



GEOENVIRONMENTAL SITE ASSESSMENT

PROPOSED RESIDENTIAL DEVELOPMENT
AT GWEL Y LLAN, LLANDEGFAN



October 2023
Revision P01

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1.0 Introduction

This report contains a detailed Phase I and II Geo-Environmental Site Investigation for a vacant parcel of land located adjacent to Gwel y Llan, Llandegfan, LL59 5YH. The location and boundary of the site is illustrated on the attached plan contained within **Appendix A**.

This report is required to determine potential contaminated land liabilities, remediation requirements and geotechnical engineering works that will be required as part of the proposed development of a proposed low rise residential development.

The scope of work the following elements:

- Detailed desk study;
- Design of suitable intrusive ground investigation.
- Window sample probe holes
- Mechanically excavated trial pits;
- In-situ geotechnical testing;
- Chemical & geotechnical laboratory analysis;
- Contamination risk assessment & conceptual site model;
- Geotechnical assessment & interpretation; and, Factual and interpretive reporting.

1.1 Proposed Development

The proposed development contains 30 new dwellings consisting of four 2-person 1-bed (2P1B) apartments, thirteen 4-person 2-bed (4P2B) properties, eight 5-person 3-bed (5P3B) properties, a single 7-person 4 bed (7P4B) property and four 3-person 2-bed (3P2B) bungalow, along with a new length of adoptable highway. A copy of the proposed architectural drawings for the site are contained within **Appendix B**.

A snapshot of the proposed development layout is indicated within **Figure 1** on the following page.

Figure 1. Snapshot of Proposed Development Site Layout



1.2 Objectives

The objectives of the Geo-Environmental Investigation are to:

- Review historical plans, geology, hydrogeology, site sensitivity, flood-plain issues, mining records and any local authority information available in order to complete a Desk Study in line with Environment Agency (EA) document Model Procedures for the Management of Contaminated Land (Contaminated Land Report 11 (CLR11));
- Undertake a preliminary stage of sampling and analysis to provide an overview of environmental issues identified.
- Assess the implications of any potential environmental risks, liabilities and development constraints associated with the site in relation to the future use of the site and in relation to off-site receptors.
- Assess the geotechnical information and provide preliminary recommendations in relation to foundations, pavement construction and floor slabs; and,
- Provide recommendations regarding future works required.

2.0 Phase I (Desktop and Walkover Survey)

Table 1. Existing Site Details

OS Grid Reference:	SH 56841 74257
Easting (X)	256841
Northing: (Y)	374257
What3Words:	mistress.trudges.shopper
Site Area:	9,863.971m ² - (0.99 Ha)

2.1 Walkover Observations

A walkover survey of the site has been undertaken as part of the Phase I site investigation and a description of the findings are provided within **Table 2**. As part of the walkover survey all boundaries and site features were photographed for reference, a plan indicating the location and direction of each photograph along with a plan containing all referenced photographs is contained within **Appendix C**.

Table 2. Existing Site Details

Current Use:	Existing vacant open parcel of land current unutilised.
Structures:	There are no structures within the site, however there are overhead cables and utility poles running longitudinally through the centre of the site with a transformer located on the easternmost utility pole.
Access	There is a gated access to the site from Gwel Y Llan residential housing estate Aswell as a gated access off a private track on the eastern corner of the site, Millbank Estate Road also terminates at the south-eastern boundary of the site with numerous trees located between the site and the highway. There is also a public footpath which runs between Gwel Y Llan and the private trackway with a kissing gate located on either side.
Retaining Structures:	There are no retaining structures within the site or along its boundaries.

Surface Cover:	Buildings:	0%
	Hardstanding:	0%
	Permeable:	100%
Vegetation / Ecology:	The south-eastern boundary between the site and Millbank Estate and the north-eastern	
Hazardous Material Storage:	No Above Ground Storage Tanks (AST) or Underground Storage Tanks (UST) were observed at the site during the preliminary site walkover. As the site is a greenfield development there is limited risk of hazardous material, however there is evidence of some fly tipping adjacent to the northern boundary of the site.	
Asbestos Containing Material (ACM)	Based on the sites greenfield nature it is not likely that ACM will be encountered within the site.	
Drainage	There is an existing foul sewerage system that crosses the site from the access to Gwel Y Llan running in a north-eastern direction crossing the private track to a chamber located within the opposite field. There is also a surface water drainage system located within the Gwel Y Llan development which includes a flow control system and storm water storage in the form of oversized pipework.	

The site boundaries and land beyond where also assessed as part of the walkover survey, a description of the findings is provided within **Table 3**.

Table 3. Site boundaries and surrounding land uses

North-east	The northeastern boundary of the site is bounded by a private trackway which spans the entire length of the boundary providing access to two dwellings to the north of the site, beyond the trackway are several fields used for agriculture. The boundary itself is formed by a dry stone wall, fronted by a timber post and wire fence, the majority of the wall is encased within a hedgerow and there are several mature trees along the length of boundary.
South-east	The southeastern boundary of the site is bounded the gable end of number 23 & 24 Millbank Estate both properties face each other with an adopted highway between. The boundary itself is formed by a timber post and wire fence hidden within a variety of mature trees and hedges.
South-west	The southwestern boundary of the site is bounded by the rear gardens of number 6 – 14 Gwel Y Llan, a housing development constructed in 2004, the boundary itself is formed by a timber post and wire mesh fence fronting a timber Panel fence. Number 12's rear fence is missing, assumed to have collapsed as one Panel remains which leans towards the site. As noted in Table 2, there is a gated access into the site from the turning head of Gwel Y Llan located along the boundary between number 7 & 6.
North-west	The northwestern boundary is bounded by another agricultural field, this boundary is predominantly undefined with the remains of a dry-stone wall which is collapsed, there are also some small trees located along the boundary, the north corner of the site on the north-western boundary is bounded by a residential property with a timber post and wire mesh fence, the boundary is heavily vegetated beyond this fence with several mature trees.

2.2 Site History

A full set of the site historical maps has obtained as part of the full site landmark envirocheck report, each of these maps are summarised within **Table 4** below and the use and changes between each map is noted. A full copy of each map is contained within **Appendix D**.

Table 4. Site Historical Maps

Map Edition	Historical Land Use Historical Map Extract
1889 - 1890 1:2,500	The site formed part of a larger field referenced 368 which includes public footpath running through the centre to the trackway. No part of Millbank has been constructed.
1914 1: 2,500	Building constructed opposite the school 200m south-west of the site. No change to the site.
1938 - 1953 1:10,560	Trem Arfon estate constructed adjacent to the school. No change to the site.
1963 1:10,000	Large development of residential at Bro Llewelyn properties 250m south-west of the site. No change to the site.
1969 - 1970 1:2,500	Further development of Bro Llewelyn, start of Glan Y Feling located 250m south of the site. No change to the site.
1969 - 1988 1:2,500	Majority of Milbank Estate constructed. No change to the site.
1988 – 1989 1:2,500	Millbank Estate appears to have been complete. No change to the site.
1993 1:2,500	No change to the site.
2000 1:10,000	No change to the site.
2006 1:10,000	Gwel Y Llan Development constructed (completed in 2004) and field divided to only include the site as indicated today.
Current	No change to the site.

2.3 Potential Contamination

As the site is a greenfield development there is little risk for contamination within the soil on site, however the landowner confirmed that the contractor developing the adjoining site Gwel Y Llan, used a small area of the site as a compound during construction of Gwel Y Llan, therefore there is a potential for some contamination from fuel spills or waste material.

There could also be a potential risk of the normal background concentrations (NBCs) of contaminant distributed within soil to exceeds the guideline allowance, the expected values of NBC's from the BGS records are provided within **Table 5**.

Table 5. Normal Background Concentrations (NBCs)

Contaminant	Concentration
Arsenic	<15 mg/kg
Cadmium	<1.8 mg/kg
Chromium	60 – 90 mg/kg
Lead	<100 mg/kg
Nickel	15 - 30 mg/kg

There is also the potential for contaminants from isolated fuel spills agricultural pesticides used on the site or fly tipped waste on the site and therefore contamination testing should be undertaken as part of the Phase II intrusive investigation.

2.4 Site Hydrology

The surface water run-off from the site currently flows to a low point within the centre of the site along the line of the public footpath and is expected to pond and slowly infiltrate into the ground before it overtops the north-western boundary and flows in a north-westerly direction towards a open land drainage feature located at the boundary of the adjoining land 150m north-west of the site boundary. The existing above ground flood routing indicating this, is contained within **Appendix E**.

2.5 Flood Risk

The following is a limited flood risk assessment considering sources of flood risk as required by TAN15 and Natural Resources Wales (NRW). The Landmark Envirocheck flood risk assessment maps, derived from the NRW flood maps, for the site is contained **Appendix F**. The Potential sources of flood risk are identified and discussed further within **Table 6**.

Table 6. Limited Flood Risk Assessment

Source	Summary
Groundwater Flooding:	BGS aquifer maps within the Landmark Envirocheck report states the site as being situated within the following aquifer designation, productive secondary b bedrock aquifer - high vulnerability, productive secondary undifferentiated superficial aquifer. the report also confirms there is limited potential for groundwater flooding to occur. Should ground water be encountered during the Phase II intrusive ground investigation, monitoring of the ground water level should be undertaken to determine a level and for any fluctuations.
Fluvial Flooding (Rivers):	There are no major watercourses within the vicinity of the site therefore the site is situated within a 'Zone A' area classified as very low to no risk of flooding from fluvial flooding.
Pluvial Flooding (surface Water and small watercourse)	On the NRW flood and costal risk map there is a small area of ponding indicated within the site, which reflects the comments made in Section 2.5 , there is also indicates the line of the watercourse located 150m north-west of the site, this flooding does not have to be considered within the design as it is the flood risk map and the flooding is only caused by run-off from the development site itself therefore the proposal will resolve this issue.
Flood Risk from the Sea.	The site is located inland and away from the sea therefore there is no risk of flooding.
Previous Flood Studies	We are not aware of any previous flood studies undertaken within the vicinity of the site.

2.6 Utility Services

The Dwr Cymru / Welsh Water (DCWW) apparatus map contained within **Appendix G** indicates there is an existing 225mm Vitrified Clay (VC) foul only public sewer which runs through the site from a chamber referenced: (F2) SH56747207 located in the access into the site at Gwel Y Lan and runs in a north-easterly direction and communicates to a chamber referenced: (F1) SH56748202 located within the field on the opposite side of the private trackway. The Map also indicates a second pipe which crosses the site further north-west which follows the same trajectory as the previously discussed pipe however it is believed that this pipe has been diverted under a section 185 sewer diversion as part of the Gwel Y Llan project as upstream of the site this pipe is indicated beneath properties, furthermore chamber reference: (F7) SH56747208 is indicated with two outfalls, 1 conveying through this pipe and one conveying through the pipe between SH56747207 and SH56748202. The pipe assumed to have been diverted is marked up on the DCWW apparatus map for clarity.

The Dwr Cymru / Welsh Water (DCWW) apparatus map contained within **Appendix G** indicates there is an existing 1200mm concrete surface water run located within the access to the site flowing away from the site, this forms part of the Gwel Y Llan surface water drainage network and acts as storm water storage, with a hydro brake flow control device located further downstream.

The Dwr Cymru / Welsh Water (DCWW) apparatus map contained within **Appendix G** indicates a potable water main located within the footway of the highway in Gwel Y Llan estate, with a washout hydrant located at the access into the site, the size or material of this is not indicated on the DCWW maps but it communicates to a 4" (100mm) UPVC potable water main located beneath at the junction into Gwel Y Llan. There is also a 4" (100mm) UPVC potable water main with a fire hydrant located within the access from Millbank Estate.

The Scottish Power Energy Network (SPEN) Map contained within **Appendix H** indicates there are three high voltage (HV) 32 CU 11kV overhead powerlines that run through the site running in a south-west to north-west trajectory, with three poles, one located adjacent to the south-west boundary which includes a transformer, a second located within the centre of the site, and a third located just beyond the northwestern boundary.

There are a series of low voltage (LV) buried cables within the vicinity of the site serving the surrounding housing developments within the access from Millbank Estate and the access from Gwel Y Llan.

The Wales & West utilities GAS map contained within **Appendix I** indicates there is a low pressure (L/P) 75 PE 150mm ductile Iron (DI) gas main located within the Millbank Estate access. There are no GAS pipes indicated within the Gwel Y Llan estate, this could be an error on the apparatus maps.

The BT Open Reach map indicates there are telecommunication assets within the vicinity of the site, with below ground cables being located beneath the footway of Gwel Y Llan extending to the site boundary, additional there are buried cables within both footways of Millbank estate extended to the site boundary. A copy of the BT Open Reach map is contained within **Appendix J**.

2.7 Ground Gas

The Landmark Envriochek report contained within **Appendix F** indicates that the proposed development is not affected by radon with less than 1% of homes, estimated to be at or above the Action Level. Therefore, no radon protection measures are required for the proposed dwellings.

2.8 Sensitive Land Use

The Landmark Envirocheck report contained within **Appendix F** indicates the location of all sensitive areas within the vicinity of the site, these are summarised below:

- The site is not located within a national nature reserve, the nearest being Cytir Mawr 1.0km north-east of the site.
- The site is not located within 1.0km of a RAMSAR site.
- The site is not located within a special Area of Conservation (SAC) the nearest being 0.78km south of the site at Menai Strait and Conwy Bay.
- The site is not located within a Special Protection Area (SPA) the nearest being Traethr Cymyran 1.9km south-east of the site.
- The site is not located within an area designated as a Site of Special Scientific interest (SSSI), the nearest SSSI to the site is located 0.77km west of the site at Cadnant Dingle or 0.93km south at Glannau Porthaethwy.
- The site is not located within 1.0km of a Nitrate Vulnerable zone.
- There are several accident woodlands within 1km of the site, the nearest being 0.5km south-east abutting the Menai Straits.
- The site is not located within an Area of Outstanding Natural Beauty (AONB) the nearest being 0.3km south of the site, being the Menai straits.

2.9 Site Geology & Superficial deposits

Table 7 & 8 below provides a summary of the geological information obtained from the British Geological Society (BGS) GeoIndex Viewer.

Table 7. BGS Bedrock Geology description

Bedrock Geology	
Bedrock Type:	Granofels and Schist
Description:	<p>Granofels: Strong to extremely strong medium to widely jointed non-foliated fine to coarse-grained GRANOFELS. Weathers to a sandy gravel or gravelly sand. Medium to very low permeability flow is through discontinuities. Includes QUARTZITE, GRANULITE, HORNFELS and AMPHIBOLITE.</p> <p>Schist: Very weak to strong generally widely jointed foliated, often with pronounced mineral layering, medium to coarse-grained SCHIST. Usually shows marked strength anisotropy, stronger normal to foliation. Weathers to gravelly sand or sandy clay. Medium to very low permeability flow is through discontinuities. Includes PHYLLITES.</p>
Foundations:	<p>Granofels: Potentially good foundation conditions but may be dependent on degree of metamorphism and variability of interbedded metamorphic lithologies and associated weathering profiles.</p> <p>Schist: Generally good foundation conditions, but dependent on inherent variability of the schist rock and depth and nature of the weathered zone.</p>
Excavation:	<p>Granofels: Highly weathered zones may be excavatable by hard digging or ripping but blasting usually required for fresher material.</p> <p>Schist: Ripping or blasting required depending on strength along foliations and spacing and orientation of discontinuities.</p>
Engineered Fill:	<p>Granofels: Suitable as selected granular fill if care taken in selection and abstraction.</p> <p>Schist: Variable strengths and durability affect use as engineered fill, but generally suitable as general granular fill if care taken in selection and abstraction.</p>
Site Investigation:	<p>Granofels: Important to determine spacing, orientation and nature of discontinuities, and depth and properties of weathered zone materials.</p> <p>Schist: Important to determine spacing, orientation and nature of discontinuities including foliations, and depth and properties of weathered zone materials.</p>

Table 8. BGS Superficial Geology description

Superficial Deposits Geology – BGS has no information in this area.	
Superficial Deposits Type:	Fine till
Description:	Firm to very stiff or hard slightly gravelly sandy CLAY with interbeds of laminated clay/silt and beds/lenses of sand and gravel. Often fissured, particularly in the upper few metres. Low to high permeability flow dominantly through lenses/interbeds of sand and gravel.
Foundations:	Variable but generally good foundation conditions dependant on shear strength, consolidation characteristics and presence of water-bearing sand and silt layers/lenses. Differential settlement possible where foundations overlap fine and coarse soils.
Excavation:	Easy digging. Excavations likely to require immediate support due to water-bearing layers/lenses of silt, sand, and gravel.
Engineered Fill:	Suitable as general cohesive fill depending on plasticity and water content. Generally, should be placed as soon as possible after excavation and subject to minimum construction traffic when wet.
Site Investigation:	Important to determine deposit thickness and lithological variation, including the presence of laminated silts and clays and water-bearing sand and gravel layers.

The Landmark Envirocheck report contained within **Appendix F** indicates the potential risk of geological based hazards to a development, the result of these searches are noted within **Table 9**.

Table 9. Potential Geological Hazards

Hazards	Risk
Collapsible Ground	Very Low
Compressible Ground	Zero Risk
Ground Dissolution	Zero Risk
Land Slides	Very Low
Running Sand	Very Low
Shrinking or Swelling Clay	Very Low

2.10 Mining Searches

The Landmark Envirocheck report indicates the site is not within a Coal Mining area or a non-coal related mining area.

2.11 Recommendations for Stage 2

In accordance with BS 5930 and forming compliance of the stage 1 desktop study, to fully understand and quantify those potential risks identified, the following intrusive and further investigations are recommended:

- Trial pitting on site to relatively shallow depth to determine the extent of any imported fill and/or the natural strata.
- Using a window sample rig, undertake dynamic probes to depths until refusal to determine the strength of the bedding soils.
- Gather bulk samples from trial pitting tubes from window samples for physical and chemical testing of the ground.
- Undertake porosity testing in accordance with BRE digest 365.

3.0 Phase II (Intrusive Ground Investigation)

The walkover survey and trail pitting ground investigation were undertaken on the 13nd of August 2023, this consisted of 7 No. trail pits excavated to a maximum depth of 1.0m below ground level (bgl). Trail pits were terminated at fairly shallow depth due to the presence of very firm gravelly clay which could not be removed with the 3-tonne excavator.

Additional window sampling and dynamic probe testing has been undertaken by Celtest Limited which consisting of 11 dynamic probe tests taken to refusal, to determine ground bearing capacity, soil samples were also extracted from 11 locations within the site, for laboratory testing.

3.1 Ground Conditions

A total of 10 trail pits were excavated and recorded within the site these are referenced TP1 through to TP10. All trail pits where abandoned due to very-firm ground being encountered preventing further excavation with the 3-tonne excavator which was on site. The location of these trial pits as well as the dynamic probe and window samples are indicated on the trial pit location plan contained within **Appendix K**.

The strata encountered within all trail pits was consistent across the site, all trail holes had a topsoil layer of between 300mm and 450mm, which was classified as slightly sandy, SILT containing small angular gravels and rootlets. The topsoil layer overlaid a slightly clayey SILT, containing angular to sub angular gravels throughout, this overlaid what was thought to be bedrock at the time due the presence of shale rock within a very dense clayey SILT, which could not be excavated using a 3-tonne excavator. The Dynamic probe and window sampling undertaken on site confirmed that the actual bedrock layer is much deeper, this could be seen within the window sample taken at WS1 and WS2 at a depth of 2.0m and 2.9m respectively, however all other samples failed to penetrate through the solid layer encountered at approx. 1.0m deep. Water was also encountered within the window samples located at WS1 and WS2 at the bedrock layer. Trail Pit Logs for each if of the trail pits are contained within **Appendix L**.

3.2 Porosity Testing

Porosity testing was undertaken within a single trial hole however due the very stiff nature of the ground failed to infiltrate at a sufficient rate in order to utilise soakaways as a feasible method for surface water disposal.

In accordance with BRE digest 365 which outlines the best practice procedure for undertaking porosity tests, each trial pit should be filled and the rate in which the water level drops should be recorded until it is dry, this should be repeated for three consecutive tests. The design of any proposed soakaway structures should then be based upon the poorest infiltration rate of the three tests.

Due to the lack on infiltration recorded it was not possible to undertake a second or third test. The results of the infiltration tests undertaken are summarised within **Tables 10** to confirm it was not possible to undertake more than one test due to the slow rate of infiltration recorded, and therefore deemed to be unsuitable for the use of infiltration structures.

Table 10. TP1 – Test 1 results

Time	Duration (mins)	Depth to water from GL (m)	Drop in water level
10:27	0	0.400	-
10:45	18	0.450	0.050m
11:05	38	0.480	0.020m
11:21	54	0.490	0.010m
11:41	74	0.495	0.005m
12:05	98	0.500	0.005m
12:30	123	0.500	0.000m
13:07	160	0.500	0.000m
Infiltration Rate (<i>f</i>)		Test Abandoned	



As noted within **Section 3.1**, ground water was recorded within the window samples and dynamic probes indicate that the site is unsuitable for the use of soakaways.

3.3 Dynamic Probe Testing

Dynamic Probe testing was carried out by Celtest in accordance with BS 1377: Part 9: clause 3.2 & BS EN ISO 22476-2. Testing was undertaken using a super heavy hammer (DPSH-B) with a 90° Cone, five tests were undertaken at the locations indicated within the attached trial pit location plan contained within **Appendix K**. The results of these tests are contained within the Celtest dynamic probe report contained within **Appendix M** and summarised within **Table 11**.

Table 11. Dynamic Probe Test Results

Depth (m)		SPT 'N' Value										
From	To	DP 1	DP 2	DP 3	DP 4	DP 5	DP 6	DP 7	DP 8	DP 9	DP 10	DP 11
0.0	0.2	0	0	0	0	0	0	0	0	0	0	0
0.2	0.5	6	6	7	5	5	9	30	26	9	4	3
0.5	0.8	14	7	12	13	7	16	37	27	12	3	14
0.8	1.1	26	19	31	19	19	25	39	32	13	13	12
1.1	1.4	13	16	16	23	16	24	25	37	18	14	14
1.4	1.7	14	10	16	16	14	27	21	42	21	14	12
1.7	2.0	15	13	23	17	14	24	14	47	15	15	14
2.0	2.3	36	23	12	22	16	21	24	32	16	17	12
2.3	2.6	41	24	11	23	9	20	30	24	9	13	14
2.6	2.9		43	37	32	9	15	29	26	0	14	17
2.9	3.2				53	12	20	31	30	12	18	2
3.2	3.5					32	31	23	41	17	34	28
3.5	3.8							36	43	30	41	22
3.8	4.1							9	60	30	49	17
4.1	4.4							14		36		19
4.4	4.7							16				33
4.7	5.0							27				
5.0	5.3							25				
5.3	5.6											

In accordance with foundation design and construction by Tomlinson for foundation widths up to 1.20m the above SPT 'N' Value can be converted to approximate bearing pressure (kN/m²) using the following equation: $Q = 11.970 \times N$. The results of the conversions are noted within **Table 12** below.

Table 12. Conversion of N values into Bearing Capacity.

Depth (m)		Bearing Capacity (kN/m ²)										
From	To	DP 1	DP 2	DP 3	DP 4	DP 5	DP 6	DP 7	DP 8	DP 9	DP 10	DP 11
0.0	0.2	0	0	0	0	0	0	0	0	0	0	0
0.2	0.5	72	72	84	60	60	108	359	311	108	48	36
0.5	0.8	168	84	144	156	84	192	443	323	144	36	168
0.8	1.1	311	227	371	227	227	299	467	383	156	156	144
1.1	1.4	156	192	192	275	192	287	299	443	215	168	168
1.4	1.7	168	120	192	192	168	323	251	503	251	168	144
1.7	2.0	180	156	275	203	168	287	168	563	180	180	168
2.0	2.3	431	275	144	263	192	251	287	383	192	203	144
2.3	2.6	491	287	132	275	108	239	359	287	108	156	168
2.6	2.9		515	443	383	108	180	347	311	120	168	203
2.9	3.2				634	144	239	371	359	144	215	24
3.2	3.5					383	371	275	491	203	407	335
3.5	3.8							431	515	359	491	263
3.8	4.1							108	718	359	587	203
4.1	4.4							168		431		227
4.4	4.7							192				395
4.7	5.0							323				
5.0	5.3							299				
5.3	5.6											

3.4 Atterberg Limits Testing

1m window samples were extracted from the site and tested in accordance with BS 1377:Part 2:1990 to obtain the samples plastic limit, liquid limit and plasticity index in order to assess the soils potential for volume change. The results of these tests are contained within **Table 13** and the Celtest Test report contained within **Appendix N**.

Table 13. Results of Physical Laboratory Testing.

Location	Depth (m bgl)	% Pass 425 μ	Plastic Limit	Liquid Limit	Plasticity Index	Modified Plasticity Index

Table 14. Volume change potential - *Table 1 of NHBC Standards Part 4.2*

Modified Plasticity Index	Volume Change Potential
40% and greater	High
20% to less than 40%	Medium
10% to less than 20%	Low
Less than 10%	No Risk

The results of the Atterberg Limits testing confirmed that the soils would be deemed to have no risk volume change in accordance with the classification system utilised by the LABC / NHBC industry guidance.

3.5 pH and Sulphate

Chemical analyses for pH and soluble sulphate content contained in **Appendix O** (summarised below in **Table 15**), shows that the soils at the site meet Class DS-1, Aggressive Chemical Environment for Concrete Classification (ACEC) AC-1 in accordance with Table C1 of BRE Special Digest 1 (2005).

Table 15. Summary of pH and Sulphate Testing

Location	Depth (m)	SO ₄ IN 2:1 pH (m) WATER / SOIL (mg/l)	pH Value	Concrete Classification

3.6 Contaminated Land and Human Health Risk Assessment

The results of the soil analysis are presented within the attached Celtest report contained within **Appendix P** and are summarised within **Table 13**, where they have been compared to the suitable Generic Assessment Criteria (GACs), to allow a Generic Quantitative Risk Assessment (GQRA) to be carried out for the site and the proposed development.

The Category 4 Screening Levels (C4SLs) published by DEFRA (2014) have since been adopted. Where a C4SL is unavailable, the Suitable 4 Use levels (S4ULs) published by LQM/CIEH (2015) have been adopted.

These Criteria have been derived using the CLEA model for a range of standard end-use scenarios and a range of soil organic matter (SOM) content. It should be noted that the C4SL values are derived on the basis of a “low level of toxicological concern”, while the S4UL values are based on a “tolerable” or “minimal” level of risk. As such, the S4ULs describe a lower level of risk than the C4SLs, and are equivalent to the former Soil Guideline Values (SGVs, published by the Environment Agency) and the previous editions of the LQM/CIEH GAC values. A “residential with gardens” end-use has been adopted for this analysis.

Table 16. Contamination Testing

Determinant	Pathway	Concentration (mg/kg)				GAC (mg/kg)	Source	Exceeded
		WS1	WS2	WS4	WS6			
		0.0m - 1.0m	0.0m - 1.0m	0.0m - 1.0m	0.0m - 1.0m			
Arsenic (As)	1					40	C4SL	0
Cadmium (Cd)	1					150	C4SL	0
Chromium (Cr)	1					910	C4SL	0
Copper (Cu)	1					7,100	S4UL	0
Mercury (Hg)	2					1.2	S4UL	0
Nickel (Ni)	1					180	S4UL	0
Lead (Pb)	1					310	C4SL	0
Selenium (Se)	1					1,200	S4UL	0
Zinc (Zn)	1					40,000	S4UL	0
Boron (B)	1					11,000	S4UL	0
Naphthalene	2					13	S4UL	0
Acenaphthylene	3					6,000	S4UL	0
Acenaphthene	1					6,000	S4UL	0
Fluorene	1					4,500	S4UL	0
Phenanthrene	3					1,500	S4UL	0
Anthracene	3					37,000	S4UL	0
Fluoranthene	3					1,600	S4UL	0
Pyrene	3					3,800	S4UL	0
Benzo (a) anthracene	3					15	S4UL	0
Chrysene	3					32	S4UL	0
Benzo (b) fluoranthene	3					4	S4UL	0
Benzo (k) fluoranthene	3					110	S4UL	0
Benzo (a) pyrene	3					5.3	S4UL	0
Indeno (1,2,3-c,d) pyrene	3					46	S4UL	0
Dibenzo (a,h) anthracene	3					0.32	S4UL	0
Benzo (g,h,i) perylene	3					360	S4UL	0

Notes

Main Exposure Pathways: 1 = Soil Ingestion, 2 = Vapour Inhalation (indoor), 3 = Dermal Contact & Ingestion, 4 = Dust Inhalation. Abbreviations: GAC = General Assessment Criteria.

Referring to **Table 16**, the result of this direct comparison indicates that the data for none of the window samples extracted from site exceed the general assessment criteria.

4.0 Conceptual Model and Risk Assessment

A risk assessment has been compiled in accordance with The Contaminated Land (Wales) (Amendment) Regulations 2012, which evaluates the risk of contaminants within the site. The risk assessment requires and evaluation of a conceptual “source-pathway-receptor” linkage model and can be qualitative or quantitative. If there is found to be a linkage of the three elements then a site will be defined as contaminated land, each of these elements are defined below:

- A contaminant ‘source’ is a chemical which is within the soil which has the potential to cause harm/pollution to a receptor.
- A ‘Pathway’ is the route in which the chemical pollutant is able to travel through from the source to the receptor.
- A ‘receptor’ can be controlled waters, an ecology system, land, a property, or a living organism.

4.1 Hazard Identification

The potential contamination of the site has been reviewed during the desk study and found to be low risk which has been confirmed by the contamination testing results summarised within **Table 16**.

These risks have been listed within **Table 17** as well as the contaminants associated with them and their potential pathways and receptor groups.

Table 17. Summary of Conceptual Ground Model.

Potential Contamination Source	Potential Contaminants of Concern	Potential Pathways	Receptor Group
Oil Spills Areas of made ground unidentified within the ground investigation.	Heavy Metals Petroleum Hydrocarbons	Lateral Migration and limited Infiltration	End-users
			Groundwater
Natural Strata	PAH	Dermal Contact Inhalation of contaminated dust	Building Materials
			Vegetation
		Ingestion of soil or home-grown vegetables	Construction Operatives
			End-users

The contamination risk to the following receptor ground is discussed below:

- End-user,
- Controlled Water,
- Construction Operatives,
- Building Materials and
- Vegetation

End-user: Due to the nature of the proposed development being residential, being the most sensitive end-use, extra precaution is required when dealing with contaminated soils. **As no contaminants exceeding the allowable level were identified the risk to the property owner is negligible.**

Controlled Waters: Contamination to controlled waters (including surface water and underlying aquifers) can drastically affect ecosystems and drinking water sources, therefore the potential risk of contamination to these must be explored and mitigated.

As noted within **Table 5** there are no water courses within the immediate vicinity of the site, with the nearest being located 150m north-west. Therefore, the risk is negated. Furthermore, as no contaminants exceeding the allowable levels were identified this risk is negated.

As discussed within **Table 5** the site is located above productive secondary B bedrock aquifer with high vulnerability and a productive secondary undifferentiated superficial aquifer, as noted within **Section 3.1** ground water inflow was recorded within some of the dynamic probe and window samples at however as **no contaminants were identified** the risk is negated. All site works should take consideration and ensure that the ground water is not contaminated from fuel spills or stored waste material on site during the construction phase of the project.

Construction Operatives: The risk to construction operatives is considered to be negligible, however by having the correct PPE and wash facilities in line with best practice, the risk is mitigated.

Vegetation: As noted there is no vegetation within the site, only around the perimeters of the site, as no contamination was identified within the testing then the risk to vegetation is negated.

5.0 Conclusions and Recommendations

Site Location	SH 56841 74257 256841 374257 mistress.trudges.shopper 9,863.971m ² - (0.99 Ha)	
Current Site	Existing vacant parcel of land current utilised as agricultural land.	
Proposed Development	Erection of 30 new dwellings along with a new length of adoptable highway.	
Environmental Setting	Superficial Deposits	Fine Till
	Bedrock Geology	Granofels and Schist
	Hydrogeology	productive secondary B bedrock aquifer with high vulnerability and a productive secondary undifferentiated superficial aquifer
	Hydrology	The surface water run-off from the site currently flows in an north-westerly direction flowing off the site, to a watercourse located at the boundary of the adjoining site.
	Flood Risk	In line with the development advice map there is no risk of flooding.
Trees	There are no mature trees located within the site.	
Utility Locations	<p>There is an existing DCWW surface water sewerage network adjacent to the site. There is a existing DCWW foul only sewerage network which crosses the site.</p> <p>The is a DCWW potable water main adjacent to the site.</p> <p>The is a WWU gas pipe adjacent to the site.</p> <p>There is an above ground electricity cable which crosses the site Aswell as buried cables surrounding the development.</p> <p>There is below ground telecommunications (BT open reach) cables within close proximity to the site.</p>	
Radon	the proposed development is nor affected by radon with the probability of the site being above the action level being 0 – 1%. Therefore, no radon protection measures are required	

Infiltration	Infiltration is deemed to be unsuitable to the presence of very firm ground and lack of infiltration recorded during testing.
Site Excavation and Preparation	<p>Very firm ground was encountered within the site, with bedrock situated at varying levels across the site.</p> <p>Topsoil depth was between 300mm and 450mm across the site. If water ingress is encountered within any excavation sumps should be created for pumping. For drainage installation it is recommended that excavations are conducted uphill so that the excavation is free draining.</p> <p>Proposed embankments should not exceed a gradient of 1:2 and 1:3 for SuDS features.</p>
Foundations & Flood Slabs	<p>Based on the dynamic probes testing undertaken, adequate bearing pressure be achieved from 0.5m – 0.8m below ground level Therefore, the recommended foundation should consist of strip footings, or insulated raft system following design by a structural engineer.</p> <p>Floor slabs can be designed to be ground bearing, if fill material exceeds 600mm suspended floor types are required.</p>
Protection of Buried Concrete	
Proposed Site Levels	The proposed design should aim to balance cut and fill volumes whilst avoiding features such as retaining structure where possible to reduce costs for the developer.
Further Work	No additional works required.

APPENDICES

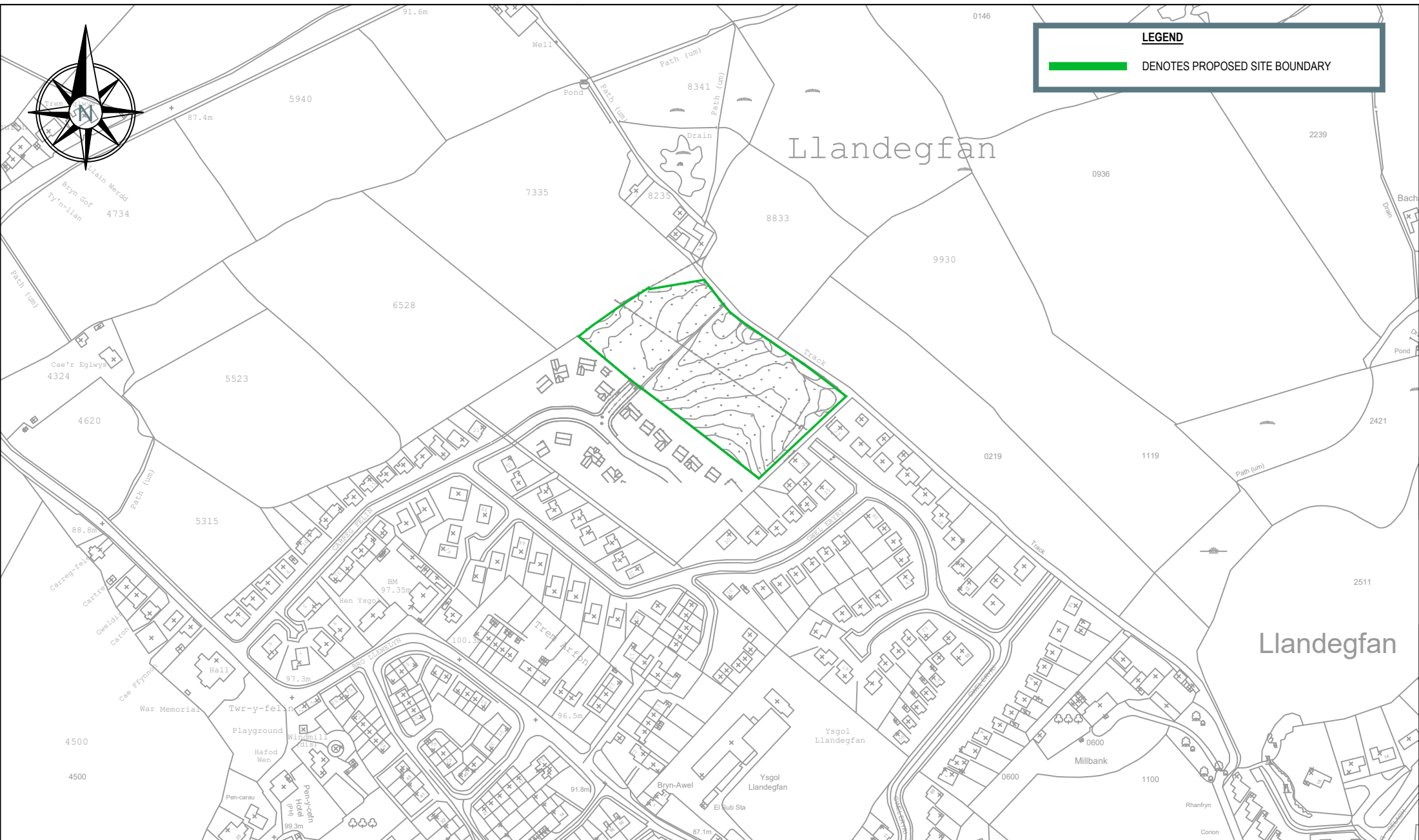
APPENDIX A

Site Location Plan



LEGEND

▬ DENOTES PROPOSED SITE BOUNDARY



GRID REFERENCE	SH 56836 74257
EASTING	256836
NORTHING	374257
POSTCODE	LL59 5YH
SITE AREA	9,863.971 m ² (0.99 Ha)

P01	07.09.2023	PRELIMINARY ISSUE	BT	KB
REV	DATE	DESCRIPTION	BY	APP
PROJECT: GWEL Y LLAN, LLANDEGFAN				
TITLE: SITE LOCATION PLAN				
STATUS: S2	PROJECT No: 292	DRAWING No: 001	REV: P01	

SCALE @ A3: 1:2,500	DESIGNED: BT	DRAWN: BT	CHECKED: KB	APPROVED: KB	DATE: SEPTEMBER 2023
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APPENDIX B

Proposed Development Site Layout

REV.	DESCRIPTION	DATE	BY	CHK.
P1	INITIAL ISSUE	28/11/2022	GD	GI
P2	UPDATED LAYOUT	24/01/2023	GI	SD
P3	AREA ADDED	14/02/2023	GI	SD
P4	PLOT NUMBERS ADDED	14/02/2023	MM	GI
P5	PHASE 1 AND 2 SHOWN	20/02/2023	MM	GI
P6	REV ALTRIO	22/06/2023	GI	DP
P7	SITE DESIGN DEVELOPMENT	13/06/2023	GI	GI
P8	FOLLOWING ENGINEER INPUT	04/10/2023	GI	GI
P9	SITE DEVELOPMENT POST CIVIL DRAINAGE			



- EXTERNAL WORKS KEY**
- PATIO & PATHS - CONCRETE OR BLOCK PAVING
 - DRIVEWAYS/PARKING - PERMEABLE PAVING
 - ADOPTABLE ROADS - TARMAC
 - ADOPTABLE FOOTPATHS
 - SAB
 - SHRUB PLANTING
 - POS
- ECOLOGY ENHANCEMENTS**
- PROVISION OF BAT AND BIRD BOXES POSITIONED IN EXISTING FEATURES AS ECOLOGIST RECOMMENDATIONS
- 1x20 SCHWEGLER (OR EQUIVALENT) 1B AND 2H BIRD BOXES
 - 2x20 SCHWEGLER (OR EQUIVALENT) 3FF BAT BOX PLANTED IN GROUP OF 3 IN TREE APPROVED BY QUALIFIED ECOLOGIST

- BOUNDARY KEY**
- S80 GOLD STANDARD ROBUST TIMBER GARDEN SHED, FROM A SUPPLIER APPROVED BY CLYDEDALE, WITH TONGUE AND GROOVE CLADDING AND TOUGLE AND GROOVE ROOF BOARDING TO BE PROVIDED. ALL TIMBER TO BE PRESERVATIVE TREATED. COLOUR TO CLYDEDALE APPROVAL. COMPLETE WITH MEDIUM DUTY PADLOCK WITH THREE KEYS. SIZE TO MEET WELSH GOVERNMENT DQR REQUIREMENTS UNDER S80 GOLD STANDARD. ANCHOR POST/FRAME FOR SECURING BICYCLES AS WELSH GOVERNMENT SUSTAINABILITY REQUIREMENTS. THE SHED TO BE LINED ON IN-SITU CONCRETE BASE 100MM THICK. SHED BEARINGS TO BE BOLT-FIXED WITH RESIN ANCHOR BOLTS.
 - EXTERNAL RAIN WATER COLLECTING BUTTS - 250 LITRE INCLUDING CHILD/ WIND RESISTANT LED TAP FOR WATER DRAIN OFF. SUPPORT PLUMB-FIXED LEVEL WITH RAIN WATER PIPE
 - BINS STORE AREAS - PROVIDE SUFFICIENT AREAS TO STORE 2ND LARGE WHEELIE BINS AND 3ND RECYCLING BOXES.
 - HEAVY DUTY ROTARY CLOTHES DRIERS OF 4 ARM DESIGN AND MINIMUM 1200MM LINEAR LENGTH TO BE PROVIDED TO ALL PRIVATE GARDEN AREAS AND AT A RATIO OF 1 PER 2 DWELLINGS FOR COMMUNAL DRYING AREAS TO FLATS.
 - EXTERNAL AIR SOURCE HEAT PUMPS

KEY

AFFORDABLE HOUSES

TYPE	AMOUNT	GfE(m ²)
2P1B FLAT	4	53 (GF) 61 (FF)
4P2B	13	83
5P3B	8	93
7P4B	1	114
3P2B BUNG	4	61
Total		30

PUBLIC OPEN SPACE
PUBLIC OPEN SPACE REQUIREMENT - 1346M²
PUBLIC OPEN SPACE PROVISION - 1492M²

PROPOSED SITE PLAN
SCALE: 1 : 200

N

0 2 4 6 8 10 12m
1:200 @ A0

sa saer architects
www.saer-works | 01482 452478 | studio@saer-works

PROJECT
**GWEL Y LLAN,
LLANDEGFAN**

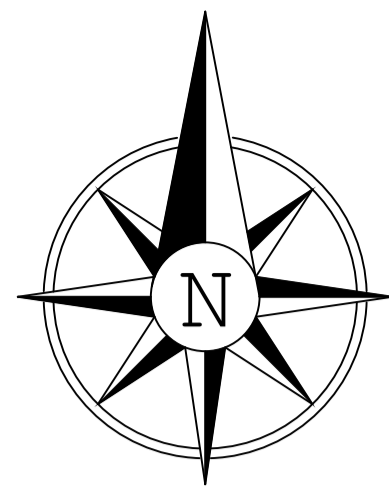
CLIENT
CLWYD ALYN

DRAWING TITLE
PROPOSED SITE PLAN

DRAWING STATUS PLANNING	STATUS S3
DRAWING No. GYL-SAL-01-ZZ-DR-A-0003	PROJECT No. P1185
SCALE As indicated@A0	REVISION PB

APPENDIX C

Site Walkover Photographs



GENERAL
 G1 DO NOT SCALE FROM THIS DRAWING.
 G2 ALL LEVELS IN METRES UNLESS NOTED OTHERWISE ON DRAWING.

LEGEND	
	LOCATION OF WHERE PHOTO WAS TAKEN
	DENOTES PROPOSED SITE BOUNDARY



P01	03.10.2023	FIRST ISSUE	KB	BT	KB
REV	DATE	DESCRIPTION	BY	CHK	APP
DRAWING STATUS:		PRELIMINARY			
CLIENT:		DU CONSTRUCTION			
ARCHITECT:		SAER ARCHITECTS			
PROJECT:		GWEL Y LLAN, LLANDEGFAN			
TITLE:		PHOTO LOCATION PLAN SHEET 1			
STATUS:	PROJECT No:	010		REV: P01	
S2	292				
SCALE @ A1:	DESIGNED:	DRAWN:	CHECKED:	APPROVED:	DATE:
1:250	BT	KB	BT	BT	SEPTEMBER 2023

MÓN CIVILS
LIMITED

PHOTO 1



PHOTO 5



PHOTO 10



PHOTO 15



PHOTO 20



PHOTO 2



PHOTO 6



PHOTO 11



PHOTO 16



PHOTO 21



PHOTO 7



PHOTO 12



PHOTO 17



PHOTO 3



PHOTO 8



PHOTO 13



PHOTO 18



PHOTO 4



PHOTO 9



PHOTO 14



PHOTO 19



P01	03.10.2023	FIRST ISSUE	KB	BT	KB
REV	DATE	DESCRIPTION	BY	CHK	APP
DRAWING STATUS:		PRELIMINARY			
CLIENT:		DU CONSTRUCTION			
ARCHITECT:		SAER ARCHITECTS			
PROJECT:		GWEL Y LLAN, LLANDEGFAN			
TITLE:		PHOTO LOCATION PLAN SHEET 2			
STATUS:	PROJECT No.	011		REV: P01	
S2	292				
SCALE @ A1:	DESIGNED:	DRAWN:	CHECKED:	APPROVED:	DATE:
1:250	BT	KB	BT	BT	SEPTEMBER 2023

MÓN CIVILS
LIMITED

APPENDIX D

Historical Maps

Historical Mapping Legends

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

Quarry **Gravel Pit** **Sand Pit**
Clay Pit **Shingle** **Refuse Heap**
Sloping Masonry **Flat Rock**
Marsh **Reeds** **Osiers**
Rough Pasture **Furze** **Wood**
Mixed Wood **Brushwood** **Orchard**
Fir **Ford** **Stepping Stones**
Ferry **Waterfall** **Lock**
Trig. Station **Altitude at Trig. Station**
B.M. 325.9 **Bench Mark** **Surface Level**
Arrow denotes flow of water **Antiquities (site of)**
Cutting **Embankment**
Railway crossing Road **Level Crossing** **Road crossing Railway**
Railway crossing River or Canal **Road over single stream** **Road over River or Canal**
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
County Borough Boundary (England)
County Burgh Boundary (Scotland)
Co. Boro. Bdy.
Co. Burgh Bdy.
BP BS Boundary Post or Stone **P.C.B** Police Call Box
B.R. Bridle Road **P** Pump
E.P Electricity Pylon **S.P** Signal Post
F.B. Foot Bridge **Sl** Sluice
F.P. Foot Path **Sp.** Spring
G.P Guide Post or Board **T.C.B** Telephone Call Box
M.S Mile Stone **Tr.** Trough
M.P M.R Mooring Post or Ring **W** Well

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

Inactive Quarry, Chalk Pit or Clay Pit **Active Quarry, Chalk Pit or Clay Pit**
Rock **Boulders**
Cliff **Slopes** **Top**
Roofed Building **Glazed Roof Building**
Sloping Masonry **Archway**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Bench Mark** **Antiquity (site of)**
Cave Entrance **Triangulation Station** **Electricity Pylon**
Electricity Transmission Line
County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
London Borough Boundary
Symbol marking point where boundary mereing changes
BH Beer House **P** Pillar, Pole or Post
BP, BS Boundary Post or Stone **PO** Post Office
Cn, C Capstan, Crane **PC** Public Convenience
Chy Chimney **PH** Public House
D Fn Drinking Fountain **Pp** Pump
EI P Electricity Pillar or Post **SB, S Br** Signal Box or Bridge
FAP Fire Alarm Pillar **SP, SL** Signal Post or Light
FB Foot Bridge **Spr** Spring
GP Guide Post **Tk** Tank or Track
H Hydrant or Hydraulic **TCB** Telephone Call Box
LC Level Crossing **TCP** Telephone Call Post
MH Manhole **Tr** Trough
MP Mile Post or Mooring Post **Wr Pt, Wr T** Water Point, Water Tap
MS Mile Stone **W** Well
NTL Normal Tidal Limit **Wd Pp** Wind Pump

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

Cliff **Slopes** **Top**
Rock **Rock (scattered)**
Boulders **Boulders (scattered)**
Positioned Boulder **Scree**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Triangulation Station** **Antiquity (site of)**
Electricity Transmission Line **Electricity Pylon**
B.M. 231.60m **Bench Mark** **Buildings with Building Seed**
Roofed Building **Glazed Roof Building**
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)
Bks Barracks **P** Pillar, Pole or Post
Bty Battery **PO** Post Office
Cemy Cemetery **PC** Public Convenience
Chy Chimney **Pp** Pump
Cis Cistern **Ppg Sta** Pumping Station
Dismtd Rly Dismantled Railway **PW** Place of Worship
EI Gen Sta Electricity Generating Station **Sewage Ppg Sta** Sewage Pumping Station
EI P Electricity Pole, Pillar **SB, S Br** Signal Box or Bridge
EI Sub Sta Electricity Sub Station **SP, SL** Signal Post or Light
FB Filter Bed **Spr** Spring
Fn / D Fn Fountain / Drinking Ftn. **Tk** Tank or Track
Gas Gov Gas Valve Compound **Tr** Trough
GVC Gas Governor **Wd Pp** Wind Pump
GP Guide Post **Wr Pt, Wr T** Water Point, Water Tap
MH Manhole **Wks** Works (building or area)
MP, MS Mile Post or Mile Stone **W** Well

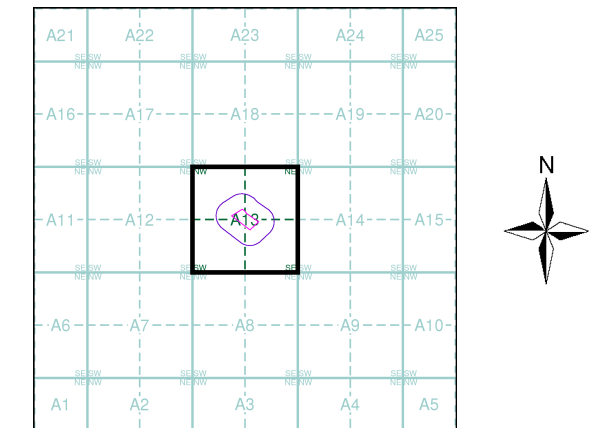
Envirocheck

LANDMARK INFORMATION GROUP

Historical Mapping & Photography included:

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Caernarvonshire	1:2,500	1890	3
Anglesey	1:2,500	1900	4
Anglesey	1:2,500	1914	5
Ordnance Survey Plan	1:2,500	1969 - 1970	6
Additional SIMs	1:2,500	1969 - 1988	7
Additional SIMs	1:2,500	1988 - 1989	8
Large-Scale National Grid Data	1:2,500	1993	9
Large-Scale National Grid Data	1:2,500	1994	10
Historical Aerial Photography	1:2,500	2003	11

Historical Map - Segment A13



Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 100

Site Details

Site at 256840, 374260

Landmark
 INFORMATION GROUP

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

Anglesey

Published 1889 - 1890

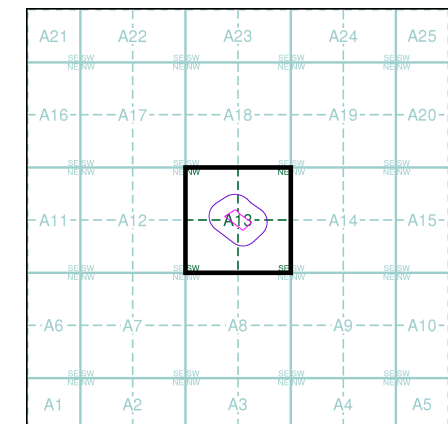
Source map scale - 1:2,500

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)

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019_07 1889 1:2,500	019_08 1890 1:2,500

Historical Map - Segment A13

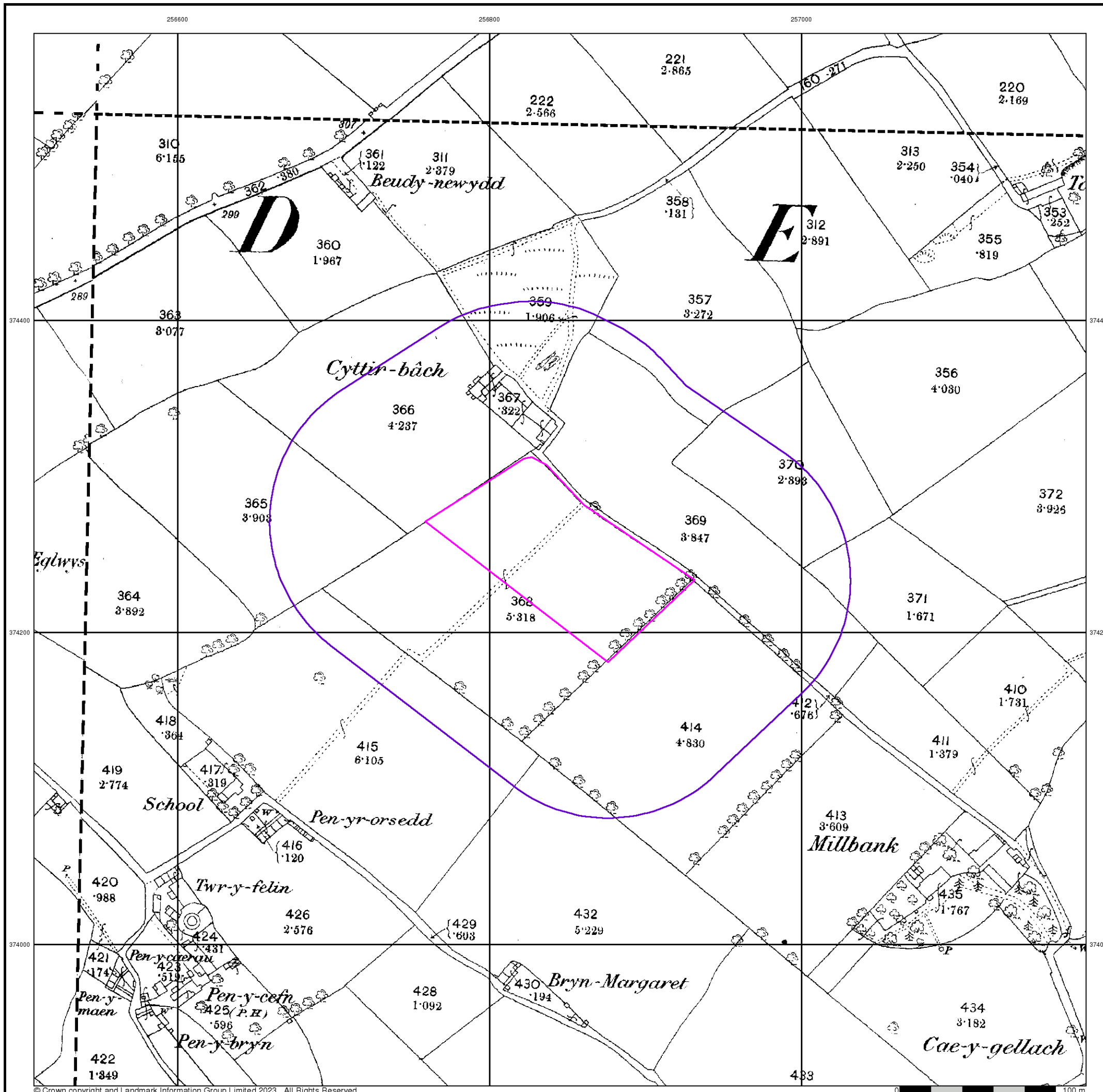


Order Details

Order Number: 317050794_1_1
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 National Grid Reference: 256850, 374250
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 Search Buffer (m): 100

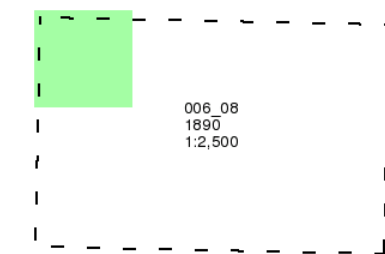
Site Details

Site at 256840, 374260

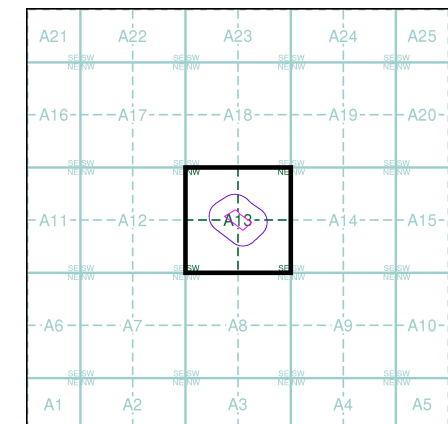


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. 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

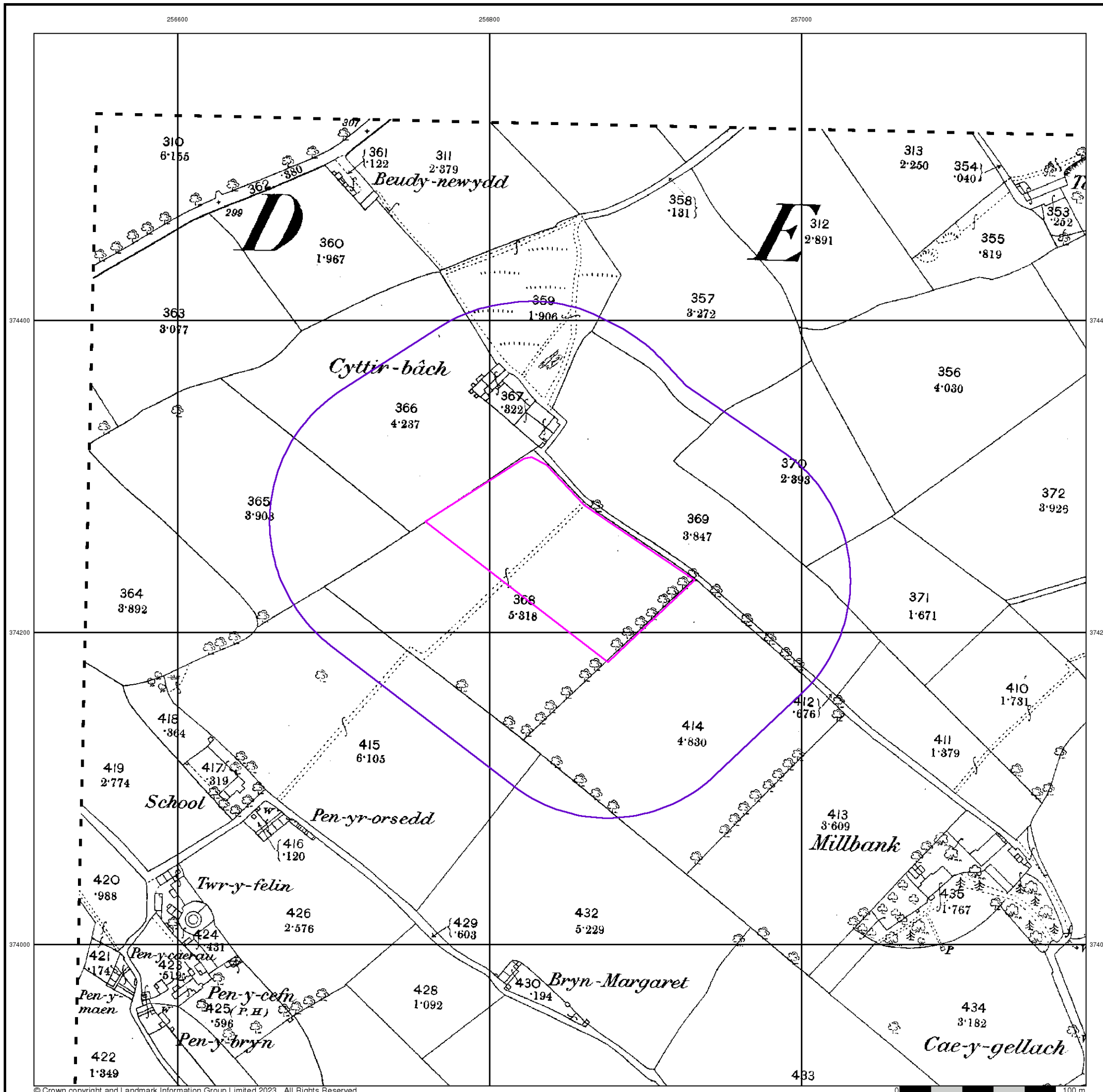


Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 100

Site Details

Site at 256840, 374260



Anglesey

Published 1900

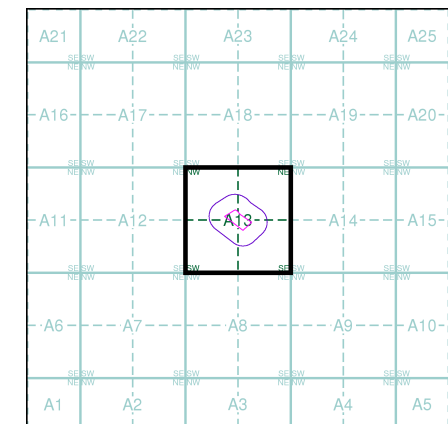
Source map scale - 1:2,500

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)

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019_07 1900 1:2,500	019_08 1900 1:2,500

Historical Map - Segment A13

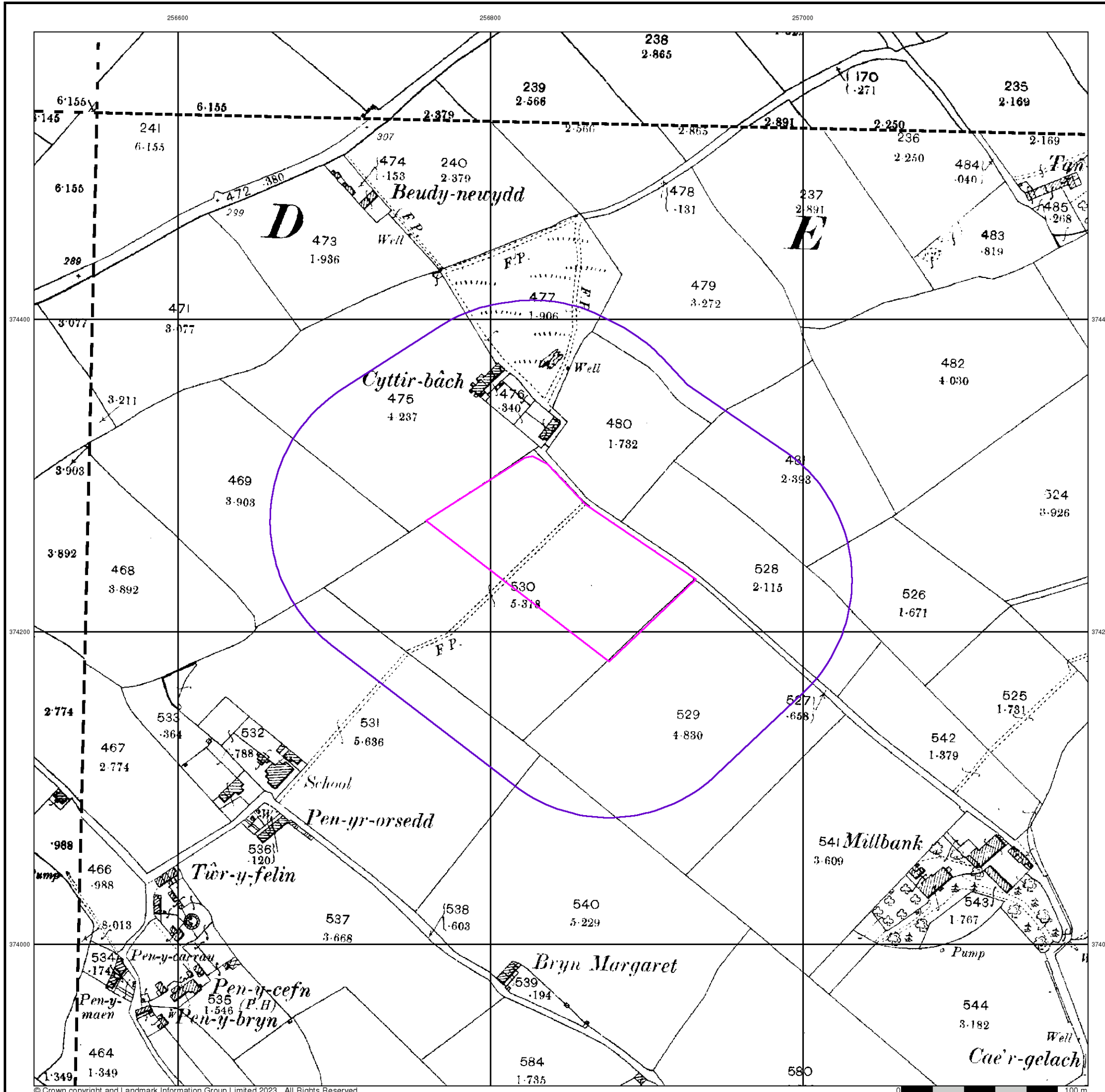


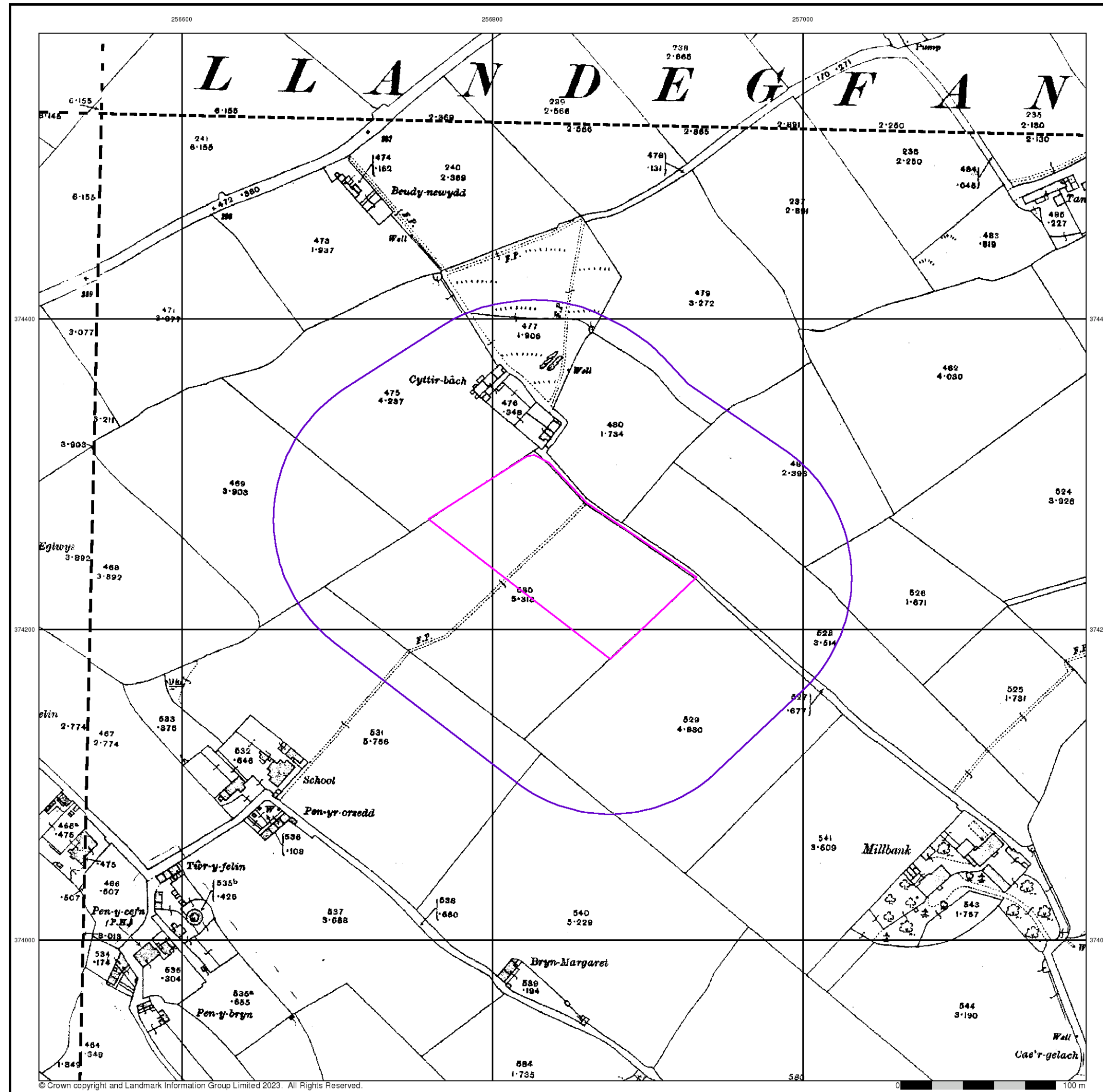
Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 100

Site Details

Site at 256840, 374260





Anglesey

Published 1914

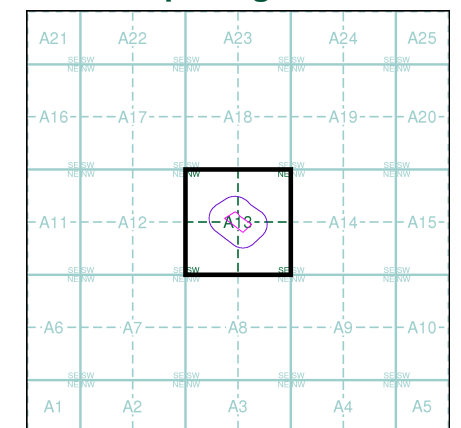
Source map scale - 1:2,500

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)

019_03 1914 1:2,500	019_04 1914 1:2,500
019_07 1914 1:2,500	019_08 1914 1:2,500

Historical Map - Segment A13



Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 100

Site Details

Site at 256840, 374260

Ordnance Survey Plan

Published 1969 - 1970

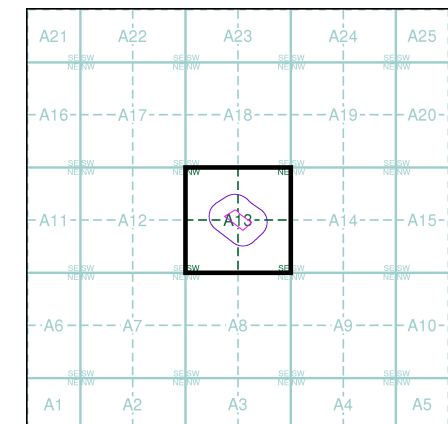
Source map scale - 1:2,500

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)

SH5674 1969 1:2,500	SH5774 1969 1:2,500
SH5673 1970 1:2,500	SH5773 1970 1:2,500

Historical Map - Segment A13

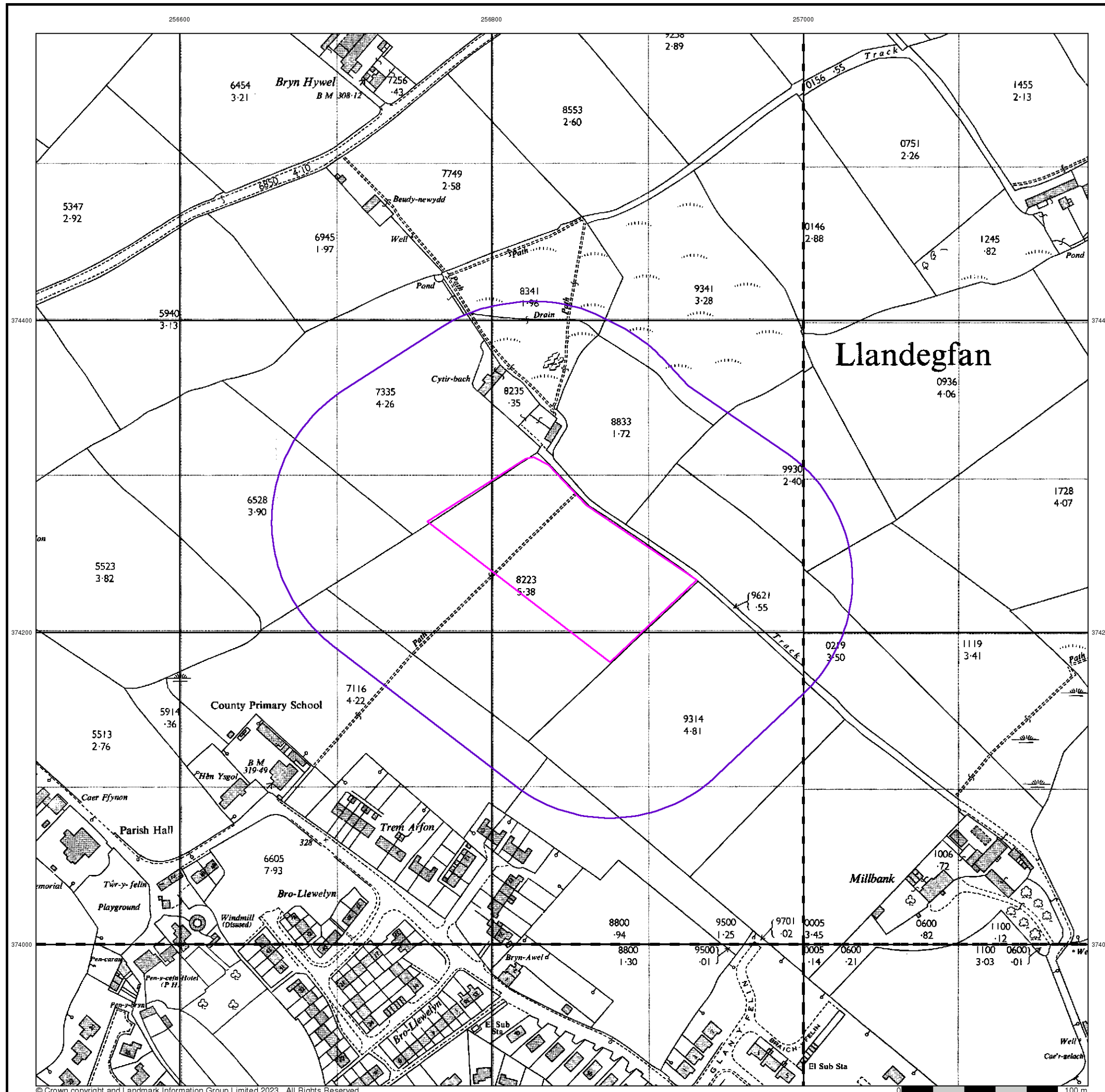


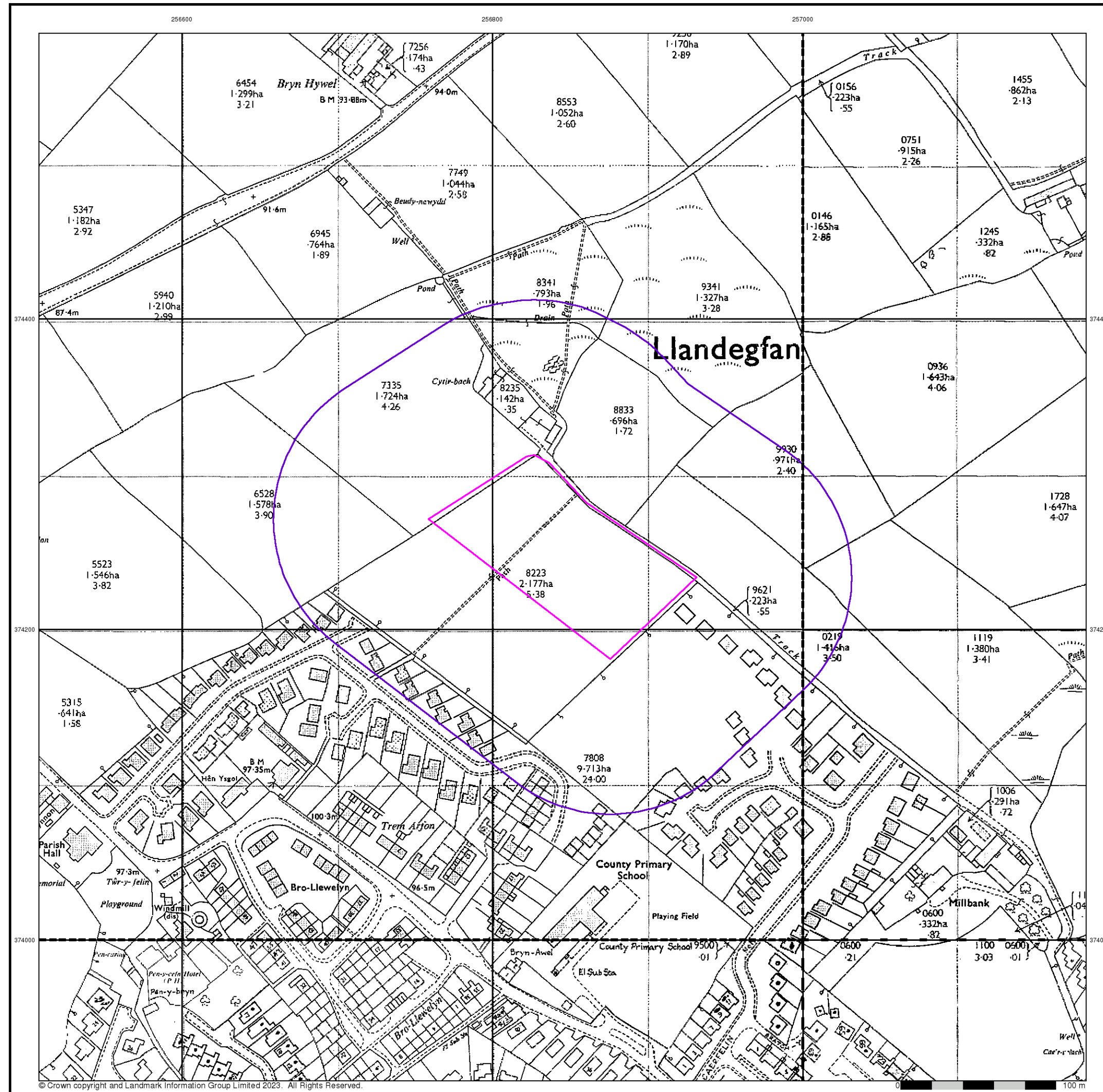
Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
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 Search Buffer (m): 100

Site Details

Site at 256840, 374260





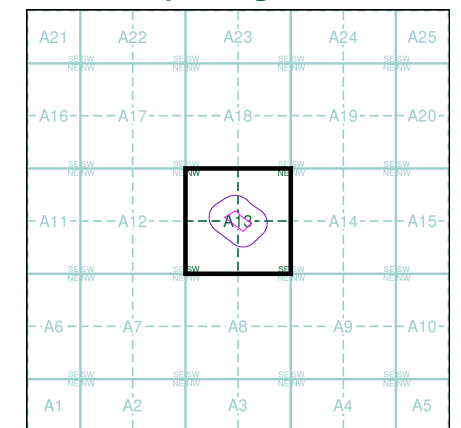
Additional SIMs
Published 1969 - 1988
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

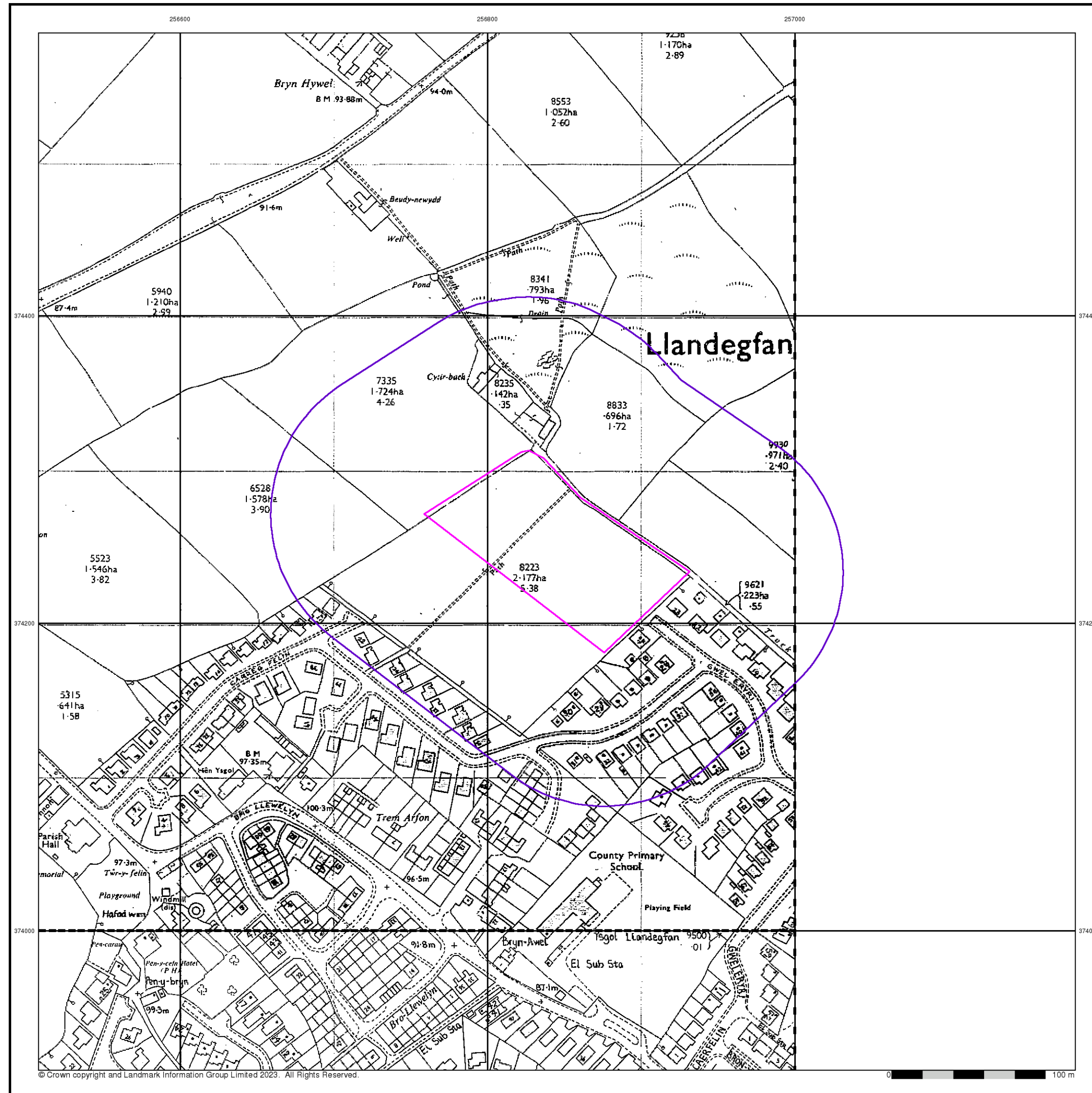
SH5674 1969 1:2,500	SH5774 1969 1:2,500
SH5673 1978 1:2,500	SH5773 1988 1:2,500

Historical Map - Segment A13



Order Details
 Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 100

Site Details
 Site at 256840, 374260

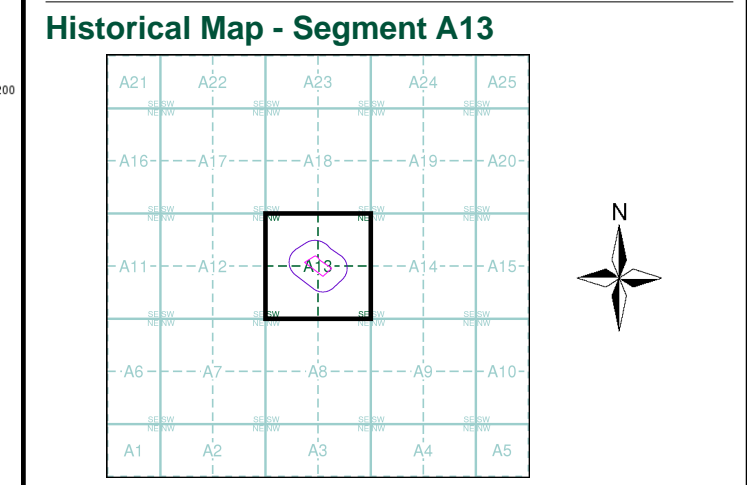


Additional SIMs
Published 1988 - 1989
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

SH5674	1989	1:2,500
SH5673	1988	1:2,500

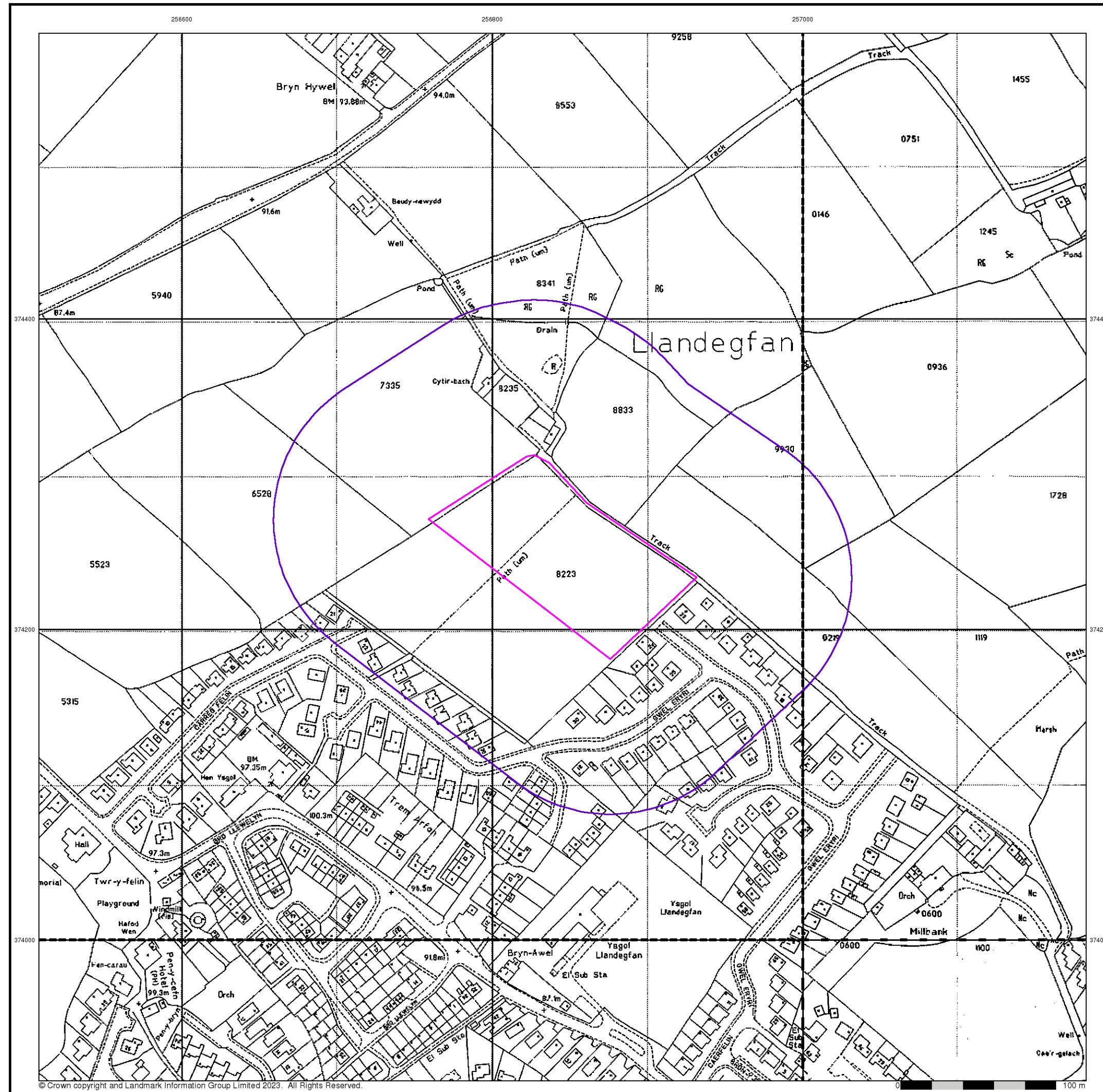


Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 100

Site Details

Site at 256840, 374260



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Large-Scale National Grid Data

Published 1993

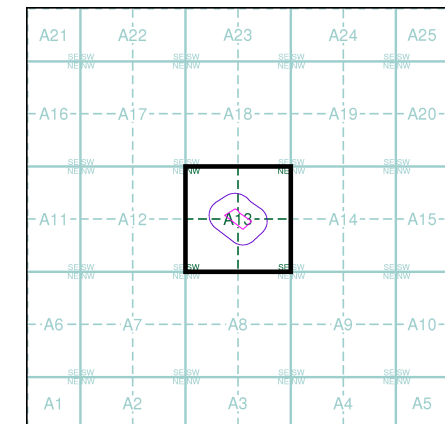
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

SH5674	SH5774
1993	1993
12,500	12,500
SH5673	SH5773
1993	1993
12,500	12,500

Historical Map - Segment A13



Order Details

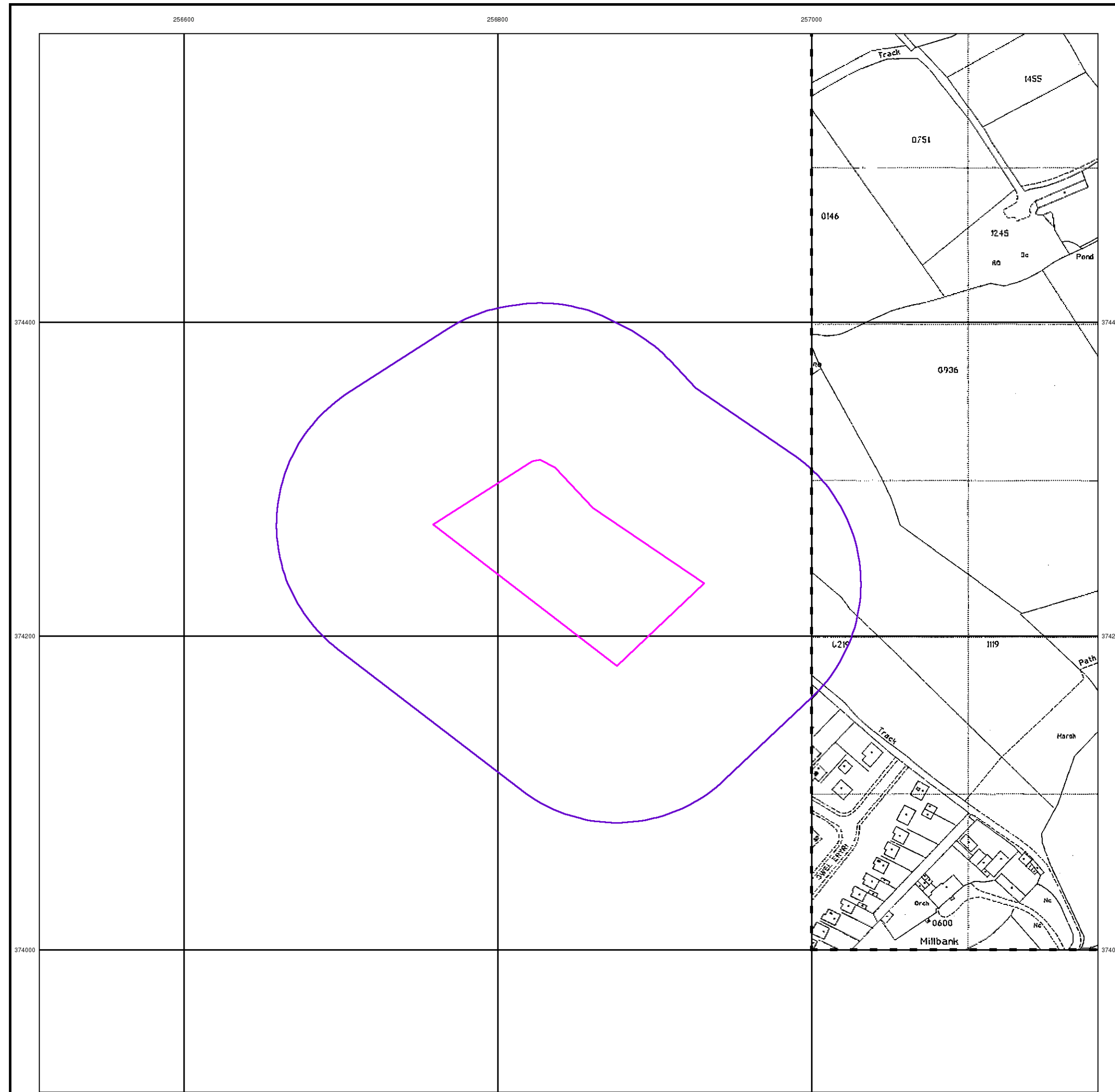
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 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 100

Site Details

Site at 256840, 374260

Landmark
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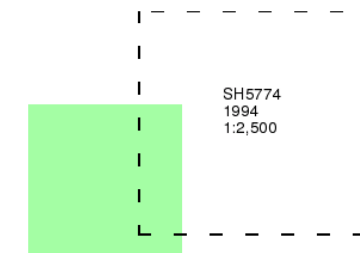
Large-Scale National Grid Data

Published 1994

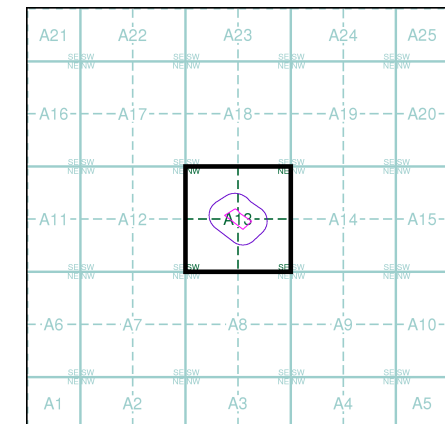
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 100

Site Details

Site at 256840, 374260

256600

256800

257000

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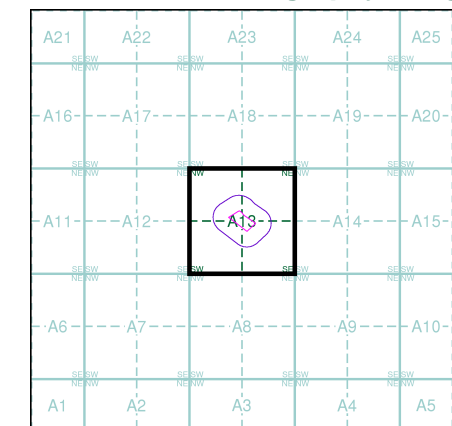
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Historical Aerial Photography

Published 2003

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: 317050794_1_1
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Site Details

Site at 256840, 374260

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374400

374400

374200

374200

374000

374000



Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit, **Sand Pit**, **Other Pits**
Quarry, **Shingle**, **Orchard**
Osiers, **Reeds**, **Marsh**
Mixed Wood, **Deciduous**, **Brushwood**
Fir, **Furze**, **Rough Pasture**
 Arrow denotes flow of water, **Trigonometrical Station**
Site of Antiquities, **Bench Mark**
Pump, Guide Post, Signal Post, **Well, Spring, Boundary Post**
-285 Surface Level
Sketched Contour, **Instrumental Contour**
Main Roads (Fenced, Un-Fenced), **Minor Roads** (Fenced, Un-Fenced)
Sunken Road, **Raised Road**
Road over Railway, **Railway over River**
Railway over Road, **Level Crossing**
Road over River or Canal, **Road over Stream**
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
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**, **Coppice**
Bracken, **Heath**, **Rough Grassland**
Marsh, **Reeds**, **Saltings**
Building, **Glasshouse**
Sloping Masonry, **Pylon**, **Electricity Transmission Line**, **Pole**
Cutting, **Embankment**, **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 (Shown only when not coincident with other boundaries)
Civil Parish (Shown alternately when coincidence of boundaries occurs)
BP, BS Boundary Post or Stone, **Pol Sta** Police Station, **Ch** Church, **PO** Post Office, **CH** Club House, **PC** Public Convenience, **F E Sta** Fire Engine Station, **PH** Public House, **FB** Foot Bridge, **SB** Signal Box, **Fn** Fountain, **Spr** Spring, **GP** Guide Post, **TCB** Telephone Call Box, **MP** Mile Post, **TCP** Telephone Call Post, **MS** Mile Stone, **W** Well

1:10,000 Raster Mapping

Gravel Pit, **Refuse tip or slag heap**
Rock, **Rock (scattered)**
Boulders, **Boulders (scattered)**
Shingle, **Mud**, **Mud**
Sand, **Sand Pit**
Slopes, **Top of cliff**
General detail, **Underground detail**
Overhead detail, **Narrow gauge railway**
Multi-track railway, **Single track railway**
County boundary (England only), **Civil, parish or community boundary**
District, Unitary, Metropolitan, London Borough boundary, **Constituency boundary**
Area of wooded vegetation, **Non-coniferous trees**
Non-coniferous trees (scattered), **Coniferous trees**
Coniferous trees (scattered), **Positioned tree**
Orchard, **Coppice or Osiers**
Rough Grassland, **Heath**
Scrub, **Marsh, Salt Marsh or Reeds**
Water feature, **Flow arrows**
MHW(S) Mean high water (springs), **MLW(S)** Mean low water (springs)
Telephone line (where shown), **Electricity transmission line (with poles)**
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**

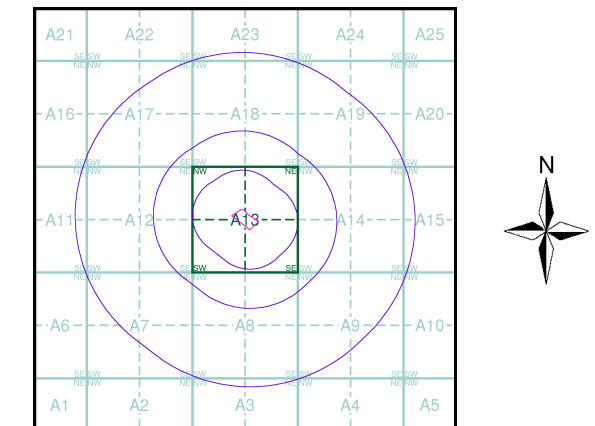
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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Anglesey	1:10,560	1889	2
Anglesey	1:10,560	1901	3
Anglesey	1:10,560	1920	4
Anglesey	1:10,560	1938 - 1953	5
Anglesey	1:10,560	1953	6
Ordnance Survey Plan	1:10,000	1963	7
Ordnance Survey Plan	1:10,000	1972 - 1977	8
Ordnance Survey Plan	1:10,000	1989	9
10K Raster Mapping	1:10,000	2000	10
10K Raster Mapping	1:10,000	2006	11
VectorMap Local	1:10,000	2023	12

Historical Map - Slice A



Order Details

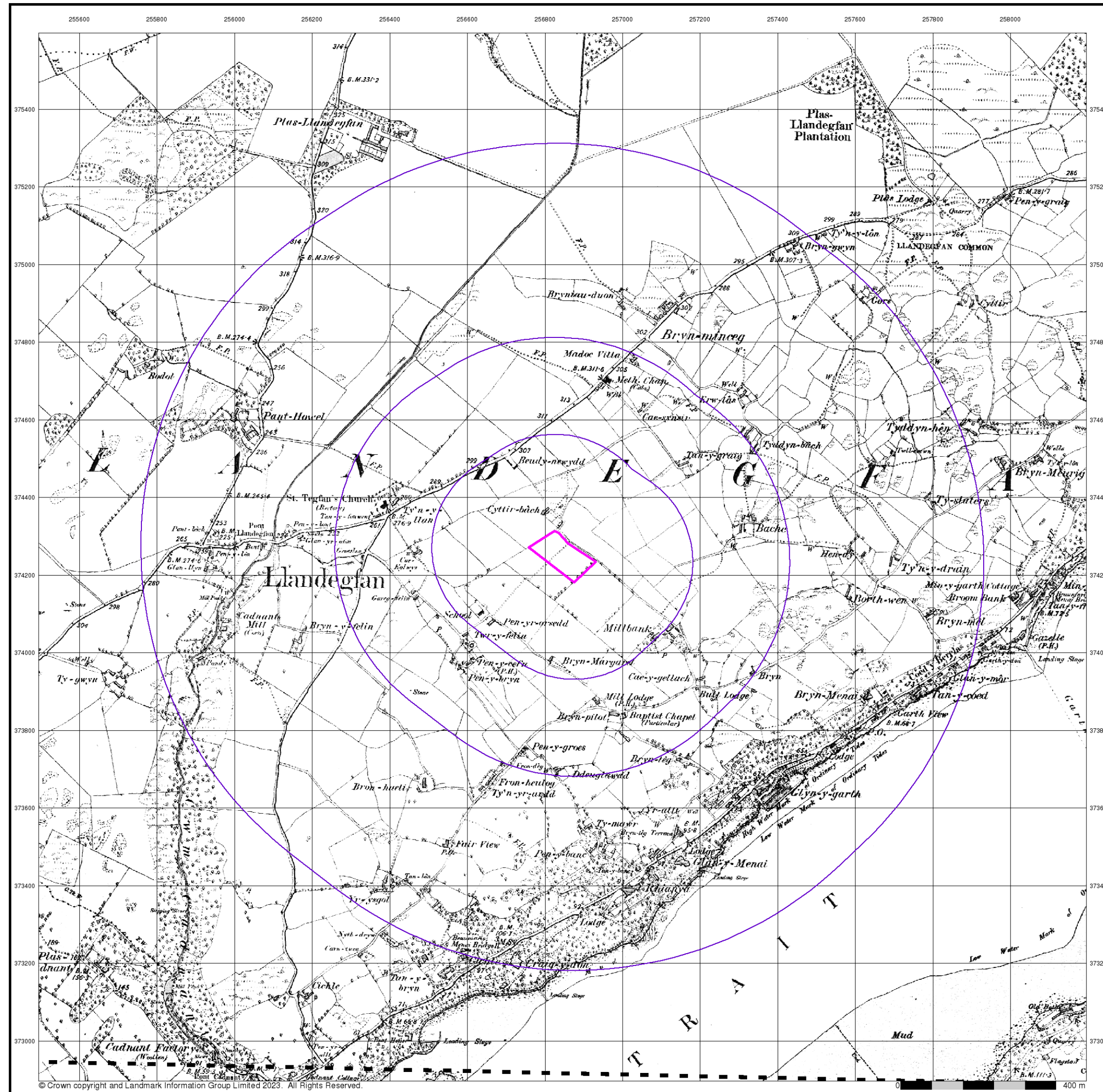
Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260

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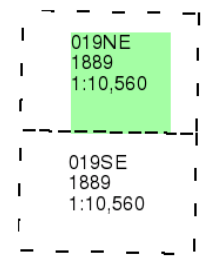
Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



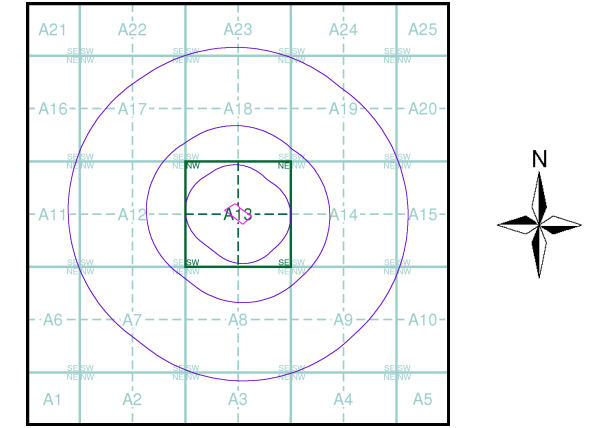
Anglesey
Published 1889
Source map scale - 1:10,560

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 overlaid 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)

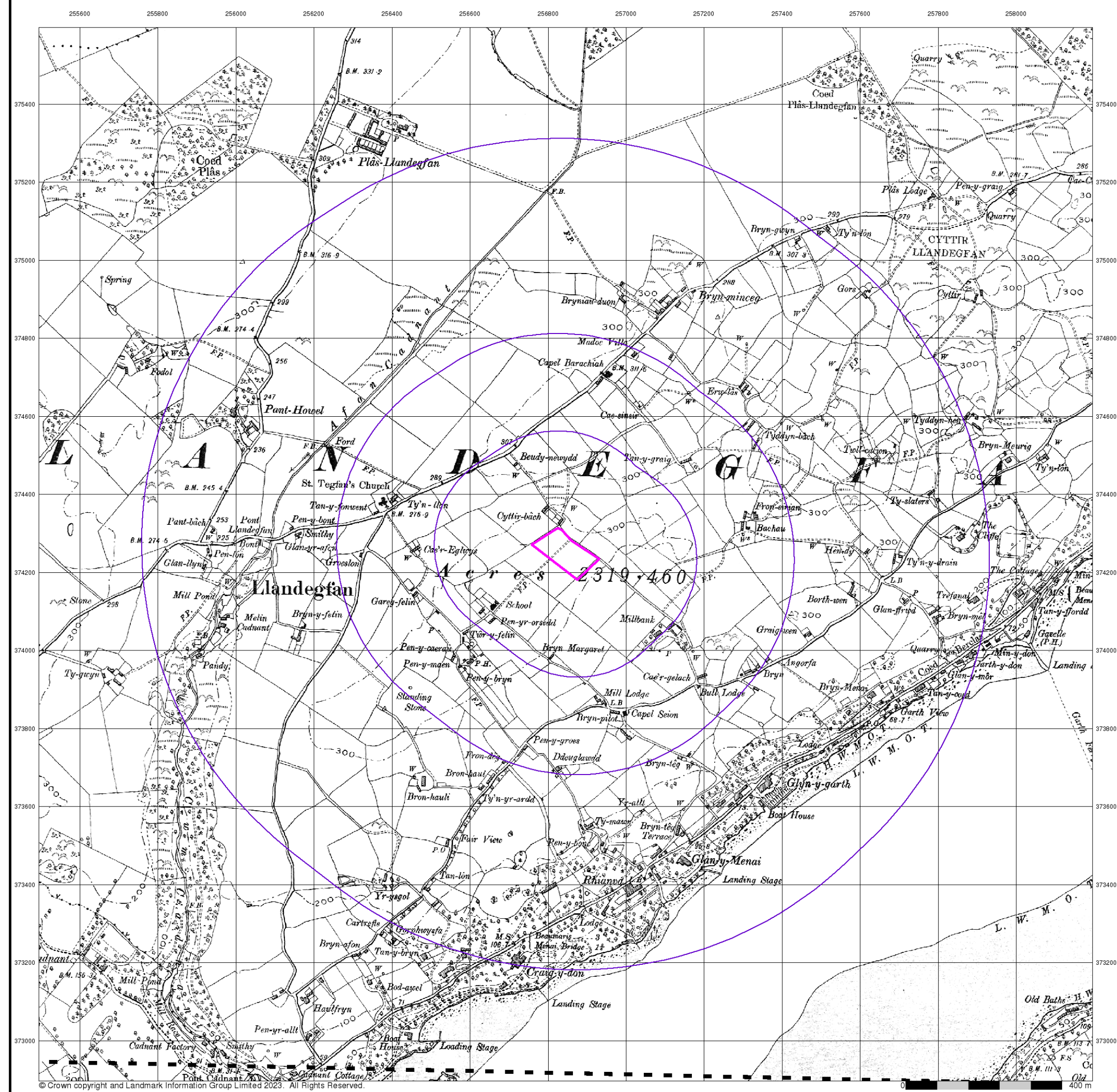


Historical Map - Slice A



Order Details
 Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
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Site Details
 Site at 256840, 374260



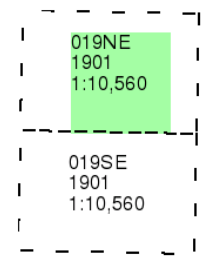
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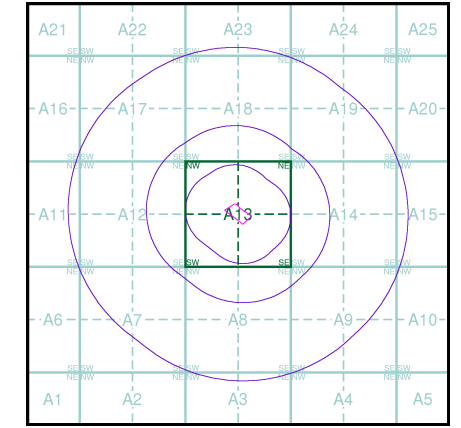
Anglesey
Published 1901
Source map scale - 1:10,560

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)



Historical Map - Slice A



Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
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 Site Area (Ha): 1.03
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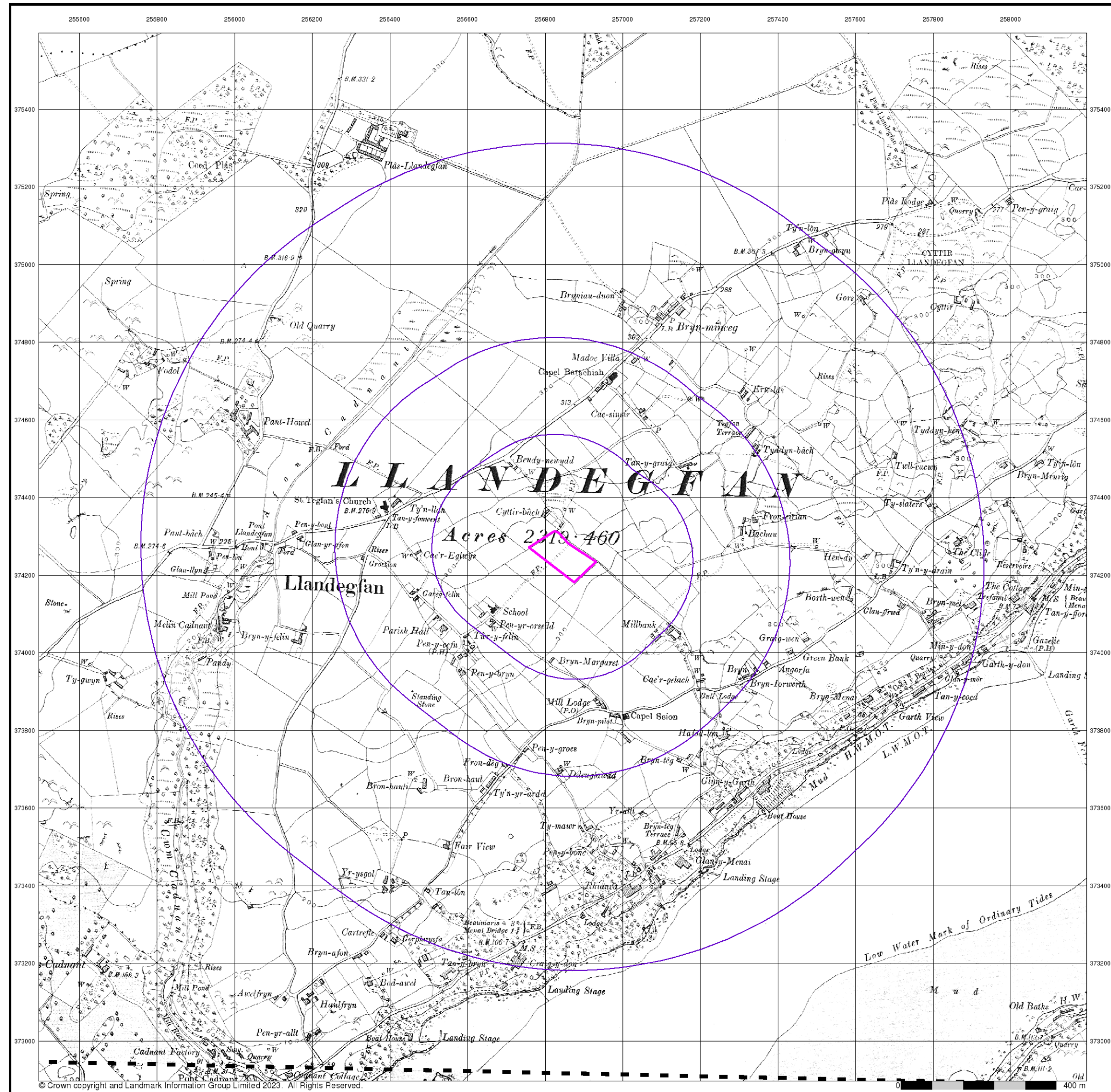
Site Details

Site at 256840, 374260

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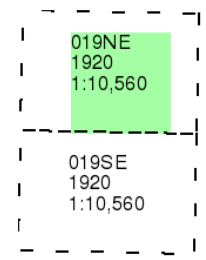
Tel: 0844 844 9952
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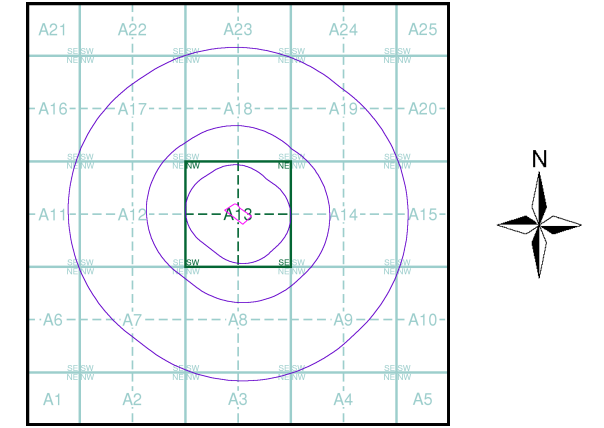
Anglesey
Published 1920
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details
 Order Number: 317050794_1_1
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 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details
 Site at 256840, 374260

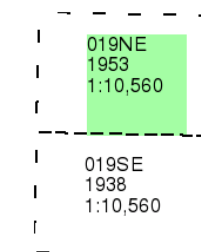
Anglesey

Published 1938 - 1953

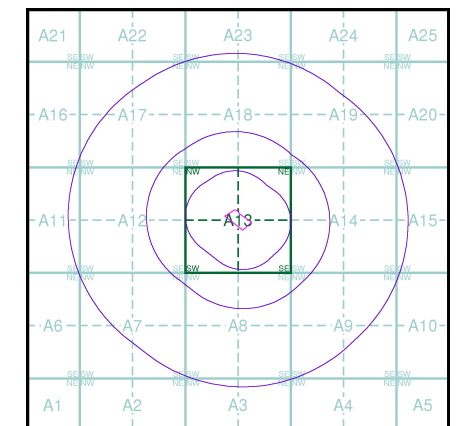
Source map scale - 1:10,560

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

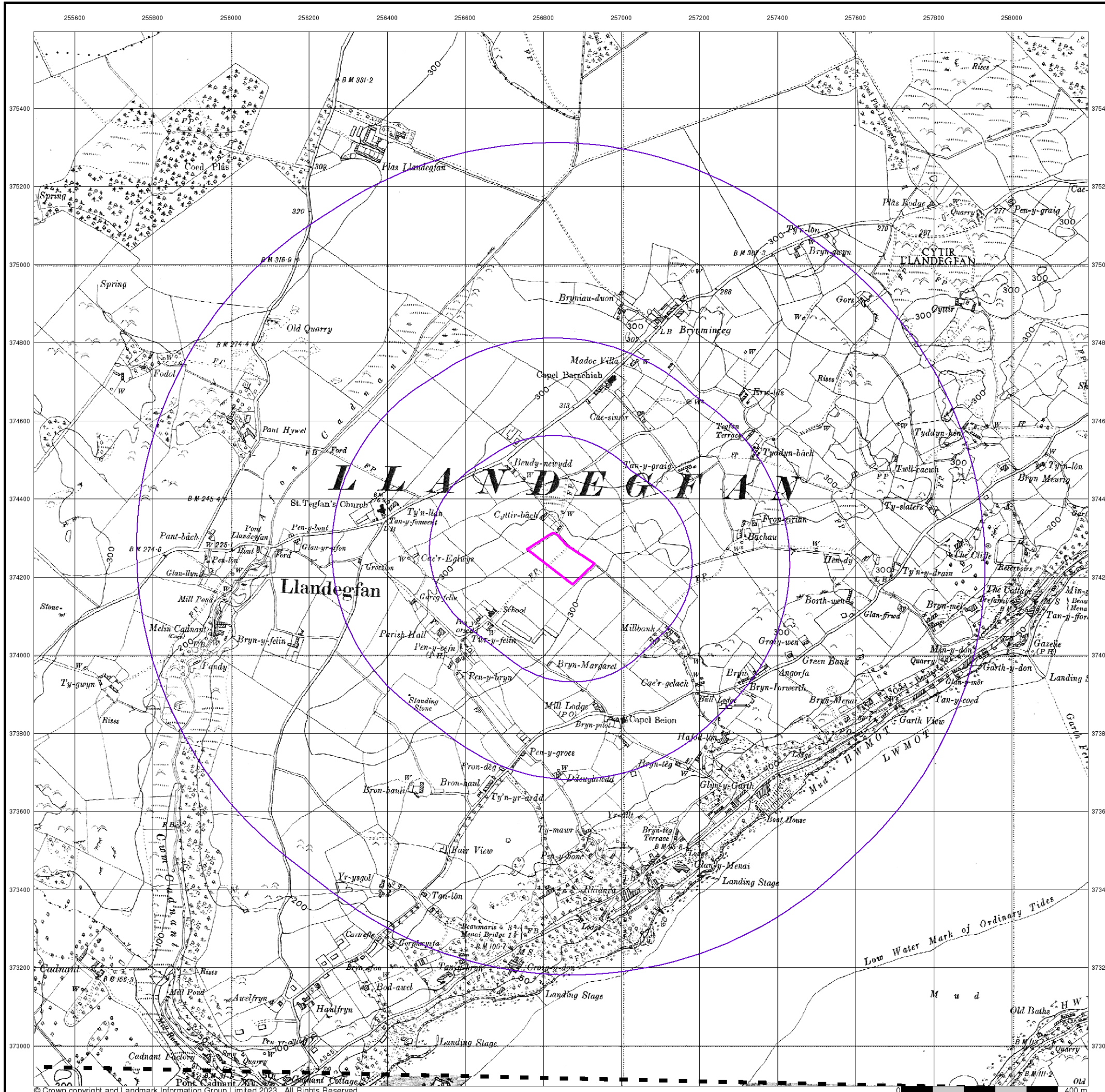


Order Details

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 Slice: A
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Site Details

Site at 256840, 374260



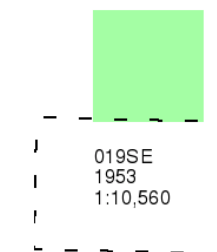
Anglesey

Published 1953

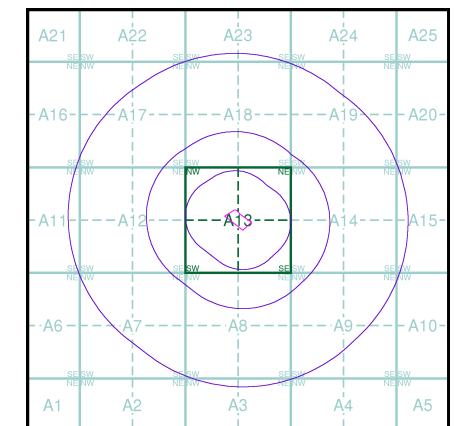
Source map scale - 1:10,560

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

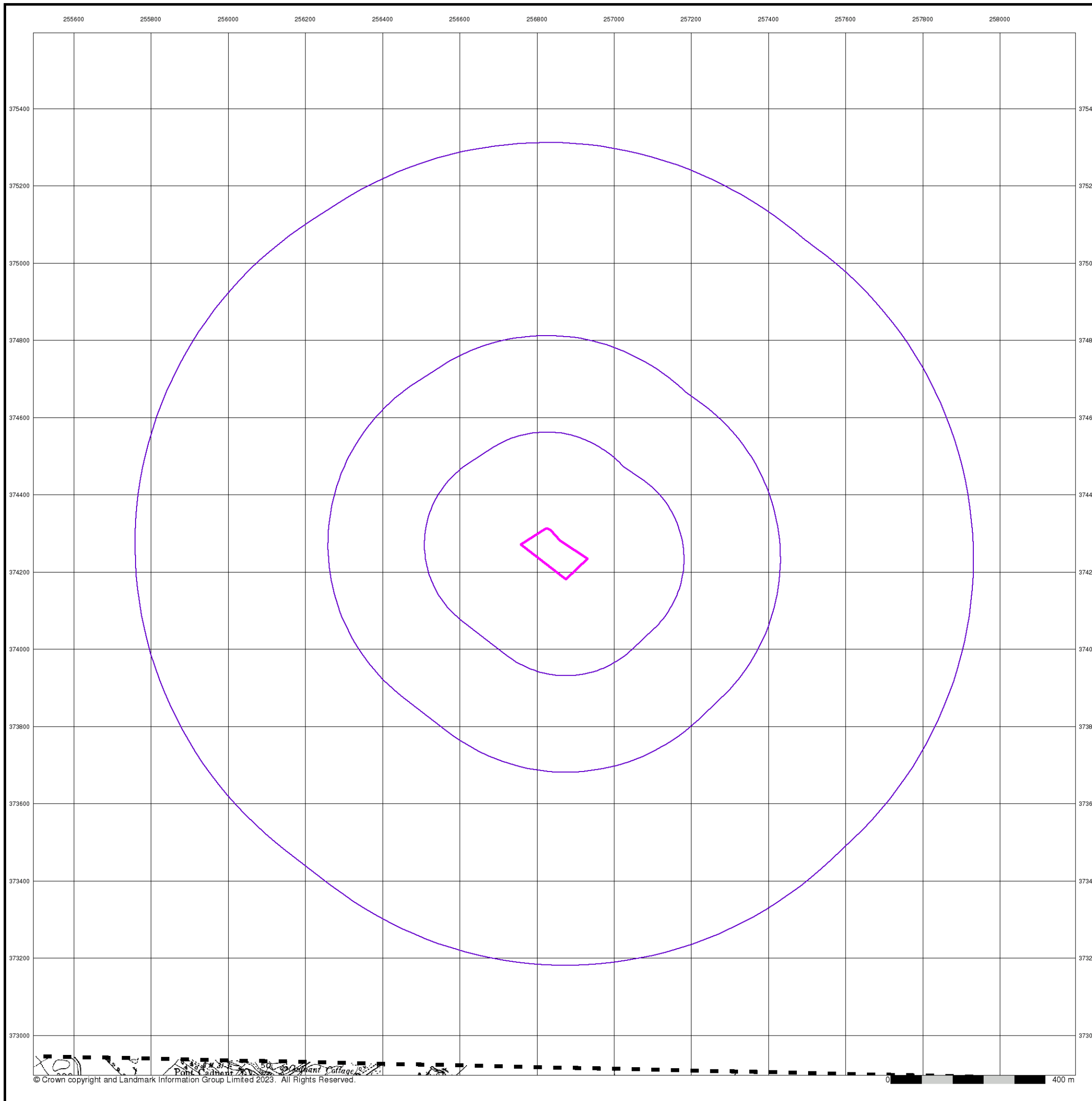


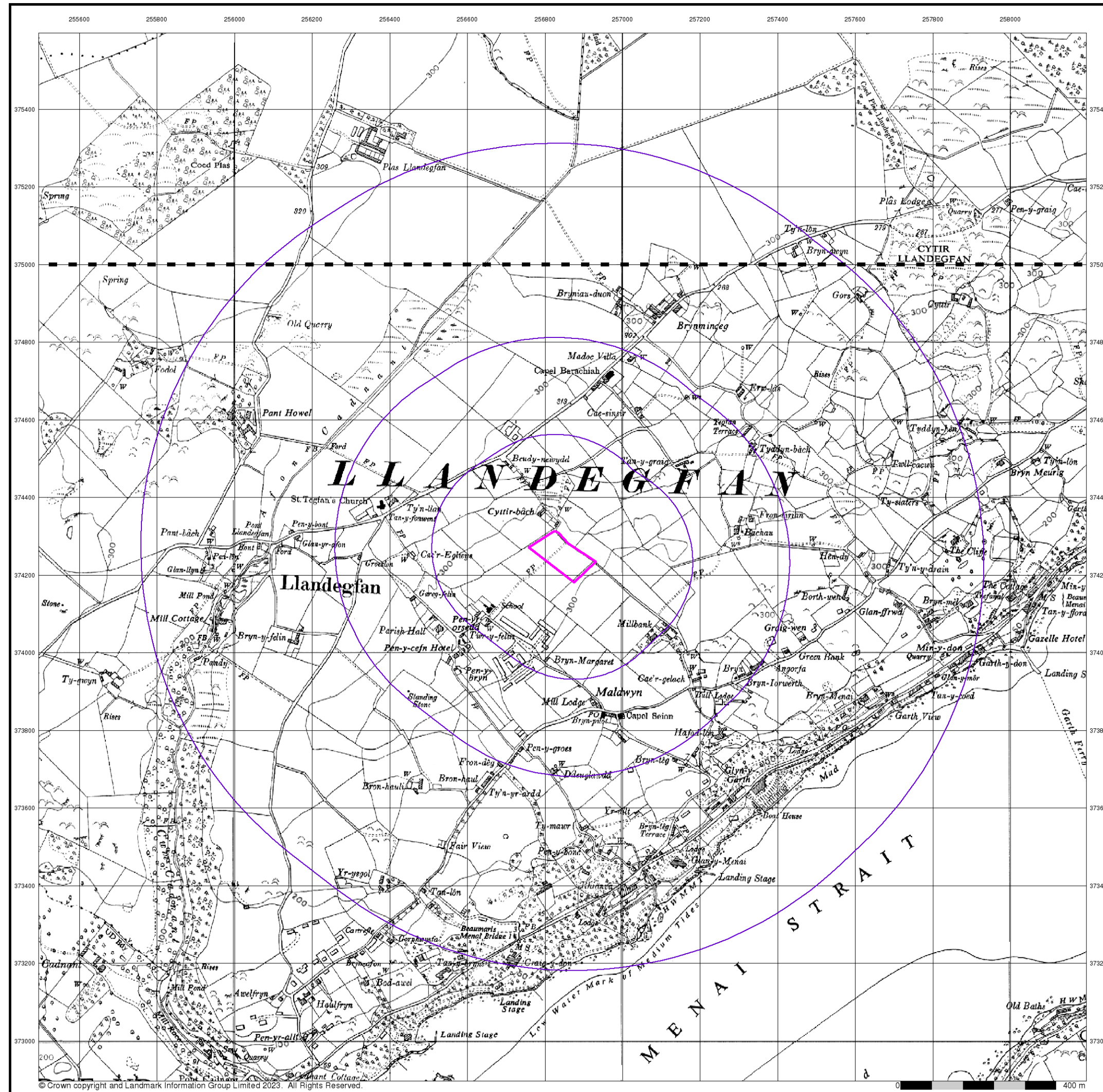
Order Details

Order Number: 317050794_1_1
Customer Ref: 292 - Gwel y Llan, Llandegfan
National Grid Reference: 256850, 374250
Slice: A
Site Area (Ha): 1.03
Search Buffer (m): 1000

Site Details

Site at 256840, 374260





Ordnance Survey Plan

Published 1963

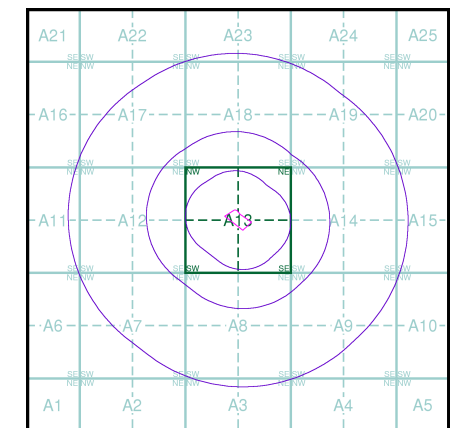
Source map scale - 1:10,000

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Map Name(s) and Date(s)

SH57NE	1963
SH57SE	1963

Historical Map - Slice A

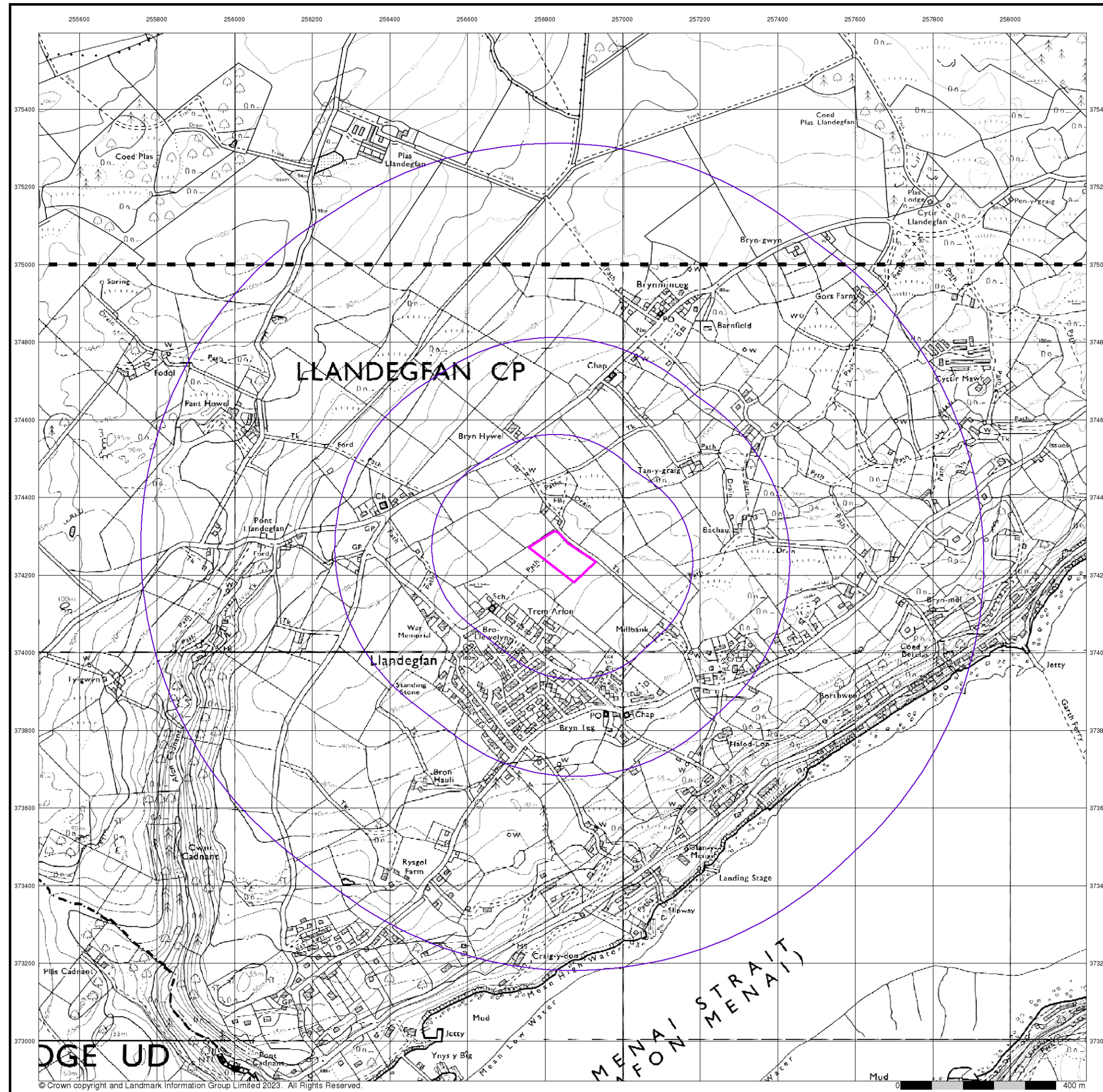


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Site Details

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Ordnance Survey Plan

Published 1972 - 1977

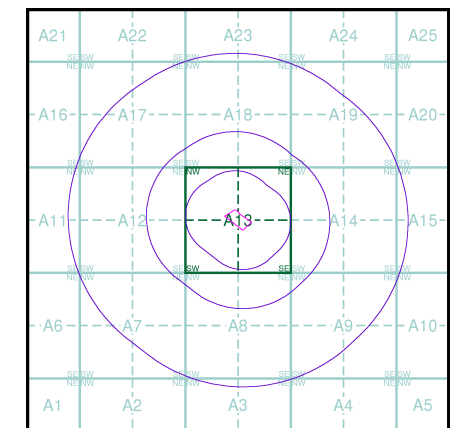
Source map scale - 1:10,000

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)

SH57NE	1977	1:10,000
SH57SE	1972	1:10,000

Historical Map - Slice A

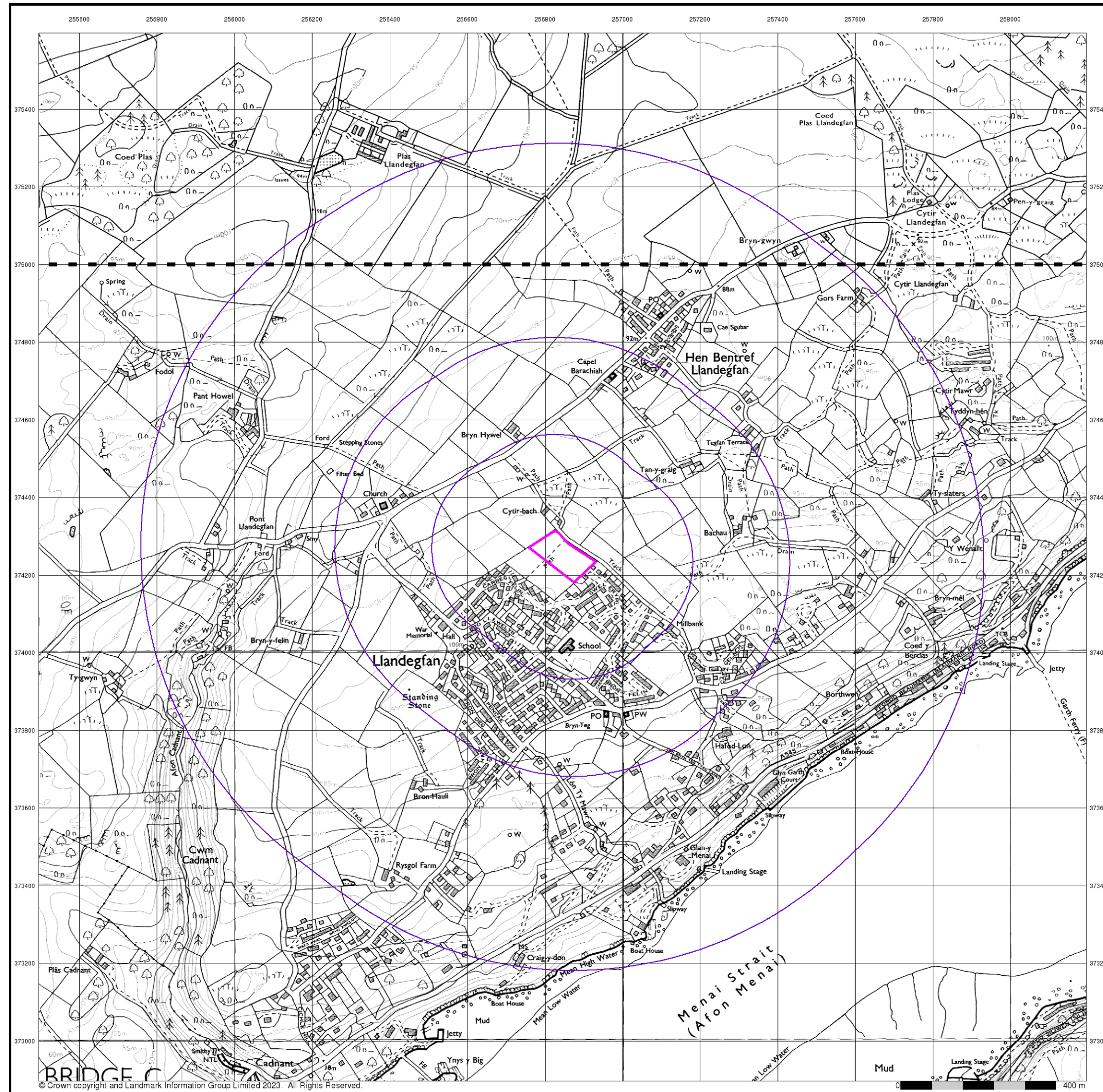


Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260



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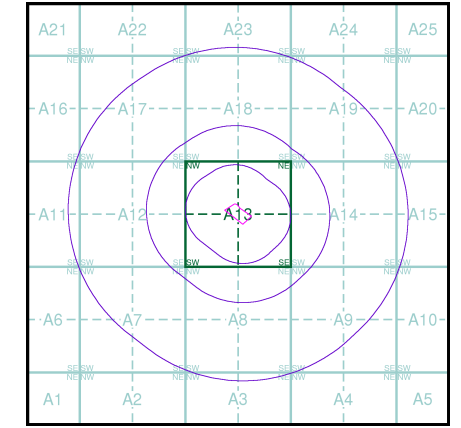
Ordnance Survey Plan Published 1989 Source map scale - 1:10,000

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)

SH57NE	1989	1:10,000
SH57SE	1989	1:10,000

Historical Map - Slice A

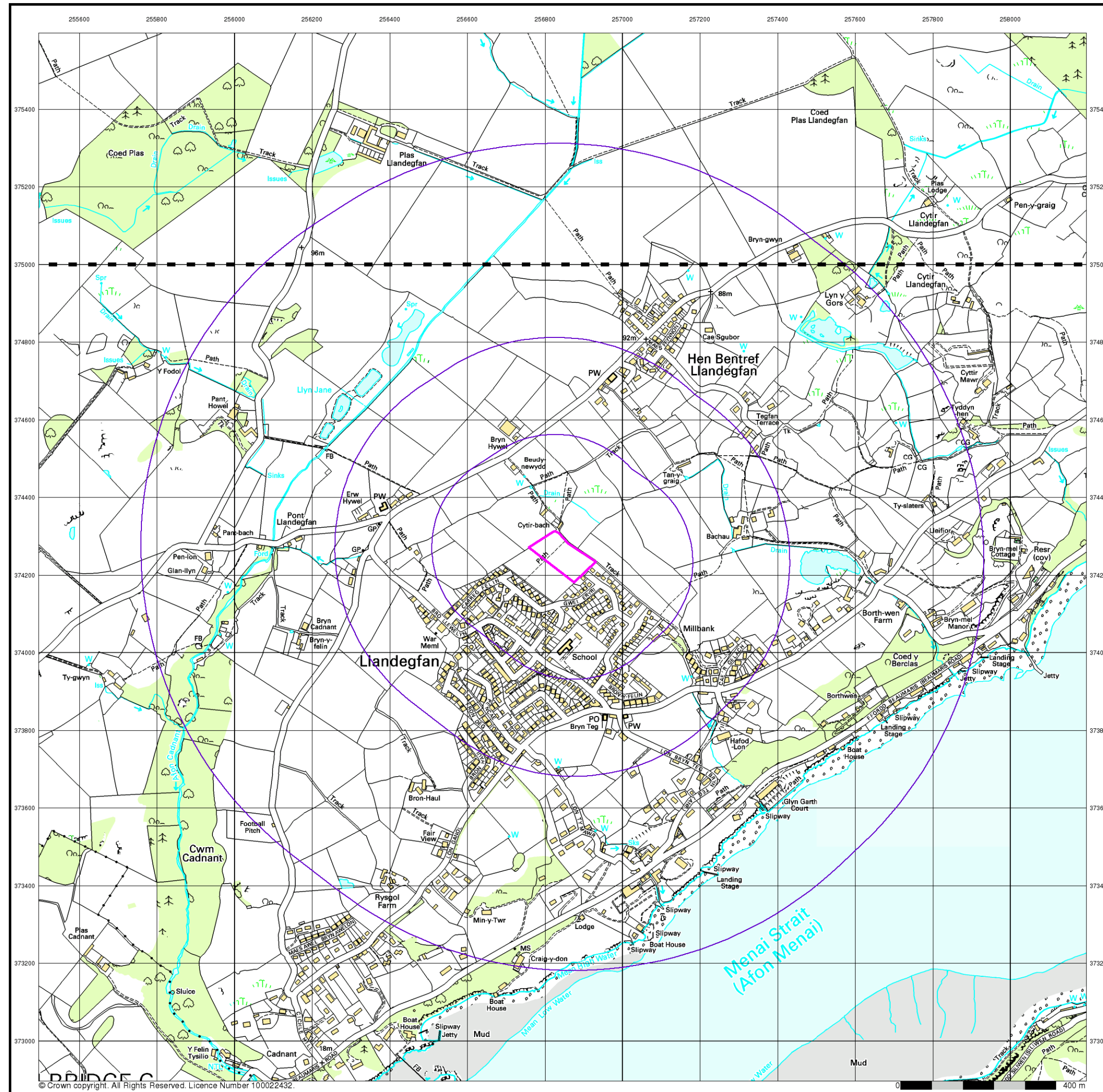


Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260



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10k Raster Mapping

Published 2000

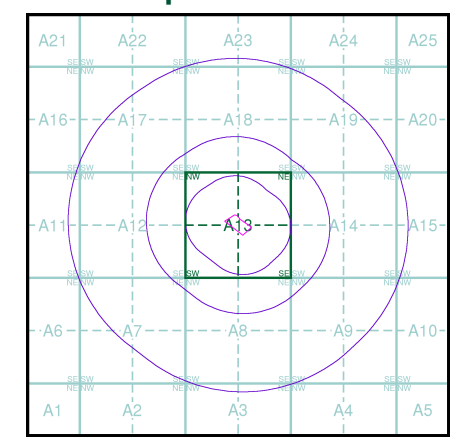
Source map scale - 1:10,000

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)

SH57NE	2000	1:10,000
SH57SE	2000	1:10,000

Historical Map - Slice A



Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260

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10k Raster Mapping

Published 2006

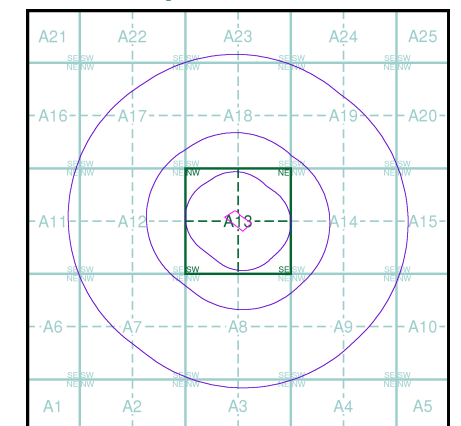
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

SH57NE	2006	1:10,000
SH57SE	2006	1:10,000

Historical Map - Slice A



Order Details

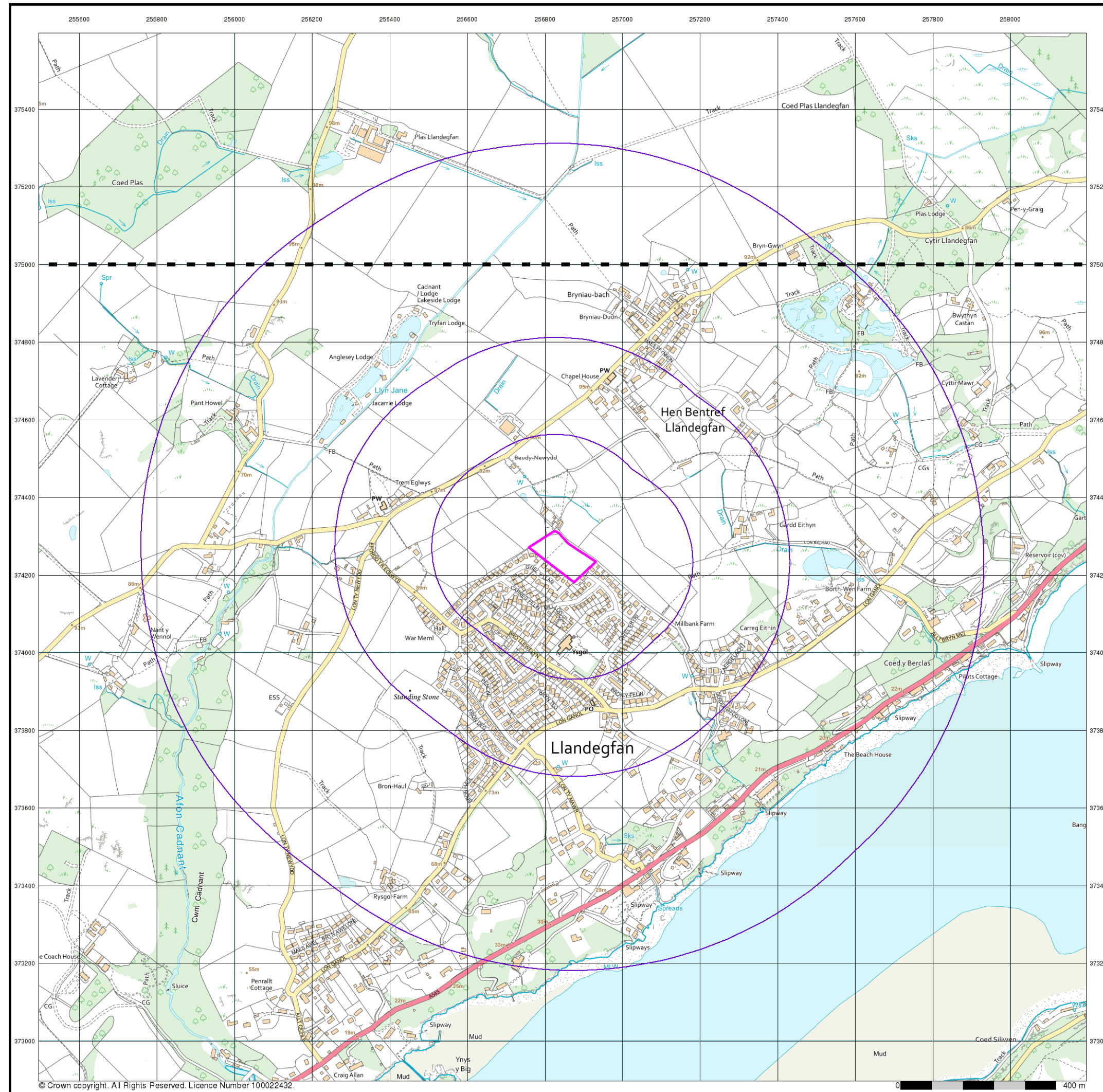
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 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260

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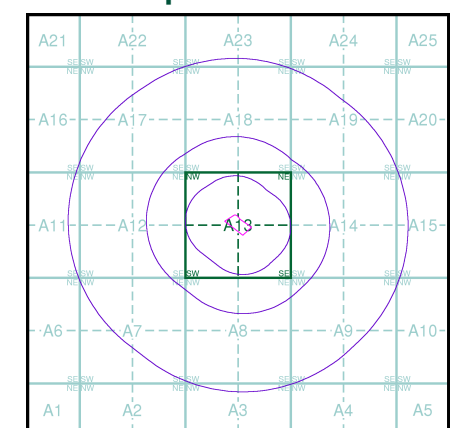
VectorMap Local
Published 2023
Source map scale - 1:10,000

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)

- SH57NE | 2023 | Variable
- SH57SE | 2023 | Variable

Historical Map - Slice A



Order Details

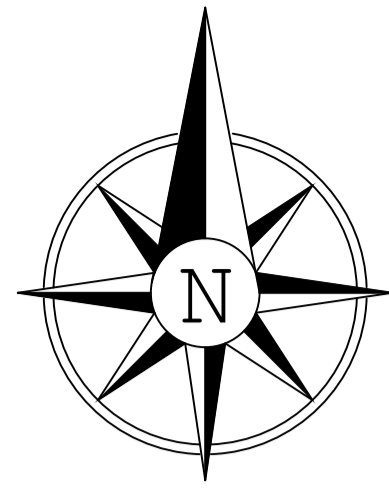
Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260

APPENDIX E



Existing Above Ground Flood Routing

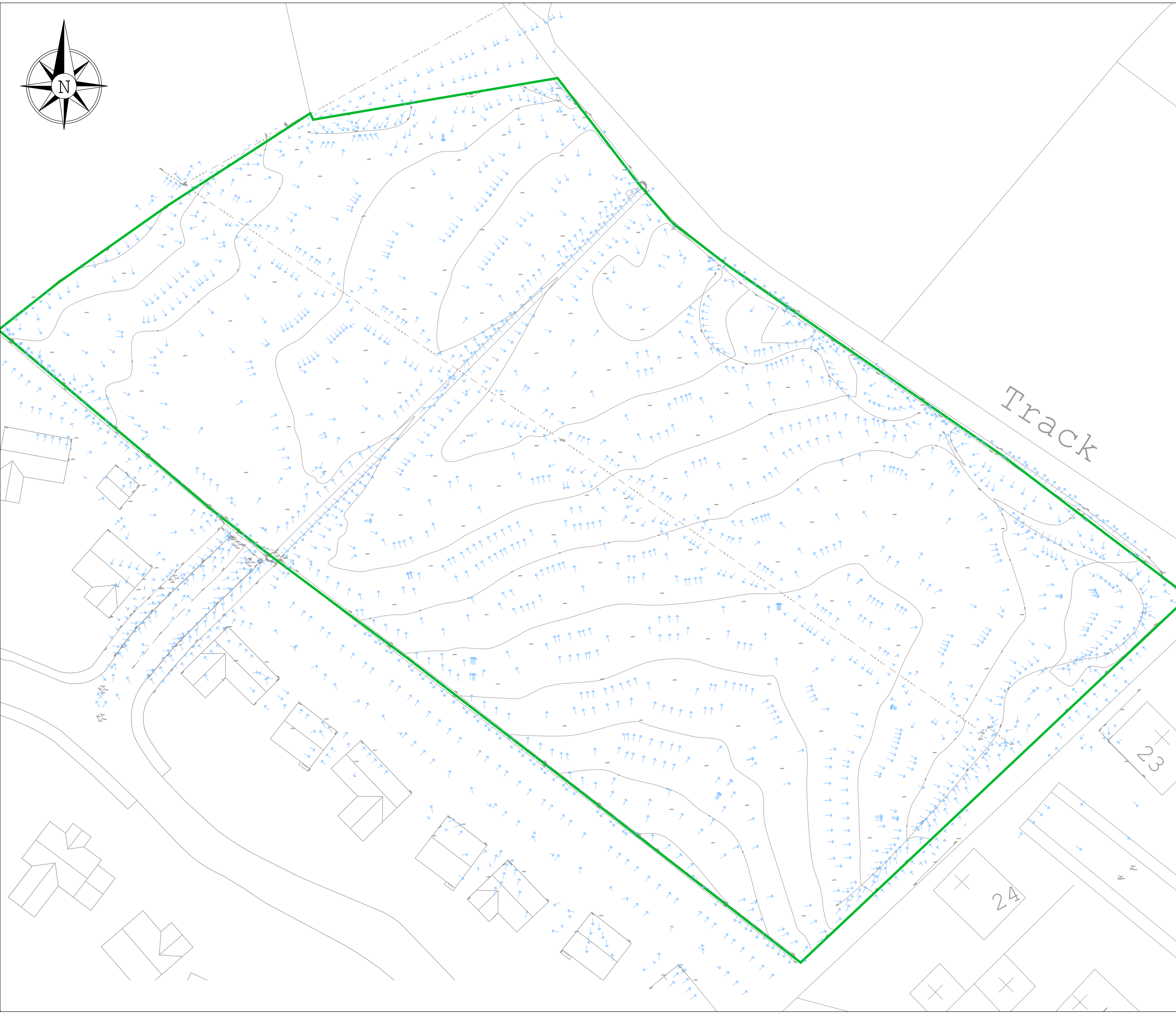


GENERAL

- G1 DO NOT SCALE FROM THIS DRAWING.
- G2 ALL LEVELS IN METRES UNLESS NOTED OTHERWISE ON DRAWING.

LEGEND

-  DENOTES ROUTE OF EXISTING SURFACE WATER RUN OFF
-  DENOTES PROPOSED SITE BOUNDARY



P01	29.09.2023	FIRST ISSUE	KB	BT	KB
REV	DATE	DESCRIPTION	BY	CHK	APP
DRAWING STATUS: PRELIMINARY					
CLIENT: DU CONSTRUCTION					
ARCHITECT: SAER ARCHITECTS					
PROJECT: GWEL Y LLAN, LLANDEGFAN					
TITLE: EXISTING FLOOD ROUTING PLAN.					
STATUS: S2	PROJECT No: 292	004		REV: P01	
SCALE @ A1: 1:250	DESIGNED: BT	DRAWN: KB	CHECKED: BT	APPROVED: BT	DATE: SEPTEMBER 2023

MÓN CIVILS
LIMITED

APPENDIX F

Envirocheck Report

Index Map

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

Slice

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

Segment

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

Quadrant

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

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

Client Details

Mr B Thorne, Mon Civils Limited, Glaslyn Ffordd Y Parc, Parc Menai, Bangor, Gwynedd, LL57 4FE

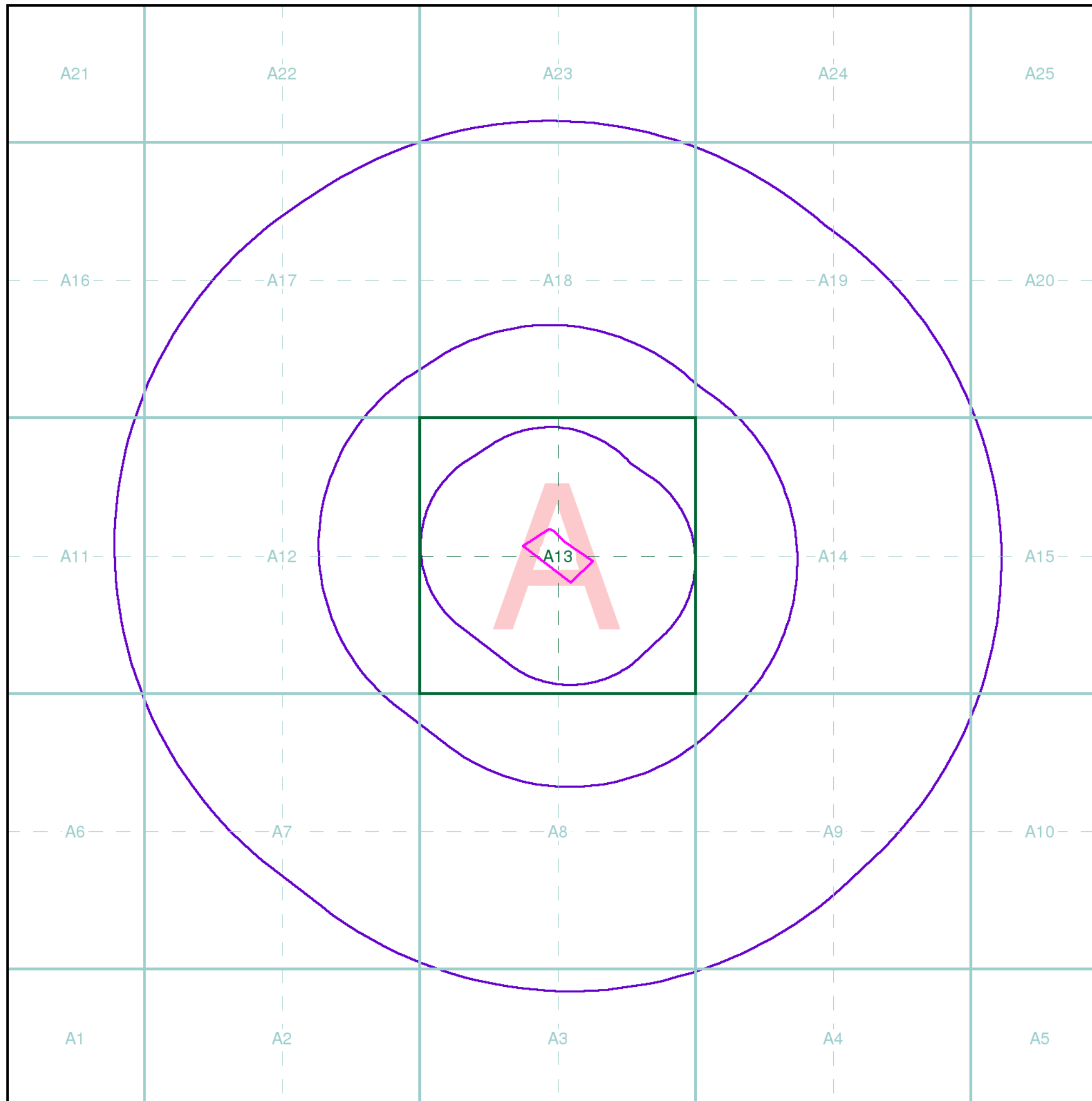
Order Details

Order Number: 317050794_1_1
Customer Ref: 292 - Gwel y Llan, Llandegfan
National Grid Reference: 256850, 374250
Site Area (Ha): 1.03
Search Buffer (m): 1000

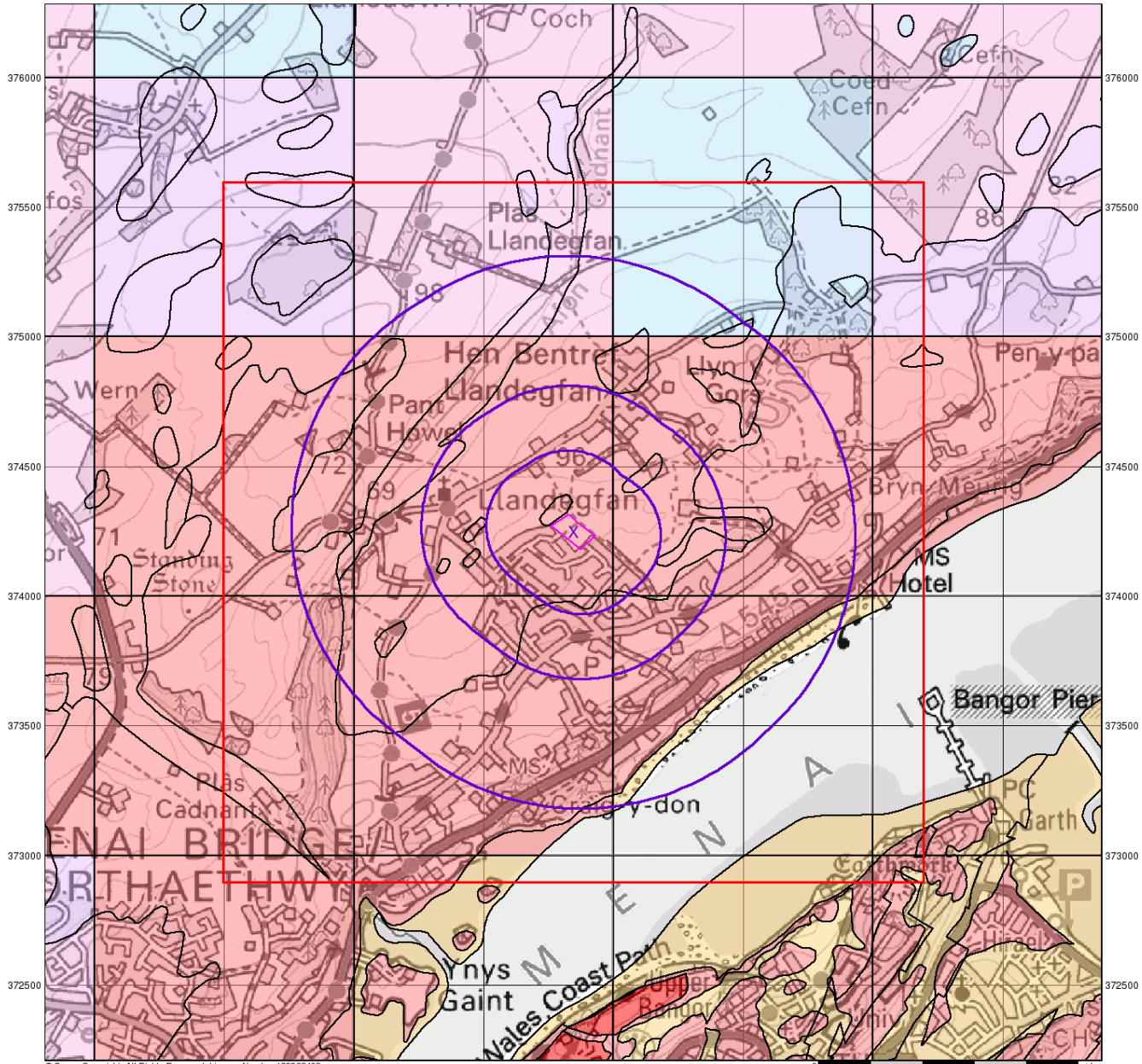
Site Details

Site at 256840, 374260

Full Terms and Conditions can be found on the following link:
<http://www.landmarkinfo.co.uk/Terms/Show/515>



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Groundwater Vulnerability

General

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

Agency and Hydrological

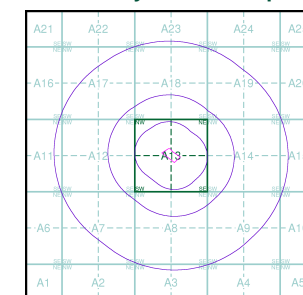
Bedrock Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer
- Unproductive Aquifer
- Soluble Rock

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

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

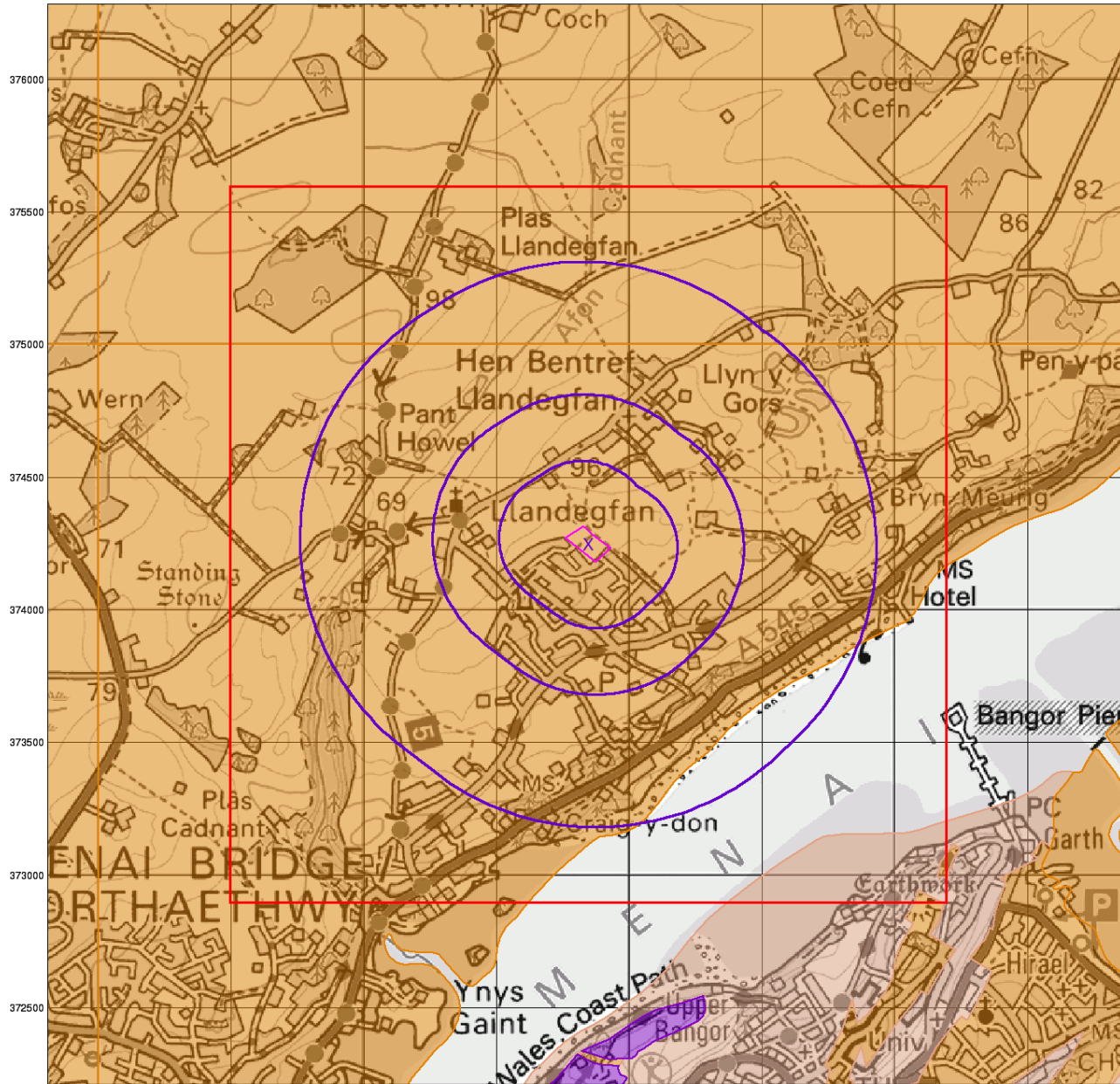
Site Details

Site at 256840, 374260

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0 1 km

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Bedrock Aquifer Designation

General

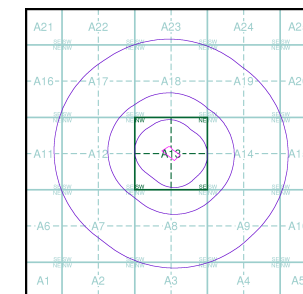
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

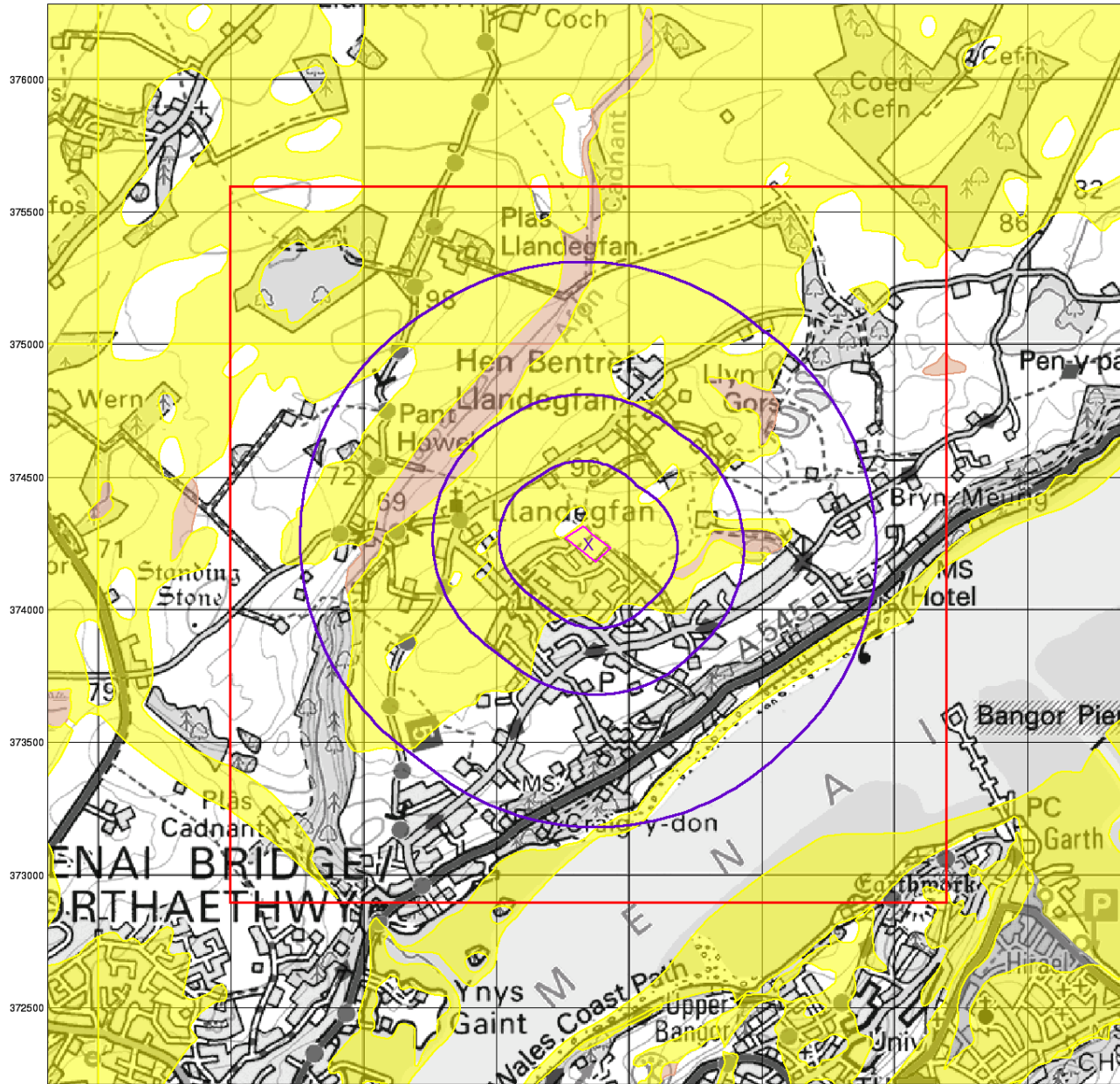
Site Details

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Superficial Aquifer Designation

General

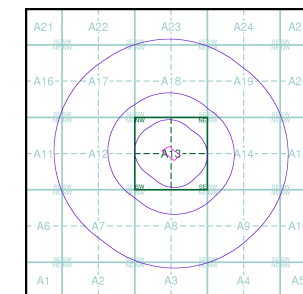
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

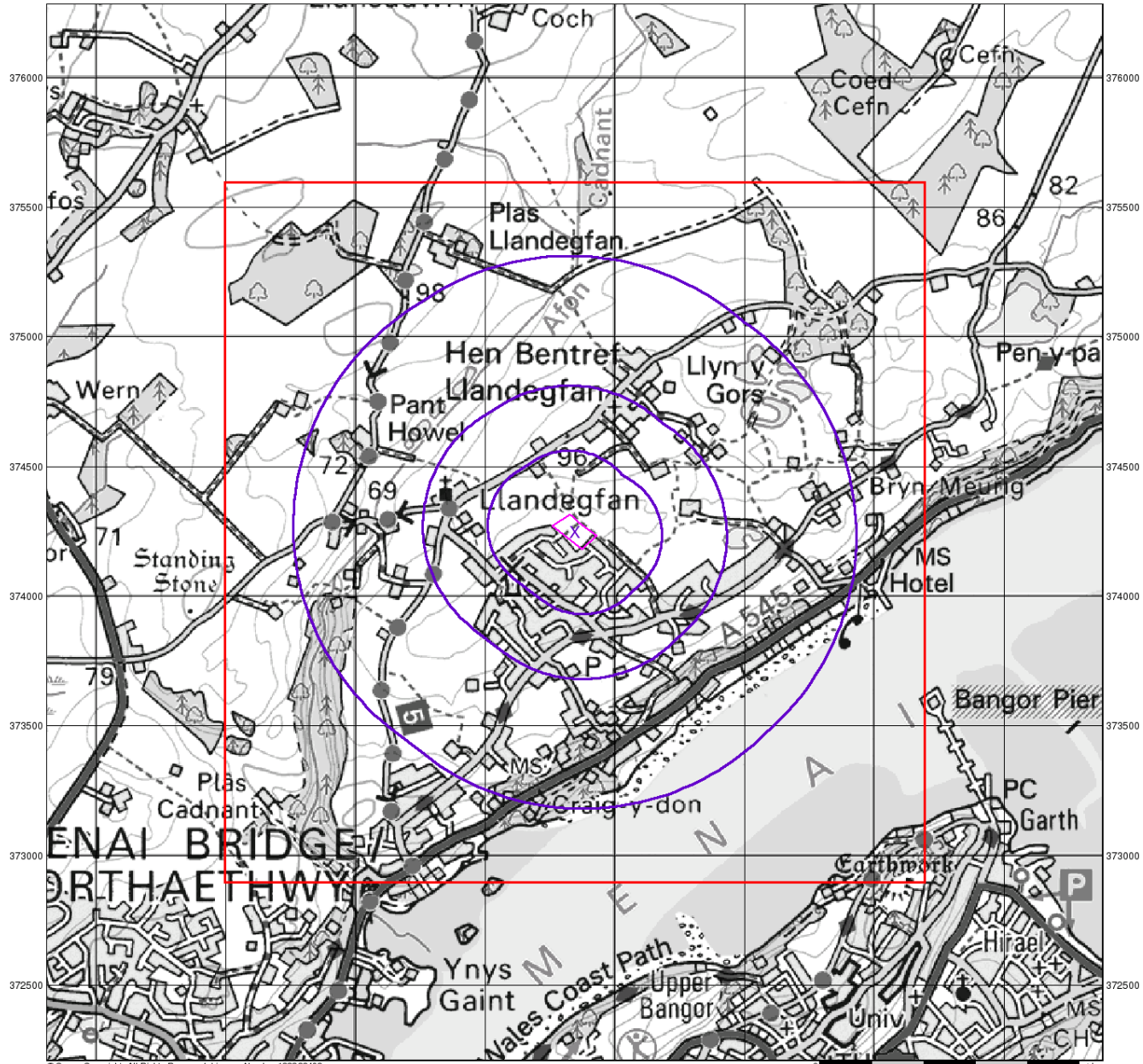
Site Details

Site at 256840, 374260

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Source Protection Zones

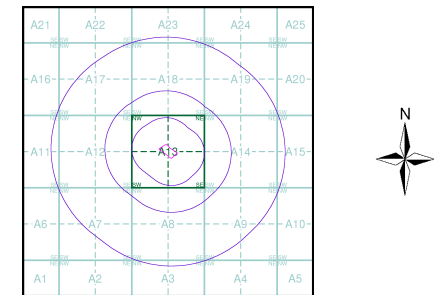
General

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

Agency and Hydrological

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

Site Sensitivity Context Map - Slice A



Order Details

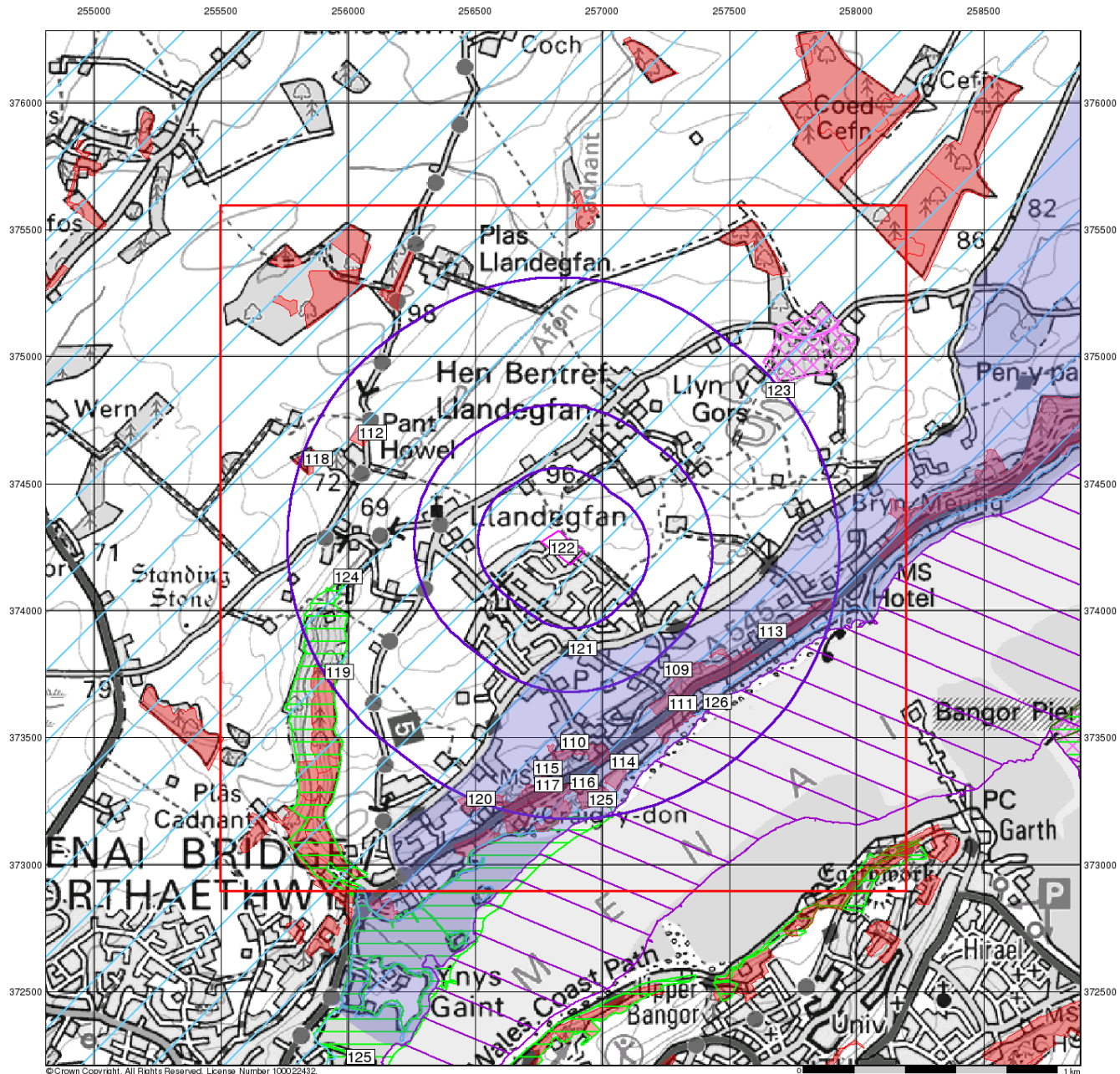
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 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260

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Sensitive Land Uses

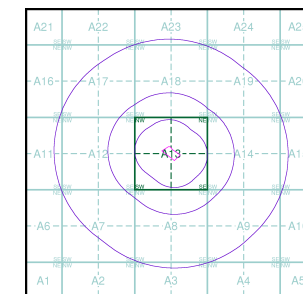
General

-  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: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

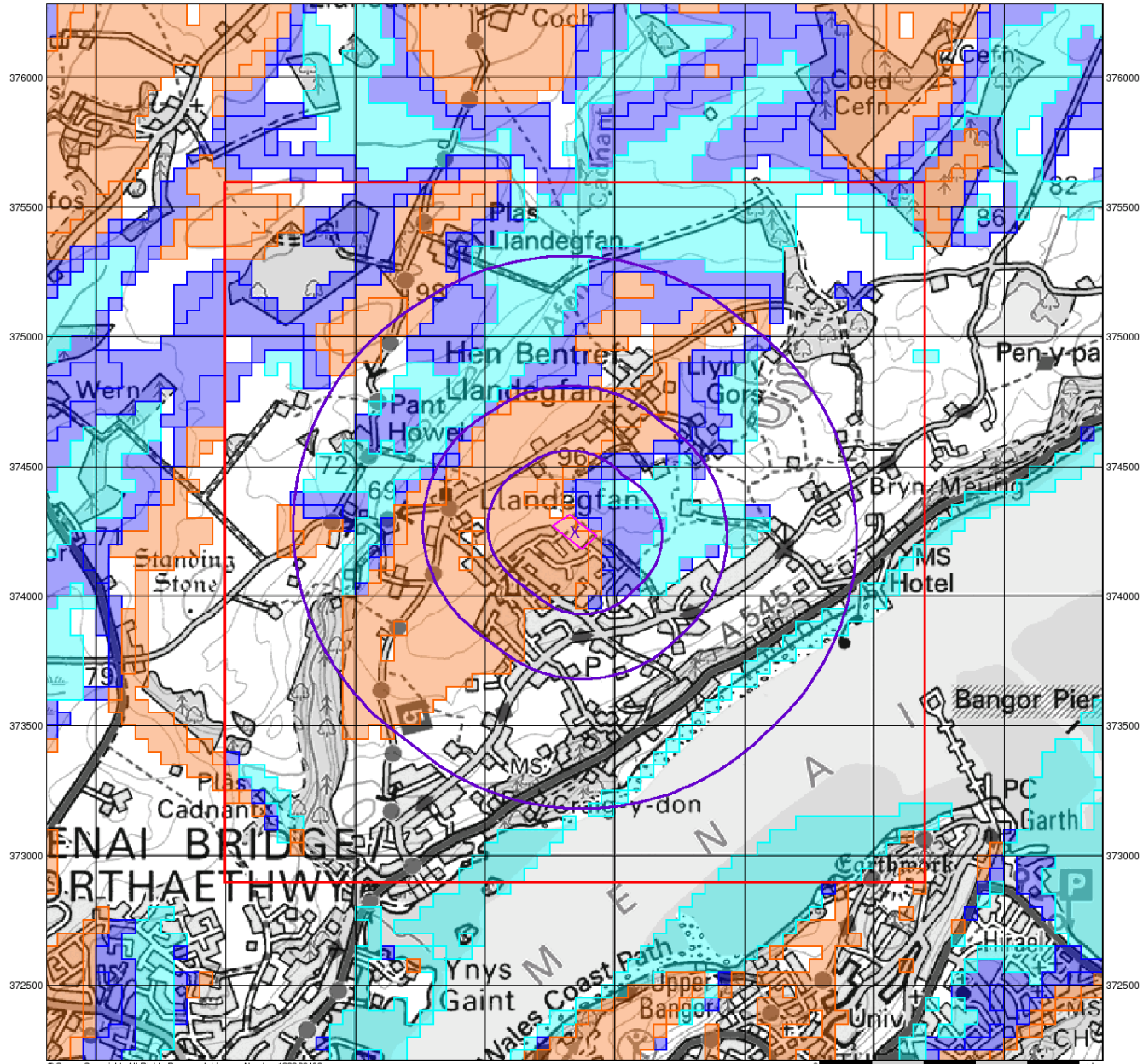
Site Details

Site at 256840, 374260

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BGS Flood GFS Data

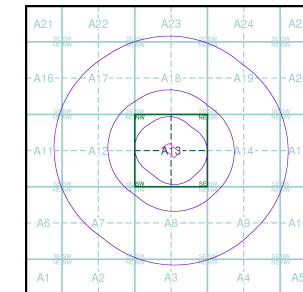
General

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

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

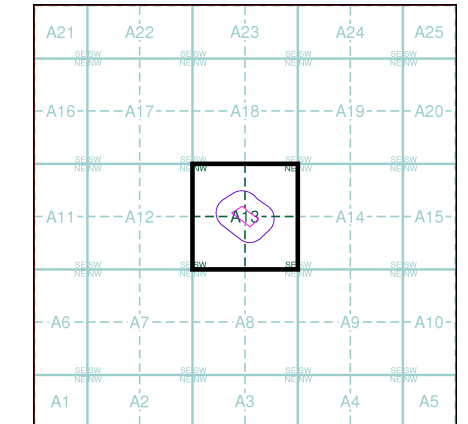
Site at 256840, 374260

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

Site Sensitivity Map - Segment A13

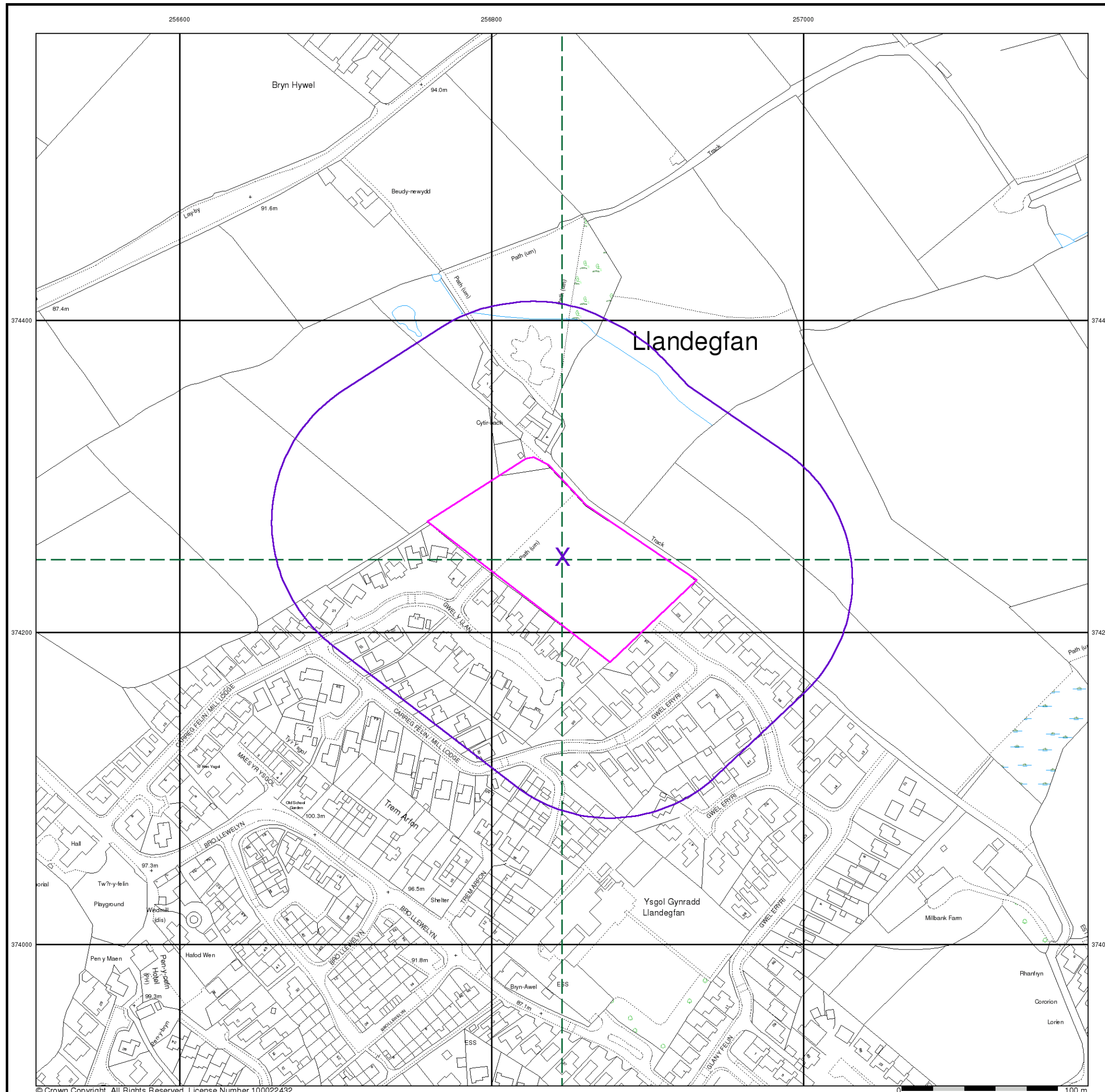


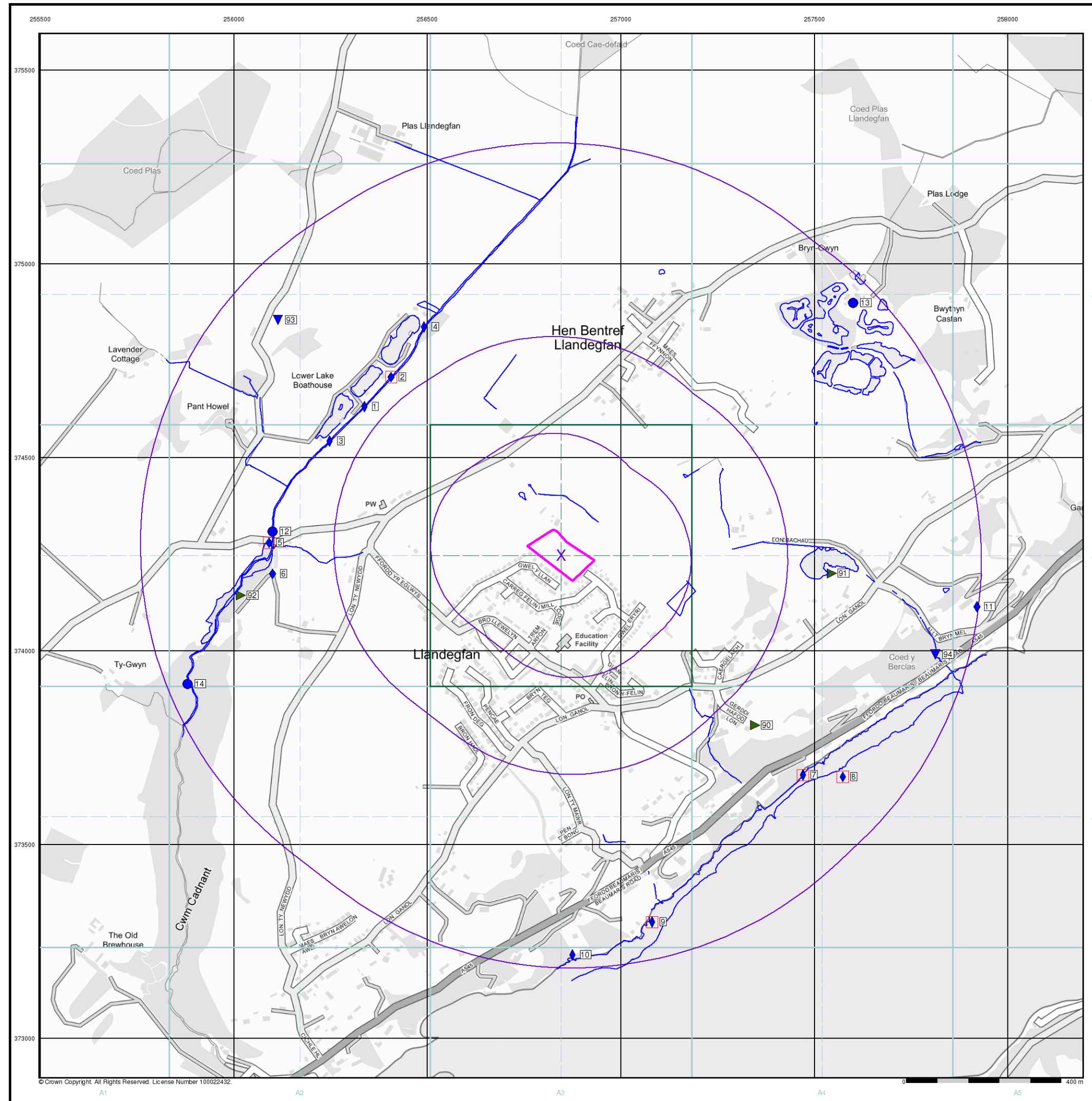
Order Details

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 Site Area (Ha): 1.03
 Plot Buffer (m): 100

Site Details

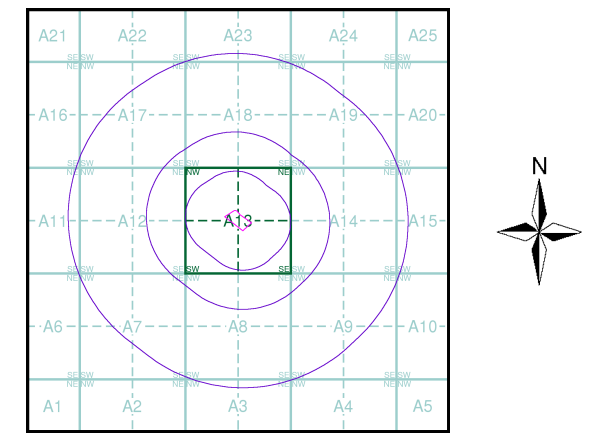
Site at 256840, 374260





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

Site Sensitivity Map - Slice A

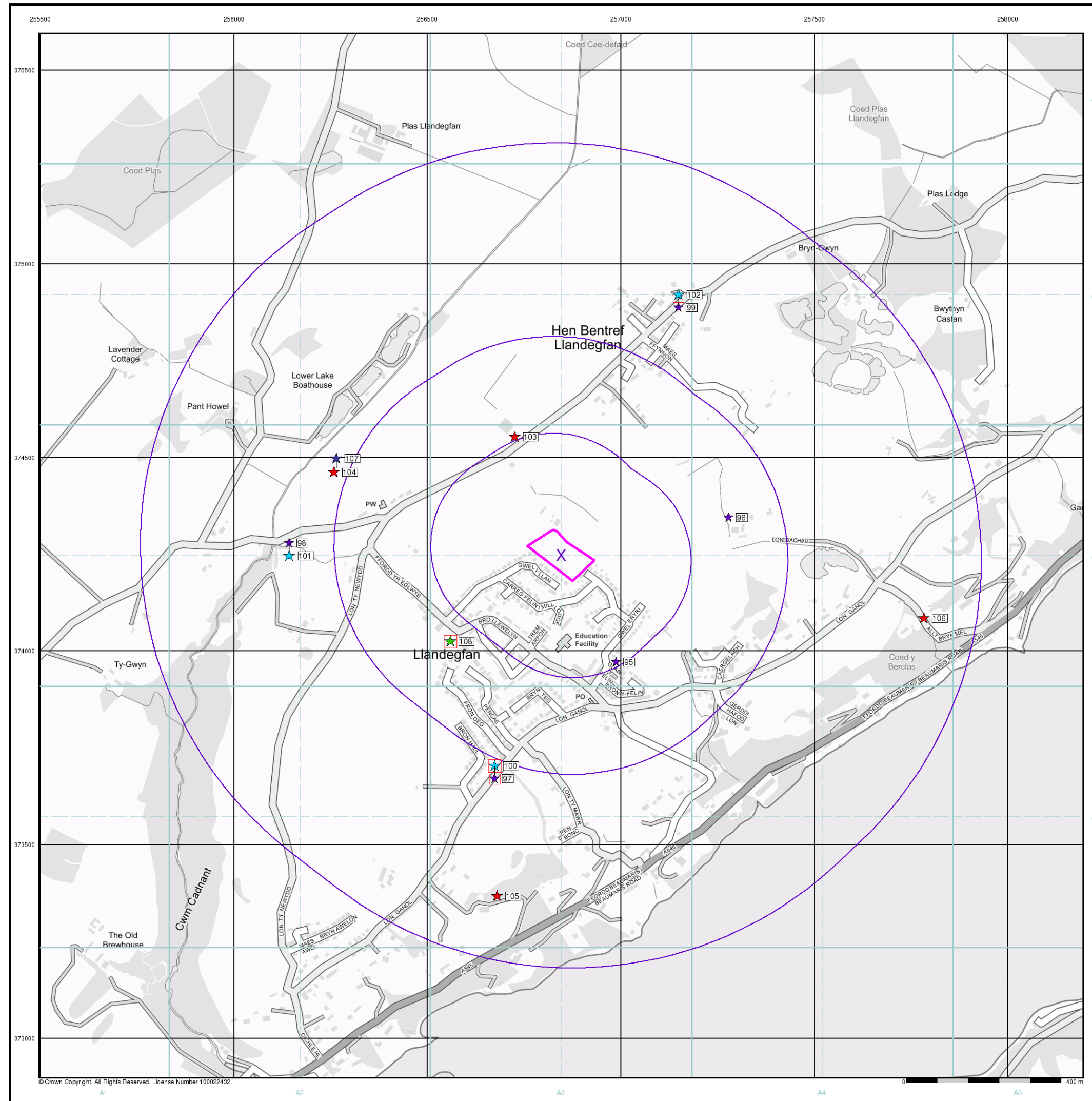


Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
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 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

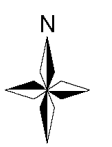
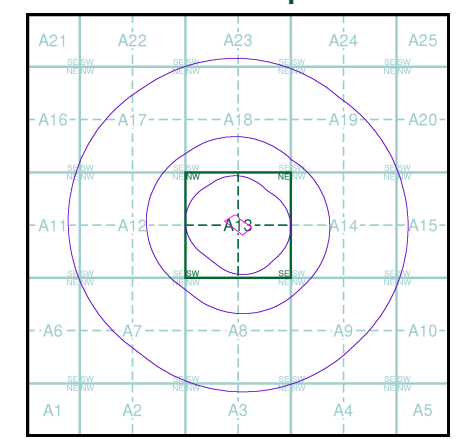
Site at 256840, 374260



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: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000






Site Details

Site at 256840, 374260

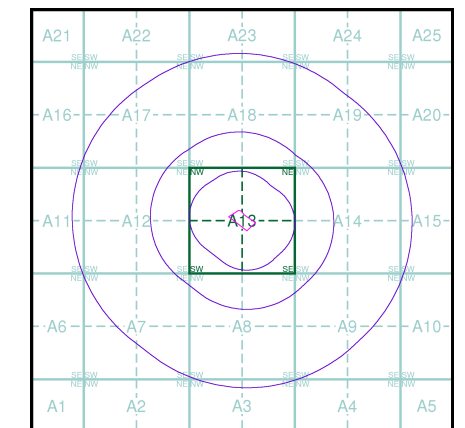
General

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

Agency and Hydrological (Flood)

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

Flood Map - Slice A

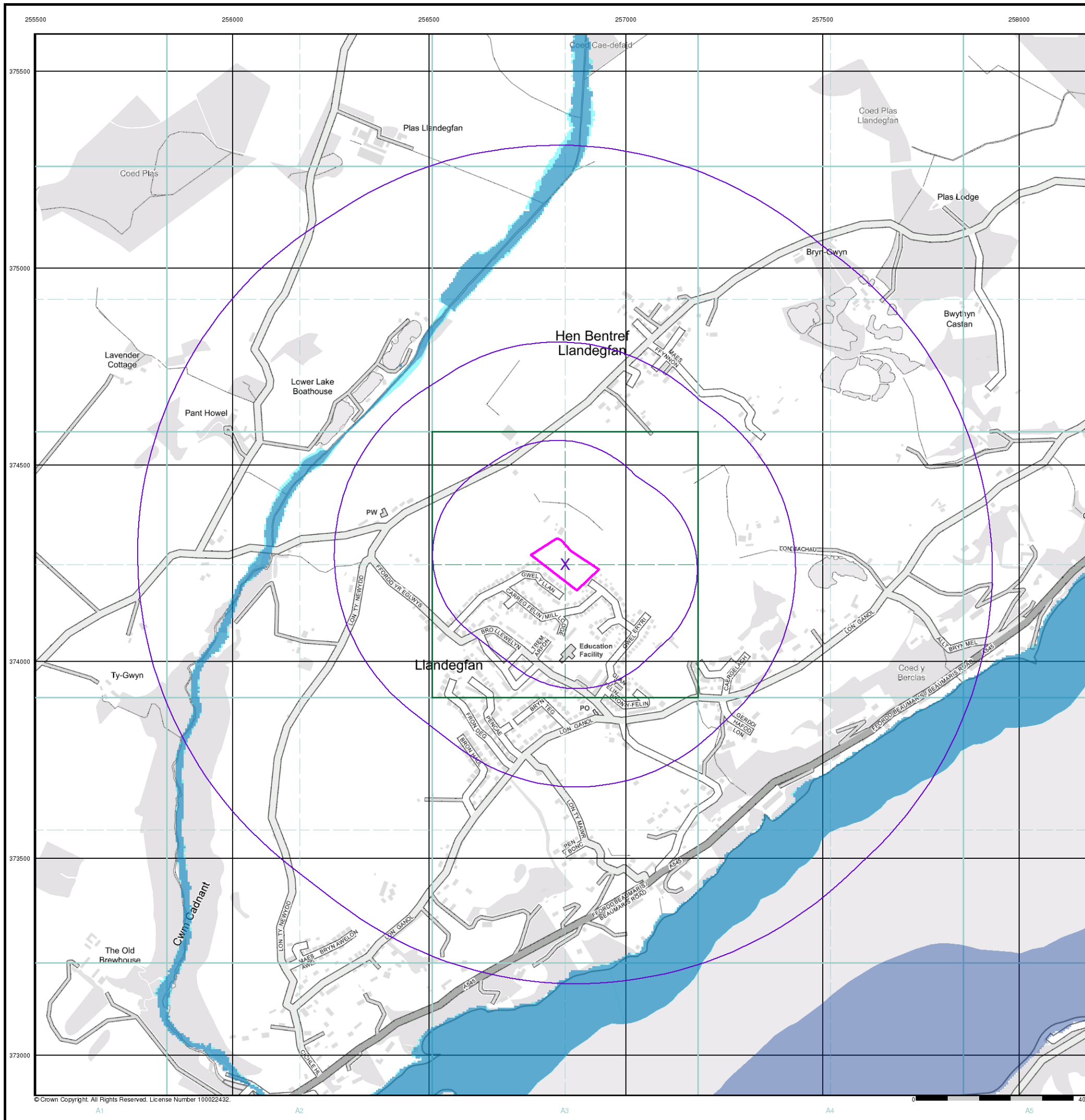


Order Details

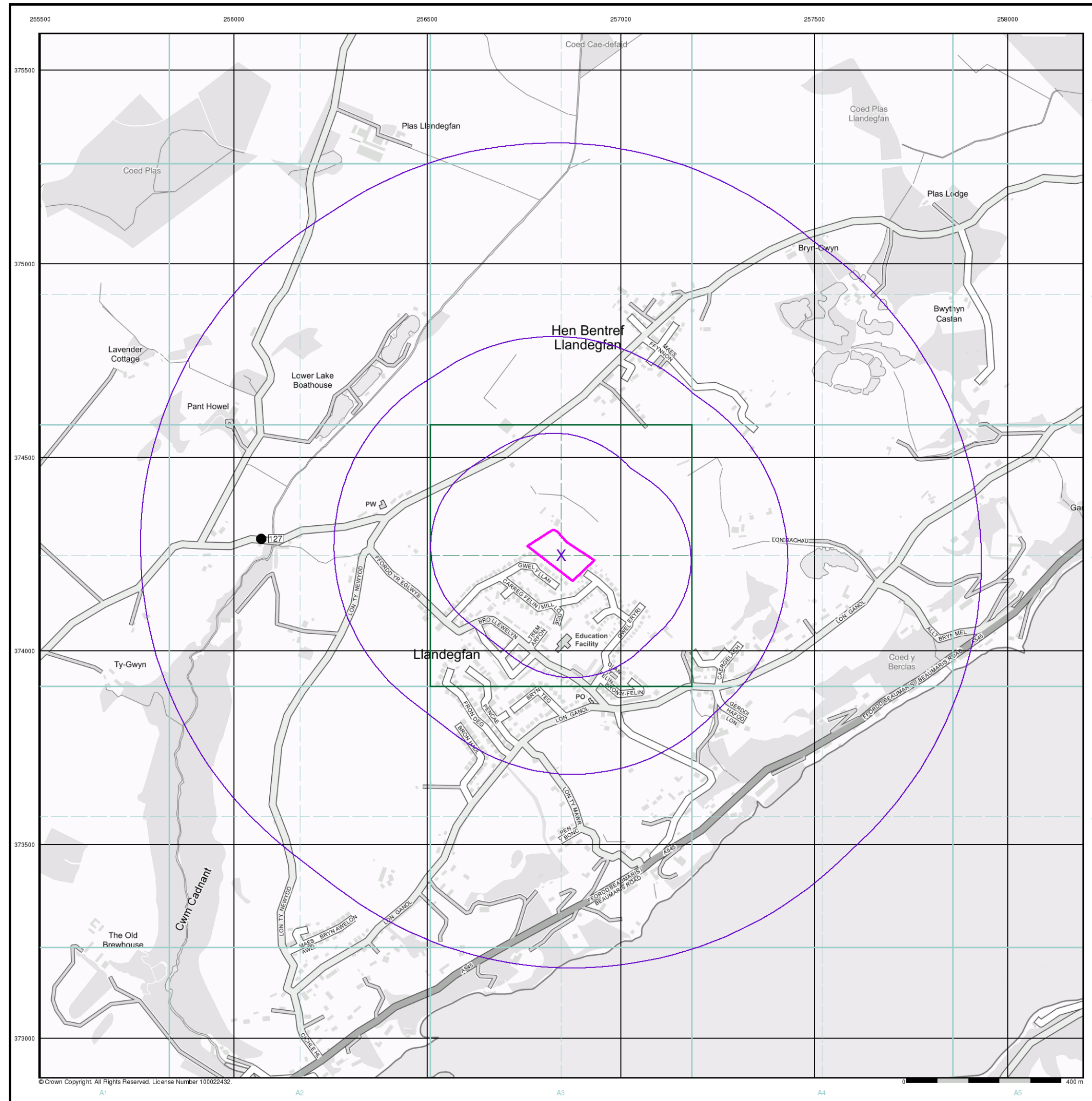
Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260



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General

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

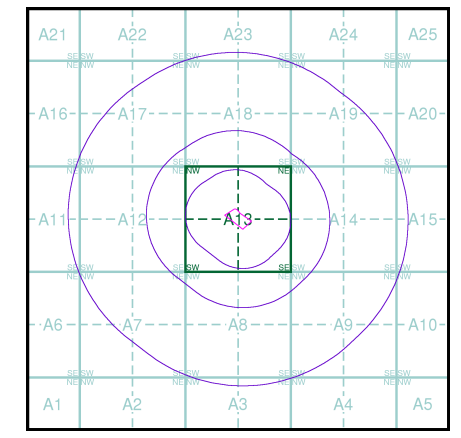
Agency and Hydrological (Boreholes)

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

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

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

Borehole Map - Slice A

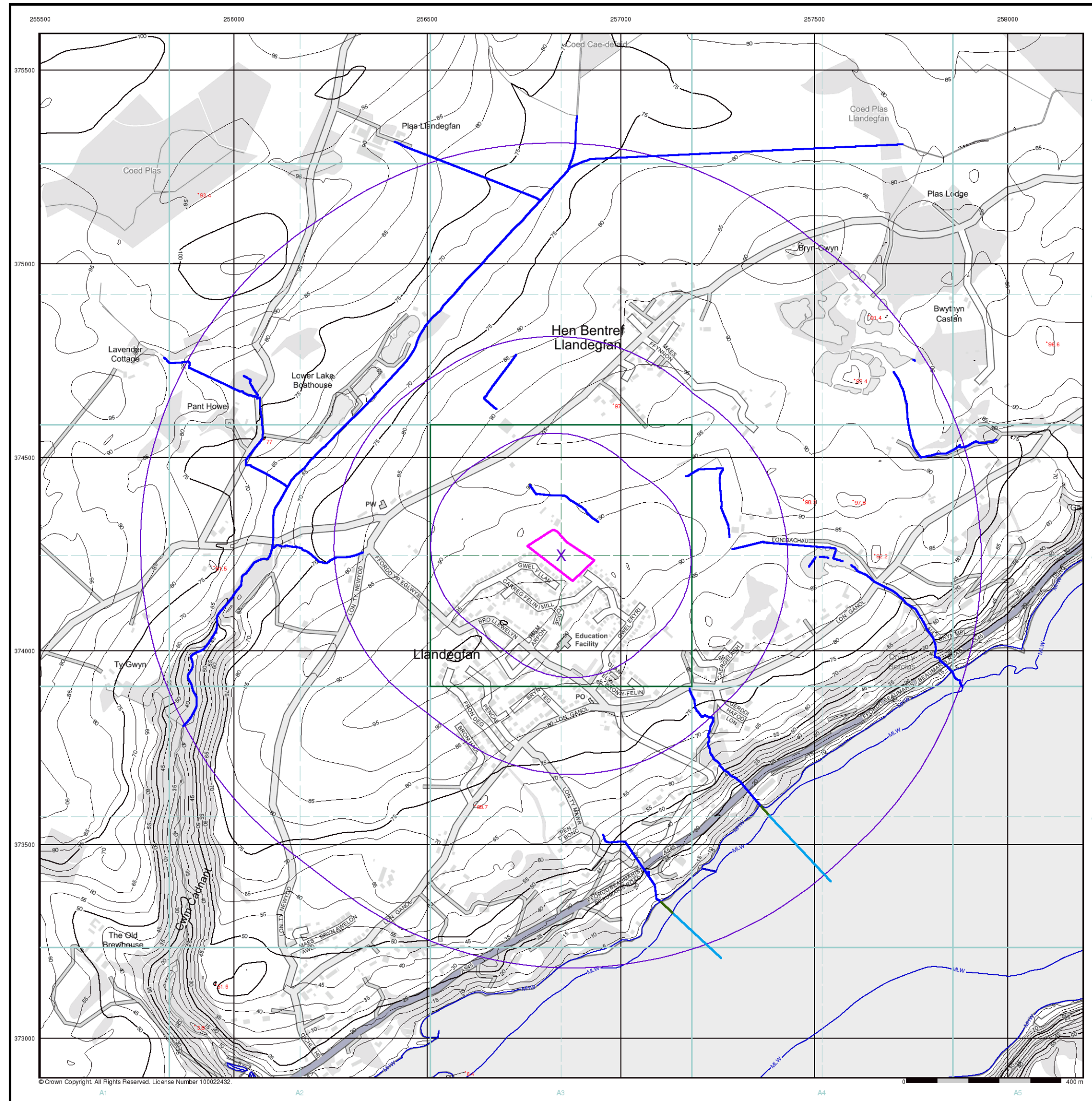


Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260



Envirocheck®

LANDMARK INFORMATION GROUP®

General

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

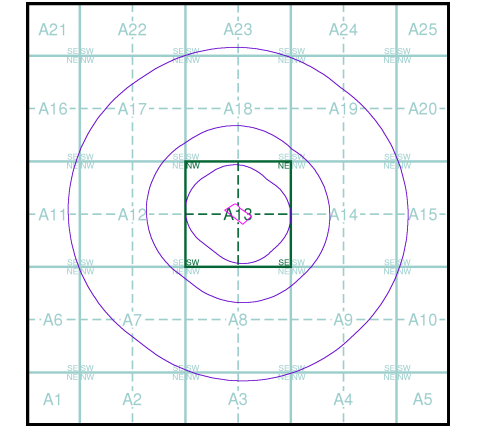
OS Water Network Data

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

Contours (height in meters)

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

OS Water Network Map - Slice A



Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000




Site Details

Site at 256840, 374260

Landmark
 INFORMATION GROUP

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

General

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

Risk of Flooding from Surface Water

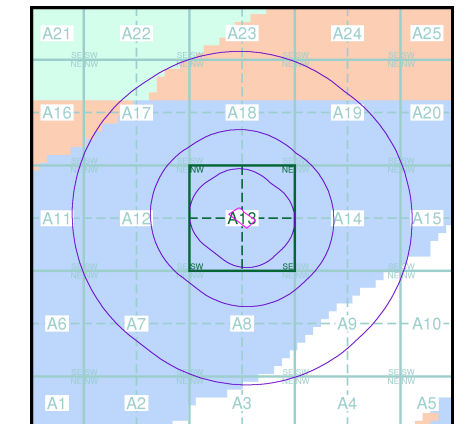
-  High - 30 Year Return
-  Medium - 100 Year Return
-  Low - 1000 Year Return

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

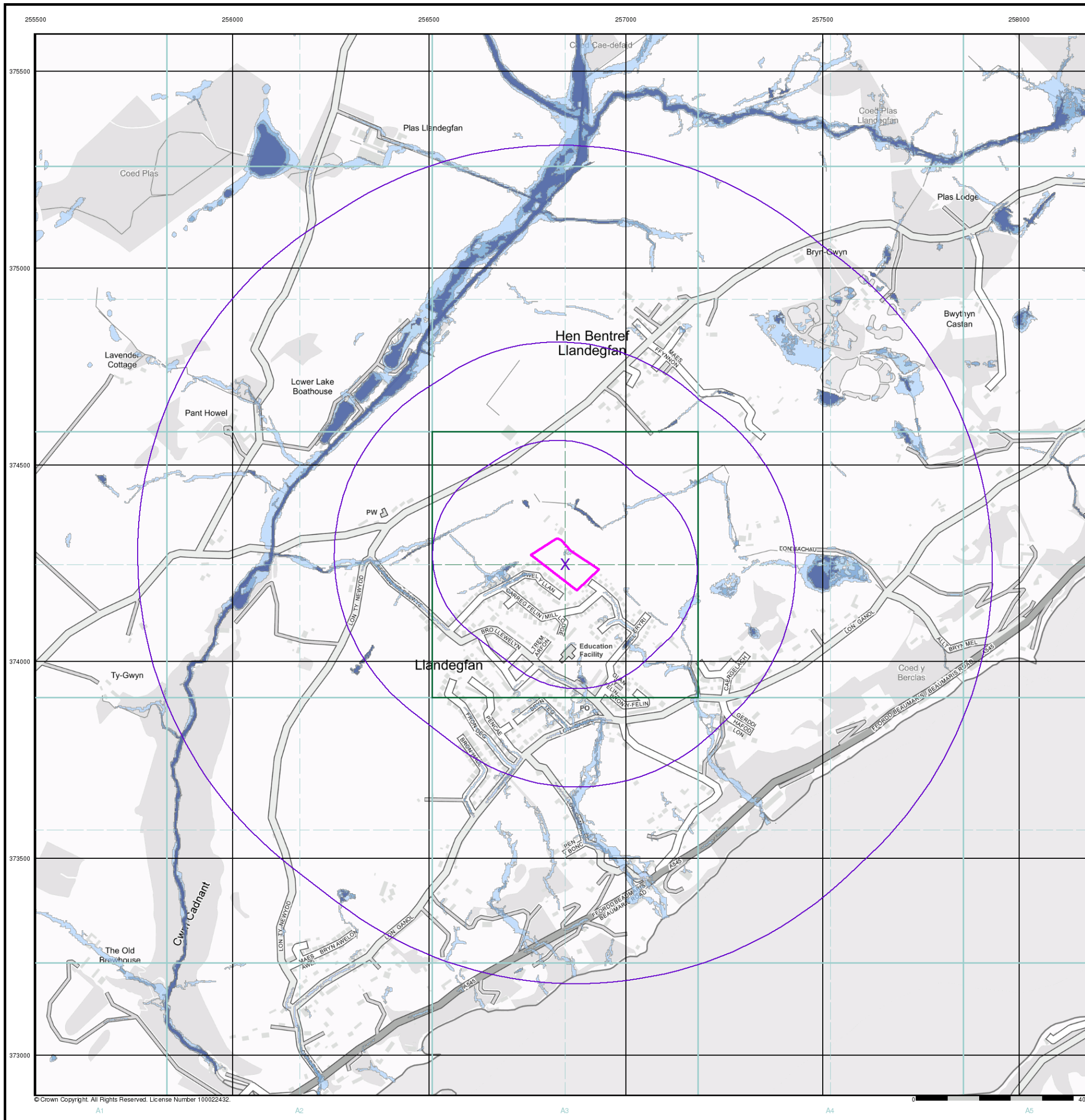


Order Details

Order Number: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260



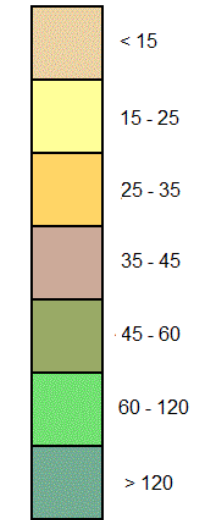
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General

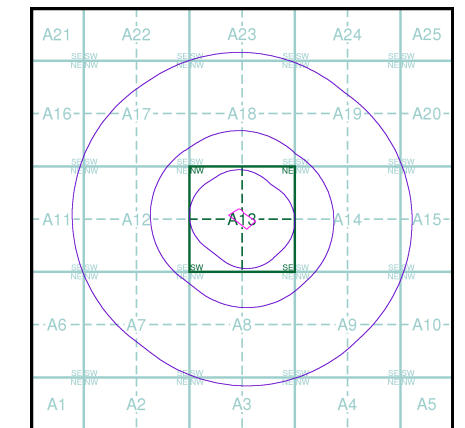
- ✱ Specified Site
- Specified Buffer(s)
- ✱ Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice A

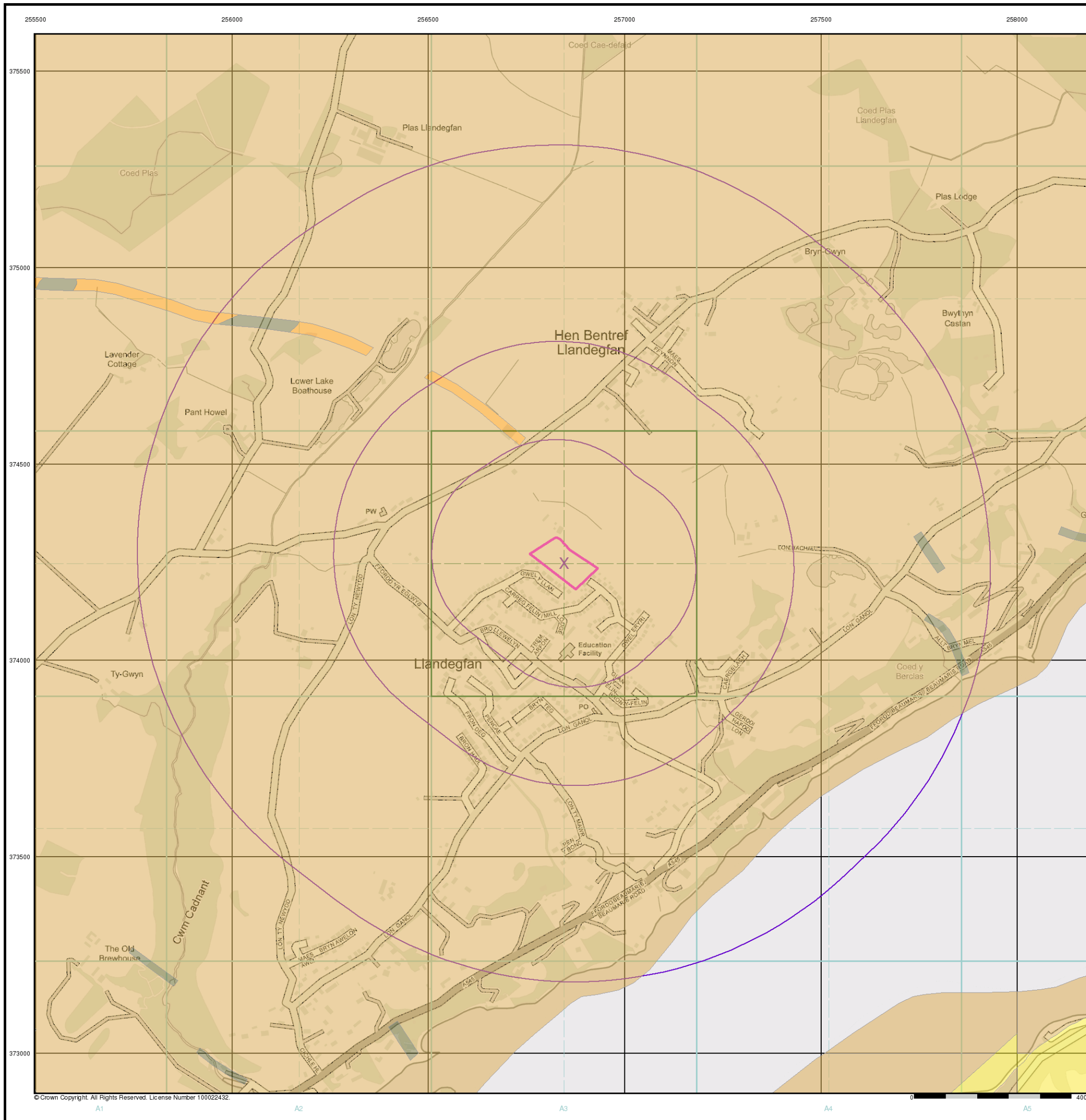


Order Details

Order Details: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260

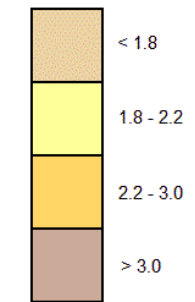


General

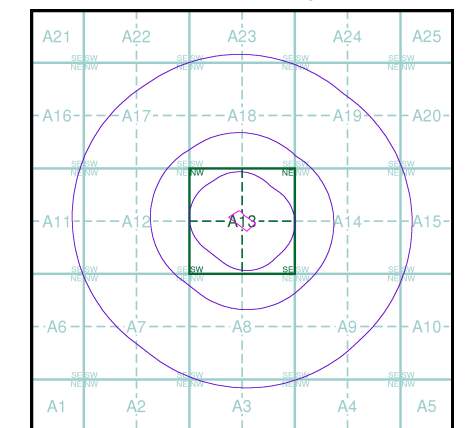
✱ Specified Site
 ○ Specified Buffer(s)
 ✕ Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A

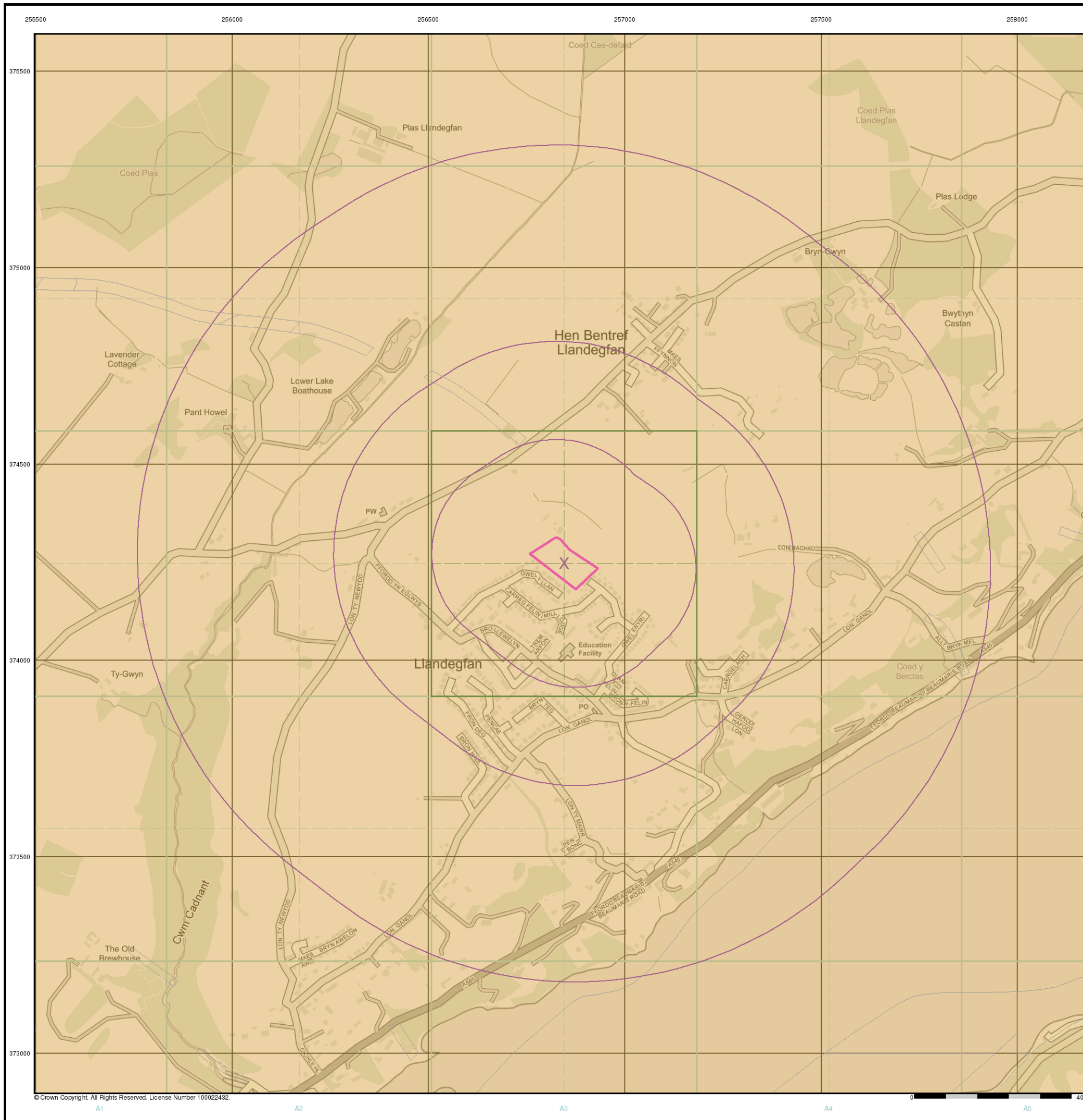


Order Details

Order Details: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260

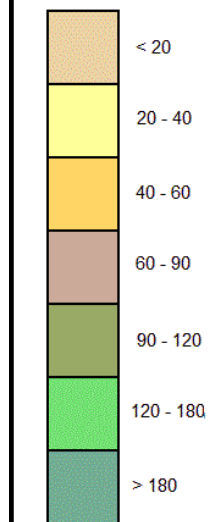


General

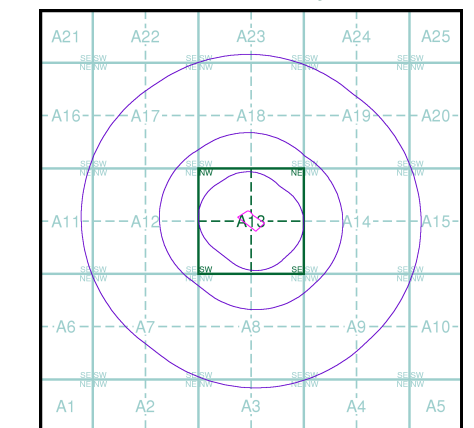
- ✱ Specified Site
- Specified Buffer(s)
- ✕ Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice A

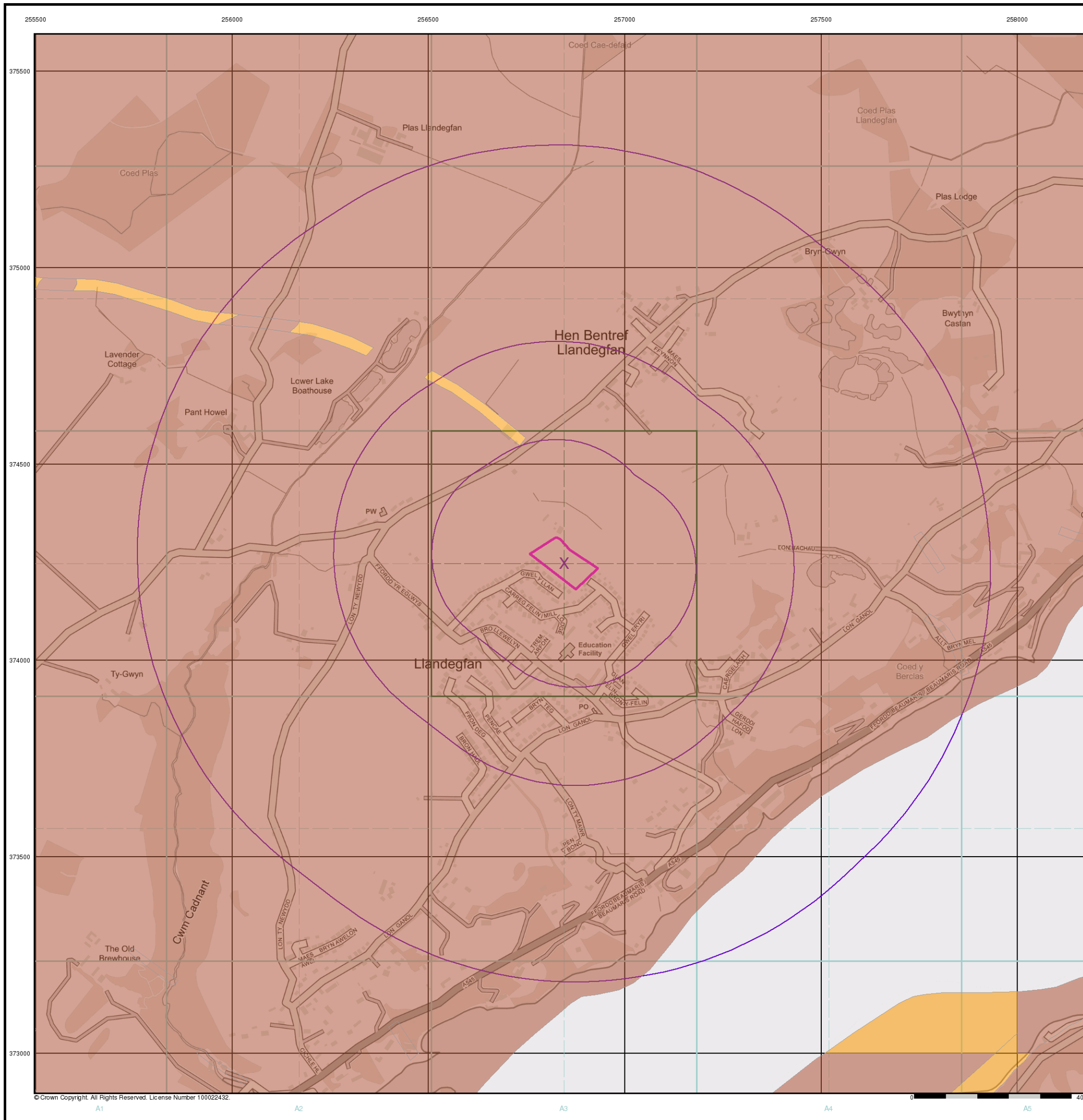


Order Details

Order Details: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260

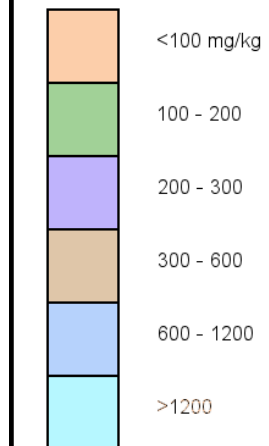


General

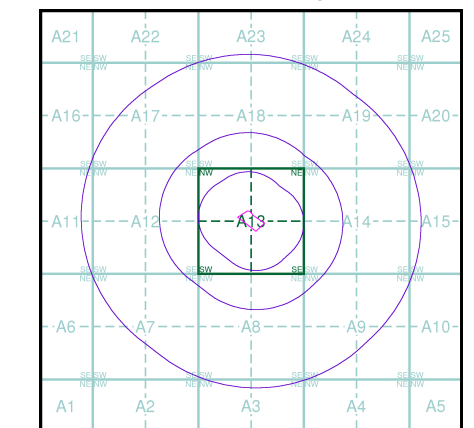
✱ Specified Site
 ○ Specified Buffer(s)
 ✕ Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A

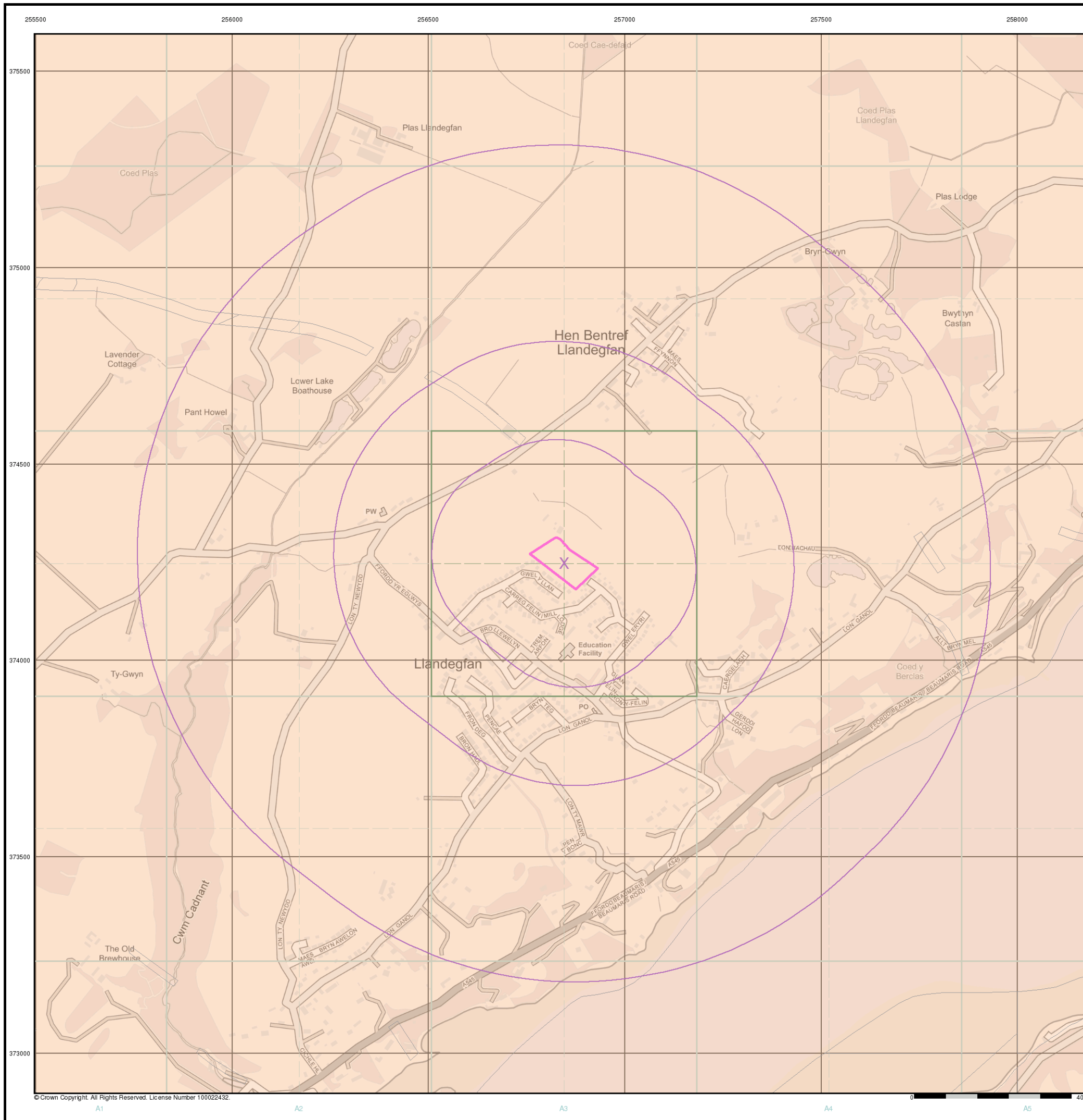


Order Details

Order Details: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260

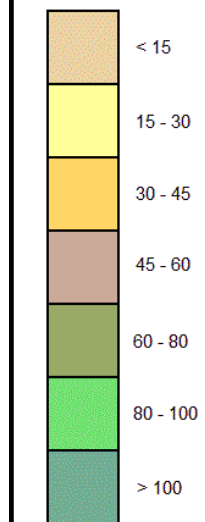


General

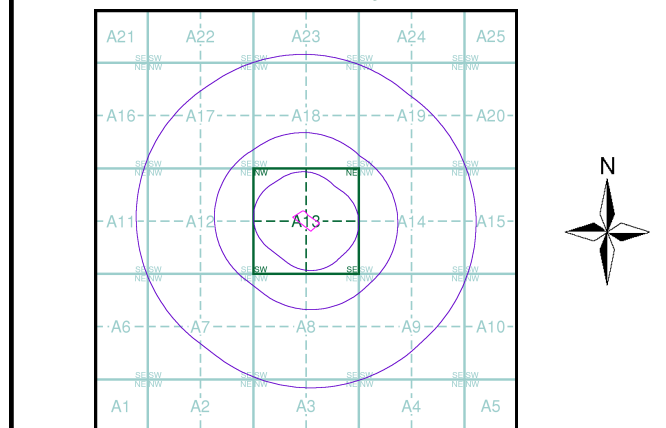
✱ Specified Site
 ○ Specified Buffer(s)
 ✕ Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A

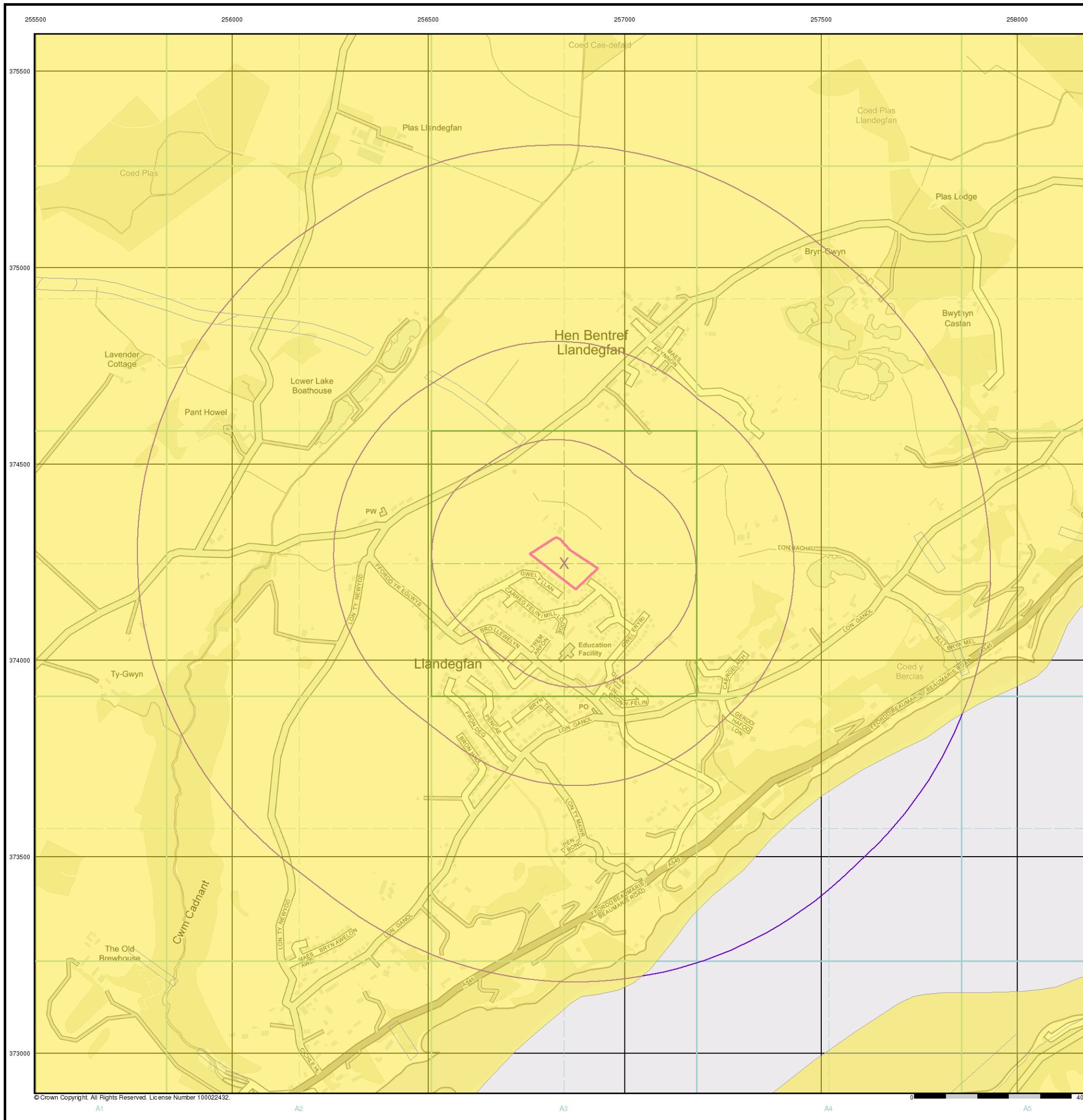


Order Details

Order Details: 317050794_1_1
 Customer Ref: 292 - Gwel y Llan, Llandegfan
 National Grid Reference: 256850, 374250
 Slice: A
 Site Area (Ha): 1.03
 Search Buffer (m): 1000

Site Details

Site at 256840, 374260



Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

317050794_1_1

Customer Reference:

292 - Gwel y Llan, Llandegfan

National Grid Reference:

256850, 374250

Slice:

A

Site Area (Ha):

1.03

Search Buffer (m):

1000

Site Details:

Site at 256840, 374260

Client Details:

Mr B Thorne
Mon Civils Limited
Glaslyn Ffordd Y Parc
Parc Menai
Bangor
Gwynedd
LL57 4FE

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	18
Hazardous Substances	-
Geological	19
Industrial Land Use	22
Sensitive Land Use	24
Data Currency	26
Data Suppliers	32
Useful Contacts	33

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 3				20
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 7		Yes		
Pollution Incidents to Controlled Waters	pg 8				3
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions					
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 8	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 8	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 8	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 9		6	10	59

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 18	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)					
Potentially Infilled Land (Water)	pg 18				3
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 19	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 19	Yes		Yes	Yes
BGS Recorded Mineral Sites	pg 20				2
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
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	pg 20	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 20	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 20	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 21	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 21	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 22		1	1	5
Fuel Station Entries					
Points of Interest - Commercial Services	pg 22				4
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 22			1	3
Points of Interest - Public Infrastructure	pg 23				1
Points of Interest - Recreational and Environmental	pg 23			2	
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 24				12
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty	pg 24			1	
Environmentally Sensitive Areas	pg 25	1			
Forest Parks					
Local Nature Reserves	pg 25				1
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest	pg 25				2
Special Areas of Conservation	pg 25				1
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	0	1	256850 374250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	0	1	256900 374250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (N)	0	1	256846 374300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	0	1	256900 374249
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NW)	0	1	256846 374249
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (N)	5	1	256850 374300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	19	1	256900 374300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	38	1	256950 374200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	45	1	256800 374350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (N)	88	1	256846 374400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (NE)	107	1	256950 374350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	110	1	256950 374100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (N)	138	1	256846 374450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (N)	156	1	256900 374450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	183	1	256950 374450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	183	1	256900 374000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (N)	202	1	256900 374500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	224	1	256950 374500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (N)	268	1	256950 374550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	330	1	257250 374150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NE)	379	1	257200 374500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	385	1	257150 374550

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 (NW)	385	1	256450 374500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (NW)	401	1	256400 374450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	417	1	256350 374350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A17SE (NW)	419	1	256500 374600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	421	1	257350 374200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	426	1	256400 374500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NE)	428	1	257300 374450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (N)	438	1	256846 374750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	447	1	256350 374450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (NW)	448	1	256600 374700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A17SE (NW)	452	1	256450 374600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	455	1	256400 374550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A17SE (NW)	459	1	256500 374650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	469	1	256350 374500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	474	1	256550 374700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A19SW (NE)	486	1	257250 374600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (N)	488	1	256846 374800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A17SE (NW)	489	1	256450 374650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	492	1	256600 374750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	493	1	256300 374450

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	<p>Discharge Consents</p> <p>Operator: Mr Geoff Green Property Type: Domestic Property (Single) Location: Cabins 2 3 & 4, Llyn Jane, Old Llandegfan, Anglesey, LI59 5sb Authority: Natural Resources Wales Catchment Area: Afon Cadnant Reference: Npswqd000353 Permit Version: 1 Effective Date: 2nd May 2008 Issued Date: 2nd May 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Afon Cadnant Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	555	2	256337 374631
2	<p>Discharge Consents</p> <p>Operator: Mr Geoff Green Property Type: Domestic Property (Single) Location: Cabins 5 6 & 7, Llyn Jane, Old Llandegfan, Anglesey, LI59 5sb Authority: Natural Resources Wales Catchment Area: Afon Cadnant Reference: Npswqd000354 Permit Version: 1 Effective Date: 2nd May 2008 Issued Date: 2nd May 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Afon Cadnant Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	562	2	256406 374708
2	<p>Discharge Consents</p> <p>Operator: Mr Geoff Green Property Type: Domestic Property (Single) Location: Cabins 8 & 9, Llyn Jane, Old Llandegfan, Anglesey, LI59 5sb Authority: Natural Resources Wales Catchment Area: Afon Cadnant Reference: Npswqd000355 Permit Version: 1 Effective Date: 2nd May 2008 Issued Date: 2nd May 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Afon Cadnant Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	564	2	256418 374720
3	<p>Discharge Consents</p> <p>Operator: Mr Geoff Green Property Type: Domestic Property (Single) Location: Cabin 1, Llyn Jane, Old Llandegfan, Anglesey, LI59 5sb Authority: Natural Resources Wales Catchment Area: Afon Cadnant Reference: Npswqd000352 Permit Version: 1 Effective Date: 2nd May 2008 Issued Date: 2nd May 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Afon Cadnant Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12NE (NW)	580	2	256247 374543

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	<p>Discharge Consents</p> <p>Operator: Mr Geoff Green Property Type: Domestic Property (Single) Location: Cabins 10 11 & 12, Llyn Jane, Old Llandegfan, Anglesey, LI59 5sb Authority: Natural Resources Wales Catchment Area: Afon Cadnant Reference: Npswqd000356 Permit Version: 1 Effective Date: 2nd May 2008 Issued Date: 2nd May 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Afon Cadnant Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	621	2	256491 374837
5	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Welsh Water Property Type: Sewerage Network - Pumping Staions Location: Pont Llandegfan Sewage Pumping Stat, Llandegfan, Anglesey, Wales, United Kingdom, LI59 5ra Authority: Natural Resources Wales Catchment Area: CADNANT Reference: Cg0055401 Permit Version: 3 Effective Date: 23rd January 2018 Issued Date: 23rd January 2018 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Cadnant Status: Effective Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	662	2	256098 374287
5	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Welsh Water Property Type: Sewerage Network - Pumping Staions Location: Pont Llandegfan Sewage Pumping Stat, Llandegfan, Anglesey, Wales, United Kingdom, LI59 5ra Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cg0055401 Permit Version: Not Supplied Effective Date: 23rd January 2018 Issued Date: 23rd January 2018 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Cadnant Status: Effective Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	662	2	256098 374287
5	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Pont Llandegfan Sewage Pumping Stat, Llandegfan, Anglesey, Wales, United Kingdom, LI59 5ra Authority: Natural Resources Wales Catchment Area: CADNANT Reference: Cg0055401 Permit Version: 2 Effective Date: 31st March 2004 Issued Date: 19th March 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Cadnant Status: Effective Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	662	2	256098 374287

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Llandegfan Sso Authority: Natural Resources Wales Catchment Area: Afon Cadnant Reference: CG0055401 Permit Version: 1 Effective Date: 2nd June 1965 Issued Date: 2nd June 1965 Revocation Date: 30th March 2004 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Cadnant Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m</p>	A12NW (W)	669	2	256090 374280
6	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Llandegfan Pont Llandegfan - S Authority: Natural Resources Wales Catchment Area: Afon Cadnant Reference: Cg0190801 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 4th March 1994 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Cadnant Status: Consent expired Positional Accuracy: Located by supplier to within 100m</p>	A12SW (W)	663	2	256100 374200
7	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Glyn Garth Ps Llandegfan Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: CG0146501 Permit Version: 2 Effective Date: 23rd February 1993 Issued Date: 23rd November 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Controlled Sea Environment: Receiving Water: Estuary - Menai Strait Status: Effective Positional Accuracy: Located by supplier to within 100m</p>	A9NW (SE)	773	2	257470 373680
7	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Glyn Garth Ps Llandegfan Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cg0146501 Permit Version: Not Supplied Effective Date: 23rd February 1993 Issued Date: 23rd November 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Controlled Sea Environment: Receiving Water: Estuary - Menai Strait Status: Effective Positional Accuracy: Located by supplier to within 10m</p>	A9NW (SE)	773	2	257470 373680

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Station - Water Company Location: Glyn Garth Ps Llandegfan Authority: Natural Resources Wales Catchment Area: Boundary Of HA 102 Reference: Cg0146501 Permit Version: 1 Effective Date: 29th September 1987 Issued Date: 29th September 1987 Revocation Date: 22nd February 1993 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Estuary - Menai Strait Status: Authorisation revoked Positional Accuracy: Located by supplier to within 10m</p>	A9NW (SE)	773	2	257470 373680
8	<p>Discharge Consents</p> <p>Operator: Alexis Ranson Property Type: Domestic Property (Single) Location: Glyn Garth, Beaumaris Road, Menai Bridge, Anglesey, Wales, LI59 5pd Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cp3629xn Permit Version: Not Supplied Effective Date: 29th June 2010 Issued Date: 29th June 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Controlled Sea Environment: Receiving Water: Menai Straights Status: Effective Positional Accuracy: Located by supplier to within 10m</p>	A9NE (SE)	851	2	257573 373675
8	<p>Discharge Consents</p> <p>Operator: Mrs Alexis Ranson Property Type: Domestic Property (Single) Location: Glyn Garth, Beaumaris Road, Menai Bridge, Anglesey, Wales, LI59 5pd Authority: Natural Resources Wales Catchment Area: Boundary Of HA 102 Reference: Eprcp3629xn Permit Version: 1 Effective Date: 29th June 2010 Issued Date: 29th June 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Controlled Sea Environment: Receiving Water: Menai Straights Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A9NE (SE)	851	2	257573 373675
9	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Stations Location: Rhianfa Ps Llandegfan Authority: Natural Resources Wales Catchment Area: MENAI STRAIT Reference: CG0146401 Permit Version: 2 Effective Date: 23rd February 1993 Issued Date: 23rd November 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Controlled Sea Environment: Receiving Water: Estuary - Menai Strait Status: Effective Positional Accuracy: Located by supplier to within 100m</p>	A8SE (S)	905	2	257080 373300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Rhianfa Ps Llandegfan Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cg0146401 Permit Version: Not Supplied Effective Date: 23rd February 1993 Issued Date: 23rd November 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Controlled Sea Environment: Receiving Water: Estuary - Menai Strait Status: Effective Positional Accuracy: Located by supplier to within 10m</p>	A8SE (S)	905	2	257080 373300
9	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Station - Water Company Location: Rhianfa Ps Llandegfan Authority: Natural Resources Wales Catchment Area: Boundary Of HA 102 Reference: Cg0146401 Permit Version: 1 Effective Date: 29th September 1987 Issued Date: 29th September 1987 Revocation Date: 22nd February 1993 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Estuary - Menai Strait Status: Authorisation revoked Positional Accuracy: Located by supplier to within 10m</p>	A8SE (S)	905	2	257080 373300
10	<p>Discharge Consents</p> <p>Operator: Andrew Simon Pritchard Property Type: Domestic Property (Single) Location: Ger-Y-Dwr, Glyn Garth, Menai Bridge, Anglesey, North Wales, LI59 5nr Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cg0458301 Permit Version: 1 Effective Date: 10th August 2007 Issued Date: 10th August 2007 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Lake/Reservoir - with outlet Environment: Receiving Water: Un-Named Pond Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A3NE (S)	967	2	256874 373215
11	<p>Discharge Consents</p> <p>Operator: Douglas Lang Limited Property Type: Domestic Property (Multiple) Location: Apartments 1 - 10 Bryn Mel, Allt Bryn Mel, Menai Bridge, Glyngarth, LI59 5pf Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Ab3898zr Permit Version: Not Supplied Effective Date: 3rd July 2018 Issued Date: 3rd July 2018 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Into Land Environment: Receiving Water: Groundwater Via Infiltration System Status: Effective Positional Accuracy: Located by supplier to within 10m</p>	A15SW (E)	995	2	257919 374115
	<p>Nearest Surface Water Feature</p>	A13NE (NE)	88	-	256923 374347

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Beside Pumping Station, Bont, BRIDGE Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 14th August 1991 Incident Reference: 2368 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	660	3	256100 374300
13	Pollution Incidents to Controlled Waters Property Type: Benthic Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Heavy Fuel Oil Note: Natural Causes Incident Date: 23rd August 1995 Incident Reference: 25757 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Natural Causes Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	945	3	257600 374900
14	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Down Stream From, F/P Crossing River Close To, Electric Sub Station Authority: Environment Agency, Welsh Region Pollutant: Industrial Solid Waste Note: Vandalism Incident Date: 30th April 1997 Incident Reference: 32109 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SW (W)	949	3	255880 373915
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: Medium	A13NE (NW)	0	2	256846 374249
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	A13NE (NW)	0	2	256846 374249
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13NE (NW)	0	2	256846 374249
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 116.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A13NE (NE)	88	4	256923 374347
16	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 61.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A13NE (N)	89	4	256846 374401
17	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A13NE (N)	92	4	256850 374401
18	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A13NW (N)	101	4	256787 374406
19	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 25.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A13NW (N)	102	4	256781 374405
20	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 2.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A13NW (NW)	128	4	256767 374426
21	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 5.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A13NE (NE)	322	4	257167 374452
22	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 34.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A13NE (NE)	326	4	257173 374452
23	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 183.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A18SW (NW)	345	4	256679 374625

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 122.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14NW (E)	355	4	257260 374370
25	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 267.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14NW (E)	359	4	257289 374263
26	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 60.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14NW (NE)	360	4	257202 374469
27	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 60.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14NW (E)	373	4	257257 374414
28	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14NW (E)	373	4	257258 374412
29	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 167.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A8NE (SE)	410	4	257178 373902
30	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 260.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A12NE (W)	427	4	256333 374254
31	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A9NW (SE)	533	4	257225 373780
32	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 110.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A9NW (SE)	538	4	257228 373776

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 93.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14SW (E)	546	4	257476 374203
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 993.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Cadnant Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A17SE (NW)	553	4	256379 374675
35	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 23.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14SE (E)	619	4	257549 374240
36	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 72.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14SE (E)	619	4	257549 374240
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14NE (E)	621	4	257551 374266
38	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A9NW (SE)	637	4	257277 373686
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 165.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Cadnant Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A12NW (W)	639	4	256139 374423
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 73.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A12NW (W)	639	4	256139 374423
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 34.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A9NW (SE)	640	4	257278 373684

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 576.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Cadnant Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A12NW (W)	660	4	256099 374267
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 69.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A8SE (S)	661	4	256955 373526
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A9NW (SE)	673	4	257306 373664
45	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: Braint Cadnant Lleiniog Primacy: 1	A9NW (SE)	676	4	257309 373662
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 75.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A9NW (SE)	680	4	257312 373659
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 25.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14SE (E)	680	4	257611 374206
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 131.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A8SE (S)	688	4	257011 373507
49	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 27.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14SE (E)	705	4	257635 374196
50	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 135.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A12NW (W)	709	4	256076 374461

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
51	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 52.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14SE (E)	727	4	257655 374178
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 14.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A12NW (W)	740	4	256074 374551
53	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 90.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A12NW (W)	744	4	256075 374565
54	OS Water Network Lines Watercourse Form: Foreshore Watercourse Length: 35.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 1	A9NW (SE)	756	4	257360 373601
55	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A8SE (S)	776	4	257071 373430
56	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 91.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14SE (E)	776	4	257702 374156
57	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A17SW (NW)	791	4	256068 374655
58	OS Water Network Lines Watercourse Form: Tidal river Watercourse Length: 233.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A9NW (SE)	791	4	257383 373575
59	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A17SW (NW)	796	4	256060 374652

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
60	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 74.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A17SW (NW)	798	4	256060 374655
61	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 280.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A17SW (NW)	798	4	256060 374655
62	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 39.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A8SE (S)	811	4	257085 373399
63	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A8SE (S)	850	4	257092 373360
64	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14SE (E)	850	4	257769 374095
65	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A8SE (S)	853	4	257095 373357
66	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 109.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Cadnant Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A18NW (N)	853	4	256793 375164
67	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 96.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A18NW (N)	853	4	256793 375164
68	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14SE (E)	855	4	257774 374087

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
69	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14SE (E)	858	4	257776 374084
70	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 129.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14SE (E)	861	4	257778 374080
71	OS Water Network Lines Watercourse Form: Foreshore Watercourse Length: 40.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 1	A8SE (S)	861	4	257104 373351
72	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 217.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14NE (E)	876	4	257755 374531
73	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14NE (E)	879	4	257764 374515
74	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 91.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14NE (E)	886	4	257775 374500
75	OS Water Network Lines Watercourse Form: Tidal river Watercourse Length: 172.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 1	A8SE (S)	896	4	257134 373323
76	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A18NW (N)	897	4	256704 375201
77	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 306.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A18NW (N)	899	4	256701 375202

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
78	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A18NE (N)	934	4	256866 375245
79	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 138.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Cadnant Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A18NE (N)	934	4	256866 375245
80	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 17.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14SE (E)	935	4	257829 373972
81	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 59.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A18NE (N)	935	4	256867 375246
82	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 71.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A14SE (E)	951	4	257842 373960
83	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 807.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A23SE (N)	963	4	256921 375270
84	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 4.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A19SE (NE)	974	4	257756 374752
85	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 13.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A15NW (E)	975	4	257863 374522
86	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 3.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A15NW (E)	988	4	257874 374529

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
87	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 4.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A15NW (E)	988	4	257874 374529
88	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A15NW (E)	990	4	257876 374527
89	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 94.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Braint Cadnant Lleiniog Primacy: 1	A15NW (E)	996	4	257882 374526

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Isle Of Anglesey Council - Has supplied landfill data		0	5	256846 374249
90	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1963	A9NW (SE)	591	-	257342 373809
91	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1963	A14SE (E)	611	-	257540 374201
92	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1963	A12SW (W)	757	-	256013 374144

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Upper Cambrian, Including Tremadoc	A13NE (NW)	0	1	256846 374249
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (NW)	0	1	256846 374249
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (N)	253	1	256732 374548
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A17SE (NW)	657	1	256341 374777
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: no data Cadmium Concentration: <1.8 mg/kg Chromium Concentration: no data Lead Concentration: <100 mg/kg Nickel Concentration: no data	A9NW (SE)	804	1	257429 373598
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14NE (E)	808	1	257735 374315
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A17SW (NW)	832	1	256166 374854

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 45 - 60 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SE (E)	841	1	257762 374103
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 25 - 35 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SW (NW)	960	1	256018 374881
93	BGS Recorded Mineral Sites Site Name: Pant-Howel Location: Llandegfan, Menai Bridge, Isle Of Anglesey Source: British Geological Survey, National Geoscience Information Service Reference: 24820 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Ordovician Geology: Unnamed Igneous Intrusion, Ordovician Commodity: Igneous and Metamorphic Rock Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	874	1	256113 374859
94	BGS Recorded Mineral Sites Site Name: Coed-Y-Barclas Location: Llandegfan, Menai Bridge, Isle Of Anglesey Source: British Geological Survey, National Geoscience Information Service Reference: 24825 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Neoproterozoic III - Cambrian Geology: Gwna Group Commodity: Igneous and Metamorphic Rock Positional Accuracy: Located by supplier to within 10m	A14SE (E)	913	1	257812 373996
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	256846 374249
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	256846 374249
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	256846 374249
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	256846 374249
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	256846 374249

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	256846 374249
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	4	1	256800 374307
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	188	1	256974 374021
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	202	1	257038 374405
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	250	1	256510 374285
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	256846 374249
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	4	1	256800 374307
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	188	1	256974 374021
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	202	1	257038 374405
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	250	1	256510 374285
	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	A13NE (NW)	0	1	256846 374249
	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	A13NE (NW)	0	1	256846 374249

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
95	Contemporary Trade Directory Entries Name: Good Designs Location: 60, Mill Bank Estate, Llandegfan, Menai Bridge, Gwynedd, LL59 5RD Classification: Cycle Accessories, Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (SE)	238	-	256987 373972
96	Contemporary Trade Directory Entries Name: I Hughes & Son Location: Bachau, Lon Bachau, Llandegfan, Menai Bridge, Gwynedd, LL59 5YE Classification: Coal & Smokeless Fuel Merchants & Distributors Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (E)	365	-	257278 374345
97	Contemporary Trade Directory Entries Name: Frondeg Auto Service Location: Trem y Menai, Lon Ganol, Llandegfan, Menai Bridge, Gwynedd, LL59 5TL Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NW (S)	520	-	256674 373703
97	Contemporary Trade Directory Entries Name: Kennedy Electrical Ltd Location: Tall Trees, Lon Ganol, Llandegfan, Menai Bridge, Gwynedd, LL59 5TL Classification: Electrical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NW (S)	535	-	256703 373675
98	Contemporary Trade Directory Entries Name: Peter Hughes & Sons Location: Pennant, Llandegfan, Menai Bridge, Gwynedd, LL59 5RA Classification: Freight Forwarders Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	616	-	256143 374279
99	Contemporary Trade Directory Entries Name: R M T Spraying Solutions North Wales Location: CRAIG FRYN, LLANDEGFAN, MENAI BRIDGE, LL59 5PW Classification: Spraying - Paint & Coatings Status: Active Positional Accuracy: Automatically positioned to the address	A18SE (NE)	645	-	257139 374876
99	Contemporary Trade Directory Entries Name: Peter Hughes & Sons Location: Bronallt, Llandegfan, Menai Bridge, Gwynedd, LL59 5PW Classification: Road Haulage Services Status: Active Positional Accuracy: Automatically positioned to the address	A18SE (NE)	659	-	257149 374887
100	Points of Interest - Commercial Services Name: Frondeg Auto Service Location: Trem y Menai, Lon Ganol, Llandegfan, Menai Bridge, LL59 5TL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (S)	520	6	256674 373703
100	Points of Interest - Commercial Services Name: Frondeg Auto Service Location: Trem y Menai, Lon Ganol, Llandegfan, Menai Bridge, LL59 5TL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (S)	520	6	256674 373703
101	Points of Interest - Commercial Services Name: Peter Hughes & Sons Location: Pennant, Llandegfan, Menai Bridge, LL59 5RA Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12NW (W)	616	6	256143 374279
102	Points of Interest - Commercial Services Name: Peter Hughes & Sons Location: Bronallt, Llandegfan, Menai Bridge, LL59 5PW Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A18SE (NE)	659	6	257149 374887
103	Points of Interest - Manufacturing and Production Name: A W Hughes Location: Brynhywel, Llandegfan, Menai Bridge, LL59 5PY Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A13NW (N)	260	6	256725 374553

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
104	Points of Interest - Manufacturing and Production Name: Tank Location: LL59 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	536	6	256258 374462
105	Points of Interest - Manufacturing and Production Name: Tank Location: LL59 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8SW (S)	839	6	256680 373366
106	Points of Interest - Manufacturing and Production Name: The Workshop Location: LL59 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	864	6	257782 374084
107	Points of Interest - Public Infrastructure Name: Filter Bed Location: LL59 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	535	6	256264 374473
108	Points of Interest - Recreational and Environmental Name: Playground Location: (Bro Llewelyn), LL59 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	317	6	256558 374026
108	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	A13SW (SW)	318	6	256559 374024

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
109	Ancient Woodland Name: Not Supplied Reference: 25100 Area(m ²): 28617.42 Type: Restored Ancient Woodland Site	A9NW (SE)	590	2	257297 373768
110	Ancient Woodland Name: Not Supplied Reference: 25098 Area(m ²): 10989.29 Type: Restored Ancient Woodland Site	A8SE (S)	699	2	256890 373483
111	Ancient Woodland Name: Not Supplied Reference: 25099 Area(m ²): 8879.08 Type: Restored Ancient Woodland Site	A9NW (SE)	706	2	257320 373633
112	Ancient Woodland Name: Not Supplied Reference: 25095 Area(m ²): 3802.98 Type: Ancient and Semi-Natural Woodland	A17SW (NW)	792	2	256093 374700
113	Ancient Woodland Name: Not Supplied Reference: 25101 Area(m ²): 9763.48 Type: Restored Ancient Woodland Site	A14SE (E)	803	2	257669 373919
114	Ancient Woodland Name: Not Supplied Reference: 25097 Area(m ²): 5121.53 Type: Restored Ancient Woodland Site	A8SE (S)	804	2	257085 373406
115	Ancient Woodland Name: Not Supplied Reference: 25046 Area(m ²): 12288.21 Type: Restored Ancient Woodland Site	A8SW (S)	807	2	256785 373380
116	Ancient Woodland Name: Not Supplied Reference: 25096 Area(m ²): 8408.45 Type: Restored Ancient Woodland Site	A8SE (S)	857	2	256927 373326
117	Ancient Woodland Name: Not Supplied Reference: 25045 Area(m ²): 21048.47 Type: Restored Ancient Woodland Site	A8SE (S)	859	2	256878 373323
118	Ancient Woodland Name: Not Supplied Reference: 25150 Area(m ²): 4811.48 Type: Restored Ancient Woodland Site	A17SW (W)	940	2	255879 374599
119	Ancient Woodland Name: Not Supplied Reference: 25003 Area(m ²): 33762.63 Type: Ancient and Semi-Natural Woodland	A7NW (SW)	947	2	255963 373759
120	Ancient Woodland Name: Not Supplied Reference: 25026 Area(m ²): 3665.71 Type: Ancient and Semi-Natural Woodland	A8SW (S)	990	2	256520 373258
121	Areas of Outstanding Natural Beauty Name: Ynys Mon/Anglesey Multiple Areas: Y Total Area (m ²): 219934787.42 Designation Date: 13th November 1967 Source: Natural Resources Wales	A8NE (S)	334	2	256921 373851

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
122	<p>Environmentally Sensitive Areas</p> <p>Name: Ynys Mon (decommissioned) Multiple Areas: Y Total Area (m2): 713685568 Source: The National Assembly for Wales, GI Services (Department of Planning & Countryside)</p>	A13NE (NW)	0	7	256846 374249
123	<p>Local Nature Reserves</p> <p>Name: Cytir Mawr Multiple Area: Y Area (m2): 48305.66 Source: Isle Of Anglesey Council Designation Date: 31st December 2006</p>	A19SE (NE)	997	8	257700 374867
124	<p>Sites of Special Scientific Interest</p> <p>Name: Cadnant Dingle Multiple Areas: N Total Area (m2): 180135.41 Source: Natural Resources Wales Reference: 78631wyf Designation Details: Biological Designation Date: 1st January 1971 Date Type: Notified</p>	A12SW (W)	774	2	255998 374132
125	<p>Sites of Special Scientific Interest</p> <p>Name: Glannau Porthaethwy Multiple Areas: Y Total Area (m2): 676971.19 Source: Natural Resources Wales Reference: 263831wwe Designation Details: Biological Designation Date: 23rd October 2003 Date Type: Notified</p>	A8SE (S)	932	2	256999 373258
126	<p>Special Areas of Conservation</p> <p>Name: Y Fenai A Bae Conwy / Menai Strait And Conwy Bay Multiple Areas: N Total Area (m2): 265017352.03 Source: Natural Resources Wales Reference: Uk0030202 Status: Designated</p>	A9NW (SE)	787	2	257450 373642

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Natural Resources Wales Isle Of Anglesey Council - Environmental Health Department Gwynedd Council - Housing and Public Protection Department	June 2020 October 2017 September 2017	Annually Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - Welsh Region Natural Resources Wales	August 2014 August 2023	Quarterly Quarterly
Enforcement and Prohibition Notices Environment Agency - Welsh Region	March 2013	
Integrated Pollution Controls Environment Agency - Welsh Region	January 2009	
Integrated Pollution Prevention And Control Natural Resources Wales Environment Agency - Welsh Region	August 2023 January 2021	Quarterly Quarterly
Local Authority Integrated Pollution Prevention And Control Isle Of Anglesey Council - Environmental Health Department Gwynedd Council - Environmental Health Department	December 2020 July 2014	Variable Variable
Local Authority Pollution Prevention and Controls Gwynedd Council - Environmental Health Department Isle Of Anglesey Council - Environmental Health Department	July 2014 October 2014	Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Gwynedd Council - Environmental Health Department Isle Of Anglesey Council - Environmental Health Department	July 2014 October 2014	Variable Variable
Nearest Surface Water Feature Ordnance Survey	July 2023	
Pollution Incidents to Controlled Waters Environment Agency - Welsh Region	December 1998	
Prosecutions Relating to Authorised Processes Environment Agency - Welsh Region Natural Resources Wales	July 2015 July 2015	
Prosecutions Relating to Controlled Waters Environment Agency - Welsh Region Natural Resources Wales	March 2013 March 2013	
Registered Radioactive Substances Natural Resources Wales Environment Agency - Welsh Region	January 2015 June 2016	As notified
Substantiated Pollution Incident Register Natural Resources Wales Environment Agency Wales - North Area	August 2023 January 2021	Quarterly Quarterly
Water Abstractions Environment Agency - Welsh Region Natural Resources Wales	April 2023 June 2023	Quarterly Quarterly
Water Industry Act Referrals Environment Agency - Welsh Region Natural Resources Wales	October 2017 October 2022	
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

Agency & Hydrological	Version	Update Cycle
Source Protection Zones Natural Resources Wales	July 2022	Annual Rolling Update
Extreme Flooding from Rivers or Sea without Defences Natural Resources Wales	September 2020	
Flooding from Rivers or Sea without Defences Natural Resources Wales	September 2020	
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	July 2023	Quarterly
Surface Water 1 in 30 year Flood Extent Natural Resources Wales	May 2018	Annually
Surface Water 1 in 100 year Flood Extent Natural Resources Wales	May 2018	Annually
Surface Water 1 in 1000 year Flood Extent Natural Resources Wales	May 2018	Annually
Surface Water Suitability Natural Resources Wales	February 2016	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	November 2002	As notified
Historical Landfill Sites Natural Resources Wales	March 2023	As notified
Integrated Pollution Control Registered Waste Sites Environment Agency - Welsh Region	January 2009	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency Wales - North Area Natural Resources Wales	January 2023 October 2021	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Natural Resources Wales Environment Agency Wales - North Area	August 2023 July 2021	Quarterly Quarterly
Local Authority Landfill Coverage Gwynedd Council Isle Of Anglesey Council - Environmental Health Department	February 2003 February 2003	Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Gwynedd Council Isle Of Anglesey Council - Environmental Health Department	October 2018 October 2018	
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	
Registered Landfill Sites Environment Agency Wales - North Area	March 2006	Not Applicable
Registered Waste Transfer Sites Environment Agency Wales - North Area	April 2018	
Registered Waste Treatment or Disposal Sites Environment Agency Wales - North Area	June 2015	
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	March 2023	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements Gwynedd Council - Planning Department Isle Of Anglesey Council - Planning Department	April 2023 July 2023	Variable Variable
Planning Hazardous Substance Consents Gwynedd Council - Planning Department Isle Of Anglesey Council - Planning Department	February 2016 February 2016	Variable Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	June 2023	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	February 2023	Annual Rolling Update
Mining Instability Ove Arup & Partners	June 1998	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	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	September 2022	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	September 2022	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	July 2023	Quarterly
Fuel Station Entries Catalist Ltd - Experian	June 2023	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Points of Interest - Commercial Services PointX	September 2023	Quarterly
Points of Interest - Education and Health PointX	September 2023	Quarterly
Points of Interest - Manufacturing and Production PointX	September 2023	Quarterly
Points of Interest - Public Infrastructure PointX	September 2023	Quarterly
Points of Interest - Recreational and Environmental PointX	September 2023	Quarterly
Underground Electrical Cables National Grid	February 2023	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural Resources Wales	April 2023	Bi-Annually
Areas of Adopted Green Belt Gwynedd Council Isle Of Anglesey Council	August 2023 August 2023	Quarterly Quarterly
Areas of Unadopted Green Belt Gwynedd Council Isle Of Anglesey Council	August 2023 August 2023	Quarterly Quarterly
Areas of Outstanding Natural Beauty Natural Resources Wales	April 2023	Bi-Annually
Environmentally Sensitive Areas The National Assembly for Wales - GI Services (Department of Planning & Countryside)	January 2017	
Forest Parks Forestry Commission	May 2023	Not Applicable
Local Nature Reserves Conwy County Borough Council Gwynedd Council Isle Of Anglesey Council	August 2023 August 2023 August 2023	Bi-Annually Bi-Annually Bi-Annually
Marine Nature Reserves Natural Resources Wales	April 2023	Bi-Annually
National Nature Reserves Natural Resources Wales	February 2023	Bi-Annually
National Parks Natural Resources Wales	February 2018	Annually
Nitrate Vulnerable Zones The National Assembly for Wales - GI Services (Department of Planning & Countryside) Natural Resources Wales	April 2016 March 2023	Bi-Annually
Ramsar Sites Natural Resources Wales	March 2023	Bi-Annually
Sites of Special Scientific Interest Natural Resources Wales	March 2023	Bi-Annually
Special Areas of Conservation Natural Resources Wales	April 2023	Bi-Annually
Special Protection Areas Natural Resources Wales	April 2023	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 <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Natural Resources Wales Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
4	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	Isle Of Anglesey Council - Environmental Health Department Swyddfa'r Sir, Llangefni, Gwynedd, LL77 7TW	Telephone: 01248 752800 Fax: 01248 750032 Website: www.anglesey.gov.uk
6	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
7	The National Assembly for Wales - GI Services (Department of Planning & Countryside) Yr Hen Ysgol Gymraeg, Alexandria Road, Aberystwyth, Ceredigion, SY23 1LD	Telephone: 02920 825111 Website: www.wales.gov.uk
8	Isle Of Anglesey Council Council Offices, Swyddfa'r Sir, Llangefni, Gwynedd, LL77 7TW	Telephone: 01248 750057 Fax: 01248 750032 Website: www.anglesey.gov.uk
9	Conwy County Borough Council Bodloneb, Conwy, Gwynedd, LL32 8DU	Telephone: 01492 574000 Fax: 01492 592114 Website: www.conwy.gov.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.

APPENDIX G

DCWW Apparatus Maps



Scale: 1: 1250



LEGEND

Clean Water

- Sluice Val
- Air Val, SINGLE
- Tap
- Pressure Reducing Valve
- Meter
- BULK Meter
- FH
- Cap
- Existing Main
- NON COMPANY

Sewerage External

- Foul
- Surface Water
- Combined
- Rising Main
- Private
- Treatment Works
- Pumping Station
- Special Purpose
- Unknown End
- Change, Combined Overflow
- Outfall, FOUL
- Lamp Hole, Foul
- Private Sewer Transfer
- Lateral Drain
- Inspection Chamber

256829,374253

Dwr Cymru Cyfyngedig ('the Company') gives this information as to the position of its underground apparatus by way of general guidance only and on the strict understanding that it is based on the best information available and no warranty as to its correctness is relied upon in the event of excavations or other works made in the vicinity of the company's apparatus and any onus of locating the apparatus before carrying out any excavations rests entirely on you. The information which is supplied hereby by the company, is done so in accordance with statutory requirements of sections 198 and 199 of the water industry Act 1991 based upon the best information available and in particular, but without prejudice to the generality of the foregoing, it should be noted that the records that are available to the Company may not disclose the existence of a drain sewer or disposal main laid before 1 September 1989, or if they do, the particulars thereof including their position underground may not be accurate. It must be understood that the furnishing of this information is entirely without prejudice to the provision of the New Roads and Street Works Act 1991 and the company's right to be compensated for any damage to its apparatus.

EXACT LOCATION OF ALL APPARATUS TO BE DETERMINED ON SITE

Reproduced from the Ordnance Survey's maps with the permission of the Controller of Her Majesty's Stationary Office. Crown Copyright. Licence No: WU298565. Whilst every reasonable effort has been taken to correctly record the pipe material of DCWW assets, there is a possibility that in some cases pipe material (other than Asbestos Cement or Pitch Fibre) may be found to be Asbestos Cement (AC) or Pitch Fibre (PF). It is therefore advisable that the possible presence of AC or PF pipes be anticipated and considered as part of any risk assessment prior to excavation

APPENDIX H

Scottish Power Energy Network Maps

Overview Map of Worksite - No Assets Displayed

Cytir-bach

1

2

Path (um)

Track

3

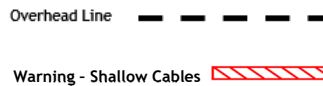
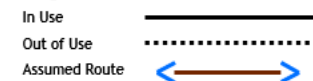
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GWELT LLAN

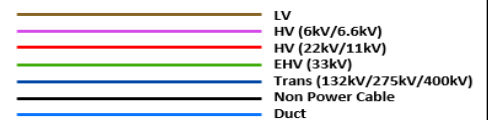
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Underground Cables



Dig Sites Area: Line:



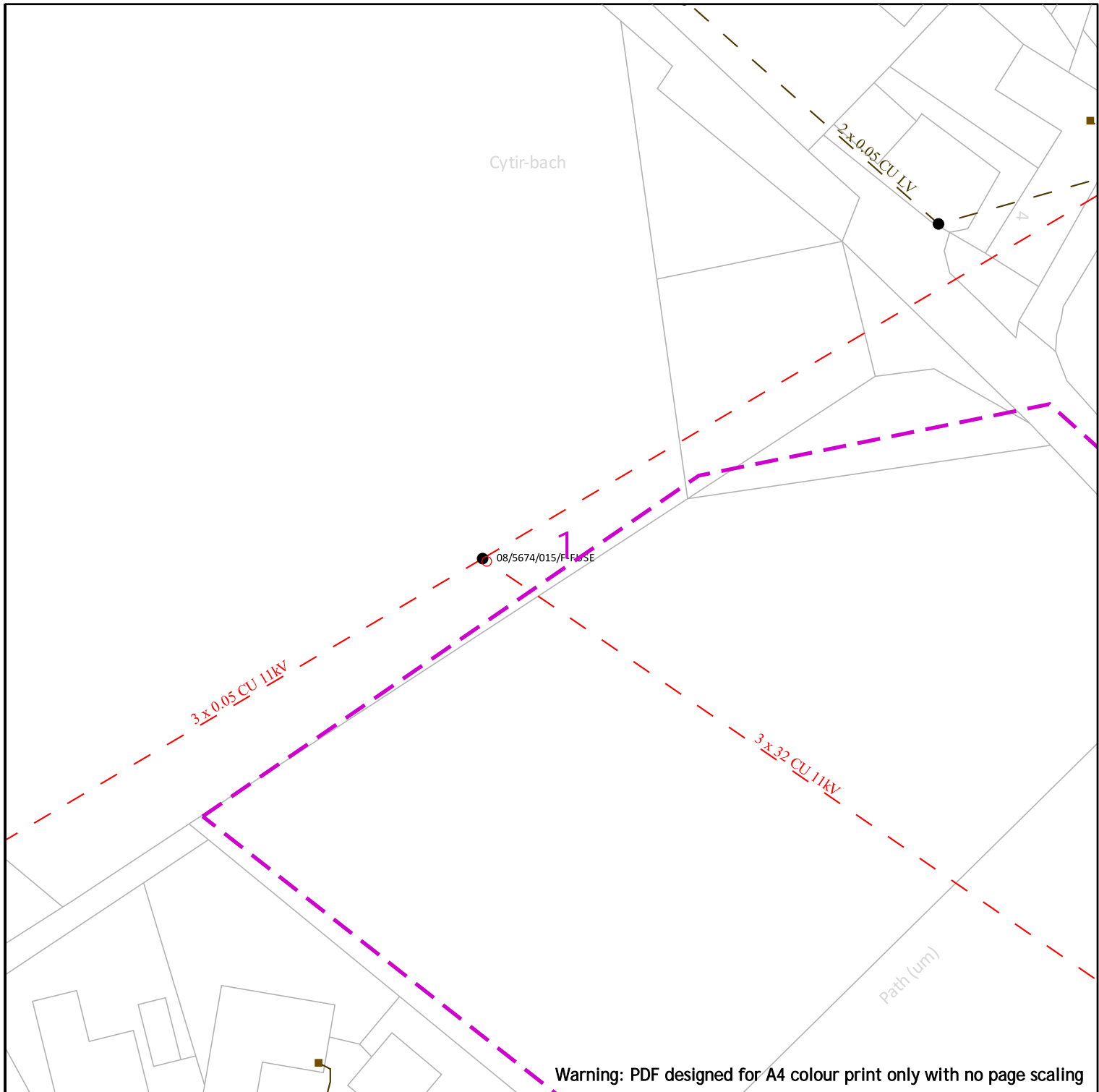
IMPORTANT NOTICES

- This information shown on this plan is indicative only and its accuracy cannot be guaranteed.
- The plan only shows assets owned by SP Energy Networks.
- Positions and depths of cables may have altered since being recorded. A line on a plan may represent more than one cable. Normally electric cables are laid at depths between 450mm and 1m but depths may have changed if land surface levels have since altered.
- The plan may not show, or may inaccurately show, individual property services and services to street lighting installations. Underground services may be found in roads, footpaths and on sites. Always assume that they are present for each property, lamp column and street sign etc and treat any services found anywhere as live.
- You must use safe digging practices in accordance with HS(G)47 to establish the actual position of mains cables, services and other apparatus before any mechanical excavation is used.
- Where overhead lines cross your site, you must comply with the requirements of Health & Safety Executive guidance as laid down in GS6, Avoidance of Danger from Overhead Electric Lines.
- Any works that fall within 5m of any 132kV or Transmission cables, or within 15m of any 132kV or Transmission OHL's, please contact our General Enquiries Team **0845 273 4444 / 0330 10 10 444** for further safety advice.
- In the event of an emergency or for further assistance contact **0800-092-9290 (Central & Southern Scotland) or 0800-001-5400 (Merseyside, Cheshire & North Wales) or by dialling 105**
- It is your responsibility to ensure this information is provided to all persons working near our plant.

Date Requested: 13/09/2023
 Job Reference: 30831889
 Site Location: 256843 374252
 Requested by: Mr byron thorne

Your Scheme/Reference: 292 - Gwel y Llan, Llandegfan

Scale: 1:1025 (When plotted at A4)

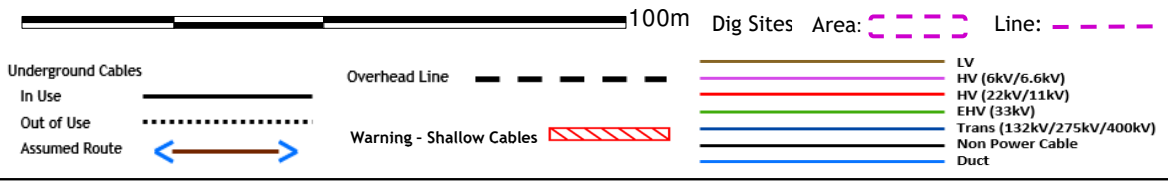


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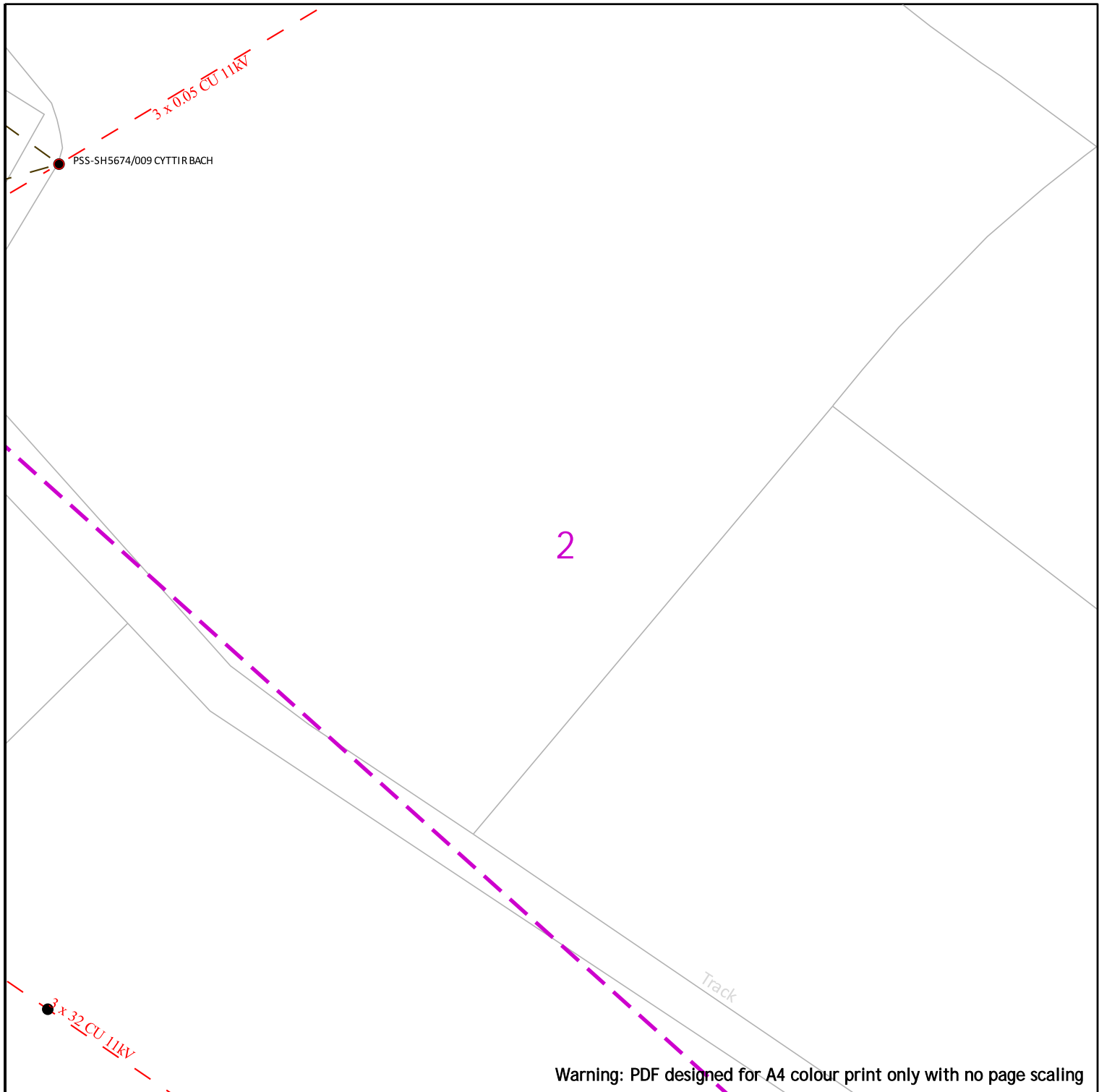
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 Job Reference: 30831889
 Site Location: 256843 374252
 Requested by: Mr byron thorne
 Your Scheme/Reference: 292 - Gwely Llan, Llandegfan

Scale: 1:500 (When plotted at A4)



IMPORTANT NOTICES

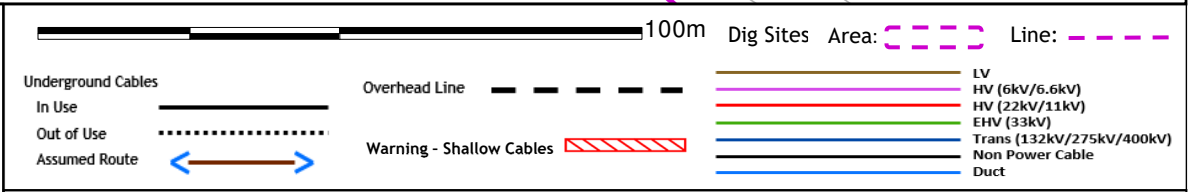
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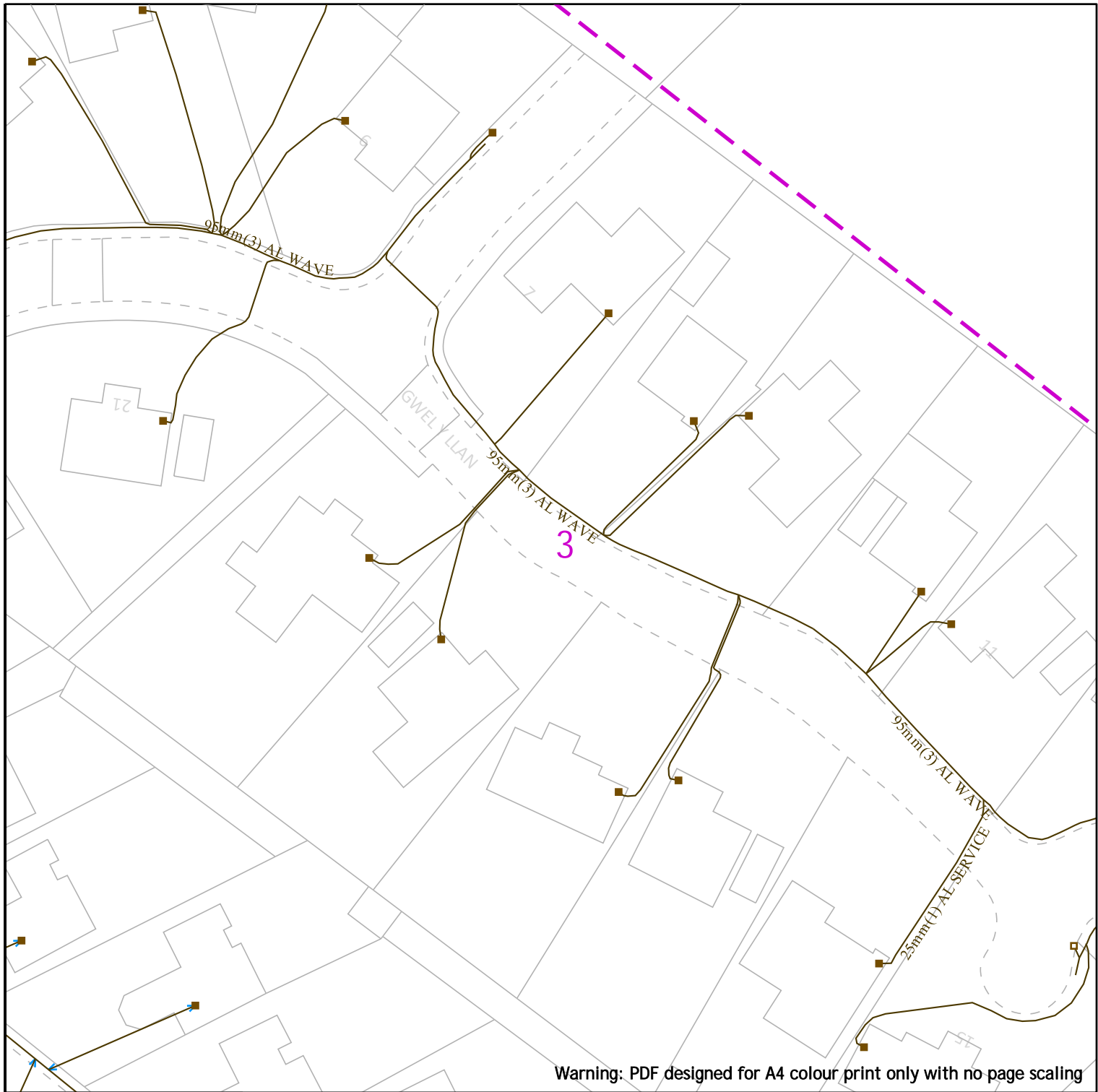
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 Job Reference: 30831889
 Site Location: 256843 374252
 Requested by: Mr byron thorne
 Your Scheme/Reference: 292 - Gwely Llan, Llandegfan



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Scale: 1:500 (When plotted at A4)

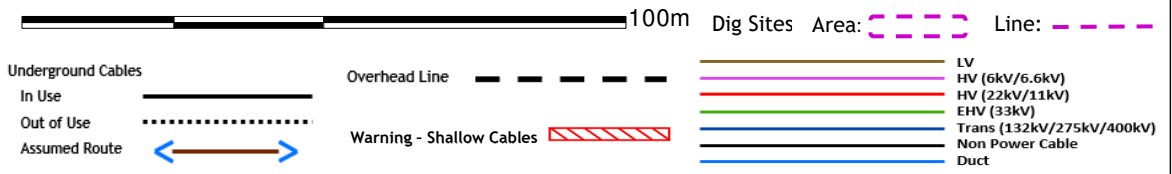


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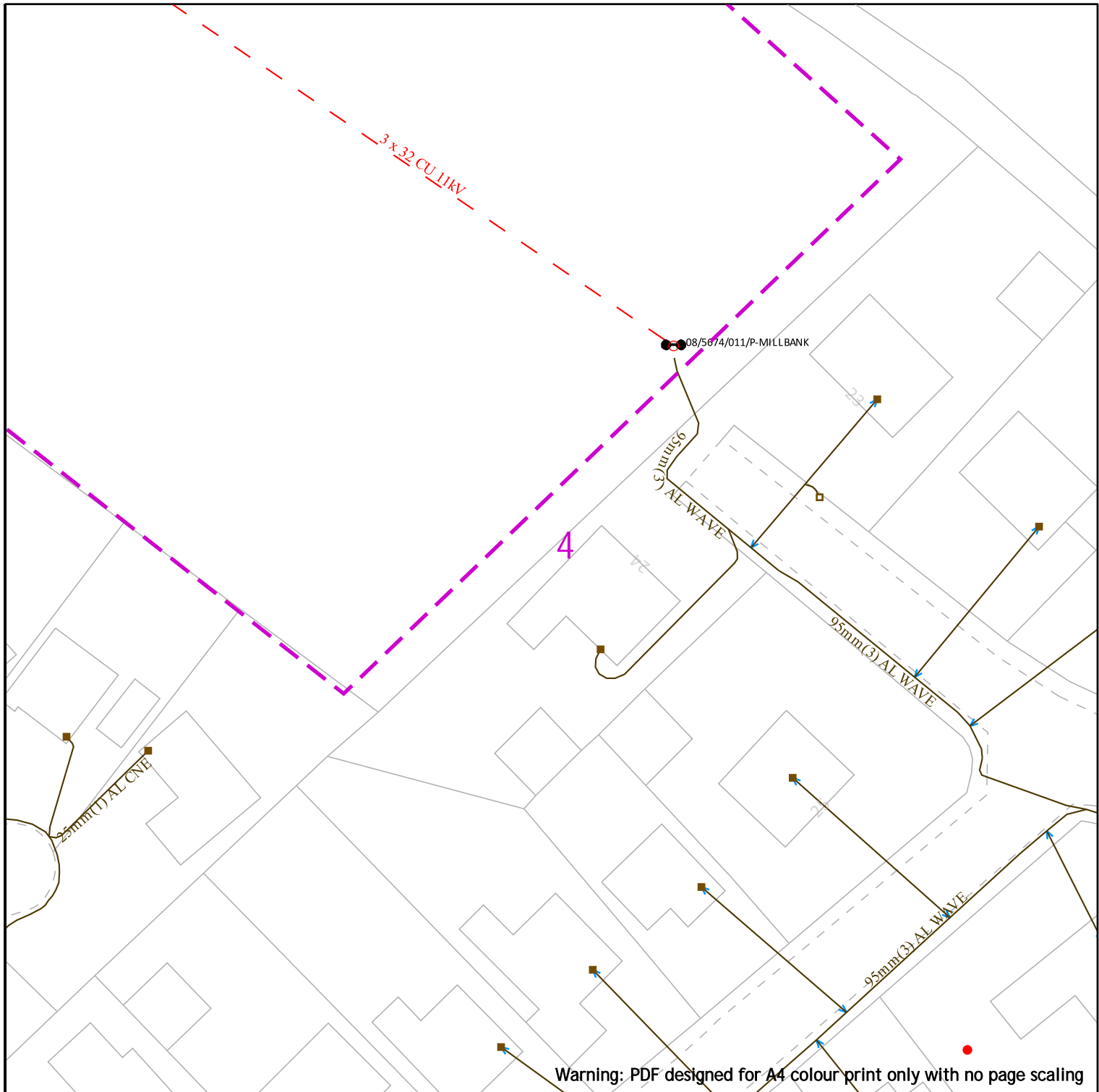
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 Job Reference: 30831889
 Site Location: 256843 374252
 Requested by: Mr byron thorne
 Your Scheme/Reference: 292 - Gwelly Llan, Llandegfan

Scale: 1:500 (When plotted at A4)



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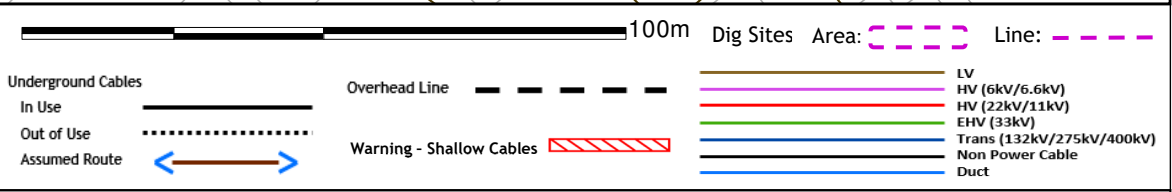


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Date Requested: 13/09/2023
 Job Reference: 30831889
 Site Location: 256843 374252
 Requested by: Mr byron thorne
 Your Scheme/Reference: 292 - Gwel y Llan, Llandegfan

Scale: 1:500 (When plotted at A4)

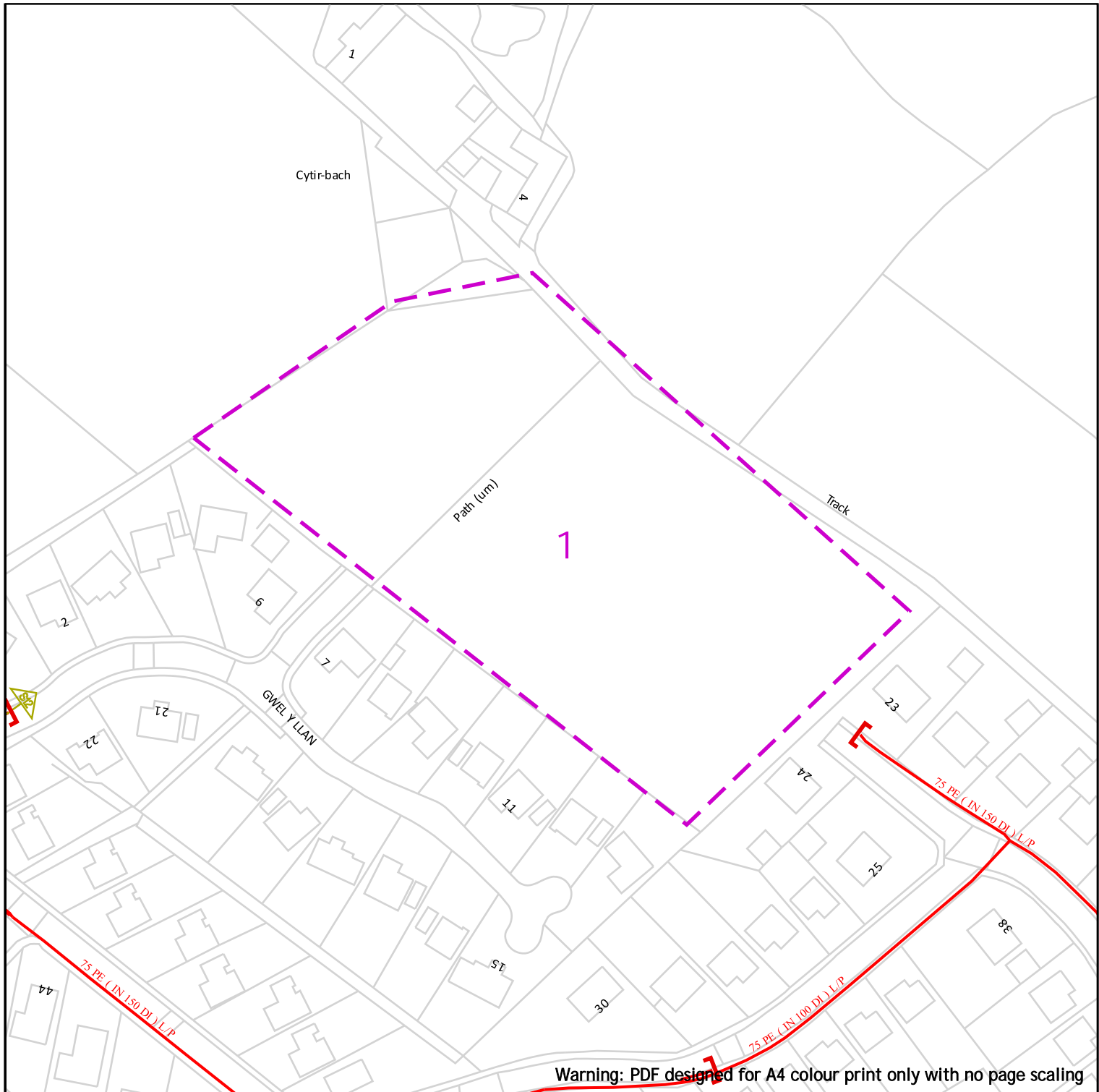



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APPENDIX I

Wales & West Gas Utility Maps

Contact Us
Mapping Enquiries:
 All areas 02920 278 912
General Enquiries:
 All areas 0800 912 2999

100m

Dig Sites	Area: 	Line: 
	Low Pressure (LP) 21mbar – 75mbar	 Change of Diameter
	Medium Pressure (MP) 350mbar – 2bar	 End Cap
	Intermediate Pressure (IP) 2bar – 7bar	 Depth of cover
	High Pressure (HP) >7bar	 Line/Fire Valve
		 Governor Station

Date Requested: 13/09/2023
 Job Reference: 30831889
 Site Location: 256843 374252
 Requested by: Mr byron thorne
 Your Scheme/Reference: 292 - Gwel Y Llan, Llandegfan

Scale: 1:1250 (When plotted at A4)

IMPORTANT NOTICES

- This information is given as a guide only and its accuracy cannot be guaranteed
- The plan only shows those pipes owned by Wales & West Utilities (WWU) as its role as a licensed Gas Transporter
- Service pipes, valves, syphons, stub connections etc. may not be shown but their presence should be anticipated
- You must use safe digging practices in accordance with HS(G)47 to establish the actual position of mains, services and other apparatus before any mechanical excavation is used
- It is your responsibility to ensure this information is provided to all persons working near our plant
- If in doubt call the WWU dig team on 02920 27891


Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA
0800 111 999


Smell gas?
 Call the Gas Emergency Service on
0800 111 999.

Dial before you dig

We need 10 days' notice

 Dial
 Call **029 2027 8912**
 before you start work.

 Investigate
 Before you dig, make sure
 you know what's below.

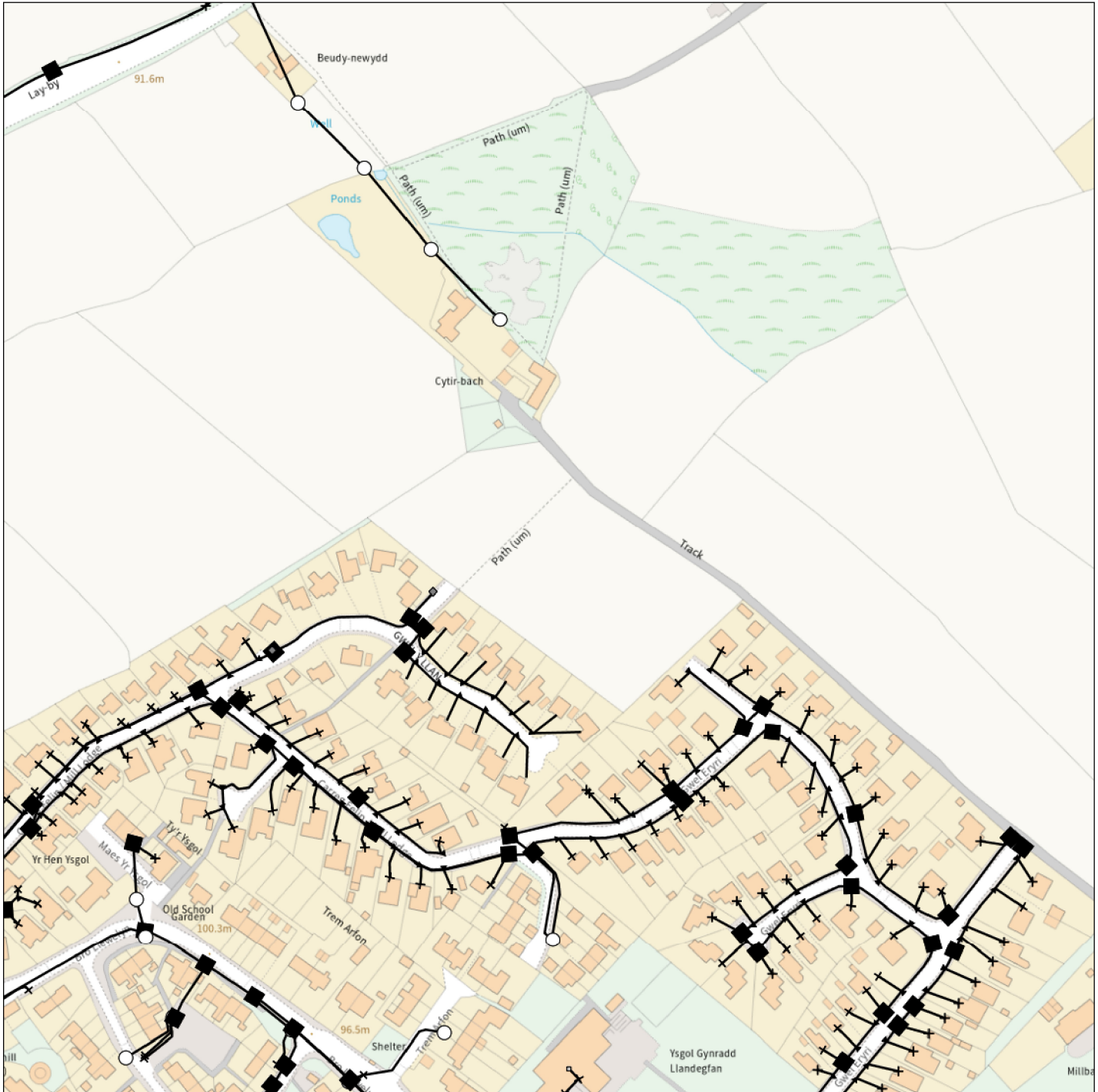
 Go ahead
 Done your research?
 Now you can dig safely.

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APPENDIX J

BT Openreach Maps

Maps by email Plant Information Reply



IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.



openreach

CLICK BEFORE YOU DIG

FOR PROFESSIONAL FREE ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS INCLUDING LOCATE AND MARKING SERVICE

email cbyd@openreach.co.uk

ADVANCE NOTICE REQUIRED
(Office hours: Monday - Friday 08.00 to 17.00)
www.openreach.co.uk/cbyd

Accidents happen

If you do damage any Openreach equipment please let us know by calling 0800 023 2023 (opt 1 + opt 1) and we can get it fixed ASAP

KEY TO BT SYMBOLS		Change Of State	+	Hatchings		
	<i>Planned</i>	<i>Live</i>	Split Coupling	×	Built	
PCP			Duct Tee	▲	Planned	
Pole			Building		Inferred	
Box			Kiosk		Duct	
Manhole			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
Cabinet						
	<i>Pending Add</i>	<i>In Place</i>	<i>Pending Remove</i>	<i>Not In Use</i>		
Power Cable						
Power Duct				N/A		

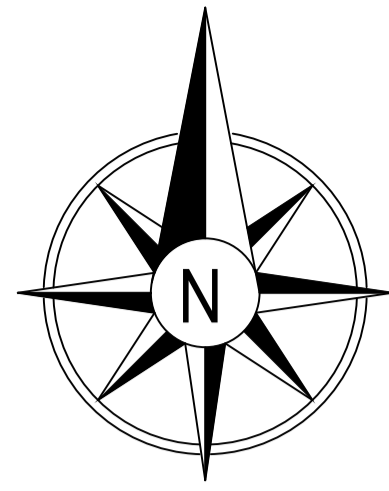
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BT Ref : JGS02443Y
Map Reference : (centre) SG5684174257
Easting/Northing : (centre) 256841,374257
Issued : 20/09/2023 14:44:38

WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: nnhc@openreach.co.uk

APPENDIX K

Trial Pit Location Plan



GENERAL

- G1 DO NOT SCALE FROM THIS DRAWING.
- G2 ALL LEVELS IN METRES UNLESS NOTED OTHERWISE ON DRAWING.

LEGEND	
	DENOTES SITE BOUNDARY
	WS2 DP2 DENOTES LOCATION OF WINDOW SAMPLE AND DYNAMIC PROBE TEST
	TP1 DENOTES TRAIL PIT LOCATION.



P02	29.09.2023	UPDATED TO SUIT CELTEST WINDOW SAMPLE LOCATIONS	KB	KB	KB
P01	07.09.2023	FIRST ISSUE	KB	KB	KB
REV	DATE	DESCRIPTION	BY	CHK	APP

DRAWING STATUS: **PRELIMINARY**

CLIENT: DU CONSTRUCTION

ARCHITECT: SAER ARCHITECTS

PROJECT: GWEL Y LLAN, LLANDEGFAN

TITLE: TRAIL PIT LOCATION PLAN

STATUS:	PROJECT No:	002	REV:
S2	292		P02

SCALE @ A1:	DESIGNED:	DRAWN:	CHECKED:	APPROVED:	DATE:
1:250	KB	KB	KB	KB	SEPTEMBER 2023

MON CIVILS

LIMITED

APPENDIX L

Trial Pit Logs

Trail Pit 1 (TP1)

0.000m – 0.450m	Topsoil – grass overlaying SILT containing rootlets and occasional small angular gravels.
0.450m – 0.850m	slightly clayey SILT, containing angular to sub angular gravels throughout.
0.850m	Very Dense clayey SILT, containing frequent boulders and shale rock thought to have been bedrock at the time however this could be penetrated with the dynamic probe rig.

Comments

1. Trial pit dimensions: 1.300m (L) x 1.1600m (W) x 0.850m (D)
2. Ground water was not encountered within the trial pit.
3. Excavation was terminated due to the very firm nature of the ground which could not be excavated with a 3-tonn machine.



Trail Pit 2 (TP2)

0.000m – 0.350m	Topsoil – grass overlaying SILT containing rootlets and occasional small angular gravels.
0.350m – 0.700m	Very clayey SILT, containing small to medium angular to sub angular gravels throughout. Pale brown in colour.
0.700m – 1.000m	Very Dense silty Clay containing frequent boulders and shale rock could not be excavated with a 3-tonn machine.

Comments

1. Trial pit dimensions: 1.300m (L) x 0.700m (W) x 1.000m (D)
2. Ground water was not encountered within the trail pit.
3. Sides of trail pit where stable.



Trail Pit 3 (TP3)

0.000m – 0.400m	Topsoil – (Made Ground) grass overlaying SILT containing rootlets and occasional small angular gravels and imported slate waste material including a plastic chamber cover seating.
0.400m – 0.880m	Very clayey SILT, containing small to medium angular to sub angular gravels throughout. Pale brown in colour.
0.880m	Very Dense silty Clay containing frequent boulders and shale rock could not be excavated with a 3-tonn machine.

Comments

1. Trial pit dimensions: 1.400m (L) x 0.700m (W) x 0.880m (D)
2. Ground water was not encountered within the trail pit.
3. Sides of trail pit where stable.



Trail Pit 4 (TP4)

0.000m – 0.300m	Topsoil – grass overlaying SILT containing rootlets and occasional small angular gravels.
0.300m – 0.800m	Very clayey SILT, containing small to medium angular to sub angular gravels throughout. Pale brown in colour.
0.800m	Very Dense silty Clay containing frequent boulders and shale rock could not be excavated with a 3-tonn machine.

Comments

1. Trial pit dimensions: 1.600m (L) x 0.700m (W) x 0.800m (D)
2. Ground water was not encountered within the trail pit.
3. Sides of trail pit where stable.



Trail Pit 5 (TP5)

0.000m – 0.400m	Topsoil – grass overlaying SILT containing rootlets and occasional small angular gravels.
0.400m – 0.700m	Very clayey SILT, containing small to medium angular to sub angular gravels throughout. Pale brown in colour.
0.700m	Very Dense silty Clay containing frequent boulders and shale rock could not be excavated with a 3-tonn machine.

Comments

1. Trial pit dimensions: 1.500m (L) x 0.700m (W) x 0.800m (D)
2. Ground water was not encountered within the trail pit.
3. Sides of trail pit where stable.



Trail Pit 6 (TP6)

0.000m – 0.360m	Topsoil – grass overlaying SILT containing rootlets and occasional small angular gravels.
0.360m – 0.670m	Very clayey SILT, containing small to medium angular to sub angular gravels throughout. Pale brown in colour.
0.670m	Very Dense silty Clay containing frequent boulders and shale rock could not be excavated with a 3-tonn machine.

Comments

1. Trial pit dimensions: 1.500m (L) x 0.700m (W) x 0.670m (D)
2. Ground water was not encountered within the trail pit.
3. Sides of trail pit where stable.



Trail Pit 7 (TP7)

0.000m – 0.350m	Topsoil – grass overlaying SILT containing rootlets and occasional small angular gravels.
0.350m – 0.750m	Very clayey SILT, containing small to medium angular to sub angular gravels throughout. Pale brown in colour.
0.750m	Very Dense silty Clay containing frequent boulders and shale rock could not be excavated with a 3-tonn machine.

Comments

1. Trial pit dimensions: 1.400m (L) x 0.700m (W) x 0.670m (D)
2. Ground water was not encountered within the trail pit.
3. Sides of trail pit where stable.



APPENDIX M

Dynamic Probe Testing

**Dynamic Probe
Test Results**

**Land at Gwel y Llan,
Llandegfan**

FACTUAL REPORT

Prepared for:
**Mon Civils Limited,
Glaslyn Ffordd Y Parc,
Parc Menai, Bangor.
LL57 4FE.**

Report Reference: FTR38392

ISSUE REF: 01

Issue Date: 15th September 2023

Prepared by:

Celtest Limited
Trefelin
Llandegai
BANGOR
Gwynedd,
LL57 4LH
☎ - 01248 355 269

FTR38392

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FTR38392

Page 1

1.0 Introduction

Following your instructions eleven (11) dynamic probe tests were carried out using a Dynamic Probe with Super Heavy hammer (DPSH-B) with 90° cone.

The test was carried out in with BS 1377: Part 9: clause 3.2 & BS EN ISO 22476-2 to determine the Dynamic Probe resistance of the underlying material.

It is assumed that the DPSH-B method has a direct correlation to the SPT.

NOTE: The SPT 'N' values should be used as guidelines only.

This test report shall not be reproduced, except in full, without the written approval of Celtest Company Limited. These results relate only to the locations tested.

Site Address: Land at Gwel y Llan, Llandegfan.

Date of Test: 14th September 2023

Weather Conditions: Overcast

Tested By: Mr Marc Bullock/Michael Roberts.

This report was prepared by: _____ *Jason Hammacott* _____
Mr Jason Hammacott

This report is issued on behalf of Celtest Limited by: _____ *JH Owen* _____
(✓) Mr. Irfon Owen – Site Testing Team Manager

Date of issue: 20th September 2023



3.1 – Test 1

LOCATION ON SITE: DP 1																																																																																																																																																		
HAMMER TYPE/MASS: Super Heavy/63.5Kg		STANDARD DROP: 760mm																																																																																																																																																
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3.0 Test Results

3.2 – Test 2

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3.0 Test Results

3.4 – Test 4

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3.0 Test Results

3.5 – Test 5

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3.0 Test Results

3.6 – Test 6

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<table border="1"> <thead> <tr> <th colspan="2">Depth (m)</th> <th rowspan="2">Blows/100mm</th> <th rowspan="2">SPT 'N' Values</th> </tr> <tr> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>0.1</td><td>0</td><td rowspan="2">0.0</td></tr> <tr><td>0.1</td><td>0.2</td><td>0</td></tr> <tr><td>0.2</td><td>0.3</td><td>3</td><td rowspan="3">9.0</td></tr> <tr><td>0.3</td><td>0.4</td><td>3</td></tr> <tr><td>0.4</td><td>0.5</td><td>3</td></tr> <tr><td>0.5</td><td>0.6</td><td>3</td><td rowspan="3">16.0</td></tr> <tr><td>0.6</td><td>0.7</td><td>4</td></tr> <tr><td>0.7</td><td>0.8</td><td>9</td></tr> <tr><td>0.8</td><td>0.9</td><td>9</td><td rowspan="3">25.0</td></tr> <tr><td>0.9</td><td>1.0</td><td>9</td></tr> <tr><td>1.0</td><td>1.1</td><td>7</td></tr> <tr><td>1.1</td><td>1.2</td><td>7</td><td rowspan="3">24.0</td></tr> <tr><td>1.2</td><td>1.3</td><td>8</td></tr> <tr><td>1.3</td><td>1.4</td><td>9</td></tr> <tr><td>1.4</td><td>1.5</td><td>9</td><td rowspan="3">27.0</td></tr> <tr><td>1.5</td><td>1.6</td><td>9</td></tr> <tr><td>1.6</td><td>1.7</td><td>9</td></tr> <tr><td>1.7</td><td>1.8</td><td>10</td><td rowspan="3">24.0</td></tr> <tr><td>1.8</td><td>1.9</td><td>8</td></tr> <tr><td>1.9</td><td>2.0</td><td>6</td></tr> <tr><td>2.0</td><td>2.1</td><td>7</td><td rowspan="3">21.0</td></tr> <tr><td>2.1</td><td>2.2</td><td>7</td></tr> <tr><td>2.2</td><td>2.3</td><td>7</td></tr> <tr><td>2.3</td><td>2.4</td><td>7</td><td rowspan="3">20.0</td></tr> <tr><td>2.4</td><td>2.5</td><td>5</td></tr> <tr><td>2.5</td><td>2.6</td><td>8</td></tr> <tr><td>2.6</td><td>2.7</td><td>5</td><td rowspan="3">15.0</td></tr> <tr><td>2.7</td><td>2.8</td><td>5</td></tr> <tr><td>2.8</td><td>2.9</td><td>5</td></tr> <tr><td>2.9</td><td>3.0</td><td>5</td><td rowspan="3">20.0</td></tr> <tr><td>3.0</td><td>3.1</td><td>8</td></tr> <tr><td>3.1</td><td>3.2</td><td>7</td></tr> <tr><td>3.2</td><td>3.3</td><td>6</td><td rowspan="3">31.0</td></tr> <tr><td>3.3</td><td>3.4</td><td>25</td></tr> <tr><td>3.4</td><td>3.5</td><td>END</td></tr> <tr><td>3.5</td><td>3.6</td><td>0</td><td rowspan="3">0.0</td></tr> <tr><td>3.6</td><td>3.7</td><td>0</td></tr> <tr><td>3.7</td><td>3.8</td><td>0</td></tr> <tr><td>3.8</td><td>3.9</td><td>0</td><td rowspan="3">0.0</td></tr> <tr><td>3.9</td><td>4.0</td><td>0</td></tr> <tr><td>4.0</td><td>4.1</td><td>0</td></tr> </tbody> </table>				Depth (m)		Blows/100mm	SPT 'N' Values	From	To	0.0	0.1	0	0.0	0.1	0.2	0	0.2	0.3	3	9.0	0.3	0.4	3	0.4	0.5	3	0.5	0.6	3	16.0	0.6	0.7	4	0.7	0.8	9	0.8	0.9	9	25.0	0.9	1.0	9	1.0	1.1	7	1.1	1.2	7	24.0	1.2	1.3	8	1.3	1.4	9	1.4	1.5	9	27.0	1.5	1.6	9	1.6	1.7	9	1.7	1.8	10	24.0	1.8	1.9	8	1.9	2.0	6	2.0	2.1	7	21.0	2.1	2.2	7	2.2	2.3	7	2.3	2.4	7	20.0	2.4	2.5	5	2.5	2.6	8	2.6	2.7	5	15.0	2.7	2.8	5	2.8	2.9	5	2.9	3.0	5	20.0	3.0	3.1	8	3.1	3.2	7	3.2	3.3	6	31.0	3.3	3.4	25	3.4	3.5	END	3.5	3.6	0	0.0	3.6	3.7	0	3.7	3.8	0	3.8	3.9	0	0.0	3.9	4.0	0	4.0	4.1	0
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3.7 – Test 7

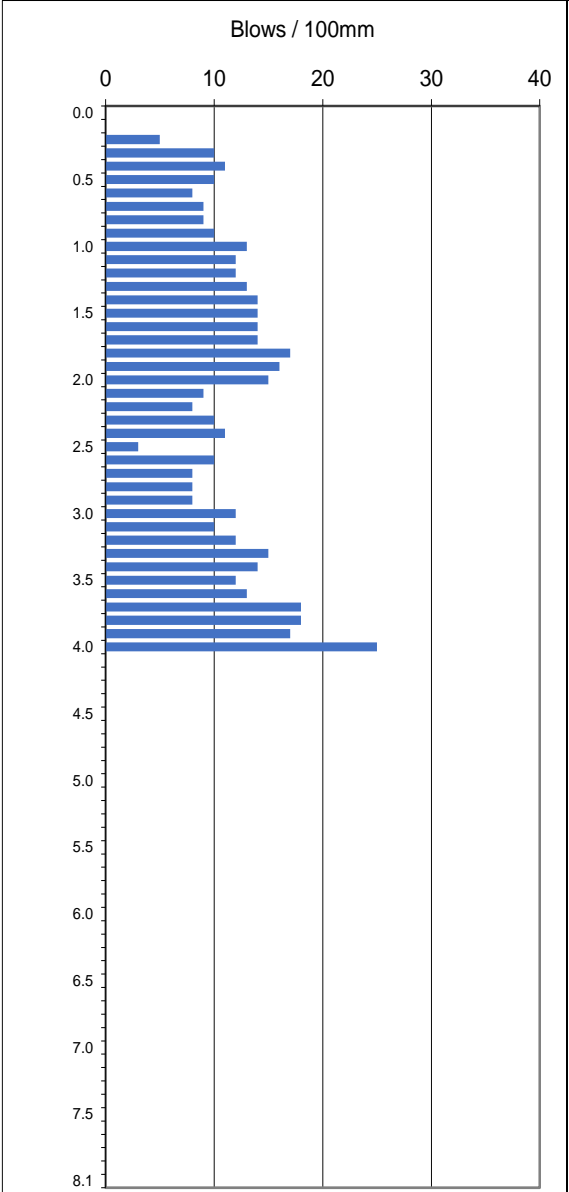
LOCATION ON SITE: DP 7						
HAMMER TYPE/MASS: Super Heavy/63.5Kg				STANDARD DROP: 760mm		
CONE TYPE/DIAMETER: 90°/50.5mm Ø				ROD TYPE/MASS: 8Kg/35mm Ø		
DAMPER USED: NO				CONE LEFT BEHIND: NO		
HOLES BACKFILLED:						
Depth (m)	Blows/100mm	SPT 'N' Values	Depth (m)	Blows/100mm	SPT 'N' Values	Blows / 100mm
From	To		From	To		
0.0	0.1	0	4.1	4.2	4	
0.1	0.2	0	4.2	4.3	5	
0.2	0.3	4	4.3	4.4	5	
0.3	0.4	10	4.4	4.5	9	
0.4	0.5	16	4.5	4.6	4	
0.5	0.6	11	4.6	4.7	3	
0.6	0.7	11	4.7	4.8	4	
0.7	0.8	15	4.8	4.9	13	
0.8	0.9	16	4.9	5.0	10	
0.9	1.0	10	5.0	5.1	25	
1.0	1.1	13	5.1	5.2	END	
1.1	1.2	11	5.2	5.3	0	
1.2	1.3	8	5.3	5.4	0	
1.3	1.4	6	5.4	5.5	0	
1.4	1.5	6	5.5	5.6	0	
1.5	1.6	7	5.6	5.7	0	
1.6	1.7	8	5.7	5.8	0	
1.7	1.8	6	5.8	5.9	0	
1.8	1.9	4	5.9	6.0	0	
1.9	2.0	4	6.0	6.1	0	
2.0	2.1	8	6.1	6.2	0	
2.1	2.2	8	6.2	6.3	0	
2.2	2.3	8	6.3	6.4	0	
2.3	2.4	9	6.4	6.5	0	
2.4	2.5	10	6.5	6.6	0	
2.5	2.6	11	6.6	6.7	0	
2.6	2.7	8	6.7	6.8	0	
2.7	2.8	9	6.8	6.9	0	
2.8	2.9	12	6.9	7.0	0	
2.9	3.0	10	7.0	7.1	0	
3.0	3.1	12	7.1	7.2	0	
3.1	3.2	9	7.2	7.3	0	
3.2	3.3	10	7.3	7.4	0	
3.3	3.4	10	7.4	7.5	0	
3.4	3.5	3	7.5	7.6	0	
3.5	3.6	8	7.6	7.7	0	
3.6	3.7	16	7.7	7.8	0	
3.7	3.8	12	7.8	7.9	0	
3.8	3.9	3	7.9	8.0	0	
3.9	4.0	2	8.1	8.0	0	
4.0	4.1	4			0.0	

FTR38392

3.0 Test Results

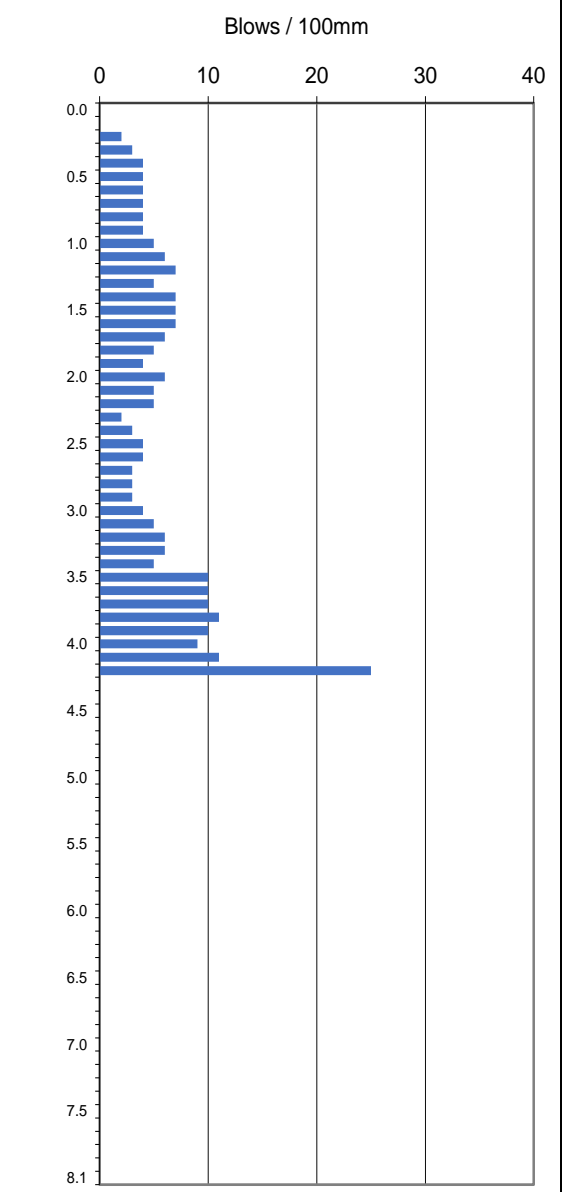
3.8 – Test 8

LOCATION ON SITE: DP 8							
HAMMER TYPE/MASS: Super Heavy/63.5Kg				STANDARD DROP: 760mm			
CONE TYPE/DIAMETER: 90°/50.5mm Ø				ROD TYPE/MASS: 8Kg/35mm Ø			
DAMPER USED: NO				CONE LEFT BEHIND: NO			
HOLES BACKFILLED:							
Depth (m)		Blows/100mm	SPT 'N' Values	Depth (m)		Blows/100mm	SPT 'N' Values
From	To			From	To		
0.0	0.1	0	N/A	4.1	4.2	END	0.0
0.1	0.2	0		4.2	4.3	0	
0.2	0.3	5	26.0	4.3	4.4	0	0.0
0.3	0.4	10		4.4	4.5	0	
0.4	0.5	11	27.0	4.5	4.6	0	0.0
0.5	0.6	10		4.6	4.7	0	
0.6	0.7	8	32.0	4.7	4.8	0	0.0
0.7	0.8	9		4.8	4.9	0	
0.8	0.9	9	37.0	4.9	5.0	0	0.0
0.9	1.0	10		5.0	5.1	0	
1.0	1.1	13	42.0	5.1	5.2	0	0.0
1.1	1.2	12		5.2	5.3	0	
1.2	1.3	12	47.0	5.3	5.4	0	0.0
1.3	1.4	13		5.4	5.5	0	
1.4	1.5	14	32.0	5.5	5.6	0	0.0
1.5	1.6	14		5.6	5.7	0	
1.6	1.7	14	37.0	5.7	5.8	0	0.0
1.7	1.8	14		5.8	5.9	0	
1.8	1.9	17	42.0	5.9	6.0	0	0.0
1.9	2.0	16		6.0	6.1	0	
2.0	2.1	15	47.0	6.1	6.2	0	0.0
2.1	2.2	9		6.2	6.3	0	
2.2	2.3	8	32.0	6.3	6.4	0	0.0
2.3	2.4	10		6.4	6.5	0	
2.4	2.5	11	24.0	6.5	6.6	0	0.0
2.5	2.6	3		6.6	6.7	0	
2.6	2.7	10	26.0	6.7	6.8	0	0.0
2.7	2.8	8		6.8	6.9	0	
2.8	2.9	8	30.0	6.9	7.0	0	0.0
2.9	3.0	8		7.0	7.1	0	
3.0	3.1	12	41.0	7.1	7.2	0	0.0
3.1	3.2	10		7.2	7.3	0	
3.2	3.3	12	43.0	7.3	7.4	0	0.0
3.3	3.4	15		7.4	7.5	0	
3.4	3.5	14	60.0	7.5	7.6	0	0.0
3.5	3.6	12		7.6	7.7	0	
3.6	3.7	13	26.0	7.7	7.8	0	0.0
3.7	3.8	18		7.8	7.9	0	
3.8	3.9	18	32.0	7.9	8.0	0	0.0
3.9	4.0	17		8.0	8.1	0	
4.0	4.1	25					0.0



3.9 – Test 9

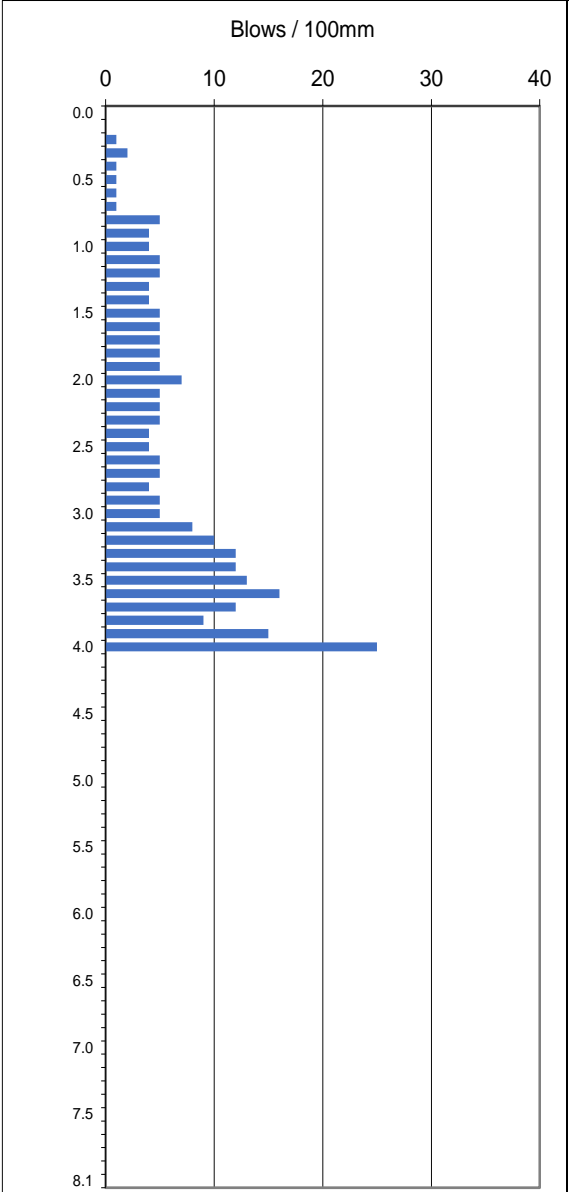
LOCATION ON SITE: DP 9							
HAMMER TYPE/MASS: Super Heavy/63.5Kg				STANDARD DROP: 760mm			
CONE TYPE/DIAMETER: 90°/50.5mm Ø				ROD TYPE/MASS: 8Kg/35mm Ø			
DAMPER USED: NO				CONE LEFT BEHIND: NO			
HOLES BACKFILLED:							
Depth (m)		Blows/100mm	SPT 'N' Values	Depth (m)		Blows/100mm	SPT 'N' Values
From	To			From	To		
0.0	0.1	0	N/A	4.1	4.2	11	36.0
0.1	0.2	0		4.2	4.3	25	
0.2	0.3	2	4.3	4.4	END		
0.3	0.4	3	9.0	4.4	4.5	0	0.0
0.4	0.5	4		4.5	4.6	0	
0.5	0.6	4	12.0	4.6	4.7	0	0.0
0.6	0.7	4		4.7	4.8	0	
0.7	0.8	4	13.0	4.8	4.9	0	0.0
0.8	0.9	4		4.9	5.0	0	
0.9	1.0	4	18.0	5.0	5.1	0	0.0
1.0	1.1	5		5.1	5.2	0	
1.1	1.2	6	21.0	5.2	5.3	0	0.0
1.2	1.3	7		5.3	5.4	0	
1.3	1.4	5	15.0	5.4	5.5	0	0.0
1.4	1.5	7		5.5	5.6	0	
1.5	1.6	7	16.0	5.6	5.7	0	0.0
1.6	1.7	7		5.7	5.8	0	
1.7	1.8	6	9.0	5.8	5.9	0	0.0
1.8	1.9	5		5.9	6.0	0	
1.9	2.0	4	17.0	6.0	6.1	0	0.0
2.0	2.1	6		6.1	6.2	0	
2.1	2.2	5	10.0	6.2	6.3	0	0.0
2.2	2.3	5		6.3	6.4	0	
2.3	2.4	2	30.0	6.4	6.5	0	0.0
2.4	2.5	3		6.5	6.6	0	
2.5	2.6	4	12.0	6.6	6.7	0	0.0
2.6	2.7	4		6.7	6.8	0	
2.7	2.8	3	17.0	6.8	6.9	0	0.0
2.8	2.9	3		6.9	7.0	0	
2.9	3.0	3	30.0	7.0	7.1	0	0.0
3.0	3.1	4		7.1	7.2	0	
3.1	3.2	5	10.0	7.2	7.3	0	0.0
3.2	3.3	6		7.3	7.4	0	
3.3	3.4	6	30.0	7.4	7.5	0	0.0
3.4	3.5	5		7.5	7.6	0	
3.5	3.6	10	12.0	7.6	7.7	0	0.0
3.6	3.7	10		7.7	7.8	0	
3.7	3.8	10	30.0	7.8	7.9	0	0.0
3.8	3.9	11		7.9	8.0	0	
3.9	4.0	10	9.0	8.1	8.0	0	0.0
4.0	4.1	9					



3.0 Test Results

3.10 – Test 10

LOCATION ON SITE: DP 10							
HAMMER TYPE/MASS: Super Heavy/63.5Kg				STANDARD DROP: 760mm			
CONE TYPE/DIAMETER: 90°/50.5mm Ø				ROD TYPE/MASS: 8Kg/35mm Ø			
DAMPER USED: NO				CONE LEFT BEHIND: NO			
HOLES BACKFILLED:							
Depth (m)		Blows/100mm	SPT 'N' Values	Depth (m)		Blows/100mm	SPT 'N' Values
From	To			From	To		
0.0	0.1	0	N/A	4.1	4.2	END	0.0
0.1	0.2	0		4.2	4.3	0	
0.2	0.3	1	4.0	4.3	4.4	0	0.0
0.3	0.4	2		4.4	4.5	0	
0.4	0.5	1	3.0	4.5	4.6	0	0.0
0.5	0.6	1		4.6	4.7	0	
0.6	0.7	1	13.0	4.7	4.8	0	0.0
0.7	0.8	1		4.8	4.9	0	
0.8	0.9	5	14.0	4.9	5.0	0	0.0
0.9	1.0	4		5.0	5.1	0	
1.0	1.1	4	14.0	5.1	5.2	0	0.0
1.1	1.2	5		5.2	5.3	0	
1.2	1.3	5	14.0	5.3	5.4	0	0.0
1.3	1.4	4		5.4	5.5	0	
1.4	1.5	4	15.0	5.5	5.6	0	0.0
1.5	1.6	5		5.6	5.7	0	
1.6	1.7	5	17.0	5.7	5.8	0	0.0
1.7	1.8	5		5.8	5.9	0	
1.8	1.9	5	13.0	5.9	6.0	0	0.0
1.9	2.0	5		6.0	6.1	0	
2.0	2.1	7	14.0	6.1	6.2	0	0.0
2.1	2.2	5		6.2	6.3	0	
2.2	2.3	5	18.0	6.3	6.4	0	0.0
2.3	2.4	5		6.4	6.5	0	
2.4	2.5	4	34.0	6.5	6.6	0	0.0
2.5	2.6	4		6.6	6.7	0	
2.6	2.7	5	41.0	6.7	6.8	0	0.0
2.7	2.8	5		6.8	6.9	0	
2.8	2.9	4	49.0	6.9	7.0	0	0.0
2.9	3.0	5		7.0	7.1	0	
3.0	3.1	5	34.0	7.1	7.2	0	0.0
3.1	3.2	8		7.2	7.3	0	
3.2	3.3	10	41.0	7.3	7.4	0	0.0
3.3	3.4	12		7.4	7.5	0	
3.4	3.5	12	49.0	7.5	7.6	0	0.0
3.5	3.6	13		7.6	7.7	0	
3.6	3.7	16	49.0	7.7	7.8	0	0.0
3.7	3.8	12		7.8	7.9	0	
3.8	3.9	9	49.0	7.9	8.0	0	0.0
3.9	4.0	15		8.1	8.0	0	
4.0	4.1	25					0.0

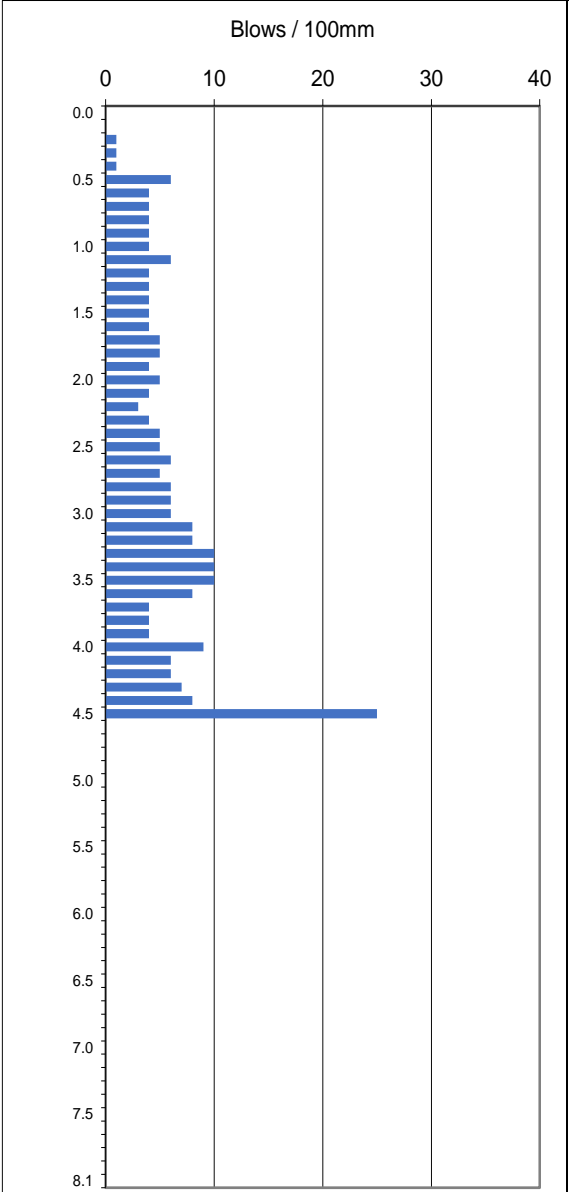


FTR38392

3.0 Test Results

3.11 – Test 11

LOCATION ON SITE: DP 11							
HAMMER TYPE/MASS: Super Heavy/63.5Kg				STANDARD DROP: 760mm			
CONE TYPE/DIAMETER: 90°/50.5mm Ø				ROD TYPE/MASS: 8Kg/35mm Ø			
DAMPER USED: NO				CONE LEFT BEHIND: NO			
HOLES BACKFILLED:							
Depth (m)		Blows/100mm	SPT 'N' Values	Depth (m)		Blows/100mm	SPT 'N' Values
From	To			From	To		
0.0	0.1	0	N/A	4.1	4.2	6	19.0
0.1	0.2	0		4.2	4.3	6	
0.2	0.3	1	3.0	4.3	4.4	7	33.0
0.3	0.4	1		4.4	4.5	8	
0.4	0.5	1	14.0	4.5	4.6	25	0.0
0.5	0.6	6		4.6	4.7	END	
0.6	0.7	4	12.0	4.7	4.8	0	0.0
0.7	0.8	4		4.8	4.9	0	
0.8	0.9	4	14.0	4.9	5.0	0	0.0
0.9	1.0	4		5.0	5.1	0	
1.0	1.1	4	12.0	5.1	5.2	0	0.0
1.1	1.2	6		5.2	5.3	0	
1.2	1.3	4	14.0	5.3	5.4	0	0.0
1.3	1.4	4		5.4	5.5	0	
1.4	1.5	4	12.0	5.5	5.6	0	0.0
1.5	1.6	4		5.6	5.7	0	
1.6	1.7	4	14.0	5.7	5.8	0	0.0
1.7	1.8	5		5.8	5.9	0	
1.8	1.9	5	17.0	5.9	6.0	0	0.0
1.9	2.0	4		6.0	6.1	0	
2.0	2.1	5	12.0	6.1	6.2	0	0.0
2.1	2.2	4		6.2	6.3	0	
2.2	2.3	3	14.0	6.3	6.4	0	0.0
2.3	2.4	4		6.4	6.5	0	
2.4	2.5	5	17.0	6.5	6.6	0	0.0
2.5	2.6	5		6.6	6.7	0	
2.6	2.7	6	20.0	6.7	6.8	0	0.0
2.7	2.8	5		6.8	6.9	0	
2.8	2.9	6	28.0	6.9	7.0	0	0.0
2.9	3.0	6		7.0	7.1	0	
3.0	3.1	6	22.0	7.1	7.2	0	0.0
3.1	3.2	8		7.2	7.3	0	
3.2	3.3	8	17.0	7.3	7.4	0	0.0
3.3	3.4	10		7.4	7.5	0	
3.4	3.5	10	22.0	7.5	7.6	0	0.0
3.5	3.6	10		7.6	7.7	0	
3.6	3.7	8	17.0	7.7	7.8	0	0.0
3.7	3.8	4		7.8	7.9	0	
3.8	3.9	4	9	7.9	8.0	0	0.0
3.9	4.0	4		8.1	8.0	0	
4.0	4.1	9					



END OF REPORT

APPENDIX N

Atterberg Limits Testing

APPENDIX O

Sulphate and pH testing

APPENDIX P

Contamination Results