Plas Power Solar and Energy Storage Project

4.3 Environmental Statement Volume 3: Appendices

Part 4 of 14

February 2024

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Schedule of appendices included in this document

Document Ref	Document Title
4.3.13	**Appendix 4.5 Noise Impact Assessment**
4.3.14	**Appendix 4.6 Desktop Study, Preliminary Risk Assessment and Site Reconnaissance (Part 1 of 4)**

Appendix 4.5
Noise Impact Assessment

PLAS POWER ESTATE

Noise Impact Assessment

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Quality Management (Report)

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Quality Management (Models & Calculations)

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1 INTRODUCTION

1.1 The acoustics team at RPS Environment (RPS) has been instructed by Lightsource bp to undertake a noise impact assessment (NIA) to support a planning application for the construction of a solar photovoltaic electricity generating station with an installed generation capacity of approximately 57MW$_{AC}$, a Battery Energy Storage System ('BESS') and associated ancillary development.

1.2 An environmental sound survey has been undertaken at the site to quantify the existing noise climate and derive appropriate operational noise emission criteria in line with the requirements of Wrexham County Borough Council (WCBC).

1.3 An assessment of operational noise from the site has been undertaken by predicting and assessing noise emissions from the proposed equipment with reference to the guidance in BS 4142:2014+A1:2019.

1.4 Construction noise and vibration impacts have been scoped out of the assessment since the works are unlikely to give rise to significant adverse effects following the adoption of Best Practicable Means (BPM) which will be detailed in the Construction Environmental Management Plan (CEMP). Noise and vibration control measures outlined in BS 5228:2009+A1:2014 – 'Code of practice for Noise and Vibration Control on Open Sites' will be implemented to minimise impacts.

1.5 RPS is a member of the Association of Noise Consultants (ANC), the representative body for acoustics consultancies, having demonstrated the necessary professional and technical competence. This report has been prepared with integrity, objectivity, and honesty in accordance with the Code of Conduct of the Institute of Acoustics (IOA) and ethically, professionally, and lawfully in accordance with the Code of Ethics of the ANC.

1.6 The technical content of this NIA has been provided by RPS personnel, all of whom are members of the IOA (the UK's professional body for those working in acoustics, noise, and vibration) at various grades. Personnel and individual qualifications are provided within the Quality Management table at the start of this report. This report has been peer reviewed within the RPS team to ensure that it is technically robust and meets the requirements of our Integrated Management System.

2 SITE DESCRIPTION

2.1 The Proposed Development site comprises approximately 136 hectares (ha) of land situated within the administrative boundary of WCBC. The site comprises two sections to the north and south of Ruthin Road (A525), respectively. The site in the context of the surrounding area is presented in **Appendix A**.

2.2 The village of Coedpoeth is situated to the west of the northern parcel, with the village of Tanyfron situated further to the north. The area to the southwest of the northern parcel and west of the southern parcel is predominantly rural comprising woodland and agricultural farmland.

2.3 The site is bound to the east by the A483 which runs from north to south and is a well-trafficked road. Beyond the A483 to the east is the city of Wrexham, with the city centre situated approximately 2.5 km from the eastern site boundary.

2.4 There are a small number of residential dwellings to the immediate south of the site on Mill Terrace, beyond which is agricultural farmland, and a number of additional residential areas in Pentre Bychan and Bronwylfa.

3 POLICY & GUIDANCE

3.1 National Planning Policy

Planning Policy Wales Edition 12 (February 2024)

3.1.1 Planning Policy Wales Edition 12 (PPW) outlines the land use planning policies of the Welsh government. It is supplemented by a series of Technical Advice Notes (TAN), Welsh Government Circulars, and policy clarification letters.

3.1.2 The primary objective of the PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental, and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other legislation.

3.1.3 The key provision relevant to noise from the Proposed Development can be found in paragraph 5.9.20 of PPW which states the following:

"Planning authorities should also identify and require suitable ways to avoid, mitigate, or compensate adverse impacts of renewable and low carbon energy development. The construction, operation, decommissioning, remediation and aftercare of proposals should take into account:

- *The need to minimise impacts on local communities, such as from noise and air pollution, to safeguard quality of life for existing and future generations.*

[…]"

Technical Advice Note 11 – Noise (TAN11)

3.1.4 The TAN11 provides guidance for the assessment of noise impacts from various developments to ensure unacceptable degrees of disturbance are avoided.

3.1.5 The guidance has been supplemented by circulars outlining key updates required for the assessment of noise impacts in line with changes or updates to the relevant guidance.

3.1.6 TAN11 refers to the use of BS 4142:2014+A1:2019 – '*Methods for rating and assessing industrial and commercial sound*' when assessing operational noise from industrial and commercial developments.

3.1.7 It is noted that the Technical Advice Note 11: *Air Quality, Noise and Soundscape* is currently being prepared and is undergoing periods of consultation.

3.2 Local Planning Policy

Wrexham Local Development Plan 2013 – 2028 (December 2023)

3.2.1 The Wrexham Local Development Plan (LDP) provides the framework for local decision making in the administrative area of Wrexham County Borough Council.

3.2.2 Policy DM 1: Development Management Considerations of the DP provides development objectives relevant to noise:

"Development proposals, where relevant, must:

[…]

iii) Safeguard the environment from the adverse effects of pollution of water, land, noise, light or air, or land instability, arising from development.

[…]"

3.3 British Standard 4142:2014+A1:2019

3.3.1 British Standard (BS) 4142:2014+A1:2019 – '*Methods for rating and assessing industrial and commercial sound*' provides a method for rating and assessing the impacts of industrial and commercial sound upon nearby human receptors. The method is applicable to fixed plant installations, sound from industrial and manufacturing process, and other associated activities.

3.3.2 In summary, this standard provides guidance on determining rating levels by correcting the specific sound level from the site or operations under consideration for acoustic character corrections such as tonality, impulsivity, and intermittency. The standard provides the following corrections to be applied where each is appropriate:

*"**Tonality***

For sound ranging from not tonal to prominently tonal the Joint Nordic Method gives a correction of between 0 dB and +6 dB for tonality. Subjectively, this can be converted to a penalty of 2 dB for a tone which is just perceptible at the noise receptor, 4 dB where it is clearly perceptible, and 6 dB where it is highly perceptible.

Impulsivity

A correction of up to +9 dB can be applied for sound that is highly impulsive, considering both the rapidity of the change in sound level and the overall change in sound level. Subjectively, this can be converted to a penalty of 3 dB for impulsivity which is just perceptible at the noise receptor, 6 dB where it is clearly perceptible, and 9 dB where it is highly perceptible.

NOTE 2 If characteristics likely to affect perception and response are present in the specific sound, within the same reference period, then the applicable corrections ought normally to be added arithmetically. However, if any single feature is dominant to the exclusion of the others then it might be appropriate to apply a reduced or even zero correction for the minor characteristics.

Intermittency

When the specific sound has identifiable on/off conditions, the specific sound level should be representative of the time period of length equal to the reference time interval which contains the greatest total amount of on time. … If the intermittency is readily distinctive against the residual acoustic environment, a penalty of 3 dB can be applied.

Other sound characteristics

Where the specific sound features characteristics that are neither tonal nor impulsive, nor intermittent, though otherwise are readily distinctive against the residual acoustic environment, a penalty of 3 dB can be applied."

3.3.3 An initial estimate of the impact of the specific sound is obtained by subtracting the measured background sound level from the rating level of the specific sound. In the context of the standard, adverse impacts include, but are not limited to, annoyance and sleep disturbance. Typically, the greater this difference, the greater the magnitude of the impact:

- A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context.
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

3.3.4 **Table 3.1** below provides definitions for some of the key acoustic terminology adopted within this report.

Table 3.1: Definitions of acoustic terms

Terminology	Definition
Ambient Sound Level, $L_{Aeq,T}$	The steady sound level which, over a period of time *T*, contains the same amount of A-weighted sound energy as the time varying sound over the same period. Also known as the equivalent continuous sound pressure level. *NOTE The ambient sound level is a measure of the residual sound and the specific sound when present.*
Background Sound Level, $L_{A90,T}$	The A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval, *T,* measured using fast time-weighting, *F*, and quoted to the nearest whole number of decibels.
Rating Level, $L_{Ar,T}$	The specific sound level plus any adjustment for the characteristic features of the sound.
Residual sound level, $L_r = L_{Aeq,T}$	The ambient sound level at a receptor in the absence of influence from the sound source under assessment.
Specific sound level, $L_{s,} = L_{Aeq,T}$	The equivalent continuous A-weighted sound pressure level produced by the specific noise source at the assessment location over a given reference time internal, *T*.

4 BASELINE SOUND SURVEY

4.1 Methodology & Instrumentation

4.1.1 An unattended environmental sound survey was undertaken at the site commencing at 1100 hours on Tuesday 5th September 2023 and concluding at 1000 hours on Monday 11th September 2023. The survey was undertaken in line with the guidance in BS 4142:2014+A1:2019 and other relevant standards[1].

4.1.2 Measurements were undertaken at six locations as presented in Appendix A and described below:

- LT1 – Free field measurement position approximately 1.5 m above local ground level on the western boundary of the northern parcel;
- LT2 – Free field measurement position approximately 1.5 m above local ground level on the southern boundary of the northern parcel;
- LT3 – Free field measurement position approximately 1.5 m above local ground level on the northern boundary of the northern parcel;
- LT4 – Free field measurement position approximately 1.5 m above local ground level on the northern boundary of the southern parcel;
- LT5 – Free field measurement position approximately 1.5 m above local ground level on the western boundary of the southern parcel; and
- LT6 – Free field measurement position approximately 1.5 m above local ground level on the southern boundary of the southern parcel.

4.1.3 These positions were selected to obtain baseline sound levels representative of those at the nearest noise-sensitive receptors.

4.1.4 The sound monitoring equipment malfunctioned at positions LT1 and LT2 and thus data was only obtained up to the 8th September 2023. However, sufficient long-term data was obtained to determine representative baseline levels.

4.1.5 Measurements of the L_{Aeq}, L_{Amax}, and L_{A90} were undertaken at 100 ms intervals and temporally averaged over 15-minute periods for the duration of the survey. The equipment listed in Table 4.1 below was used to undertake the survey:

[1] British Standard 7445-2:1991, *'Description and measurement of environmental noise – Part 2: Guide to the acquisition of data pertinent to land use'.*

Table 4.1: Equipment used during the unattended noise survey

Measurement Location	Make/Model	Serial Number	Calibration Start (dB) (Ref: 94.0 dB)	Calibration End (dB) (Ref: 94.0 dB)	Last Manufacturers' Calibration Date
Calibrator	Rion NC-74	35046823	94.0	-	26/05/2023
LT1	Rion NL-52	1021257	94.0	94.1	27/04/2022
LT2	Rion NL-52	219905	94.0	94.0	26/05/2023
LT3	Rion NL-52	1221576	94.0	94.0	30/06/2022
LT4	Rion NL-52	810559	94.0	93.8	08/12/2021
LT5	Rion NL-52	710312	94.0	94.1	26/09/2023
LT6	Rion NL-52	810558	94.0	94.0	08/12/2021

4.1.6 Measurements were undertaken in accordance with British Standard 7445-2:1991 – 'Description and measurement of environmental noise – Part 2: Guide to the acquisition of data.

4.1.7 All sound level meters used meet the 'Class 1' criteria defined within BS EN 61672-2:2013+A1:2017 – 'Electroacoustics. Sound level meters – Pattern evaluation tests'. All calibrators used meet the 'Class 1' criteria defined within BS EN IEC 60942 – 'Electroacoustics. Sound calibrators'

4.2 Meteorological Conditions

4.2.1 A weather station was installed alongside the noise monitoring equipment to log the meteorological conditions on site. The console for the station malfunctioned and thus no weather data was recorded.

4.2.2 In the absence of measured data, publicly available weather data has been obtained from the closest weather station available to the site[2]. This has been cross-referenced against other weather stations in the area and shows good agreement.

4.2.3 The data shows that favourable weather conditions prevailed throughout the survey period with no precipitation events recorded and wind speeds less than 5 m/s throughout. As a result, no periods have been omitted from the assessment due to adverse weather conditions.

4.3 Noise Climate

4.3.1 Subjectively, the noise climate in the northern parcel of the Proposed Development was noted to be generally quiet and dominated primarily by traffic on Ruthin Road (A525) and the surrounding local highway networks.

4.3.2 The noise climate in the southern parcel of the Proposed Development was dominated primarily by traffic on the A483.

[2] Wunderground Station ID IWREXH47, https://www.wunderground.com/dashboard/pws/IWREXH47

4.4 Results

4.4.1 The results of the unattended sound survey are presented graphically in Appendix B.

4.4.2 Representative baseline sound levels have been derived in accordance with the guidance presented in BS 4142:2014+A1:2019.

4.4.3 Solar photovoltaic (PV) inverters often 'ramp-up' in operational duty in the early morning between the hours of 0500 and 0700. As such, the residual sound levels, $L_{Aeq,T}$ and representative background sound levels $L_{A90,T}$ have been determined from the measured data for the following periods:

- Daytime (0700-2300);
- Night-time (2300-0500); and
- Early morning (0500-0700).

4.4.4 The representative ambient sound levels $L_{Aeq,T}$ have been calculated by logarithmically averaging the survey data over a 16-hour, 6-hour, and 2-hour periods for the day, night-time, and early morning, respectively.

4.4.5 The representative background sound levels, $L_{A90,T}$, have been derived through statistical analysis of the measured background sound level data with reference to the guidance in BS 4142:2014+A1:2019 which states the following:

"A representative level should account for the range of background sound levels and should not automatically be assumed to be either the minimum or modal value."

4.4.6 Histograms of the cumulative frequency of occurrence plotted against the range of $L_{A90,T}$ levels during the relevant periods have been generated from the baseline survey data at both positions.

4.4.7 The representative levels at each measurement position have been derived as described in Table 4.2 below. These values have been reviewed against the time-history graphs in Appendix B and are acceptable.

Table 4.2: Description of representative background derivation.

Measurement Position	Justification		
	Day (0700-2300)	Night (2300-0500)	Early Morning (0500-0700)
LT1	The modal level during the daytime was 39 dB L_{A90}. This next most frequently occurring level was 45 dB L_{A90} which occurred 3 times less over the survey period. As such, the modal value has been selected as a worst-case scenario.	The modal values were 30 dB and 34 dB L_{A90} which both occurred 8 times each over the survey period. As such, a level of 30 dB has been selected as representative as a worst-case scenario.	The modal level was measured to be 43 dB L_{A90} during the survey period occurring 5 times. However, it was also noted that the levels of 39 dB and 40 dB both occurred 4 times each and thus the representative level is more likely to be within these levels. A conservative level of 39 dB L_{A90} has been adopted for the assessment.
LT2	The most frequently occurring level by a large margin was 43 dB L_{A90}. As such, this level is considered to be representative for the daytime period.	Levels of 29, 30, and 31 dB L_{A90} all occurred between 8 and 9 times each during the survey period. As such, a representative background of 30 dB L_{A90} has been adopted for the assessment to provide a	As with the daytime period, the modal value by a large margin was 36 dB L_{A90}. As such, this level is considered to be representative.

Measurement Position	Justification		
	Day (0700-2300)	Night (2300-0500)	Early Morning (0500-0700)
		conservative but pragmatic level against which to assess.	
LT3	The modal value measured during the day was 38 dB L_{A90}. However, the levels of 36 and 37 dB L_{A90} occurred 30 and 29 times, respectively. As such, the representative level is more likely to be within these levels. A conservative level of 36 dB L_{A90} has been adopted for the assessment	The modal levels measured were 29 dB and 31 dB L_{A90} which both occurred 9 times throughout the survey period. A representative level of 31 dB L_{A90} has been selected for the assessment to provide a pragmatic limit for the assessment.	The most frequently occurring level during this period was 38 dB L_{A90} occurring 7 times during the survey period. However, a level of 35 dB L_{A90} occurred 5 times throughout the survey period and has been selected as representative as a worst-case scenario.
LT4	The modal value measured during the day was 43 dB L_{A90} and, as such, has been deemed suitably representative.	The modal value measured during the night was 30 dB L_{A90} and, as such, has been deemed suitably representative.	The modal value measured during the early morning was 35 dB L_{A90} and, as such, has been deemed suitably representative.
LT5	The modal value measured during the early morning was 38 dB L_{A90} and, as such, has been deemed suitably representative.	The modal value measured during the night was 30 dB L_{A90} and, as such, has been deemed suitably representative.	The modal level was measured to be 41 dB L_{A90} during the survey period occurring 6 times. However, it was also noted that the levels of 38 dB and 39 dB both occurred 5 times each and thus the representative level is more likely to be within these levels. A conservative level of 38 dB L_{A90} has been adopted for the assessment.
LT6	The modal level was measured to be 49 dB L_{A90} during the survey period occurring 44 times. However, it was also noted that the levels of 43 dB and 44 dB both occurred 27 times each and thus the representative level is more likely to be within these levels. A conservative level of 43 dB L_{A90} has been adopted for the assessment	The modal value measured during the night was 35 dB L_{A90} and, as such, has been deemed suitably representative.	The modal level measured during this period was 47 dB L_{A90}. However, a representative level of 42 dB L_{A90} has been selected since it is the lowest measured level which occurred frequently enough (4 times) to be considered representative.

4.4.8 The results are presented in Table 4.3 below.

Table 4.3: Baseline sound survey results

Position	Measured Sound Levels (dB)					
	Day		Night		Early Morning	
	Residual Sound Level, $L_{Aeq,16h}$	Background Sound Level, $L_{A90,1h}$	Residual Sound Level, $L_{Aeq,6h}$	Background Sound Level, $L_{A90,15min}$	Residual Sound Level, $L_{Aeq,2h}$	Background Sound Level, $L_{A90,15min}$
LT1	46	39	37	30	46	39
LT2	48	43	39	31	43	36
LT3	43	36	35	31	43	35
LT4	48	43	38	30	46	35

Position	Measured Sound Levels (dB)					
	Day		Night		Early Morning	
	Residual Sound Level, $L_{Aeq,16h}$	Background Sound Level, $L_{A90,1h}$	Residual Sound Level, $L_{Aeq,6h}$	Background Sound Level, $L_{A90,15min}$	Residual Sound Level, $L_{Aeq,2h}$	Background Sound Level, $L_{A90,15min}$
LT5	48	38	37	30	43	38
LT6	50	43	45	35	49	42

5 NOISE IMPACT ASSESSMENT

5.1 Proposed Installation

Overview

5.1.1 The Proposed Development comprises a solar PV array area and a BESS facility in the southern portion of the site. The solar array area will contain the arrays of solar PV panels and associated noise-emitting equipment, namely:

- Solar PV inverters; and
- Medium voltage (MV) transformers.

5.1.2 The BESS facility in the southern portion of the site will contain the following equipment:

- BESS units;
- Power conversion system (PCS) plant comprising:
  - PCS inverters; and
  - PCS MV transformers.
- Auxiliary transformer;
- BESS intake substation;
- Customer substation; and
- District Network Operator (DNO) substation

5.1.3 It should be noted that the inclusion of the BESS facility in the assessment represents the 'worst-case' design scenario in the context of potential noise impacts. The land on which the BESS facility is currently proposed would be used for additional solar panels if the BESS facility is omitted from the Proposed Development and the noise impacts would be equal to or less than those assessed within this report.

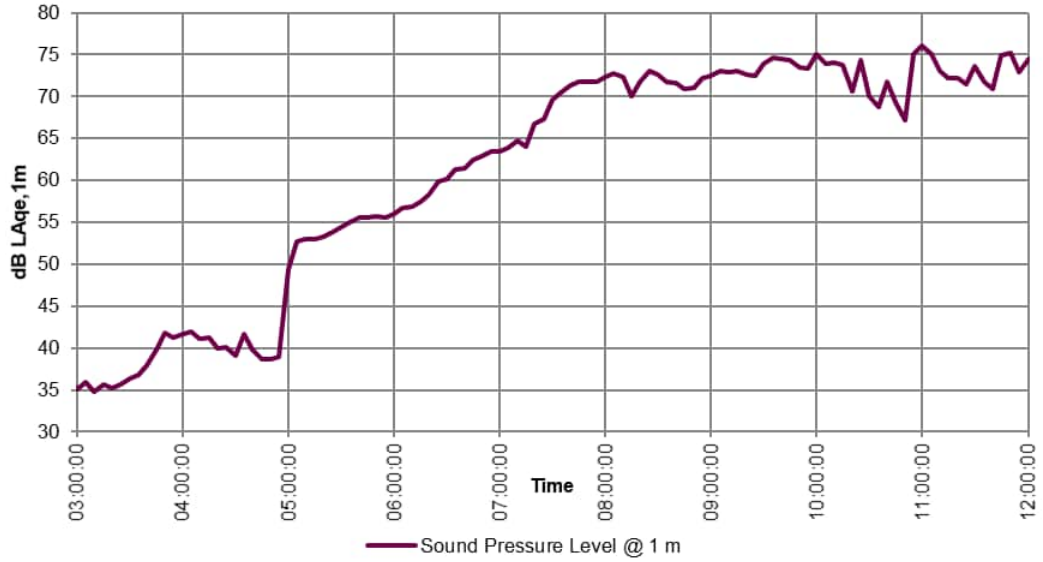
Operation & Mitigation

5.1.4 Typically, solar PV inverters 'ramp-up' during the early morning period. Historically, RPS have undertaken measurements of noise emission levels from solar inverters during the hours of 0500-0800 on a clear day during the summertime. The results are shown below in Figure 5.1 as 1 – minute ambient noise levels at a distance of 1 m from a solar inverter.

5.1.5 The results show that the inverters commence operation and increase in noise emission level before reaching a maximum at around 0800 hours.

5.1.6 As such, as a worst-case scenario, the noise levels during this period have been assessed based on the assumption that the solar PV inverters will operate at 75% capacity for the full period between 0500-0700.

Figure 5.1: Solar PV inverter noise levels at 1 m between 0500-0700 hours.



5.1.7 Noise data has been provided from the manufacturer for the PCS inverter units at various fan speeds. It is understood that the units will operate at 70% of the maximum fan speed which will achieve the desired power output whilst reducing the overall noise emission levels from the units.

5.1.8 Additionally, the PCS inverters are proposed to be housed within bespoke acoustic enclosures to reduce the noise emission levels. An acoustic test report of the performance of this enclosure has been provided by the manufacturer and shows a 4 dB reduction in the noise emission level at 70% fan speed. These enclosures have been included as part of the assessment.

5.1.9 It is understood that the worst-case daily run-time for the BESS units will be 66% of a 24-hour period. Whilst in practice, the daily run-time is likely to be lower, the assessment has been undertaken assuming the BESS is in operation to assess the day and night-time periods where all plant is operating concurrently.

Noise Source Data

5.1.10 The plant items modelled are listed in Table 5.1 below. Spectral data is presented in Appendix C.

Table 5.1: Proposed plant strategy

Plant Item	Model	Quantity	Sound Power Level, dB(A)	Operational Time
Solar PV Array Area				
Solar PV Inverter	Gamesa-E PV Station(4.5-5.2 MVA)	28	92	0500-2300
MV Transformer	Assumed from historic RPS projects.	28	77	24/7
BESS Enclosure				
BESS Units	Trina Storage Elementa	56	78	24/7
PCS Inverters	Freemaq PCSK GEN3	14	91(1)	24/7
PCS MV Transformer	Trina StorageSL-4400 (33/0.69 kV)	7	89	24/7
Auxiliary Transformer	Assumed from historic RPS projects.	1	67	24/7

(1) *Sound power level for the unit housed within an acoustic enclosure and operating at 70% of the maximum fan speed*

5.1.11 It is understood that a transformer will be included as part of the Customer Substation in the southern portion of the site. This transformer will be limited to a sound pressure level of 75 dB(A) at a distance of 1 m from the source. As such, a sound power level of 83 dB(A) has been assumed in the modelling.

5.2 Assessment Methodology

5.2.1 Plant noise emission levels due to the proposed plant installation have been predicted at the nearest noise-sensitive receptors via the construction of a computational 3D acoustic model using SoundPLAN v8.2. This modelling software implements the propagation method outlined in ISO 9613-2:1996 and allows for the prediction of sound levels under light, down-wind conditions based upon hemispherical radiation, and includes corrections for atmospheric absorption, ground effects, screening, and directivity. The site layout has been modelled based on the following drawing:

- Indicative Site Layout Plan (Solar and Battery) (Drawing ref: LP2-PDL), Document Ref: 2.02.

5.2.2 The topography of the site and the surrounding area has been obtained from site surveyed topographical data and Ordnance Survey (OS) Terrain 5 data.

5.2.3 The effect of screening from solid structures (buildings) has been incorporated into the modelling process by importing OS Open Data 'Settlement Area' shape file data into the model.

5.2.4 The surrounding area is predominantly agricultural farmland. Thus, the ground has been assumed to be more ‘acoustically soft’ with a ground factor of G=0.5. The solar PV array area will comprise predominantly acoustically reflective PV panels and thus have been modelled with a ground factor of G=0.8 as a worst-case assumption.

5.2.5 The specific sound levels output by the 3D model has informed an assessment in line with the guidance in BS 4142:2014+A1:2019 as detailed above. The sources listed in Table 5.1 and those have been set have been modelled as presented in Table 5.2 below:

Table 5.2: Model input details

Plant Item	Source Type	Modelled Height (m)
Solar PV Array Area		
Solar PV Inverter	Industrial Building	2.8
MV Transformer	Point Source	2.0
BESS Enclosure		
BESS Units	Industrial Building	2.7
PCS Inverters	Industrial Building	2.2
PCS MV Transformer	Industrial Building	2.5
Auxiliary Transformer	Point Source	1.5

5.2.6 The specific sound levels have been predicted at ground floor level during the daytime with a receptor height of 1.5 m (typical of the centre of a ground floor window) and at first floor level during the night-time and early morning with a receptor height of 4.5 m (typical of the centre of a first-floor window).

5.2.7 The noise emission spectra for the proposed plant strategy do not contain any distinct tonal components and are unlikely to be impulsive or intermittent in their operation. As such, no acoustic character corrections to account for these features have been applied.

5.3 Results and Discussion

5.3.1 The results of the acoustic modelling are presented in Table 5.3 below.

Table 5.3: Noise impact assessment

NSR	Representative Background Level, $L_{A90,T}$ (dB)	Specific Sound Level, $L_{Aeq,T}$ (dB)	Character Correction (dB)	Rating Level, $L_{Ar,T}$ (dB)	Difference Between Representative Background Level and Rating Level (dB)
Early Morning (0500-0700)					
Barn Hill Cottage	36	33	0	33	**-3**
Bersham Bank	42	41	0	41	**-1**
Bersham Lodge	42	38	0	38	**-4**
Bryn Moel	42	35	0	35	**-7**
Bwthyn Coctel	39	35	0	35	**-4**
Higher Berse Farm	35	29	0	29	**-6**
Lower Berse Farm	42	35	0	35	**-7**
The Bungalow	38	35	0	35	**-3**
The Dolls House	35	32	0	32	**-3**
The Meadows	36	33	0	33	**-3**
The Oaks	36	33	0	33	**-3**
Ty Newydd	36	32	0	32	**-4**
Woodside Barn	36	32	0	32	**-4**
Day (0700-2300)					
Barn Hill Cottage	43	33	0	33	**-10**
Bersham Bank	43	33	0	33	**-10**
Bersham Lodge	43	40	0	40	**-3**
Bryn Moel	38	38	0	38	**0**
Bwthyn Coctel	43	35	0	35	**-8**
Higher Berse Farm	39	37	0	37	**-2**
Lower Berse Farm	38	30	0	30	**-8**
The Bungalow	43	35	0	35	**-8**
The Dolls House	38	38	0	38	**0**
The Meadows	41	33	0	33	**-8**
The Oaks	43	33	0	33	**-10**
Ty Newydd	43	33	0	33	**-10**
Woodside Barn	43	32	0	32	**-11**
Night (2300-0500)					
Barn Hill Cottage	31	27	0	27	**-4**
Bersham Bank	35	39	0	39	**+4**
Bersham Lodge	35	37	0	37	**+2**

NSR	Representative Background Level, $L_{A90,T}$ (dB)	Specific Sound Level, $L_{Aeq,T}$ (dB)	Character Correction (dB)	Rating Level, $L_{Ar,T}$ (dB)	Difference Between Representative Background Level and Rating Level (dB)
Bryn Moel	35	33	0	33	**-2**
Bwthyn Coctel	30	26	0	26	**-4**
Higher Berse Farm	31	25	0	25	**-6**
Lower Berse Farm	35	30	0	30	**-5**
The Bungalow	30	27	0	27	**-3**
The Dolls House	30	23	0	23	**-7**
The Meadows	31	30	0	30	**-1**
The Oaks	31	29	0	29	**-2**
Ty Newydd	31	28	0	28	**-3**
Woodside Barn	31	29	0	29	**-2**

5.3.2 The results in Table 5.3 above show that during the early morning and daytime periods, the rating level at the nearest noise sensitive receptors during the daytime and early morning periods are equal to or below the representative background sound level at every receptor. This is indicative of a 'low impact' in terms of BS 4142:2014+A1:2019, depending on the context.

5.3.3 The results at the majority of receptors during the night-time also fall below the representative background sound level and thus indicate a 'low impact' depending on the context. The exceptional receptors are Bersham Bank and Bersham Lodge. The rating levels at these receptors are higher due to their closer proximity to the proposed BESS installation. However, the exceedance of +2 dB at Bersham Lodge and +4 dB at Bersham Bank fall below the +5 dB exceedance associated with an 'adverse impact' in terms of BS 4142:2014+A1:2019. This indicates that adverse impacts have been avoided, depending on the context.

5.4 Consideration of Context

5.4.1 It is important that the context of the impacts assessed be considered as part of an assessment in line with BS 4142:2014+A1:2019. The following factors will be considered:

- The absolute level of sound;
- The character and level of the residual sound compared to the character and the specific sound level; and
- The sensitivity of the receptor.

Absolute Sound Level

5.4.2 Section 11 of BS 4142:2014+A1:2019 states the following:

"Where background sound levels and rating levels are low, absolute levels might be as, or more, relevant than the margin by which the rating level exceeds the background. This is especially true at night.

Where residual sound levels are very high, the residual sound might itself result in adverse impacts or significant adverse impacts, and the margin by which the rating level exceeds the background

might simply be an indication of the extent to which the specific sound source is likely to make those impacts worse."

5.4.3 The baseline survey results in Table 4.3 show the background sound levels to be low in absolute terms during the night-time period. However, the rating levels predicted are not considered to be low due to the BESS enclosure operation. As such, the exceedances by which the rating levels exceed the background sound levels are thus considered to be more relevant to this development.

Character & Level of the Residual and Specific Sound

5.4.4 The baseline sound climate was noted to be influenced by road traffic on local highway networks. As presented in Table 4.3 above, the residual sound levels were measured to be between:

- 35-42 dB $L_{Aeq,T}$ during the early morning;
- 43-50 dB $L_{Aeq,T}$ during the daytime; and
- 35-45 dB $L_{Aeq,T}$ during the night-time.

5.4.5 The specific sound levels predicted are of a lesser or similar magnitude to the residual sound levels. Furthermore, noise from BESS is typically dominated by cooling fan noise from the battery storage containers and noise emissions from the PCS units. The source spectra show these units to be broadband in nature with no distinct tonal components indicating that the source will not be readily distinguishable against the existing acoustic environment. Moreover, the units are controlled via individual thermostats and therefore do not exhibit clearly perceptible intermittent operation. As such, no corrections for acoustic character have been applied.

Sensitivity of Receptors

5.4.6 Section 11 of BS 4142:2014+A1:2019 states the following:

"The sensitivity of the receptor and whether dwellings or other premises used for residential purposes will already incorporate design measures that secure good internal design and/or outdoor acoustic conditions, such as:

1) Façade insulate treatment;

2) Ventilation and/or cooling that will reduce the need to have windows open as to provide rapid or purge ventilation; and

3) Acoustic screening."

5.4.7 The glazing and ventilation strategy for existing NSRs is not known and, as such, it has been assumed that the NSRs will rely on open windows to maintain sufficient background ventilation.

5.4.8 Assuming a typical reduction of 13 dB due to a partially open window, the maximum internal noise levels at the worst-affected receptor (Bersham Bank) will be 26 dB(A) during the night-time period. This level falls below the night-time internal ambient noise criteria of 30 dB $L_{Aeq,8h}$ outlined in BS 8233:2014 – 'Guidance on sound insulation and noise reduction for buildings' which is the level above which sleep disturbance is likely.

5.5 Summary

5.5.1 The Proposed Development has been modelled based upon worst-case assumptions regarding the 75% operational duty during the early morning period for the solar PV inverters.

5.5.2 The PCS inverters have been modelled based on manufacturer's noise data for the units operating at 70% fan speed inside a bespoke acoustic enclosure.

5.5.3 A limiting level for Customer Substation of 75 dB(A) at a distance of 1 m from the source will be sufficient to ensure noise impacts at receptors are minimised sufficiently.

5.5.4 The results show that adopting these measures are likely to reduce noise levels at receptors such that adverse impacts are sufficiently minimised and significant adverse impacts are avoided.

6 UNCERTAINTY

6.1 Overview

6.1.1 This section discusses the limitations and potential sources of uncertainty within the assessment methodology. Limitations are discussed below for the baseline sound survey, acoustic modelling, and subsequent assessment.

6.2 Baseline Sound Survey

6.2.1 All sound surveys are limited by the instrumentation used to undertake the measurements. Uncertainty may arise as a result of the internal processes within the sound level meter to measure and process the measured sound into the relevant noise indices. The accuracy of the equipment used has been monitored via calibration both prior to and upon completion of the noise survey at each position. All sound level meters used meet the 'Class 1' criteria defined within BS EN 61672-2:2013+A1:2017 – 'Electroacoustics. Sound level meters – Pattern evaluation tests'. All calibrators used meet the 'Class 1' criteria defined within BS EN IEC 60942 – 'Electroacoustics sound calibrators'.

6.2.2 The variation in the local noise climate has been accounted for by undertaking long-term measurements over a period of 1-week. This allows for statistical analysis of any temporal variations in the noise climate to reduce uncertainty in the derivation of representative sound levels at receptors.

6.2.3 Any influence due to human error has been minimised by ensuring that all sound monitoring equipment is installed safely and securely. All measurements were undertaken at a minimum of 1.5 m above local ground level and 3.5 m from other reflective surfaces to minimise influence from reflected sound waves.

6.3 Acoustic Modelling & Calculations

6.3.1 Uncertainty and limitations arise during the modelling process as a result of the sound propagation models used to inform the calculations. The sound levels at the nearest receptors have been calculated using the internationally accepted guidance within ISO 9513-2:1996 which is implemented by the 3D acoustic modelling software (SoundPLAN) used to predict noise levels due to the Proposed Development. This standard claims an accuracy of ±3 dB for source heights up to 30 m and propagation distances between 100 m and 1 km.

6.3.2 The calculations have been undertaken using sound data and information provided by the client and RPS' experience with similar sites. As such, the data adopted as part of this assessment has been chosen to provide realistic noise emission levels.

7 CONCLUSIONS

7.1 The acoustics team at RPS Environment (RPS) has been instructed by Lightsource bp to undertake a noise impact assessment (NIA) to support a planning application for the construction of a solar photovoltaic electricity generating station with an installed generation capacity of approximately 57MW$_{AC}$, a Battery Energy Storage System ('BESS') and associated ancillary development.

7.2 An environmental sound survey has been undertaken at the site to quantify the existing noise climate and derive appropriate operational noise emission criteria in line with the requirements of WCBC.

7.3 An assessment of operational noise from the site has been undertaken by predicting and assessing noise emissions from the proposed equipment with reference to the guidance in BS 4142:2014+A1:2019. Mitigation measures have been included, where proposed as part of the design, to reduce adverse noise impacts at the nearest noise sensitive receptors.

7.4 It has been demonstrated that with the noise control measures outlined in this report in place, the Proposed Development is unlikely to give rise to significant adverse noise impacts with adverse impacts also sufficiently minimised at the nearest receptors and thus will not harm or disrupt the existing residential amenity.

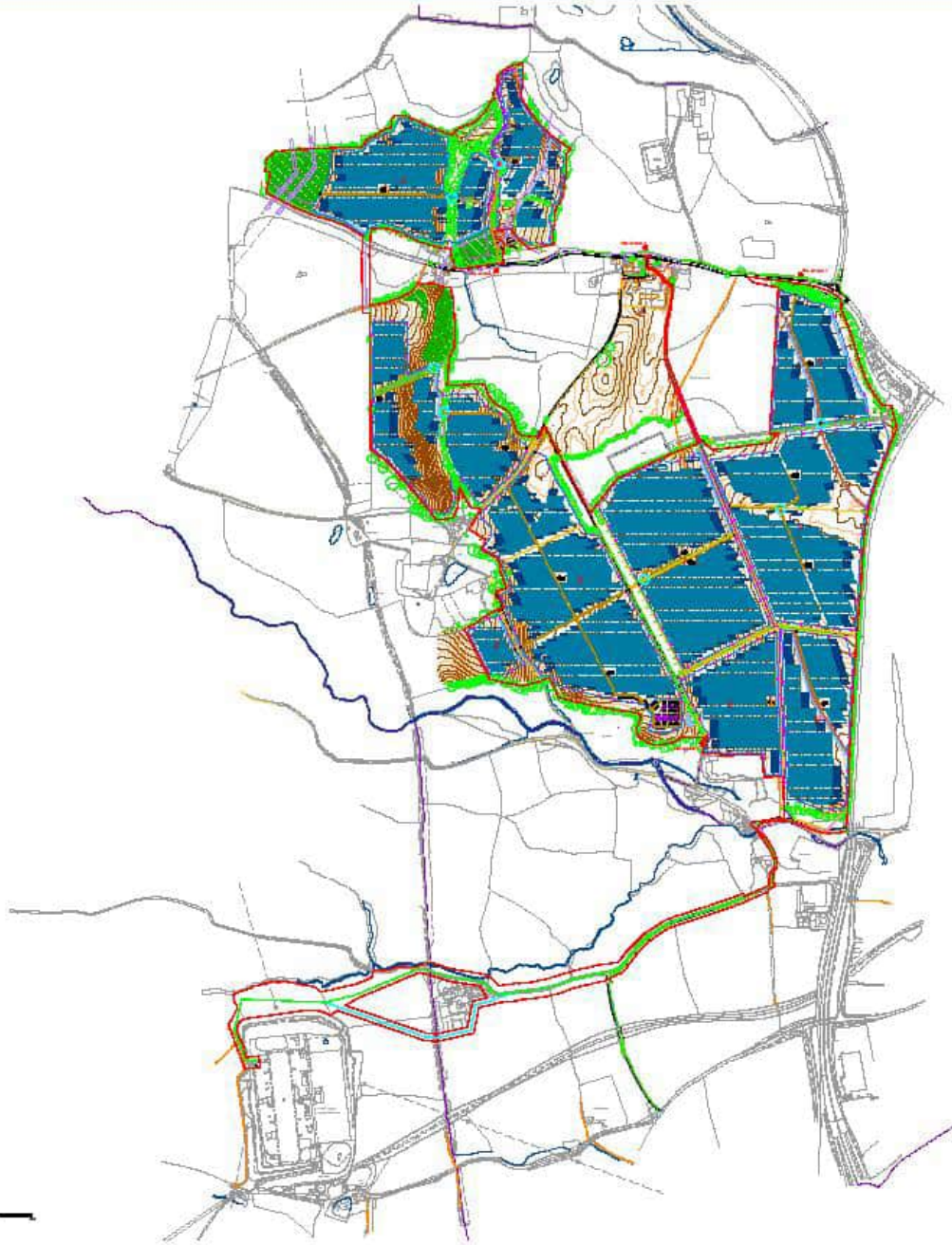
APPENDICES

Appendix A

Site Plan

GBR_Plas Power Solar & Battery Project_LP2 - Indicative Site layout_13

Area 1,355,959 m2 (335.06 acres)



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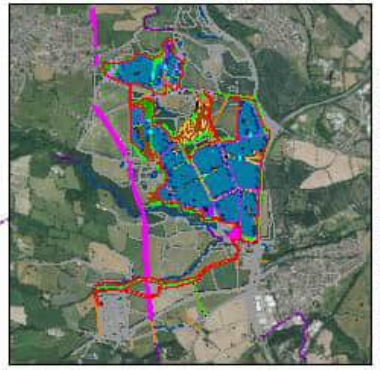

- Site Boundary
- Site Access
- Security Fence
- Module Table 30 x 2
- Module Table 15 x 2
- Transformer
- Switchgear Substation
- PV Intake Substation
- Customer Substation
- Access Road
- Access Gates
- CCTV
- BESS Enclosure x 4
- Twin MV Skid
- Backup Generator
- BESS Intake Substation
- BESS Security Fence
- Preferred Cable Route Option
- Cable Route
- Existing PRoW
- Proposed PRoW diversion
- Cable Sealing End

DA			13.02.2024
DRAWN	CHECKED	APPROVED	DATE

PROJECT NAME & ADDRESS:
Location: Plas Power Estate, Rhosrobin
Postcode: Caego, Wrexham, Wales

NOTES:
-
-
-
-

Paper Size:	Scale:	Sheet:
A3	1:12500	1

CAPACITY:

DRAWING TITLE:
GBR_Plas Power Solar & Battery Project_LP2 - Indicative Site Layout_13

DRAWING NUMBER:	STATUS:
LP2-PDL	Pre-application Consultation

lightsource bp

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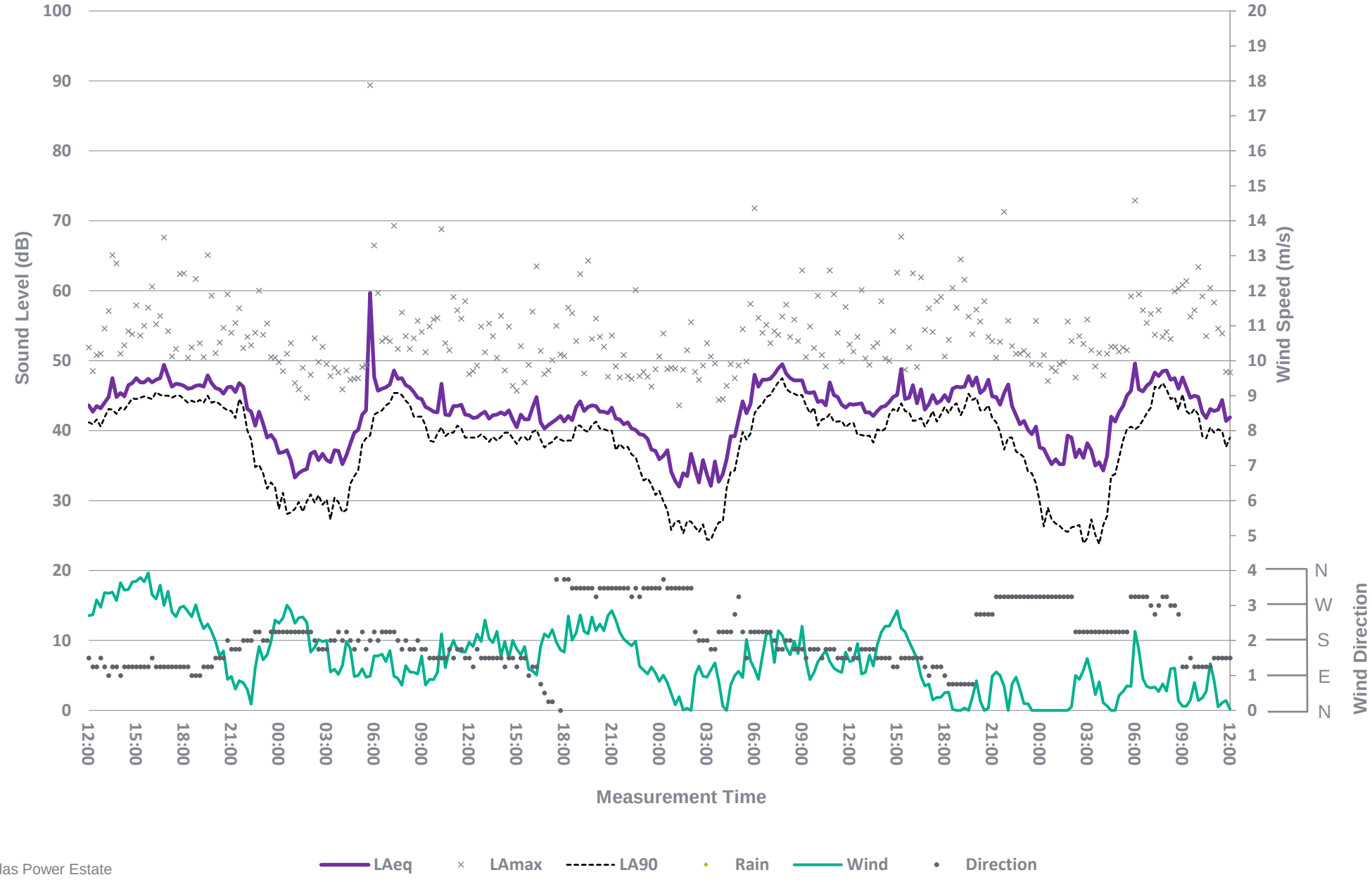
ISO full bleed A3 (420.00 x 297.00 MM)

Appendix B

Time History Graphs

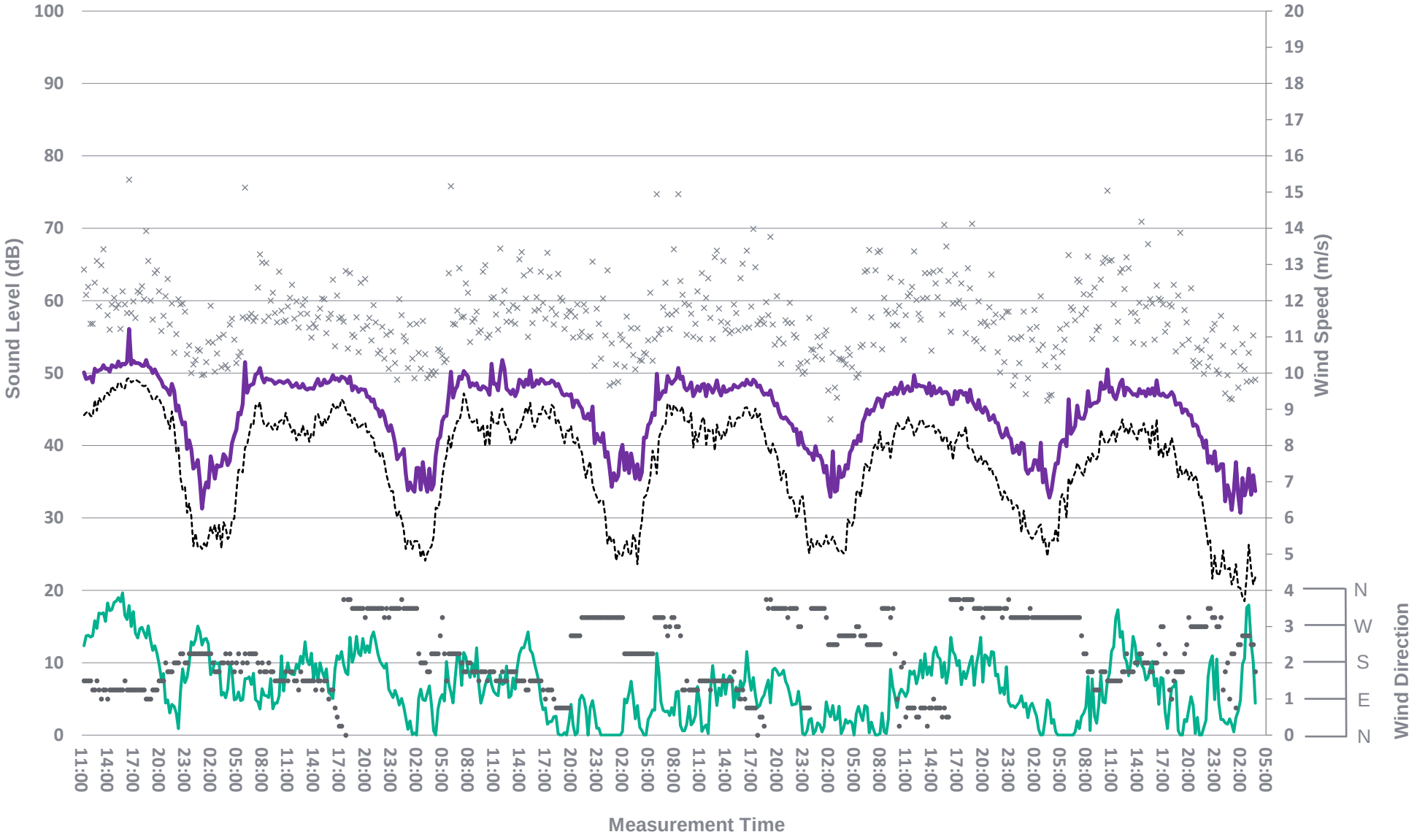
Appendix B1

Measured Noise Levels at LT1, 5 to 8 September 2023



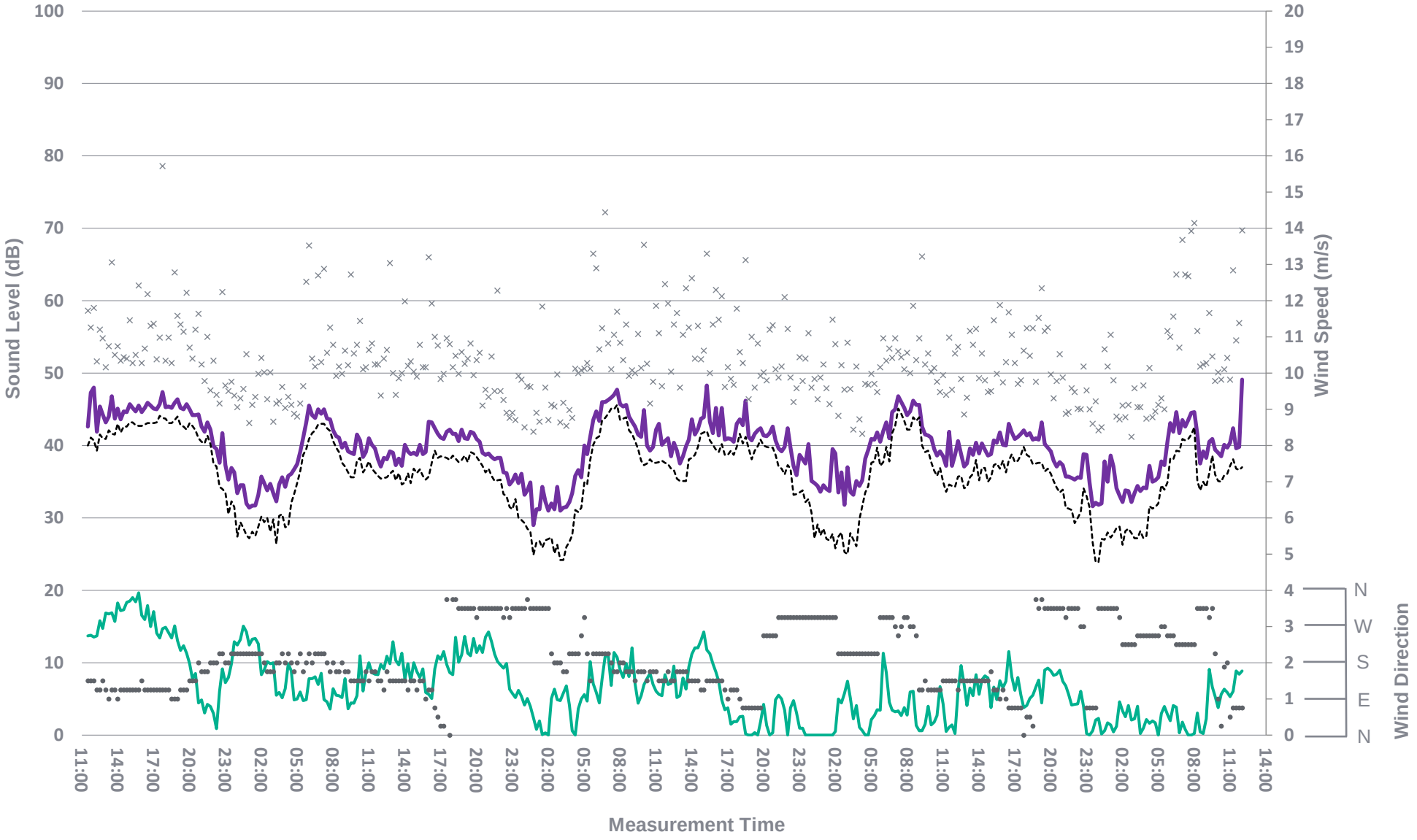
Appendix B2

Measured Noise Levels at LT2, 5 to 11 September 2023



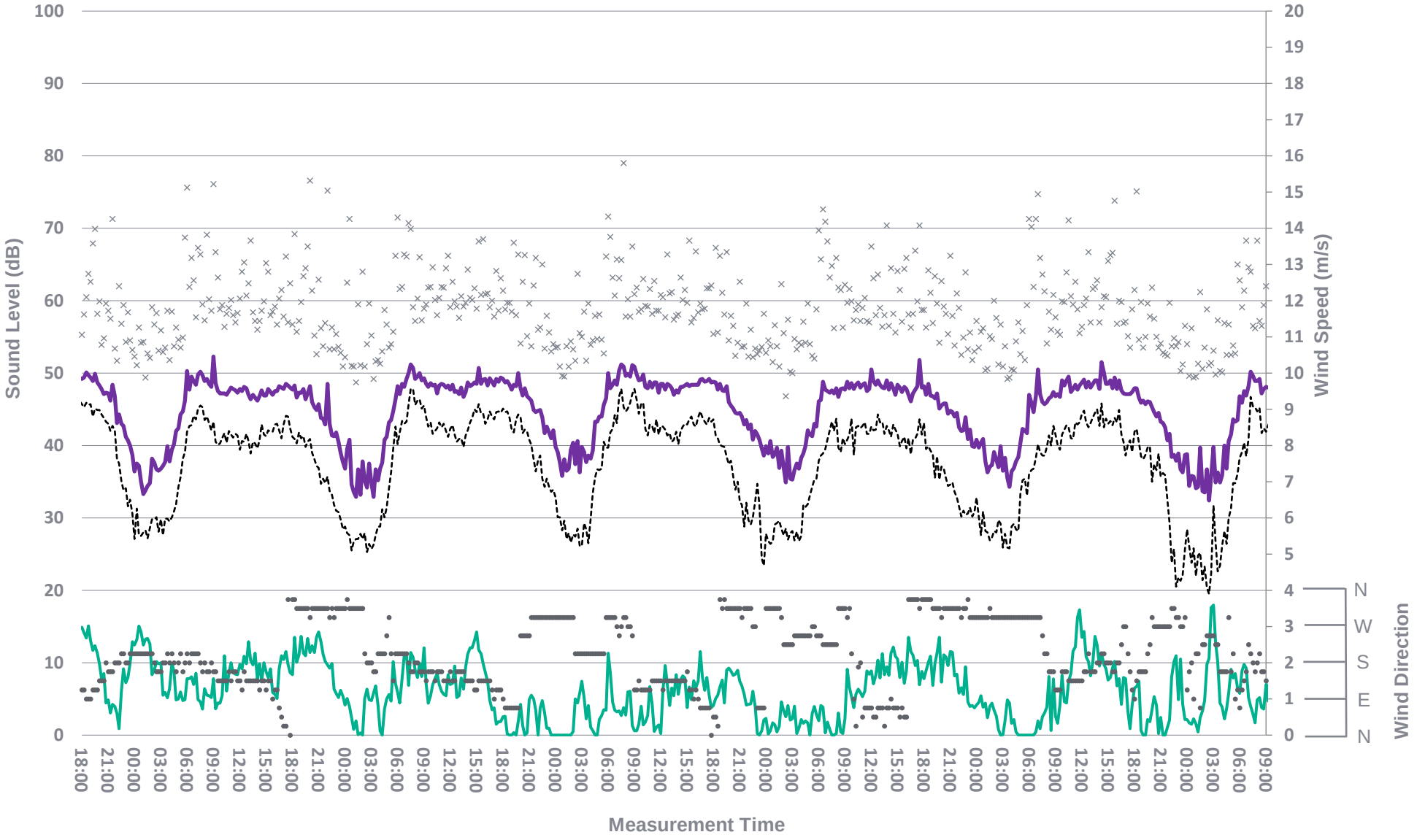
Appendix B3

Measured Noise Levels at LT3, 5 to 9 September 2023



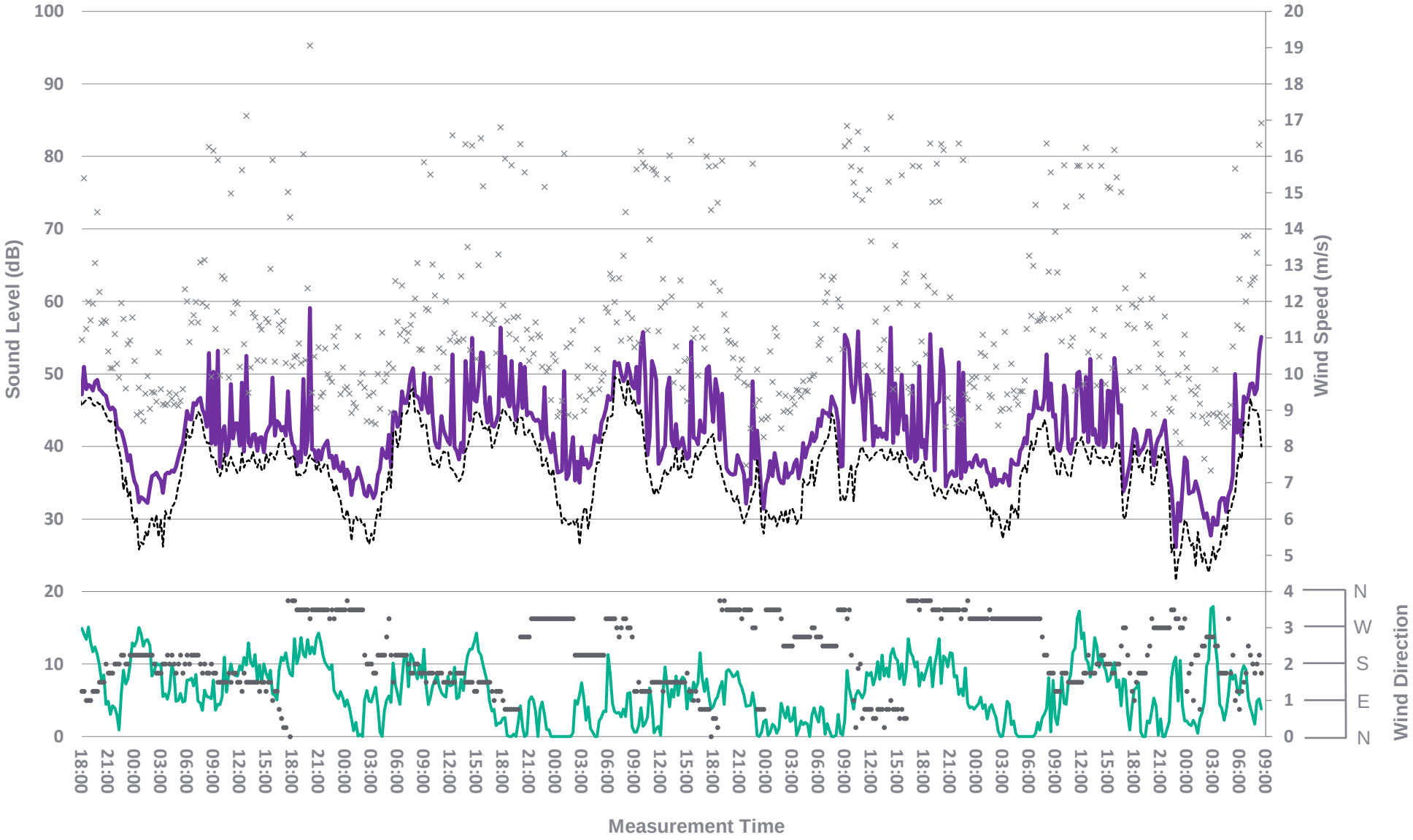
Appendix B4

Measured Noise Levels at LT4, 5 to 11 September 2023



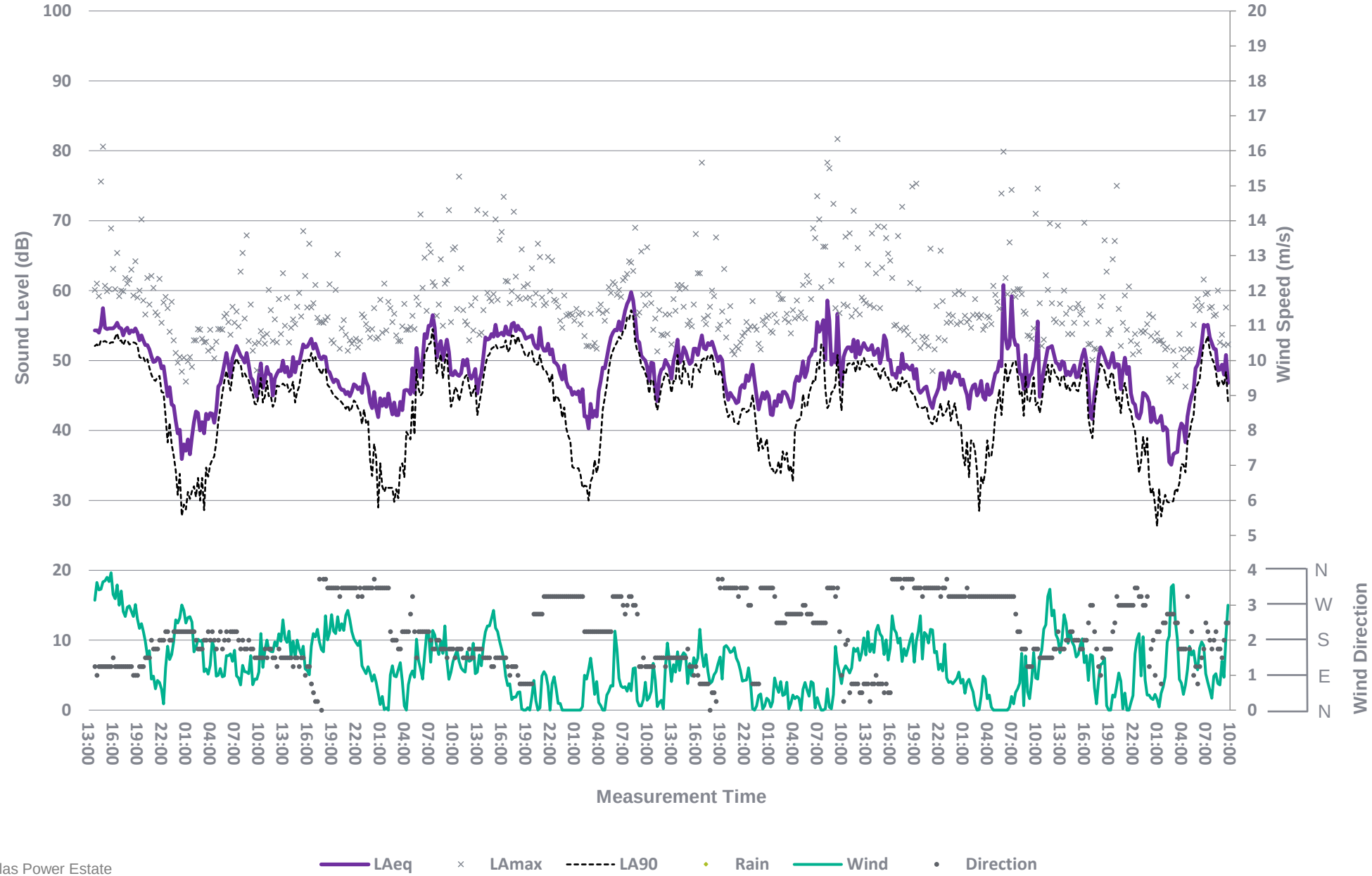
Appendix B5

Measured Noise Levels at LT5, 5 to 11 September 2023



Appendix B6

Measured Noise Levels at LT6, 5 to 11 September 2023



Appendix C

Acoustic Model Inputs

Plant	Sound Power Level (dB) at 1/3-Octave Centre Frequency (Hz)																								dB(A)
	50	63	80	100	125	160	200	250	315	400	500	630	800	1k	1.25k	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	
PV Inverter	83	82	84	85	84	84	85	83	86	89	85	83	83	83	81	79	77	75	75	71	67	71	63	60	**92**
PV MV Transformer	59	63	63	83	63	58	79	65	76	77	72	68	61	61	60	54	52	50	47	44	45	46	45	45	**77**
BESS Unit	71	65	62	69	68	64	69	75	72	71	73	69	65	67	63	64	62	60	59	59	55	62	49	47	**77**
PCS Inverter	94	90	94	94	96	91	93	90	86	85	84	80	79	80	79	77	75	73	71	69	68	67	65	64	**91**
PCS MV Transformer	86	85	84	83	84	85	89	90	85	80	81	79	78	78	77	76	75	73	73	72	72	70	67	65	**89**
Auxiliary Transformer	49	53	53	73	53	48	69	55	66	67	62	58	51	51	50	44	42	40	37	34	35	36	35	35	**67**

Appendix D

Statement of Expertise

Dr. Alex Stronach – Principal Consultant – Acoustics

BSc (Hons) Physics, Ph.D. Acoustics, PgDip, AMIOA

Alex is a Principal Consultant working within the RPS acoustics team. He joined the team in 2022, based out of the Manchester office. Alex has gained over 4 years' experience in consultancy following completion of his doctorate in Environmental Acoustics with a focus on outdoor sound propagation. He has a plethora of experience in areas of architectural and environmental acoustics over a wide range of sectors such as commercial, residential, and education. Furthermore, he is the topic lead for the noise and vibration chapters of Environmental Impact Assessments for nationally significant renewable energy infrastructure schemes including offshore wind and solar farms.

Alex has been involved BS 4142 noise assessments for both the previous and current 2014 version of BS 4142. He is familiar with the Standard and received training regarding the revised 2014 version of the Standard. On the basis of Alex's overall experience in acoustics, combined with particular focus on BS 4142, he is deemed competent for BS 4142 assessments.

Alex has taken on the role of Technical Lead for this project and has been responsible for producing the assessment and all deliverables.

Lee Whitehall – Senior Consultant – Acoustics

PGDip Acoustics and Noise Control, AMIOA

Lee is an Acoustic Consultant with seven years' experience. He has completed the IOA postgraduate diploma in Acoustics and Noise control in 2018 and has been an associate Member of the Institute of Acoustics since 2016.

Lee has project managed and undertaken noise assessments for a wide range of developments in the UK and internationally has been involved in the production and review of Noise Impact Assessments for 7 years.

He has been involved in the production of BS4142 assessments for the last seven years, using the current 2014 version of BS4142. He is familiar with the Standard and has received training on the previous iterations of BS4142. As such, he is considered competent for BS4142 assessments.

Lee has reviewed the assessment and report against the RPS quality assurance standards and provided technical input to the modelling, where sought.

Appendix 4.6

Desktop Survey and Preliminary Risk Assessment and Site Reconaissance (Part 1 of 4)

MAKING COMPLEX EASY

A TETRA TECH COMPANY

DESKTOP STUDY, PRELIMINARY RISK ASSESSMENT AND SITE RECONNAISSANCE

Plas Power Solar and Energy Storage Project

JER8537
Final
February 2024

rpsgroup.com

Document status

Version	Revision	Authored by	Reviewed by	Approved by	Review date
1	0	Lauren Davies	Gary Riches	Gary Riches	20 September 2023
1	1	Lauren Davies	Gary Riches	Gary Riches	7 November 2023
1	2	Lauren Davies	Gary Riches	Gary Riches	1 February 2024

Approval for issue

Gary Riches	Principal Geo-environmental Consultant	-	1 February 2024

File Name

Appendix 4.7 DTS and PRA - Final (Feb 2024).docx

Prepared by:

RPS

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Senior Geo-Environmental Consultant

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Prepared for:

Lightsource bp

EXECUTIVE SUMMARY

Section	Summary
Background	RPS Consulting Services Ltd (RPS) was commissioned by RPS Planning on behalf of Lightsource bp to undertake a Phase 1 Geo-Environmental Desk Study and Preliminary Environmental Risk Assessment of Plas Power Estate, either side of Ruthin Road, Wrexham (herein termed the Application Site and designated as Area 1 (northern land parcel) and Area 2 (southern land parcel). The report has been commissioned to support a planning application for the proposed temporary redevelopment of the site as a solar farm.
Site Details	**Site area**: Approx 145 ha. **National Grid Reference**: 330326 E, 350087 N **Current site use**: The site is currently used for agricultural purposes comprising several agricultural fields for pasture, mature woodland, trees, hedgerows and fencing. **Proposed site use**: The proposed development comprises a solar farm and associated ancillary development. **Surrounding land use**: The site is located in an area of mixed agricultural and residential usage.
Site Inspection	A site inspection undertaken on 21st April 2023 identified no current significant on-site contamination sources. There is evidence of localised areas of poor drainage in Area 1.
Site History	A review of historical maps indicates the Application Site has remained predominantly undeveloped until the 1960s when Area 2 was subject to opencast mine workings and subsequently restored to agricultural land on completion. Area 1 has remained comparatively unchanged throughout the dates of the maps inspected with no surface evidence of past mining activity. Off-site historical potential sources of contaminants of concern include a former railway line and legacy of historical mining activity.
Environmental Setting	The Application Site is indicated to be underlain by a Secondary A Aquifer relating to the Lower Pennine Coal Measures bedrock. The superficial deposits overlying the bedrock across the Application Site are designated as Secondary A (Glaciofluvial) and Secondary Undifferentiated (Glacial Till) Aquifers respectively. The Application Site is not indicated to be located in a groundwater Source Protection Zone (SPZ) and there are no sensitive groundwater abstractions in the vicinity of the Application Site. Other than minor ditches/drains in Area 2, the nearest surface water feature is the River Clywedog close to the southern boundary of Area 2.
Preliminary Risk Assessment	An outline conceptual site model (CSM) has been derived on the basis of the desktop study and site reconnaissance. The CSM indicates that the risk to human health and controlled waters based upon the proposed redevelopment is considered to be generally low with a moderate risk in Area 2. The latter risk dictated by the potential presence of ground and mine gases associated with the historical opencast workings having the potential to accumulate in proposed structures.
Conclusions and Recommendations	It is recommended that the potential for the identified pollutant linkages to be active is assessed through a Ground Investigation with geotechnical testing in order to facilitate preliminary foundation design. The investigation should be targeted to inform on: - Potential contamination sources associated with opencast backfill materials; - Potential ground gas/mine gas generation associated with the above; - Depth, extent and condition of former opencast workings. Initially, prior to any ground investigation a CMRA and mineral resource assessment is recommended to further inform on the opencast workings and if underground mining may also be a potential concern, and whether there are any potential issues with safeguarded minerals. If any visual or olfactory evidence of previously unidentified contamination is encountered during construction, works in the affected area will cease until further investigations are completed by a qualified consultant. Any necessary mitigation measures will then be put in place.

Contents

Tables

Figures

Drawings

Drawing 1 GBR_Plas Power Solar & Battery Project_LP2 – Indicative Site Layout_11

Appendices

1 INTRODUCTION

1.1 Preamble

1.1.1 RPS Consulting Services Ltd (RPS) was commissioned by RPS Planning on behalf of Lightsource bp to undertake a ground conditions Desk Top Study (DTS) and Preliminary Environmental Risk Assessment (PRA) of a proposed temporary solar farm development at Plas Power Estate, Ruthin Road, Wrexham LL11 3BS (the Application Site). The report has been commissioned to provide information in support of a planning application for a solar farm development as detailed in Section 2.2. An indicative site layout plan ref GBR_Plas Power Solar & Battery Project_LP2 - Indicative Site Layout _11 is presented as Drawing 1, and the site is herein referred to as the Application Site.

1.1.2 The Application Site covers approximately 145 hectares (ha) and is located wholly within the administrative boundary of Wrexham County Borough Council. The Application Site is approximately 2.5 km to the west of Wrexham town centre. The Application Site consists of two main areas, the smaller area on the north side of the A525 and the larger area to the south of the A525 and west of the A483. For the purpose of this report, the northern area is referred to as Area 1 and the larger southern area as Area 2. Area 2 also includes the proposed cable route in the south-west.

1.1.3 The DTS and PRA is based upon a review of published information available from local, regional and national agencies. The desk study information is derived from Envirocheck Reports provided by Landmark Information Group, Ref. 291151542_1_1, which is presented as Appendix C. Please note the terms and conditions attached to the supply of data from Landmark. It should also be noted that since procurement of the Envirocheck reports, the boundary of the Application Site has changed for Area 2 and Area 1 has been added to the extents of the Application Site.

1.1.4 It should be noted that a Coal Mining Risk Assessment was recommended following the completion of this DTS and PRA, and RPS was subsequently commissioned to complete a separate Coal Mining Risk Assessment (CMRA), which should be read in conjunction with this DTS and PRA report.

1.2 Objectives

1.2.1 The principal objectives of this assessment were as follows:

- To assess potential sources of contamination at the site, associated with historical and current land uses both on site and in the surrounding area;
- To review the environmental setting to assess the sensitivity of the surrounding area to contamination/pollution;
- To produce an outline Conceptual Site Model (CSM) detailing how any contamination may impact the identified receptors via pollutant linkages; and
- To conclude on the likely requirement for further assessment and investigation to support outline planning application.

1.2.2 The methodology followed to produce the DTS and PRA is detailed in Appendix A.

1.3 Legislation and Guidance

1.3.1 The assessment has been undertaken in general accordance with British Standard BS EN ISO 21365:2020 and is considered suitable to meet the initial requirements of planning as outlined within the Planning Policy Wales (2021). The assessment also reflects the recommendations of Environment Agency guidance, Land Contamination: Risk Management, (LCRM 2020).

1.3.2 This report has been produced in general accordance with:

- DEFRA Environmental Protection Act 1990: Part 2A - *Contaminated Land Statutory Guidance* (2012);
- Environment Agency (2020) Land Contamination: Risk Management (LCRM 2020);
- Planning Policy Wales (2021);
- CIRIA Document C665: *Assessing Risks Posed by Hazardous Ground Gases to Buildings*;
- British Standard requirements for the '*Investigation of potentially contaminated sites - Code of practice*' (ref. BS10175:2011+A2:2017);
- British Standard requirements for the '*Code of practice for ground investigations*' (ref. BS5930:2015+A1:2020); and,
- Welsh Local Government Association (WLGA) & Natural Resources Wales (NRW): Development of Land Affected by Contamination: A Guide for Developers (2017);

1.4 Limitations of Assessment

1.4.1 Due to the size of the Application Site, the site walkover undertaken has been limited to areas identified as potential contamination sources as identified from a review of current and historical mapping obtained from Landmark.

1.4.2 Details of other limitations of this type of assessment are described in Appendix F.

2 SITE RECONNAISSANCE AND DESK STUDY

2.1 Targeted Site Reconnaissance

2.1.1 This section of the report is based upon observations made during a site visit carried out on 21st April 2023. Selected photographs are presented in Appendix B. A summary of the observations are presented in Table 2-1 below.

The Site

Table 2-1 – Summary of on-site activities

Section	Description
Background:	The Ordnance Survey National Grid Reference (NGR) for the centre of the Application Site is approximately 330326 E, 350087 N. It is irregular in shape and occupies an area of approximately145 ha. The Application Site is at Plas Power Estate, south of Ruthin Road, and directly west of the A483, approximately 2.5 km west of Wrexham city centre (near postcode LL11 3BS). Access to Area 1 can be gained from Barn Hill Farm (Plate 13) and Area 2 from Home Farm (Plate 01).
Site Layout:	The Application Site currently comprises multiple fields. There was a floor slab remaining from former development in the east of Area 2 (Plate 09) and hardcore access roads/tracks in the south-east of Area 2 (Plate 06).
Activity / Operations:	Undeveloped agricultural land comprising open fields used for sheep grazing or pasture (Plates 07, 16, 18).
Building Structure(s):	No current structures on site however there is evidence of a concrete slab associated with a former building in the east of Area 2 (Plate 09).
Surface Cover:	Predominantly grassland/ploughed fields, there is some evidence of hardstanding (Plate 04) along the track leading into Area 2 from the farm south of the A525.
Drainage:	Evidence of a drainage system linked to an off-site rectangular pond feature was noted close to the eastern boundary of Area 2 (Plates 03 and 04). The pond feature is located within a copse of mature coniferous trees (Plate 05). Evidence of surface water field drainage was also noted in the south-east of Area 2 (Plate 07) and north-east of Area 2 (Plate 11). A pond was present in the centre of Area 2 (Plate 17).
Bulk Storage / Tanks:	None noted.
Waste:	Some localised evidence of fly-tipping along the western boundary of Area 2 (Plate 10).
Electricity Sub-Stations /Transformers:	None currently identified on-site.
Visual Evidence of Contamination:	No significant potential on-site contamination sources were identified, there are pylons in the north-east of Area 1 (Plate 19), which are likely to have localised areas of Made Ground associated with their construction. Evidence of a pet burial in the north-west of Area 2 (Plate 12).
Statutory Nuisance:	No reported evidence of statutory nuisance confirmed by the walkover survey.
Other non-Geo-Environmental Issues:	It was noted that there was an area of poorly drained waterlogged ground in the central southern area of Area 1 (Plate 15). Also observed was a borehole monitoring installation in the north-east of Area 2 indicative of former intrusive ground investigation on the Application Site (Plate 08).

The Surrounding Area

2.1.2 The site is located in an area of currently predominantly agricultural land use. At the time of the site inspection, neighbouring land consisted of the following, as presented in Table 2-2 below:

Table 2-2 – Neighbouring Land Uses

Direction	Description
North:	Area 1 - Fields, woodland, Adwy Grange and Higher Berse Road. Area 2 – A525, Home Farm, woodland (Cil Hendre).
East:	Area 1 – Agricultural land and covered reservoir. Area 2 – A483 (T).
South:	Area 1 – A525, Barn Hill Cottage (possible scrapyard noted – Plate 14), Barn Hill Farm (including Integrated Bulk Container (IBC) chemical storage – Plate 20) and Area 2. Area 2 – Woodland 'Big Wood', isolated properties and farm buildings.
West:	Area 1 – Fields beyond which are residential properties. Area 2 – Fields and grounds/buildings of Plas Power Park.

2.2 Proposed Development

2.2.1 The proposed development will consist of the construction of solar photovoltaic (PV) panels mounted on metal frames, new access tracks, underground cabling, perimeter fencing with Closed-circuit television (CCTV) cameras, switchgear substations, inverters, transformer stations, auxiliary transformers, permanent storage containers, monitoring houses, battery energy storage system (BESS) and all ancillary grid infrastructure and associated works. An indicative layout plan is provided as Drawing 1. This indicates that Area 1 will comprise two main areas of PV panels each with transformers, inverters and switchgear substation with access roads linking these features to the access point from the A425. Area 2 is identified as comprising eleven areas of PV panels, again each with transformers, inverters and switchgear substations. In the extreme south alongside Big Wood is a proposed maintenance area comprising a Distribution Network Operator (DNO) substation, monitoring house, switchgear substation, Glass Reinforced Plastic (GRP) cabinet, auxiliary transformer and storage facility. The BESS is to be located in the south of Area 2, close to a site access point.

2.2.2 The preferred method of foundation support and anchoring of the solar panels has not been confirmed however typically this is by the use of pre-formed small displacement steel sections driven into the ground at regular intervals along the length of panel frames.

2.2.3 The solar farm, battery storage facility, and associated infrastructure will connect to the northern side of the Legacy Substation located approximately 600 m to the south-west of the site, north of the B5246 Bronwylfa Road. The cable route is indicated to follow existing roads westwards from the southern extremity of Area 2 with options to divert to the north or south of Cadwgan Hall.

2.2.4 During construction and decommissioning temporary site compounds will be required to provide staff welfare facilities, take deliveries of components and store plant and equipment securely while not in use. The locations of compounds is currently unknown, however temporary construction access to Area 2 is shown on the north-eastern boundary.

2.3 Site History

Historical Map Review

2.3.1 The following review is based on past editions of readily available Ordnance Survey (OS) maps. These include scales of 1:1,250, 1:2,500, 1:10,560 and 1:10,000 dated 1872 to 2022. Extracts from selected historical maps are included in Appendix C and summary presented in Table 2-3 below.

2.3.2

Table 2-3 – Historical Site Uses

On-site Land Use and Features	Dates (From – To)
Area 1 – Agricultural land comprising open fields	1872 - 2022
Area 1 – Electricity pylons in west	1954 - 2022
Area 1 – Pond in south-east	1872 - 1963
Area 1 – Pond in east	1872 - 1993
Area 2 – Opencast coal mining	1962 - 1977
Area 2 - Fish pond (central part of site) - infilled	1872 – 1962
Area 2 – Boat House (central part of site)	1872 – 1962
Area 2 – Unidentified building in east (concrete slab noted in site inspection)	1976 - 1989
Area 2 – Small group of temporary buildings alongside track entering site from north-eastern boundary. Possibly evidence of wartime military usage or opencast mining related structures.	1954 - 1962
Area 2 – Agricultural land comprising open fields	1872 - 2022
Cable Route – Minor roads, Offa's Dyke and open fields	1872 - 2022

2.3.3 Potentially contaminative historical land uses identified within 250 m of the Application Site are listed in Table 2-4 below.

Table 2-4 – Historical Neighbouring Site Uses

Surrounding Land Uses (250 m radius)	Orientation	Distance	Dates	
			From	To
Railway Line (GWR Rhos Branch)	South of Area 2 and cable route,	150 m	1899	1976
Legacy Sub-Station	South-west of Area 2 linked to cable route on north side	0 m	1963	Present
Limekiln (disused by 1914)	North of cable route to west of Cadwgan Hall	10 m	1879	1963
Unidentified Tank close to Offa's Dyke	West of Area 2	120 m	1899	1938

2.3.4 It is noted that on early historical maps there are identified mine shafts, collieries and mineral railways (Legacy Colliery) within 500 m south of the proposed cable route, particularly concentrated close to the current Legacy sub-station.

Site Planning History

2.3.5 Relevant and readily available planning records for the site, as obtained from Wrexham County Borough Council planning website are summarised as follows:

- The Application Site itself does not appear to have any planning history relevant to the proposed development. The nearest recorded applications are two applications for barn conversions at Plas Power Home Farm close to the north of Area 2 dating from 2017.

2.3.6 Neither of the above planning permissions included planning conditions pertaining to the investigation of potentially contaminated land at the sites.

2.4 Previous Reports

2.4.1 RPS has not been provided with any previous ground investigation reports for the Application Site, however from the site observations made, it is evident that there has been recent borehole formation in the north-east of Area 2.

2.5 Environmental Setting

Geology

2.5.1 Based on British Geological Survey (BGS) mapping (1:50,000-scale) and the Environment Agency (EA) Groundwater Vulnerability mapping (1:100,000-scale), the stratigraphic sequence and aquifer classifications beneath the site are presented in Table 2-5:

Table 2-5 – Descriptions of Geological Strata

Strata	Description and Approximate Thickness	Aquifer Classification
Superficial Deposits		
Glacial Till – across most of Area 1 and Area 2	Typically comprises poorly sorted clay, silt, sand and gravel in a matrix of silt/clay or sand. From BGS records likely to be approximately 6 m in thickness across Area 1. Will have been excavated in Area 2 where there has been past opencast workings.	Secondary Undifferentiated Aquifer
Glaciofluvial Sheet Deposits – localised to the east of Area 1 and north-east and east of Area 2.	Typically comprises unconsolidated sand and gravel. Thickness indicated as being approximately 2.50 m in a BGS recorded borehole (SJ25SE/42) in Area 1.	Secondary A Aquifer
Bedrock Strata		
Pennine Lower Coal Measures Formation and Pennine Middle Coal Measures Formation (undifferentiated) – Across the central section of Area 1 and south and east of Area 2.	Indicated to comprise variably mudstone, siltstone and sandstone. A BGS borehole log (SJ35SW/46) located in Area 2 to the north-west of the rectangular pond indicates coal between 3.00 m and 4.60 m below ground level (BGL). The coal is described as '80 % coal and 20 % smooth mudstone'. Directly underlying the coal is noted to be sand to 7.60 m BGL comprising coarse grey sand with coal. RPS interpretation is likely to be a seatearth. Interbedded sequences of sandstone, siltstone and mudstone are identified beneath the coal and sandy coal beds with a deeper coal seam recorded at depth of in excess of 100 m BGL named as the Cefn seam. This borehole dates from 1979 and was sunk by the National Coal Board (now the Coal Authority) to prove coal measures.	Secondary A Aquifer
Cefn Rock Sandstone – western half of Area 1 only.	Massive, quartzose sandstone within Middle Coal Measures with subordinate and impersistent beds of mudstone and coal. Recorded as up to 37 m thick.	Secondary A Aquifer
Pennine Lower Coal Measures Formation and Pennine Middle Coal Measures Formation (undifferentiated) – Sandstone. This is identified across the south-east of Area 1 and north-west of Area 2.	Predominantly sandstone dominated strata. Thickness unknown.	Secondary A Aquifer

2.5.2 Made Ground is likely to be present across the eastern part of Area 2 as a result of the restoration of past opencast coal mining activities and forming part of the road construction followed by the proposed cable route. No site investigation reports have been reviewed to verify this.

2.5.3 Approximately 170 borehole records are indicated on BGS sources for Area 2. These are predominantly identified as being for Plas Power Opencast Site with boreholes ranging in depth from 7.60 m to 25.00 m. A single borehole identified as Pool Covert o/c site is located in the south-east of Area 2. All of these records bar one have an added note that they have been 'transferred to the Opencast Collection' and are not available for inspection. Where specified, the dates for these borings are indicated as 1945. The available borehole record referenced in Table 2-5 (SJ35SW/46) is included as Appendix D.

2.5.4 Three borehole records are identified on Area 1, two of which are identified for Plas Maelor and Higher Berse Opencast Sites dating from 1944 and 1950 and are 12 m and 17 m in depth. These records are not available for inspection. The available record, as referenced in Table 2-5 (SJ25SE/42) is included in Appendix D.

Hydrogeology

2.5.5 The site is located above Secondary A Aquifers relating to the bedrock and localised Glaciofluvial Sheet Deposits across both areas.

- Secondary A Aquifer: These formations are formed of permeable layers capable of supporting water supplies at a local scale, in some cases forming an important source of base flow to rivers.

2.5.6 The Glacial Till designation is Secondary Undifferentiated.

- Secondary Undifferentiated Aquifer: These formations have varying characteristics in different locations.

2.5.7 According to EA data, the Application Site is not located in a groundwater Source Protection Zone (SPZ).

2.5.8 Information provided by the EA indicates that there are no records of active licensed groundwater abstractions within 500 m of the Application Site.

Surface Water

2.5.9 There are two watercourses within 500 m of the Application Site which are classified within a River Basin Management Plan published by the EA under the European Water Framework Directive (2000). These are presented in Table 2-6 below:

Table 2-6 – Nearby Watercourses and Water Bodies

Watercourse / Body	Quality Classification	Approximate Distance and Direction from Site
River Clywedog – Conf. Black Bk. Erddig Pk-Conf.Trib	GQA River Quality – A (2000)	40 m south of Area 2
River Gwenfro – Hospital – Conf. Trib. Nr. South Sea	GQA River Quality – B (2000)	191 m north-east of Area 2

2.5.10 In addition to the above there are minor watercourses (drains/ditches) identified in the Envirocheck report in the north-east and south-east of Area 2 and on the southern boundary of Area 1 adjacent to the A525.

2.5.11 Information provided by the EA indicates that there are records of three active licensed surface water abstractions within 500 m of the site, all from the River Gwenfro or tributary of this river. The details of these are included in Table 2-7:

Table 2-7 – Licensed Surface Water Abstractions

Licence Holder/Licence Number	Use	Approx. Distance and Direction from Site
Mr N Morris 24/67/7/0135	General Agriculture: Spray Irrigation - Direct	106 m north-east of Area 2 (Lower Berse Farm)
Wrexham County Borough 24/67/7/0181	Water Supply Related: Effluent/Slurry Dilution	200 m north-east of Area 2
Mr N Morris 24/67/7/0135	General Agriculture: Spray Irrigation - Direct	249 m north-east of Area 2

2.5.12 According to the EA flood map the Application Site is not located within an area considered to be at risk from flooding or extreme flooding from rivers without defences (Zone 2 or Zone 3 flood risk area).

Ecologically Sensitive Sites

2.5.13 Natural Resources Wales (NRW) data indicates there are a number of ecologically sensitive sites, that constitute environmental receptors as defined within Table 1 of the DEFRA Environmental Protection Act 1990: Part 2A – Contaminated Land Statutory Guidance (2012), located within a 500 m radius of the Application Site. These are listed in Table 2-8 below.

Table 2-8 – Ecologically Sensitive Sites

Designation	Approx. Distance and Direction from Site	Details
Ancient Woodland		
Ancient and Semi-natural Woodland (locally designated)	Immediately south of Area 2	Big Wood
Ancient and Semi-natural Woodland (locally designated)	Immediately west of Area 2	Plas Power Park
Plantation on Ancient Woodland (locally designated)	Immediately north-east of Area 2	Plas Power Park
Restored Ancient Woodland Site (locally designated)	Immediately north of Area 2	Cil Hendre
Restored Ancient Woodland Site (locally designated)	10 m south of Area 2	Woodland alongside A525

Radon

2.5.14 According to the Indicative Atlas of Radon in England and Wales published by the Health Protection Agency (part of Public Health England) and the British Geological Survey, parts of the Application Site are located in an area at risk from radon gas.

2.5.15 It was indicated that in these areas, either basic or full radon protective measures are considered necessary in the construction of new dwellings or extensions based on the available information, however given the proposed development proposals it is not anticipated that radon ingress to buildings is a viable risk for the majority of the Application Site. Current development proposals show potential maintenance/storage buildings in the south of Area 2 close to Big Wood. This area is identified as a low to intermediate probability radon area where up to 5 % of properties exceed

the identified action level and basic radon protection measures would apply for new dwellings/extensions.

Coal Authority

2.5.16 The Coal Authority Interactive Map Viewer indicates that the whole of the Application Site is located in a coal mining reporting area with much of Area 2 located within a Development High Risk Area coinciding with identified surface mining (opencast mining records). Area 1 is not identified as a Development High Risk Area. An extract of the Coal Authority Map Viewer Plan is presented in Figure 1 below.

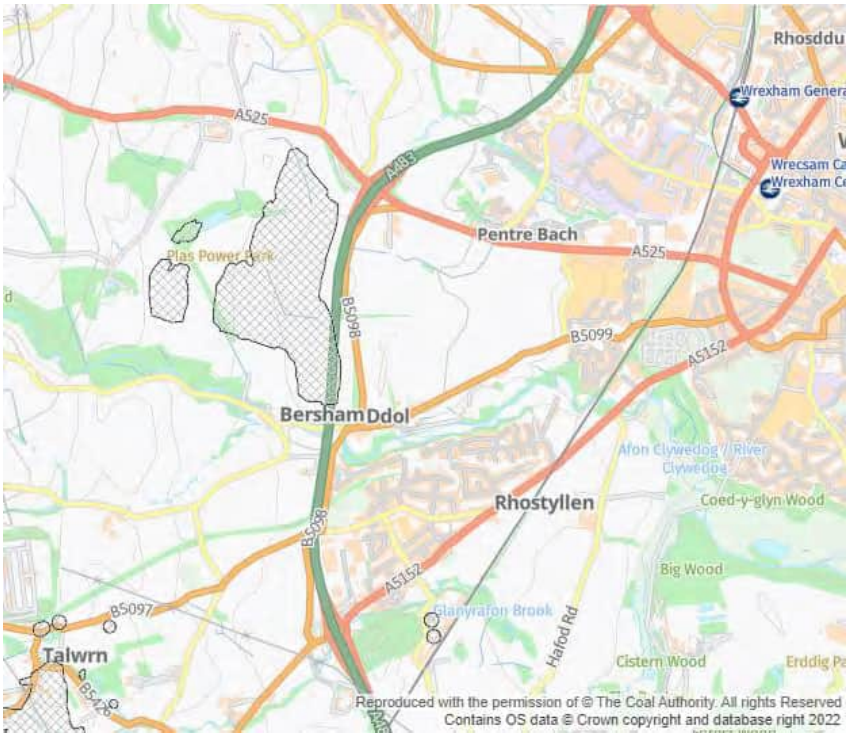


Figure 1 – Coal Mining Development High Risk Area

2.5.17 A CON29 Coal Authority Coal Mining report (ref. SO220192) including Area 2 was provided for review by the Client. A similar report (ref. GS-A99-WV6-FRZ-GSU) was later obtained for Area 1 by RPS. Both reports are included in Appendix E.

Area 1

2.5.18 The mining report obtained for Area 1 identifies that there are no recorded mine entries within 20 m of the boundary and this part of the Application Site is unaffected by any former opencast workings. The Application Site is not shown as having been affected by shallow coal mine workings however it is noted that it is within the potential zone of influence of recorded workings in 6 seams of coal worked at depths of between 35 m and 190 m prior to 1938. It is stated that any ground movement due to this coal mining activity should have stopped.

2.5.19 A claim was made for subsidence damages in 1995 for land approximately 18 m to the north-east. The claim was subsequently rejected.

2.5.20 There are no proposals for any future opencast or underground coal mining within this part of the Application Site.

Area 2

2.5.21 The mining report for Area 2 identifies no recorded former mine entries within the Application Site boundaries.

2.5.22 Area 2 is within the potential zone of influence of recorded workings in seven coal seams at depths between 35 m and 350 m below ground level, the last date of working is specified as 1972.

2.5.23 It is stated that there are records for past opencast workings on the Application Site undertaken prior to issue of licensing by the Coal Authority in 1994.

2.5.24 The report identifies that Area 2 is not within an area where there are any current proposals for any future underground or opencast mining.

2.5.25 The property lies within an area where a notice of entitlement to withdraw support has been published. Notices were issued in 1946, 1967, 1974 and 1976 respectively.

2.5.26 As the review of the standard CON29M mining reports has identified that there is a risk that former coal mining activities may have impacted on the ground stability of the Application Site, it is recommended that a detailed Coal Mining Risk Assessment (CMRA) is undertaken to further evaluate the level of risk presented to the proposed development.

Non-Coal Mining

2.5.27 The BGS have identified that the Application Site has a risk rating of highly unlikely to rare relating to non-coal mining risks.

BGS Ground Stability Hazard Ratings

2.5.28 British Geological Survey Ground Stability Hazard ratings for the Application Site are summarised in Table 2-9 below. The source data for this did not extend to Area 1 however given the shallow superficial deposits are indicated to be the same as those in Area 2, similar ground stability hazard ratings are expected.

Table 2-9 – BGS Ground Stability Hazard Ratings (Area 2)

Ground Stability Hazard	BGS Risk Rating (Highest)
Collapsible ground	Very Low
Compressible ground	Moderate
Ground dissolution	No Hazard
Landslide	Low
Running sand	Low
Shrinking or swelling clay	Very Low

2.6 Authorised Processes and Pollution Incidents

Landfills and Waste Sites

2.6.1 The Envirocheck Report indicates that there are no historical or current recorded landfill sites, waste transfer sites or licensed waste management sites within 250 m of the Application Site.

Environmental Permits

2.6.2 EA/NRW and Local Authority data indicates that there is one process regulated by an Environmental Permit (under the Environmental Permitting Regulations 2010) within 500 m of the Application Site. This is outlined in Table 2-10 below.

Table 2-10 – Environmental Permits

Licence Holder	Approx. Distance and Direction from Site	Permitted Activity
Pentrebychan Crematorium - Under Local Authority Pollution Prevention and Control (LAPPC) regs.	342 m south-east of Area 2.	PG5/2 Crematoria, permit ref. WCBC/PG5/2/PC(v3), dated 14th July 1993 - Local Authority Air Pollution Control.

COMAH Sites

2.6.3 There are no records of any operations under the Control of Major Accident Hazards (COMAH) Regulations 1999, located within 500 m of the Application Site.

Pollution Incidents

2.6.4 EA data indicates that there is one recorded 'major' or 'significant' pollution incident within 500 m of the Application Site. This is outlined in Table 2-11:

Table 2-11 – Pollution Incidents on site and significant incidents within 500 m

Location/Address	Approx. Distance and Direction from Site	Receiving Medium and Date	Severity of Incident and Type
Ponds - Southsea	410 m north-east of Area 1	-	Sewage - Significant

2.7 Unexploded Ordnance

2.7.1 CIRIA Report C681 (Stone et al (2009)) outlines recommendations for dealing with the potential risk associated with the legacy of Unexploded Ordnance Risk, largely relating to WWII bombing and military sites.

2.7.2 Reference to the Zetica Unexploded Bomb Risk mapping indicates that the site is in an area of low potential risk from Unexploded Ordnance. As the site is not within an area of known military history, in general accordance with CIRIA Report C681 no further consideration of Unexploded Ordnance is considered necessary.

3 OUTLINE CONCEPTUAL SITE MODEL

3.1 Background

3.1.1 An outline conceptual site model (CSM) consists of an appraisal of the *source-pathway-receptor* 'contaminant linkages' which is central to the approach used to determine the existence of 'contaminated land' according to the definition set out under Part 2A of the Environmental Protection Act 1990. For a risk to exist (under Part 2A), all three of the following components must be present to facilitate a potential 'pollutant linkage'.

- **Source** referring to the source of contamination (Hazard).
- **Pathway** for the contaminant to move/migrate to receptor(s).
- **Receptor** (Target) that could be affected by the contaminant(s).

3.1.2 Receptors include human beings, controlled waters and buildings / structures. The National Planning Policy Framework, used to address contaminated land through the planning process, follows the same principles as those set out under Part 2A.

3.1.3 As part of the assessment the potential risks to receptors for potential source is given one of the following classification:

- **Low risk** - it is considered unlikely that issues within the category will give rise to significant harm to identified receptors
- **Moderate risk** - it is possible, but not certain that issues within the category will give rise to significant harm to receptors
- **High risk** - there is a high potential that issues within the category will give rise to significant harm to identified receptors

3.2 Potential Pollutant Linkages

3.2.1 Each stage of the potential pollutant linkage sequence has been assessed individually on the basis of information obtained during the site reconnaissance and desk study exercise and are discussed in the following section.

Potential Contaminant Sources

On Site – Current

3.2.2 Radon can be a risk to human health from the inhalation of radioactive elements. The risk posed outside of buildings is however negligible.

3.2.3 Potential localised Made Ground associated with the installation of electricity pylons in west of Area 1.

On Site – Historical

3.2.4 Historical maps indicate few potentially contaminative historical land uses on site or in the immediate surrounding area. Those considered most significant are as follows;

- Area 2 - Mine workings – unknown backfill of opencast workings post abandonment, there is no evidence of refuse tips or landfill sites from historical maps or Local Authority records therefore it is assumed that workings were backfilled with natural overburden but use for disposal of waste materials cannot be entirely discounted. There is also the potential for toxic or explosive mine gases associated with opencast or underground mining.

- Area 2 - Fishpond and boathouse (presumed to have been cleared as part of the opencast workings) – also potentially backfilled with unknown materials. Comments regarding nature of backfill as above.
- Area 2 - 1950s unidentified former buildings in the north-east – There may be residual localised soil contamination associated with the construction and clearance of these structures in addition to remnant utility supplies or foundations. Demolition materials could include asbestos containing materials given the age of structures. The remnants of the easternmost building evident on Plate 09 are outside the extent of the proposed development and therefore unlikely to be disturbed. The group of small temporary structures shown on the 1950s mapping alongside a pathway in the north-east are within the area of identified opencast workings and therefore likely to have been demolished and cleared to allow excavation. This would indicate that there is a low risk presented by these sources.

Off-site – Current

3.2.5 Current off-site potential sources of contaminants of concern include;

- Legacy sub-station. Given the age of construction there is the possibility of residual Polychlorinated Biphenyl (PCB) contamination of soils and groundwater, however this is unlikely to represent a significant post construction risk to the cable route and therefore is discounted from further review.
- Farm fuel/chemical storage e.g. IBC storage at Barn Hill adjoining Area 1.

Off-Site – Historical

3.2.6 Historical maps indicate the following potential off-site historical contamination sources;

- Former branch railway south of the cable route and Area 2, possible source of deposited airborne particulate contaminants or minor oil spills.
- Former limekiln close to the western end of proposed cable route. This was disused by 1914 and no longer present by the 1960s and is unlikely to have any residual impact on the Application Site.
- Tank (unspecified) to west of Offa's Dyke. This feature was only present for a short period of time and was no longer present by 1938. With no evidence of surrounding structures that would indicate that it was used for fuel/oil storage and from the time elapsed since removal it is considered unlikely to be a viable source that could impact on the Application Site.

Potential Pathways

3.2.7 At the time of report completion RPS has been provided with an indicative layout of the proposed solar farm development. From the details shown, it includes a building that would be occupied by future site users (maintenance staff) identified as a monitoring house alongside the BESS in Area 2. This is less than 250 m from the nearest extent of the former opencast workings and may be occupied on a part time basis by future users. Substations and inverter substations are anticipated to be included as part of the development but are not expected to have occupancy. The potential for exposure to ground gases (including radon and mine gases) and volatile contaminants of concern via inhalation pathways in indoor areas cannot be discounted. On the assumption that there will be only short term outdoor exposure of maintenance workers to residual soils other human health exposure pathways are not considered viable.

3.2.8 Existing drainage patterns may be modified by the development and it is likely that there will be preferential drainage pathways for infiltration of rainfall runoff created by the placement of the solar panels.

Potential Receptors

Human Health

3.2.9 Potential post development human receptors include facility maintenance engineers. It is assumed that there will not be any full-time occupancy of the facility once construction is complete, however should this not be the case then this CSM should be reassessed accordingly. The rest of the Application Site is assumed to comprise associated infrastructure including substations and a monitoring house.

3.2.10 The assessment does not consider the risk to construction/demolition workers during redevelopment. These risks will be managed through appropriate Health and Safety (H&S) legislation including the H&S At Work Act (1974) and Construction Design and Management Regulations (2005).

3.2.11 The immediate surrounding area within 250 m of the Application Site is predominantly agricultural with low density housing. Off-site residents are not considered to be a sensitive receptor and have been discounted from further assessment.

Controlled Waters

3.2.12 The main groundwater receptor is considered to be the underlying bedrock aquifer or localised superficial deposits designated as Secondary A Aquifers, although given the absence of source protection zones or abstractions in the vicinity of the Application Site, this receptor is not considered to be highly sensitive. The anticipated absence of extensive Made Ground in areas not affected by opencast workings and the likely low permeability of the underlying superficial deposits indicate that the risk posed to the water quality of the bedrock aquifer as a result of the proposed development is likely to be low.

3.2.13 The nearest major surface water feature is River Clywedog close to the southern boundary of Area 2. Given the limited number of identified on-site potential contamination sources, generally low permeability of Glacial Till and anticipated perched nature of any shallow groundwater which is unlikely to be in hydraulic continuity with the river, the risk presented to surface water by the proposed development is considered to be low.

Sensitive Land Use

3.2.14 There are a number of designated Ancient Woodland sites bordering or in close proximity to Area 2 of the Application Site. The construction/operational phases of the proposed solar farm development are considered unlikely to adversely impact on these off-site receptors although any changes in long-term shallow drainage patterns from the installation of the banks of PV panels cannot be discounted.

3.3 Outline Conceptual Site Model

3.3.1 An outline CSM has been developed on the basis of the site reconnaissance and DTS and is presented in Table 3-1 below. The CSM is used to identify potential sources, pathways and receptors (i.e. potential pollutant linkages) on-site post development and is summarised in the table below. Should the development layout plan vary from that reviewed and included as a part of this PRA or should occupied structures be proposed then the Conceptual Site Model and derived risk ratings should be reviewed accordingly.

Table 3-1 – Outline Conceptual Site Model

Potential Source	Contaminants of Concern	Via	Potential Pathways	Linkage Potentially Active?	Receptors	Qualitative Risk Rating	Notes
On site – historical: Backfilled opencast workings, remnants of mining infrastructure, unidentified buildings. Off-site – historical: Former railway line.	Metals, hydrocarbons, solvents and asbestos from demolition or infill materials	Soil	Direct contact/ingestion	✓	Future site users	Low	Anticipated short-term exposure of maintenance workers to soils would indicate minimal risk
			Inhalation of volatiles	✓		Low	
			Airborne migration of soil or dust	✓		Low	
			Leaching of mobile contaminants	✓	Secondary A Aquifers	Low	Unlikely to be any significant change in current leaching potential
		Groundwater	Direct contact/ingestion	×	Future site users	N/A	Future maintenance activities are unlikely to involve contact with groundwater.
			Inhalation of volatiles	×	Future site users	N/A	
			Vertical and lateral migration in permeable strata	✓ ✓ ✓	Secondary Aquifers Surface watercourse Ecological receptors	Low Low Low	Creation of new pathways that could impact on bedrock aquifer, surface water or ecological receptors post construction unlikely
Off-site – current: Farms – chemical/fuel storage Off-site – historical: Former tank, limekiln.	Metals, hydrocarbons, solvents or other Volatile Organic Compounds (VOCs)	Groundwater	Direct contact/ingestion	×	Future site users	N/A	Groundwater is likely to be discontinuous in Glacial Till limiting potential for migration on site. Future maintenance activities are unlikely to involve contact with groundwater.
			Inhalation of volatiles	×	Future site users	N/A	
On and off-site natural strata, mine gas, Made Ground (opencast backfill)	Radon, carbon dioxide and methane	Ground Gas	Inhalation of ground gas/radon	✓	Future site users Future site Structures	Moderate	There are likely to be buildings associated with the BESS, albeit not occupied/used on a regular basis. Basic radon protection measures would apply for new dwellings/extensions in this area.
			Explosive risks				

Note × The Qualitative Risk Rating does not consider the potential for the pathway to be active. In the event that a Moderate or High Qualitative Risk Rating is identified further assessment is recommended.

3.3.2 Based on the identified potential sources and the site setting there is not considered to be a significant risk to archaeological receptors.

4 PRELIMINARY GEOTECHNICAL RISK REGISTER

4.1 Introduction

4.1.1 It is understood the proposed development is to comprise a temporary solar farm with associated infrastructure. The following section provides a preliminary assessment of potential geotechnical constraints appropriate to the installation of solar panels, concrete slabs for ancillary structures as detailed in 2.2.2. It should be emphasised that the comments listed below are based solely on the Desk Study data available. Intrusive ground investigation together with geotechnical testing will provide further confirmatory information on ground conditions and the significance of these potential constraints.

4.2 Preliminary Geotechnical Risk Register

4.2.1 Table 4-1 summarises the potential geotechnical hazards associated with the proposed development based on freely available published information. Preliminary information relating to the hazard and associated engineering considerations are provided.

Table 4-1 - Preliminary Geotechnical Risk Register

Hazard Description	Potential for Hazard	Comments / Possible Engineering Requirements
Sudden lateral / vertical changes in ground conditions	High	It is anticipated that there will be variable thickness of superficial cover across the Application Site which may be suitable for placement of anchoring systems for the photovoltaic panels, however, the extent and variability of composition of these deposits is unconfirmed from the Desk Study findings therefore intrusive investigation will be required to confirm a suitable depth for any foundations / anchoring systems for the panels and any ancillary structures. This will provide further information on the proportion of cobbles and boulders present within the Glacial Till that may deflect and deform driven piles and this is likely to vary laterally. There is also potential for shallow bedrock to be present, which may impede the ability to install driven/augered foundations or anchors in some areas of the Application Site. This is of particular concern within areas of former opencast workings which have since been backfilled and indicated to lie directly over bedrock. It is likely that the Glacial Till will also provide a suitable bearing stratum for shallow spread foundations supporting lightly loaded structures.
Highly compressible / low bearing capacity soils, (including peat and soft clay)	Moderate	Localised Made Ground associated with on-site development is anticipated although likely to be more extensive and thicker in areas of former opencast workings in the eastern half of Area 2. The thickness of superficial deposits across Area 2 could not be accurately determined by the Desk Study findings given the general absence of available borehole records, indicated to be up to 6.00 m in Area 1. BGS land instability risk ratings indicates a moderate hazard from compressible ground across the Application Site.
Ground dissolution features / natural cavities	N/A	Ground conditions beneath the Application Site are not consistent with these conditions.
Shrinking and swelling clays	Low	The BGS database indicate that there is a very low hazard potential from shrinking and swelling clays.
Slope stability issues	Low	Whilst no significant slopes are present on site, any temporary slopes created as part of the development should be subject to appropriate geotechnical design based on site-specific site investigation information.
High groundwater table (including waterlogged ground)	Moderate	Areas of the Application Site are indicated to have potential for 'groundwater flooding of property situated below ground level'. Shallow

Hazard Description	Potential for Hazard	Comments / Possible Engineering Requirements
		excavations may be unstable and excavation support as well as groundwater control measures may be required.
Filled and Made Ground (including embankments)	Moderate	There is evidence that a large part of the eastern half of Area 2 was subject to opencast workings that have subsequently been backfilled and restored. The composition and compaction of the fill materials is currently unknown. Poor compaction could present variable ground conditions and settlement and also affect resistance to lateral loads imposed by wind.
Obstructions (including foundations, services, basements, tunnels and adjacent sub-structures)	Moderate	Relic obstructions could be encountered from former opencast mining activities in Area 2, which may require removal to enable the construction of the proposed development. It is likely these obstructions, if encountered, may be removed using standard construction plant.
Underground mining	Low to High	Opencast workings have been identified across much of the east of Area 2 of the Application Site (High hazard potential). A number of coal seams have been identified by a historical BGS borehole in this area at shallow depth with recorded underground workings from 35 m BGL. The presence of unidentified shallow mine workings could also provide a constraint to development and identification and treatment required as necessary. No evidence of opencast or underground workings beneath Area 1 (Low hazard potential).
Concrete classification	Moderate	Any Made Ground present has the potential for low pH and / or the presence of sulphates that could impact on selection of concrete required for below ground structures. Site specific testing will be required to confirm this.

4.2.2 The potential risks are given one of the following classifications:

- **Low risk** - it is considered unlikely that issues within the category will give rise to significant damage in relation to the proposed development.
- **Moderate risk** - it is possible, but not certain that issues within the category will give rise to significant damage in relation to the proposed development.
- **High risk** - there is a high potential that issues within the category will give rise to significant damage in relation to the proposed development.
- **N/A -** The anticipated ground conditions are not consistent with this hazard.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

5.1.1 The outline CSM produced upon completion of the desk study assessment has identified a small number of potential pollutant linkages that may be active upon the redevelopment of the Application Site, primarily related to the backfilled opencast workings in Area 2.

5.1.2 The conceptual site model indicates that the risk to human health from non-inhalation pathways based upon proposed redevelopment is considered to be low in areas of soft landscaping, whilst mitigated in areas of buildings or hardstanding cover. If any visual or olfactory evidence of contamination is encountered during construction, works in the affected area should cease until further investigations are completed by a qualified consultant. Any necessary mitigation measures will then be put in place. The risk posed by ground gases associated with Made Ground and mine workings are considered to be moderate.

5.1.3 It is recommended that a ground investigation is undertaken in Area 2 of the Application Site to clarify the following potential geo-environmental and geotechnical issues:

- Potential contamination sources associated with opencast backfill materials;
- Potential ground gas/mine gas generation associated with the above;
- Depth, presence and condition of former opencast workings; and
- Provision of recommendations (where necessary) for remediation/mitigation measures to ensure that any identified potential pollutant linkages are not active upon redevelopment of the site.

5.1.4 At this stage, it is anticipated the above can be achieved via a number of boreholes across the Application Site with installations to establish the ground gas regime. It should be noted that any intrusive works that may disturb coal seams require prior authorisation and a license issued by the Coal Authority. It is often cost efficient to combine any site investigation undertaken for geo-environmental purposes with geotechnical testing, to facilitate preliminary foundation design. Use of dynamic sample boreholes to replicate driven pile supports would assist with future design of foundations for PV panels in this part of the Application Site.

5.2 Other Considerations

Coal Mining and Mineral Resource Assessments

5.2.1 A Coal Mining Risk Assessment (CMRA) is recommended to be undertaken to further define the risks from past opencast and potentially shallow coal mining at the Application Site. The proposed scope of recommended ground investigation listed above will be refined on completion of the CMRA.

5.2.2 The CMRA would also include a review of mineral resources identified by the Local Authority, and potential Mineral Safeguarding status of the Application Site.

REFERENCES

BGS. British Geological Survey Onshore GeoIndex. [online] Available at: http://www.bgs.ac.uk/geoindex/ [Accessed 19th April 2023].

Building Research Establishment (2008): Guidance for the Safe Development of Housing on Land Affected by Contamination. R&D Publication 66.

British Standards Institution (2019): Soil quality — Conceptual site models for potentially contaminated sites. BS EN ISO 21365:2019.

Environment Agency (2020): Land Contamination: Risk Management (LCRM 2020).

Landmark Information Group (2022): Envirocheck Report Ref 291151542_1_1.

National Resources Wales Map Viewer. Interactive Maps. [online] Available at: https://maps.cyfoethnaturiolcymru.gov.uk/ [Accessed 10th May 2023].

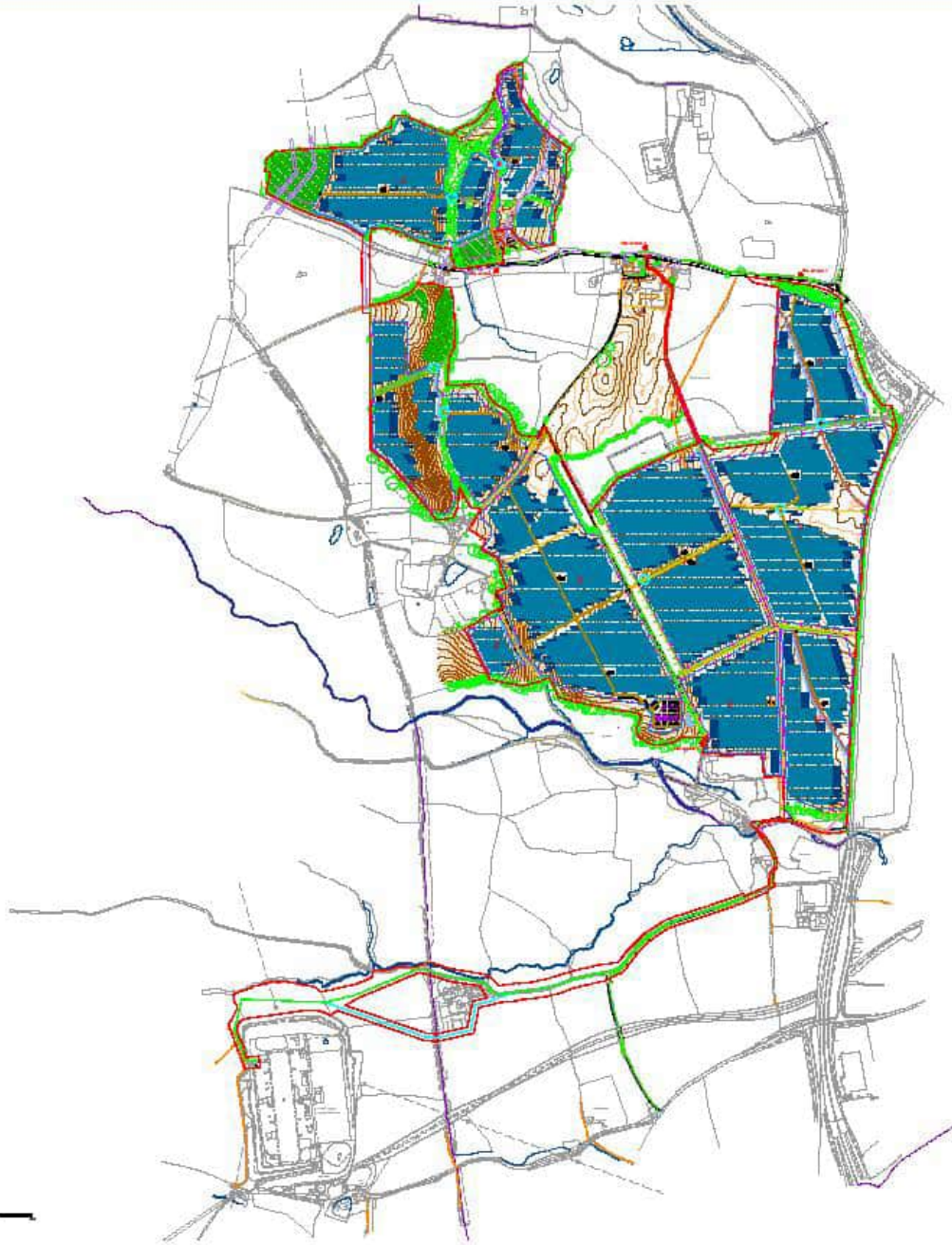
https://zeticauxo.com/downloads-and-resources/risk-maps/

DRAWINGS

Drawing 1 GBR_Plas Power Solar & Battery Project_LP2 – Indicative Site Layout_12

GBR_Plas Power Solar & Battery Project_LP2 - Indicative Site layout_13

Area 1,355,959 m2 (335.06 acres)



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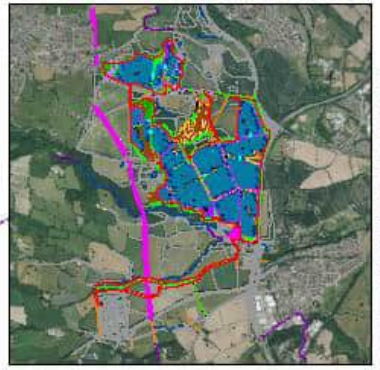


- Site Boundary
- Site Access
- Security Fence
- Module Table 30 x 2
- Module Table 15 x 2
- Transformer
- Switchgear Substation
- PV Intake Substation
- Customer Substation
- Access Road
- Access Gates
- CCTV
- BESS Enclosure x 4
- Twin MV Skid
- Backup Generator
- BESS Intake Substation
- BESS Security Fence
- Preferred Cable Route Option
- Cable Route
- Existing PRoW
- Proposed PRoW diversion
- Cable Sealing End

DA			13.02.2024
DRAWN	CHECKED	APPROVED	DATE

PROJECT NAME & ADDRESS:
Location: Plas Power Estate, Rhosrobin
Postcode: Caego, Wrexham, Wales

NOTES:
-
-
-
-

Paper Size:	Scale:	Sheet:
A3	1:12500	1

CAPACITY:

DRAWING TITLE:
GBR_Plas Power Solar & Battery Project_LP2 - Indicative Site Layout_13

DRAWING NUMBER:	STATUS:
LP2-PDL	Pre-application Consultation

lightsource bp

Lightsource Renewable Development Limited,
7th Floor, 33 Holborn, London, EC1N 2HU
General: +44 (0) 333 200 0755
Web: www.lightsourcebp.com
info@lightsourcebp.com

ISO full bleed A3 (420.00 x 297.00 MM)

Appendix A
PRA METHODOLOGY

PRA METHODOLOGY

INTRODUCTION

This report provides available factual data for the site obtained only from the sources described below and related to the site on the basis of the location provided by the client. The desk study information is not necessarily exhaustive and further information relevant to the site may be available from other sources. No responsibility can be accepted by RPS for inaccuracies in the data supplied by any other party.

This report is written in the context of an agreed scope of work and should not be used in a different context. Furthermore, new information and changes in legislation may necessitate a re-interpretation of the report in whole or in part after its original submission. The report is provided for sole use by the client and is confidential to them and their professional advisors. No reliance whatsoever is provided to any party other than the client unless otherwise agreed.

INFORMATION SOURCES

Current and Historical Land Use

This section establishes the former and current uses of the site, which could have caused contamination. Details of the site location, the current and proposed site uses have been provided by the client.

Information about the history of the site has been obtained through an inspection of historical maps at 1:10,000, 1:2,500 and 1:1,250 scales and historical aerial photographs (where available). The accuracy of maps cannot be guaranteed, and it should be recognised that different conditions on-site may have existed between, and subsequent to, the map survey dates.

Regulatory Records

Regulatory records including landfills, pollution incidents ('major' and 'significant' only), industry authorisations and licensed water abstractions are derived from information purchased from Landmark Ltd (unless otherwise specified).

Environmental Setting

The geological sequence underlying the site and the approximate depths of strata are provided by maps published by the British Geological Survey (BGS) 1:50,000 scale and available borehole records held by the BGS.

The hydrogeological classification is obtained from Groundwater Vulnerability mapping by National Resources Wales (NRW). The vulnerability of groundwater is determined from this mapping and geological information.

The location of surface watercourses is obtained from an inspection of current OS maps. Flood risk details and information on groundwater Source Protection Zones are obtained from readily available NRW information published on-line and supplied by Landmark Ltd.

Details of sensitive ecosystems/habitats and coal mining areas are supplied by NRW and the Coal Authority respectively via Landmark Ltd and inspection of NRW interactive mapping and the MAGIC website.

Radon is a radioactive gas produced naturally by certain types of geology. This report uses the Indicative Atlas of Radon in England and Wales (2007) produced by the Health Protection Agency (HPA) and the British Geological Survey (BGS) to determine whether the site is located in an area at risk from radon gas. Where

potential issues are identified, a site-specific radon report is obtained from the HPA and BGS to provide a more accurate estimate of the probability of the site being affected by radon gas ingress.

Appendix B
SITE WALKOVER PHOTOS

Plate 01: Southern parcel – Access track from estate to the south of A525

Plate 02: Southern parcel – Drainage channel from off site pond

Plate 03: Southern parcel – Off site pond

Plate 04: Southern parcel –Evidence of hardstanding along track

Plate 05: Southern parcel – Mature treeline in the centre of the site

Plate 06: Southern parcel – Access tracks meeting in the south-east

Plate 07: Southern parcel – Drainage channel within the south-eastern field

Plate 08: Southern parcel – Borehole monitoring standpipe in the north-east

Plate 09: Southern parcel – Foundations of former building in the east of site

Plate 10: Southern parcel – Evidence of fly-tipping along western site boundary

Plate 11: Southern parcel – Drainage channel and shrubbery in the north-east

Plate 12: Southern parcel – Pet grave in the north-west

Plate 13: Northern parcel – Access to the north off A525

Plate 14: Northern parcel – View of A525 and scrapyard area offsite to the south

Plate 15: Northern parcel – Waterlogged ground in the south of the site

Plate 16: Northern parcel – View from mature treeline in the centre of the site looking east

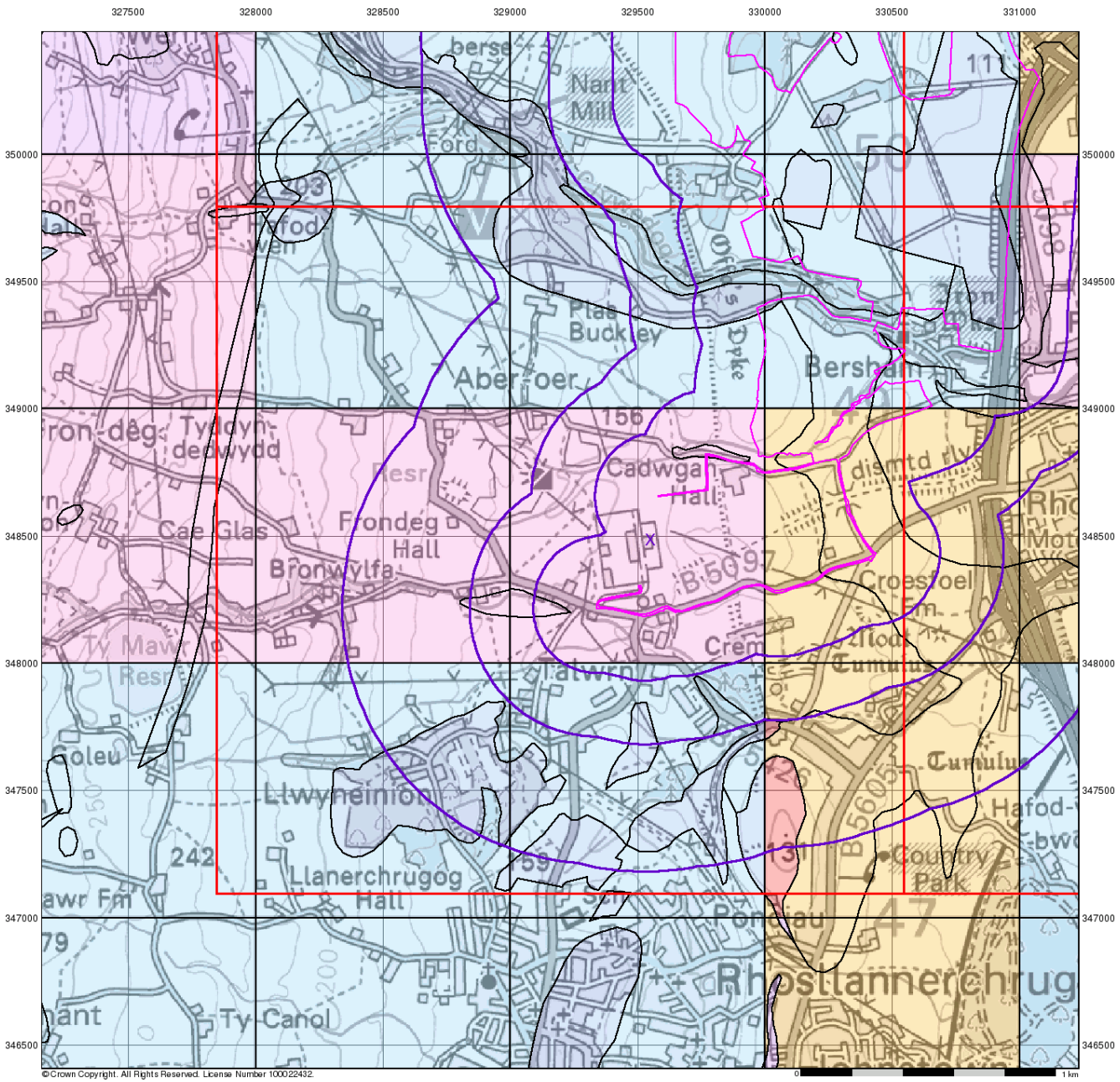
Plate 17: Northern parcel – Pond in the centre of site

Plate 18: Northern parcel – Field in the south-east corner of site

Plate 19: Northern parcel – Overhead pylons in the north-east

Plate 20: Northern parcel – Off site Manganese storage tanks

Appendix C
ENVIROCHECK DATA REPORTS AND HISTORICAL MAPS



Groundwater Vulnerability

General

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

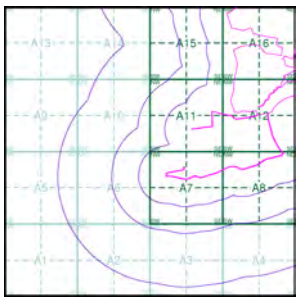
Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

Site Sensitivity Context Map - Slice A



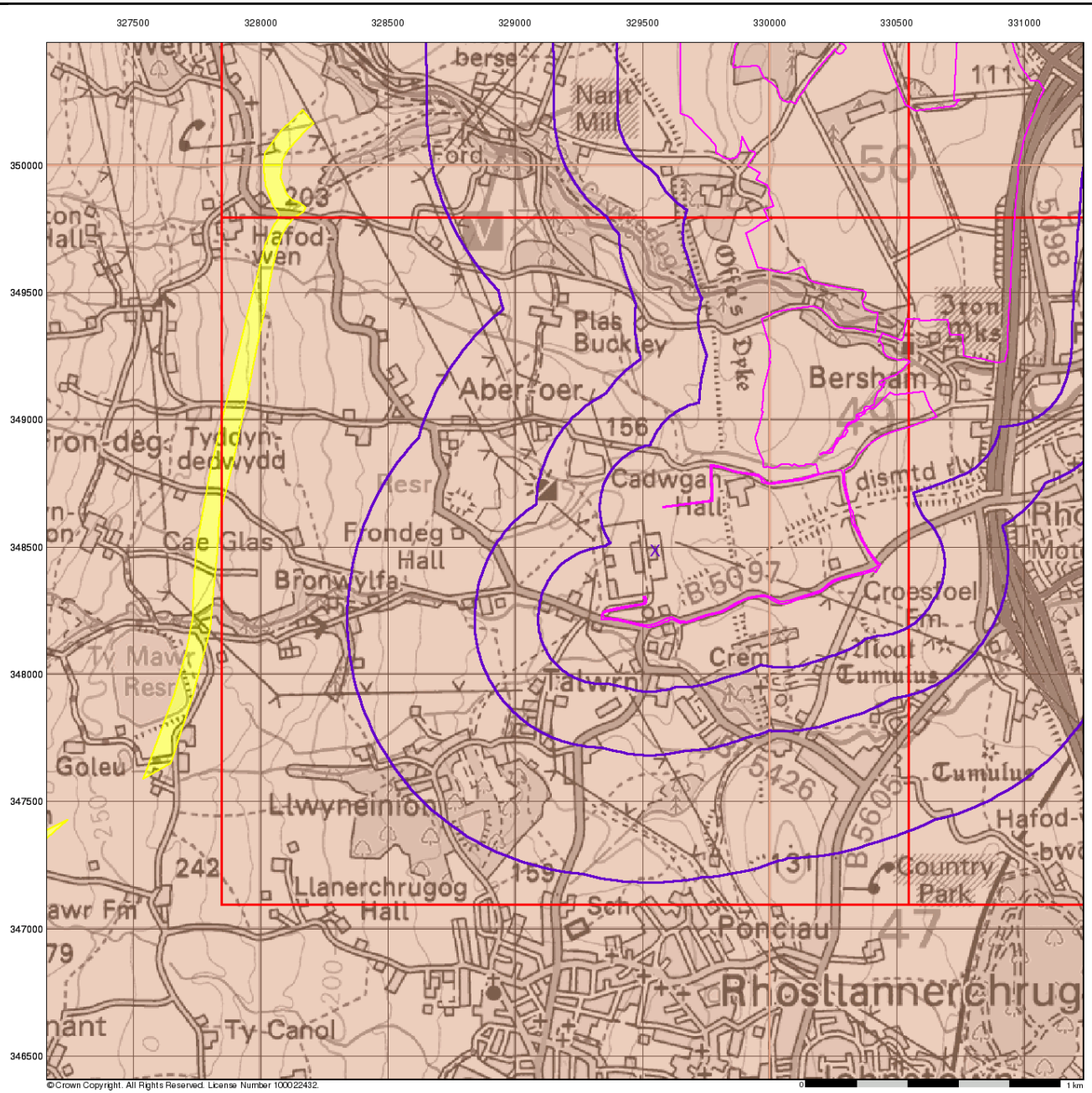
Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	1000

Site Details

Site at 330330, 350090

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



Bedrock Aquifer Designation

General

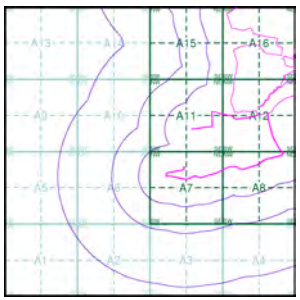
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



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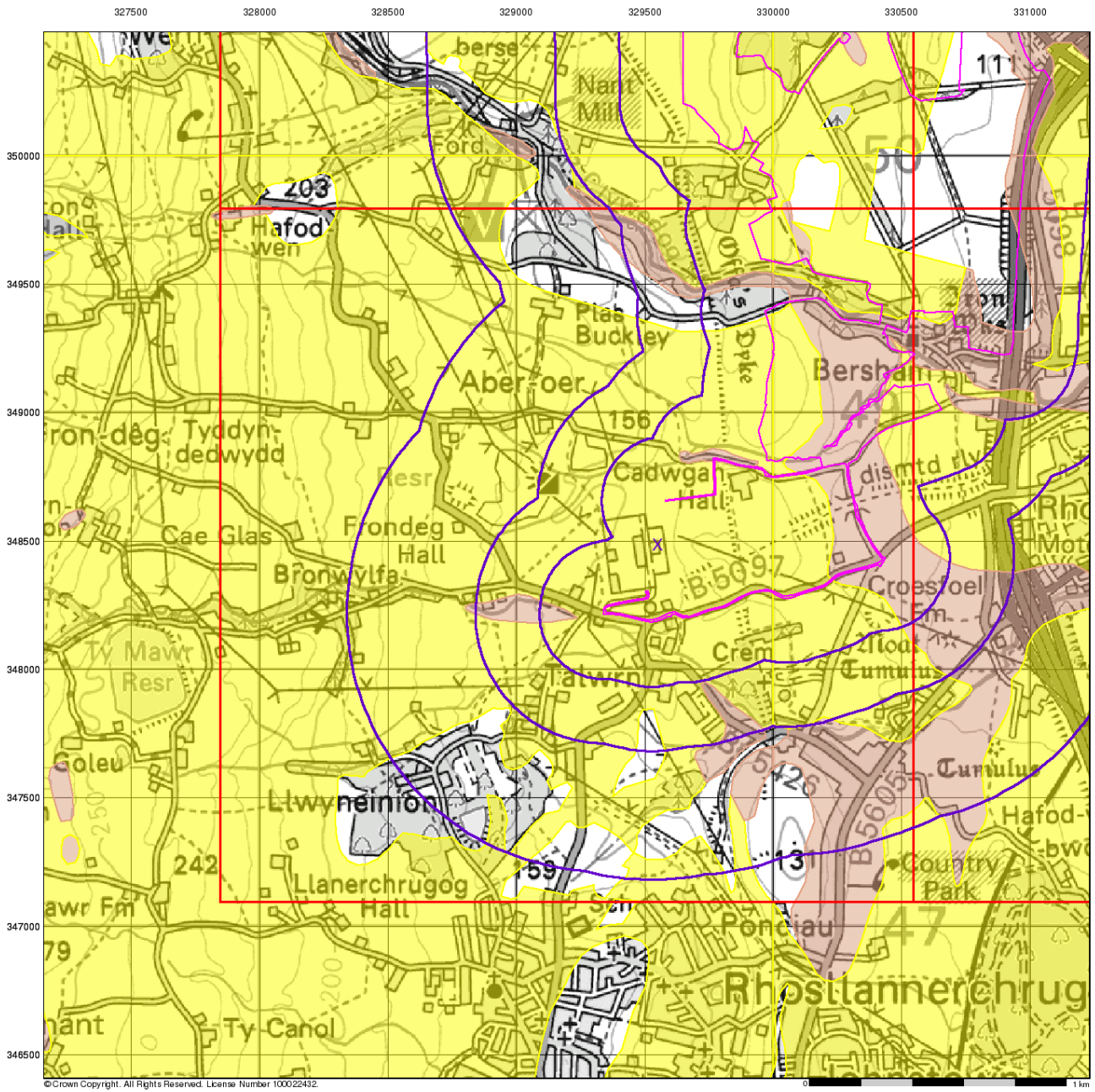
Web: www.envirocheck.co.uk



Superficial Aquifer Designation

General

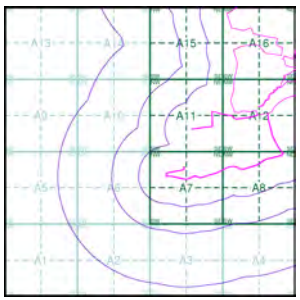
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

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



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National Grid Reference:	329550, 348490
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Site Area (Ha):	145.64
Search Buffer (m):	1000

Site Details

Site at 330330, 350090

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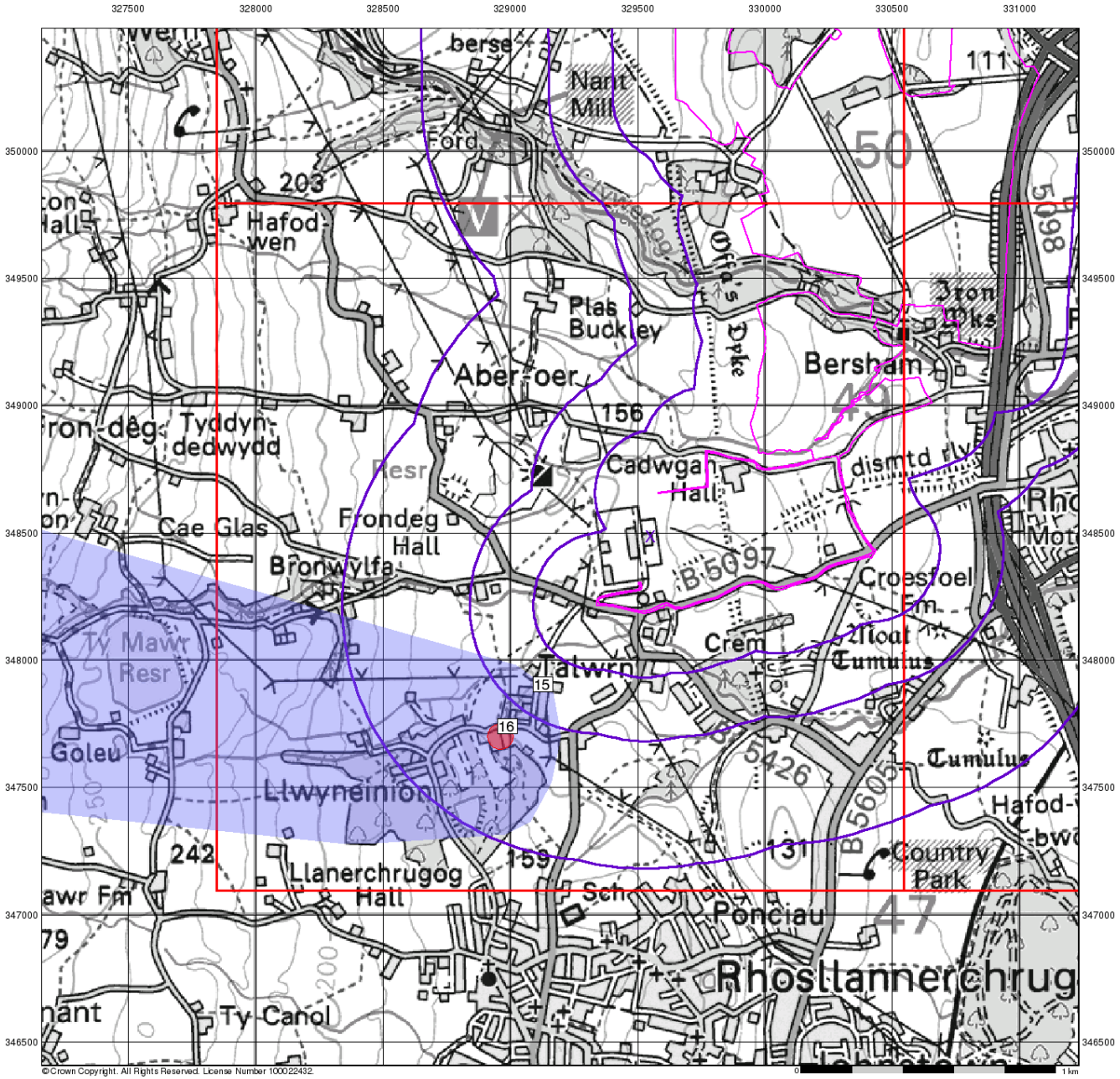


Source Protection Zones

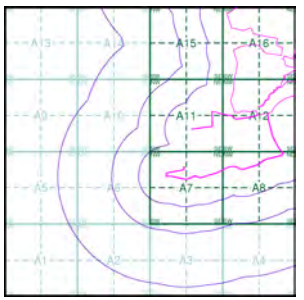
General

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



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National Grid Reference:	329550, 348490
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Site Area (Ha):	145.64
Search Buffer (m):	1000

Site Details

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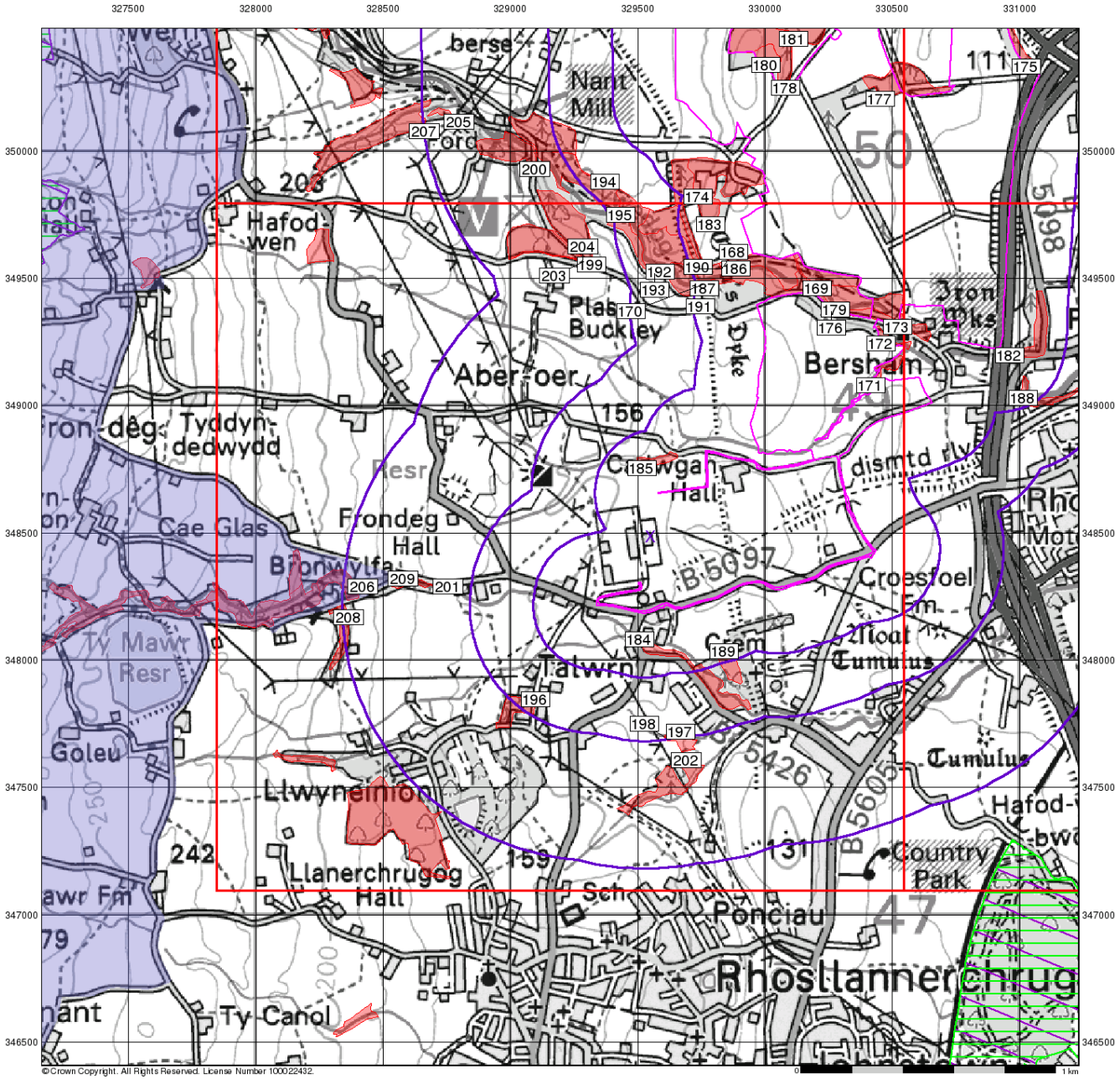


Sensitive Land Uses

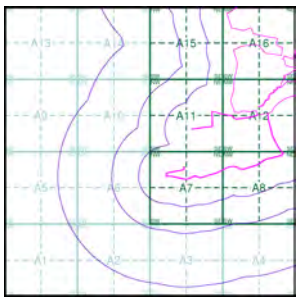
General

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

Sensitive Land Uses

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

Site Sensitivity Context Map - Slice A



Order Details

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Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	1000

Site Details

Site at 330330, 350090

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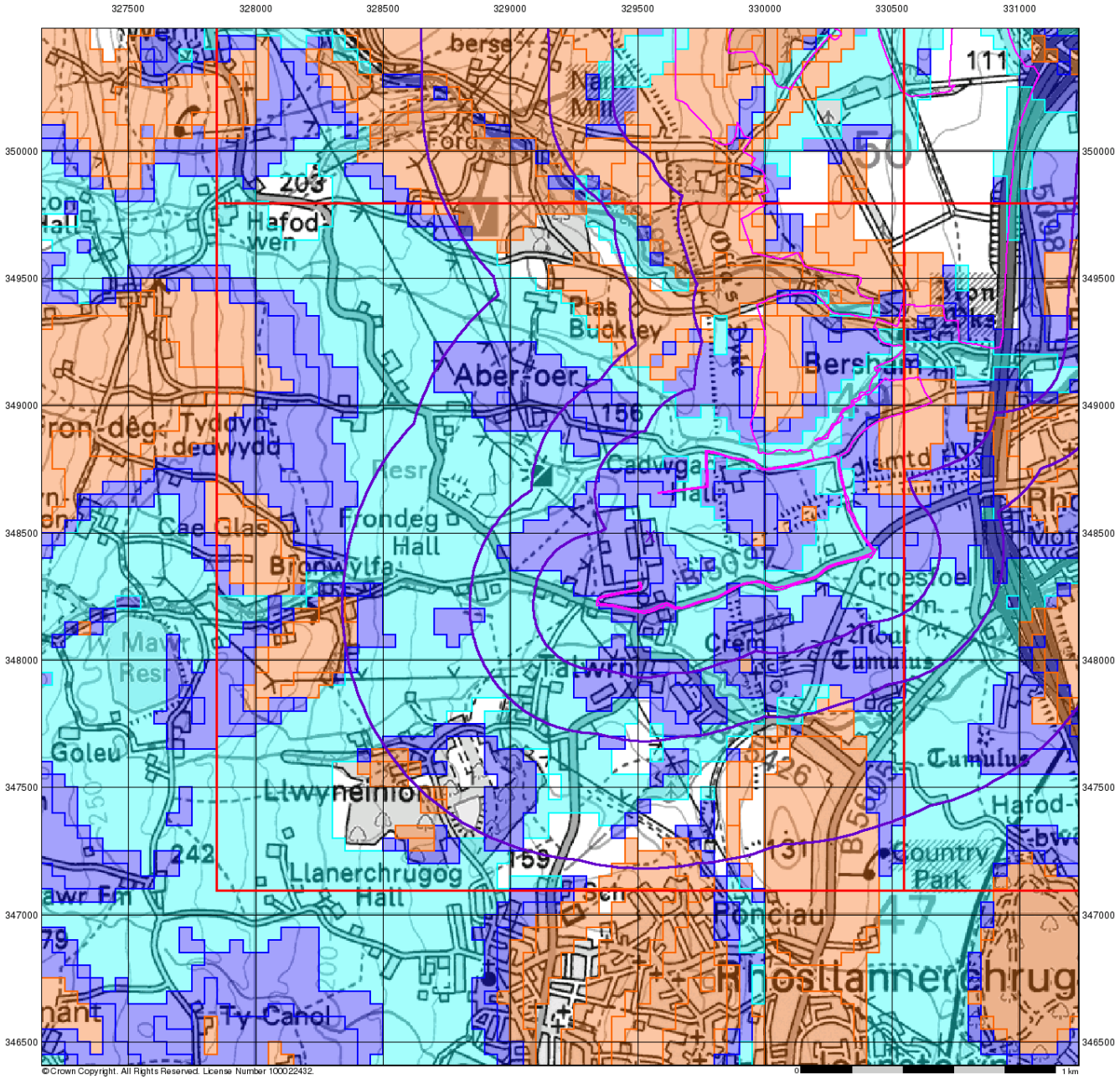


BGS Flood GFS Data

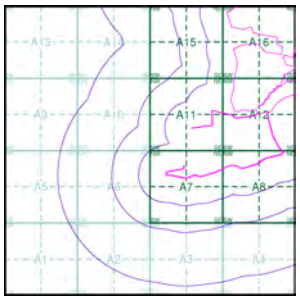
General

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



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Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	1000

Site Details

Site at 330330, 350090

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

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
291151542_1_1

Customer Reference:
JER8537

National Grid Reference:
329550, 348490

Slice:
A

Site Area (Ha):
145.64

Search Buffer (m):
1000

Site Details:

Site at 330330, 350090

Client Details:

Mr G Chapman
RPS Consulting Services Ltd
260 Park Avenue
Aztec West
Almondsbury
Bristol
BS32 4SY

Contents

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.

Report Version v53.0

Summary

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 10		13		2
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 13			1	
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 13	Yes			
Pollution Incidents to Controlled Waters	pg 13			1	2
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 14	1			
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 14				2
Water Abstractions	pg 14				2 (*2)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 15	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 21	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 22	Yes	n/a	n/a	n/a
Source Protection Zones	pg 22			1	1
Extreme Flooding from Rivers or Sea without Defences	pg 22	Yes		n/a	n/a
Flooding from Rivers or Sea without Defences	pg 22	Yes		n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 23	7	40	22	48

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 37			1	5
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 38				2
Local Authority Landfill Coverage	pg 38	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 38			1	5
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites	pg 39				2
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					
Geological					
BGS 1:625,000 Solid Geology	pg 41	Yes	n/a	n/a	n/a
BGS Recorded Mineral Sites	pg 41		1		12
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 43	Yes	n/a	n/a	n/a
Mining Instability	pg 43	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 43	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 43	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 44	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 44	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 45	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 46	Yes		n/a	n/a
Radon Potential - Radon Affected Areas	pg 47	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures	pg 47	Yes	n/a	n/a	n/a

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries	pg 49		2	1	5
Fuel Station Entries					
Gas Pipelines					
Underground Electrical Cables					
Sensitive Land Use					
Ancient Woodland	pg 50	13	12	6	10
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty	pg 52				1
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SW (NE)	0	1	330050 349400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SW (NE)	0	1	330100 349400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A16SW (NE)	0	1	330200 349400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SW (NE)	0	1	330200 349450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SE (NE)	0	1	330500 349400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16NW (N)	0	1	330000 349750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NE)	0	1	330950 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NE)	0	1	330950 349650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16NW (NE)	0	1	330000 349550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	0	1	329400 350200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	330200 350350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	329850 350400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	0	1	330200 350400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	329900 350050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	329950 350050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	330000 350050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	329800 350250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	330000 350300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	0	1	330000 350150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	0	1	330050 349900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16NW (N)	0	1	329950 349600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16NW (N)	0	1	330000 349600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16NW (NE)	0	1	330100 349600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	329800 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	329900 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	329850 349950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	0	1	330250 349950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16NW (N)	0	1	329950 349700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16NW (N)	0	1	330000 349650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	329551 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15NE (N)	0	1	329650 349500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16NW (NE)	0	1	330200 349700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	329900 349900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	0	1	330000 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	0	1	329950 350100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16NW (NE)	0	1	330150 349550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16NE (NE)	0	1	330250 349550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SE (NE)	0	1	330500 349450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NE)	0	1	330750 349450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	329950 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	330150 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	0	1	330350 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NE)	0	1	330300 350100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	0	1	331100 350150

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	329551 350450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	0	1	330250 350450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	330350 350450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	329850 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	329900 349800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	329950 349900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	330000 349800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	0	1	330250 349800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	0	1	330900 349800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (S)	0	1	329551 348400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (E)	0	1	329551 348488
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SE)	0	1	329850 348300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NW (NE)	0	1	330150 349050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SE (NE)	0	1	330250 349250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	0	1	330350 348600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SW (NE)	0	1	330150 349150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SW (NE)	0	1	329950 349150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NW (NE)	0	1	330050 349000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (NE)	0	1	330150 349000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NE)	0	1	330450 349000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NW (E)	0	1	330000 348350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (N)	0	1	329600 348650

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NE)	0	1	330250 348800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (E)	0	1	330450 348750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	0	1	330800 349250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (NE)	0	1	329950 348900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NW (NE)	0	1	329950 348950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NW (NE)	0	1	330000 348900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (NE)	0	1	330050 348900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	0	1	330400 348700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SW (NE)	0	1	330000 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SW (NE)	0	1	330050 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A16SE (NE)	0	1	330250 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SE (NE)	0	1	330450 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	0	1	330650 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	0	1	330700 349400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	330000 348450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NE)	0	1	330450 349100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NE)	0	1	330500 349100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	0	1	330600 349100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11SE (N)	0	1	329551 348500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (N)	0	1	329650 348950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (NE)	0	1	330000 348850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SW (NE)	0	1	330100 349150

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	0	1	330600 349300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SE (N)	0	1	329550 349150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SW (NE)	0	1	330000 349400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SE (NE)	0	1	330300 349300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SE (NE)	0	1	330500 349300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (NE)	0	1	329750 348600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	1	1	330200 350450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (NE)	2	1	329900 348950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16NW (NE)	4	1	330000 349500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	7	1	330150 350400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SE (NE)	13	1	330250 349400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	13	1	330250 348600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	19	1	331050 350350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	19	1	330550 349150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	19	1	330550 349250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SE)	21	1	330000 348250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (NE)	23	1	329800 348650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	24	1	329800 349950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	27	1	330350 348650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (NE)	27	1	329650 348700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SW (NE)	34	1	329900 349150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15NE (N)	37	1	329800 349500

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	(N)	39	1	330050 350350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	46	1	330550 348700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	47	1	331100 350350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SW (NE)	47	1	329900 349250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	49	1	329300 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	49	1	329850 349900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	65	1	329850 349800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	74	1	331150 350300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	74	1	330900 349100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (E)	75	1	330400 348650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	76	1	330600 350300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	82	1	331150 350350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	82	1	331050 350450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	92	1	329950 348450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	96	1	331050 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	97	1	330000 348488
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SE)	97	1	329750 348400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7SW (S)	98	1	329450 348100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SE)	100	1	329850 348150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	107	1	330450 348600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	115	1	330550 348488
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SW (E)	122	1	330150 348550

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (E)	123	1	330450 348650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	124	1	331200 350300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	127	1	331100 350450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A15SE (N)	127	1	329800 349200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11SW (NW)	132	1	329450 348600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SW (E)	142	1	329950 348488
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E)	144	1	330800 348900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (E)	144	1	329850 348500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	146	1	329550 350050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	148	1	331000 349050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	149	1	329400 350350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	149	1	329450 350400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	150	1	331100 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NE)	151	1	331150 350450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	152	1	329450 350100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	164	1	331100 349250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SE (N)	178	1	329700 349450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	185	1	329550 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	187	1	330700 348750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SE (N)	189	1	329750 349250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	192	1	331000 349000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7SW (S)	195	1	329450 348000

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	A12SW (E)	195	1	330050 348500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NW (N)	210	1	329500 348850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	217	1	331050 349000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15NE (N)	226	1	329550 349700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	227	1	329450 350050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8SW (SE)	227	1	330000 348050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7SE (S)	232	1	329551 347950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (N)	237	1	329700 349250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E)	239	1	330950 348800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NE (N)	240	1	329551 349100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	254	1	329450 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8SW (SE)	258	1	329900 348000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E)	259	1	331050 348950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	260	1	329550 349900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A15SE (N)	270	1	329600 349450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NW (N)	277	1	329450 348900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SE (N)	285	1	329650 349250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	287	1	329400 349850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E)	298	1	330800 348700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	301	1	329350 350200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	304	1	331200 349050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8SE (SE)	310	1	330350 348050

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7SE (S)	311	1	329750 347900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15NE (N)	319	1	329551 349600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15NE (N)	334	1	329551 349550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (N)	338	1	329600 349200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	343	1	330800 348650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15NE (N)	359	1	329550 349650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (N)	370	1	329551 349150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8SW (SE)	387	1	330050 347850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8SE (SE)	417	1	330250 347900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	429	1	329350 349850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(E)	430	1	330850 348550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A3NE (S)	433	1	329551 347750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	435	1	329400 349800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	436	1	330900 348550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A6NE (SW)	440	1	328900 348200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8SW (SE)	448	1	330200 347850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	451	1	329250 349900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SW (N)	458	1	329450 349150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	465	1	329300 349850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A3NW (S)	488	1	329450 347700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	499	1	329300 349800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: Exors Of Col G E Fitzhugh Deceased Property Type: Undefined Or Other Location: Bersham Bersham Smithy & Mill Terra, Bersham Smithy & Mill Terrace/ Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0014401 Permit Version: 1 Effective Date: 13th November 1962 Issued Date: 13th November 1962 Revocation Date: 22nd December 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: To Land **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A12NE (NE)	13	2	330450 349100
2	**Discharge Consents** Operator: Mr L E Davies Property Type: Undefined Or Other Location: Legacy Station House Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0048101 Permit Version: 1 Effective Date: 26th February 1968 Issued Date: 26th February 1968 Revocation Date: 23rd February 1995 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Pentrebychan Brook **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	52	2	329300 348180
3	**Discharge Consents** Operator: The National Grid Company Plc Property Type: SUB-STATION/ELECTRICITY/GAS/AIR CONDITIONING SUPPLY Location: Legacy 132/400kv Substation Wrexh, Wrexham Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: CM0029201 Permit Version: 1 Effective Date: 18th June 1965 Issued Date: 18th June 1965 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Pentrebychan Brook **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A7NE (S)	108	2	329600 348370
4	**Discharge Consents** Operator: H. Pritchard (Gresford) Ltd. Property Type: Domestic Property (Single) Location: Land Adjacent To Min Y Cored, Bronwylfa Road, Rhostyllen, Wrexham, Wales, Ll14 4hy Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cg0440201 Permit Version: 1 Effective Date: 1st March 2006 Issued Date: 17th January 2006 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Pentrebychan Brook **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	130	2	329210 348210

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Discharge Consents** Operator: Company Secretary Property Type: Water Treatment Works Location: Legacy Wtw Bronwylfa Road Legacy Ne, Bronwylfa Road, Legacy, Near Wrexham, Ll14 4hy Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0108601 Permit Version: 2 Effective Date: 28th August 1991 Issued Date: 28th August 1991 Revocation Date: 5th February 1995 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: Pentrebychan Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A7SE (S)	141	2	329610 348060
5	**Discharge Consents** Operator: Company Secretary Property Type: Water Treatment Works Location: Legacy Wtw Bronwylfa Road Legacy Ne, Bronwylfa Road, Legacy, Near Wrexham, Ll14 4hy Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0108601 Permit Version: 1 Effective Date: 1st January 1967 Issued Date: 29th March 1965 Revocation Date: 27th August 1991 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: Pentrebychan Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A7SE (S)	141	2	329610 348060
5	**Discharge Consents** Operator: National Grid Plc Property Type: Production & Distribution Of Electricity Location: Legacy Substation, Bronwylfa Road, Pentre Bychan, Wrexham, Ll14 4hy Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cg0430401 Permit Version: 1 Effective Date: 17th December 2004 Issued Date: 17th December 2004 Revocation Date: 1st August 2010 Discharge Type: Trade Discharges - Site Drainage (Contam Surface Water, Not Tips) Discharge Environment: Freshwater Stream/River Receiving Water: Pentre Bychan Brook **Status: Revoked under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A7SE (S)	155	2	329650 348045
5	**Discharge Consents** Operator: Hafren Dyfrdwy Cyfyngedig Property Type: Water Treatment Works Location: Legacy Water Treatment Works, Brownwylfa Road, Legacy, Wrexham, Ll14 4hy Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cm0108601 Permit Version: 5 Effective Date: 4th January 2019 Issued Date: 20th December 2018 Revocation Date: Not Supplied Discharge Type: Sewerage And Trade Discharge - Process Water Discharge Environment: Freshwater Stream/River Receiving Water: Pentrebychan Brook **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A7SE (S)	157	2	329651 348043

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Discharge Consents** Operator: Company Secretary Property Type: Water Treatment Works Location: Legacy Wtw Bronwylfa Road Legacy Ne, Bronwylfa Road, Legacy, Near Wrexham, Ll14 4hy Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cm0108601 Permit Version: 4 Effective Date: 30th April 2003 Issued Date: 29th April 2003 Revocation Date: Not Supplied Discharge Type: Sewerage And Trade Discharge - Process Water Discharge Environment: Freshwater Stream/River Receiving Water: Pentrebychan Brook **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A7SE (S)	157	2	329651 348043
5	**Discharge Consents** Operator: Company Secretary Property Type: Water Treatment Works Location: Legacy Wtw Bronwylfa Road Legacy Ne, Bronwylfa Road, Legacy, Near Wrexham, Ll14 4hy Authority: Natural Resources Wales Catchment Area: River Dee Reference: CM0108601 Permit Version: 3 Effective Date: 6th February 1995 Issued Date: 6th February 1995 Revocation Date: 30th April 2003 Discharge Type: Trade Discharges - Process Effluent - Water Company (Wtw) Discharge Environment: Not Supplied Receiving Water: Pentrebychan Brook **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A7SE (S)	157	2	329651 348043
5	**Discharge Consents** Operator: Mr & Mrs A & D E Morris Property Type: Domestic Property (Single) Location: Esclusham Hall Legacy Wrexham Authority: Natural Resources Wales Catchment Area: River Dee Reference: CM0232001 Permit Version: 2 Effective Date: 21st June 1993 Issued Date: 21st June 1993 Revocation Date: Not Supplied Discharge Type: Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Pentrebychan Brook **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A7SE (S)	170	2	329650 348030
5	**Discharge Consents** Operator: Mr & Mrs A & D E Morris Property Type: Domestic Property (Single) Location: Esclusham Hall Legacy Wrexham Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0232001 Permit Version: 1 Effective Date: 26th November 1990 Issued Date: 26th November 1990 Revocation Date: 20th June 1993 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Pentrebychan Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A7SE (S)	170	2	329650 348030

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Discharge Consents** Operator: The National Grid Company Plc Property Type: SUB-STATION/ELECTRICITY/GAS/AIR CONDITIONING SUPPLY Location: Legacy 132/400kv Substation Wrexh, Wrexham Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: CM0036201 Permit Version: 1 Effective Date: 8th August 1966 Issued Date: 8th August 1966 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Pentrebychan Brook **Status:** **Effective** Positional Accuracy: Located by supplier to within 100m	A7SE (S)	146	2	329600 348050
7	**Discharge Consents** Operator: National Grid Company Plc Property Type: Other Transport Location: Wrexham Legacy Depot & Garage Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0083001 Permit Version: 1 Effective Date: 13th July 1977 Issued Date: 13th July 1977 Revocation Date: 5th April 1995 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Trib. Of Pentrebychan Brook **Status:** **Consent expired** Positional Accuracy: Located by supplier to within 10m	A2NE (SW)	548	2	329100 347720
8	**Discharge Consents** Operator: Manweb Plc Property Type: Business Services Location: Rhostyllen - Manweb Offices Smithy, Smithy Lane. Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0231201 Permit Version: 1 Effective Date: 28th December 1990 Issued Date: 28th December 1990 Revocation Date: 21st November 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Pentrebychan Brook **Status:** **Consent expired** Positional Accuracy: Located by supplier to within 10m	A4NE (SE)	622	2	330390 347730
9	**Local Authority Pollution Prevention and Controls** Name: Pentrebychan Crematorium Location: Pentrebychan, WREXHAM, Clwyd, LL14 4EP Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WCBC/PG5/2/PC(v3) Dated: 14th July 1993 Process Type: Local Authority Air Pollution Control Description: PG5/2 Crematoria **Status:** **Authorised** Positional Accuracy: Automatically positioned to the address	A8SW (SE)	342	3	329964 347935
	Nearest Surface Water Feature	A16SE (NE)	0	-	330427 349365
10	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: At Brookside, Lledy Lane, WREXHAM Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Unknown; Afon Clywedog Incident Date: 24th August 1998 Incident Reference: 36562 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SW (SE)	496	4	330200 347800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	**Pollution Incidents to Controlled Waters** Property Type: Waste Handling Facilities Location: Packsaddle Bridge Authority: Environment Agency, Welsh Region Pollutant: Algae Note: Accidental Spillage/Leakage Incident Date: 14th November 1995 Incident Reference: 26617 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	A4NE (SE)	645	4	330500 347750
12	**Pollution Incidents to Controlled Waters** Property Type: Waste Handling Facilities Location: Legacy Between, Talwrn Borehole And Dkelly Scrap Authority: Environment Agency, Welsh Region Pollutant: Sewage - Septic Tank Effluent Note: Accidental Spillage/Leakage Incident Date: 2nd May 1991 Incident Reference: 2645 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Spillage Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A2NE (SW)	685	4	328950 347650
	River Quality Name: Clywedog GQA Grade: River Quality A Reach: Conf.Black Bk.Erddig Pk-Conf.Trib. Estimated Distance (km): 5.3 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A15NE (N)	0	4	329730 349481
13	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 4th May 2003 Incident Reference: 155932 Water Impact: Category 4 - No Impact Air Impact: Category 2 - Significant Incident Land Impact: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Atmospheric Pollutants and Effects: Smoke	A2NE (SW)	699	2	328930 347647
13	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 6th May 2003 Incident Reference: 156107 Water Impact: Category 4 - No Impact Air Impact: Category 2 - Significant Incident Land Impact: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Atmospheric Pollutants and Effects: Smoke	A2NE (SW)	719	2	328923 347627
14	**Water Abstractions** Operator: Dee Valley Water Plc Licence Number: 24/67/7/0037 Permit Version: 100 Location: Talwrn Borehole Authority: Natural Resources Wales Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Talwrn Borehole Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2NE (SW)	638	2	328960 347700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	**Water Abstractions** Operator: Hafren Dyfrdwy Cyfyngedig Licence Number: 24/67/7/0037 Permit Version: Not Supplied Location: Underground Strata At Talwrn Nr Rhosllanerchrugog, Llwyneinion Road, Legacy, Rhostyllen, Rhosllanerchrugog, Wrexham, Ll14 4et Authority: Natural Resources Wales Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2NE (SW)	638	2	328960 347700
	Water Abstractions Operator: Dee Valley Water Plc Licence Number: 24/67/7/0036 Permit Version: 100 Location: Ty Mawrreservoir Authority: Natural Resources Wales Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Ty Mawrreservoir Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 9th August 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(W)	1693	2	327670 347931
	Water Abstractions Operator: Hafren Dyfrdwy Cyfyngedig Licence Number: 24/67/7/0036 Permit Version: Not Supplied Location: Abstraction From Points 'K' - Ty Mawr Res And 'L' - Cae Llwyd Res, Ty Mawr Reservoir, Cae Llwyd Reservoir, Ll14 1uj Authority: Natural Resources Wales Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from any point within an area Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1693	2	327670 347931
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	(N)	0	2	329551 350000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: High	(N)	0	2	330000 350000
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: High	(NE)	0	2	330340 350348
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	A12NW (NE)	0	2	330189 349000
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	(NE)	0	2	331000 349528

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A12NW (NE)	0	2	330041 348799
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A11SE (E)	0	2	329551 348488
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A11NE (N)	0	2	329642 348810
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A12NE (NE)	0	2	330414 348869

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A12SW (E)	0	2	330000 348488
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	A11NE (N)	0	2	329551 349000
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	A15NE (N)	0	2	329695 349481
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	A12NE (NE)	0	2	330418 349000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	A12NW (NE)	0	2	330000 349000
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	A16NW (NE)	0	2	330000 349539
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	A16NW (NE)	0	2	330120 349565
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: High	(NE)	0	2	330927 350000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: High	(NE)	0	2	331000 350000
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: High	(N)	0	2	330123 350000
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: High	(N)	0	2	330184 350104
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: High	(NE)	0	2	330405 350000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	A15SE (N)	0	2	329641 349314
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	A16SW (NE)	0	2	330000 349381
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	A16NW (NE)	0	2	330073 349741
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	A16NE (NE)	0	2	330355 349671
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11SE (E)	0	2	329551 348488
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(N)	0	2	330000 350000
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(N)	0	2	329551 350000
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A12SW (E)	0	2	330000 348488

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(NE)	0	2	330340 350348
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(NE)	0	2	330927 350000
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	(N)	0	2	330000 350000
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A16NW (NE)	0	2	330000 349539
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A12SW (E)	0	2	330000 348488
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	(N)	0	2	329551 350000
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A16NW (NE)	0	2	330120 349565
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A12NW (NE)	0	2	330041 348799
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A12NE (NE)	0	2	330414 348869
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A15NE (N)	0	2	329695 349481
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A11SE (E)	0	2	329551 348488
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11NE (N)	0	2	329642 348810
15	**Source Protection Zones** Name: Not Supplied Source: Natural Resources Wales Reference: Not Supplied Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	A6SE (SW)	374	2	329128 347905
16	**Source Protection Zones** Name: Not Supplied Source: Natural Resources Wales Reference: Not Supplied Type: Zone I (Inner Protection Zone): Travel time of 50 days or less to the groundwater source.	A2NE (SW)	588	2	328989 347741
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A7NE (SE)	0	2	329765 348325
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A15SE (N)	0	2	329700 349445
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A7NE (SE)	0	2	329770 348315
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A11NE (NE)	0	2	329690 348810
	Areas Benefiting from Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flood Water Storage Areas None				
	Flood Defences None				
17	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1051.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A11NE (NE)	0	5	329802 348831
18	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 361.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A16SE (NE)	0	5	330544 349440
19	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 540.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A8NW (SE)	0	5	329873 348319
20	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A16SE (NE)	0	5	330416 349373
21	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 179.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A16SE (NE)	0	5	330481 349265
22	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 116.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A16SE (NE)	0	5	330424 349376
23	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A16SE (NE)	0	5	330524 349319
24	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 200.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A16SW (N)	3	5	329874 349365

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 279.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A16SE (NE)	4	5	330258 349380
26	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 144.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A11NE (N)	5	5	329679 348817
27	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A16SW (NE)	5	5	330059 349436
28	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 81.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A16SE (NE)	5	5	330528 349317
29	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 228.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A15NE (N)	6	5	329849 349499
30	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 76.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A16SE (NE)	6	5	330528 349244
31	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 97.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A16SE (NE)	9	5	330528 349244
32	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A11NE (NE)	15	5	329798 348831
33	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 120.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A16NW (NE)	15	5	330186 349481

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
34	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 119.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A16NW (NE)	21	5	330079 349458
35	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A16NW (NE)	21	5	330181 349464
36	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 110.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7NE (S)	23	5	329556 348253
37	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 272.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A15NE (N)	31	5	329846 349504
38	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 278.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Pentrebychan Brook Catchment Name: Dee Primacy: 1	A7NW (S)	46	5	329413 348144
39	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.4 Watercourse Level: Underground Permanent: True Watercourse Name: Pentrebychan Brook Catchment Name: Dee Primacy: 1	A7NW (SW)	65	5	329277 348195
40	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 809.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Pentrebychan Brook Catchment Name: Dee Primacy: 1	A7NW (SW)	71	5	329270 348199
41	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 131.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7SW (S)	93	5	329463 348102
42	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 439.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Pentrebychan Brook Catchment Name: Dee Primacy: 1	A7SW (S)	93	5	329463 348102

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 401.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A11NE (N)	107	5	329661 348825
44	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A11NE (N)	107	5	329656 348816
45	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 74.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A8NE (E)	107	5	330365 348284
46	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A11NE (N)	112	5	329649 348810
47	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 220.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A11SW (N)	119	5	329525 348768
48	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 69.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A15NE (N)	141	5	329778 349492
49	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A15NE (N)	141	5	329849 349499
50	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7SW (SW)	165	5	329324 348049
51	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7SW (SW)	165	5	329334 348048

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
52	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7SW (SW)	165	5	329347 348049
53	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 238.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7SW (SW)	165	5	329324 348049
54	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A8NE (E)	168	5	330420 348233
55	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 45.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7SW (SW)	170	5	329337 348044
56	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 185.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A11NW (N)	181	5	329453 348784
57	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 53.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A8NE (E)	193	5	330394 348202
58	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 512.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A15SE (N)	203	5	329693 349455
59	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 51.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A15NE (N)	203	5	329760 349491
60	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 321.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A15NE (N)	210	5	329743 349541

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
61	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A15NE (N)	216	5	329747 349524
62	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A15NE (N)	217	5	329749 349520
63	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 335.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A8NE (E)	217	5	330427 348184
64	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 49.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7SE (SE)	301	5	329824 347933
65	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 324.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A11SW (NW)	309	5	329253 348679
66	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 97.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A11SW (NW)	309	5	329286 348746
67	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 36.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A6SE (SW)	310	5	329117 347997
68	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 269.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Pentrebychan Brook Catchment Name: Dee Primacy: 1	A7SE (SE)	336	5	329826 347897
69	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 143.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A6SE (SW)	344	5	329095 347971

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
70	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 577.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7SW (S)	388	5	329428 347807
71	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10SE (NW)	401	5	329193 348751
72	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 51.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10SE (NW)	402	5	329191 348751
73	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7SW (S)	415	5	329378 347791
74	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 173.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7SW (S)	418	5	329371 347790
75	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 428.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A11NW (N)	421	5	329458 349106
76	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 517.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A11NW (N)	421	5	329464 349111
77	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 150.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10SE (W)	432	5	329053 348559
78	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 137.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10SE (W)	432	5	329053 348559

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
79	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 2	A15NW (N)	450	5	329458 349720
80	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 35.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A15NW (N)	450	5	329458 349720
81	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10SE (NW)	452	5	329143 348762
82	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 339.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10SE (NW)	457	5	329138 348764
83	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 81.5 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A6SE (SW)	460	5	328954 347962
84	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 586.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A15NW (N)	470	5	329391 349736
85	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 140.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A6SE (SW)	480	5	329019 347856
86	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 188.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Pentrebychan Brook Catchment Name: Dee Primacy: 1	A8SW (SE)	502	5	330001 347776
87	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 114.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A4NW (SE)	514	5	329967 347753

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
88	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 72.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A3NW (SW)	516	5	329224 347710
89	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 42.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A3NW (SW)	516	5	329224 347710
90	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 57.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A2NE (SW)	535	5	329182 347702
91	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 599.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A4NW (S)	542	5	329873 347695
92	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 245.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A6SE (SW)	542	5	328888 347915
93	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 466.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Pentrebychan Brook Catchment Name: Dee Primacy: 1	A4NW (SE)	544	5	330139 347733
94	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 111.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A2NE (SW)	555	5	329106 347710
95	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 23.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A2NE (SW)	555	5	329107 347710
96	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10SE (W)	568	5	328949 348648

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
97	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 248.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10SE (W)	579	5	328940 348656
98	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A2NE (SW)	584	5	329182 347651
99	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 536.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A2NE (SW)	594	5	329180 347642
100	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 265.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A2NE (SW)	594	5	329180 347642
101	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 279.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A4NE (SE)	618	5	330530 347721
102	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 391.8 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10NE (NW)	756	5	328887 348954
103	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 306.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A6SW (SW)	756	5	328680 347844
104	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 194.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A6SW (SW)	756	5	328680 347844
105	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 150.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10SW (W)	757	5	328593 348456

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
106	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Pentrebychan Brook Catchment Name: Dee Primacy: 1	A6NW (W)	757	5	328588 348305
107	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 39.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Pentrebychan Brook Catchment Name: Dee Primacy: 1	A6NW (W)	759	5	328586 348305
108	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 53.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A6NW (W)	759	5	328586 348305
109	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 78.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10SW (W)	767	5	328704 348691
110	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 336.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10SW (W)	767	5	328692 348643
111	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 56.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A3SW (S)	779	5	329440 347408
112	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 86.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10SW (W)	782	5	328593 348456
113	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SE (NW)	785	5	329108 349283
114	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 141.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SE (NW)	791	5	329102 349285

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
115	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 169.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10SW (W)	794	5	328710 348719
116	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 79.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SE (N)	795	5	329167 349442
117	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Pentrebychan Brook Catchment Name: Dee Primacy: 1	A6NW (W)	795	5	328551 348309
118	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 592.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Pentrebychan Brook Catchment Name: Dee Primacy: 1	A6NW (W)	799	5	328547 348312
119	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 141.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A6NW (W)	802	5	328548 348341
120	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 42.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14NE (NW)	806	5	329009 349700
121	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14NE (NW)	817	5	329006 349674
122	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 296.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A3SW (S)	817	5	329265 347400
123	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 277.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A3SW (S)	828	5	329406 347363

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
124	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 80.8 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14NE (NW)	836	5	329044 349603
125	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 148.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14NE (NW)	855	5	329093 349472
126	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 61.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SE (NW)	890	5	328969 349302
127	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 302.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SE (NW)	890	5	328969 349302
128	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 11.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A2NW (SW)	895	5	328598 347713
129	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 180.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A2NW (SW)	906	5	328590 347705
130	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SE (NW)	936	5	328966 349361
131	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 386.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SE (NW)	939	5	328967 349366
132	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 64.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A5NE (W)	940	5	328414 348384

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
133	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 176.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A10NW (W)	954	5	328621 348862

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
134	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Llwyneinion Name: Llwyneinion Old Refuse Tip No.2 Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14255 First Input Date: 31st December 1939 Last Input Date: 31st December 1961 Specified Waste Type: Deposited Waste included Commercial and Household Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6955/0039 BGS Ref: Not Supplied Other Ref: Not Supplied	A6SE (SW)	451	2	328965 347962
135	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Llwyneinion Name: Llwyneinion Old Refuse Tip No.1 Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14252 First Input Date: 31st December 1920 Last Input Date: 31st December 1940 Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial, Household and Special Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6955/0038 BGS Ref: Not Supplied Other Ref: Not Supplied	A2NE (SW)	639	2	329040 347650
136	**Historical Landfill Sites** Licence Holder: Clwyd County Council Location: Cae Dwr Name: Monsanto Chemical Tip Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14253 First Input Date: 31st December 1964 Last Input Date: 31st December 1985 Specified Waste Type: Deposited Waste included Special Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6955/0042 BGS Ref: Not Supplied Other Ref: Not Supplied	A2NW (SW)	764	2	328799 347674
137	**Historical Landfill Sites** Licence Holder: Clwyd County Council Location: Cae Dwr Name: Cae Dwr Brickworks Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14246 First Input Date: 1st June 1980 Last Input Date: 31st December 1985 Specified Waste Type: Deposited Waste included Industrial, Commercial and Household Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6955/0015 BGS Ref: Not Supplied Other Ref: Not Supplied	A2NE (SW)	801	2	328878 347558
138	**Historical Landfill Sites** Licence Holder: Llwyneinion Shale Brick Company Location: Llwyneinion Name: Llwyneinion Acid Tar Lagoon Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14254 First Input Date: 1st June 1961 Last Input Date: 1st March 1972 Specified Waste Type: Deposited Waste included Industrial and Special Waste, and Liquid Sludge EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6955/0040 BGS Ref: Not Supplied Other Ref: Not Supplied	A2NE (SW)	893	2	328879 347448

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
139	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Cae Dwr Name: Railway Cutting Fill Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14259 First Input Date: 31st December 1984 Last Input Date: 31st December 1985 Specified Waste Type: Deposited Waste included Industrial and Special Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6955/0048 BGS Ref: Not Supplied Other Ref: Not Supplied	A2SE (SW)	980	2	328935 347321
140	**Licensed Waste Management Facilities (Locations)** Licence Number: EP3094FG Location: Legacy Car Dismantlers, Esclusham Mill, Llwyneinon Road, Legacy, Wrexham, Clwyd, Wrexham, LL14 4ET Operator Name: David Ithel Kelly Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Metal Recycling Sites (Vehicle Dismantlers) **Licence Status:** **Effective** Issued: 16th June 1998 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2NE (SW)	681	2	328888 347704
140	**Licensed Waste Management Facilities (Locations)** Licence Number: 37154 Location: Esclusham Mill, Llwyneinon Road, Legacy, Wrexham, LL14 4ET Operator Name: Kelly David Ithel Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Metal Recycling Sites (Vehicle Dismantlers) **Licence Status:** **Modified** Issued: 16th June 1998 Last Modified: 15th March 2005 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2NE (SW)	681	2	328888 347704
	Local Authority Landfill Coverage Name: Wrexham County Borough Council - Has supplied landfill data		0	6	329551 348488
141	**Local Authority Recorded Landfill Sites** Location: Llwyneinion Old Refuse Tip 2, Llwyneinion, Wrexham Reference: 6955/0039 Authority: Wrexham County Borough Council **Last Reported Status:** **Closed** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Good	A6SE (SW)	450	6	328964 347965
142	**Local Authority Recorded Landfill Sites** Location: Llwyneinion Old Refuse Tip 1, Llwyneinion, Wrexham Reference: 6955/0038 Authority: Wrexham County Borough Council **Last Reported Status:** **Closed** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Good	A2NE (SW)	639	6	329039 347650

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
143	**Local Authority Recorded Landfill Sites** Location: Monsanto Chemical Tip, Cae Dwr, Llwyneinion Reference: 6955/0042 Authority: Wrexham County Borough Council **Last Reported Status:** **Closed** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Good	A2NW (SW)	761	6	328794 347683
144	**Local Authority Recorded Landfill Sites** Location: Cae Dwr Brickworks, Llwyneinion, Wrexham Reference: 6955/0015 Authority: Wrexham County Borough Council **Last Reported Status:** **Closed** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Good	A2NE (SW)	788	6	328877 347576
145	**Local Authority Recorded Landfill Sites** Location: Llwyneinion Acid Tar Lagoon, Lwyneinion, Wrexham Reference: 6955/0040 Authority: Wrexham County Borough Council **Last Reported Status:** **Closed** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Good	A2NE (SW)	898	6	328865 347450
146	**Local Authority Recorded Landfill Sites** Location: Railway Cutting Fill, Cae Dwr, Llwyneinion, Wrexham Reference: 6955/0048 Authority: Wrexham County Borough Council **Last Reported Status:** **Closed** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Good	A2SE (SW)	968	6	328933 347334
147	**Registered Waste Treatment or Disposal Sites** Licence Holder: D I Kelly - Legacy Car Dismantlers Licence Reference: NOW-526-L Site Location: Esclusham Mill, Llwyneinion Road, Legacy, WREXHAM, Clwyd, LL14 4ET Operator Location: Bluebell Cottage, Pandy, WREXHAM, Clwyd, LL12 8EE Authority: Environment Agency Wales, North Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 16th June 1998 Preceded By Licence: L77 Superseded By Licence: Not Given Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Supplied Authorised Waste: Engines Max.Stor; Lead/Acid Batteries Max.Stor; Max.Waste Permitted By Licence; Oil/Brakefluid/Antifr' Ex Veh Max.Stor; Scrap Vehicles Max.Stor; Transmission Units Max.Stor; Tyres On Vehicles Max.Stor; Tyres Removed From Vehicles Max.Stor Prohibited Waste: Spec.Waste (Epa'90:S62/1996 Regs)N.O.S; Waste N.O.S.	A2NE (SW)	689	4	328880 347700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Registered Waste Treatment or Disposal Sites				
147	Licence Holder: D I Kelly Licence Reference: L77 Site Location: Esclusham Mill, Llwyneinion Road, Legacy, WREXHAM, Clwyd, LL14 4ET Operator Location: Bluebell Cottage, Pandy, WREXHAM, Clwyd, LL12 8EE Authority: Environment Agency Wales, North Area Site Category: Scrapyard Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st March 1994 Preceded By Licence: Not Given Superseded By Licence: Now-526-L Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Supplied Authorised Waste: Batteries/Acid Contained Therein M.St. Brake/Clutch Fluid Max.Stor. Coolant Sol.(Water/Ethylene Glycol Mix Engines Max.Stor. Gearboxes/Transm.Units Max.Stor. Mineral Oils - Hub Oils Max.Stor. Scrap Vehicles Max.Stor. Tyres (Left On Cars) Prohibited Waste: Cadmium Compounds Elemental Sodium/Potassium Fuel Oil, Incl Diesel Liable To Cause Environmental Hazards Liquified Gas / Gas Under Pressure Mercury Compounds Percussive/Explosive/Similar Waste Petrol Powder / Powdered Waste Special Wastes N.O.S. Sub'S Control. Radioactive Subs Act'60 Waste In Drums Waste N.O.S. Water Soluble Waste	A2NE (SW)	689	4	328880 347700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Pennine Middle Coal Measures Formation And South Wales Middle Coal Measures Formation (Undifferentiated)	A11SE (E)	0	1	329551 348488
	BGS 1:625,000 Solid Geology Description: Pennine Lower Coal Measures Formation And South Wales Lower Coal Measures Formation (Undifferentiated)	A11SW (W)	0	1	329418 348484
	BGS 1:625,000 Solid Geology Description: Warwickshire Group	A8NE (E)	0	1	330215 348242
148	**BGS Recorded Mineral Sites** Site Name: Talwrn Lodge Location: Bersham, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 184992 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Not Available Geology: ! Commodity: Lead Positional Accuracy: Located by supplier to within 10m	A7NE (S)	20	1	329628 348239
149	**BGS Recorded Mineral Sites** Site Name: Talwrn Pumping Station Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 184993 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A6SW (SW)	676	1	328784 347829
150	**BGS Recorded Mineral Sites** Site Name: Llwyn Ennion Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185629 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A2NE (SW)	776	1	329103 347474
151	**BGS Recorded Mineral Sites** Site Name: Talwrn Pumping Station Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 184995 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A2NW (SW)	797	1	328735 347694
152	**BGS Recorded Mineral Sites** Site Name: Bryn-Yr-Owen Colliery Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185630 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Cefn Rock Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A4NE (SE)	838	1	330274 347466

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
152	**BGS Recorded Mineral Sites** Site Name: Bryn-Yr-Owen Colliery Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185631 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Cefn Rock Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A4NE (SE)	867	1	330267 347435
153	**BGS Recorded Mineral Sites** Site Name: Talwrn Pumping Station Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 184994 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A2NW (SW)	840	1	328721 347645
154	**BGS Recorded Mineral Sites** Site Name: Llwyn Ennion Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185658 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A2NE (SW)	863	1	328901 347470
155	**BGS Recorded Mineral Sites** Site Name: Llwyn Ennion Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185657 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A2NW (SW)	887	1	328771 347532
156	**BGS Recorded Mineral Sites** Site Name: Bryn-Yr-Owen Colliery Location: Ponciau, Rhosllanerchrugog, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 19332 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A3SE (S)	922	1	329870 347300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
157	**BGS Recorded Mineral Sites** Site Name: Llwyn Ennion Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185659 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A2SE (SW)	940	1	328887 347389
158	**BGS Recorded Mineral Sites** Site Name: Llwyneinion Brick Works Location: Llwyneinion, Rhosllanchrugog, Wrexham, Clwyd Source: British Geological Survey, National Geoscience Information Service Reference: 14099 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A2SW (SW)	946	1	328810 347430
159	**BGS Recorded Mineral Sites** Site Name: Bryn-Yr-Owen Colliery Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185800 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Cefn Rock Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A4SW (S)	993	1	330026 347271
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A11SE (E)	0	7	329551 348488
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A11SE (E)	0	-	329551 348488
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A12SW (E)	0	1	330000 348488
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	0	1	329551 348488
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	A8NE (E)	0	1	330252 348329
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A4NW (SE)	0	1	330152 347712
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	1	329642 348810
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	0	1	329551 348488
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A12SW (E)	0	1	330000 348488

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NW (SW)	104	1	329237 348197
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	0	1	329493 348293
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A12SW (E)	0	1	330039 348519
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	0	1	329551 348488
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A12SW (E)	0	1	330000 348488
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	0	1	330056 349480
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	1	329642 348810
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (N)	1	1	329536 348635
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7NE (SE)	66	1	329641 348306
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A7NW (SW)	104	1	329237 348197
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	0	1	329551 348488
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A12SW (E)	0	1	330000 348488
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A15NE (N)	0	1	329695 349481
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	0	1	330028 349522
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A12NW (NE)	0	1	329995 348832
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A12NW (NE)	0	1	330000 348832
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NE)	0	1	329628 348611
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A16SW (NE)	0	1	330102 349254
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A12SW (E)	0	1	330000 348488
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	0	1	329551 348488
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A15NE (N)	0	1	329835 349559

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	2	1	330056 349480
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A16SE (NE)	11	1	330502 349148
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	16	1	330169 349479
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	38	1	329812 349346
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NE (SE)	56	1	329685 348301
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A15NE (N)	88	1	329767 349688
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A12SW (E)	100	1	330175 348548
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A15NE (N)	177	1	329756 349506
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11NW (N)	193	1	329483 348822
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	218	1	329676 349442
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	226	1	329717 349223
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A16NE (NE)	0	1	330355 349671
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	0	1	329641 349314
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A16SW (NE)	0	1	330000 349381
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	0	1	330073 349741
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	0	1	330000 349488
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A12SW (E)	0	1	330000 348488
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	0	1	329670 349444
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	0	1	329551 348488
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	1	329642 348810
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	0	1	330056 349480

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NW (SW)	104	1	329237 348197
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	0	1	329551 348488
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A12SW (E)	0	1	330000 348488
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A16SW (NE)	0	1	330000 349392
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	0	1	330130 349726
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A16SW (NE)	0	1	329924 349352
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A12NW (NE)	0	1	330041 348799
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A16SE (NE)	0	1	330485 349365
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	0	1	330120 349565
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A16NE (NE)	0	1	330355 349671
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	4	1	329641 349314
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (5 to 10% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A16SW (NE)	0	1	330000 349326
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Higher probability radon area (10 to 30% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A16NW (N)	0	1	329975 349701
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Higher probability radon area (10 to 30% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A12SW (NE)	0	1	329975 348751
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (1 to 3% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A16NE (NE)	0	1	330475 349651
	Radon Potential - Radon Affected Areas Affected Area: The property is an Intermediate probability radon area (3 to 5% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A16NW (N)	0	1	329875 349576
	Radon Potential - Radon Affected Areas Affected Area: The property is an Intermediate probability radon area (3 to 5% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A16SE (NE)	0	1	330350 349376
	Radon Potential - Radon Affected Areas Affected Area: The property is an Intermediate probability radon area (3 to 5% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	0	1	330000 349551
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (5 to 10% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	0	1	329551 349251

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Higher probability radon area (10 to 30% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A12SW (NE)	0	1	330000 348726
	Radon Potential - Radon Affected Areas Affected Area: The property is an Intermediate probability radon area (3 to 5% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	0	1	329551 348488
	Radon Potential - Radon Affected Areas Affected Area: The property is an Intermediate probability radon area (3 to 5% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A12NW (NE)	0	1	330000 348876
	Radon Potential - Radon Affected Areas Affected Area: The property is an Intermediate probability radon area (3 to 5% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A12SW (E)	0	1	330000 348488
	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	A16NE (NE)	0	1	330325 349476
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A16SW (NE)	0	1	330000 349326
	Radon Potential - Radon Protection Measures Protection Measure: Full radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A16NW (N)	0	1	329975 349701
	Radon Potential - Radon Protection Measures Protection Measure: Full radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A12SW (NE)	0	1	329975 348751
	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	A16NE (NE)	0	1	330475 349651
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A16NW (N)	0	1	329875 349576
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A16SE (NE)	0	1	330350 349376
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	0	1	330000 349551
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	0	1	329551 349251
	Radon Potential - Radon Protection Measures Protection Measure: Full radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A12SW (NE)	0	1	330000 348726
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	0	1	329551 348488
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A12NW (NE)	0	1	330000 348876

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A12SW (E)	0	1	330000 348488
	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	A16NE (NE)	0	1	330325 349476

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
160	**Contemporary Trade Directory Entries** Name: Clean & Green Ltd Location: Woodpecker Cottage, Talwrn Road, Rhostyllen, Wrexham, Clwyd, LL14 4ES Classification: Cleaning Materials & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	136	-	329599 348060
161	**Contemporary Trade Directory Entries** Name: Gavin Jones Body Repairs Location: Talwrn Road, Rhostyllen, Wrexham, LL14 4ER Classification: Car Body Repairs **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A7SW (S)	247	-	329497 347937
162	**Contemporary Trade Directory Entries** Name: Pentre Bychan Crematorium Location: Pentre Bychan Road, Pentre Bychan, Wrexham, Clwyd, LL14 4EP Classification: Cemeteries & Crematoria **Status: Active** Positional Accuracy: Automatically positioned to the address	A8SW (SE)	342	-	329964 347935
163	**Contemporary Trade Directory Entries** Name: North Wales Energy Ltd Location: Packsaddle, Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4EH Classification: Gas Companies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SE (SE)	542	-	330479 347857
164	**Contemporary Trade Directory Entries** Name: Cecil S Allen & Sons Location: Talwrn Buildings, Llwyneinion Road, Rhostyllen, Wrexham, Clwyd, LL14 4ET Classification: Road Haulage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A2NE (SW)	677	-	328966 347649
165	**Contemporary Trade Directory Entries** Name: David Kelly Location: Esclusham Mill, Llwyneinion Road, Rhostyllen, Wrexham, Clwyd, LL14 4ET Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A2NE (SW)	692	-	328889 347687
166	**Contemporary Trade Directory Entries** Name: S P Power Systems Ltd Location: Electricity House, Wrexham Road, Pentre Bychan, Wrexham, LL14 4DU Classification: Electricity Companies **Status: Active** Positional Accuracy: Automatically positioned to the address	A4NE (SE)	711	-	330427 347648
167	**Contemporary Trade Directory Entries** Name: Hayne'S Location: Vinegar Hill, Rhosllanerchrugog, Wrexham, Clwyd, LL14 1EH Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A3SW (S)	943	-	329234 347276

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
168	**Ancient Woodland** Name: Not Supplied Reference: 44697 Area(m²): 18598.4 Type: Plantation on Ancient Woodland	A15NE (N)	0	2	329829 349538
169	**Ancient Woodland** Name: Not Supplied Reference: 28401 Area(m²): 11927.41 Type: Ancient and Semi-Natural Woodland	A16NW (NE)	0	2	330204 349459
170	**Ancient Woodland** Name: Not Supplied Reference: 28402 Area(m²): 25384.63 Type: Ancient and Semi-Natural Woodland	A15NE (N)	0	2	329755 349475
171	**Ancient Woodland** Name: Not Supplied Reference: 31892 Area(m²): 3689.65 Type: Ancient and Semi-Natural Woodland	A12NE (NE)	0	2	330414 349080
172	**Ancient Woodland** Name: Not Supplied Reference: 31893 Area(m²): 3423.04 Type: Ancient and Semi-Natural Woodland	A16SE (NE)	0	2	330454 349254
173	**Ancient Woodland** Name: Not Supplied Reference: 31894 Area(m²): 5298.12 Type: Ancient and Semi-Natural Woodland	A16SE (NE)	0	2	330519 349309
174	**Ancient Woodland** Name: Not Supplied Reference: 31895 Area(m²): 32563.69 Type: Ancient and Semi-Natural Woodland	(N)	0	2	329737 349820
175	**Ancient Woodland** Name: Not Supplied Reference: 36800 Area(m²): 6187.18 Type: Restored Ancient Woodland Site	(NE)	0	2	331026 350330
176	**Ancient Woodland** Name: Not Supplied Reference: 36795 Area(m²): 10124.28 Type: Restored Ancient Woodland Site	A16SE (NE)	0	2	330259 349370
177	**Ancient Woodland** Name: Not Supplied Reference: 47040 Area(m²): 25982.54 Type: Plantation on Ancient Woodland	(NE)	0	2	330452 350204
178	**Ancient Woodland** Name: Not Supplied Reference: 47041 Area(m²): 30794.46 Type: Plantation on Ancient Woodland	(N)	0	2	330080 350248
179	**Ancient Woodland** Name: Not Supplied Reference: 29691 Area(m²): 23810.49 Type: Restored Ancient Woodland Site	A16SE (NE)	0	2	330274 349376
180	**Ancient Woodland** Name: Not Supplied Reference: 36799 Area(m²): 5763.65 Type: Restored Ancient Woodland Site	(N)	0	2	330001 350336
181	**Ancient Woodland** Name: Not Supplied Reference: 36799 Area(m²): 16577.14 Type: Restored Ancient Woodland Site	(N)	14	2	330110 350438

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
182	**Ancient Woodland** Name: Not Supplied Reference: 37165 Area(m²): 14030.91 Type: Restored Ancient Woodland Site	(NE)	35	2	330960 349195
183	**Ancient Woodland** Name: Not Supplied Reference: 29695 Area(m²): 7424.77 Type: Ancient and Semi-Natural Woodland	A15NE (N)	93	2	329786 349711
184	**Ancient Woodland** Name: Not Supplied Reference: 31884 Area(m²): 18996.87 Type: Ancient and Semi-Natural Woodland	A7SW (S)	102	2	329506 348081
185	**Ancient Woodland** Name: Not Supplied Reference: 31891 Area(m²): 5037.11 Type: Ancient and Semi-Natural Woodland	A11SW (N)	109	2	329516 348755
186	**Ancient Woodland** Name: Not Supplied Reference: 36797 Area(m²): 18121.59 Type: Restored Ancient Woodland Site	A15NE (N)	122	2	329744 349538
187	**Ancient Woodland** Name: Not Supplied Reference: 44697 Area(m²): 2253.19 Type: Plantation on Ancient Woodland	A15NE (N)	129	2	329762 349458
188	**Ancient Woodland** Name: Not Supplied Reference: 33409 Area(m²): 11674.4 Type: Ancient and Semi-Natural Woodland	(E)	144	2	331013 349029
189	**Ancient Woodland** Name: Not Supplied Reference: 31883 Area(m²): 7490.9 Type: Ancient and Semi-Natural Woodland	A7SE (SE)	204	2	329840 348033
190	**Ancient Woodland** Name: Not Supplied Reference: 29694 Area(m²): 16608.75 Type: Restored Ancient Woodland Site	A15NE (N)	211	2	329737 349543
191	**Ancient Woodland** Name: Not Supplied Reference: 27370 Area(m²): 12198.45 Type: Ancient and Semi-Natural Woodland	A15SE (N)	216	2	329683 349433
192	**Ancient Woodland** Name: Not Supplied Reference: 45171 Area(m²): 36368.75 Type: Plantation on Ancient Woodland	A15NE (N)	220	2	329589 349525
193	**Ancient Woodland** Name: Not Supplied Reference: 44057 Area(m²): 8750.89 Type: Plantation on Ancient Woodland	A15NE (N)	355	2	329567 349518
194	**Ancient Woodland** Name: Not Supplied Reference: 36798 Area(m²): 26428.57 Type: Restored Ancient Woodland Site	(N)	416	2	329369 349877
195	**Ancient Woodland** Name: Not Supplied Reference: 29694 Area(m²): 28156.11 Type: Restored Ancient Woodland Site	A15NW (N)	417	2	329433 349748

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
196	**Ancient Woodland** Name: Not Supplied Reference: 36794 Area(m²): 10029.13 Type: Restored Ancient Woodland Site	A6SE (SW)	440	2	329099 347845
197	**Ancient Woodland** Name: Not Supplied Reference: 31882 Area(m²): 1084.43 Type: Ancient and Semi-Natural Woodland	A3NE (S)	483	2	329669 347718
198	**Ancient Woodland** Name: Not Supplied Reference: 28399 Area(m²): 4083.8 Type: Ancient and Semi-Natural Woodland	A3NE (S)	489	2	329602 347699
199	**Ancient Woodland** Name: Not Supplied Reference: 29693 Area(m²): 27707.99 Type: Restored Ancient Woodland Site	A15NW (N)	584	2	329319 349553
200	**Ancient Woodland** Name: Not Supplied Reference: 31896 Area(m²): 18382.66 Type: Ancient and Semi-Natural Woodland	(N)	591	2	329094 349927
201	**Ancient Woodland** Name: Not Supplied Reference: 31888 Area(m²): 3812.63 Type: Ancient and Semi-Natural Woodland	A6NW (W)	592	2	328753 348287
202	**Ancient Woodland** Name: Not Supplied Reference: 36793 Area(m²): 19624.66 Type: Restored Ancient Woodland Site	A3NE (S)	594	2	329689 347607
203	**Ancient Woodland** Name: Not Supplied Reference: 36796 Area(m²): 2560.91 Type: Restored Ancient Woodland Site	A15NW (N)	636	2	329288 349566
204	**Ancient Woodland** Name: Not Supplied Reference: 29692 Area(m²): 23390.88 Type: Restored Ancient Woodland Site	A15NW (N)	645	2	329283 349571
205	**Ancient Woodland** Name: Not Supplied Reference: 33421 Area(m²): 2522.01 Type: Ancient and Semi-Natural Woodland	(NW)	876	2	328778 350113
206	**Ancient Woodland** Name: Not Supplied Reference: 31889 Area(m²): 9825.36 Type: Ancient and Semi-Natural Woodland	A5NE (W)	924	2	328419 348289
207	**Ancient Woodland** Name: Not Supplied Reference: 33422 Area(m²): 41152.25 Type: Ancient and Semi-Natural Woodland	(NW)	964	2	328660 350077
208	**Ancient Woodland** Name: Not Supplied Reference: 31886 Area(m²): 8259.26 Type: Ancient and Semi-Natural Woodland	A5NE (W)	978	2	328363 348167
209	**Areas of Outstanding Natural Beauty** Name: Bryniau Clwyd A Dyffryn Dyfrdwy/Clwydian Range And Dee Valley Multiple Areas: N Total Area (m2): 389277308.58 Designation Date: 22nd November 2011 Source: Natural Resources Wales	A6NW (W)	768	2	328579 348319

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Natural Resources Wales	June 2020	Annually
Wrexham County Borough Council - Public Protection Department	October 2017	Annually
Denbighshire County Council - Public Protection Department	September 2017	Annual Rolling Update
Discharge Consents		
Environment Agency - Welsh Region	August 2014	Quarterly
Natural Resources Wales	January 2022	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		
Environment Agency - Welsh Region	January 2021	Quarterly
Natural Resources Wales	January 2022	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Wrexham County Borough Council - Environmental Health Department	April 2014	Variable
Denbighshire County Council - Environmental Health Department	December 2014	Variable
Local Authority Pollution Prevention and Controls		
Wrexham County Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Denbighshire County Council - Environmental Health Department	December 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Wrexham County Borough Council - Environmental Health Department	April 2014	Variable
Denbighshire County Council - Environmental Health Department	December 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	November 2021	
Pollution Incidents to Controlled Waters		
Environment Agency - Welsh Region	December 1998	
Prosecutions Relating to Authorised Processes		
Environment Agency - Welsh Region	July 2015	
Natural Resources Wales	July 2015	
Prosecutions Relating to Controlled Waters		
Environment Agency - Welsh Region	March 2013	
Natural Resources Wales	March 2013	
Registered Radioactive Substances		
Natural Resources Wales	January 2015	
Environment Agency - Welsh Region	June 2016	As notified
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
Substantiated Pollution Incident Register		
Environment Agency Wales - North Area	January 2021	Quarterly
Natural Resources Wales	January 2022	Quarterly
Water Abstractions		
Environment Agency - Welsh Region	January 2022	Quarterly
Natural Resources Wales	November 2021	Quarterly
Water Industry Act Referrals		
Natural Resources Wales	January 2022	Quarterly
Environment Agency - Welsh Region	October 2017	
Groundwater Vulnerability Map		
Natural Resources Wales	June 2018	As notified
Bedrock Aquifer Designations		
Natural Resources Wales	January 2018	Annually

Agency & Hydrological	Version	Update Cycle
Superficial Aquifer Designations		
Natural Resources Wales	January 2018	Annually
Source Protection Zones		
Natural Resources Wales	July 2017	Annual Rolling Update
Extreme Flooding from Rivers or Sea without Defences		
Natural Resources Wales	September 2020	Quarterly
Flooding from Rivers or Sea without Defences		
Natural Resources Wales	September 2020	Quarterly
Areas Benefiting from Flood Defences		
Natural Resources Wales	November 2019	Quarterly
Flood Water Storage Areas		
Natural Resources Wales	August 2019	Quarterly
Flood Defences		
Natural Resources Wales	November 2019	Quarterly
OS Water Network Lines		
Ordnance Survey	October 2021	Quarterly
BGS Groundwater Flooding Susceptibility		
British Geological Survey - National Geoscience Information Service	May 2013	Annually
Waste	**Version**	**Update Cycle**
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	November 2002	Not Applicable
Historical Landfill Sites		
Natural Resources Wales	July 2019	Quarterly
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	October 2021	Quarterly
Natural Resources Wales	October 2021	Quarterly
Licensed Waste Management Facilities (Locations)		
Natural Resources Wales	April 2021	Quarterly
Environment Agency Wales - North Area	July 2021	Quarterly
Local Authority Landfill Coverage		
Denbighshire County Council - Environmental Health Department	February 2003	Not Applicable
Wrexham County Borough Council	February 2003	Not Applicable
Local Authority Recorded Landfill Sites		
Denbighshire County Council - Environmental Health Department	October 2018	
Wrexham County Borough Council	October 2018	
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	January 2022	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements		
Denbighshire County Council - Planning Department	February 2016	Variable
Wrexham County Borough Council - Planning Department	February 2016	Variable
Planning Hazardous Substance Consents		
Denbighshire County Council - Planning Department	February 2016	Variable
Wrexham County Borough Council - Planning Department	February 2016	Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology		
British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	November 2021	Bi-Annually
CBSCB Compensation District		
Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	
Cheshire Brine Subsidence Compensation Board (CBSCB)	November 2020	As notified
Coal Mining Affected Areas		
The Coal Authority - Property Searches	March 2014	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	July 2011	Annually
Radon Potential - Radon Protection Measures		
British Geological Survey - National Geoscience Information Service	July 2011	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries		
Thomson Directories	January 2022	Quarterly
Fuel Station Entries		
Catalist Ltd - Experian	November 2021	Quarterly
Gas Pipelines		
National Grid	October 2021	Bi-Annually
Underground Electrical Cables		
National Grid	May 2021	Bi-Annually
Sensitive Land Use	**Version**	**Update Cycle**
Ancient Woodland		
Natural Resources Wales	September 2018	Bi-Annually
Areas of Adopted Green Belt		
Denbighshire County Council	October 2020	Quarterly
Wrexham County Borough Council	October 2020	Quarterly
Areas of Unadopted Green Belt		
Denbighshire County Council	October 2020	Quarterly
Wrexham County Borough Council	October 2020	Quarterly
Areas of Outstanding Natural Beauty		
Natural Resources Wales	June 2019	Bi-Annually
Environmentally Sensitive Areas		
The National Assembly for Wales - GI Services (Department of Planning & Countryside)	January 2017	
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Denbighshire County Council	August 2018	Bi-Annually
Wrexham County Borough Council	August 2018	Bi-Annually
Marine Nature Reserves		
Natural Resources Wales	August 2018	Bi-Annually
National Nature Reserves		
Natural Resources Wales	July 2019	Bi-Annually
National Parks		
Natural Resources Wales	February 2018	Annually
Nitrate Vulnerable Zones		
The National Assembly for Wales - GI Services (Department of Planning & Countryside)	April 2016	
Natural Resources Wales	July 2019	Bi-Annually
Ramsar Sites		
Natural Resources Wales	July 2019	Bi-Annually
Sites of Special Scientific Interest		
Natural Resources Wales	March 2020	Bi-Annually
Special Areas of Conservation		
Natural Resources Wales	August 2020	Bi-Annually
Special Protection Areas		
Natural Resources Wales	August 2018	Bi-Annually

Data Suppliers

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	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Natural Resources Wales** Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	**Wrexham County Borough Council - Environmental Health Department** Crown Buildings, P O Box 1297, Wrexham, Clwyd, LL13 8ZE	Telephone: 01978 297038 Fax: 01978 292502 Website: www.wrexham.gov.uk
4	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**Wrexham County Borough Council** Lampet Street, Guildhall, Wrexham, Clwyd, LL11 1WL	Telephone: 01978 292000 Fax: 01978 292502 Website: www.wrexham.gov.uk
7	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

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

Ordnance Survey Plan 1:10,000

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

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

1:10,000 Raster Mapping

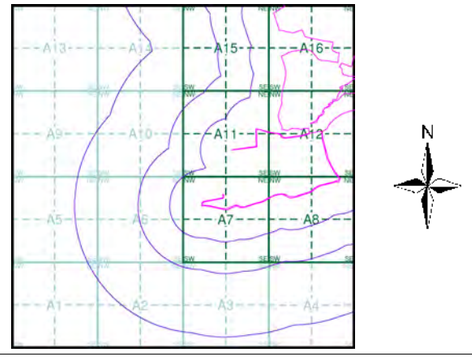
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Mud
Sand
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or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

rps

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Denbighshire	1:10,560	1879	2
Denbighshire	1:10,560	1900	3
Denbighshire	1:10,560	1914 - 1915	4
Denbighshire	1:10,560	1938	5
Denbighshire	1:10,560	1938 - 1954	6
Denbighshire	1:10,560	1954	7
Ordnance Survey Plan	1:10,000	1963 - 1964	8
Ordnance Survey Plan	1:10,000	1976 - 1979	9
Ordnance Survey Plan	1:10,000	1993	10
10K Raster Mapping	1:10,000	2000	11
Street View	Variable		12

Historical Map - Slice A



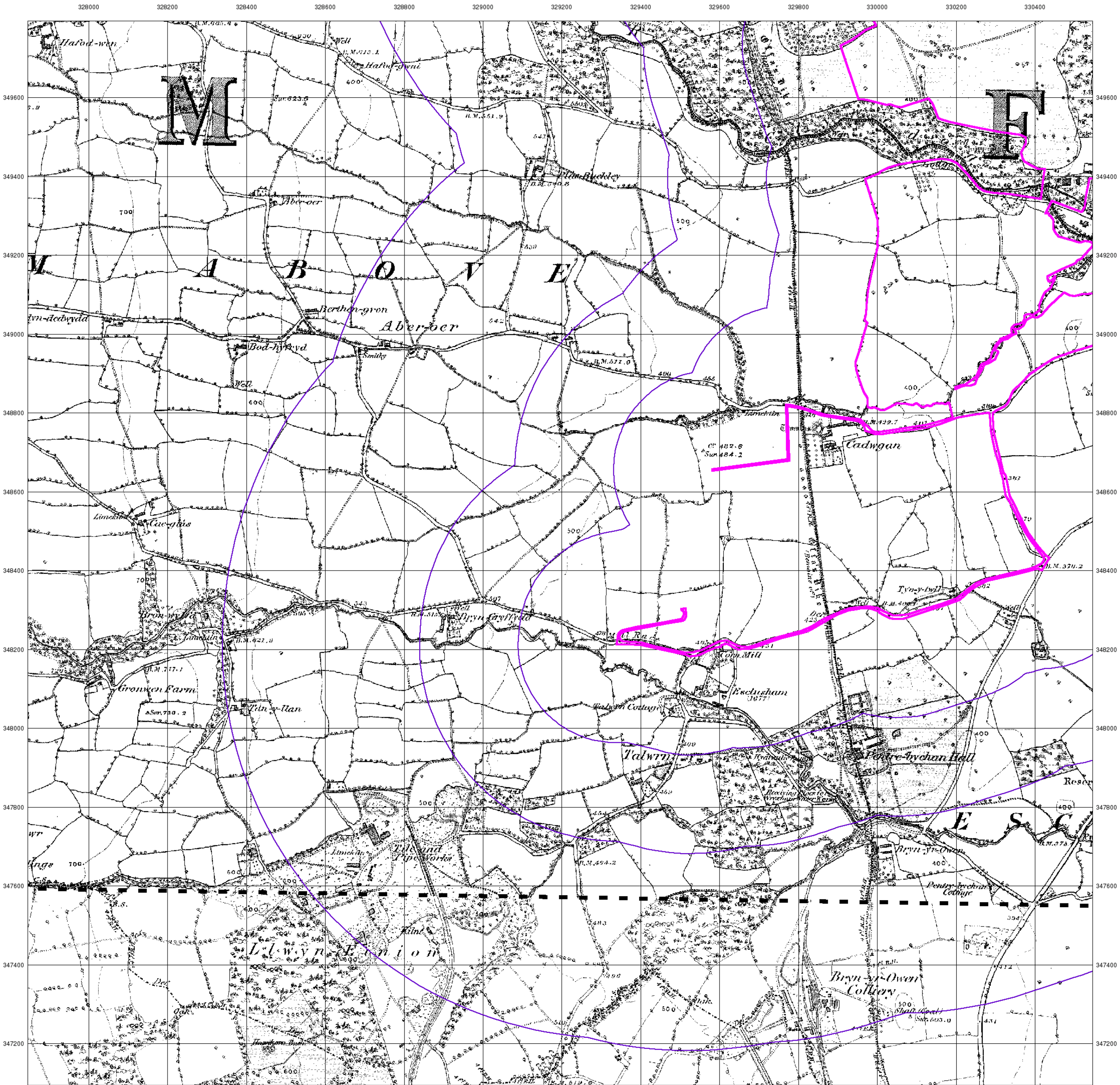
Order Details

Order Number: 291151542_1_1
Customer Ref: JER8537
National Grid Reference: 329550, 348490
Slice: A
Site Area (Ha): 145.64
Search Buffer (m): 1000

Site Details

Site at 330330, 350090

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



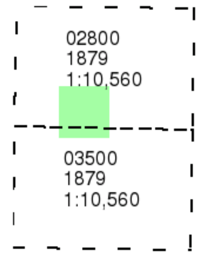
Denbighshire

Published 1879

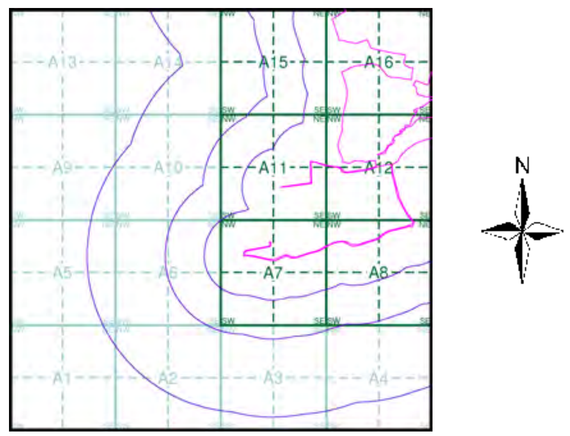
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



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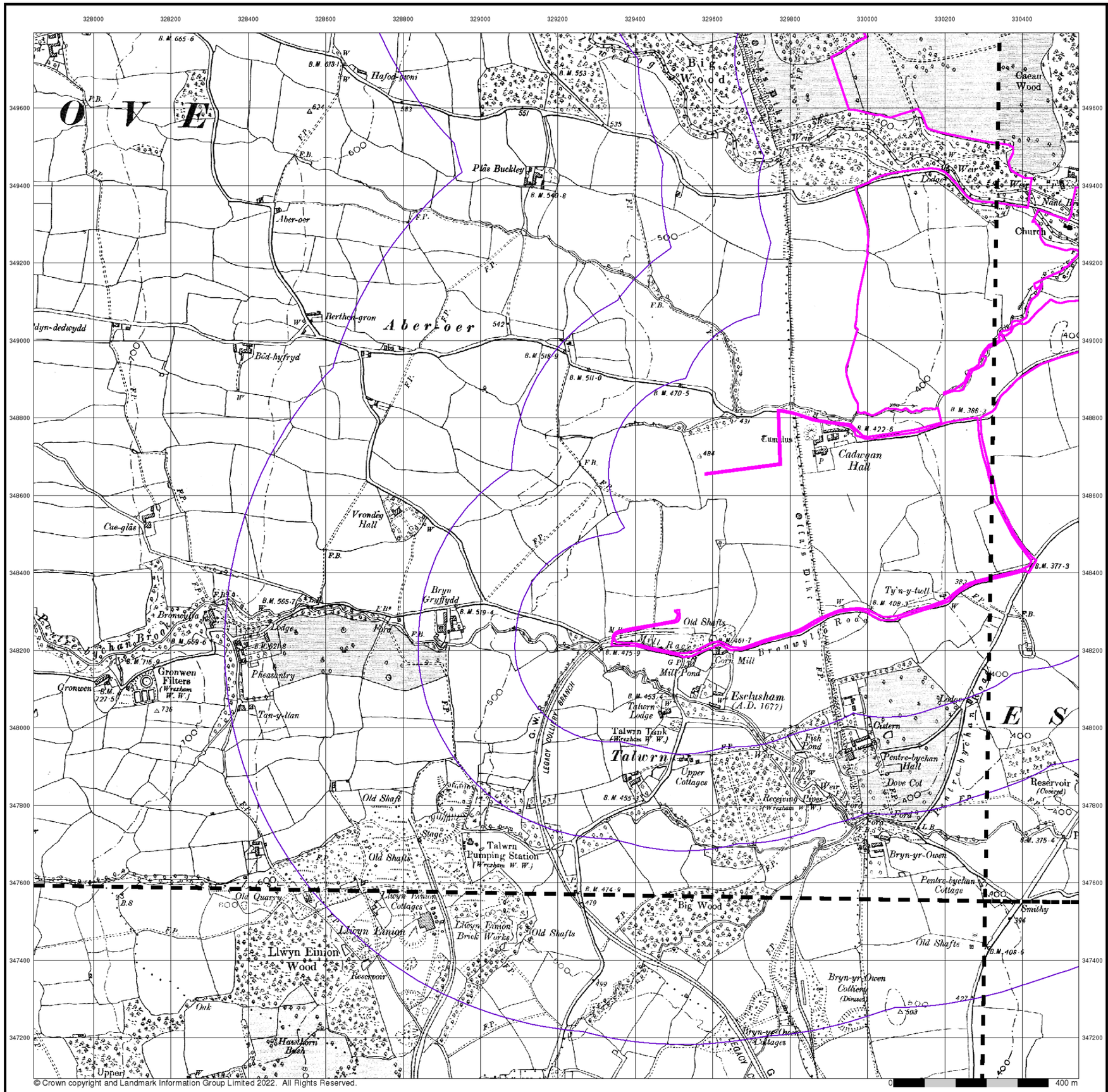

Denbighshire

Published 1900

Source map scale - 1:10,560

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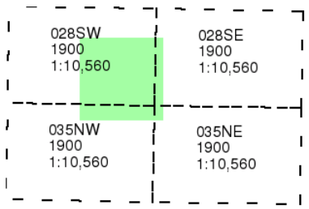
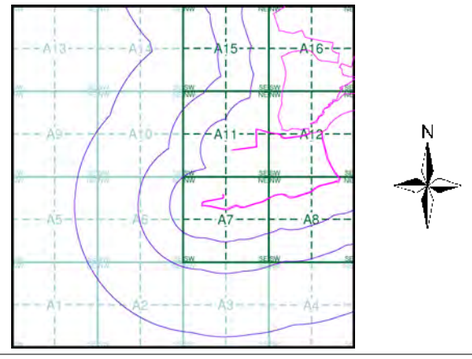


Historical Map - Slice A



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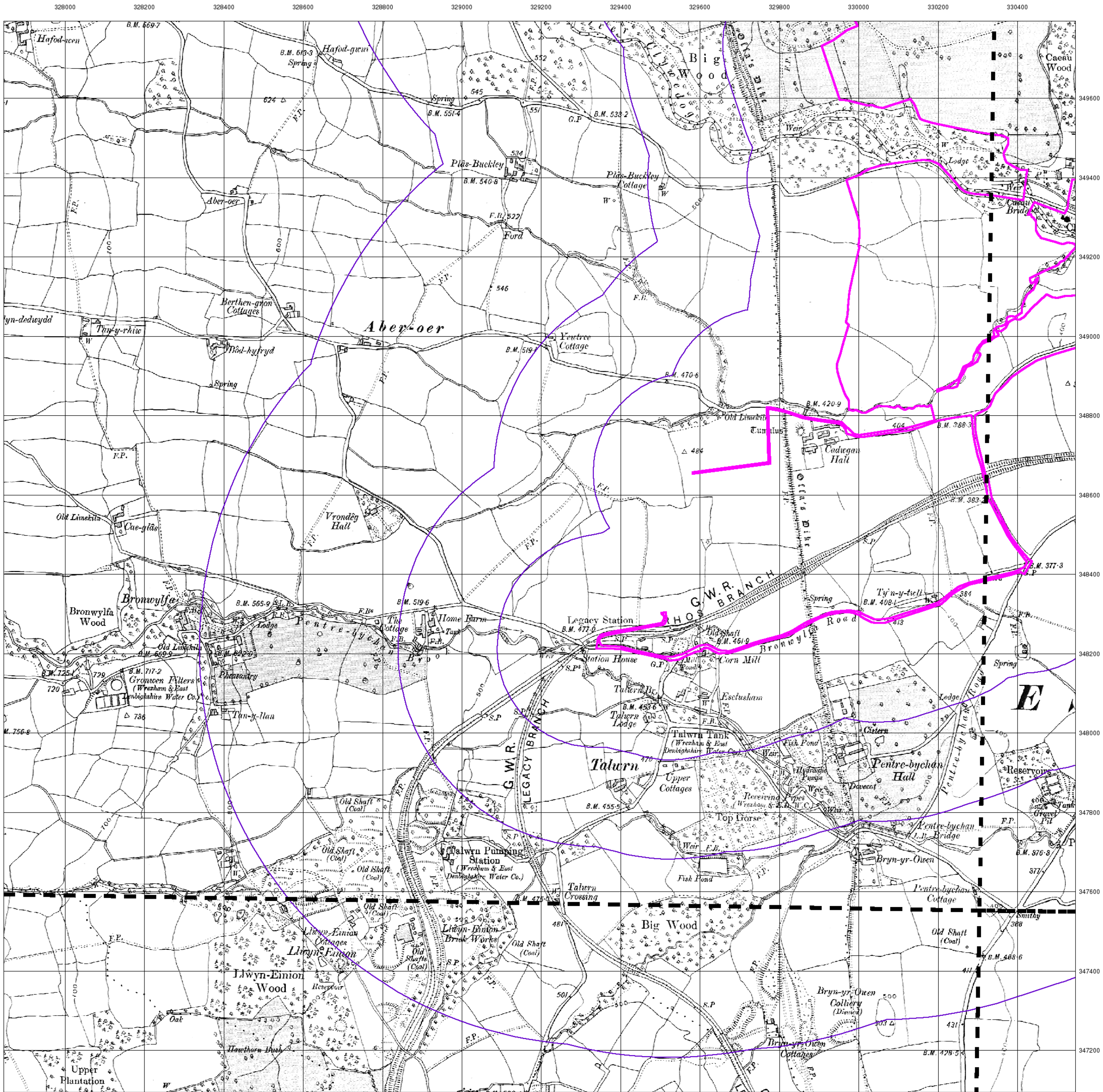

Denbighshire

Published 1914 - 1915

Source map scale - 1:10,560

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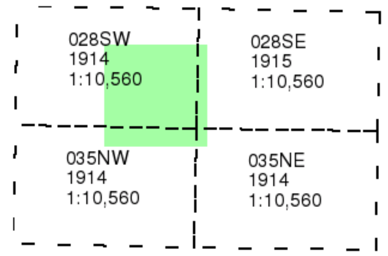
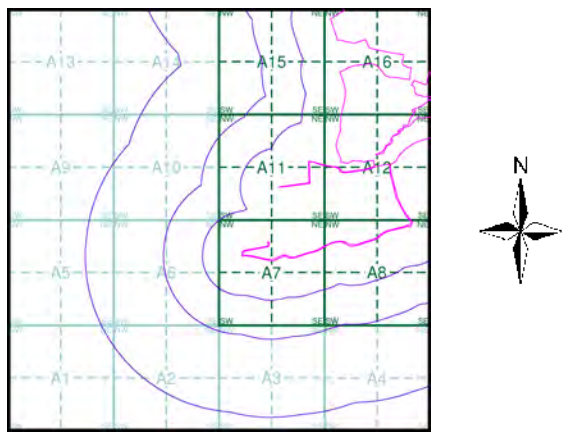


Historical Map - Slice A



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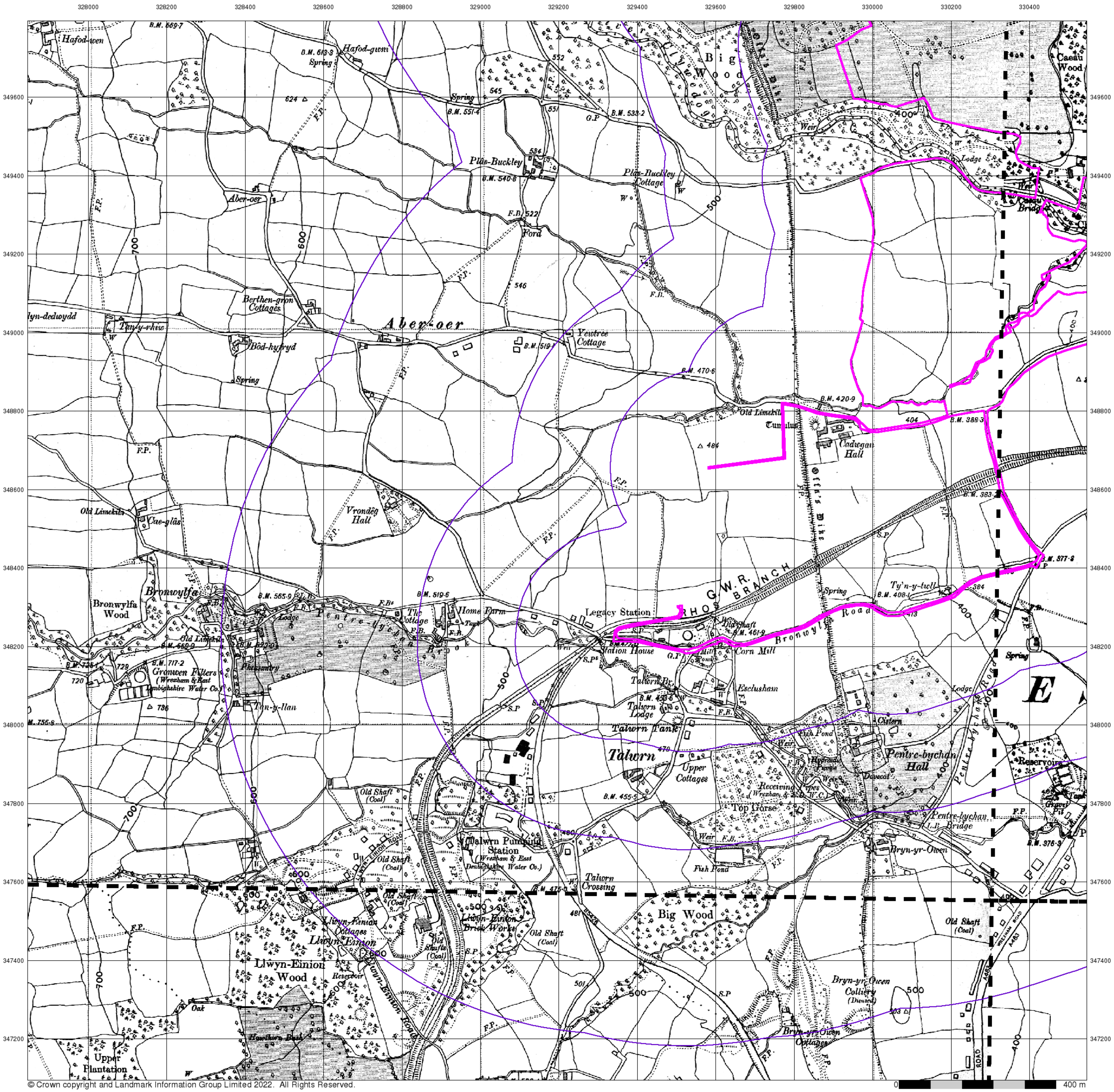

Denbighshire

Published 1938

Source map scale - 1:10,560

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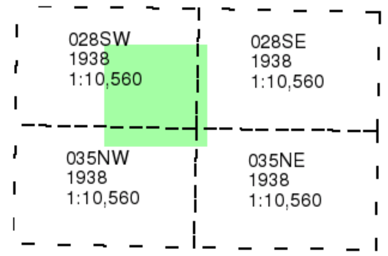
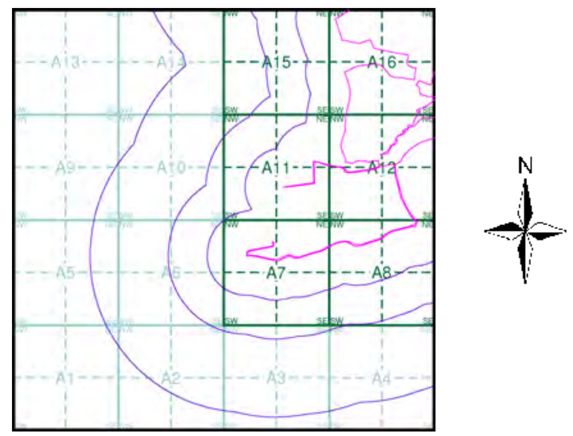


Historical Map - Slice A



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National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
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Site Details

Site at 330330, 350090

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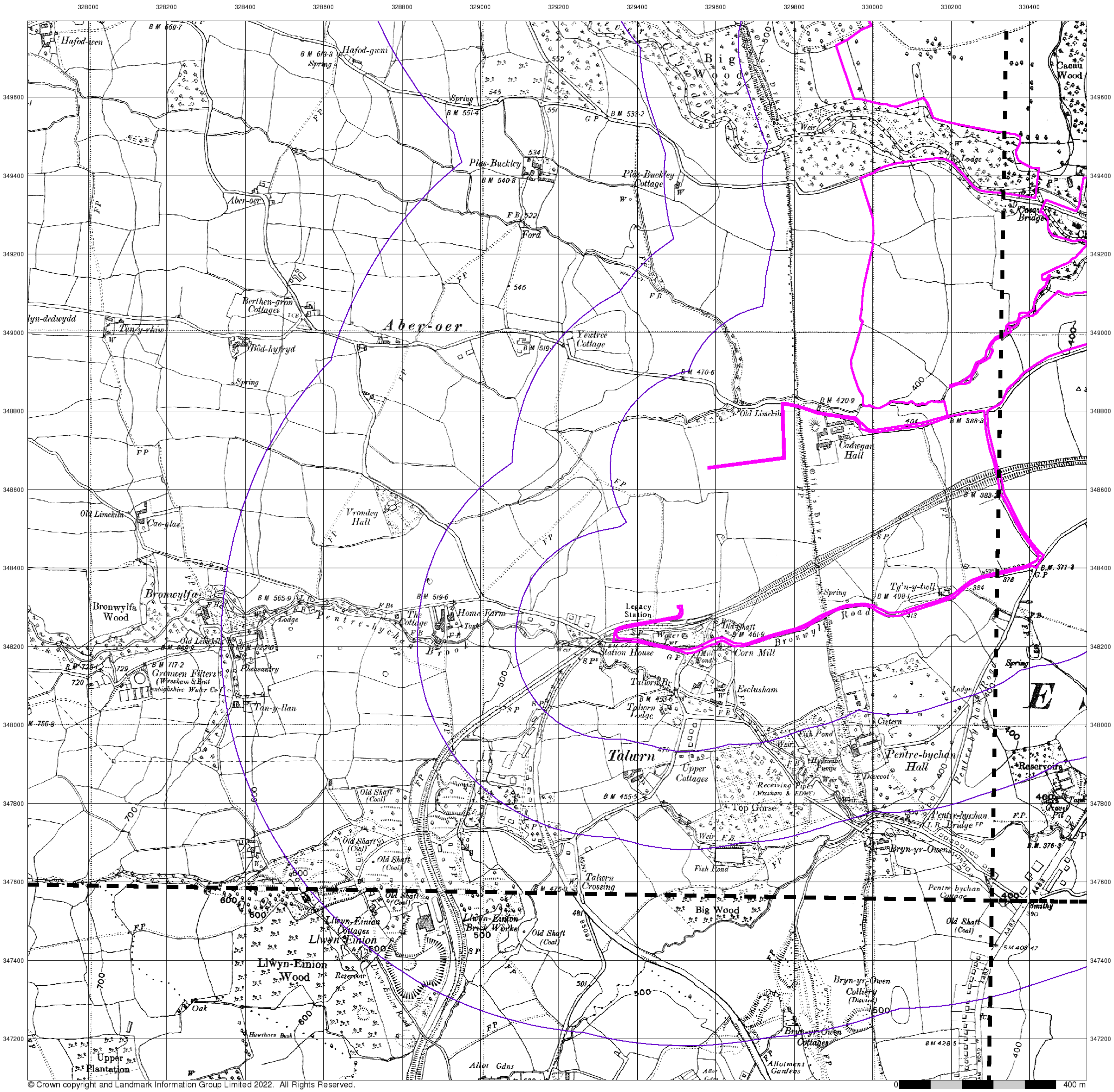

Denbighshire

Published 1938 - 1954

Source map scale - 1:10,560

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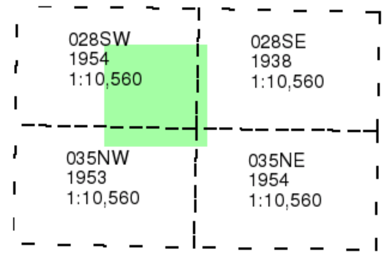
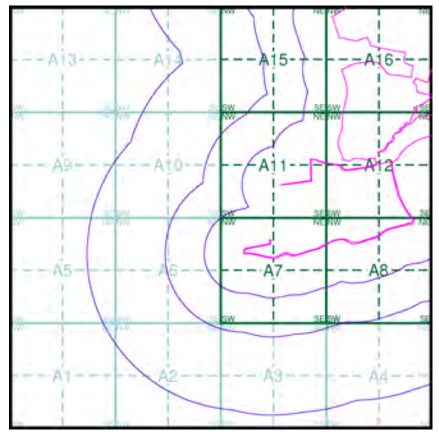
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 291151542_1_1
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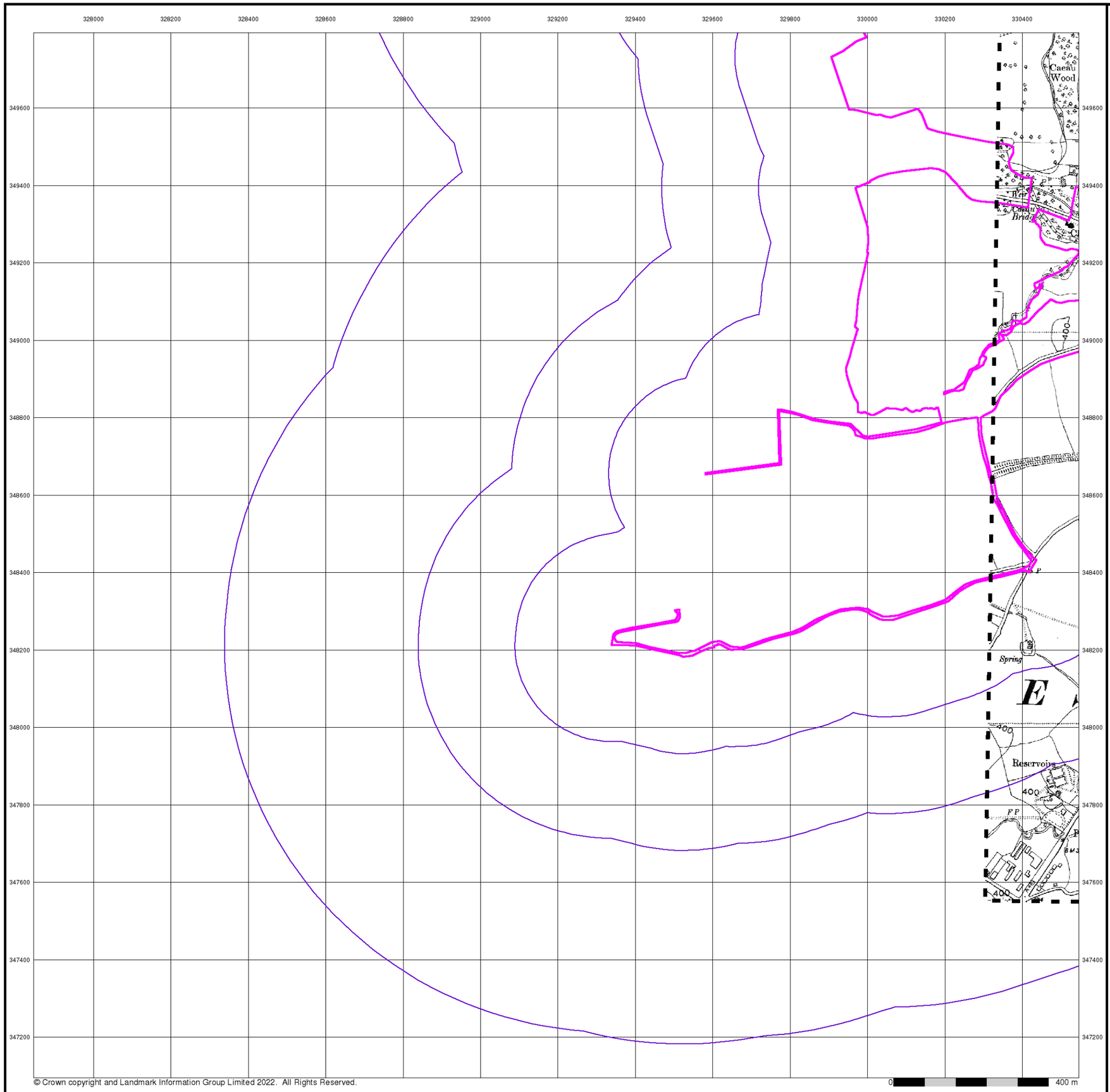


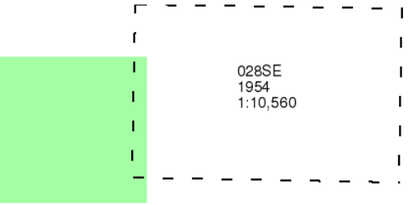
Denbighshire

Published 1954

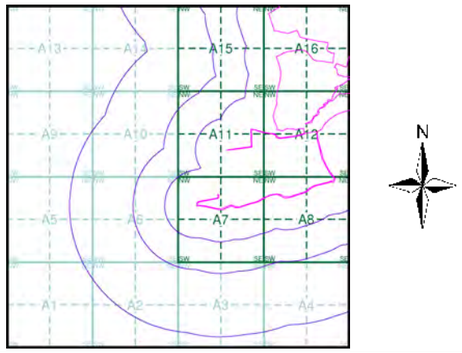
Source map scale - 1:10,560

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:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
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Site Details

Site at 330330, 350090

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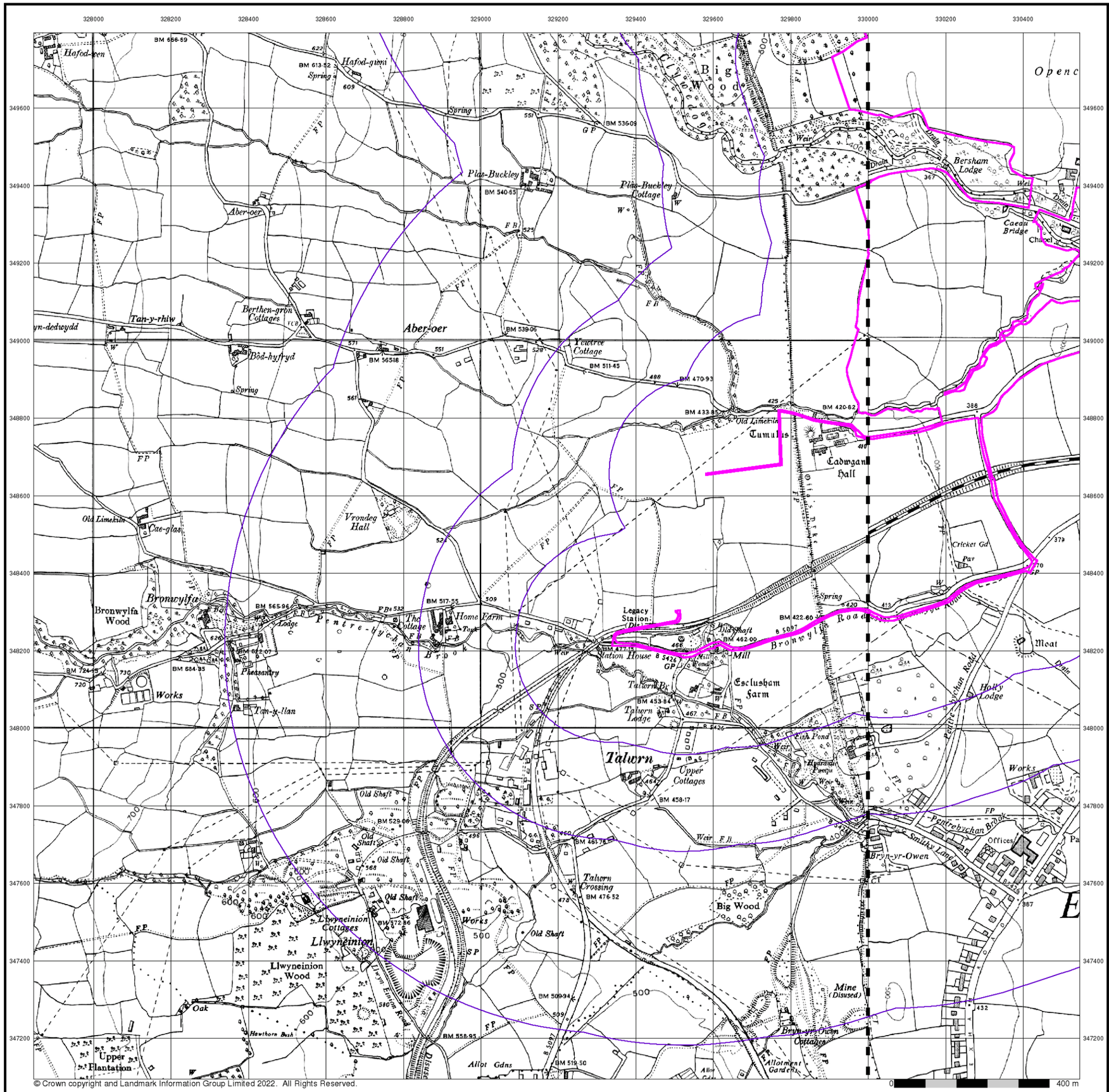
Web: www.envirocheck.co.uk



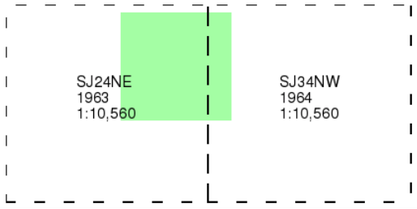
Ordnance Survey Plan

Published 1963 - 1964

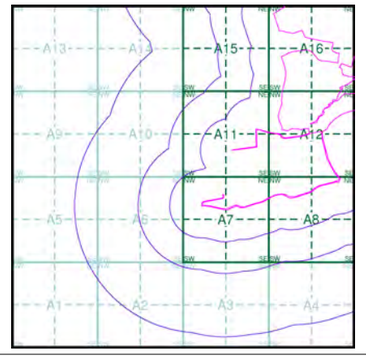
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	291151542_1_1
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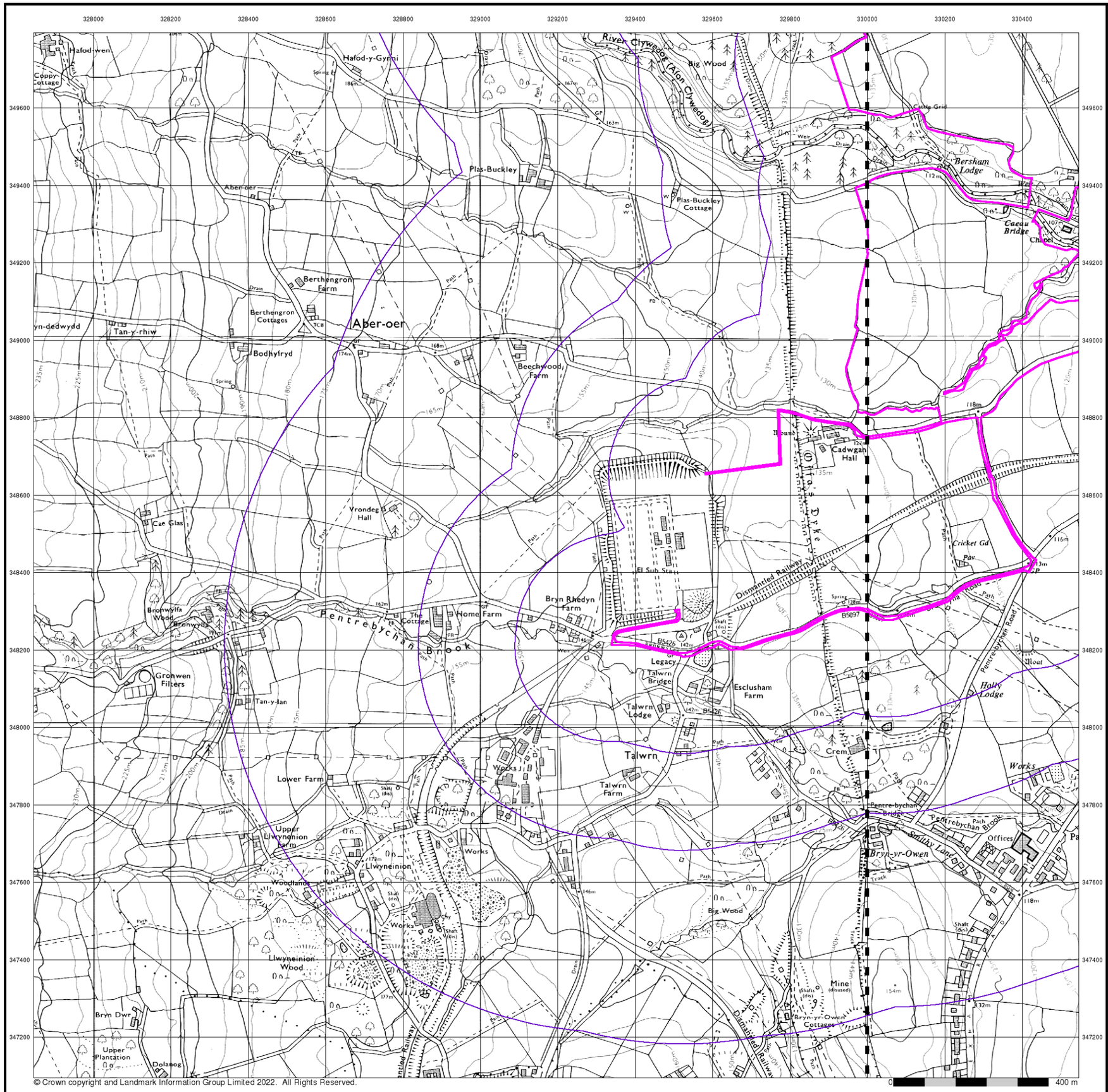

Ordnance Survey Plan

Published 1976 - 1979

Source map scale - 1:10,000

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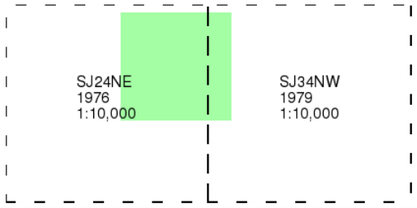
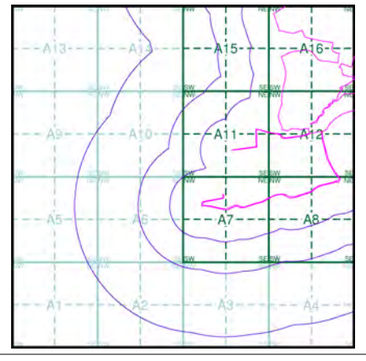
Map Name(s) and Date(s)



Historical Map - Slice A



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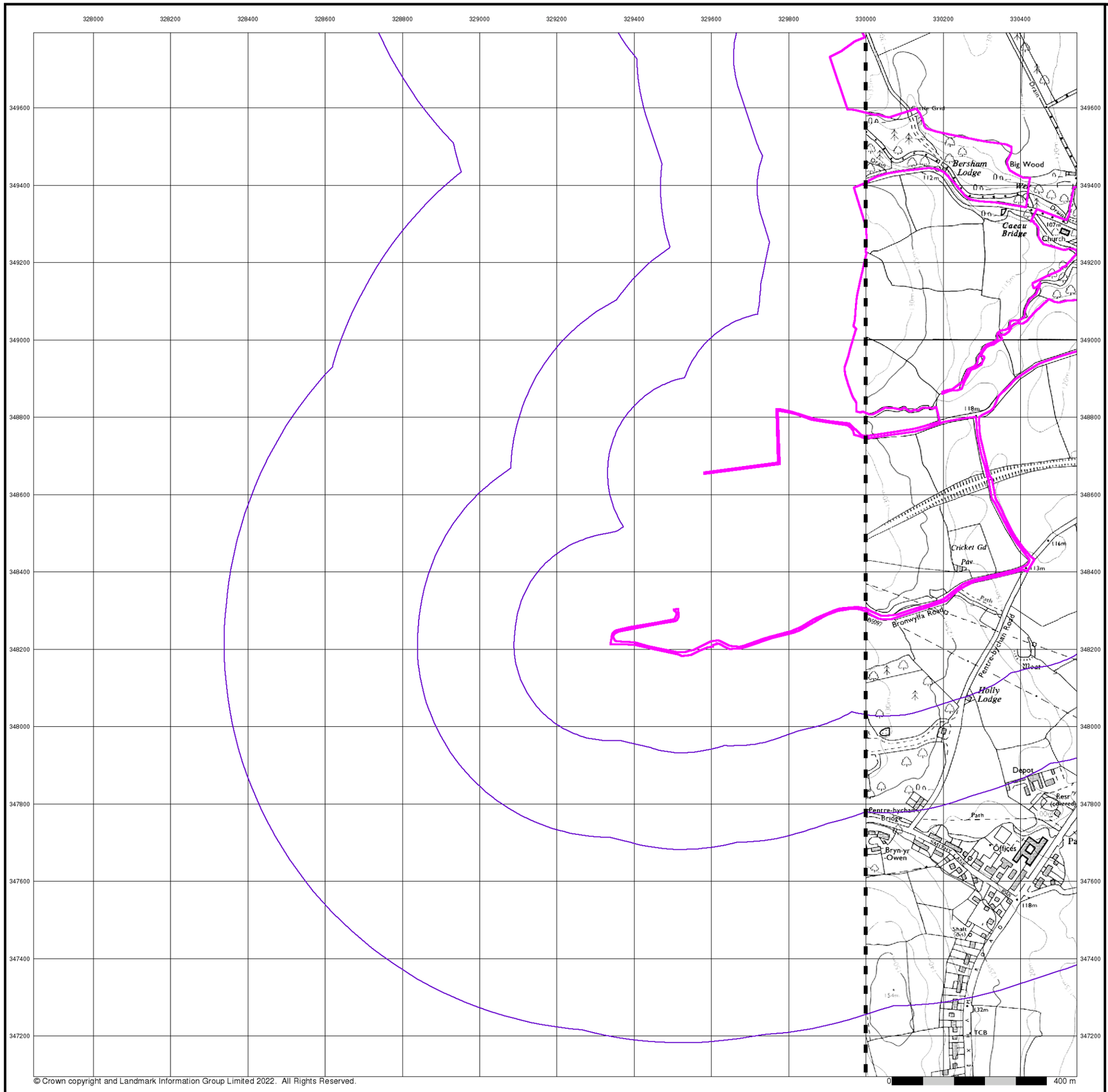


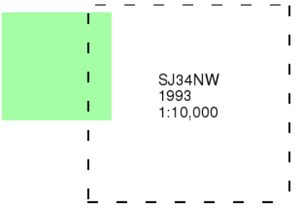
Ordnance Survey Plan

Published 1993

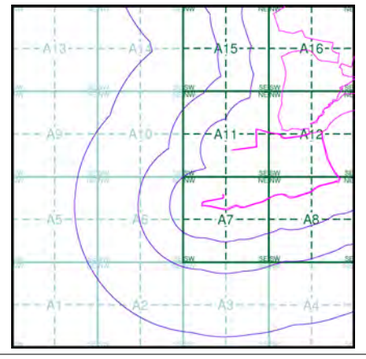
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



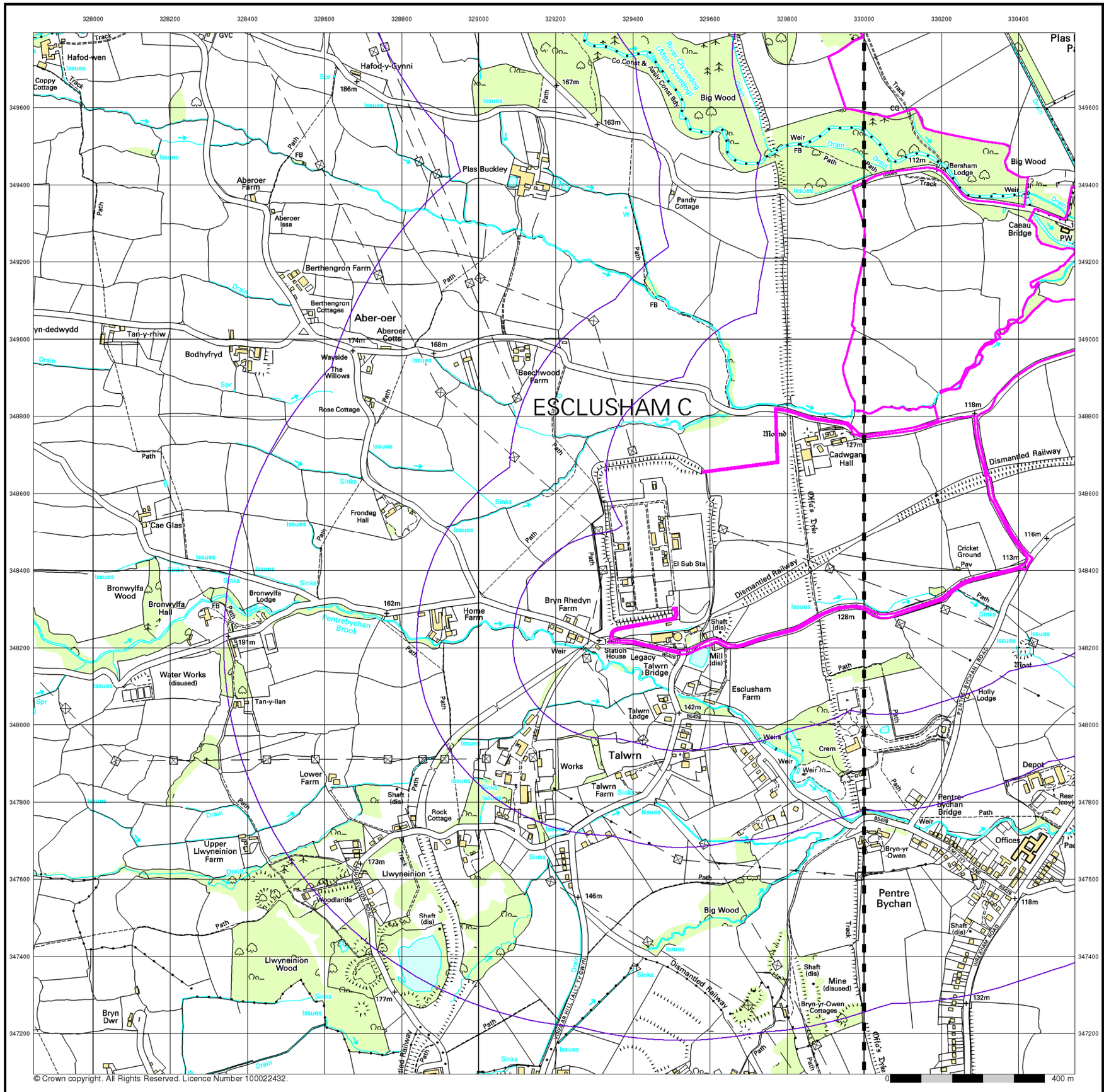
Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	1000

Site Details

Site at 330330, 350090

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



0 400 m

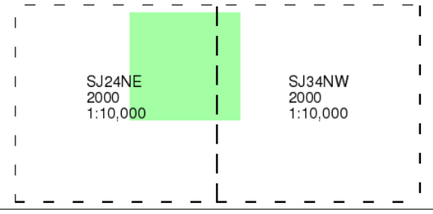
10k Raster Mapping

Published 2000

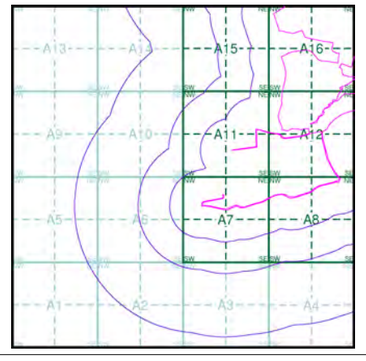
Source map scale - 1:10,000

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)



Historical Map - Slice A



Order Details

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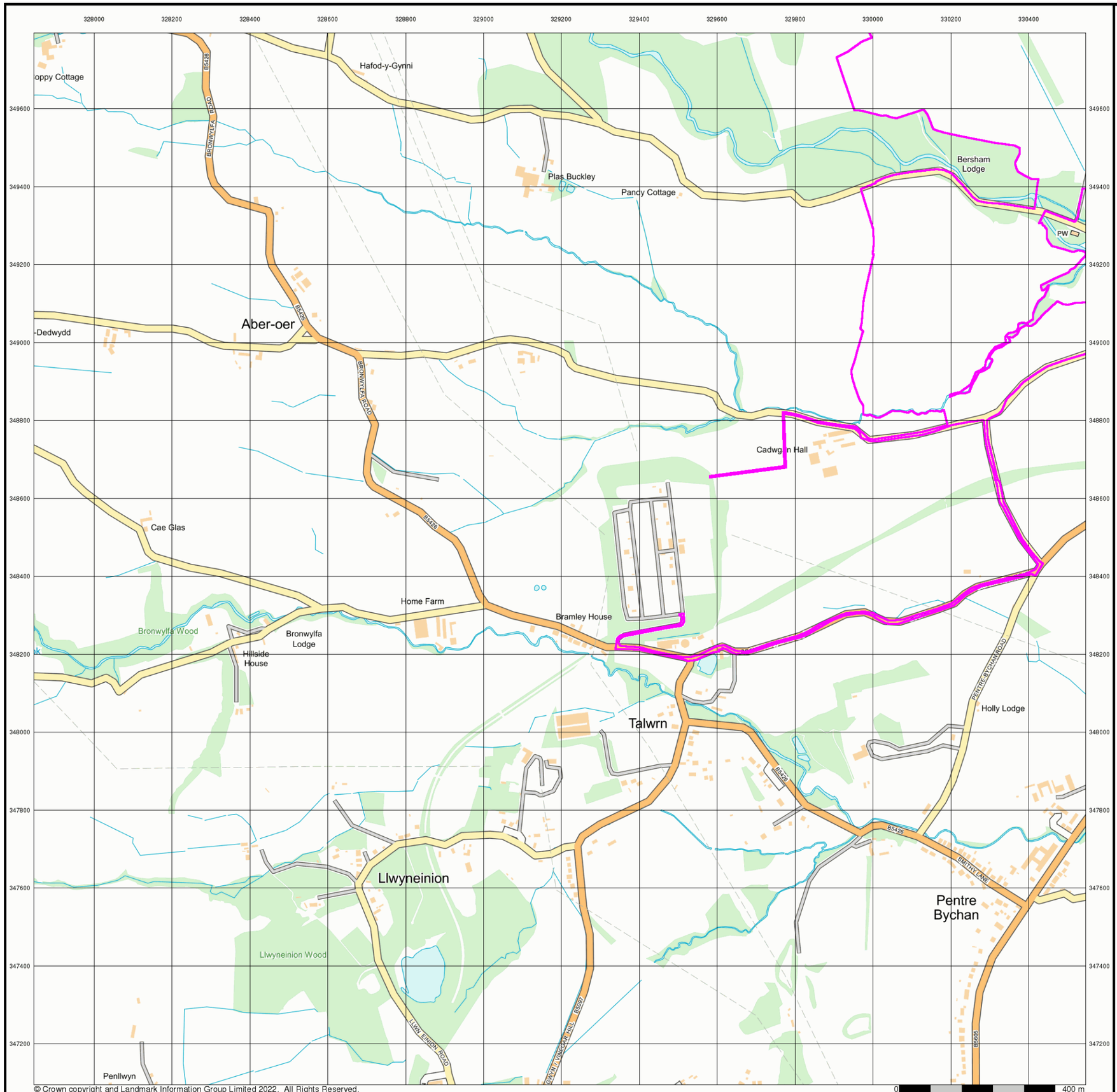


Street View

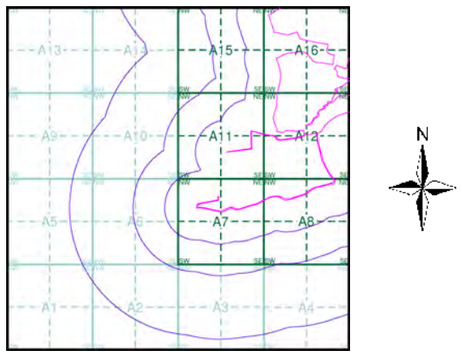
Published 2022

Source map scale - 1:10,000

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

Map Name(s) and Date(s)

Street View Map - Slice A



Order Details

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Site Details

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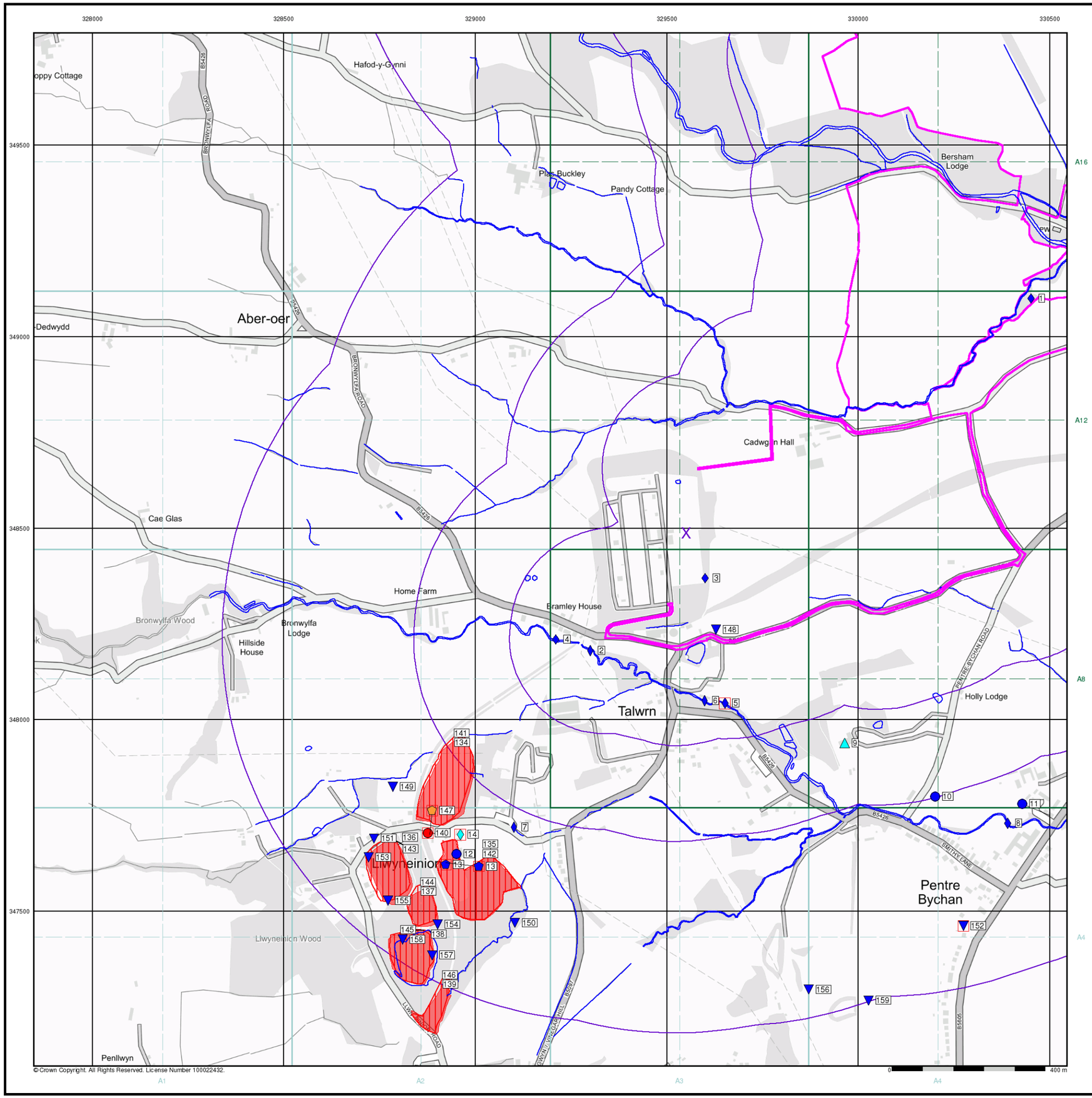


General

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

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- 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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

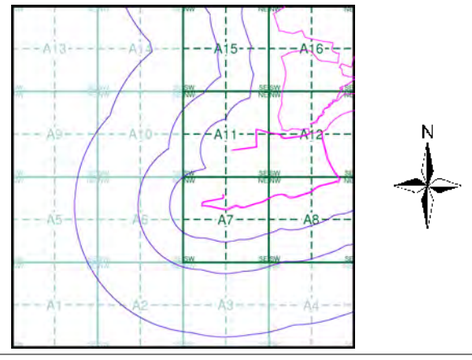
Waste

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

Hazardous Substances

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

Site Sensitivity Map - Slice A



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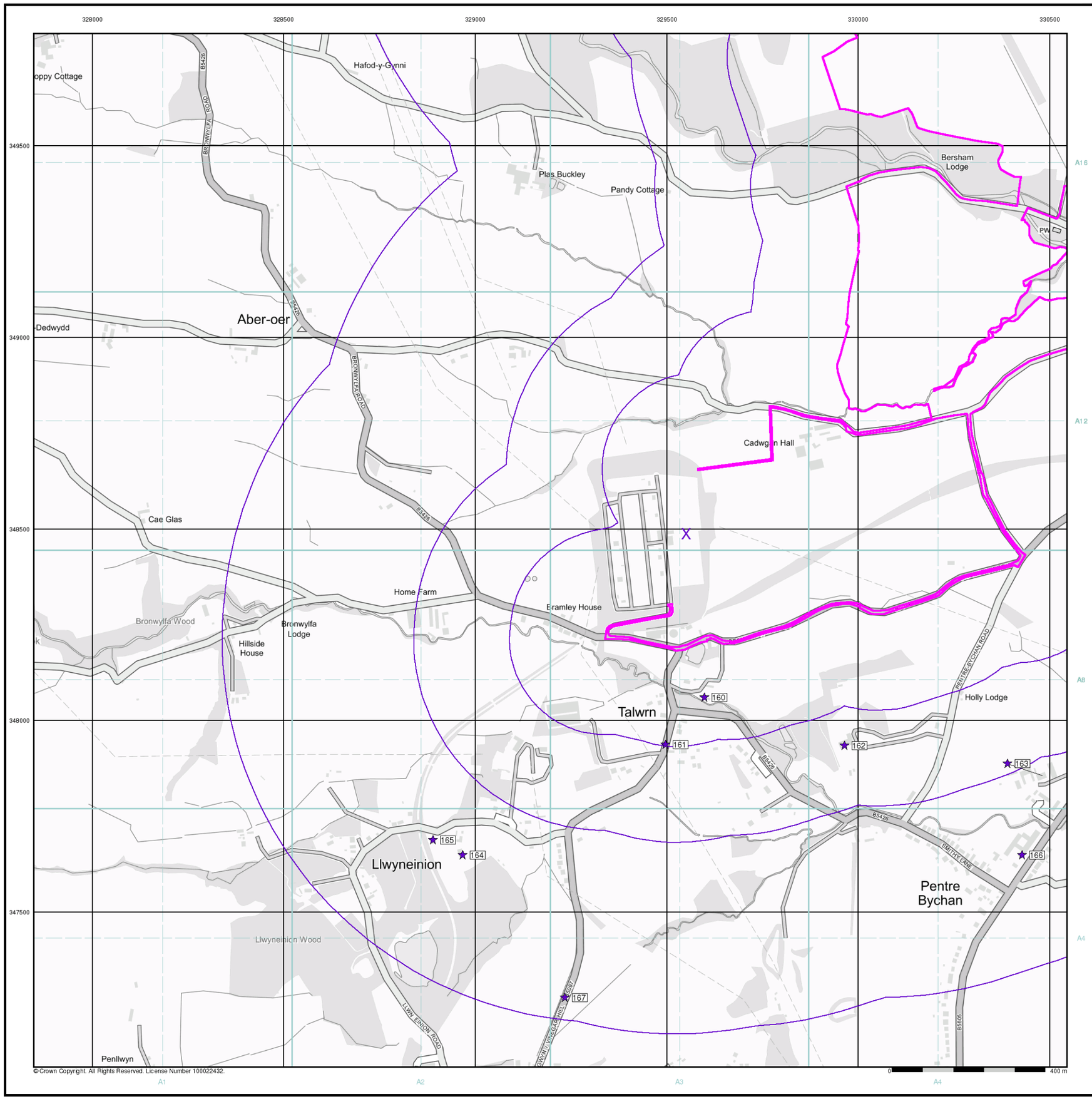


Industrial Land Use Map

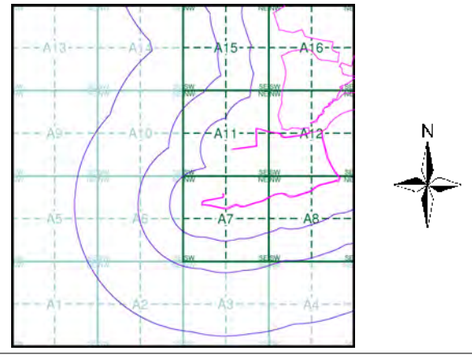
General

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

Industrial Land Use

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

Industrial Land Use Map - Slice A



Order Details

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Search Buffer (m):	1000

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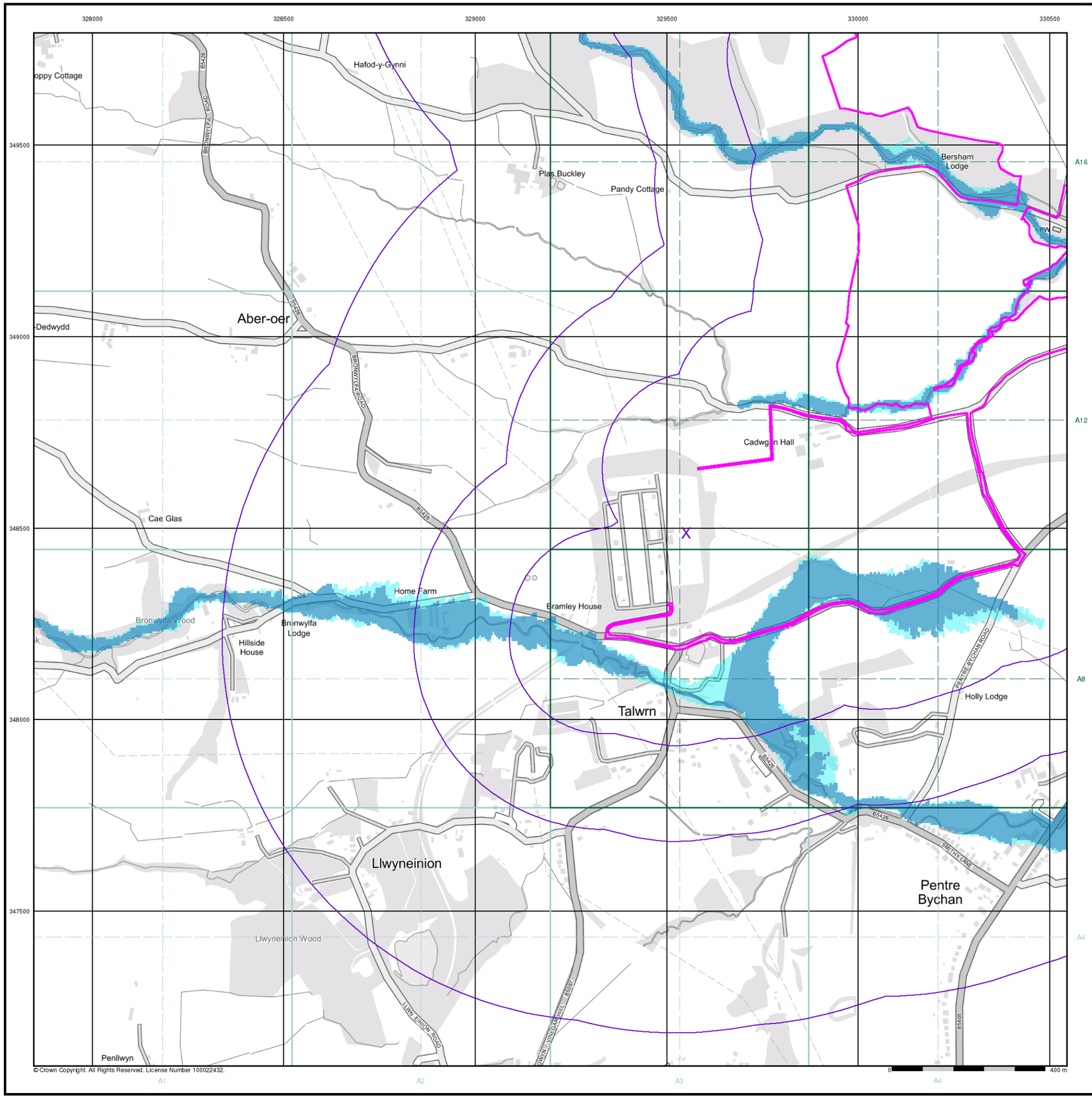


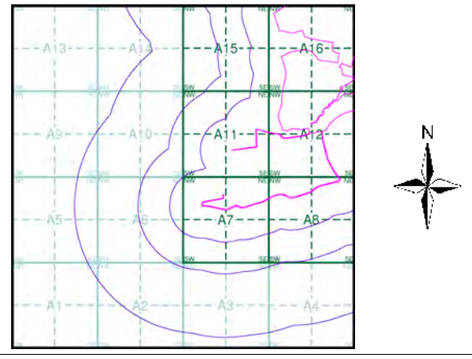
General

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

Agency and Hydrological (Flood)

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

Flood Map - Slice A



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	1000

Site Details

Site at 330330, 350090

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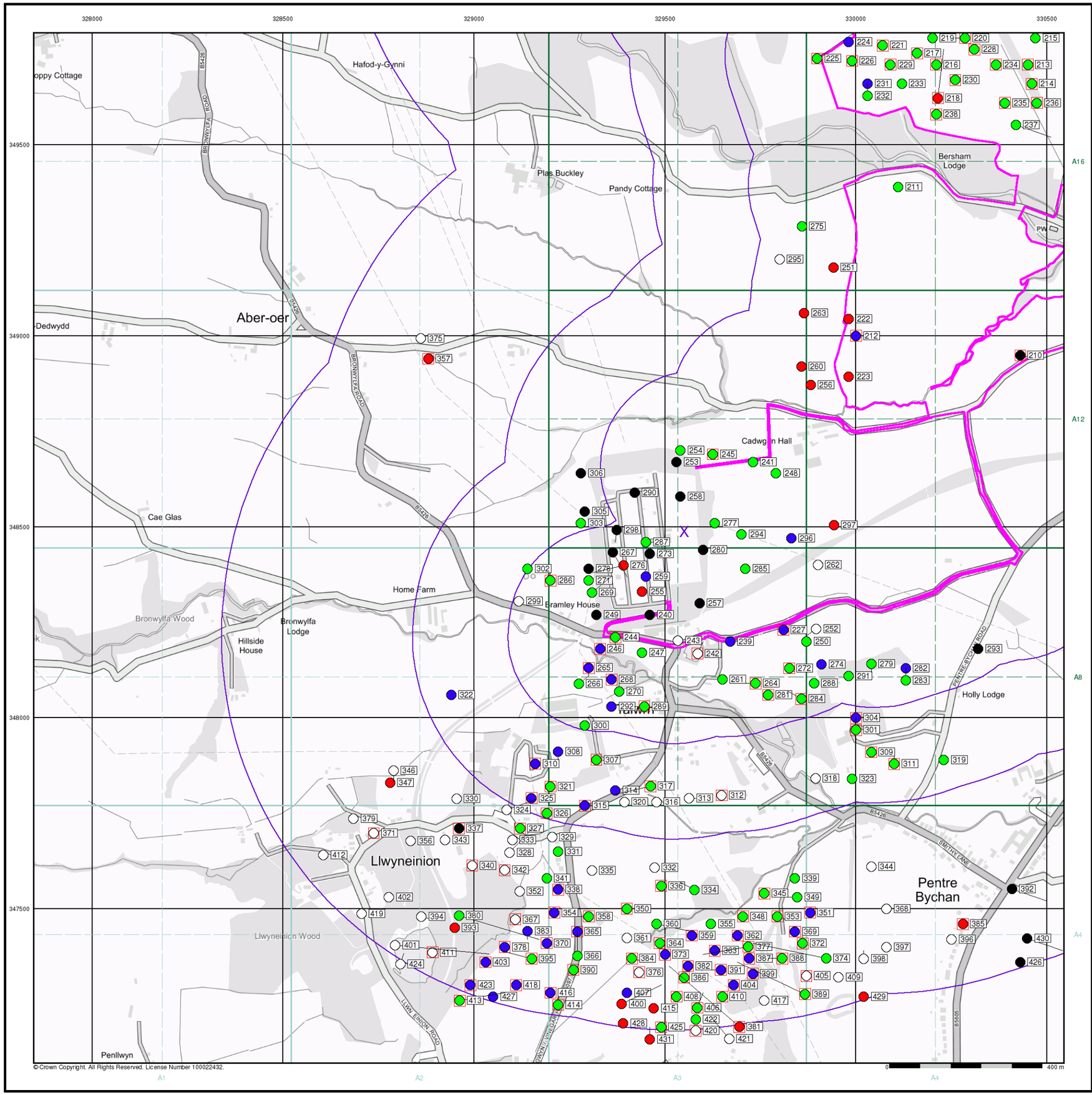


General

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

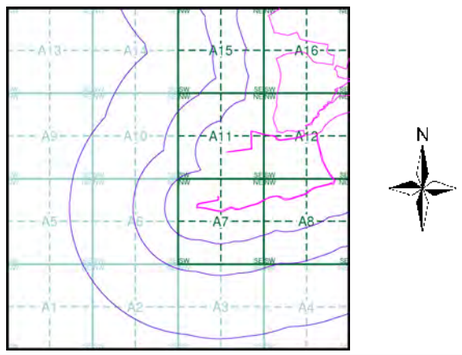
Agency and Hydrological (Boreholes)

- 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:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
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Site Details

Site at 330330, 350090

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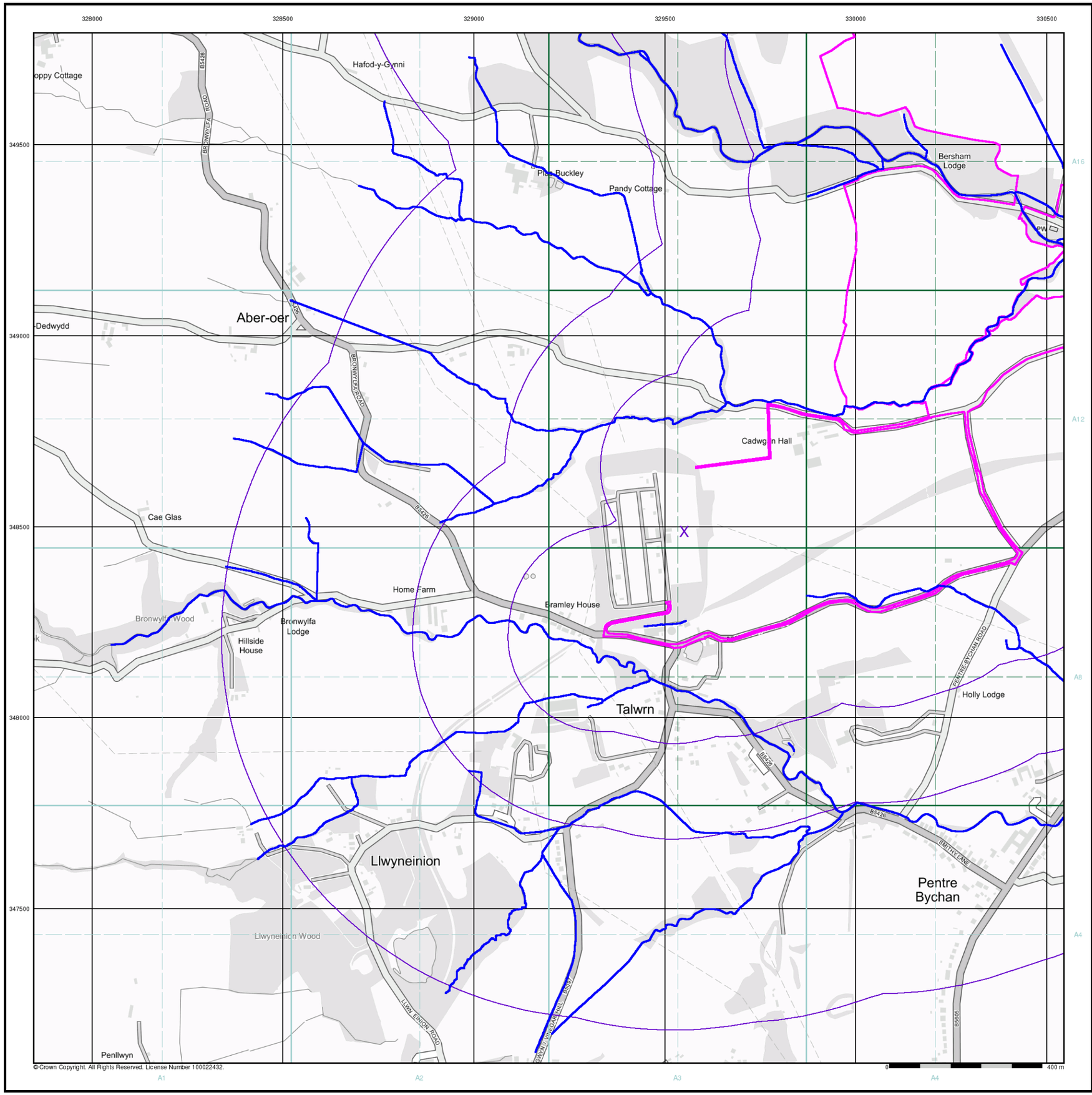


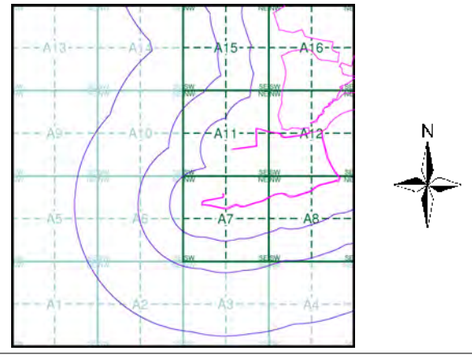
General

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

OS Water Network Data

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

OS Water Network Map - Slice A



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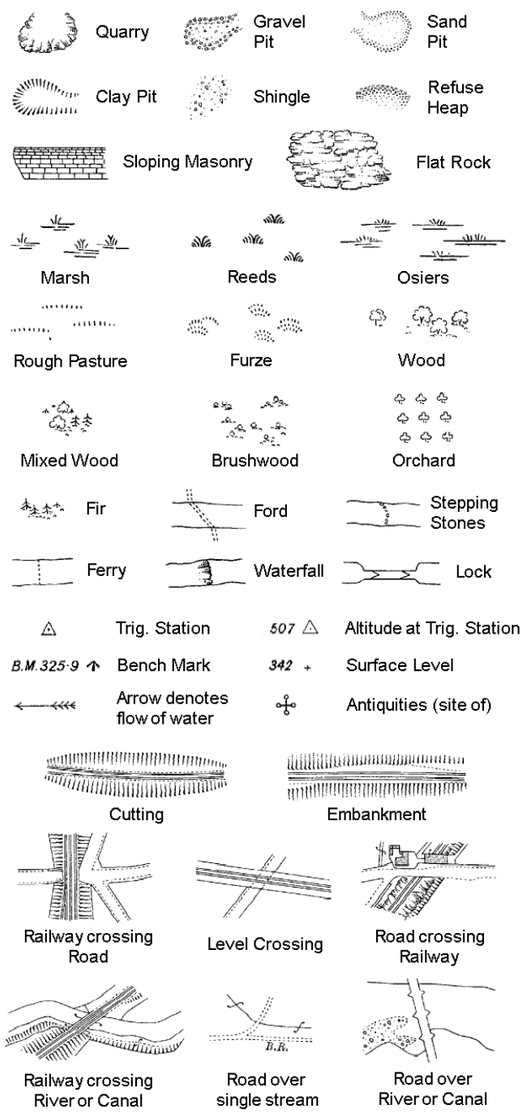
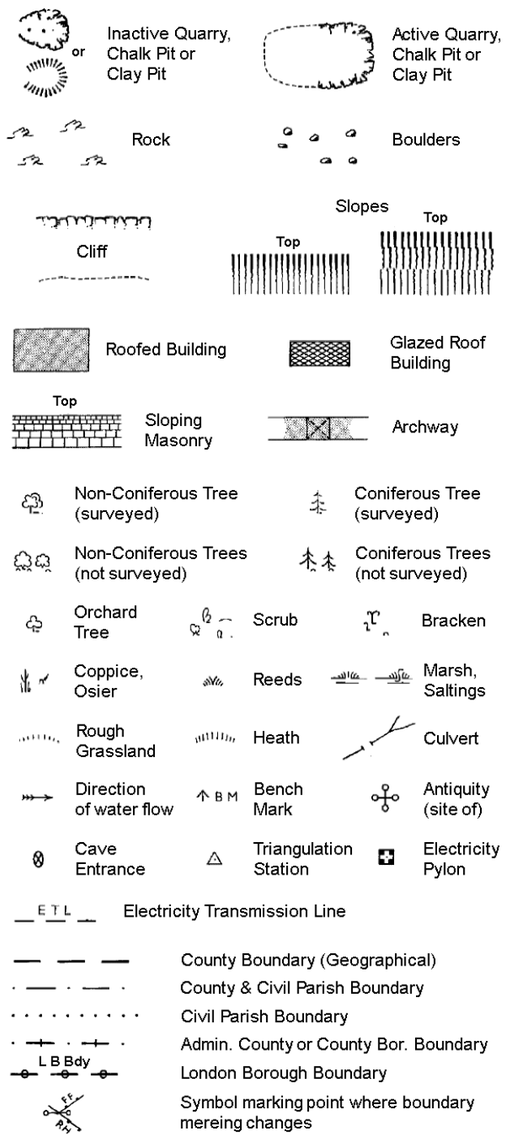
Historical Mapping Legends

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



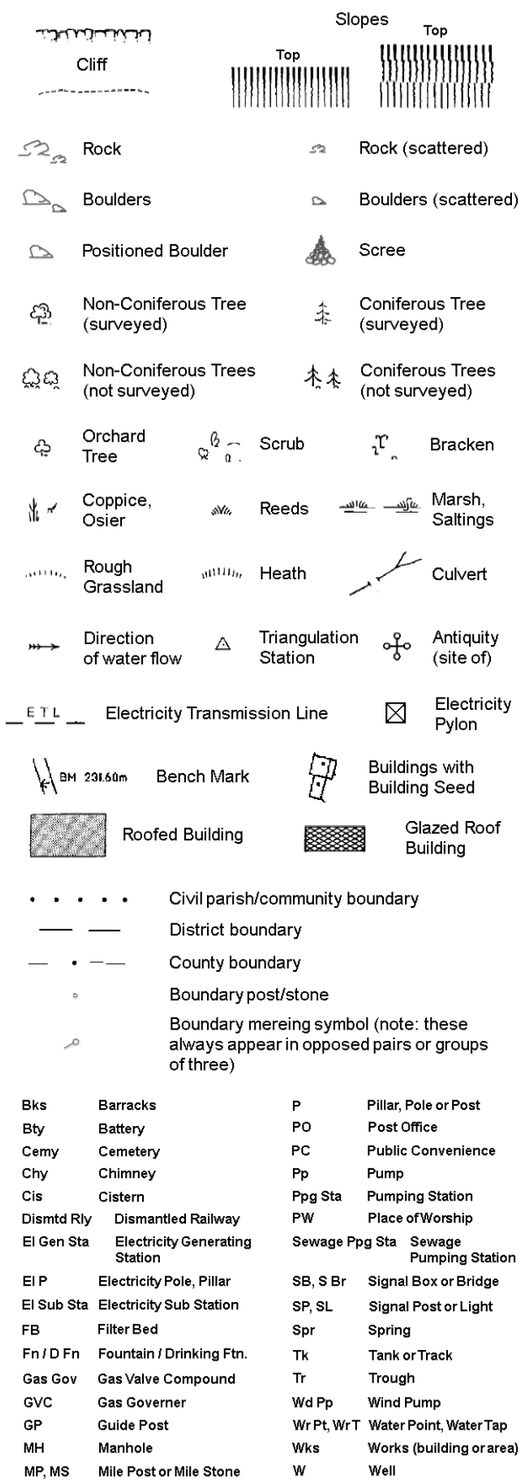
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



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

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



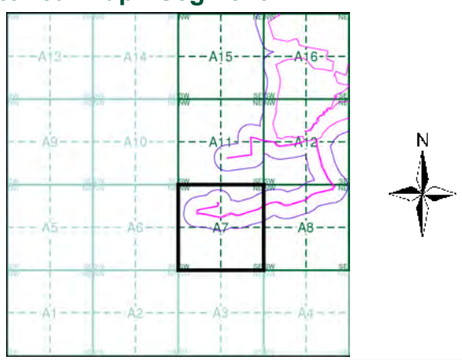
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

rps

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Denbighshire	1:2,500	1873	2
Denbighshire	1:2,500	1899	3
Denbighshire	1:2,500	1912	4
Ordnance Survey Plan	1:2,500	1963	5
Additional SIMs	1:2,500	1963	6
Additional SIMs	1:2,500	1988	7
Large-Scale National Grid Data	1:2,500	1993	8

Historical Map - Segment A7



Order Details

Order Number: 291151542_1_1
Customer Ref: JER8537
National Grid Reference: 329550, 348490
Slice: A
Site Area (Ha): 145.64
Search Buffer (m): 100

Site Details

Site at 330330, 350090

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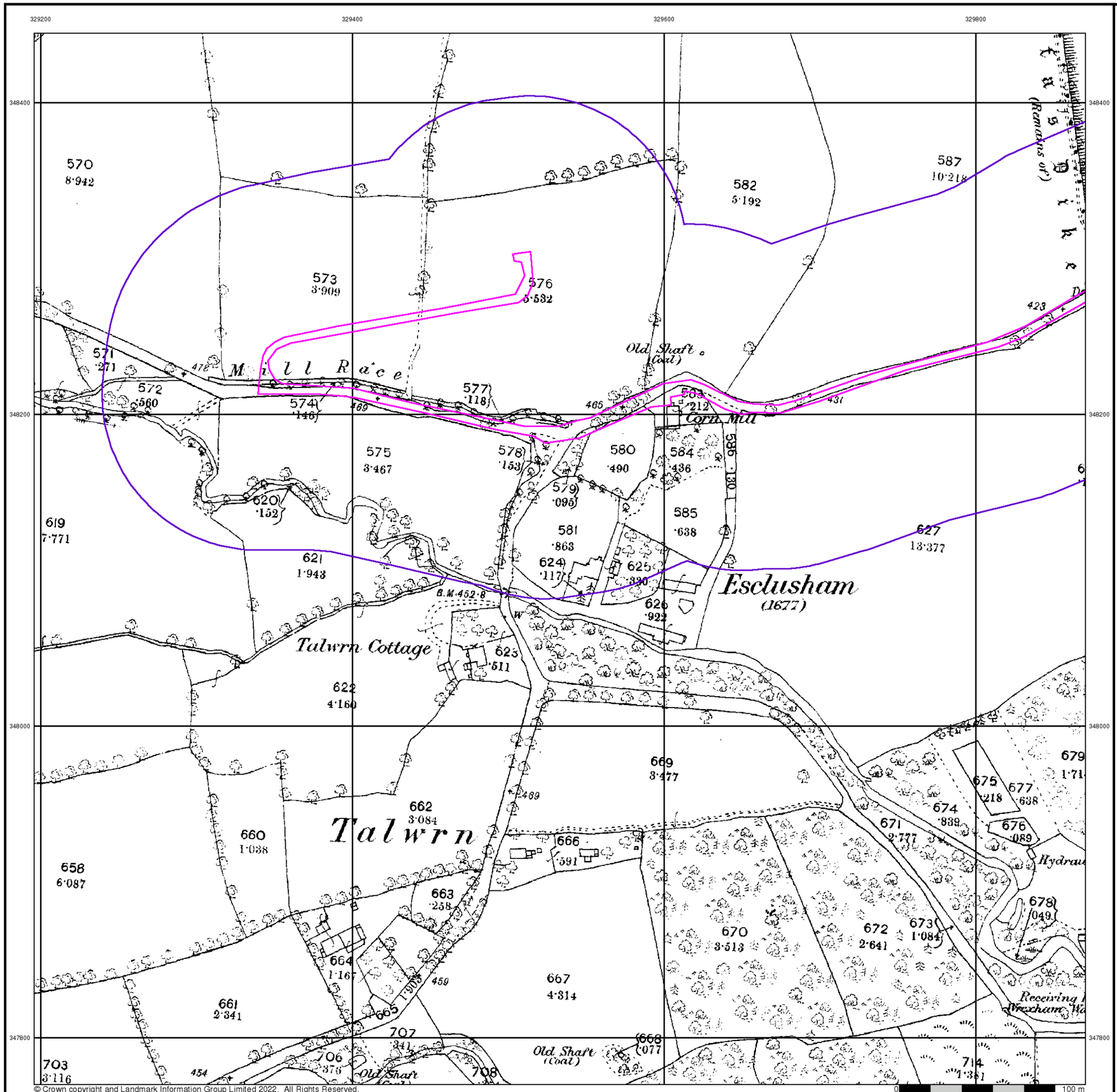
Web: www.envirocheck.co.uk



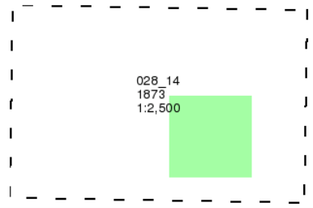
Denbighshire

Published 1873

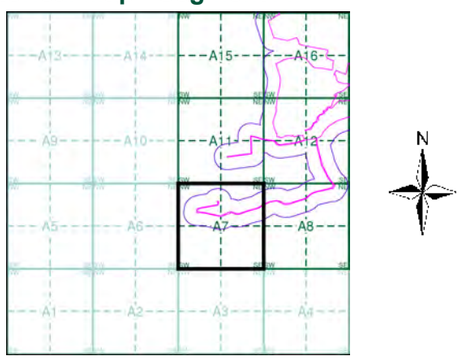
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A7



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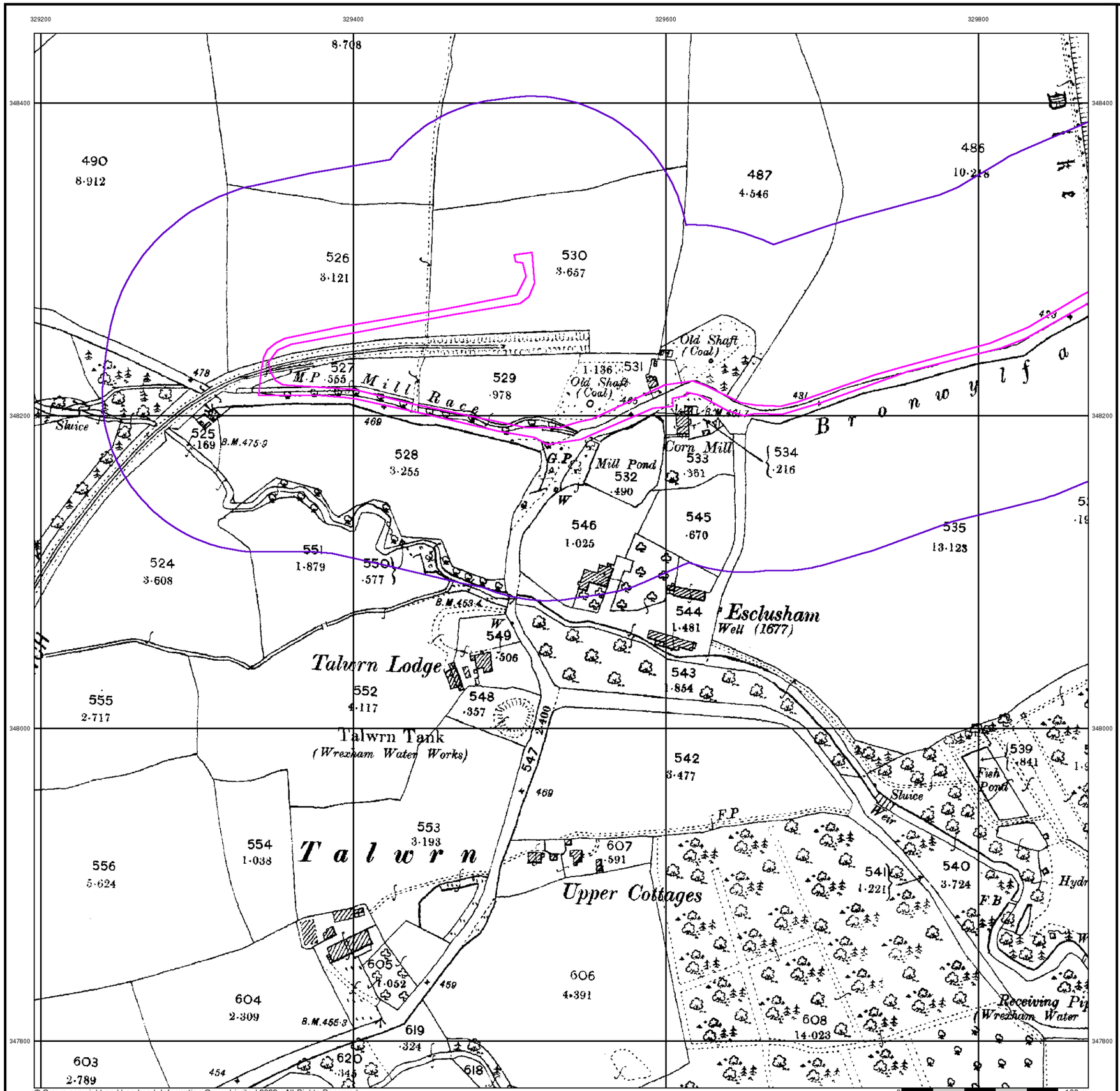

rps

Denbighshire

Published 1899

Source map scale - 1:2,500

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

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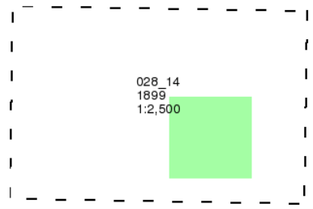
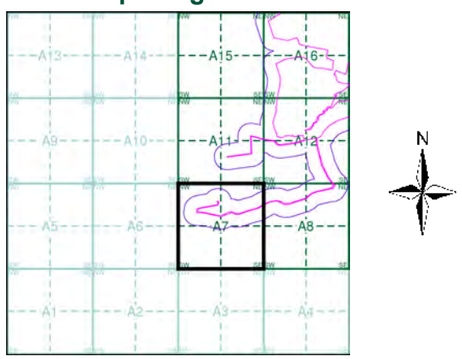


Historical Map - Segment A7



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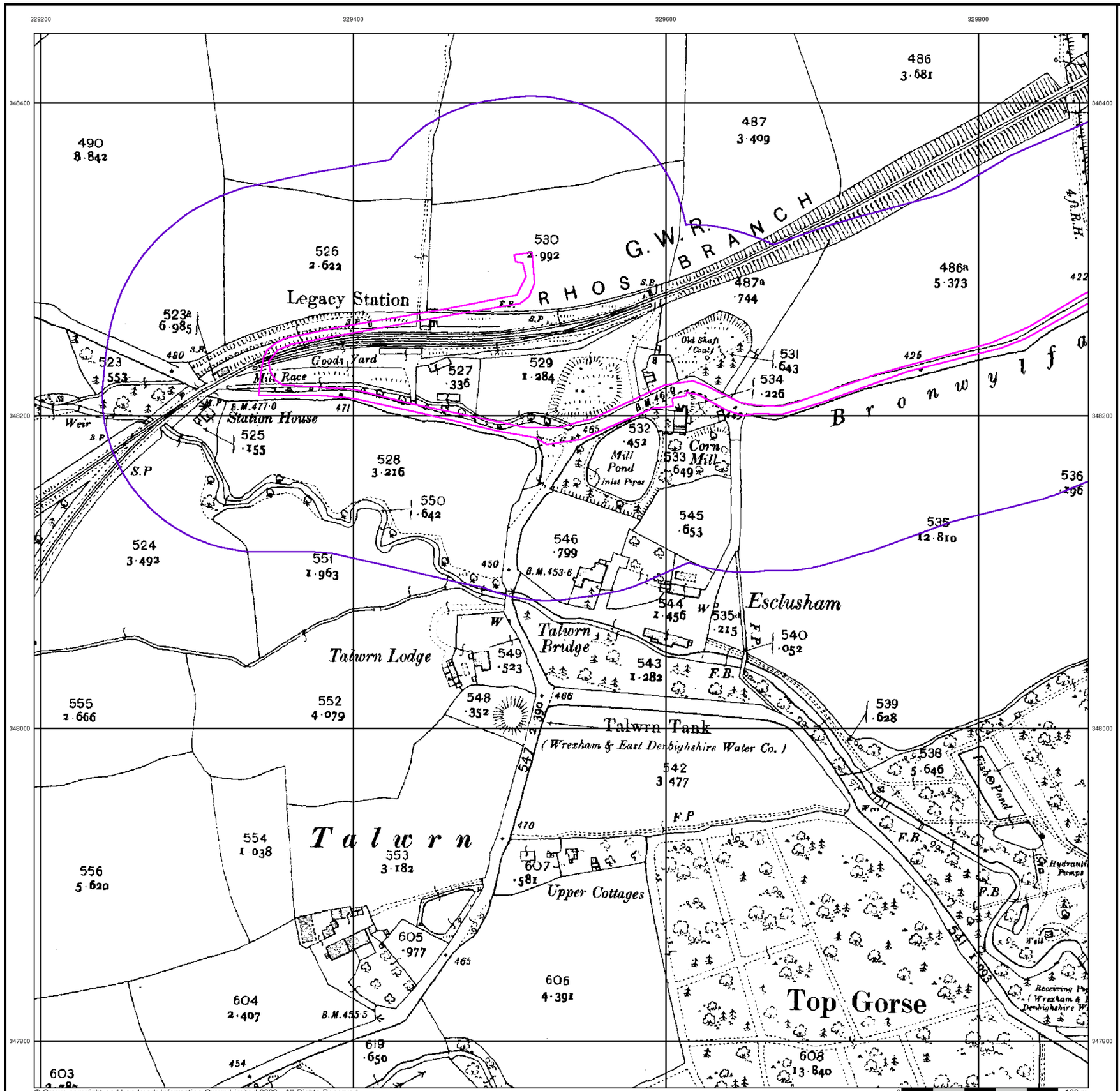

Denbighshire

Published 1912

Source map scale - 1:2,500

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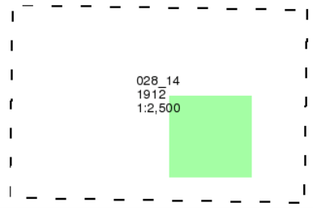
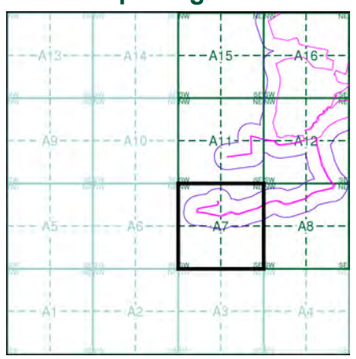


Historical Map - Segment A7



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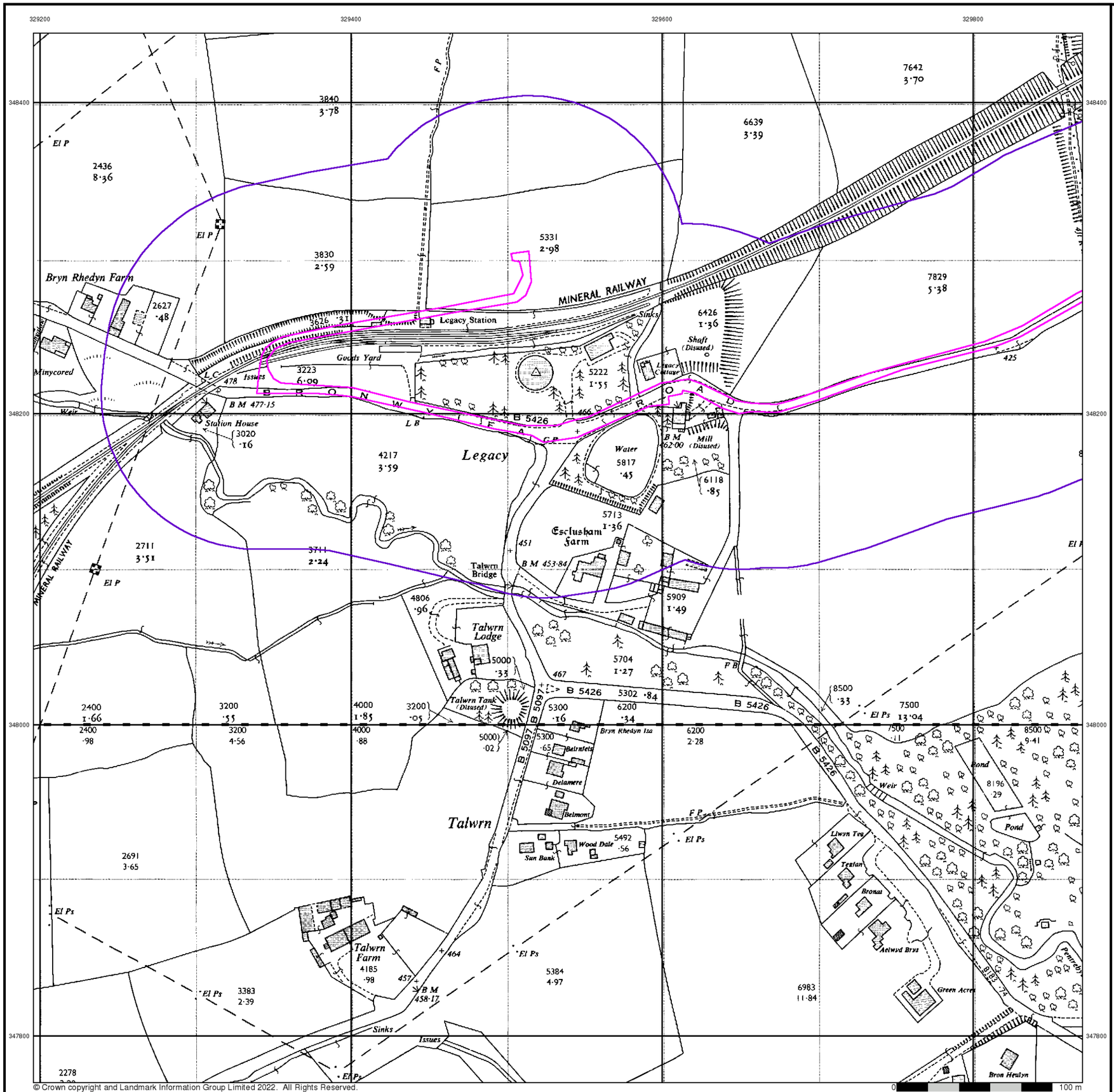
Search Buffer (m):	100

Site Details

Site at 330330, 350090

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



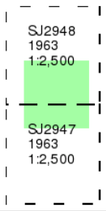
Ordnance Survey Plan

Published 1963

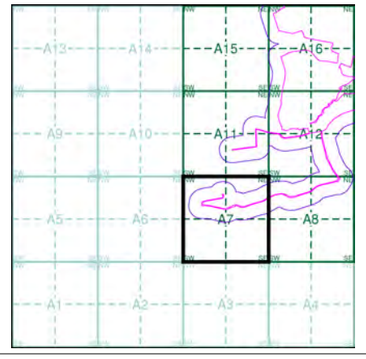
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

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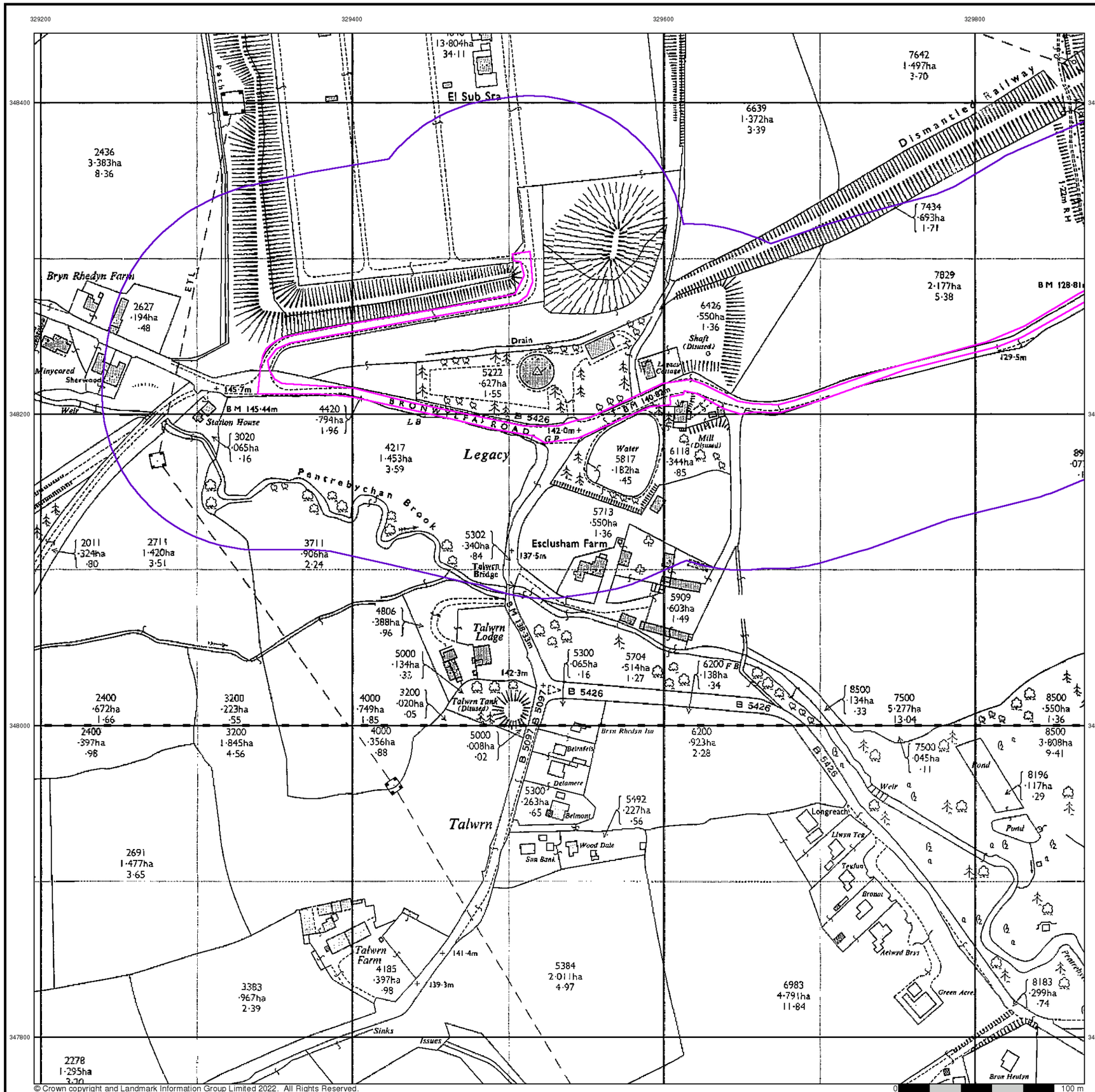


Additional SIMs

Published 1963

Source map scale - 1:2,500

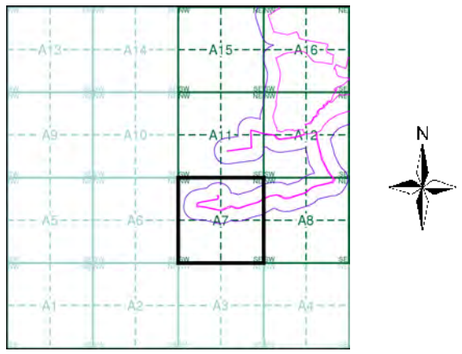
The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps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

Map Name(s) and Date(s)

SJ2948
1963
1:2,500

SJ2947
1963
1:2,500

Historical Map - Segment A7



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

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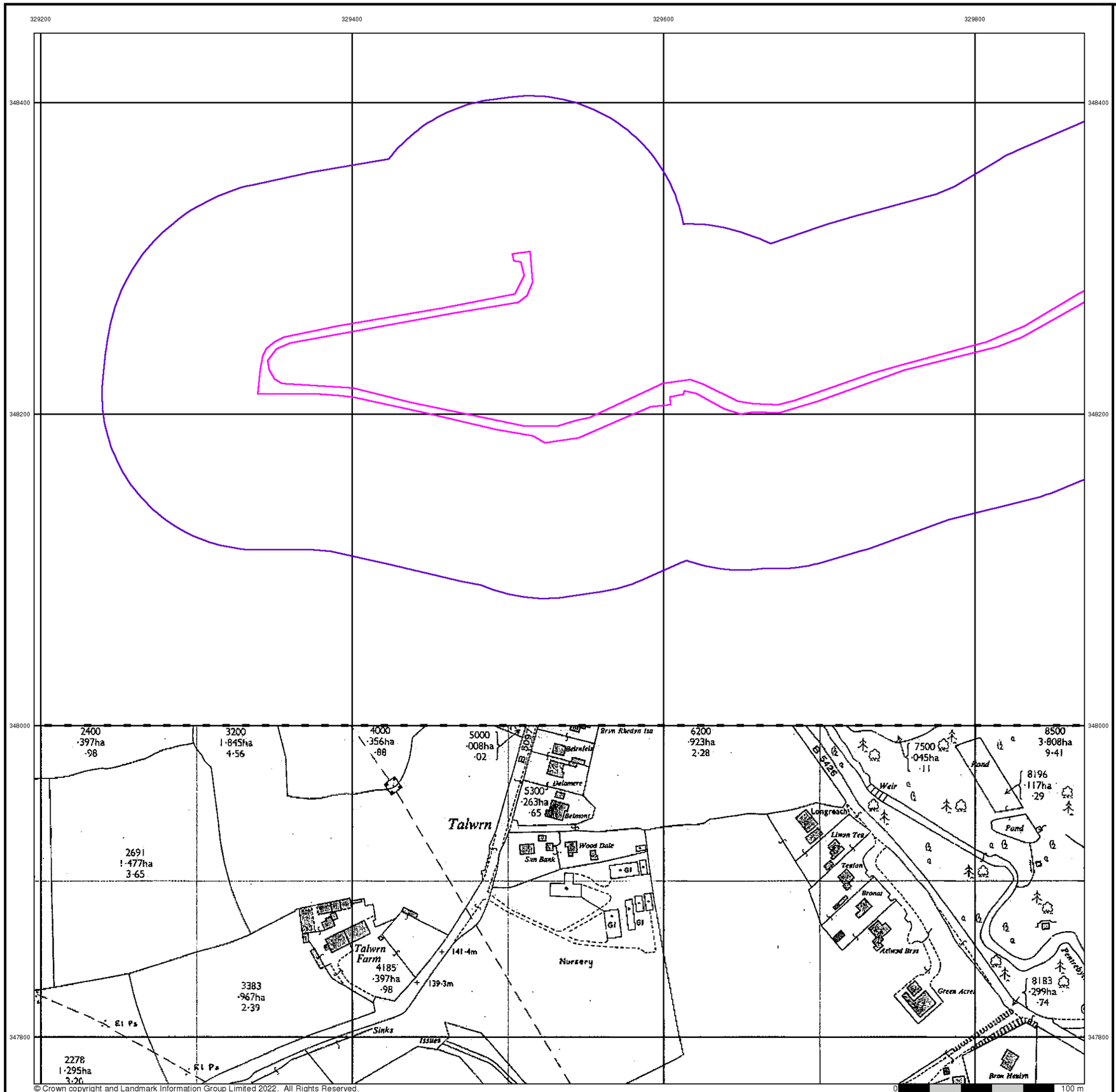


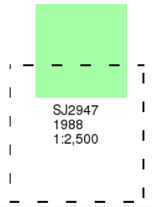
Additional SIMs

Published 1988

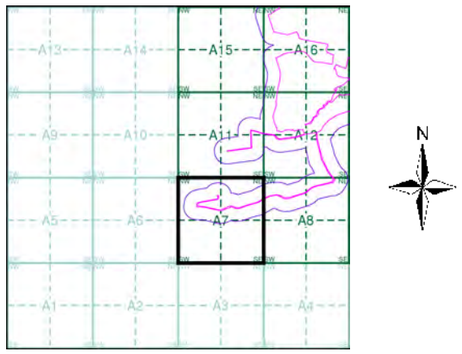
Source map scale - 1:2,500

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)



Historical Map - Segment A7



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

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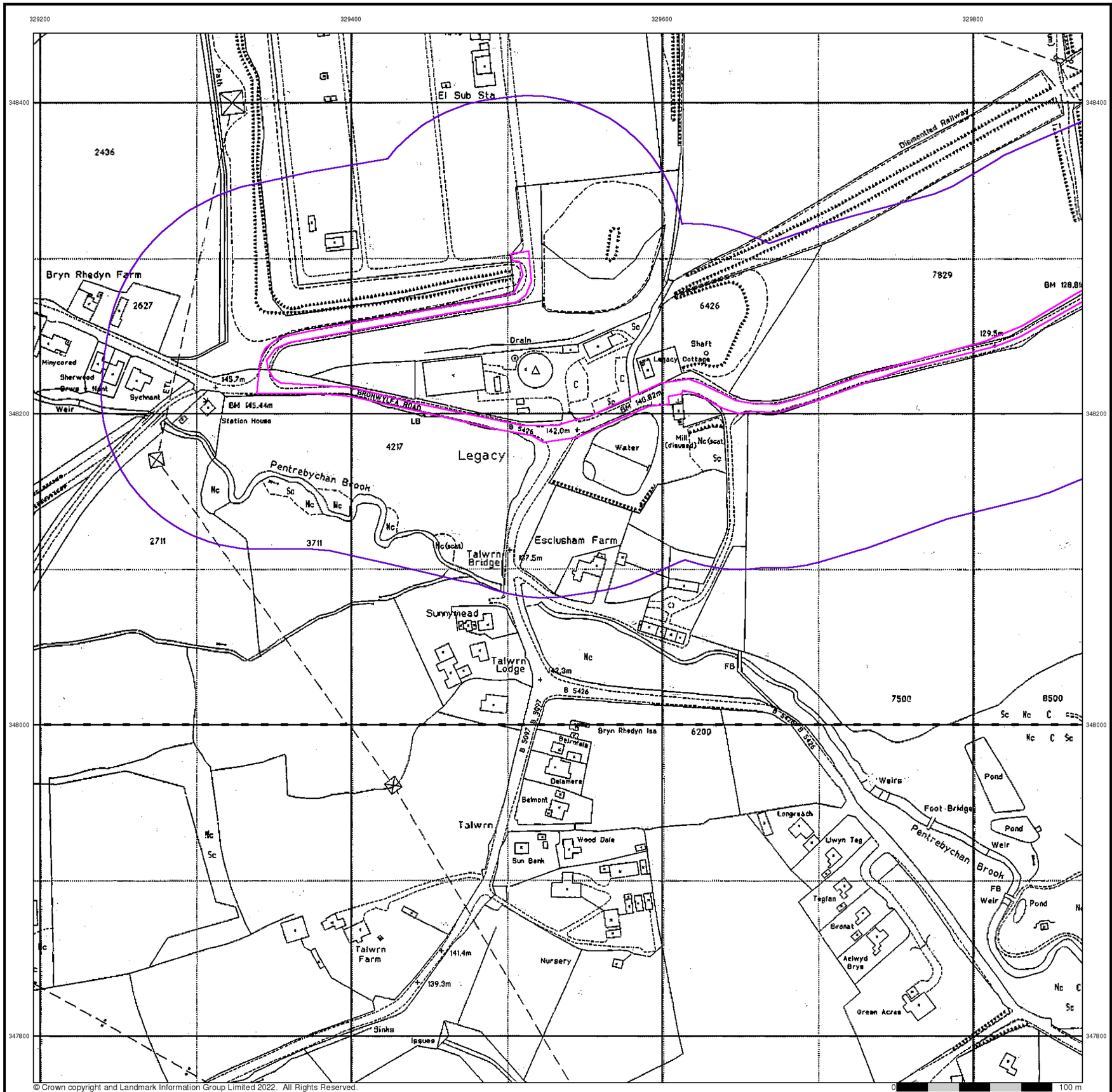


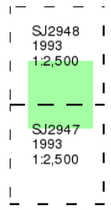
Large-Scale National Grid Data

Published 1993

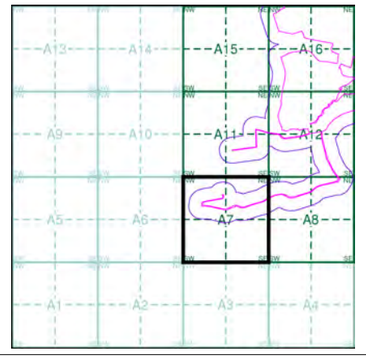
Source map scale - 1:2,500

'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)



Historical Map - Segment A7



Order Details

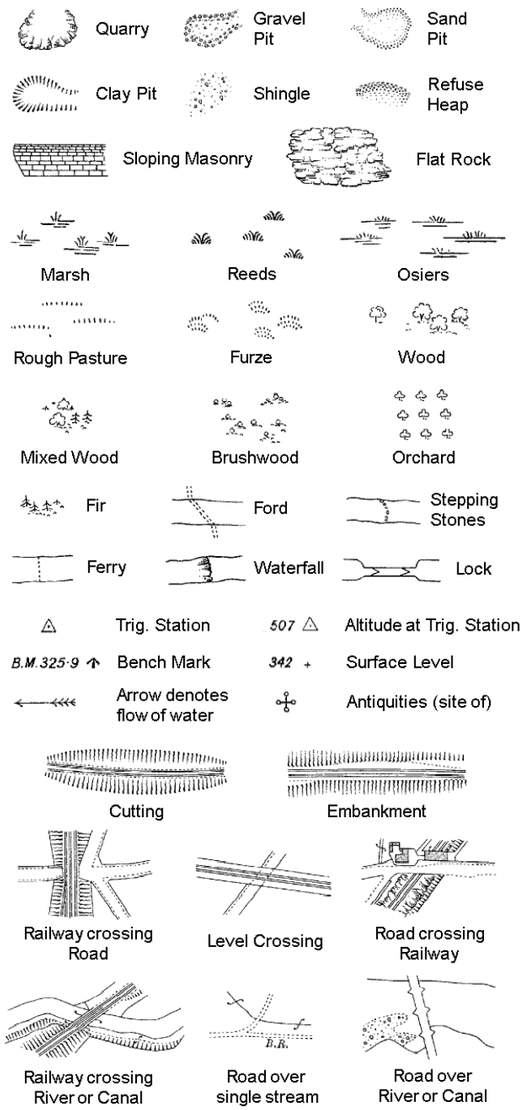
Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

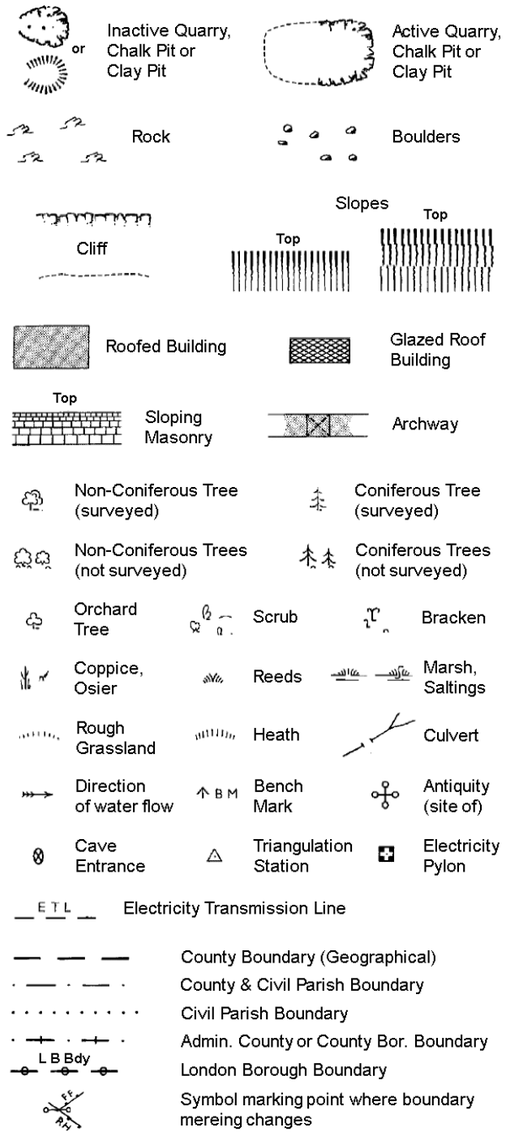
Historical Mapping Legends

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



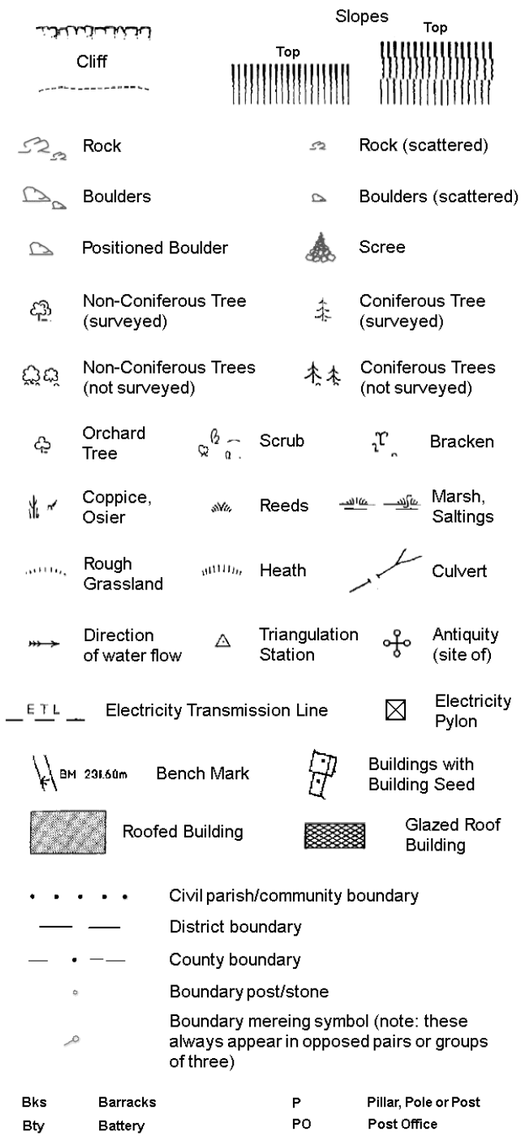
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



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

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



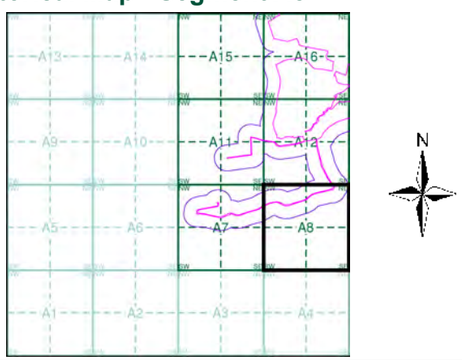
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

rps

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Denbighshire	1:2,500	1872 - 1873	2
Denbighshire	1:2,500	1899	3
Denbighshire	1:2,500	1912	4
Ordnance Survey Plan	1:2,500	1961 - 1967	5
Additional SIMs	1:2,500	1961 - 1967	6
Ordnance Survey Plan	1:2,500	1967	7
Additional SIMs	1:2,500	1981 - 1988	8
Ordnance Survey Plan	1:2,500	1984	9
Large-Scale National Grid Data	1:2,500	1992 - 1993	10
Large-Scale National Grid Data	1:2,500	1994	11

Historical Map - Segment A8



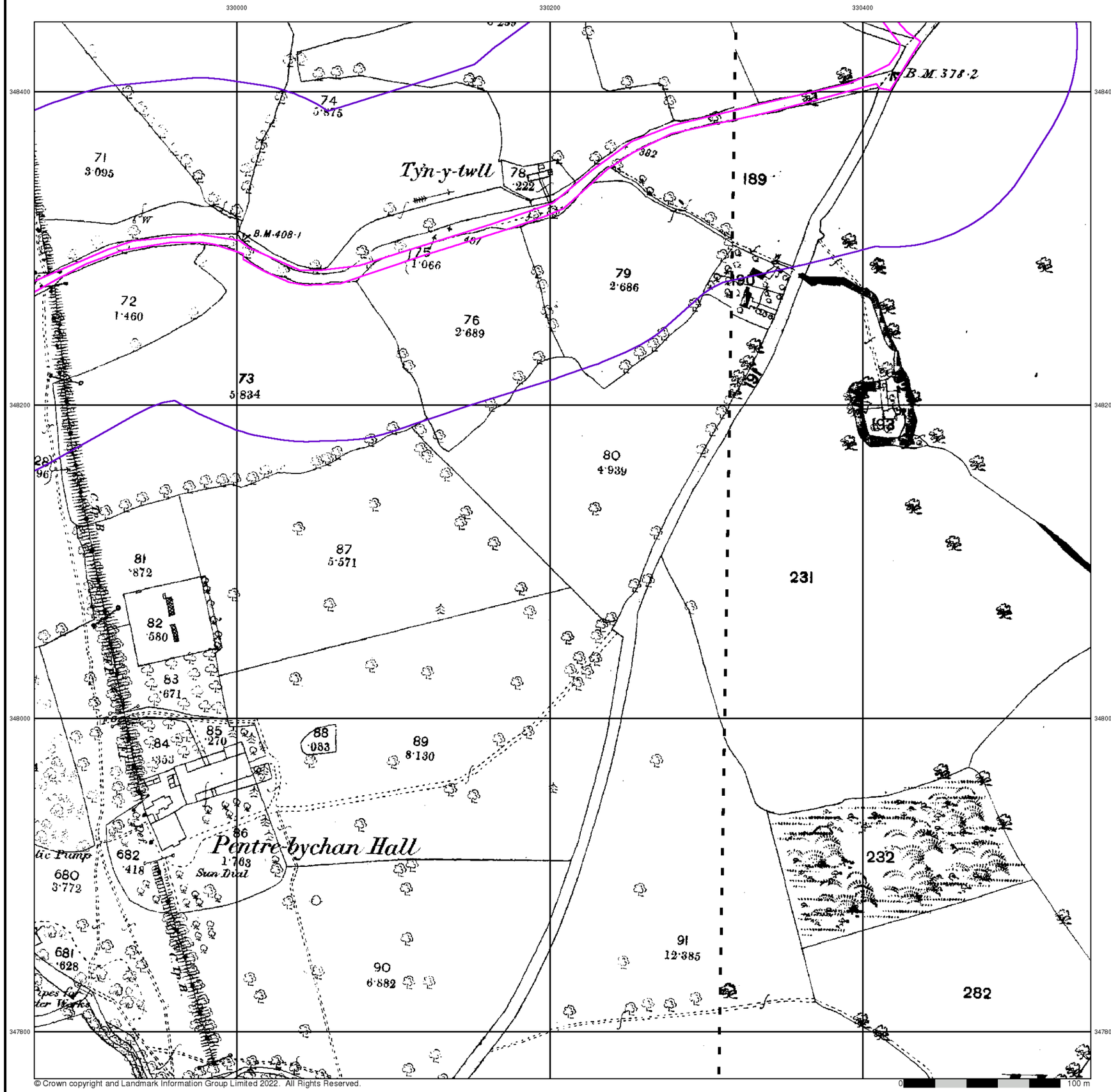
Order Details

Order Number: 291151542_1_1
Customer Ref: JER8537
National Grid Reference: 329550, 348490
Slice: A
Site Area (Ha): 145.64
Search Buffer (m): 100

Site Details

Site at 330330, 350090

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



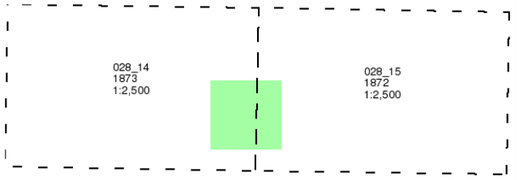
Denbighshire

Published 1872 - 1873

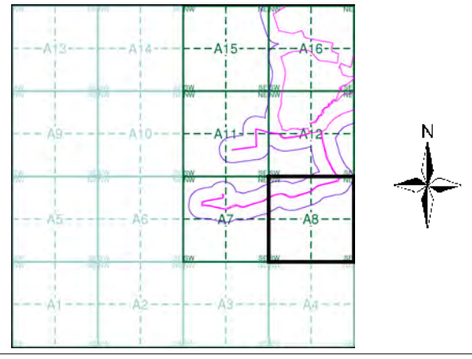
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
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Site Details

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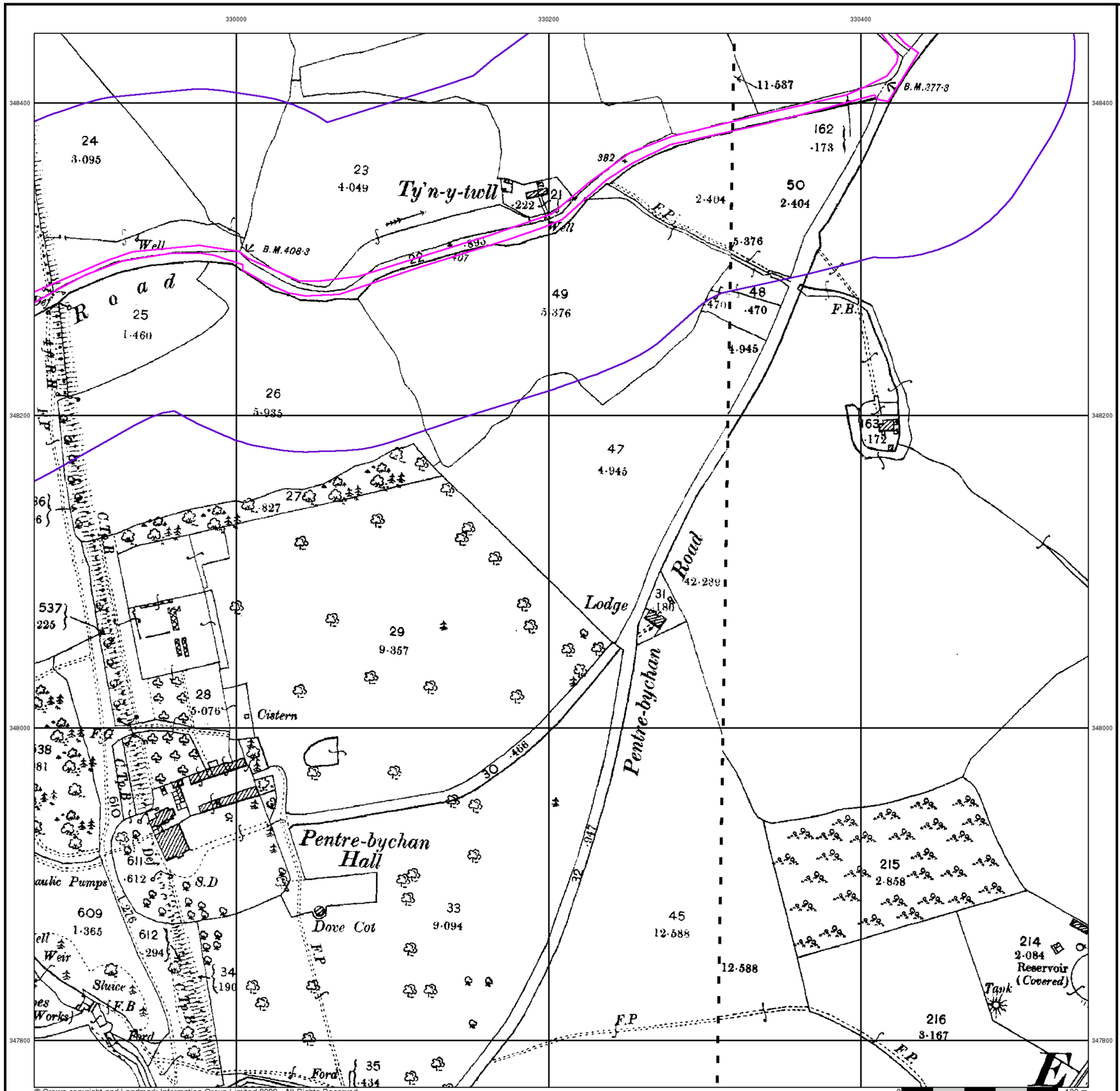


rps

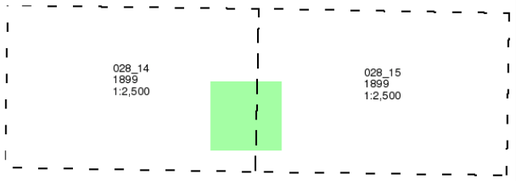
Denbighshire

Published 1899

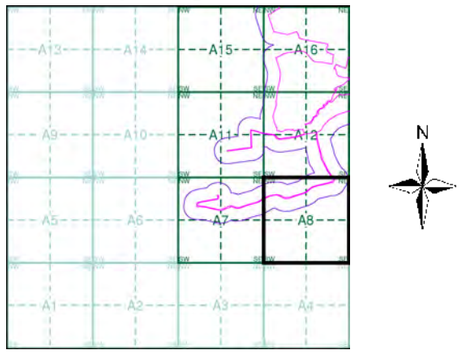
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

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Slice:	A
Site Area (Ha):	145.64
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Site Details

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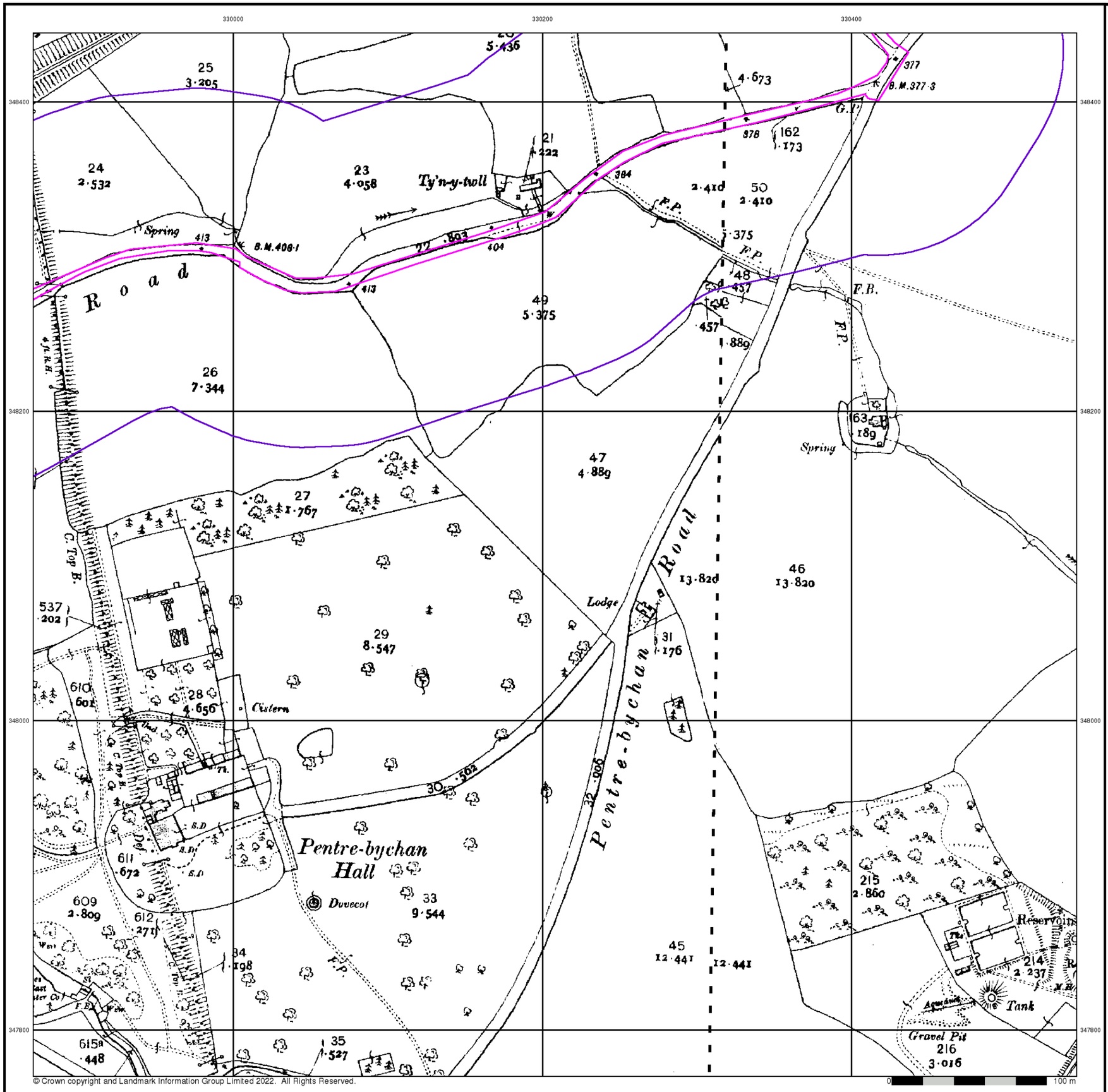


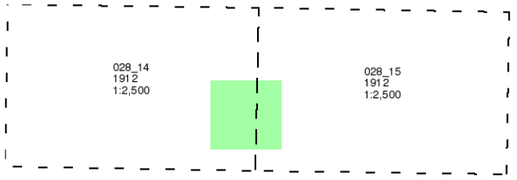
Denbighshire

Published 1912

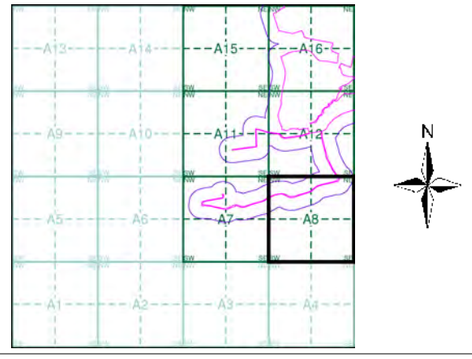
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

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Site Details

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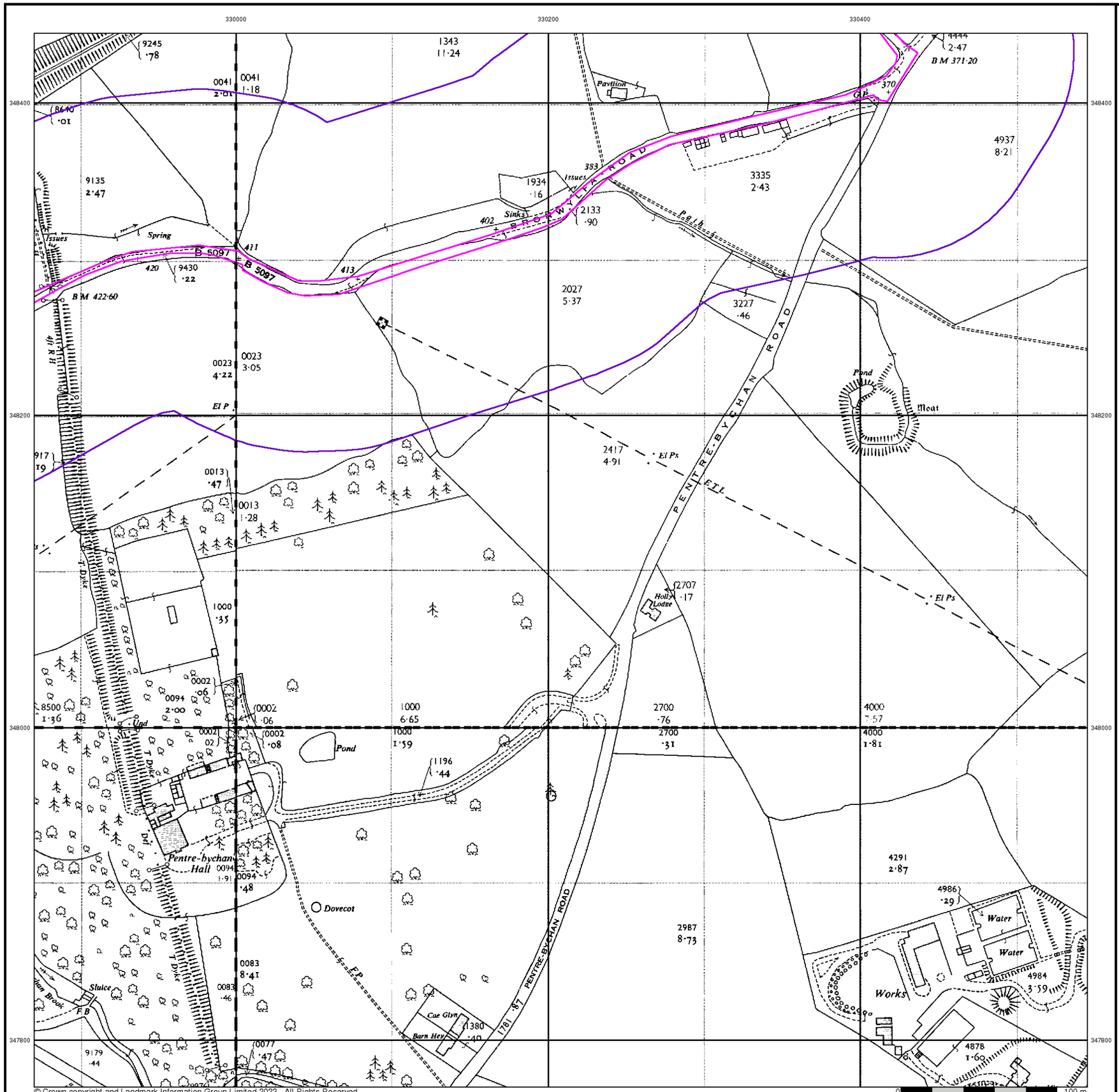


0 100 m

Ordnance Survey Plan

Published 1961 - 1967

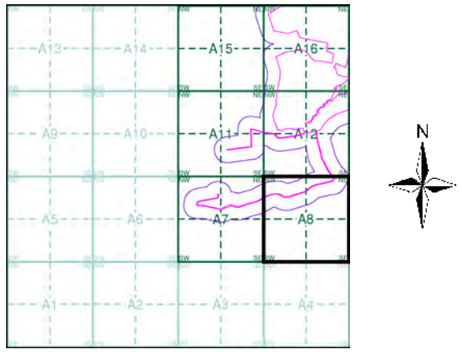
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

SJ2948 1963 1:2,500	SJ3048 1967 1:2,500
SJ2947 1963 1:2,500	SJ3047 1961 1:2,500

Historical Map - Segment A8



Order Details

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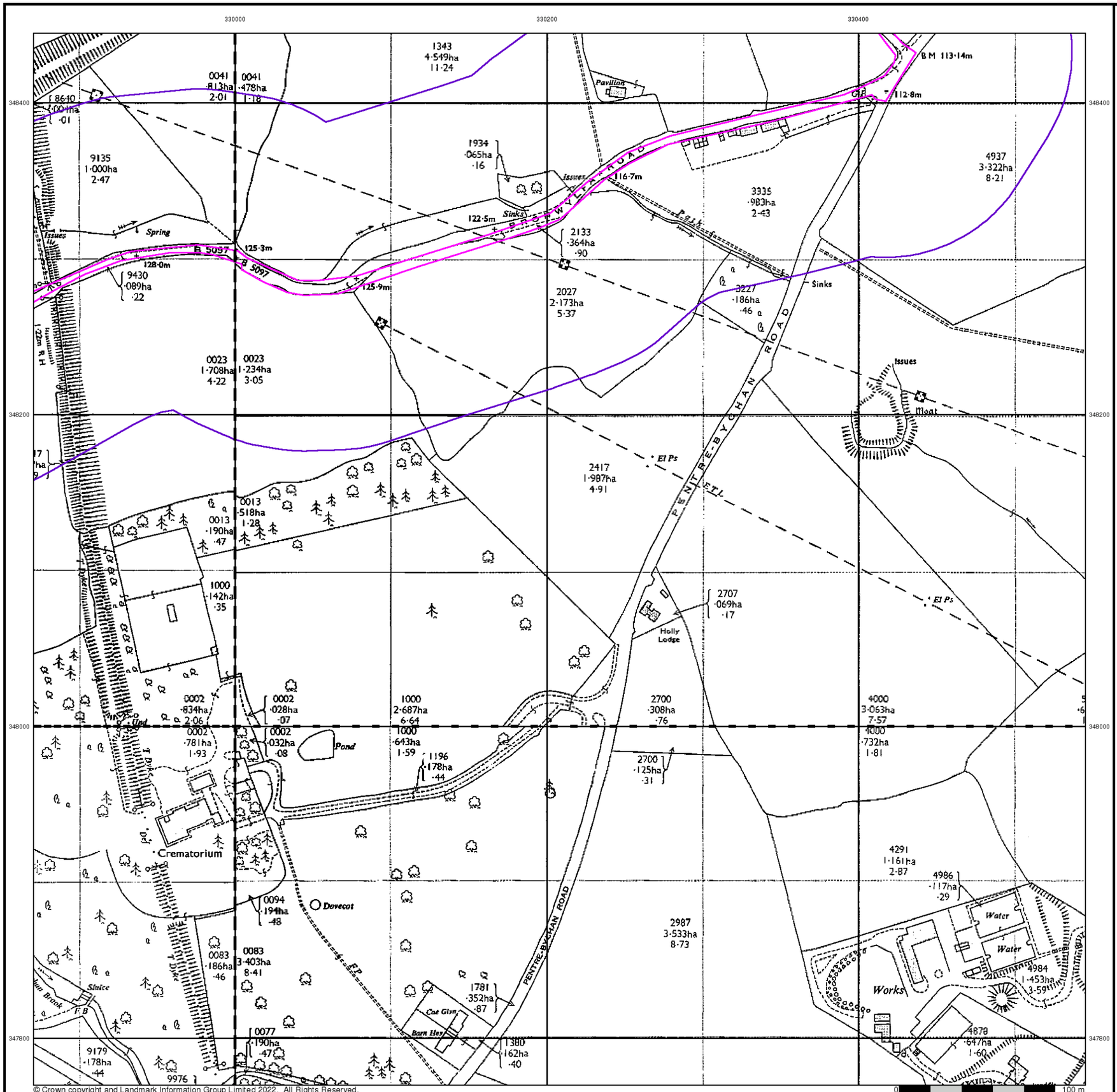


Additional SIMs

Published 1961 - 1967

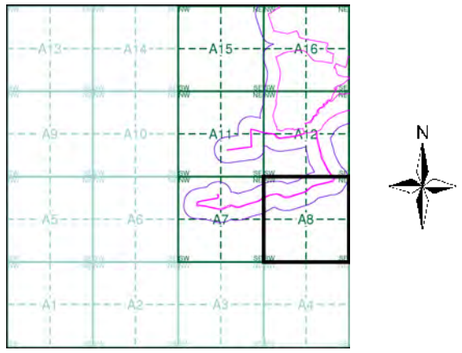
Source map scale - 1:2,500

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)

SJ2948 1963 1:2,500	SJ3048 1967 1:2,500
SJ2947 1963 1:2,500	SJ3047 1961 1:2,500

Historical Map - Segment A8



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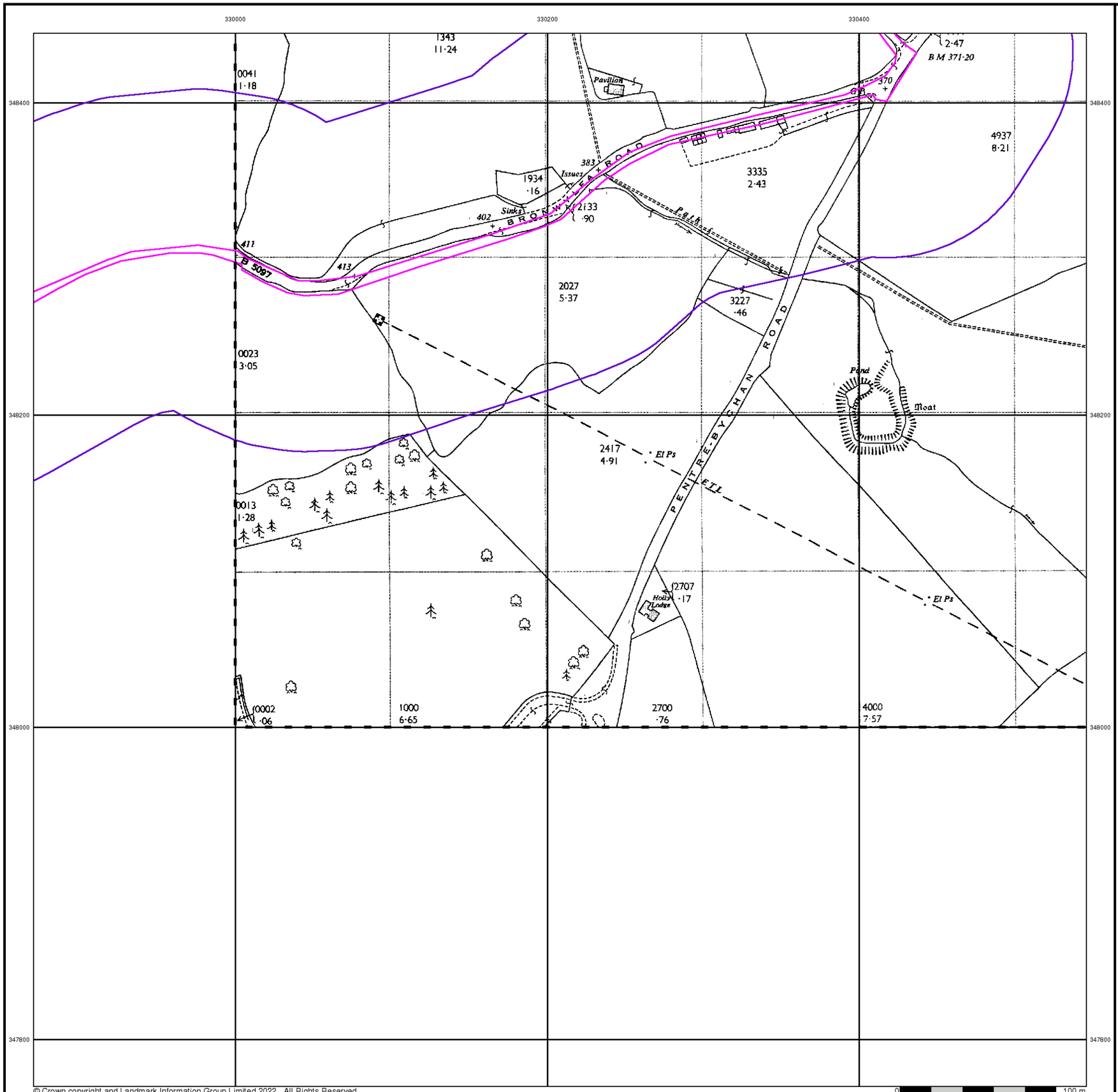

Ordnance Survey Plan

Published 1967

Source map scale - 1:2,500

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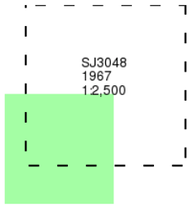
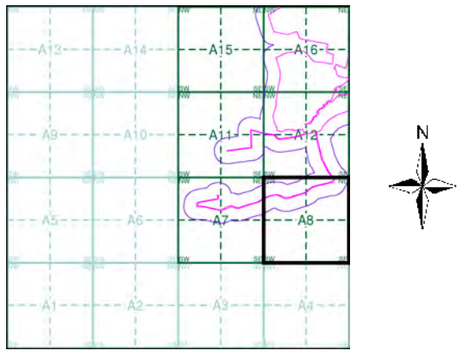


Historical Map - Segment A8



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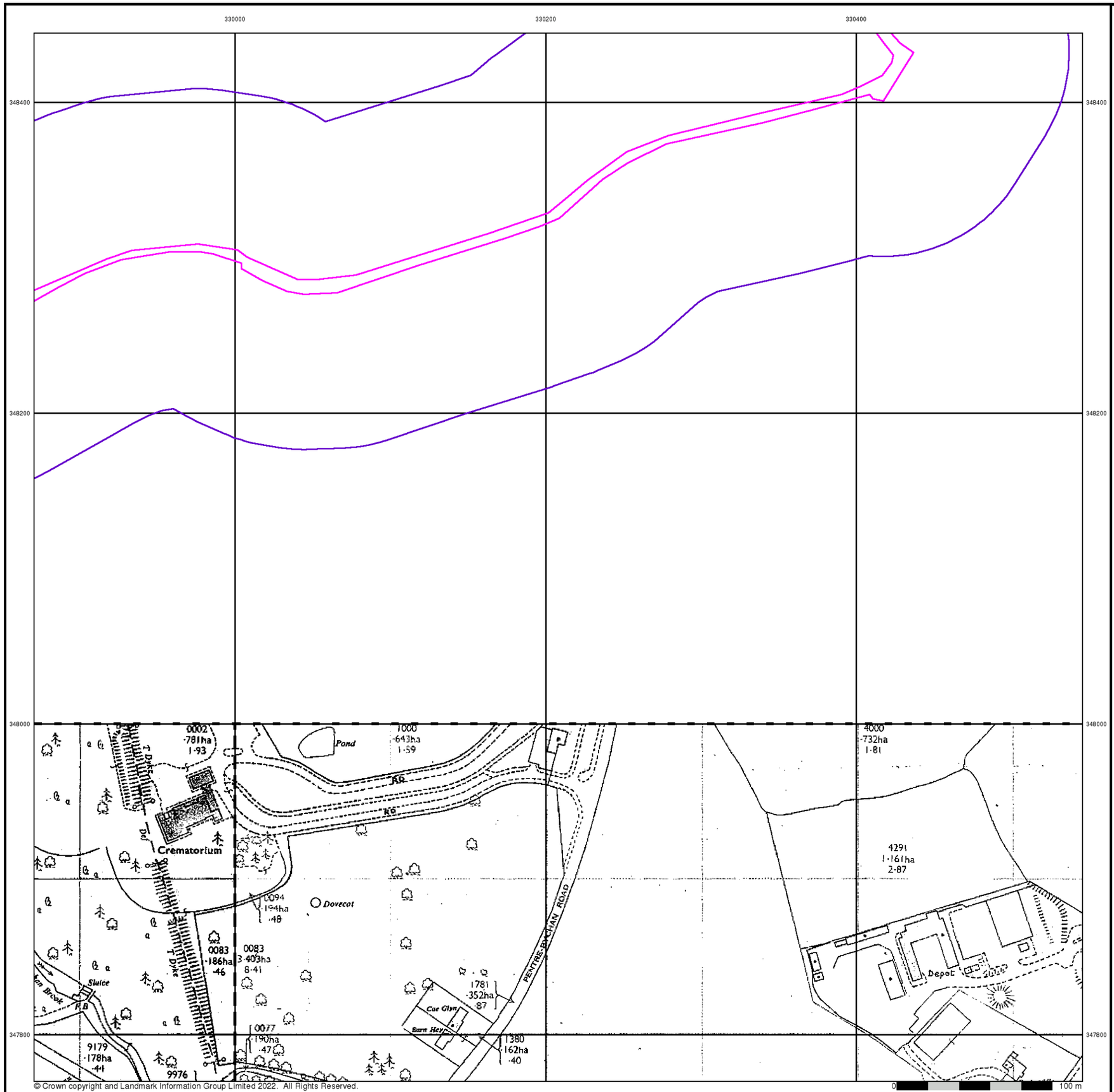


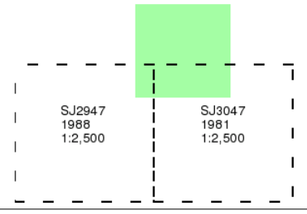
Additional SIMs

Published 1981 - 1988

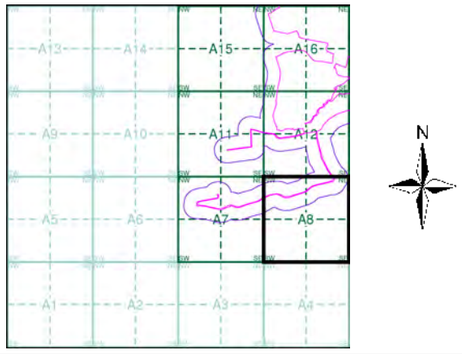
Source map scale - 1:2,500

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)



Historical Map - Segment A8



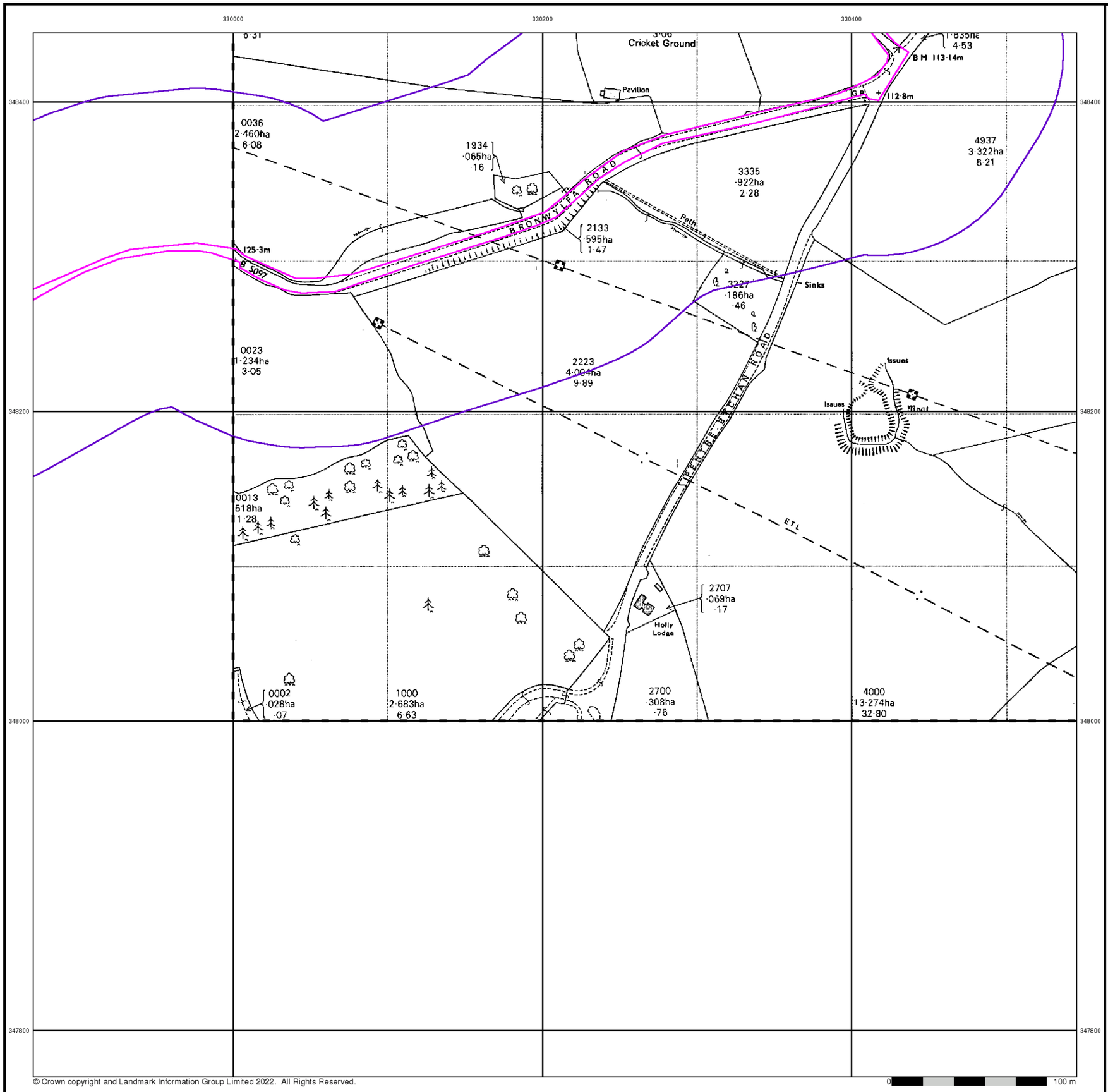
Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

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



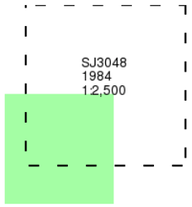
Ordnance Survey Plan

Published 1984

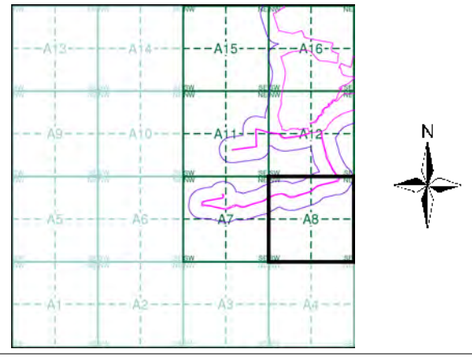
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A8



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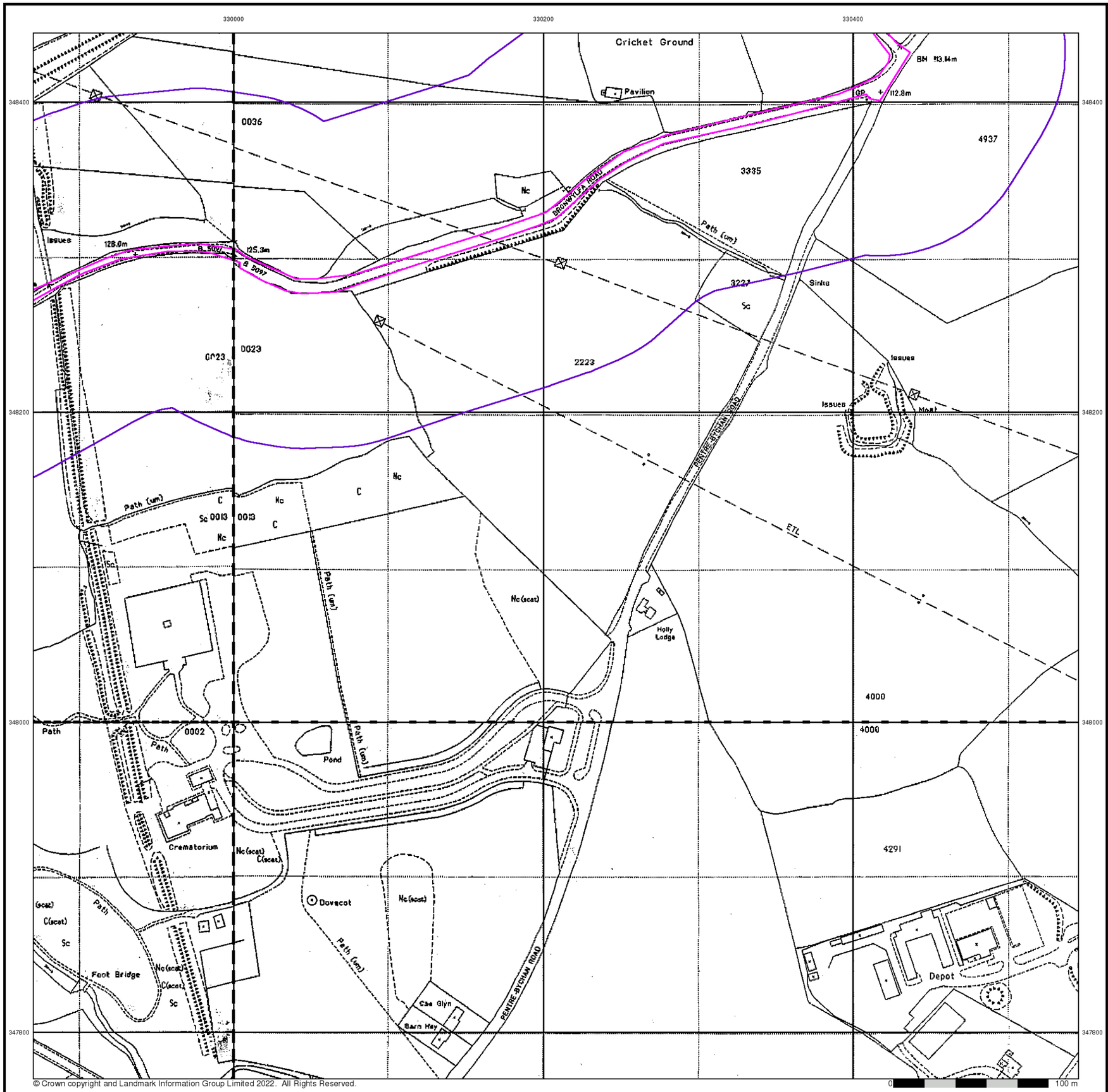


Large-Scale National Grid Data

Published 1992 - 1993

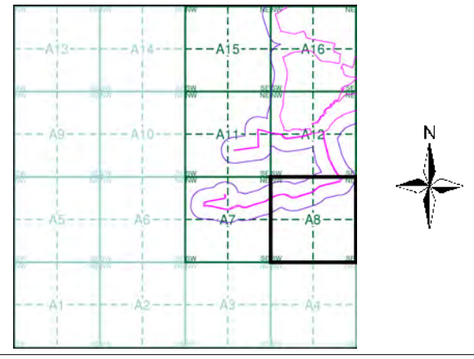
Source map scale - 1:2,500

'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)

SJ2948 1993 1:2,500	SJ3048 1992 1:2,500
SJ2947 1993 1:2,500	SJ3047 1992 1:2,500

Historical Map - Segment A8



Order Details

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Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

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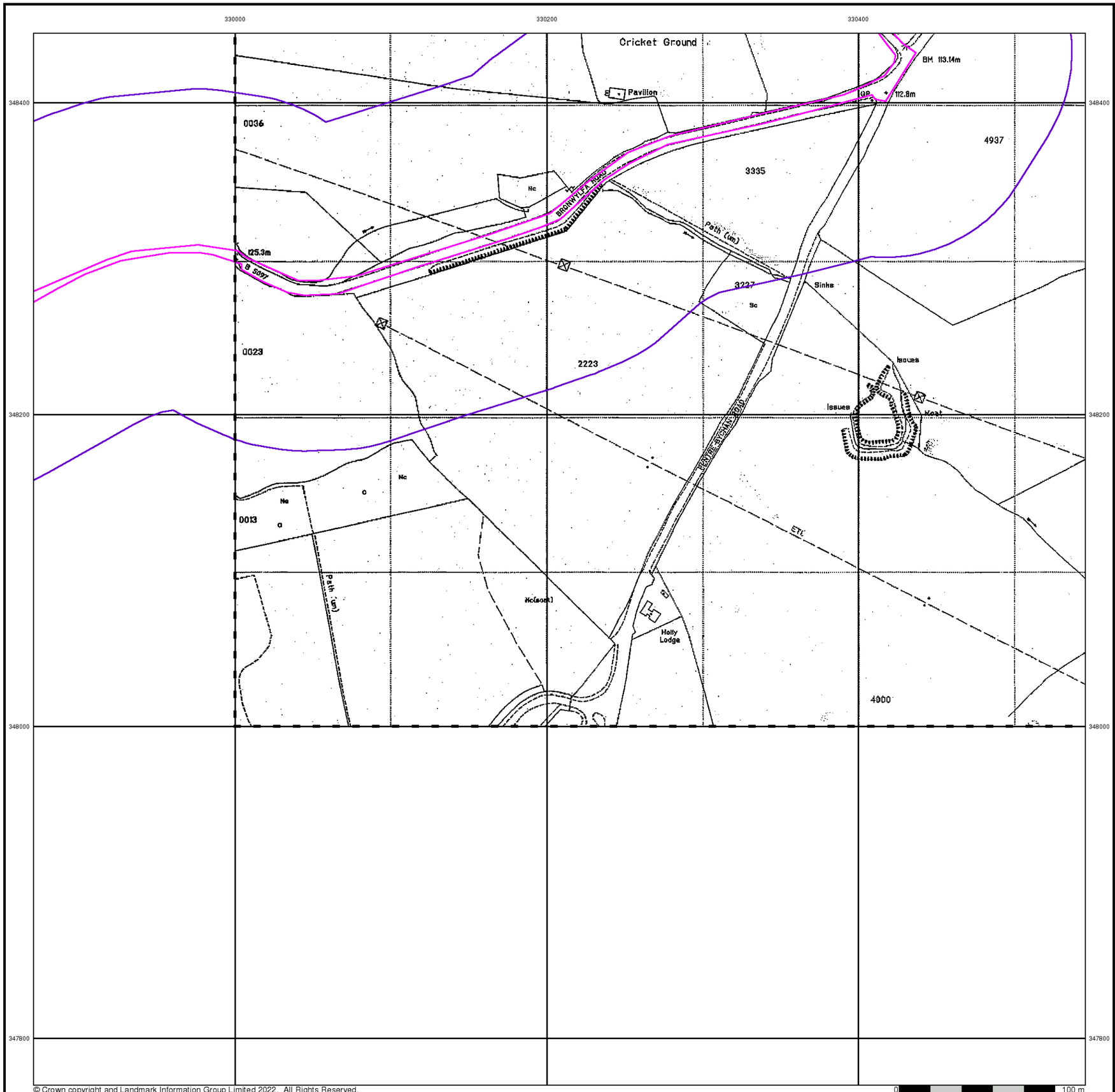


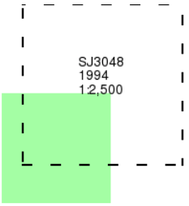
Large-Scale National Grid Data

Published 1994

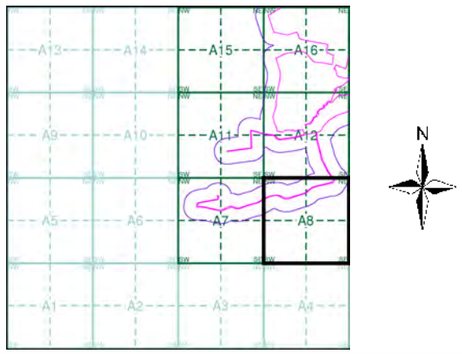
Source map scale - 1:2,500

'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 A8



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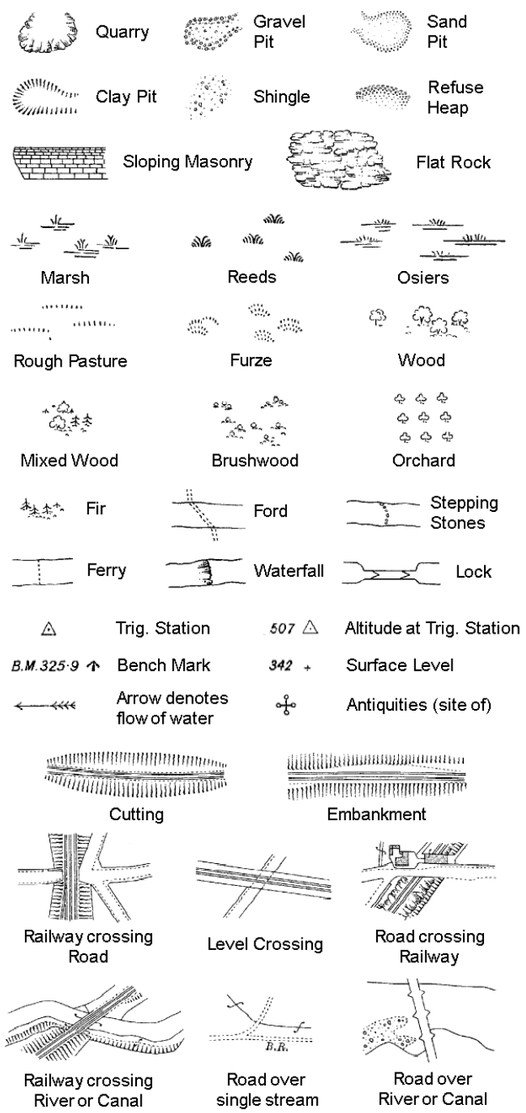
Web: www.envirocheck.co.uk

Historical Mapping Legends

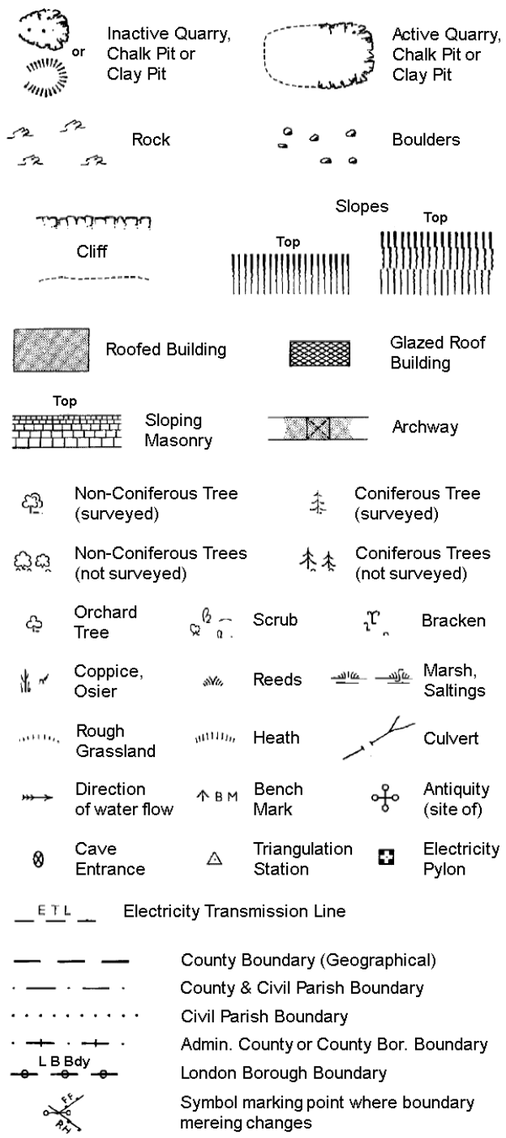
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	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

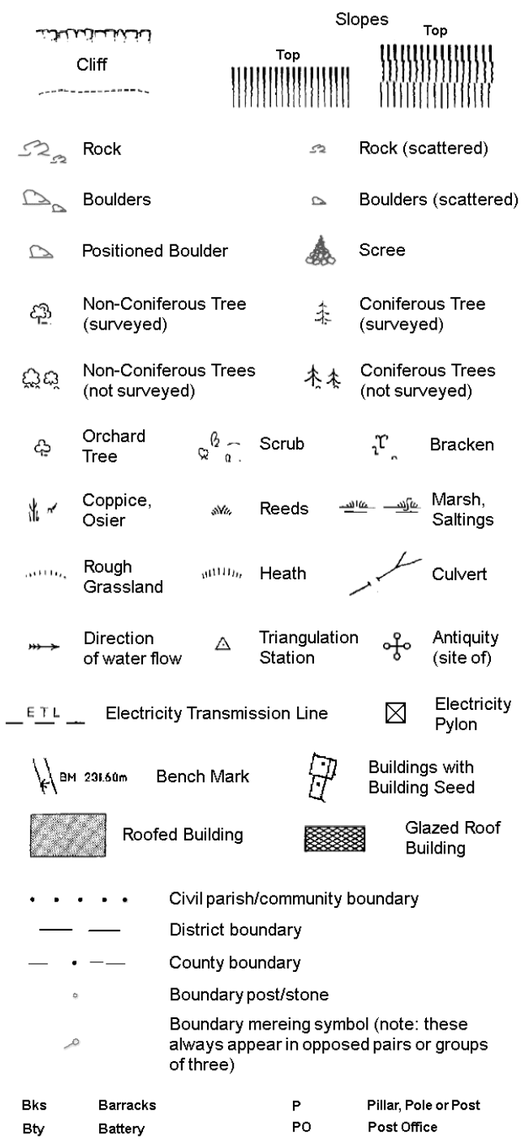
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



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

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

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



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

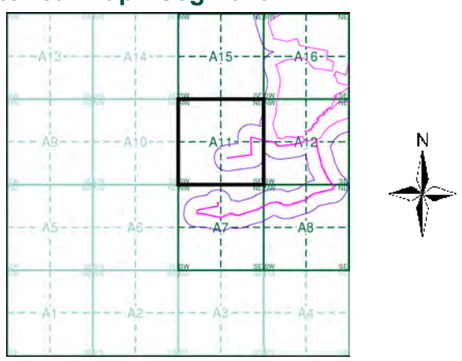
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

rps

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Denbighshire	1:2,500	1873	2
Denbighshire	1:2,500	1899	3
Denbighshire	1:2,500	1912	4
Ordnance Survey Plan	1:2,500	1963	5
Additional SIMs	1:2,500	1963	6
Large-Scale National Grid Data	1:2,500	1993	7

Historical Map - Segment A11



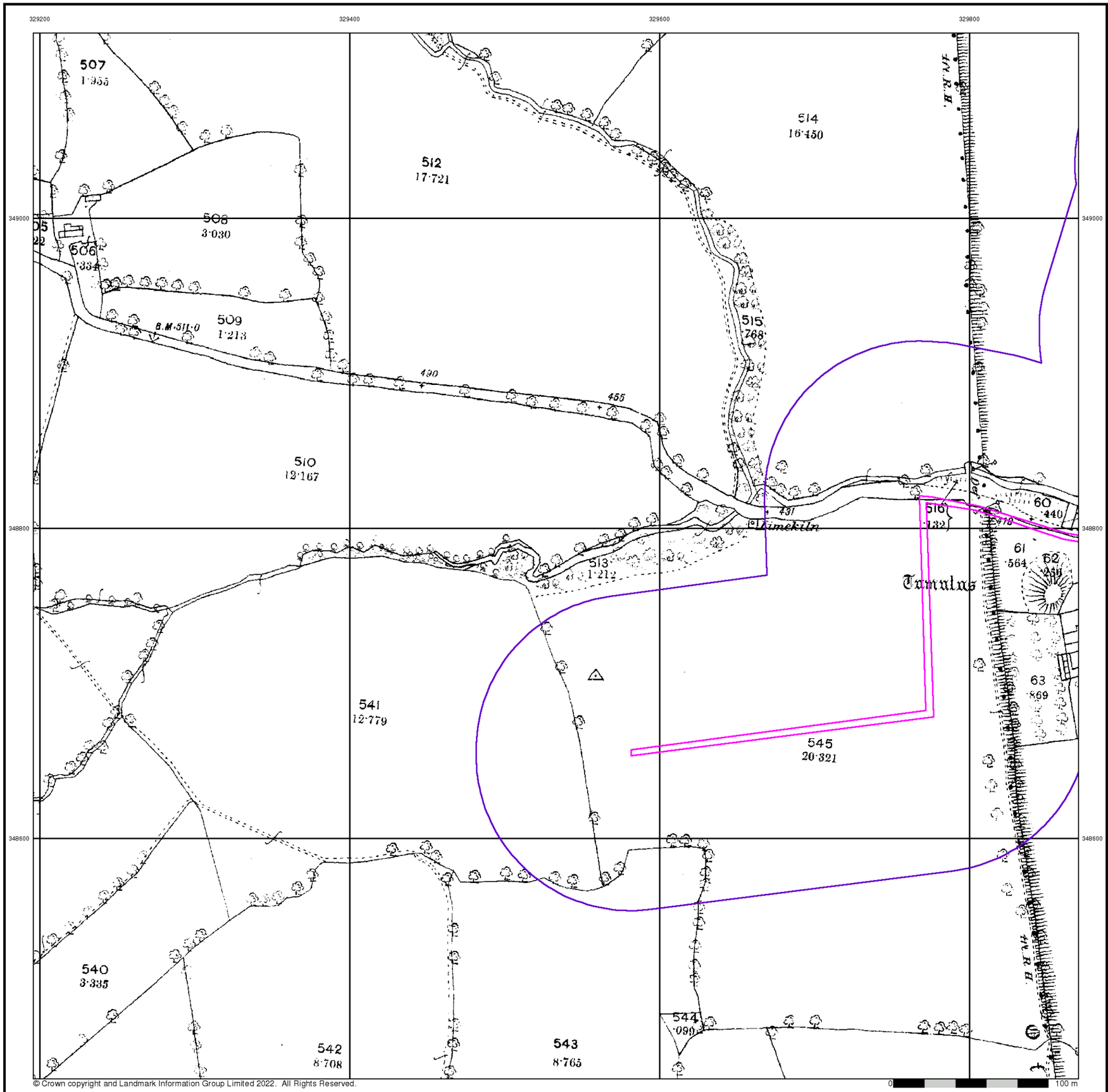
Order Details

Order Number: 291151542_1_1
Customer Ref: JER8537
National Grid Reference: 329550, 348490
Slice: A
Site Area (Ha): 145.64
Search Buffer (m): 100

Site Details

Site at 330330, 350090

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



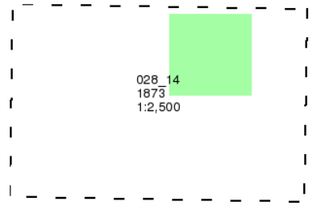
Denbighshire

Published 1873

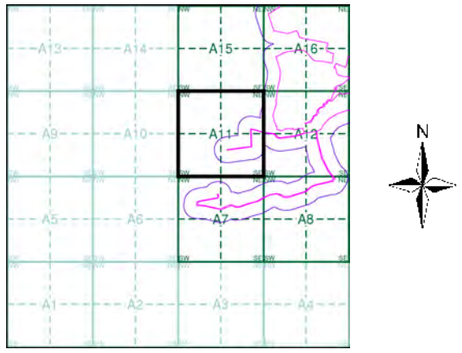
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

Order Number:	291151542_1_1
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Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

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Site at 330330, 350090

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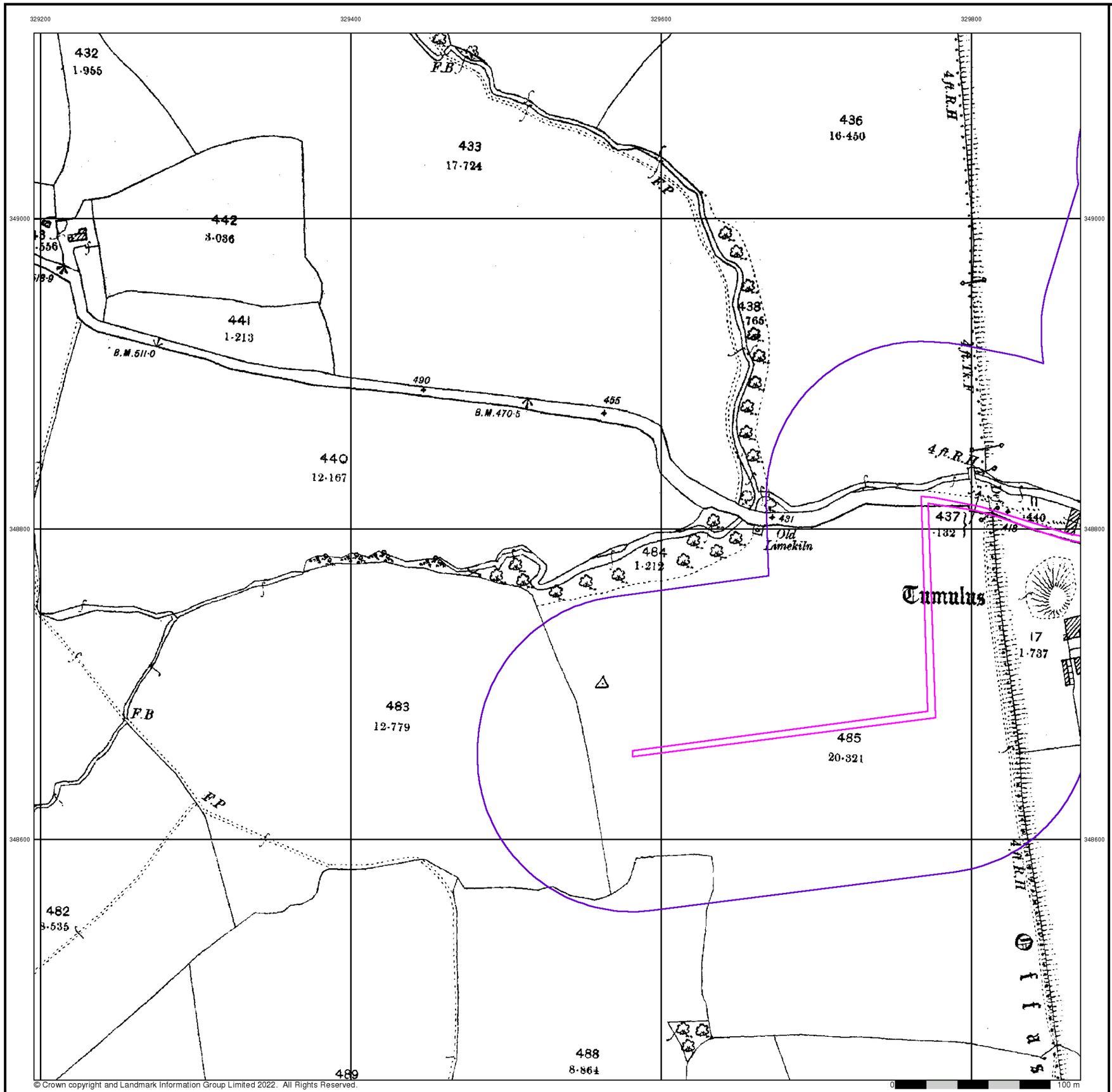


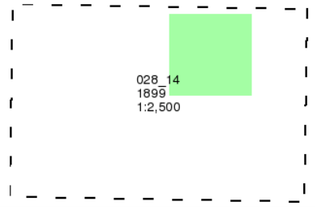
Denbighshire

Published 1899

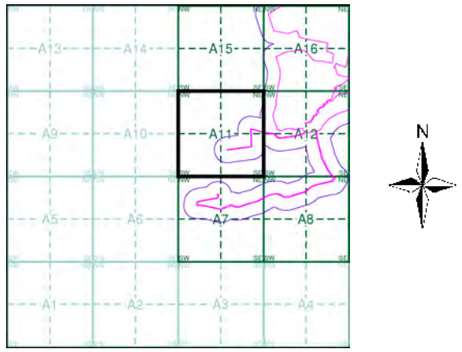
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

Landmark INFORMATION GROUP
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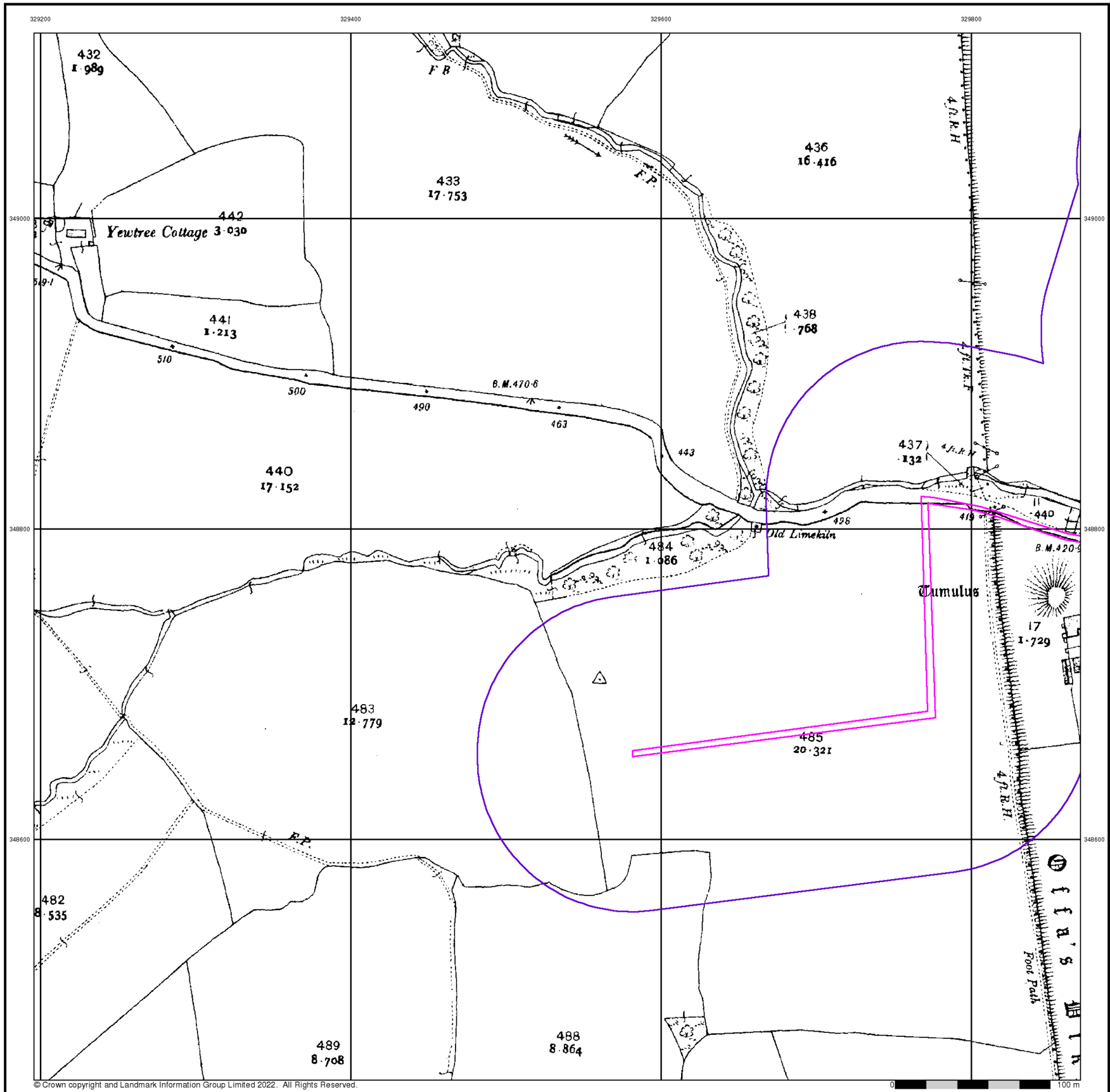


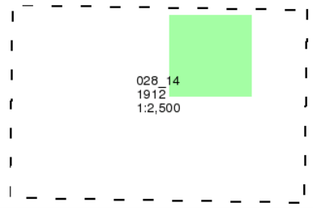
Denbighshire

Published 1912

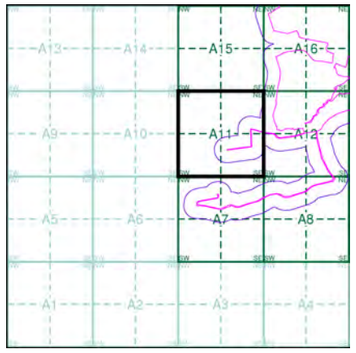
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A11



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329200 329400 329600 329800

349000 348800 348600

2309 1·99
3000 1·35
3000 1·72
4900 9·84
4900 7·99
7100 10·62
7100 6·10
3391 1·22
509
B M 511·45
488
4489 1·56
B M 470·93
6690 ·75
Pond
444
3084 8·30
5283 4·18
4ft R H
El Post
419
8880 ·88
B M 433·85
Tumulus
6078 ·86
El P
8477 ·90
8973 2·75
F P
4167 12·77
7066 20·51
2155 8·53
3851 4·94
5447 8·86
Footpath
Offa's Dyke

0 100 m

Ordnance Survey Plan

Published 1963

Source map scale - 1:2,500

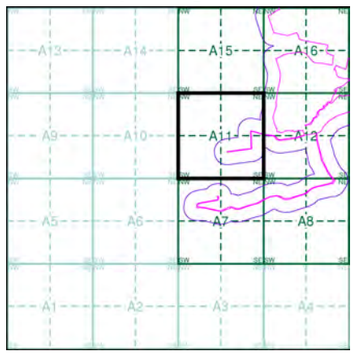
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain.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

SJ2949 1963 1:2,500

SJ2948 1963 1:2,500

Historical Map - Segment A11



Order Details

Order Number:	291151542_1_1
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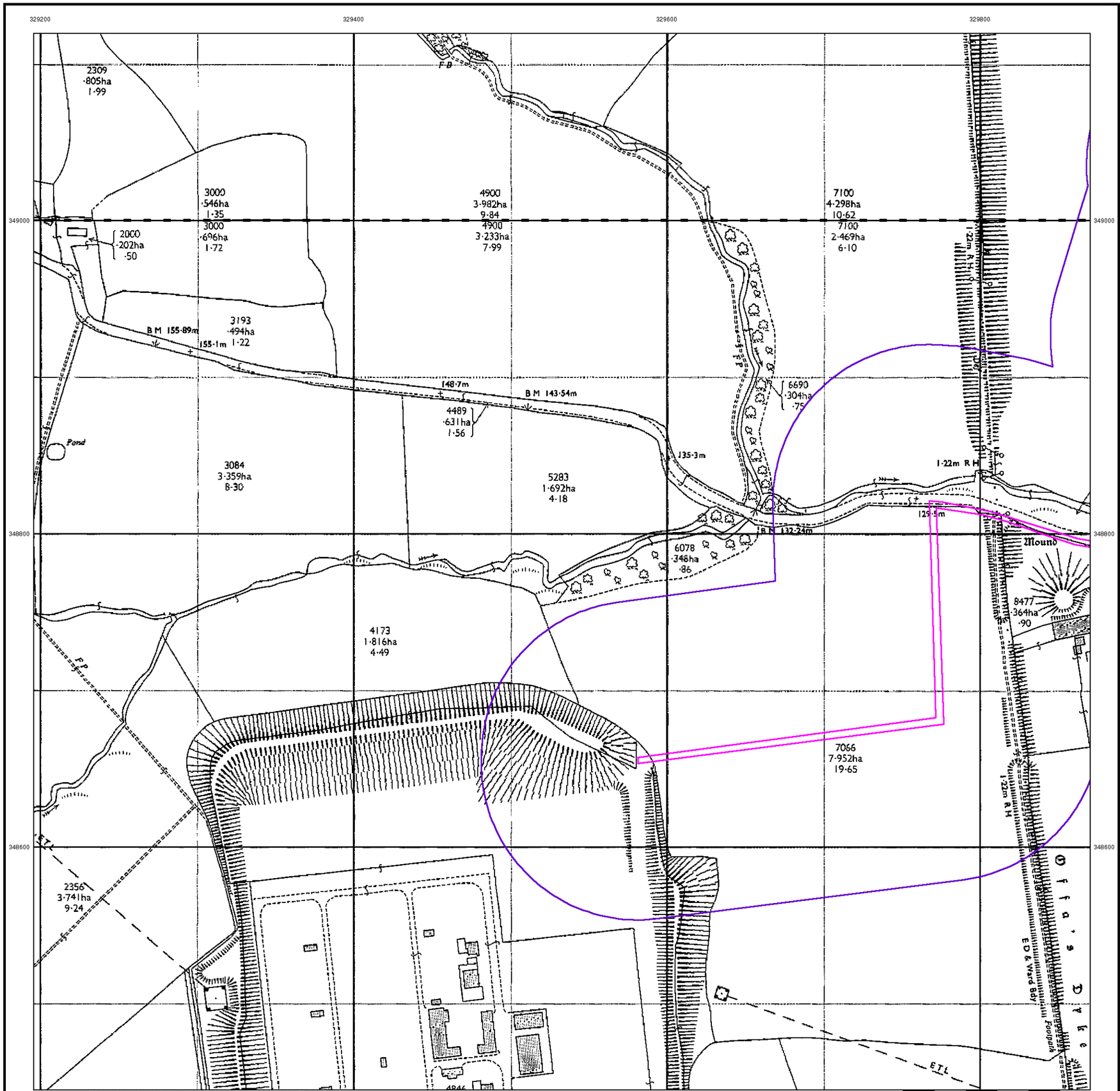


Additional SIMs

Published 1963

Source map scale - 1:2,500

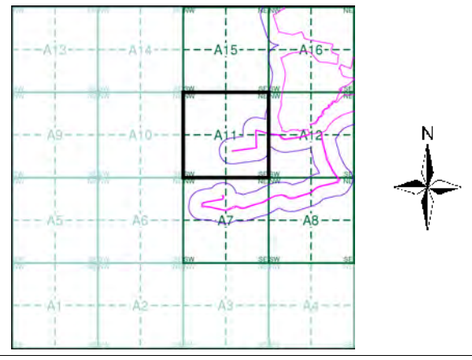
The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps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

Map Name(s) and Date(s)

SJ2949
1963
1:2,500

SJ2948
1963
1:2,500

Historical Map - Segment A11



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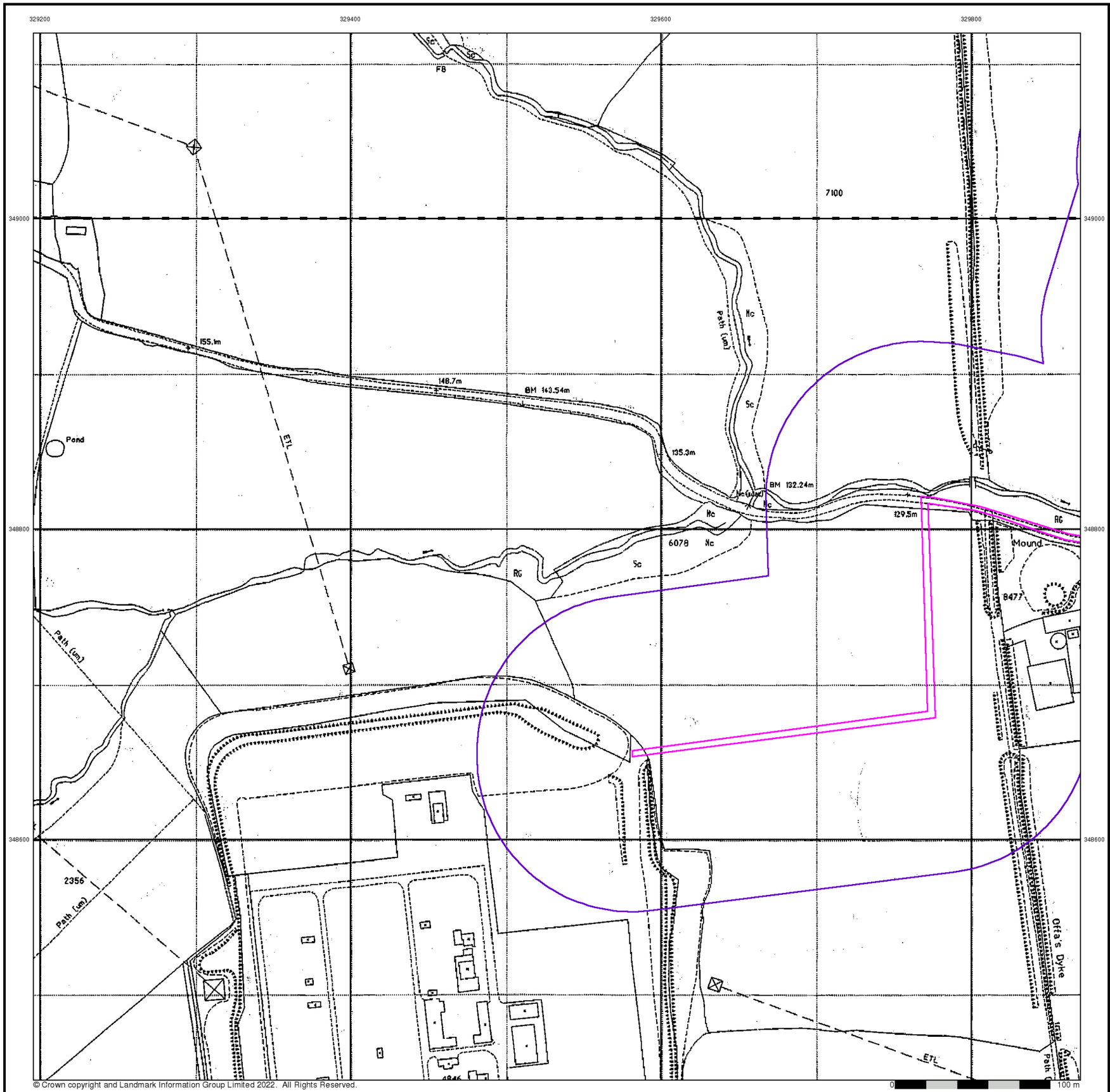


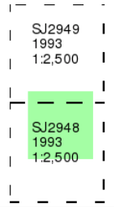
Large-Scale National Grid Data

Published 1993

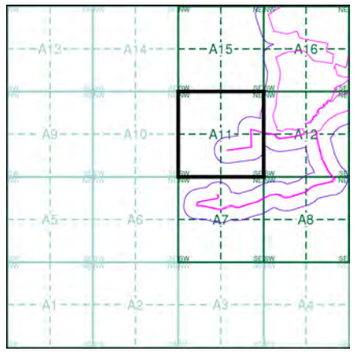
Source map scale - 1:2,500

'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)



Historical Map - Segment A11



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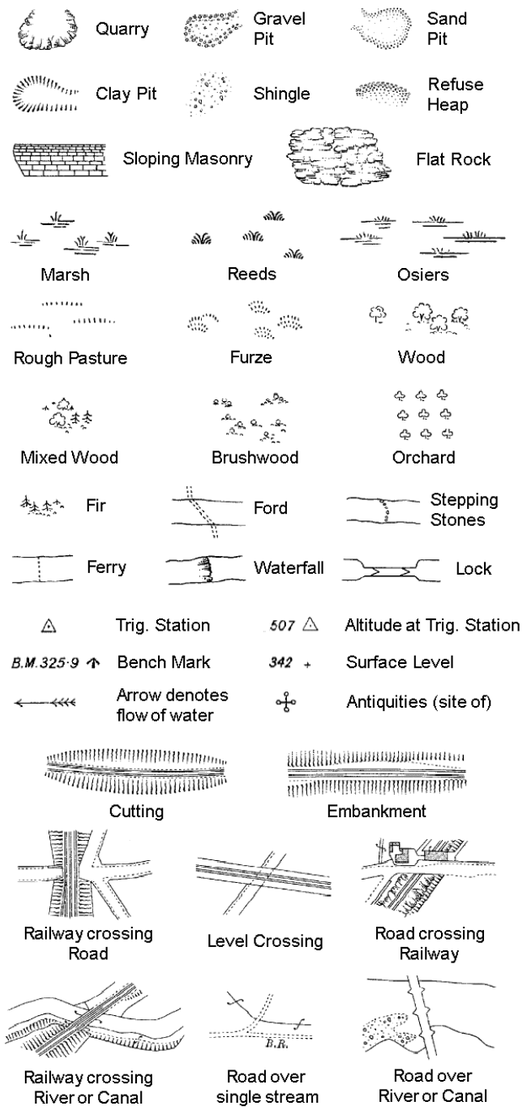
Historical Mapping Legends

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



County Boundary (Geographical)

County & Civil Parish Boundary

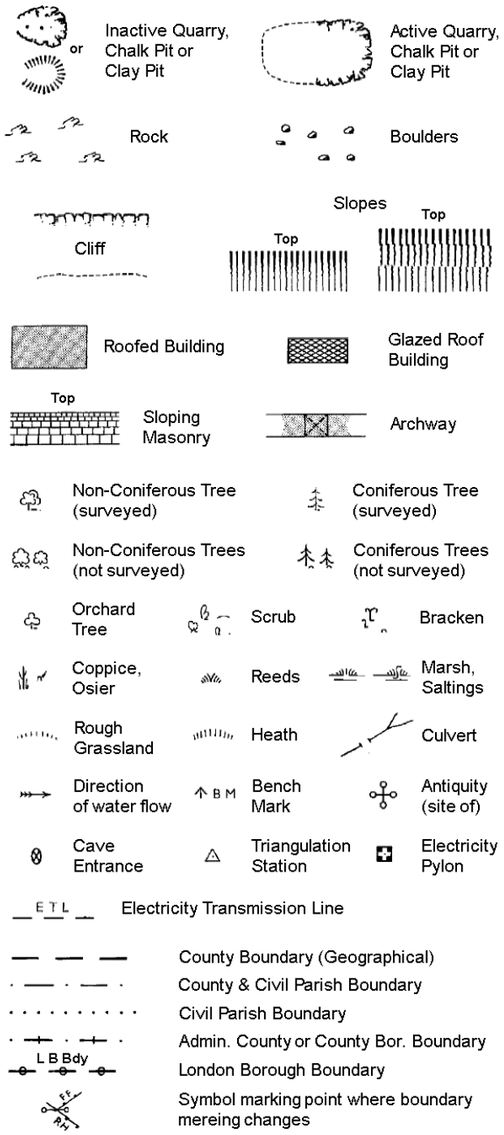
Administrative County & Civil Parish Boundary

Co. Boro. Bdy. County Borough Boundary (England)

Co. Burgh Bdy. County Burgh Boundary (Scotland)

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

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



County Boundary (Geographical)

County & Civil Parish Boundary

Civil Parish Boundary

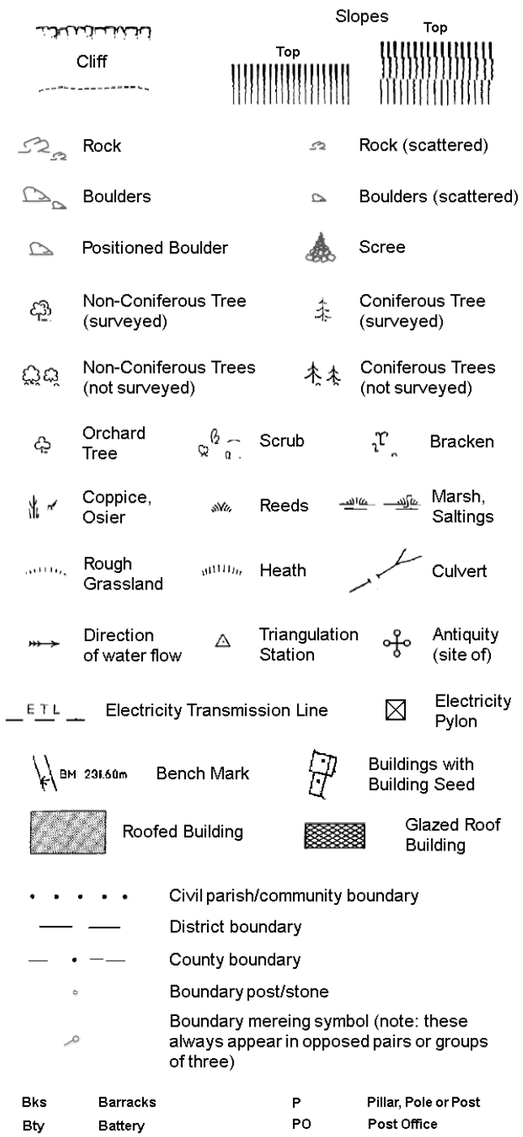
Admin. County or County Bor. Boundary

L B Bdy London Borough Boundary

Symbol marking point where boundary mereing changes

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

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



Civil parish/community boundary

District boundary

County boundary

Boundary post/stone

Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

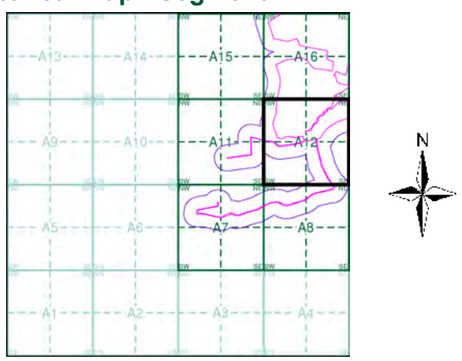
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

rps

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Denbighshire	1:2,500	1872 - 1873	2
Denbighshire	1:2,500	1899	3
Denbighshire	1:2,500	1912	4
Ordnance Survey Plan	1:2,500	1962 - 1967	5
Additional SIMs	1:2,500	1963 - 1967	6
Ordnance Survey Plan	1:2,500	1967 - 1977	7
Ordnance Survey Plan	1:2,500	1984	8
Large-Scale National Grid Data	1:2,500	1992 - 1993	9
Large-Scale National Grid Data	1:2,500	1994	10

Historical Map - Segment A12



Order Details

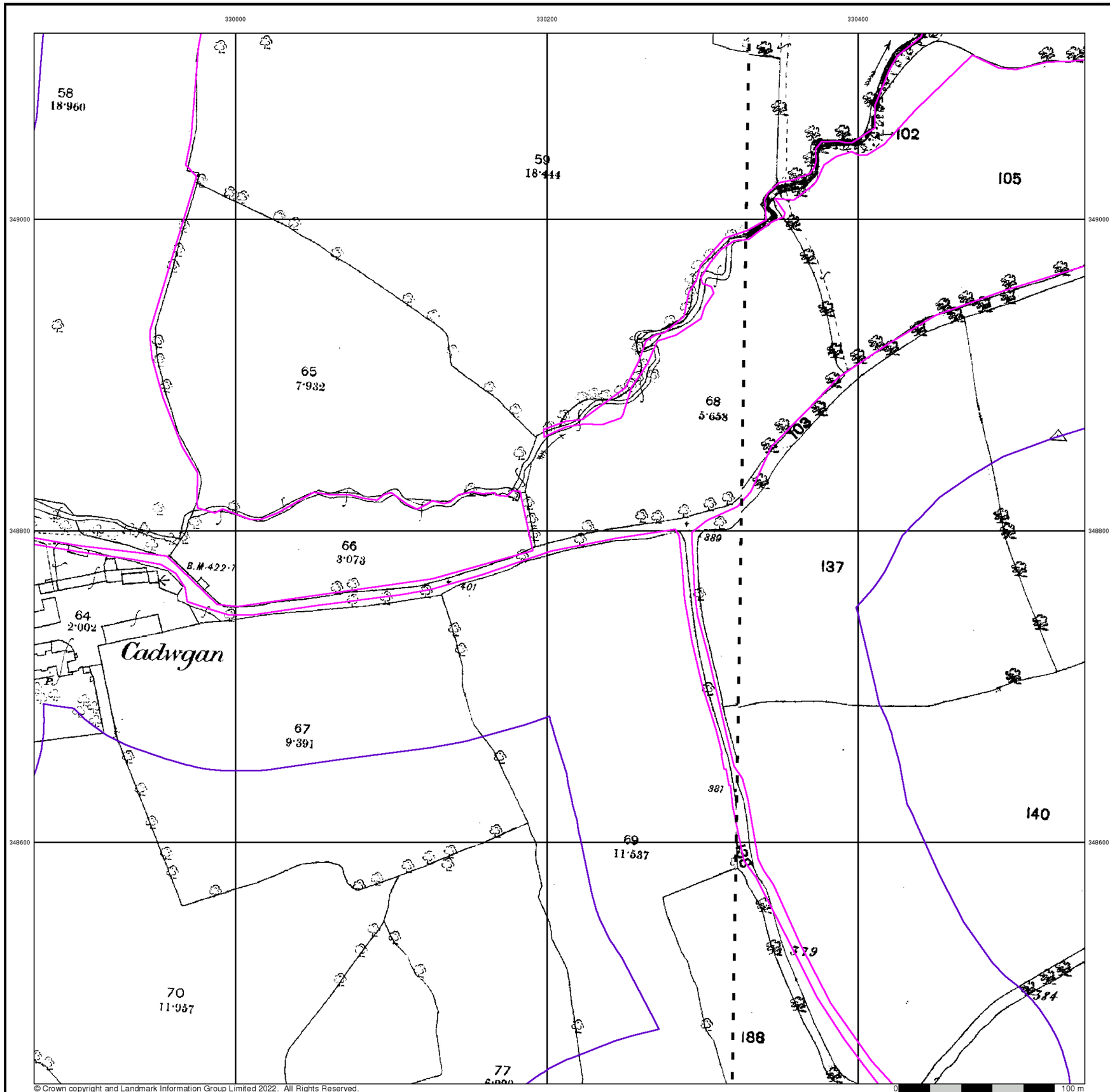
Order Number: 291151542_1_1
Customer Ref: JER8537
National Grid Reference: 329550, 348490
Slice: A
Site Area (Ha): 145.64
Search Buffer (m): 100

Site Details

Site at 330330, 350090

Landmark INFORMATION GROUP

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



0 100 m

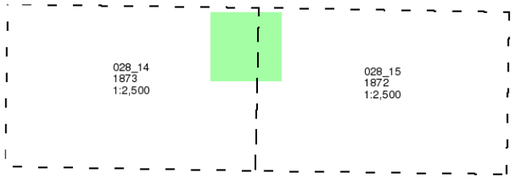
Denbighshire

Published 1872 - 1873

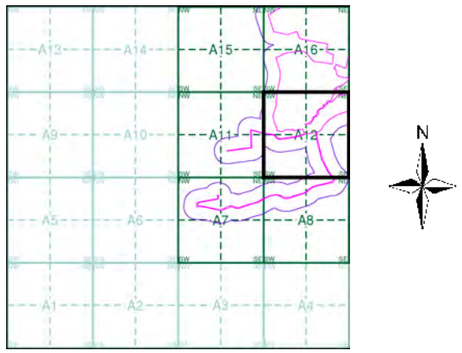
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

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Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
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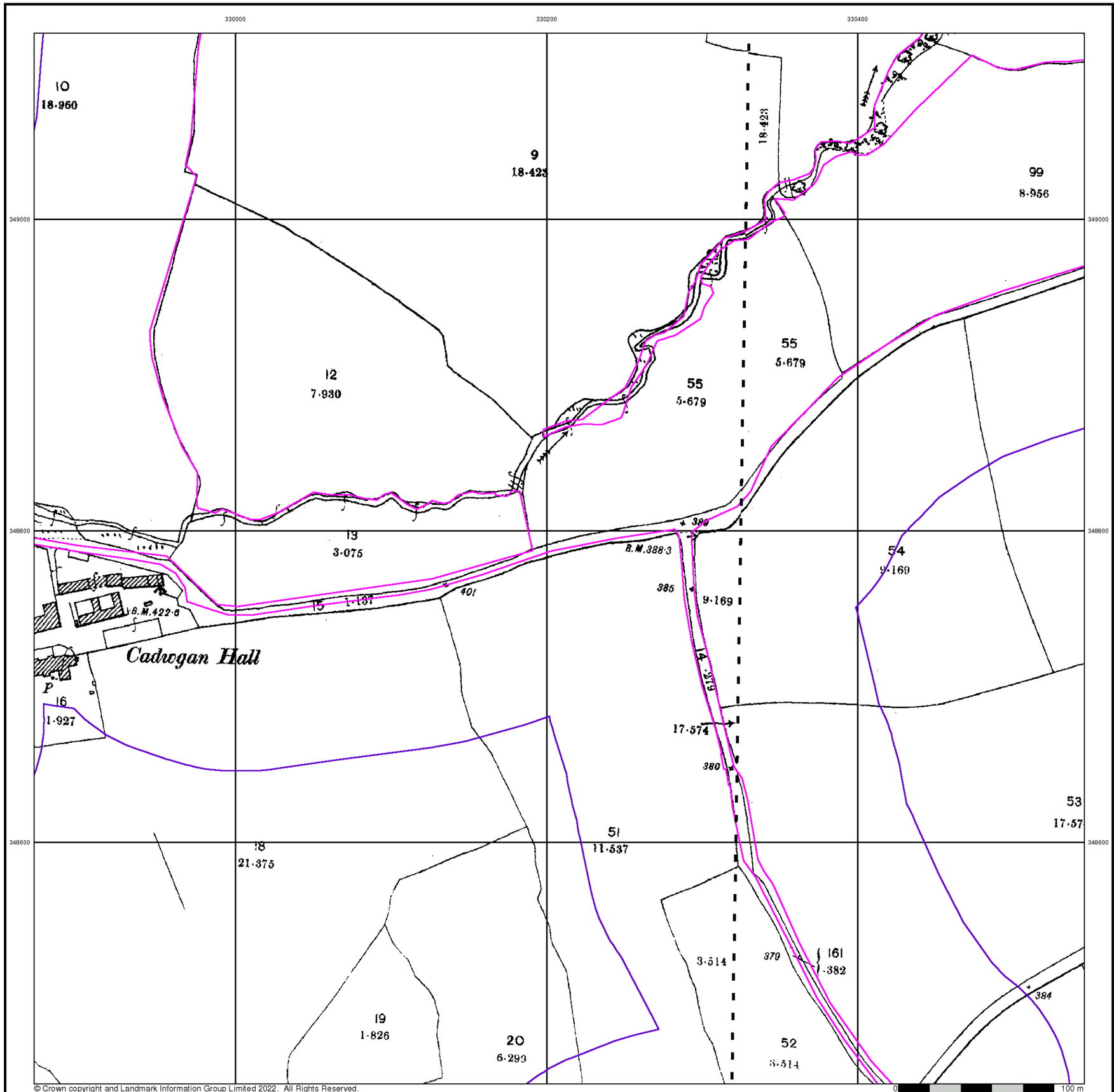


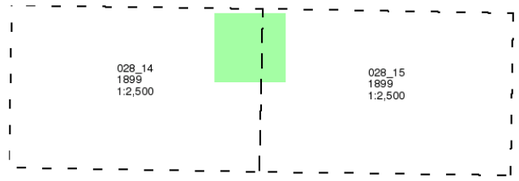
Denbighshire

Published 1899

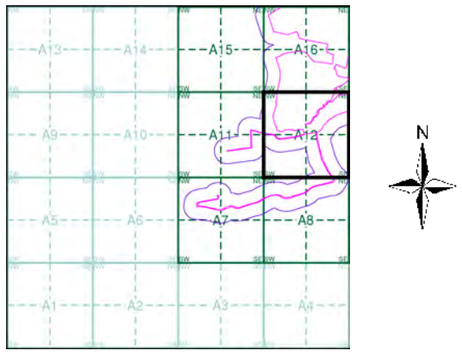
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

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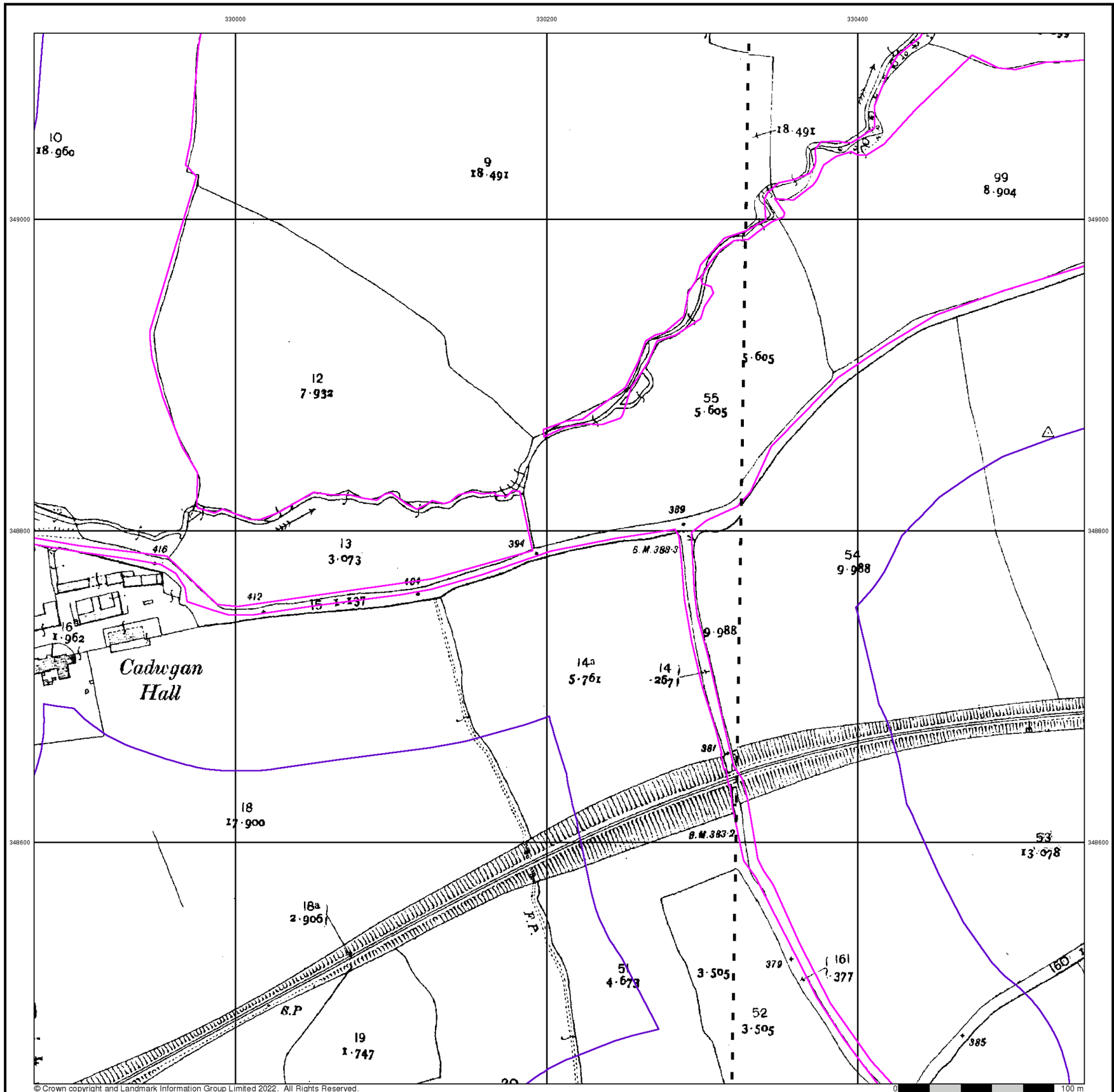


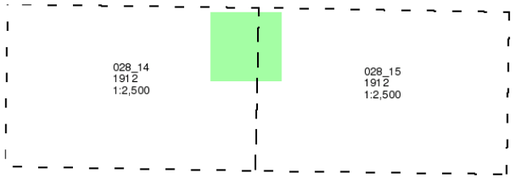
Denbighshire

Published 1912

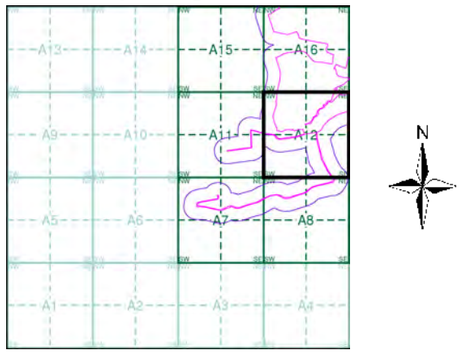
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

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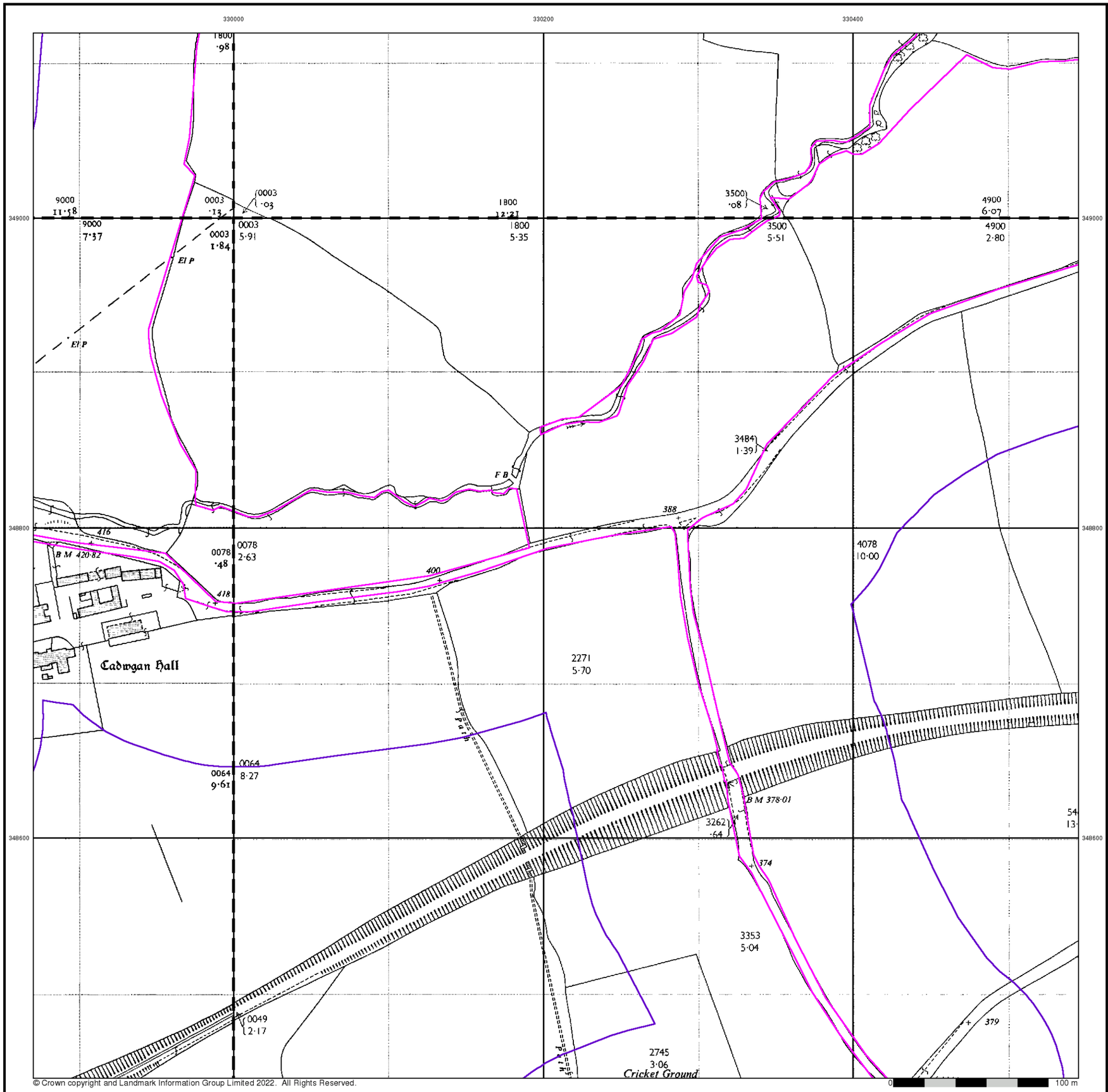

Ordnance Survey Plan

Published 1962 - 1967

Source map scale - 1:2,500

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

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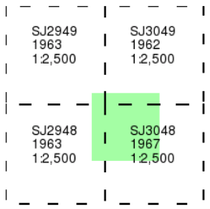
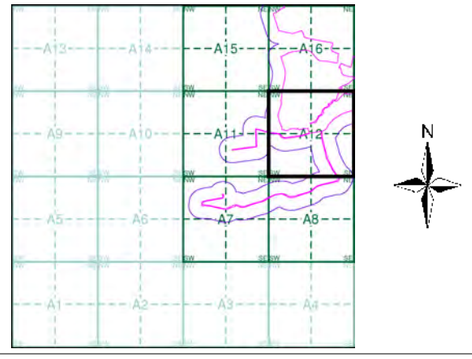


Historical Map - Segment A12



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

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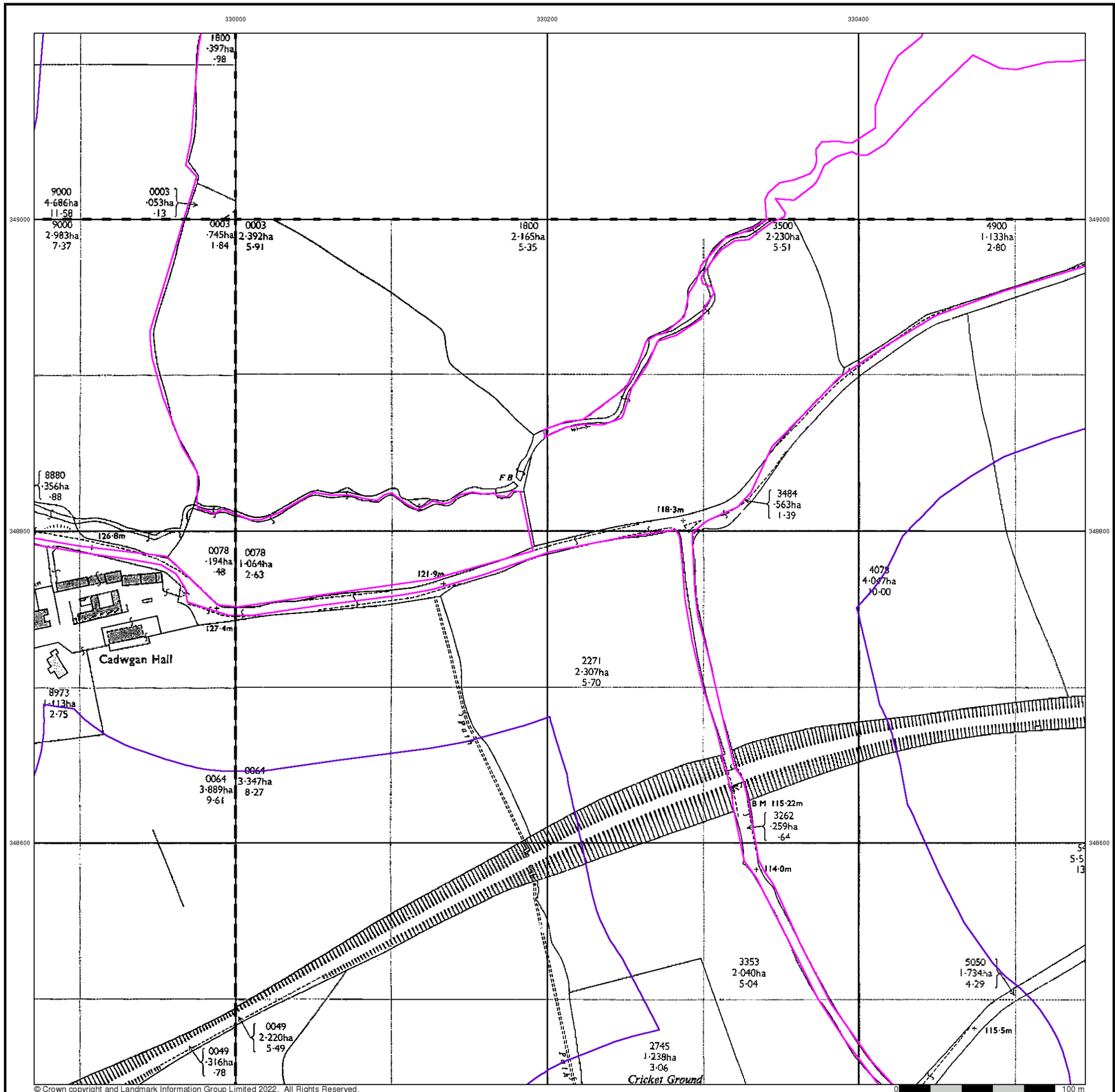


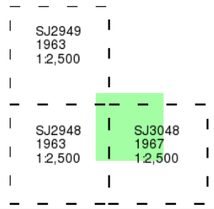
Additional SIMs

Published 1963 - 1967

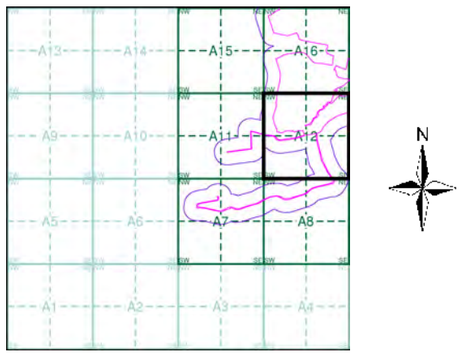
Source map scale - 1:2,500

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)



Historical Map - Segment A12



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

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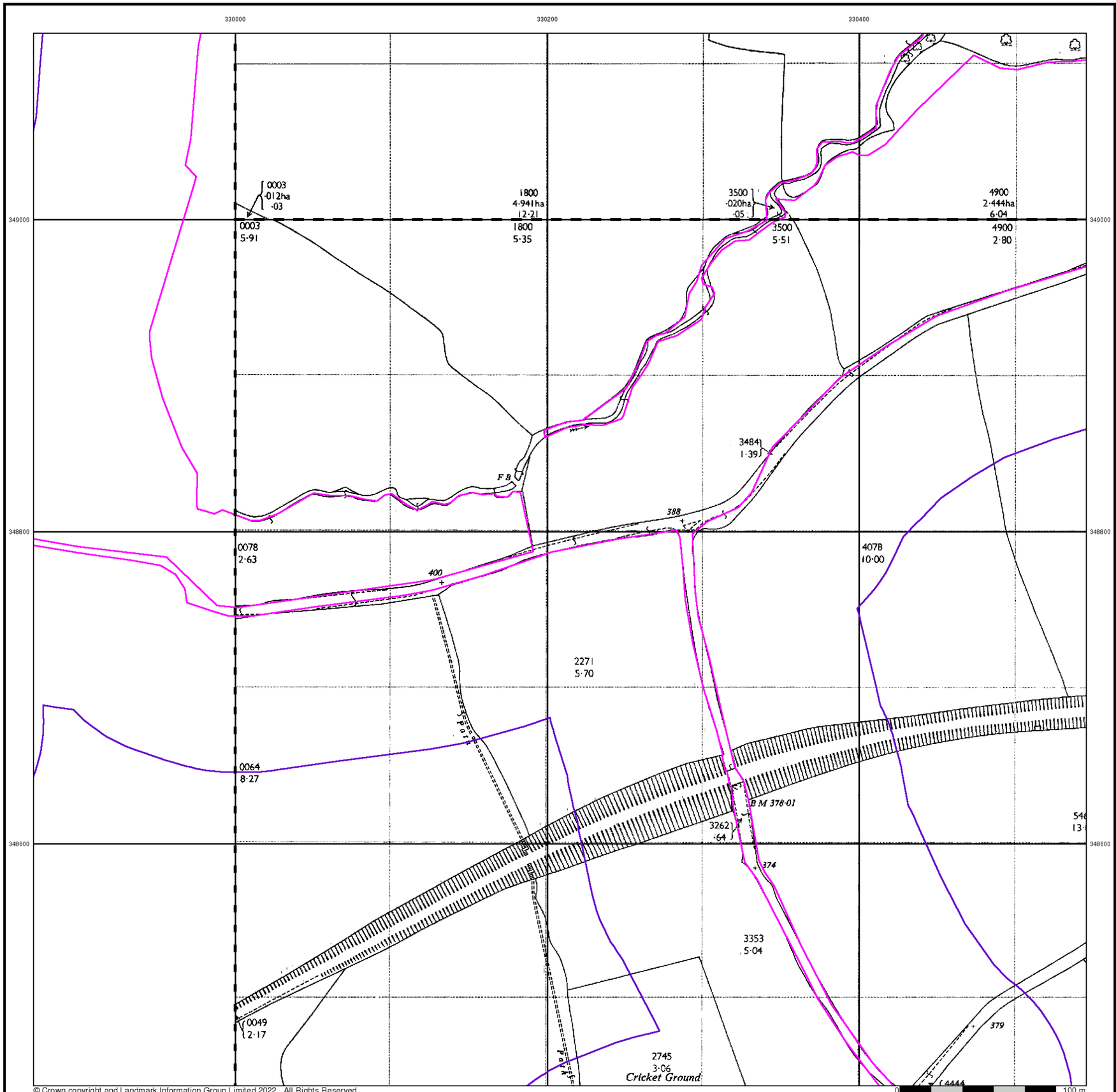


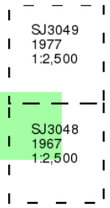
Ordnance Survey Plan

Published 1967 - 1977

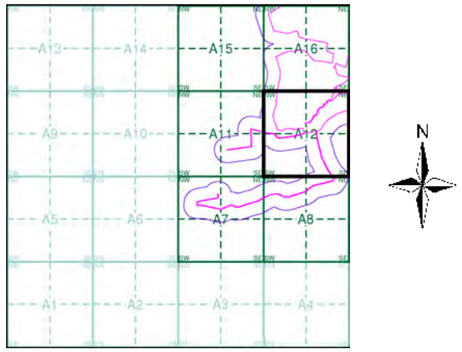
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

Landmark INFORMATION GROUP
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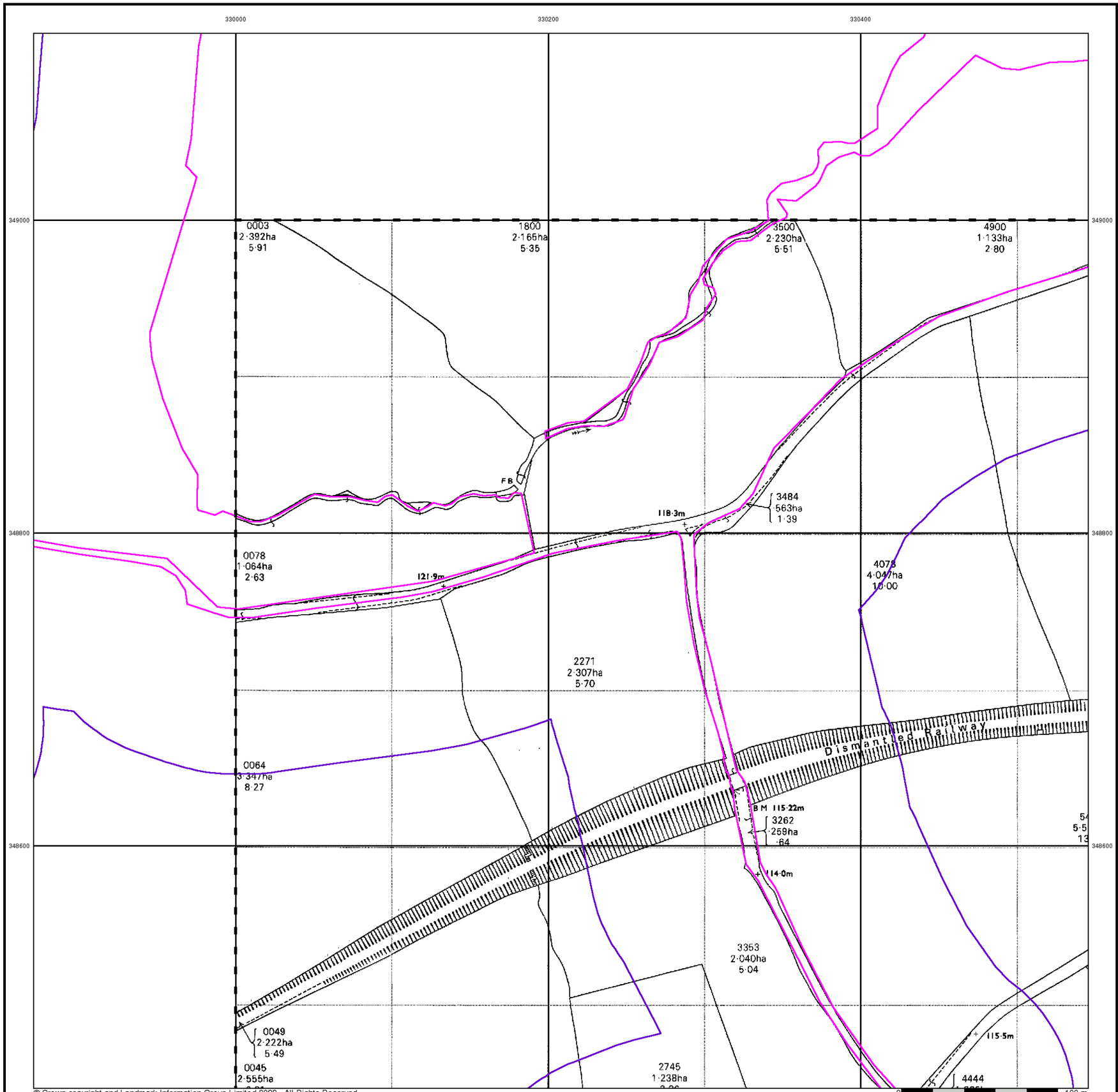


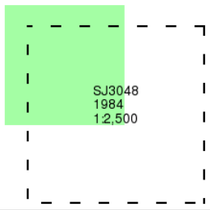
Ordnance Survey Plan

Published 1984

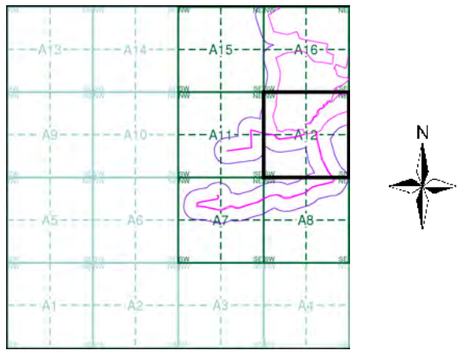
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

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

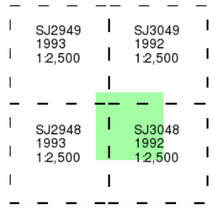
Large-Scale National Grid Data

Published 1992 - 1993

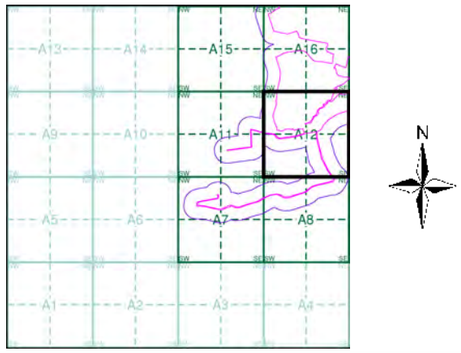
Source map scale - 1:2,500

'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)



Historical Map - Segment A12



Order Details

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Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
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Site Details

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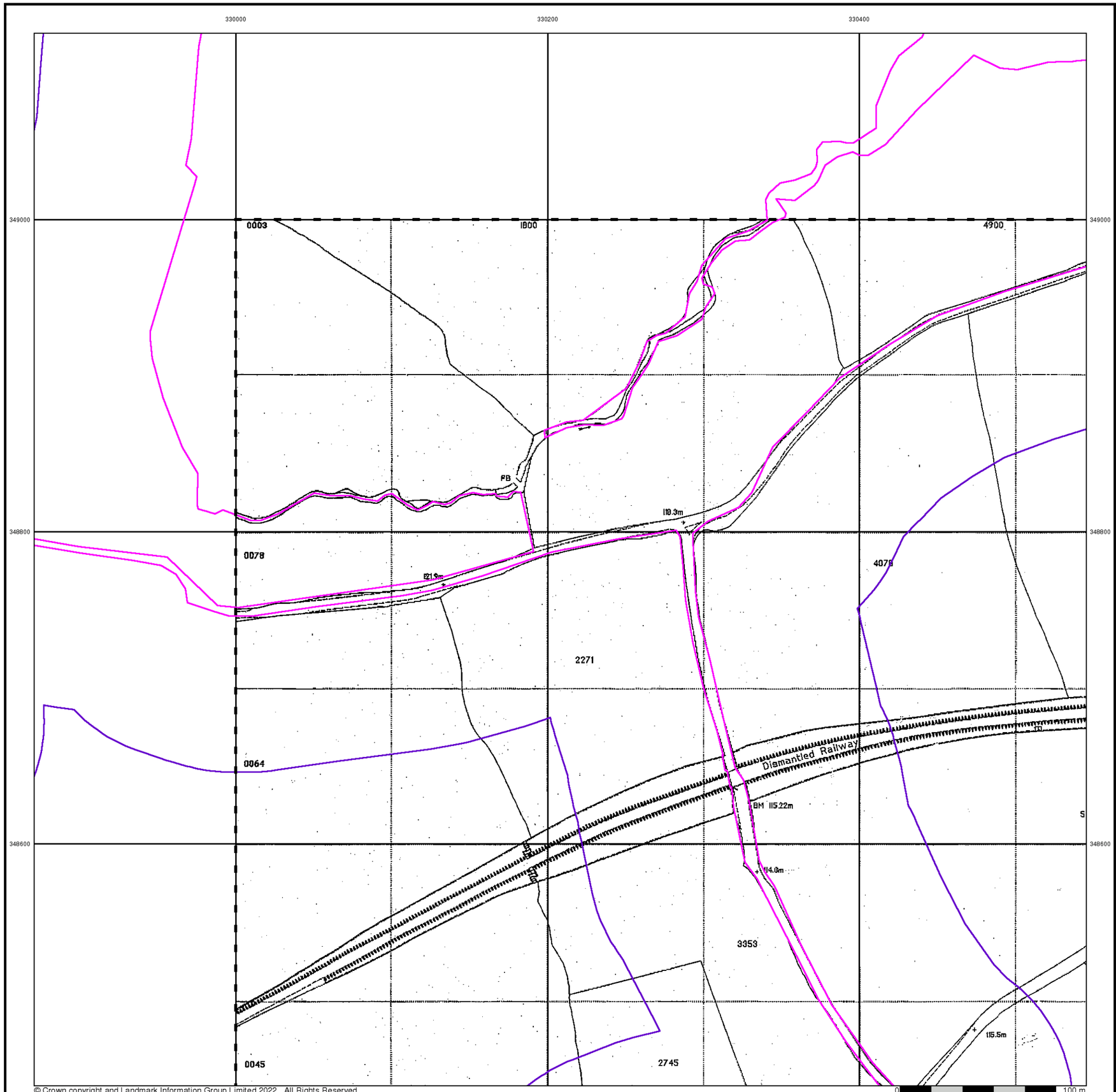

Large-Scale National Grid Data

Published 1994

Source map scale - 1:2,500

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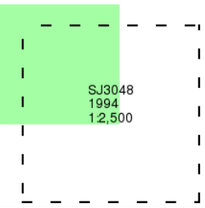
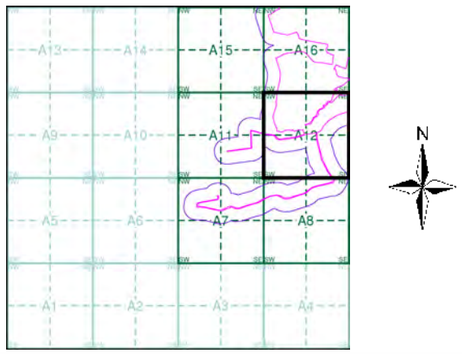


Historical Map - Segment A12



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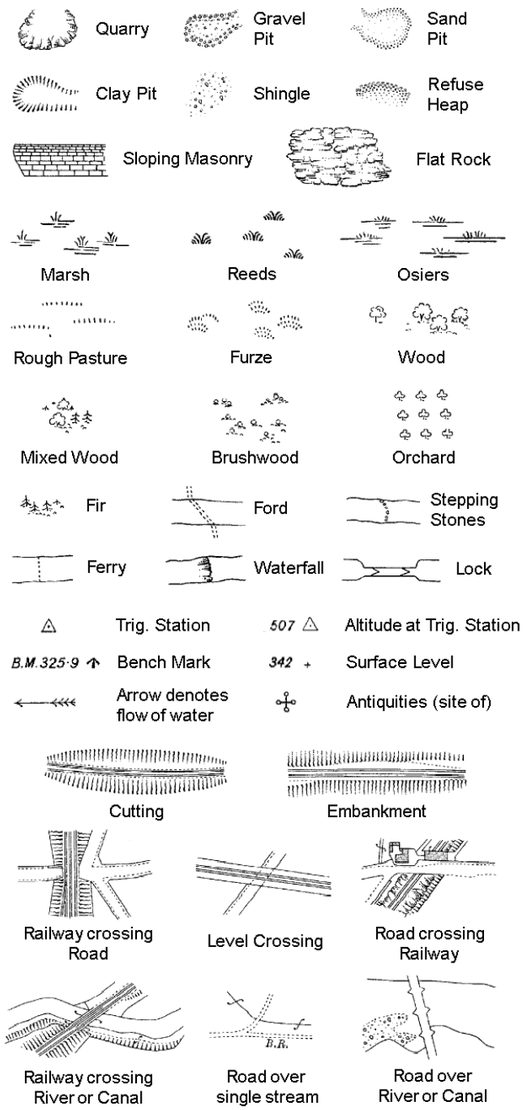
Historical Mapping Legends

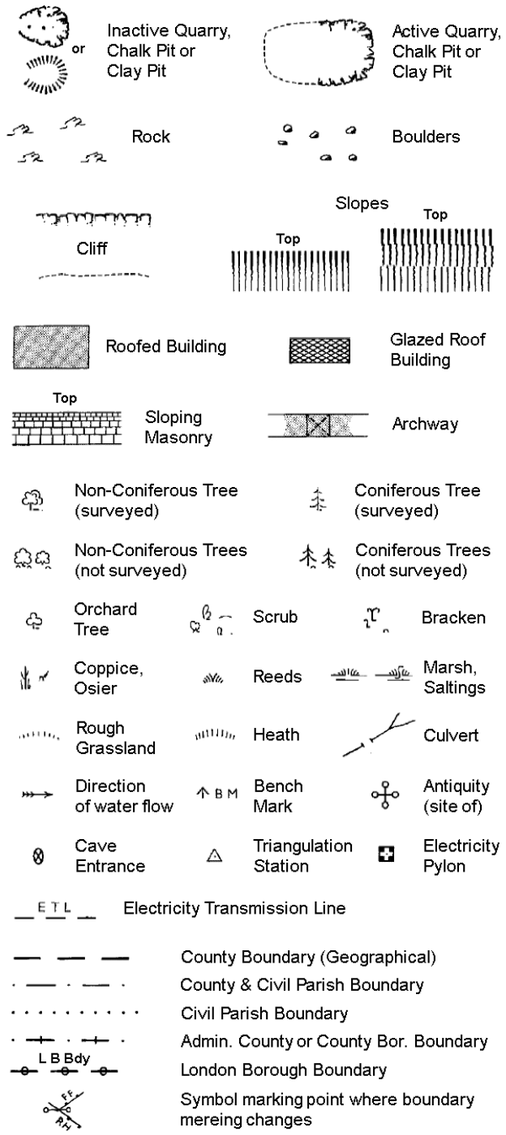
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	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

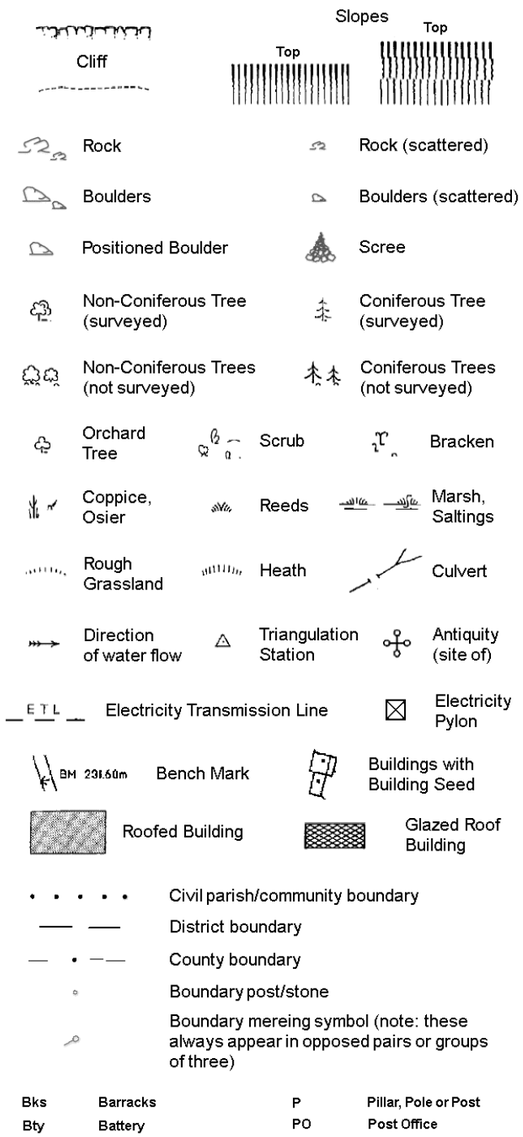
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



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

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

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



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

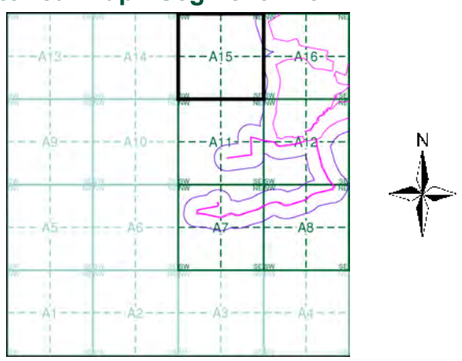
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

rps

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Denbighshire	1:2,500	1873 - 1887	2
Denbighshire	1:2,500	1899	3
Denbighshire	1:2,500	1912	4
Ordnance Survey Plan	1:2,500	1963	5
Additional SIMs	1:2,500	1963	6
Large-Scale National Grid Data	1:2,500	1993	7

Historical Map - Segment A15



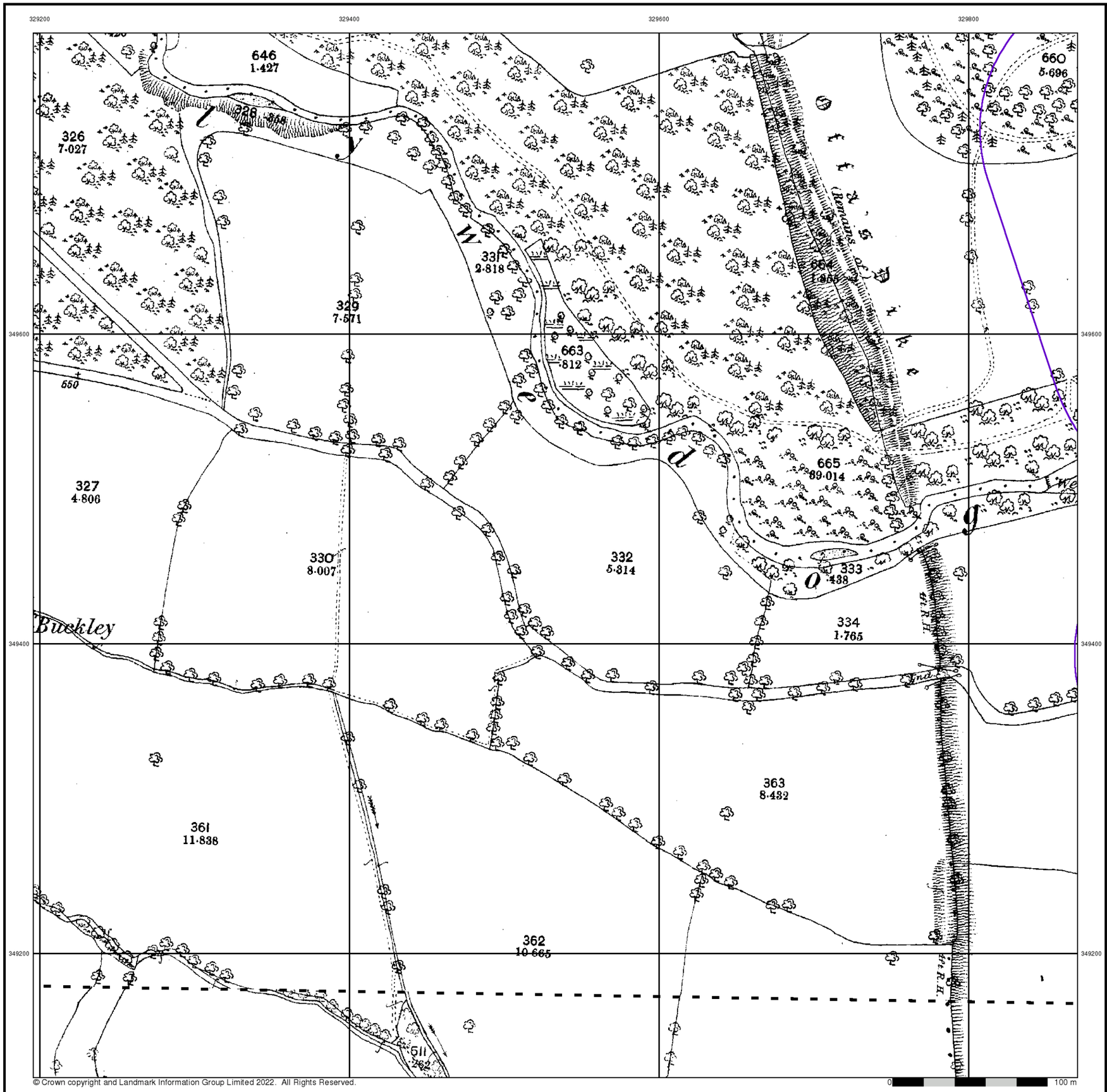
Order Details

Order Number: 291151542_1_1
Customer Ref: JER8537
National Grid Reference: 329550, 348490
Slice: A
Site Area (Ha): 145.64
Search Buffer (m): 100

Site Details

Site at 330330, 350090

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



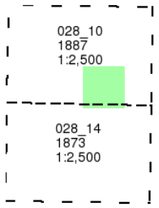
Denbighshire

Published 1873 - 1887

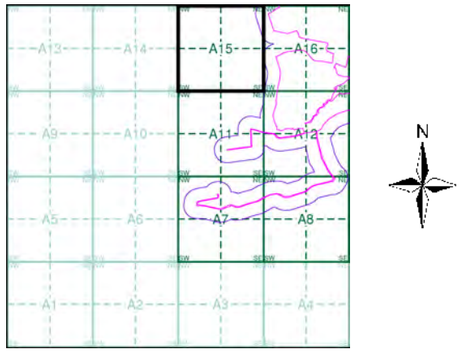
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A15



Order Details

Order Number:	291151542_1_1
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Slice:	A
Site Area (Ha):	145.64
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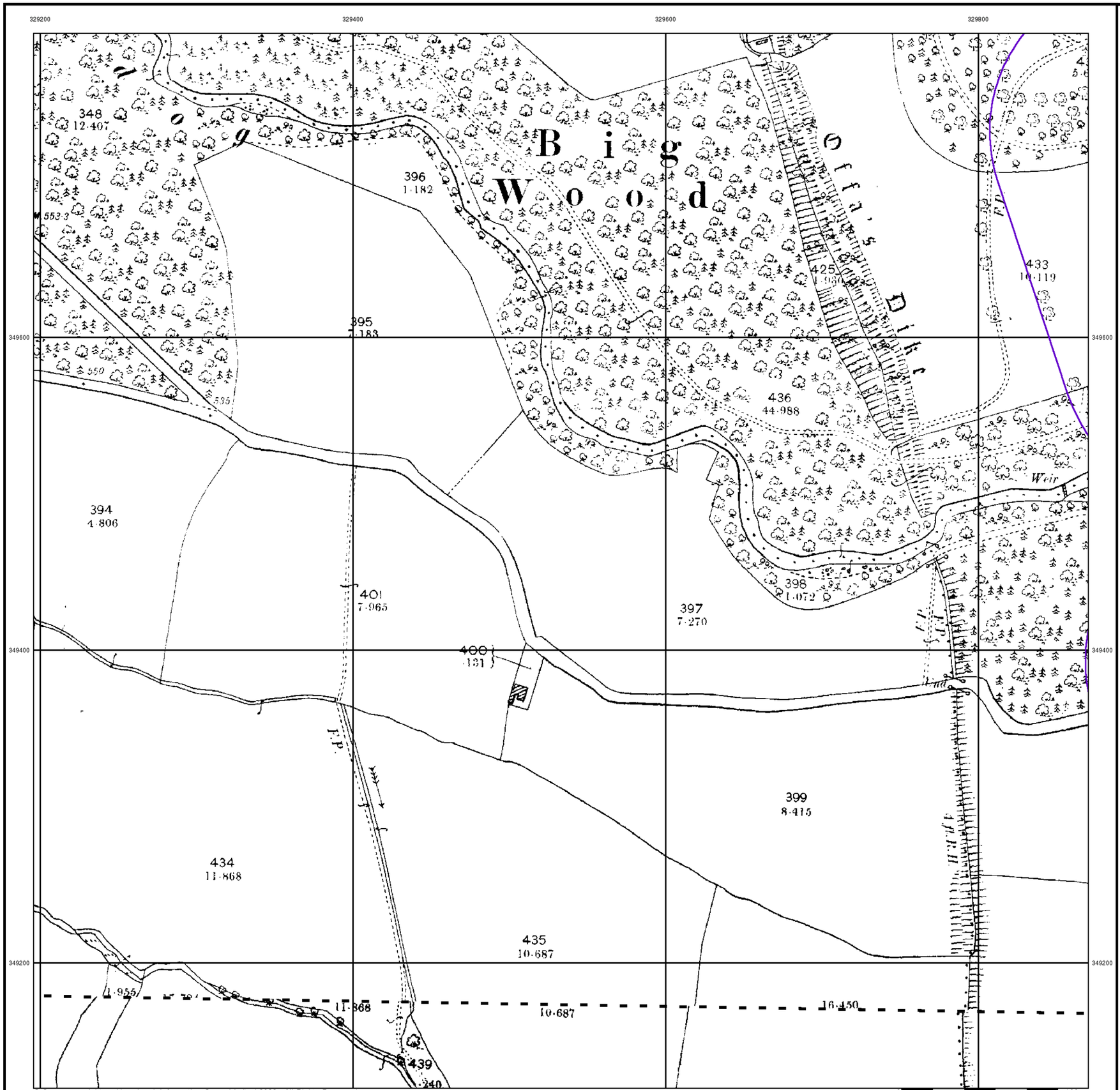

0 100 m

Denbighshire

Published 1899

Source map scale - 1:2,500

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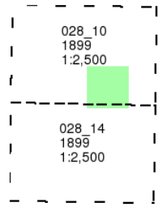
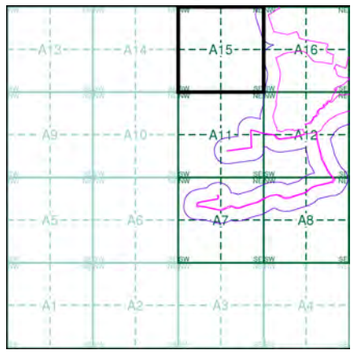


Historical Map - Segment A15



Order Details

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National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

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329200 329400 329600 329800

349600 349600

349400 349400

349200 349200

Big Wood

Offa's Dike

348
13·700

425
6·300

436
46·880

546

396
1·632

536

B.M.533·2

393
365

394
4·806

397
14·430

401
7·905

398
1·013

Weir

Und.

F.P.

Plâs-Buckley Cottage

400
·140

Well

Well

399
8·370

4 F.B.H.

434
11·868

435
10·606

1·980 17·753 11·868 10·606 16·416

439
·308

0 100 m

rps

Denbighshire

Published 1912

Source map scale - 1:2,500

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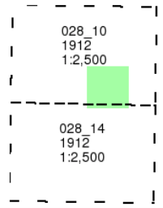
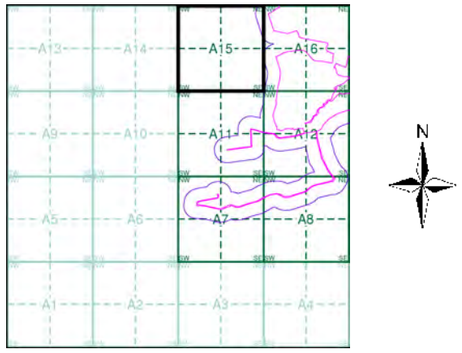
Map Name(s) and Date(s)



Historical Map - Segment A15



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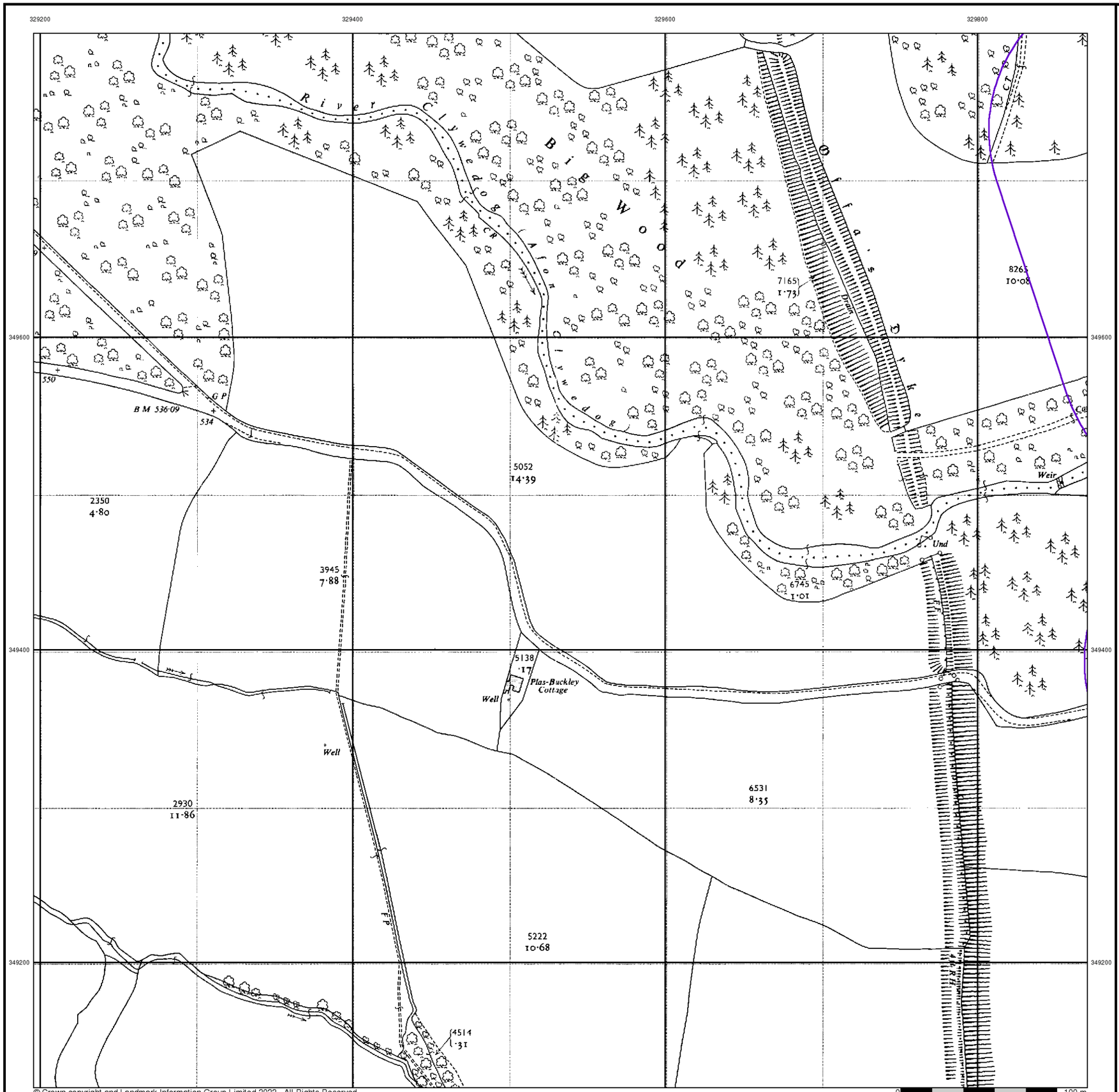


Ordnance Survey Plan

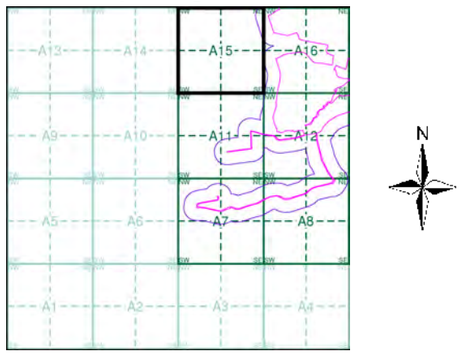
Published 1963

Source map scale - 1:2,500

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

Map Name(s) and Date(s)

Historical Map - Segment A15



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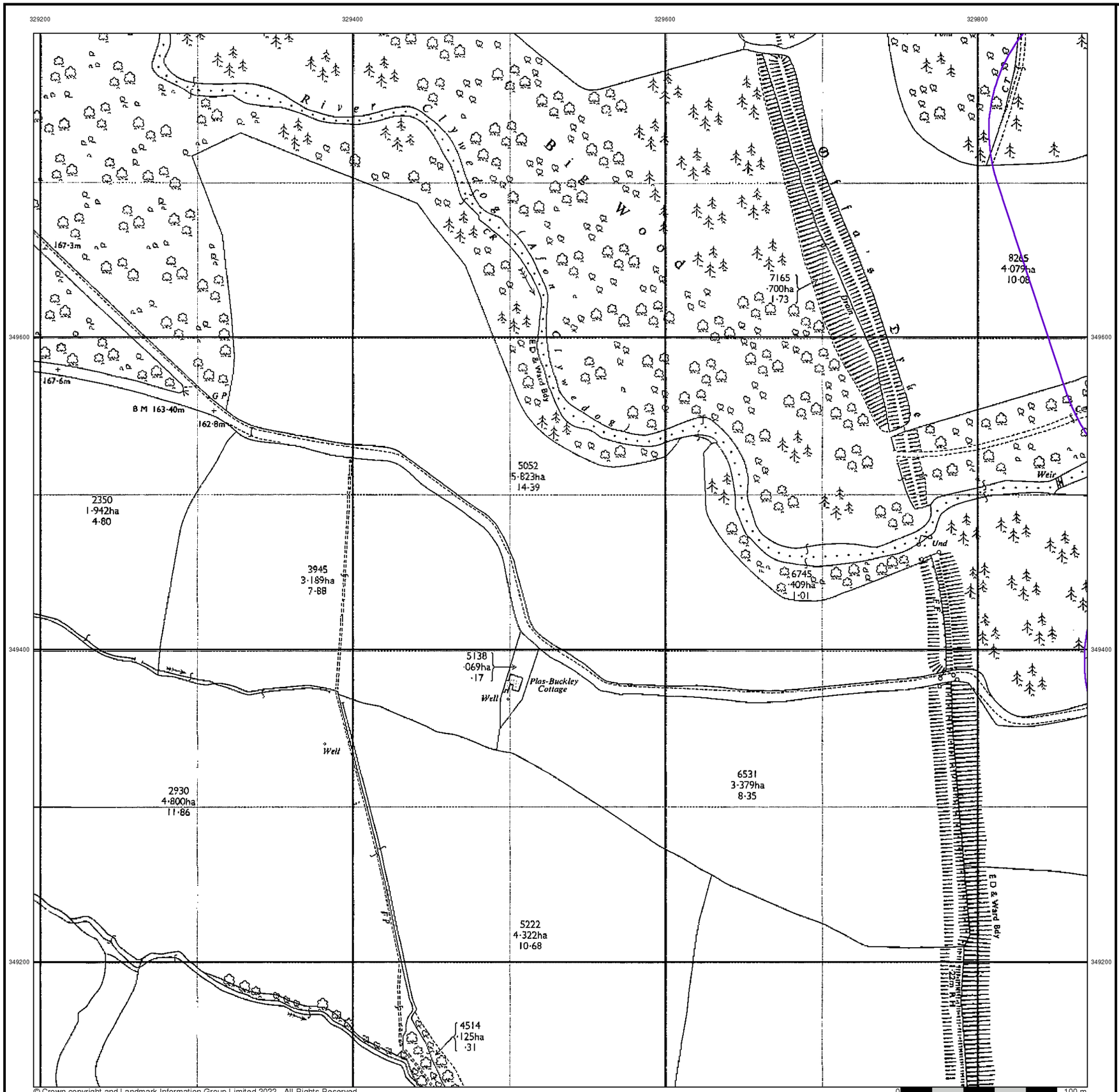


Additional SIMs

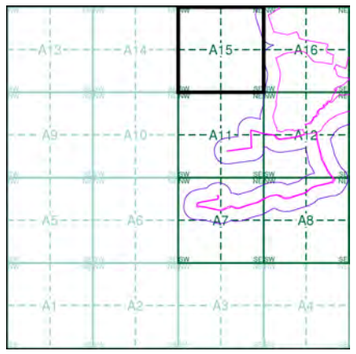
Published 1963

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)

Historical Map - Segment A15



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Slice:	A
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Search Buffer (m):	100

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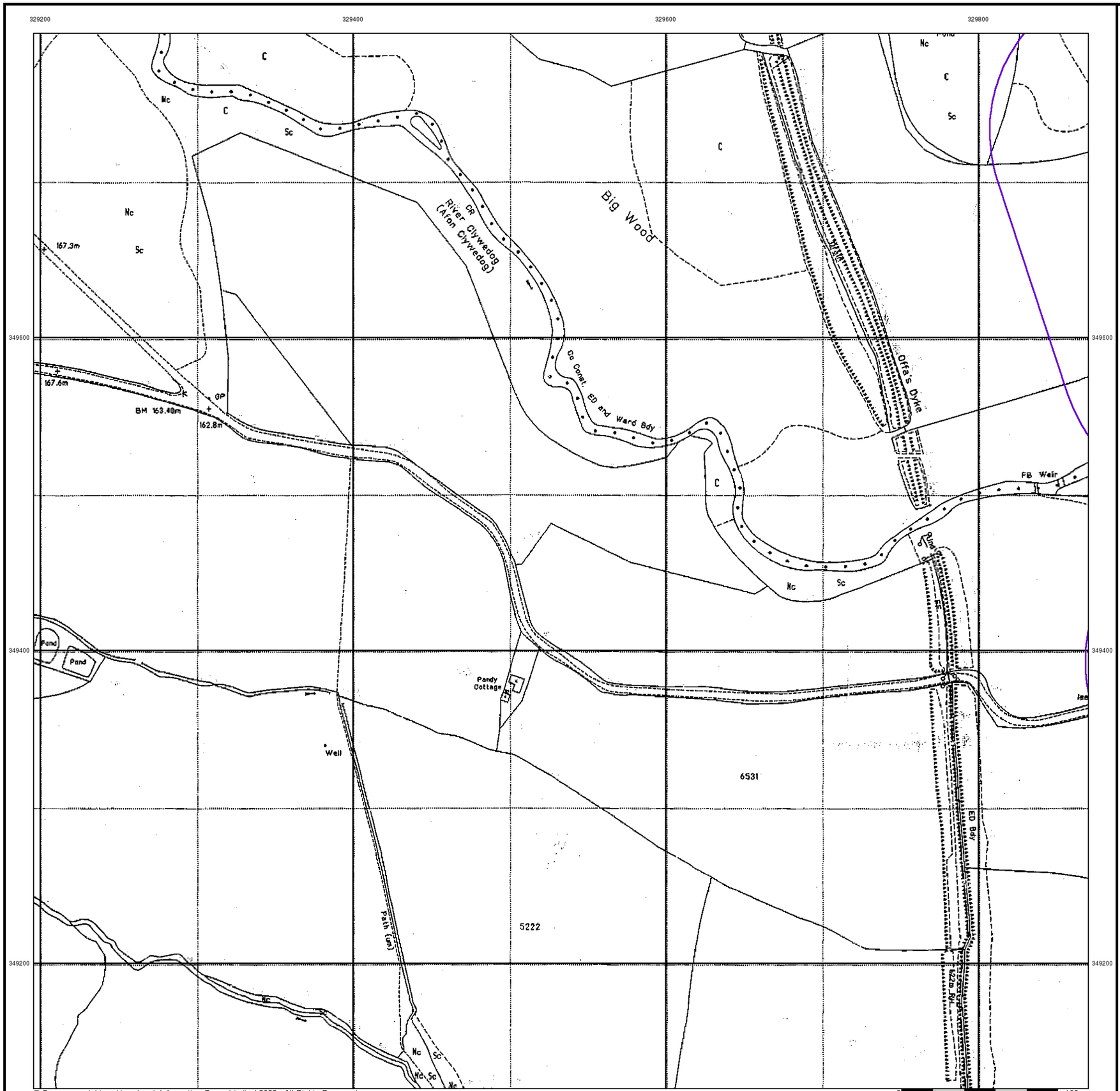


Large-Scale National Grid Data

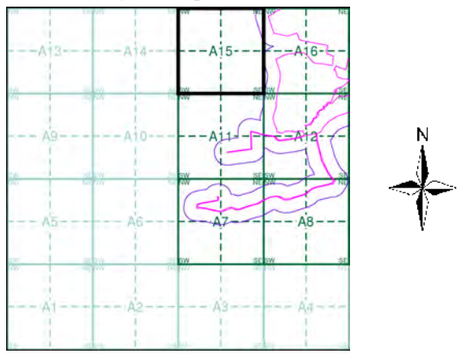
Published 1993

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)

Historical Map - Segment A15



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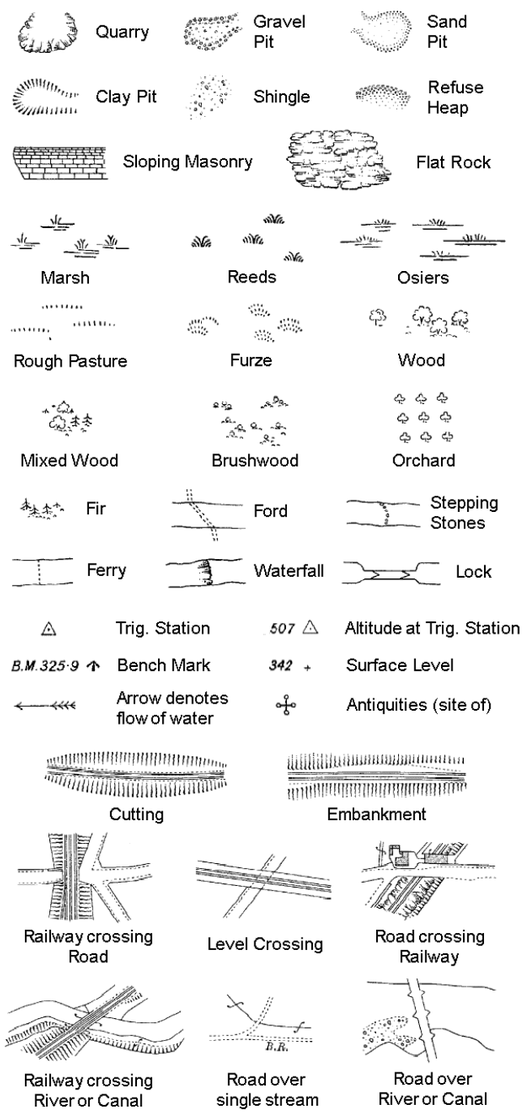
Historical Mapping Legends

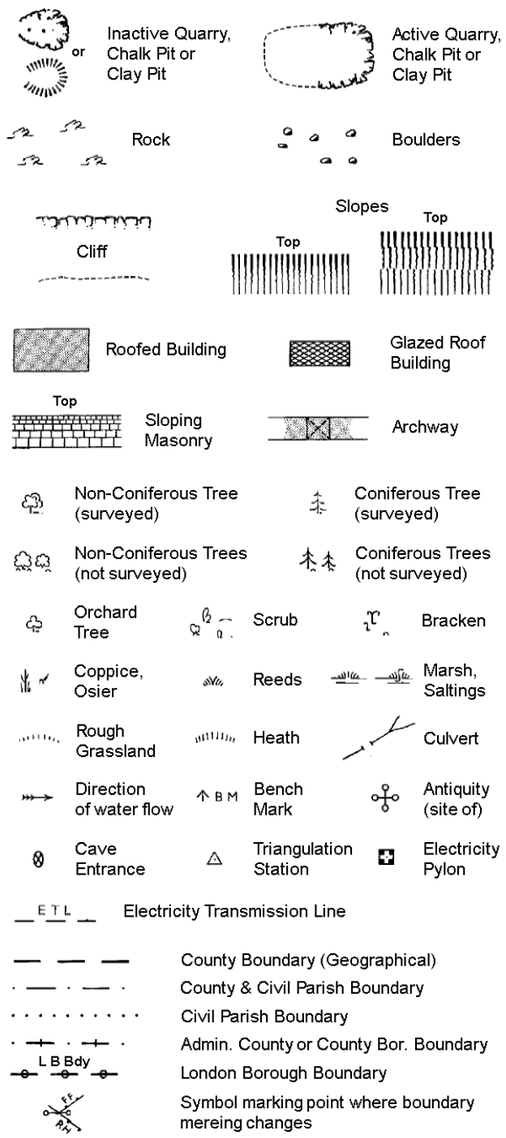
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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

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

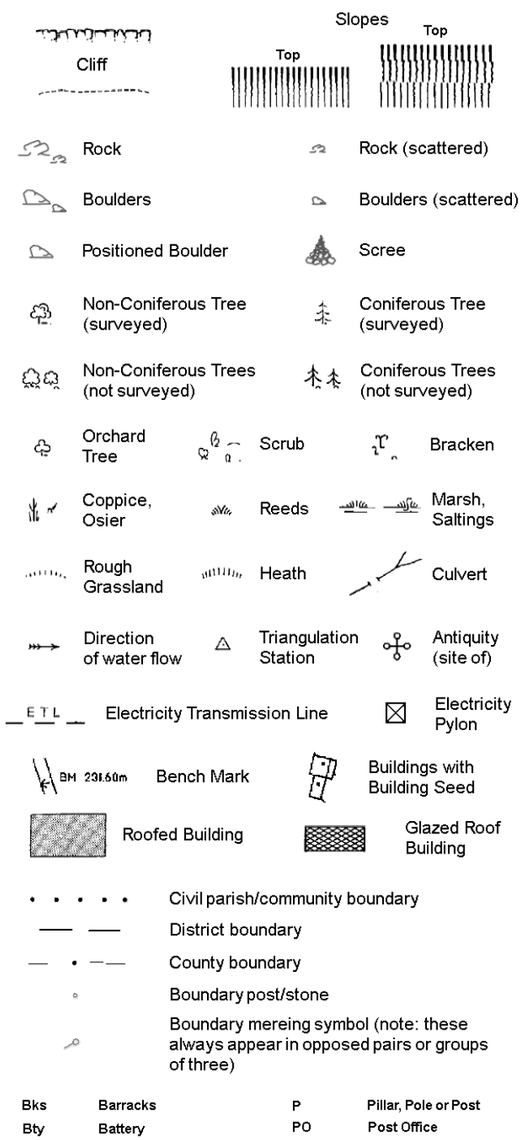
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



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

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

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



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

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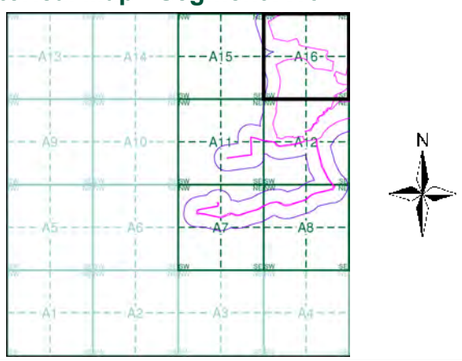
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

rps

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Denbighshire	1:2,500	1872 - 1887	2
Denbighshire	1:2,500	1899	3
Denbighshire	1:2,500	1912	4
Ordnance Survey Plan	1:2,500	1962 - 1963	5
Additional SIMs	1:2,500	1963	6
Ordnance Survey Plan	1:2,500	1977	7
Large-Scale National Grid Data	1:2,500	1992 - 1993	8

Historical Map - Segment A16



Order Details

Order Number: 291151542_1_1
Customer Ref: JER8537
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Slice: A
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Search Buffer (m): 100

Site Details

Site at 330330, 350090

Landmark INFORMATION GROUP
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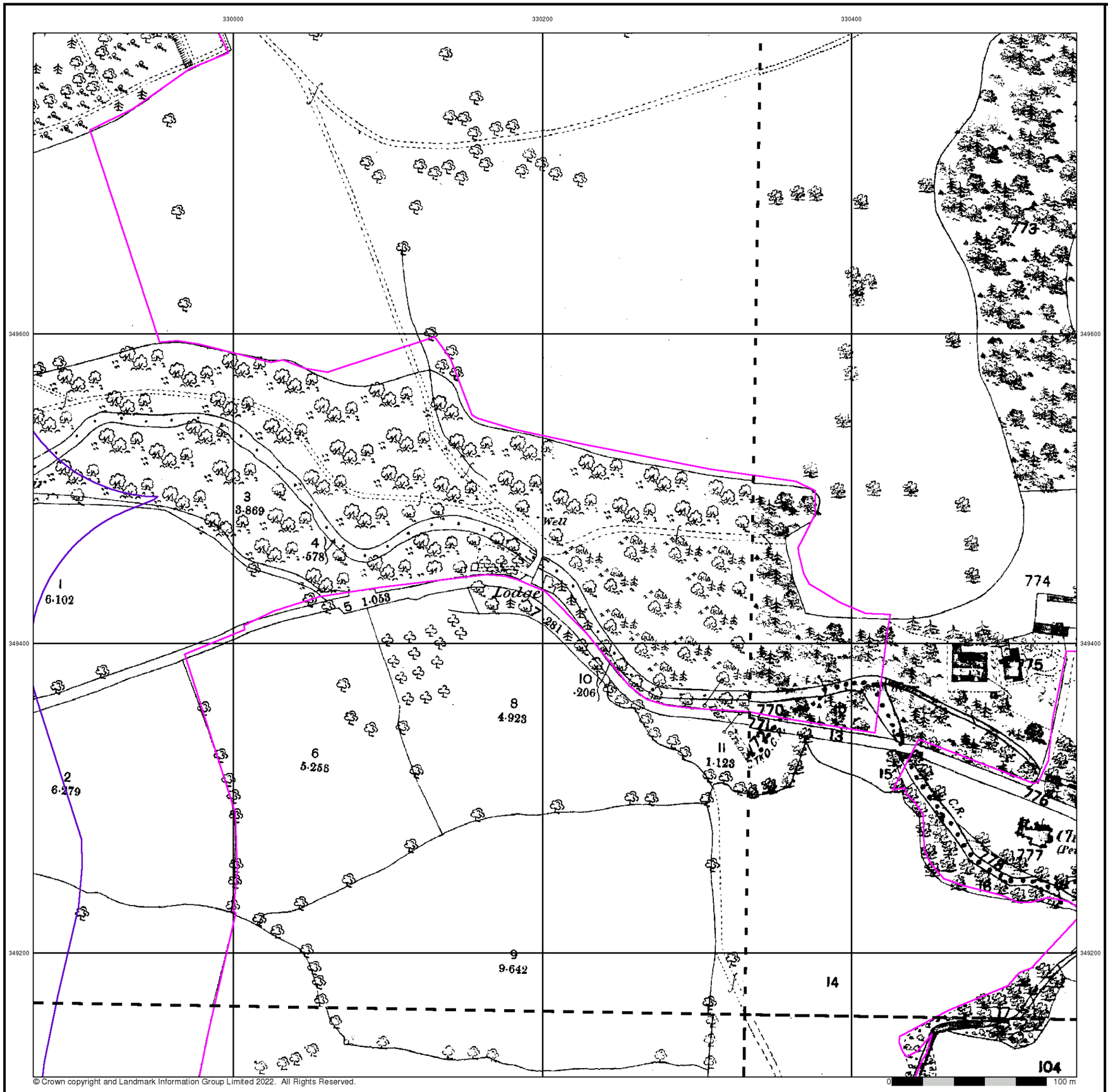


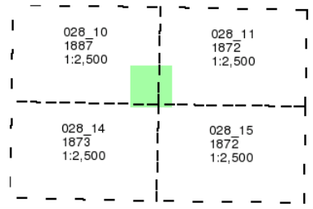
Denbighshire

Published 1872 - 1887

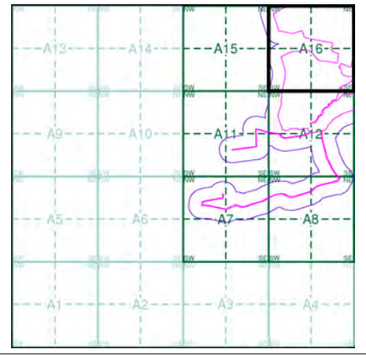
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A16



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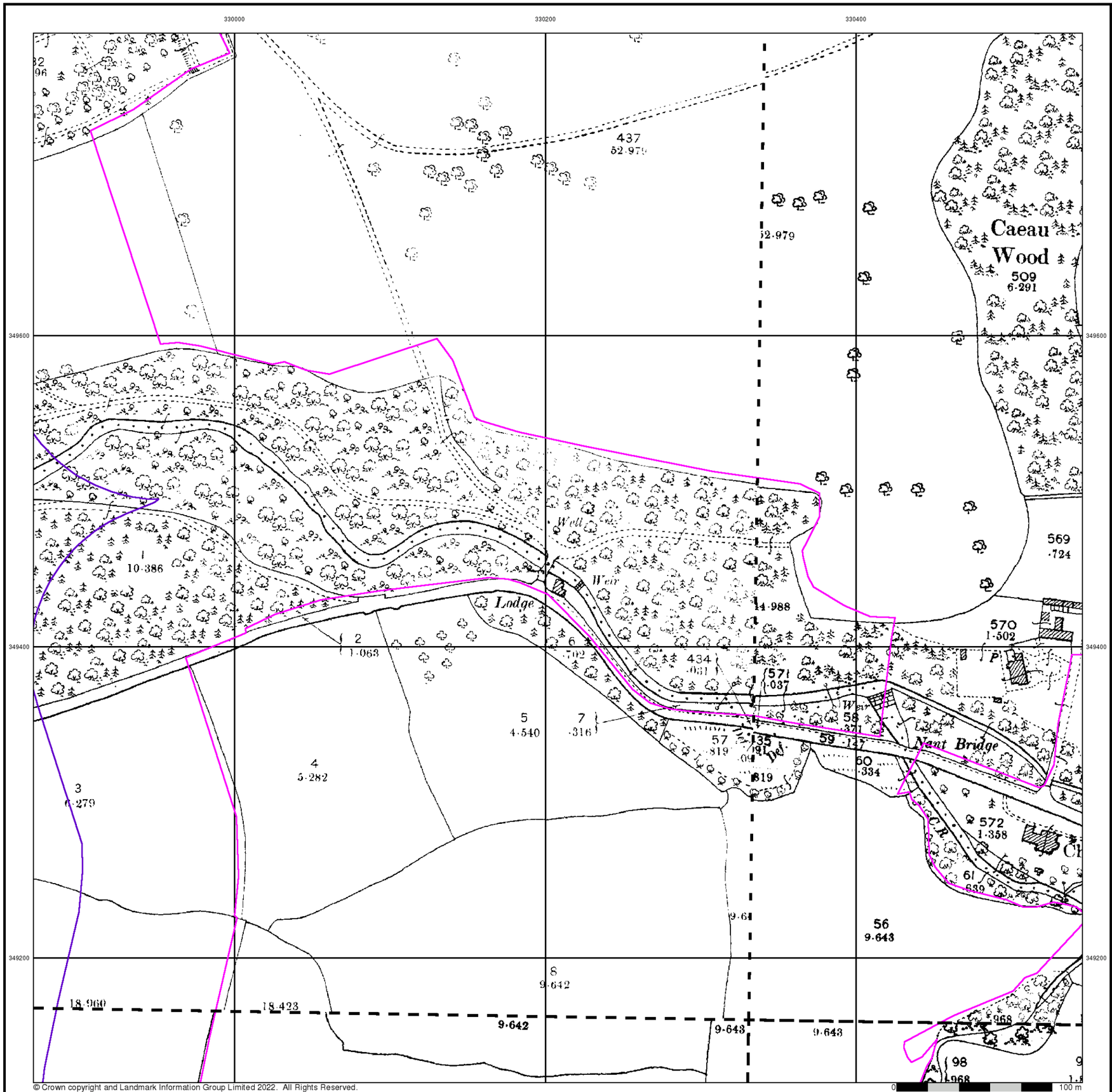

Denbighshire

Published 1899

Source map scale - 1:2,500

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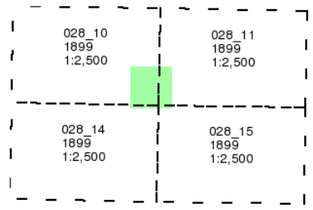
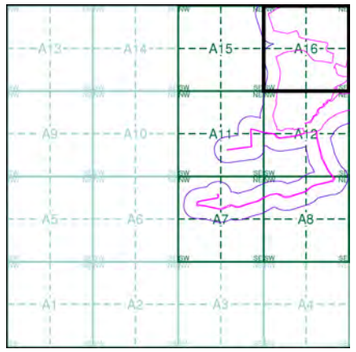


Historical Map - Segment A16



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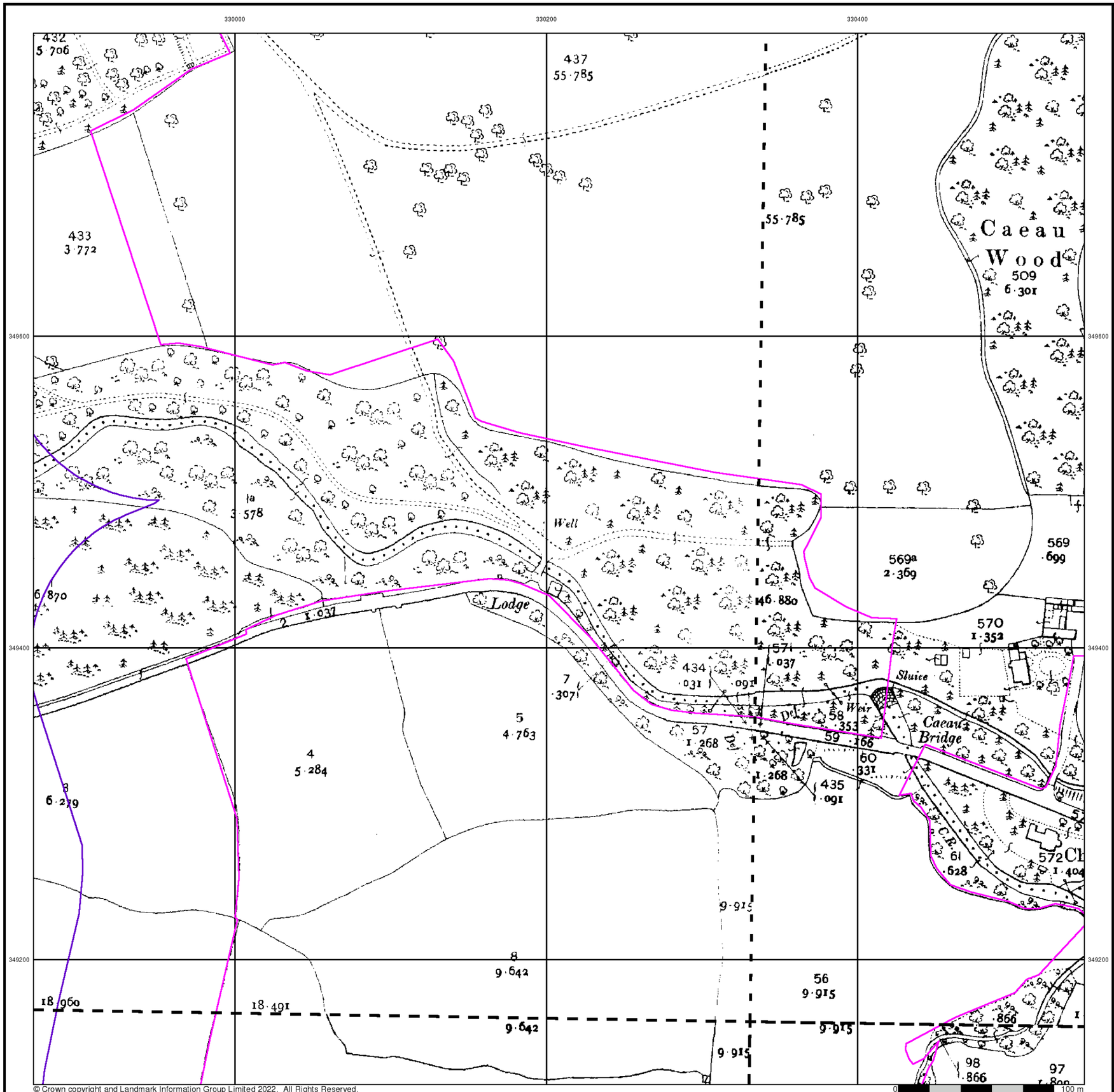

Denbighshire

Published 1912

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.

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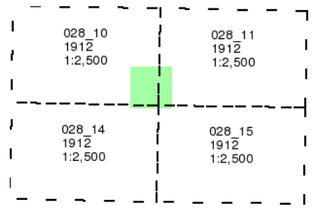
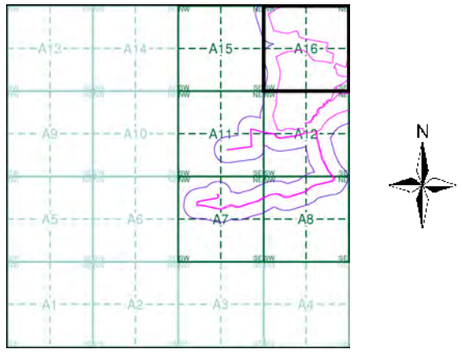


Historical Map - Segment A16



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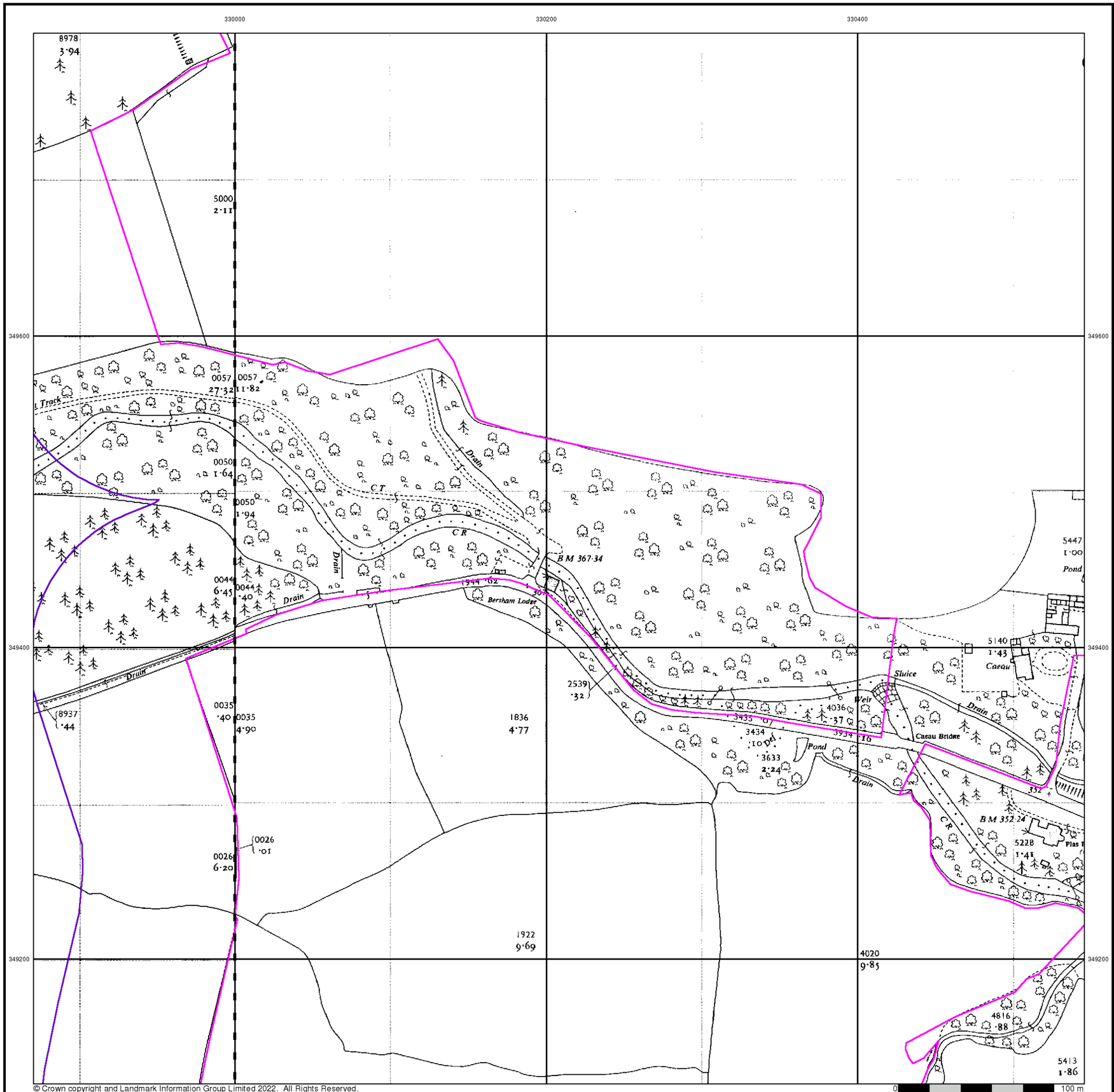


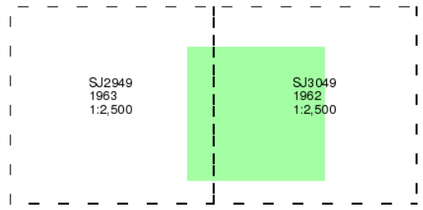
Ordnance Survey Plan

Published 1962 - 1963

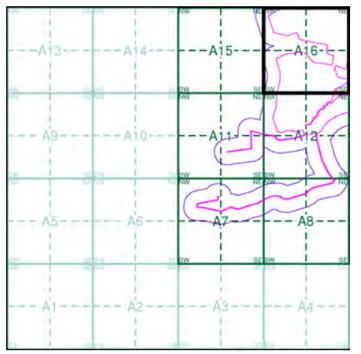
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A16



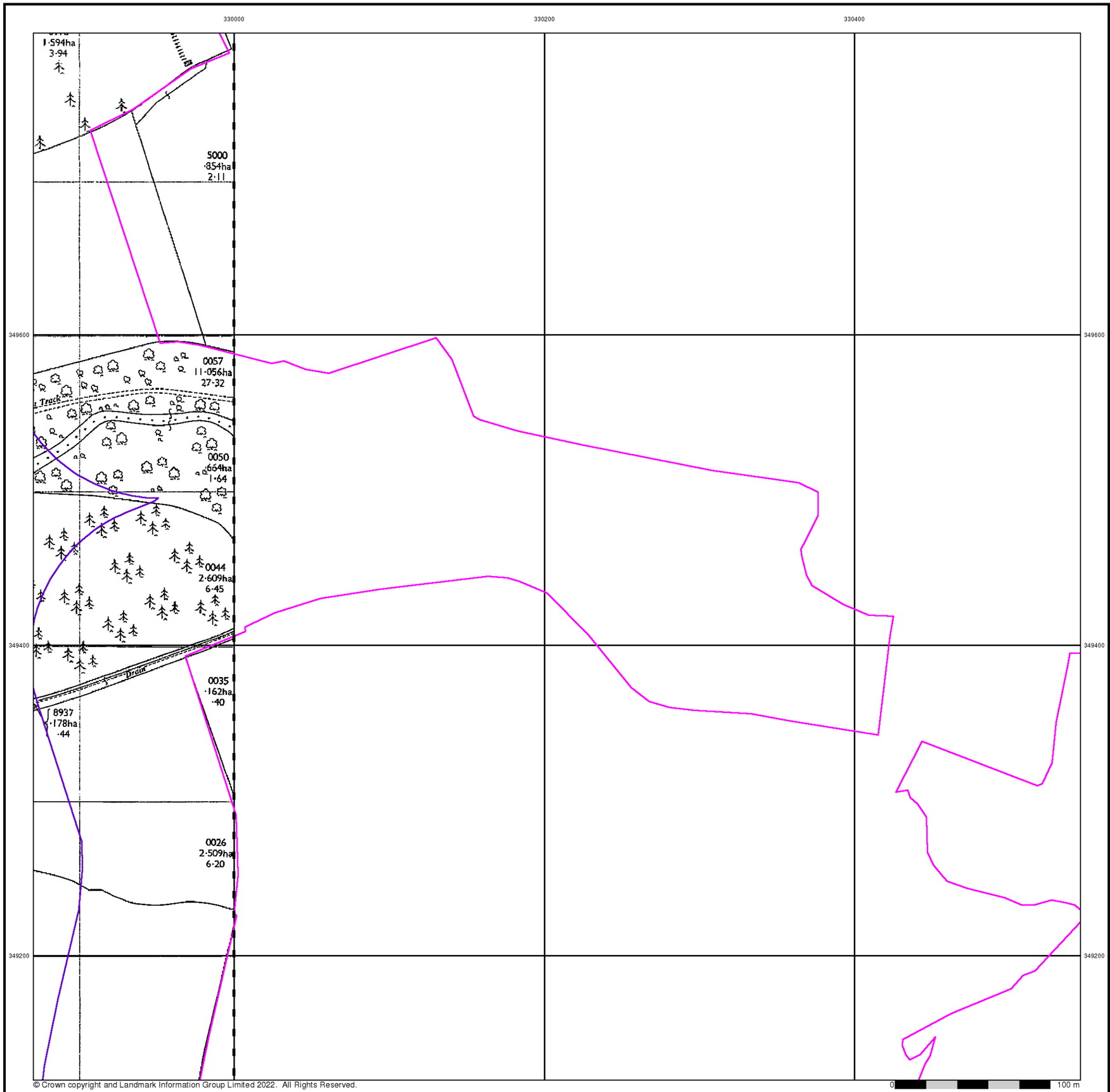
Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

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



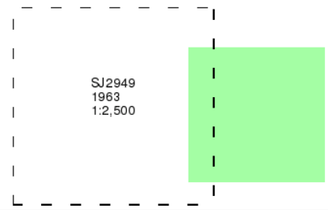
Additional SIMs

Published 1963

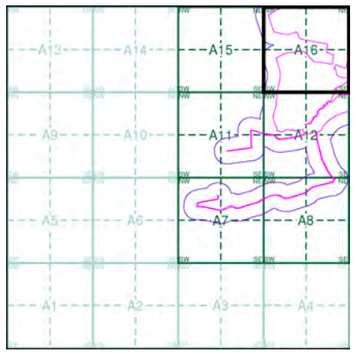
Source map scale - 1:2,500

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)



Historical Map - Segment A16



Order Details

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Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

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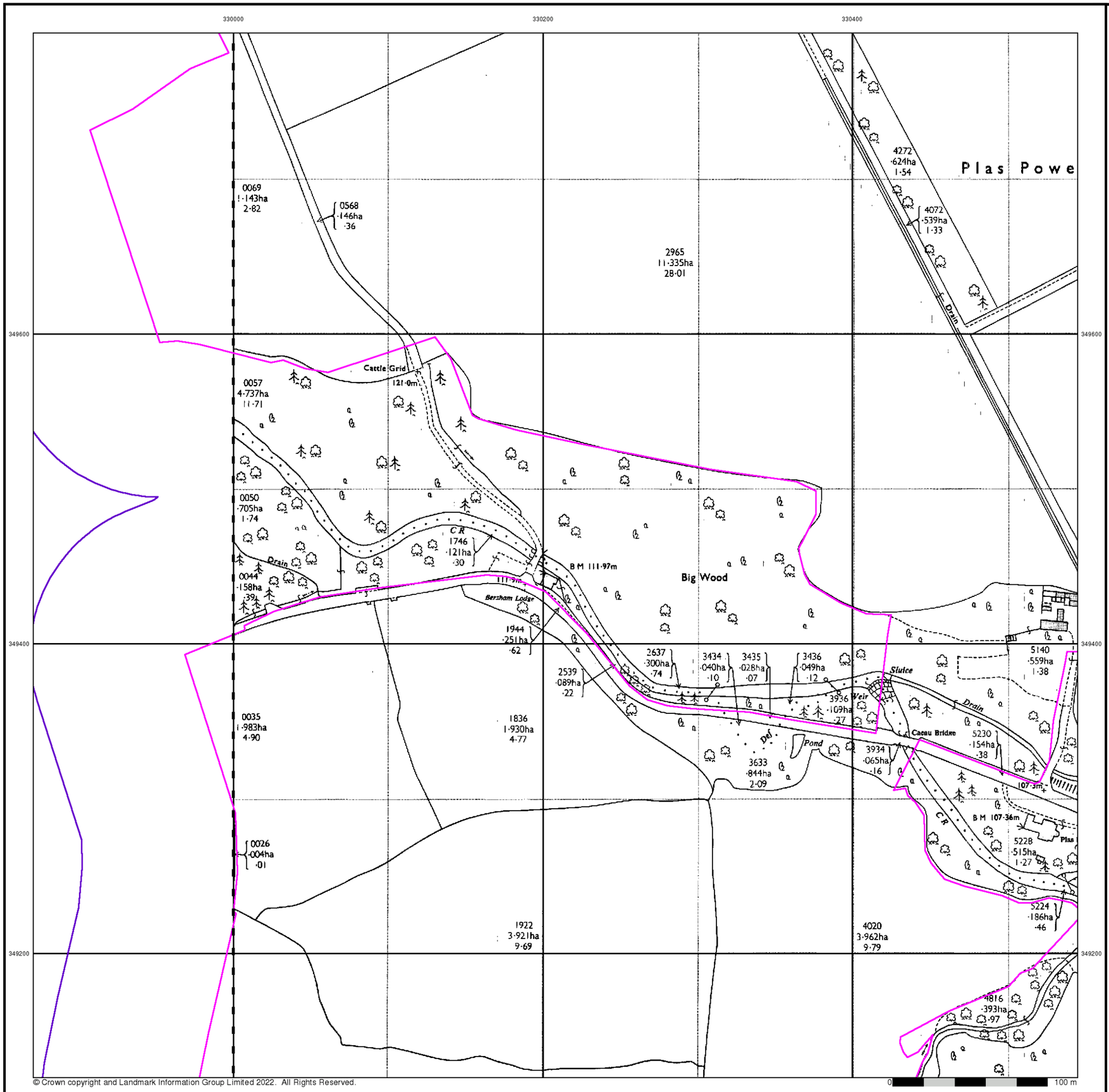


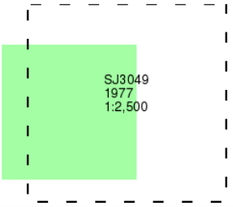
Ordnance Survey Plan

Published 1977

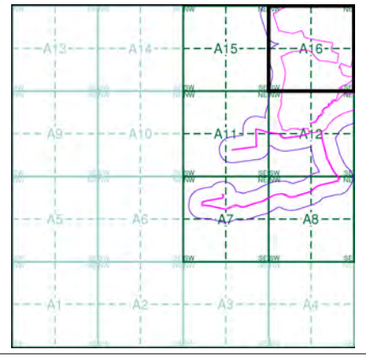
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A16



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

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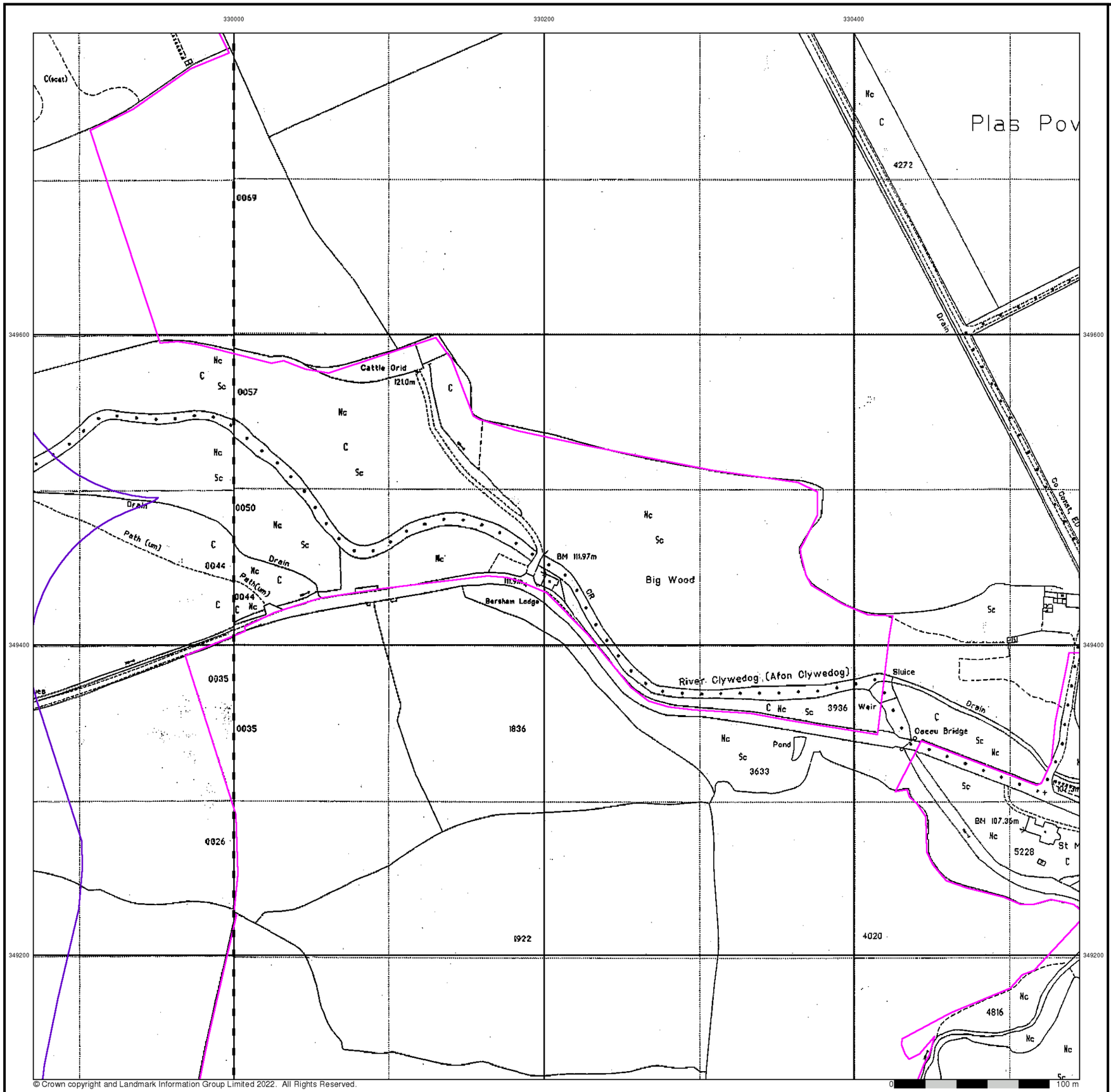


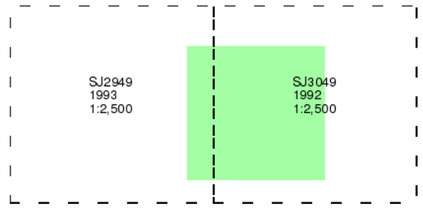
Large-Scale National Grid Data

Published 1992 - 1993

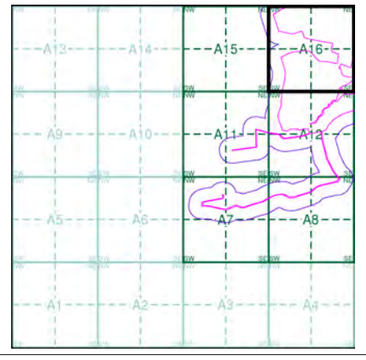
Source map scale - 1:2,500

'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)



Historical Map - Segment A16



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	329550, 348490
Slice:	A
Site Area (Ha):	145.64
Search Buffer (m):	100

Site Details

Site at 330330, 350090

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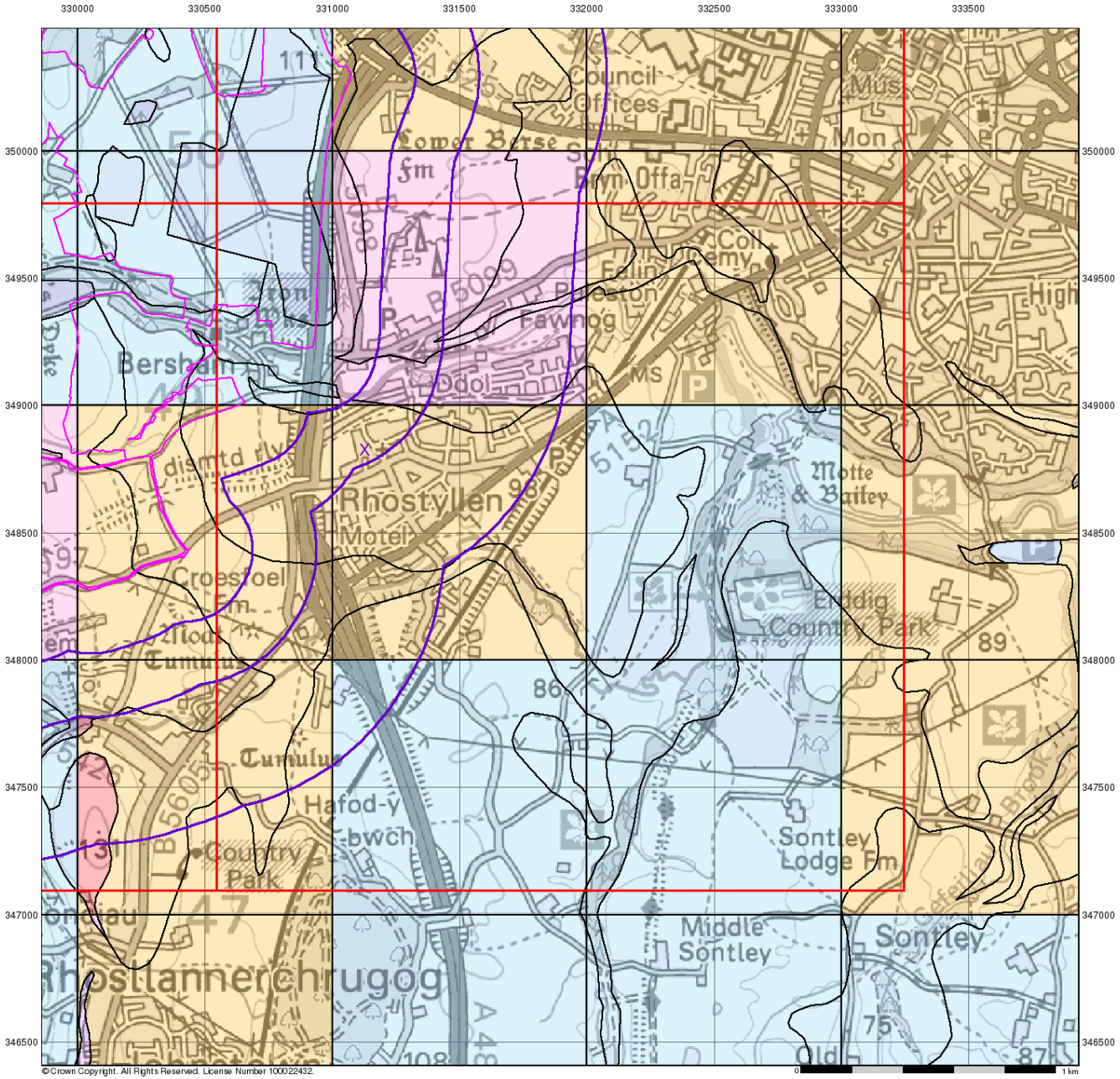


Groundwater Vulnerability

General

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

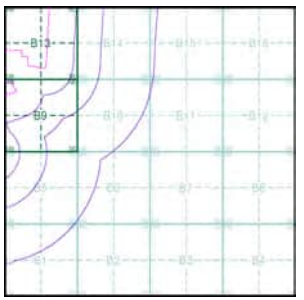
Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

Site Sensitivity Context Map - Slice B



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	331130, 348830
Slice:	B
Site Area (Ha):	145.64
Search Buffer (m):	1000

Site Details

Site at 330330, 350090

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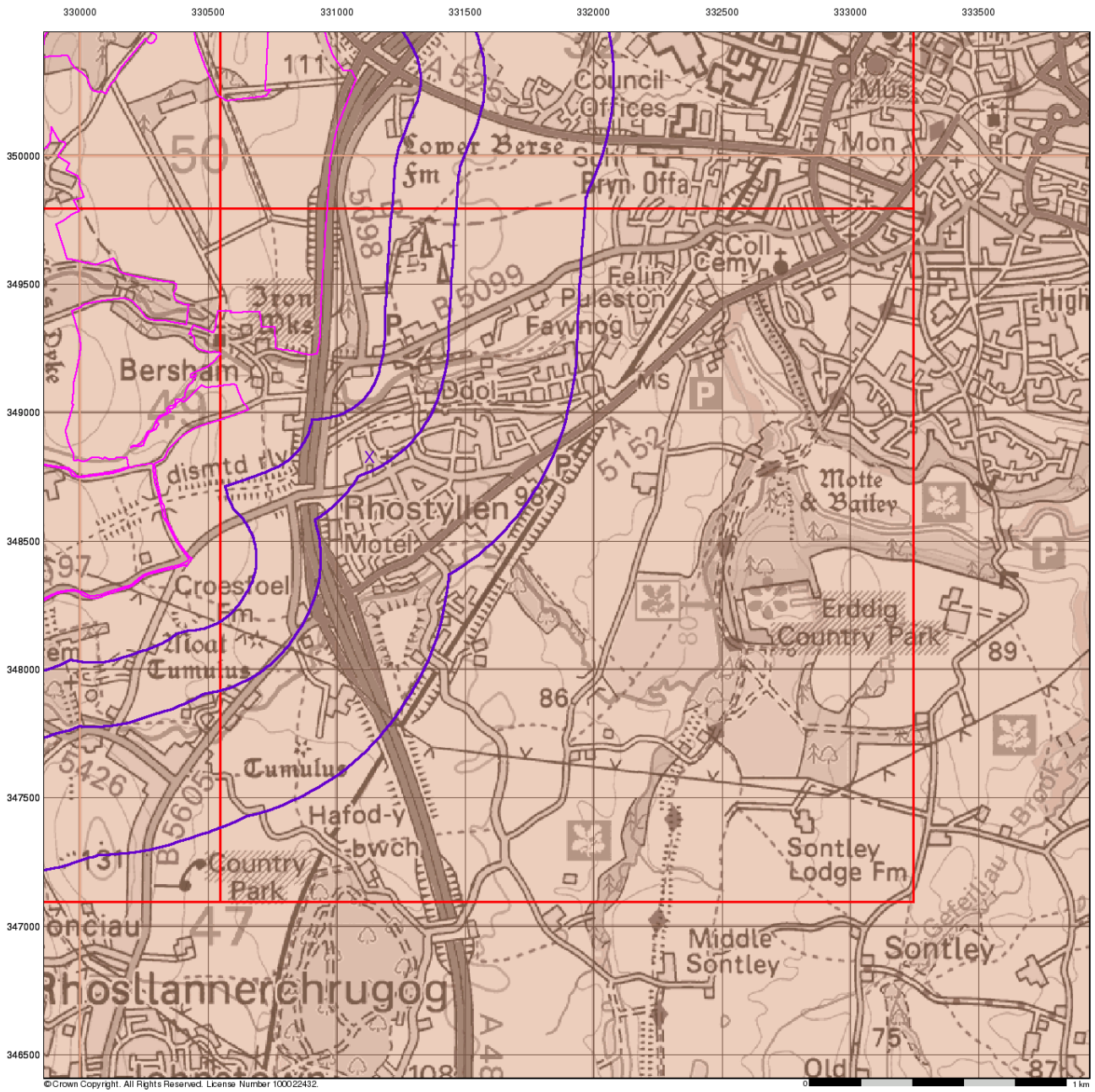
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Bedrock Aquifer Designation

General

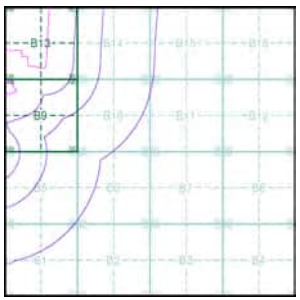
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

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 B



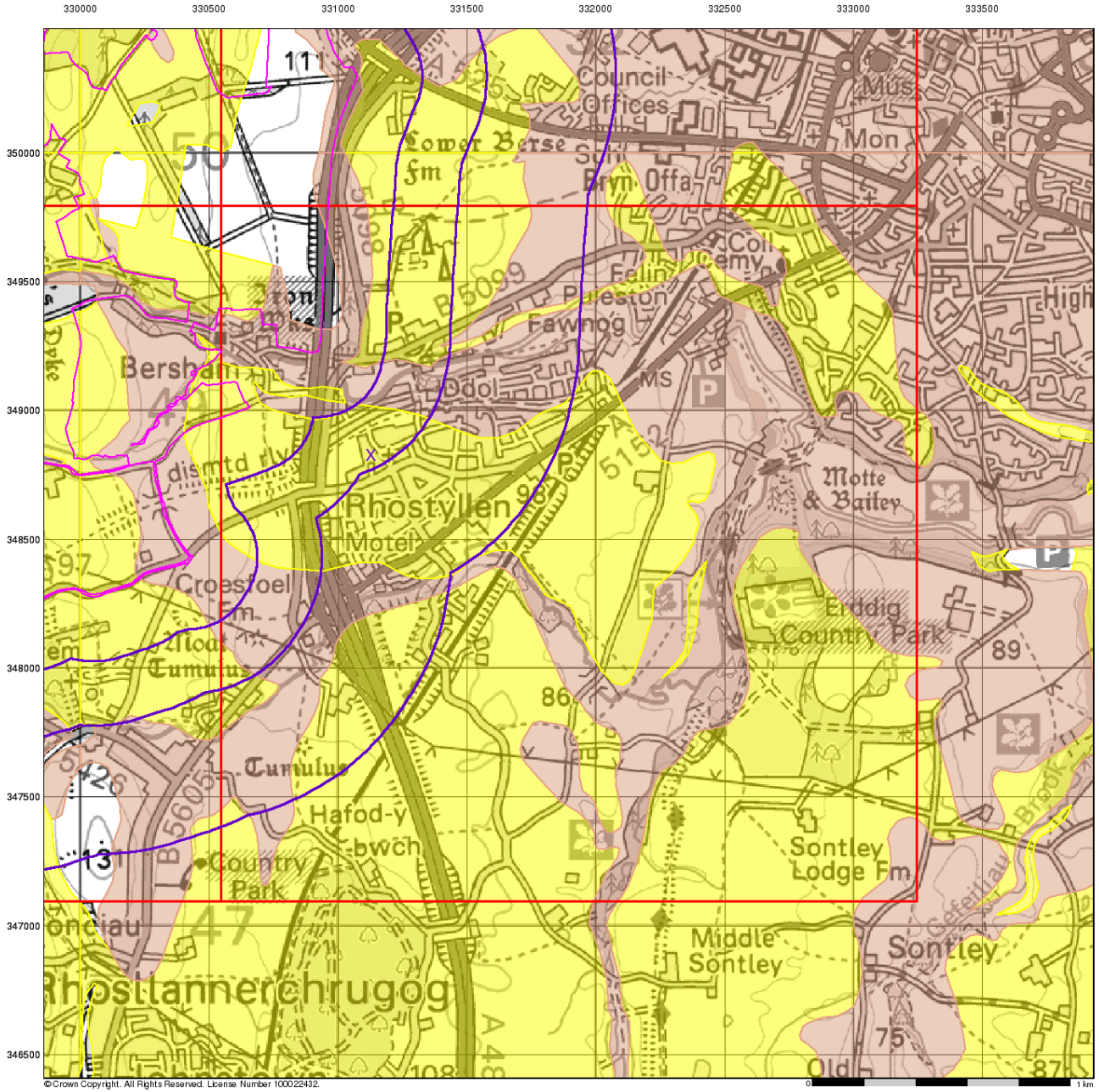
Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	331130, 348830
Slice:	B
Site Area (Ha):	145.64
Search Buffer (m):	1000

Site Details

Site at 330330, 350090

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



Superficial Aquifer Designation

General

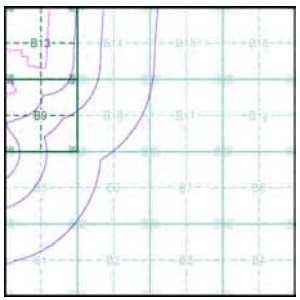
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

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 B



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	331130, 348830
Slice:	B
Site Area (Ha):	145.64
Search Buffer (m):	1000

Site Details

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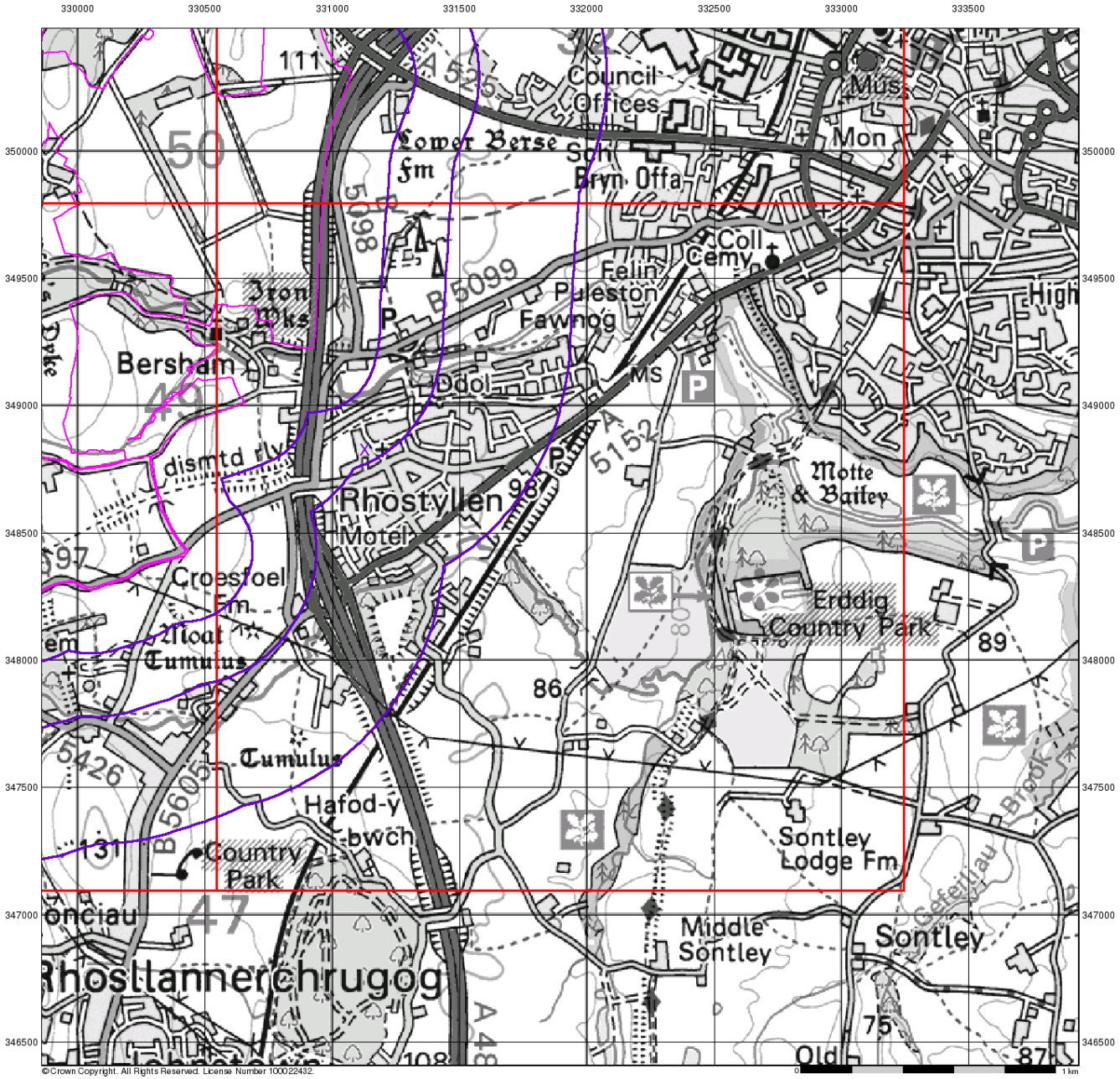


Source Protection Zones

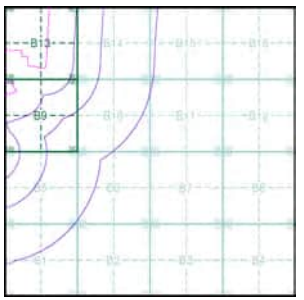
General

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 B



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	331130, 348830
Slice:	B
Site Area (Ha):	145.64
Search Buffer (m):	1000

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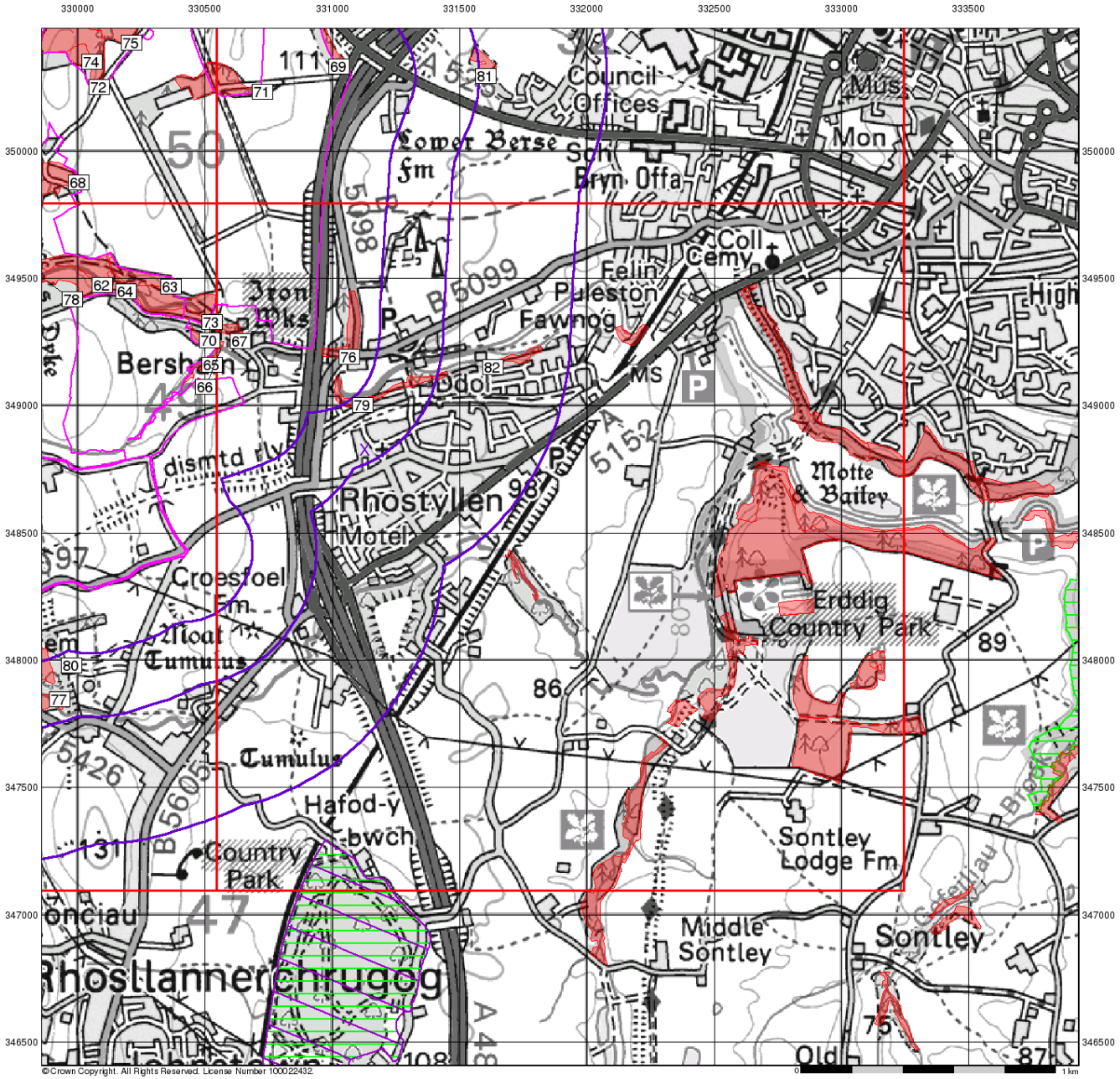


Sensitive Land Uses

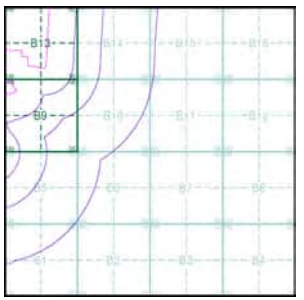
General

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 B



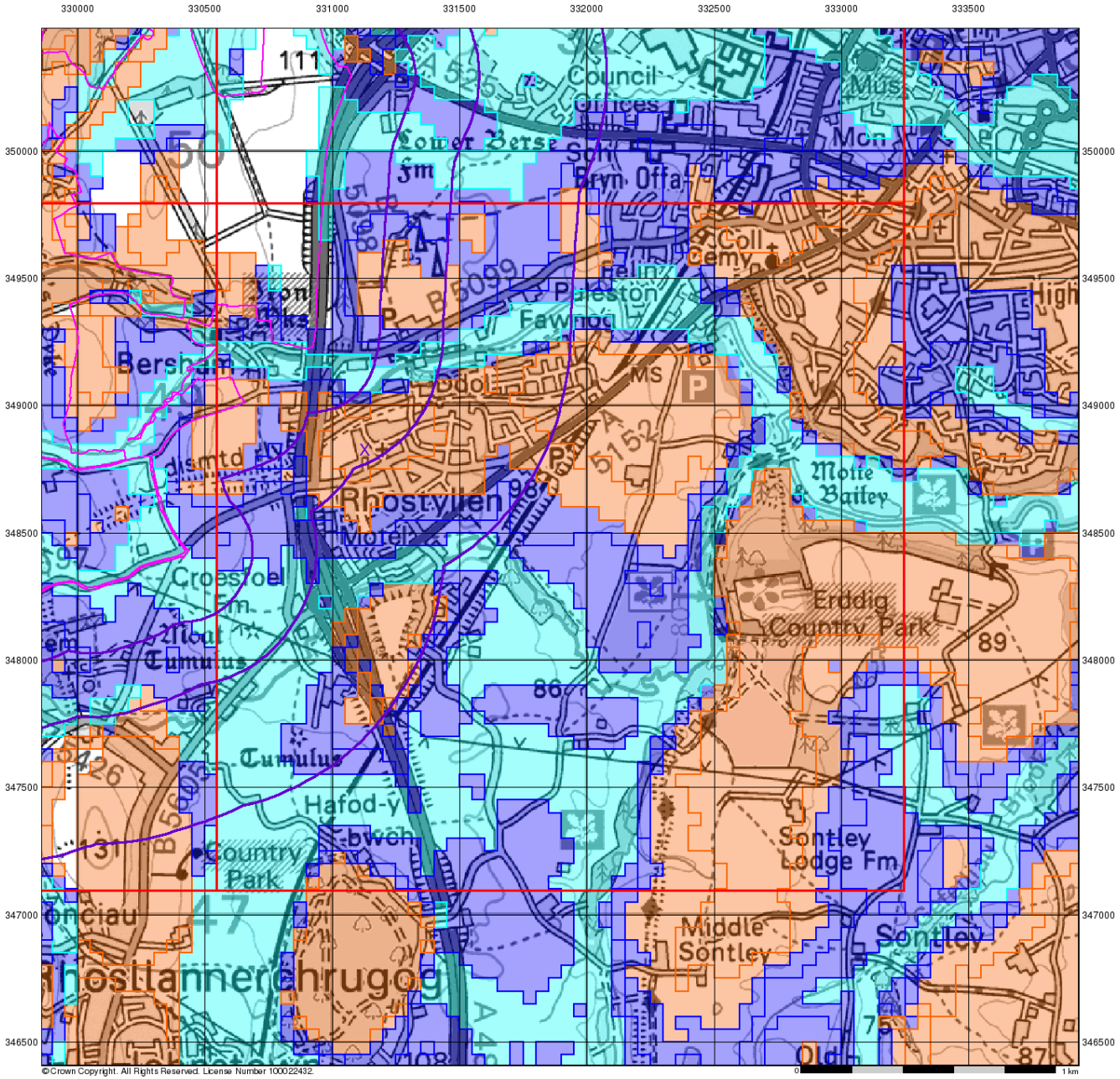
Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	331130, 348830
Slice:	B
Site Area (Ha):	145.64
Search Buffer (m):	1000

Site Details

Site at 330330, 350090

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



BGS Flood GFS Data

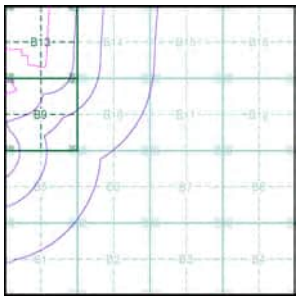
General

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 B



Order Details

Order Number:	291151542_1_1
Customer Ref:	JER8537
National Grid Reference:	331130, 348830
Slice:	B
Site Area (Ha):	145.64
Search Buffer (m):	1000

Site Details

Site at 330330, 350090

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Envirocheck® Report:

Datasheet

Order Details:

Order Number:
291151542_1_1

Customer Reference:
JER8537

National Grid Reference:
331130, 348830

Slice:
B

Site Area (Ha):
145.64

Search Buffer (m):
1000

Site Details:

Site at 330330, 350090

Client Details:

Mr G Chapman
RPS Consulting Services Ltd
260 Park Avenue
Aztec West
Almondsbury
Bristol
BS32 4SY

Contents

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.

Report Version v53.0

Summary

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 8			1	8
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 10				1
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature		Yes			
Pollution Incidents to Controlled Waters	pg 10				4
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 11	1			
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 11				(*1)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 11	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 17	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 17	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 18	Yes		n/a	n/a
Flooding from Rivers or Sea without Defences	pg 18	Yes		n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 18	4	9	6	15

Summary

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 23	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
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					
Geological					
BGS 1:625,000 Solid Geology	pg 24	Yes	n/a	n/a	n/a
BGS Recorded Mineral Sites	pg 24				1
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 24	Yes	n/a	n/a	n/a
Mining Instability	pg 24	Yes	n/a	n/a	n/a
Man-Made Mining Cavities	pg 24				1
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 24	Yes	Yes	n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 24	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 24	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 25	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 25	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 25	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas	pg 26	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures	pg 26	Yes	n/a	n/a	n/a

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries	pg 27			7	20
Fuel Station Entries	pg 29				2
Gas Pipelines					
Underground Electrical Cables					
Sensitive Land Use					
Ancient Woodland	pg 30	13	6	1	1
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	330100 349400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	330200 349400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NW)	0	1	330250 349400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330500 349450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SW (NW)	0	1	330550 349400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	330050 349750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	0	1	331130 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B13NE (N)	0	1	331000 349650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330150 349550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330300 350350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	329950 350400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NW)	0	1	330250 350400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	329950 350050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330000 350050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330050 350050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330000 350300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330050 350300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NW)	0	1	330050 350150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NW)	0	1	330100 349900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330000 349600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	330100 349600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	330150 349600

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	(NW)	0	1	329950 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	329950 349950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	330300 349950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330000 349700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330050 349650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	329900 350100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330000 349550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330250 349700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	329950 349900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NW)	0	1	330300 350050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NW)	0	1	330000 350100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330250 349550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330400 349600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B13SW (NW)	0	1	330600 349450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B13SW (NW)	0	1	330800 349450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330000 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	330500 350050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	330400 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NW)	0	1	330600 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	331450 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NW)	0	1	330300 350450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	330400 350450

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	329900 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330000 349850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	330000 349900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	330100 349850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330400 349850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	330950 349800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	0	1	330000 348250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	330200 349050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	330300 349250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9NE (W)	0	1	330900 348800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	330200 349150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	330000 349150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	330150 349050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	330200 349000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	330500 349000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B9NE (N)	0	1	331130 349050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	330450 348950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B9NW (NW)	0	1	330750 349000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SE (N)	0	1	331150 349150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	330000 348900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	330000 348950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	330150 348950

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	330100 348900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	330500 348750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330050 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330250 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NW)	0	1	330450 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SW (NW)	0	1	330550 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B13SW (NW)	0	1	330700 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SW (NW)	0	1	330800 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	330250 348650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	330500 349100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9NW (NW)	0	1	330550 349100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9NW (NW)	0	1	330750 349100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(W)	0	1	330000 348827
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	330000 348850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	330500 349200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	330150 349150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SW (NW)	0	1	330800 349250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330000 349300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330100 349450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	330500 349300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B13SW (NW)	0	1	330650 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	330000 348750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	1	1	330250 350450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	2	1	329950 348950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	4	1	330200 349450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	7	1	330200 350400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	13	1	330300 349400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	13	1	330300 348650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	19	1	331100 350350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SW (NW)	19	1	330600 349150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SW (NW)	19	1	330650 349250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	21	1	330450 348150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	23	1	330000 348700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	27	1	330400 348700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	34	1	329950 349150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	37	1	330000 349500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	39	1	330100 350350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9NE (NW)	46	1	330950 348950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	47	1	331130 350350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	47	1	329950 349250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	49	1	329900 349900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	65	1	329900 349800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	74	1	331150 350300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9NE (NW)	74	1	331000 349100

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	(W)	75	1	330450 348700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	76	1	330650 350300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	82	1	331150 350350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	82	1	331100 350450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	92	1	330000 348450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SE (N)	96	1	331100 349350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	97	1	330050 348650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	100	1	329950 348150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SW (W)	107	1	330650 348650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SW (SW)	115	1	330600 348500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	122	1	330200 348600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	123	1	330500 348700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	124	1	331200 350300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	127	1	331130 350450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	142	1	330000 348500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B9SE (S)	144	1	331150 348750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	144	1	329950 348550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9NE (N)	148	1	331050 349050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B13SE (N)	150	1	331200 349300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	151	1	331150 350450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SE (N)	164	1	331130 349250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	174	1	331250 350250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	174	1	331250 350300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	182	1	331600 350000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9NW (W)	187	1	330800 348827
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9NE (NW)	192	1	331050 349000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	195	1	330100 348550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	203	1	331250 350400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9NE (N)	217	1	331130 349000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	227	1	331400 350400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	227	1	330050 348050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B9NE (S)	239	1	331130 348827
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	258	1	329950 348000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B9NE (N)	259	1	331130 348950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	267	1	331400 349850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B9SW (W)	298	1	330850 348750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9NE (N)	304	1	331200 349050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	310	1	330400 348050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SW (SW)	343	1	330850 348700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SW)	387	1	330250 347900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	417	1	330300 347900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B9SE (SW)	430	1	330900 348600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SE (S)	436	1	331200 348650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	448	1	330350 347800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B10NW (NE)	482	1	331400 349100
1	**Discharge Consents** Operator: The Occupier Property Type: Domestic Property (Single) Location: 14 Ddol Bersham Wrexham Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0053101 Permit Version: 1 Effective Date: 31st October 1968 Issued Date: 31st October 1968 Revocation Date: 31st October 1996 Discharge Type: Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Clywedog **Status: Lapsed (under Environment Act 1995, Schedule 23)** Positional Accuracy: Located by supplier to within 100m	B14SW (NE)	456	2	331380 349180
2	**Discharge Consents** Operator: Wrexham Maelor Borough Council Property Type: Undefined Or Other Location: Rhostyllen Groesfoel Ind Park Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0151301 Permit Version: 1 Effective Date: 6th April 1987 Issued Date: 6th April 1987 Revocation Date: 18th March 1993 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Glan-Yr-Afon,Brook **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	B5NE (S)	662	2	331070 348240
3	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso At Colliery Road Rhostyllen, Nr 172 Wrexham Rd, Wrexham, Ll14 4fg Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cg0356101 Permit Version: 5 Effective Date: 21st October 2019 Issued Date: 21st October 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status: Effective** Positional Accuracy: Located by supplier to within 10m	B6NW (SE)	975	2	331419 348387
3	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Colliery Road Rhostyllen, Ll14 4fg Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cg0356101 Permit Version: 4 Effective Date: 31st March 2009 Issued Date: 19th March 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status: Effective** Positional Accuracy: Located by supplier to within 10m	B6NW (SE)	975	2	331419 348387

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Colliery Road Rhostyllen, Ll14 4fg Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cg0356101 Permit Version: 4 Effective Date: 31st March 2009 Issued Date: 19th March 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status: Effective** Positional Accuracy: Located by supplier to within 10m	B6NW (SE)	975	2	331419 348387
3	**Discharge Consents** Operator: Arlington Wrexham Property Type: Undefined Or Other Location: Wrexham Rhostyllen Car Sales Depot Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0042401 Permit Version: 1 Effective Date: 19th June 1967 Issued Date: 19th June 1967 Revocation Date: 22nd December 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Glan-Yr-Afon Brook **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	B6NW (SE)	987	2	331420 348350
3	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Colliery Road Rhostyllen, Ll14 4fg Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cg0356101 Permit Version: 3 Effective Date: 14th September 2006 Issued Date: 14th September 2006 Revocation Date: 16th April 2009 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	B6NW (SE)	995	2	331430 348370
3	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Colliery Road Rhostyllen, Ll14 4fg Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cg0356101 Permit Version: 2 Effective Date: 31st March 2008 Issued Date: 21st January 2005 Revocation Date: 13th September 2006 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	B6NW (SE)	995	2	331430 348370

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Colliery Road Rhostyllen, Ll14 4fg Authority: Natural Resources Wales Catchment Area: Not Given Reference: CG0356101 Permit Version: 1 Effective Date: 21st July 1994 Issued Date: 21st July 1994 Revocation Date: 30th March 2008 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	B6NW (SE)	995	2	331430 348370
4	**Local Authority Pollution Prevention and Controls** Name: Rhostyllen Service Station Location: Wrexham Road, Rhostyllen, WREXHAM, Clwyd, LL14 4EJ Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WCBC/PG1/14(16)V3 Dated: 23rd December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Automatically positioned to the address	B5NE (S)	634	3	331062 348329
	Nearest Surface Water Feature	B13NW (NW)	0	-	330740 349741
5	**Pollution Incidents to Controlled Waters** Property Type: Road (Lost Load) Location: Esso Garage In, Plau Tree, QUEENSFERRY Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Mechanical Failure Incident Date: 14th October 1995 Incident Reference: 26238 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B10NW (E)	640	4	331400 348800
6	**Pollution Incidents to Controlled Waters** Property Type: Land Location: RHOSTYLLEN Authority: Environment Agency, Welsh Region Pollutant: Chlorinated Water Note: Poor Operational Practise Incident Date: 24th August 1991 Incident Reference: 3201 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	B5NE (S)	657	4	331070 348260
6	**Pollution Incidents to Controlled Waters** Property Type: Warehouses Location: Rhostyllen Roundabout Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Vandalism Incident Date: 3rd January 1995 Incident Reference: 22217 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B5NE (S)	677	4	331100 348300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Rhos Fawr Cottage, Llen Authority: Environment Agency, Welsh Region Pollutant: Algae Note: Blocked Sewer Incident Date: 25th July 1996 Incident Reference: 29260 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B6NW (SE)	954	4	331400 348400
	River Quality Name: Clywedog GQA Grade: River Quality A Reach: Conf.Black Bk.Erddig Pk-Conf.Trib. Estimated Distance (km): 5.3 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	B9NE (NW)	0	4	331027 349012
	Water Abstractions Operator: The National Trust Licence Number: 24/67/7/0169 Permit Version: 100 Location: Spring Authority: Environment Agency, Welsh Region Abstraction: Household Water Supply: Drinking; Cooking; Sanitary; Washing; (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 6th May 1977 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	B7NE (SE)	1843	4	332440 348180
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	(NW)	0	2	330000 350000
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: High	(NW)	0	2	330552 350003

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: High	(NW)	0	2	330340 350348
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	B9NE (NW)	0	2	331000 349083
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	B13NE (N)	0	2	331000 349528
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	B5NE (S)	0	2	331000 348390

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	(W)	0	2	330000 348827
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	(W)	0	2	329940 348809
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	B9NE (W)	0	2	331000 348827
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	(SW)	0	2	330435 348272

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	(W)	0	2	330000 349000
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	(NW)	0	2	330000 349539
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	B9NE (NW)	0	2	331000 349033
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	(W)	0	2	330189 349000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	B13SW (NW)	0	2	330692 349370
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	(NW)	0	2	330145 349570
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: High	(N)	0	2	331000 350000
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: High	(N)	0	2	331026 350000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: High	(NW)	0	2	330163 350000
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: High	(NW)	0	2	330282 350117
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: High	(N)	0	2	330927 350000
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	(NW)	0	2	330000 349381

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	(NW)	0	2	330066 349421
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	(NW)	0	2	330219 349704
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	B13SE (N)	0	2	330978 349313
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(W)	0	2	330000 348827
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(N)	0	2	331130 350000
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(NW)	0	2	330000 350000
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	B9NE (S)	0	2	331130 348827
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(NW)	0	2	330340 350348
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(N)	0	2	331026 350000
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	(NW)	0	2	330552 350003
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	B13SW (NW)	0	2	330692 349370

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	(SW)	0	2	330435 348272
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	(NW)	0	2	330000 350000
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(NW)	0	2	330145 349570
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	B9NE (N)	0	2	331148 349012
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	B9NE (S)	0	2	331130 348827
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	(NW)	0	2	330000 349539
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	(W)	0	2	330000 348827
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(W)	0	2	329940 348809
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	B9NE (N)	0	2	331085 349015
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	B9NE (N)	0	2	331110 349020
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	B13SE (N)	0	2	331015 349150
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
8	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	B13NW (NW)	0	5	330740 349741
9	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 150.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	B13NE (N)	0	5	330889 349722
10	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1051.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	B13SW (NW)	0	5	330591 349205

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 237.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	B13NW (NW)	0	5	330731 349740
12	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 81.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	B13SW (NW)	5	5	330607 349298
13	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 76.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	B13SW (NW)	6	5	330591 349205
14	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 97.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	B13SW (NW)	9	5	330603 349287
15	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 734.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	B9NE (N)	38	5	331110 349033
16	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 121.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	B13SW (NW)	44	5	330746 349209
17	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 176.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	B13SW (NW)	47	5	330746 349209
18	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	B13SW (NW)	84	5	330606 349293
19	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 47.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	B13SW (NW)	84	5	330644 349271

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 335.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	(SW)	217	5	330505 348134
21	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	B14SW (NE)	369	5	331282 349137
22	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	B14SW (NE)	369	5	331287 349134
23	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 673.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	B14SW (NE)	369	5	331282 349139
24	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 709.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	B10NW (NE)	375	5	331308 349119
25	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 62.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	B14SW (NE)	459	5	331391 349229
26	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 104.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	B5SW (SW)	496	5	330694 347990
27	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	B5NE (S)	585	5	330947 348138
28	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 123.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	B5NE (S)	589	5	331041 348219

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	B14SW (NE)	592	5	331529 349283
30	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 269.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	B5SE (S)	594	5	330926 348060
31	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	B5SW (SW)	596	5	330718 347883
32	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 2	B5NE (S)	600	5	330944 348114
33	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	B5NE (S)	600	5	330944 348114
34	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 55.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	B5SW (S)	600	5	330762 347910
35	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	B5SE (S)	610	5	330949 348101
36	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	B5SE (S)	612	5	330951 348092
37	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 59.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 2	B5SE (S)	613	5	330951 348092

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 279.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	B5SW (S)	618	5	330745 347863
39	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 834.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	B6NW (SE)	641	5	331475 348441
40	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 24.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	B14SE (NE)	940	5	331890 349351
41	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 129.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	B14SE (NE)	954	5	331891 349349

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Wrexham County Borough Council - Has supplied landfill data		0	6	331130 348827

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Pennine Middle Coal Measures Formation And South Wales Middle Coal Measures Formation (Undifferentiated)	B9NE (NW)	0	1	331004 348953
	BGS 1:625,000 Solid Geology Description: Warwickshire Group	B9NE (S)	0	1	331130 348827
42	**BGS Recorded Mineral Sites** Site Name: Bersham Spoil Tip Location: Bersham, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 35869 Type: Tip **Status: Ceased** Operator: Bersham (Glenside) Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Colliery Spoil Positional Accuracy: Located by supplier to within 10m	B6NW (S)	864	1	331255 348155
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	B9NE (S)	0	7	331130 348827
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	B9NE (S)	0	-	331130 348827
	Man-Made Mining Cavities Easting: 331400 Northing: 348200 Distance: 991 Quadrant Reference: B6 Quadrant Reference: NW Bearing Ref: SE Cavity Type: Unknown Commodity: Unknown Solid Geology Detail: No Details Superficial Geology Detail: No Details	B6NW (SE)	991	8	331400 348200
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	B9NE (NW)	0	1	331013 348910
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	B9NE (S)	0	1	331130 348827
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	B10NW (NE)	196	1	331458 349018
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	331118 349015
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (S)	0	1	331130 348827
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (W)	0	1	330849 348735
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (S)	0	1	331130 348827
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	331118 349015
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B13SE (N)	195	1	331154 349138

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (S)	0	1	331130 348827
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (S)	0	1	331130 348827
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B13SW (NW)	11	1	330813 349222
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B9NE (NW)	11	1	330889 349076
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B13SE (NW)	22	1	330955 349142
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B13SE (N)	60	1	331054 349151
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	153	1	331118 348972
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B13SE (N)	0	1	330978 349313
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B13SE (N)	0	1	331154 349138
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (S)	0	1	331130 348827
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	331118 349015
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (S)	0	1	331130 348827
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NE (S)	0	1	331134 348410
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B13SE (N)	0	1	331000 349187
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B13SE (N)	15	1	331086 349243
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B13NE (N)	42	1	331012 349649
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (NW)	46	1	331020 348986
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (NW)	87	1	331018 349078
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	214	1	331115 349060
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (1 to 3% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	B13SE (N)	0	1	330950 349401

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Radon Potential - Radon Affected Areas Affected Area: The property is an Intermediate probability radon area (3 to 5% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	B13SW (NW)	0	1	330650 349426
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Higher probability radon area (10 to 30% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	B9NE (NW)	0	1	331075 348926
	Radon Potential - Radon Affected Areas Affected Area: The property is an Intermediate probability radon area (3 to 5% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	B9NE (NW)	0	1	331075 348851
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (5 to 10% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	B13NW (NW)	0	1	330675 349526
	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	B13SE (N)	0	1	330950 349401
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	B13SW (NW)	0	1	330650 349426
	Radon Potential - Radon Protection Measures Protection Measure: Full radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	B9NE (NW)	0	1	331075 348926
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	B9NE (NW)	0	1	331075 348851
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	B13NW (NW)	0	1	330675 349526

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	**Contemporary Trade Directory Entries** Name: The Lining & Coating Company Ltd Location: 3, Highgrove Close, Heritage Gardens, Bersham, Wrexham, LL14 4FB Classification: Coating Specialists **Status: Active** Positional Accuracy: Automatically positioned to the address	B9NE (W)	353	-	330993 348880
44	**Contemporary Trade Directory Entries** Name: First Line Maintenance Ltd Location: Bersham Road, Bersham, Wrexham, Clwyd, LL14 4HS Classification: Office Equipment Servicing & Maintenance **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	B14SW (NE)	398	-	331334 349297
45	**Contemporary Trade Directory Entries** Name: E R Williams Location: Mount Street, Rhostyllen, Wrexham, LL14 4AU Classification: Engine Rebuilding & Reconditioning **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B10NW (E)	479	-	331249 348875
45	**Contemporary Trade Directory Entries** Name: E R Williams Location: Mount Street, Rhostyllen, Wrexham, Clwyd, LL14 4AU Classification: Engine Rebuilding & Reconditioning **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B10NW (E)	482	-	331256 348878
45	**Contemporary Trade Directory Entries** Name: Motor Trade Machine Shop Location: Mount Street, Rhostyllen, WREXHAM, Clwyd, LL14 4AU Classification: Engine Rebuilding & Reconditioning **Status: Active** Positional Accuracy: Automatically positioned to the address	B10NW (E)	482	-	331256 348878
45	**Contemporary Trade Directory Entries** Name: Smd Auto Services Location: Mount St, Rhostyllen, Wrexham, Clwyd, LL14 4AU Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B10NW (E)	493	-	331256 348862
46	**Contemporary Trade Directory Entries** Name: Alkemi Mf Technologies Ltd Location: Hill St, Rhostyllen, Wrexham, Clwyd, LL14 4AT Classification: Metal Finishing Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B9NE (E)	500	-	331194 348806
47	**Contemporary Trade Directory Entries** Name: European Fine Blanking Ltd Location: Croesfoel Industrial Estate, Rhostyllen, Wrexham, Clwyd, LL14 4BJ Classification: Sheet Metal Work **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (S)	546	-	330980 348379
47	**Contemporary Trade Directory Entries** Name: Huws Gray Location: Wrexham Road, Rhostyllen, Wrexham, LL14 4EJ Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	B5NE (S)	546	-	330981 348386
48	**Contemporary Trade Directory Entries** Name: Arthurs Peugeot Location: Croesfoel Industrial Estate, Rhostyllen, Wrexham, Clwyd, LL14 4BJ Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B9SE (S)	626	-	331060 348491
49	**Contemporary Trade Directory Entries** Name: Esso Location: Wrexham Road Rhostyllen, Rhostyllen, Wrexham, Clwyd, LL14 4EJ Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Manually positioned to the address or location	B5NE (S)	634	-	331062 348330
49	**Contemporary Trade Directory Entries** Name: Rhostyllen Service Station Location: Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4EJ Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (S)	634	-	331062 348329

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
50	**Contemporary Trade Directory Entries** Name: Dickens Wrexham Location: Croesfoel Industrial Estate, Rhostyllen, Wrexham, LL14 4BJ Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	B5NE (S)	650	-	331086 348428
51	**Contemporary Trade Directory Entries** Name: Evans Halshaw Wrexham Location: Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4EJ Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	B5NE (S)	737	-	331163 348308
52	**Contemporary Trade Directory Entries** Name: Pickering & Davies Location: Hafod-y-Bwch Hall, Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4DR Classification: Road Haulage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	B5SE (S)	801	-	331009 347863
53	**Contemporary Trade Directory Entries** Name: Mt Electrical & Plumbing Services Location: 5, Westbourne Drive, Rhostyllen, Wrexham, Clwyd, LL14 4BU Classification: Electrical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B10NE (E)	837	-	331697 348909
54	**Contemporary Trade Directory Entries** Name: Pcp Uk Location: 13, Trevor Avenue, Rhostyllen, Wrexham, Clwyd, LL14 4BT Classification: Air Conditioning & Refrigeration Contractors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B10NE (E)	858	-	331691 348844
55	**Contemporary Trade Directory Entries** Name: M D Industrial Cleaning Services Location: Adaley, Henry Street, Rhostyllen, Wrexham, LL14 4BY Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B10NE (E)	873	-	331749 348944
56	**Contemporary Trade Directory Entries** Name: T H Hughes Location: 97, Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4DW Classification: Coal & Smokeless Fuel Merchants & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B10SE (SE)	884	-	331567 348621
57	**Contemporary Trade Directory Entries** Name: Motus Commercials Location: Wrexham Road, Rhostyllen, Wrexham, LL14 4DP Classification: Commercial Vehicle Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	B6NW (SE)	911	-	331357 348425
57	**Contemporary Trade Directory Entries** Name: Imperial Commercials Ltd Location: Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4DP Classification: Commercial Vehicle Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B6NW (SE)	911	-	331357 348425
57	**Contemporary Trade Directory Entries** Name: T R P Motus Commercials Location: Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4DP Classification: Garage Services **Status: Active** Positional Accuracy: Manually positioned to the address or location	B6NW (SE)	911	-	331357 348425
57	**Contemporary Trade Directory Entries** Name: Motor Commericials Location: Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4DP Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	B6NW (SE)	911	-	331357 348425

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
57	**Contemporary Trade Directory Entries** Name: Randy'S Motor Services Location: 11 Bersham Enterprise Centre,Colliery Rd, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B6NW (SE)	919	-	331391 348435
58	**Contemporary Trade Directory Entries** Name: Barie-C-Vaughan & Son Ltd Location: Colliery Garage, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B6NW (SE)	925	-	331408 348438
59	**Contemporary Trade Directory Entries** Name: The Welsh M G Centre Location: Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4DW Classification: Classic Car Specialists **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B10SE (E)	947	-	331744 348753
59	**Contemporary Trade Directory Entries** Name: Malcolm Hughes Location: 53, Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4DW Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B10SE (E)	952	-	331757 348767
60	**Fuel Station Entries** Name: Rhostyllen Service Station Location: Wrexham Road , Rhostyllen , Wrexham, Wrexham, LL14 4EJ Brand: ESSO Premises Type: Service Area **Status: Open** Positional Accuracy: Manually positioned to the address or location	B5NE (S)	634	-	331062 348330
61	**Fuel Station Entries** Name: Welsh Mg Centre Location: Wrexham Road , , Wrexham, Wrexham, LL14 4DW Brand: Unbranded Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Manually positioned to the address or location	B10SE (E)	947	-	331744 348753

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
62	**Ancient Woodland** Name: Not Supplied Reference: 44697 Area(m²): 18598.4 Type: Plantation on Ancient Woodland	(NW)	0	2	330126 349472
63	**Ancient Woodland** Name: Not Supplied Reference: 28401 Area(m²): 11927.41 Type: Ancient and Semi-Natural Woodland	(NW)	0	2	330367 349466
64	**Ancient Woodland** Name: Not Supplied Reference: 28402 Area(m²): 25384.63 Type: Ancient and Semi-Natural Woodland	(NW)	0	2	330190 349447
65	**Ancient Woodland** Name: Not Supplied Reference: 31892 Area(m²): 3689.65 Type: Ancient and Semi-Natural Woodland	(NW)	0	2	330529 349159
66	**Ancient Woodland** Name: Not Supplied Reference: 31893 Area(m²): 3423.04 Type: Ancient and Semi-Natural Woodland	B13SW (NW)	0	2	330562 349221
67	**Ancient Woodland** Name: Not Supplied Reference: 31894 Area(m²): 5298.12 Type: Ancient and Semi-Natural Woodland	B13SW (NW)	0	2	330639 349252
68	**Ancient Woodland** Name: Not Supplied Reference: 31895 Area(m²): 32563.69 Type: Ancient and Semi-Natural Woodland	(NW)	0	2	330003 349875
69	**Ancient Woodland** Name: Not Supplied Reference: 36800 Area(m²): 6187.18 Type: Restored Ancient Woodland Site	(N)	0	2	331026 350330
70	**Ancient Woodland** Name: Not Supplied Reference: 36795 Area(m²): 10124.28 Type: Restored Ancient Woodland Site	(NW)	0	2	330519 349309
71	**Ancient Woodland** Name: Not Supplied Reference: 47040 Area(m²): 25982.54 Type: Plantation on Ancient Woodland	(N)	0	2	330724 350231
72	**Ancient Woodland** Name: Not Supplied Reference: 47041 Area(m²): 30794.46 Type: Plantation on Ancient Woodland	(NW)	0	2	330084 350249
73	**Ancient Woodland** Name: Not Supplied Reference: 29691 Area(m²): 23810.49 Type: Restored Ancient Woodland Site	(NW)	0	2	330527 349325
74	**Ancient Woodland** Name: Not Supplied Reference: 36799 Area(m²): 5763.65 Type: Restored Ancient Woodland Site	(NW)	0	2	330057 350348
75	**Ancient Woodland** Name: Not Supplied Reference: 36799 Area(m²): 16577.14 Type: Restored Ancient Woodland Site	(NW)	14	2	330210 350423

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
76	**Ancient Woodland** Name: Not Supplied Reference: 37165 Area(m²): 14030.91 Type: Restored Ancient Woodland Site	B13SE (N)	35	2	331065 349191
77	**Ancient Woodland** Name: Not Supplied Reference: 31884 Area(m²): 18996.87 Type: Ancient and Semi-Natural Woodland	(SW)	102	2	329930 347847
78	**Ancient Woodland** Name: Not Supplied Reference: 44697 Area(m²): 2253.19 Type: Plantation on Ancient Woodland	(NW)	129	2	329880 349489
79	**Ancient Woodland** Name: Not Supplied Reference: 33409 Area(m²): 11674.4 Type: Ancient and Semi-Natural Woodland	B9NE (N)	144	2	331119 349002
80	**Ancient Woodland** Name: Not Supplied Reference: 31883 Area(m²): 7490.9 Type: Ancient and Semi-Natural Woodland	(SW)	204	2	329876 348049
81	**Ancient Woodland** Name: Not Supplied Reference: 37167 Area(m²): 5259.49 Type: Restored Ancient Woodland Site	(N)	468	2	331602 350292
82	**Ancient Woodland** Name: Not Supplied Reference: 33410 Area(m²): 4736.41 Type: Ancient and Semi-Natural Woodland	B14SE (NE)	702	2	331629 349149

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Natural Resources Wales	June 2020	Annually
Wrexham County Borough Council - Public Protection Department	October 2017	Annually
Discharge Consents		
Environment Agency - Welsh Region	August 2014	Quarterly
Natural Resources Wales	January 2022	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		
Environment Agency - Welsh Region	January 2021	Quarterly
Natural Resources Wales	January 2022	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Wrexham County Borough Council - Environmental Health Department	April 2014	Variable
Local Authority Pollution Prevention and Controls		
Wrexham County Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Wrexham County Borough Council - Environmental Health Department	April 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	November 2021	
Pollution Incidents to Controlled Waters		
Environment Agency - Welsh Region	December 1998	
Prosecutions Relating to Authorised Processes		
Environment Agency - Welsh Region	July 2015	
Natural Resources Wales	July 2015	
Prosecutions Relating to Controlled Waters		
Environment Agency - Welsh Region	March 2013	
Natural Resources Wales	March 2013	
Registered Radioactive Substances		
Natural Resources Wales	January 2015	
Environment Agency - Welsh Region	June 2016	As notified
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
Substantiated Pollution Incident Register		
Environment Agency Wales - North Area	January 2021	Quarterly
Natural Resources Wales	January 2022	Quarterly
Water Abstractions		
Environment Agency - Welsh Region	January 2022	Quarterly
Natural Resources Wales	November 2021	Quarterly
Water Industry Act Referrals		
Natural Resources Wales	January 2022	Quarterly
Environment Agency - Welsh Region	October 2017	
Groundwater Vulnerability Map		
Natural Resources Wales	June 2018	As notified
Bedrock Aquifer Designations		
Natural Resources Wales	January 2018	Annually
Superficial Aquifer Designations		
Natural Resources Wales	January 2018	Annually
Source Protection Zones		
Natural Resources Wales	July 2017	Annual Rolling Update

Agency & Hydrological	Version	Update Cycle
Extreme Flooding from Rivers or Sea without Defences Natural Resources Wales	September 2020	Quarterly
Flooding from Rivers or Sea without Defences Natural Resources Wales	September 2020	Quarterly
Areas Benefiting from Flood Defences Natural Resources Wales	November 2019	Quarterly
Flood Water Storage Areas Natural Resources Wales	August 2019	Quarterly
Flood Defences Natural Resources Wales	November 2019	Quarterly
OS Water Network Lines Ordnance Survey	October 2021	Quarterly
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually
Waste	**Version**	**Update Cycle**
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	November 2002	Not Applicable
Historical Landfill Sites Natural Resources Wales	July 2019	Quarterly
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	October 2021 October 2021	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Natural Resources Wales Environment Agency Wales - North Area	April 2021 July 2021	Quarterly Quarterly
Local Authority Landfill Coverage Wrexham County Borough Council	February 2003	Not Applicable
Local Authority Recorded Landfill Sites Wrexham County Borough Council	October 2018	
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	January 2022	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements Wrexham County Borough Council - Planning Department	February 2016	Variable
Planning Hazardous Substance Consents Wrexham County Borough Council - Planning Department	February 2016	Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2021	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	March 2014	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	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually
Industrial Land Use	**Version**	**Update Cycle**
Contemporary Trade Directory Entries Thomson Directories	January 2022	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2021	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Underground Electrical Cables National Grid	May 2021	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural Resources Wales	September 2018	Bi-Annually
Areas of Adopted Green Belt Wrexham County Borough Council	October 2020	Quarterly
Areas of Unadopted Green Belt Wrexham County Borough Council	October 2020	Quarterly
Areas of Outstanding Natural Beauty Natural Resources Wales	June 2019	Bi-Annually
Environmentally Sensitive Areas The National Assembly for Wales - GI Services (Department of Planning & Countryside)	January 2017	
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Wrexham County Borough Council	August 2018	Bi-Annually
Marine Nature Reserves Natural Resources Wales	August 2018	Bi-Annually
National Nature Reserves Natural Resources Wales	July 2019	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 July 2019	Bi-Annually
Ramsar Sites Natural Resources Wales	July 2019	Bi-Annually
Sites of Special Scientific Interest Natural Resources Wales	March 2020	Bi-Annually
Special Areas of Conservation Natural Resources Wales	August 2020	Bi-Annually
Special Protection Areas Natural Resources Wales	August 2018	Bi-Annually

Data Suppliers

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	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Natural Resources Wales** Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	**Wrexham County Borough Council - Environmental Health Department** Crown Buildings, P O Box 1297, Wrexham, Clwyd, LL13 8ZE	Telephone: 01978 297038 Fax: 01978 292502 Website: www.wrexham.gov.uk
4	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**Wrexham County Borough Council** Lampet Street, Guildhall, Wrexham, Clwyd, LL11 1WL	Telephone: 01978 292000 Fax: 01978 292502 Website: www.wrexham.gov.uk
7	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
8	**Stantec UK Ltd** Caversham Bridge House, Waterman Place, Reading, RG1 8DN	Telephone: 0118 950 0761 Email: pba.reading@stantec.com Website: www.stantec.com
-	**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.