BROWNFIELD SOLUTIONS LTD

GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

LVW GROUP LTD

LVW Warehouse, Rhosddu Industrial Estate, Wrexham

Phase I Geo-Environmental Assessment Report

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PROJECT QUALITY CONTROL DATA SHEET

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DRAWINGS

Drawing Number	Rev	Title
2219/DD/001B	-	Existing and Proposed Site Plans
C5736/01	-	Site Location Plan
C5736/02	-	Site Features Plan

APPENDICIES	
Appendix	**Title**
Photographs	Site Walkover Photographs
Appendix A	BSL Methodology and Guidance
Appendix B	Historical Maps
Appendix C	Geo-Environmental Data Report
Appendix D	Mining Search Report
Appendix E	UXO Screening Map
Appendix F	BGS Radon Report

1.0 INTRODUCTION

1.1 Context

This report describes a desk-based Phase I Geo-Environmental Assessment Report carried out by Brownfield Solutions Limited (BSL) for LVW Group Ltd on a site on Rhosddu Industrial Estate and has been completed in general accordance with the following guidance:

- Environment Agency guidance - Land Contamination: Risk Management (LCRM).
- BS 10175:2011+A2:2017 Investigation of Potentially Contaminated Sites.
- BS5930: 2015+A1:2020 Code of Practice for Ground Investigations.
- BS EN 1997-1:2004+A1:2013 Eurocode 7. Geotechnical design. General rules plus UK National Annex.
- BS EN 1997-2:2007 Eurocode 7 Geotechnical design. Ground investigation and testing plus UK National Annex.

Definitions of terms and acronyms used within this report is presented in Section 7.0.

1.2 Proposed Development

The proposed development is for continued commercial end use comprising construction of 3 No. light industrial units including site parking and removal of disused underground fuel tank, as shown on the Existing and Proposed Site Plans, drawing No. 2219/DD/001B provided to BSL by the client.

1.3 Objectives and Scope

The objectives of this assessment were to determine the environmental setting and ground conditions of the site, highlighting potential areas of concern that may govern the redevelopment.

The scope of works comprises a Phase I Assessment and site walk-over, with a review of the site, surroundings, historical uses and environmental setting in order to develop a preliminary Conceptual Site Model (CSM).

This report is intended to meet the requirements of a Preliminary Investigation as defined in BS10175:2011+A2:2017 and has been produced in general accordance with the recommendations for a Tier 1 Preliminary Risk Assessment as described in LCRM guidance.

1.4 Limitations

This Phase 1 Geo-Environmental Assessment Report has been prepared in accordance with the relevant legislative framework, guidance and risk assessment methodology as outlined in Appendix A.

The findings and opinions conveyed via this assessment are based on information obtained from a number of sources as detailed within this report, BSL have assumed this information is correct and reliable. Nevertheless, BSL cannot and does not guarantee the authenticity or reliability of the information it has relied upon.

BSL have used reasonable skill, care and diligence in the production of this report. There may be other conditions prevailing on the site which are outside the scope of work and have not been highlighted by this assessment and therefore have not been taken into account by this report. Responsibility cannot be accepted for such site conditions not revealed by the assessment.

This report has been prepared for the sole use and reliance of the Client, LVW Group Ltd. No other third party may rely upon or reproduce the contents of this report without the written permission of Brownfield Solutions Ltd (BSL); a charge may be levied against such approval. If any unauthorised third party comes into possession of this report, then they rely on it at their own risk and BSL do not owe them any Duty of Care. This report may not be relied upon by the client or submitted to a third party for their reliance for the purposes of valuation, mortgage, insurance and regulatory approval, until all invoices have been settled in full.

Any recommendations made in this report should be confirmed with the Regulatory Authorities prior to implementation to ensure compliance.

This assessment has been based on the proposed planning layouts provided. Any subsequent change to the planning layout may have an impact on the validity of recommendations made within this report. Furthermore, new information, changed practices or new legislation may necessitate revised interpretation of the report after the date of its submission.

The site plans enclosed in this report should not be scaled off. Any site boundary line depicted on plans does not imply legal ownership of land.

Notwithstanding site observations concerning the presence or otherwise of archaeological issues, asbestos-containing materials (ACM) or invasive weeds (e.g. Japanese knotweed), this report does not constitute a formal survey of these potential issues and specialist advice should be sought.

2.0 THE SITE

2.1 Location

The site is located off Rhosddu Industrial Estate, Wrexham, LL11 4YL, centred on National Grid Reference 332870, 352630 as shown on the Site Location Plan, Drawing No. C5736/01.

2.2 Site Description

A site reconnaissance survey was carried out at the site on 29th April 2024. The main site features and potential issues identified during this survey are detailed below and are shown on the Site Features Plan, Drawing No. C5736/02. A selection of photographs from the site walkover are presented to the rear of this report.

Feature	Description
Site Area	Approximately 0.42 hectares.
Site Access	Vehicular access to the site is gained to the south.
Site Overview Imagery	 Orientated North
	Update from Google: All images: Imagery Google©2023, Imagery ©2023 Airbus, CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The Geoinformation Group, Map data ©2023.
Current Land Use and Site Features	The site is currently occupied by a commercial warehouse building, equivalent to two storeys in height, located in the north-eastern corner. The north-western corner is currently surfaced in a combination of hardstanding comprising macadam and compacted gravel and is used for parking. The south-eastern and south-western are areas of soft landscaping comprising grass. The commercial building is operated by LVW Group Ltd, primarily for sales of car parts and accessories. Two fuel pumps are located just outside the south-western corner of the building, and a series of manhole covers are located nearby, as well as within a nearby area of soft landscaping; BSL understand an underground fuel tank is located in the vicinity of the manhole covers. Further manhole covers are located in the area used for car parking, denoting possible drainage/sewers. A small outbuilding housing a possible gas governor was noted in the south-eastern corner.
Potential Sources of Gross Contamination	The underground fuel storage tank (UST) represents a potential source of petroleum hydrocarbon contamination, although based on conversations with the current site owner and operator, the UST has not been in use for at least 10 years.

Feature	Description
Vegetation / Ecology	Areas of grass are present in the south-eastern and south-western corners of the site, as well as a grass verge along the northern boundary. Several semi-mature trees are located on the south-eastern boundary of the site.
Topography	The site is generally flat.
Site Boundaries	Steel palisade fencing encloses the northern and western boundaries. The southern and eastern boundaries are open for pedestrian access, although a series of large boulders and lockable gate enclose the southern boundary for vehicular access, and a series of hooped perimeter barriers line the eastern boundary to prevent vehicle access.
Surrounding Area	The site is set within an industrial estate and is surrounded by industrial units in all directions.

3.0 GEO-ENVIRONMENTAL SETTING

3.1 Historical Setting

A review of the available historical Ordnance Survey Maps and satellite imagery has been conducted, with the pertinent issues that may have affected the site, or its environs, summarised below. The Historical Maps are presented in Appendix B. A review of the historical industrial data within the geo-environmental data report has also been undertaken below, the report is presented in Appendix C.

Notable features on site, and potentially contaminative or geotechnically relevant features within 100m of the site boundary have been presented. Any features that have potentially been infilled will be considered up to 250m from the site boundary.

Feature	Distance (m) & Direction	Years Present	Description
Depot	On site	1985 - Present	A depot is shown on site on mapping dated 1985, at which stage the site adopts its current layout and remains unchanged to the present day.
Garage	From 10m NE	1985 - Present	A garage has been constructed on the adjacent site to the east by 1985, and the garage footprint extends to the west by 1992, to within circa 10m of the site. The feature is last labelled as a garage in 1992, however recent satellite and street view imagery indicates the site is used by Volkswagen as a vehicle sales and service centre.
Embankment/ Ground Workings	From 31m S	1872 - 1975	An embankment / area of ground workings is evident on the earliest mapping dated 1872, located 31m south at the closest approach to the site. By the mid 1970s, the area of former ground workings appears to begin a phase of redevelopment, with various works being built, until by 1985 the surrounding area becomes recognisable as the current Rhosddu Industrial Estate with various depots constructed to the south of the site.
Drains	From 40m W	1960 - Present	Two linear drains are indicated to be present from 61m SW on mapping dated 1960. One of these (located 61m SE) is last shown on 1974, however by 1981 this is no longer shown on mapping, and by 1985 a road has been constructed over the former drain. It is possible the drain was either diverted and infilled, or culverted. The other drain is still present.
Railway	61m SE	1872 - Present	A railway line is located 61m south-east of the site at the closest approach, first indicated on mapping dated 1872, and remains to the present day.
Depot / MOT testing centre	77m E	1970 - Present	A depot is first shown on mapping dated 1970, located 77m E. The building is last annotated as a depot in 1992, but remains in commercial usage to the present day. Google Streetview imagery dated 2022 indicates the site is now an MOT testing centre.
Potentially infilled ponds	170m W 202m E 234m NE	1937 – 1990 1872 – 1954 1900 - 1914	Various small ponds are present in the surrounding area, the closest located 170m west of the site, but is no longer present on mapping dated 1992, therefore has disappeared at some stage between 1990 and 1992. No development has taken place in the intervening years, therefore it is possible the pond has dried up, or been infilled.
Brick Field	232m SW	1872 - 1981	A brick field is indicated to be present 232m south-west of the site on the earliest mapping dated 1872. By 1899 the brick field is no longer annotated, however an area of ground workings is evident until mapping dated 1981. By 1985, large areas of former groundworks associated with the former brick field had been redeveloped into the current industrial estate which remains to the present day.

In summary, the map evidence indicates that the site has remained undeveloped until approximately 1985, at which time the current commercial building and site layout was adopted, and has remained unchanged ever since.

The earliest mapping indicates large parts of the surrounding areas to the south and west of the site were brick fields, and other potentially associated embankments and ground workings are evident to the south of the site, until the wider area was redeveloped into the current industrial estate between the 1970s and 1980s.

Potentially contaminated land uses in the surrounding areas include a garage on the site immediately east, various depots, MOT testing centre and a railway.

3.2 Published Geology

The following publications of the British Geological Survey (BGS) were examined in respect of the geology underlying the site:

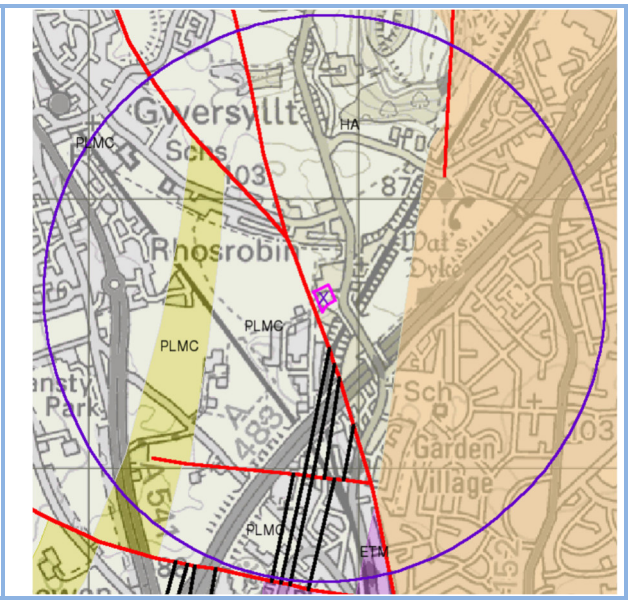
- British Geological Survey (BGS) 1:50,000 Scale Geological Map Sheet 121 Wrexham. Solid and Drift Edition.
- BGS Geology of Britain Map Viewer.
- BGS GeoIndex Onshore.
- Coal Authority Interactive Map.
- Geo-Environmental Data Report.

Extracts of the 1:50,000 geological mapping from the Geo-Environmental Data Report are presented below for reference:

BGS 1:50 000 Combined Artificial and Superficial Geology



BGS 1:50 000 Solid Geology



Made Ground
BGS mapping indicates the site is underlain by Made Ground (Undivided).

Information from the Geo-Environmental Data Report presented in Appendix B does not indicate any areas of suspected infilled ground on site. However, areas of potentially infilled land (non-water) are shown towards the south and south-west of the site, associated with the former ground workings and brick fields identified as part of the review of historical mapping detailed in section 3.1.

Superficial Deposits

The site is indicated to be underlain by Glaciofluvial Deposits, which typically comprises sand and gravel. The area immediately west of the site is indicated to be underlain by glacial Till, which typically comprises clay with silt, sand and gravel.

Solid Geology
The deeper solid geology is indicated to be part of the Halesowen Formation, which typically comprises mudstone, siltstone and sandstone.

A fault is shown close to the western boundary of the site, trending in a broadly north-south direction, downthrowing to the east. Bedrock to the west of the fault is indicated to comprise the Pennine Lower Coal Measures Formation, comprising mudstone, siltstone, sandstone and coal measures. However, any movements associated with this fault should now have stopped.

3.3 BGS Exploratory Hole Records

There are no BGS exploratory hole records within a relevant distance of the site, the closest being over 350m away.

3.4 Mining and Mineral Extraction

Coal Mining
As the site lies within the Coal Authority Reporting Area, a mining search has been undertaken as the site could be affected by past or current coal mining. The mining searches are presented in Appendix D. No significant issues are identified therefore coal mining risks are not any considered further in this report.

Non-Coal Mining

Various historical sand and gravel pits are indicated to have been present in the surrounding area, the closest being 420m south, however operations at all known pits are indicated to have ceased.

The Mining and Natural Cavities Data Report states that the risk from Non-Coal Mining Areas of Great Britain is highly unlikely at the site.

3.5 Hydrogeology

Based on the inferred geology, a summary of the Environment Agency aquifer designations is presented in the table below:

Stratum	Coverage	Aquifer Designation
Superficial - Glaciofluvial Deposits	Full Site	Secondary (A) Aquifer. These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.
Bedrock – Halesowen Formation	Full Site	Secondary (A) Aquifer. These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

A summary of the pertinent hydrogeological features within the Geo-Environmental Data Report are provided below:

Feature	Distance (m) & Direction	Details
Nearest Active Groundwater Abstraction	1822m S	Licence No: 24/67/7/0012 Details: Carlsberg Tetley Brewing Ltd - Breweries/Wine: Process Water Source: Groundwater Annual Volume (m3): Not supplied

Feature	Distance (m) & Direction	Details
		Original Start Date: 11/02/2024
Nearest Active Potable Groundwater Abstraction	1822	As above, whilst not specifically listed as potable, this is considered likely based on the usage by a brewery.
Source Protection Zones	-	None within 2000m.

3.6 Hydrology

A summary of the pertinent hydrological aspects within the Geo-Environmental Data Report are provided below:

Feature	Distance (m) & Direction	Details
Nearest Surface Water Feature	42m NW	Inland drain – no further details.
Nearest Watercourse	719m N	River Alyn
Nearest Surface Water Abstraction	-	None within 2000m.
Closest Active Licenced Discharge Consent	811m NW	Storm sewage overflow into freshwater river / stream. Receiving water is Gwersyllt Fishpond (Tributary Of The Afon Alyn)

Information obtained from the Environment Agency (EA) Risk of Flooding from Rivers and the Sea (RoFRaS) database indicates that no records exist for the site, therefore the risk of flooding across the site from rivers and the sea is negligible.

The British Geological Survey indicate there is limited potential for groundwater flooding to occur at the subject site.

No further consideration of flood risk is undertaken in this report. Specialist flood risk advice should be sought with regards to drainage and flooding.

3.7 Landfill and Waste Management Sites

There is a historical landfill site located 175m south-west of the site, which appears to be in the location of the former brick field. The record indicates the site accepted 'industrial waste' between January 1990 and February 1991.

There is a former registered waste treatment or disposal site located 172m south-west of the site, active since July 1994, which is classified as having a very small input rate (less than 10,000 tonnes per year). The licence status is lapsed/cancelled/surrendered. The site was authorised to accept various wastes including batteries, coolant, brake fluid, fuel oils, vehicle parts, petrol and tyres.

There are two records of historical waste management sites, which both appear to relate to the same metal recycling facility located 248m south.

3.8 Environmental Regulatory Data

A summary of the relevant environmental aspects, both on site and within 250m of the site contained in the Geo-Environmental Data Report, are presented in the table below:

Entry	On-site	0 – 50m	50 – 250m	Details
Recent Industrial Land Uses	-	4	45	The closest are located 32m NE and relate to car dealerships. Various industrial activities take place in the surrounding area, including garage services, vehicle repair, haulage services and manufacturers.
Current or Recent Fuel Stations	-	-	-	None within 250m
Planning Hazardous Substance Consents	-	-	1	Record located 100m south-west at 'The Calor Shop'. No further details given.
Radioactive Substances	-	-	-	None within 250m
Pollution Incidents (EA/NRW)	-	1	-	The only relevant record was a minor incident in August 1997, pollutant described as oils – diesel (including agricultural).

In regard to the entries identified above, none are considered to be of significant relevance to be carried forward to the preliminary CSM, which haven't already been identified during the review of historical mapping.

3.9 Radon

Information from the environmental database report indicates parts of the property are in an area where 10-30% of properties are above the Action Level for radon, whereas some areas of the site are within an area where 3-5% of properties are above the action level.

As the site is indicated to reside in an area requiring variable protection, BSL obtained a more high-resolution search from the BGS, which is presented in Appendix F. This indicates that the area of proposed new construction is encroached by an area where 10-30% of properties are above the Action Level, and therefore full radon protective measures will be required in accordance with BRE Report 211 'Radon – Guidance on protective measures for new dwellings'.

3.10 UXO Risk

In accordance with CIRIA Report C681, BSL have reviewed non-specialist UXO data for the site using the online Zetica Bomb Risk Mapping data.

There is no indication of former military use from the Phase I Assessment. The map indicates the site to be in an area where the bomb risk is low. A copy of the map is presented in Appendix E.

As the site is at low risk, no further consideration of UXO is required at this stage. Should new evidence indicate that UXO may be an issue, it would be prudent to seek appropriate specialist advice.

3.11 Other Potential Development Constraints

No invasive species have been noted during the walkover, however it would be prudent to undertake a specialist survey prior to any works on site.

4.0 PHASE 1 SUMMARY AND RISK ASSESSMENT

4.1 Introduction

The risk posed by any contaminants in soil or groundwater will depend on the nature and level of the source, the probability of exposure occurring, the potential pollution pathway and the likely effects on the receptors.

A contaminant is defined as a substance that has the potential to cause harm, a risk is considered to exist if such a substance is present at sufficient concentrations to cause harm and if a pathway is present through which a receptor could be exposed to the contaminant.

The following sections discuss the identified potential on-site and off-site sources, and any pollution that could impact receptors via the pathways associated with the proposed development. Pollution linkages are assessed which may represent a risk to human health and/or controlled water receptors from the information gained from the Phase I Assessment searches. The assessment has been carried out on a qualitative basis and aims to produce a complete and comprehensive Preliminary Conceptual Site Model.

Three potential impacts exist for any given site and all three need to be considered in the qualitative risk assessment, these are:

- On-site impacts.
- The site impacting its surroundings.
- Off-site sources impacting the subject site.

4.2 Potential Contaminative Sources

On-Site
From the information obtained, the following sources have been identified which may affect the redevelopment of the site for commercial end use:

- Made ground from current usage.
- Underground storage tank (UST) and infrastructure located in the southern part of the site.
- Natural Geology (Radon).

Off-Site
The following off-site sources have been identified which may affect the redevelopment of the site:

- Garages and depots (closest 10m E).
- Potentially Infilled land, former ground workings (from 31m S).
- Potentially infilled drains and ponds (closest 40m W).
- Railway (from 61m SE)
- Former brick field and historical landfill site (from 175m SW).

Associated Contaminants
The contaminants commonly associated with the potential sources of contamination identified are tabulated below:

Contaminative Sources	Department of the Environment Industry Profile or Other Source	Commonly Associated Contaminants
On Site		
Made Ground & Depot	AGS Guides BS8485 and BS8576	Heavy metals, polycyclic aromatic hydrocarbons (PAHs), asbestos, ground gases (carbon dioxide and methane).
Underground Fuel Storage Tank	Road vehicle fuelling, service and repair	Petroleum Hydrocarbons (oils, petrol, diesel, etc).
Solid Geology - Radon	BRE Radon Mapping	Radon gas.
Off Site		
Garages and Depots	Road vehicle fuelling, service and repair	Petroleum Hydrocarbons, asbestos
Potentially infilled land including former landfill site	-	Heavy metals, polycyclic aromatic hydrocarbons (PAHs), petroleum hydrocarbons, asbestos, ground gases (carbon dioxide and methane).
Railway	Railway Land Engineering works-Railway	Heavy metals, polycyclic aromatic hydrocarbons (PAHs), asbestos, oils, solvents.

4.3 Pathways

A pathway is defined as a medium by which a contaminant comes into contact with, or otherwise impacts a receptor.

At this stage the potential contaminants identified above are considered to present potential risks to site end users and controlled waters through the following pathways:

Potential Pathways	
Pathways in respect to Human Health	• Dermal contact with contamination. • Inhalation of dusts. • Inhalation of gases or vapours in both indoor and outdoor air.
Pathways in respect to Controlled Waters – Surface water	• Surface run-off /over land flow. • Drainage discharge. • Base flow from groundwater.
Pathways in respect to Controlled Waters – Groundwater	• Leaching of mobile contamination into groundwater via the unsaturated zone. • Migration of perched groundwater in any permeable soils or along existing or proposed service runs. • Migration into the saturated zone and flow through the aquifers underlying the site.
Pathways in respect to Property/structures/water pipes	• Direct contact with substances deleterious to building materials and potable water supply pipelines. • Migration of ground gases (methane) into confined spaces (explosion and damage to property).

4.4 Receptors

The identified receptors are listed below:

- Commercial end users (human health).
- Structures/Property/Potable water supply pipes.
- Nearest Surface Water Feature – inland drain 42m NW (Controlled waters).
- Superficial Aquifer – Secondary A. Glaciofluvial Deposits (Controlled waters).

- Bedrock Aquifer – Secondary A. Halesowen Formation (Controlled waters).

Under current UK health and safety legislation, employers are required to carry out their own appropriate site-specific risk assessments and mitigation to protect employees. It has been assumed that any future construction works onsite will be undertaken in compliance with these requirements. Therefore, construction workers have not been specifically considered as part of this assessment.

4.5 Preliminary Conceptual Site Model (CSM)

The information obtained in the previous sections has been used to compile a Preliminary CSM. The identified potential contaminants and receptors have been assessed in the table below as to whether a plausible source-pathway-receptor pollutant linkage for the proposed end use of the site exists. The risk classification has been estimated in accordance with information in the BSL Guidance and Methodology in Appendix A.

The Preliminary CSM's are presented in the tables overleaf, any assessed risk above moderate will possibly require further action:

Human Health						
Potential Source	Potential Pathway	Potential Receptor	Likelihood	Severity	Level of Risk	Justification
On site **Made ground** Metals, PAHs, asbestos	Direct contact, inhalation of dusts	End-users	Unlikely	Medium	Low	Whilst made ground is indicated to underlie the site based on BGS mapping, the site has not been previously developed prior to the current usage, therefore significant thicknesses of made ground are unlikely based on the available information. The proposed development will involve construction of new commercial buildings and converting the current areas of soft landscaping into areas of car parking which will presumably be surfaced in hard standing. The development will see a significant reduction in the area of soft landscaping on site, resulting in a reduction in available pathways. The overall risk is therefore considered to be low.
On site **Made Ground** Metals and organic contamination	Migration into/chemical attack of water supply pipelines	Water Pipelines / End users	Low Likelihood	Medium	Moderate / Low	As stated above, limited made ground is anticipated to be present based on the available information pertaining to the site history and previous uses, although an underground fuel tank may have impacted any surrounding soils locally, which should be considered as part of a water pipeline risk assessment. Contaminants within the soil/groundwater could potentially attack the clean potable water supply pipe, contaminants should be assessed to determine the correct pipe material and level of precautions required.
On site **UST** Petroleum Hydrocarbons	Direct contact, inhalation of dusts	End-users	Unlikely	Medium	Low	The presence of a tank on the northern part of the site may have led to contamination of the underlying soils due to leaks or surface spills. However, the proposed development will involve construction of new commercial buildings and converting the current areas of soft landscaping into areas of car parking which will presumably be surfaced in hard standing. The development will see a significant reduction in the area of soft landscaping on site, resulting in a reduction in available pathways. The overall risk from direct contact is therefore considered to be low. The potential risk via the vapour pathway is assessed separately below.
On site **UST(s)** Petroleum Hydrocarbons	Inhalation of Vapours	End-users	Unlikely	Severe	Moderate / Low	The former contents of the UST are unknown and it is now disused and has been for at least the last 10 years. Due to the age of the tank and potential for corrosion and leakage to have occurred over its lifetime, localised contamination of the surrounding soils may have occurred. However, the UST is located away from the current and proposed buildings, which would likely reduce the potential for vapour accumulation in these areas. In addition, the UST will be removed as part of the development alongside any grossly impacted soils, which will significantly reduce any residual risks from volatile vapours. Given the length of time since

Human Health						
Potential Source	Potential Pathway	Potential Receptor	Likelihood	Severity	Level of Risk	Justification
						usage, it is likely that any volatile contamination would have degraded or volatilized over this period. The overall risk is therefore moderate / low at this stage, and it is recommended that as a minimum, the UST is removed under a watching brief by a geo-environmental engineer using a PID monitor to enable an assessment of the potential risk from volatile vapours from soils left in situ.
On site Made ground Ground Gas (carbon dioxide and methane)	Migration into confined spaces, inhalation and asphyxiation/ explosion	End-users / property / structures	Low Likelihood	Medium	Moderate / Low	Whilst made ground is indicated to underlie the site based on BGS mapping, the site has not been previously developed prior to the current usage, therefore made ground at the site is anticipated to be limited in thickness (<1m) and would likely comprise inert construction materials which would not be capable of producing significant volume of hazardous gases. Putrescible materials are therefore unlikely to be present based on the available information at this stage. In accordance with CL:AIRE RB17 guidance, it is likely that no ground gas protection measures will be required, however confirmatory intrusive investigations should be carried out to confirm the anticipated absence of any significant thicknesses of made ground and putrescible materials.
On site Natural Geology Radon	Migration into confined spaces, inhalation	End-users	Likely	Medium	Moderate	BR 211 radon advice indicates full radon protection measures are required within the area of new construction.
Off site Garages, depots Petroleum Hydrocarbons, asbestos	Direct contact, inhalation of dusts	End-users	Unlikely	Medium	Low	Whilst the adjacent site is an active VW garage and has been used as a garage since the 1980s, based on the continued commercial usage and nature of the redevelopment of the site, which will see a significant reduction in soft landscaping areas and therefore a reduction in the available pathways. The overall risk is therefore considered to be low.
Off site Railway Heavy metals, PAHs, asbestos, oils, solvents	Direct contact, inhalation of dusts	End-users	Unlikely	Medium	Low	Based on the continued commercial usage and nature of the redevelopment of the site, this will see a significant reduction in soft landscaping areas and therefore a reduction in the available pathways. In addition, the superficial deposits between the railway and the site are varied, with granular deposits indicated to be not laterally continuous, reducing the potential for any mobile contaminants migrating onto the site. The overall risk is therefore considered to be low.

Human Health						
Potential Source	Potential Pathway	Potential Receptor	Likelihood	Severity	Level of Risk	Justification
Off site Potentially Infilled Ground and Infilled Ponds Ground Gas (carbon dioxide and methane)	Migration into confined spaces, inhalation and asphyxiation/ explosion	End-users / property / structures	Unlikely	Severe	Moderate / Low	There is evidence of made ground across a relatively wide area to the south of the site, related to former ground workings detailed on historical mapping, which have potentially been infilled, presumably in order to facilitate the development of the industrial estate. The nature of the fill is unknown, however this is more likely to have been inert fill rather than highly putrescible materials, given the redevelopment which has taken place. Whist the distance between the potential infilled ground and the site is 'from 31m south' the majority of the infilled ground is significantly further away from the site, reducing the likelihood of ground gases migrating onto the site. Whilst the site is indicated to be underlain by an area of superficial deposits consisting of sands and gravels, this is not laterally continuous and large areas to the south of the site are indicated to be underlain by glacial Till, through which migration of ground gases is unlikely especially over large distances. Based on the above, the overall risk is considered to be moderate / low at this stage and further investigation is required.
Off site Former brick field and historic landfill Ground Gas (carbon dioxide and methane)	Migration into confined spaces, inhalation and asphyxiation/ explosion	End-users / property / structures	Unlikely	Severe	Moderate / Low	The historic landfill is located in the approximate location of a former brick field, and records suggest that the landfill accepted 'industrial waste' between January 1990 and February 1991, which is a relatively short period of time. It is noted that the site did not accept household waste, which is usually associated with putrescible materials which have a higher ground gas generation potential, particularly with respect to methane. Whilst the site is indicated to be underlain by an area of superficial deposits consisting of sands and gravels, this is not laterally continuous and the land between the site and the historic landfill site is indicated to be underlain by glacial Till, through which migration of ground gases is unlikely especially over large distances. Based on the above, the overall risk is considered to be moderate / low at this stage and further investigation is required.

Controlled Waters						
Potential Source	**Potential Pathway**	**Potential Receptor**	**Likelihood**	**Severity**	**Level of Risk**	**Justification**
Made Ground PAHs, Metals	Overland flow, leaching through unsaturated zone / migration through saturated zone	Inland Drain 41m NW, River Alyn 719m NE (Surface waters)	Unlikely	Medium	Low	The site has not been previously developed prior to the current usage, therefore made ground at the site is anticipated to be limited in thickness and would likely comprise inert construction materials which are unlikely to be impacted by gross contamination. In addition, there are no surface water abstractions within 2000m of the site, and the inland drain does not appear to be in hydraulic continuity with any sensitive surface water receptors. The River Alyn is located over 700m away, which is a significant distance over which contaminants would attenuate and degrade. The overall risk from the made ground is considered to be low.
	Leaching through unsaturated zone / Migration through saturated zone	Secondary A and Principal Aquifers (Groundwater)	Unlikely	Medium	Low	As stated above site has not been previously developed prior to the current usage, therefore made ground at the site is anticipated to be limited in thickness and would likely comprise inert construction materials which are unlikely to be impacted by gross contamination. The finished development will be almost entirely surfaced in hard standing with new drainage installed, which will reduce any leaching through the made ground especially when compared to the site in its current condition. Therefore by virtue of the development taking place, this will contribute to an overall "betterment" of groundwater quality.
UST Petroleum Hydrocarbons	Overland flow, leaching through unsaturated zone / migration through saturated zone	Inland Drain 41m NW, River Alyn 719m NE (Surface waters)	Unlikely	Medium	Low	The former contents of the UST are unknown and it is now disused. Due to the age of the tank and potential for corrosion and leakage to have occurred over its lifetime, localised contamination of the surrounding soils may have occurred. However, the UST will be removed as part of the development alongside any grossly impacted soils, which will effectively remove the source of contamination. In addition, as stated above, the finished development will be almost entirely surfaced in hard standing with new drainage installed, which will reduce any leaching through the made ground especially when compared to the site in its current condition. Therefore by virtue of the development taking place, this will contribute to an overall "betterment" of groundwater quality. The overall risk is therefore low based on the tank being removed alongside any grossly impacted soils. This should be completed under a watching brief by a geo-environmental engineer.
	Leaching through unsaturated zone / Migration through saturated zone	Secondary A and Principal Aquifers (Groundwater)	Unlikely	Medium	Low	

Human Health Risk – Soils Contamination Summary
Based on the preliminary CSM and the current use of the site, the overall risk from land contamination at the site is considered to be **low to moderate** for a redeveloped site. This would need to be confirmed by appropriate intrusive investigation, testing and assessment.

Human Health Risk – Ground Gas Summary
As stated within the CSM table, adopting the CL:AIRE RB17 approach, where natural soils with low organic content are present and there is generally less than 1m of made ground with no significant putrescible material, this is not considered to represent a significant ground gas source, therefore no gas monitoring is required and the site would fall into the definition of Characteristic Situation 1 (CS1), with no protection measures required.

However, in addition to the potential made ground on site, potential off-site gas sources have been identified associated with areas of infilled ground including a former landfill site circa 175m SW of the site. Whilst the likelihood of off-site ground gases impacting the site has been assessed as unlikely, due to the potential severity of landfill gas, potentially viable linkages are still considered to exist and the preliminary CSM considers these sources to be of low to moderate risk.

In accordance with BS8576 and CIRIA C665 as set out in Appendix A of this report, the gas generation potential is considered to be very low (inert landfill site / made ground with low degradable organic content). The sensitivity of the development is low on account of the proposed commercial use.

In line with current guidance, it is recommended that ground gas monitoring should comprise 4 visits over a 1 month period. Ground gas monitoring should also include use of a Photo Ionisation Detector (PID) given the potential for volatile hydrocarbons.

Full radon protective measures are required in accordance with BRE Report 211 'Radon – Guidance on protective measures for new dwellings' 2023 Edition. As an alternative to gas monitoring, given the relatively low overall risk from carbon dioxide and methane identified at this stage, consideration should be given to upgrading the membrane installed as part of the radon protection system, to a membrane which is impervious to carbon dioxide, methane and hydrocarbon vapours, which BSL believe would be sufficient to mitigate any risks from these ground gases, alongside radon.

Please note that all installations should be subject to independent verification.

Controlled Waters Risk - Summary
Based on the preliminary CSM, BSL believes the overall risk to controlled waters at the site is **low.**

The above assessed level of risk will need to be confirmed by intrusive investigation and quantitative risk assessment.

5.0 PRELIMINARY GEOTECHNICAL ASSESSMENT

5.1 Hazard Identification

A preliminary geotechnical hazard identification exercise has been undertaken in general accordance with the Highways England document CD 622, 'Managing geotechnical risk'. Potential geotechnical hazards based on the expected ground conditions are listed below:

- Made ground of unknown nature; if placed in a non-engineered manner may cause excessive settlement of foundations, highways and infrastructure.
- Presence of obstruction in the ground from historical developments (e.g relict foundations) causing difficulties with excavations or penetrative works (e.g. piling).
- Attack of buried concrete by aggressive ground conditions; the site may contain unknown made ground and potentially sulphate bearing soils.
- Running sands or loose fill materials leading to difficulty with excavation due to trench collapse.

Whilst the site lies within a Coal Authority reporting area, based on the available information, the risk from mining induced instability is considered to be very low and needs no further consideration.

The above identified geotechnical hazards will need to be considered as part of further investigations and assessments.

5.2 Foundation and Geotechnical Design

The proposed development will comprise construction of 3 No. light industrial units including site parking. The type of foundation solution should be informed by an onsite intrusive investigation to confirm ground conditions and obtain geotechnical parameters for preliminary foundation and floor slab design. Intrusive investigation should also obtain data to allow appropriate concrete classification in accordance with BRE SD1 and for preliminary highways/pavement design.

5.3 Drainage

Drainage to SuDS is a potentially viable option for the site, given the indicated presence of permeable Glaciofluvial deposits, subject to the depth to the groundwater and test results.

This would need to be confirmed by an onsite intrusive investigation to confirm ground conditions and infiltration rates. Testing should be carried out in general accordance with BRE Digest 365 “Soakaway design” and CIRIA C753 “The SuDS Manual”.

Alternatively, it may be possible to use the existing drainage system for the continued use of the site.

5.4 Recommendations

To confirm the ground conditions in respect to the identified potential geotechnical hazards and risks, an appropriate intrusive investigation will need to be undertaken.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Geo-Environmental Summary

The site has not seen significant historical development aside from the construction of the existing commercial building and hard surfacing. Based on the proposed ongoing commercial usage of the site, which will result in increased cover with buildings and/or hard standing, the overall risk to human health from on site soils contamination is considered to be low.

There is a UST on site, which will be removed as part of the development, but presents a potential risk of volatile vapour contamination, assessed as low/moderate at this stage.

The risk from permanent ground gases is considered to be low/moderate, potential sources including an off-site historical landfill and areas of potentially infilled ground.

Radon is considered to pose a risk and full protection will be required. If the radon membrane is upgraded to a membrane which is suitable for mitigation of carbon dioxide, methane and VOCs, then it is considered that this would be sufficient to mitigate the potential risk from these ground gases.

The overall risk to controlled waters is considered to be low, given the UST on site will be removed alongside any grossly impacted soils as part of the redevelopment of the site. These works should be completed under the guidance of a suitably qualified and experienced geo-environmental engineer.

Intrusive investigations will be required to confirm the above assessed levels of risks and determine remedial requirements, if any.

6.2 Geotechnical Summary

Intrusive investigations will be required to confirm the most suitable foundation solution and to obtain parameters for concrete classification, floor slab and highways design.

Drainage to SuDS is potentially viable, subject to intrusive investigation and testing.

6.3 Further Work

To confirm the risks to the identified receptors and confirm the ground conditions in respect to the identified geotechnical and geo-environmental risks, an appropriate intrusive investigation will need to be undertaken. The following further works are recommended, although this list is not exhaustive and should be read in conjunction with any planning conditions that are applicable to the site:

- Topographical survey / utility mapping.
- Intrusive ground investigation comprising:
  - Trial pitting and windowless sampling.
  - Installation of standpipes in boreholes to allow groundwater levels to be monitored.
  - The undertaking of soil infiltration rate testing, if required.
  - Geotechnical testing of soils.
  - Contamination analyses of soil.
  - Undertake gas / volatile monitoring in boreholes, alternatively upgrade radon barrier to membrane suitable for carbon dioxide, methane and VOCs.
- Assessment and recommendations based on the above, including requirements for further work, if necessary.

7.0 ABBREVIATIONS AND DEFINITIONS

GLOSSARY	
Term / Abbreviation	**Definition**
AST	Above Ground Storage Tank.
B(a)P	Benzo (a) Pyrene.
BGS	British Geological Survey.
BRE	Building Research Establishment.
BS	British Standard.
BSL	Brownfield Solutions Ltd.
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes.
CBR	California Bearing Ratio (used in pavement/highways design).
CAR 2012	Control of Asbestos Regulations (2012).
CBCB	Cheshire Brine Compensation Board.
CBCD	Cheshire Brine Compensation District.
CBR	California Bearing Ratio.
CIEH	Chartered Institute of Environmental Health.
CIRIA	Construction Industry Research Association.
CL:AIRE	Contaminated Land: Applications in Real Environments.
CLEA	Contaminated Land Exposure Assessment.
CLO	Contaminated Land Officer.
COMAH	Control of Major Accident Hazards.
Contamination	Presence of a substance which is in, on or under land, and which has the potential to cause significant harm or to cause significant pollution of controlled water. There is no assumption in this definition that harm results from the presence of the contamination. Naturally enhanced concentrations of harmful substances can fall within this definition of contamination. Contamination may relate to soils, surface water, groundwater or ground gas.
Controlled Waters	Inland freshwater (any lake, pond or watercourse above the freshwater limit), water contained in underground strata and any coastal water between the limit of highest tide or the freshwater line to the three-mile limit of territorial waters.
CPT	Cone Penetration Test.
CSM	Conceptual Site Model. A schematic hypothesis of the nature and sources of contamination, potential migration pathways (including description of the ground and groundwater) and potential receptors, developed on the basis of the information from the preliminary investigation and refined during subsequent phases of investigation and which is an essential part of the risk assessment process. The conceptual site model is initially derived from the information obtained by the preliminary investigation (i.e. the Phase I Phase I Assessment). This conceptual model is used to focus subsequent investigations, where these are considered to be necessary, in order to meet the objectives of the investigations and the risk assessment. The results of intrusive investigations can provide additional data that can be used to further refine the conceptual site model.
DCP	Dynamic Cone Penetrometer.
DNAPL	Dense Non-Aqueous Phase Liquid.
DoWCoP	Definition of Waste Code of Practice.
DWS	Drinking Water Standard.
EA	Environment Agency.
EHO	Environmental health Officer.
EQS	Environmental Quality Standard.
GAC	Generic Assessment Criteria.

GLOSSARY	
Term / Abbreviation	**Definition**
GDR	Geotechnical Design Report.
GFR	Geotechnical Feedback Report.
GIR	Ground Investigation Report.
GSV	Gas Screening Value.
Harm	Adverse effect on the health of living organisms, or other interference with ecological systems of which they form part, and, in the case of human health, including property/structures and water supply pipelines.
Hazard	Inherently dangerous quality of a substance, procedure or event.
HDPE	High Density Polyethylene.
HSV	Hand Shear Vane.
K	Modulus of Subgrade Reaction.
LCRM	Land Contamination: Risk Management (EA guidance).
LNAPL	Light Non-Aqueous Phase Liquid (petrol, diesel, kerosene).
LOD	Limit of Detection (for particular method adopted).
MMP	Materials Management Plan.
Mv	Modulus of Volume of Compressibility.
ND	Not Detected.
NHBC	National House Building Council.
NR	Not Recorded.
OS	Ordnance Survey.
PAH	Polycyclic Aromatic Hydrocarbon.
Pathway	Mechanism or route by which a contaminant comes into contact with, or otherwise affects, a receptor.
PCB	Poly-Chlorinated Biphenyl.
PCSM	Preliminary Conceptual Site Model.
pH	Scale used to specify how acidic or basic a water-based solution is.
PHC	Petroleum Hydrocarbons.
PID	Photo Ionisation Detector.
PNEC	Predicted No-Effect Concentration.
Precision	Level of agreement within a series of measurements of a parameter.
PSD	Particle Size Distribution.
PVC	Polyvinyl Chloride.
Receptor	Human health, living organisms, ecological systems, controlled waters (surface waters and groundwater within aquifers), atmosphere, structures and utilities that could potentially be adversely affected by contaminant(s).
Risk	Probability of the occurrence, magnitude and consequences of an unwanted adverse effect on a receptor.
Risk Assessment	Process of establishing, to the extent possible, the existence, nature and significance of risk.
Sampling	Methods and techniques used to obtain a representative sample of the material under investigation.
SOM	Soil Organic Matter.
Source	Location from which contamination is, or was, derived. This could possibly be the location of the highest soil, groundwater or gas concentration of the contaminant(s).
SPT	Standard Penetration Test.
SVOCs	Semi Volatile Organic Compounds.
TOC	Total Organic Carbon.
TPH CWG	Total Petroleum Hydrocarbon (Criteria Working Group).

GLOSSARY	
Term / Abbreviation	**Definition**
TVOCs	Total volatile organic compounds.
UCS	Unconfined Compressive Strength.
Uncertainty	Parameter, associated with the result of a measurement that characterises the dispersion of the values that could reasonably be attributed to the measurement.
UST	Underground Storage Tank.
UXO	Unexploded Ordnance.
VCCs	Vibro Concrete Columns.
VSCs	Vibro Stone Columns
VOCs	Volatile Organic Compounds.
WAC	Waste Assessment Criteria.
WFD (in waste context)	Waste Framework Directive.
WFD (in water context)	Water Framework Directive.
Units	**Definition**
°	Degrees
Φ	Phi angle (in degrees)
g/l	Grams per Litre
Km	Kilometres
kPa	Kilo Pascal (Equivalent to kN/m^2)
$KN/m^2/mm$	Kilo Newton per metered squared per millimeter
kN/m^2	Kilo Newtons per metre squared
kPa	Kilo Pascal (Equivalent to kN/m^2)
l/hr	Litres per hour
MJ/kg	Mega joule per kilogram
MN	Mega Newton
M^2/MN	Mega Newton per metre squared
M	Metres
m bgl	Metres Below Ground Level
m OD	Metres Ordnance Datum (sea level)
µg/l	Micrograms per Litre (parts per billion)
µm	Micrometre
mb	Millibars (atmospheric pressure)
mg/kg	Milligrams per kilogram (parts per million)
mg/m^3	Milligram per metre cubed
mm	Millimetre
ppb	Parts Per Billion
Ppm	Parts Per Million

8.0 REFERENCES

References used in the production of this report are listed below; note not all of the below are relevant to the subject site and may not have been utilised.

Association of Ground Investigation Specialists. 'Description Of Anthropogenic Materials– A Practitioners' Guide'. 2018.

BS 8576 'Guidance on investigations for ground gas – Permanent gases and Volatile Organic Compounds (VOCs)'. 2013.

BS 5930+A1:2020: 'Code of Practice for Site Investigations'. 2020.

BS 10175:2011+A2:2017 'Investigation of Potentially Contaminated sites - code of practice'. 2017.

BRE Report BR211, Scivyer, C. 'Radon – Guidance on protective measures for new buildings' 2023 Edition.

CIRIA Special Publication SP32, PSA Civil Engineering Technical Guide 34, 'Construction over abandoned mine workings'. 1984.

CIRIA C574 'Engineering in Chalk'. 2002.

CIRIA C665 'Assessing Risks Posed by Hazardous Ground Gases to Buildings'. 2007.

CIRIA C681 'Unexploded Ordnance (UXO) A guide for the construction industry'. 2009.

CIRIA C753 'The SuDS Manual'. 2015.

CIRIA C758 'Abandoned Mine Workings Manual'. 2019.

CL:AIRE RB17 'A Pragmatic Approach to Ground Gas Risk Assessment'. 2012.

CL:AIRE TB19 'Managing Risks and Liabilities associated with Per and Polyfluoroalkyl Substances (PFASs)'. 2019.

CL:AIRE TB22 'An overview of the uses of PFAS to assist with identification of sites of concern'. 2023.

Department of the Environment. 'Industry Profiles' - 48 separate publications available from The Stationery Office, London. 1995.

DEFRA and the Environment Agency, CLR Report No 11 'Model Procedures for the Management of Contaminated Land'. 2004. [Withdrawn 2019.]

Environment Agency (EA) - Land Contamination Risk Management (LCRM). 2019.

Health and Safety Executive (HSE). Control of Asbestos Regulations (CAR). 2012.

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National Planning Policy Framework (NPPF). 2023.

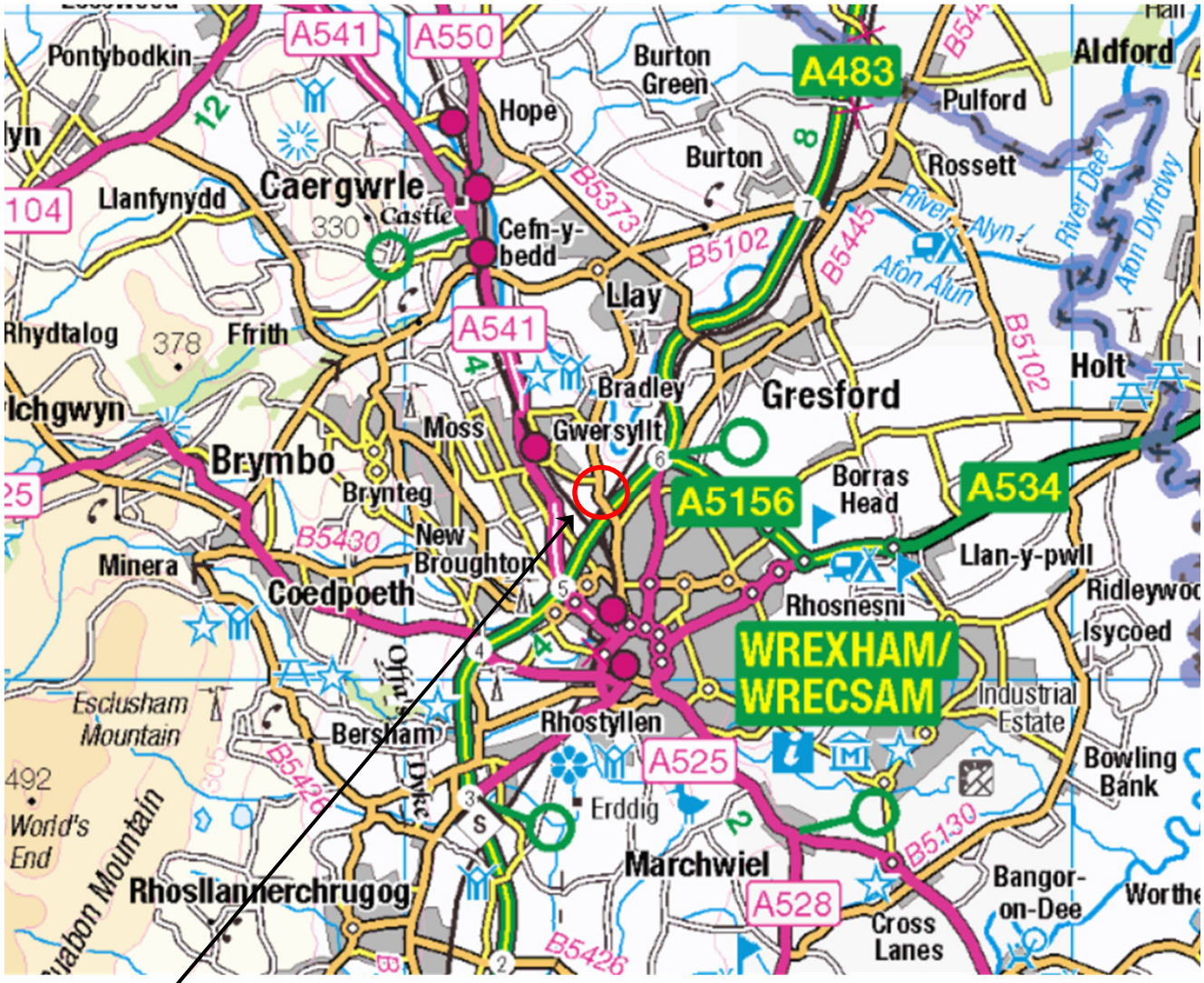
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NHBC. 'Hazardous Ground Gas - An essential guide for housebuilders'. May 2023.

Water Framework Directive, 2000.

DRAWINGS



SITE LOCATION

NEAREST POSTCODE: LL11 4YL

SITE ENTRANCE WHAT3WORDS: ///CHEAT.LAZY.FOLDS



REV	DATE	DESCRIPTION	BY	CKD

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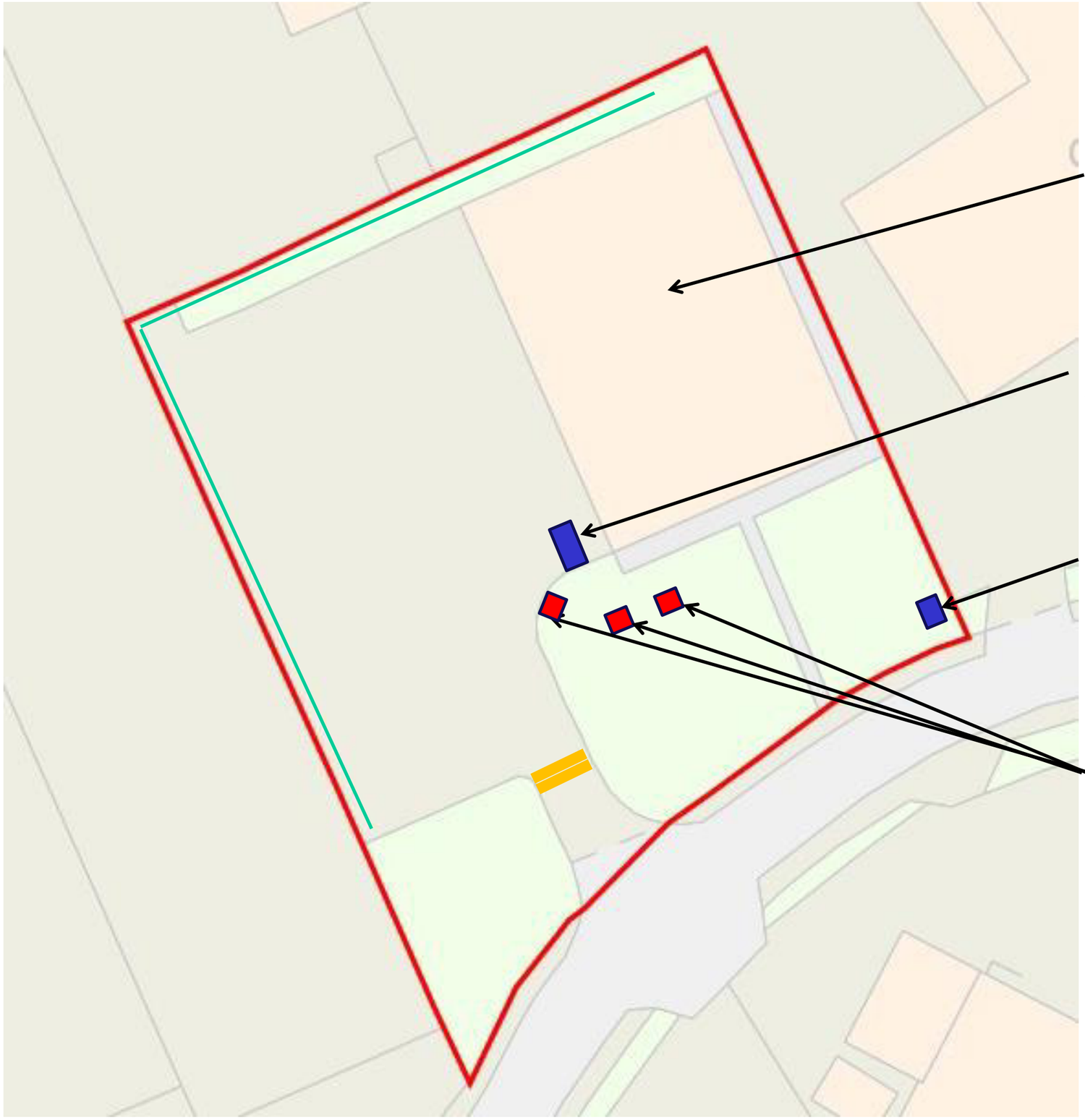
CLIENT
LVW GROUP LTD

PROJECT TITLE
RHOSDDU INDUSTRIAL ESTATE, WREXHAM

DRAWING TITLE
SITE LOCATION PLAN

DRAWING No.	REVISION	SCALE	DATE
C5736/01	-	NTS	25/04/24

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SD	TM



KEY

- APPROXIMATE SITE BOUNDARY
- GATE
- APPROXIMATE ROUTE OF CABLE AT GROUND LEVEL

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
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PROJECT TITLE
RHOSDDU INDUSTRIAL ESTATE, WREXHAM

DRAWING TITLE
SITE FEATURES PLAN

DRAWING No.	REVISION	SCALE	DATE
C5736/02	-	NTS	29/04/24

DRAWN BY	CHECKED BY
TM	CM

PHOTOGRAPHS



Photograph 1: Site Entrance



Photograph 2: Fuel Pump Area



Photograph 3: View from fuel pump area, showing manhole covers denoting UST



Photograph 4: View inside existing commercial building



Photograph 5: Possible gas governor



Photograph 6: Overview of hard standing area

APPENDIX A

BSL Methodology and Guidance

BSL Phase I Geo-Environmental Assessment Reports - Methodology and Guidance

Background

This Appendix provides information on the approaches, methods and guidance used by Brownfield Solutions Ltd in the preparation of this report.

The term 'geo-environmental' is used to describe aspects relating to ground-related environmental issues (such as potential soils and groundwater contamination). The term 'geotechnical' is used to describe aspects relating to the physical nature of the site (such as foundation requirements). It should be noted that this is an integrated investigation and these two main aspects are related, unless otherwise specified within the report.

Phase I reports are written in general accordance with the description of a Preliminary Investigation as defined in BS10175:2011+A2:2017 and are also produced in general accordance with the recommendations for a Tier 1 Preliminary Risk Assessment as described in LCRM guidance.

The first stage of the investigation and assessment of a site is the Preliminary Investigation/Tier 1 Preliminary Risk Assessment, often referred to as a Phase 1 Desk Study, comprising a desk study and walk-over survey and collation of desk-based searches, which culminates in the Preliminary Risk Assessment and the development of a preliminary/initial **Conceptual Site Model (CSM)**. From this are identified any potential geotechnical and geo-environmental hazards and the qualitative degree of risk associated with them. In the case of the geotechnical hazard identification, this is referred to as the **Ground Model.**

From the geo-environmental perspective, the hazard Identification process uses professional judgement to evaluate all the hazards in terms of possible contaminant linkages (of source-pathway-receptor). Possible contaminant linkages are potentially unacceptable risks in terms of the current contaminated land regime legal framework and require either remediation or further assessment. These are normally addressed via intrusive ground investigation and generic risk assessment as part of Phase II investigations and reports.

The second stage is the Ground Investigation, Generic Risk Assessment and Geotechnical Interpretation. This represents the further assessment mentioned above. The Ground Investigation comprises field work and laboratory testing based on the findings of the Preliminary Risk Assessment, to reduce uncertainty in the geotechnical and geo-environmental hazard identification. This may include an exploratory, a detailed or/and supplementary Investigations as described in BS 10175:2011+A2:2017. Phase II Assessments are produced in general accordance with the recommendations for a Tier 2 Generic Quantitative Risk Assessment as described in LCRM guidance and are also intended to fulfil the requirements of a Ground Investigation Report (GIR) as detailed in BS EN 1997-2:2007.

Contaminated Land - Legislative Background

Land contamination can be addressed in several ways, e.g. during planning, under Part 2A, following an incident, during an investigation into environmental damages, or during the application of an environmental permit, or its surrender.

For the planning process the key test is **as a minimum the site cannot be determined as contaminated land**, e.g. there is not significant harm, significant possibility of significant harm to human health or that there is not significant harm to, or the significant possibility that the pollution of controlled waters will occur.

Environmental liabilities and risks have been evaluated in terms of a source -pathway - target relationship in accordance with the approach set out in:

- The 1995 Environment Act.
- The Contaminated Land Statutory Guidance, DEFRA – April 2012.
- The Contaminated Land (England) Regulations 2006.
- The Contaminated Land (England) Amendment Regulations 2012.
- Water Resources Act.
- Water Framework Directive.
- Environmental Damage Regulations.
- Environment Agency (EA) - Land Contamination Risk Management (LCRM) 2019.

Contaminated land is defined within the legislative framework as land which is in such condition by reason of substances in, on or under the land that:

1) Significant harm is being caused or there is a significant possibility of such harm being caused.
2) Significant pollution of controlled waters is being or is likely to be caused.

The potential for harm is based on the presence of three factors:

Source - substances that are potential contaminants or pollutants that may cause harm.
Pathway - a potential route by which contaminants can move from the source to the receptor, and the impact of that migration on the source e.g., attenuation.
Receptor - a receptor that may be harmed, for example the water environment, humans and water, considering the sensitivity of the receptor.

Where a source, pathway and target are all present a pollutant linkage exists and there is potential for harm to be caused.



Where any one of the “pollution linkages” between the above is absent there is deemed to be no risk.

The presence of a source does not automatically imply that a contamination problem exists, since contamination must be defined in terms of pollutant linkages and unacceptable risk of harm. The nature and importance of both pathways and receptors are site specific and will vary according to the intended end use of the site, its characteristics and its surroundings.

The key principle which supports the S-P-R approach is ‘suitable for use’ criteria. This requires remedial action only where contamination is considered to pose unacceptable actual or potential risks to health or the environment and, taking into account the proposed use of the site.

Relevant Guidance Documents
This report has been prepared in accordance with the list of guidance below, however the list is not exhaustive:

- DETR: Circular 02/2000: Environmental Protection Act 1990: Part IIA: Contaminated land. 2012.
- Environment Agency technical advice to third parties on Pollution of Controlled Waters for Part IIA of the EPA1990, May 2002.
- BS 10175:2011+A2:2017.
- Environment Agency (EA) - Land Contamination Risk Management (LCRM). 2019.
- Groundwater Protection https://www.gov.uk/government/collections/groundwater-protection
- UK Technical Advisory Group (UKTAG) - - Water Framework Directive
- Incidents and their classification: the Common Incident Classification Scheme (CICS) – Used by the Environment Agency to classify pollution incidents.

Relevant Legislative Documents
The following is a non-exhaustive list of legislative framework documents that has been considered in the production of this report:

- The Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance (2012).
- The Environment Protection Act (1990).
- The Water Resources Act (1991).
- The Environment Act (1995).
- The Contaminated Land (England) Act (2000).
- The Pollution Prevention and Control (England and Wales) Regulations (2000).
- The Landfill Regulations (England and Wales) Regulations (2002).
- The Landfill (England and Wales) (Amendment) Regulations (2004).
- Contaminated Land (England) Regulations (2012).
- The Environmental Damage (Prevention and Remediation) Regulations (2009).
- Environmental Permitting Regulations (England and Wales) Regulations (2010).
- The Water Environment (Water Framework Directive) (England and Wales) Regulations (2017).
- Health and Safety at Work Act.
- National Planning Policy Framework (NPPF) – latest version.

Contaminated Land Risk Assessment Approach

Contaminated Land Risk Assessment is a technique that identifies and considers the associated risk, determines whether the risks are significant and whether action needs to be taken. The four main stages of risk assessment are:



LCRM outlines the framework to be followed for risk assessment in the UK. The framework is designed to be consistent with UK legislation and policies including planning. The starting point of the risk assessment is to identify the context of the problem and the objectives of the process. Under LCRM, three tiers of risk assessment exist – Stage/Tier Preliminary Risk Assessment, Stage 2 Generic Quantitative Assessment and Stage 3 Detailed Quantitative Assessment.

Further information can be found at the below site:
https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm

Formulating and developing a conceptual model for the site is an important requirement of risk assessment, this supports the identification and assessment of pollutant linkages. Development of the conceptual model forms the main part of preliminary risk assessment, and the model is subsequently refined or revised as more information and understanding is obtained through the risk assessment process.

Risk is a combination of the likelihood of an event occurring and the magnitude of its consequences. Therefore, both the likelihood and the consequences of an event must be taken into account when assessing risk.

The risk assessment process needs to take into account the degree of confidence required in decisions. Identification of uncertainties is an essential step in risk assessment.

The likelihood of an event is classified on a four-point system using the following terms and definitions from CIRIA C552, with reference to Incidents and their classification: the Common Incident Classification Scheme (CICS), Environmental Protection Act 1990: Part 2A – Contaminated Land Statutory Guidance 2012 and other guidance as appropriate which will be detailed within the main body of the report if applied.

The likelihood of a given receptor being impacted is related to a number of factors, e.g. the geology which could inhibit contaminant migration. For example, a site with a significant thickness of clay between it and a receptor may reduce migration of contamination via the subsurface, which will reduce the likelihood of a given receptor being impacted. The geology or drainage for example could offer a preferential pathway e.g. mines shafts/faults increasing the likelihood and potential magnitude of an impact. The depth of contamination will also affect the exposure pathway, for example petroleum hydrocarbons at depth are unlikely to reach a receptor via dermal contact but could via vapour pathways which will influence the likelihood of an impact being felt e.g. if there are no buildings on site.

The terms and definitions used for the assessment of the likelihood are provided below:

High likelihood: There is a pollution linkage and an event appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Examples - Extensive areas with concentrations above saturation limits for mobile contamination e.g. petroleum hydrocarbons within the water table.

Likely: There is a pollution linkage and all the elements are present and in the right place, which means it is probable that an event will occur. Circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term.
Examples – Localised areas of contaminants with concentrations above saturation limits for mobile contamination e.g. localised petroleum hydrocarbons within the water table; shallow contamination above relevant human health generic assessment criteria is present with little or no hardstanding,

Low likelihood: There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain even over a longer period such event would take place, and is less likely in the short term.
Examples - A thickness/distance of low permeability deposits preventing contaminant migration to a receptor is present; a site is mostly covered hard standing preventing exposure to soil contamination.

Unlikely: There is a pollution linkage but circumstances are such that it is improbable the event would occur even in the long term.
Examples – A site is underlain by a substantial thickness of low permeability clays, between the source and potential receptors which will inhibit significantly, but not completely rule out migration to sensitive receptors.

The severity is also classified using a system based on CIRIA C552, with reference to Incidents and their classification: the Common Incident Classification Scheme (CICS), Environmental Protection Act 1990: Part 2A – Contaminated Land Statutory Guidance 2012 and other guidance as appropriate which will be detailed within the main body of the report, if applied. The terms and definitions are:

Severe: Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. A short-term risk to a particular ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);
Examples – High concentrations of contaminant on surface of recreation area, major spillage of contaminants from site into controlled waters, explosion causing building to collapse.

Medium: Chronic damage to human health ('significant harm' as defined in DETR 2000). Pollution of sensitive water resources. A significant change in a particular ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);
Examples - Concentrations of contaminants exceed the generic assessment criteria, leaching of contaminants from a site to a Principal or Secondary Aquifer, death of species within a designated nature reserve.

Mild: Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000). Damage to sensitive buildings, structures, services or the environment.
Examples – Pollution of non-classified groundwater or damage to buildings rendering it unsafe to occupy.

Minor: harm, not necessarily significant harm, which may result in financial loss or expenditure to resolve. Non-permanent health effects to human health (easily prevented by use of personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.
Examples – Presence of contaminants at such concentrations PPE is required during site work, loss of plants in landscaping scheme or discolouration of concrete.

Once the likelihood and severity have been determined, a risk category can be assigned using the table below.

		Consequences			
		Severe	Medium	Mild	Minor
Probability	Highly likely	Very high	High	Moderate	Moderate/low
	Likely	High	Moderate	Moderate/low	Low
	Low likelihood	Moderate	Moderate/low	Low	Very low
	Unlikely	Moderate/low	Low	Very Low	Very low
	Negligible	Negligible Risk / No Linkage			

Definitions of the risk categories obtained from the above table are as follows together with an assessment of the further work that might be required:

Very high: There is a high probability that severe harm could arise to a designated receptor from an identified hazard or there is evidence that severe harm is currently happening. This risk, if realised, could result in substantial liability. Urgent investigation and remediation are likely to be required.

High: Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation is required and remedial works may be necessary in the short term and are likely over the longer term.

Moderate: It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it would be more likely to be relatively mild. Investigation is normally required to clarify the risk and determine the liability. Some remedial works may be required in the longer term.

Low: It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.

Very Low: There is a low possibility that harm could arise to a receptor. In the event of such harm being realised, it is not likely to be severe.

Some linkages may be identified which constitutes a theoretical connection between a source and a receptor, but professional judgement shows them not to be possible for some reason. These are labelled 'negligible risk' and 'no linkage' in the summary table, which give rise to an overall **negligible** risk category and no further action is required.

Ground Gas Risk Assessment

BS8485:2015+A1:2019, BS 8576:2013, CL:AIRE RB17, and NHBC 'Hazardous Ground Gas - An essential guide for housebuilders' 2023, are the current guidance which gives up-to-date advice on all aspects of permanent ground gas risk. BS8576 alongside CIRIA C682 also provides guidance on assessment of hydrocarbon vapour intrusion.

The CL:AIRE publication 'Good Practice for Coal Mine Gas Emissions" 2021 provides guidance on the assessment of risks from mine gas sources.

The above all outline good practice in investigation, the collection of relevant data and monitoring programmes in a risk-based approach to ground gas contamination. The aim of the guidance is for a consistent approach to decision making, particularly relating to the scope of protective design measures on a site-specific basis.

Legislative Framework
BS8485:2015+A1:2019, BS 8576:2013 and CIRIA C665 provides technical guidance, however they also recognise the context into which the guidance has to be employed. Government policy is based upon a "suitable for use approach", which is relevant to both the current and proposed future use of land. When considering the current use of land, Part IIA of the Environment Protection Act 1990 provides the regulatory regime. The presence of hazardous ground gases could provide the "source" in a "pollutant linkage" which could lead the regulator to determine that considerable harm or there is a significant possibility of such harm being caused. Under such circumstances, the regulator would determine the land to be "contaminated land" under the provisions of the Act, setting out the process of remediation as described in the DETR Circular 02/2000 *Statutory guidance on contaminated land*.

Generation Potential of Sources
BS 8576:2013 Figure 6 provides a basis for assessing the generation potential from sources identified as part of the Phase I Assessment. These are summarised below:

Generation Potential	Typical Sources
Very Low	• Natural carbonate soil and strata, e.g. chalk and limestone. • Natural soil strata with a low degradable organic content, e.g. alluvium, peat. • In-filled pond less than 15 m diameter, in-filled before 1930s to 1940s. • Made ground with low degradable organic content (e.g. up to 5% organic material such as pieces of wood, pieces of paper, rags, etc. with a high proportion of ash and no food or other easily degradable waste). • Mine workings shallow or shaft (where there is clear evidence that they are flooded). • Inert landfill sites.
Low	• Natural soil strata with a high degradable organic content (DOC). • Made ground with total organic carbon (TOC) up to 6% (e.g. dock silt, no food or other easily degradable waste). • Foundry sand (includes phenolic binders, rags and wood that decay, albeit at low rates). • Landfill 1945 to mid 1960s (see also Moderate below).
Moderate	• Sewage sludge. • Mine workings – unflooded, more than 50 years since last worked (gas is liberated from coal when mine workings are excavated; this continues for up to about 50 years). • Landfill 1945 to mid 1960s (this could also be "low" or, if disturbed, "high").
High	• Landfill mid 1960s to early 1990s. • Mine workings – unflooded – less than 50 years since last worked.
Very High	• Municipal landfill sites. • Landfill early 1990s onward.

Frequency and Duration of Monitoring

BS8576 notes to determine where and how to monitor ground gases requires consideration of credible pathways of possible exposure of the receptors, taking into account what is known about the geology and hydrogeology, building construction and services layout, foreseeable events such as flooding, changes in groundwater level, climate change, extreme weather conditions, the closure of mines, and possible changes to the gas regime caused by future development.

The monitoring period for a specific site should cover the "worst case" scenario. A "worst case" scenario will typically occur during falling atmospheric pressure and, in particular, weather conditions such as rainfall, frost and dry weather.

The benefits of additional information and whether it is likely to change the scope of gas protection should be considered, as are the consequences of failing to characterise adequately pollutant linkages. Investigations concerned with ground gas are required to provide monitoring data sufficient to allow prediction of worst case conditions enabling the confident assessment of risk and subsequent design of appropriate gas protection schemes. Monitoring programmes should not be an academic exercise in data collection. CL:AIRE publication TB17 "Ground Gas Monitoring and 'Worst-Case' Conditions" provides further guidance.

Below are matrices that will aid in determining an appropriate number of gas monitoring visits and the length of monitoring period.

Typical/idealised periods of monitoring

		Generation of Potential Source				
		Very Low	Low	Moderate	High	Very High
Sensitivity of Development	Low (Commercial)	1 month	2 months	3 months	6 months	12 months
	Moderate (Apartments)	2 months	3 months	6 months	12 months	24 months
	High (Low rise Residential)	3 months	6 months	6 months	12 months	24 months

Typical/idealised frequency of monitoring/Number of Visits Required

		Gas Generation of Potential Source				
		Very Low	Low	Moderate	High	Very High
Sensitivity of Development	Low (Commercial)	4	6	6	12	12
	Moderate (Apartments)	6	6	9	12	24
	High (Low rise Residential)	6	9	12	24	24

Notes

1 Generation potential of sources based on descriptions within BS 8576:2013.

2 At least two sets of readings should be at low and falling atmospheric pressure (but not restricted to periods below <1000 mb) known as worst case conditions. Historical data can be used as part of the data set (Table 5.5b).

RB17 Approach

CL:AIRE RB17 (Card et al 2012) is a pragmatic approach to ground gas risk assessment and was developed because gas concentration, pressure and flow rate measured in a well headspace may not be representative of the conditions in the surrounding formation.

In these low-risk situations, the approach is to use the conceptual site model and the estimation of the likely gas generation from a source to identify where or if gas monitoring is required to better define the risks.

Under this approach, for sites with natural soils only with no credible methane source, then no action is required (no monitoring or gas protection measures) as this represents Characteristic Situation 1 (CS1).

Radon
Advice on radon protection in England is provided by the UK Health Security Agency, https://www.ukradon.org/information/ukmaps and by the BRE (BR 211 (Scivyer 2023)).

Areas of the country can be categorised according to the percentage of existing homes where radon is present above the Action Level:

- 0-1% lower probability.
- 1-3% and 3-10% intermediate probability.
- >10% higher probability.

Basic radon protection measures are required in new buildings and extensions in areas of England and Wales where 3-10% of properties exceed the Action Level and full radon protection measures where >10% exceed the Action Level.

Unexploded Ordnance (UXO) Guidance

Clients have a legal duty under the CDM 2015 Regulations to provide designers and contractors with project-specific health and safety information needed to identify hazards and risks. This includes the possibility of unexploded ordnance (UXO) being encountered on the site. Further details are given in CIRIA report C681.

BSL carry out non-specialist UXO screening exercises by considering any evidence of UK defence activities on or near the site evident from gathered desk study information and the unexploded aerial delivered bomb (UXB) online risk maps produced by Zetica. Other data sources are available, but as a first stage screening exercise the freely available online Zetica maps have been used. The level of risk stated is that determined by Zetica, a company experienced and considered competent in the assessment of UXO.

Geotechnical Guidance

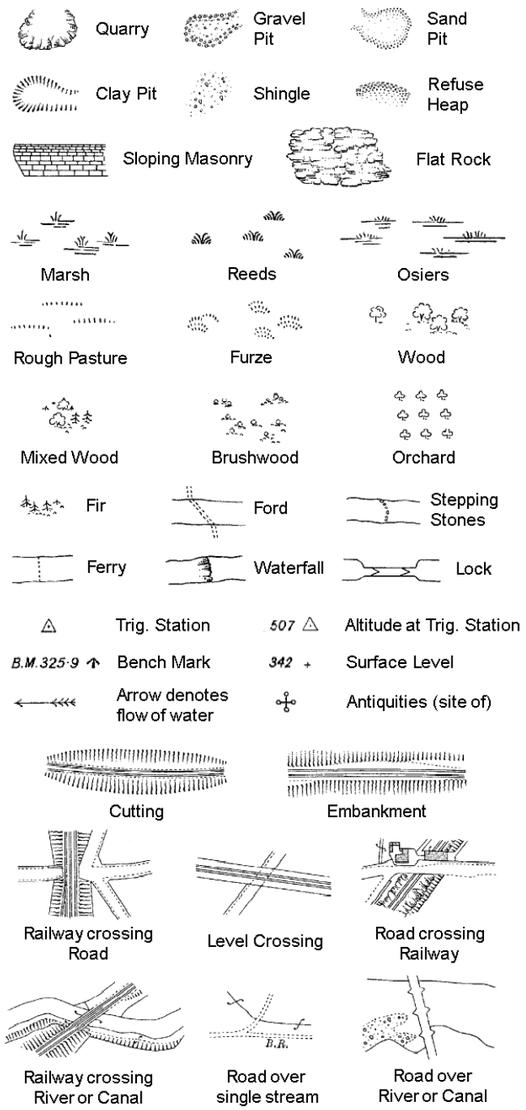
A preliminary risk assessment of geotechnical hazards is carried out at the desk study stage and confirmed (or amended) at the ground investigation stage. The desk-based stage my include the requirements for a Coal Mining Risk Assessment (CMRA) which specifically assesses the risks from mining induced instability and related issues in high risk development areas: https://www.gov.uk/guidance/planning-applications-coal-mining-risk-assessments

APPENDIX B

Historical Maps

Historical Mapping Legends

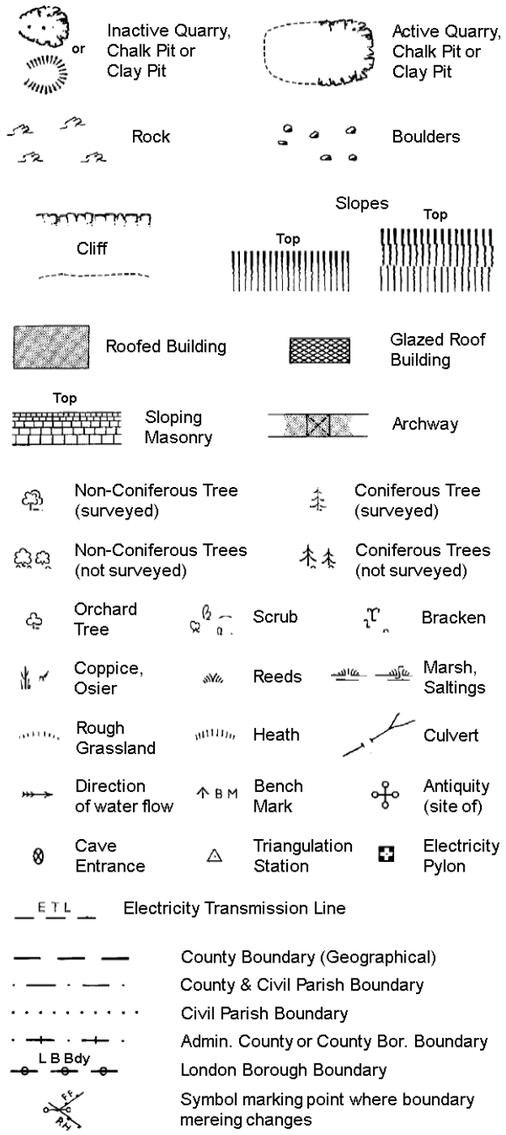
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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

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

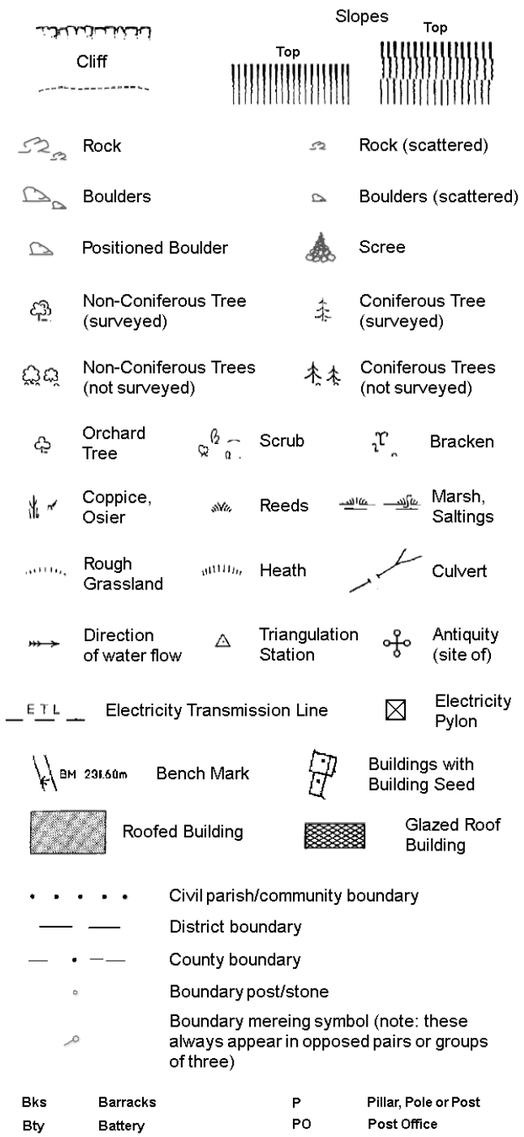
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



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

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

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



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

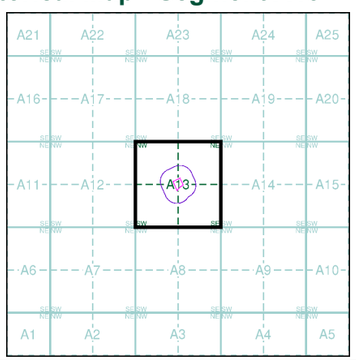
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity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

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Denbighshire	1:2,500	1872 - 1874	2
Denbighshire	1:2,500	1899 - 1900	3
Denbighshire	1:2,500	1912	4
Denbighshire	1:2,500	1937 - 1939	5
Ordnance Survey Plan	1:1,250	1959	6
Ordnance Survey Plan	1:2,500	1962	7
Ordnance Survey Plan	1:1,250	1967 - 1972	8
Ordnance Survey Plan	1:1,250	1974	9
Ordnance Survey Plan	1:2,500	1976	10
Additional SIMs	1:2,500	1985	11
Additional SIMs	1:1,250	1986	12
Additional SIMs	1:2,500	1988	13
Additional SIMs	1:1,250	1990	14
Additional SIMs	1:2,500	1990	15
Large-Scale National Grid Data	1:1,250	1992	16
Large-Scale National Grid Data	1:2,500	1992	17
Historical Aerial Photography	1:2,500	2003	18

Historical Map - Segment A13



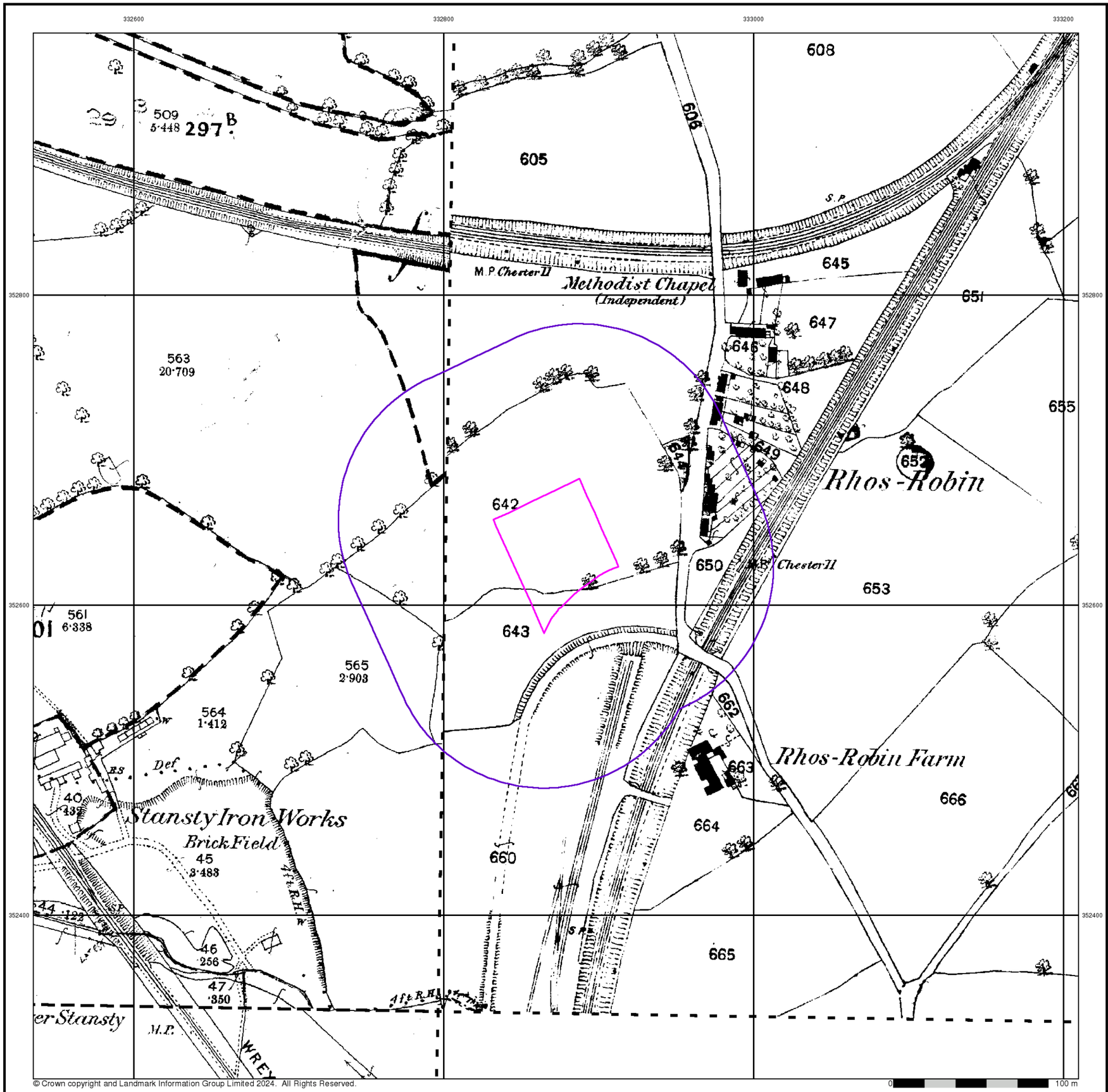
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Search Buffer (m):	100

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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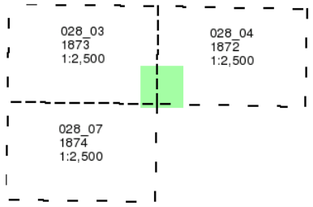
Denbighshire

Published 1872 - 1874

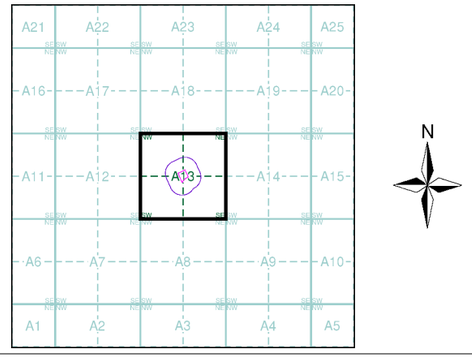
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Map Name(s) and Date(s)



Historical Map - Segment A13



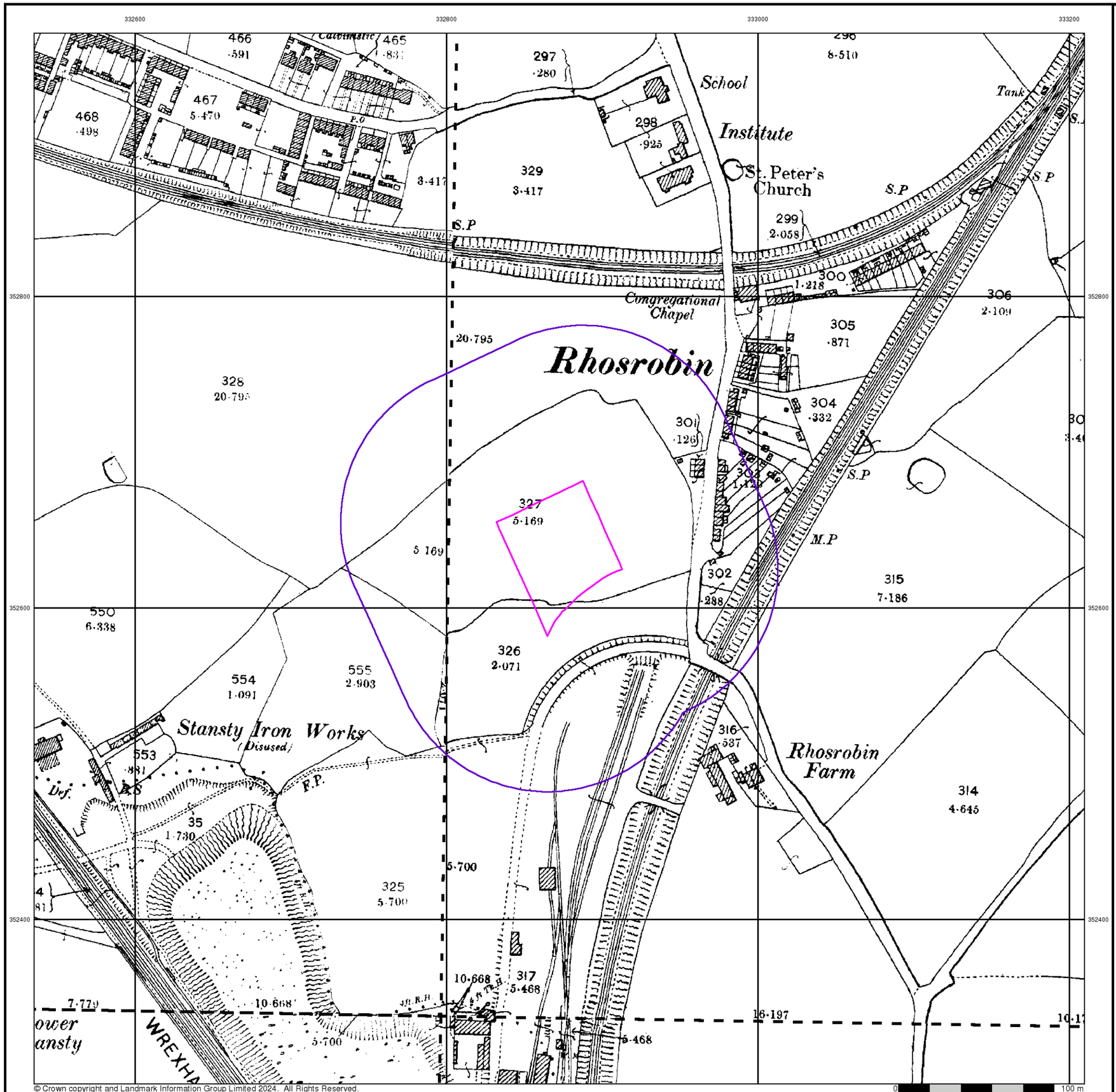
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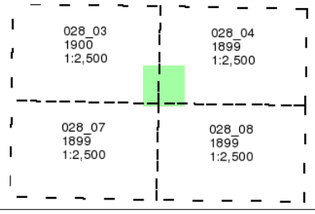
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Published 1899 - 1900

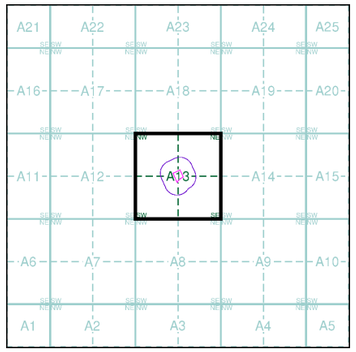
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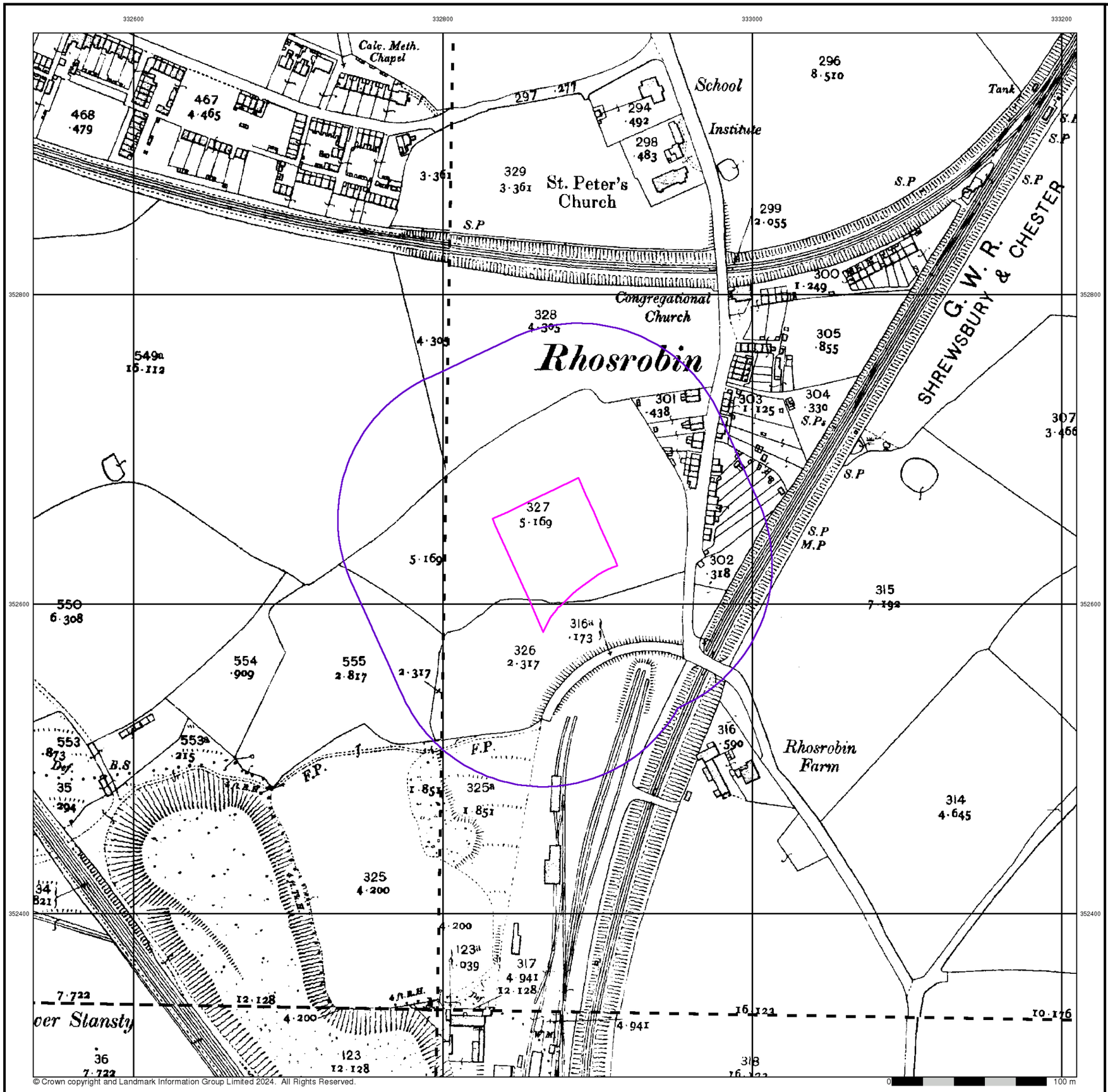
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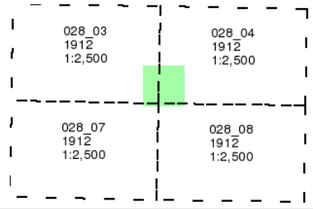
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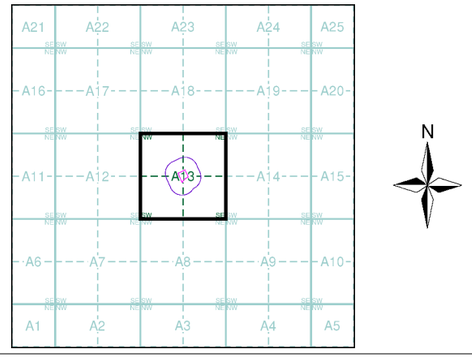
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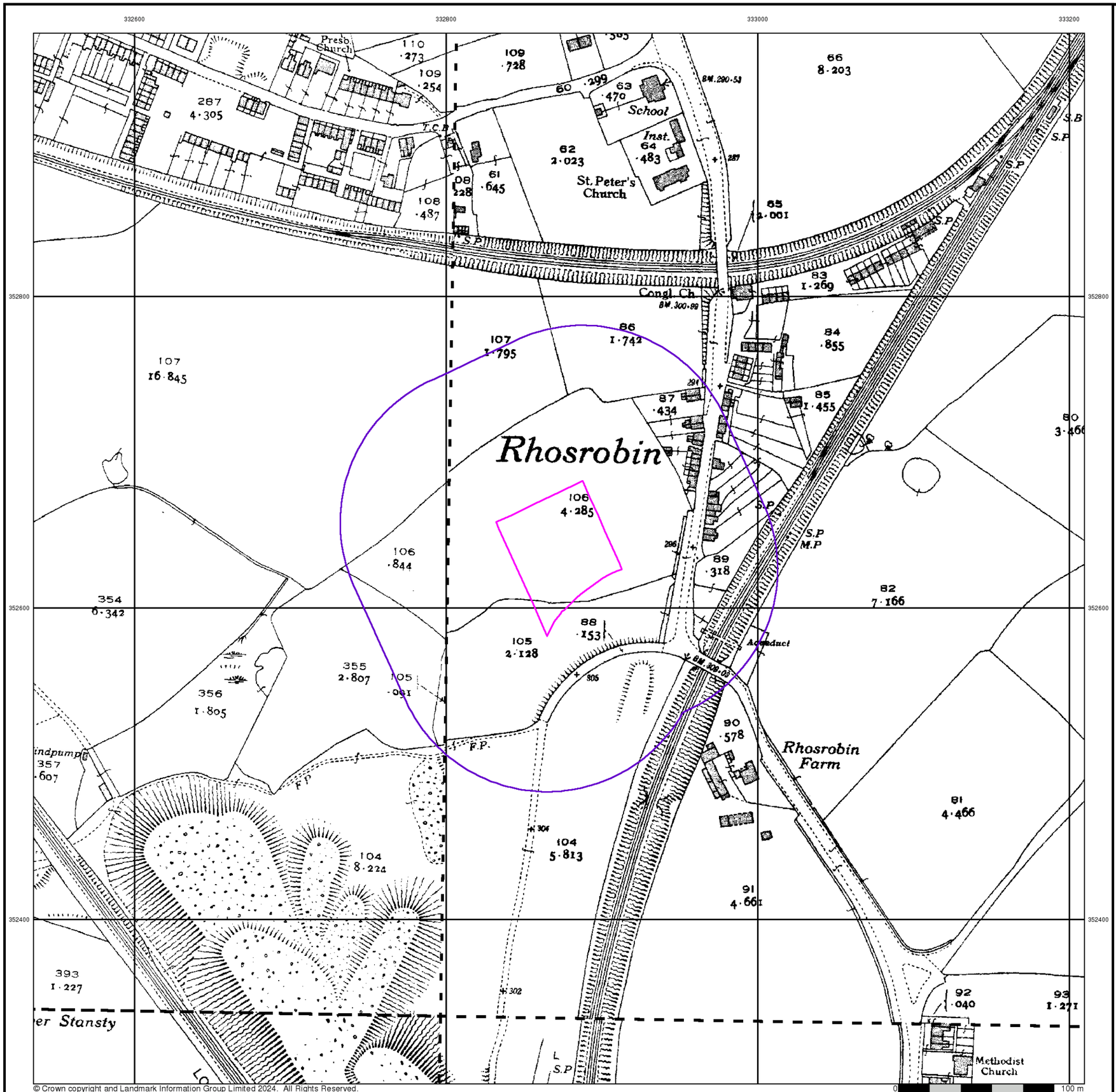
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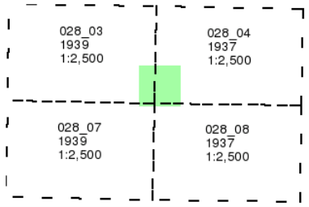
Denbighshire

Published 1937 - 1939

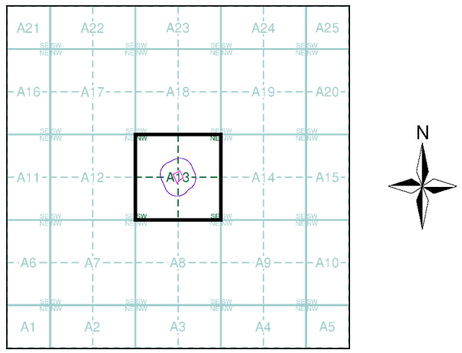
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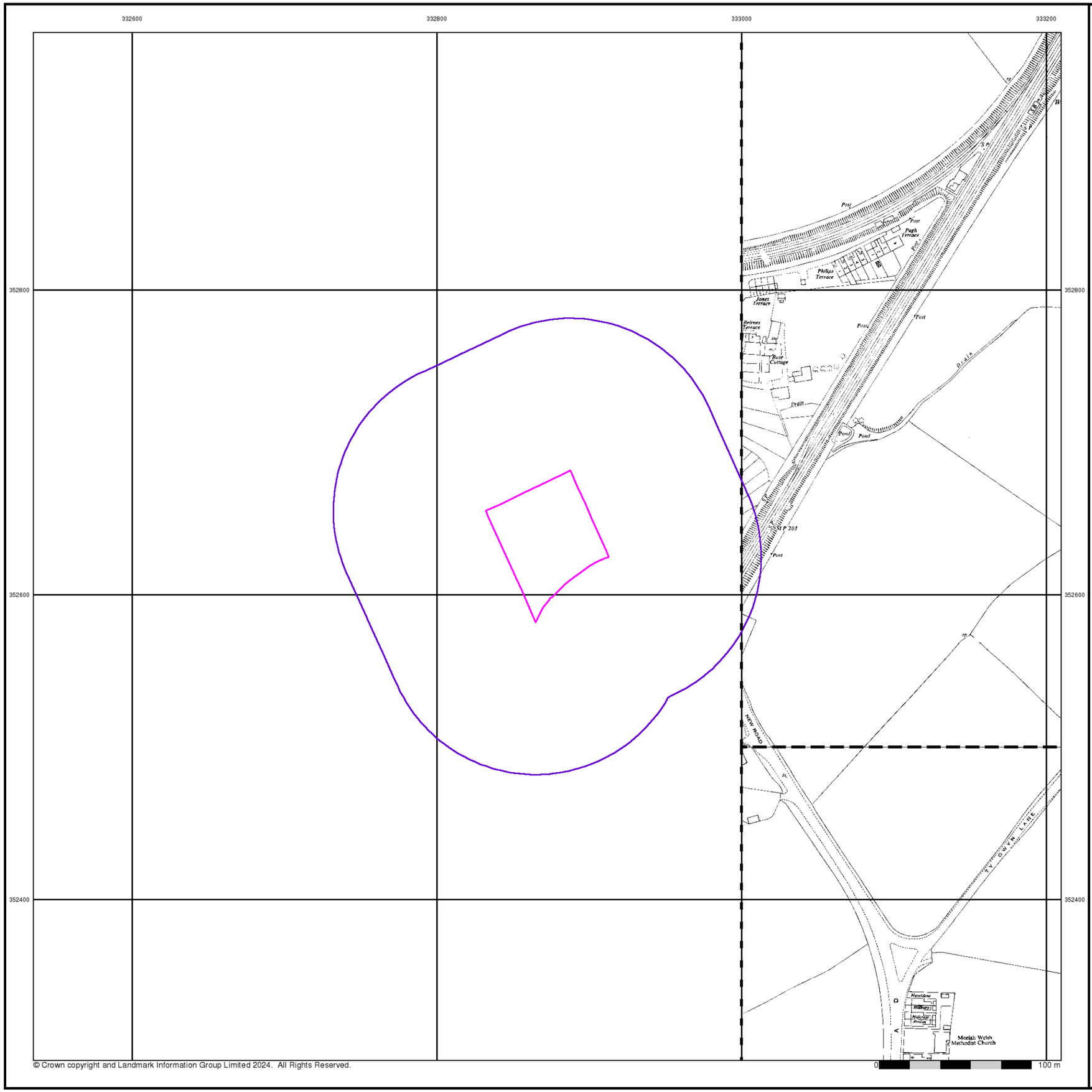
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Site Area (Ha):	0.42
Search Buffer (m):	100

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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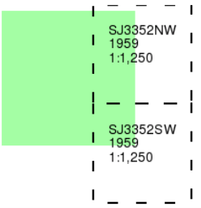
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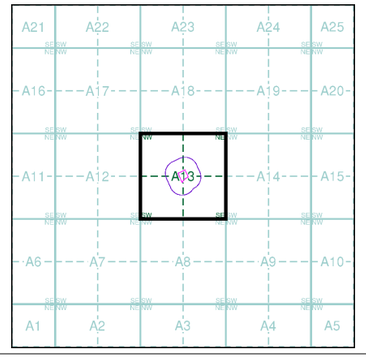
Ordnance Survey Plan
Published 1959
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



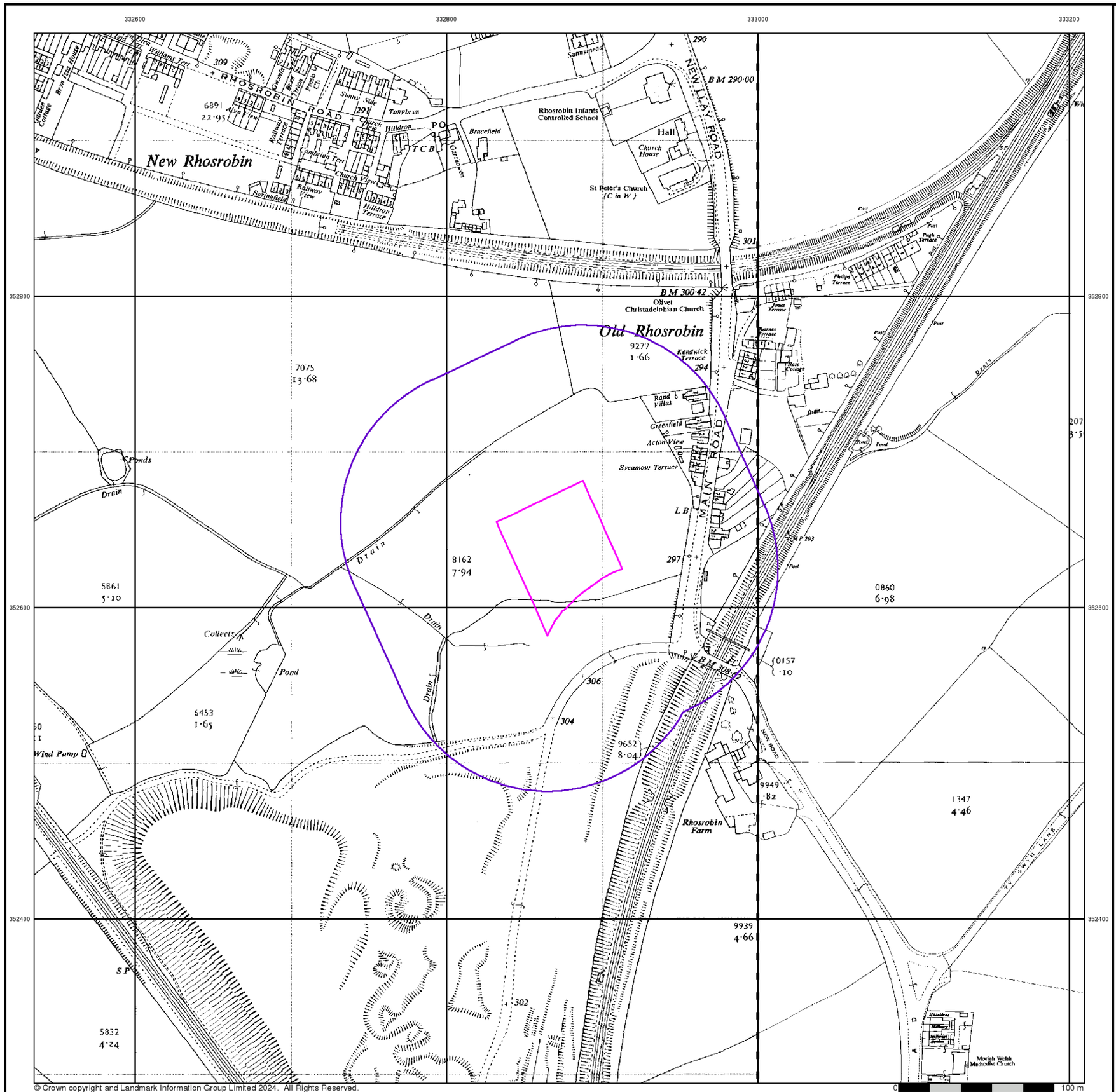
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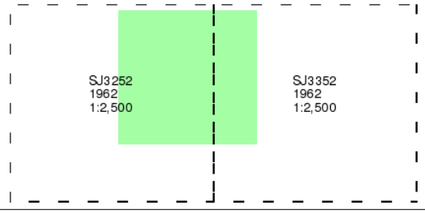


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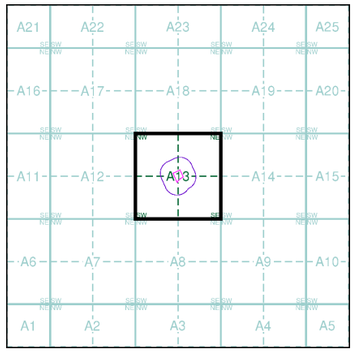
Ordnance Survey Plan
Published 1962
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



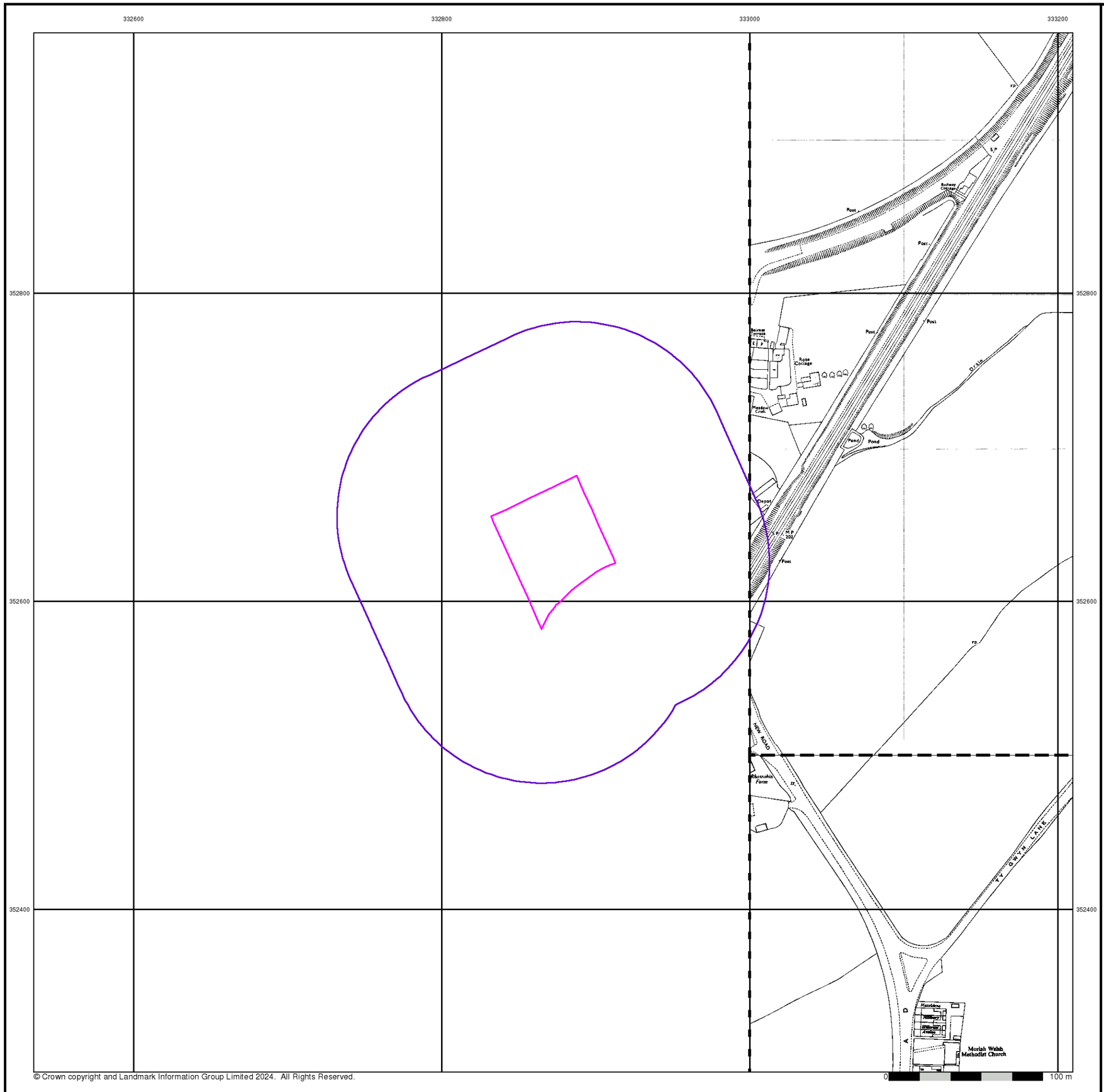
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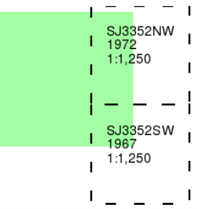
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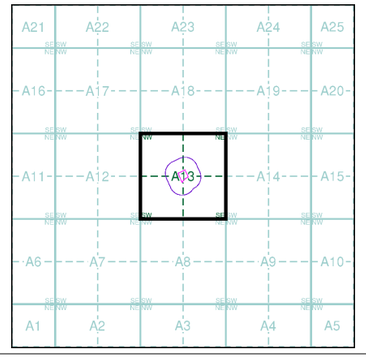
Ordnance Survey Plan
Published 1967 - 1972
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



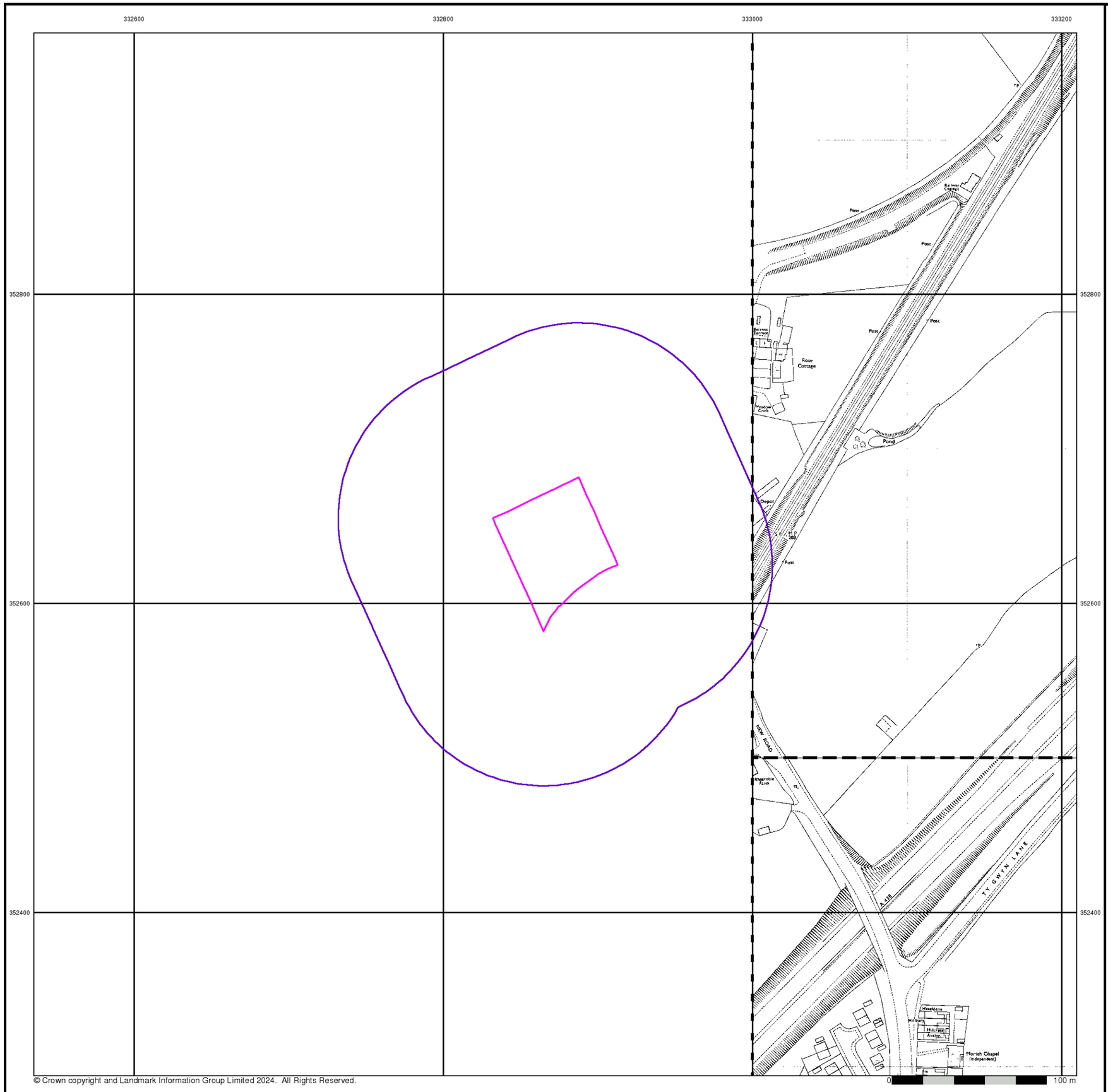
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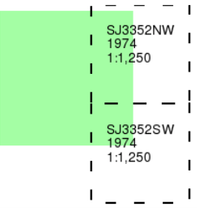
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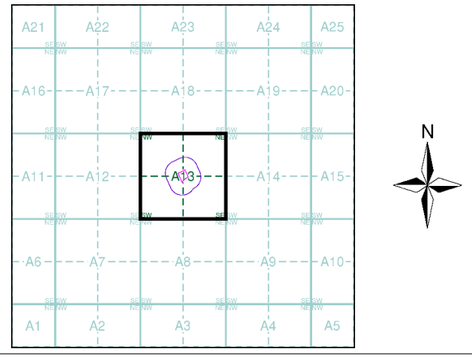
Ordnance Survey Plan
Published 1974
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A13



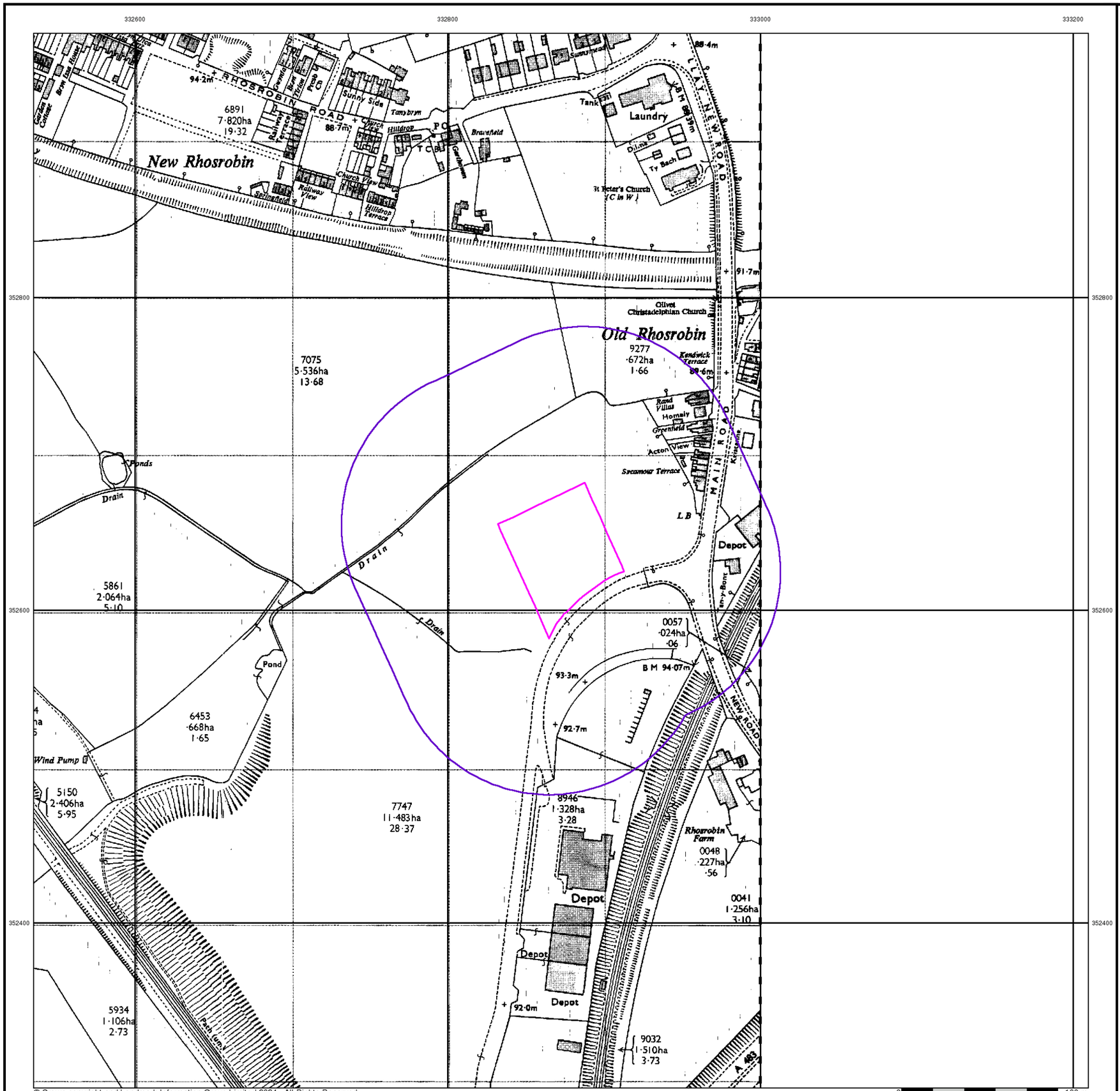
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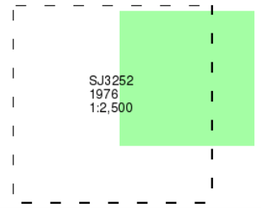


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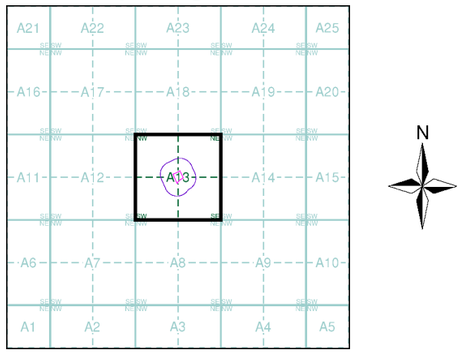
Ordnance Survey Plan
Published 1976
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



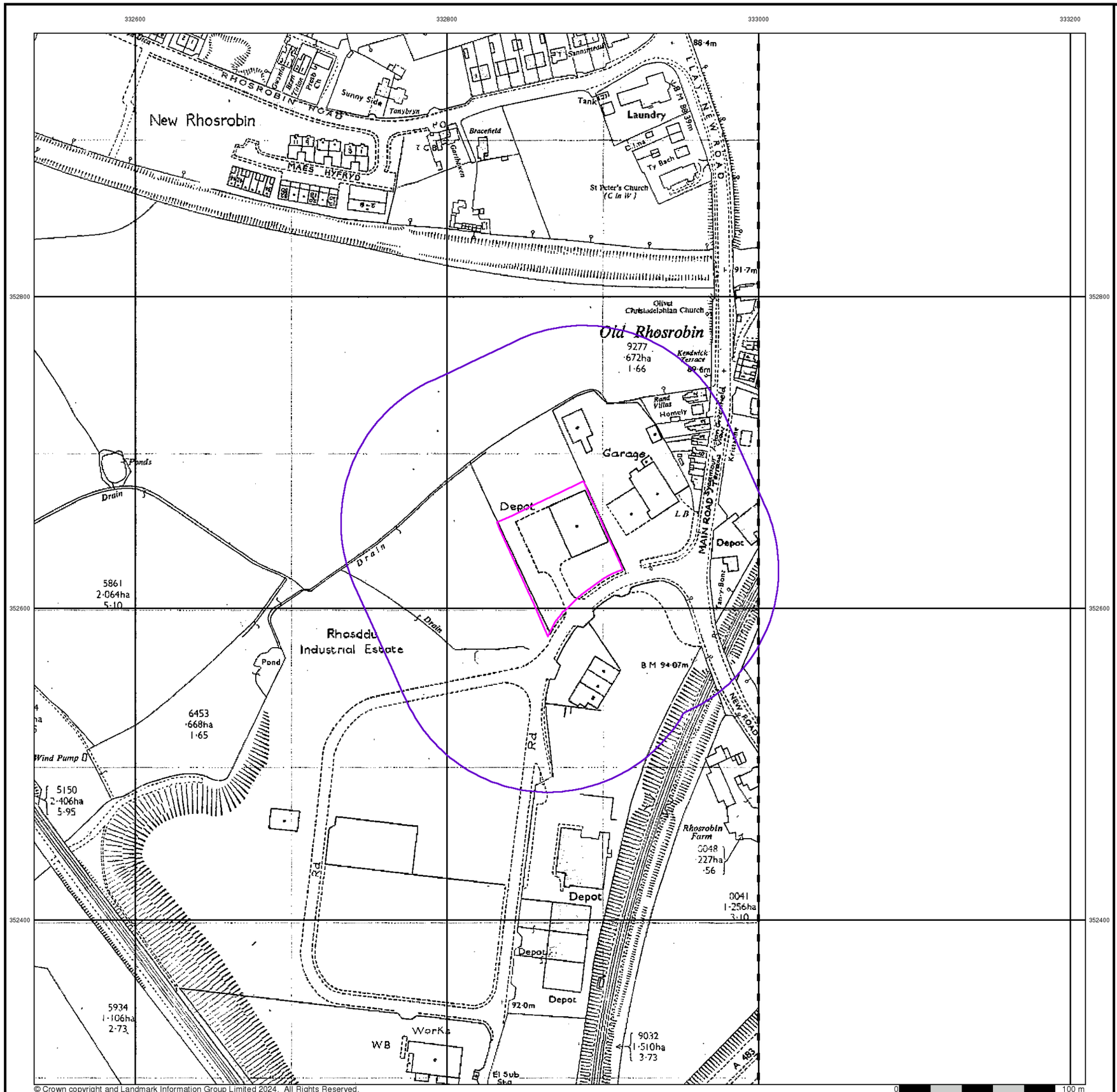
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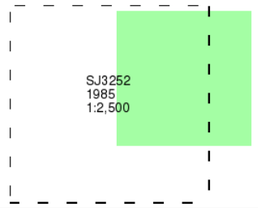
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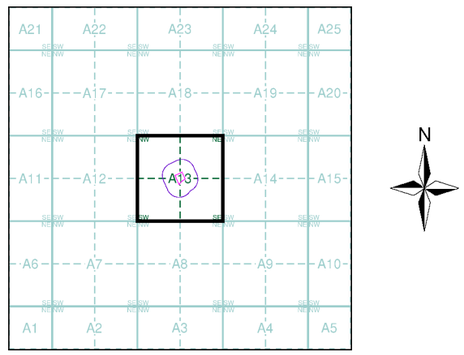
Additional SIMs
Published 1985
Source map scale - 1:2,500

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 A13



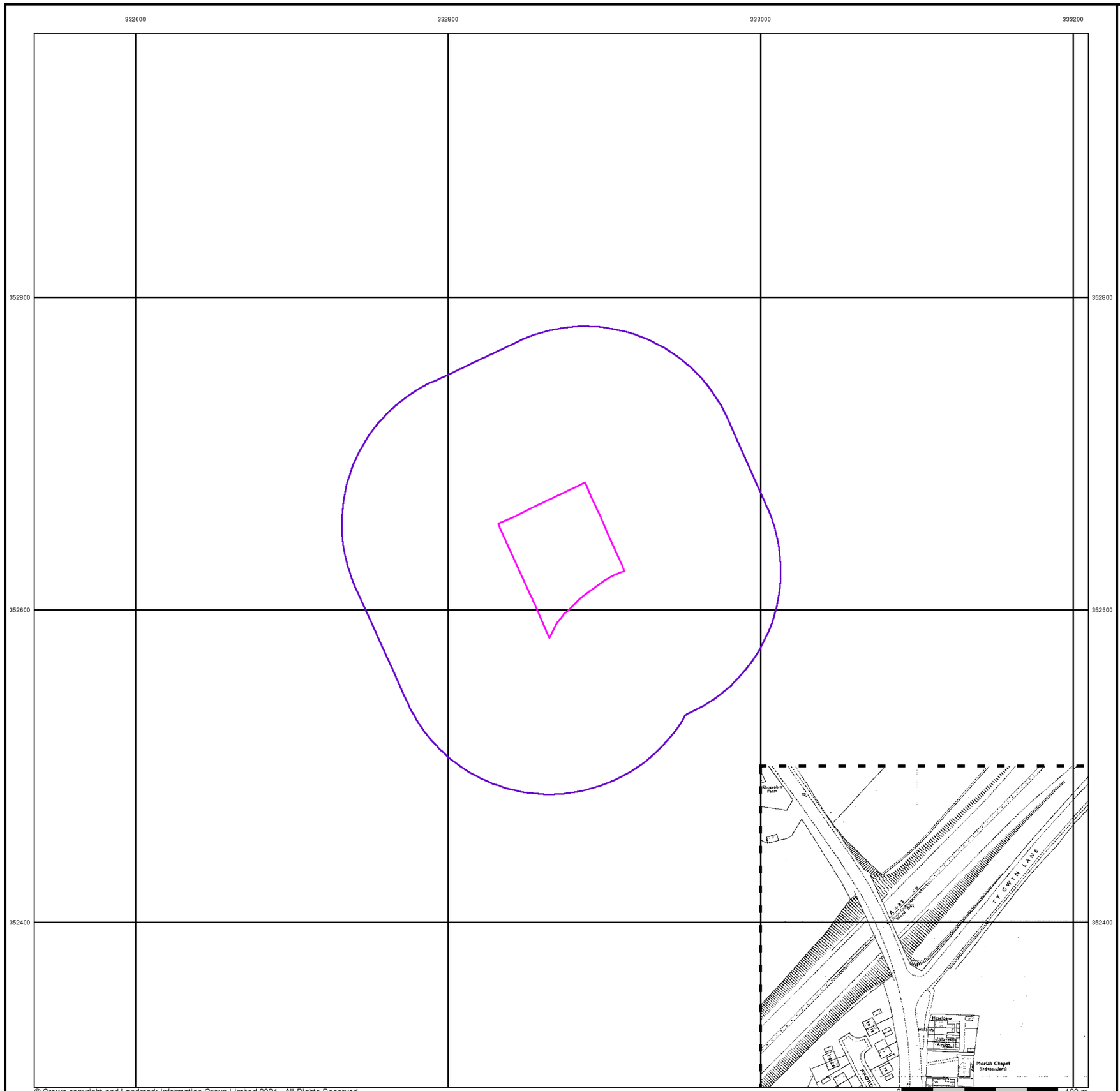
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Site Area (Ha):	0.42
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Site Details

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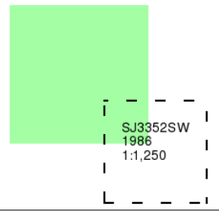
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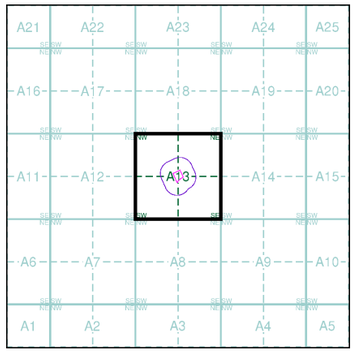
Additional SIMs
Published 1986
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A13



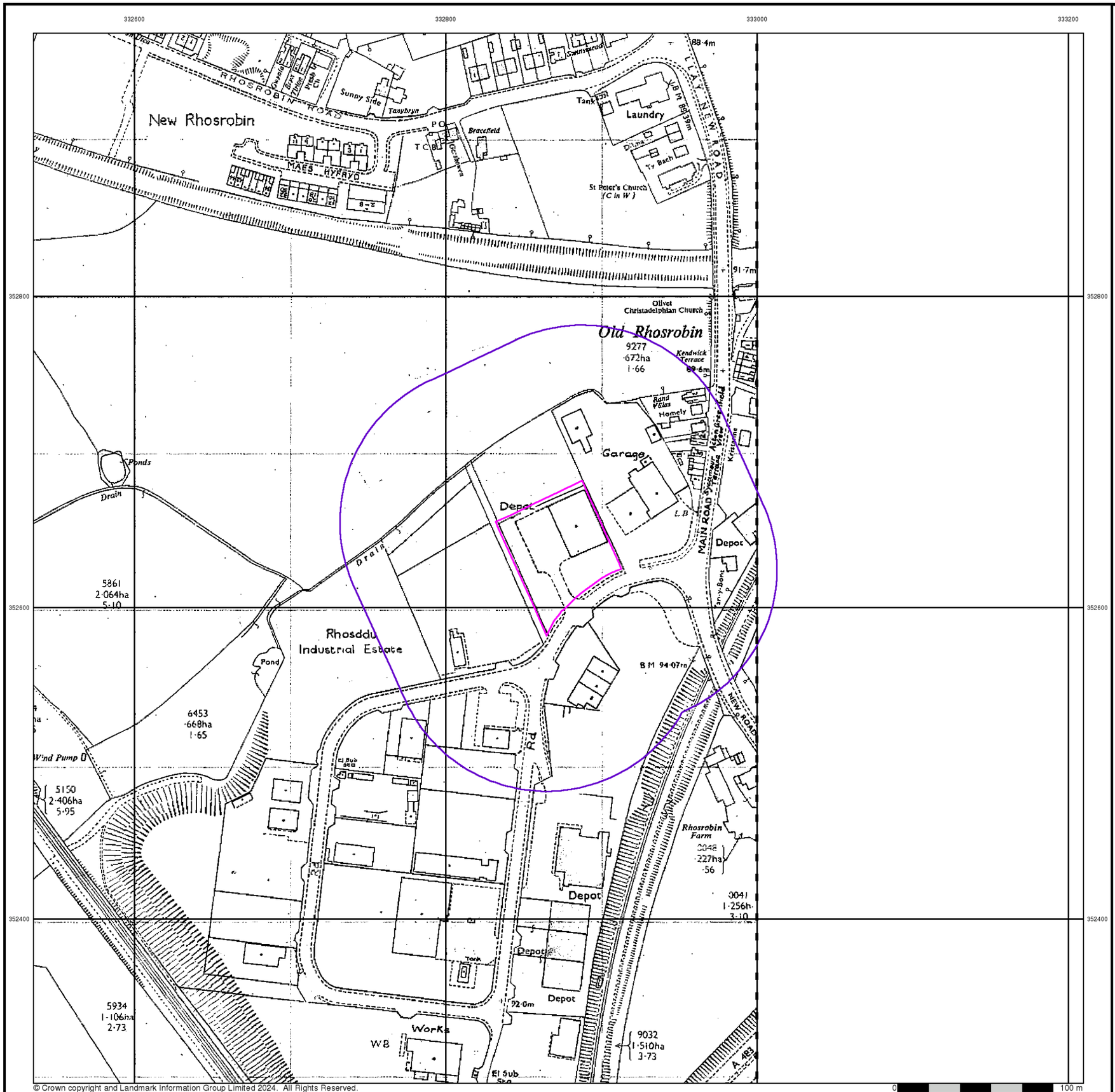
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Site Details

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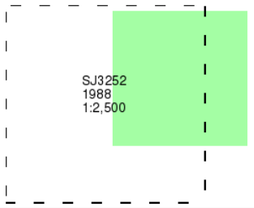
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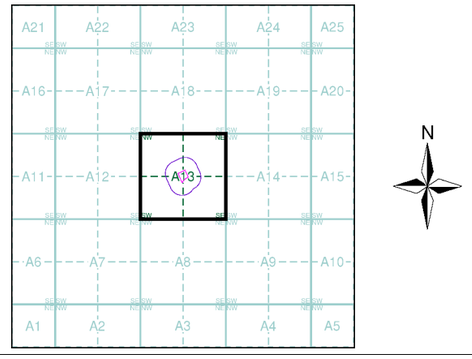
Additional SIMs
Published 1988
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



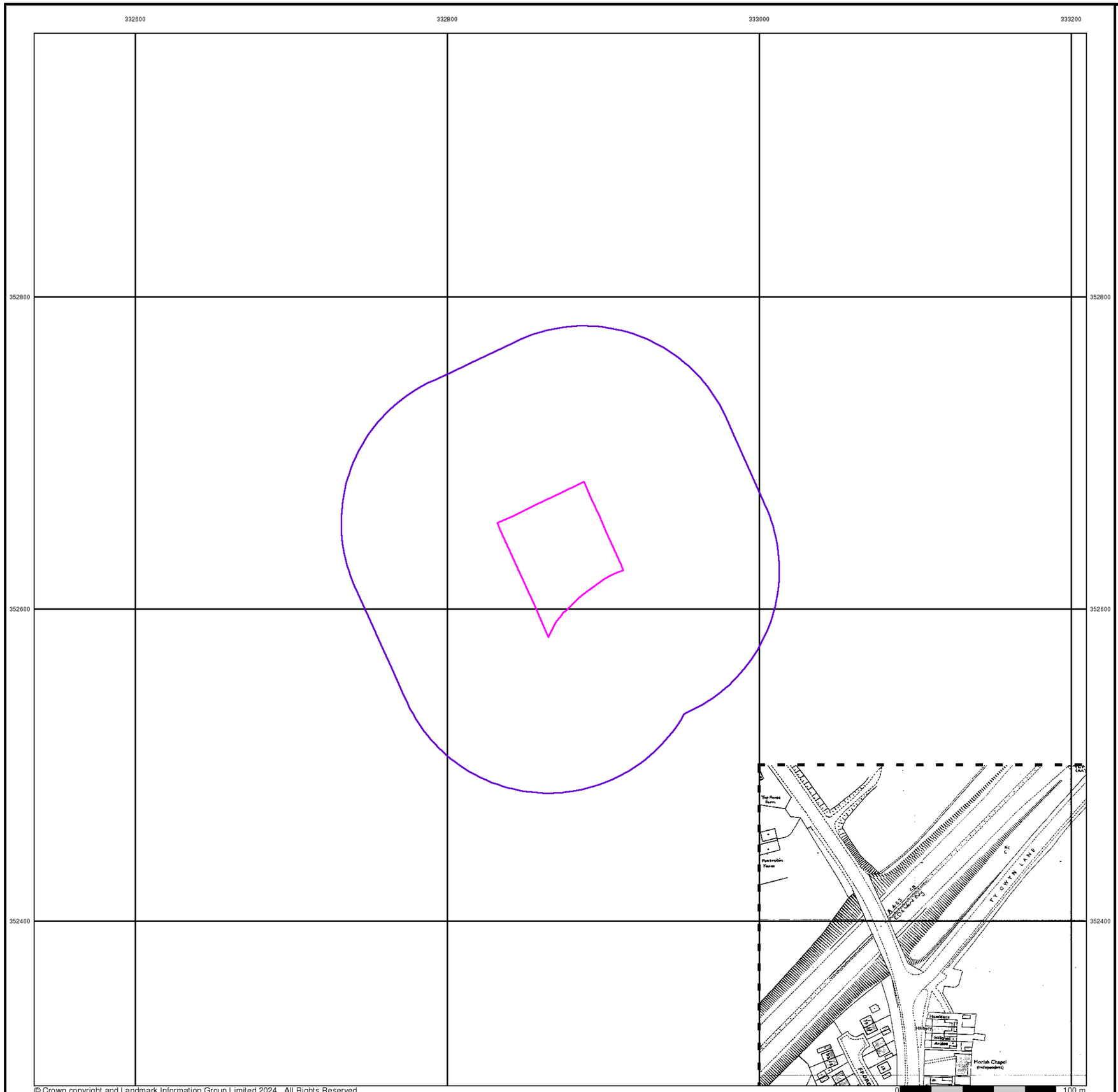
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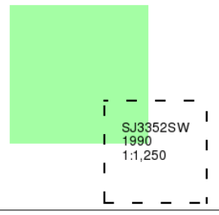
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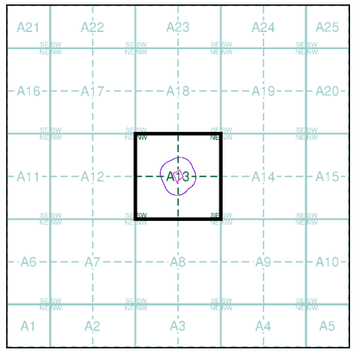
Additional SIMs
Published 1990
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A13



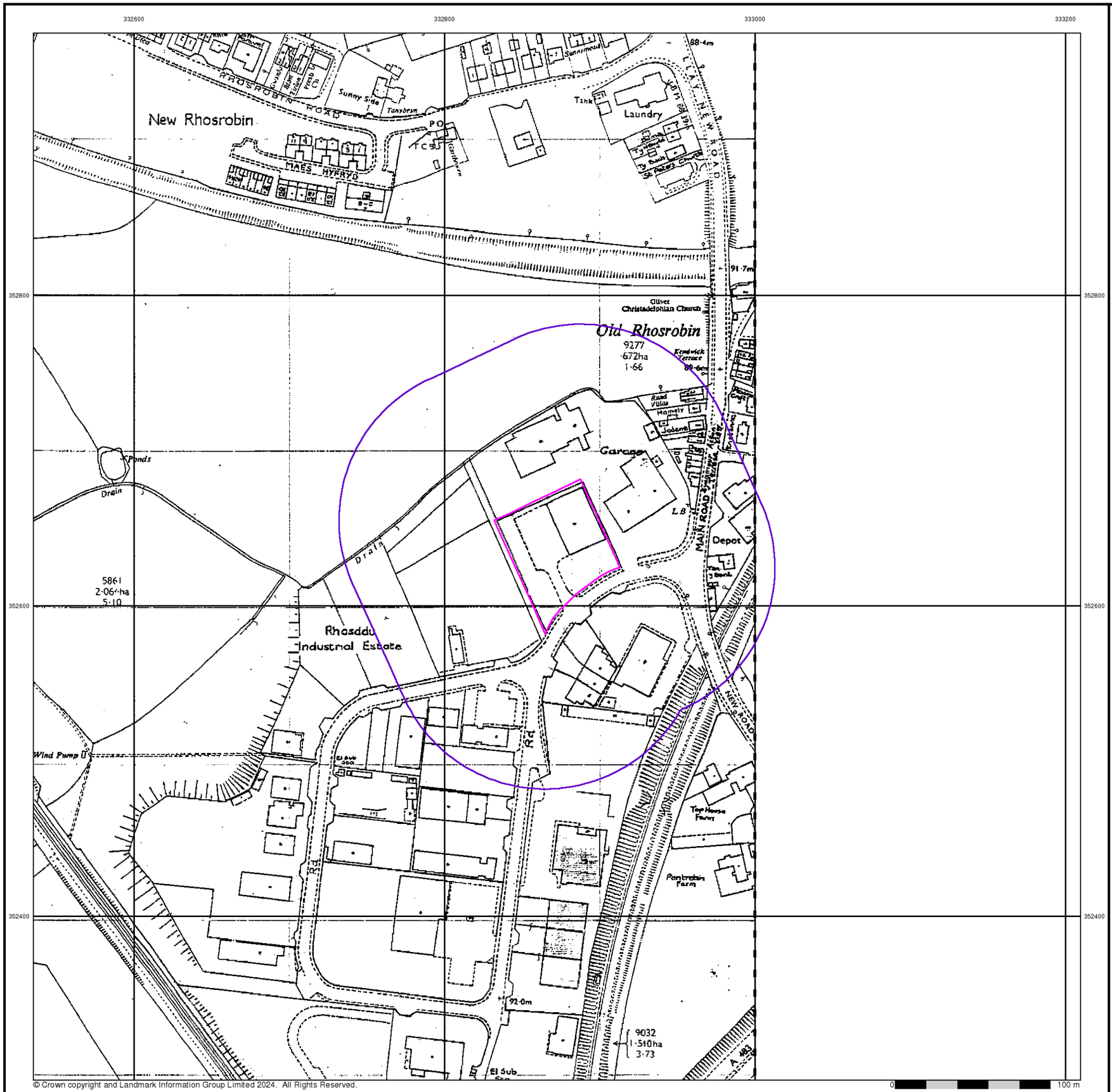
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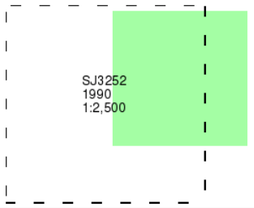
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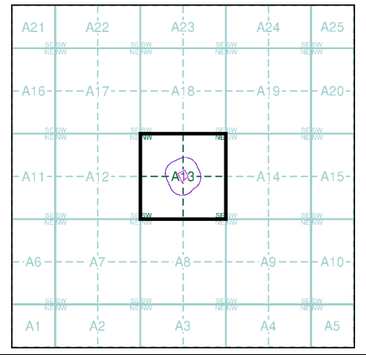
Additional SIMs
Published 1990
Source map scale - 1:2,500

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Map Name(s) and Date(s)



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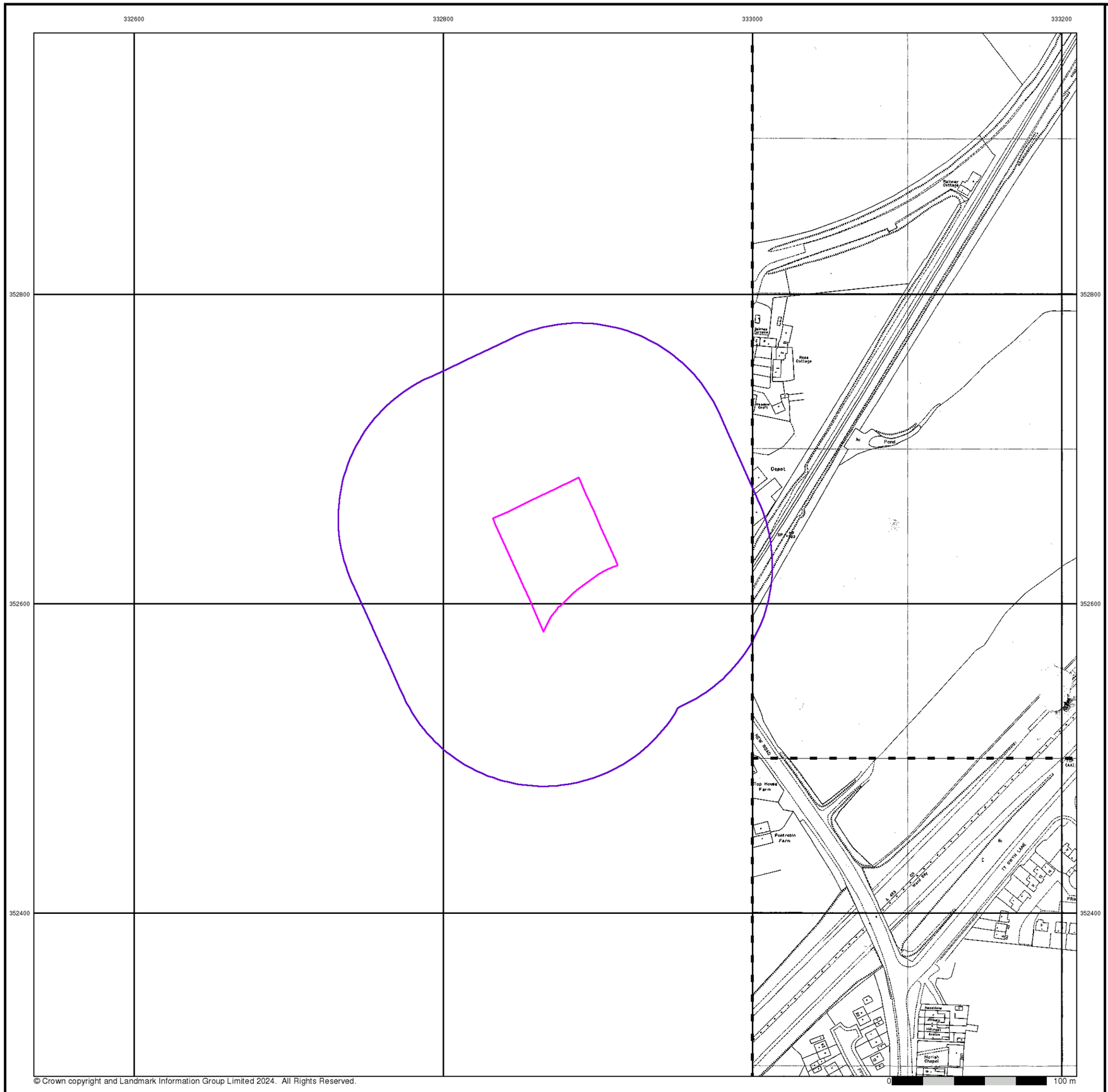


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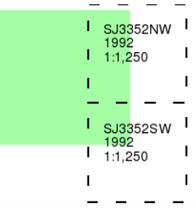
Large-Scale National Grid Data

Published 1992

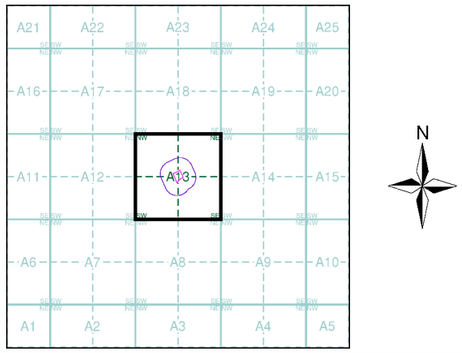
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13



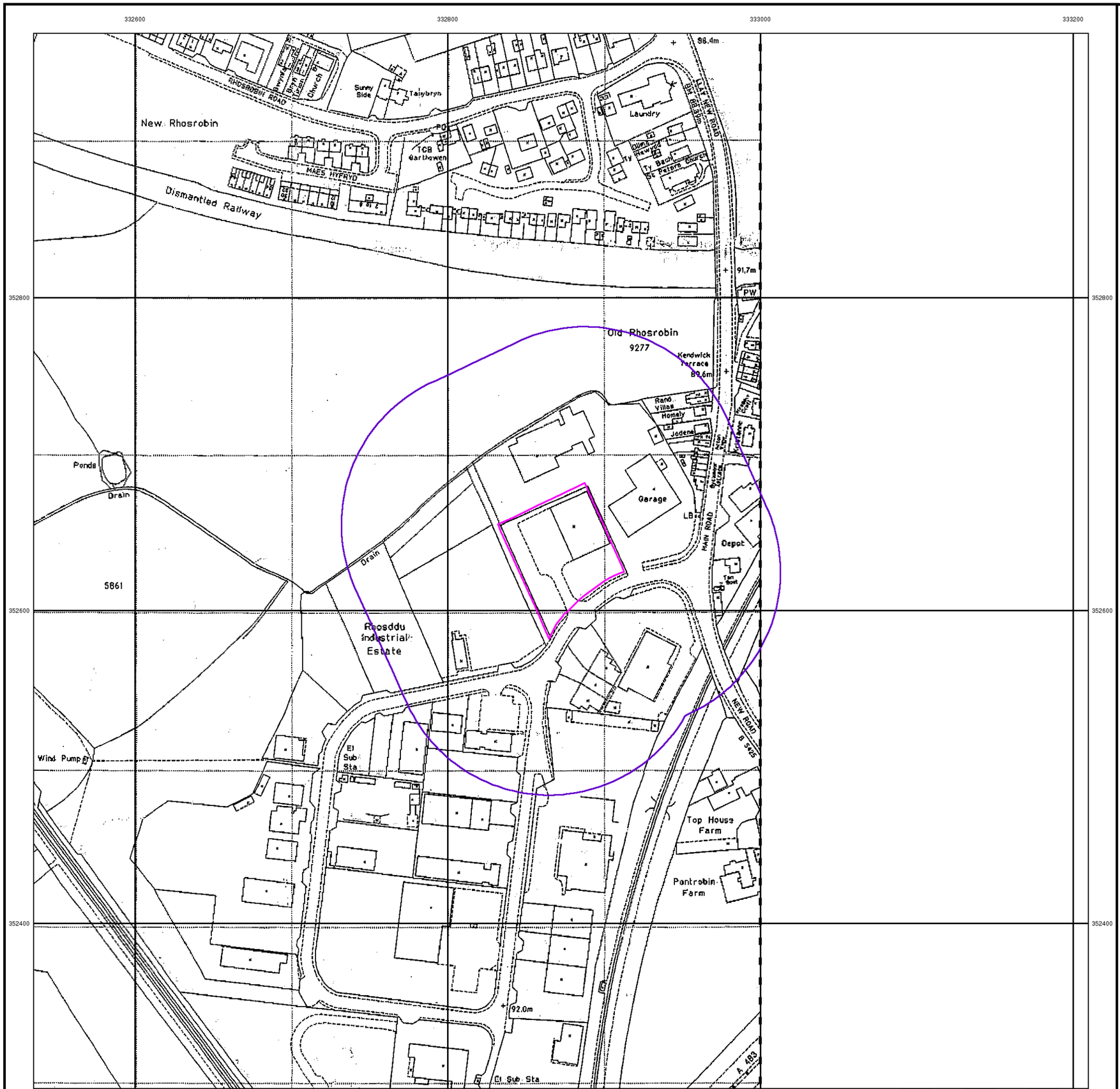
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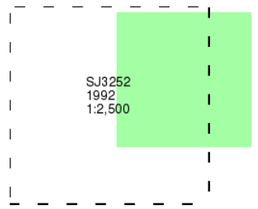
Large-Scale National Grid Data

Published 1992

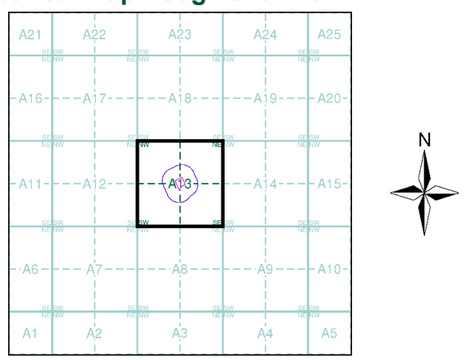
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	100

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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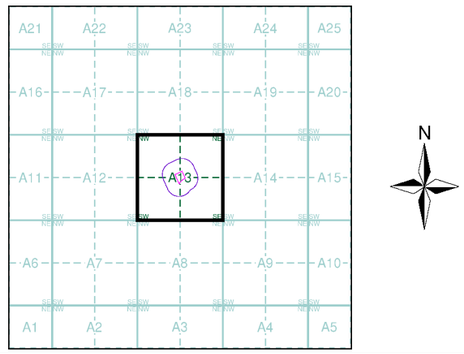
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Historical Aerial Photography

Published 2003

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

Historical Aerial Photography - Segment A13



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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

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

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
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

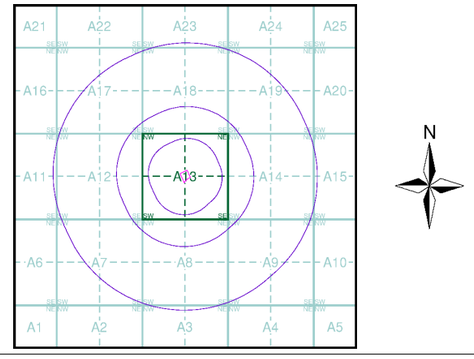
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Mud
Sand
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or 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

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Flintshire	1:10,560	1879	2
Denbighshire	1:10,560	1879	3
Denbighshire	1:10,560	1900	4
Flintshire	1:10,560	1900	5
Denbighshire	1:10,560	1914 - 1915	6
Denbighshire	1:10,560	1938	7
Denbighshire	1:10,560	1938 - 1954	8
Denbighshire	1:10,560	1954	9
Ordnance Survey Plan	1:10,000	1964	10
Ordnance Survey Plan	1:10,000	1974	11
Ordnance Survey Plan	1:10,000	1981	12
Ordnance Survey Plan	1:10,000	1988	13
Ordnance Survey Plan	1:10,000	1990	14
Ordnance Survey Plan	1:10,000	1992	15
10K Raster Mapping	1:10,000	2000	16
10K Raster Mapping	1:10,000	2006	17
VectorMap Local	1:10,000	2024	18

Historical Map - Slice A



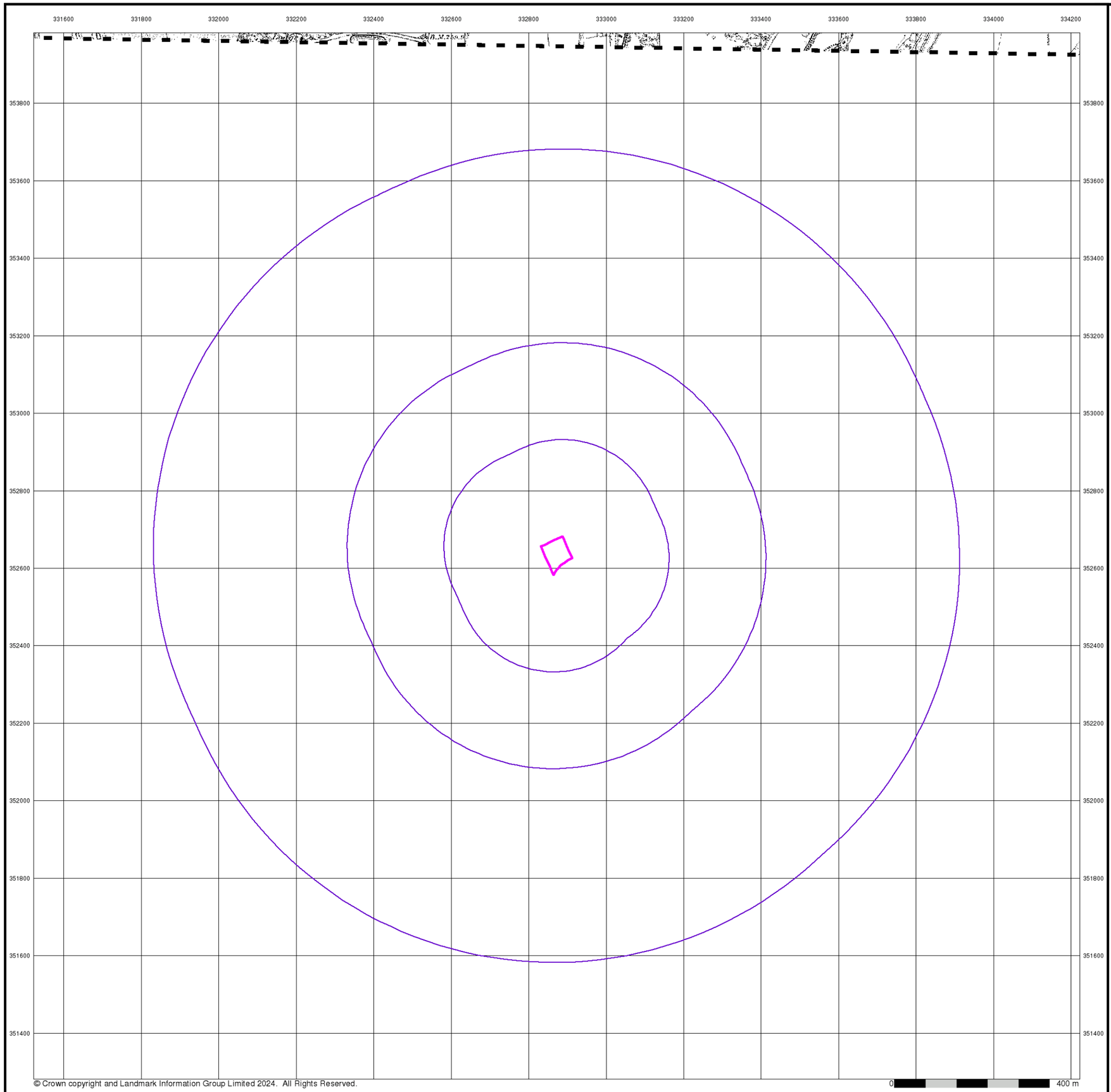
Order Details

Order Number: 344266127_1_1
Customer Ref: C5736
National Grid Reference: 332870, 352630
Slice: A
Site Area (Ha): 0.42
Search Buffer (m): 1000

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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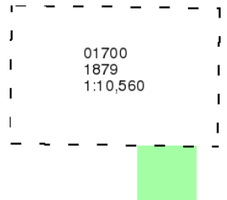
Flintshire

Published 1879

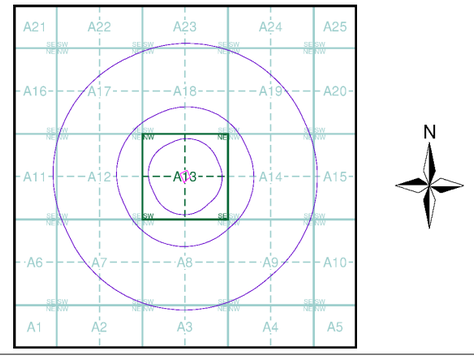
Source map scale - 1:10,560

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



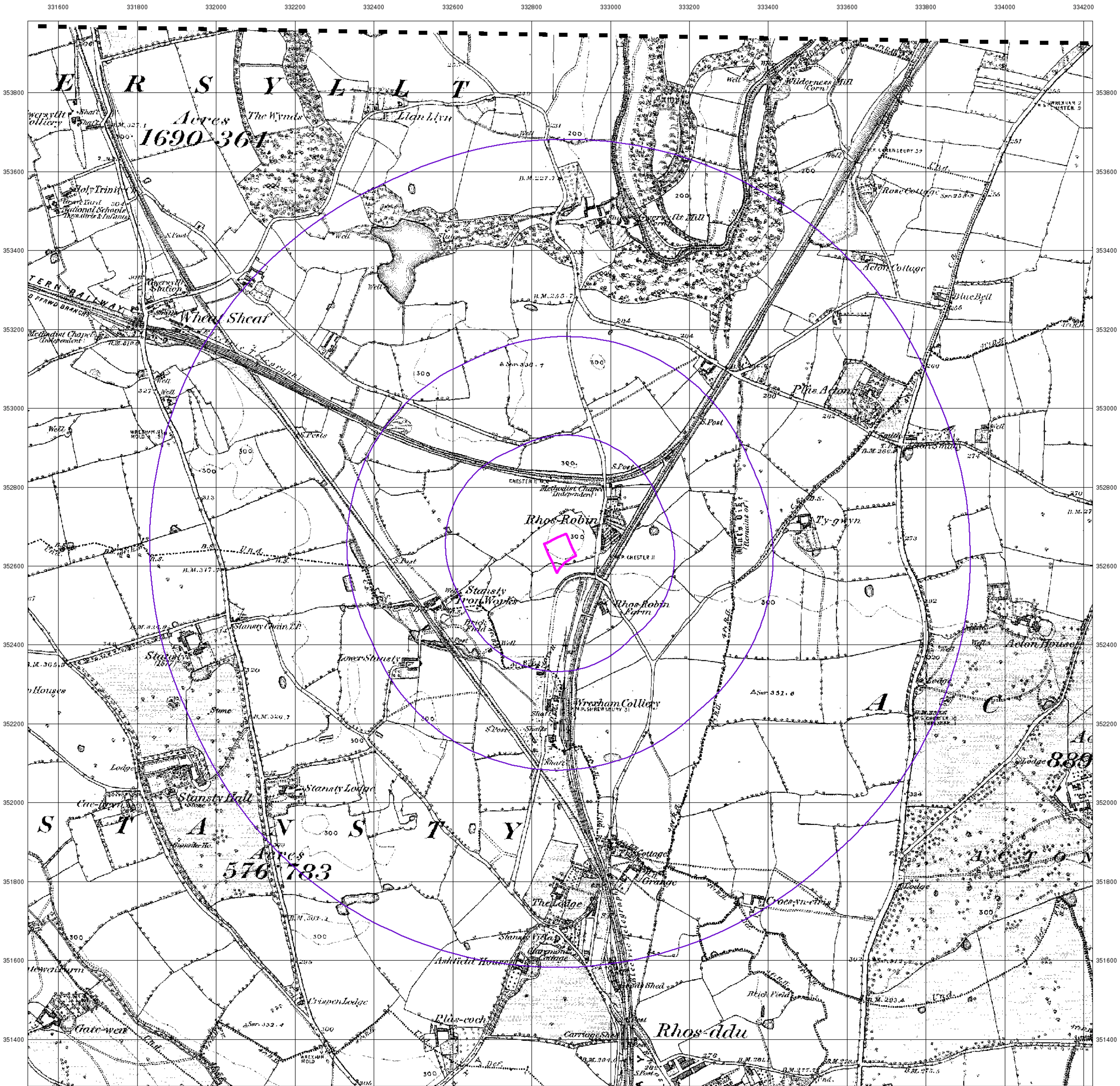
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Customer Ref:	C5736
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Denbighshire

Published 1879

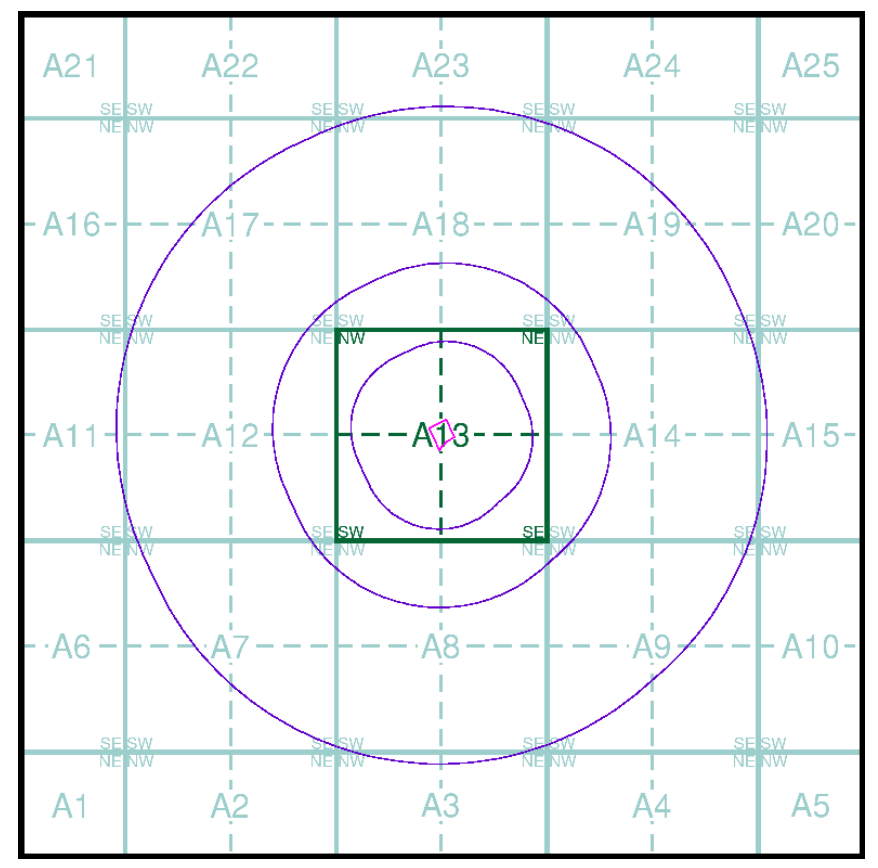
Source map scale - 1:10,560

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)

02800
1879
1:10,560

Historical Map - Slice A



Order Details

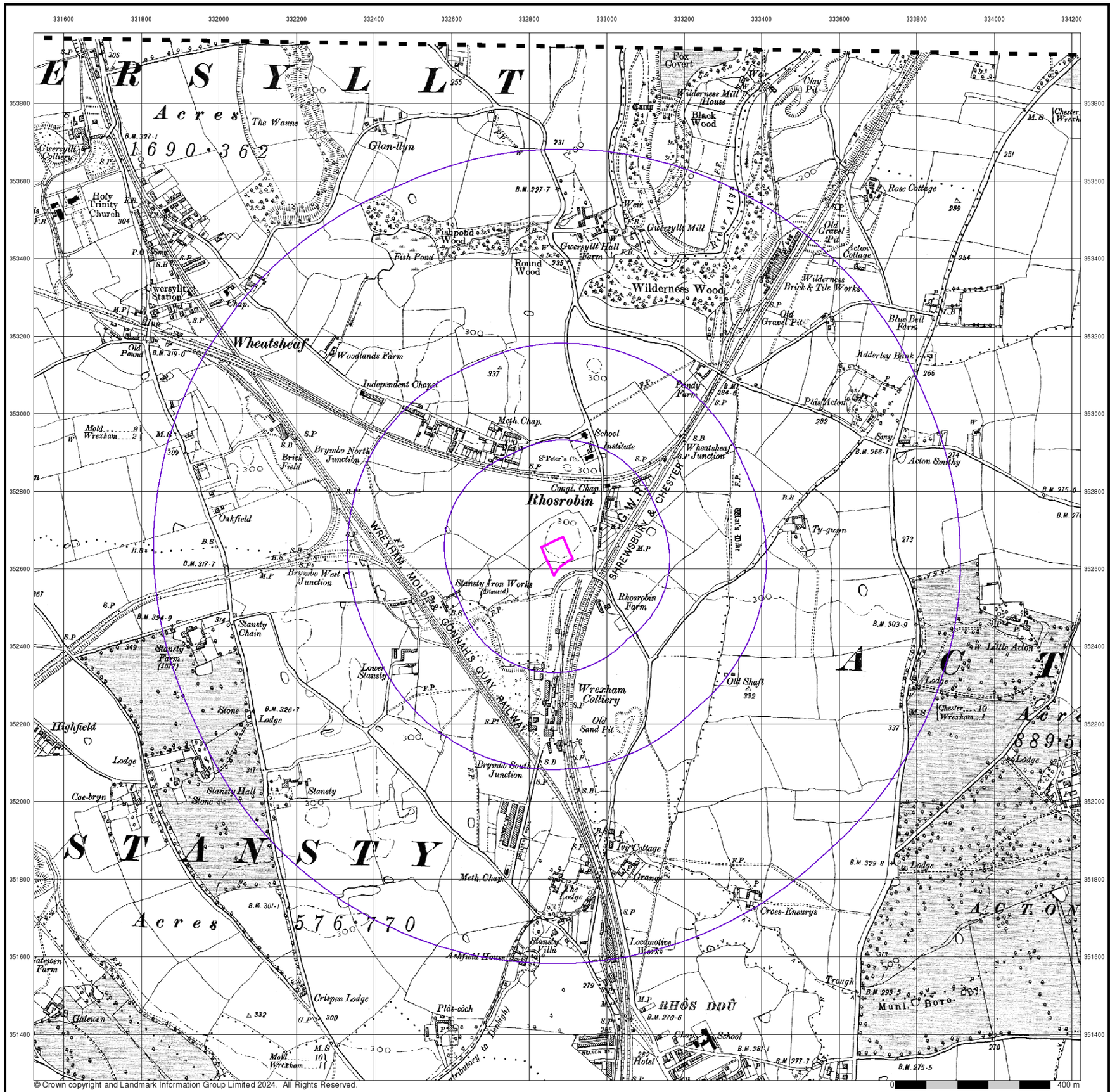
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Customer Ref: C5736
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Slice: A
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Search Buffer (m): 1000

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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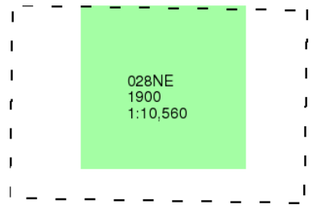
Denbighshire

Published 1900

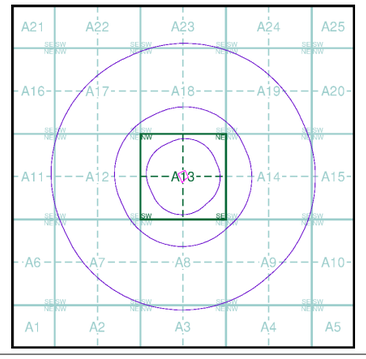
Source map scale - 1:10,560

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



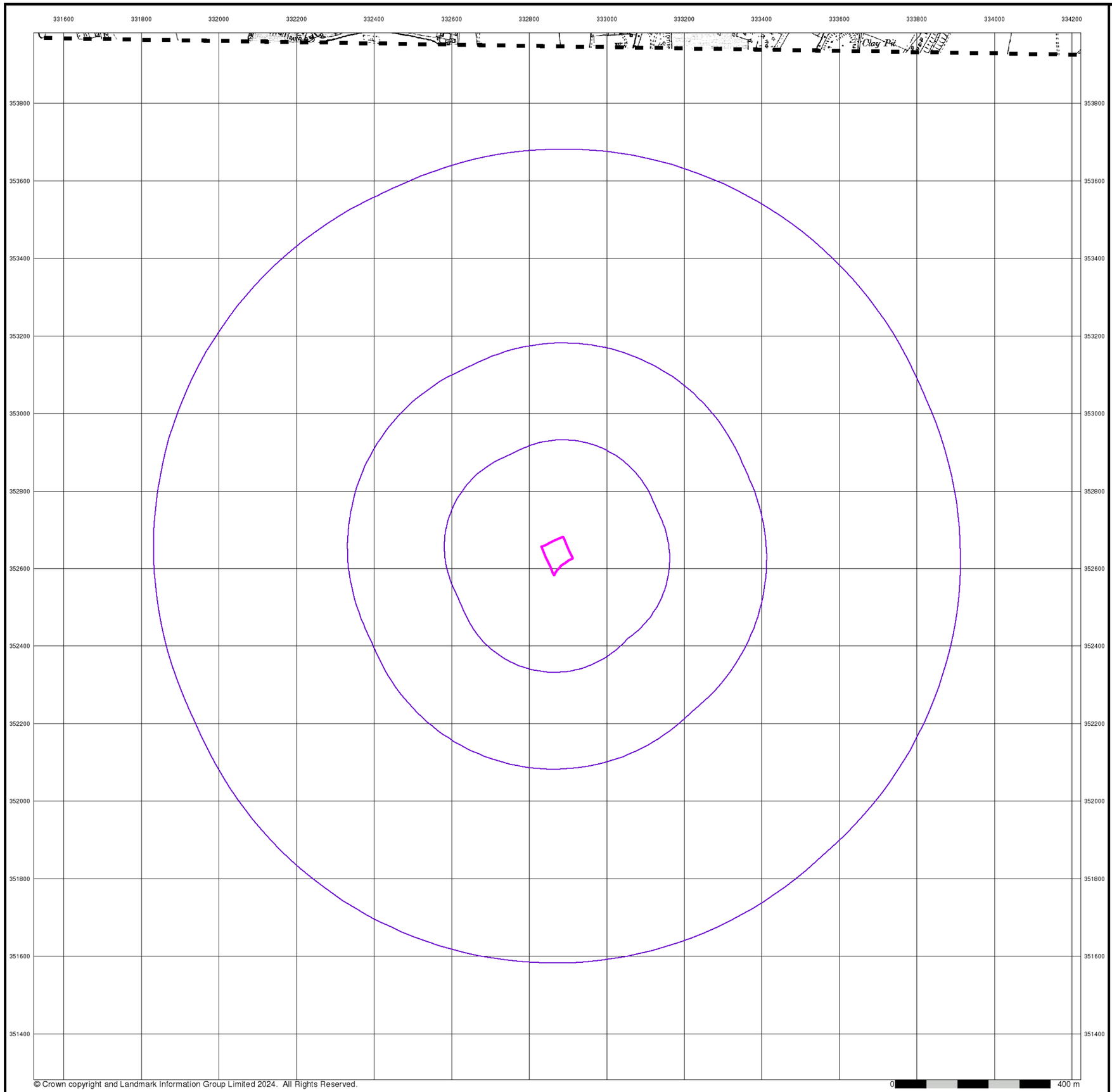
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Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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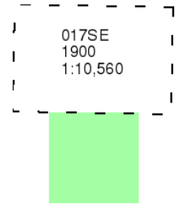
Flintshire

Published 1900

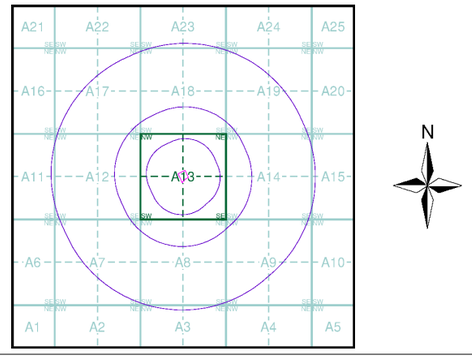
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Map Name(s) and Date(s)



Historical Map - Slice A



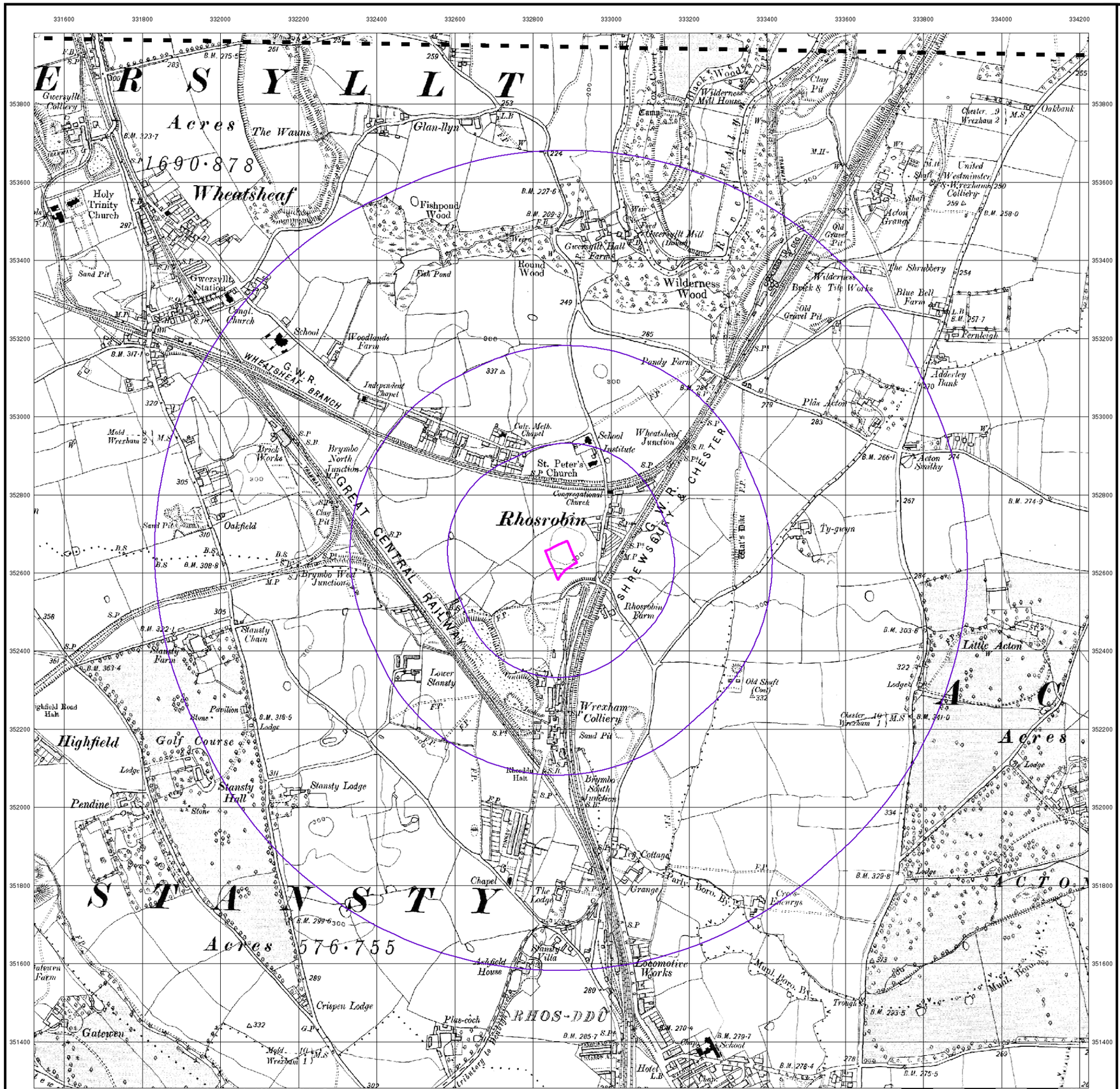
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Denbighshire

Published 1914 - 1915

Source map scale - 1:10,560

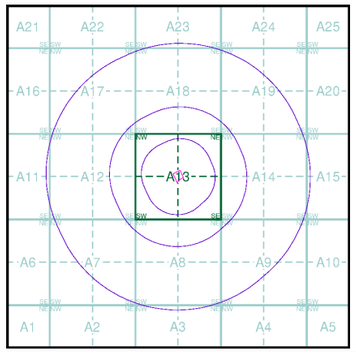
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Map Name(s) and Date(s)

021SE
1914
1:10,560

028NE
1915
1:10,560

Historical Map - Slice A



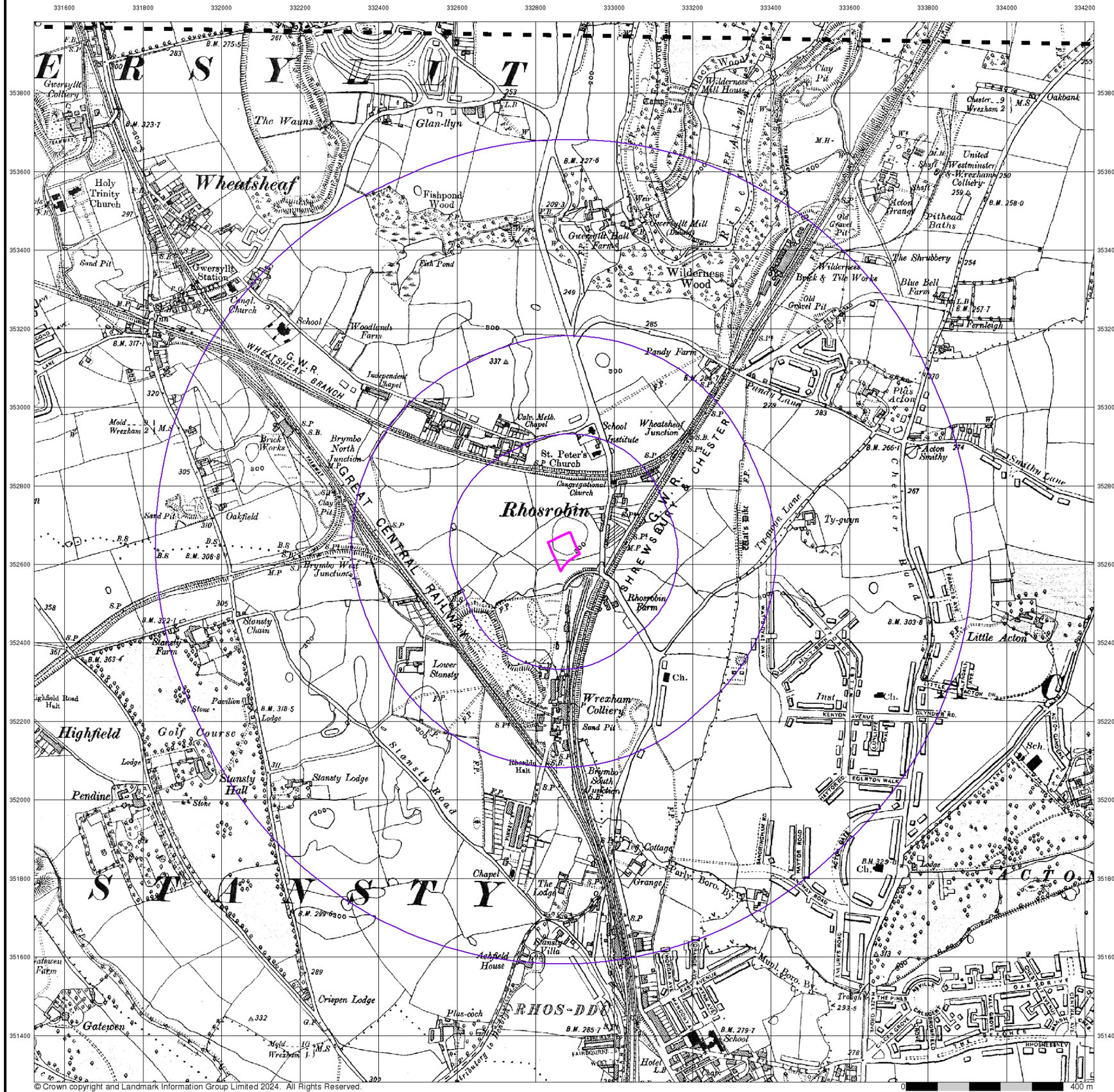
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Site Details

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Denbighshire

Published 1938

Source map scale - 1:10,560

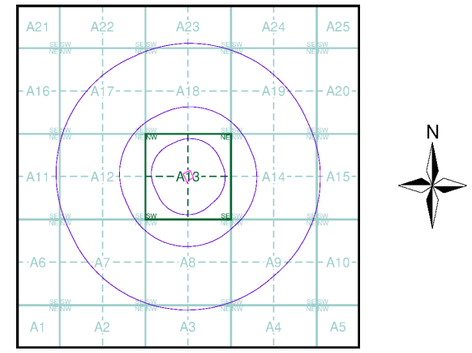
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Map Name(s) and Date(s)

021SE
1938
1:10,560

028NE
1938
1:10,560

Historical Map - Slice A



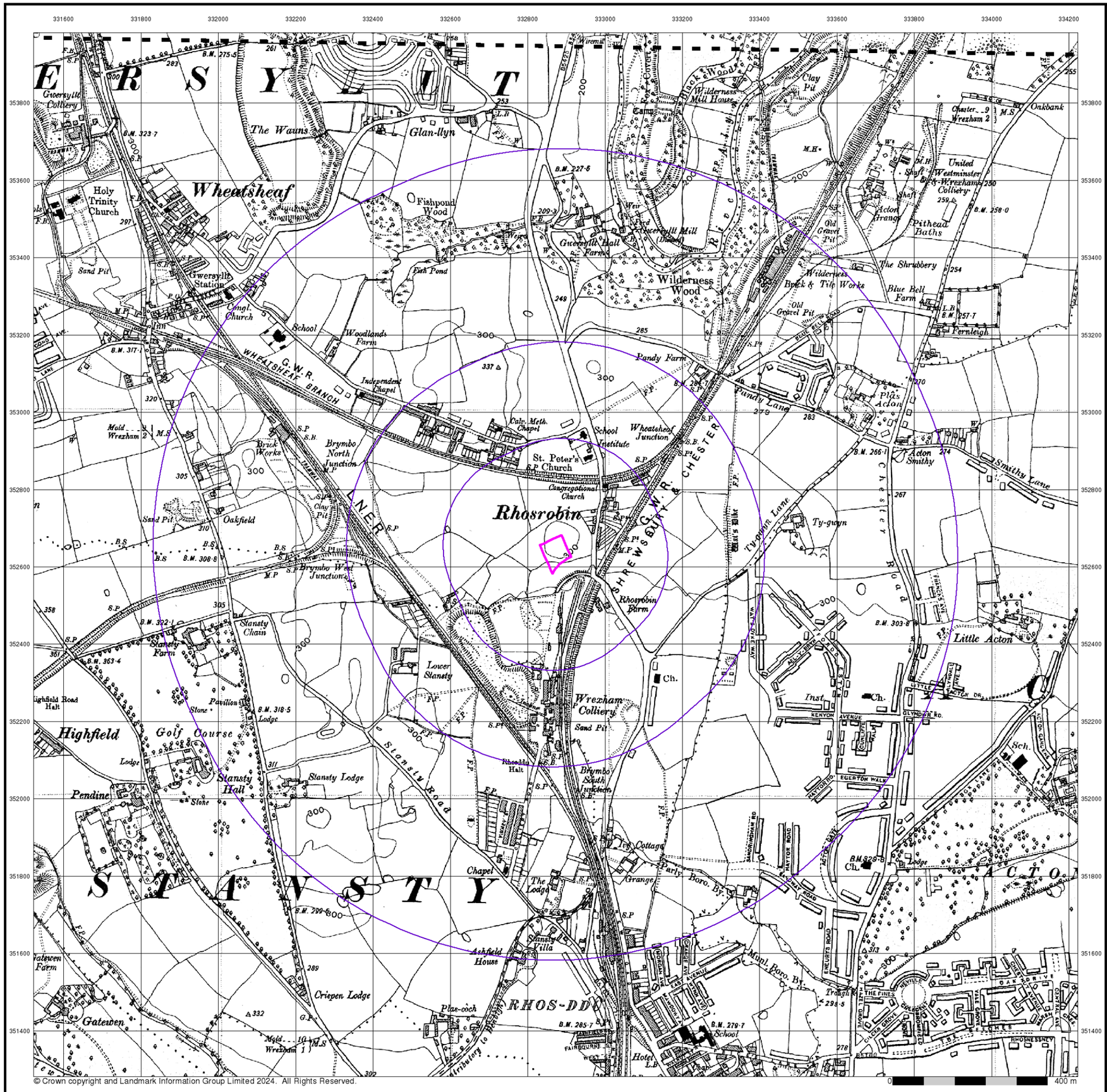
Order Details

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Customer Ref:	C5736
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Slice:	A
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Denbighshire

Published 1938 - 1954

Source map scale - 1:10,560

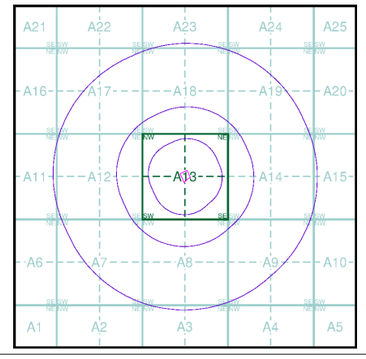
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Map Name(s) and Date(s)

021SE
1954
1:10,560

028NE
1938
1:10,560

Historical Map - Slice A



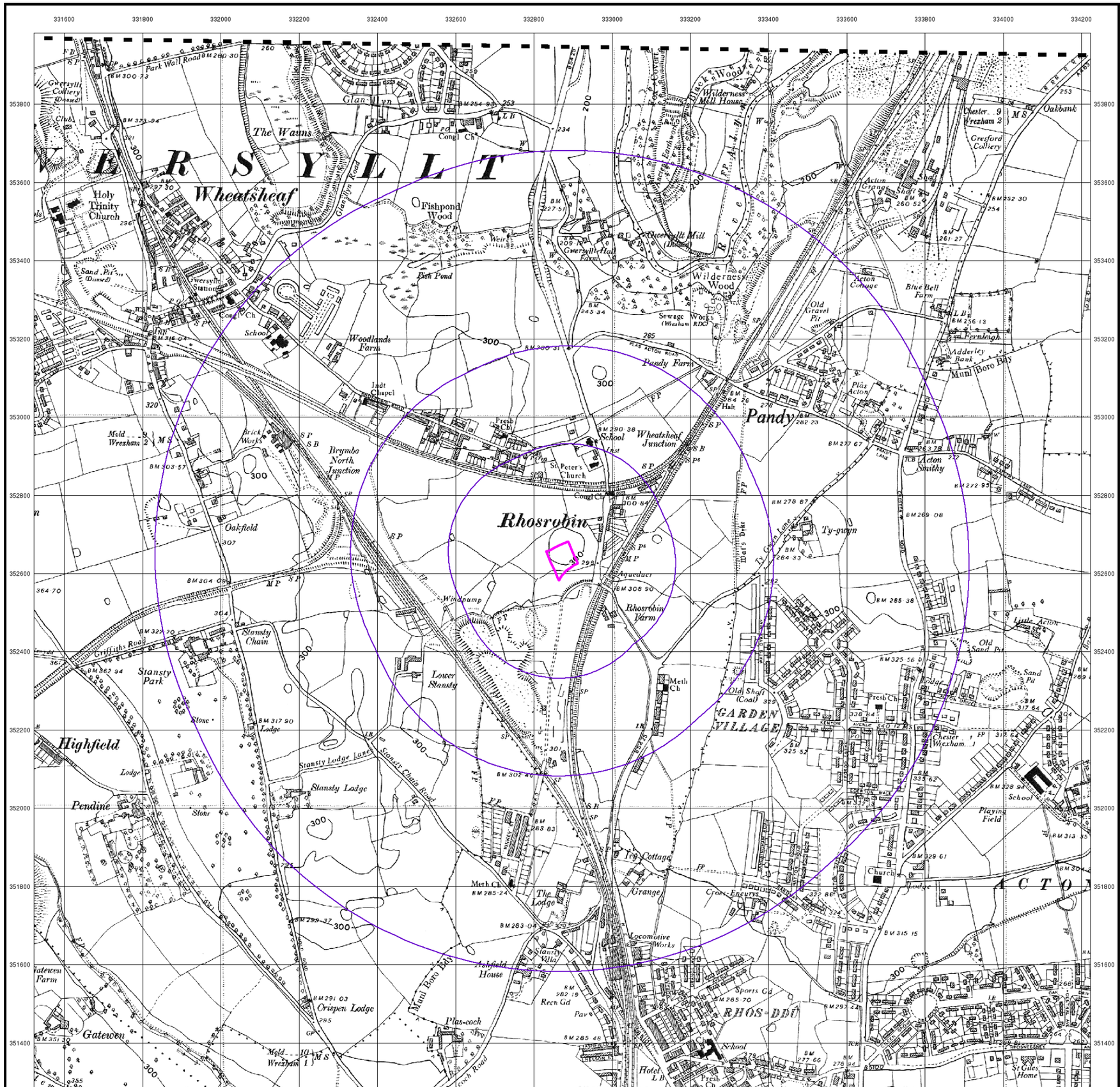
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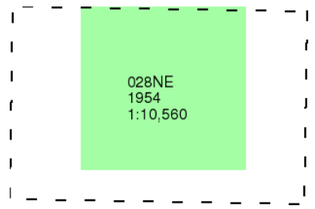
Denbighshire

Published 1954

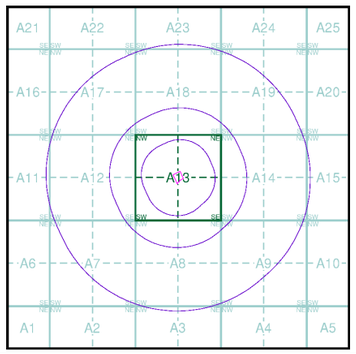
Source map scale - 1:10,560

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



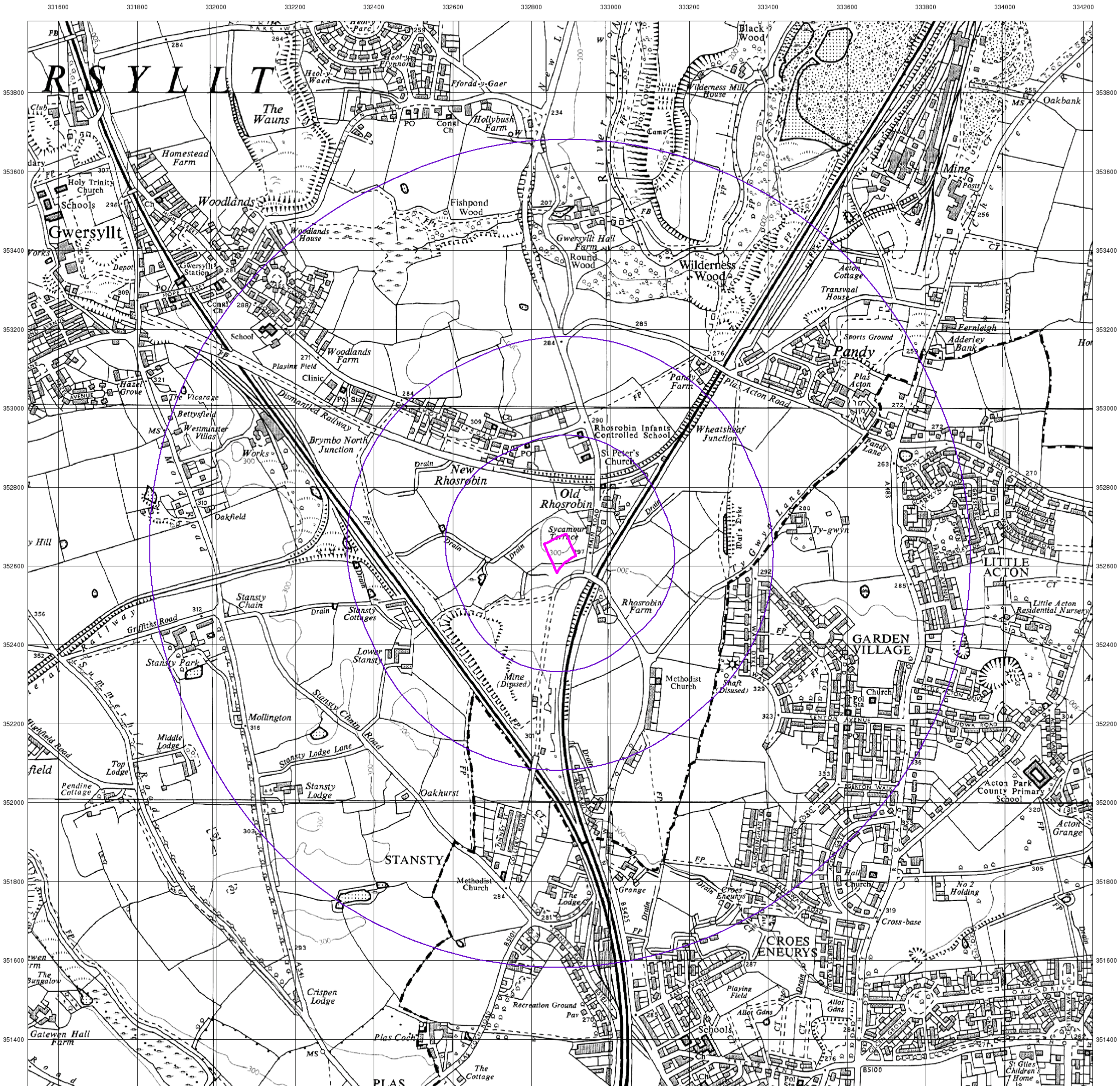
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National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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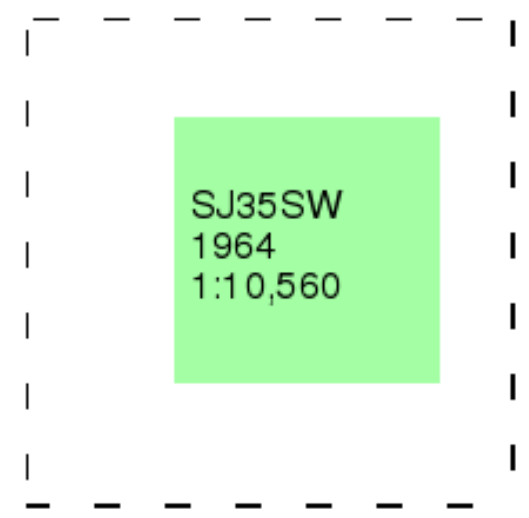
Ordnance Survey Plan

Published 1964

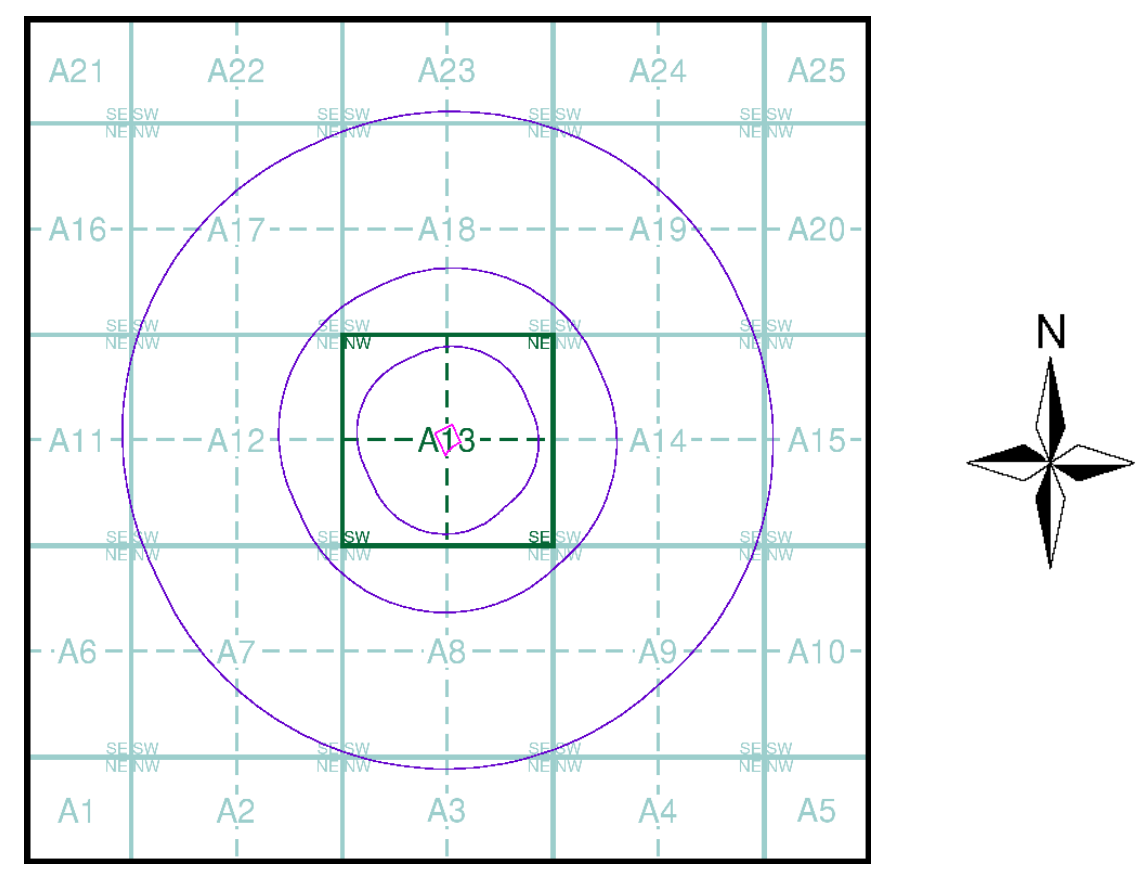
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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

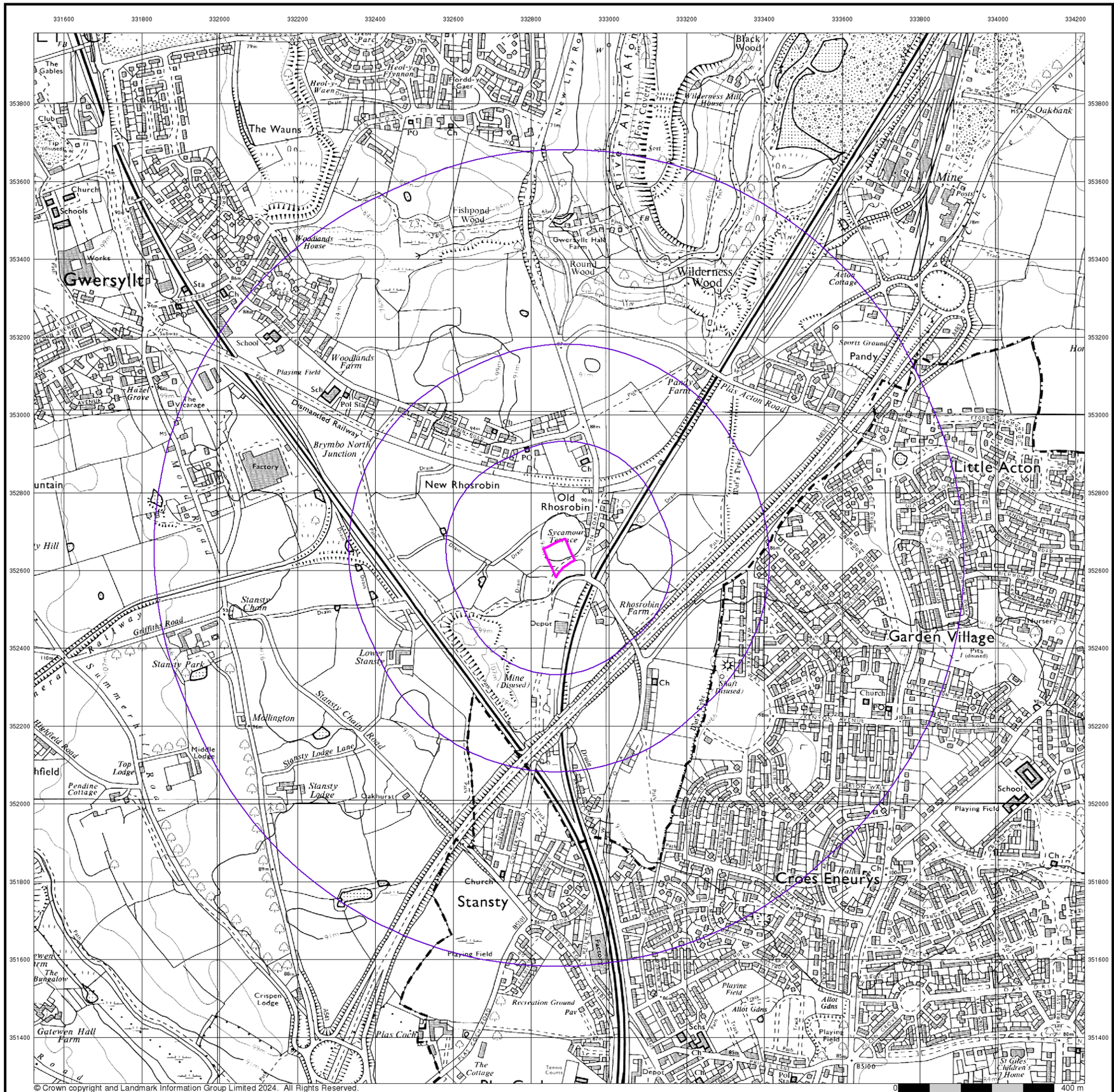
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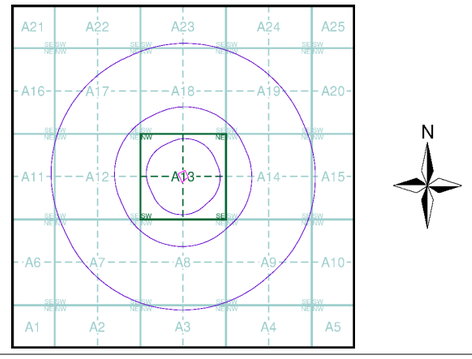
Ordnance Survey Plan
Published 1974
Source map scale - 1:10,000

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)

SJ35SW
1974
1:10,000

Historical Map - Slice A



Order Details

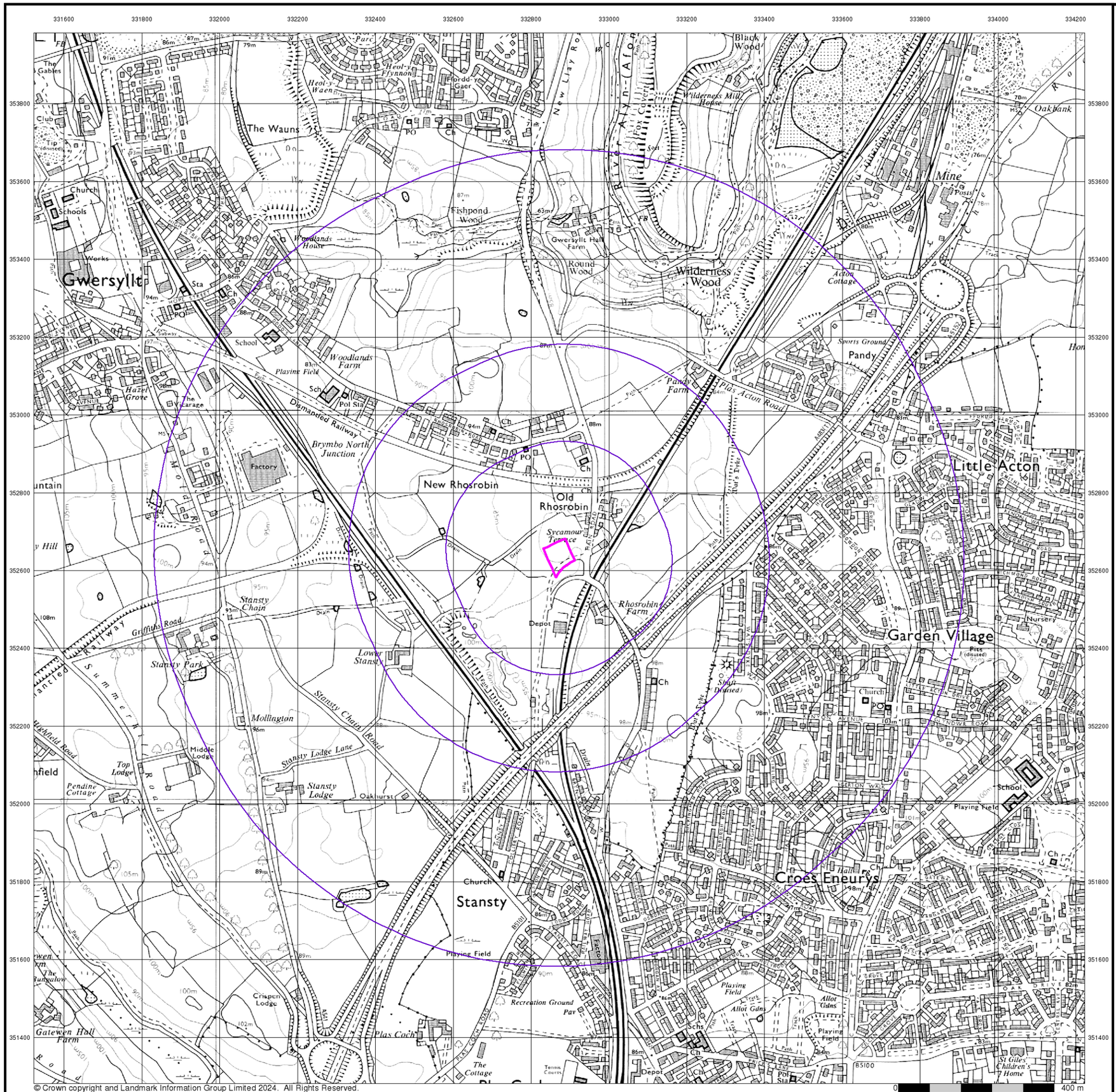
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Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details

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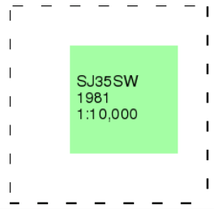


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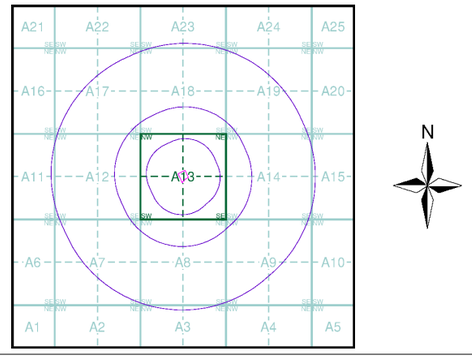
Ordnance Survey Plan
Published 1981
Source map scale - 1:10,000

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:	344266127_1_1
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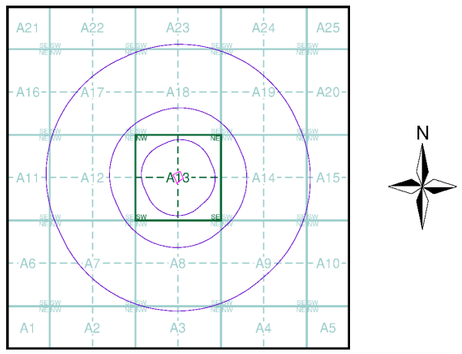
Ordnance Survey Plan
Published 1988
Source map scale - 1:10,000

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)

SJ35SW
1988
1:10,000

Historical Map - Slice A



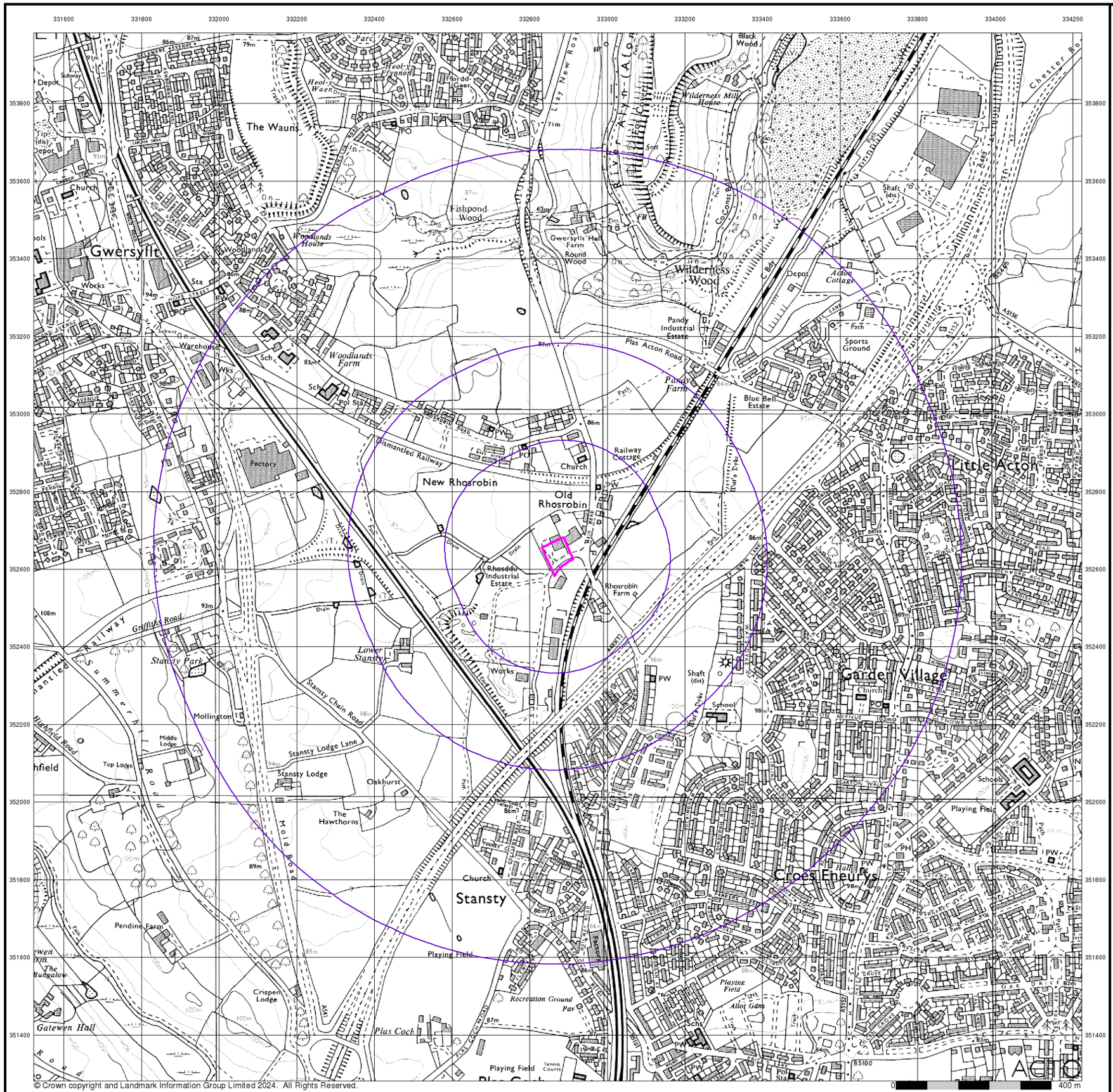
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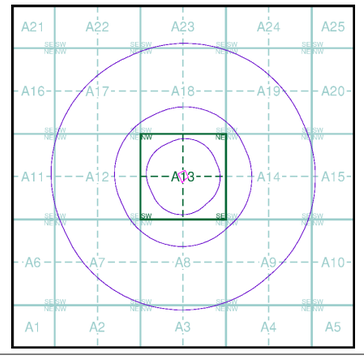
Ordnance Survey Plan
Published 1990
Source map scale - 1:10,000

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)

SJ35SW
1990
1:10,000

Historical Map - Slice A



Order Details

Order Number:	344266127_1_1
Customer Ref:	C5736
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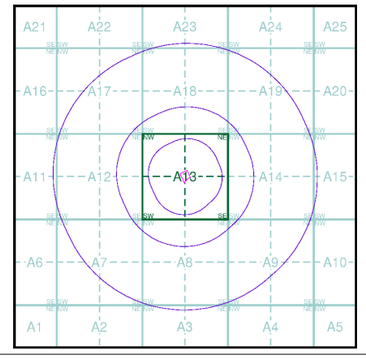
Ordnance Survey Plan
Published 1992
Source map scale - 1:10,000

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)

SJ35SW
1992
1:10,000

Historical Map - Slice A



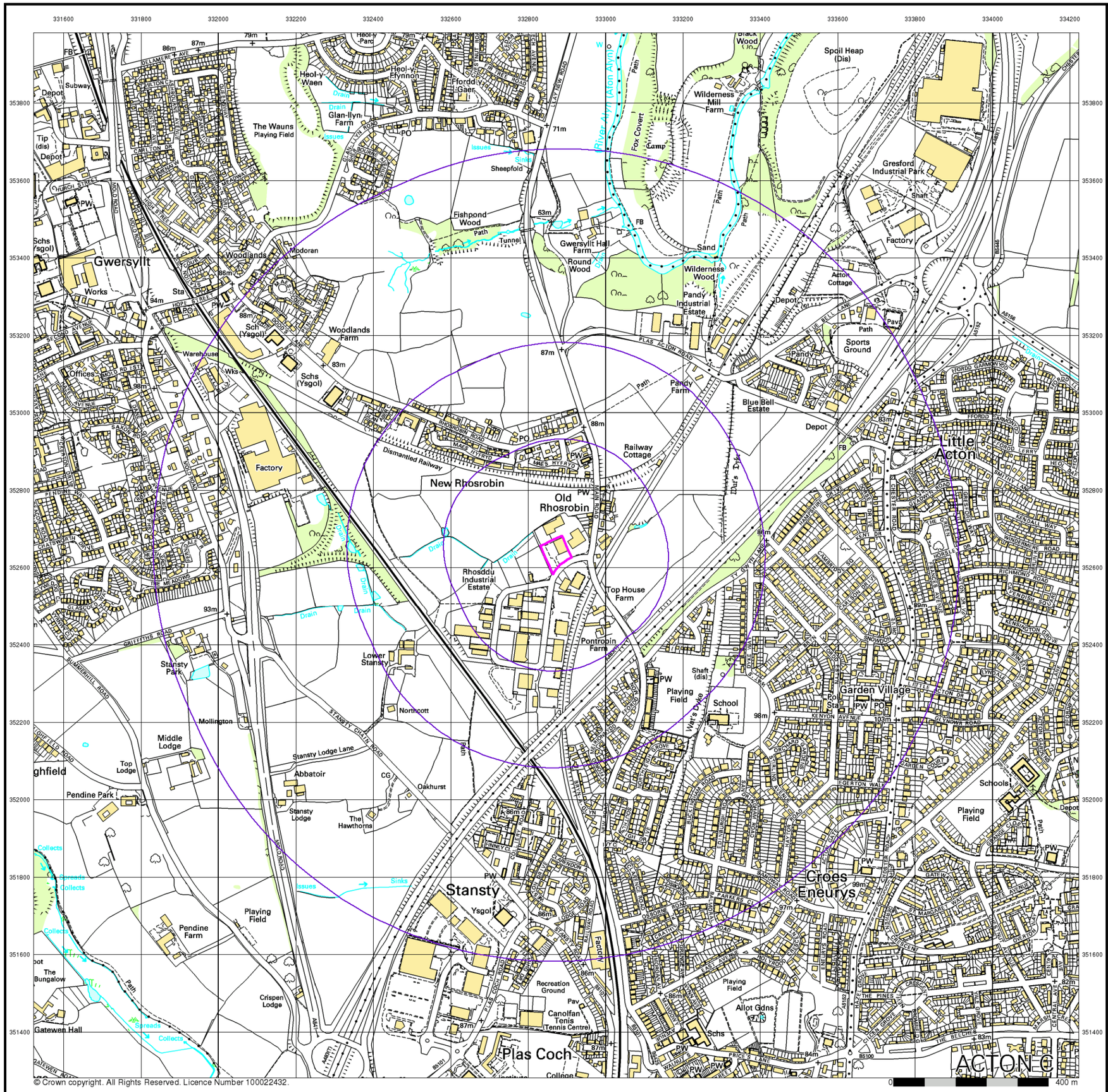
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Site Details

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10k Raster Mapping

Published 2000

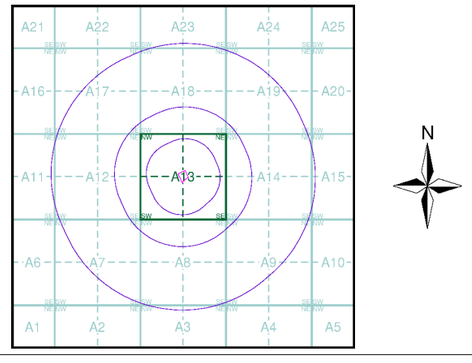
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

SJ35SW
2000
1:10,000

Historical Map - Slice A



Order Details

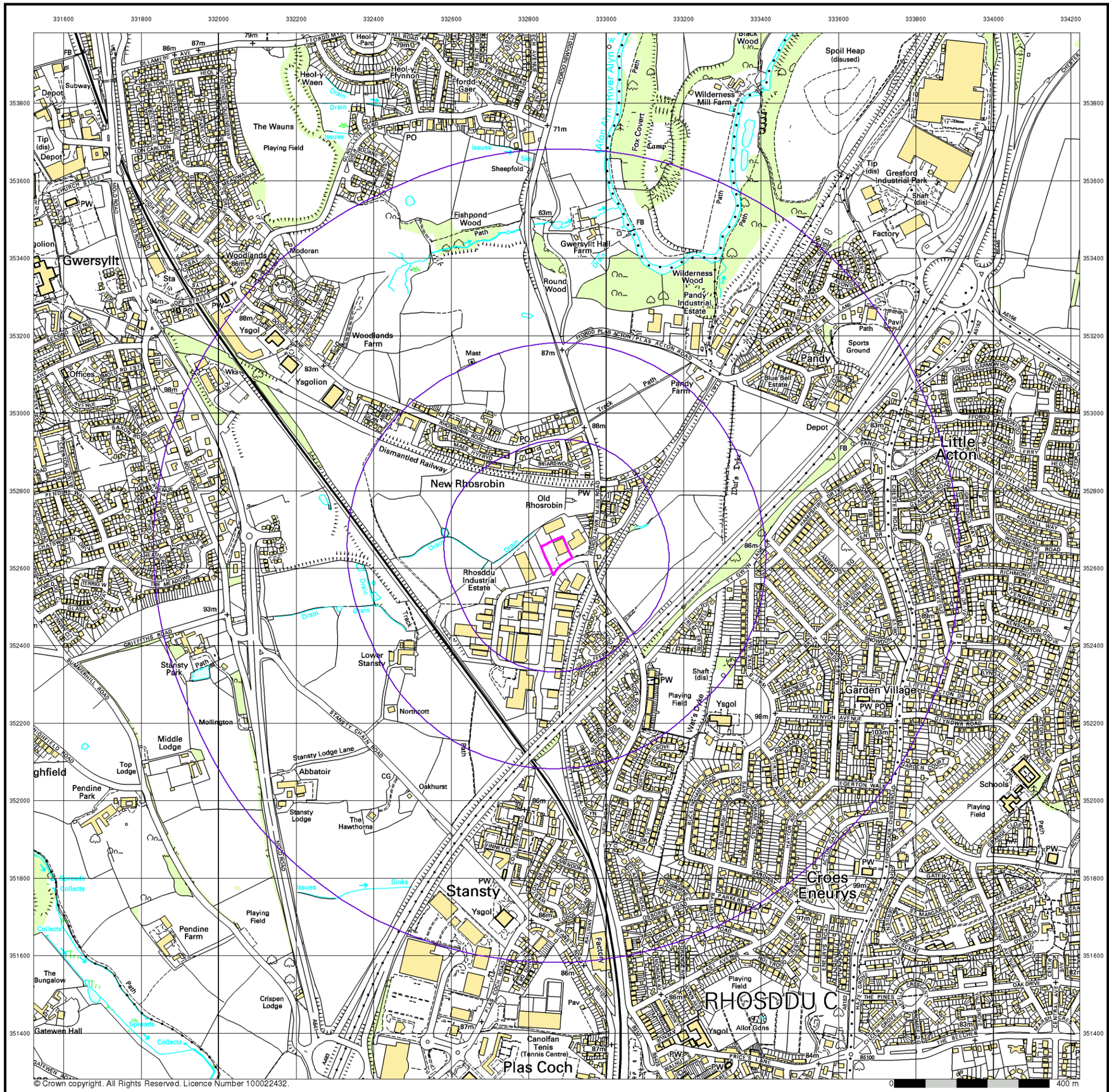
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Site Details

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10k Raster Mapping

Published 2006

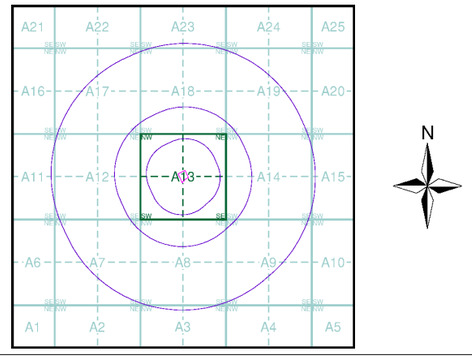
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Map Name(s) and Date(s)

SJ35SW
2006
1:10,000

Historical Map - Slice A



Order Details

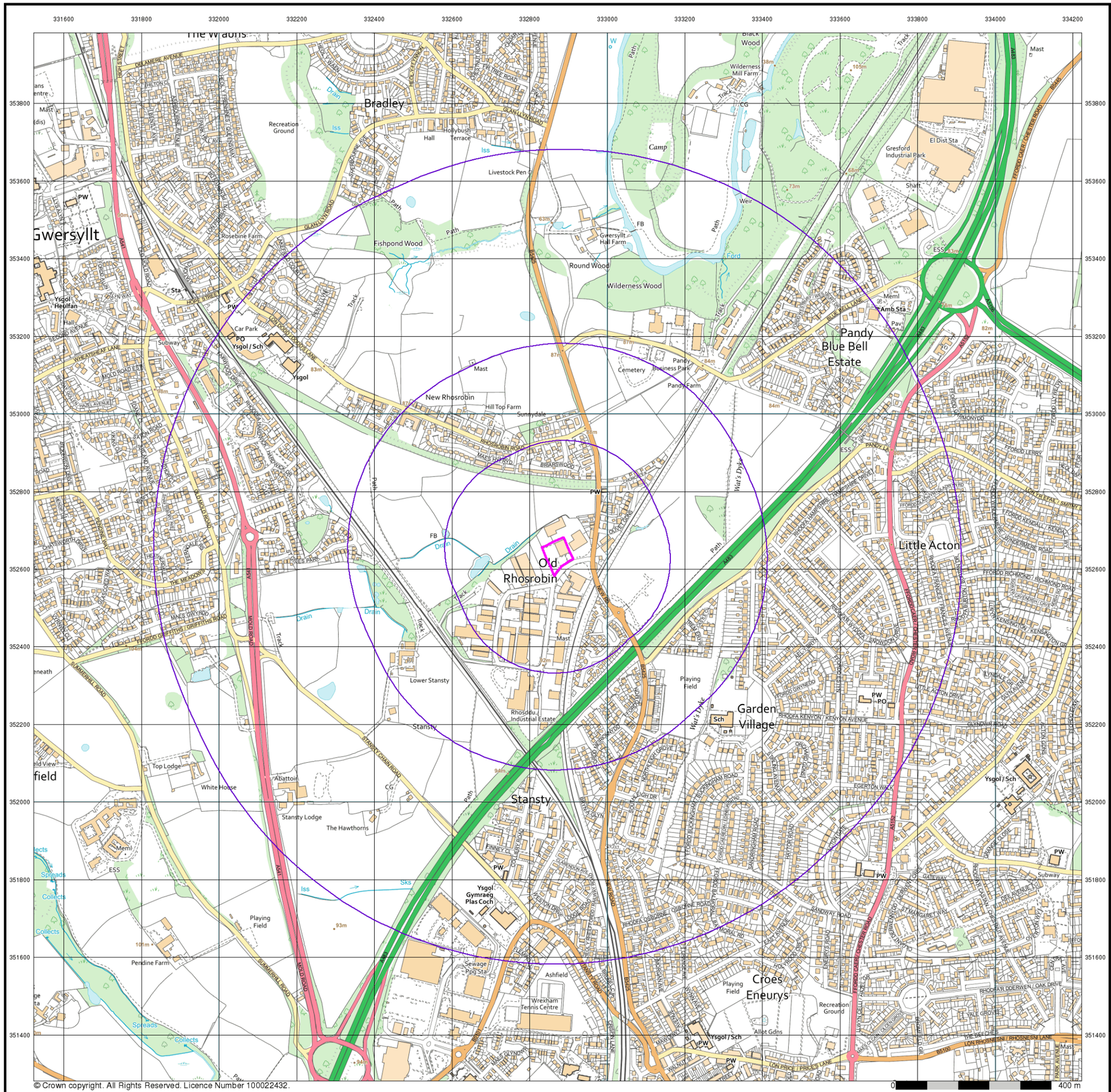
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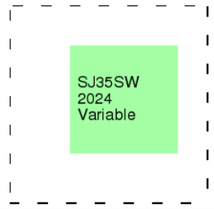
VectorMap Local

Published 2024

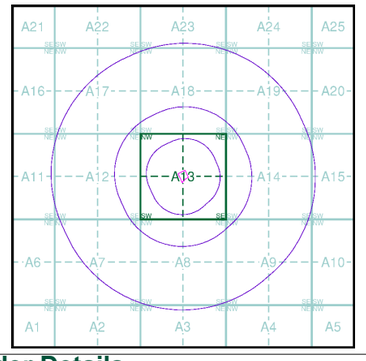
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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APPENDIX C

Geo-Environmental Data Report

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
344266127_1_1

Customer Reference:
C5736

National Grid Reference:
332870, 352630

Slice:
A

Site Area (Ha):
0.42

Search Buffer (m):
1000

Site Details:

Rollings, Rhosddu Industrial Estate
Old Rhosrobin
Rhosrobin
WREXHAM
LL11 4YL

Client Details:

Ms S Dixon
Brownfield Solutions Ltd
William Smith House
173-183 Witton Street
Northwich
Cheshire
CW9 5LP

BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

Contents

Report Section	Page Number
Summary	-
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Data Suppliers	46
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Introduction

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

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Report Version v53.0

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 2				19
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 6		2	1	3
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 7		Yes		
Pollution Incidents to Controlled Waters	pg 7		1		10
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 9				1
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 9				1
Water Abstractions	pg 9				(*9)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 12	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 12	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 12	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 12		7	6	28

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 17		1		
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 17		2		
Local Authority Landfill Coverage	pg 17	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 17		1		
Potentially Infilled Land (Non-Water)	pg 17		1	2	5
Potentially Infilled Land (Water)	pg 18		2	4	22
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites	pg 20		1	1	
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)	pg 21			1	
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)	pg 21			1	
Planning Hazardous Substance Consents	pg 21		1		
Planning Hazardous Substance Enforcements					

BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 22	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 22	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 22			1	3
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 23	Yes	n/a	n/a	n/a
Mining Instability	pg 23	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 23		Yes	n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 23	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 23	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 23	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 23	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 23		Yes	n/a	n/a
Radon Potential - Radon Affected Areas	pg 24	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures	pg 24	Yes	n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 25		38	16	35
Fuel Station Entries	pg 33				2
Points of Interest - Commercial Services	pg 33		11	6	12
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 35		1	5	9
Points of Interest - Public Infrastructure	pg 37		1	1	8
Points of Interest - Recreational and Environmental	pg 37			1	7
Gas Pipelines					
Underground Electrical Cables					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 39				7
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: Limited Potential for Groundwater Flooding to Occur	A13NW (W)	0	1	332850 352634
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NE)	0	1	332872 352634
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	32	1	332800 352650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	82	1	332750 352650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	83	1	332750 352634
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	164	1	332700 352550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	167	1	332750 352800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (W)	182	1	332650 352634
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	236	1	332700 352850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (S)	305	1	332750 352300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	338	1	332600 352900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	346	1	332500 352750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (NW)	363	1	332500 352800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	383	1	332850 352200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	388	1	332800 352200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	408	1	332550 352950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	432	1	332400 352634
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (SW)	433	1	332450 352450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	433	1	332850 352150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	433	1	332872 352150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (NW)	446	1	332550 353000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NW (S)	463	1	332700 352150

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	A8NW (S)	483	1	332872 352100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	487	1	332800 352100
1	**Discharge Consents** Operator: Cmb Bottles & Speciality Closures (Uk) Property Type: Undefined Or Other Location: Gwersyllt Mold Rd. Factory Of Metal, Mold Rd. Factory Of Metalbox Com, Factory Of Metalbox Company Lt Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0053401 Permit Version: 1 Effective Date: 19th December 1968 Issued Date: 19th December 1968 Revocation Date: 22nd December 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Trib. Of Alyn **Status:** **Consent expired** Positional Accuracy: Located by supplier to within 10m	A12NE (W)	518	2	332320 352730
2	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Undefined Or Other Location: Wilderness Stw Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0005801 Permit Version: 1 Effective Date: 14th February 1958 Issued Date: 14th February 1958 Revocation Date: 28th March 1995 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Alyn **Status:** **Consent expired** Positional Accuracy: Located by supplier to within 100m	A18SE (N)	654	2	333100 353300
3	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Station - Water Company Location: Pandy Pumping Station, Pandy Industrial Estate, Pandy, Wrexham, Ll11 2ud Authority: Natural Resources Wales Catchment Area: River Dee Reference: CM0176801 Permit Version: 1 Effective Date: 19th October 1989 Issued Date: 19th October 1989 Revocation Date: 30th March 2005 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Alyn **Status:** **New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	663	2	333300 353200
4	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Gwersyllt Glan Llyn (Fishpond) Cso, Woodlands Farm, Dodds Lane, Gwersyllt, Wrexham, Ll11 4ns Authority: Natural Resources Wales Catchment Area: River Dee Reference: CM0175301 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 30th March 2005 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Alyn **Status:** **New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A17SE (NW)	776	2	332400 353300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Gwersyllt Glan Llyn (Fishpond) Cso, R/O Pen Y Llyn, Gwersyllt, Wrexham, LI11 4pe Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cm0175301 Permit Version: Not Supplied Effective Date: 11th October 2019 Issued Date: 11th October 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Gwersyllt Fishpond (Tributary Of The Afon Alyn) **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A17NE (NW)	811	2	332465 353378
5	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Gwersyllt Glan Llyn (Fishpond) Cso, Woodlands Farm, Dodds Lane, Gwersyllt, Wrexham, LI11 4ns Authority: Natural Resources Wales Catchment Area: ALYN - HOPE TO DEE Reference: Cm0175301 Permit Version: 2 Effective Date: 31st March 2005 Issued Date: 25th November 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Gwersyllt Fishpond **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A17NE (NW)	811	2	332465 353378
5	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Gwersyllt Glan Llyn (Fishpond) Cso, Woodlands Farm, Dodds Lane, Gwersyllt, Wrexham, LI11 4ns Authority: Natural Resources Wales Catchment Area: ALYN - HOPE TO DEE Reference: Cm0175301 Permit Version: 2 Effective Date: 31st March 2005 Issued Date: 25th November 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Gwersyllt Fishpond **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A17NE (NW)	811	2	332465 353378
6	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Pandy Sps, Wrexham, Pandy Ind Est, Plas Acton Road, Pandy, Wrexham, LI11 2ud Authority: Natural Resources Wales Catchment Area: ALYN - HOPE TO DEE Reference: Cm0176801 Permit Version: 3 Effective Date: 6th February 2020 Issued Date: 6th February 2020 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Alyn **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	815	2	333286 353392

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Pandy Sps, Wrexham, Pandy Ind Est, Plas Acton Road, Pandy, Wrexham, Ll11 2ud Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cm0176801 Permit Version: Not Supplied Effective Date: 6th February 2020 Issued Date: 6th February 2020 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Alyn **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	815	2	333286 353392
6	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Pandy Pumping Station, Pandy Industrial Estate, Pandy, Wrexham, Ll11 2ud Authority: Natural Resources Wales Catchment Area: ALYN - HOPE TO DEE Reference: Cm0176801 Permit Version: 2 Effective Date: 31st March 2005 Issued Date: 25th November 2004 Revocation Date: Not Supplied Discharge Type: Miscellaneous Discharges - Emergency Discharges Discharge Environment: Freshwater Stream/River Receiving Water: River Alyn **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	815	2	333286 353392
6	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Pandy Pumping Station, Pandy Industrial Estate, Pandy, Wrexham, Ll11 2ud Authority: Natural Resources Wales Catchment Area: ALYN - HOPE TO DEE Reference: Cm0176801 Permit Version: 2 Effective Date: 31st March 2005 Issued Date: 25th November 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Alyn **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	815	2	333286 353392
6	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Pandy Pumping Station, Pandy Industrial Estate, Pandy, Wrexham, Ll11 2ud Authority: Natural Resources Wales Catchment Area: ALYN - HOPE TO DEE Reference: Cm0176801 Permit Version: 2 Effective Date: 31st March 2005 Issued Date: 25th November 2004 Revocation Date: Not Supplied Discharge Type: Miscellaneous Discharges - Emergency Discharges Discharge Environment: Freshwater Stream/River Receiving Water: River Alyn **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	815	2	333286 353392

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Pandy Pumping Station, Pandy Industrial Estate, Pandy, Wrexham, Ll11 2ud Authority: Natural Resources Wales Catchment Area: ALYN - HOPE TO DEE Reference: Cm0176801 Permit Version: 2 Effective Date: 31st March 2005 Issued Date: 25th November 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Alyn **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	815	2	333286 353392
7	**Discharge Consents** Operator: Stephen Day Property Type: Domestic Property (Single) Location: Gwersyllt Hall Lodge, Llay New Road, Bradley, Wrexham, Clwyd, Ll11 4bg Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Wqd003972 Permit Version: Not Supplied Effective Date: 10th October 2008 Issued Date: 10th October 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Un-Named Trib Of River Alyn **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A18NE (N)	842	2	333042 353509
7	**Discharge Consents** Operator: Mr Stephen Day Property Type: Domestic Property (Single) Location: Gwersyllt Hall Lodge, Llay New Road, Bradley, Wrexham, Clwyd, Ll11 4bg Authority: Natural Resources Wales Catchment Area: River Dee Reference: Npswqd003972 Permit Version: 1 Effective Date: 10th October 2008 Issued Date: 10th October 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Un-Named Trib Of River Alyn **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	A18NE (N)	842	2	333042 353509
8	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Acton Ps, Ll12 8aq Authority: Natural Resources Wales Catchment Area: ALYN - HOPE TO DEE Reference: Cm0194001 Permit Version: 2 Effective Date: 8th September 2010 Issued Date: 8th September 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Pond Adj **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A14NE (E)	929	2	333800 352900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Acton Ps, LI12 8aq Authority: Natural Resources Wales Catchment Area: ALYN - HOPE TO DEE Reference: Cm0194001 Permit Version: 2 Effective Date: 8th September 2010 Issued Date: 8th September 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Pond Adj **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A14NE (E)	929	2	333800 352900
8	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Station - Water Company Location: Acton Ps, LI12 8aq Authority: Natural Resources Wales Catchment Area: River Dee Reference: CM0194001 Permit Version: 1 Effective Date: 19th October 1989 Issued Date: 19th October 1989 Revocation Date: 7th September 2010 Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Pond Adj **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A14NE (E)	929	2	333800 352900
8	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Wrexham Acton Sps, Opp 3 Smithy Close, Willow View, Wrexham, LI12 8dy Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cm0194001 Permit Version: Not Supplied Effective Date: 17th December 2019 Issued Date: 17th December 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Pond Adj **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A14NE (E)	931	2	333802 352900
9	**Local Authority Pollution Prevention and Controls** Name: Cemex Location: Rhosddu Industrial Estate, WREXHAM, Clwyd, LL11 4YL Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WCBC/PG3/1/CEM-V5 Dated: 27th March 1996 Process Type: Local Authority Air Pollution Control Description: Part B - General Mineral Process (No Specific Reference) **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A13SW (SW)	172	3	332729 352478
9	**Local Authority Pollution Prevention and Controls** Name: Tudor Griffiths Group Location: Rhosddu Industrial Estate, Wrexham, LI11 4yl Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WCBC/PG3/1/CEM-V5 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A13SW (SW)	193	3	332698 352486

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	**Local Authority Pollution Prevention and Controls** Name: Dane Motor Company (Wrexham) Ltd Location: Rhosddu Industrial Estate, WREXHAM, Clwyd, LL11 4YL Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WMBC/HJB/03/039 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles **Status: Not Supplied** Positional Accuracy: Automatically positioned to the address	A13SW (S)	287	3	332793 352305
11	**Local Authority Pollution Prevention and Controls** Name: Remploy Limited Location: Station Road, Railway Road, WREXHAM, Clwyd, LL11 2DN Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WCBC/PG6/2/REM/V2 Dated: 6th November 1992 Process Type: Local Authority Air Pollution Control Description: PG6/2 Manufacture of timber and wood-based products **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A8SE (S)	938	3	332980 351652
11	**Local Authority Pollution Prevention and Controls** Name: Remploy Limited Location: Station Road, Railway Road, WREXHAM, Clwyd, LL11 2DN Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: NOT GIVEN Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/33 Wood coating **Status: Not Supplied** Positional Accuracy: Automatically positioned to the address	A8SE (S)	938	3	332981 351652
12	**Local Authority Pollution Prevention and Controls** Name: British Fuels Ltd Location: Bluebell Lane, Pandy, WREXHAM, Clwyd, LL12 8EE Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: Not Given Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG3/5 Coal, coke and coal product processes **Status: Authorisation revoked** Positional Accuracy: Manually positioned to the road within the address or location	A19SE (NE)	950	3	333626 353278
	Nearest Surface Water Feature	A13NW (NW)	42	-	332814 352694
13	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Currans By Cafe On, Rhosddu Industrial Estate Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: River Alyn Incident Date: 5th August 1997 Incident Reference: 33429 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	A13NE (E)	45	4	332950 352650
14	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewerage Location: Gwersyllt Hall Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 29th August 1995 Incident Reference: 25921 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	A18NW (N)	724	4	332800 353400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	**Pollution Incidents to Controlled Waters** Property Type: Private Sewage (Non-PLC): Other Location: Stansty, CROSSROADS Authority: Environment Agency, Welsh Region Pollutant: Sewage - Treated Effluent Note: Inadequate Design/Capacity Incident Date: 13th April 1992 Incident Reference: 4170 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	767	4	332200 352200
16	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Fishpond Wood, GWERSYLLT Authority: Environment Agency, Welsh Region Pollutant: Sewage - Treated Effluent Note: Not Supplied Incident Date: 6th November 1996 Incident Reference: 30450 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	A17NE (NW)	796	4	332410 353330
17	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Other Location: Pont Y, Capel/Pandy Pumping Station Authority: Environment Agency, Welsh Region Pollutant: Chlorinated Water Note: Blocked Sewer Incident Date: 18th July 1994 Incident Reference: 20713 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	A19NW (NE)	829	4	333300 353400
17	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Other Location: Pontycapel Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 11th August 1991 Incident Reference: 20729 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	A19NW (NE)	855	4	333350 353400
18	**Pollution Incidents to Controlled Waters** Property Type: Council Premises Location: Gresford Down Stream Of, Pandy Pumping Station Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blocked Sewer Incident Date: 10th October 1994 Incident Reference: 21397 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	A19NW (NE)	920	4	333400 353445
18	**Pollution Incidents to Controlled Waters** Property Type: Council Premises Location: Gresford Down Stream Of, Pandy Pumping Station Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blocked Sewer Incident Date: 10th October 1994 Incident Reference: 21397 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	A19NW (NE)	924	4	333400 353450

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	**Pollution Incidents to Controlled Waters** Property Type: Council Premises Location: Pandy Pumping Station, PANDY Authority: Environment Agency, Welsh Region Pollutant: Oils - Petrol Note: Blocked Sewer Incident Date: 27th October 1995 Incident Reference: 26446 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	A19NW (NE)	953	4	333450 353450
19	**Pollution Incidents to Controlled Waters** Property Type: Council Premises Location: Pandy Pumping Station, PANDY Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Mechanical Failure Incident Date: 17th August 1994 Incident Reference: 21004 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	A19NW (NE)	949	4	333450 353445
19	**Pollution Incidents to Controlled Waters** Property Type: Council Premises Location: Pandy Pumping Station, PANDY Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Vandalism Incident Date: 17th August 1994 Incident Reference: 21005 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	A19NW (NE)	952	4	333455 353445
	River Quality Name: Alyn GQA Grade: River Quality B Reach: Gresford - Conf. Cegidog Estimated Distance (km): 6.2 Flow Rate: Flow less than 5 cumecs Flow Type: River Year: 2000	A18NE (N)	719	4	333095 353370
20	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 29th September 2010 Incident Reference: 826734 Water Impact: Category 3 - Minor Incident Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Crude Sewage	A17NE (NW)	930	2	332500 353526
	Water Abstractions Operator: Carlsberg Tetley Brewing Ltd. Licence Number: 24/67/7/0012 Permit Version: 100 Location: Well No.1 Authority: Environment Agency, Welsh Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Well No.2 Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th February 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1822	4	332600 350780

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Mr & Mrs K.E Jones Licence Number: 24/67/8/0017 Permit Version: 100 Location: Well 2 Authority: Environment Agency, Welsh Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Well 1 Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1995 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(E)	1857	4	334640 353305
	Water Abstractions Operator: Mr & Mrs K.E Jones Licence Number: 24/67/8/0017 Permit Version: 100 Location: Well 1 Authority: Environment Agency, Welsh Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Well 2 Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1995 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NE)	1884	4	334620 353421
	Water Abstractions Operator: Carlsberg Tetley Brewing Ltd. Licence Number: 24/67/7/0012 Permit Version: 100 Location: Well No.3 Authority: Environment Agency, Welsh Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Well No.1 Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th February 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1892	4	332630 350705
	Water Abstractions Operator: Carlsberg Tetley Brewing Ltd. Licence Number: 24/67/7/0012 Permit Version: 100 Location: Well No.2 Authority: Environment Agency, Welsh Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Well No.3 Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th February 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1919	4	332610 350681

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Carlsberg Tetley Brewing Ltd. Licence Number: 24/67/7/0194 Permit Version: 100 Location: Borehole Authority: Environment Agency, Welsh Region Abstraction: Breweries/Wine: Process Water 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: 11th February 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1996	4	332600 350604
	Water Abstractions Operator: Carlsberg Tetley Brewing Ltd. Licence Number: 24/67/7/0194 Permit Version: 100 Location: Borehole Authority: Environment Agency, Welsh Region Abstraction: Breweries/Wine: Process Water 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: 11th February 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1997	4	332600 350603
	Water Abstractions Operator: Carlsberg Tetley Brewing Ltd. Licence Number: 24/67/7/0194 Permit Version: 100 Location: Borehole Authority: Environment Agency, Welsh Region Abstraction: Breweries/Wine: Process Water 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: 11th February 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1998	4	332600 350602
	Water Abstractions Operator: Carlsberg Tetley Brewing Ltd. Licence Number: 24/67/7/0194 Permit Version: 100 Location: Borehole Authority: Environment Agency, Welsh Region Abstraction: Breweries/Wine: Process Water 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: 11th February 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1999	4	332600 350601

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	A13NW (NE)	0	2	332872 352634
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NW (NE)	0	2	332872 352634
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NW (NE)	0	2	332872 352634
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
21	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 137.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NW (NW)	42	5	332814 352694
22	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13SW (W)	140	5	332697 352619
23	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 19.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13SW (W)	144	5	332693 352621
24	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 106.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13SW (W)	159	5	332676 352629
25	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 131.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NW (W)	249	5	332585 352679

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NW (W)	249	5	332585 352679
27	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 12.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NW (W)	250	5	332586 352695
28	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (SW)	408	5	332484 352436
29	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 23.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (SW)	410	5	332478 352445
30	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 95.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (SW)	410	5	332478 352445
31	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 85.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (W)	455	5	332404 352502
32	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 102.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (W)	455	5	332404 352502
33	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 10.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (W)	464	5	332372 352594
34	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 13.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (W)	537	5	332319 352499

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
35	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 162.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (W)	550	5	332305 352499
36	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12NE (W)	550	5	332291 352749
37	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18NE (N)	707	5	332962 353384
38	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18NE (N)	714	5	332967 353391
39	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 25.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18NE (N)	716	5	332968 353392
40	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 364.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Alun Catchment Name: Dee Primacy: 1	A18NE (N)	732	5	333129 353372
41	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 84.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A17NE (NW)	737	5	332489 353307
42	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 125.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19SW (NE)	739	5	333296 353297
43	**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	A17NE (NW)	759	5	332452 353312

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
44	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 300.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18NW (N)	786	5	332638 353426
45	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A17NE (NW)	795	5	332529 353391
46	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 27.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18NE (N)	796	5	332889 353477
47	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 46.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18NE (N)	799	5	332884 353480
48	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 16.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18NW (NW)	802	5	332543 353405
49	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18NW (N)	804	5	332556 353413
50	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 57.5 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18NE (N)	805	5	332907 353486
51	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A17NE (NW)	805	5	332493 353385
52	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A17NE (NW)	808	5	332488 353385

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
53	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A17NE (NW)	826	5	332473 353399
54	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 38.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A17NE (NW)	826	5	332473 353399
55	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 84.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18NE (N)	826	5	332962 353503
56	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 468.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Alun Catchment Name: Dee Primacy: 1	A19NW (NE)	828	5	333289 353406
57	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 151.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Alun Catchment Name: Dee Primacy: 1	A18NE (N)	862	5	333039 353530
58	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 295.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7SE (SW)	886	5	332500 351776
59	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 194.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A23SE (N)	994	5	332887 353675
60	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 33.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A23SE (N)	996	5	332977 353673
61	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 958.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Alun Catchment Name: Dee Primacy: 1	A23SE (N)	999	5	333004 353673

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
62	**Historical Landfill Sites** Licence Holder: D S Holmes Builders Limited Location: Rhosddu Name: Holmes Plant Hire Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14250 First Input Date: 1st January 1990 Last Input Date: 18th February 1991 Specified Waste Type: Deposited Waste included Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6955/0032 BGS Ref: Not Supplied Other Ref: Not Supplied	A13SW (SW)	177	2	332714 352492
63	**Licensed Waste Management Facilities (Locations)** Licence Number: EP3194FT Location: T Milner & Son, Wrexham, Clwyd, Wrexham, LL11 4YL Operator Name: Thomas Milner & Stephen Milner Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Metal Recycling Sites (Mixed) **Licence Status: Revoked** Issued: 31st March 1999 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: 12th May 2015 Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13SW (S)	248	2	332843 352336
63	**Licensed Waste Management Facilities (Locations)** Licence Number: 37161 Location: Rhosddu Ind Est, Rhosddu, Wrexham, LL11 4YL Operator Name: Thomas Milner & Stephen Milner Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Metal Recycling Sites (Mixed) **Licence Status: Revoked** Issued: 31st March 1999 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: 12th May 2015 Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13SW (S)	248	2	332843 352336
	Local Authority Landfill Coverage Name: Wrexham County Borough Council - Has supplied landfill data		0	6	332872 352634
64	**Local Authority Recorded Landfill Sites** Location: Holmes Plant Hire, Rhosddu Industrial Estate, Wrexham Reference: 6955/0032 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	A13SW (SW)	175	6	332712 352498
65	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13SE (SE)	39	-	332911 352565
66	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A8NE (SE)	372	-	333035 352252
67	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A8NE (S)	489	-	332999 352112

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
68	**Potentially Infilled Land (Non-Water)** Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A12NE (W)	552	-	332288 352747
69	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A19SW (NE)	586	-	333279 353117
70	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A19SW (NE)	723	-	333356 353232
71	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A19SW (NE)	831	-	333511 353230
72	**Potentially Infilled Land (Non-Water)** Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A12NW (W)	873	-	331961 352710
73	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A13NE (E)	213	-	333116 352687
74	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A13NE (NE)	230	-	332991 352886
75	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1879	A13SW (SW)	355	-	332561 352400
76	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1879	A12SE (SW)	396	-	332503 352422
77	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A12SE (SW)	404	-	332489 352433
78	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1879	A12SE (W)	473	-	332360 352622
79	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A12SE (W)	506	-	332337 352551
80	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A14NW (E)	536	-	333445 352687
81	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A14NW (E)	613	-	333525 352635
82	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A17SE (NW)	670	-	332324 353092
83	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A17SE (NW)	682	-	332312 353096
84	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A8SW (S)	686	-	332649 351931
85	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A17SE (NW)	709	-	332474 353266
86	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A7NE (SW)	724	-	332270 352169

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
87	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A17SE (NW)	741	-	332313 353184
88	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A17SE (NW)	744	-	332449 353293
89	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A14SE (E)	746	-	333653 352536
90	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A12SW (SW)	750	-	332169 352304
91	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1879	A18NW (N)	816	-	332550 353424
92	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A8SE (S)	819	-	332952 351768
93	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A18NE (N)	823	-	332911 353504
94	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A18NE (N)	829	-	333024 353499
95	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A18NE (N)	831	-	332980 353507
96	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A7SE (SW)	909	-	332427 351786
97	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A12NW (W)	944	-	331889 352690
98	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A7SE (SW)	944	-	332393 351765
99	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A17SW (NW)	977	-	331933 353038
100	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A17NE (NW)	996	-	332362 353534

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
101	**Registered Waste Treatment or Disposal Sites** Licence Holder: A A Butler & Company Licence Reference: L83 Site Location: Rhosddu Industrial Estate, Rhosrobin, WREXHAM, Clwyd, LL11 4YL Operator Location: Seaview Garage, Gronant, Prestatyn, Clwyd 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: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st July 1994 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Batteries Max.Stor. Brake & Clutch Fluid Max.Stor. Coolant Max.Stor. Fuel Oils Max.Stor. Gearboxes/Transmission Units Max.Stor. Internal Combustion Engines Max.Stor. Mineral/Lubricating Oils Max.Stor. Motor Vehicles & Parts Incl. Following Petrol Max.Stor. Tyres Max.Stor. Prohibited Waste: Cadmium Compounds Elemental Sodium/Potassium Liable To Cause Environmental Hazards Liquified Gas / Gas Under Pressure Mercury Compounds Percussive/Explosive/Similar Waste Powder / Powdered Waste Special Wastes Sub'S Control. Radioactive Subs Act'60 Waste In Drums Water Soluble Waste	A13SW (SW)	172	4	332700 352530
102	**Registered Waste Treatment or Disposal Sites** Licence Holder: T J & S C Milner t/a T Milner & Sons Licence Reference: NOW-528-L Site Location: Rhosddu Industrial Estate, Rhosddu, WREXHAM, Clwyd, LL11 2HP Operator Location: Rhosddu Industrial Estate, Rhosrobin, WREXHAM, Clwyd, LL11 4YL 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: Operational as far as is knownOperational Dated: 31st March 1999 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Batteries (& Acid Therein) Engines Ferrous Metals Ferrous Swarf Max.Storage In Licence Max.Waste Permitted By Licence Non-Ferrous Metals Non-Ferrous Swarf Scrap Vehicles Transformers Transmission Units Tyres Prohibited Waste: Liquid Waste N.O.S. Pcbs/Pcts Spec.Waste (Epa'90:S62/1996 Regs)N.O.S Waste N.O.S.	A13SW (S)	283	4	332850 352300

Hazardous Substances

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
103	**Control of Major Accident Hazards Sites (COMAH)** Name: A A Butler & Co Wrexham Ltd Location: Rhosddu Industrial Estate, WREXHAM, Clwyd, LL11 4YL Reference: 4740 Type: Lower Tier **Status: Record Ceased To Be Supplied Under COMAH Regulations** Positional Accuracy: Automatically positioned to the address	A13SW (S)	288	7	332793 352304
104	**Notification of Installations Handling Hazardous Substances (NIHHS)** Name: Aa Butler And Co Location: Rhosddu Industrial Estate, WREXHAM, Clwyd, LL11 4YL **Status: Not Active** Positional Accuracy: Automatically positioned to the address	A13SW (S)	293	7	332793 352299
105	**Planning Hazardous Substance Consents** Name: Aa Butler & Co (Wrexham) Ltd Location: The Calor Shop, Rhosddu Industrial Estate, WREXHAM, Clywd, LL11 4YL Authority: Wrexham County Borough Council, Planning Department Application Ref: 6/0002/0881 Hazardous Substance: Unknown at time of report Maximum Quantity: 60 Application date: 16th November 1992 **Decision: Deemed Consent GrantedGranted** Positional Accuracy: Manually positioned within the geographical locality	A13SW (SW)	100	8	332774 352542

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Warwickshire Group	A13NW (NE)	0	1	332872 352634
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (NE)	0	1	332872 352634
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SW (S)	83	1	332872 352500
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A13SE (E)	261	1	333173 352616
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 200 - 300 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NW (S)	583	1	332872 352000
106	**BGS Recorded Mineral Sites** Site Name: Wrexham Colliery Sand Pit Location: Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 184974 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Sheet Deposits, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A8NE (S)	420	1	333031 352197
107	**BGS Recorded Mineral Sites** Site Name: Wrexham Colliery Location: Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 184973 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Salop Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	509	1	333318 352317

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
108	**BGS Recorded Mineral Sites** Site Name: Wilderness Wood Gravel Pit Location: Gwersyllt, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 184968 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Sheet Deposits, Devensian Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	827	1	333507 353229
109	**BGS Recorded Mineral Sites** Site Name: Wilderness Wood Gravel Pit Location: Gwersyllt, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 184969 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Sheet Deposits, Devensian Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	990	1	333529 353435
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13NW (NE)	0	9	332872 352634
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NW (NE)	0	-	332872 352634
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	19	1	332827 352617
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	332872 352634
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	332872 352634
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	45	1	332825 352705
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	113	1	333001 352555
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	332872 352634
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	332872 352634
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	332872 352634
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	332872 352634
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	12	1	332835 352604

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	111	1	333007 352567
	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	A13NW (W)	0	1	332850 352634
	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	A13NW (NE)	0	1	332872 352634
	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	A13NW (W)	0	1	332850 352634
	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	A13NW (NE)	0	1	332872 352634

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
110	**Contemporary Trade Directory Entries** Name: Wrexham Volkswagen Location: RHOSDDU INDUSTRIAL ESTATE, OLD RHOSROBIN, WREXHAM, LL11 4YL Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	32	-	332929 352667
110	**Contemporary Trade Directory Entries** Name: Volkswagen Van Centre Wrexham Location: Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Car Dealers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A13NE (NE)	32	-	332929 352667
110	**Contemporary Trade Directory Entries** Name: Volkswagon Van Centre Location: Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Commercial Vehicle Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	39	-	332932 352679
110	**Contemporary Trade Directory Entries** Name: Wrexham Vw Location: Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Commercial Vehicle Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	39	-	332932 352679
110	**Contemporary Trade Directory Entries** Name: W G Duckham Location: Main Road,Rhosddu Ind Est,Old Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NE (NE)	84	-	332972 352698
111	**Contemporary Trade Directory Entries** Name: Body Perfect Location: The Grange,Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4YY Classification: Car Body Repairs **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A13SW (SW)	56	-	332796 352600
111	**Contemporary Trade Directory Entries** Name: Popular Trading Location: The Grange,Rhosddu Ind Est, Rhosrobin, Wrexham, Clwyd, LL11 4YY Classification: Sand, Gravel & Other Aggregates **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	56	-	332796 352600
111	**Contemporary Trade Directory Entries** Name: Wrexham Service Centre Location: The Grange,Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4YY Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	56	-	332796 352600
111	**Contemporary Trade Directory Entries** Name: Clwyd Equestrian & Country Ltd Location: Unit 3, Alyn Court, Rhosddu Industrial Estate, Wrexham, LL11 4YL Classification: Pet Foods & Animal Feeds **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (W)	81	-	332771 352594
111	**Contemporary Trade Directory Entries** Name: The Handle Studio Ltd Location: UNIT 4, ALYN COURT, RHOSDDU INDUSTRIAL ESTATE, OLD RHOSROBIN, WREXHAM, LL11 4YL Classification: Hardware **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SW (W)	81	-	332771 352594
112	**Contemporary Trade Directory Entries** Name: Henlys (Wrexham) Ltd Location: Rhosddu Ind Est,Main Rd, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SE (SE)	60	-	332927 352565

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
112	**Contemporary Trade Directory Entries** Name: Body Perfect Location: Unit 2, The Sidings, Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4RE Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	65	-	332901 352529
113	**Contemporary Trade Directory Entries** Name: 1 2 1 Auto Tint Location: Hillrise, Main Road, Old Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4RL Classification: Window Tinting **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	72	-	332984 352630
113	**Contemporary Trade Directory Entries** Name: Tyrewise Location: Main Road, Old Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4RL Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	96	-	332993 352678
114	**Contemporary Trade Directory Entries** Name: Bodyperfect Accident Repair Centre Location: Unit 5, The Sidings, Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4RE Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	90	-	332893 352497
115	**Contemporary Trade Directory Entries** Name: Road Transport Services Ltd Location: Rhosddu Indust Est, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13SW (SW)	96	-	332761 352580
115	**Contemporary Trade Directory Entries** Name: Wiseman Transport Services Location: Rhosddu Indust Est,Main Rd, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13SW (SW)	100	-	332757 352580
115	**Contemporary Trade Directory Entries** Name: D & G Auto Services Location: Unit D, Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Mot Testing Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	130	-	332756 352511
115	**Contemporary Trade Directory Entries** Name: Arrow Environmental Services Ltd Location: Rhosddu Industrial Estate, Rhosrobin, WREXHAM, Clwyd, LL11 4YL Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	136	-	332735 352541
115	**Contemporary Trade Directory Entries** Name: Matthews Control Solutions Ltd Location: Heritage House, Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Electrical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	141	-	332744 352509
115	**Contemporary Trade Directory Entries** Name: Xcel Cleaning Services Location: Heritage House, Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	141	-	332744 352509
115	**Contemporary Trade Directory Entries** Name: Cemex Wrexham Plant Location: Concrete Batching Plant, RMC Wales Ltd, Rhosddu Industrial Estate, Wrexham, LL11 4YL Classification: Sand, Gravel & Other Aggregates **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	148	-	332746 352495

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
115	**Contemporary Trade Directory Entries** Name: Cash 4 Clothes Ltd Location: Meadows View, Rhosddu Industrial Estate, Wrexham, LL11 4YL Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	154	-	332710 352552
116	**Contemporary Trade Directory Entries** Name: G F S Blinds Location: Unit 12a & B Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13SW (SW)	102	-	332810 352497
116	**Contemporary Trade Directory Entries** Name: Tudor Griffiths Group Location: Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Concrete & Mortar Ready Mixed **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A13SW (SW)	104	-	332806 352497
116	**Contemporary Trade Directory Entries** Name: Major Tyres Location: Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Tyre Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	110	-	332780 352514
116	**Contemporary Trade Directory Entries** Name: Westminster Plastic Fabrication Location: Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Plastic Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	110	-	332780 352514
116	**Contemporary Trade Directory Entries** Name: Ready Mixed Concrete (Wales) Ltd Location: Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Concrete & Mortar Ready Mixed **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	134	-	332777 352482
117	**Contemporary Trade Directory Entries** Name: Tyrewise Ltd Location: Main Road, Rhosrobin, Wrexham, LL11 4RL Classification: Tyre Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (E)	106	-	333003 352682
117	**Contemporary Trade Directory Entries** Name: C D Jackson Location: Kristanne, 9, Main Road, Old Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4RL Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	110	-	332993 352714
118	**Contemporary Trade Directory Entries** Name: Howden'S Location: Rhosddu Ind Est, Old Rhosrobin/Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Kitchen Furniture Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13SW (S)	121	-	332822 352469
119	**Contemporary Trade Directory Entries** Name: K P Packaging Location: Unit 15, Clwyd Court, Rhosddu Industrial Estate, Wrexham, LL11 4YL Classification: Packaging Materials Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	189	-	332733 352447
119	**Contemporary Trade Directory Entries** Name: Cemex Location: Rhosddu Industrial Estate, Rhosrobin, Wrexham, LL11 4YL Classification: Concrete & Mortar Ready Mixed **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	193	-	332698 352486

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
119	**Contemporary Trade Directory Entries** Name: G S C Engineering Ltd Location: Unit 3, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Hydraulic Engineers **Status:** **Inactive** Positional Accuracy: Manually positioned to the address or location	A13SW (SW)	219	-	332691 352450
119	**Contemporary Trade Directory Entries** Name: Wrexham Auto Kraft Location: Unit 3, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Car Body Repairs **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	219	-	332691 352450
119	**Contemporary Trade Directory Entries** Name: Tycon Automation Location: Rhosddu Ind Est, Old Rhosrobin/Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Automation Systems & Equipment **Status:** **Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13SW (SW)	228	-	332674 352458
120	**Contemporary Trade Directory Entries** Name: V Max Tyres Ltd Location: Unit 8-9, Clwyd Court, Rhosddu Industrial Estate, Rhosrobin, Wrexham, LL11 4YL Classification: Car Body Repairs **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	209	-	332755 352405
121	**Contemporary Trade Directory Entries** Name: Owen Automotive Ltd Location: Unit 3, Rhosddu Industrial Estate, Rhosrobin, Wrexham, LL11 4YL Classification: Garage Services **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A13SE (S)	215	-	332873 352368
121	**Contemporary Trade Directory Entries** Name: Milner T & Sons Location: Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Scrap Metal Merchants **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	253	-	332878 352330
122	**Contemporary Trade Directory Entries** Name: Curtis & Son Contracting Location: 6, ST PETERS CLOSE, NEW RHOSROBIN, RHOSROBIN, LL11 4RF Classification: Road Haulage Services **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A13NE (N)	251	-	332941 352927
123	**Contemporary Trade Directory Entries** Name: Jones & Williams Location: Unit 3, Clwyd Court, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Printers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	259	-	332688 352394
123	**Contemporary Trade Directory Entries** Name: Bodywerx Ltd Location: Unit 1, Clwyd Court, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Garage Services **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	259	-	332688 352394
123	**Contemporary Trade Directory Entries** Name: Wrexham Brake Centre Location: Unit 2, Clwyd Court, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Breakdown and Recovery **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	271	-	332669 352396

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
123	**Contemporary Trade Directory Entries** Name: H E Hydraulics Ltd Location: Unit 2, Clwyd Court, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Hydraulic Equipment & Accessories - Sales & Service **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	271	-	332669 352396
123	**Contemporary Trade Directory Entries** Name: A E C Engineering Ltd Location: Unit 1-2 Clwyd Court, Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Precision Engineers **Status:** **Inactive** Positional Accuracy: Manually positioned to the address or location	A13SW (SW)	273	-	332668 352393
123	**Contemporary Trade Directory Entries** Name: Acorn Furniture Location: Rhosddu Industrial Estate, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Cabinet Makers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	275	-	332682 352378
123	**Contemporary Trade Directory Entries** Name: Chris Semper Location: Unit 1, Clwyd Court, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4YL Classification: Garage Services **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	280	-	332656 352397
124	**Contemporary Trade Directory Entries** Name: Graham Jones Cranes Location: ENTERPRISE HOUSE, ENTERPRISE BUILDINGS, RHOSDDU INDUSTRIAL ESTATE, OLD RHOSROBIN, WREXHAM, LL11 4YL Classification: Crane Hire, Sales & Service **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A8NW (S)	309	-	332862 352274
125	**Contemporary Trade Directory Entries** Name: W P S Logistics Location: Wrexham, LL11 4YL Classification: Pallets, Crates & Packing Cases **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A8NW (S)	340	-	332818 352246
126	**Contemporary Trade Directory Entries** Name: Sparkles Cleaning Location: 39, Maes Hyfryd, New Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4PJ Classification: Cleaning Services - Domestic **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	348	-	332624 352933
127	**Contemporary Trade Directory Entries** Name: D S B Cleaning Services Location: 10, Trem Eryri, Wrexham, LL11 2TR Classification: Cleaning Services - Domestic **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	372	-	333222 352418
128	**Contemporary Trade Directory Entries** Name: Clean Carpets Location: 2, Ffordd Caerfyrddin, Wrexham, LL11 2LD Classification: Carpet, Curtain & Upholstery Cleaners **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	388	-	332998 352218
129	**Contemporary Trade Directory Entries** Name: Border Fire Protection Snowdonia Location: 1, Bryn Ucha, New Rhosrobin, Rhosrobin, Wrexham, LL11 4PL Classification: Firefighting Equipment **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	409	-	332586 352982
129	**Contemporary Trade Directory Entries** Name: Border Fire Protection Location: 1, Bryn Ucha, New Rhosrobin, Rhosrobin, Wrexham, Clwyd, LL11 4PL Classification: Firefighting Equipment **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	412	-	332589 352987

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
130	**Contemporary Trade Directory Entries** Name: M H Fire Protection Location: 17, Ffordd Meirionydd, Wrexham, Clwyd, LL11 2LA Classification: Firefighting Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NE (S)	563	-	332993 352035
131	**Contemporary Trade Directory Entries** Name: Stoneacre Wrexham Location: Wrexham, LL11 2UB Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	600	-	333132 353229
131	**Contemporary Trade Directory Entries** Name: Stoneacre Location: Plas Acton Road, Wrexham, Clwyd, LL11 2UB Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	600	-	333132 353229
132	**Contemporary Trade Directory Entries** Name: Stoneacre Wrexham Plas Acton Road Location: Plas Action Road, Pandy, Wrexham, LL11 2UA Classification: Car Dealers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A18SE (NE)	633	-	333187 353239
132	**Contemporary Trade Directory Entries** Name: Speedsix (Rover) Ltd Location: Unit 2, Plas Acton Industrial Estate, Plas Acton Road, Wrexham, Clwyd, LL11 2UB Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	633	-	333186 353239
133	**Contemporary Trade Directory Entries** Name: Zeta Electronic Systems Location: Unit 4,Pandy Ind Est,Plas Acton Rd, Wrexham, Clwyd, LL11 2UD Classification: Electronic Equipment - Manufacturers & Assemblers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SW (NE)	676	-	333304 353213
133	**Contemporary Trade Directory Entries** Name: Broughton Mill Ltd Location: Unit 4, Pandy Industrial Estate, Plas Acton Road, Wrexham, Clwyd, LL11 2UD Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	677	-	333305 353214
134	**Contemporary Trade Directory Entries** Name: Wrexham Sharpening Services Location: 5, Oaklea Close, Wrexham, Clwyd, LL11 2AU Classification: Tool Sharpening, Repairing & Servicing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	768	-	333572 353030
134	**Contemporary Trade Directory Entries** Name: Express Dairies Location: Plas Acton Road, Wrexham, Clwyd, LL11 2UB Classification: Dairies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	773	-	333580 353023
135	**Contemporary Trade Directory Entries** Name: Smithy View Service Station Location: Smithy View Service Station, Chester Road, Wrexham, Clwyd, LL12 8DY Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	820	-	333697 352862
135	**Contemporary Trade Directory Entries** Name: Nationwide Vehicle Bank Location: Smithy View Service Station, Chester Road, Wrexham, Clwyd, LL12 8DY Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	820	-	333697 352862

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
135	**Contemporary Trade Directory Entries** Name: Smithy View Service Station Location: Smithy View Service Station, Chester Road, Wrexham, LL12 8DY Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	828	-	333709 352852
136	**Contemporary Trade Directory Entries** Name: Stoneacre Rochdale Location: Plas Acton Road, Wrexham, Clwyd, LL11 2UA Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A14NE (E)	826	-	333673 352946
136	**Contemporary Trade Directory Entries** Name: Stoneacre Location: 4, Ty Gwyn Lane, Wrexham, Clwyd, LL11 2UA Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	837	-	333686 352943
137	**Contemporary Trade Directory Entries** Name: Top Notch Blinds Location: 21, Westbury Drive, Pandy, Wrexham, Clwyd, LL12 8PZ Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	836	-	333509 353241
138	**Contemporary Trade Directory Entries** Name: Commercial & Domestic Refrigeration & Air Conditioning Location: 1, Stansty Drive, Wrexham, Clwyd, LL11 2DG Classification: Air Conditioning Equipment & Systems **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SE (S)	846	-	332922 351738
138	**Contemporary Trade Directory Entries** Name: Chips Away Location: 1, Railway Road, Wrexham, Clwyd, LL11 2DH Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SE (S)	870	-	332953 351717
139	**Contemporary Trade Directory Entries** Name: Agf Cleaning Services Location: 3, Oakland Court, Old Mold Road, Gwersyllt, Wrexham, Clwyd, LL11 4QS Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	859	-	331998 352857
140	**Contemporary Trade Directory Entries** Name: Jones Bros Location: ABATTOIR AND SLAUGHTER HOUSE, MOLD ROAD, STANSTY, WREXHAM, LL11 4YF Classification: Abattoirs **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	864	-	332191 352042
141	**Contemporary Trade Directory Entries** Name: Select Tyres & Autocare Location: Unit 12a, Dodds Lane, Wrexham, LL11 4NT Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	880	-	332107 353153
142	**Contemporary Trade Directory Entries** Name: Veggie Fayre Location: 193, Chester Road, Wrexham, LL12 8DW Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	883	-	333744 352328
143	**Contemporary Trade Directory Entries** Name: Dodd'S Auto Repairs Location: The Courtyard, Stansty Park, Mold Road, Wrexham, Clwyd, LL11 4YG Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SW (W)	908	-	331956 352420

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
143	**Contemporary Trade Directory Entries** Name: North Wales & Border Carriers Location: The Courtyard, Stansty Park, Mold Road, Wrexham, Clwyd, LL11 4YG Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SW (W)	908	-	331956 352420
144	**Contemporary Trade Directory Entries** Name: Jones Brothers Location: Stansty Lodge, Mold Road, Stansty, Wrexham, LL11 4YF Classification: Abattoirs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	913	-	332171 351990
145	**Contemporary Trade Directory Entries** Name: P Derosa Location: Plas Acton Garage,Chester Rd, Wrexham, Clwyd, LL12 8DU Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A19SE (NE)	934	-	333762 353013
145	**Contemporary Trade Directory Entries** Name: Brett Location: Plas Acton Garage, 282, Chester Road, Wrexham, Clwyd, LL12 8DU Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (E)	948	-	333782 353002
146	**Contemporary Trade Directory Entries** Name: Remploy Ltd Location: Railway Road, Wrexham, Clwyd, LL11 2DN Classification: Furniture Manufacturers - Home & Office **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SE (S)	937	-	332981 351653
146	**Contemporary Trade Directory Entries** Name: Tyre Trend Location: Railway Road, WREXHAM, Clwyd, LL11 2DL Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SE (S)	943	-	332938 351642
147	**Contemporary Trade Directory Entries** Name: Derwen Joinery Ltd Location: Mold Road, Gwersyllt, Wrexham, LL11 4AQ Classification: Joinery Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	943	-	331998 353093
147	**Contemporary Trade Directory Entries** Name: Rhones Joinery Location: Mold Road, Gwersyllt, Wrexham, Clwyd, LL11 4AQ Classification: Joinery Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	957	-	331990 353109
148	**Contemporary Trade Directory Entries** Name: Currys Location: UNIT E, PLAS COCH RETAIL PARK, PLAS COCH, WREXHAM, LL11 2BA Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8SW (S)	947	-	332653 351659
148	**Contemporary Trade Directory Entries** Name: Currys Location: Retail Park, Plas Coch Road, Wrexham, Clwyd, LL11 2BA Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	947	-	332652 351660
148	**Contemporary Trade Directory Entries** Name: Currys Pc World Location: Retail Park, Plas Coch Road, Wrexham, LL11 2BA Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8SW (S)	948	-	332653 351659
149	**Contemporary Trade Directory Entries** Name: Jaques Garage Location: Unit 1, Railway Road, Wrexham, Clwyd, LL11 2DL Classification: Car Breakers & Dismantlers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8SE (S)	957	-	332934 351628

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
150	**Contemporary Trade Directory Entries** Name: Select Stone Location: Mold Rd, Gwersyllt, Wrexham, Clwyd, LL11 4AQ Classification: Kitchen Furniture Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17SW (NW)	993	-	331929 353068
151	**Fuel Station Entries** Name: Smithy View Service Station Location: Chester Road , Acton , Wrexham, Wrexham, LL12 8DY Brand: UNBRANDED Premises Type: Petrol Station **Status: Open** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	820	-	333697 352862
152	**Fuel Station Entries** Name: Plas Acton Garage Location: Chester Road , Acton , Wrexham, Wrexham, LL12 8DU Brand: Gulf Premises Type: Petrol Station **Status: Open** Positional Accuracy: Manually positioned to the address or location	A19SE (E)	948	-	333782 353002
153	**Points of Interest - Commercial Services** Name: Owen Automotive Location: Unit 1 The Sidings, Rhosddu Industrial Estate, Rhosrobin, Wrexham, LL11 4RE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (S)	55	10	332883 352531
153	**Points of Interest - Commercial Services** Name: Body Perfect Location: Unit 2 The Sidings, Rhosddu Industrial Estate, Rhosrobin, Wrexham, LL11 4RE Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A13SE (S)	65	10	332901 352529
153	**Points of Interest - Commercial Services** Name: Body Perfect Location: Unit 5-6 The Sidings, Rhosddu Industrial Estate, Rhosrobin, Wrexham, LL11 4RE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (S)	90	10	332893 352497
153	**Points of Interest - Commercial Services** Name: Bodyperfect Accident Repair Centre Location: Unit 5 The Sidings, Rhosddu Industrial Estate, Rhosrobin, Wrexham, LL11 4RE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (S)	90	10	332893 352497
153	**Points of Interest - Commercial Services** Name: Wrexham Service Centre Location: Unit H, Rhosddu Industrial Estate, Old Rhosrobin, Wrexham, LL11 4YY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (S)	106	10	332890 352480
153	**Points of Interest - Commercial Services** Name: Body Perfect Location: Unit H, Rhosddu Industrial Estate, Old Rhosrobin, Wrexham, LL11 4YY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (S)	106	10	332890 352480
154	**Points of Interest - Commercial Services** Name: 1-2-1 Windscreen Services Ltd Location: Hillrise, Main Road, Rhosrobin, Wrexham, LL11 4RL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (E)	72	10	332984 352630
155	**Points of Interest - Commercial Services** Name: D & G Auto Services Location: Unit D, Rhosddu Industrial Estate, Rhosrobin, Wrexham, LL11 4YL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (SW)	130	10	332756 352511

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
155	**Points of Interest - Commercial Services** Name: 1 2 1 Windscreen Services Location: 2 Meadows View, Rhosddu Industrial Estate, Old Rhosrobin, Wrexham, LL11 4YL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (SW)	150	10	332718 352543
156	**Points of Interest - Commercial Services** Name: Owen Automotive Ltd Location: Unit 3, Rhosddu Industrial Estate, Old Rhosrobin, Wrexham, LL11 4YL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (S)	216	10	332872 352367
157	**Points of Interest - Commercial Services** Name: Wrexham Auto Kraft Location: Unit 3 Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, Wrexham, LL11 4YL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (SW)	219	10	332691 352450
157	**Points of Interest - Commercial Services** Name: V Max Tyres Ltd Location: Clwyd Court, Rhosddu Industrial Estate, Rhosrobin, Wrexham, LL11 4YL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (SW)	259	10	332688 352394
157	**Points of Interest - Commercial Services** Name: B L Williams Location: Rhosddu Industrial Estate, Rhosrobin, Wrexham, LL11 4YL Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A13SW (SW)	271	10	332669 352396
157	**Points of Interest - Commercial Services** Name: Chris Semper Location: Unit 1 Clwyd Court Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, Wrexham, LL11 4YL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (SW)	280	10	332656 352397
158	**Points of Interest - Commercial Services** Name: Curtis & Son Contracting Location: 6 St Peters Close, New Rhosrobin, Rhosrobin, LL11 4RF Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A13NE (N)	251	10	332940 352926
159	**Points of Interest - Commercial Services** Name: Cheetam H & Son Metals Ltd Location: Rhosddu Industrial Estate, Rhosrobin, Wrexham, LL11 4YL Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A13SW (S)	287	10	332793 352305
159	**Points of Interest - Commercial Services** Name: C Semper Location: Enterprise House, Rhosddu Industrial Estate, Rhosrobin, Wrexham, LL11 4YL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (S)	304	10	332863 352279
160	**Points of Interest - Commercial Services** Name: M A Hughes Location: 1 Snowdon Drive, Wrexham, LL11 2UY Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A14NW (E)	540	10	333450 352675
161	**Points of Interest - Commercial Services** Name: Marcher Distributions Location: 10 Cae Glo, Colliery Road, Wrexham, LL11 2BF Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A8SW (S)	646	10	332719 351953

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
162	**Points of Interest - Commercial Services** Name: Autoteknix Location: 36 Colliery Road, Wrexham, LL11 2BQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8SW (S)	728	10	332781 351859
163	**Points of Interest - Commercial Services** Name: Car Wash Location: Smithy View Service Station, Chester Road, Wrexham, LL12 8DY Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A14NE (E)	820	10	333697 352862
163	**Points of Interest - Commercial Services** Name: Smithy View Service Station Location: Smithy View Service Station, Chester Road, Wrexham, LL12 8DY Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A14NE (E)	829	10	333698 352889
164	**Points of Interest - Commercial Services** Name: Riverside Auto Centre Location: Unit 12a, Dodds Lane, Wrexham, LL11 4NT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17SW (NW)	879	10	332107 353152
165	**Points of Interest - Commercial Services** Name: Dodd's Auto Repairs Location: Pitch 1 The Courtyard, Mold Road, Stansty, Wrexham, LL11 4YG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12SW (W)	889	10	331975 352420
165	**Points of Interest - Commercial Services** Name: North Wales & Border Carriers Location: The Courtyard Stansty Park, Mold Road, Wrexham, LL11 4YG Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12SW (W)	908	10	331956 352420
165	**Points of Interest - Commercial Services** Name: Dodds Auto Repairs Location: The Courtyard Stansty Park, Mold Road, Wrexham, LL11 4YG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12SW (W)	908	10	331956 352420
166	**Points of Interest - Commercial Services** Name: Plas Acton Garage Location: Plas Acton Garage 282, Chester Road, Wrexham, LL12 8DU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SE (E)	948	10	333782 353002
166	**Points of Interest - Commercial Services** Name: P & C Derosa Ltd Location: Plas Acton Garage 282, Chester Road, Wrexham, LL12 8DU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SE (E)	948	10	333782 353002
167	**Points of Interest - Commercial Services** Name: Jaques Garage Location: Unit 1, Railway Road, Wrexham, LL11 2DL Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A8SE (S)	948	10	332919 351636
168	**Points of Interest - Manufacturing and Production** Name: Rhosddu Industrial Estate Location: LL11 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	96	10	332759 352584
169	**Points of Interest - Manufacturing and Production** Name: Workshops Location: LL11 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	296	10	332674 352357

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
170	**Points of Interest - Manufacturing and Production** Name: C Jarvis Location: Chain Road, Stansty, Wrexham, LL11 4YH Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A12SE (SW)	444	10	332494 352339
170	**Points of Interest - Manufacturing and Production** Name: C Jarvis Location: Lower Stansty Farm, Chain Road, Stansty, Wrexham, LL11 4YH Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A12SE (SW)	444	10	332494 352339
171	**Points of Interest - Manufacturing and Production** Name: Shaft (Disused) Location: LL11 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	480	10	333289 352327
171	**Points of Interest - Manufacturing and Production** Name: Shaft (Disused) Location: LL11 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to address or location	A14SW (SE)	495	10	333304 352322
172	**Points of Interest - Manufacturing and Production** Name: Pandy Business Park Location: LL11 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	595	10	333265 353141
172	**Points of Interest - Manufacturing and Production** Name: Pandy Industrial Estate Location: LL11 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	663	10	333306 353195
173	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	722	10	332139 352858
174	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	872	10	331983 352854
175	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A17SW (NW)	920	10	332019 353085
175	**Points of Interest - Manufacturing and Production** Name: Works Location: LL11 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A17SW (NW)	971	10	331980 353120
176	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL12 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	960	10	333812 352959
177	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A3NE (S)	985	10	332980 351604

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
177	**Points of Interest - Manufacturing and Production** Name: Factory Location: LL11 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A3NE (S)	985	10	332986 351605
178	**Points of Interest - Public Infrastructure** Name: Arrow Environmental Services Ltd Location: Rhosddu Industrial Estate, Rhosrobin, Wrexham, LL11 4YL Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A13SW (SW)	136	10	332735 352541
179	**Points of Interest - Public Infrastructure** Name: Cemetery Location: LL12 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A18SE (NE)	473	10	333077 353114
180	**Points of Interest - Public Infrastructure** Name: Smithy View Service Station Location: Smithy View Service Station, Chester Road, Wrexham, LL12 8DY Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14NE (E)	817	10	333697 352854
180	**Points of Interest - Public Infrastructure** Name: Smithy View Service Station Location: Smithy View Service Station, Chester Road, Wrexham, LL12 8DY Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14NE (E)	820	10	333697 352862
180	**Points of Interest - Public Infrastructure** Name: Smithy View Service Station Location: Smithy View Service Station, Chester Road, Wrexham, LL12 8DY Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14NE (E)	820	10	333697 352862
180	**Points of Interest - Public Infrastructure** Name: Nationwide Vehicle Bank Location: Smithy View Service Station, Chester Road, Wrexham, LL12 8DY Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14NE (E)	820	10	333697 352862
180	**Points of Interest - Public Infrastructure** Name: Smithy View Service Station Location: Smithy View Service Station, Chester Road, Wrexham, LL12 8DY Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14NE (E)	820	10	333697 352862
180	**Points of Interest - Public Infrastructure** Name: Smithy View Filling Station Location: Smithy View Service Station, Chester Road, Wrexham, LL12 8DY Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14NE (E)	820	10	333697 352862
180	**Points of Interest - Public Infrastructure** Name: Smithy View Service Station Location: Smithy View Service Station, Chester Road, Wrexham, LL12 8DY Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14NE (E)	820	10	333697 352862
181	**Points of Interest - Public Infrastructure** Name: Plas Acton Garage Location: Plas Acton Garage, 282, Chester Road, Wrexham, LL12 8DU Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A19SE (E)	948	10	333782 353002
182	**Points of Interest - Recreational and Environmental** Name: Play Area Location: LL11 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	457	10	332375 352654

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
183	**Points of Interest - Recreational and Environmental** Name: Playground Location: Chapel Mews, LL11 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A17SE (NW)	624	10	332318 353009
183	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	628	10	332317 353014
184	**Points of Interest - Recreational and Environmental** Name: Playground Location: Nr (Parc By Chan), LL11 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	625	10	333367 352197
184	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	629	10	333374 352198
185	**Points of Interest - Recreational and Environmental** Name: Play Area Location: LL11 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	637	10	332215 352811
186	**Points of Interest - Recreational and Environmental** Name: Playground Location: Plas Acton Road (Ffordd Plas Acton), LL11 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A14NE (NE)	741	10	333571 352967
187	**Points of Interest - Recreational and Environmental** Name: Play Area Location: LL11 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	955	10	332991 351636

Sensitive Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
188	**Ancient Woodland** Name: Not Supplied Reference: 32266 Area(m²): 9932.06 Type: Ancient and Semi-Natural Woodland	A18SE (N)	600	2	333017 353267
189	**Ancient Woodland** Name: Not Supplied Reference: 28596 Area(m²): 58518.83 Type: Ancient and Semi-Natural Woodland	A18SE (N)	608	2	332986 353282
190	**Ancient Woodland** Name: Not Supplied Reference: 32264 Area(m²): 3858.72 Type: Ancient and Semi-Natural Woodland	A18NE (N)	673	2	332892 353354
191	**Ancient Woodland** Name: Not Supplied Reference: 32265 Area(m²): 7629.33 Type: Ancient and Semi-Natural Woodland	A18NW (N)	764	2	332728 353428
192	**Ancient Woodland** Name: Not Supplied Reference: 32267 Area(m²): 3081.83 Type: Ancient and Semi-Natural Woodland	A18NE (N)	764	2	333177 353388
193	**Ancient Woodland** Name: Not Supplied Reference: 32268 Area(m²): 1016.5 Type: Ancient and Semi-Natural Woodland	A18NE (N)	845	2	333089 353501
194	**Ancient Woodland** Name: Not Supplied Reference: 28597 Area(m²): 58789.73 Type: Ancient and Semi-Natural Woodland	A18NE (N)	852	2	333081 353510

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Natural Resources Wales	November 2023	Annually
Flintshire Council - Environmental Health Department	October 2017	Annual Rolling Update
Wrexham County Borough Council - Public Protection Department	October 2017	Annually
Discharge Consents		
Environment Agency - Welsh Region	August 2014	Quarterly
Natural Resources Wales	February 2024	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Welsh Region	March 2013	
Integrated Pollution Controls		
Environment Agency - Welsh Region	January 2009	
Integrated Pollution Prevention And Control		
Natural Resources Wales	December 2023	Quarterly
Environment Agency - Welsh Region	January 2021	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Wrexham County Borough Council - Environmental Health Department	April 2014	Variable
Flintshire Council - Environmental Health Department	April 2016	Variable
Local Authority Pollution Prevention and Controls		
Wrexham County Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Flintshire Council - Environmental Health Department	April 2016	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Wrexham County Borough Council - Environmental Health Department	April 2014	Variable
Flintshire Council - Environmental Health Department	April 2016	Variable
Nearest Surface Water Feature		
Ordnance Survey	March 2024	
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		
Natural Resources Wales	February 2024	Quarterly
Environment Agency Wales - North Area	January 2021	Quarterly
Water Abstractions		
Natural Resources Wales	February 2024	Quarterly
Environment Agency - Welsh Region	October 2023	Quarterly
Water Industry Act Referrals		
Environment Agency - Welsh Region	October 2017	
Natural Resources Wales	October 2022	
Groundwater Vulnerability Map		
Natural Resources Wales	June 2018	As notified
Bedrock Aquifer Designations		
Natural Resources Wales	January 2018	As notified

Data Currency

Agency & Hydrological	Version	Update Cycle
Superficial Aquifer Designations Natural Resources Wales	January 2018	As notified
Source Protection Zones Natural Resources Wales	July 2022	Annual Rolling Update
Extreme Flooding from Rivers or Sea without Defences Natural Resources Wales	September 2020	
Flooding from Rivers or Sea without Defences Natural Resources Wales	September 2020	
Areas Benefiting from Flood Defences Natural Resources Wales	November 2019	Quarterly
Flood Water Storage Areas Natural Resources Wales	August 2019	Quarterly
Flood Defences Natural Resources Wales	November 2019	Quarterly
OS Water Network Lines Ordnance Survey	April 2024	Quarterly
Surface Water 1 in 30 year Flood Extent Natural Resources Wales	May 2018	Annually
Surface Water 1 in 100 year Flood Extent Natural Resources Wales	May 2018	Annually
Surface Water 1 in 1000 year Flood Extent Natural Resources Wales	May 2018	Annually
Surface Water Suitability Natural Resources Wales	February 2016	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified

Data Currency

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	November 2002	As notified
Historical Landfill Sites		
Natural Resources Wales	March 2023	As notified
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Welsh Region	January 2009	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency Wales - North Area	January 2023	Quarterly
Natural Resources Wales	October 2021	Quarterly
Licensed Waste Management Facilities (Locations)		
Natural Resources Wales	February 2024	Quarterly
Environment Agency Wales - North Area	July 2021	Quarterly
Local Authority Landfill Coverage		
Flintshire Council - Environmental Health Department	February 2003	Not Applicable
Wrexham County Borough Council	February 2003	Not Applicable
Local Authority Recorded Landfill Sites		
Flintshire Council - Environmental Health Department	October 2018	
Wrexham County Borough Council	October 2018	
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	
Registered Landfill Sites		
Environment Agency Wales - North Area	March 2006	Not Applicable
Registered Waste Transfer Sites		
Environment Agency Wales - North Area	April 2018	
Registered Waste Treatment or Disposal Sites		
Environment Agency Wales - North Area	June 2015	
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	January 2024	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements		
Wrexham County Borough Council - Planning Department	February 2016	Variable
Flintshire Council	January 2016	Variable
Planning Hazardous Substance Consents		
Wrexham County Borough Council - Planning Department	February 2016	Variable
Flintshire Council	January 2016	Variable

Data Currency

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	January 2024	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	February 2023	Annual Rolling Update
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	October 2023	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	October 2023	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	October 2023	Quarterly
Fuel Station Entries Catalist Ltd - Experian	February 2024	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Points of Interest - Commercial Services PointX	March 2024	Quarterly
Points of Interest - Education and Health PointX	March 2024	Quarterly
Points of Interest - Manufacturing and Production PointX	March 2024	Quarterly
Points of Interest - Public Infrastructure PointX	March 2024	Quarterly
Points of Interest - Recreational and Environmental PointX	March 2024	Quarterly
Underground Electrical Cables National Grid	January 2024	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural Resources Wales	October 2023	Bi-Annually
Areas of Adopted Green Belt		
Flintshire Council	February 2024	Quarterly
Wrexham County Borough Council	February 2024	Quarterly
Areas of Unadopted Green Belt		
Flintshire Council	February 2024	Quarterly
Wrexham County Borough Council	February 2024	Quarterly
Areas of Outstanding Natural Beauty		
Natural Resources Wales	November 2023	Bi-Annually
Environmentally Sensitive Areas		
The National Assembly for Wales - GI Services (Department of Planning & Countryside)	January 2017	
Forest Parks		
Forestry Commission	May 2023	Not Applicable
Local Nature Reserves		
Flintshire Council	February 2024	Bi-Annually
Wrexham County Borough Council	February 2024	Bi-Annually
Marine Nature Reserves		
Natural Resources Wales	February 2024	Bi-Annually
National Nature Reserves		
Natural Resources Wales	February 2024	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	April 2024	Bi-Annually
Ramsar Sites		
Natural Resources Wales	February 2024	Bi-Annually
Sites of Special Scientific Interest		
Natural Resources Wales	October 2023	Bi-Annually
Special Areas of Conservation		
Natural Resources Wales	April 2024	Bi-Annually
Special Protection Areas		
Natural Resources Wales	October 2023	Bi-Annually

Data Suppliers

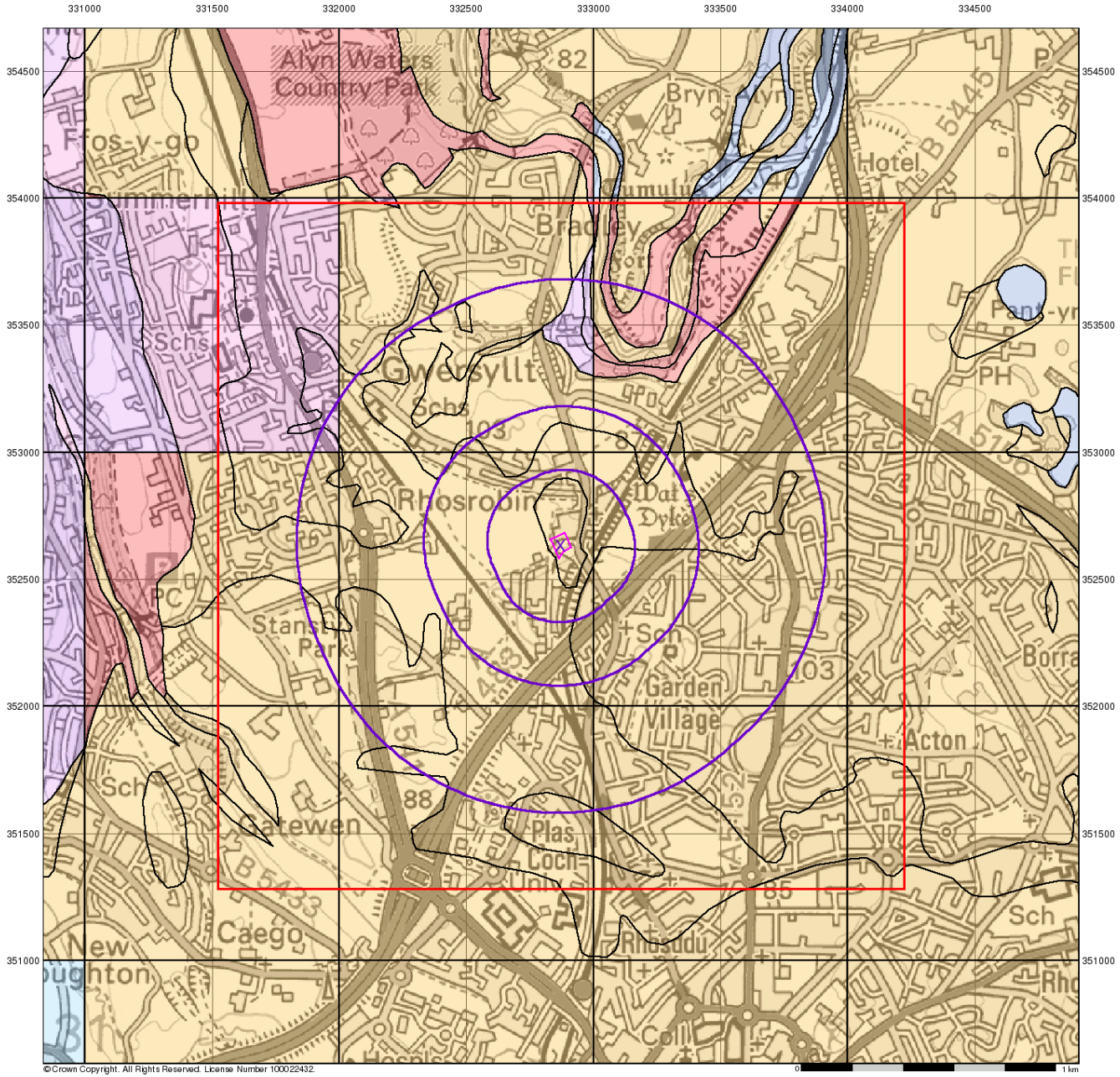
A selection of organisations who provide data within this report

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	**Health and Safety Executive** 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
8	**Wrexham County Borough Council - Planning Department** Guildhall, Wrexham, LL11 1AY	Telephone: 01978 292000 Fax: 01978 292502 Website: www.wrexham.gov.uk
9	**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
10	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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



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Groundwater Vulnerability

General

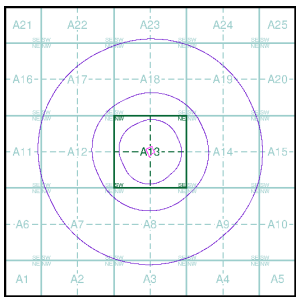
Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Agency and Hydrological

Bedrock Aquifers	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



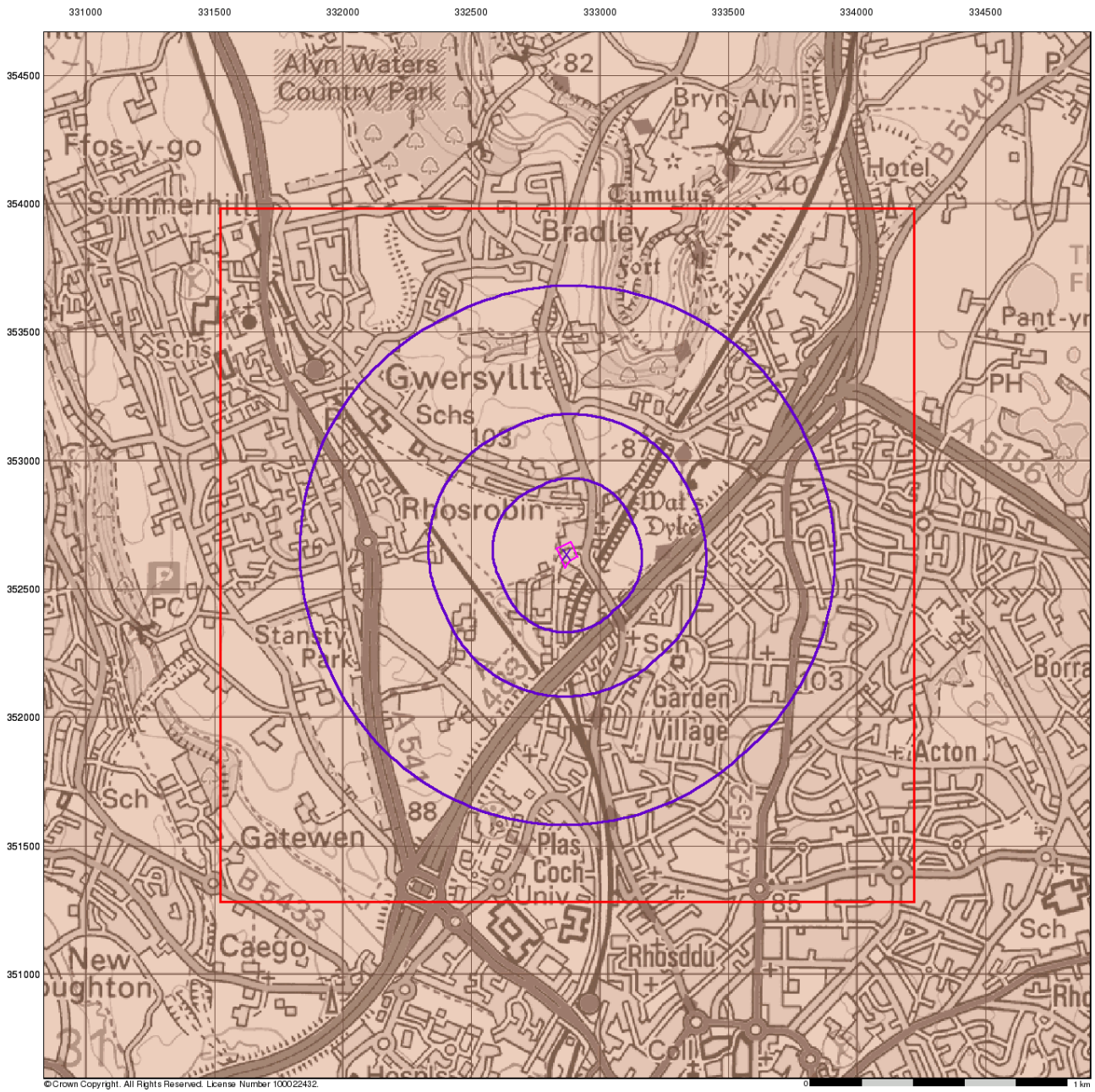
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Order Number:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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



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Bedrock Aquifer Designation

General

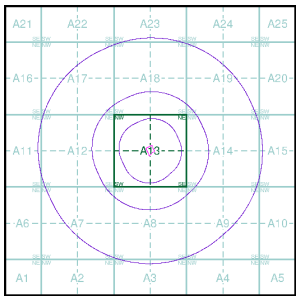
Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



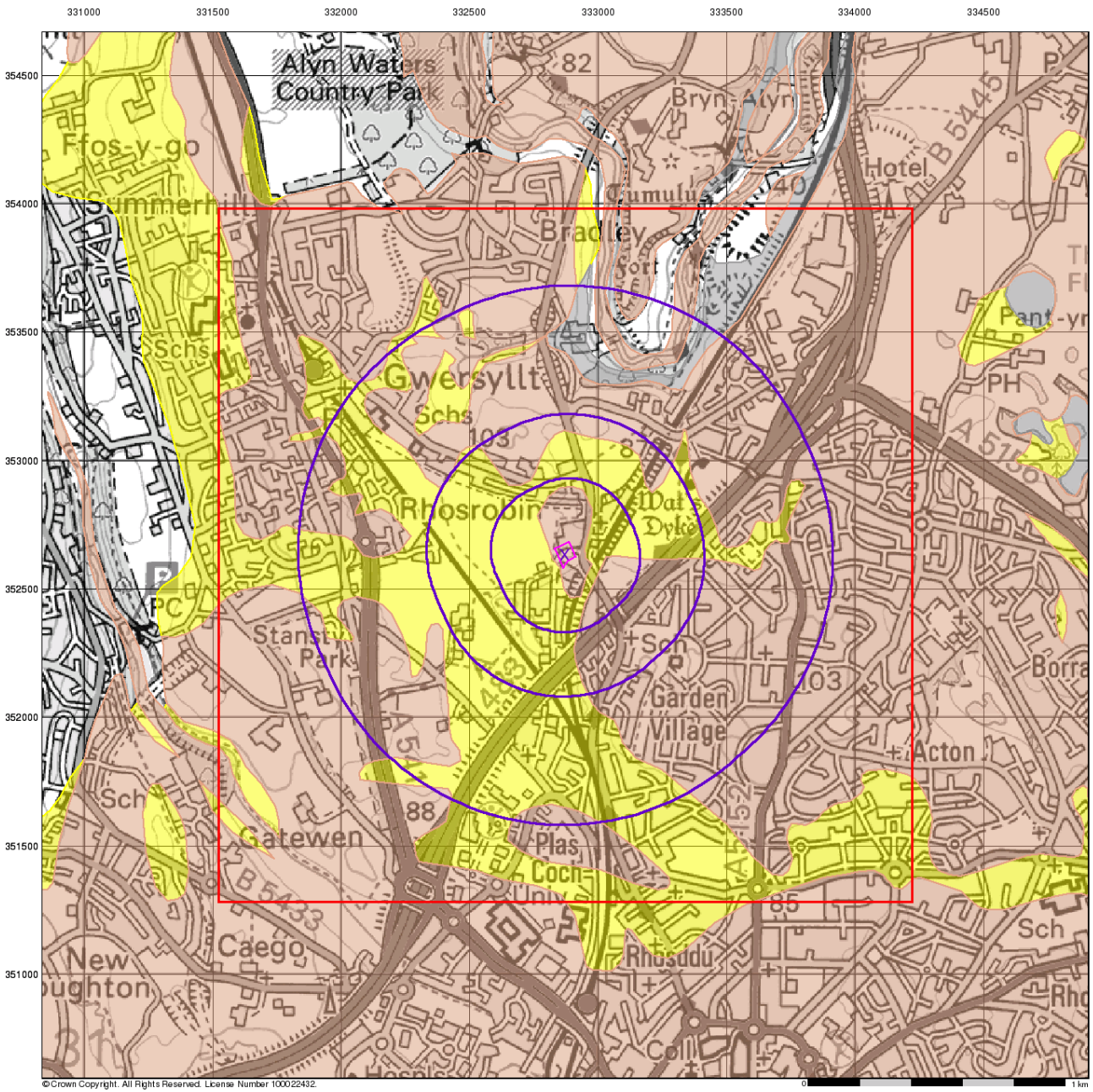
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Site Details

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Superficial Aquifer Designation

General

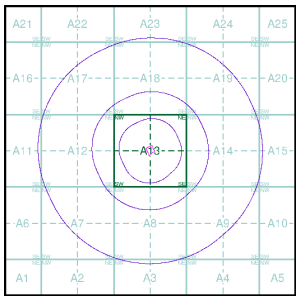
Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



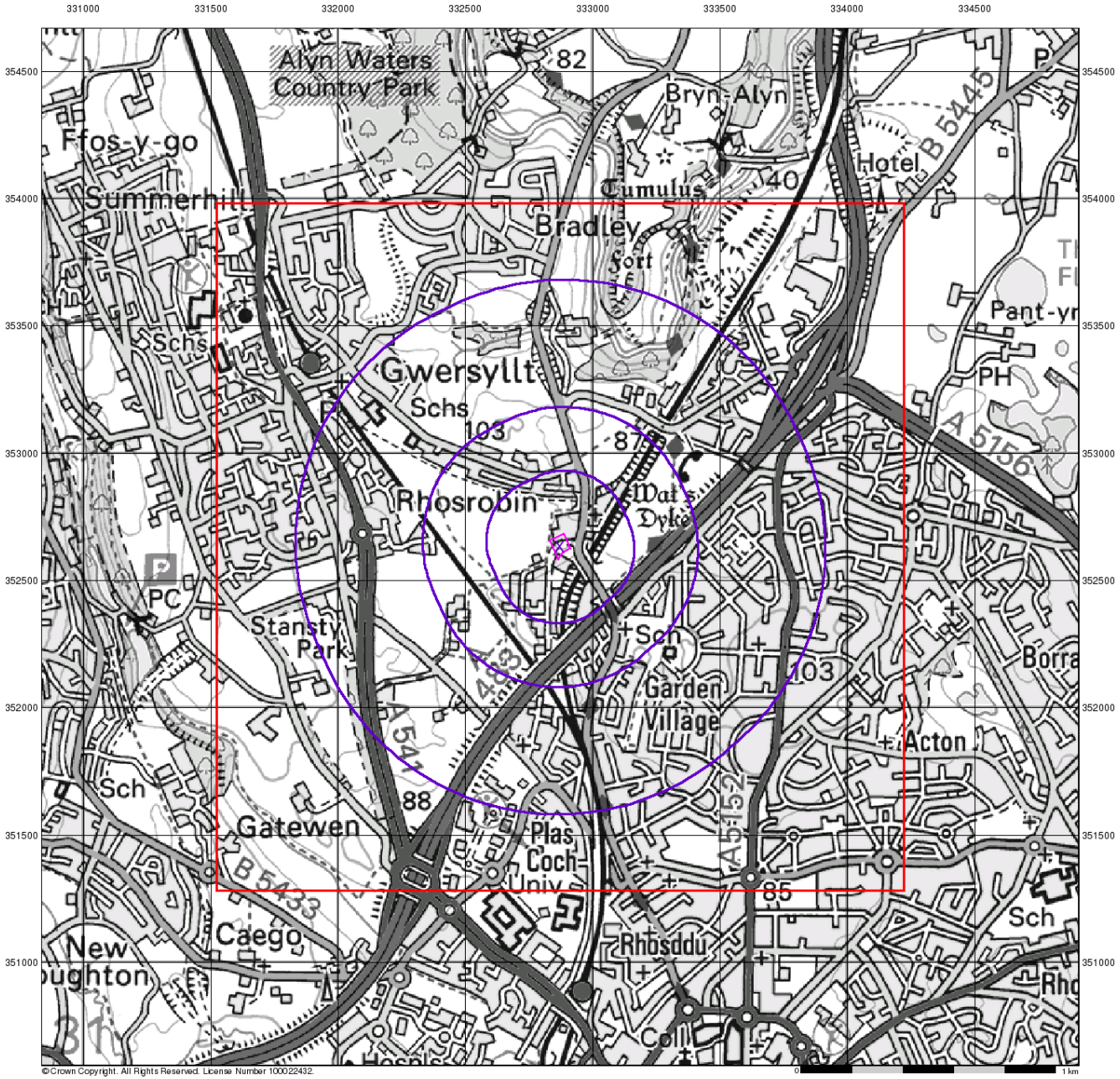
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Source Protection Zones

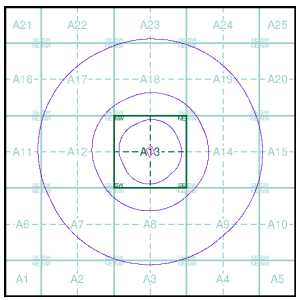
General

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

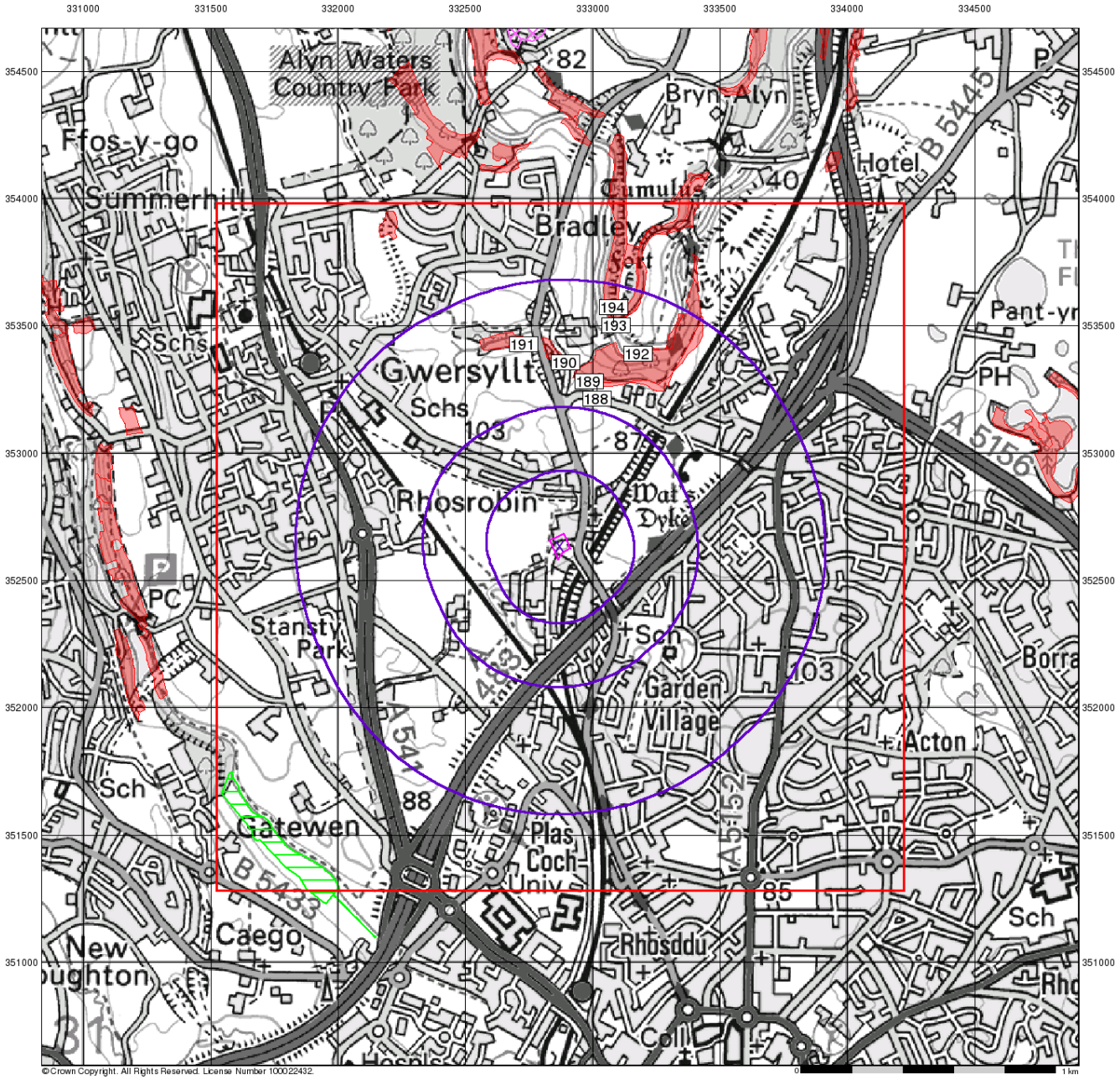


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Site Details

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Sensitive Land Uses

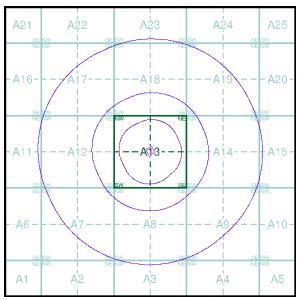
General

- 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

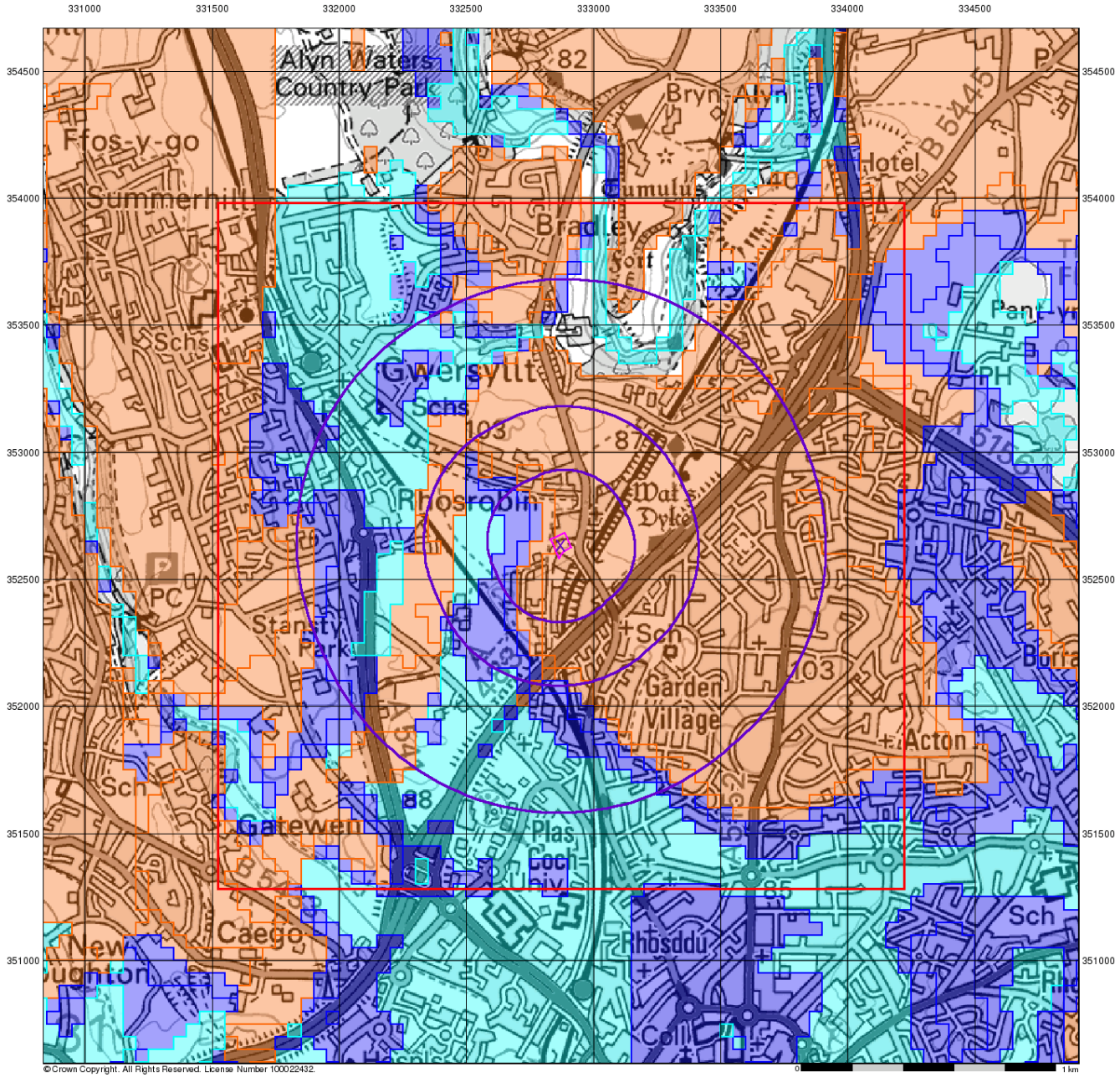


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National Grid Reference:	332870, 352630
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BGS Flood GFS Data

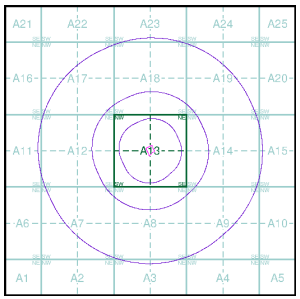
General

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

Agency and Hydrological (Flood)

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

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL



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General

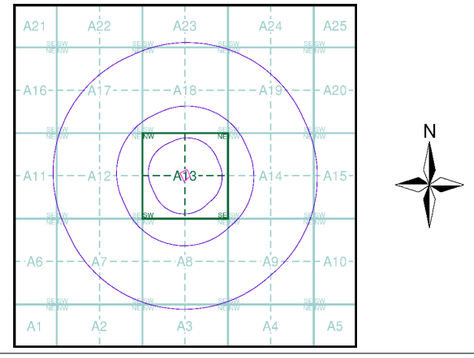
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

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

Estimated Soil Chemistry Arsenic - Slice A



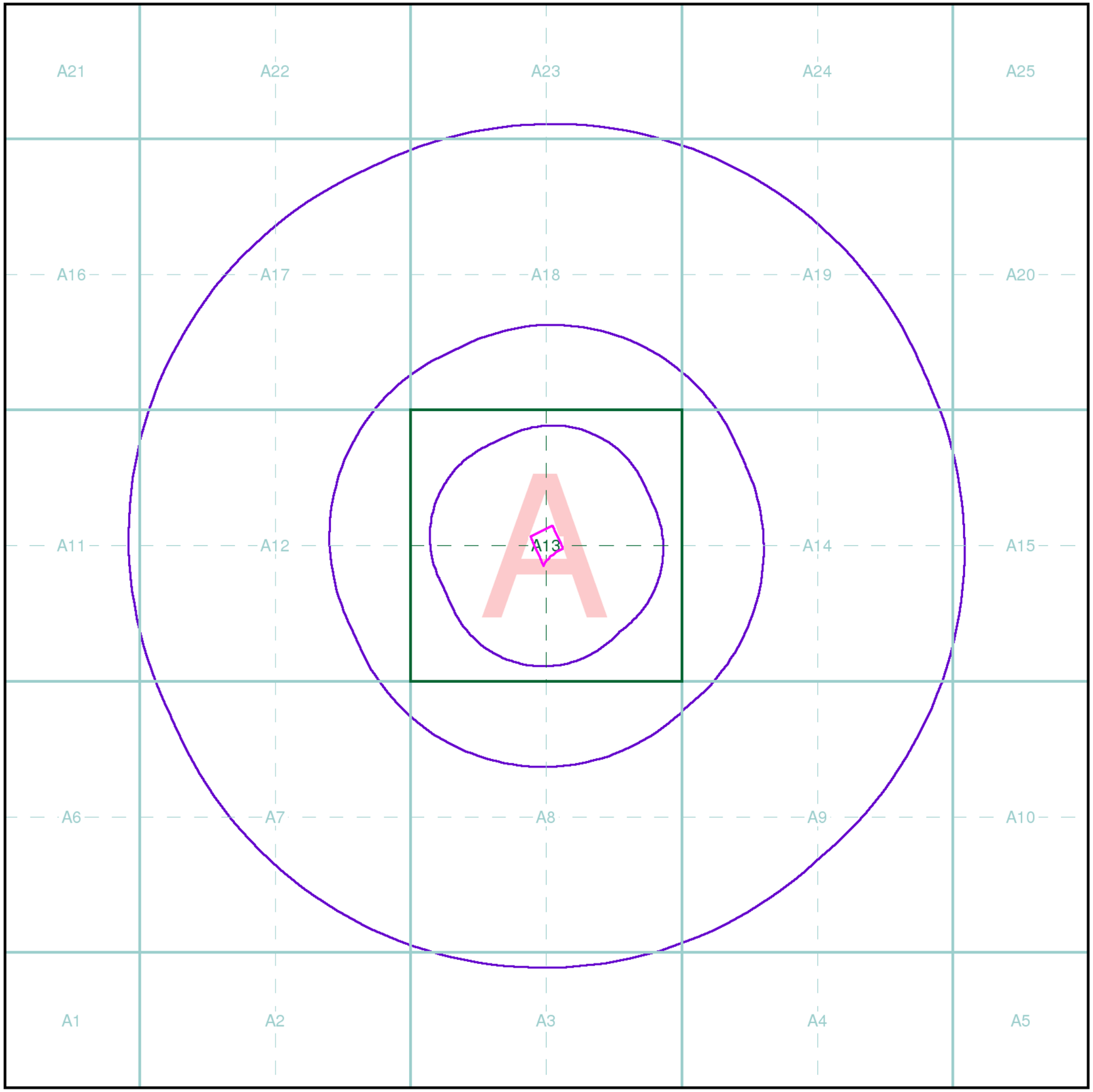
Order Details

Order Details:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

Index Map

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

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

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

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

A selection of organisations who provide data within this report:

Map data

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Cyfoeth Naturiol Cymru
Natural Resources Wales

Envirocheck reports are compiled from 136 different sources of data.

Client Details

Ms S Dixon, Brownfield Solutions Ltd, William Smith House, 173-183 Witton Street, Northwich, Cheshire, CW9 5LP

Order Details

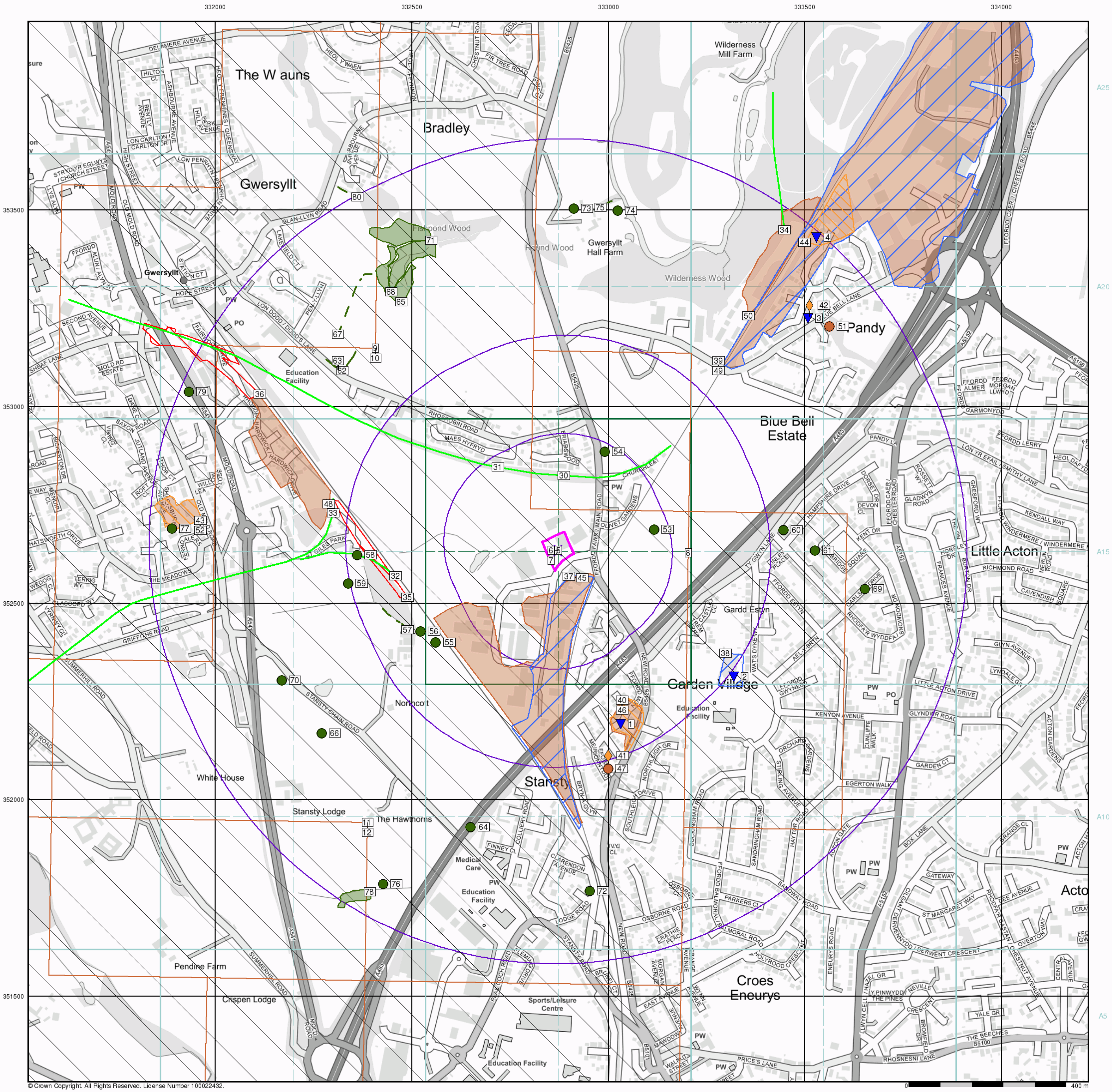
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Customer Ref:	C5736
National Grid Reference:	332870, 352640
Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

Historical Land Use Information (1:10,000)

General

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

Several of Type at Location

Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

	Point	Line	Polygon
Air Shafts			
Disturbed Ground			
General Quarrying			
Heap, unknown constituents			
Mineral Railway			
Mining and Quarrying General			
Mining of Coal & Lignite			
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits			

Historical Land Use

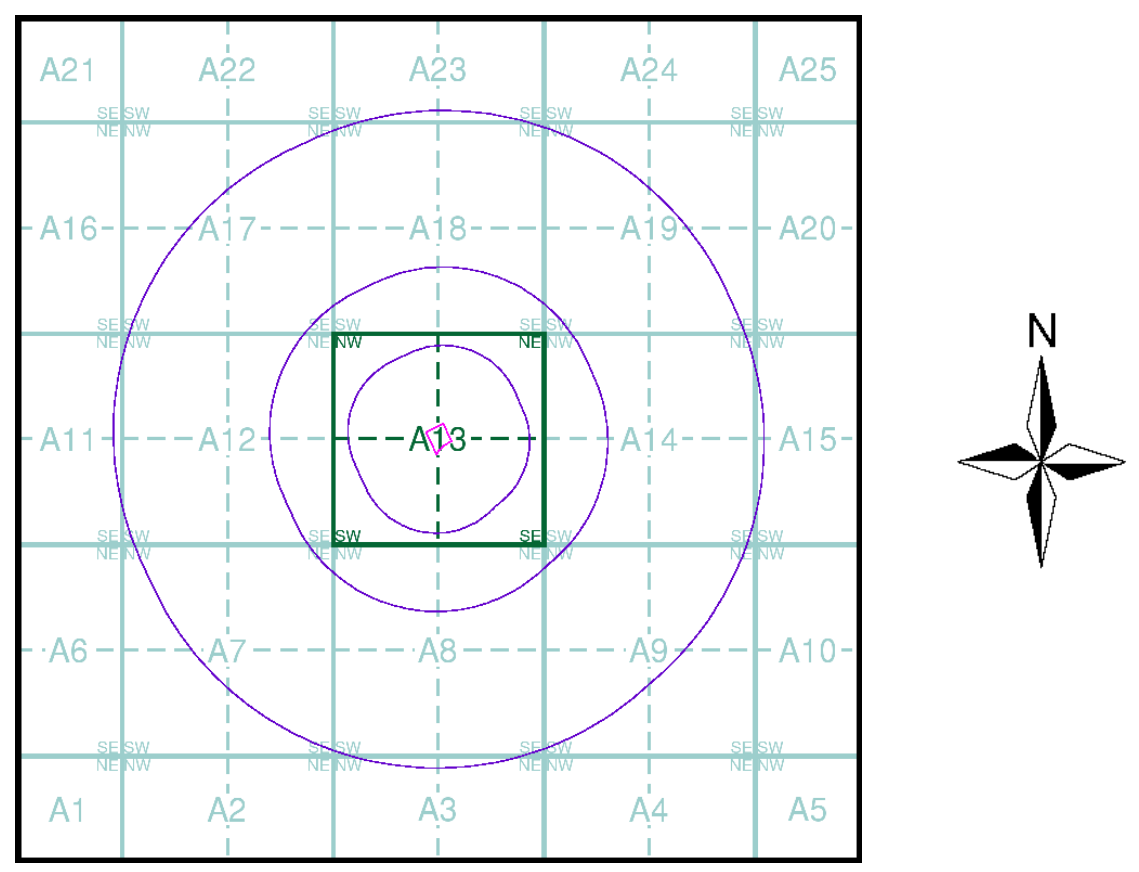
	Point	Line	Polygon
Potentially Infilled Land (Non-Water)			
Potentially Infilled Land (Water)			
Former Marsh			

Mining Data

Potential Mining Area

BGS Recorded Mineral Site

Mining and Ground Stability - Slice A



Order Details

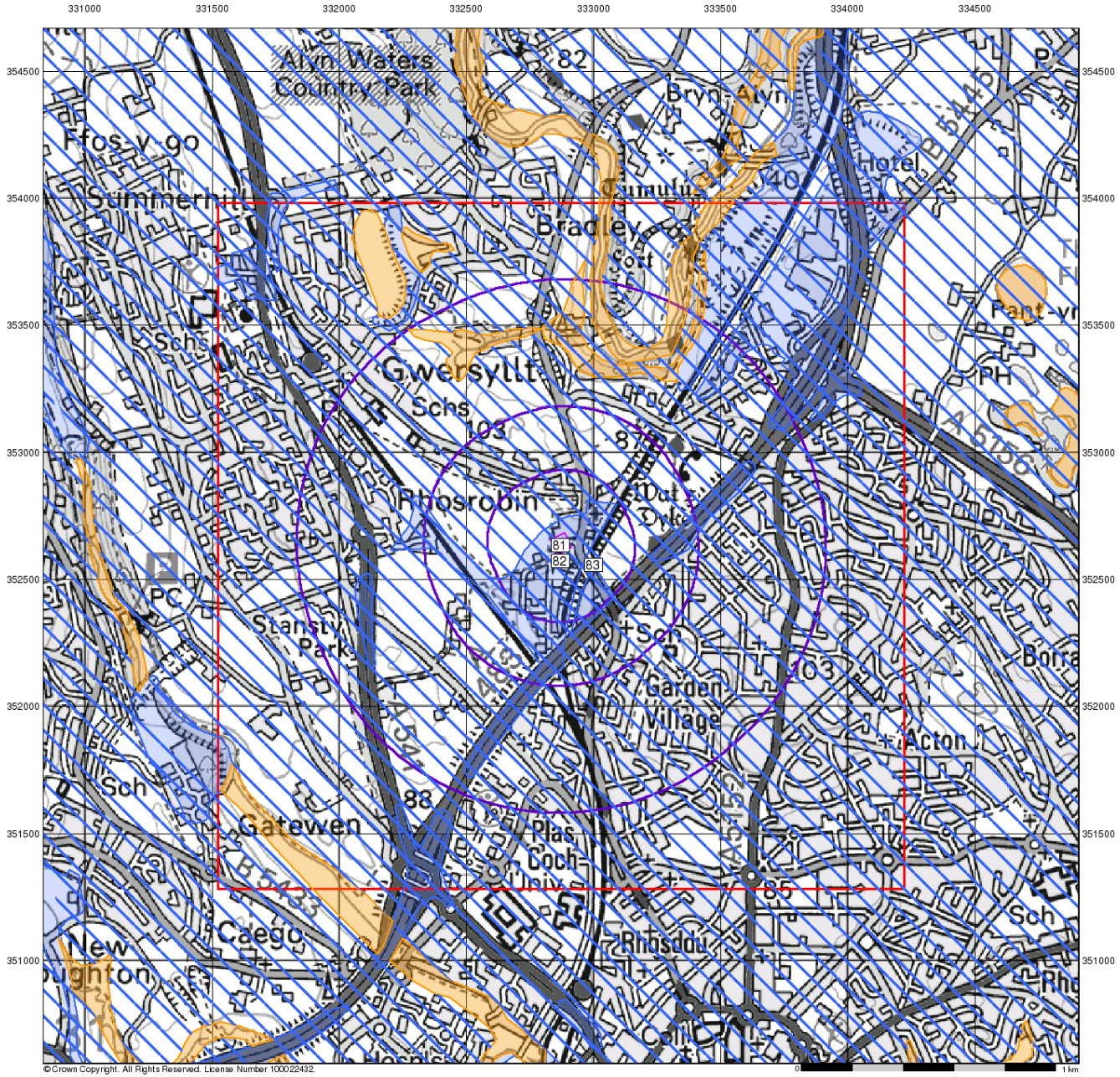
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Customer Ref: C5736
National Grid Reference: 332870, 352630
Slice: A
Site Area (Ha): 0.42
Search Buffer (m): 1000

Site Details

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Ground Stability Data (1:50,000)

General

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

Potential for Compressible Ground Stability Hazards

High | Low
Moderate | Very Low

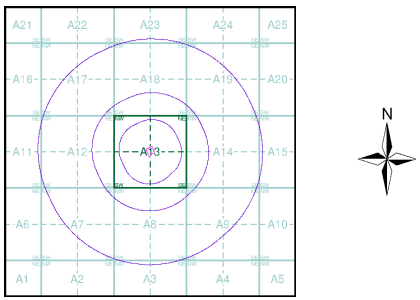
Potential for Collapsible Ground Stability Hazards

High | Low
Moderate | Very Low

Brine Pumping and Salt Mining

	Point	Polygon
Brine Pumping Related Feature	▲	▨
Salt Mining Related Feature	▲	▨

Mining and Ground Stability - Slice A



Order Details

Order Number:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
344266127_1_1

Customer Reference:
C5736

National Grid Reference:
332870, 352630

Slice:
A

Site Area (Ha):
0.42

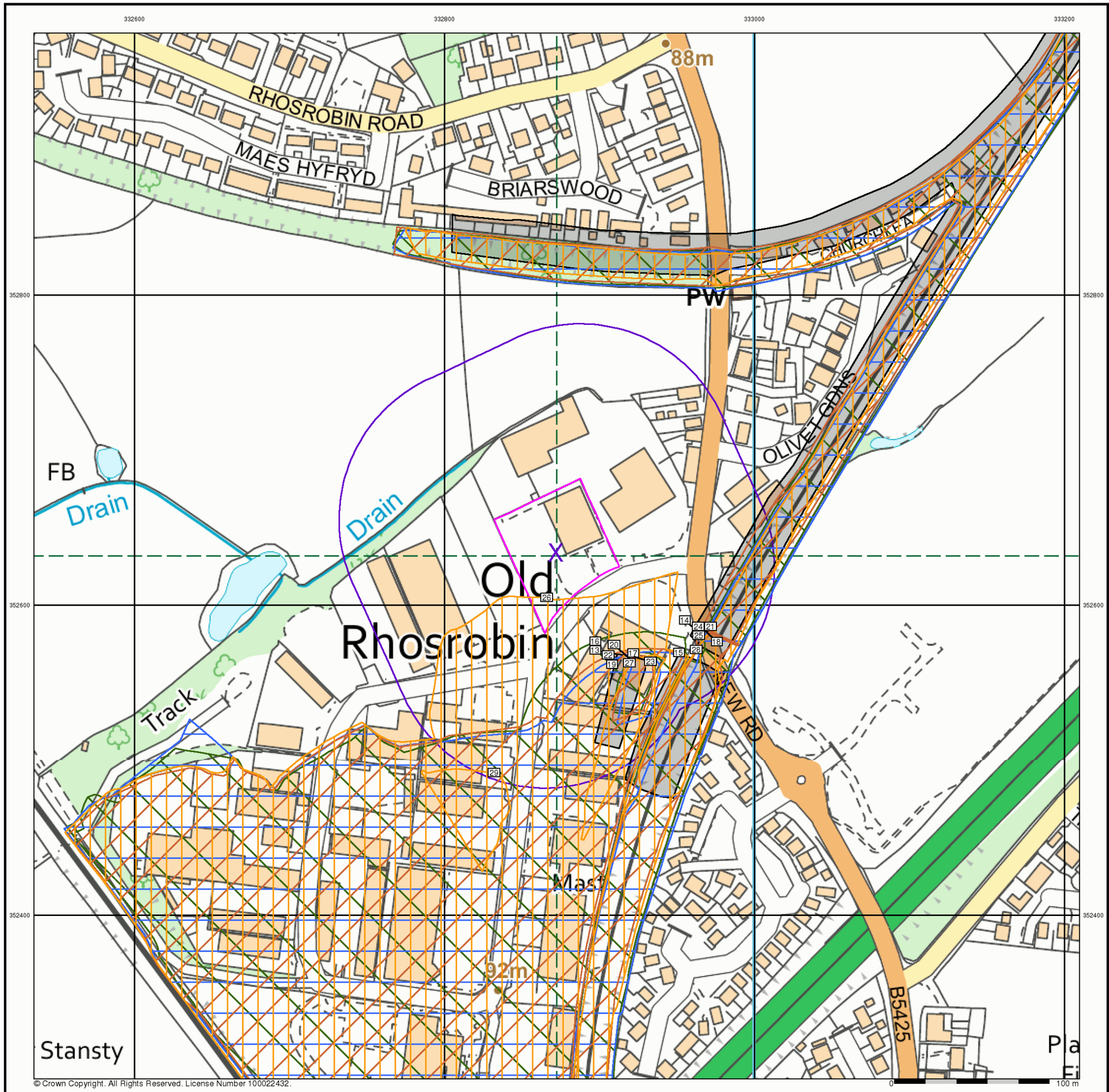
Search Buffer (m):
1000

Site Details:

Rollings, Rhosddu Industrial Estate
Old Rhosrobin
Rhosrobin
WREXHAM
LL11 4YL

Client Details:

Ms S Dixon
Brownfield Solutions Ltd
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173-183 Witton Street
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Historical Land Use Information (1:2,500)

General

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

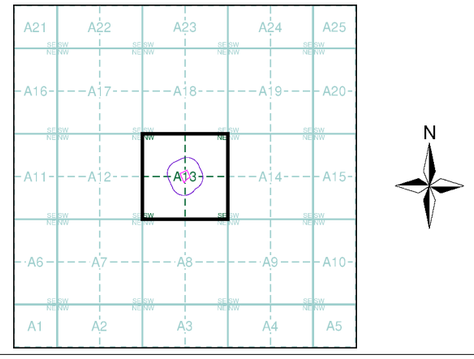
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	▭
Extractive Industries Activity from 1893 - 1915	▲	—	▨
Extractive Industries Activity from 1906 - 1937	▲	—	▤
Extractive Industries Activity from 1924 - 1949	▲	—	▨
Extractive Industries Activity from 1950 - 1980	▲	—	▥

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	▭

Mining and Ground Stability - Segment A13



Order Details

Order Number:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Plot Buffer (m):	100

Site Details

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Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene
	WGR	Worked Ground (Undivided)	Void	Not Supplied - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	TILLD	Till, Devensian	Diamicton	Not Supplied - Devensian
	GFSDD	Glaciofluvial Sheet Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	GLLDD	Glaciolacustrine Deposits, Devensian	Clay and Silt	Not Supplied - Devensian
	RTDU	River Terrace Deposits (Undifferentiated)	Sand and Gravel	Not Supplied - Quaternary
	LDE	Lacustrine Deposits	Clay and Silt	Not Supplied - Quaternary
	LDE	Lacustrine Deposits	Clay and Silt	Not Supplied - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	HA	Halesowen Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	SAL	Salop Formation	Mudstone, Sandstone and Conglomerate	Not Supplied - Westphalian
	SAL	Salop Formation	Mudstone, Sandstone and Conglomerate	Not Supplied - Westphalian
	CF	Cefn Rock	Sandstone	Not Supplied - Westphalian
	PLMC	Pennine Lower Coal Measures Formation and Pennine Middle Coal Measures Formation (Undifferentiated)	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	PLMC	Pennine Lower Coal Measures Formation and	Sandstone	Not Supplied - Westphalian
		Pennine Middle Coal Measures Formation (Undifferentiated)		
	ETM	Etruria Formation	Mudstone	Not Supplied - Westphalian
		Faults		
		Rock Segments		

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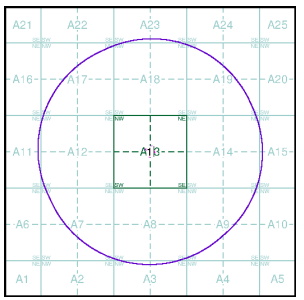
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	**1**
Map Sheet No:	**121**
Map Name:	**Wrexham**
Map Date:	**1993**
Bedrock Geology:	**Available**
Superficial Geology:	**Available**
Artificial Geology:	**Available**
Faults:	**Not Supplied**
Landslip:	**Available**
Rock Segments:	**Not Supplied**

Geology 1:50,000 Maps - Slice A

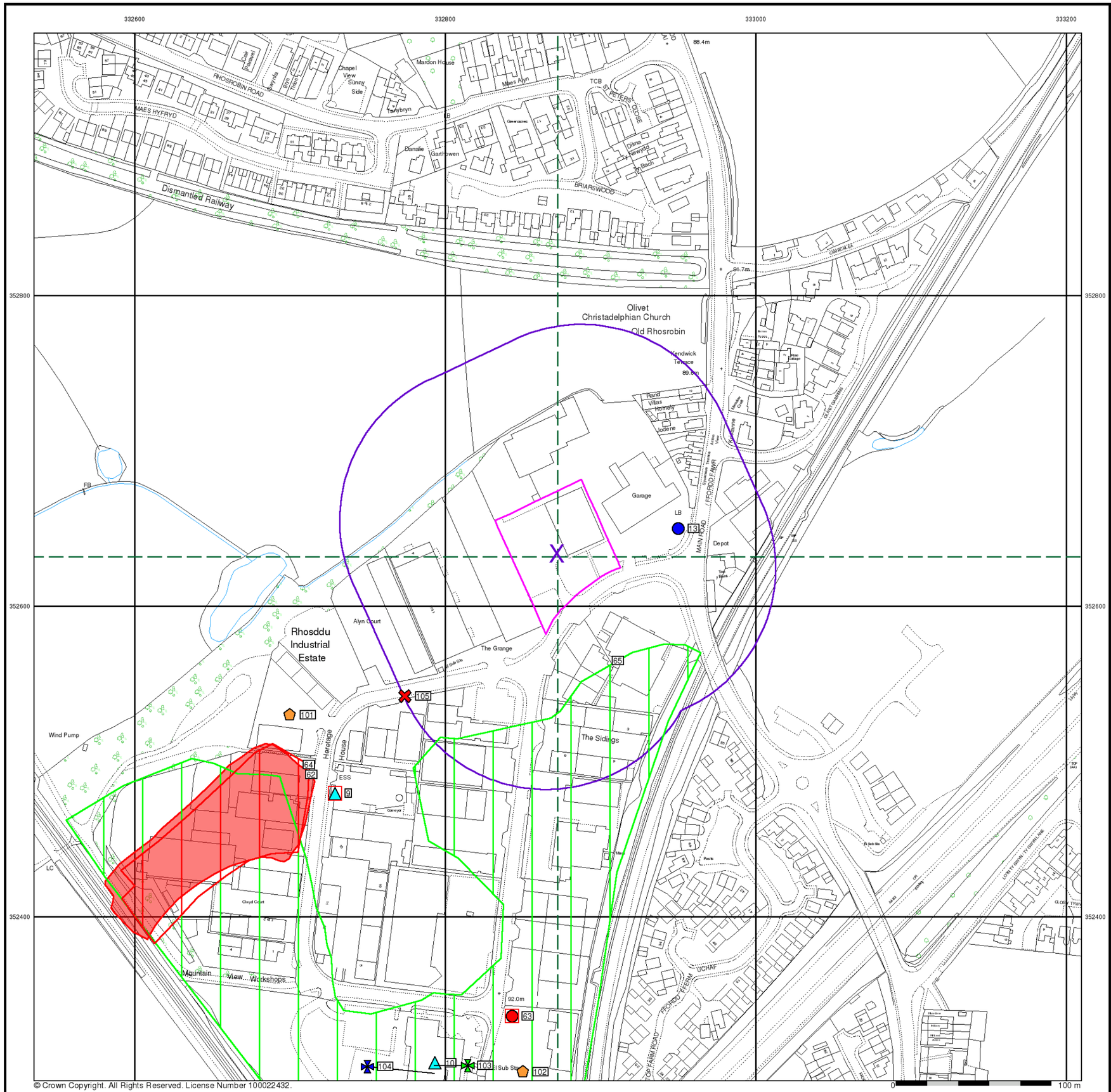


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Order Number:	344266127_1_1
Customer Reference:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details:

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL



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GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

General

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

Agency and Hydrological

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

Hazardous Substances

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

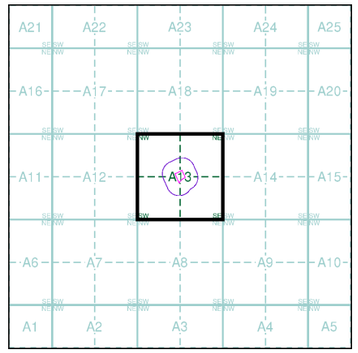
Geological

- BGS Recorded Mineral Site

Waste

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

Site Sensitivity Map - Segment A13



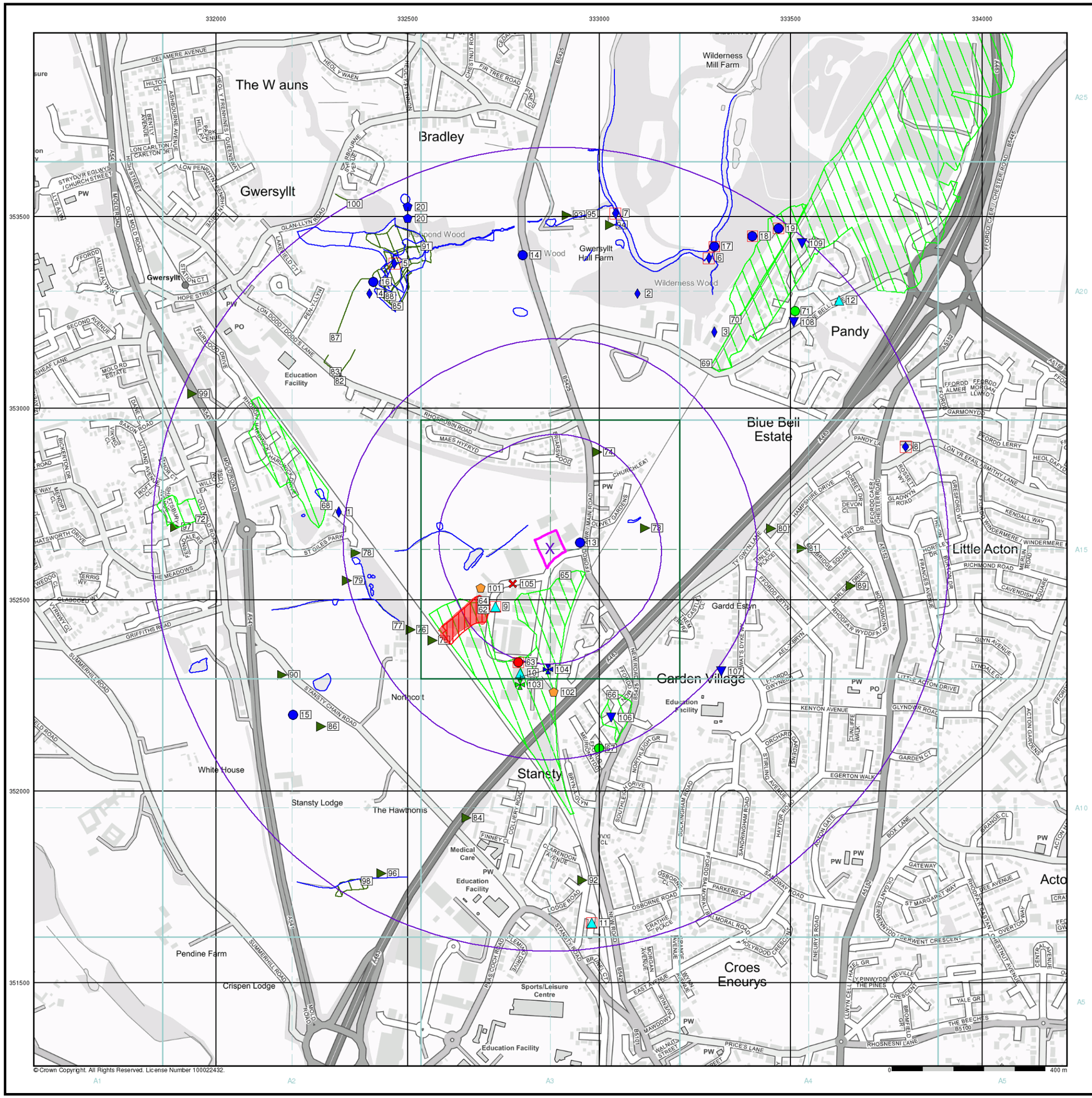
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Order Number:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Plot Buffer (m):	100

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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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

Hazardous Substances

COMAH Site | Explosive Site | NIHHS Site

- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

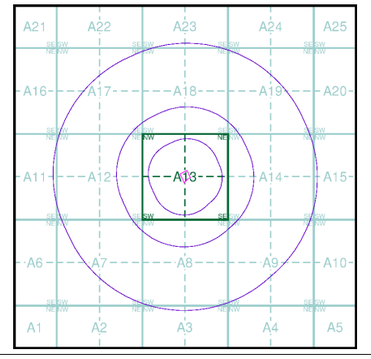
Geological

- BGS Recorded Mineral Site

Waste

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

Site Sensitivity Map - Slice A



Order Details

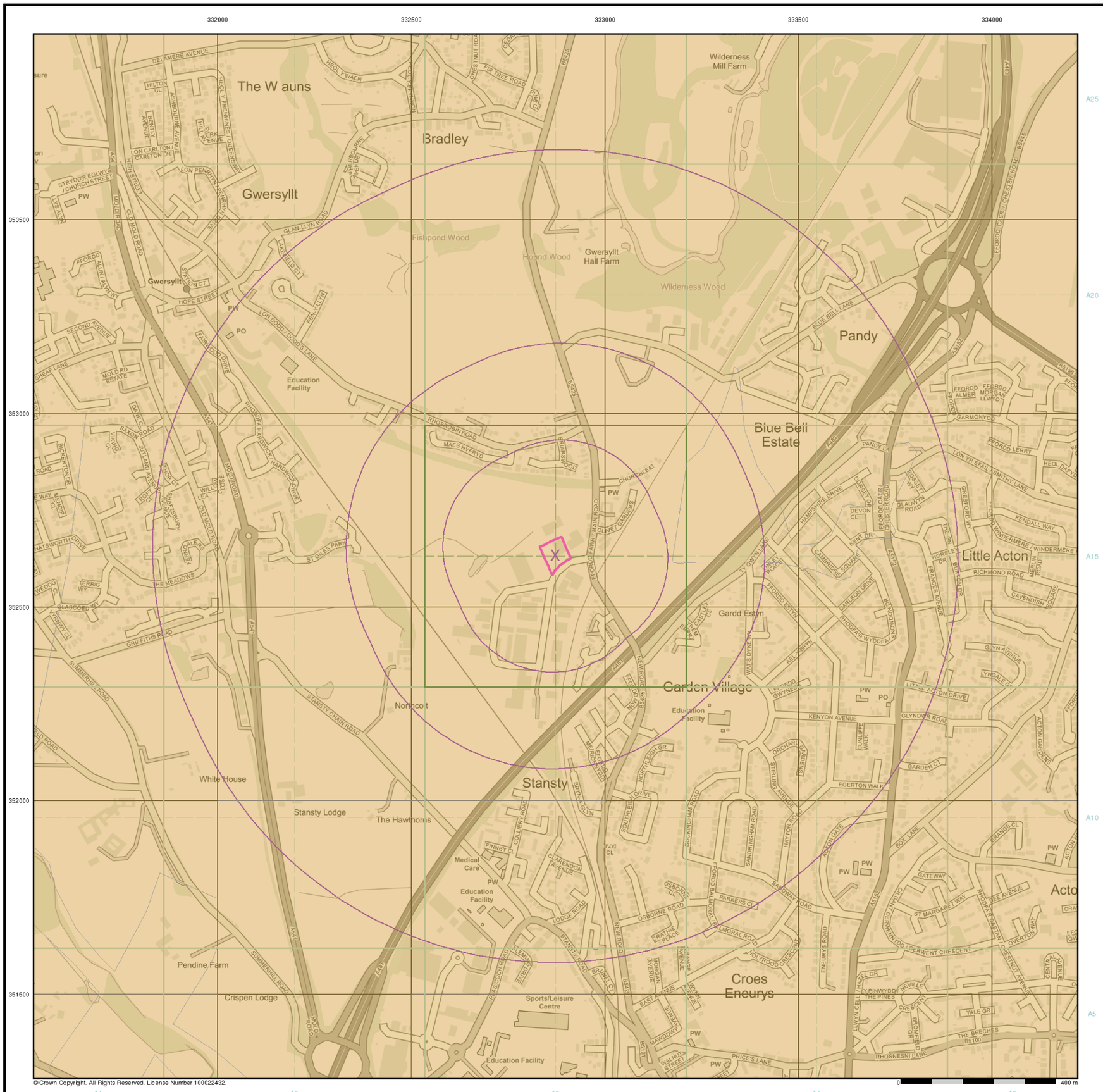
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Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details

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General

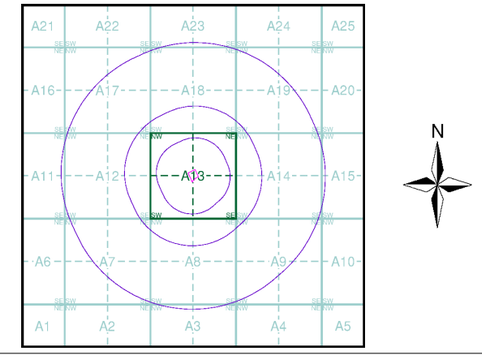
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

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

Estimated Soil Chemistry Cadmium - Slice A



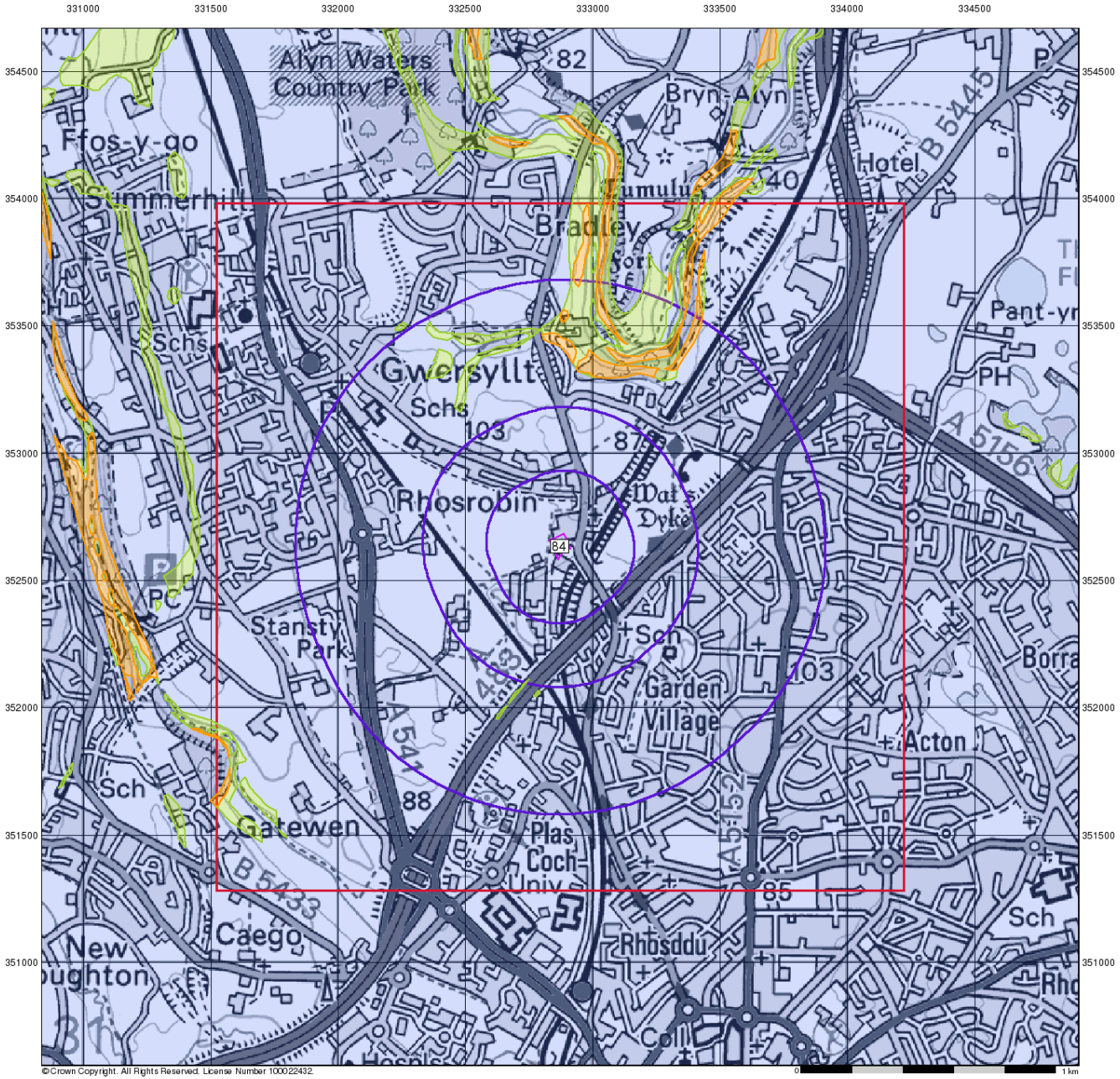
Order Details

Order Details:	344266127_1_1
Customer Ref:	C5736
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Slice:	A
Site Area (Ha):	0.42
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Site Details

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Ground Stability Data (1:50,000)

General

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

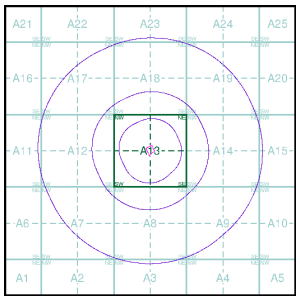
Potential for Landslide Ground Stability Hazards

High | Low
Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low
Moderate | Very Low

Mining and Ground Stability - Slice A



Order Details

Order Number:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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Contents

Report Section and Details	Page Number
Summary	-
The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer selected. For ease of reference, the report is broken down into 4 sections of data; Mining and Natural Cavities Data, Historical Land Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data (1:50,000).	
Mining and Natural Cavities Data	1
The Mining and Natural Cavities Data section features data sets related to the existence of mining areas and their potential hazards; and details of naturally formed cavities. Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites and Potential Mining Areas which feature on the Historical Land Use Information (1:10,000) map.	
Historical Land Use Information (1:2,500)	3
The Historical Land Use Information (1:2,500) section contains data captured from analysis carried out by Landmark of 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping, identifying areas where, historically, the land uses were potentially contaminative. For the purpose of this Envirocheck module, only historical data relating to mining and ground stability has been included and plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also includes the Subterranean Features data set, which details various man-made and man-used underground spaces obtained from the Subterranea Britannica society.	
Historical Land Use Information (1:10,000)	5
The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses. For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.	
Ground Stability Data (1:50,000)	8
The Ground Stability (1:50,000) section includes the BGS Geosure data suite, reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence, brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted, and subsidence insurance claims and insurance investigations data, which is not plotted.	
Historical Map List	9
The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.	
Data Currency	10
Data Suppliers	11
Useful Contacts	12

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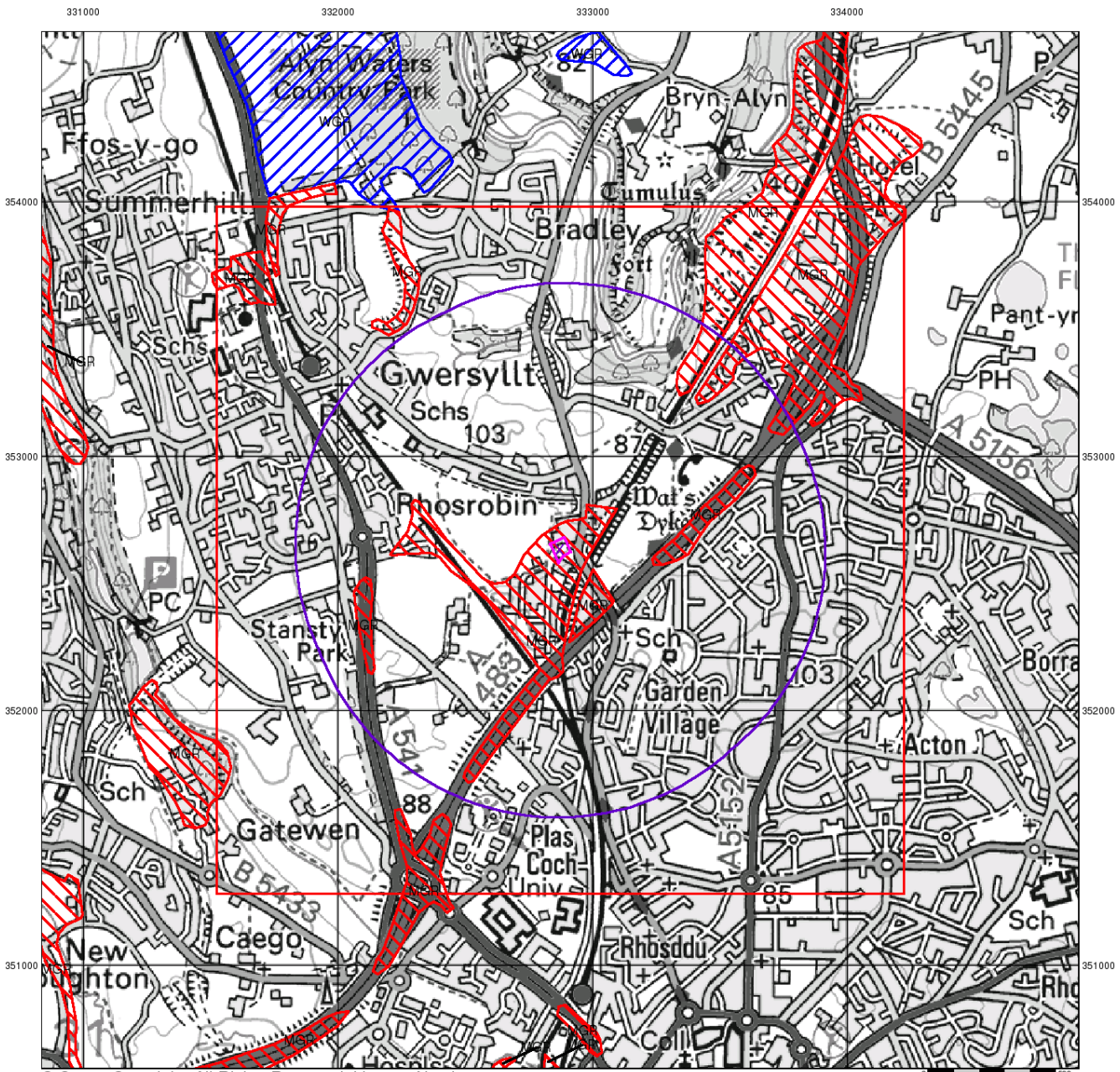
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The brine subsidence data relating to the Driotwich area as provided in this report is derived from JPB studies and physical monitoring undertaken annually over more than 35 years. For more detailed interpretation contact enquiries@jpb.co.uk. JPB retain the copyright and intellectual rights to this data and accept no liability for any loss or damage, including in direct or consequential loss, arising from the use of this data.

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Artificial Ground and Landslip

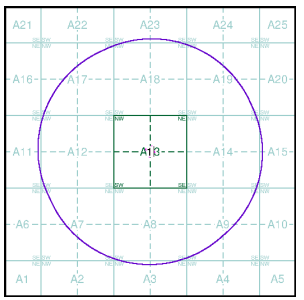
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



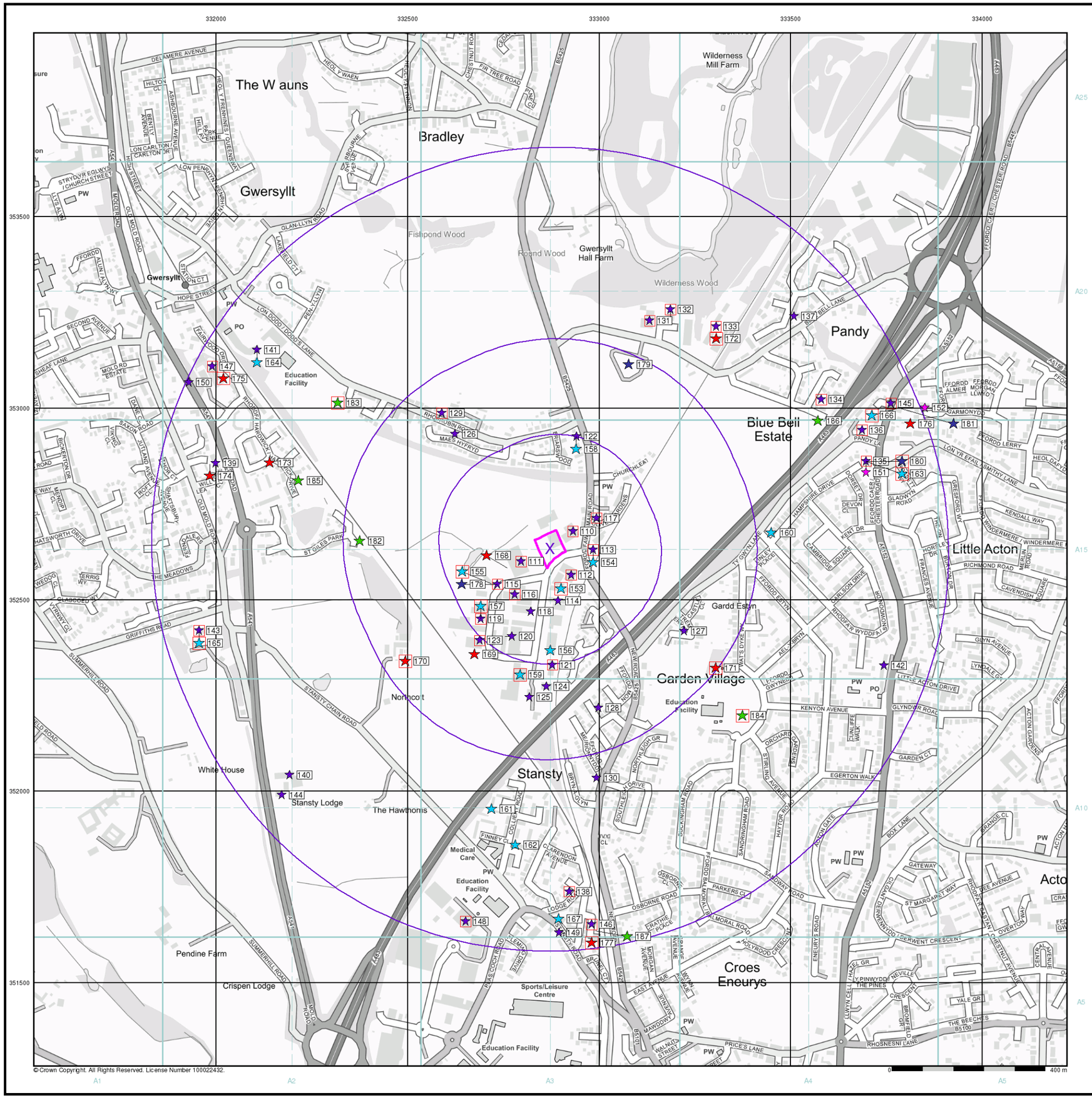
Order Details:

Order Number:	344266127_1_1
Customer Reference:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details:

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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Industrial Land Use Map

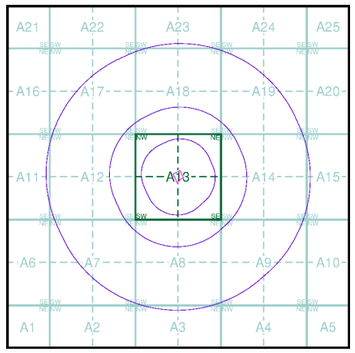
General

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

Industrial Land Use

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

Industrial Land Use Map - Slice A



Order Details

Order Number:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
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General

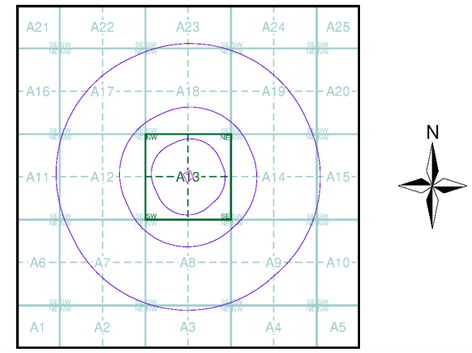
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

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

Estimated Soil Chemistry Chromium - Slice A



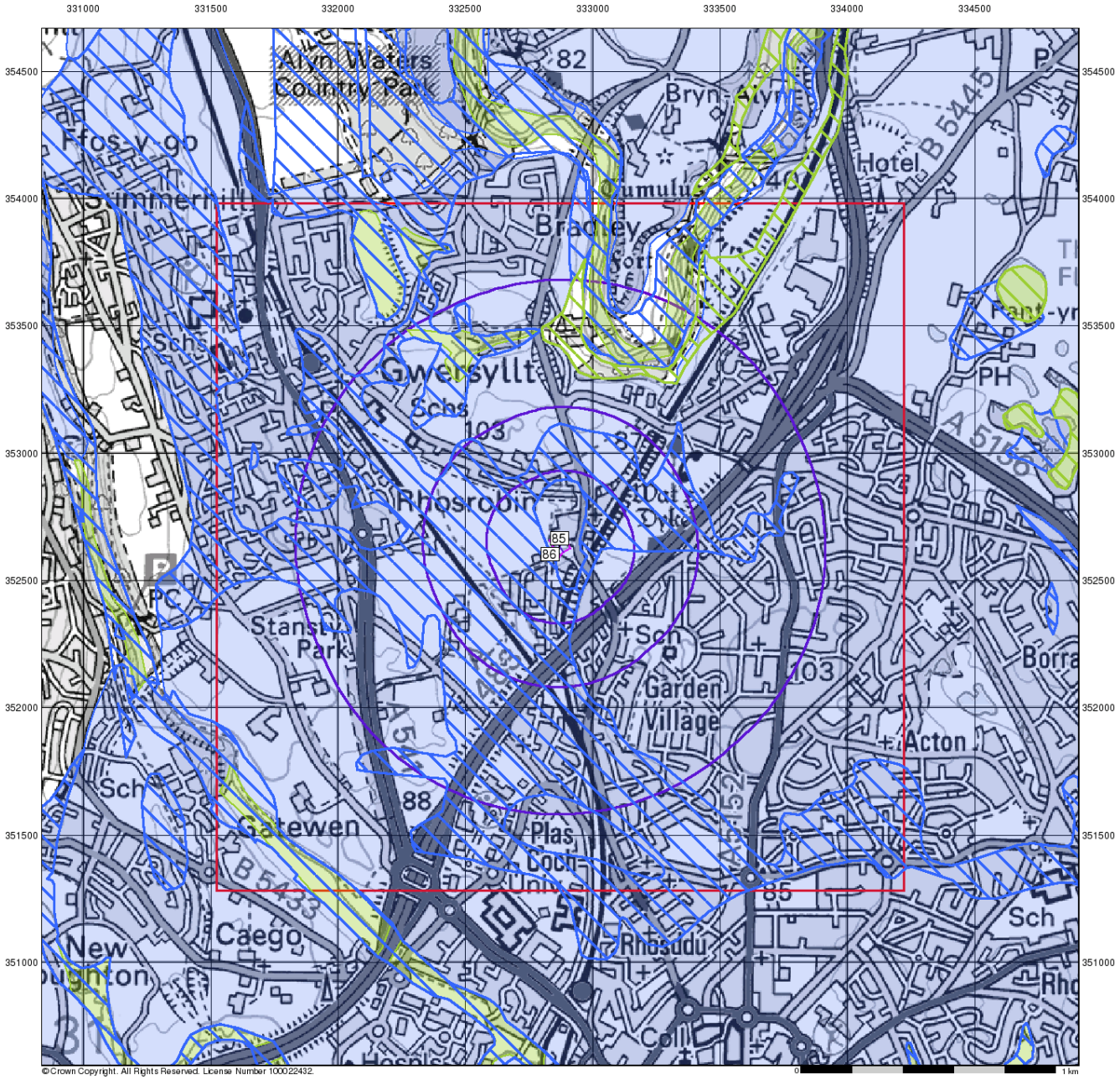
Order Details

Order Details:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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Ground Stability Data (1:50,000)

General

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

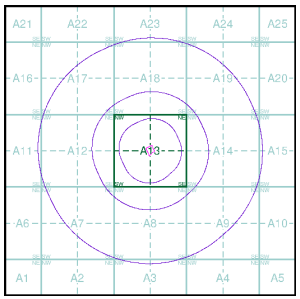
Potential for Running Sand Ground Stability Hazards

High | Low
Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low
Moderate | Very Low

Mining and Ground Stability - Slice A



Order Details

Order Number:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

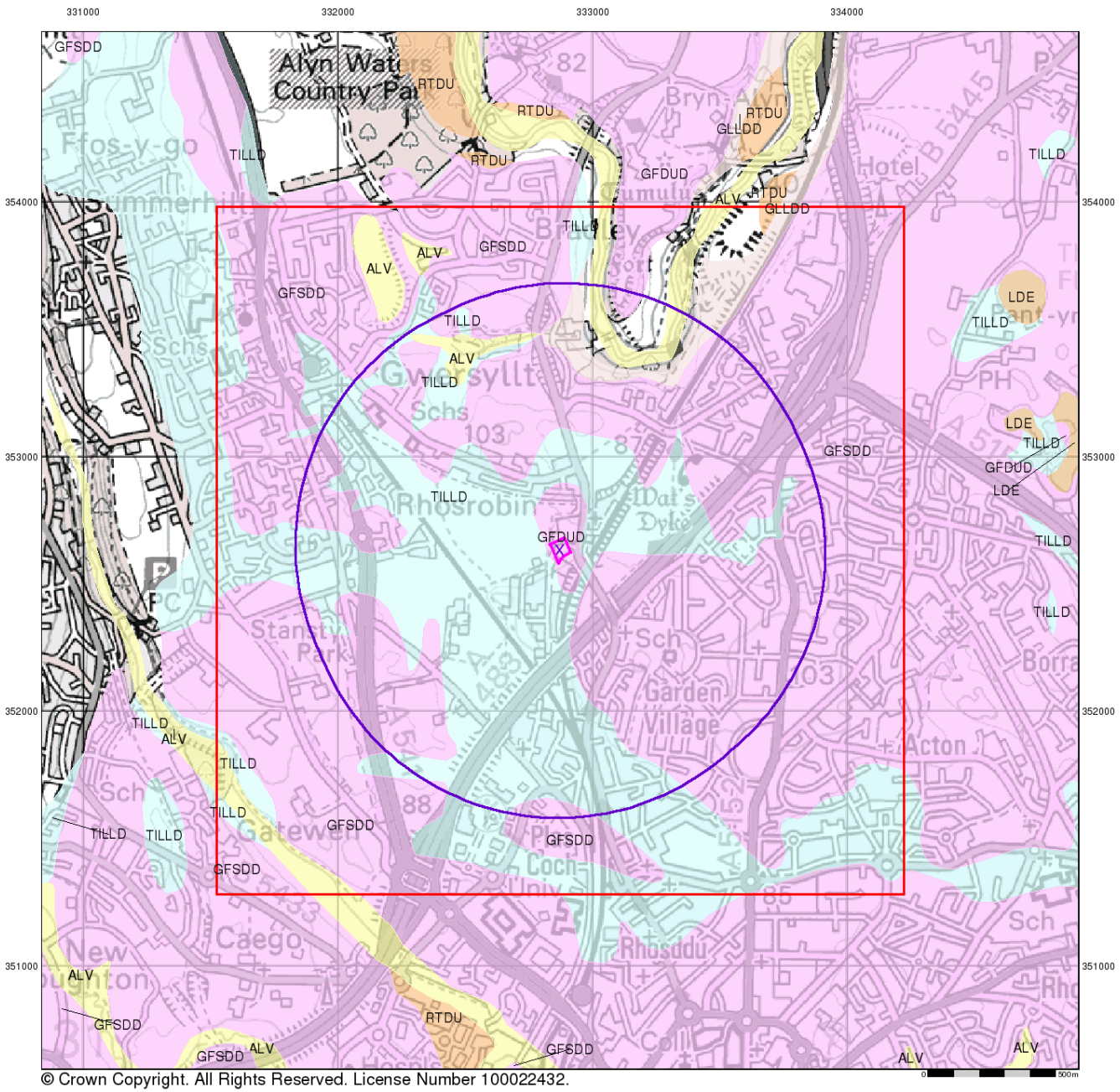
Site Details

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Fax: 0844 844 9951
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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites	pg 1			1	3
Coal Mining Affected Areas	pg 1	Yes	n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability	pg 1	Yes	n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 1		Yes	n/a	n/a
Potential Mining Areas	pg 1	3		1	4
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)	pg 3		3	n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)	pg 3		2	n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)	pg 3		3	n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)	pg 3		4	n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)	pg 4	1	3	n/a	n/a
Subterranean Features (100m)				n/a	n/a
Historical Land Use Information (1:10,000)					
Air Shafts					
Disturbed Ground					
General Quarrying					
Heap, unknown constituents					
Mineral Railway	pg 5		2	1	2
Mining & quarrying general	pg 5			1	1
Mining of coal & lignite	pg 5		1	1	1
Quarrying of sand & clay, operation of sand & gravel pits	pg 5			2	3
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 5		1	2	5
Potentially Infilled Land (Water)	pg 6		2	4	22
Ground Stability Data (1:50,000)					
CBSCB Compensation District			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 8	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 8	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 8	Yes		n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 8	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 8	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 8	Yes	Yes	n/a	n/a
Salt Mining Related Features					



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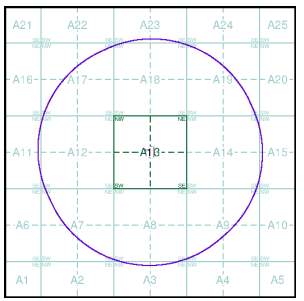
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



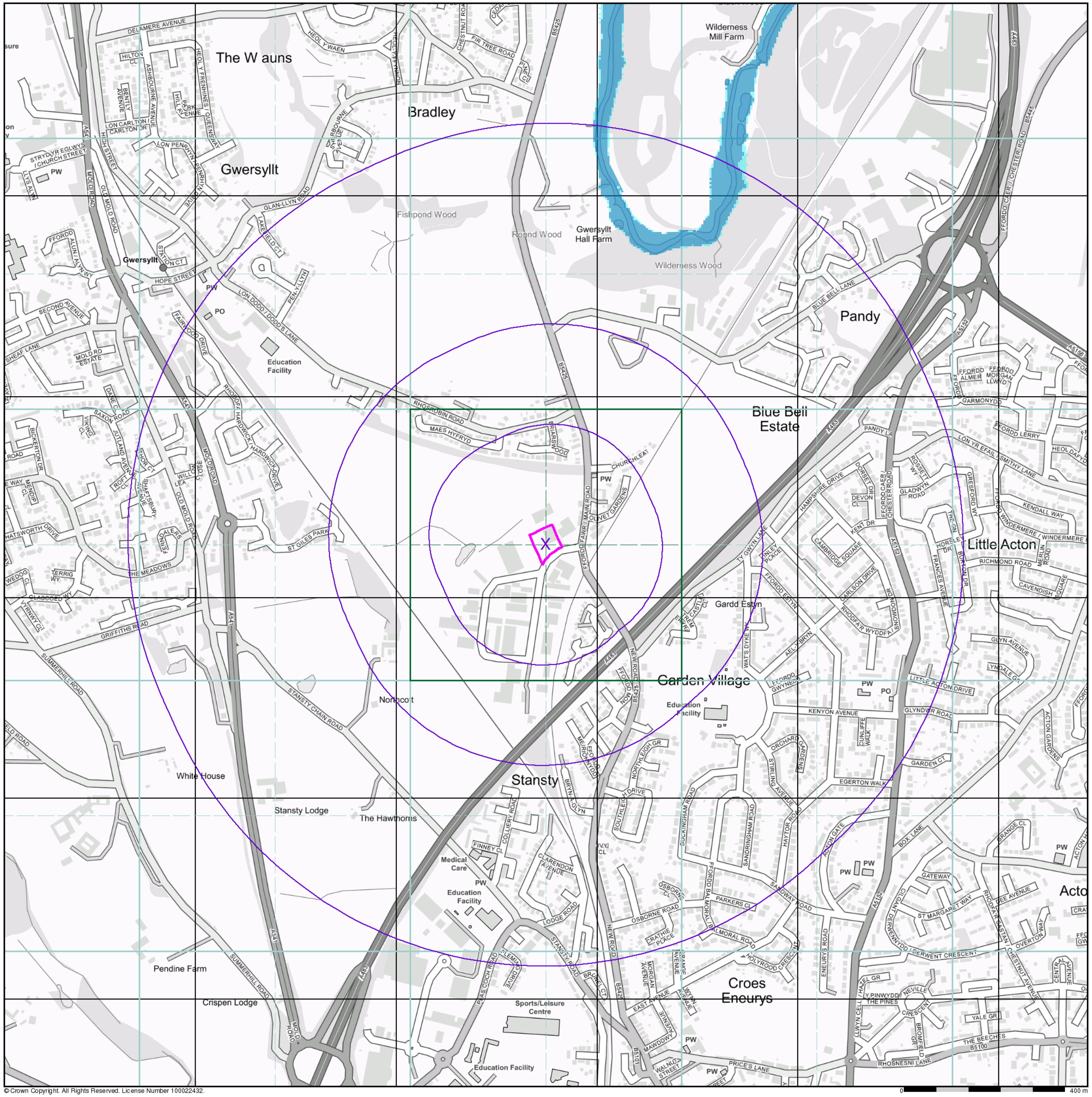
Order Details:

Order Number:	344266127_1_1
Customer Reference:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details:

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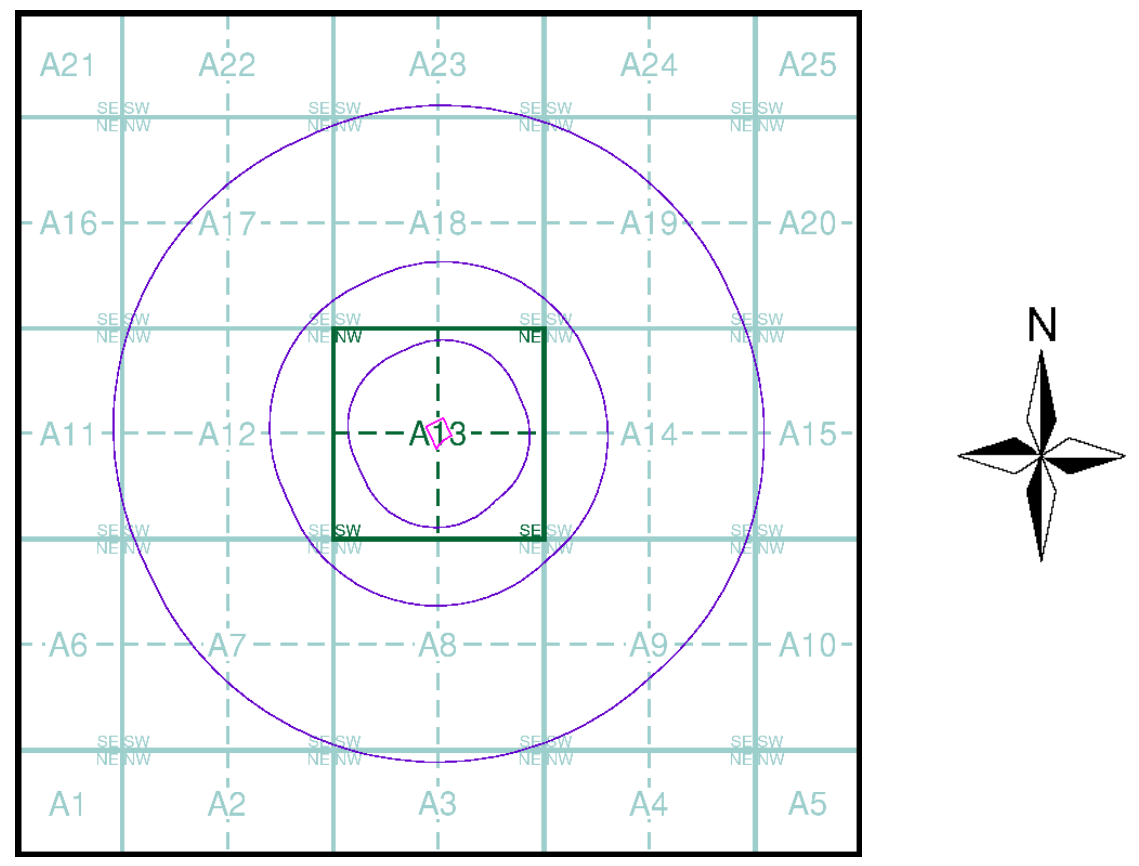
General

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

Agency and Hydrological (Flood)

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

Flood Map - Slice A



Order Details

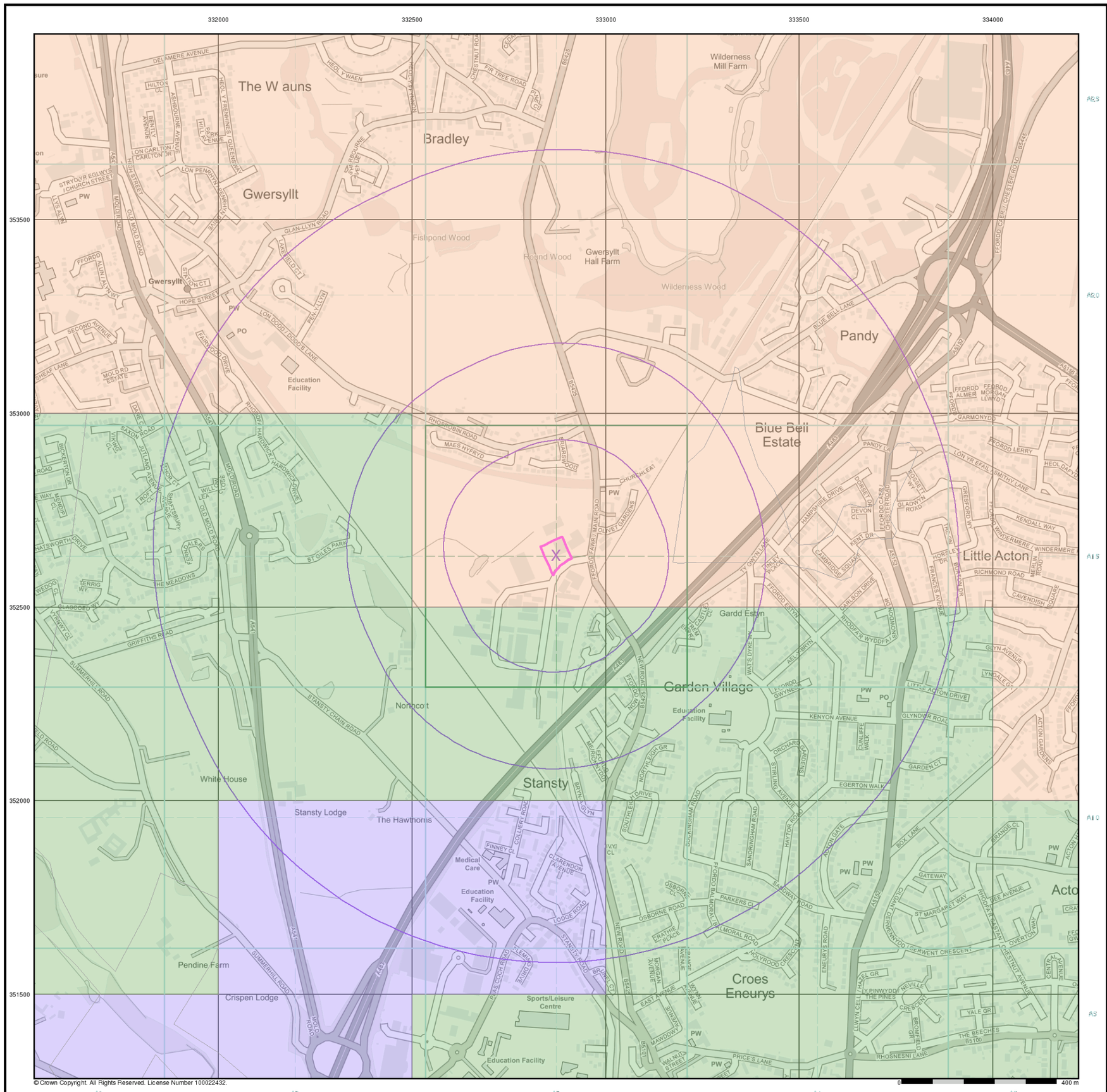
Order Number:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

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General

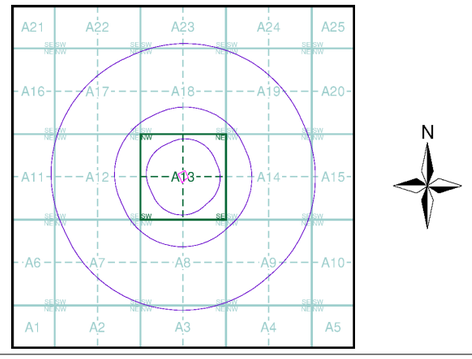
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

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

Estimated Soil Chemistry Lead - Slice A



Order Details

Order Details:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

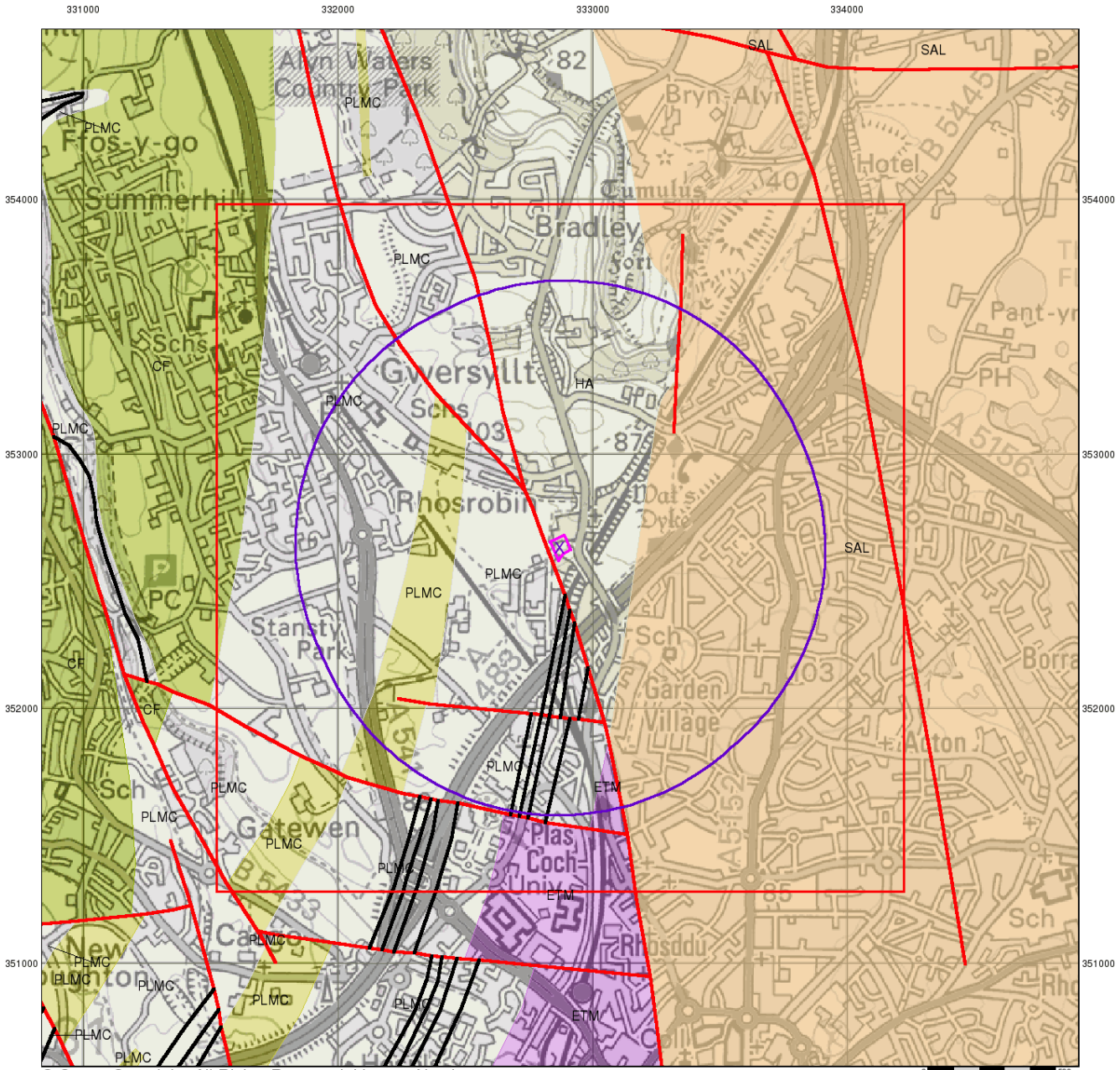
Site Details

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Summary

Report Version v53.0



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Bedrock and Faults

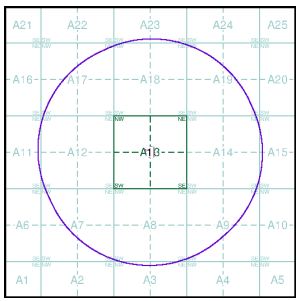
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



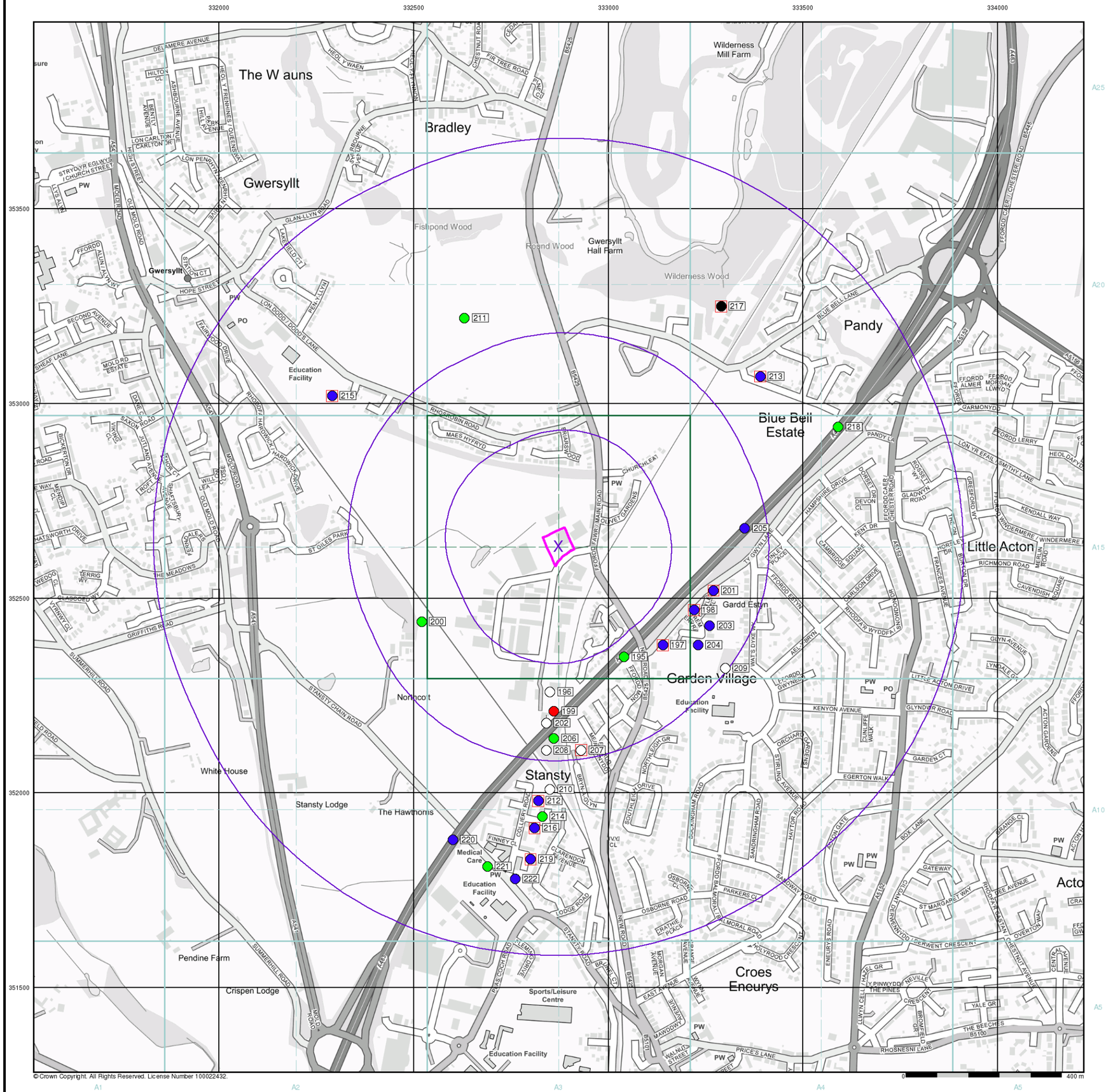
Order Details:

Order Number:	344266127_1_1
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National Grid Reference:	332870, 352630
Slice:	A
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General

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

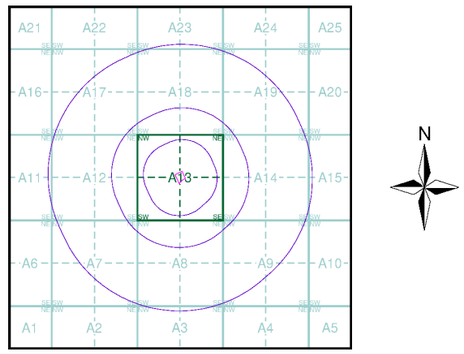
Agency and Hydrological (Boreholes)

- 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



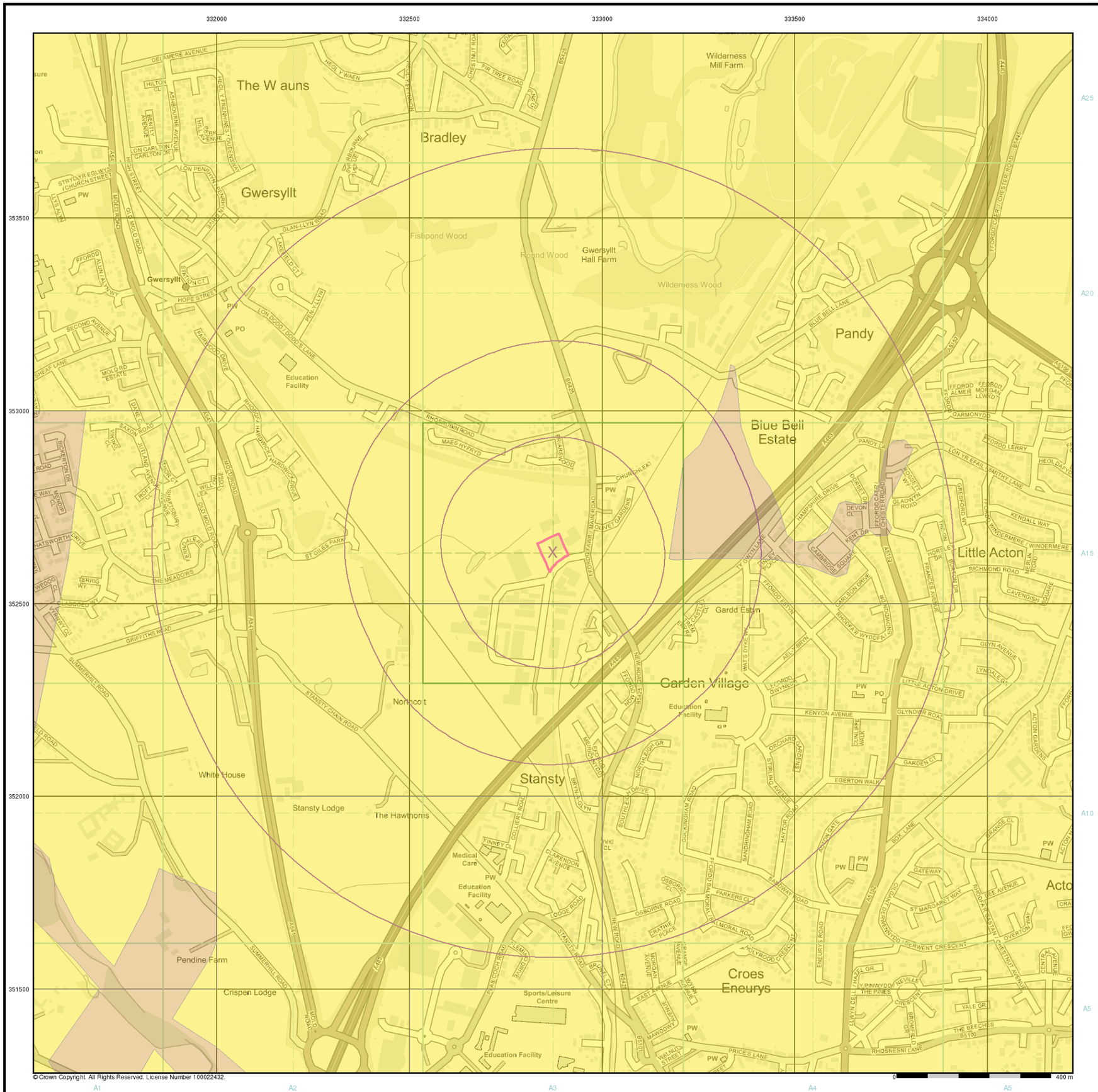
Order Details

Order Number:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
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Site Area (Ha):	0.42
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General

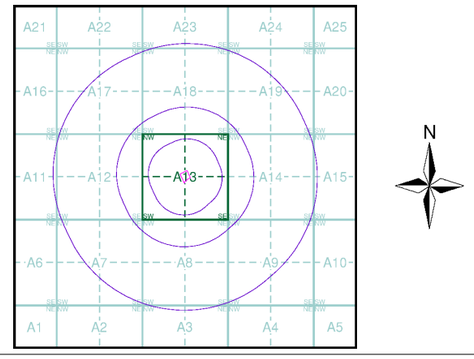
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

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

Estimated Soil Chemistry Nickel - Slice A



Order Details

Order Details:	344266127_1_1
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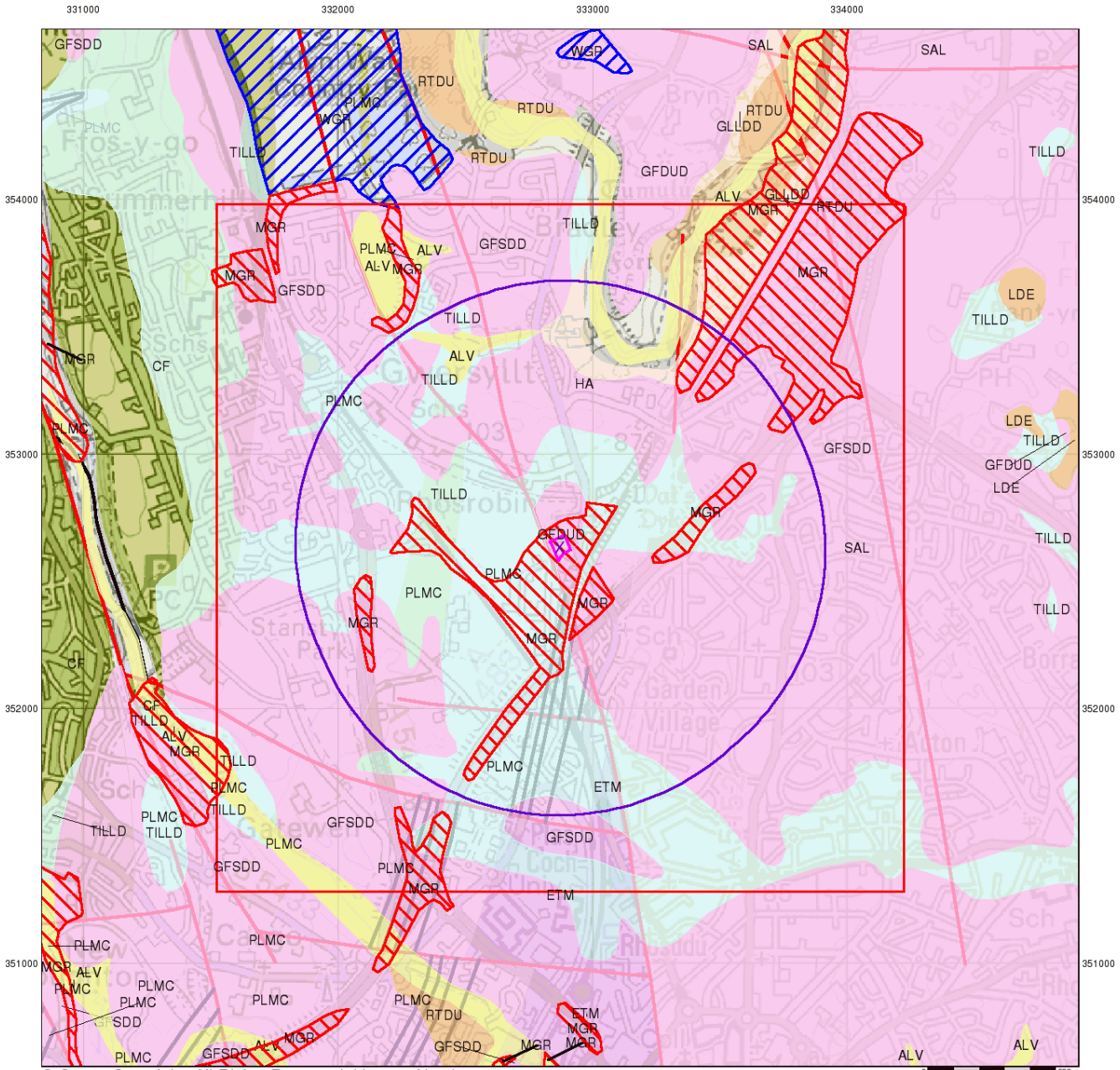
Site Details

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Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**BGS Recorded Mineral Sites** Site Name: Wrexham Colliery Sand Pit Location: Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 184974 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Sheet Deposits, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A8NE (S)	420	1	333031 352197
2	**BGS Recorded Mineral Sites** Site Name: Wrexham Colliery Location: Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 184973 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Salop Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	509	1	333318 352317
3	**BGS Recorded Mineral Sites** Site Name: Wilderness Wood Gravel Pit Location: Gwersyllt, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 184968 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Sheet Deposits, Devensian Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	827	1	333507 353229
4	**BGS Recorded Mineral Sites** Site Name: Wilderness Wood Gravel Pit Location: Gwersyllt, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 184969 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Sheet Deposits, Devensian Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	990	1	333529 353435
	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.	A13NW (NE)	0	2	332872 352634
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NW (NE)	0	3	332872 352634
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	19	1	332827 352617
5	**Potential Mining Areas** Name: Wrexham Ceased Operation: 1924 Commodity: Coal; Two Yard; Crank; Powell Reference: 7935 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A13NW (NE)	0	4	332872 352634



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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

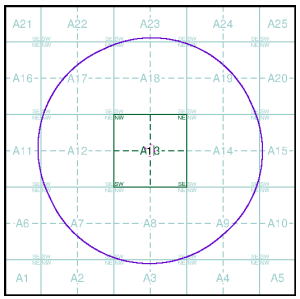
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A

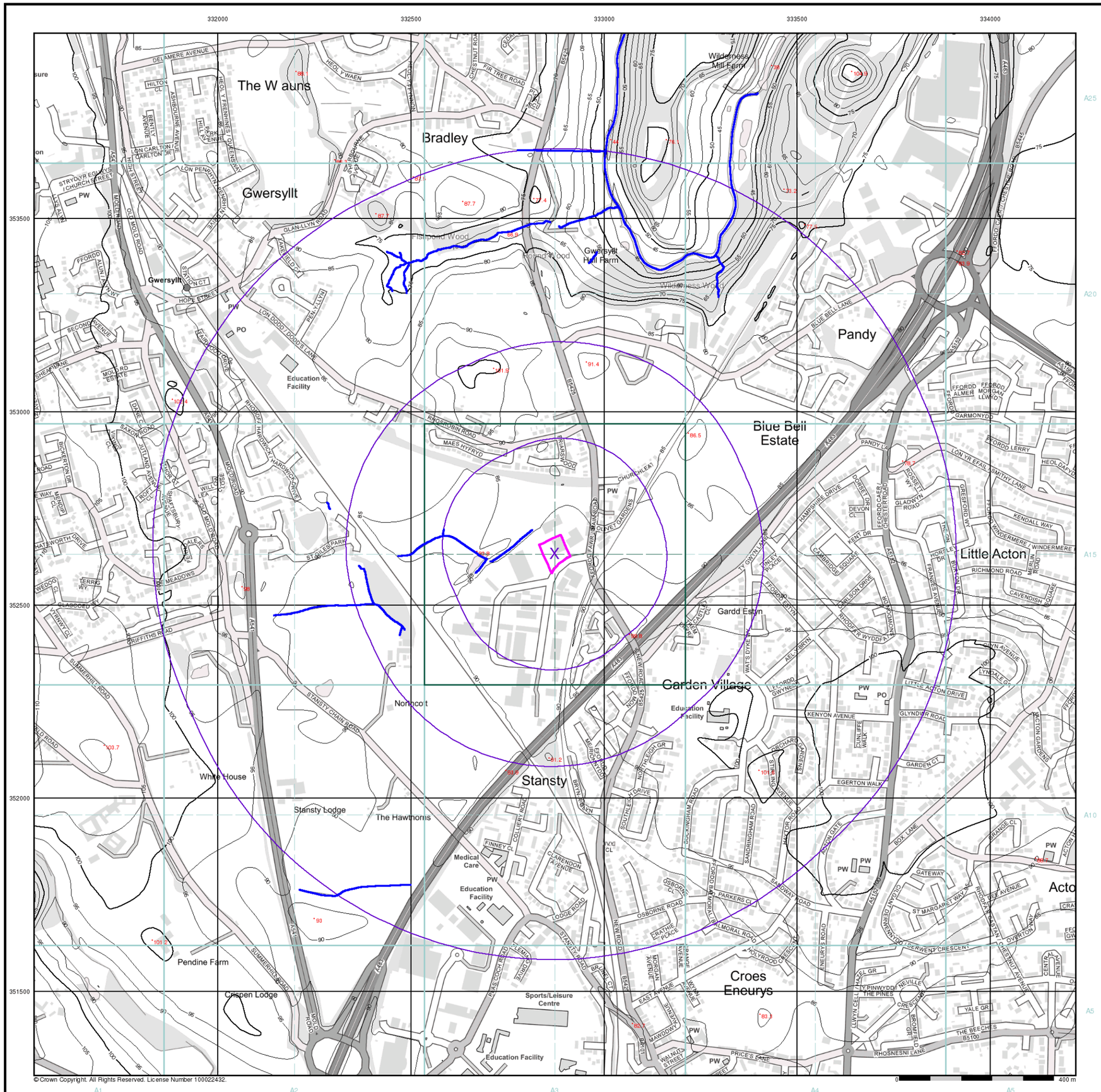


Order Details:

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Slice:	A
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General

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

OS Water Network Data

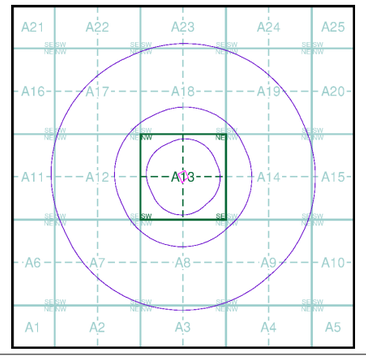
- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in meters)

Standard Contour 105 100 95
Master Contour
Spot Height 167.3

- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



Order Details

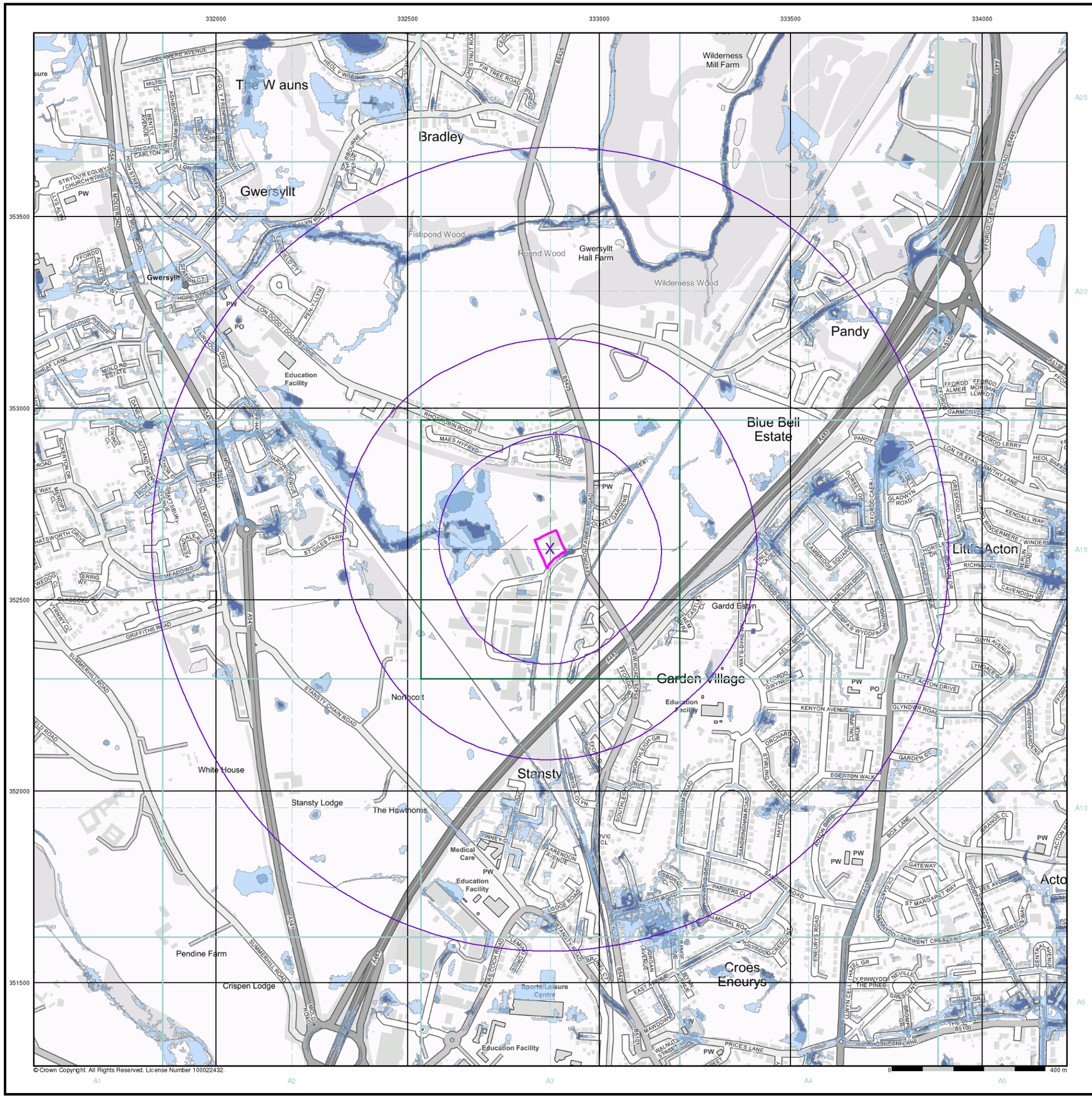
Order Number:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Potential Mining Areas** Name: Wrexham and Acton Ceased Operation: 1917 Commodity: Coal; Main Reference: 7170 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A13NW (NE)	0	4	332872 352634
7	**Potential Mining Areas** Name: Wrexham and Acton Ceased Operation: 1921 Commodity: Coal; Brassey Reference: 7601 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A13NW (NE)	0	4	332872 352634
8	**Potential Mining Areas** Name: Acton Ceased Operation: Not Supplied Commodity: Coal Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A13SE (E)	291	4	333203 352629
9	**Potential Mining Areas** Name: Westminster Ceased Operation: 1925 Commodity: Coal; Powell; Smith; Crank; Two Yard; Four Feet; Queen; Main; Brassey; Drowsell Reference: 8153 Alternate Name/Mine: Broughton Alternate Name/Mine: Ffrwd Alternate Name/Mine: Gwersyllt Alternate Name/Mine: Nant Old Alternate Name/Mine: Nos. 1, 2, 3, 4, 5 Alternate Name/Mine: Nos. 7, 9 Custodian: Not Supplied	A17SE (NW)	651	4	332407 353149
10	**Potential Mining Areas** Name: Westminster Ceased Operation: 1909 Commodity: Coal; Main; Brassey Reference: 7180 Alternate Name/Mine: Broughton Old Alternate Name/Mine: Ffrwd Alternate Name/Mine: Gwersyllt Alternate Name/Mine: Llay Hall Alternate Name/Mine: Nant Old Alternate Name/Mine: Nos. 1, 2, 3, 4, 5 Custodian: Not Supplied	A17SE (NW)	651	4	332407 353149
11	**Potential Mining Areas** Name: Gatewen Ceased Operation: 1932 Commodity: Coal; Main; Four Feet; Crank; Yard Reference: 10902 Alternate Name/Mine: Broughton New Custodian: Not Supplied	A7SE (SW)	799	4	332388 351942
12	**Potential Mining Areas** Name: Gatewen Ceased Operation: 1924 Commodity: Coal; Powell; Smith Reference: 8458 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A7SE (SW)	799	4	332388 351942



BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

General

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

Risk of Flooding from Surface Water

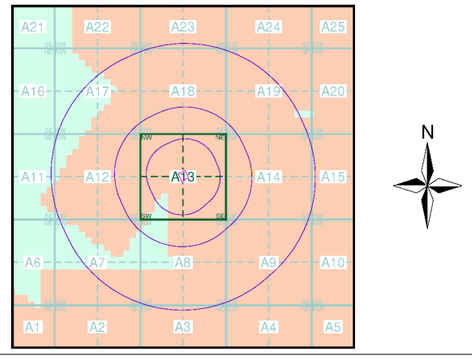
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

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

EA/NRW Suitability Map - Slice A



Order Details

Order Number:	344266127_1_1
Customer Ref:	C5736
National Grid Reference:	332870, 352630
Slice:	A
Site Area (Ha):	0.42
Search Buffer (m):	1000

Site Details

Rollings, Rhosddu Industrial Estate, Old Rhosrobin, Rhosrobin, WREXHAM, LL11 4YL

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

Historical Land Use Information (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	**Extractive Industries or Potential Excavations from 1855-1909** Use: Railway Embankment First Map Published Date: 1872 Last Map Published Date: Not Applicable	A13SE (SE)	47	-	332912 352568
14	**Extractive Industries or Potential Excavations from 1855-1909** Use: Railway Cutting First Map Published Date: 1872 Last Map Published Date: Not Applicable	A13SE (SE)	62	-	332961 352585
15	**Extractive Industries or Potential Excavations from 1855-1909** Use: Railway Cutting First Map Published Date: 1872 Last Map Published Date: Not Applicable	A13SE (SE)	68	-	332952 352569
16	**Extractive Industries or Potential Excavations from 1893-1915** Use: Wrexham Colliery First Map Published Date: 1899 Last Map Published Date: 1900	A13SE (SE)	22	-	332898 352577
17	**Extractive Industries or Potential Excavations from 1893-1915** Use: Railway Embankment First Map Published Date: 1899 Last Map Published Date: Not Applicable	A13SE (SE)	53	-	332922 352569
18	**Extractive Industries or Potential Excavations from 1893-1915** Use: Railway Cutting First Map Published Date: 1899 Last Map Published Date: 1900	A13SE (SE)	69	-	332968 352584
19	**Extractive Industries or Potential Excavations from 1906-1937** Use: Wrexham Colliery First Map Published Date: 1912 Last Map Published Date: 1912	A13SE (SE)	39	-	332908 352564
20	**Extractive Industries or Potential Excavations from 1906-1937** Use: Railway Embankment First Map Published Date: 1912 Last Map Published Date: Not Applicable	A13SE (SE)	58	-	332922 352563
21	**Extractive Industries or Potential Excavations from 1906-1937** Use: Railway Cutting First Map Published Date: 1912 Last Map Published Date: 1912	A13SE (SE)	70	-	332970 352583
22	**Extractive Industries or Potential Excavations from 1924-1949** Use: Unspecified Mining First Map Published Date: 1937 Last Map Published Date: 1939	A13SE (SE)	35	-	332906 352568
23	**Extractive Industries or Potential Excavations from 1924-1949** Use: Unspecified Deposited Material First Map Published Date: 1937 Last Map Published Date: Not Applicable	A13SE (SE)	55	-	332922 352567

Historical Land Use Information (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	**Extractive Industries or Potential Excavations from 1924-1949** Use: Aqueduct First Map Published Date: 1937 Last Map Published Date: Not Applicable	A13SE (SE)	64	-	332964 352586
25	**Extractive Industries or Potential Excavations from 1924-1949** Use: Railway Cutting First Map Published Date: 1937 Last Map Published Date: 1939	A13SE (SE)	66	-	332964 352583
26	**Extractive Industries or Potential Excavations from 1950-1980** Use: Mine (Disused) First Map Published Date: 1958 Last Map Published Date: 1962	A13SW (S)	0	-	332866 352605
27	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A13SE (SE)	57	-	332919 352563
28	**Extractive Industries or Potential Excavations from 1950-1980** Use: Railway Cutting First Map Published Date: 1959 Last Map Published Date: 1962	A13SE (SE)	72	-	332963 352571
29	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A13SW (S)	97	-	332832 352492

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
30	**Mineral Railway** Use: Not Supplied Date of Mapping: 1879 - 1964	A13NE (N)	144	-	332886 352825
31	**Mineral Railway** Use: Not Supplied Date of Mapping: 1879 - 1938	A13NW (NW)	223	-	332718 352846
32	**Mineral Railway** Use: Not Supplied Date of Mapping: 1900 - 1938	A12SE (W)	384	-	332458 352569
33	**Mineral Railway** Use: Not Supplied Date of Mapping: 1900 - 1964	A12NE (W)	538	-	332300 352729
34	**Mineral Railway** Use: Not Supplied Date of Mapping: 1900 - 1938	A19NW (NE)	951	-	333447 353450
35	**Mining & quarrying general** Use: Not Supplied Date of Mapping: 1900 - 1964	A12SE (W)	371	-	332488 352515
36	**Mining & quarrying general** Use: Not Supplied Date of Mapping: 1900 - 1938	A17SW (NW)	812	-	332113 353032
37	**Mining of coal & lignite** Use: Not Supplied Date of Mapping: 1879 - 1938	A13SE (S)	36	-	332899 352568
38	**Mining of coal & lignite** Use: Not Supplied Date of Mapping: 1900	A14SW (SE)	460	-	333298 352373
39	**Mining of coal & lignite** Use: Not Supplied Date of Mapping: 1964	A19SW (NE)	586	-	333279 353117
40	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1900 - 1938	A8NE (SE)	371	-	333035 352253
41	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1879	A8NE (S)	489	-	332999 352112
42	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1879	A19SW (NE)	831	-	333511 353230
43	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1915 - 1938	A12NW (W)	873	-	331961 352710
44	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1879	A19NW (NE)	964	-	333508 353418
45	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13SE (SE)	39	-	332911 352565
46	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A8NE (SE)	372	-	333035 352252
47	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A8NE (S)	489	-	332999 352112
48	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A12NE (W)	552	-	332288 352747
49	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A19SW (NE)	586	-	333279 353117
50	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A19SW (NE)	723	-	333356 353232

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
51	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A19SW (NE)	831	-	333511 353230
52	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A12NW (W)	873	-	331961 352710
53	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A13NE (E)	213	-	333116 352687
54	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A13NE (NE)	230	-	332991 352886
55	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1879	A13SW (SW)	355	-	332561 352400
56	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1879	A12SE (SW)	396	-	332503 352422
57	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A12SE (SW)	404	-	332489 352433
58	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1879	A12SE (W)	473	-	332360 352622
59	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A12SE (W)	506	-	332337 352551
60	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A14NW (E)	536	-	333445 352687
61	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A14NW (E)	613	-	333525 352635
62	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A17SE (NW)	670	-	332324 353092
63	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A17SE (NW)	682	-	332312 353096
64	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A8SW (S)	686	-	332649 351931
65	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A17SE (NW)	709	-	332474 353266
66	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A7NE (SW)	724	-	332270 352169
67	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A17SE (NW)	741	-	332313 353184
68	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A17SE (NW)	744	-	332449 353293
69	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A14SE (E)	746	-	333653 352536
70	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A12SW (SW)	750	-	332169 352304
71	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1879	A18NW (N)	816	-	332550 353424

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
72	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A8SE (S)	819	-	332952 351768
73	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A18NE (N)	823	-	332911 353504
74	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A18NE (N)	829	-	333024 353499
75	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A18NE (N)	831	-	332980 353507
76	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A7SE (SW)	909	-	332427 351786
77	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A12NW (W)	944	-	331889 352690
78	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A7SE (SW)	944	-	332393 351765
79	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A17SW (NW)	977	-	331933 353038
80	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A17NE (NW)	996	-	332362 353534

Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	CBSCB Compensation District The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
81	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	332872 352634
82	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	332872 352634
83	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	113	1	333001 352555
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	45	1	332825 352705
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	332872 352634
84	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	332872 352634
85	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	332872 352634
86	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	12	1	332835 352604
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	332872 352634
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	111	1	333007 352567

Historical Map List

The following mapping has been analysed for Historical Land Use Information (1:2,500):

1:2,500	Mapsheet	Published Date
Denbighshire	028_04	1872
Denbighshire	028_03	1873
Denbighshire	028_07	1874
Denbighshire	028_04	1899
Denbighshire	028_07	1899
Denbighshire	028_08	1899
Denbighshire	028_03	1900
Denbighshire	028_03	1912
Denbighshire	028_04	1912
Denbighshire	028_07	1912
Denbighshire	028_08	1912
Denbighshire	028_04	1937
Denbighshire	028_08	1937
Denbighshire	028_03	1939
Denbighshire	028_07	1939
Ordnance Survey Plan	SJ3252	1962

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheet	Published Date
Denbighshire	021_00	1879
Denbighshire	028_00	1879
Flintshire	017_SE	1900
Denbighshire	021_SE	1900
Denbighshire	028_NE	1900
Flintshire	017_SE	1914
Denbighshire	021_SE	1914
Denbighshire	028_NE	1915
Flintshire	017_SE	1938
Denbighshire	021_SE	1938
Denbighshire	028_NE	1938
Ordnance Survey Plan	SJ35SW	1964
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	SJ35SW	1992

Data Currency

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	January 2024	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	February 2023	Annual Rolling Update
Man Made Mining Cavities Stantec UK Ltd	December 2023	Bi-Annually
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Natural Cavities Stantec UK Ltd	December 2023	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	**Version**	**Update Cycle**
Subterranean Features Landmark Information Group Limited	July 2023	Bi-Annually
Ground Stability Data (1:50,000)	**Version**	**Update Cycle**
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	 As notified
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
Brine Subsidence Solution Area Johnson Poole & Bloomer	December 2020	

Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
The Coal Authority	The Coal Authority
Ove Arup	ARUP
Stantec UK Ltd	Stantec
Wardell Armstrong	wardell armstrong your earth our world
Johnson Poole & Bloomer	JPB

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	**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
3	**Ove Arup & Partners** Central Square, Forth Street, Newcastle upon Tyne, Tyne and Wear, NE1 3PL	Telephone: 0191 261 6080 Fax: 0191 261 7879
4	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9960 Fax: 0844 844 9951 Email: customerservice@promap.co.uk Website: www.landmarkinfo.co.uk
-	**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

APPENDIX D

Mining Search Report

The Coal Authority

CON29M
coal mining report

LVW GROUP LIMITED, WAREHOUSE, RHOSDDU INDUSTRIAL ESTATE, OLD RHOSROBIN, WREXHAM, WREXHAM, LL11 4YL

Known or potential coal mining risks

Past underground coal mining	**Page 4**
Future underground coal mining	**Page 4**

Further action

No further reports from the Coal Authority are required. Further information on any next steps can be found in our Professional opinion.

For more information on our reports please visit www.groundstability.com

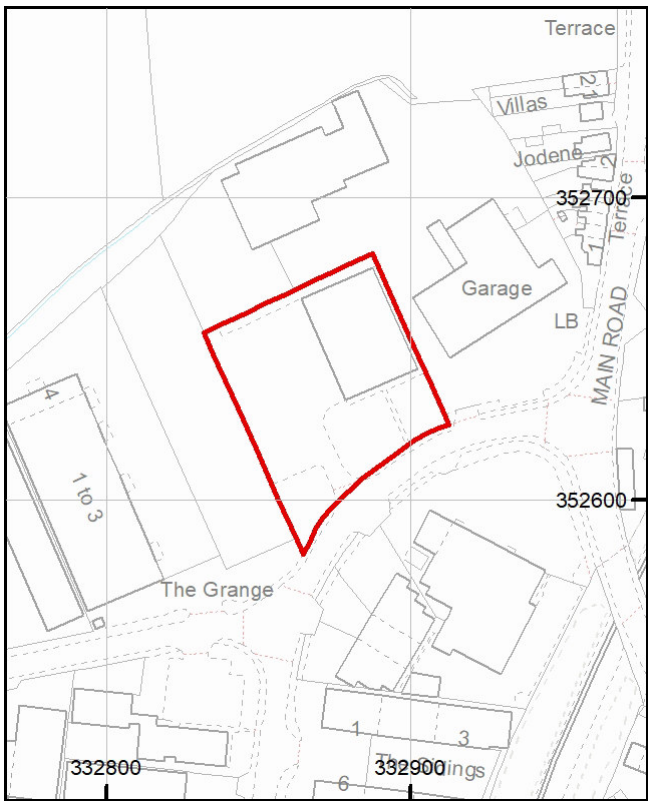
Professional opinion

According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. It is unlikely that these features will impact on the stability of the enquiry boundary.

Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is **on the coalfield**

Map data

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This report is prepared in accordance with the latest Law Society's Guidance Notes 2018, the User Guide 2018 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.

Accessibility

If you would like this information in an alternative format, please contact our communications team on 0345 762 6848 or email communications@coal.gov.uk.

Professional opinion

Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority.

MINE GAS: Please note, if there are no recorded instances of mine gas within the enquiry boundary, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed. In these instances, the Coal Authority recommends that a more detailed Gas Risk Assessment is undertaken by a competent assessor.

If you are looking to develop, or undertake works, within a coal mining development high risk area your Local Authority planning department may require a Coal Mining Risk Assessment to be undertaken by a qualified mining geologist or engineer. Should you require any additional information then please contact the Coal Authority on 0345 762 6848 or email cmra@coal.gov.uk.

Detailed findings

Information provided by the Coal Authority in this report is compiled in response to the Law Society's CON29M Coal Mining enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL.

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1 Past underground coal mining

The property is in a surface area that could be affected by underground mining in 6 seams of coal at 240m to 710m depth, and last worked in 1964.

Any movement in the ground due to coal mining activity associated with these workings should have stopped by now.

2 Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3 Future underground coal mining

The property is not in an area where the Coal Authority has received an application for, and is currently considering whether to grant a licence to remove or work coal by underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

4 Mine entries

There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

5 Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6 Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7 Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8 Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9 Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10 Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11 Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

12 Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13 Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14 Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Statutory cover



Coal mining subsidence

In the unlikely event of any coal mining related subsidence damage, the Coal Authority or the mine operator has a duty to take remedial action in respect of subsidence caused by the withdrawal of support from land or property in connection with lawful coal mining operations.

When the works are the responsibility of the Coal Authority, our dedicated public safety and subsidence team will manage the claim. The house or land owner ("the owner") is covered for these works under the terms of the Coal Mining Subsidence Act 1991 (as amended by the Coal Industry Act 1994). Please note, this Act does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

If you believe your land or property is suffering from coal mining subsidence damage and you need more information on what to do next, please use the following link to our website which sets out what your rights are and what you need to consider before making a claim.
www.gov.uk/government/publications/coal-mining-subsidence-damage-notice-form



Coal mining hazards

Our public safety and subsidence team provide a 24 hour a day, 7 days a week hazard reporting service, to help protect the public from hazards caused by past coal workings, such as a mine shaft or shallow working collapse. To report any hazards please call 0800 288 4242. Further information can be found on our website: www.gov.uk/coalauthority.

Glossary

Key terms

adit - horizontal or sloped entrance to a mine

coal mining subsidence - ground movement caused by the removal of coal by underground mining

Coal Mining Subsidence Act 1991 - the Act setting out the duties of the Coal Authority to repair damage caused by coal mining subsidence

coal mining subsidence damage - damage to land, buildings or structures caused by the removal of coal by underground mining

coal seams - bed of coal of varying thickness

future opencast coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal from the surface

future underground coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal underground. Although it is unlikely, remaining coal reserves could create a possibility for future mining, which would be licensed by the Coal Authority

mine entries - collective name for shafts and adits

mine gas - reports of alleged mine gas emissions received by the Coal Authority within the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded

payments to owners of former copyhold land - historically, copyhold land gave rights to coal to the copyholder. Legislation was set up to allow others to work this coal, but they had to issue a notice and pay compensation if a copyholder came forward

shaft - vertical entry into a mine

site investigation - investigations of coal mining risks carried out with the Coal Authority's permission

stop notice - a delay to repairs because further coal mining subsidence damage may occur and it would be unwise to carry out permanent repairs

subsidence claim - a formal notice of subsidence damage to the Coal Authority since it was established on 31 October 1994

withdrawal of support - a historic notice informing landowners that the coal beneath their property was going to be worked

working facilities orders - a court order which gave permission, restricted or prevented coal mine workings

APPENDIX E

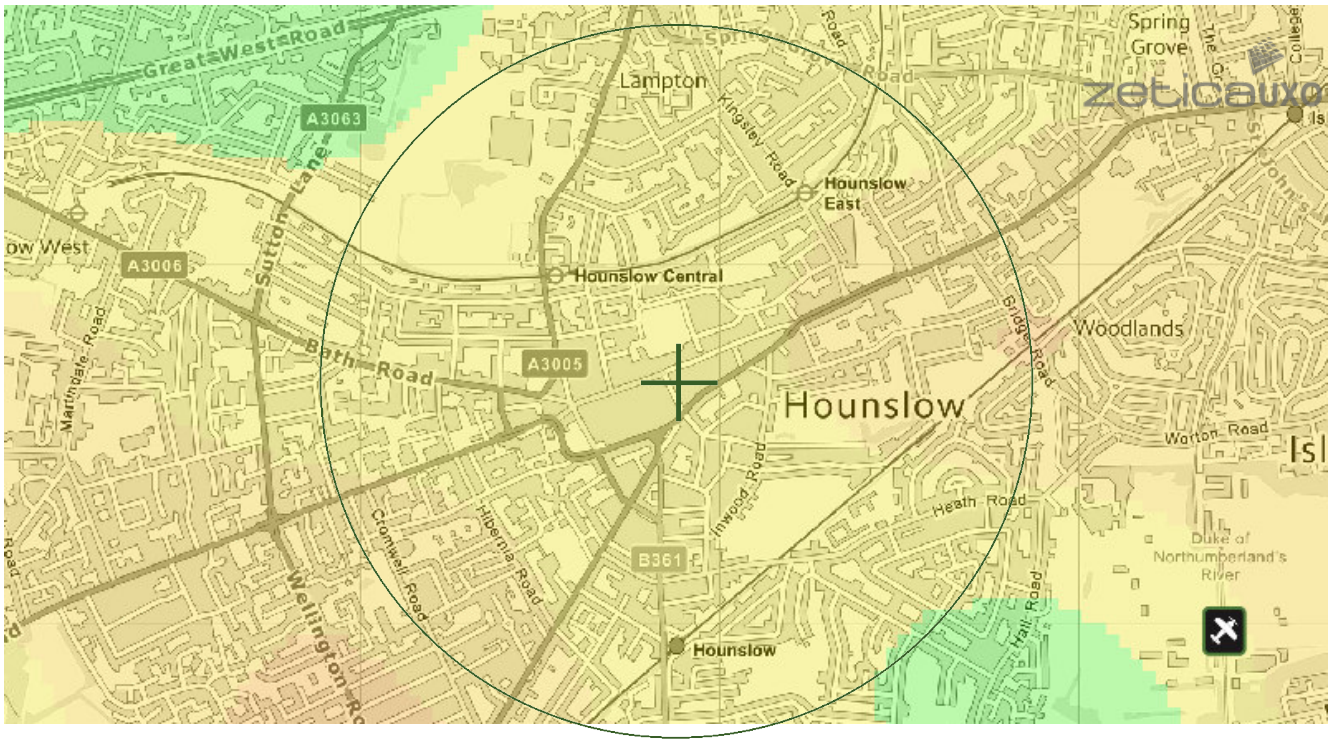
UXO Screening Map

UNEXPLODED BOMB RISK MAP

zeticauxo

SITE LOCATION

Location: TW3 1HL,
Map Centre: 513850,175720



This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

London Bomb Risk

Low — High

Miltary	Industry	UXO find	Airfields
Transport	Docks	Luftwaffe target	Other
Utilities	Abandoned bomb	Bombing decoy	

How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

During WWII, London was bombed more times than any other city in the UK. The bombing densities across the city are generally moderate to high in comparison to the rest of the UK.
You will receive two map downloads for sites on the boundary of London: one to demonstrate the bombing density in relation to the rest of the UK, and another to reflect the bombing density of the site in relation to the rest of London.
Typically, we recommend that a detailed UXO desk study and risk assessment is commissioned for sites in London.

Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then additional detailed research is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm that there is a low potential for UXO to be present on your site, then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

If you are unsure whether other sources of UXO may be present, you can request one of our pre-desk study assessments (PDSA) by emailing a site boundary and location to uxo@zetica.com.

You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

If I have any questions, who do I contact?

tel: +44 (0) 1993 886682 **email:** uxo@zetica.com **web:** www.zeticauxo.com

The information in this UXB risk map is derived from a range of sources and should be used with the accompanying notes on our website.

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgement. The copyright remains with Zetica Ltd.

APPENDIX F

BGS Radon Report

GeoReports

British Geological Survey

Tim Mayall
Brownfield Solutions Ltd
339 Manchester Road
Northwich
CW9 7NL

Radon Report

Advisory report on the requirement for radon protective measures in new buildings, conversions and extensions to existing buildings. The report also indicates whether a site is located within a radon Affected Area

Report Id: ***BGS_338099/53751***

Client reference: C5736/TM

Search location



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Search location indicated in red

Point centred at: 332879,352658

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Radon Report: UK

When extensions are made to existing buildings in high radon areas, or new buildings are constructed in these areas, the Building Regulations for England, Wales, Scotland and Northern Ireland require that protective measures are taken against radon entering the building.

This report provides information on whether radon protective measures are required. Depending on the probability of buildings having high radon levels, the Regulations may require either:

1. No protective measures
2. Basic protective measures
3. Full protective measures

This is an advisory report on the requirement for radon protective measures in new buildings, conversions and extensions. The report also indicates whether a site is located within a radon Affected Area

Requirement for radon protective measures

The determination below follows advice in *BR211 Radon: Guidance on protective measures for new buildings (2023 edition), which also provides guidance on what to do if the* result *indicates that protective measures are required.*

Is the property in an area where radon protective measures are required for new buildings or extensions to existing ones as described in publication BR211 (2023 edition) Radon: Guidance on protective measures for new buildings?

BASIC RADON PROTECTIVE MEASURES ARE REQUIRED FOR THE REPORT AREA.

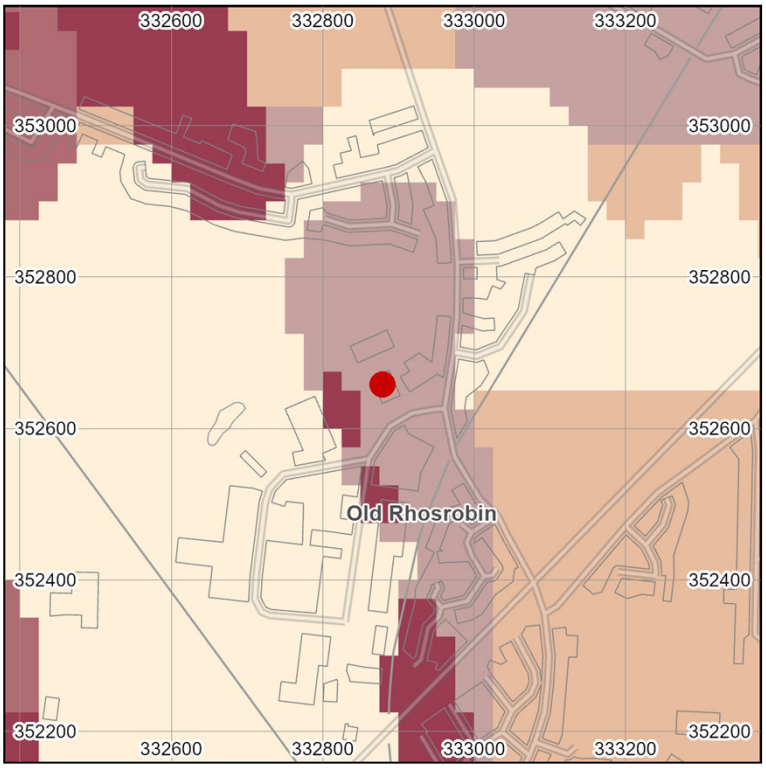
More details of the protective measures required are available in *BR211 Radon: Guidance on protective measures for new buildings (2023 Edition)*.

Whether or not the radon level in a building is above or below the radon Action Level can only be established by having the building tested. The UKHSA provides a radon testing service which can be accessed at www.ukradon.org or by telephone (01235 822622).

If you require further information or guidance, you should contact your local authority building control officer or approved inspector.

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Radon Affected Area



	% Homes estimated to be at or above the action level
	0-1%
	1-3%
	3-5%
	5-10%
	10-30%
	30-100%

Contains OS data © Crown Copyright and database right 2024
Scale: 1:10 000 (1cm = 100 m)
Search area indicated in red

Is the property in a radon Affected Area as defined by the UK Health Security Agency (UKHSA) and if so what percentage of homes are estimated to be at or above the Action Level? **YES**

Additional Information

THE PROPERTY IS IN A RADON AFFECTED AREA WHERE 3 TO 5% OF HOMES ARE ESTIMATED TO BE AT OR ABOVE THE ACTION LEVEL.

The UKHSA recommends a radon 'Action Level' of 200 Becquerels per cubic metre of air (Bq m^{-3}) for the annual average of the radon gas concentration in a home. Where 1% or more of homes are estimated to be at or above the Action Level the area should be regarded as a radon Affected Area.

This report informs you whether the property is in a radon Affected Area and the percentage of homes that are estimated to be at or above the radon Action Level at this location. Being in an Affected Area does not necessarily mean there is a high radon level within the property; the only way to determine the radon level is to carry out a radon measurement.

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The UKHSA advises that radon gas should be measured in all properties within radon Affected Areas and that homes with radon levels at or above the Action Level (200 Bq m^{-3}) should be remediated. Householders with levels between the Target Level (100 Bq m^{-3}) and Action Level should seriously consider reducing their radon level, especially if they are at greater risk, such as if they are current or ex smokers. Whether or not a home is in fact above or below the Action Level or Target Level can only be established by having the building tested. The UKHSA provides a validated radon testing service which can be accessed at www.ukradon.org.

The information in this report provides an answer to one of the standard legal enquiries on house purchase in England and Wales, known as Law Society CON29 Enquiries of the Local Authority (2016); 3.14 Radon Gas: Do records indicate that the property is in a “Radon Affected Area” as identified by the UKHSA. The data can also be used to advise house buyers and sellers in Scotland and Northern Ireland.

If you are buying a new build property in a Radon Affected Area, you should ask the builder whether radon protective measures were incorporated in the construction of the property.

If you are buying a currently occupied property in a radon Affected Area, you should ask the present owner whether radon levels have been measured in the property. If they have, ask whether the results were at or above the radon Action Level and if so, whether remedial measures were installed, radon levels were re-tested, and if the results of re-testing confirmed the effectiveness of the measures.

Further information on radon is available from the UKHSA at www.ukradon.org.

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What is radon?

Radon is a naturally occurring radioactive gas, which is produced by the radioactive decay of radium which, in turn, is derived from the radioactive decay of uranium. Uranium is found in small quantities in all soils and rocks, although the amount varies from place to place. Radon released from rocks and soils is quickly diluted in the atmosphere. Concentrations in the open air are normally very low and do not present a hazard. Radon that enters enclosed spaces such as some buildings (particularly basements), caves, mines, and tunnels may reach high concentrations in some circumstances. The construction method and degree of ventilation will influence radon levels in individual buildings. A person's exposure to radon will also vary according to how particular buildings and spaces are used.

Inhalation of the radioactive decay products of radon gas increases the chance of developing lung cancer. If individuals are exposed to high concentrations for significant periods of time, there may be cause for concern. In order to limit the risk to individuals, the Government has adopted an Action Level for radon in homes of 200 becquerels per cubic metre (Bq m^{-3}). The Government advises householders that, where the radon level is at or above the Action Level, measures should be taken to reduce the concentration.

Radon in workplaces

The Ionising Radiation Regulations 2017 require employers to take action when radon is present above a defined level in the workplace. Advice may be obtained from your local Health and Safety Executive Area Office or the Environmental Health Department of your local authority. The BRE publishes a guide (BR293)**: Radon in the workplace.** BRE publications may be obtained from the BRE Bookshop, Tel: 01923 664262, email: bookshop@bre.co.uk website: www.brebookshop.com

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Ordnance Survey

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