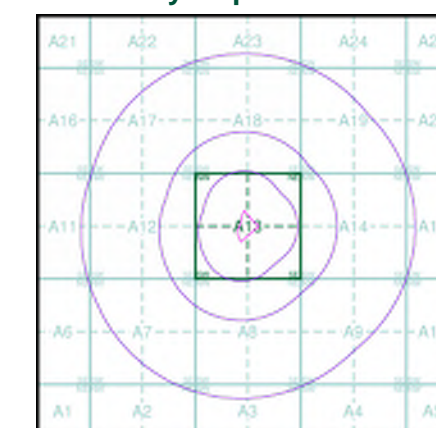
Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Site Sensitivity Map - Slice A



Order Details

Order Number: 220157716_1_1
 Customer Ref: CC2013
 National Grid Reference: 259840, 224050
 Slice: A
 Site Area (Ha): 1.33
 Search Buffer (m): 1000

Site Details

Site at 259850, 224060

Industrial Land Use Map

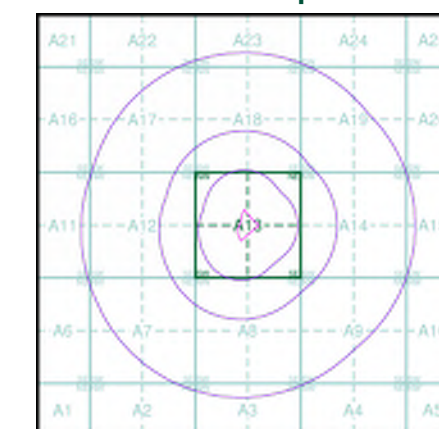
General

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Underground Electrical Cables

Industrial Land Use Map - Slice A

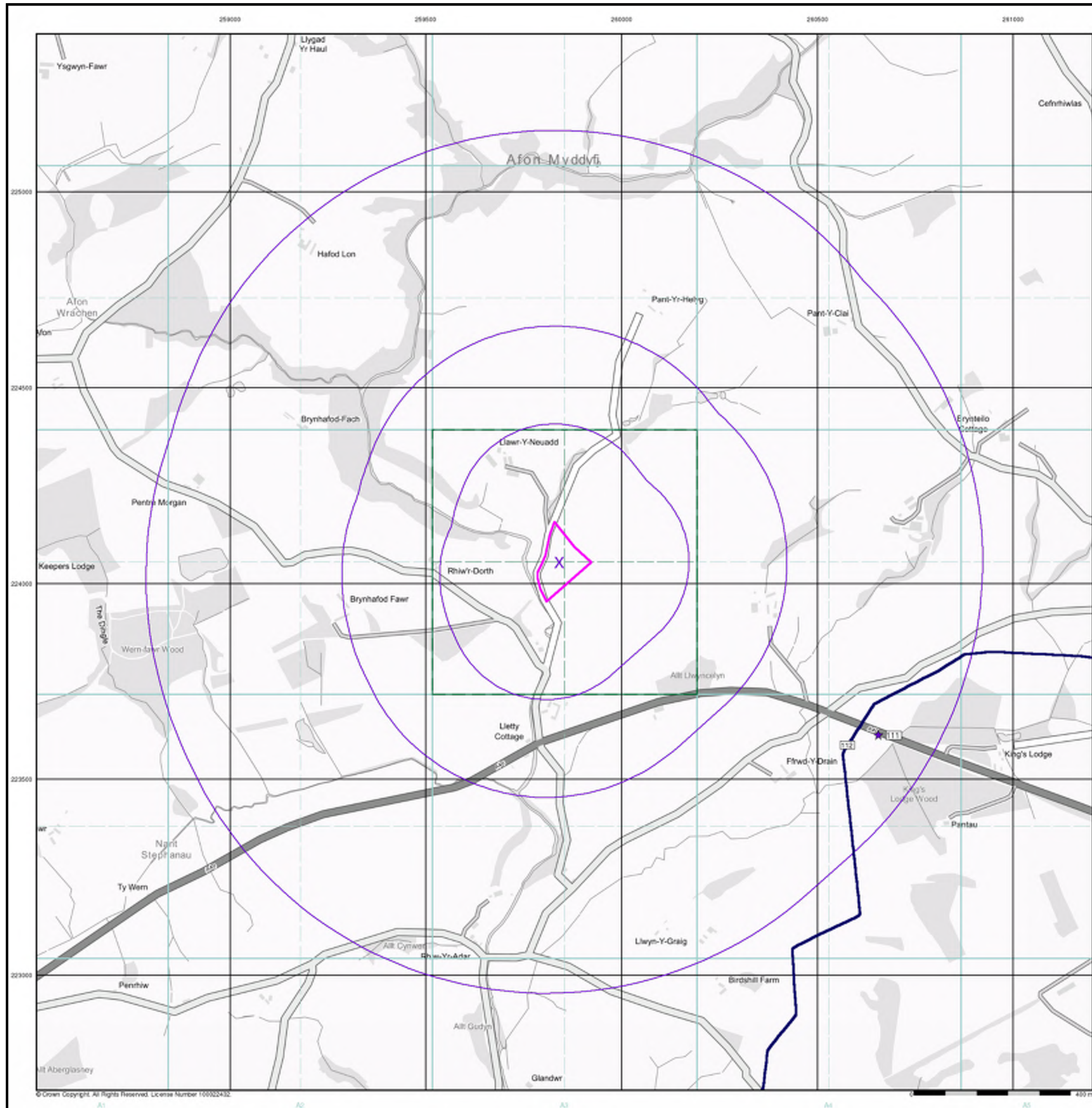


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Site Details

Site at 259850, 224060



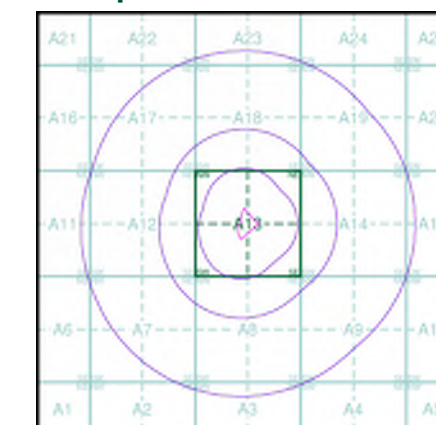
General

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

Agency and Hydrological (Flood)

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

Flood Map - Slice A

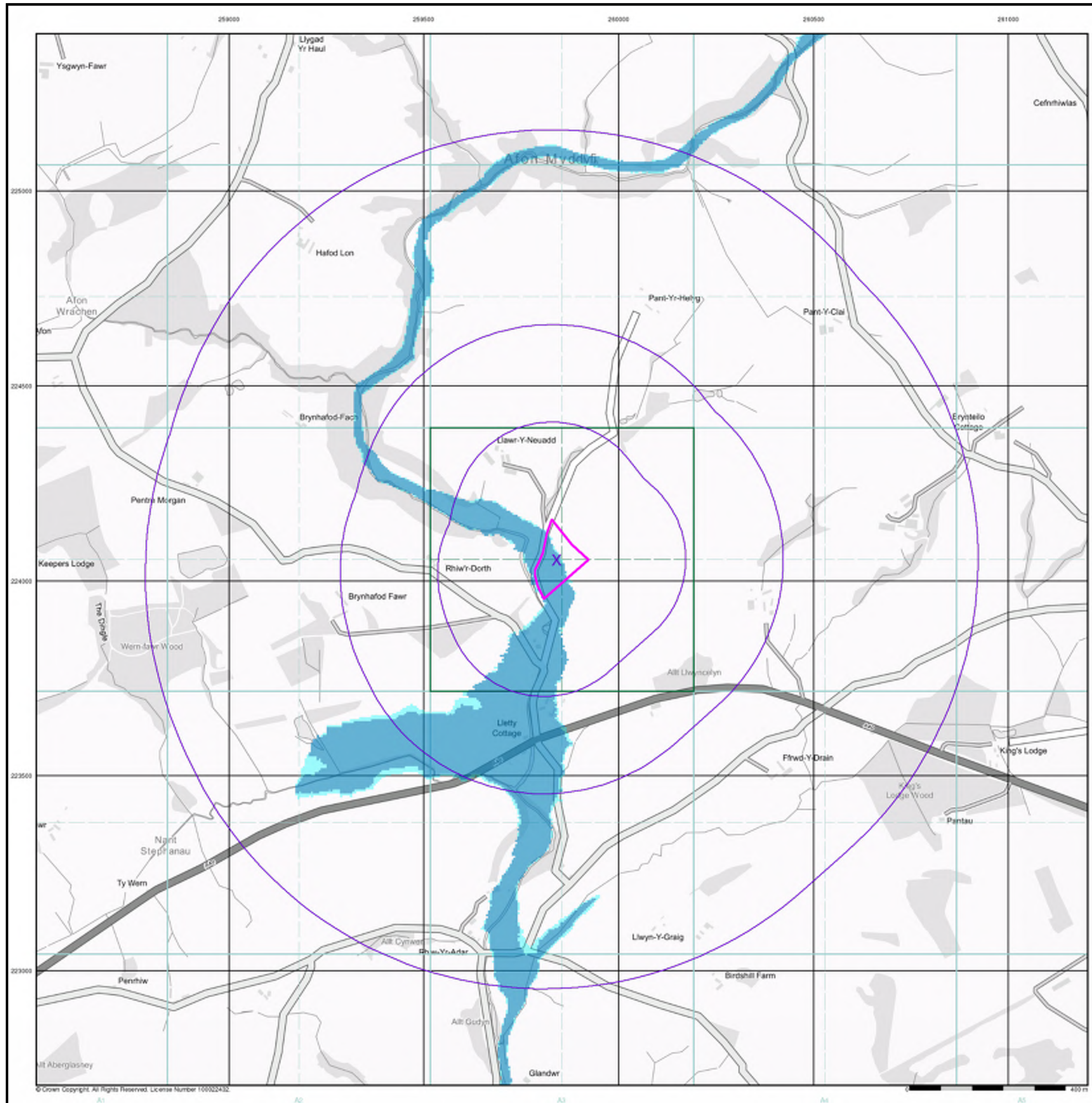


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 National Grid Reference: 259840, 224050
 Slice: A
 Site Area (Ha): 1.33
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Site Details

Site at 259850, 224060



General

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

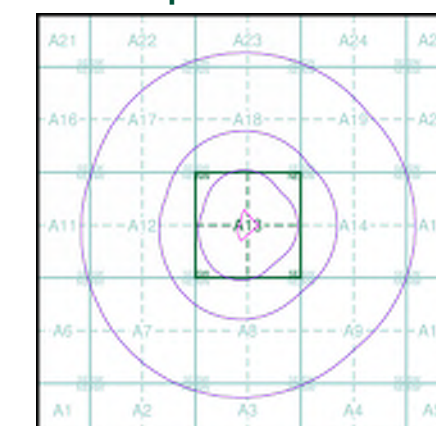
Agency and Hydrological (Boreholes)

- 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: 220157716_1_1
 Customer Ref: CC2013
 National Grid Reference: 259840, 224050
 Slice: A
 Site Area (Ha): 1.33
 Search Buffer (m): 1000

Site Details

Site at 259850, 224060

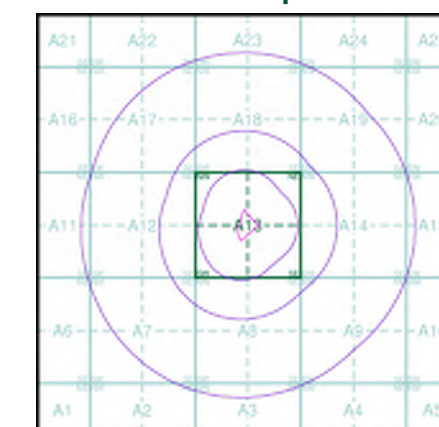
General

- Specified Site
- Specified Buffer(s)
- X 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 |

OS Water Network Map - Slice A

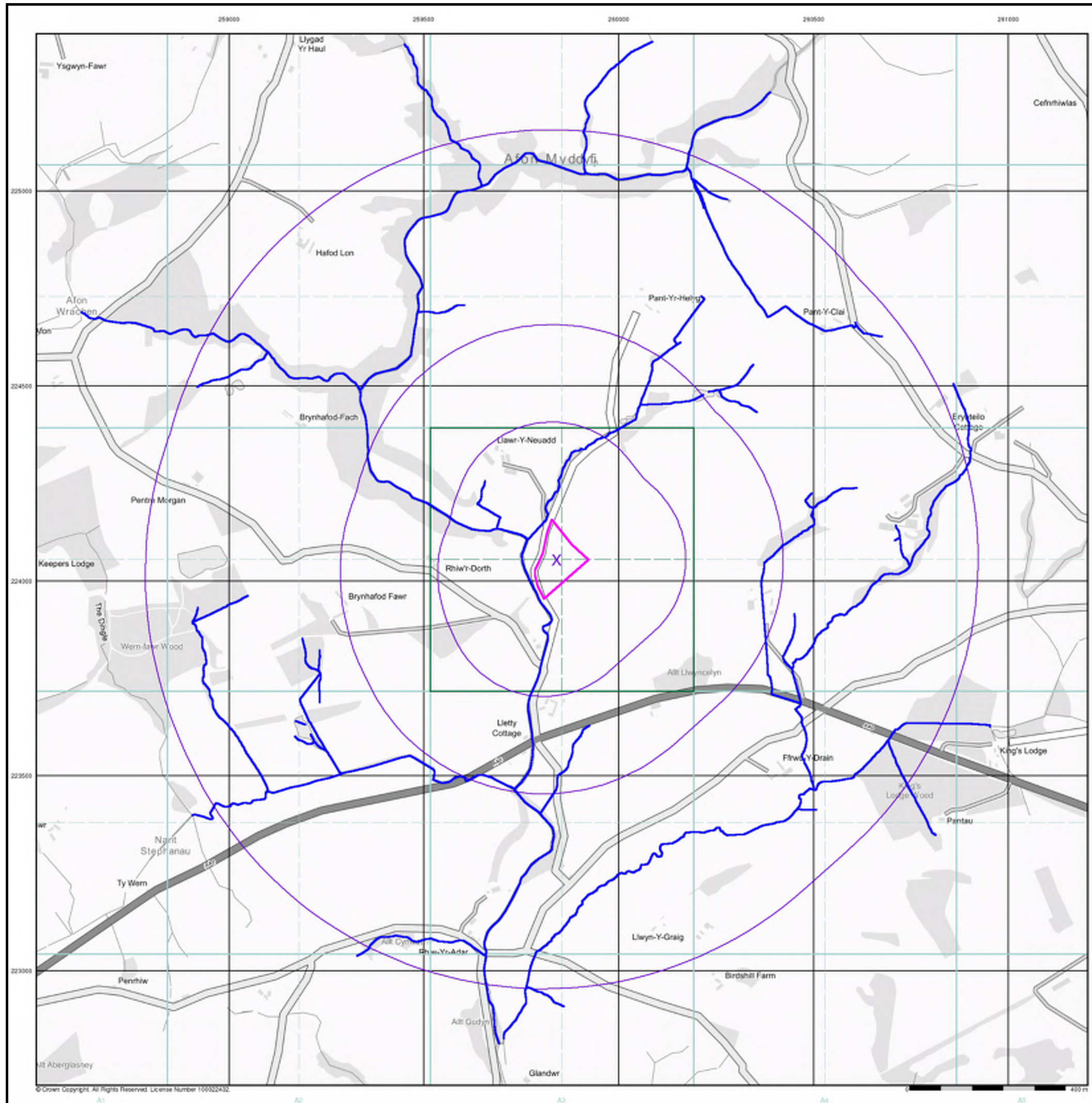


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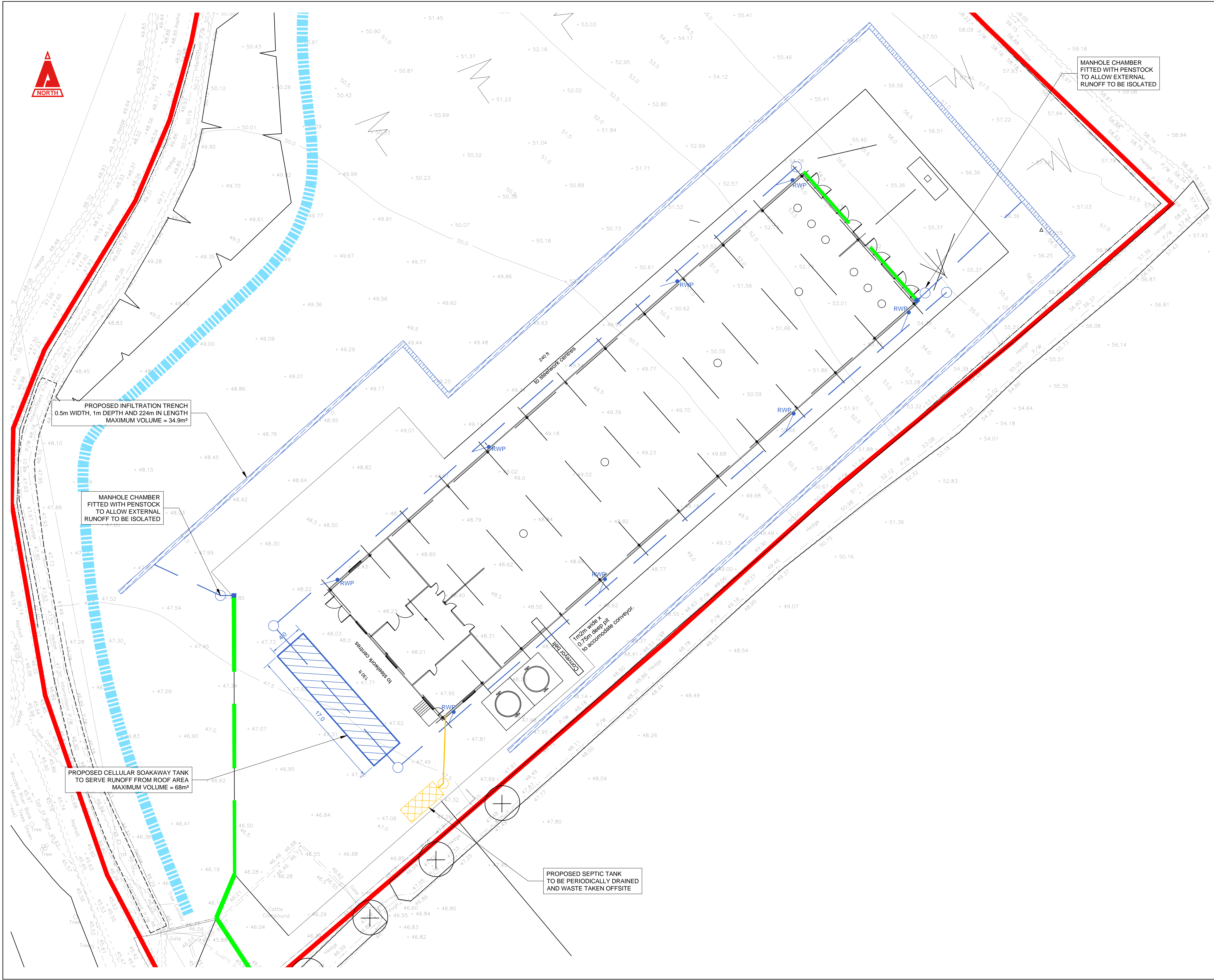
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 Customer Ref: CC2013
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 Slice: A
 Site Area (Ha): 1.33
 Search Buffer (m): 1000

Site Details

Site at 259850, 224060



APPENDIX B – Proposed Drainage Strategy Plan



LINEAR DRAIN

Civil & Structural Engineers
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 [@cambria](https://twitter.com/cambria)
 uk.linkedin.com/in/cambria

APPENDIX C – Pollution Risk Assessment

Water Pollution Risk Assessment

CAMBRIA

Project Ref: CC2013

Project Title: Glan Myddyfi, Pentrefelin

Pollution Source	Receptor	Pathway	Hazard	Risk (Uncontrolled)		Pollution Prevention	Residual Risk
				Likelihood	Severity		
Fuel & Chemical Spills	Glan Myddyfi, between 10-40m away from the site & Afon Tywi 2km south of the site.	Ground water infiltration, overland surface water flows	Pollution of the watercourse with hydrocarbons and chemicals. Damage to downstream river fauna and flora.	2	4	There will no fuels or chemicals stored on the site during its operation. Any refuelling of plant during the construction phase will be undertaken on hardstanding area away from any sensitive areas of the site.	Minimal residual risks.
Silt & Dust	Glan Myddyfi, between 10-40m away from the site & Afon Tywi 2km south of the site.	Overland surface water flows.	Blockages and flooding of surface water infrastructure / flooding. Mobilising suspended solids into neighbouring watercourses	3	3	Temporary lagoons/silt fences will be installed during the works. Dust suppression methods will be employed.	Minimal residual risk, assuming the silt controls are regularly inspected through the duration of the construction works.
Construction Traffic	Glan Myddyfi, between 10-40m away from the site & Afon Tywi 2km south of the site.	Overland surface water flows.	Contaminated solid being transported off site by construction traffic. Run-off entering neighbouring watercourses	3	4	A wheel wash facility will be employed near the site entrance. All washdown drainage will be controlled and removed off site.	No residual risks as long as wheel wash is operated in accordance with best practice.
Flooding	Glan Myddyfi, between 10-40m away from the site & Afon Tywi 2km south of the site.	Flood Waters	Mobilisation of contaminants from range area during flood event.	2	4	An FCA has been undertaken for the site and recommendations adhered to. The proposed surface water drainage infrastructure has been sized for a 1 in 100 year +30% design storm.	Minimal residual risks.

Water Pollution Risk Assessment

CAMBRIA

Project Ref: CC2013

Project Title: Glan Myddyfi, Pentrefelin

Washdown Activities	Glan Myddyfi, between 10-40m away from the site & Afon Tywi 2km south of the site.	Ground water infiltration Overland surface water flows.	Washdown operations could mobilise pollutants into the ground or downstream receiving watercourses.	3	4	The washdown area will be serviced by a sealed dirty water tank and wastewater taken offsite.	Minimal residual risks.
Livestock Range Area	Glan Myddyfi, between 10-40m away from the site & Afon Tywi 2km south of the site.	Ground Water infiltration. Overland flow surface water flows.	Pollution incidents within the range area.	2	4	A 1m deep surface water interception ditch will be installed at the perimeter of the range.	Minimal residual risks.
Foul Drainage	Glan Myddyfi, between 10-40m away from the site & Afon Tywi 2km south of the site.	Groundwater contamination	Sewage waste transported to the groundwater table and ultimately the neighbouring watercourse	1	5	A septic tank will be installed to service the 1 no. WC. Any waste will be taken off site.	Minimal residual risks.

Likelihood Scale; 1 – Very unlikely, 2 – Unlikely, 3 – Likely, 4- Very Likely, 5 Certain

Severity; 1 – Minor damage, 2 – Moderate Damage, 3 – Serious Damage, 4 – Severe Damage, 5 Catastrophic Damage

CAMBRIA

Constructive Thinking

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