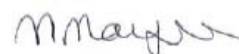


Carter Jonas**Ruabon Park, Wrexham****Phase 1 Contamination Assessment Report**

Document Ref: 773135-REP-ENV-001
Revision: 0
Date: 16 November 2015

Prepared: Michael Maynard
Geoenvironmental Engineer



Checked: Hugh Dyer
Senior Geoenvironmental Engineer



Approved: James Warth
Principal Consultant Environmental



Project Revision Sheet

Revision No	Date	Status	Changes	Author	Approved
0	16 November 2015	Final	-	M.Maynard	J.Warth

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Executive Summary

Details	Summary of Main Text
Introduction	This report has been prepared on the instructions of Carter Jonas which proposes to market the site on behalf of their client for mixed industrial and residential purposes. It presents the results of a Phase 1 Contamination Assessment for the development.
Site Description	The 24.62 acre site consists of farmland.
Summary of Historical Mapping	Historical maps indicate the site has consisted of agricultural farmland, since the earliest editions. From 1900-1961 a football ground was present in the southwest corner of the site. A colliery was present directly to the west from 1873-1967 with the groundsure report indicating that this may have extended onto the site. The colliery was decommissioned in the 1960's. Railway sidings are noted 25m to the northwest from 1873-1960, with the groundsure report stating that these may have extended onto the site. A quarry was present 100m to the northwest from 1899-1961.
Environmental Setting	Published geology is of glaciofluvial deposits within the north east of the site with Glacial Till overlying the remainder of the site overlying the Etruria Formation (Mudstone) on the eastern and central sections of the site, Pennine Lower Coal Measures Formation on the western edge of the site. The glaciofluvial deposits are classified as a secondary (A) aquifer, the Till as unproductive strata, and the Etruria Formation and the Pennine Lower Coal Measures Formation as secondary (A) aquifers. The site is not within a groundwater source protection zone. The nearest surface water feature is a large pond in the centre of the site The site is bordered to the east by James Caravan Park with the A483 and fields beyond this, to the north by the A539 with residential properties beyond, to the west by Clwyd Caravan & Leisure with the B5605 beyond and to the south by farmland. The site is indicated to be within an area affected by radon as between 10 and 30% of properties are above the Action Level. Full radon protective measures are necessary.
Environmental Search Data	The following environmental search entries were identified that could potentially affect site condition: • Discharge consent – Container site (226m west) • Waste treatment plants – Tyre recycling plant (173m west) • Current industrial sites – Clwyd Caravans & Leisure Ltd (94m west), Electricity substation (133m north), Hopper (153m southwest), Civic Amenity site (201m west), Electricity substation (234m west).
Potential Contamination Sources	The desk study and site reconnaissance have identified the following potential sources of contamination that could affect site condition: • Infilled former ponds (on-site) • Made ground associated with former sports ground and suspected road feature(on-site) • Agricultural use of site associated with farming (on-site) • Former marshland (on-site) • Infilled unspecified mine (on-site) • Historical colliery (adjacent to western boundary) • Historical tanks (122m northwest) • Spoil heaps associated with former colliery (5m northwest) • Historical railway (adjacent to northwest and west)
Risk Ratings	Low to High
Recommendations	• Intrusive investigation to confirm desk study findings. To include: (i) sampling and testing of soils to determine contaminative nature of soils and groundwater, (ii) monitoring wells and an appropriate number of visits to establish the presence and levels of ground gas.

	• The Mineral and Waste Planning Officer at Wrexham County Council should be contacted to confirm that the site does not lie over a potentially workable coal deposit.
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Desk Study General Notes

- 1 This report has been prepared by MLM Consulting Engineers Ltd (MLMCEL) and provides available factual data for the site at the time of the study and as obtained from the sources described in the text. The data is related to the site on the basis of the site location information provided by the Client.
- 2 It should be appreciated that the desk study information is not necessarily exhaustive and that further information relevant to the site and its proposed use may be available.
- 3 The accuracy of map extracts cannot be guaranteed and it should be recognised that different conditions on site may have existed between and subsequent to the various map editions.
- 4 Any borehole data from the British Geological Survey (BGS) sources is included on the following basis: 'The British Geological Survey accept no responsibility for omissions or misinterpretations of the data from their Data Bank as this may be old or obtained from non-BGS sources and may not represent current interpretation'.
- 5 Unless stated otherwise, the identification and assessment of potential of geotechnical issues is excluded from this report, although such assessments can be undertaken by MLMCEL on request.
- 6 The copyright in this report and other plans and documents prepared by MLMCEL in relation to this project is owned by MLMCEL and no such report, plan or document may be reproduced, published or adapted without their written consent. Complete copies of this report may, however, be made and distributed by the Client as an expedient in dealing with matters related to its commission.
- 7 The content of websites visited during internet searches has not been validated and is accepted *de facto* and without prejudice. Anyone relying upon the information obtained from such sources does so at their own risk. Notwithstanding, MLMCEL takes all reasonable care in utilising information only from reputable and professional sources.
- 8 This report was prepared only for our Client and was not intended to be relied on by any other party. Third parties should not rely on the facts, matters or opinions set out in this report without the express written permission of MLMCEL.
- 9 The data contained within the Groundsure report is subject to the copyright and database rights ownership of the Groundsure Ltd.
- 10 Ordnance Survey mapping included within the Groundsure report is protected by Crown Copyright and must not be used for any purpose outside the context of this report.

1 Introduction

1.1 General

This report has been prepared by MLM Consulting Engineers Limited (MLMCEL) on the instructions of Carter Jonas on behalf of their client, which is proposing to market the site for mixed use including residential and commercial development.

1.2 Terms of Reference

The terms of reference for the work were set out in the MLMCEL proposal 773135-FEE-ENV-001 dated 22 July 2015.

1.3 Scope of Work

This Phase 1 Contamination Assessment report presents the readily available information on and addresses the following:

- Current use and condition of the site based on a site walkover
- Previous uses of the site and surroundings based on available historical mapping and data
- Environmental setting in terms of geology, hydrogeology, hydrology and surrounding land use
- Environmental data searches
- Development of a preliminary conceptual site model and identification of potential risks to human health and environmental receptors
- Conclusions and recommendations

1.4 Technical Approach

The process of assessment adopted in this report generally follows the guidance provided in the following publications:

- Model Procedures for the Management of Land Contamination. Environment Agency Contaminated Land Report 11 (CLR11)
- GPLC1 – Guiding principles for land contamination. Environment Agency 2010
- National Planning Policy Framework (NPPF) (2012)
- NHBC Part 4 Foundations – Chapter 4.1 Land quality: Managing ground conditions

1.5 Proposed Development

It is understood that the proposed development will comprise the construction of 139,500 sq ft of office space, 50,000 sq ft of warehousing, 20,000 sq ft of retail, 30,000 sq ft of restaurant and/or hotel use, and 319 residential units. The existing pond in the centre of the site will remain.

An indicative site layout is shown on Bingham:Hall Associates drawing Combined Services Layout ref. 2978.100 rev P1 dated August 2015.

2 The Site

2.1 Location

The site is located in Ruabon Park, Wrexham, LL14 3EH. The National Grid Reference for the site is 329736 343226.

A location plan of the site is presented as Figure 1.

2.2 Site Environmental Setting

2.2.1 Geology

Published geology is of Glacio-fluvial deposits in the north east of the site and Glacial Till deposits across the centre and south west. These superficial deposits generally overly a solid geology of the Etruria Formation (mudstone) which is recorded beneath the majority of the site with exception of the western extremity which is underlain by the Pennine Lower Coal Measures Formation.

The Groundsure Report (see section 3) indicates that the site is in an area affected by radon as between 10 and 30% of properties are above the Action Level. Full radon protective measures are likely to be necessary in new buildings.

The BGS borehole scan website indicates records of four boreholes having been drilled on site. One borehole encountered a strata sequence of topsoil (0.27m thick) and gravelly silty very sandy clay (4.35m thick).

2.2.2 Hydrogeology

The Environment Agency website provides the following hydrogeological information:

Table 2.1 Aquifer Properties

Aspect	Designation	Description
Groundwater Source Protection Zone	No SPZ	The site is not within a catchment area where groundwater is discharged to a source.
Superficial Aquifer Designation Glacio-fluvial deposits	Secondary Aquifer (A)	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.
Superficial Aquifer Designation Till	Unproductive Strata	These are deposits with low permeability that have negligible significance for water supply or river base flow.
Bedrock Aquifer Designation Etruria Formation	Secondary Aquifer (A)	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 Aquifer Designation Pennine Lower Coal Measures		

There is one historical groundwater abstraction within 2km for farming uses. It is located 1,992m to the northwest.

There are no public water supply boreholes within 2km of the site.

2.2.3 Hydrology

The Groundsure report indicates that there are twelve significant surface water features within 250m of the site, including three that are on the site. The on site features include a small lake in the centre with a drain extending northwards, and ditches in the south and east.

The site is not shown to be in an area likely to be affected by sea or river flooding.

There are no abstractions from surface waters within 2km of the site.

2.2.4 Mining

A Coal Authority Mining Report has been obtained for the site and is summarised below. A full copy is attached as Appendix B.

The Coal Authority report states that the site is in the likely zone of influence from workings in nine seams of coal at 100 to 580m depth, and was last worked in 1927. The Coal Authority suggest that any ground movement associated with these coal workings should have ceased by now.

The report indicates that there are no known coal mine entries within, or within 20 metres of the boundary of the property. The Coal Authority is not aware of any evidence of damage arising due to geological faults or other lines of weakness that have been affected by coal mining.

The report indicates that there is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.

The report states that the property is not in an area for which the Coal Authority is determining whether to grant a license to remove coal using underground methods. However, reserves of coal exist in the local area which could be worked at some time in the future.

The report does not indicate that there are records of notice of the risk of the land being affected by subsidence having been given under section 46 of the Coal Mining Subsidence Act 1991.

Review of the geological information available from the BGS and the information given within the Coal Authority Mining Report indicates that although coal horizons may exist beneath the site, they are at a significant depth and it is considered unlikely that any instability associated with these coal horizons would impact upon the site.

2.2.4.1 Groundsure Report

The Groundsure report states that there is one record of a coal mining area within 1000m of the site boundary. This is on site and is indicated to be an unspecified disused mine.

The report also states that there are three non-coal mining areas within 1000m of the site. These are also all on site and are listed as a potential for occasional small scale mining of veins and rare minor bedded iron ore mining.

2.2.5 Mineral Resource and Safeguarding

From reference to the British Geological Survey (BGS) Mineral Resources Map for North East Wales, the western edge of the site is situated within an area of Secondary Shallow Coal resource which is considered a mineral safeguarding area. From review of the Coal Authority interactive map this appears to relate to the presence of shallow surface coal resource which could potentially be worked.

There is no direct evidence at this stage to confirm if any workable coal is actually present, and the closure of the adjacent colliery indicates that productive coal resources within the area would have been exploited during the working life of the colliery. In MLM's view, to extract coal from below the site as a standalone operation would not be economically viable. In addition, to extract coal from below the site would impact on the adjacent road and rail line.

It is recommended that confirmation of the above is sought from the Mineral and Waste Planning Officer at Wrexham County Council.

2.3 Previous Reports

Report	Summary
Geotechnical Engineering Ltd (2003) Ruabon Business Park Ref. 14991	Geotechnical Engineering undertook an intrusive investigation to determine ground conditions across a site area which approximates to the eastern section of the current Ruabon Park Development site. The fieldwork was carried out on the 18-19 September 2003 and comprised the excavation of twenty two trial pits with soakaway testing in five of those trial pits. The trial pits ranged in depth from 1.70m-3.30m bgl. Ground conditions generally comprised silty sand, coarse gravel and sandy clay deposits although made ground was recorded in three of the trial pits, TP05, TP05a and TP14 in the east and west of the site to a depth of 1.0m. No laboratory testing or interpretation of the results of the investigation works was undertaken.

3 Site Reconnaissance and Desk Study

3.1 General

A desk study has been carried out using information obtained from a Groundsure EnviroInsight report for the area commissioned by MLMCEL; through a review of published information, information obtained from regulatory bodies and online and from a site walkover. The full Groundsure report has been included as Appendix A.

3.2 Site Reconnaissance

3.2.1 Site Description and Use

The 24.6 hectare site is irregular in shape, generally flat lying and is currently used as farmland. Access is via the A539 along the northern boundary or from a small side road on the western boundary.

It predominantly consists of well-maintained, agricultural fields which are currently farmed. No hardstanding was present within the site boundary although compacted unmade tracks are present along the western edge.

A small elongated lake with an island is present in the centre of the site. A drain extends northwards from the lake. Ditches are present along the southern boundary and extend off site from the eastern boundary. Trees surround the pond and are also present along the western and northern boundaries. Shrubs and smaller trees are present along the southern boundary.

No evidence of trespassing or flytipping was noted on site. Overhead electricity power lines cross the site from the southwest to the northeast corner, with an offshoot to the northwest corner from the centre.

Aerial photos show an unidentified structure to the north of the pond. However, at the time of the investigation only a large mound of soil was present in this location. The previous by Geotechnical Engineering Ltd ref report indicates that a road had been planned to be built across the site in 2003, but was never completed. It is possible that this feature is related to initial ground works associated with the proposed road.

3.2.2 Surrounding Land Use

A caravan sales yard is adjacent to the western boundary of the site. The A539 and B5605 is present to the north with fields and housing beyond. Agricultural fields are present to the south and James' Caravan Park and the A483 is present to the eastern with fields beyond it.

3.3 Site History

Historical maps have been obtained as part of the Groundsure Report and these are presented in Appendix A.

The historical information of relevance from within 200m of the site is presented as follows:

Table 3.1 Historical Map Summary

Map Date	On Site	Surrounding Area
1873 (1:10,560), 1873 (1:2,500)	Site is indicated to be farmland with a small lake in the centre. The western edge of the site is shown as dense vegetation and trees. A line of trees is shown running along the eastern boundary. A pond is indicated in the north west.	Shrewsbury and Chester railway line is present approximately 50m to the north and west. Wynnstay Colliery is located directly to the west of the site. Agricultural fields are present immediately adjacent to the northern, eastern and southern boundaries. James' Farm is located approximately 100m to the east. Home Farm and a pond are shown approximately 100m south of the site. Pond 150m south. Railway sidings are shown 25m to the north west associated with the Wynnstay Colliery. Ditch adjacent southeast boundary.
1899, 1900 (1:2,500) 1900 (1:10,560)	Pond in northeast has been infilled. Football ground in south west corner.	Spoil heaps associated with colliery 150m to north west with old quarry marked to the north of it. Smithy 100m north.
1910, 1914, 1938, 1949 (1:10,560), 1912 (1:2,500)	Tennis ground indicated adjacent to football ground in the south west. Marshland indicated to the west of the lake.	Spoil heaps have expanded and have infilled the old quarry. Gravel pit 100m east.
1960, 1968 (1:10,560), 1961, 1967 (1:2,500)	Football ground and tennis courts are no longer present. Pond in eastern corner.	Railway sidings are no longer present. Wynnstay Colliery is shown as disused 'Mine' and 'The Green' and many of the buildings have been removed. Smithy to the north is shown as cottages.
1971 (1:2,500), 1974 (1:10,000)	Drain along southwestern boundary.	Spoil heap appears to have been flattened out.
1978 (1:2,500), 1985 (1:10,000)	Pond in east is shown as marshland	No significant change from previous editions.
1989, 1990, 1991, 1992(1:2,500), 1994 (1:10,000), 1994, 1995 (1:2,500)	No significant change from previous editions.	A483 constructed 150m to the south east and east of the site. Caravan park present 100m to the east. A539 constructed directly to the north. Wynnstay Technology Park 150m and a Civic Amenity Centre to west.
2002, 2010, 2014 (1:10,000),	No significant change from previous editions.	Gravel pit to west has been infilled.

3.4 Environmental Data Searches

Environmental data has been obtained for the site from a Groundsure report and from data provided by the Environment Agency and local authority or their websites. Table 3.2 summarises this data as presented by Groundsure.

Table 3.2 Environmental Data

Aspect	On Site	0 – 250m	Details of Relevance
Historical Industrial Sites			
Potentially Contaminative Uses Identified from 1:10,000 scale mapping	5	84	On site: Railway sidings (1873 and 1898). Unspecified disused mine (1960). Colliery (1873 and 1898).
Historical tank database	0	10	Unspecified tank 122m northwest (1899).
Historical energy features database	0	6	Electricity Substation 174m east (1992).
Potentially Infilled Land	12	63	On site: Unspecified disused mine (1960) Colliery (1873 and 1898) Pond or water body (1873 to 1994)
Environmental Permits, Incidents and Registers			
Records of Licensed Discharge Consents	0	1	Unspecified effluent 226m west (expired 1993)
National Incidents Recording System, List 2	1	4	On site: Atmospheric Pollutants (2006), Ammonia / Amine Odour Off site: Sewage Materials – 69m east (2012), 153m east (2013) Other pollutant - 112m southwest (2002) Blood and offal – 171m southwest (2001)
Landfill and Other Waste Sites			
Operational and Non-Operational Waste Treatment or Disposal Sites	0	4	173m west. Tyre recycling plant and unspecified.

Industrial Land Use			
Current industrial sites	0	5	Vehicle hire 94m west Electricity substation 133m north Hoppers and silos 153m southwest Refuse disposal facilities 201m west Electricity substation 234m northwest
Ground Workings			
Historical surface ground working features from small scale mapping	8	46	Pond (1873-1949) Pond (1974-1985) Water body (1960) Colliery (1873)
Historical underground workings from small scale mapping	2	1	Unspecified disused mine (1960) Colliery (1873)
Current ground workings	0	2	Wynnstay Colliery 73m west (ceased) Wynnstay 175m northwest (ceased)
Mining, Extraction and Natural Cavities			
Historical Mining	2	1	Colliery (1873) Unspecified disused mine (1960)
Coal Mining	1	0	Potential for coal mining within the vicinity of the site
Non-Coal Mining	3	0	Identified potential for occasional minor vein mineral mining and/or rare and localised small scale iron ore mining

The Groundsure Report records that the historical colliery and features associated with the colliery including railway sidings and infilled land are within the site boundary. Review of the historical mapping indicates that these features are not within the boundary of the proposed development site but are recorded adjacent to this boundary. These features are therefore considered to be off site.

The records of non-coal mining indicate a possibility for occasional small scale vein mineral and/or iron ore workings within the site. There was no evidence during the site walkover or on historical mapping of vein mineral or iron ore mining within the site and the risk of vein or iron ore mining is considered to relate to the Pennine Coal Measures strata underlying the western edge of the site.

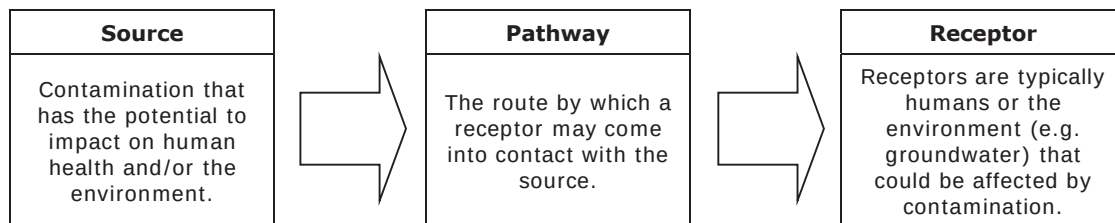
The records from the National Incidents Recording System indicate ammonia / amine odour on site in 2006 and a spillage of sewage within the caravan site 69m

east of the site in 2012. Neither of these incidents are considered to have significantly impacted the site.

4 Conceptual Site Model and Preliminary Assessment

4.1 General

The assessment of risk from contamination follows the source-pathway-receptor approach. Each of these elements is described as follows.



Without a source-pathway-receptor linkage in place, it is considered that there is no risk of harm.

If, however, there is a linkage between source and receptor then a risk-based assessment called a Qualitative Risk Assessment (QRA) is used to determine the significance or potential impact of the SPR-linkage.

The QRA process involves the identification of sources based on historical mapping, data searches and site walkover, together with identification of the exposure pathway and sensitive receptor. A Conceptual Site Model (CSM) is then developed and presented that shows the possible pollution linkages.

In terms of identifying *significant* pollution linkages (i.e. those that could require remediation), MLMCEL assigns a level of risk to each (ranging from Very High to Very Low). Where the level of risk is Moderate or greater, then the pollution linkage is considered to be 'significant' and further investigation would be required.

4.2 Review of Potential Sources of Contamination

Based on the information presented in the previous sections, potential sources of contamination that could impact on receptors have been identified and are summarized in tables 4.1 and 4.2 below.

Table 4.1 Potential Sources of Contamination – On Site

Source	Location On Site	Activity	Potential Contaminants
Infilled ponds	Northwest and west	Infilled land	Metals, TPH, PAH, ground gas.
Made ground	Southwest and north	Former sports ground and unidentified structure	Metals, TPH, PAH, ground gas, asbestos.
Agricultural use of the site	Entire site	Use of pesticides and fertilisers	Metals, pesticides.
Former marshland	Centre and west	Decomposition of organic matter in natural soils	Ground gas.
Infilled land	West	Infilled coal mining entry	Metals, TPH, PAH, ground gas, asbestos.

As discussed within Section 3.4, the former colliery and former railway sidings have been noted on the historical mapping to be adjacent to the site boundary to the

west and are not considered to have been present within the boundary of the proposed development area.

Table 4.2 Potential Sources of Contamination – Off Site

Source	Location Off Site	Activity	Potential Contaminants
Former colliery site	Adjacent to west	Former colliery. Infilled land, possible tanks.	TPH, ground gas
Historical tanks	122NW	Industrial	TPH, hydrocarbons, organic vapour
Infilled land	5NW	Spoil heaps associated with the former colliery site.	Ground gas
Former railway	Adjacent to northwest and west	Leaks and spills of fuels	TPH

4.3 Review of Potential Exposure Pathways

Table 4.3 below presents a review of the identified potential pathways that could exist at the site, whether or not a source of contamination has been identified above.

Table 4.3 Potential Exposure Pathways and Receptors

Receptor	Pathway	Present	Notes
Human Health			
Future Site Users	Dermal contact, ingestion or inhalation of soil and soil dust	YES	Residential development including gardens is proposed.
	Migration in permeable strata and inhalation of gas and/or organic vapour	YES	New buildings are proposed. Shallow soils are mixed and considered permeable.
	Migration in permeable strata, accumulation and risk of explosion	YES	New buildings are proposed. Shallow soils are considered permeable.
Adjacent Site Users	Ingestion/inhalation of windblown dust	YES	Residential development is adjacent including a caravan park.
	Migration in groundwater and direct contact	NO	Off site residents are unlikely to come into contact with groundwater.
	Migration in groundwater and inhalation of organic vapour	YES	Organic contaminants in groundwater could migrate off site and release organic vapour
Construction Workers and Services Repair Staff	Dermal contact, ingestion or inhalation of soil and soil dust	YES	Site workers could be exposed to soil contamination during groundworks.
Development			

Future Plant Life	Plant uptake in garden or landscape area	YES	Residential development including gardens is proposed.
Water Supply Pipes	Contact with contaminated material	YES	New services will be constructed below ground.
Environment			
Surface Water:	Surface runoff	YES	Site is generally level however there is a lake in the centre of the site which runoff could enter.
	Groundwater movement	YES	Groundwater may be in hydraulic connection with surface water via Glacio-fluvial Deposits.
Superficial aquifer (Glaciofluvial deposits)	Leaching from soil and vertical fluid movement	YES	Glacio-fluvial superficial aquifer is unconfined. Potential for leaching of contaminants into Glacio-fluvial soils.
Superficial aquifer (Glacial Till)	Leaching from soil and vertical fluid movement	NO	Superficial aquifer materials are unproductive strata
Bedrock aquifer (Etruria Formation and the Pennine Lower Coal Measures Formation)	Leaching from soil and vertical fluid movement	YES	Secondary (A) aquifer is unconfined beneath Glacio-fluvial deposits.

4.4 Potentially Complete SPR-Linkages

Based on the sources, pathways and receptors identified above, tables 4.4 and 4.5 below summarise all potentially complete pollutant linkages for the site and identifies the level of risk from each. Risk definitions are provided in Appendix C.

Table 4.4 Potentially Complete SPR-Linkages (on site sources of contamination)

Source	Location	Contaminants	Pathway	Receptor	Probability	Consequence	Overall Risk	Justification and/or Mitigating Factors
Infilled Ponds	Northeast and east	Metals, TPH, PAH	Ingestion, dermal contact and fugitive inhalation	Site users	Likely	Medium	Moderate	Site users could be exposed to soil contamination within garden and soft landscaped areas.
				Construction and services repair workers	Likely	Medium	Moderate	Site workers could be exposed to soil contamination during groundworks.
				Adjacent site users	Low	Medium	Low	Residential development is adjacent. However the exposure period will be short term.
			Leaching (Glacial Till deposits)	Shallow groundwater	Unlikely	Medium	Low	Superficial Till is unproductive strata.
			Leaching (Glacio-fluvial deposits)	Shallow groundwater	Likely	Medium	Moderate	Superficial aquifer is Secondary 'A' aquifer and is unconfined.
			Leaching from soil and vertical fluid movement	Superficial aquifer groundwater (Glacial Till deposits)	Unlikely	Medium	Low	Superficial Till is unproductive strata.
			Leaching from soil and vertical fluid movement	Superficial aquifer groundwater (Glacio-fluvial deposits)	Likely	Medium	Moderate	Glaciofluvial soils are a Secondary 'A' aquifer and is unconfined.
			Leaching from soil and vertical fluid	Bedrock aquifer groundwater	Likely	Medium	Moderate	In part of the site, the Secondary (A) aquifer is overlain by

		movement	Surface water	Low Likelihood	Medium	Low	permeable superficial strata.
		Surface runoff					Site is generally level however there is a lake in the centre of the site which surface runoff could impact.
	Metals	Plant uptake	Planting	Likely	Mild	Low	Residential development is proposed including garden areas
	TPH	Migration and contact	Water pipes	Likely	Medium	Moderate	New services will be constructed below ground.
	Organic contaminants	Migration in groundwater and inhalation of organic vapour	Adjacent site users	Likely	Medium	Moderate	Organic contaminants in groundwater could migrate off site and release organic vapour.
	Ground gas	Migration and inhalation	Site users	Likely	Medium	Moderate	New buildings are proposed. Possible accumulation of carbon dioxide within enclosed spaces could impact on proposed housing.
			Construction and services repair workers	Likely	Medium	Moderate	New buildings are proposed. Possible accumulation of methane within buildings.
		Migration and explosion	Site users	Likely	Severe	High	New buildings are proposed. Possible accumulation of methane within buildings.
Former sports ground – made ground materials	South west	Ingestion, dermal contact and fugitive inhalation	Site users	Likely	Medium	Moderate	Site users could be exposed to soil contamination in gardens or soft landscape areas.

Unidentified feature	North			Construction and services repair workers	Likely	Medium	Moderate	Site workers could be exposed to soil contamination during groundworks.
				Adjacent site users	Low	Medium	Low	Residential development is adjacent. However the exposure period will be short term.
			Shallow groundwater	Leaching (Glacial Till deposits)	Unlikely	Medium	Low	Superficial Till is unproductive strata.
			Leaching from soil and vertical fluid movement	Superficial aquifer groundwater (Glaciofluvial deposits)	Unlikely	Medium	Low	Glaciofluvial soils are unconfined.
			Leaching from soil and vertical fluid movement	Bedrock aquifer groundwater	Unlikely	Medium	Low	Secondary (A) aquifer is overlain by unproductive strata.
		Metals	Plant uptake	Planting	Likely	Mild	Low	Residential development is proposed including garden areas
		Hydrocarbons	Migration and contact	Water supply pipes	Likely	Medium	Moderate	New services will be constructed below ground.
		Ground gas	Migration and inhalation	Site users	Likely	Medium	Moderate	New buildings are proposed. Possible accumulation of carbon dioxide within enclosed spaces could impact on proposed housing.
				Construction and services repair workers	Likely	Medium	Moderate	
			Migration and	Site users	Likely	Severe	High	New buildings are

		explosion						proposed. Possible accumulation of methane within buildings.			
Agricultural use of the site	Asbestos	Fibre inhalation	Site users	Likely	Severe	High	Site users could be exposed to soil contamination within gardens and soft landscaped areas.				
							Construction and services repair workers	Low Likelihood	Severe	Moderate	Site workers could be exposed to soil contamination during groundworks.
							Adjacent site users	Low Likelihood	Severe	Moderate	Residential development is adjacent. Potential for dust generation during redevelopment of site, however exposure period will be short term.
							Site users	Low Likelihood	Medium	Low	Site users could be exposed to soil contamination within gardens and soft landscaped areas. Pesticides would be at low levels within soils across fields.
		Ingestion, dermal contact and fugitive inhalation	Construction and services repair workers	Low Likelihood	Medium	Low	Site workers could be exposed to soil contamination during groundworks. Pesticides would have been applied at low levels within soils across the fields and therefore significant				

Former marshland	Centre and west	Ground gas	Migration and inhalation	Site users	Construction and services repair workers	Likely	Medium	Moderate Moderate	New buildings are proposed. Possible accumulation of carbon dioxide within enclosed spaces.		levels within soils across the fields and therefore significant residual concentrations are not anticipated.
			Migration and explosion	Site users		Likely	Severe	High	New buildings are proposed. Possible accumulation of methane within buildings.		Site is generally level however there is a lake in the centre of the site which runoff could enter. Pesticides would be at low levels within soils across fields.
			Plant uptake	Planting		Low Likelihood	Mild	Low	Residential development is proposed including garden areas. Pesticides would have been applied at low levels within soils across the fields and therefore significant residual concentrations are not anticipated.		
			Surface runoff	Surface water		Low Likelihood	Medium	Low			

Infilled land associated with historical mine entry	West	Metals, TPH, PAH, asbestos	Ingestion, dermal contact and fugitive inhalation	Site users	Likely	Medium	Moderate	Site users could be exposed to soil contamination during groundworks.
			Construction and services repair workers	Adjacent site users	Likely	Medium	Moderate	Site workers could be exposed to soil contamination during groundworks.
			Shallow groundwater	Superficial groundwater (Glacial Till deposits)	Low	Medium	Low	Residential development is adjacent. However exposure period will be short term.
			Leaching from soil and vertical fluid movement		Unlikely	Medium	Low	Superficial materials is unproductive strata.
			Shallow groundwater	Superficial Secondary 'A' Aquifer (Glacio-fluvial deposits)	Low Likelihood	Medium	Low	Superficial glaciofluvial aquifer is unconfined.
			Leaching from soil and vertical fluid movement		Low Likelihood	Medium	Low	Secondary (A) aquifer is overlain by unproductive strata.
			Bedrock aquifer groundwater	Leaching from soil and vertical fluid movement	Unlikely	Medium	Low	Secondary (A) aquifer is overlain by unproductive strata.
			Plant uptake	Planting	Likely	Mild	Low	Residential development is proposed including garden areas
		Metals						

		Hydrocarbons	Migration and contact	Water supply pipes	Likely	Medium	Moderate	New services will be constructed below ground.
		Ground gas	Migration and inhalation	Site users	Likely	Medium	Moderate	New buildings are proposed. Possible accumulation of carbon dioxide within enclosed spaces could impact on proposed housing.
				Construction and services repair workers	Likely	Medium	Moderate	
			Migration and explosion	Site users	Likely	Severe	High	New buildings are proposed. Possible accumulation of methane within buildings.
		Organic contaminants	Migration in groundwater and inhalation of organic vapour	Adjacent site users	Low Likelihood	Medium	Low	Organic contaminants in groundwater could migrate off site and release organic vapour.
		Asbestos	Fibre inhalation	Site users	Likely	Severe	High	Site users could be exposed to soil contamination in gardens or landscaped areas.
				Construction and services repair workers	Likely	Severe	High	Site workers could be exposed to soil contamination during groundworks.
				Adjacent site users	Low Likelihood	Severe	Moderate	Residential development is adjacent. Potential for dust during redevelopment of site. However, the exposure period will be short term.

Table 4.5 Potentially Complete SPR-Linkages (off site sources of mobile contamination)

Source	Location	Mobile Contaminants	Pathway	Receptor	Probability	Consequence	Overall Risk	Justification and/or Mitigating Factors
Former Colliery Site	Adjacent to west	TPH	Migration and contact	Site users	Unlikely	Moderate	Low	Low permeability superficial strata will restrict contaminant migration.
				Construction and services repair workers	Unlikely	Moderate	Low	
		Ground gas	Migration and inhalation	Construction workers	Unlikely	Moderate	Low	Low permeability superficial strata will restrict contaminant migration. Diffusion to atmosphere will be the preferential pathway.
			Migration and explosion	Site users	Unlikely	Severe	Low	
Historical tanks	122m NW	TPH	Migration and contact	Site users	Unlikely	Moderate	Low	Low permeability superficial strata will restrict contaminant migration.
			Migration and inhalation	Site users and construction workers				
Infilled land	5m NW	Ground gas	Migration and inhalation	Site users	Unlikely	Moderate	Low	Diffusion to atmosphere from spoil heaps will be the preferential pathway.
			Migration and explosion	Site users	Unlikely	Severe	Low	
Former railway	Adjacent to northwest and west	TPH	Migration and contact	Site users	Unlikely	Moderate	Low	Low permeability superficial strata will restrict contaminant migration.
				Construction and services repair workers	Unlikely	Moderate	Low	

5 Summary and Recommendations

5.1 Summary

The 24.62 ha site consists of farmland with a lake in the centre, with an unidentified structure possibly relating to a partially constructed road to the north of the lake and other surface water features on site.

The review of the historical mapping indicates that the site has predominantly been used for farming. Ponds were indicated to have been present in the northeast and east of the site and are assumed to have been infilled in 1899 and 1978 respectively. Sports facilities including tennis courts and a football ground were recorded in the south west of the site between 1900 and 1967.

A historical colliery was present to the northwest of the site from 1873 to 1967. In 1967 it is shown as a disused mine and was redeveloped.

Published geology is of Glacio-fluvial deposits in the north east of the site and Glacial Till deposits across the centre and south west. These superficial deposits generally overly a solid geology of the Etruria Formation (mudstone) which is recorded beneath the majority of the site with exception of the western extremity which is underlain by the Pennine Lower Coal Measures Formation.

The glacio-fluvial deposits are classified by the EA as a secondary (A) aquifer, the Till as unproductive strata, and the Etruria Formation and the Pennine Lower Coal Measures Formation also as secondary (A) aquifers. The site is not indicated to be within a groundwater source protection zone.

The site is bordered to the east by James Caravan Park with the A483 and fields beyond this, to the north by the A539 with residential properties beyond, to the west by Clwyd Caravan & Leisure with the B5605 beyond and to the south by farmland.

The site is in an area affected by radon as between 10% and 30% of properties are above the Action Level. Full radon protective measures are indicated by the Groundsure report, to be necessary in new structures.

The desk study and site reconnaissance have identified potential sources of contamination as follows:

- Made ground associated with former sports facilities and use as farm land.
- Infilled land associated with adjacent historical colliery, mine and on-site former pond.
- Pesticides and fertilisers used on site
- Former marshland on site
- Historical colliery (adjacent to west)
- Historical tanks (122m northwest)
- Spoil heaps associated with former colliery (5m northwest)
- Historical railway (adjacent to northwest and west)

Qualitative risk assessment has identified potentially complete SPR-linkages as follows:

- Low risks to High

5.2 Recommendations

The moderate and high risks (above) warrant further investigation and a more

detailed assessment to establish what, if any, remediation or mitigation is necessary for development.

MLMCEL has undertaken an intrusive investigation which will be reported under separate cover. The investigation included the following:

- Sampling of made ground materials to determine their nature and contaminative status.
- Monitoring wells and an appropriate number of visits to establish the presence and levels of ground gas

An invasive plant survey to establish presence or otherwise of controlled species is recommended.

Although recorded within the Groundsure Report as being on-site, the former colliery is shown within the historical mapping as being adjacent to the west of the site and is not considered to have impinged on the site area. There is therefore considered to be a low risk of ground instability associated with the former colliery site. The risk associated with contamination associated with the colliery including mine gas emissions has been considered within the conceptual site model and risk assessment within Section 4 of this report.

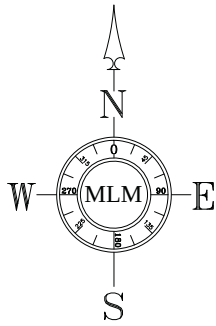
It is recommended that the Mineral and Waste Planning Officer at Flintshire County Council is contacted to confirm that the site does not lie over a potentially workable coal deposit.

6 References

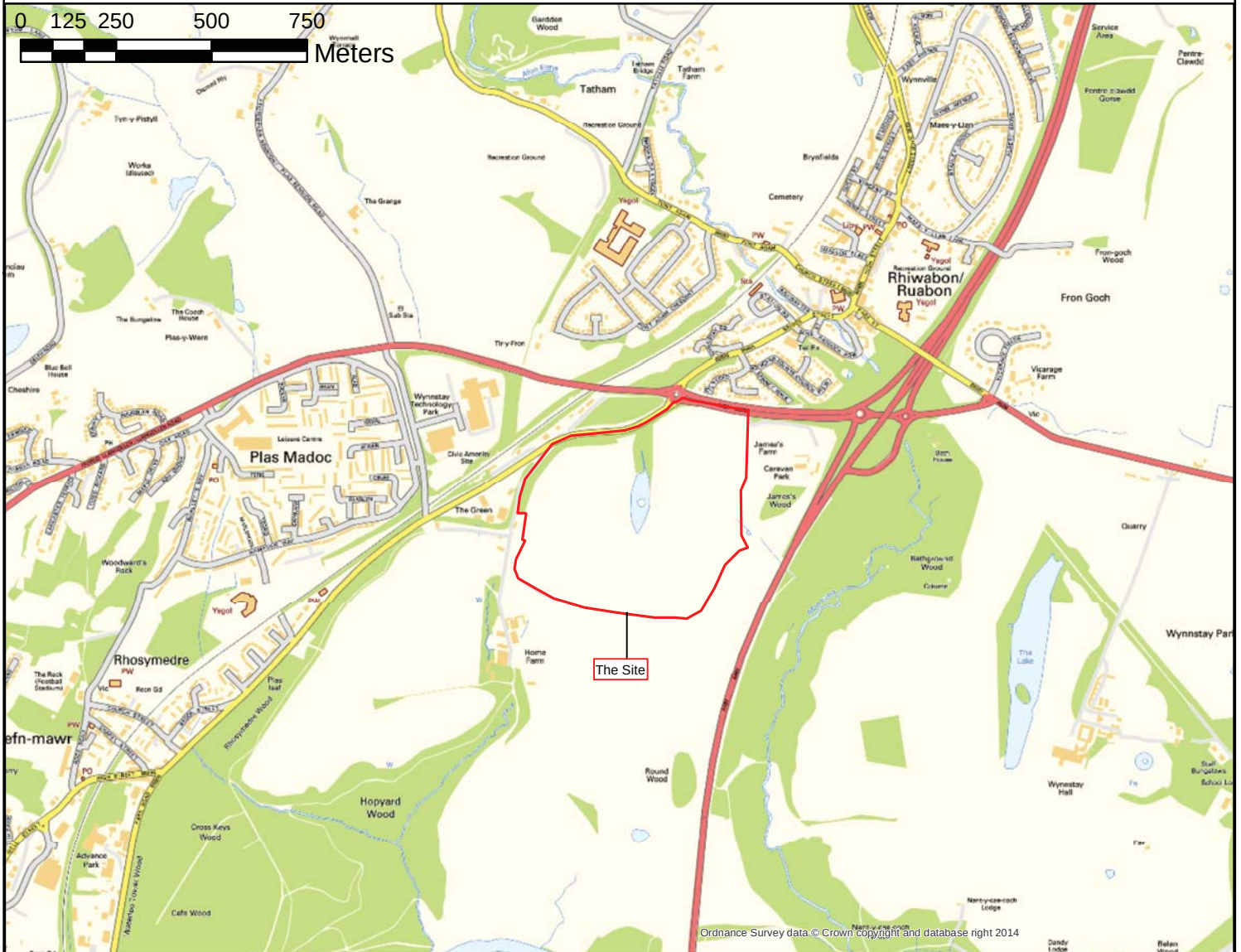
- 1 Environment Agency (2004) Model Procedures for the Management of Land Contamination Contaminated Land Report 11 (CLR11)
- 2 Environment Agency (2010) GPLC1 – Guiding Principles for Land Contamination
- 3 NHBC Standards (2011) Part 4 Foundations – Chapter 4.1 Land Quality: Managing Ground Conditions
- 4 National Planning Policy Framework (NPPF) (2012)
- 5 British Geological Survey (1993) Sheet 121 Wrexham 1:50,000 scale, Solid and Drift Edition
- 6 Groundsure EnviroInsight Report Ref: 773135 (20/08/2015)]
- 7 Coal Authority Report Ref: GS-2480871 (06/10/2015)
- 8 Geotechnical Engineering Ltd (2003) Ruabon Business Park Ref. 14991

Figures

Figure 1: Site Location Plan



0 125 250 500 750 Meters



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www.mlm.uk.com

Project
Ruabon Park Wrexham

Site Location Plan

Job No.
773135

Figure No.

1

Appendices

Appendix A:	Groundsure Report
Appendix B:	Coal Authority Mining Report
Appendix C:	Risk Definitions

Appendix A

Groundsure Report



MLM Consulting Engineers Limited
7200, BEACH DRIVE,
CAMBRIDGE, CB25 9TL

Groundsure Reference: GS-2356366

Your Reference: 773135

Report Date 20 Aug 2015

Report Delivery Method: Email - pdf

Groundsure Enviroinsight

Address: Ruabon Park A483, WREXHAM, LL14 6DW

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviroinsight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Groundsure Envirosight

Address: Ruabon Park A483, WREXHAM, LL14 6DW
Date: 20 Aug 2015
Reference: GS-2356366
Client: MLM Consulting Engineers Limited

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 27-Mar-2012
Grid Reference: 329736,343226
Site Size: 24.62ha

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Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	5	18	66	69
1.2 Additional Information – Historical Tank Database	0	0	10	5
1.3 Additional Information – Historical Energy Features Database	0	0	6	31
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	3
1.6 Potentially Infilled Land	12	13	50	55
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	1
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	1	4
2.1.9 Records of Water Industry Referrals	0	0	0	1
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	1	0	4	2
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-5000
3.1 Landfill Sites						
3.1.1 Environment Agency Registered Landfill Sites	0	0	0	0	2	Not searched
3.1.2 Environment Agency Historic Landfill Sites	0	0	0	0	3	5
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	3	6
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	4	0	Not searched	Not searched
3.2.2 Environment Agency Licensed Waste Sites	0	0	0	8	0	14

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	0	5	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	Yes
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m					
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes					
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes					
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	1
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	4	2	3	1	Not searched	Not searched
	On-site	0-50m	51-250	251-500	501-1000	1000-1500

Section 6: Hydrogeology and Hydrology

0-500m

6.9 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	Yes	No	Yes
6.10 Detailed River Network entries within 500m of the site	1	2	11	10	Not searched	Not searched
6.11 Surface water features within 250m of the study site	Yes	Yes	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	No
7.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site	No
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low
7.4 Are there any Flood Defences within 250m of the study site?	No
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Potential at Surface
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	High

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	1	3
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	1	2
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	1	2	9	25	43	84
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	1	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	1

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	0	0	0	0	0	0
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards

9.1 What is the maximum risk of natural ground subsidence?	Very Low
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Very Low
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Very Low
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Negligible
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Very Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is in a Radon Affected Area, as between 10 and 30% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	Full radon protective measures are necessary.

Section 10: Mining

10.1 Are there any coal mining areas within 75m of the study site?	Yes
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	Yes
10.3 Are there any brine affected areas within 75m of the study site?	No

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

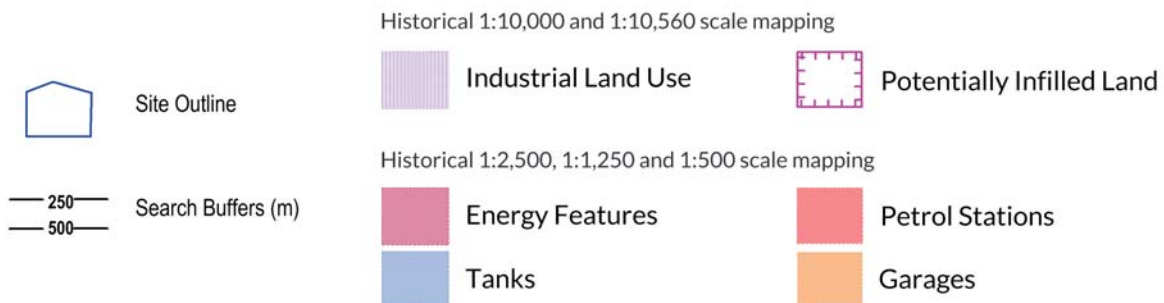
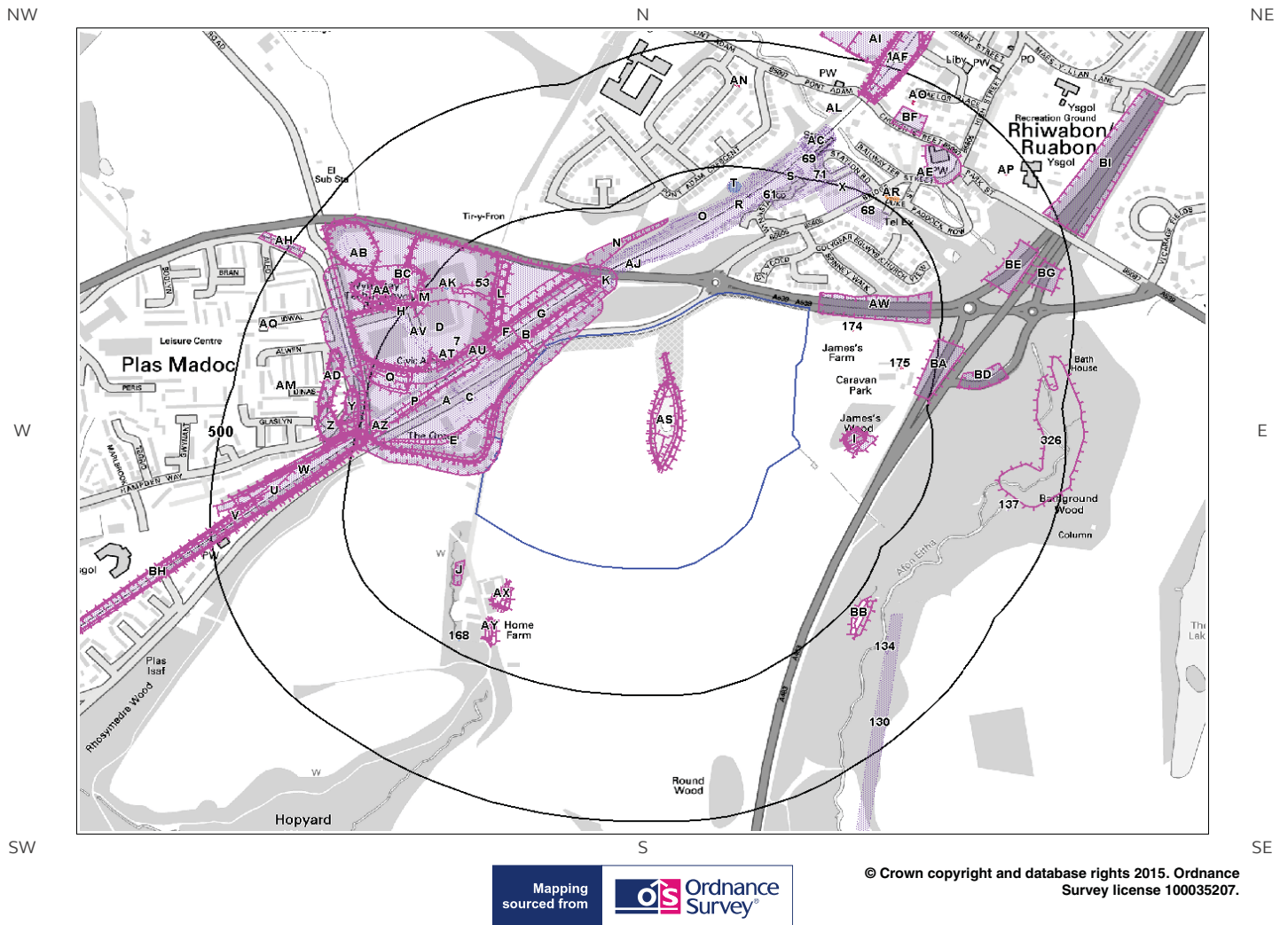
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use



1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 158

ID	Distance [m]	Direction	Use	Date
1F	0	On Site	Railway Sidings	1898
2C	0	On Site	Unspecified Disused Mine	1960
3A	0	On Site	Colliery	1873
4A	0	On Site	Railway Sidings	1873
5AT	0	On Site	Colliery	1898
6B	4	NW	Railway Sidings	1938
7	5	NW	Colliery	1949
8B	5	NW	Railway Sidings	1949
9	5	NW	Railway Sidings	1910
10C	5	NW	Colliery	1910
11D	6	NW	Colliery	1938
12D	6	NW	Colliery	1938
13E	8	W	Unspecified Ground Workings	1910
14E	10	W	Unspecified Heap	1960
15AW	18	E	Cuttings	1993
16G	31	NW	Cuttings	1873
17F	36	NW	Cuttings	1898
18G	37	NW	Cuttings	1949
19G	39	NW	Cuttings	1910
20G	39	NW	Cuttings	1938
21G	41	NW	Cuttings	1960
22AU	41	NW	Railway Sidings	1960
23H	44	W	Tramway Sidings	1938
24H	57	W	Tramway Sidings	1910
25I	82	E	Gravel Pit	1949
26I	83	E	Gravel Pit	1949
27I	83	E	Gravel Pit	1910
28I	86	E	Gravel Pit	1938
29I	86	E	Unspecified Pit	1968
30I	86	E	Unspecified Pit	1993
31J	88	SW	Unspecified Pit	1974
32J	88	SW	Unspecified Pit	1994
33J	88	SW	Unspecified Pit	1985
34M	90	NW	Unspecified Ground Workings	1910
35K	90	N	Smithy	1949

36K	90	N	Smithy	1898
37L	91	NW	Unspecified Heap	1949
38K	92	N	Smithy	1910
39K	93	N	Smithy	1938
40L	93	NW	Unspecified Heap	1960
41K	94	N	Smithy	1960
42M	101	NW	Unspecified Heap	1938
43M	101	NW	Unspecified Heap	1938
44M	101	NW	Unspecified Heap	1949
45M	104	NW	Refuse Heap	1960
46AV	106	NW	Unspecified Heap	1898
47R	111	NW	Railway Sidings	1910
48O	112	NW	Railway Sidings	1960
49P	128	W	Cuttings	1873
50N	132	N	Unspecified Ground Workings	1994
51N	132	N	Unspecified Ground Workings	1974
52N	132	N	Unspecified Ground Workings	1985
53	142	NW	Unspecified Old Quarry	1898
54O	144	NW	Railway Sidings	1910
55Q	173	W	Cuttings	1949
56P	175	W	Railway Building	1960
57Q	177	W	Cuttings	1974
58Q	177	W	Cuttings	1985
59S	178	N	Unspecified Commercial/Industrial	1898
60R	190	N	Railway Building	1960
61	191	N	Railway Building	1910
62X	191	N	Telephone Exchange	1938
63S	194	N	Railway Sidings	1873
64AZ	196	W	Cuttings	1873
65T	198	N	Unspecified Tank	1994
66T	198	N	Unspecified Tank	1974
67T	198	N	Unspecified Tank	1985
68	200	NE	Telephone Exchange	1993
69	212	N	Railway Sidings	1949
70AK	215	NW	Unspecified Tank	1994
71	220	N	Unspecified Depot	1993
72BA	220	E	Cuttings	1993
73U	226	W	Cuttings	1873
74W	230	W	Cuttings	1898
75V	233	W	Cuttings	1910
76U	233	W	Cuttings	1949
77V	233	W	Cuttings	1938
78W	234	W	Cuttings	1960
79S	238	N	Railway Building	1873
80S	239	N	Railway Building	1949

81X	240	NE	Telephone Exchange	1949
82W	242	W	Cuttings	1974
83W	242	W	Cuttings	1985
84W	242	W	Cuttings	1994
85S	243	N	Railway Building	1910
86S	244	N	Railway Building	1938
87S	245	N	Railway Building	1949
88S	245	N	Railway Building	1968
89S	248	N	Railway Building	1960
90Y	252	NW	Unspecified Heap	1938
91Y	252	NW	Unspecified Heap	1938
92Y	256	NW	Unspecified Heap	1910
93Y	257	NW	Unspecified Heap	1949
94Y	258	W	Unspecified Heap	1960
95AC	264	N	Railway Station	1910
96Z	269	W	Unspecified Old Quarry	1898
97Z	276	W	Unspecified Old Quarry	1938
98Z	277	W	Unspecified Old Quarry	1949
99Z	278	W	Unspecified Old Quarry	1910
100Z	279	W	Unspecified Old Quarry	1960
101AA	280	NW	Unspecified Heap	1873
102AA	287	NW	Unspecified Heap	1898
103AB	291	NW	Unspecified Heaps	1938
104AB	291	NW	Unspecified Heaps	1938
105BC	291	NW	Old Coal Shaft	1938
106AB	292	NW	Unspecified Heap	1949
107AC	292	N	Railway Station	1949
108AA	293	NW	Unspecified Heap	1960
109AA	294	NW	Old Coal Shaft	1938
110AC	295	N	Railway Station	1898
111AA	295	NW	Unspecified Old Shaft	1960
112BD	298	E	Cuttings	1993
113AC	298	N	Railway Station	1873
114AA	298	NW	Unspecified Shaft	1873
115AC	299	N	Railway Station	1949
116AC	301	N	Railway Station	1968
117AC	302	N	Railway Station	1938
118AD	305	W	Unspecified Heap	1938
119AD	305	W	Unspecified Heap	1938
120AD	305	W	Unspecified Heap	1910
121AD	305	W	Unspecified Heap	1949
122AC	306	N	Railway Station	1993
123AA	306	NW	Old Coal Shaft	1949
124AA	308	NW	Old Coal Shaft	1938
125AD	309	W	Unspecified Heap	1960
126AA	313	NW	Old Coal Shaft	1910
127AA	314	NW	Old Coal Shaft	1938
128AA	315	NW	Unspecified Old Shaft	1960

129AE	324	NE	Police Station	1873
130	325	SE	Rifle Range	1873
131BE	335	E	Cuttings	1993
132AB	345	NW	Unspecified Ground Workings	1960
133AE	345	NE	Grave Yard	1873
134	351	SE	Targets	1910
135AL	387	N	Gasometer	1873
136BF	397	NE	Grave Yard	1873
137	406	E	Water Wheel	1909
138BG	416	E	Cuttings	1993
139AF	422	N	Cuttings	1873
140	425	N	Railway Sidings	1949
141AG	425	N	Cuttings	1949
142AF	430	N	Cuttings	1949
143AG	430	N	Cuttings	1949
144AF	431	N	Cuttings	1910
145AF	432	N	Cuttings	1938
146AF	436	N	Cuttings	1993
147AF	436	N	Cuttings	1968
148AF	437	N	Railway Sidings	1910
149BH	448	W	Cuttings	1960
150AF	455	N	Cuttings	1898
151AH	471	NW	Railway Sidings	1898
152AH	471	NW	Cuttings	1873
153AH	471	NW	Railway Sidings	1949
154BI	479	NE	Cuttings	1993
155AH	484	NW	Railway Sidings	1910
156AI	498	N	Cemetery	1873
157AI	498	N	Cemetery	1898
158AI	499	N	Cemetery	1949

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary:

15

ID	Distance (m)	Direction	Use	Date
159AJ	122	NW	Unspecified Tank	1899
160AJ	122	NW	Unspecified Tank	1912
161AJ	127	NW	Unspecified Tank	1961
162T	199	N	Unspecified Tank	1967
163T	199	N	Unspecified Tank	1971
164AK	215	NW	Unspecified Tank	1989

165AK	217	NW	Unspecified Tank	1994
166AK	218	NW	Unspecified Tank	1989
167AK	218	NW	Unspecified Tank	1991
168	223	SW	Unspecified Tank	1960
169AE	345	NE	Unspecified Tank	1960
170AE	345	NE	Unspecified Tank	1960
171AE	345	NE	Unspecified Tank	1960
172AL	389	N	Gasometer	1873
173AO	461	NE	Unspecified Tank	1912

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary:

37

ID	Distance (m)	Direction	Use	Date
174	83	E	Electricity Substation	1992
175	177	E	Electricity Substation	1992
176AK	223	NW	Electricity Substation	1994
177AK	224	NW	Electricity Substation	1991
178AK	237	NW	Electricity Substation	1989
179AK	240	NW	Electricity Substation	1991
180AL	389	N	Gasometer	1873
181AM	400	W	Electricity Substation	1971
182AM	400	W	Electricity Substation	1991
183AM	400	W	Electricity Substation	1989
184AM	400	W	Electricity Substation	1989
185AM	400	W	Electricity Substation	1994
186AM	401	W	Electricity Substation	1989
187AN	408	N	Electricity Substation	1994
188AN	409	N	Electricity Substation	1989
189AN	409	N	Electricity Substation	1971
190AN	409	N	Electricity Substation	1991
191AN	409	N	Electricity Substation	1989
192AN	411	N	Electricity Substation	1967
193AO	448	NE	Electricity Substation	1992
194AO	448	NE	Electricity Substation	1992
195AO	448	NE	Electricity Substation	1989
196AO	448	NE	Electricity Substation	1995
197AO	448	NE	Electricity Substation	1995
198AO	449	NE	Electricity Substation	1960
199AO	449	NE	Electricity Substation	1960
200AP	453	NE	Electricity Substation	1992
201AP	453	NE	Electricity Substation	1992
202AP	453	NE	Electricity Substation	1989

203AP	456	NE	Electricity Substation	1960
204AP	456	NE	Electricity Substation	1960
205AQ	460	W	Electricity Substation	1991
206AQ	460	W	Electricity Substation	1989
207AQ	460	W	Electricity Substation	1989
208AQ	460	W	Electricity Substation	1989
209AQ	460	W	Electricity Substation	1994
210AQ	460	W	Electricity Substation	1971

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary: 0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 3

ID	Distance (m)	Direction	Use	Date
211AR	261	NE	Garage	1960
212AR	261	NE	Garage	1960
213AR	261	NE	Garage	1960

1.6 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 130

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

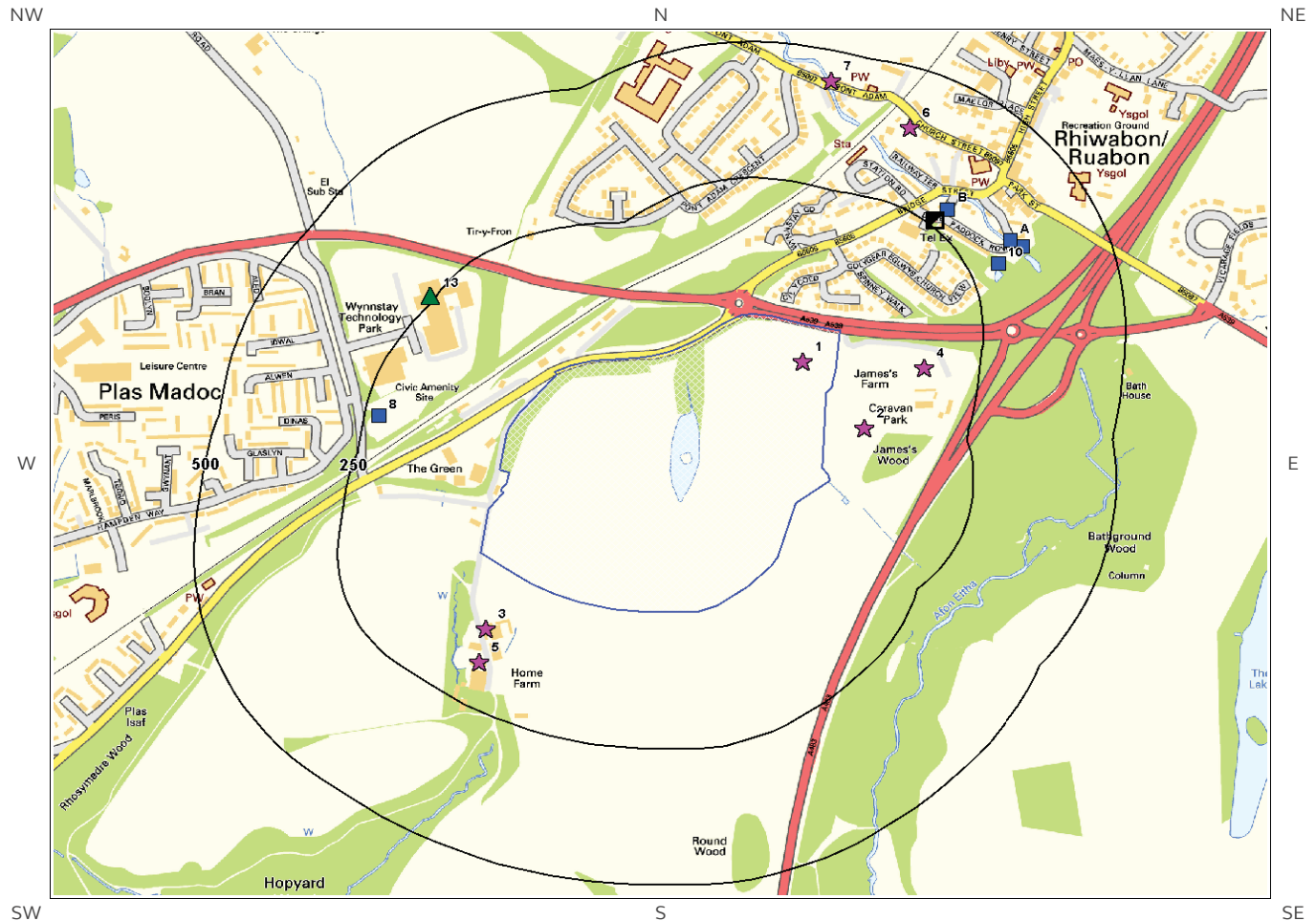
ID	Distance(m)	Direction	Use	Date
214C	0	On Site	Unspecified Disused Mine	1960
215AS	0	On Site	Pond	1938
216AS	0	On Site	Pond	1898
217AS	0	On Site	Pond	1873
218AS	0	On Site	Pond	1985
219AS	0	On Site	Pond	1994
220AS	0	On Site	Pond	1974
221A	0	On Site	Colliery	1873
222AS	0	On Site	Pond	1910

223AS	0	On Site	Water Body	1960
224AS	0	On Site	Pond	1949
225AT	0	On Site	Colliery	1898
226AU	5	NW	Colliery	1949
227C	5	NW	Colliery	1910
228AV	6	NW	Colliery	1938
229AV	6	NW	Colliery	1938
230E	8	W	Unspecified Ground Workings	1910
231E	10	W	Unspecified Heap	1960
232AW	18	E	Cuttings	1993
233G	31	NW	Cuttings	1873
234F	36	NW	Cuttings	1898
235G	37	NW	Cuttings	1949
236G	39	NW	Cuttings	1910
237G	39	NW	Cuttings	1938
238G	41	NW	Cuttings	1960
239AX	82	SW	Ponds	1960
240I	82	E	Gravel Pit	1949
241AX	83	SW	Ponds	1938
242I	83	E	Gravel Pit	1949
243I	83	E	Gravel Pit	1910
244AX	85	SW	Pond	1910
245I	86	E	Gravel Pit	1938
246I	86	E	Unspecified Pit	1993
247I	86	E	Unspecified Pit	1968
248J	88	SW	Unspecified Pit	1985
249J	88	SW	Unspecified Pit	1994
250J	88	SW	Unspecified Pit	1974
251M	90	NW	Unspecified Ground Workings	1910
252L	91	NW	Unspecified Heap	1949
253L	93	NW	Unspecified Heap	1960
254AX	97	SW	Pond	1873
255AX	97	SW	Pond	1898
256AX	100	SW	Pond	1949
257M	101	NW	Unspecified Heap	1938
258M	101	NW	Unspecified Heap	1938
259M	101	NW	Unspecified Heap	1949
260M	104	NW	Refuse Heap	1960
261AV	106	NW	Unspecified Heap	1898
262P	128	W	Cuttings	1873
263N	132	N	Unspecified Ground Workings	1985
264N	132	N	Unspecified Ground Workings	1994
265N	132	N	Unspecified Ground Workings	1974
266L	142	NW	Unspecified Old Quarry	1898
267AY	160	SW	Pond	1960

268AY	160	SW	Pond	1985
269AY	160	SW	Pond	1974
270AY	161	SW	Pond	1938
271AY	161	SW	Pond	1910
272AY	162	SW	Pond	1949
273AY	162	SW	Pond	1873
274AY	162	SW	Pond	1898
275Q	173	W	Cuttings	1949
276Q	177	W	Cuttings	1985
277Q	177	W	Cuttings	1974
278AZ	196	W	Cuttings	1873
279BA	220	E	Cuttings	1993
280U	226	W	Cuttings	1873
281W	230	W	Cuttings	1898
282V	233	W	Cuttings	1910
283U	233	W	Cuttings	1949
284V	233	W	Cuttings	1938
285W	234	W	Cuttings	1960
286W	242	W	Cuttings	1974
287W	242	W	Cuttings	1985
288W	242	W	Cuttings	1994
289Y	252	NW	Unspecified Heap	1938
290Y	252	NW	Unspecified Heap	1938
291Y	256	NW	Unspecified Heap	1910
292Y	257	NW	Unspecified Heap	1949
293Y	258	W	Unspecified Heap	1960
294BB	263	SE	Pond	1898
295Z	269	W	Unspecified Old Quarry	1898
296BB	273	SE	Pond	1873
297Z	276	W	Unspecified Old Quarry	1938
298Z	277	W	Unspecified Old Quarry	1949
299Z	278	W	Unspecified Old Quarry	1910
300Z	279	W	Unspecified Old Quarry	1960
301AA	280	NW	Unspecified Heap	1873
302BC	286	NW	Air Shaft	1898
303AA	287	NW	Unspecified Heap	1898
304AB	291	NW	Unspecified Heaps	1938
305AB	291	NW	Unspecified Heaps	1938
306BC	291	NW	Old Coal Shaft	1938
307AB	292	NW	Unspecified Heap	1949
308AA	293	NW	Unspecified Heap	1960
309BC	294	NW	Old Coal Shaft	1938
310BC	295	NW	Unspecified Old Shaft	1960
311BD	298	E	Cuttings	1993
312AA	298	NW	Unspecified Shaft	1873
313AD	305	W	Unspecified Heap	1938
314AD	305	W	Unspecified Heap	1938
315AD	305	W	Unspecified Heap	1910

316AD	305	W	Unspecified Heap	1949
317AA	306	NW	Old Coal Shaft	1949
318AA	308	NW	Old Coal Shaft	1938
319AD	309	W	Unspecified Heap	1960
320BC	313	NW	Old Coal Shaft	1910
321BC	314	NW	Old Coal Shaft	1938
322BC	315	NW	Unspecified Old Shaft	1960
323BE	335	E	Cuttings	1993
324AB	345	NW	Unspecified Ground Workings	1960
325AE	345	NE	Grave Yard	1873
326	380	E	Pond	1873
327BF	397	NE	Grave Yard	1873
328BG	416	E	Cuttings	1993
329AF	422	N	Cuttings	1873
330AG	425	N	Cuttings	1949
331AF	430	N	Cuttings	1949
332AF	430	N	Cuttings	1949
333AF	431	N	Cuttings	1910
334AF	432	N	Cuttings	1938
335AF	436	N	Cuttings	1993
336AF	436	N	Cuttings	1968
337BH	448	W	Cuttings	1960
338AF	455	N	Cuttings	1898
339AH	471	NW	Cuttings	1873
340BI	479	NE	Cuttings	1993
341AI	498	N	Cemetery	1898
342AI	498	N	Cemetery	1873
343AI	499	N	Cemetery	1949

2. Environmental Permits, Incidents and Registers Map



Mapping sourced from
Ordnance Survey

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- | | | |
|--------------------|-------------------------------|--|
| Site Outline | Recorded Pollution Incident | RAS 3 & 4 Authorisations |
| Search Buffers (m) | Dangerous Substances (List 1) | Part A(1) Authorised Processes and Historic IPC Authorisations |
| | Dangerous Substances (List 2) | Part A(2) and Part B Authorised Processes |
| | Water Industry Referrals | COMAH / NIHHS Sites |
| | Licenced Discharge Consents | Sites Determined as Contaminated Land |
| | Red List Discharge Consents | Hazardous Substance Consents and Enforcements |

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

1

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
13	257	NW	329320 343558	Address: Rolinx Performance Coatings, Wynnstay Technology Park, Ruabon, Wrexham, LL14 6EN Process: Coating Process Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified. Date of Enforcement: No Enforcement Notified. Comment: No Enforcement Notified.

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

5

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
8	226	W	329230 343340	Address: RUABON MANNED CONTAINER SITE WYNNST, RUABON MANNED CONTAINER SITE WYN, MANNED CONTAINER SITE WYNNSTAY B, WYNNSTAY BANKS, UNKNOWN, UNKNOWN Effluent Type: UNSPECIFIED Permit Number: CM0151401 Permit Version: 1 Receiving Water: Status: CONSENT EXPIRED - TIME LIMIT Issue date: 06/04/1987 Effective Date: 06-Apr-1987 Revocation Date: 18/03/1993
9B	290	NE	330220 343720	Address: RUABON 5 DUKE STREET PRIVATE GARAGE, RUABON 5 DUKE STREET PRIVATE GAR, 5 DUKE STREET PRIVATE GARAGE, PRIVATE GARAGE, UNKNOWN, UNKNOWN Effluent Type: UNSPECIFIED Permit Number: CM0033401 Permit Version: 1 Receiving Water: Status: CONSENT EXPIRED - TIME LIMIT Issue date: 20/04/1966 Effective Date: 20-Apr-1966 Revocation Date: 05/04/1995
10	302	NE	330310 343620	Address: PADDOCK ROW RUABON ,, PADDOCK ROW RUABON ,, RUABON ,, RUABON ,, RUABON ,, Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: CG0358201 Permit Version: 1 Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 21/07/1994 Effective Date: 21-Jul-1994 Revocation Date: -

ID	Distance (m)	Direction	NGR	Details
11A	340	NE	330331 343663	Address: TAL Y LAN CSO, RUABON PS (SE OF BRIDGE STREET), (SE OF BRIDGE STREET) RUABON, RUABON, RUABON, RUABON Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: CM0008201 Permit Version: 1 Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 08/01/1960 Effective Date: 08-Jan-1960 Revocation Date: -
12A	354	NE	330353 343652	Address: RUABON PS, RUABON PS, UNKNOWN, UNKNOWN, UNKNOWN, LL14 1US Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: CM0190801 Permit Version: 3 Receiving Water: Status: VARIED UNDER EPR 2010 Issue date: 19/12/2011 Effective Date: 19-Dec-2011 Revocation Date: -

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

1

The following Water Industry Referral records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	Address	Permission reference	Local Authority	First Date Received	Last Date Received	Status
15B	261	NE	SUPASTRIP LTD, PROVIDENCE CHAPEL, BRIDGE STREET, RUABON, RUABON, LL14 6DA	AU5688	WREXHAM COUNTY BOROUGH COUNCIL	01-Jun-2001	01-Apr-2015	RECEIVED

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

2.3 Environment Agency Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

7

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
1	0	On Site	329968 343441	Incident Date: 11-Sep-2006 Incident Identification: 434517 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Ammonia/Amine Odour Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
2	69	E	330076 343319	Incident Date: 15-Aug-2012 Incident Identification: 1026336 Pollutant: Sewage Materials Pollutant Description: Crude Sewage Water Impact: Category 2 (Significant) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
3	112	SW	329416 342950	Incident Date: 10-Oct-2002 Incident Identification: 113978 Pollutant: Other Pollutant Pollutant Description: Other Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
4	153	E	330180 343429	Incident Date: 11-May-2013 Incident Identification: 1111914 Pollutant: Sewage Materials Pollutant Description: Crude Sewage Water Impact: Category 3 (Minor) Land Impact: Category 2 (Significant) Air Impact: Category 3 (Minor)
5	171	SW	329405 342888	Incident Date: 09-Sep-2001 Incident Identification: 29747 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Blood and Offal Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
6	392	N	330155 343871	Incident Date: 19-Aug-2003 Incident Identification: 183455 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
7	444	N	330017 343956	Incident Date: 05-Oct-2001 Incident Identification: 34948 Pollutant: Oils and Fuel Pollutant Description: Petrol Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

Database searched and no data found.

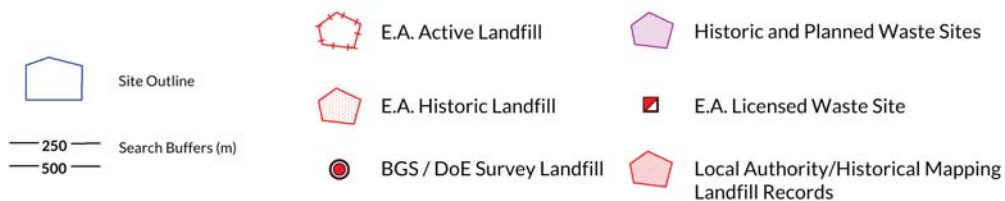
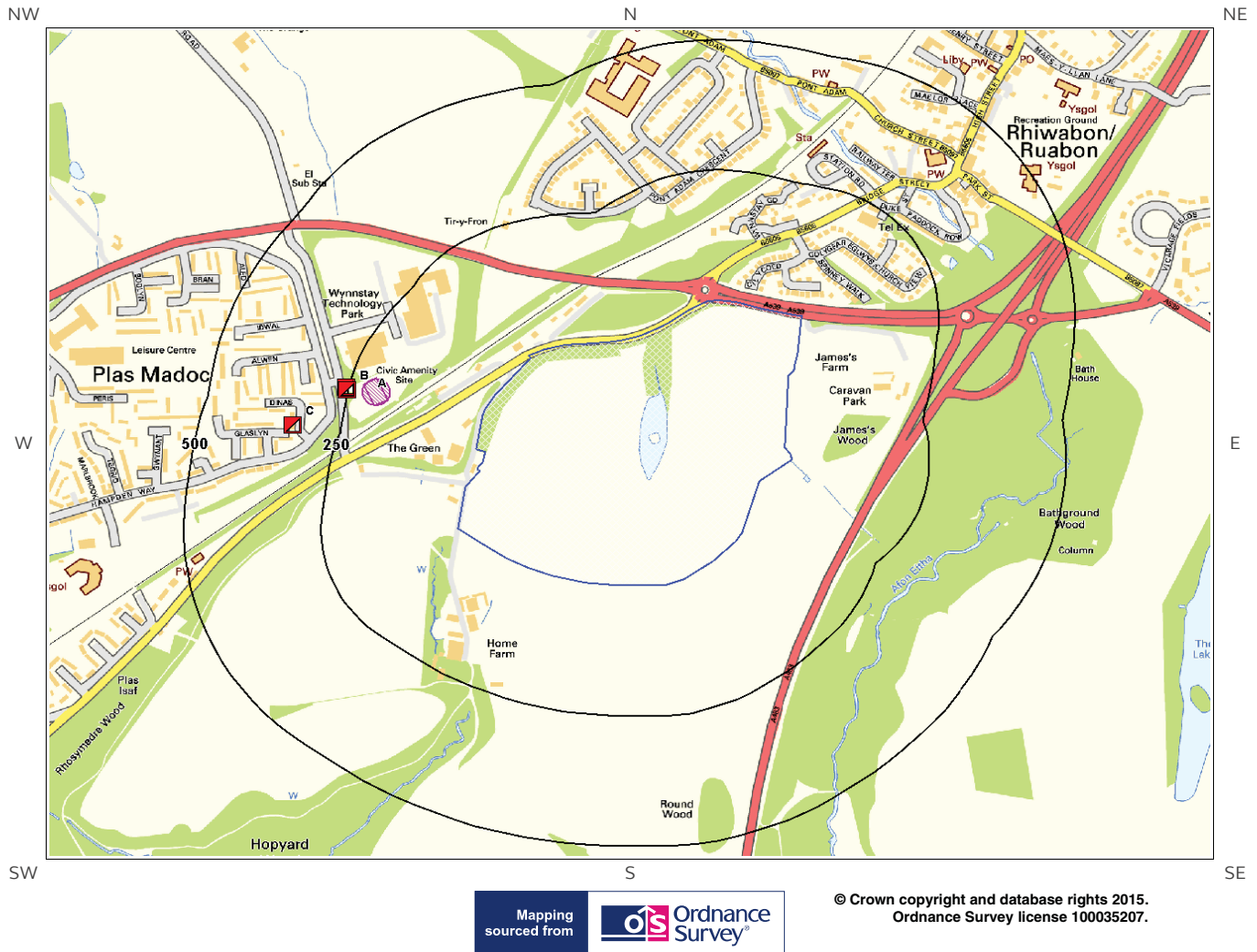
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site?

0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency landfill data within 1000m of the study site:

2

The following Environment Agency landfill records are represented as polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
Not shown	681	N	330077 344722	Address: Tatham Road, Ruabon, Wrexham, Clwyd, LL14 6RF Landfill Reference: 37109.0 Environmental Permitting Regulations (Waste) Reference: SHA001 Landfill Type: A4 : Household, Commercial & Industrial Waste Landfill Operator: Shanks Northern Ltd Status: Closure IPPC Reference: EPR Reference:
Not shown	764	N	330087 344716	Address: Gardden, Tatham Road, Ruabon, Wrexham, Clwyd, LL14 6RF Landfill Reference: 37014.0 Environmental Permitting Regulations (Waste) Reference: SHA005 Landfill Type: A4 : Household, Commercial & Industrial Waste Landfill Operator: Shanks Midlands Ltd Status: Closure IPPC Reference: EPR Reference:

3.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site:

8

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
Not shown	694	N	329800 344200	Site Address: Llys Offa, Tatham Road, Wrexham, Ruabon Waste Licence: Yes Site Reference: WMBC L/29 Waste Type: Industrial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 02-Jun-1983 Licence Surrendered: 02-Jun-1984 Licence Hold Address: - Operator: - First Recorded: 02-Jun-1983 Last Recorded: 02-Jun-1984

ID	Distance (m)	Direction	NGR	Details
Not shown	743	N	330100 344500	Site Address: Gardden Clay Pit, Gardden Lodge, Tatham Road, Ruabon, Wrexham, Clywd Waste Licence: Yes Site Reference: WMBC L/23, WMBC L82 Waste Type: Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 01-Apr-1977 Licence Surrendered: Licence Hold Address: A8 Edinburgh Road, Coatbridge, Lanarkshire Operator: - First Recorded: 31-Dec-1977 Last Recorded: 31-Aug-1984
Not shown	915	W	328400 343100	Site Address: Woodward's Rock, Plas Madoc Waste Licence: Yes Site Reference: - Waste Type: Inert, Industrial, Commercial, Household, Special, Liquid sludge, Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: - First Recorded: 01-Jan-1968 Last Recorded: 31-Dec-1978
Not shown	1284	W	327700 344000	Site Address: The Delph, Acrefair, Wrexham, Clwyd Waste Licence: Yes Site Reference: WMBC L/32 Waste Type: Inert, Industrial, Household, Special Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 05-Aug-1981 Licence Surrendered: 31-Dec-1986 Licence Hold Address: - Operator: - First Recorded: 30-Nov-1981 Last Recorded: 31-Dec-1986
Not shown	1333	W	328100 342500	Site Address: Rhosmedre Quarry, Rhosmedre Waste Licence: Yes Site Reference: L17 Waste Type: Industrial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 31-Dec-1977 Licence Surrendered: 30-Apr-1994 Licence Hold Address: - Operator: - First Recorded: - Last Recorded: -
Not shown	1348	W	327900 343200	Site Address: Air Products Social Club, Acrefair, Wrexham, Clwyd Waste Licence: - Site Reference: - Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: - First Recorded: 31-Dec-1950 Last Recorded: 31-Dec-1960
Not shown	1409	SW	328100 342200	Site Address: Druids United FC, Plas Kynaston Lane, Wrexham, Cefn Mawr Waste Licence: Yes Site Reference: WMBC L/42 Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 28-Jul-1983 Licence Surrendered: 31-Oct-1983 Licence Hold Address: - Operator: - First Recorded: 01-Mar-1983 Last Recorded: 31-Oct-1983
Not shown	1460	W	327900 343000	Site Address: Air Products, Llangollen Road, Wrexham, Acrefair Waste Licence: Yes Site Reference: WMBC L/8, WMBC L/58 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 01-Sep-1977 Licence Surrendered: 30-Apr-1993 Licence Hold Address: - Operator: - First Recorded: 01-Sep-1977 Last Recorded: 31-Dec-1991

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

0

Database searched and no data found.

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

9

The following landfill records are represented as points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
Not shown	914	W	328408 343092	Refuse Tip	1967 mapping	Polygon
Not shown	914	W	328436 343135	Refuse Tip	1961 mapping	Polygon
Not shown	914	W	328417 343136	Refuse Tip	1971 mapping	Polygon
Not shown	1363	SW	328143 342542	Refuse Tips	1960 mapping	Polygon
Not shown	1363	SW	328143 342542	Refuse Tips	1960 mapping	Polygon
Not shown	1396	SW	328125 342535	Refuse Tips	1960 mapping	Polygon
Not shown	1396	SW	328125 342535	Refuse Tips	1960 mapping	Polygon
Not shown	1411	W	328092 342547	Refuse Tips	1960 mapping	Polygon
Not shown	1411	W	328092 342547	Refuse Tips	1960 mapping	Polygon

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

4

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
3A	173	W	329259 343351	Type of Site: Tyre Recycling Plant (Conversion) Site Address: 2 & 3, Wynnstay Technology Park, Ruabon, WREXHAM, Clwyd, LL14 6	Planning Application Reference: P/2008/0483 Date: -	Further Details: Scheme comprises change of use from industrial premises to used tyre recycling plant. An application (ref: P/2008/0483) for detailed planning permission was granted by Wrexham B.C. Planning decision obtained Data Source: Historic Planning Application Data Type: Point
4A	174	W	329258 343351	Type of Site: Amenity Site Site Address: N/A	Planning Application Reference: N/A Date: 1989	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

ID	Distance (m)	Direction	NGR	Details		
5A	174	W	329258 343351	Type of Site: Amenity Site Site Address: N/A	Planning Application Reference: N/A Date: 1989	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
6A	174	W	329258 343351	Type of Site: Amenity Site Site Address: N/A	Planning Application Reference: N/A Date: 1991	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

3.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

22

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
15B	252	W	329206 343357	Site Address: Off Plas Bennion Road, Wynnstey Bank Ruabon, Wrexham, Clwyd, LL14 1TP Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 3CW010 EPR reference: - Operator: 3 C Waste Ltd Waste Management licence No: 37039 Annual Tonnage: 0.0	Issue Date: 01/10/1993 Effective Date: 13/11/2001 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Wynnstey Banks Civic Amenity Site Correspondence Address: -, Barton House, Darland Lane, Lavister, Wrexham, LL12 OEL	
16B	252	W	329206 343357	Site Address: Off Plas Bennion Road, Wynnstey Bank Ruabon, Wrexham, Clwyd, LL14 1TP Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 3CW010 EPR reference: - Operator: 3 C Waste Ltd Waste Management licence No: 37039 Annual Tonnage: 0.0	Issue Date: 01/10/1993 Effective Date: 13/11/2001 Modified: 10/12/2003 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Wynnstey Banks Civic Amenity Site Correspondence Address: Chris Giffiths, Barton House, Darland Lane, Lavister, Wrexham, LL12 OEL	
17B	252	W	329206 343357	Site Address: Off Plas Bennion Road, Wynnstey Bank Ruabon, Wrexham, Clwyd, LL14 3ES Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 3CW010 EPR reference: EA/EPR/MP3394FY/V004 Operator: 3 C Waste Ltd Waste Management licence No: 37039 Annual Tonnage: 0.0	Issue Date: 01/10/1993 Effective Date: 13/11/2001 Modified: 28/02/2007 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Wynnstey Banks Civic Amenity Site Correspondence Address: -, -	

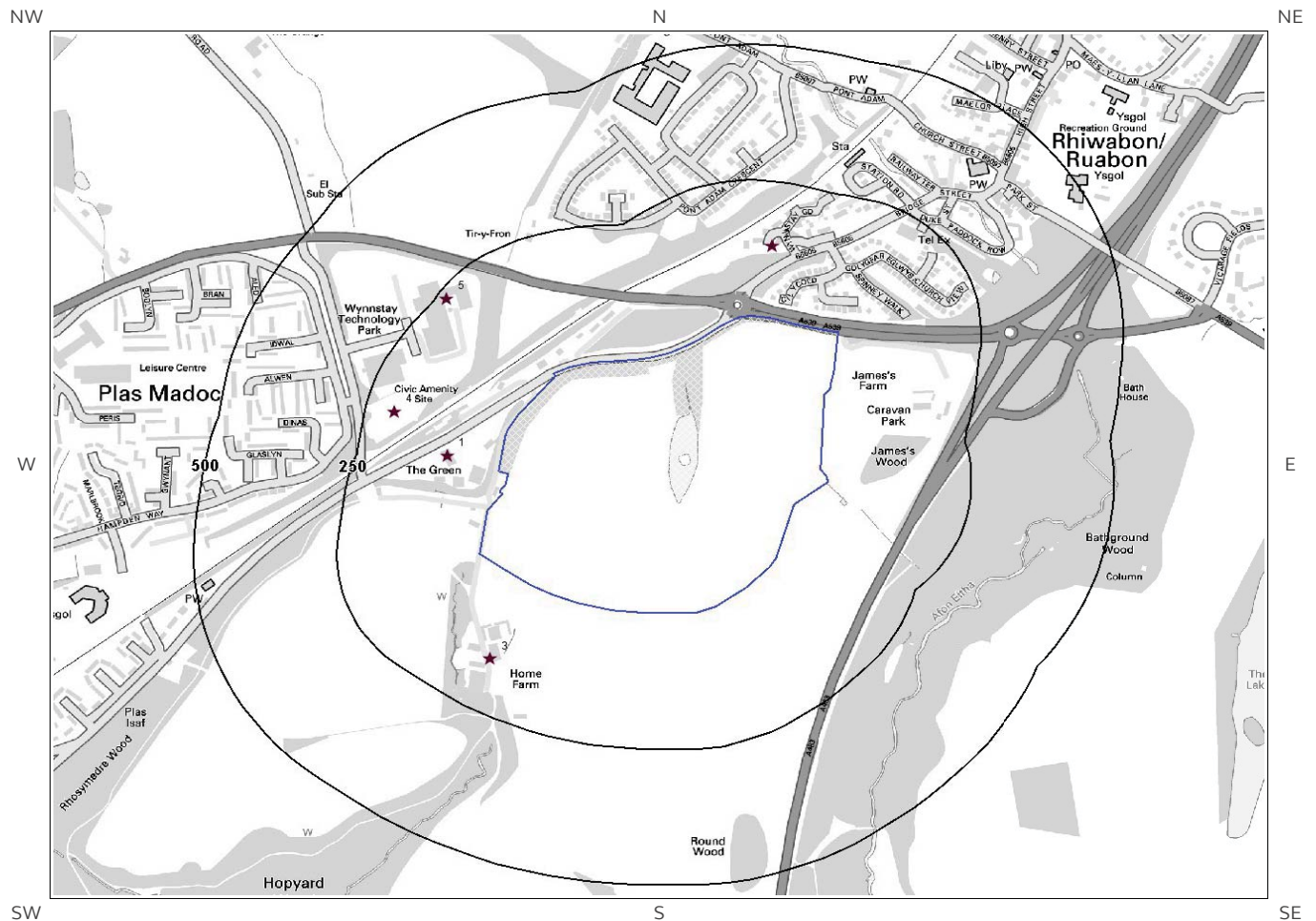
ID	Distance (m)	Direction	NGR	Details
18B	252	W	329206 343357	Site Address: Off Plas Bennion Road, Wynnstey Bank Ruabon, Wrexham, Clwyd, LL14 3ES Type: Household Waste Amenity Site Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: 3CW010 EPR reference: MP3394FY/V004 Operator: 3 C Waste Ltd Waste Management licence No: 37039 Annual Tonnage: 0.0 Issue Date: 01/10/1993 Effective Date: 13/11/2001 Modified: 28/02/2007 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked Site Name: Wynnstey Banks Civic Amenity Site Correspondence Address: -, -
19B	254	W	329205 343361	Site Address: Plas Madoc H W R C, Wynnstey Industrial Estate, Acrefair, Wrexham, Clwyd, LL14 1TP Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WAS025 EPR reference: EA/EPR/NP3095EW/V002 Operator: F C C Recycling (U K) Limited Waste Management licence No: 100081 Annual Tonnage: 24999.0 Issue Date: 23/10/2007 Effective Date: - Modified: 22/11/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Plas Madoc Household Waste Recycling Centre Correspondence Address: -, -
20B	254	W	329205 343361	Site Address: Plas Madoc H W R C, Wynnstey Industrial Estate, Acrefair, Wrexham, Clwyd, LL14 1TP Type: Household Waste Amenity Site Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: WAS025 EPR reference: NP3095EW/V002 Operator: F C C Recycling (U K) Limited Waste Management licence No: 100081 Annual Tonnage: 0.0 Issue Date: 23/10/2007 Effective Date: - Modified: 22/11/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Plas Madoc Household Waste Recycling Centre Correspondence Address: -, -
21C	336	W	329107 343288	Site Address: Land/ Premises At, Acrefair, Plas Madoc, Wrexham, Clwyd, LL14 3ES Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WAS025 EPR reference: EA/EPR/NP3095EW/A001 Operator: Waste Recycling Ltd Waste Management licence No: 100081 Annual Tonnage: 24999.0 Issue Date: 23/10/2007 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Plas Madoc Household Waste Recycling Centre Correspondence Address: -, -
22C	336	W	329107 343288	Site Address: Acrefair, Plas Madoc, Wrexham, Clwyd, LL14 3ES Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WAS025 EPR reference: - Operator: Waste Recycling Limited Waste Management licence No: 100081 Annual Tonnage: 0.0 Issue Date: 23/10/2007 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Plas Madoc Household Waste Recycling Centre Correspondence Address: -, Bold Business Centre, Bold Lane, Sutton, St Helens, Merseyside, WA9 4TX
Not shown	1204	N	330083 344716	Site Address: Tatham Road, Ruabon, Wrexham, LL14 6DR Type: Household, Commercial & Industrial Waste Landfill Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SHA001 EPR reference: - Operator: Shanks Northern Ltd Waste Management licence No: 37109 Annual Tonnage: 0.0 Issue Date: 06/07/1994 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Gardden Claypit 2 Northern Correspondence Address: -, Unit 9, Abbey Lane Industrial Estate, Burscough, Ormskirk, Merseyside, L40 7SR

ID	Distance (m)	Direction	NGR	Details
Not shown	1204	N	330087 344716	Site Address: Gardden, Tatham Road, Ruabon, Wrexham, Clwyd, LL14 6RF Type: Household, Commercial & Industrial Waste Landfill Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SHA005 EPR reference: BP3494FC/A001 Operator: Shanks Midlands Ltd Waste Management licence No: 37014 Annual Tonnage: 400.0 Issue Date: 02/05/1989 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Gardden Claypit 1 Midlands Correspondence Address: -, -
Not shown	1209	N	330077 344722	Site Address: Tatham Road, Ruabon, Wrexham, Clwyd, LL14 6RF Type: Household, Commercial & Industrial Waste Landfill Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SHA001 EPR reference: EA/EPR/HP3694FJ/A001 Operator: Shanks Northern Ltd Waste Management licence No: 37109 Annual Tonnage: 51712.0 Issue Date: 06/07/1994 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Gardden Claypit 2 Northern Correspondence Address: -, -
Not shown	1209	N	330077 344722	Site Address: Tatham Road, Ruabon, Wrexham, Clwyd, LL14 6RF Type: Household, Commercial & Industrial Waste Landfill Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SHA001 EPR reference: HP3694FJ/A001 Operator: Shanks Northern Ltd Waste Management licence No: 37109 Annual Tonnage: 51712.0 Issue Date: 06/07/1994 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Gardden Claypit 2 Northern Correspondence Address: -, -
Not shown	1209	N	330087 344721	Site Address: Tatham Road, Ruabon, Wrexham, LL14 6DR Type: Household, Commercial & Industrial Waste Landfill Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SHA005 EPR reference: - Operator: Shanks Midlands Ltd Waste Management licence No: 37014 Annual Tonnage: 0.0 Issue Date: 02/05/1989 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Gardden Claypit 1 Midlands Correspondence Address: -, Woodside House, Church Road, Woburn Sands, Milton Keynes, MK17 8TA
Not shown	1428	N	330083 344942	Site Address: Land / Premises At, Gardden Ind Est, Ruabon, Wrexham, Clwyd, LL14 6RG Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BEN001 EPR reference: EA/EPR/VP3394FX/A001 Operator: Bennett D Waste Management licence No: 37163 Annual Tonnage: 30000.0 Issue Date: 31/03/1999 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Clwyd Car Breakers Correspondence Address: -, -
Not shown	1428	N	330083 344942	Site Address: Land / Premises At, Gardden Ind Est, Ruabon, Wrexham, Clwyd, LL14 6RG Type: Metal Recycling Site (mixed MRS's) Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BEN001 EPR reference: VP3394FX/A001 Operator: Bennett D Waste Management licence No: 37163 Annual Tonnage: 30000.0 Issue Date: 31/03/1999 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Clwyd Car Breakers Correspondence Address: -, -

ID	Distance (m)	Direction	NGR	Details
Not shown	1439	N	330053 344957	Site Address: Gardden Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6RG Type: Vehicle depollution facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CLW002 EPR reference: EA/EPR/NP3290VM/A001 Operator: Clwyd Breakers Ltd Waste Management licence No: 102006 Annual Tonnage: 74999.0 Issue Date: 07/10/2010 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Clwyd Breakers Ltd Correspondence Address: -, -
Not shown	1439	N	330053 344957	Site Address: Gardden Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6RG Type: Vehicle depollution facility Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: CLW002 EPR reference: NP3290VM/A001 Operator: Clwyd Breakers Ltd Waste Management licence No: 102006 Annual Tonnage: 0.0 Issue Date: 07/10/2010 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Clwyd Breakers Ltd Correspondence Address: -, -
Not shown	1475	N	330082 344990	Site Address: I Hayward Ltd, Gardden Ind Est, Ruabon, Wrexham, Clwyd, LL14 6RG Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: HAY001 EPR reference: EA/EPR/EP3794FY/V003 Operator: I Hayward Limited Waste Management licence No: 37162 Annual Tonnage: 24999.0 Issue Date: 31/03/1999 Effective Date: - Modified: 31/01/2013 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: I Hayward Ltd Correspondence Address: -, -
Not shown	1475	N	330082 344990	Site Address: Gardden Ind Est, Ruabon, Wrexham, LL14 6RG Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: HAY001 EPR reference: - Operator: Haywards I Waste Management licence No: 37162 Annual Tonnage: 0.0 Issue Date: 31/03/1999 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: I Haywards Ltd Correspondence Address: -, Gardden Ind Est, Ruabon, Wrexham, LL14 6RG
Not shown	1475	N	330082 344990	Site Address: I Hayward Ltd, Gardden Ind Est, Ruabon, Wrexham, Clwyd, LL14 6RG Type: Metal Recycling Site (mixed MRS's) Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: HAY001 EPR reference: EP3794FY/V003 Operator: I Hayward Limited Waste Management licence No: 37162 Annual Tonnage: 0.0 Issue Date: 31/03/1999 Effective Date: - Modified: 31/01/2013 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: I Hayward Ltd Correspondence Address: -, -
Not shown	1483	S	329188 341568	Site Address: Pen-y-bont Landfill, Newbridge Road, Chirk, Wrexham, LL14 3JE Type: Household, Commercial & Industrial Waste Landfill Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SHA004 EPR reference: EA/EPR/CP3094FU/V002 Operator: Shanks Midlands Ltd Waste Management licence No: 37123 Annual Tonnage: 214490.0 Issue Date: 23/12/1994 Effective Date: - Modified: 26/03/2002 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: To PPC Site Name: Pen-y-bont Landfill Correspondence Address: -, -

ID	Distance (m)	Direction	NGR	Details
Not shown	1483	S	329188 341568	Site Address: Pen-y-bont Landfill, Newbridge Road, Chirk, Wrexham, LL14 3JE Type: Household, Commercial & Industrial Waste Landfill Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SHA004 EPR reference: CP3094FU/V002 Operator: Shanks Midlands Ltd Waste Management licence No: 37123 Annual Tonnage: 214490.0 Issue Date: 23/12/1994 Effective Date: - Modified: 26/03/2002 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: To PPC Site Name: Pen-y-bont Landfill Correspondence Address: -, -

4. Current Land Use Map



Mapping sourced from **Ordnance Survey**

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- | | | |
|--|--|--|
|  Site Outline |  Current Industrial Sites |  Electricity Transmission Cables |
|  Search Buffers (m) |  Petrol & Fuel Sites |  Gas Transmission Pipelines |

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site:

5

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	94	W	Clwyd Caravans & Leisure Ltd	329352 343272	The Green, Wynnstay Yard, Ruabon, Wrexham, LL14 6DP	Vehicle Hire and Rental	Hire Services
2	133	N	Electricity Sub Station	329318 343658	LL14	Electrical Features	Infrastructure and Facilities
3	153	SW	Hopper	329426 342897	LL14	Hoppers and Silos	Farming
4	201	W	Civic Amenity Site	329358 343353	LL14	Refuse Disposal Facilities	Infrastructure and Facilities
5	234	NW	Electricity Sub Station	329350 343561	LL14	Electrical Features	Infrastructure and Facilities

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site:

0

Database searched and no data found.

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site:

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site:

0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
TILLD	TILL, DEVENSIAN	DIAMICTON
GFDUD	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]

5.3 Bedrock and Solid Geology

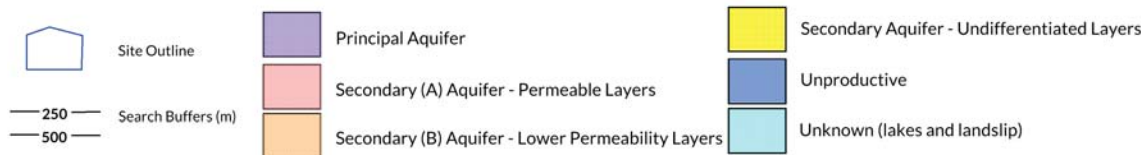
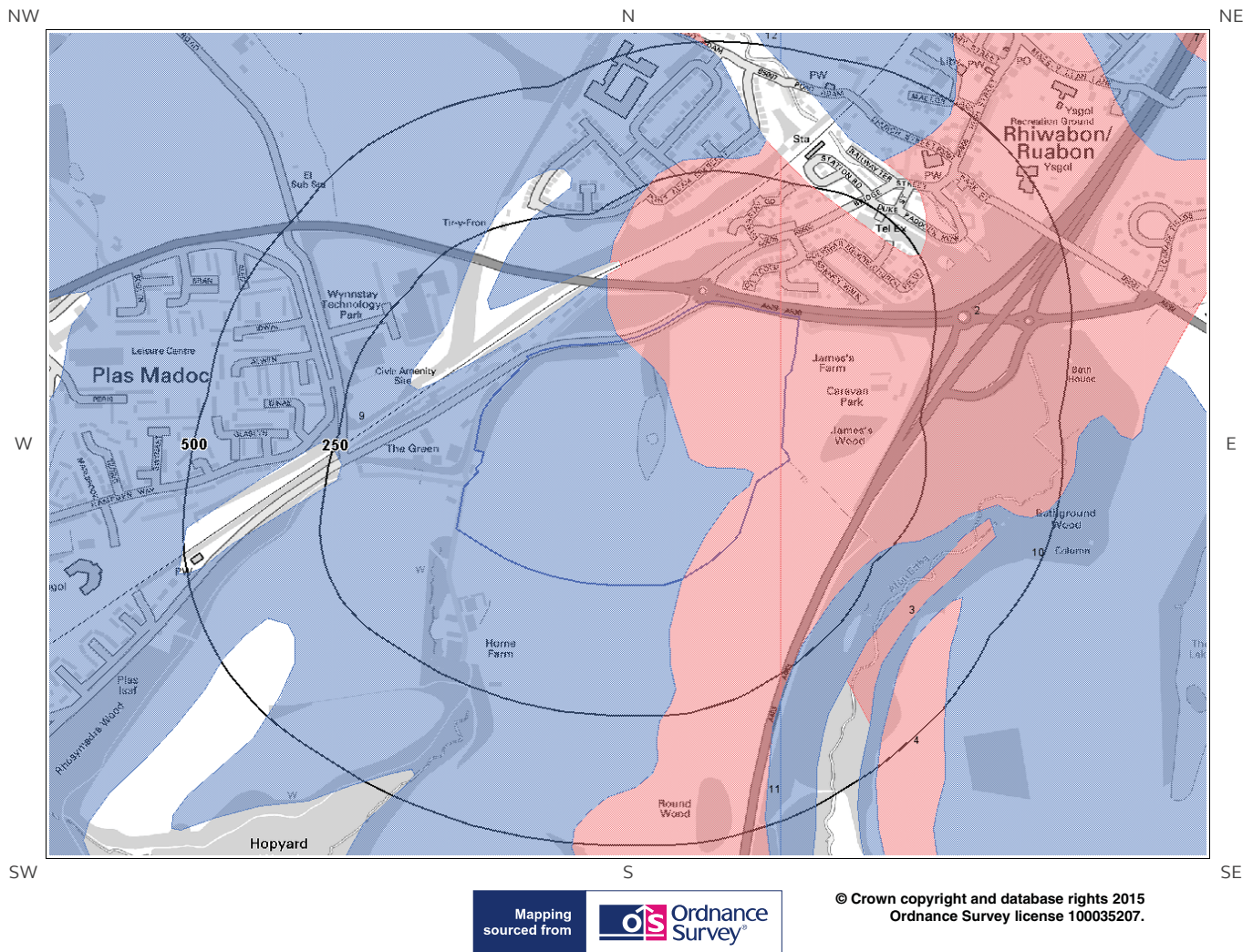
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
PLMC-MDSS	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED)	MUDSTONE, SILTSTONE AND SANDSTONE
ETM-MDST	ETRURIA FORMATION	MUDSTONE

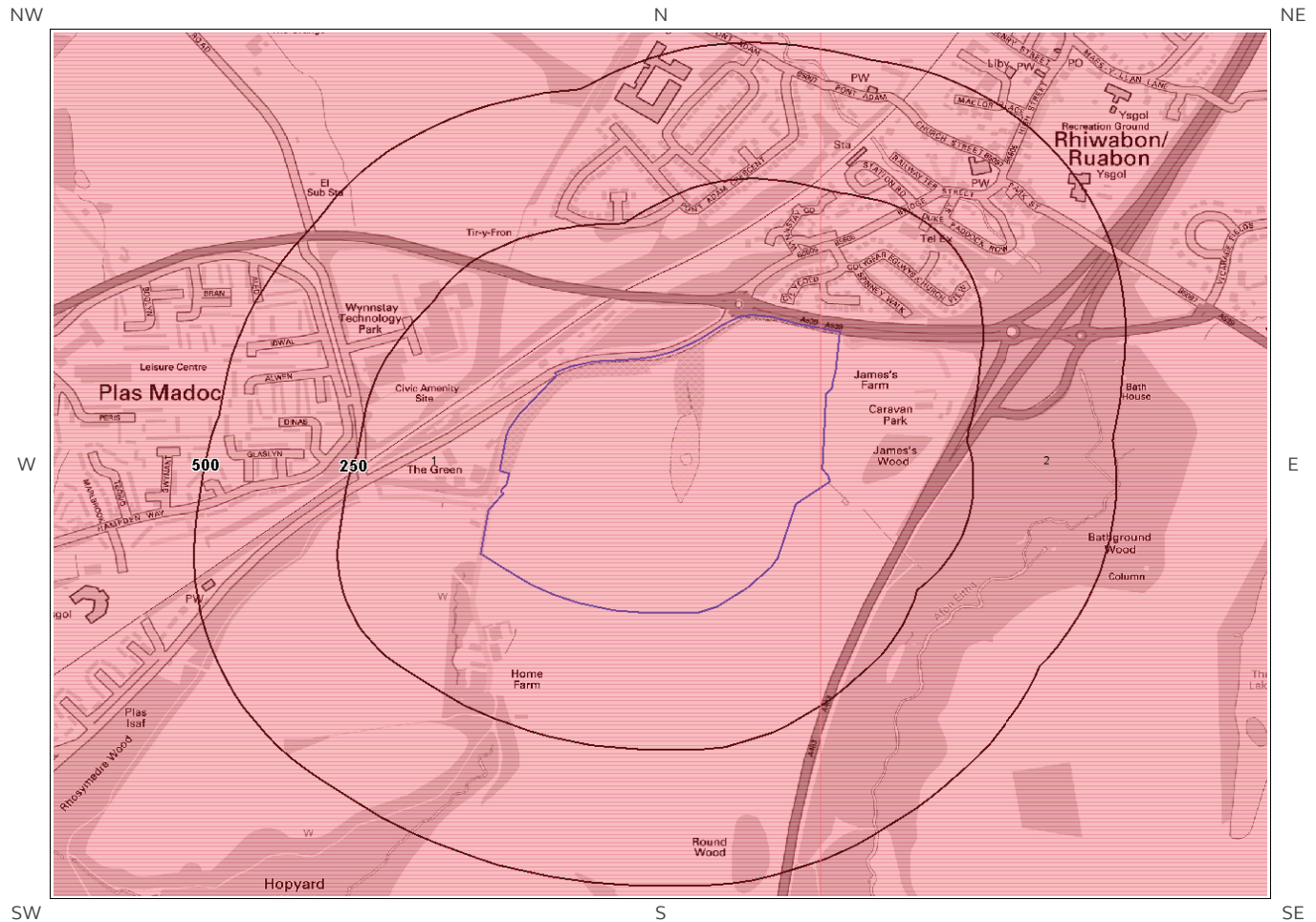
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



6b. Aquifer Within Bedrock Geology and Abstraction Licenses



Mapping sourced from **Ordnance Survey**

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Site Outline

250 Search Buffers (m)

500 Search Buffers (m)

Source Protection Zone 1 - Inner Catchment

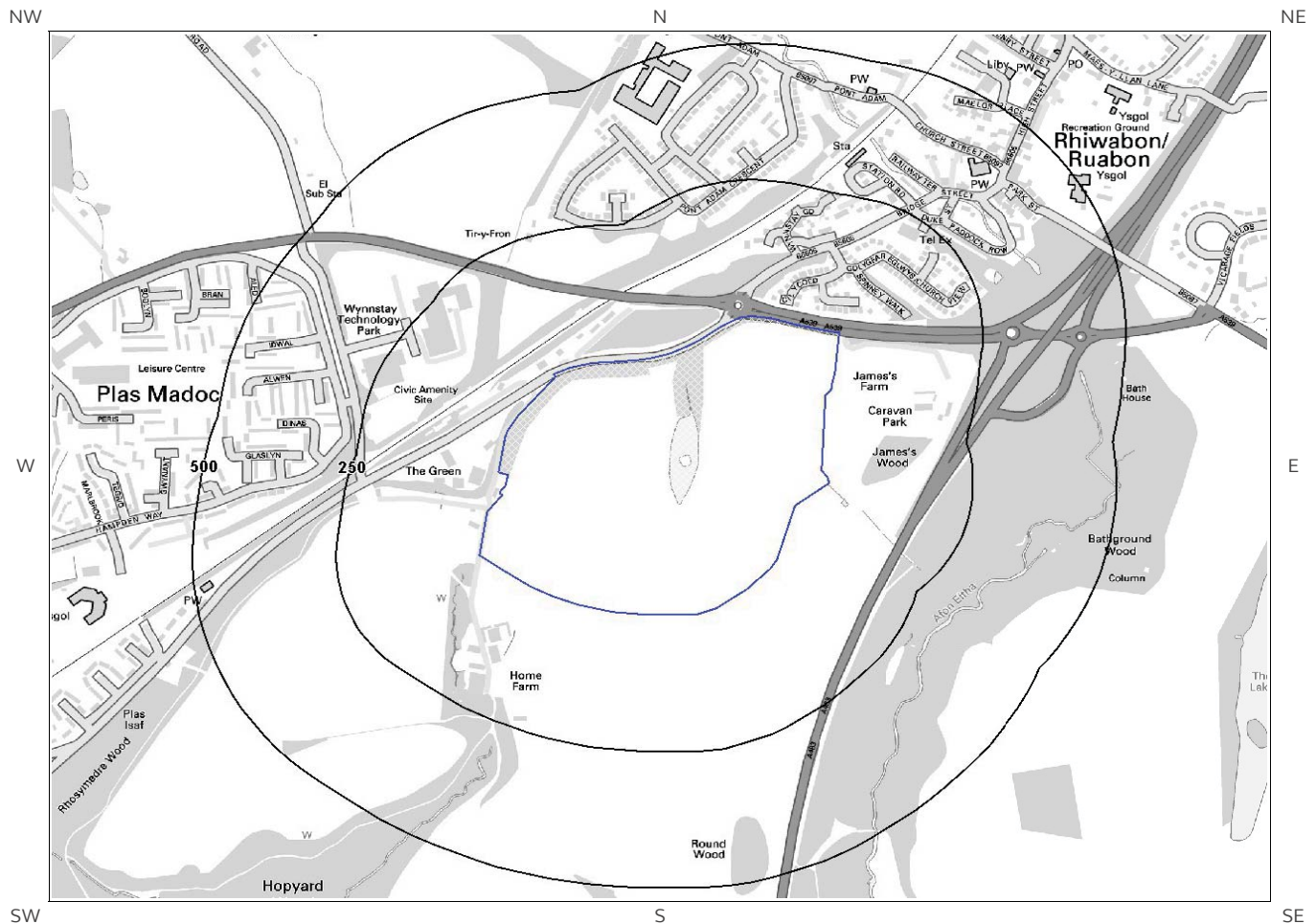
Source Protection Zone 2 - Outer Catchment

Source Protection Zone 3 - Total Catchment

Source Protection Zone 4 - Zone of Special Interest

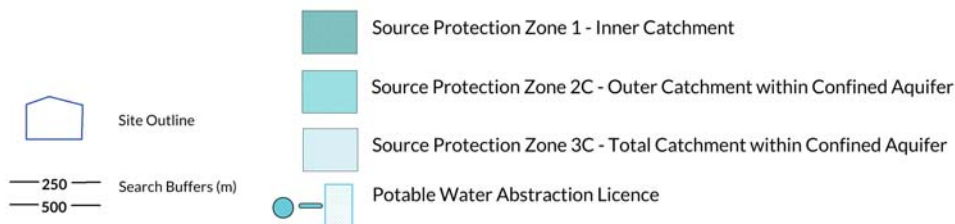
Potable Water Abstraction Licence

6d. Hydrogeology – Source Protection Zones within confined aquifer

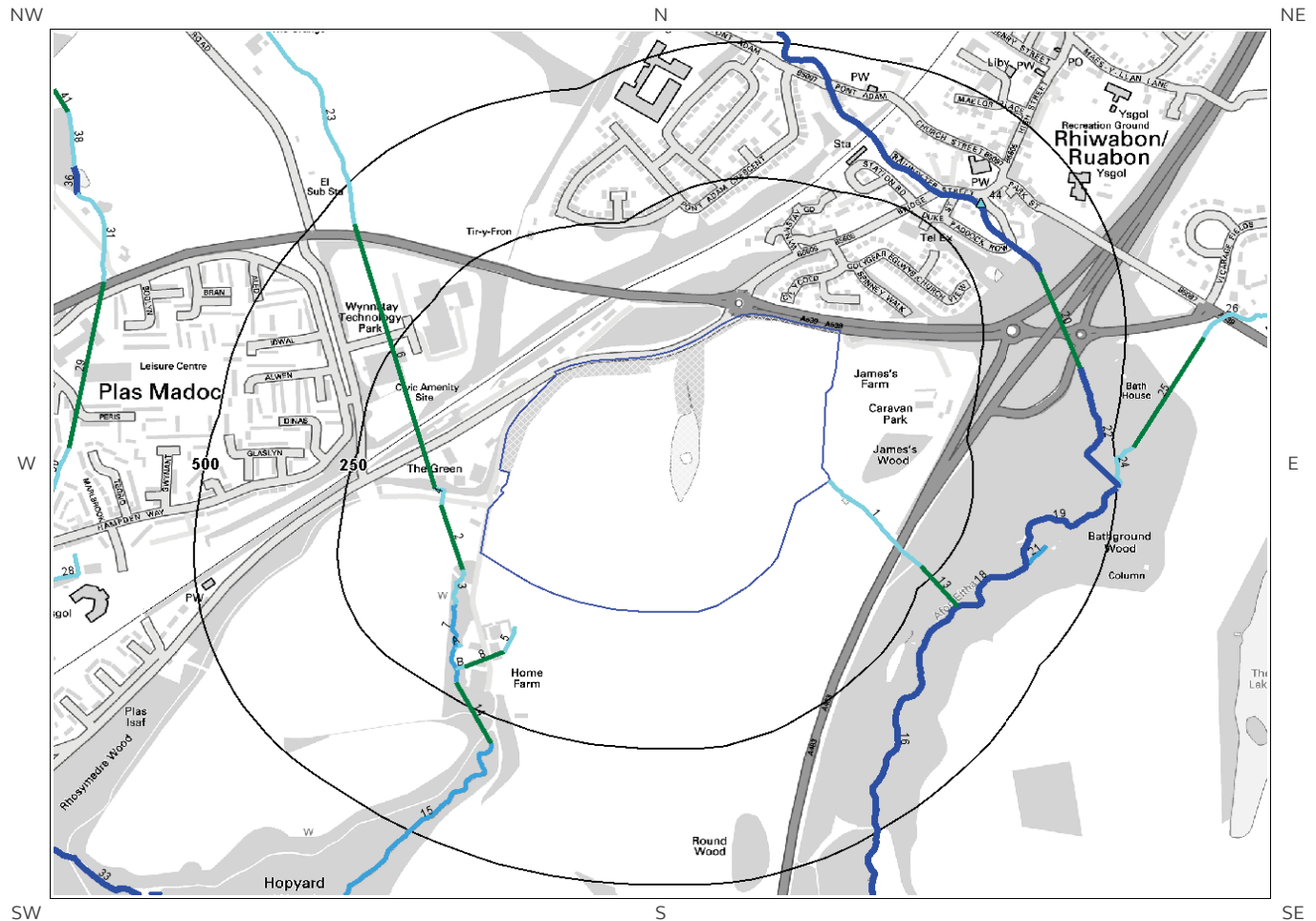


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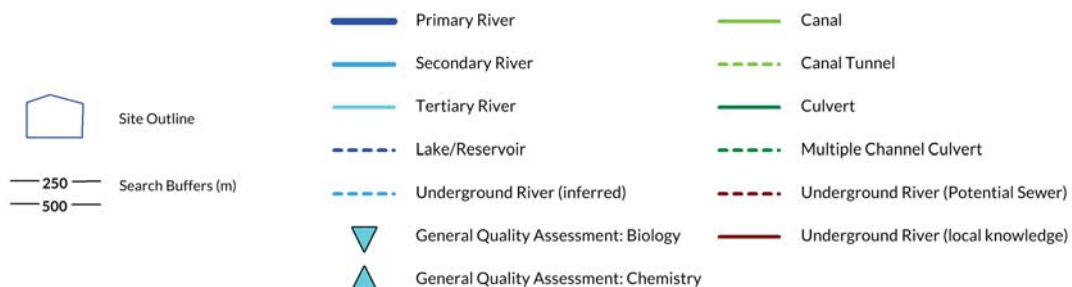


6e. Hydrology – Detailed River Network and River Quality



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6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property?
 Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviroinsight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	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. These are generally aquifers formerly classified as minor aquifers
2	0	On Site	Secondary A	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. These are generally aquifers formerly classified as minor aquifers
9	0	On Site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
10	213	SE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
11	292	SE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
3	310	SE	Secondary A	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. These are generally aquifers formerly classified as minor aquifers
4	377	SE	Secondary A	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. These are generally aquifers formerly classified as minor aquifers
12	473	N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
5	491	N	Secondary A	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. These are generally aquifers formerly classified as minor aquifers

6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviroinsight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	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. These are generally aquifers formerly classified as minor aquifers
2	0	On Site	Secondary A	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. These are generally aquifers formerly classified as minor aquifers

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
Not shown	1992	NW	328100 344800	Status: Historical Licence No: 24/67/5/0046 Details: General Farming & Domestic Direct Source: Eaw Groundwater Point: 35 Ft Deep, 8ft Dia. Well Data Type: Point Name: Lloyd Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: N124 Original Start Date: 12/10/1973 Expiry Date: - Issue No: 100 Version Start Date: 12/10/1973 Version End Date:

6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site? No

Database searched and no data found.

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site? No

Database searched and no data found.

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site?

No

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site?

No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency information on groundwater vulnerability and soil leaching potential within 500m of the study site? Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/Low Leaching Potential	L	Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.
0	On Site	Minor Aquifer/Low Leaching Potential	L	Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.
0	On Site	Minor Aquifer/High Leaching Potential	H2	Deep, permeable, coarse textured soils which readily transmit a wide range of pollutants because of their rapid drainage and low attenuation potential.
0	On Site	Minor Aquifer/High Leaching Potential	H2	Deep, permeable, coarse textured soils which readily transmit a wide range of pollutants because of their rapid drainage and low attenuation potential.
19	N	Minor Aquifer/High Leaching Potential	H2	Deep, permeable, coarse textured soils which readily transmit a wide range of pollutants because of their rapid drainage and low attenuation potential.
43	NW	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
59	NW	Minor Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.
151	W	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
250	N	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
313	SE	Minor Aquifer/Low Leaching Potential	L	Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.

6.9 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site? Yes

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAHl). In England, each chemical sample is measured for ammonia and dissolved oxygen. In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad').

The following Chemical Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
44	338	NE	330280 343730	River Name: Eitha Reach: Conf.r.dee W.park - Conf.trib.nr.penycae End/Start of Stretch: Sample Point NGR	A	A	A	A	-
Not shown	1451	SW	328730 341800	River Name: Dee Reach: Conf.bradley Bk.-conf.trefynant Bk. End/Start of Stretch: Sample Point NGR	A	A	A	A	-
Not shown	1451	SW	328730 341800	River Name: Dee Reach: Conf.cyflymen Bk.- Conf.eglwysseg End/Start of Stretch: Sample Point NGR	A	A	A	A	-
Not shown	1451	SW	328730 341800	River Name: Dee Reach: Conf.trefynant Bk.- Conf. Cyflymen Bk. End/Start of Stretch: Sample Point NGR	A	A	A	A	-
Not shown	1451	SW	328730 341800	River Name: Dee Reach: Conf.eglwysseg - Conf. Afon Morwynion End/Start of Stretch: Sample Point NGR	A	A	A	A	-

6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site?

Yes

The following Detailed River Network records are represented on the Hydrology Map (6e):

ID	Distance (m)	Direction	Details	
1	0	On Site	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
2	40	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
3	45	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
4	82	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
5	84	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
6	100	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
7	103	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
8	132	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
9A	160	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
10A	170	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
11B	191	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
12B	201	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
13	222	SE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
14	222	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
15	295	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
16	299	SE	River Name: Afon Eitha Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
17	304	NE	River Name: Afon Eitha Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
18	321	SE	River Name: Afon Eitha Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
19	359	E	River Name: Afon Eitha Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
20	365	E	River Name: Afon Eitha Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
21	377	SE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
22	425	E	River Name: Afon Eitha Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
23	443	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
24	500	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined

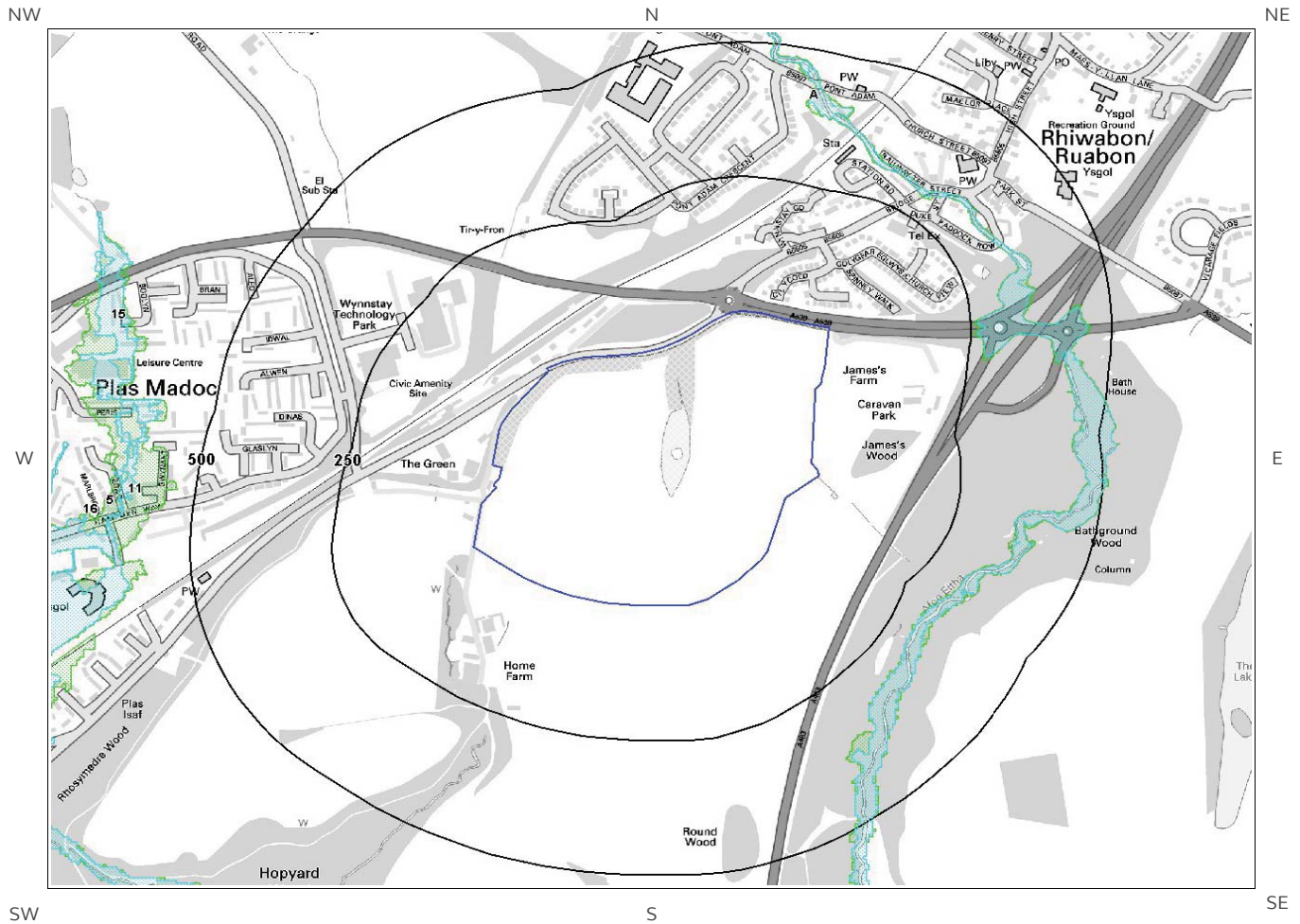
6.11 Surface Water Features

Are there any surface water features within 250m of the study site? Yes

The following surface water records are not represented on mapping:

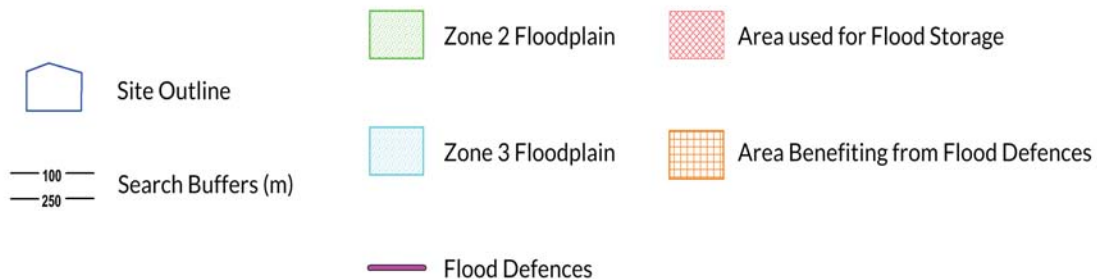
Distance (m)	Direction
0	On Site
0	On Site
0	On Site
45	SW
63	SW
76	SE
83	NW
84	SW
130	SE
160	SW
180	SE
191	SW

7a. Environment Agency Flood Map for Planning (from rivers and the sea)

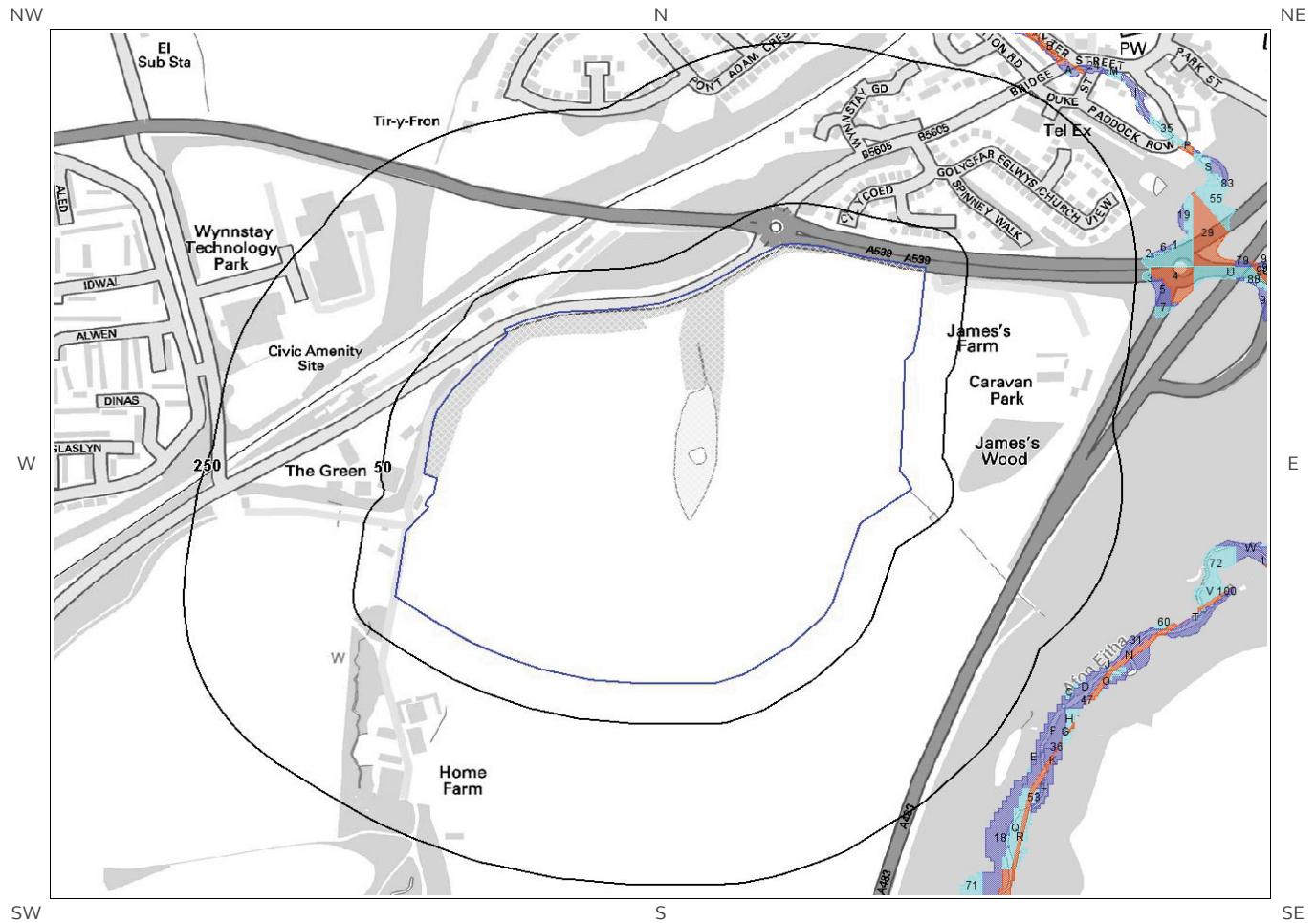


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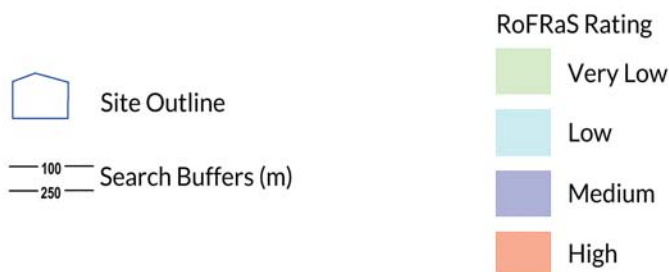


7b. Environment Agency Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency Zone 2 floodplain?

No

Environment Agency Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

Database searched and no data found.

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency Zone 3 floodplain?

No

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

Database searched and no data found.

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

What is the highest risk of flooding onsite?

Very Low

The Environment Agency RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Very Low (less than 1 in 1000) chance of flooding in any given year.

7.4 Flood Defences

Are there any Flood Defences within 250m of the study site?

No

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site?

No

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site?

No

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding? Superficial Deposits Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

7.8 Groundwater Flooding Confidence Areas

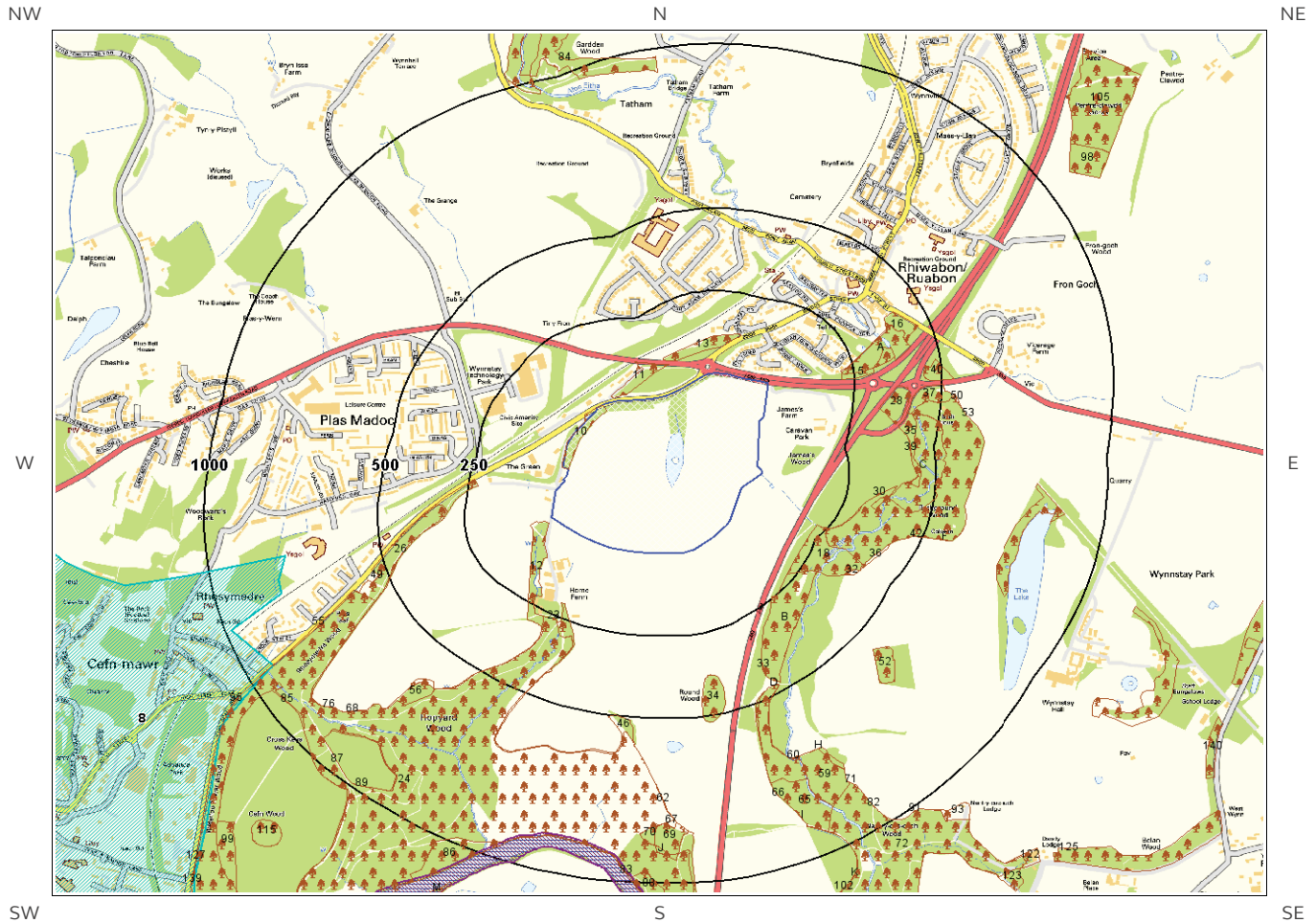
What is the British Geological Survey confidence rating in this result?

High

Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site? Yes

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

4

The following Site of Special Scientific Interest (SSSI) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SSSI Name	Data Source
4	885	S	AFON DYFRDWY (RIVER DEE)	Natural Resources Wales
Not shown	1650	N	STRYT LAS A'R HAFOD	Natural Resources Wales
Not shown	1681	S	NANT-Y-BELAN AND PRYNELA WOODS	Natural Resources Wales
Not shown	1901	N	STRYT LAS A'R HAFOD	Natural Resources Wales

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

3

The following Special Area of Conservation (SAC) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SAC Name	Data Source
1	885	S	River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid (Wales)	Natural Resources Wales
Not shown	1650	N	Johnstown Newt Sites	Natural Resources Wales
Not shown	1901	N	Johnstown Newt Sites	Natural Resources Wales

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

8.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

8.6 Records of Ancient Woodland within 2000m of the study site:

164

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
10	0	On Site	Unknown	Ancient and Semi-Natural Woodland
11	12	N	Unknown	Ancient and Semi-Natural Woodland
12	17	SW	Unknown	Ancient and Semi-Natural Woodland
13	70	N	Unknown	Ancient and Semi-Natural Woodland
14	205	SW	Unknown	Restored Ancient Woodland Site
15	212	E	Unknown	Restored Ancient Woodland Site
16	213	E	Unknown	Ancient Replanted Woodland
17A	215	E	Unknown	Restored Ancient Woodland Site
18	220	SE	Unknown	Restored Ancient Woodland Site
19	223	W	Unknown	Ancient and Semi-Natural Woodland
20	224	SE	Unknown	Ancient Replanted Woodland
21B	225	SE	Unknown	Other Ancient Woodland
22	252	SE	Unknown	Ancient Replanted Woodland
23	260	SW	HOPYARD WOOD	Ancient and Semi-Natural Woodland
24	260	SW	Unknown	Restored Ancient Woodland Site
25	298	SW	HOPYARD WOOD	Ancient and Semi-Natural Woodland
26	302	W	Unknown	Ancient and Semi-Natural Woodland
27A	305	E	Unknown	Ancient Replanted Woodland
28	324	E	Unknown	Restored Ancient Woodland Site
29C	329	E	Unknown	Ancient Replanted Woodland
30	334	E	Unknown	Ancient Replanted Woodland
31B	350	SE	Unknown	Ancient and Semi-Natural Woodland
32	364	SE	Unknown	Ancient Replanted Woodland
33	372	SE	Unknown	Ancient and Semi-Natural Woodland
34	377	S	Unknown	Ancient and Semi-Natural Woodland
35	386	E	Unknown	Restored Ancient Woodland Site
36	399	SE	Unknown	Ancient Replanted Woodland
37	407	E	Unknown	Ancient Replanted Woodland
38C	420	E	Unknown	Ancient Replanted Woodland
39	421	E	Unknown	Ancient Replanted Woodland
40	449	E	Unknown	Restored Ancient Woodland Site
41G	469	SE	Unknown	Ancient Replanted Woodland

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
42	470	SE	Unknown	Ancient Replanted Woodland
43D	471	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
44E	476	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
45D	477	SE	Unknown	Restored Ancient Woodland Site
46	495	S	HOPYARD WOOD	Ancient and Semi-Natural Woodland
47	504	SW	HOPYARD WOOD	Ancient and Semi-Natural Woodland
48E	516	SE	Unknown	Restored Ancient Woodland Site
49	524	W	Unknown	Ancient Replanted Woodland
50	532	E	Unknown	Ancient Replanted Woodland
51F	538	E	Unknown	Ancient Replanted Woodland
52	563	SE	Unknown	Ancient and Semi-Natural Woodland
53	578	E	Unknown	Ancient Replanted Woodland
54F	589	E	Unknown	Ancient Replanted Woodland
55	598	W	Unknown	Restored Ancient Woodland Site
56	618	SW	HOPYARD WOOD	Ancient and Semi-Natural Woodland
57G	631	S	Unknown	Restored Ancient Woodland Site
58	680	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
59	691	SE	Unknown	Ancient Replanted Woodland
60	694	SE	Unknown	Ancient and Semi-Natural Woodland
61H	699	SE	Unknown	Ancient and Semi-Natural Woodland
62	700	S	HOPYARD WOOD	Ancient and Semi-Natural Woodland
63H	701	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
64	729	E	Unknown	Ancient and Semi-Natural Woodland
65	740	S	Unknown	Restored Ancient Woodland Site
66	781	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
67	786	S	Unknown	Restored Ancient Woodland Site
68	790	SW	HOPYARD WOOD	Ancient and Semi-Natural Woodland
69	815	S	Unknown	Ancient Replanted Woodland
70	822	S	Unknown	Ancient Replanted Woodland
71	828	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
72	838	SE	Unknown	Ancient and Semi-Natural Woodland
73	841	S	Unknown	Restored Ancient Woodland Site
74	846	SW	HOPYARD WOOD	Ancient and Semi-Natural Woodland
75I	850	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
76	853	SW	HOPYARD WOOD	Ancient and Semi-Natural Woodland
77J	887	S	Unknown	Restored Ancient Woodland Site
78	888	S	HOPYARD WOOD	Ancient and Semi-Natural Woodland
79I	903	S	Unknown	Ancient Replanted Woodland
80	904	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
81J	910	S	Unknown	Ancient Replanted Woodland
82	916	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
83	919	S	Unknown	Ancient and Semi-Natural Woodland
84	926	N	Unknown	Ancient and Semi-Natural Woodland
85	930	SW	Unknown	Restored Ancient Woodland Site
86	943	S	HOPYARD WOOD	Ancient and Semi-Natural Woodland
87	964	SW	Unknown	Ancient Replanted Woodland
88	966	S	Unknown	Ancient Replanted Woodland
89	974	SW	Unknown	Ancient Replanted Woodland
90	1011	SW	Unknown	Ancient Replanted Woodland
91	1012	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
92	1025	SE	Unknown	Ancient Replanted Woodland
93	1028	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1039	S	Unknown	Ancient Replanted Woodland
95	1042	SW	HOPYARD WOOD	Ancient and Semi-Natural Woodland
Not shown	1058	S	Unknown	Restored Ancient Woodland Site
97K	1082	SE	Unknown	Ancient Replanted Woodland
98	1082	NE	Unknown	Restored Ancient Woodland Site
99	1088	SW	Unknown	Ancient and Semi-Natural Woodland
Not shown	1088	S	Unknown	Ancient Replanted Woodland
101K	1092	SE	Unknown	Ancient Replanted Woodland
102	1103	SE	Unknown	Ancient Replanted Woodland

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
103M	1115	S	Unknown	Ancient and Semi-Natural Woodland
Not shown	1120	S	Unknown	Restored Ancient Woodland Site
105	1137	NE	Unknown	Ancient and Semi-Natural Woodland
106L	1137	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
107L	1139	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
108	1149	E	Unknown	Restored Ancient Woodland Site
Not shown	1162	N	Unknown	Ancient and Semi-Natural Woodland
Not shown	1164	S	Unknown	Ancient Replanted Woodland
111L	1165	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
112N	1180	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1201	S	Unknown	Other Ancient Woodland
Not shown	1203	S	Unknown	Restored Ancient Woodland Site
115	1221	SW	Unknown	Ancient Replanted Woodland
116M	1233	SW	HOPYARD WOOD	Ancient and Semi-Natural Woodland
Not shown	1247	S	Unknown	Ancient Replanted Woodland
Not shown	1247	SW	Unknown	Restored Ancient Woodland Site
119N	1263	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1287	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1291	S	Unknown	Ancient and Semi-Natural Woodland
122	1302	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
123	1313	SE	Unknown	Ancient and Semi-Natural Woodland
Not shown	1351	SE	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
125	1371	SE	Unknown	Ancient and Semi-Natural Woodland
Not shown	1383	S	Unknown	Ancient Replanted Woodland
127	1428	SW	HOPYARD WOOD	Ancient and Semi-Natural Woodland
Not shown	1430	SW	HOPYARD WOOD	Ancient and Semi-Natural Woodland
Not shown	1430	SW	Unknown	Restored Ancient Woodland Site

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
Not shown	1438	S	Unknown	Ancient Replanted Woodland
Not shown	1441	SW	Unknown	Restored Ancient Woodland Site
Not shown	1450	SW	HOPYARD WOOD	Ancient and Semi-Natural Woodland
Not shown	1452	N	Unknown	Restored Ancient Woodland Site
Not shown	1464	S	Unknown	Ancient Replanted Woodland
Not shown	1468	SW	Unknown	Ancient Replanted Woodland
136	1478	E	Unknown	Ancient and Semi-Natural Woodland
Not shown	1492	SE	Unknown	Ancient and Semi-Natural Woodland
Not shown	1506	S	Unknown	Ancient Replanted Woodland
139	1509	SW	HOPYARD WOOD	Ancient and Semi-Natural Woodland
140	1509	SE	Unknown	Ancient and Semi-Natural Woodland
Not shown	1512	S	Unknown	Ancient Replanted Woodland
Not shown	1542	E	Unknown	Restored Ancient Woodland Site
Not shown	1545	N	Unknown	Ancient and Semi-Natural Woodland
Not shown	1560	S	Unknown	Ancient Replanted Woodland
Not shown	1577	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1587	SW	Unknown	Restored Ancient Woodland Site
Not shown	1588	SW	HOPYARD WOOD	Ancient and Semi-Natural Woodland
Not shown	1601	S	Unknown	Ancient and Semi-Natural Woodland
Not shown	1614	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1629	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1644	SW	Unknown	Restored Ancient Woodland Site
Not shown	1660	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1674	SE	Unknown	Ancient and Semi-Natural Woodland
Not shown	1676	NE	Unknown	Restored Ancient Woodland Site
Not shown	1729	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1795	S	Unknown	Ancient Replanted Woodland

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
Not shown	1799	S	Unknown	Ancient Replanted Woodland
Not shown	1800	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1814	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1816	S	Unknown	Ancient and Semi-Natural Woodland
Not shown	1821	E	Unknown	Ancient Replanted Woodland
Not shown	1834	E	Unknown	Restored Ancient Woodland Site
Not shown	1866	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1900	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1901	S	Unknown	Restored Ancient Woodland Site
Not shown	1908	S	Unknown	Ancient Replanted Woodland
Not shown	1922	S	Unknown	Ancient Replanted Woodland
Not shown	1940	S	Unknown	Ancient Replanted Woodland
Not shown	1947	S	Unknown	Ancient Replanted Woodland
Not shown	1968	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1991	S	NANT-Y-CAE-COCH WOOD/BATHGROUND/+	Ancient and Semi-Natural Woodland
Not shown	1994	S	Unknown	Restored Ancient Woodland Site
Not shown	1997	S	Unknown	Restored Ancient Woodland Site

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

0

Database searched and no data found.

8.8 Records of World Heritage Sites within 2000m of the study site:

1

The following World Heritage Site records provided by English Heritage and Cadw are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	World Heritage Site Name	Data Source
8	775	W	Pontcysyllte Aqueduct and Canal Buffer Zone	English Heritage

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

1

The following Area of Outstanding Natural Beauty (AONB) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	AONB/NSA Name	Data Source
Not shown	1438	SW	Clwydian Range	Natural Resources Wales

8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

0

Database searched and no data found.

8.14 Records of Green Belt land within 2000m of the study site:

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a Groundsure GeoInsight, available from our [website](#). The following information has been found:

9.1.1 Shrink Swell

What is the maximum Shrink-Swell* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

9.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

9.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

What is the maximum Running Sand** hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 10 and 30% of properties are above the Action Level.

* This indicates an automatically generated 50m buffer and site.

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing

ones as described in publication BR211 by the Building Research Establishment? Full radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Are there any coal mining areas within 75m of the study site?

Yes

The following coal mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary?

Yes

The following non-coal mining information is provided by the BGS:

Distance (m)	Direction	Name	Commodity	Assessment of likelihood
0.0	On Site	Not available	Vein Mineral	Occasional minor mining may have occurred but of restricted extent.
0.0	On Site	Not available	Iron Ore (Bedded)	Rare and localised small scale mining may have occurred.
0.0	On Site	Not available	Vein Mineral	Occasional minor mining may have occurred but of restricted extent.

Past underground mine workings may occur. The rock types present in these areas are such that small mineral veins may be present on which it is possible that small scale mining has been undertaken and/or it is possible that limited underground extraction of other materials may have occurred. All such occurrences are likely to be of minor localised extent and infrequent. It should be noted, however, that there is always the possibility of the existence of other sub-surface excavations, such as wells, cess pits, follies, air raid shelters/bunkers and other military structures etc. that could affect surface ground stability but which are outside the scope of this dataset. However, if in a coalfield area you should still consider a Coal Authority mining search for the area of interest.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site?

No

Guidance: No Guidance Required.

Contact Details

Groundsure Helpline
Telephone: 08444 159 000
info@groundsure.com

British Geological Survey Enquiries
Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:
Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency
National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 08708 506 506
Web: www.environment-agency.gov.uk
Email: enquiries@environment-agency.gov.uk

Public Health England
Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000

The Coal Authority
200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

Local Authority
Authority: Wrexham - Wrexham County Borough Council
Phone: 01978 292 000
Web: <http://www.wrexham.gov.uk/>
Address: The Guildhall, Wrexham, Wrexham, LL11 1AY

Gemapping PLC
Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444



Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England who retain the Copyright and Intellectual Property Rights for the data.

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This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:

“Beneficiary” means the person or entity for whose benefit the Client has obtained the Services.

“Client” means the party or parties entering into a Contract with Groundsure.

“Commercial” means any building or property which is not Residential.

“Confidential Information” means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

“Support Services” means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

“Contract” means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

“Third Party Data Provider” means any third party providing Third Party Content to Groundsure.

“Data Reports” means reports comprising factual data with no accompanying interpretation.

“Fees” has the meaning set out in clause 5.1.

“Groundsure” means Groundsure Limited, a company registered in England and Wales under number 03421028.

“Groundsure Materials” means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

“Intellectual Property” means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

“Mapping” means a map, map data or a combination of historical maps of various ages, time periods and scales.

“Order” means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.

“Ordnance Survey” means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

“Order Website” means the online platform through which Orders may be placed by the Client and accepted by Groundsure.

“Report” means a Risk Screening Report or Data Report for Commercial or Residential property.

“Residential” means any building or property used as or intended to be used as a single dwelling.

“Risk Screening Report” means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.

“Services” means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.

“Site” means the area of land in respect of which the Client has requested Groundsure to provide the Services.

“Third Party Content” means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.

“User Guide” means the user guide, as amended from time to time, available upon request from Groundsure and on the website (www.Groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.

2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 Groundsure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure. Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure's acceptance of an Order shall be binding only when made in writing and signed by Groundsure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.

3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client's approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

(i) the Beneficiary,

(ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),

(iv) the first purchaser or first tenant of the Site, and

(v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1 Groundsure shall charge and the Client shall pay fees at the rate and

frequency specified in the written proposal, Order website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

(i) full payment of all relevant Fees and

(ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.

6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

(i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;

(ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;

(iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);

(iv) not combine the Services with or incorporate such Services into any other information data or service;

(v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);

(vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and

(vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

(i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or

subcontractors;

(ii) any use made of the Reports, Services, Materials or any part of them; and

(iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 Groundsure shall not be liable for

(i) loss of profits;

(ii) loss of business;

(iii) depletion of goodwill and/or similar losses;

(iv) loss of anticipated savings;

(v) loss of goods;

(vi) loss of contract;

(vii) loss of use;

(viii) loss or corruption of data or information;

(ix) business interruption;

(x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;

(xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;

(xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;

(xiii) loss or damage to a computer, software, modem, telephone or other property; and

(xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

(i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or

(ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or

(iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

- (a) supplied to the Client's specification(s) and in any event
- (b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.

12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.

12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;

(ii) fire, storm, flood, tempest or epidemic;

(iii) Acts of God or the public enemy;

(iv) riot, civil commotion or war;

(v) strikes, labour disputes or industrial action;

(vi) acts or regulations of any governmental or other agency;

(vii) suspension or delay of services at public registries by Third Party Data Providers;

(viii) changes in law; or

(ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner.

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law. © Groundsure Limited June 2013



MLM Consulting Engineers Limited
7200, BEACH DRIVE,
CAMBRIDGE, CB25 9TL

Groundsure Reference: GS-2356367

Your Reference: 773135

Report Date 20 Aug 2015

Report Delivery Method: Email - pdf

Groundsure Geosight

Address: Ruabon Park A483, WREXHAM, LL14 6DW

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geosight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Geosight

Groundsure Geoinsight

Address: Ruabon Park A483, WREXHAM, LL14 6DW
Date: 20 Aug 2015
Reference: GS-2356367
Client: MLM Consulting Engineers Limited

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 27-Mar-2012
Grid Reference: 329736,343226
Site Size: 24.62ha

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Overview of Findings

The Groundsure Geosight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Shallow Mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1:Geology

1.1 Artificial Ground	1.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	1.1.2 Are there any records relating to permeability of artificial ground within the study site* boundary?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?	Yes
	1.2.2 Are there any records relating to permeability of superficial geology within the study site boundary?	Yes
	1.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	1.2.4 Are there any records relating to permeability of landslips within the study site boundary?	No
1.3 Bedrock, Solid Geology & Faults	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records relating to permeability of bedrock within the study site boundary?	Yes
	1.3.3 Are there any records of faults within 500m of the study site boundary?	Yes
1.4 Radon data	1.4.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is in a Radon Affected Area, as between 10 and 30% of properties are above the Action Level
	1.4.2 Is the property in an area where Radon Protection Measures are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	Full radon protective measures are necessary

Section 2:Ground Workings

	On-site	0-50m	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	8	7	39	Not Searched	Not Searched
2.2 Historical Underground Workings from Small Scale Mapping	2	1	0	5	11
2.3 Current Ground Workings	0	0	2	2	6

Section 3: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
3.1 Historical Mining	2	1	0	5	11
3.2 Coal Mining	1	0	0	0	0
3.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
3.4 Non-Coal Mining	3	0	0	0	0
3.5 Non-Coal Mining Cavities	0	0	0	0	0
3.6 Natural Cavities	0	0	0	0	0
3.7 Brine Extraction	0	0	0	0	0
3.8 Gypsum Extraction	0	0	0	0	0
3.9 Tin Mining	0	0	0	0	0
3.10 Clay Mining	0	0	0	0	0
Section 4: Natural Ground Subsidence	On-site				
4.1 Shrink Swell Clay	Very Low				
4.2 Landslides	Very Low				
4.3 Ground Dissolution of Soluble Rocks	Negligible				
4.4 Compressible Deposits	Negligible				
4.5 Collapsible Deposits	Very Low				
4.6 Running Sand	Very Low				
Section 5: Borehole Records	On-site	0-50m	51-250		
5 BGS Recorded Boreholes	4	3	31		
Section 6: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
6 Records of Background Soil Chemistry	11	4	23		
Section 7: Railways and Tunnels	On-site	0-50m	51-250	251-500	
7.1 Tunnels	0	0	0	Not Searched	
7.2 Historical Railway and Tunnel Features	2	9	14	Not Searched	
7.3 Historical Railways	0	0	1	Not Searched	
7.4 Active Railways	0	0	4	Not Searched	

Section 7:Railways and Tunnels	On-site	0-50m	51-250	251-500
7.5 Railway Projects	0	0	0	0

1 Geology

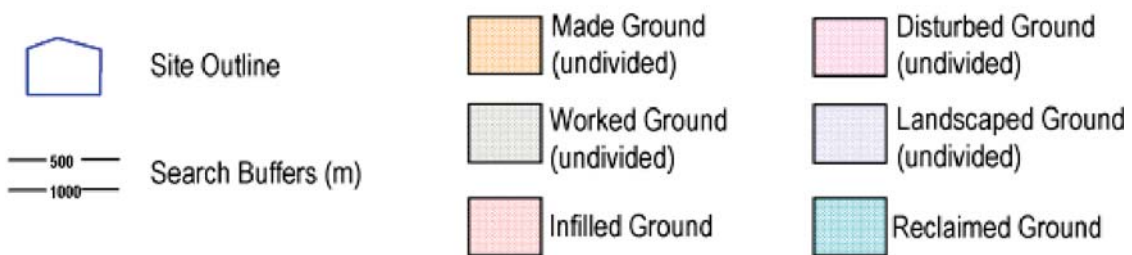
1.1 Artificial Ground Map



Artificial Ground Legend



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1 Geology

1.1 Artificial Ground

1.1.1 Artificial/ Made Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:121

Are there any records of Artificial/Made Ground within 500m of the study site boundary? No

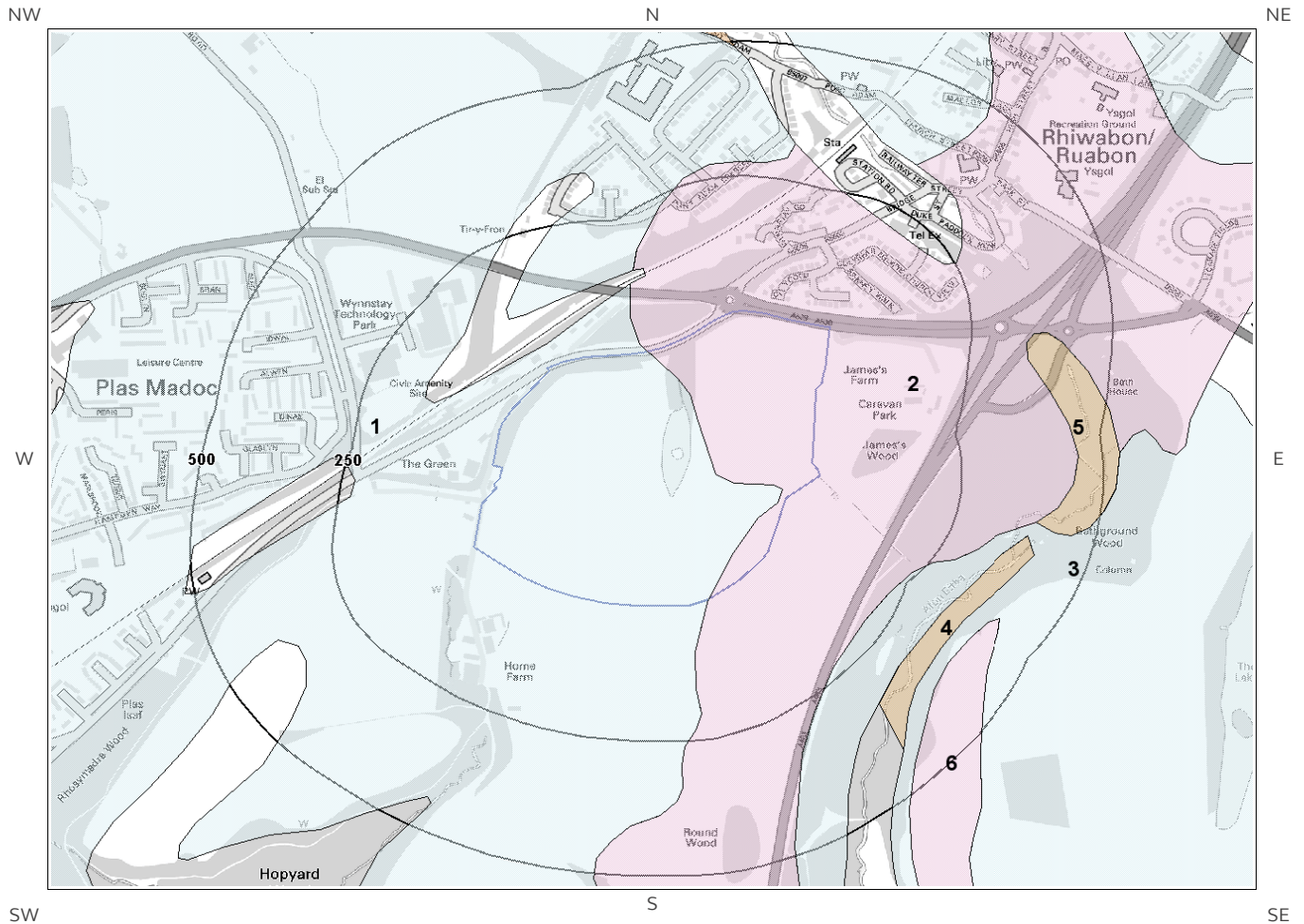
Database searched and no data found.

1.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.

1.2 Superficial Deposits and Landslips Map



Superficial Deposits and Landslips Legend



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- Site Outline
- Search Buffers (m)

1.2 Superficial Deposits and Landslips

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TILLD	TILL, DEVENSIAN	DIAMICTON
2	0.0	On Site	GFDUD	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]
3	213.0	SE	TILLD	TILL, DEVENSIAN	DIAMICTON
4	310.0	SE	ALV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]
5	349.0	E	ALV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]
6	377.0	SE	GFDUD	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]
7	491.0	N	RTDU	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]

1.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	High	Low
0.0	On Site	Intergranular	Very High	High
0.0	On Site	Intergranular	Very High	High

1.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary?

No

Database searched and no data found.

This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.2.4 Landslip Permeability

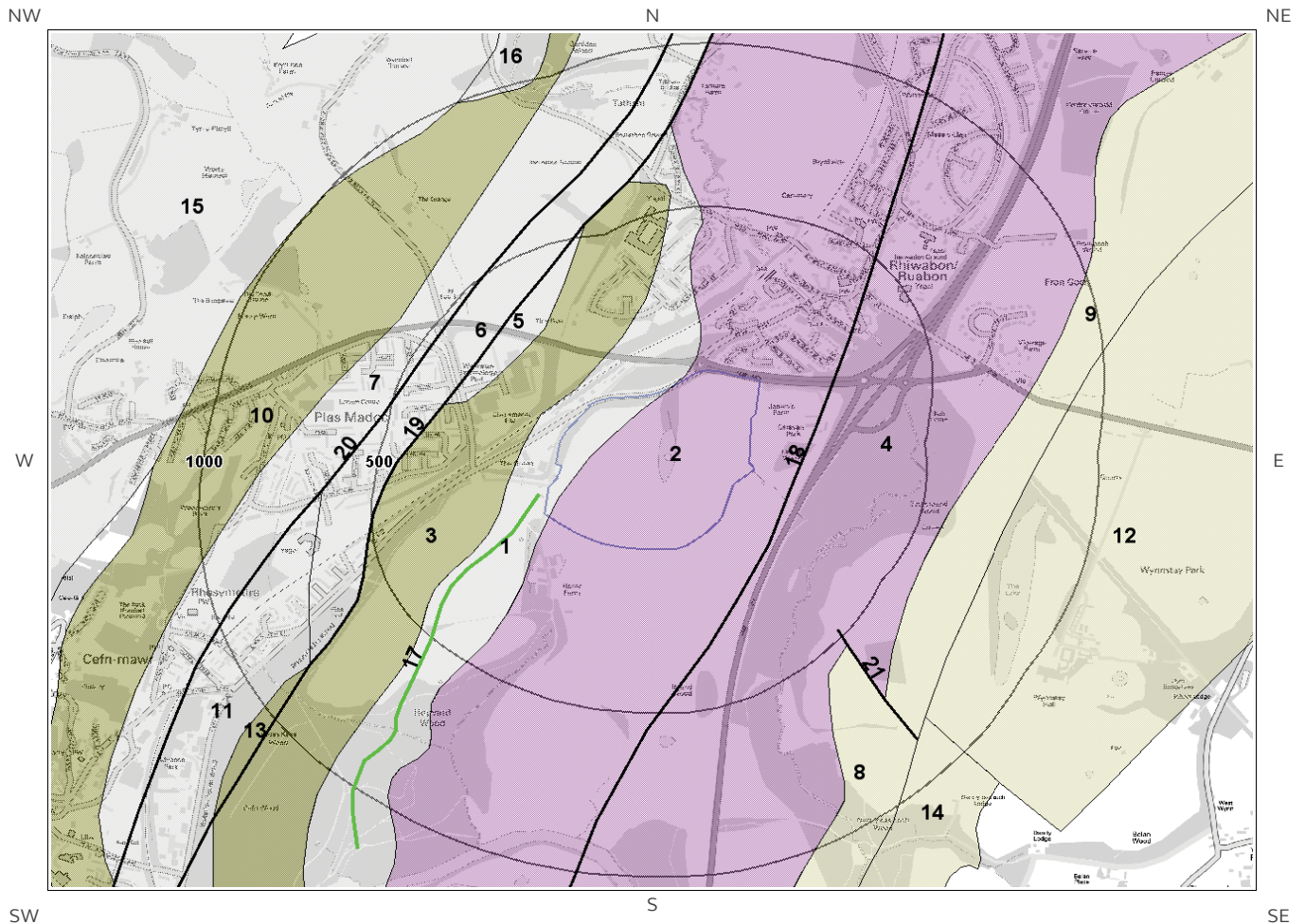
Are there any records relating to permeability of landslips within the study site** boundary?

No

Database searched and no data found.

* This includes an automatically generated 50m buffer zone around the site

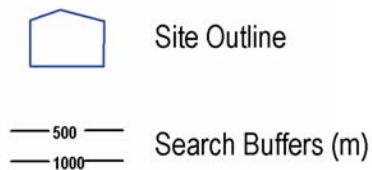
1.3 Bedrock and Faults Map



Bedrock and Faults Legend



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1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:121

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/ Solid Geology within 500m of the study site boundary:

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	PLMC-MDSS	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Mudstone, Siltston	Bolsoviaian / Langsettian
2	0.0	On Site	ETM-MDST	Etruria Formation - Mudstone	No Details
3	63.0	NW	CF-SDST	Cefn Rock - Sandstone	Bolsoviaian
4	119.0	E	ETM-MDST	Etruria Formation - Mudstone	No Details
5	251.0	NW	PLMC-MDSS	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Mudstone, Siltston	Bolsoviaian / Langsettian
6	334.0	NW	PLMC-MDSS	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Mudstone, Siltston	Bolsoviaian / Langsettian
7	471.0	NW	PLMC-MDSS	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Mudstone, Siltston	Bolsoviaian / Langsettian

1.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site* boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Low	Low
0.0	On Site	Fracture	Low	Low
0.0	On Site	Fracture	Moderate	Low

1.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	Category Description	Feature Description
17	23.0	W	ROCK	Coal seam, inferred
18	119.0	E	FAULT	Fault, inferred, displacement unknown

* This includes an automatically generated 50m buffer zone around the site

ID	Distance (m)	Direction	Category Description	Feature Description
19	334.0	NW	FAULT	Fault, inferred, displacement unknown
20	471.0	NW	FAULT	Fault, inferred, displacement unknown
21	475.0	SE	FAULT	Fault, inferred, displacement unknown

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.4 Radon Data

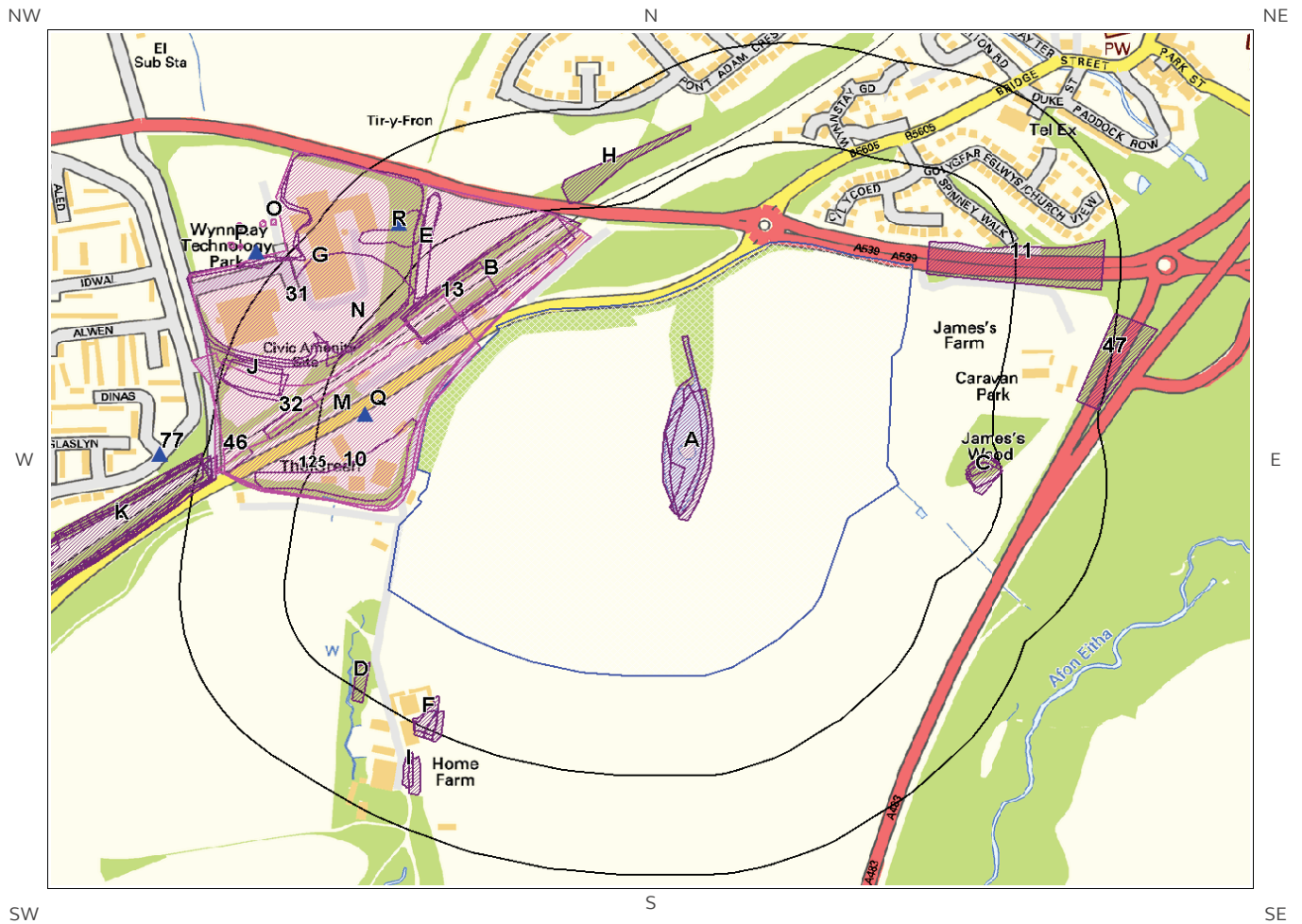
1.4.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 10 and 30% of properties are above the Action Level

1.4.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? Full radon protective measures are necessary

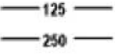
2 Ground Workings Map



Ground Workings Legend



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-  Site Outline
-  Historic Surface Ground Workings
-  Historic Underground Workings
-  Current Ground Workings
-  Search Buffers (m)

2 Ground Workings

2.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping.

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

The following Historical Surface Ground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
1A	0.0	On Site	329771 343259	Pond	1949
2A	0.0	On Site	329771 343259	Pond	1898
3M	0.0	On Site	329346 343325	Colliery	1873
4A	0.0	On Site	329771 343259	Pond	1873
5A	0.0	On Site	329761 343266	Pond	1994
6A	0.0	On Site	329761 343266	Pond	1974
7A	0.0	On Site	329761 343266	Pond	1985
8A	0.0	On Site	329763 343296	Water Body	1960
9N	5.0	NW	329411 343417	Colliery	1949
10	10.0	W	329402 343253	Unspecified Heap	1960
11	18.0	E	330161 343500	Cuttings	1993
12B	31.0	NW	329530 343479	Cuttings	1873
13	36.0	NW	329484 343450	Cuttings	1898
14B	37.0	NW	329521 343483	Cuttings	1949
15B	41.0	NW	329530 343485	Cuttings	1960
16F	82.0	SW	329453 342930	Ponds	1960
17C	82.0	E	330120 343229	Gravel Pit	1949
18C	83.0	E	330120 343236	Gravel Pit	1949
19C	86.0	E	330123 343246	Unspecified Pit	1993
20C	86.0	E	330123 343246	Unspecified Pit	1968

ID	Distance (m)	Direction	NGR	Use	Date
21D	88.0	SW	329376 342972	Unspecified Pit	1985
22D	88.0	SW	329376 342972	Unspecified Pit	1994
23D	88.0	SW	329376 342972	Unspecified Pit	1974
24E	91.0	NW	329456 343520	Unspecified Heap	1949
25E	93.0	NW	329455 343523	Unspecified Heap	1960
26F	97.0	SW	329463 342917	Pond	1898
27F	97.0	SW	329463 342917	Pond	1873
28F	100.0	SW	329453 342919	Pond	1949
29G	101.0	NW	329310 343505	Unspecified Heap	1949
30G	104.0	NW	329310 343505	Refuse Heap	1960
31	106.0	NW	329304 343442	Unspecified Heap	1898
32	128.0	W	329292 343306	Cuttings	1873
33H	132.0	N	329674 343625	Unspecified Ground Workings	1985
34H	132.0	N	329674 343625	Unspecified Ground Workings	1994
35H	132.0	N	329674 343625	Unspecified Ground Workings	1974
36R	142.0	NW	329433 343544	Unspecified Old Quarry	1898
37I	160.0	SW	329432 342862	Pond	1974
38I	160.0	SW	329432 342862	Pond	1985
39I	160.0	SW	329432 342862	Pond	1960
40I	162.0	SW	329440 342854	Pond	1949
41I	162.0	SW	329440 342854	Pond	1898
42I	162.0	SW	329440 342854	Pond	1873
43J	173.0	W	329247 343354	Cuttings	1949
44J	177.0	W	329247 343357	Cuttings	1985
45J	177.0	W	329247 343357	Cuttings	1974
46	196.0	W	329229 343256	Cuttings	1873
47	220.0	E	330279 343376	Cuttings	1993
48K	226.0	W	329013 343113	Cuttings	1873

ID	Distance (m)	Direction	NGR	Use	Date
49L	230.0	W	329086 343169	Cuttings	1898
50K	233.0	W	329005 343110	Cuttings	1949
51L	234.0	W	329078 343165	Cuttings	1960
52L	242.0	W	328971 343093	Cuttings	1994
53L	242.0	W	328971 343093	Cuttings	1985
54L	242.0	W	328971 343093	Cuttings	1974

2.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? ☒ Yes

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
55Q	0.0	On Site	329413 343360	Unspecified Disused Mine	1960
56M	0.0	On Site	329346 343325	Colliery	1873
57N	5.0	NW	329411 343417	Colliery	1949
58O	286.0	NW	329272 343552	Air Shaft	1898
59O	295.0	NW	329259 343550	Unspecified Old Shaft	1960
60P	298.0	NW	329232 343522	Unspecified Shaft	1873
61P	306.0	NW	329221 343523	Old Coal Shaft	1949
62P	315.0	NW	329230 343548	Unspecified Old Shaft	1960
Not shown	814.0	NW	328734 343701	Unspecified Disused Shaft	1974
Not shown	814.0	NW	328734 343701	Unspecified Disused Shaft	1994
Not shown	814.0	NW	328734 343701	Unspecified Disused Shaft	1985
Not shown	879.0	NW	328951 344080	Unspecified Old Shaft	1898
Not shown	880.0	NW	328953 344085	Unspecified Old Shaft	1960

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	888.0	NW	328951 344094	Unspecified Disused Shaft	1994
Not shown	888.0	NW	328951 344094	Unspecified Disused Shaft	1985
Not shown	888.0	NW	328951 344094	Unspecified Disused Shaft	1974
Not shown	934.0	N	330314 344393	Unspecified Old Shaft	1949
Not shown	937.0	N	330316 344395	Unspecified Old Shaft	1898
Not shown	937.0	N	330316 344395	Unspecified Old Shaft	1949

2.3 Current Ground Workings

This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

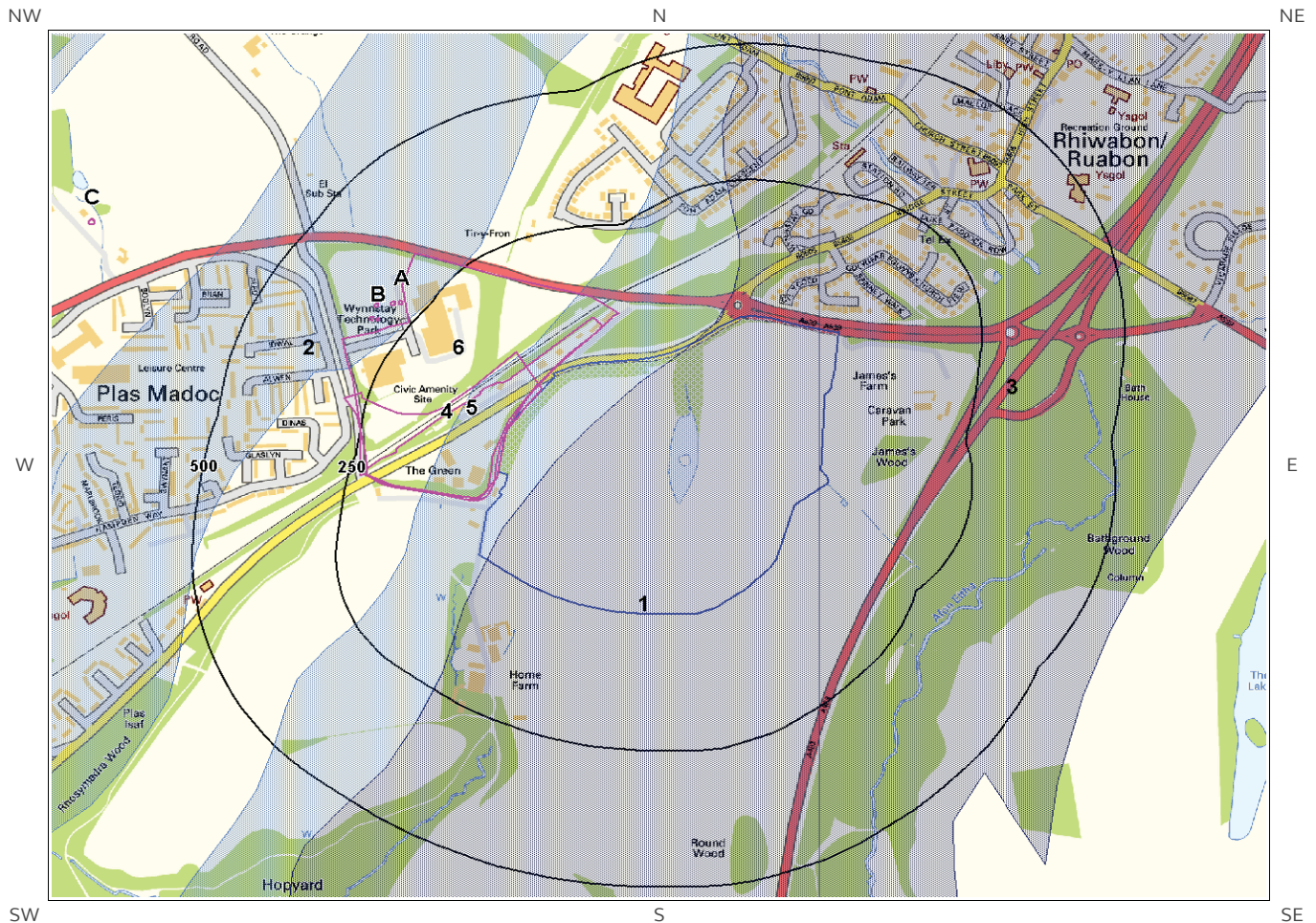
Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
74Q	73.0	W	329380 343310	Coal, Deep	Wynnstay Colliery, Nos 1 & 2 Shafts	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
75R	175.0	NW	329420 343550	Sandstone	Wynnstay	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
76P	283.0	NW	329250 343515	Coal, Deep	Wynnstay Colliery, No 3 Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
77	300.0	W	329135 343260	Sandstone	Plas Madoc Lodge	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	775.0	NW	328760 343655	Coal, Deep	Plas-yn-Wern Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	883.0	NW	328950 344080	Coal, Deep	Plas Madoc Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	927.0	N	330091 344434	Clay & Shale	Tatham Brick & Tile Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	930.0	W	328490 343230	Sandstone	Acrefair Quarries	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	936.0	N	330312 344392	Vein Minerals	New Hall	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	999.0	W	328410 343115	Sandstone	Acrefair	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

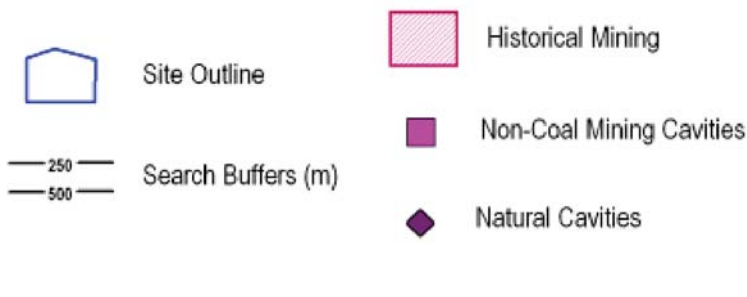
3 Mining, Extraction & Natural Cavities Map



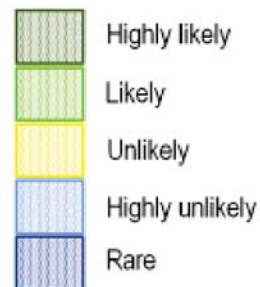
Mining, Extraction and
Natural Cavities Legend

Mapping
sourced from
**Ordnance
Survey**

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Non-Coal Mining



3 Mining, Extraction & Natural Cavities

3.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? Yes

The following Historical Mining information is provided by Groundsure:

ID	Distance (m)	Direction	NGR	Details	Date
4	0.0	On Site	329346 343325	Colliery	1873
5	0.0	On Site	329413 343360	Unspecified Disused Mine	1960
6	5.0	NW	329411 343417	Colliery	1949
7A	286.0	NW	329272 343552	Air Shaft	1898
8A	295.0	NW	329259 343550	Unspecified Old Shaft	1960
9B	298.0	NW	329232 343522	Unspecified Shaft	1873
10B	306.0	NW	329221 343523	Old Coal Shaft	1949
11B	315.0	NW	329230 343548	Unspecified Old Shaft	1960
12C	814.0	NW	328734 343701	Unspecified Disused Shaft	1985
13C	814.0	NW	328734 343701	Unspecified Disused Shaft	1994
14C	814.0	NW	328734 343701	Unspecified Disused Shaft	1974
Not shown	879.0	NW	328951 344080	Unspecified Old Shaft	1898
Not shown	880.0	NW	328953 344085	Unspecified Old Shaft	1960
Not shown	888.0	NW	328951 344094	Unspecified Disused Shaft	1985
Not shown	888.0	NW	328951 344094	Unspecified Disused Shaft	1994
Not shown	888.0	NW	328951 344094	Unspecified Disused Shaft	1974
Not shown	934.0	N	330314 344393	Unspecified Old Shaft	1949
Not shown	937.0	N	330316 344395	Unspecified Old Shaft	1898
Not shown	937.0	N	330316 344395	Unspecified Old Shaft	1949

3.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? Yes

The following Coal Mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0.0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

3.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

3.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Vein Mineral	Occasional minor mining may have occurred but of restricted extent.
2	0.0	On Site	Not available	Iron Ore (Bedded)	Rare and localised small scale mining may have occurred.
3	0.0	On Site	Not available	Vein Mineral	Occasional minor mining may have occurred but of restricted extent.

3.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled “Review of mining instability in Great Britain, 1990” PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

3.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

3.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

3.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

3.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level.

Are there any Tin Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

3.10 Clay Mining

This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

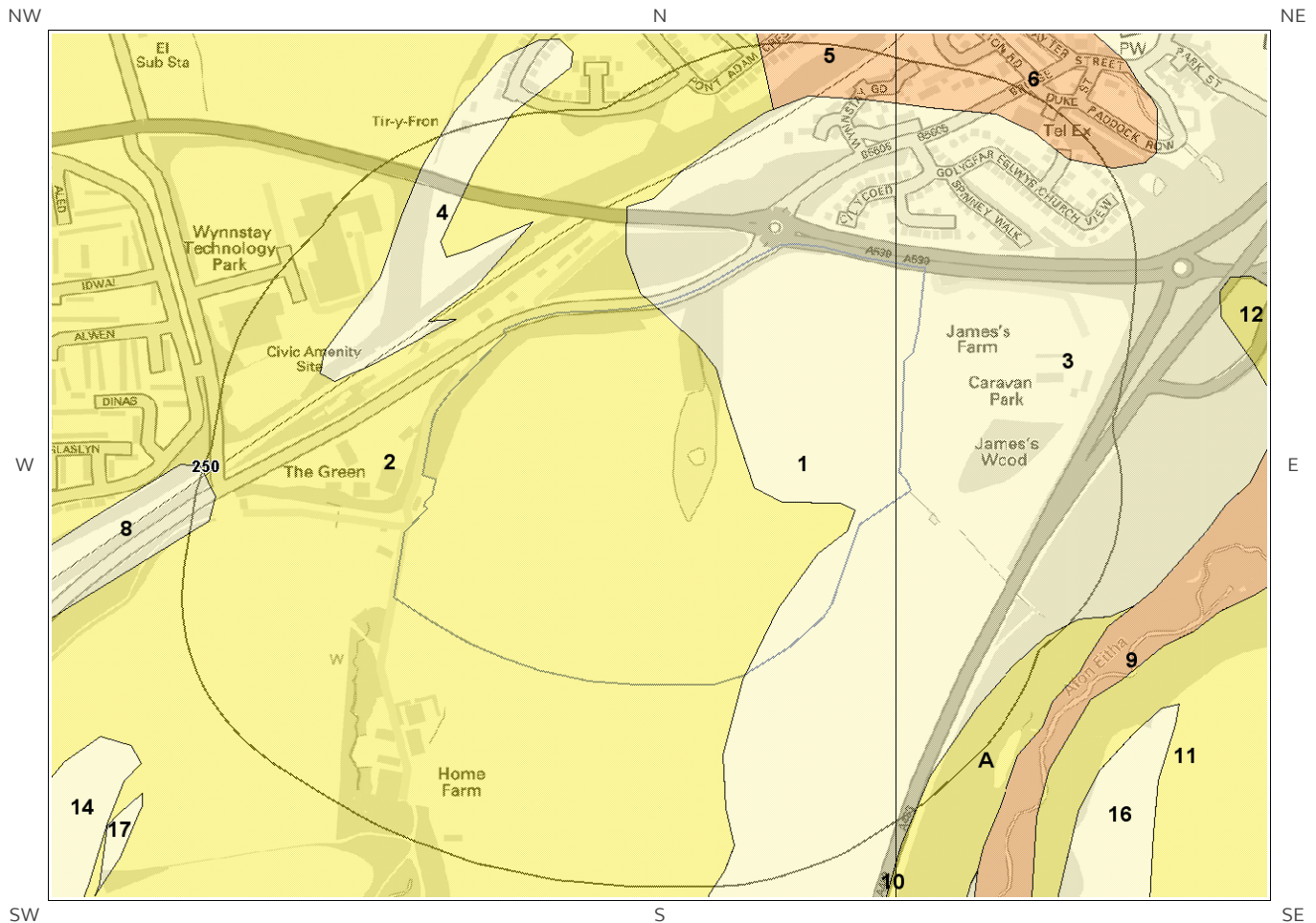
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

4 Natural Ground Subsidence

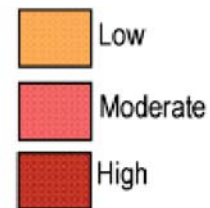
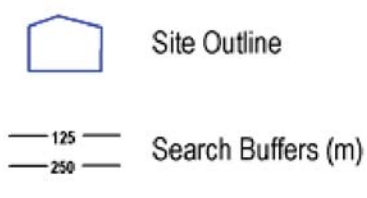
4.1 Shrink-Swell Clay Map



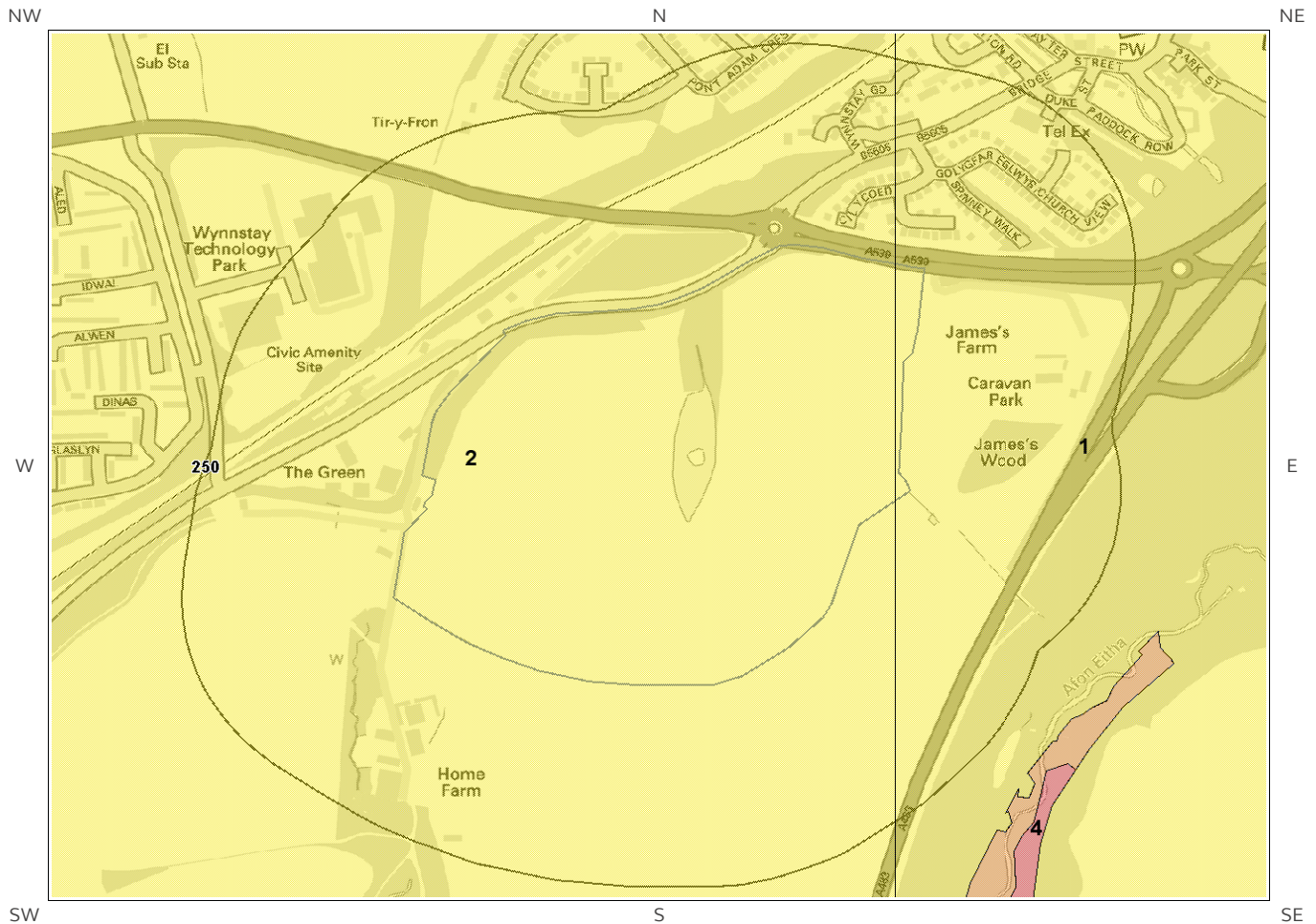
Shrink Swell Clay Legend



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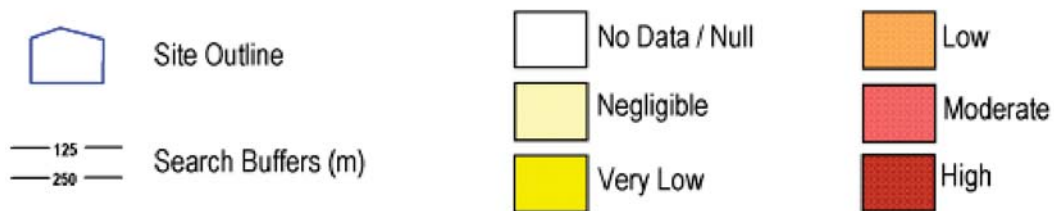
4.2 Landslides Map



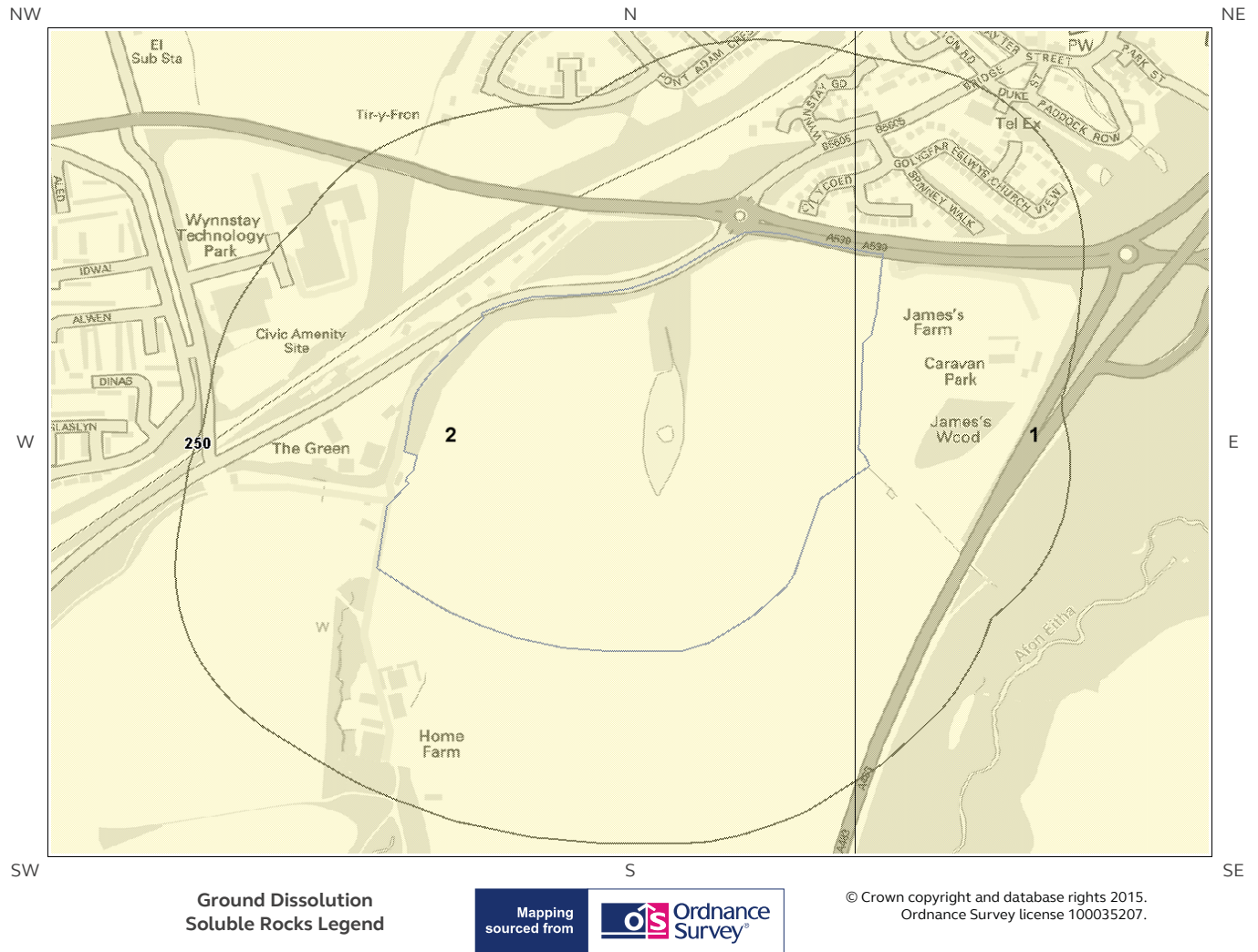
Landslides Legend



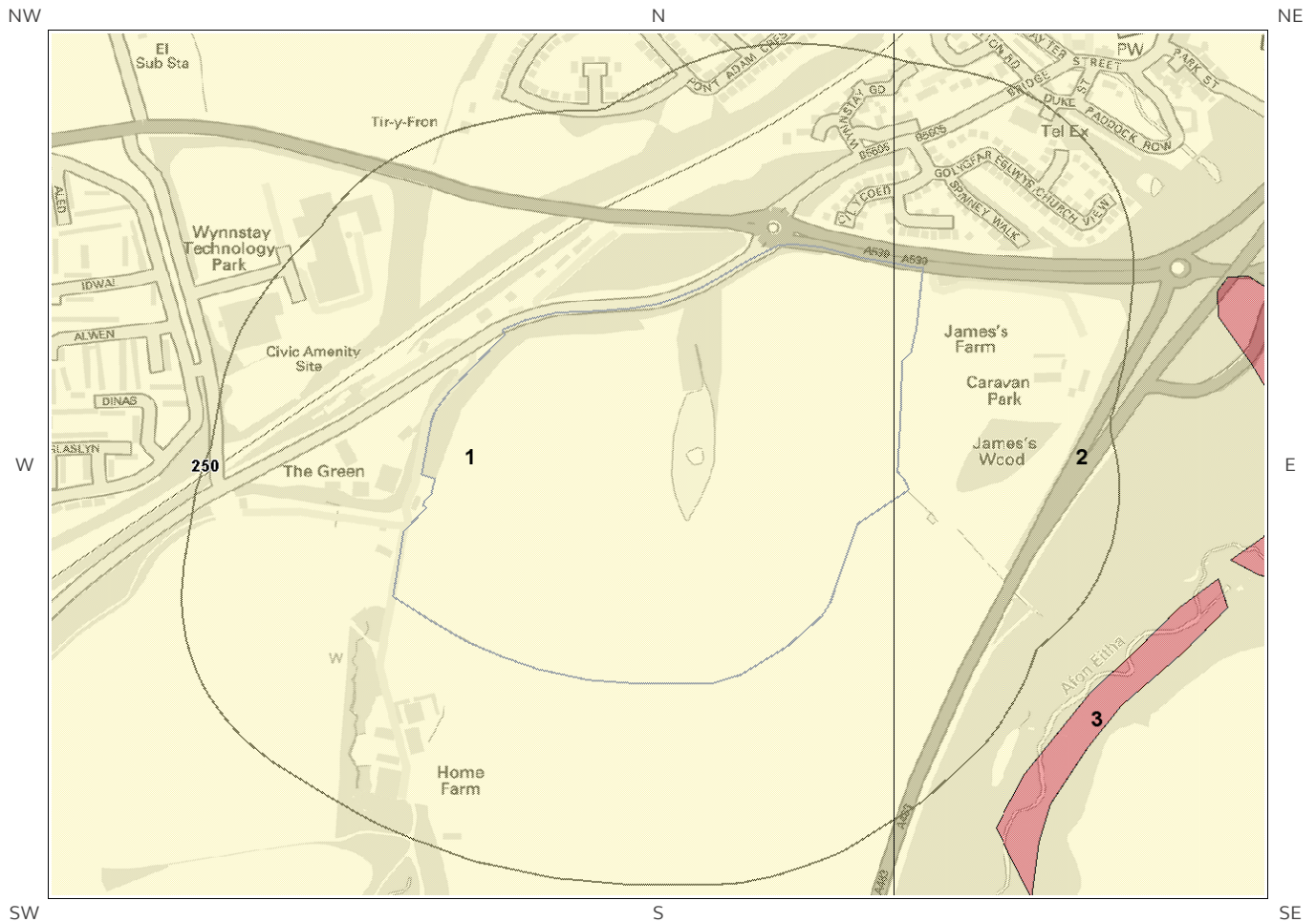
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4.3 Ground Dissolution Soluble Rocks Map



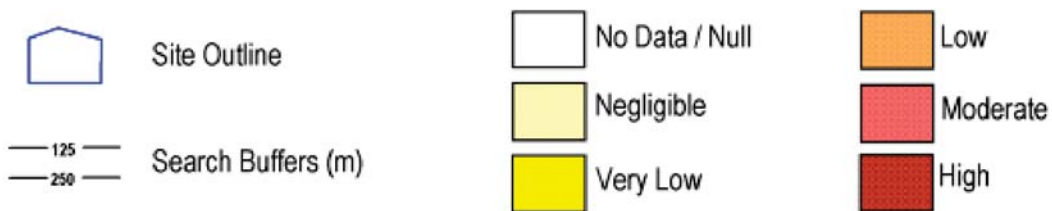
4.4 Compressible Deposits Map



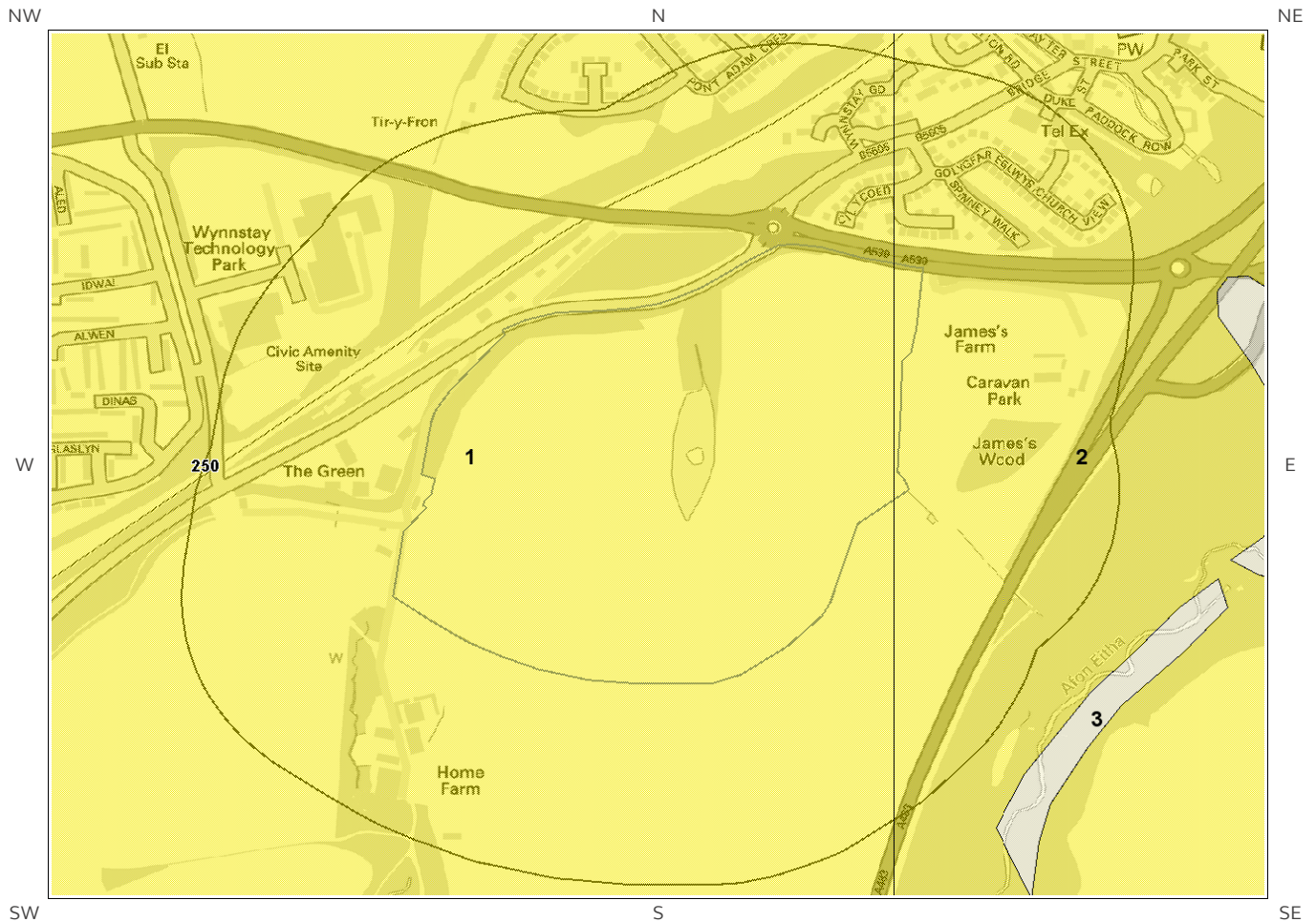
Compressible Deposits Legend



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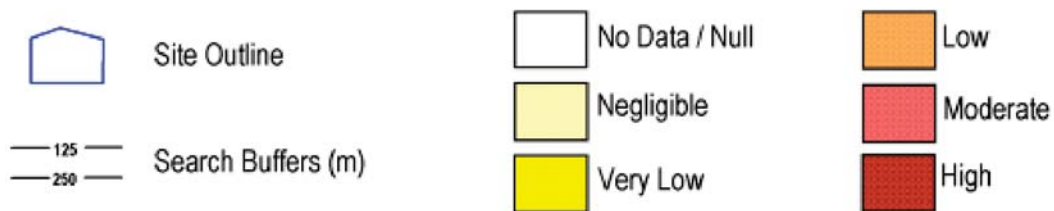
4.5 Collapsible Deposits Map



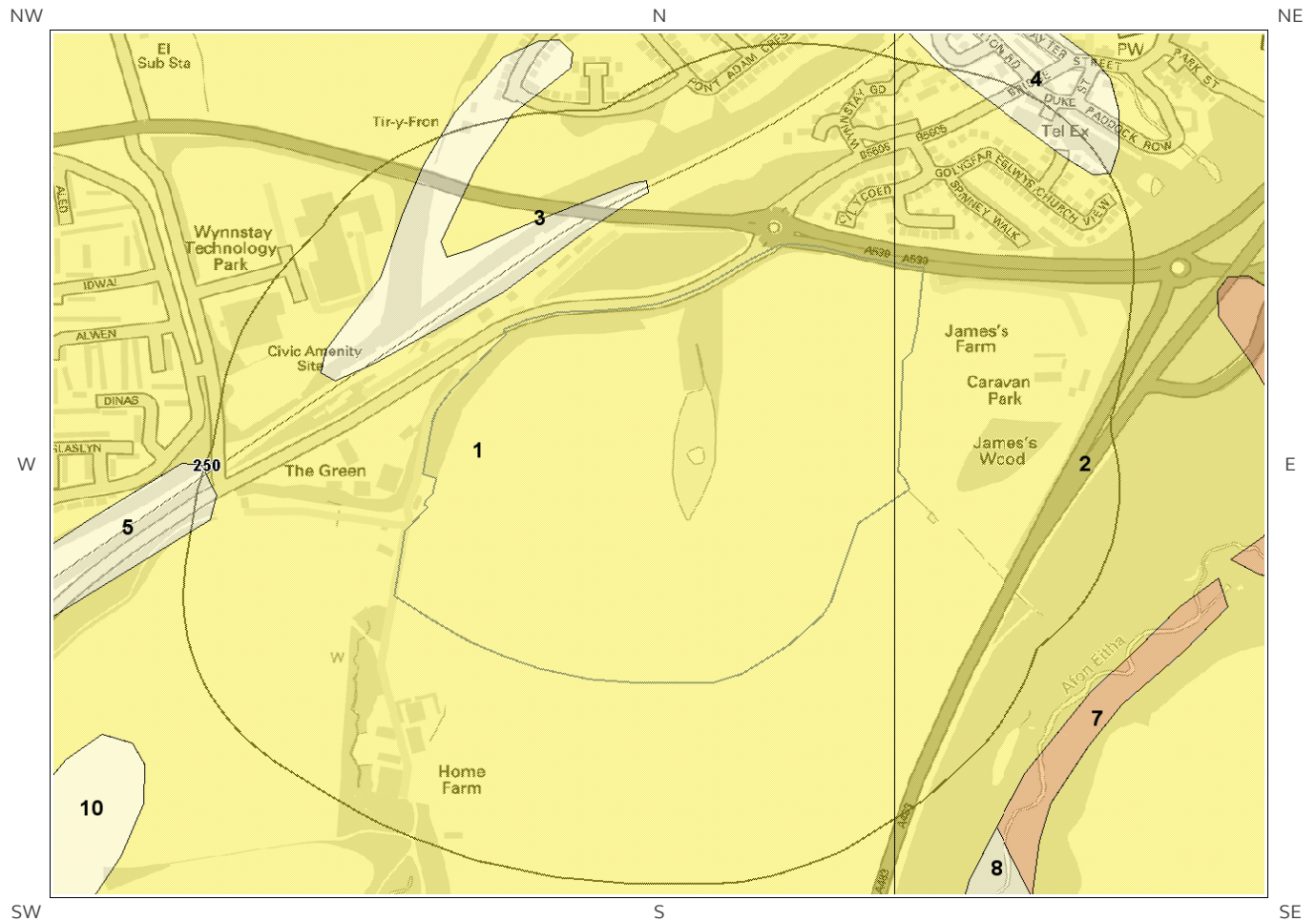
Collapsible Deposits Legend



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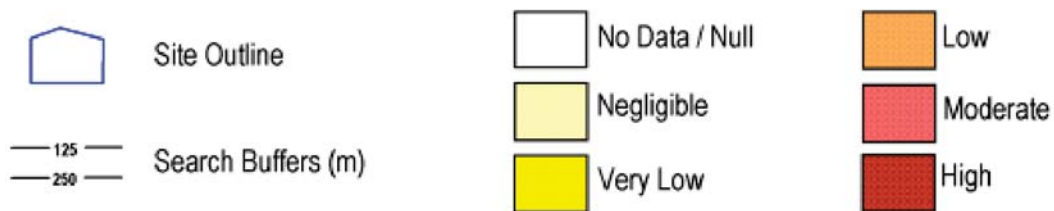
4.6 Running Sand Map



Running Sand Legend



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4 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site** boundary? Very Low

4.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
2	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
3	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

4.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.
2	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

* This includes an automatically generated 50m buffer zone around the site

4.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.
2	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

4.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible ground identified. No special actions required to avoid problems due to compressible ground. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible ground.
2	0.0	On Site	Negligible	No indicators for compressible ground identified. No special actions required to avoid problems due to compressible ground. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible ground.

4.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

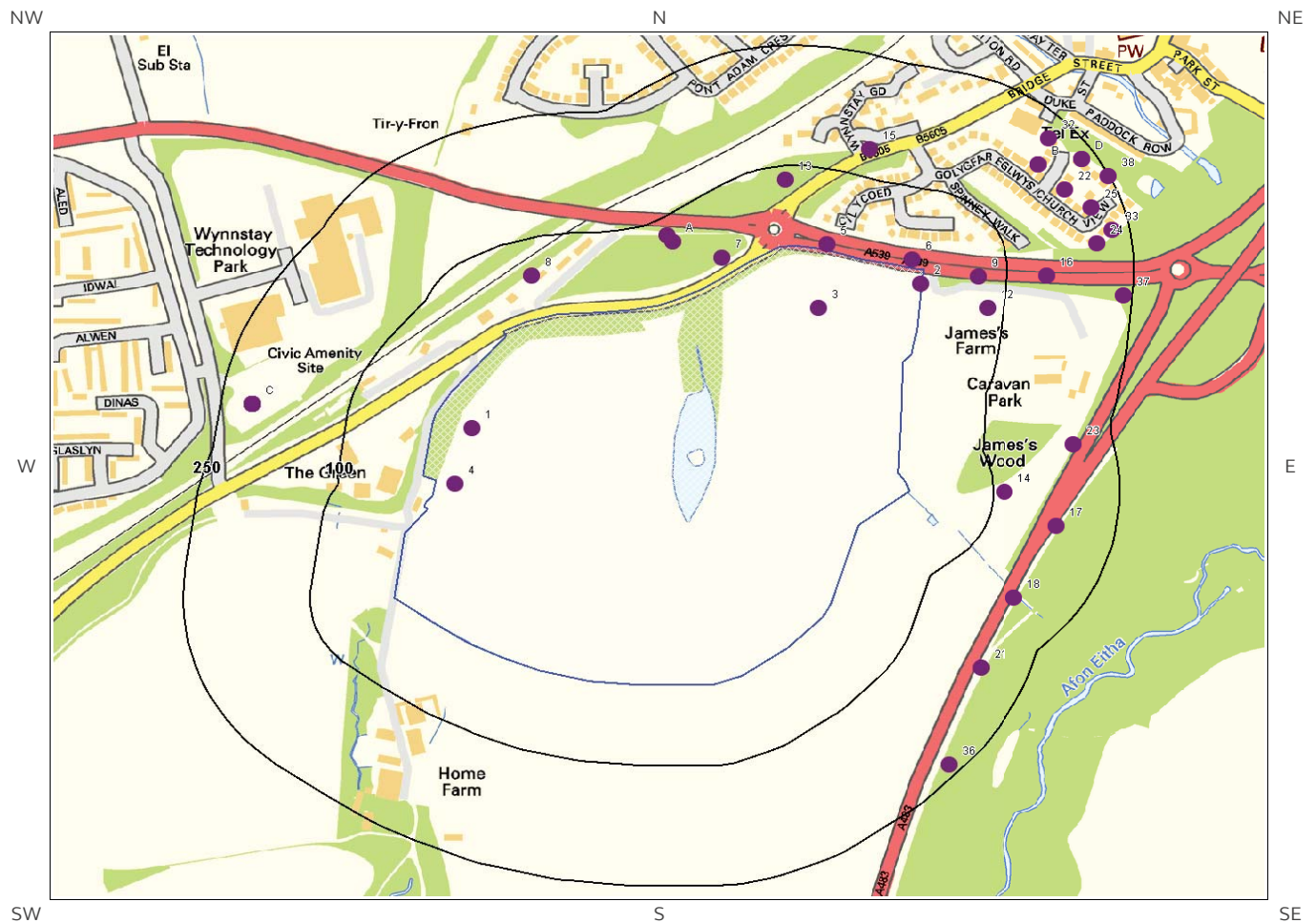
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
2	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

4.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
3	41.0	NW	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

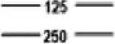
5 Borehole Records Map



Borehole Records Legend



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-  Site Outline
-  Search Buffers (m)
-  Borehole Locations

5 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

38

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	0.0	On Site	329500 343300	SJ24SE364	-1.0	WYNNSTAY COLLIERY
2	0.0	On Site	330030 343480	SJ34SW46	5.0	RUABON BY-PASS. 239
3	0.0	On Site	329910 343450	SJ24SE675	4.57	WREXHAM SEWERAGE 9
4	0.0	On Site	329480 343230	SJ24SE674	4.88	WREXHAM SEWERAGE 8
5	6.0	N	329920 343529	SJ24SE451	5.0	RUABON BYPASS 309
6	9.0	N	330020 343510	SJ34SW80	-1.0	RUABON NEWBRIDGE CHIRK BYPASSES TP 554
7	22.0	NW	329795 343513	SJ24SE431	11.0	RUABON BYPASS 17
8	54.0	N	329570 343490	SJ24SE420	4.0	RUABON BY-PASS. 237
9	66.0	E	330099 343489	SJ34SW66	7.0	RUABON BYPASS 308
10A	68.0	NW	329737 343533	SJ24SE453	6.0	RUABON BYPASS 311
11A	78.0	NW	329730 343540	SJ24SE421	8.0	RUABON BY-PASS. 238
12	81.0	E	330110 343450	SJ34SW114	6.4	WREXHAM SEWERAGE 10
13	82.0	N	329870 343610	SJ24SE419	6.0	RUABON BY-PASS. 236
14	113.0	E	330130 343220	SJ34SW14	10.6	JAMES'S FARM
15	134.0	N	329970 343648	SJ24SE452	4.0	RUABON BYPASS 310
16	146.0	E	330180 343490	SJ34SW42	20.0	RUABON BY-PASS. 18
17	179.0	E	330191 343178	SJ34SW69	4.0	RUABON BYPASS 314
18	183.0	SE	330141 343088	SJ34SW51	4.5	RUABON BYPASS 21
19B	189.0	NE	330170 343629	SJ34SW96	-1.0	PARKLANDS RUABON 1A
20B	189.0	NE	330170 343629	SJ34SW95	-1.0	PARKLANDS RUABON 1
21	194.0	SE	330102 343001	SJ34SW70	3.0	RUABON BYPASS 315
22	196.0	NE	330202 343598	SJ34SW98	-1.0	PARKLANDS RUABON 3

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
23	203.0	E	330212 343280	SJ34SW68	5.0	RUABON BYPASS 313
24	208.0	E	330240 343530	SJ34SW76	-1.0	RUABON NEWBRIDGE CHIRK BYPASSES 506
25	213.0	E	330233 343575	SJ34SW101	-1.0	PARKLANDS RUABON 5
26C	214.0	W	329240 343330	SJ24SE382	5.5	WYNNNSTAY BANKS DEPOT. 1
27C	214.0	W	329240 343330	SJ24SE383	5.0	WYNNNSTAY BANKS DEPOT. 2
28C	214.0	W	329240 343330	SJ24SE387	5.0	WYNNNSTAY BANKS DEPOT. 6
29C	214.0	W	329240 343330	SJ24SE386	5.0	WYNNNSTAY BANKS DEPOT. 5
30C	214.0	W	329240 343330	SJ24SE385	5.0	WYNNNSTAY BANKS DEPOT. 4
31C	214.0	W	329240 343330	SJ24SE384	5.0	WYNNNSTAY BANKS DEPOT. 3
32	221.0	NE	330183 343661	SJ34SW97	-1.0	PARKLANDS RUABON 2
33	228.0	E	330257 343547	SJ34SW103	-1.0	PARKLANDS RUABON 7
34D	233.0	NE	330222 343636	SJ34SW100	-1.0	PARKLANDS RUABON 4A
35D	233.0	NE	330222 343636	SJ34SW99	-1.0	PARKLANDS RUABON 4
36	237.0	SE	330064 342880	SJ34SW71	3.0	RUABON BYPASS 316
37	239.0	E	330271 343466	SJ34SW65	12.0	RUABON BYPASS 307
38	248.0	NE	330253 343614	SJ34SW102	-1.0	PARKLANDS RUABON 6

The borehole records are available using the hyperlinks below: Please note that if the donor of the borehole record has requested the information be held as commercial-in-confidence, the additional data will be held separately by the BGS and a formal request must be made for its release.

#1: scans.bgs.ac.uk/sobi_scans/boreholes/144048
 #2: scans.bgs.ac.uk/sobi_scans/boreholes/153981
 #3: scans.bgs.ac.uk/sobi_scans/boreholes/17087484
 #4: scans.bgs.ac.uk/sobi_scans/boreholes/17087483
 #5: scans.bgs.ac.uk/sobi_scans/boreholes/144135
 #7: scans.bgs.ac.uk/sobi_scans/boreholes/144115
 #8: scans.bgs.ac.uk/sobi_scans/boreholes/144104
 #9: scans.bgs.ac.uk/sobi_scans/boreholes/154001
 #10A: scans.bgs.ac.uk/sobi_scans/boreholes/144137
 #11A: scans.bgs.ac.uk/sobi_scans/boreholes/144105
 #12: scans.bgs.ac.uk/sobi_scans/boreholes/17087485
 #13: scans.bgs.ac.uk/sobi_scans/boreholes/144103
 #14: scans.bgs.ac.uk/sobi_scans/boreholes/153949
 #15: scans.bgs.ac.uk/sobi_scans/boreholes/144136
 #16: scans.bgs.ac.uk/sobi_scans/boreholes/153977
 #17: scans.bgs.ac.uk/sobi_scans/boreholes/154004
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#28C: scans.bgs.ac.uk/sobi_scans/boreholes/144071
#29C: scans.bgs.ac.uk/sobi_scans/boreholes/144070
#30C: scans.bgs.ac.uk/sobi_scans/boreholes/144069
#31C: scans.bgs.ac.uk/sobi_scans/boreholes/144068
#36: scans.bgs.ac.uk/sobi_scans/boreholes/154006
#37: scans.bgs.ac.uk/sobi_scans/boreholes/154000

6 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

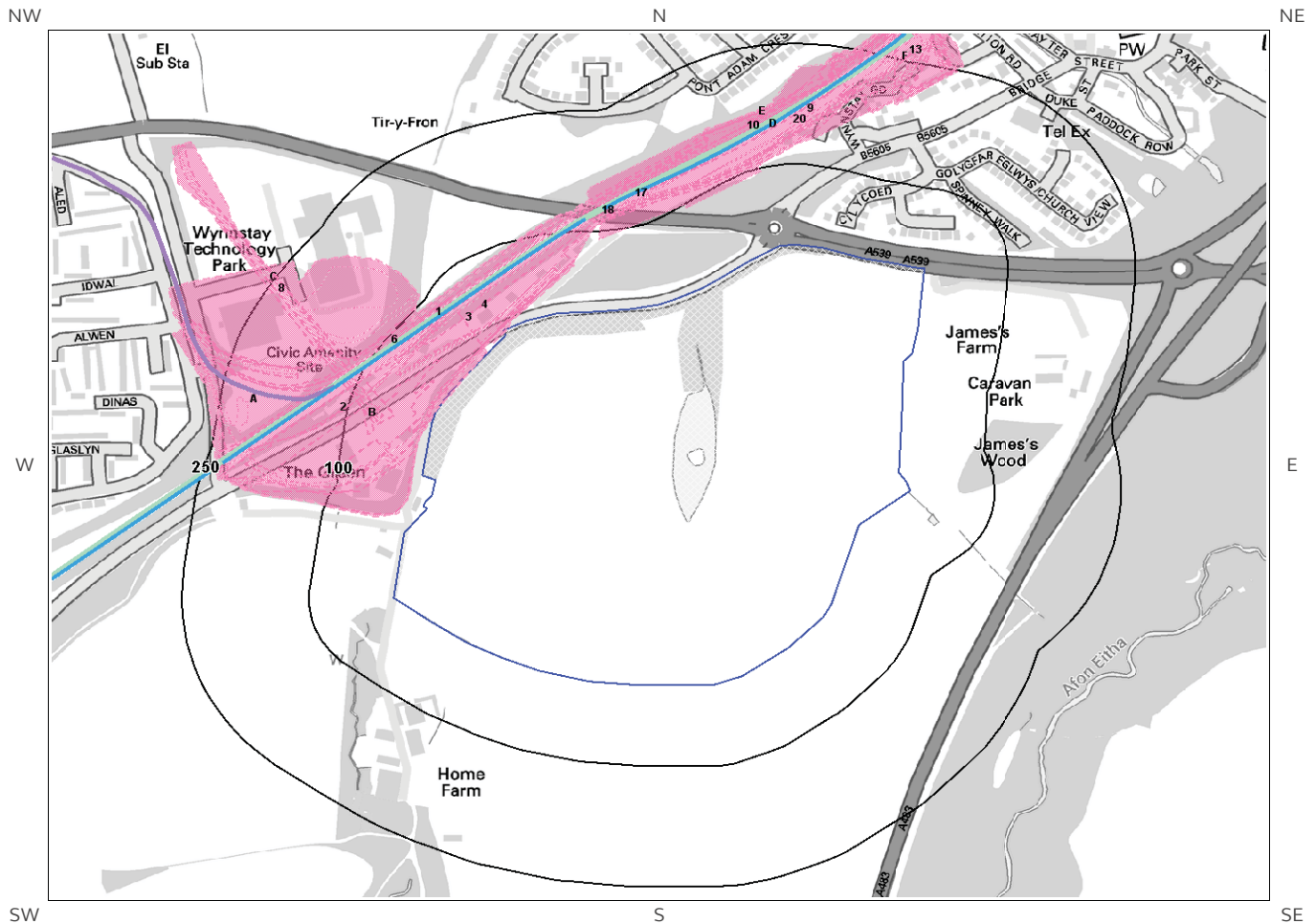
38

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geoinsight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
6.0	NW	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
28.0	SW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
41.0	NW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
46.0	NW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
52.0	N	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
62.0	N	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
63.0	NW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
63.0	NW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
77.0	NW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
87.0	SW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
88.0	NW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
89.0	NW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
107.0	SE	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
108.0	NW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
108.0	NW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
117.0	N	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
119.0	E	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
159.0	SE	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
162.0	NW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
190.0	N	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
191.0	SE	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
205.0	SW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
212.0	NE	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
213.0	SE	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
215.0	E	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
225.0	E	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
227.0	W	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg

*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

7 Railways and Tunnels Map



Railways and Tunnels Legend



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	Underground or Partially Underground Railway / Subway System		Railway Track (OpenStreetMap)
	Railway Tunnel (OS Mapping)		High Speed 2
	Abandoned or Dismantled Railway (OpenStreetMap)		Crossrail 1
	Railway Track (OS Mapping)		Railway and/or Tunnel Feature from Historical Mapping
	Site Outline		
	Search Buffers (m) 250 500		

7 Railways and Tunnels

7.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

7.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? Yes

Have any historical railway or tunnel features been identified within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Details	Date
1	0	On Site	329683 343585	Railway Sidings	1898
2	0	On Site	329346 343325	Railway Sidings	1873
14A	3	NW	329276 343363	Railway Sidings	1899
3	4	NW	329598 343509	Railway Sidings	1938
4	5	NW	329399 343387	Railway Sidings	1949
5A	5	NW	329209 343363	Railway Sidings	1910

ID	Distance (m)	Direction	NGR	Details	Date
15B	7	NW	329410 343364	Railway Sidings	1912
16B	9	NW	329181 343392	Railway Sidings	1873
6	41	NW	329425 343402	Railway Sidings	1960
7C	44	W	329267 343480	Tramway Sidings	1938
17	50	NW	329597 343532	Railway Sidings	1961
18	53	NW	329287 343318	Railway Sidings	1967
8	57	W	329269 343480	Tramway Sidings	1910
19C	59	W	329268 343481	Tramway Sidings	1912
20	89	N	n/a	Railway	1873
21D	109	NW	329845 343679	Railway Sidings	1899
9	111	NW	329907 343696	Railway Sidings	1910
10	112	NW	329822 343688	Railway Sidings	1960
22D	112	NW	329889 343695	Railway Sidings	1912
23E	114	N	329882 343692	Railway Sidings	1873
11E	144	NW	329887 343710	Railway Sidings	1910
24	171	W	329189 343398	Railway Sidings	1912
12F	194	N	330006 343771	Railway Sidings	1873
13	212	N	330042 343784	Railway Sidings	1949
25F	243	N	330020 343769	Railway Sidings	1960

Any records that have been identified are represented on the Railways and Tunnels Map.

7.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? No

Have any historical railway lines been identified within 250m of the study site boundary? Yes

Distance (m)	Direction	Status
123	W	Abandoned

Note: multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels Map.

7.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? No

Have any active railway lines been identified within 250m of the study site boundary? Yes

Distance (m)	Direction	Name	Type
59	NW	Not given	Multi Track
61	NW	Shrewsbury to Chester Line	Rail
127	N	Not given	Multi Track
242	W	Not given	Multi Track

Note: multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels Map.

7.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1.

Is the study site within 5km of the route of the High Speed 2 rail project? No

Is the study site within 500m of the route of the Crossrail 1 rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail 1 Report.

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Contact Details

Groundsure Helpline
Telephone: 08444 159 000
info@groundsure.com



British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk



BGS Geological Hazards Reports and general geological enquiries

British Gypsum

British Gypsum Ltd
East Leake
Loughborough
Leicestershire
LE12 6HX



The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk



Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
<https://www.gov.uk/government/organisations/public-health-england>
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000



Johnson Poole & Bloomer Limited

Harris and Pearson Building, Brettel Lane
Brierley Hill, West Midlands
DY5 3LH
Tel: +44 (0) 1384 262 000
Email: enquiries.gs@jpb.co.uk
Website: www.jpb.co.uk



Ordnance Survey

Adanac Drive, Southampton
SO16 0AS

Tel: 08456 050505

Website: <http://www.ordnancesurvey.co.uk/>



Getmapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444
Website: <http://www1.getmapping.com/>



Peter Brett Associates

Caversham Bridge House
Waterman Place
Reading
Berkshire RG1 8DN
Tel: +44 (0)118 950 0761 E-mail: reading@pba.co.uk
Website: <http://www.peterbrett.com/home>



Contact Details

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1 Definitions

In these terms and conditions unless the context otherwise requires:

“Beneficiary” means the person or entity for whose benefit the Client has obtained the Services.

“Client” means the party or parties entering into a Contract with Groundsure.

“Commercial” means any building or property which is not Residential.

“Confidential Information” means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

“Support Services” means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

“Contract” means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

“Third Party Data Provider” means any third party providing Third Party Content to Groundsure.

“Data Reports” means reports comprising factual data with no accompanying interpretation.

“Fees” has the meaning set out in clause 5.1.

“Groundsure” means Groundsure Limited, a company registered in England and Wales under number 03421028.

“Groundsure Materials” means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

“Intellectual Property” means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

“Mapping” means a map, map data or a combination of historical maps of various ages, time periods and scales.

“Order” means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.

“Ordnance Survey” means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

“Order Website” means the online platform through which Orders may be placed by the Client and accepted by Groundsure.

“Report” means a Risk Screening Report or Data Report for Commercial or Residential property.

“Residential” means any building or property used as or intended to be used as a single dwelling.

“Risk Screening Report” means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.

“Services” means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.

“Site” means the area of land in respect of which the Client has requested Groundsure to provide the Services.

“Third Party Content” means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.

“User Guide” means the user guide, as amended from time to time, available upon request from Groundsure and on the website (www.Groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.

2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 Groundsure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure.

Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure's acceptance of an Order shall be binding only when made in writing and signed by Groundsure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.

3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client's approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

(i) the Beneficiary,
(ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
(iv) the first purchaser or first tenant of the Site, and
(v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1 Groundsure shall charge and the Client shall pay fees at the rate and frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together “Fees”).

5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client (“Payment Date”). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

(i) full payment of all relevant Fees and
(ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.

6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure

Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

(i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;

(ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;

(iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);

(iv) not combine the Services with or incorporate such Services into any other information data or service;

(v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);

(vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and

(vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7. Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

(i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or subcontractors;

(ii) any use made of the Reports, Services, Materials or any part of them; and

(iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 Groundsure shall not be liable for

- (i) loss of profits;
- (ii) loss of business;
- (iii) depletion of goodwill and/or similar losses;
- (iv) loss of anticipated savings;
- (v) loss of goods;
- (vi) loss of contract;
- (vii) loss of use;
- (viii) loss or corruption of data or information;
- (ix) business interruption;
- (x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;

(xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;

(xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;

(xiii) loss or damage to a computer, software, modem, telephone or other property; and

(xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

(i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or

(ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or

(iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

- (a) supplied to the Client's specification(s) and in any event
- (b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.

12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.

12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

- (i) the Client or Beneficiary's failure to provide facilities, access or information;
- (ii) fire, storm, flood, tempest or epidemic;
- (iii) Acts of God or the public enemy;
- (iv) riot, civil commotion or war;
- (v) strikes, labour disputes or industrial action;
- (vi) acts or regulations of any governmental or other agency;
- (vii) suspension or delay of services at public registries by Third Party Data Providers;
- (viii) changes in law; or
- (ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

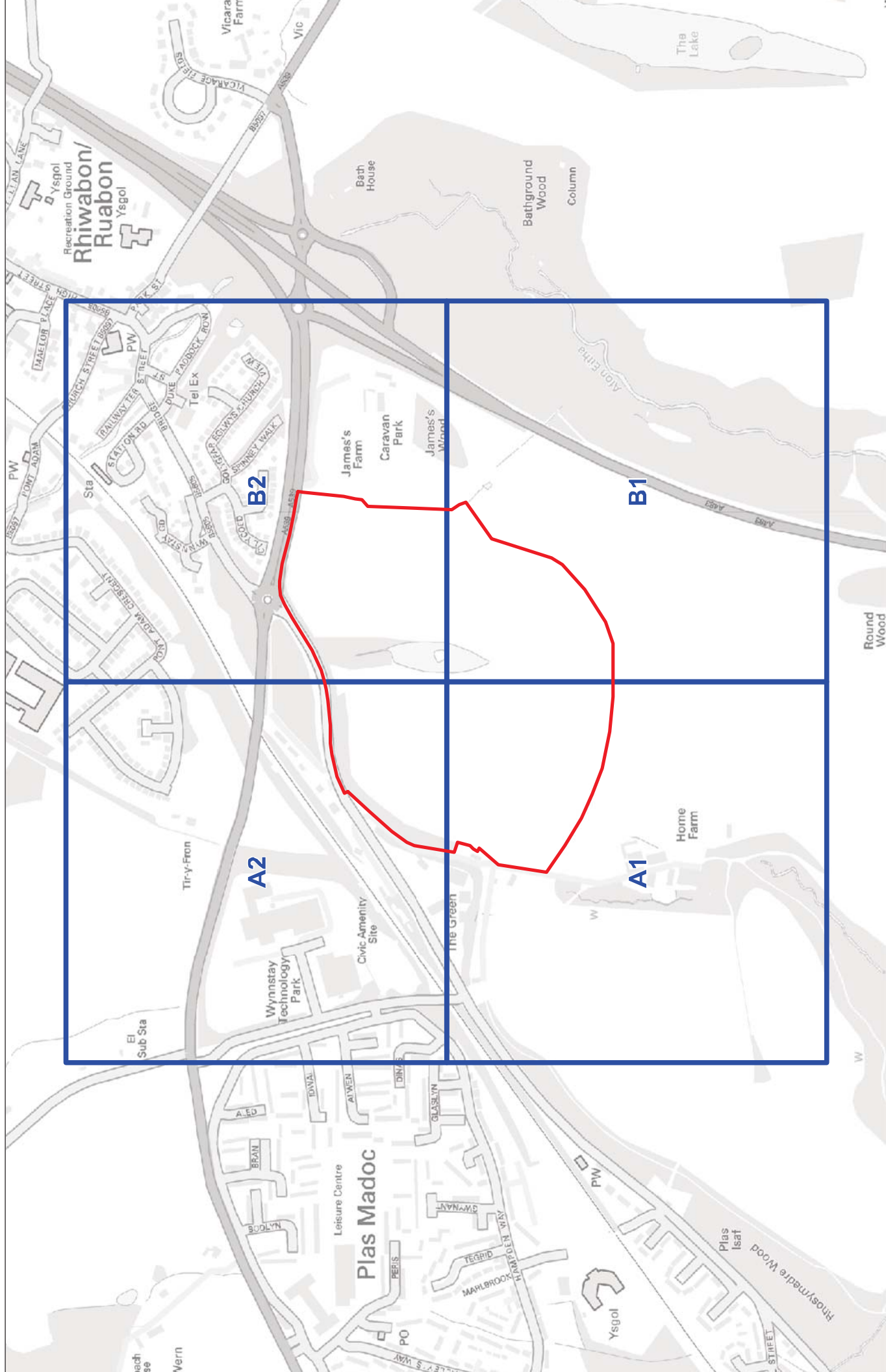
12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

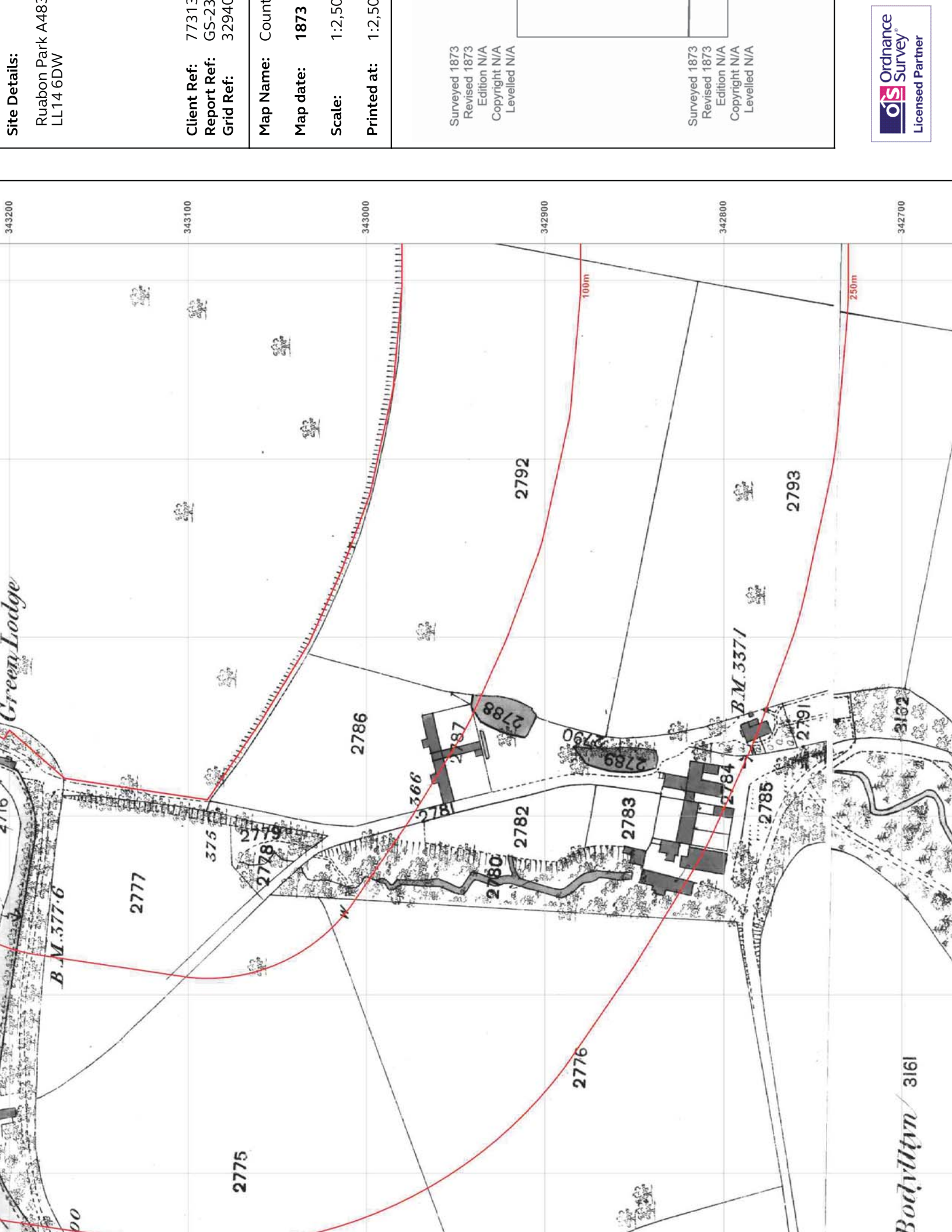
12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner.

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law





Site Details:		Client Ref: 77313		Map Name: Count	
Ruabon Park A48		Report Ref: GS-23		Map date: 1873	
LL14 6DW		Grid Ref: 32940		Scale: 1:2,500	
				Printed at: 1:2,500	
				Surveyed 1873	
				Revised 1873	
				Edition N/A	
				Copyright N/A	
				Levelled N/A	
				Surveyed 1873	
				Revised 1873	
				Edition N/A	
				Copyright N/A	
				Levelled N/A	



Site Details:		Client Ref: 77313		Map Name: Count	
Ruabon Park A48		Report Ref: GS-23		Map date: 1899	
LL14 6DW		Grid Ref: 32940		Scale: 1:2,500	
				Printed at: 1:2,500	
				Surveyed 1899	
				Revised 1899	
				Edition N/A	
				Copyright N/A	
				Levelled N/A	
				Surveyed 1899	
				Revised 1899	
				Edition N/A	
				Copyright N/A	
				Levelled N/A	





Site Details:

Ruabon Park A48
LL14 6DW

Client Ref: 77313

Report Ref: GS-23

Grid Ref: 32940

Map Name: Nation

Map date: 1960-

Scale: 1:2,500

Printed at: 1:2,500

Surveyed 1961

Revised 1961

Edition N/A

Copyright 1962

Levelled 1959

Surveyed 1960

Revised 1960

Edition N/A

Copyright 1962

Levelled 1959

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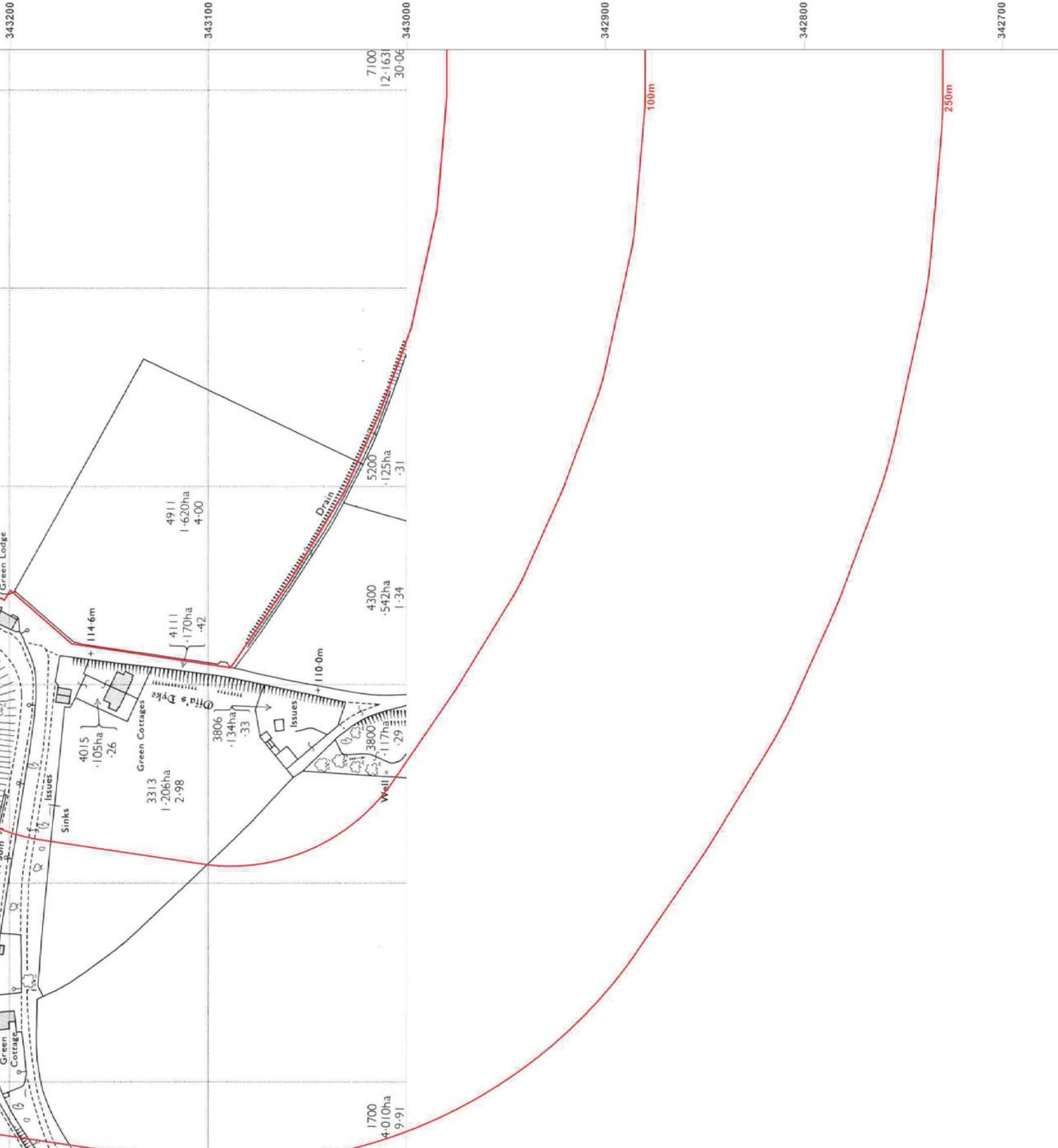
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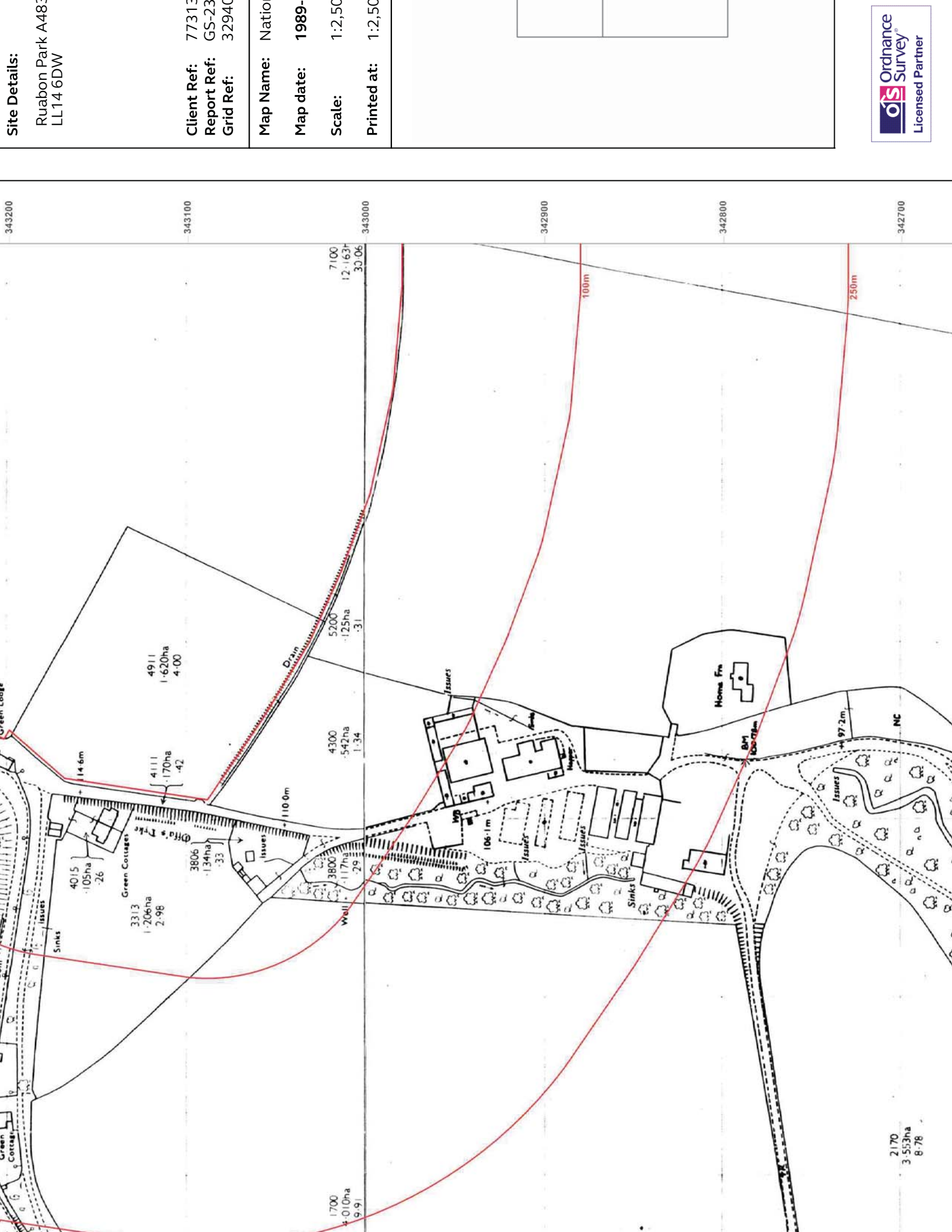
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LL14 6DW

Client Ref: 77313
Report Ref: GS-23
Grid Ref: 32940

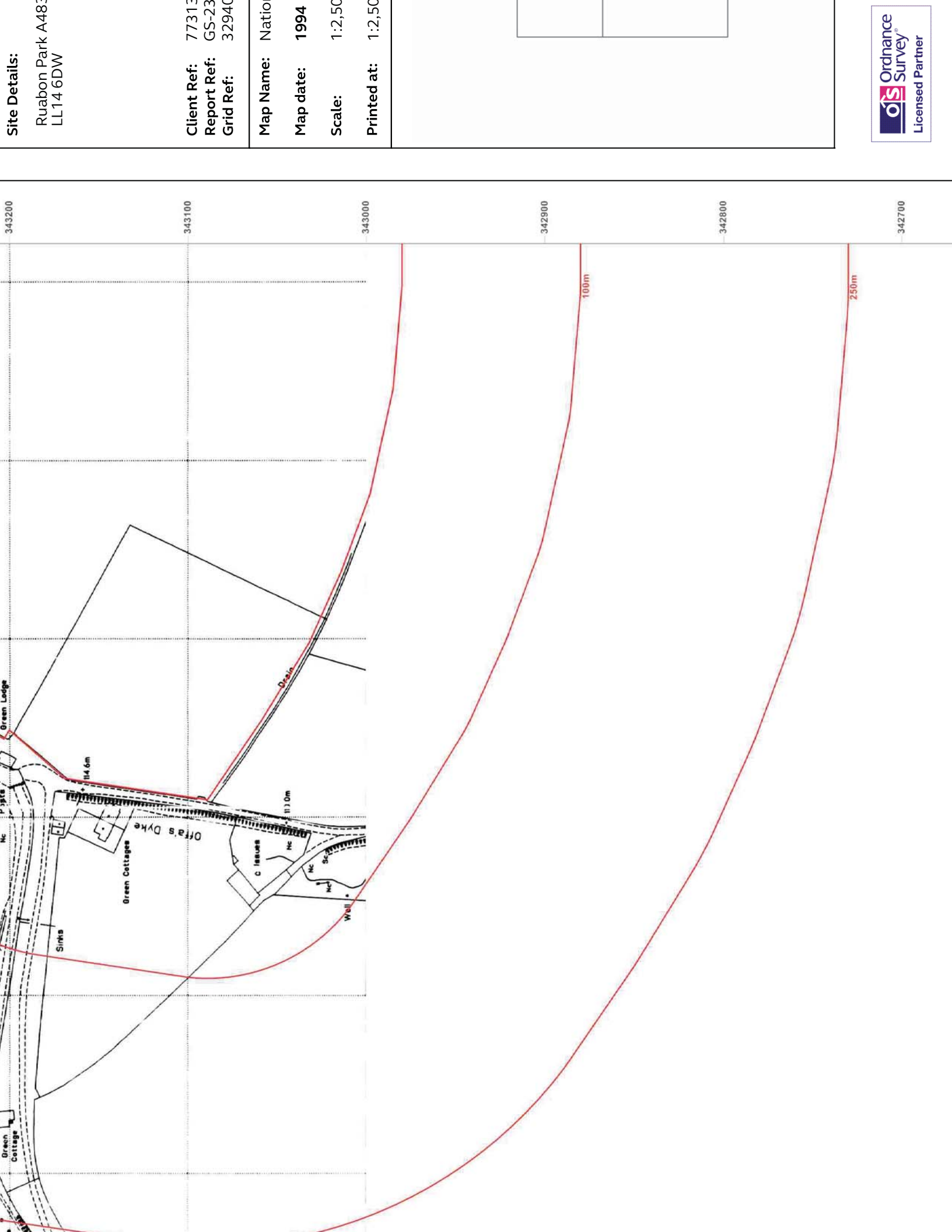
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Revised 1971
Edition N/A
Copyright 1972
Levelled 1959





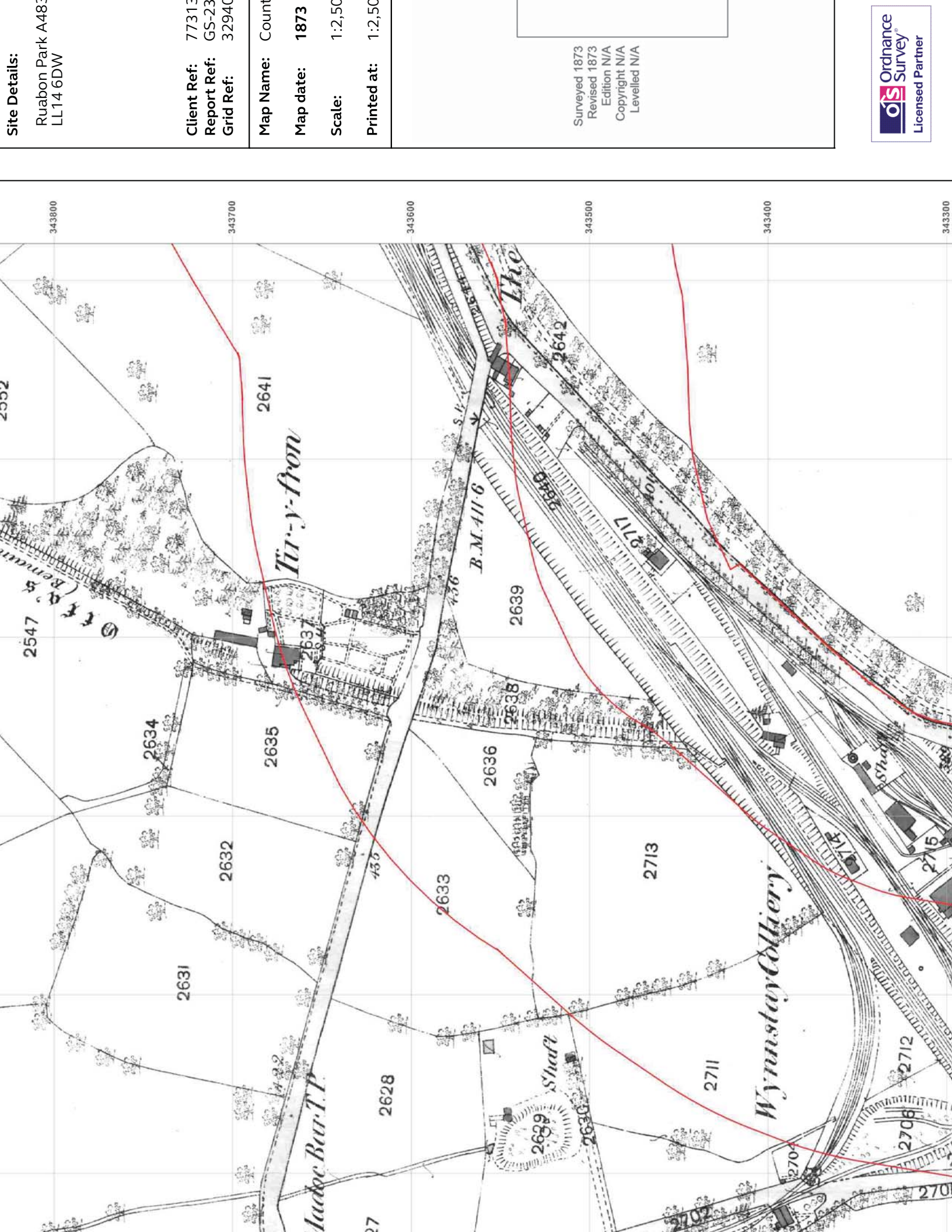
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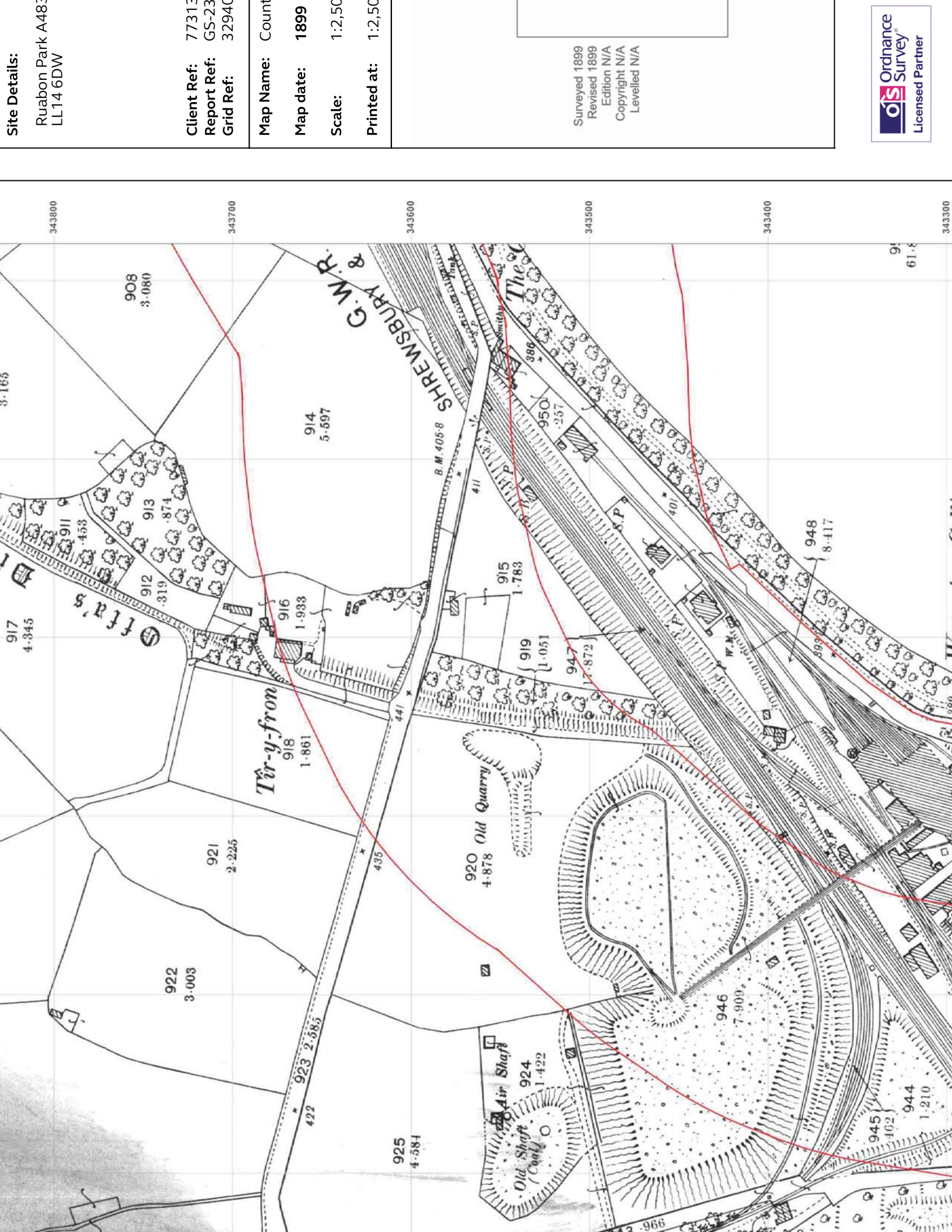


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Site Details:		Client Ref: 77313		Map Name: Nation	
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Site Details:		Client Ref: 77313		Count	
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Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

Site Details:

Ruabon Park A483
LL14 6DW

Client Ref: 77313
Report Ref: GS-23
Grid Ref: 32940

Map Name:	Count
Map date:	1912
Scale:	1:2,500
Printed at:	1:2,500

Surveyed 1912
Revised 1912
Edition N/A
Copyright N/A
Levelled N/A



Site Details:

Ruabon Park A48
LL14 6DW

Client Ref: 77313

Report Ref: GS-23

Grid Ref: 32940

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Map date: 1961

Scale: 1:2,500

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Surveyed 1961

Revised 1961

Edition N/A

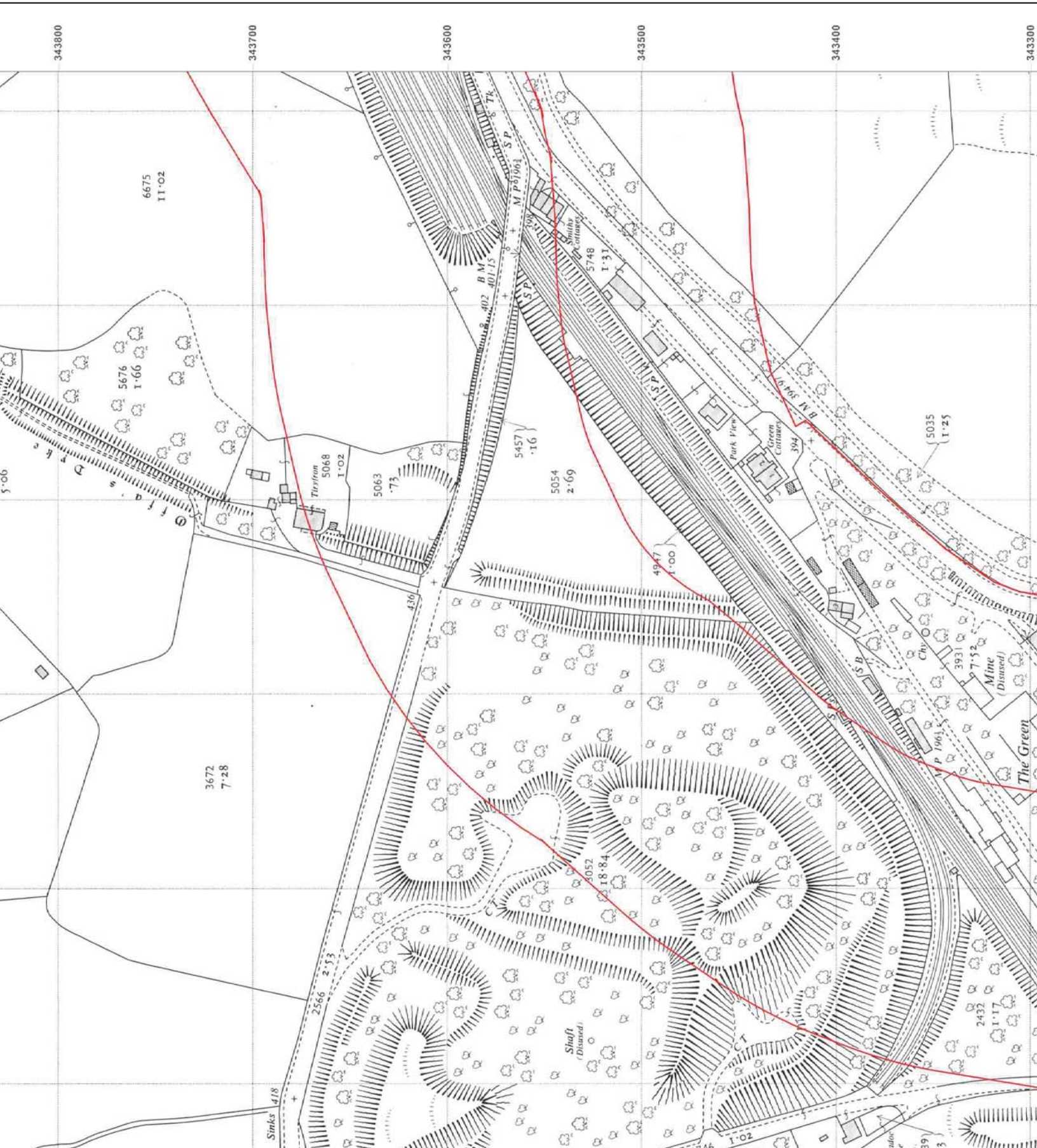
Copyright 1962

Levelled 1959

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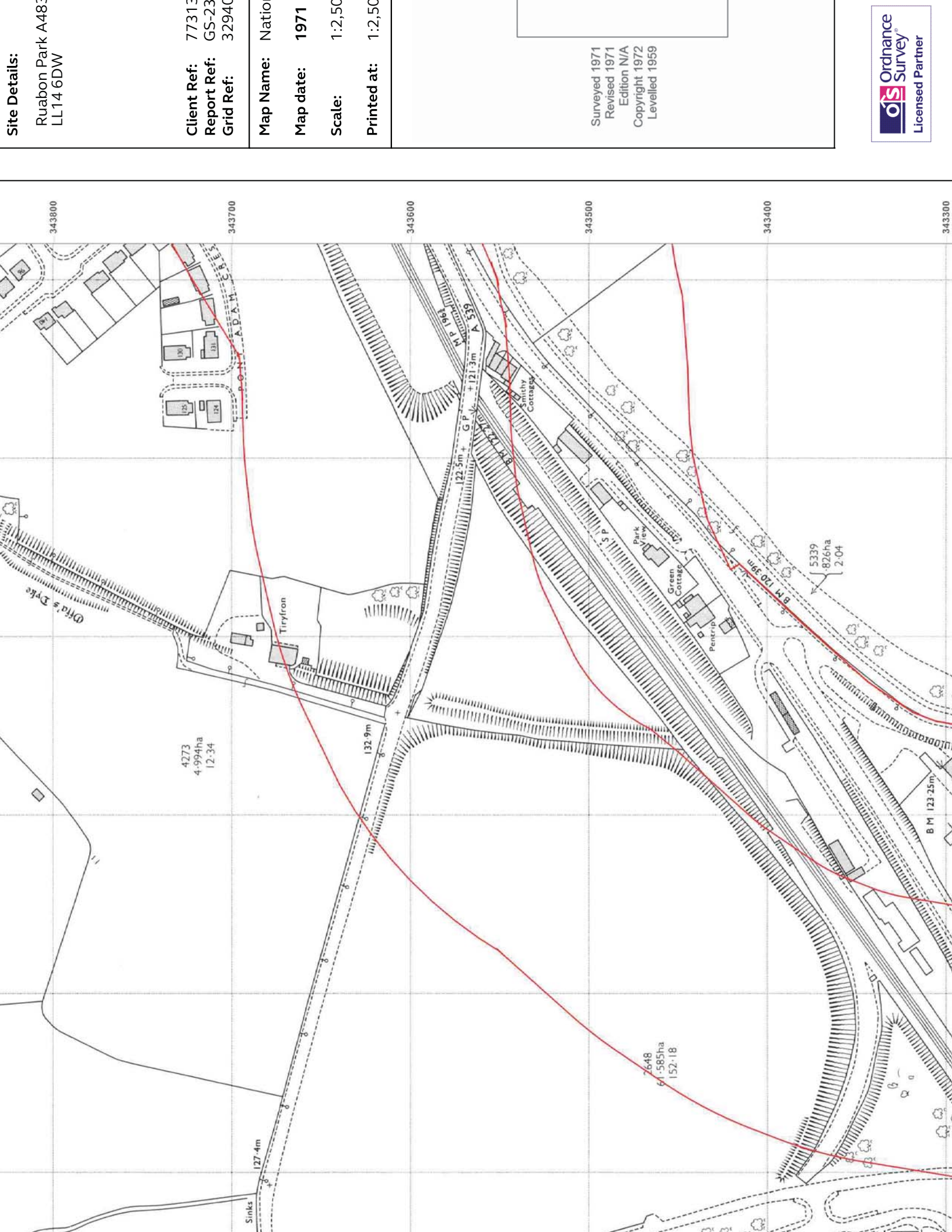


Ruabon Park A483
LL14 6DW

Map Name:	Natio
Map date:	1967
Scale:	1:2,50
Printed at:	1:2,50



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Site Details:		Client Ref: 77313		Map Name: Natio	
Ruabon Park A48		Report Ref: GS-23		Map date: 1971	
LL14 6DW		Grid Ref: 32940		Scale: 1:2,500	
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				Surveyed 1971	
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				Copyright 1972	
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				Ordnance Survey Licensed Partner	

Site Details:
Ruabon Park A483
LL14 6DW

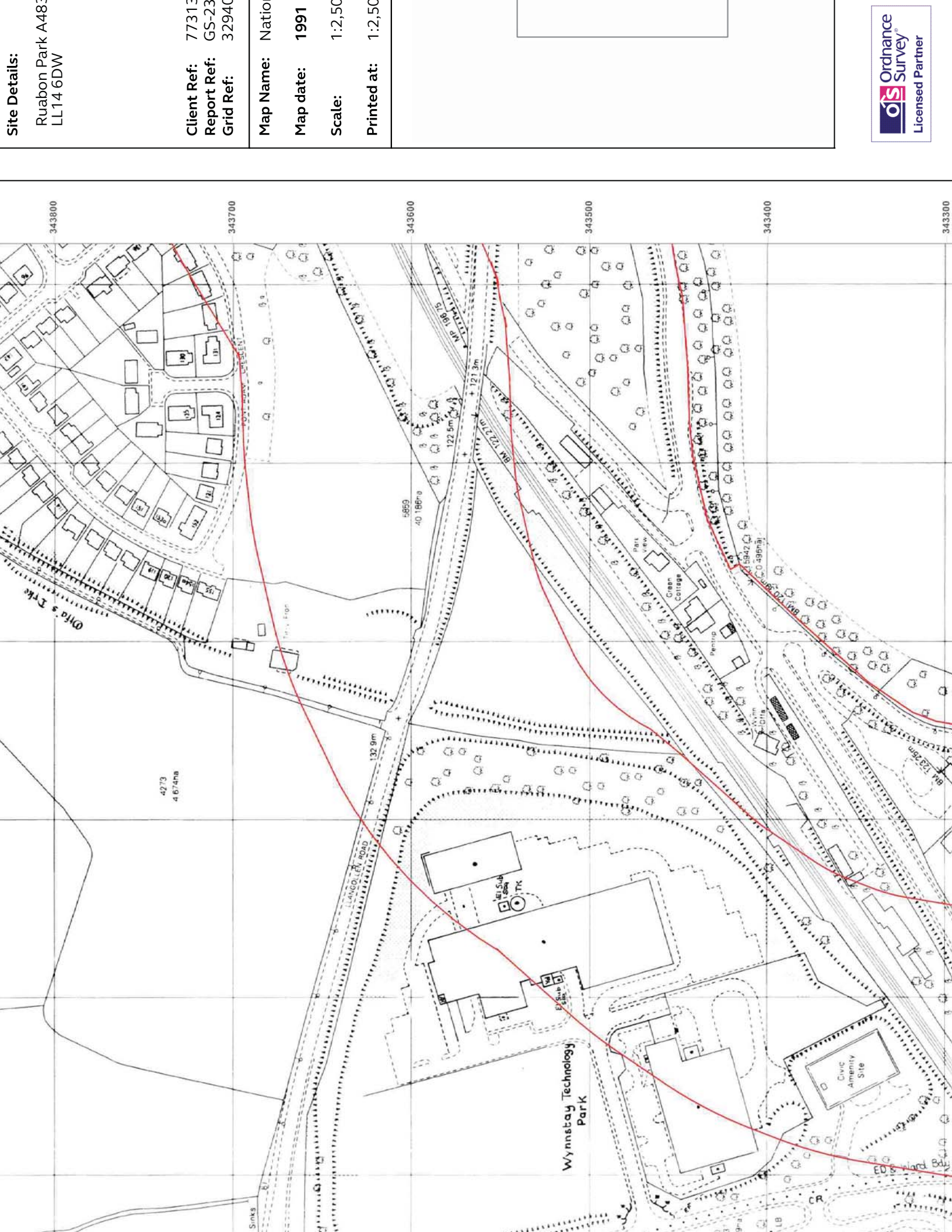
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Report Ref: GS-23
Grid Ref: 32940

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Map date:	1989
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Printed at:	1:2,500



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Site Details: Ruabon Park A48 LL14 6DW		Client Ref: 77313	Map Name: Nation
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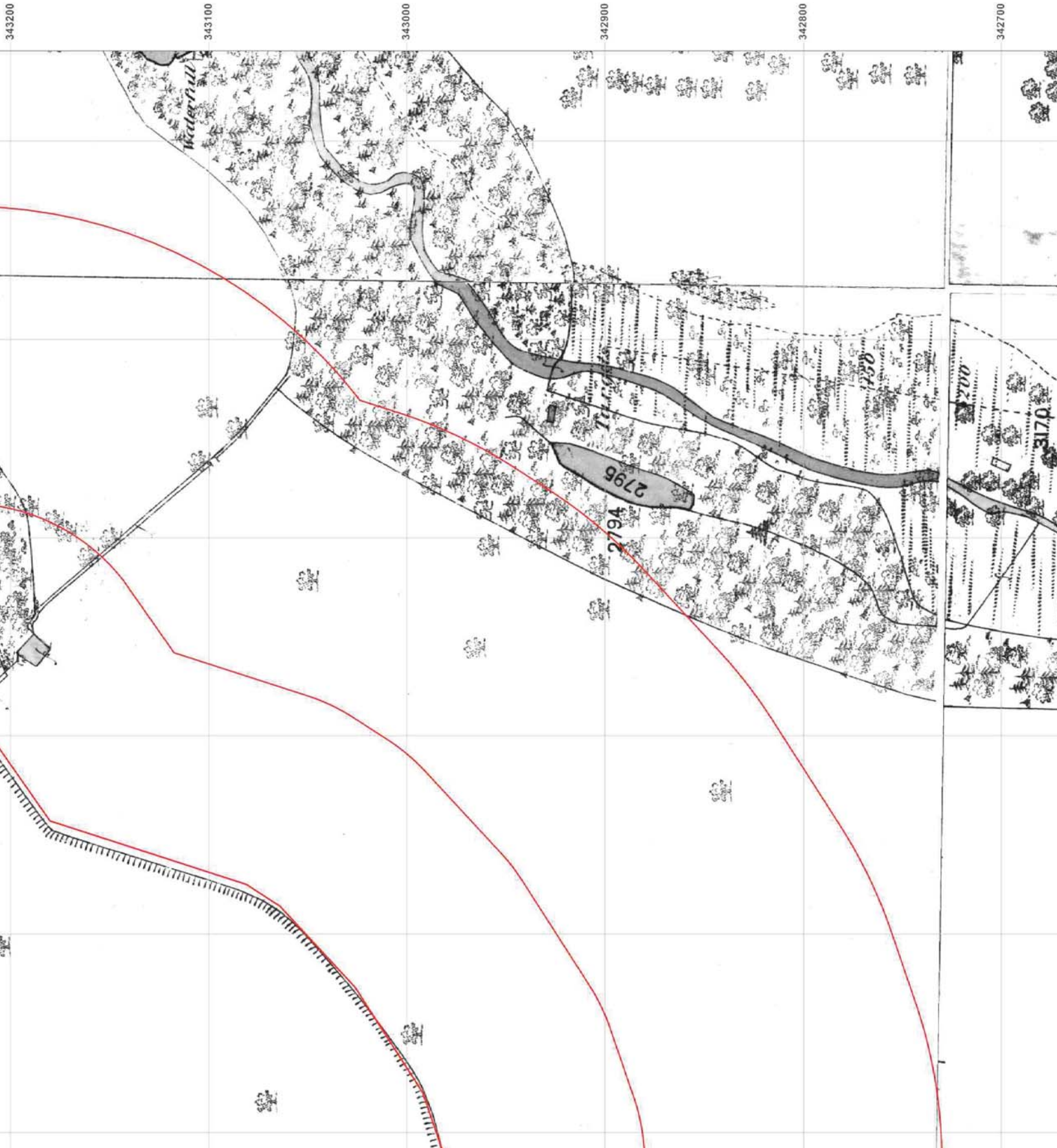


Site Details:		Client Ref: 77313		Map Name: Nation	
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Ruabon Park A483
LL14 6DW

Map Name:	Count
Map date:	1873
Scale:	1:2,500
Printed at:	1:2,500

Surveyed 1873
Revised 1873
Edition N/A
Copyright N/A
Levelled N/A



Site Details:

Ruabon Park A48
LL14 6DW

Client Ref: 77313
Report Ref: GS-23
Grid Ref: 33003

Map Name: Count

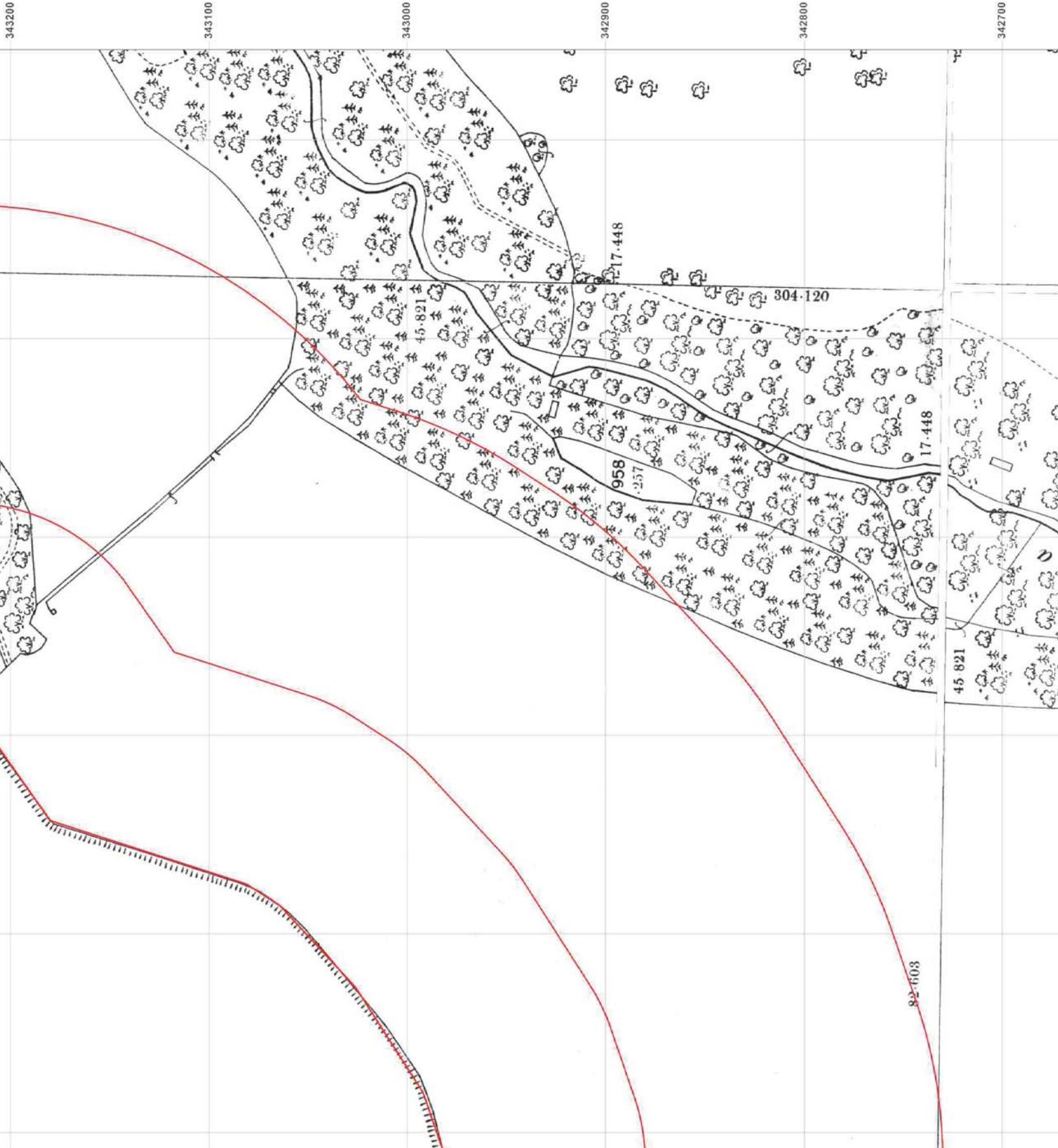
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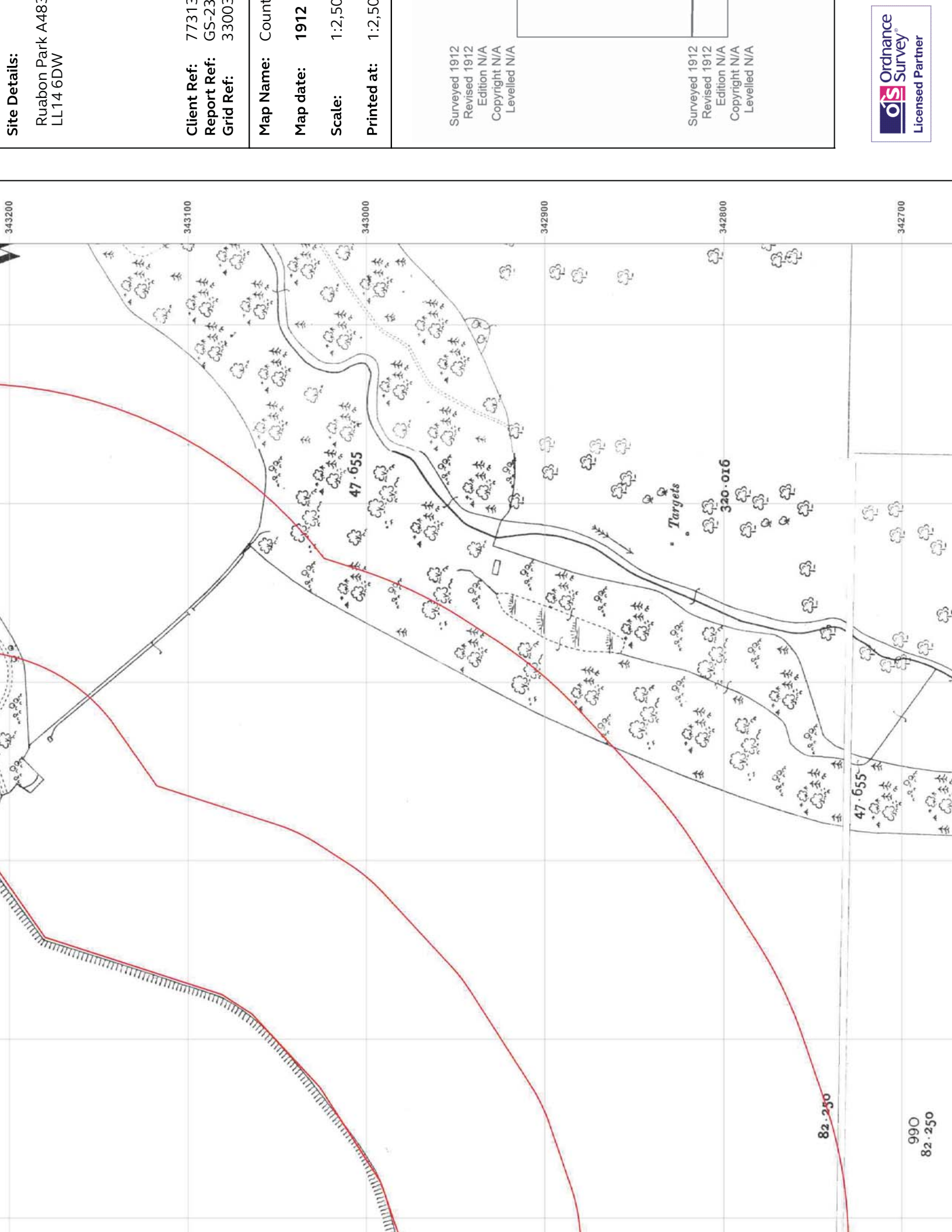
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Printed at: 1:2,500

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A





Site Details:		Client Ref: 77313		Map Name: Count	
Ruabon Park A48		Report Ref: GS-23		Map date: 1912	
LL14 6DW		Grid Ref: 33003		Scale: 1:2,500	
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				Revised 1912	
				Edition N/A	
				Copyright N/A	
				Levelled N/A	
				Surveyed 1912	
				Revised 1912	
				Edition N/A	
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Ruabon Park A48
LL14 6DW

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Grid Ref: 33003

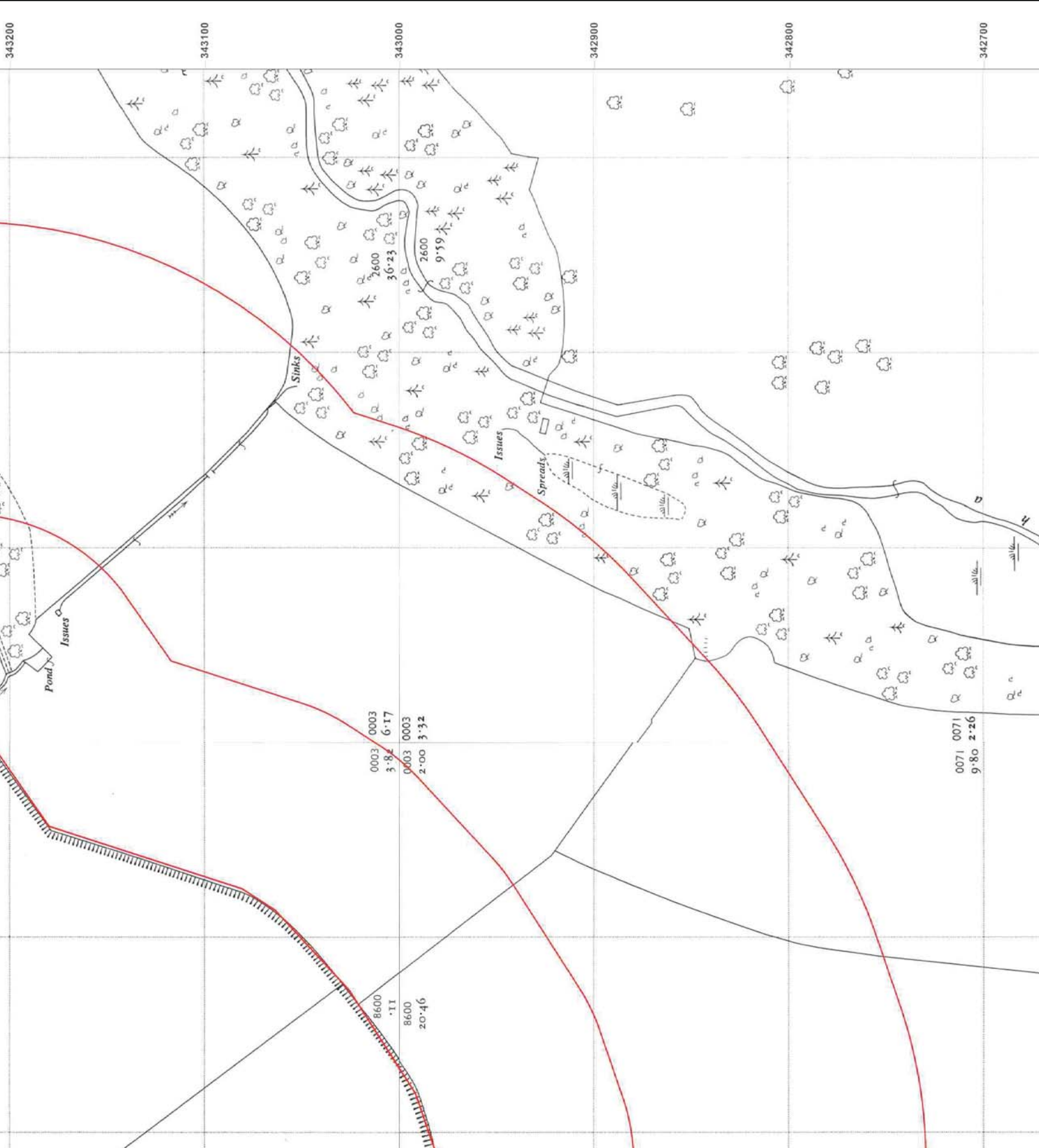
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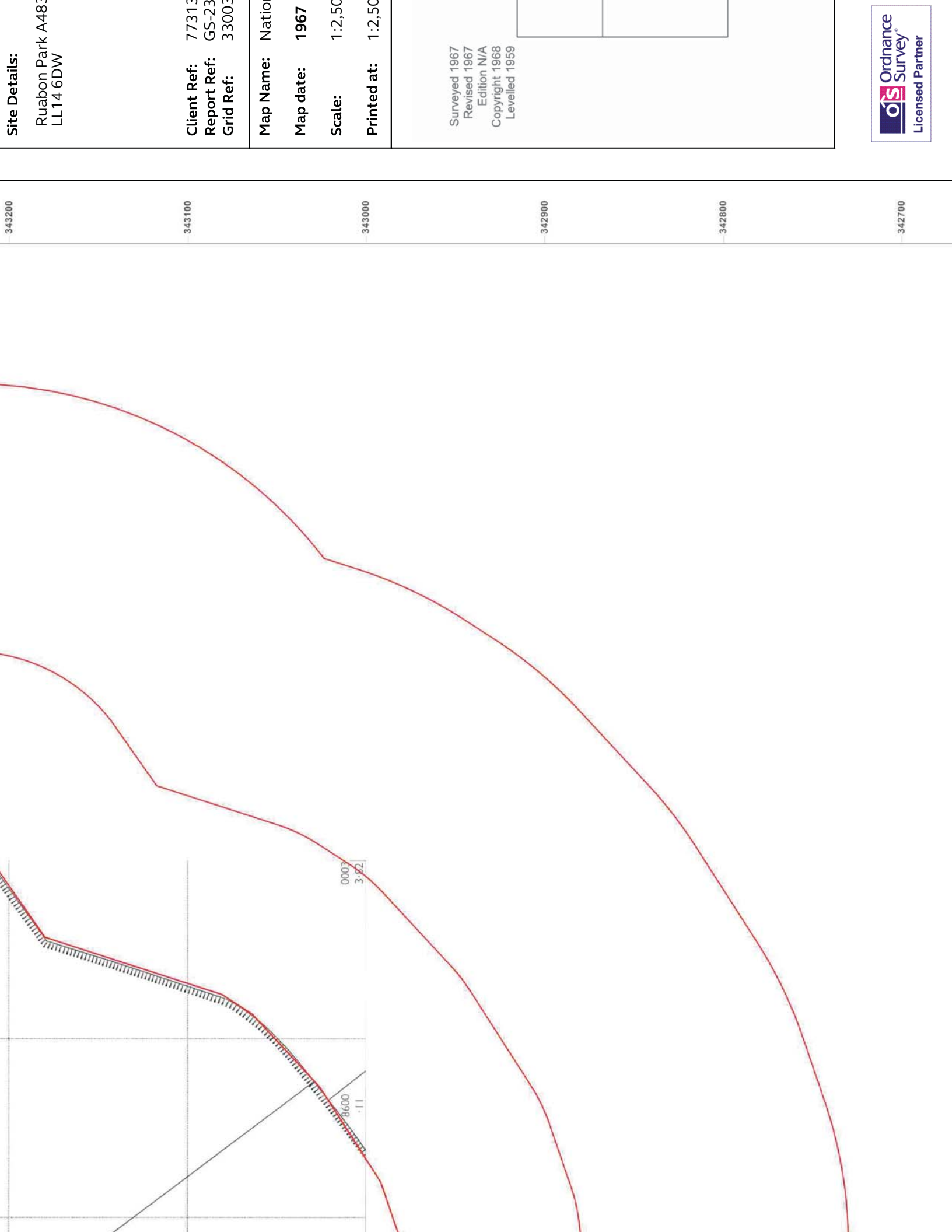
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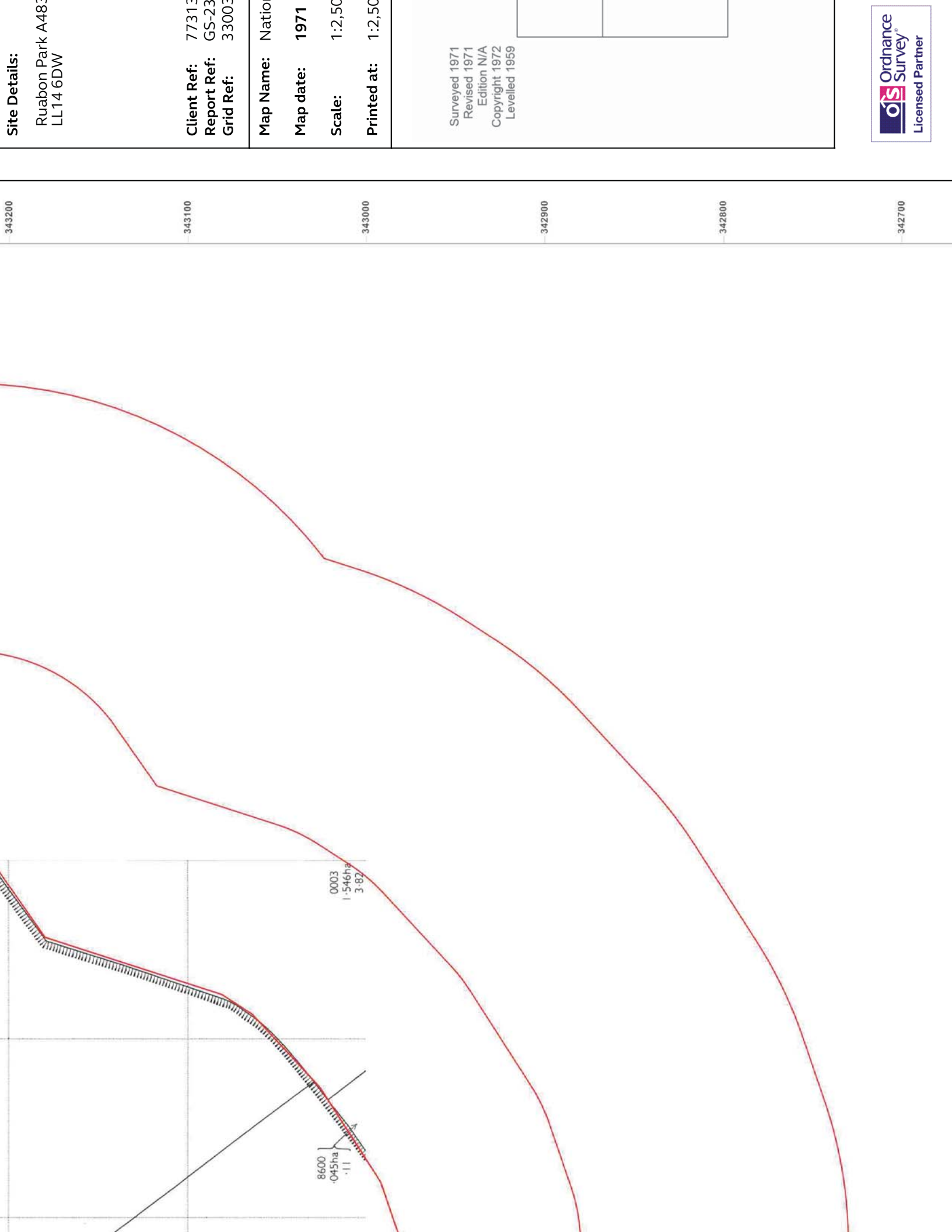
Surveyed 1961
Revised 1961
Edition N/A
Copyright 1962
Levelled 1959

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1962
Levelled 1959





Site Details: Ruabon Park A48 LL14 6DW		Client Ref: 77313 Report Ref: GS-23 Grid Ref: 33003	Map Name: Nation Map date: 1967 Scale: 1:2,500 Printed at: 1:2,500	Surveyed 1967 Revised 1967 Edition N/A Copyright 1968 Levelled 1959	
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Site Details:

Ruabon Park A48
LL14 6DW

Client Ref: 77313
Report Ref: GS-23
Grid Ref: 33003

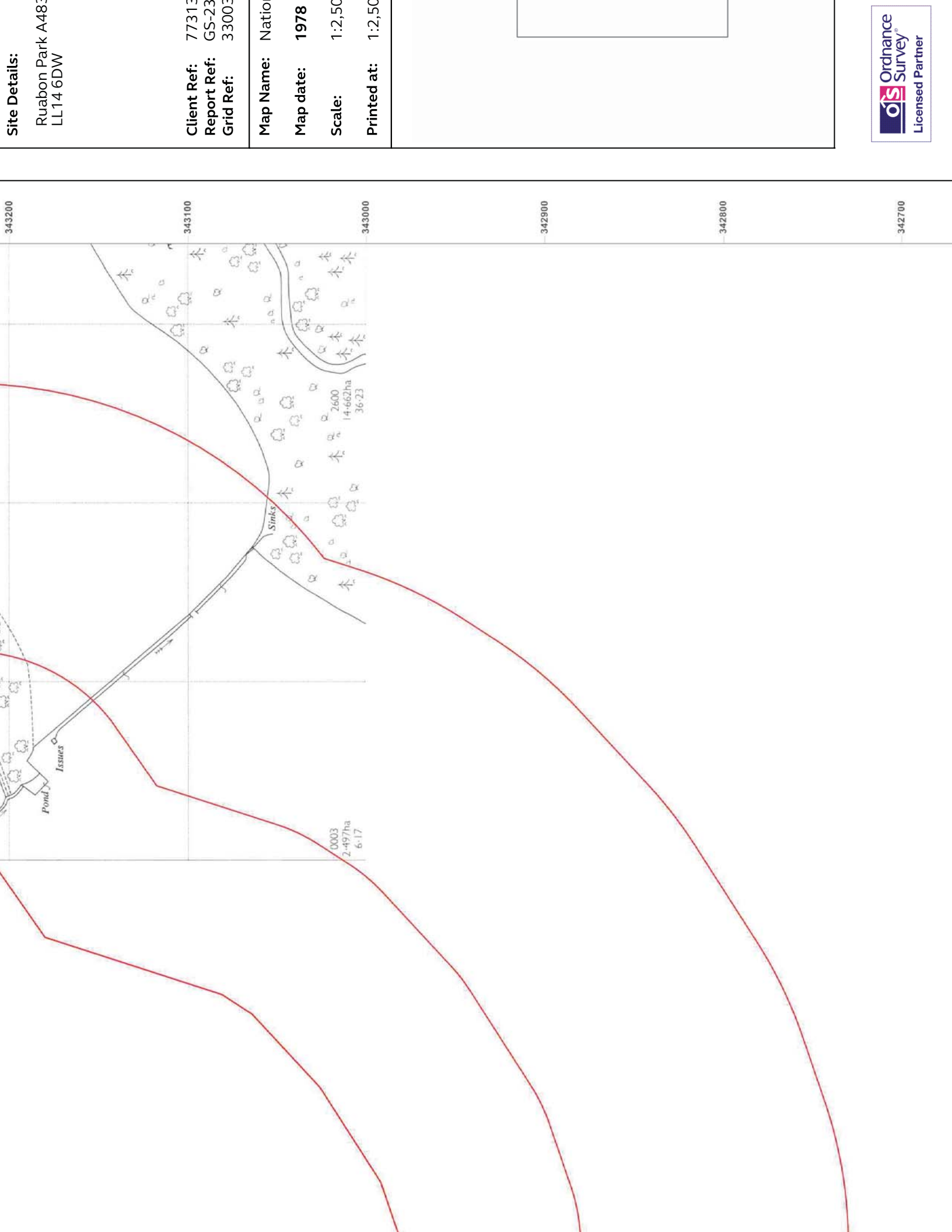
Map Name: Nation

Map date: 1971

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Surveyed 1971
Revised 1971
Edition N/A
Copyright 1972
Levelled 1959



Site Details: Ruabon Park A48 LL14 6DW		Client Ref: 77313 Report Ref: GS-23 Grid Ref: 33003	Map Name: Nation Map date: 1978 Scale: 1:2,500 Printed at: 1:2,500
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Ruabon Park A483
LL14 6DW

Client Ref: 77313
Report Ref: GS-23
Grid Ref: 33003

Map Name:	Natio
Map date:	1989-

Scale: 1:2,500

Printed at: 1:2.50

Surveyed 1989
Revised 1989
Edition N/A
Copyright 1991
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1990
Levelled 1959



Ruabon Park A483
LL14 6DW

Client Ref: 77313
Report Ref: GS-23
Grid Ref: 33003

Map Name: Nation

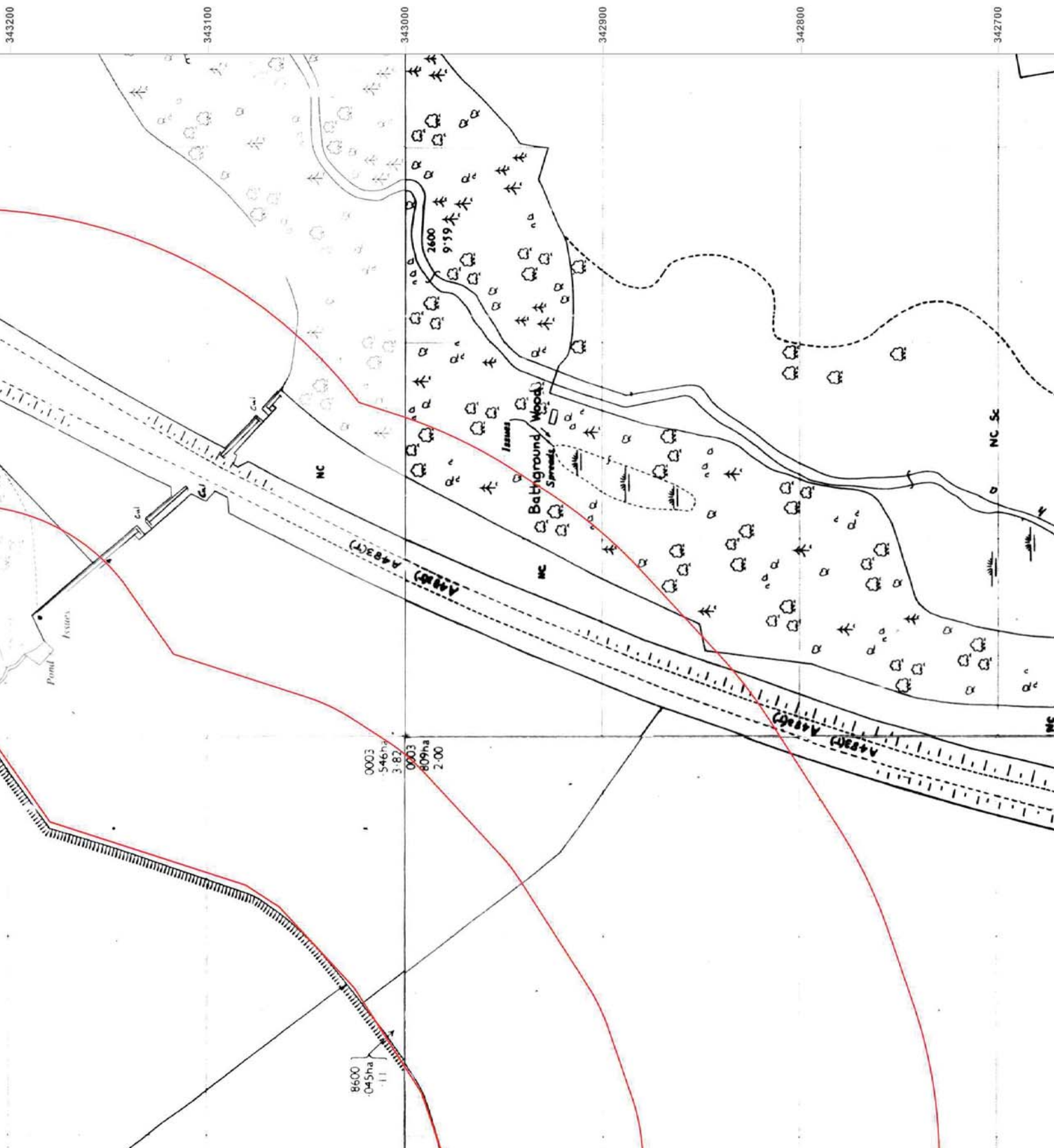
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Revised 1989
Edition N/A
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Levelled N/A

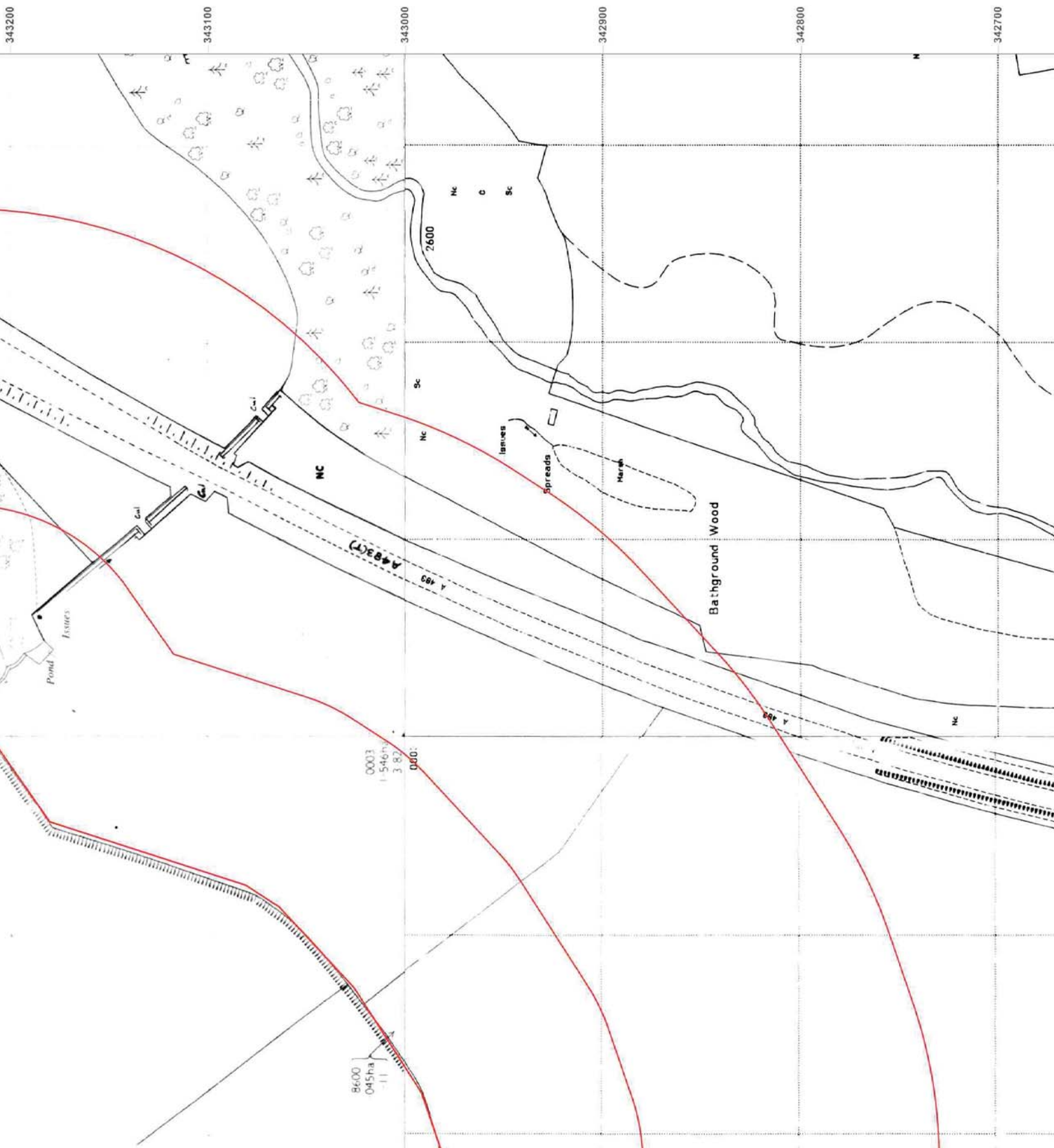
Surveyed N/A
Revised N/A
Edition N/A
Copyright 1990
Levelled 1959



Ruabon Park A483
LL14 6DW

Map Name:	Natio
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Scale:	1:2,50
Printed at:	1:2,50

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A



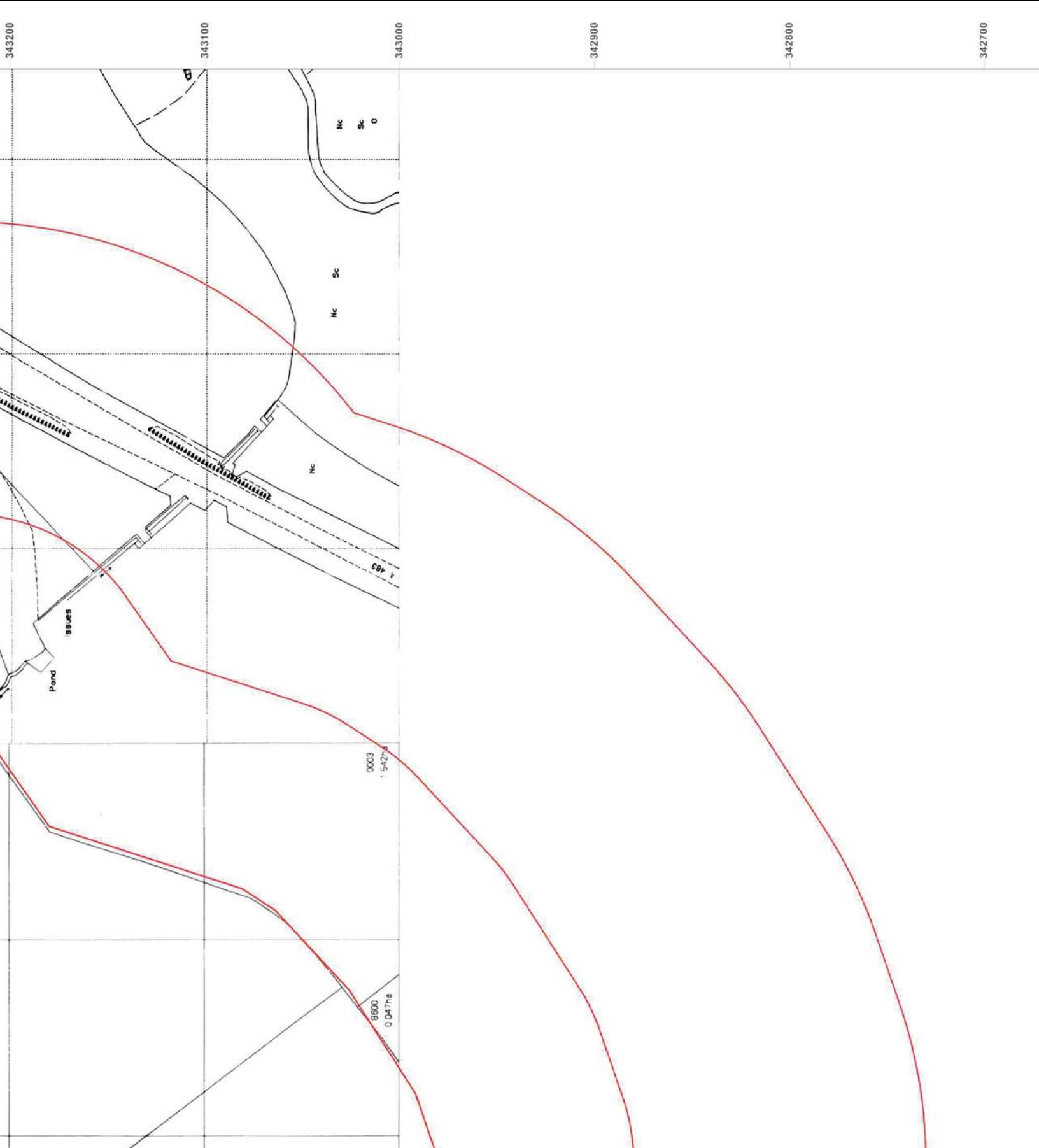
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Scale: 1:2,500
Printed at: 1:2,500

Surveyed 1991
Revised 1991
Edition N/A
Copyright 1991
Levelled N/A



Site Details:

Ruabon Park A483
LL14 6DW

Client Ref: 77313
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Grid Ref: 33003

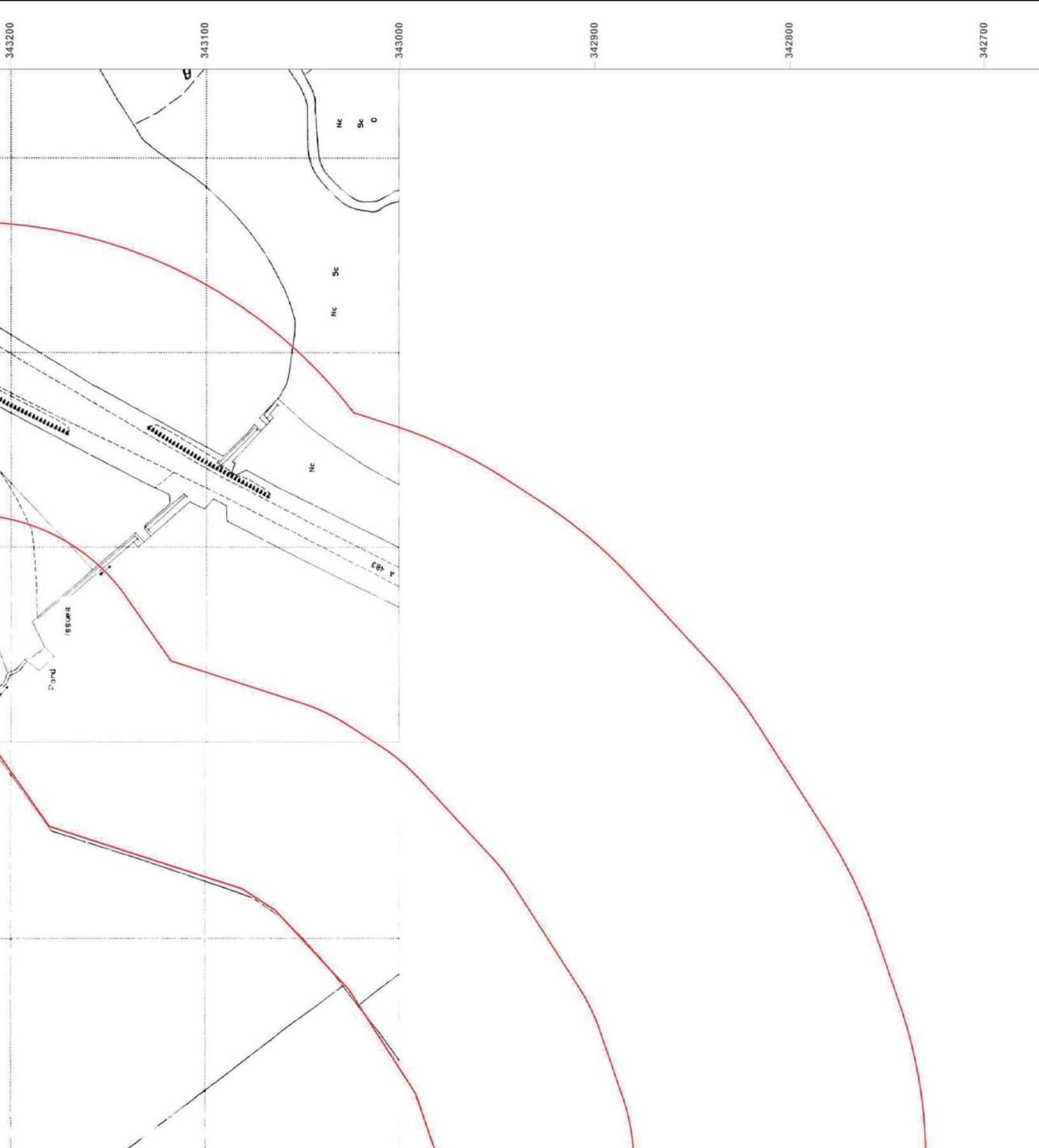
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Map date: 1994

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Revised N/A
Edition N/A
Copyright 1994
Levelled N/A



Ruabon Park A483
LL14 6DW

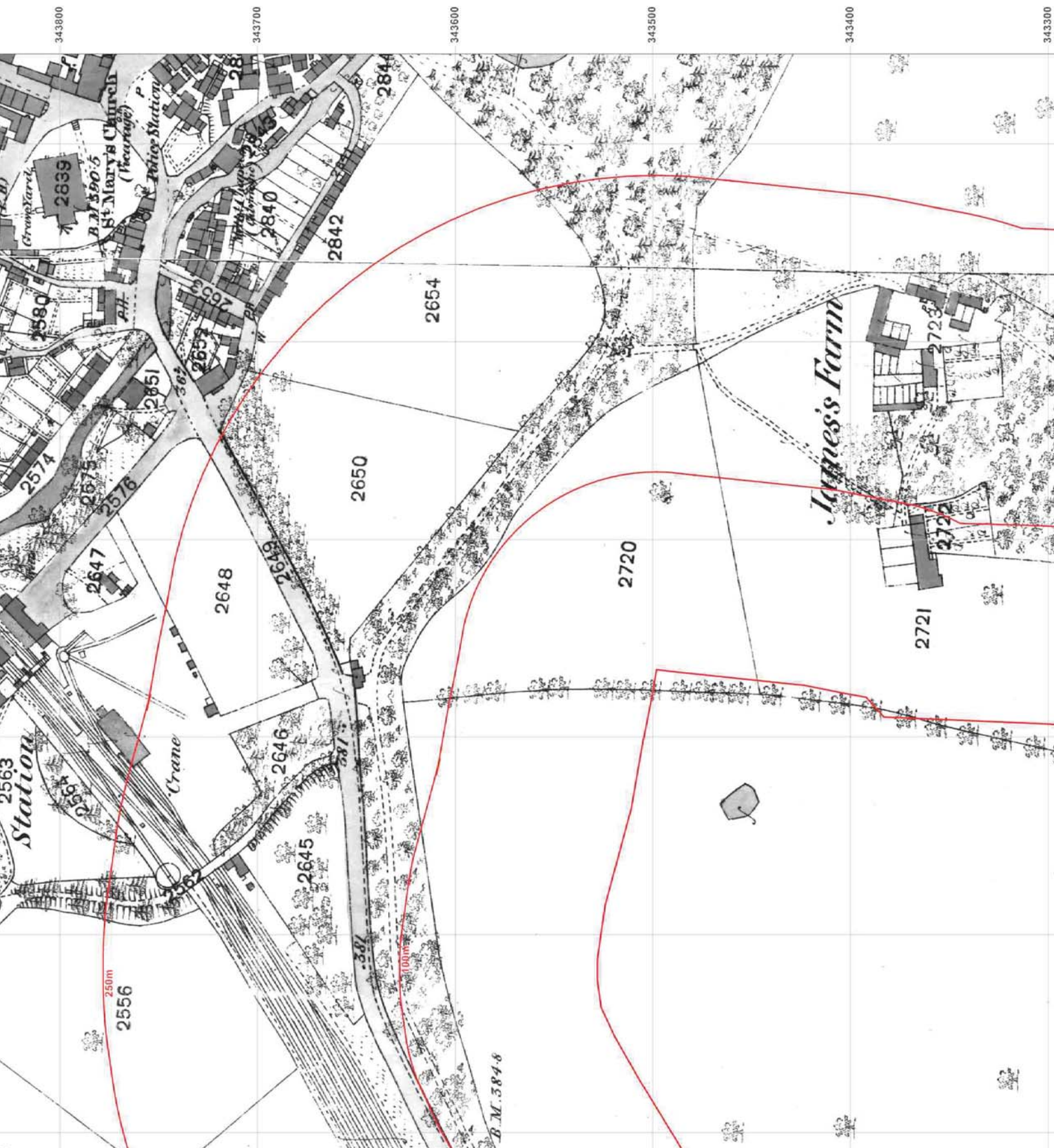
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Scale:	1:2,500
Printed at:	1:2,500

Surveyed 1873
Revised 1873
Edition N/A
Copyright N/A
Levelled N/A



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Ruabon Park A483
LL14 6DW

Client Ref: 77313
Report Ref: GS-23
Grid Ref: 33003

Map Name: Count
 Map date: 1899
 Scale: 1:2,500
 Printed at: 1:2,500

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A



Site Details:

Client Ref:

Report Ref:

Grid Ref:

Map Name

Map date:

Scale:

Printed at:

Surveyed 1912
Revised 1912
Edition N/A
Copyright N/A
Levelled N/A

Site Details:

Ruabon Pa
LL14 6DW

Client Ref:
Report Ref:
Grid Ref:

Map Name:

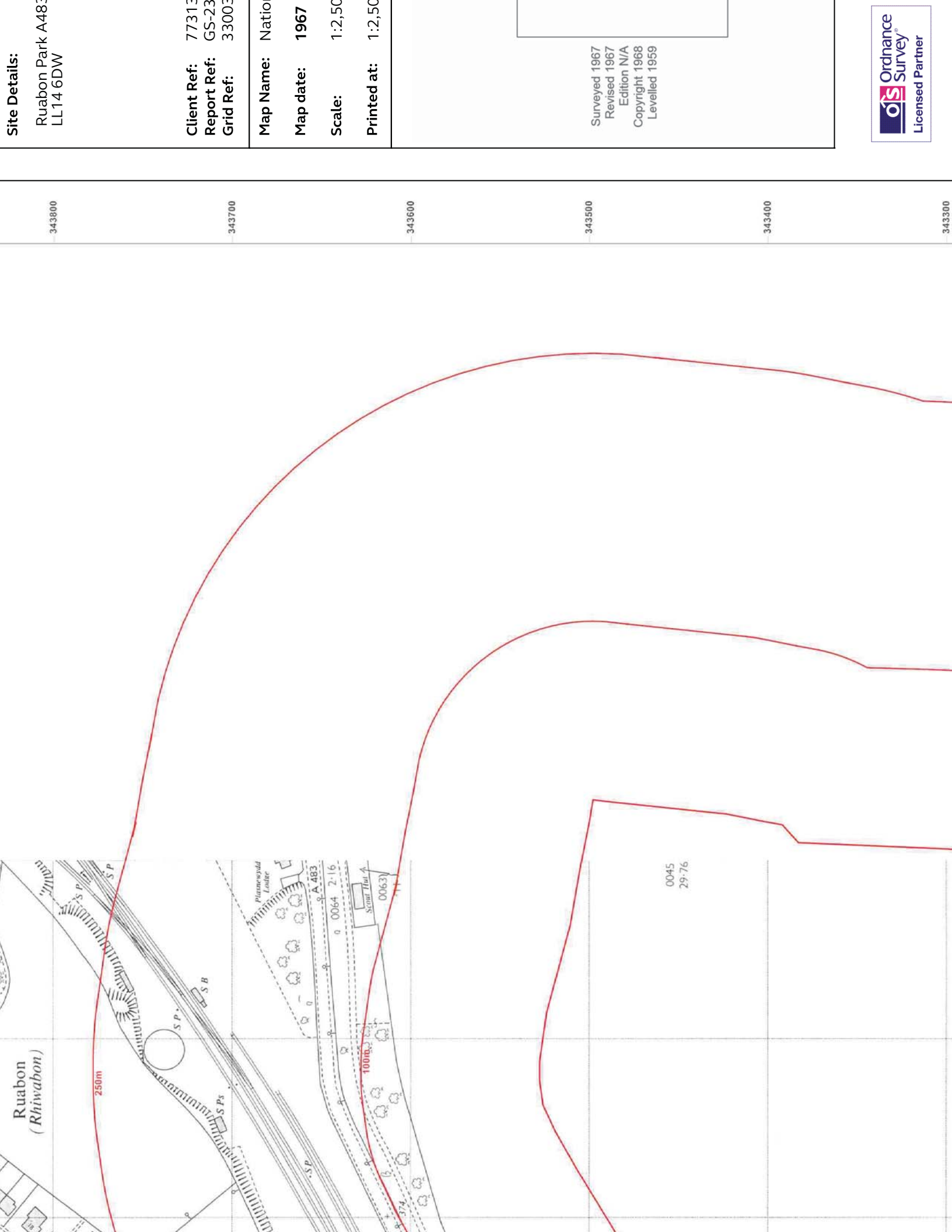
Map date:

Scale:

Printed at:

Surveyed 1961
Revised 1961
Edition N/A
Copyright 1962
Levelled 1959





Site Details:

Ruabon Park A48
LL14 6DW

Client Ref: 77313

Report Ref: GS-23

Grid Ref: 33003

Map Name: Nation

Map date: 1967

Scale: 1:2,500

Printed at: 1:2,500

Surveyed 1967

Revised 1967

Edition N/A

Copyright 1968

Levelled 1959

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Ruabon Park A483
LL14 6DW

Map Name:	Nation
Map date:	1971
Scale:	1:2,500
Printed at:	1:2,500



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Ruabon Park A483
LL14 6DW

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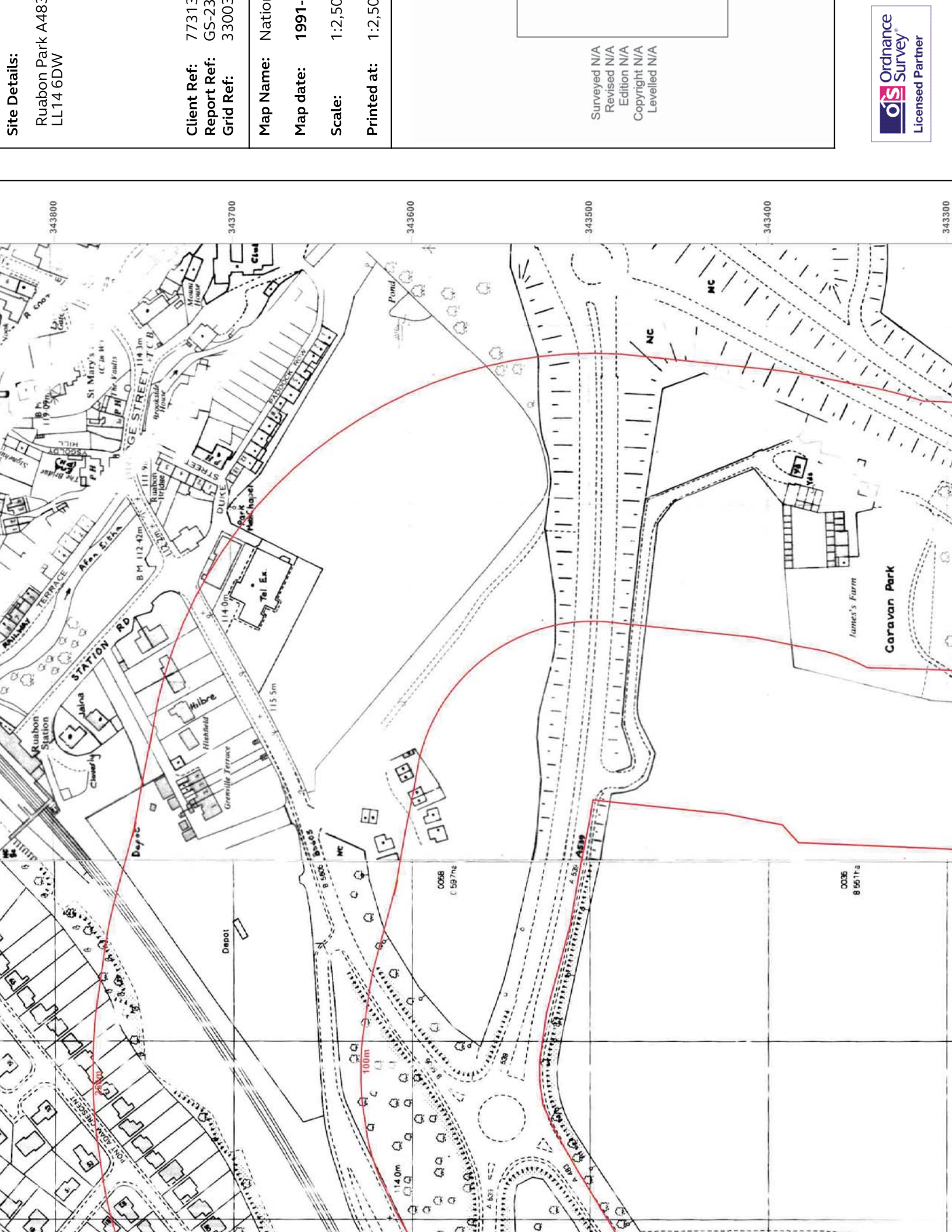




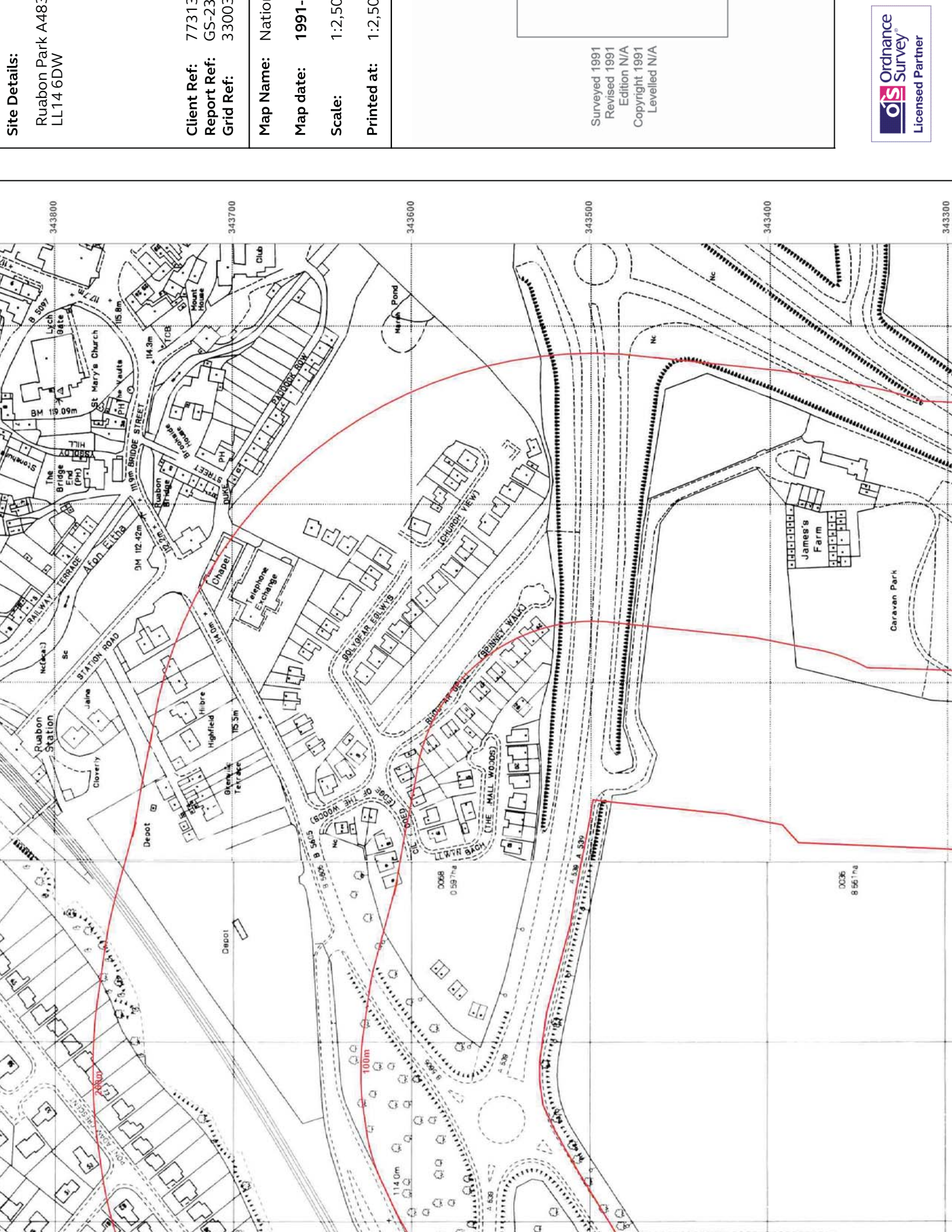
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Surveyed 1989 Revised 1989 Edition N/A Copyright 1991 Levelled N/A									
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Site Details:		Client Ref: 77313		Map Name: Nation	
Ruabon Park A48		Report Ref: GS-23		Map date: 1989-	
LL14 6DW		Grid Ref: 33003		Scale: 1:2,500	
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Site Details:		Client Ref: 77313		Map Name: Nation	
Ruabon Park A48		Report Ref: GS-23		Map date: 1991-	
LL14 6DW		Grid Ref: 33003		Scale: 1:2,500	
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Site Details:		Client Ref: 77313		Map Name: Nation					
Ruabon Park A48		Report Ref: GS-23		Map date: 1991-					
LL14 6DW		Grid Ref: 33003		Scale: 1:2,500					
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Surveyed 1991 Revised 1991 Edition N/A Copyright 1991 Levelled N/A									
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Site Details:

Ruabon Park A48
LL14 6DW

Client Ref: 77313

Report Ref: GS-23

Grid Ref: 33003

Map Name: Nation

Map date: 1994

Scale: 1:2,500

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Revised N/A

Edition N/A

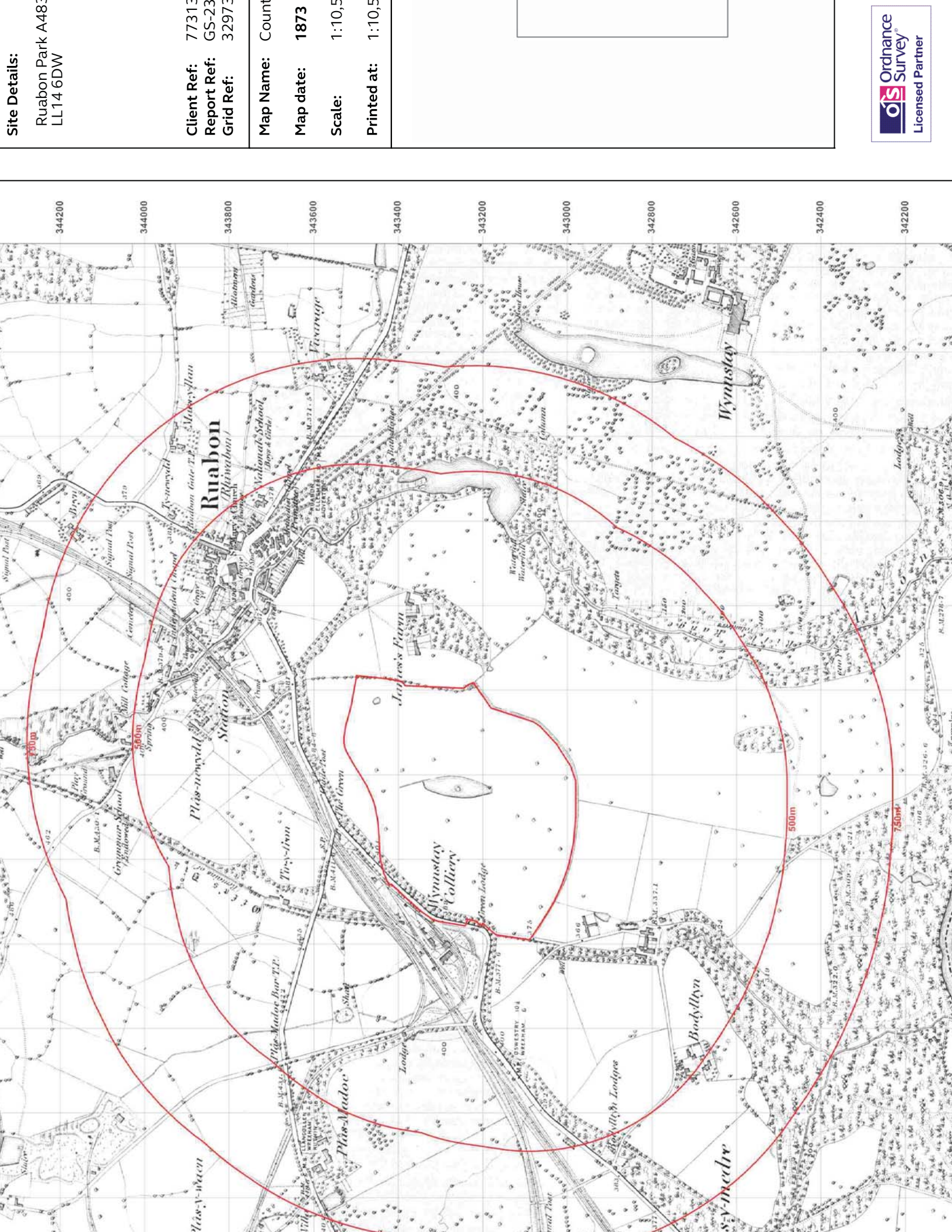
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Site Details:		Client Ref: 77313		Map Name: Nation	
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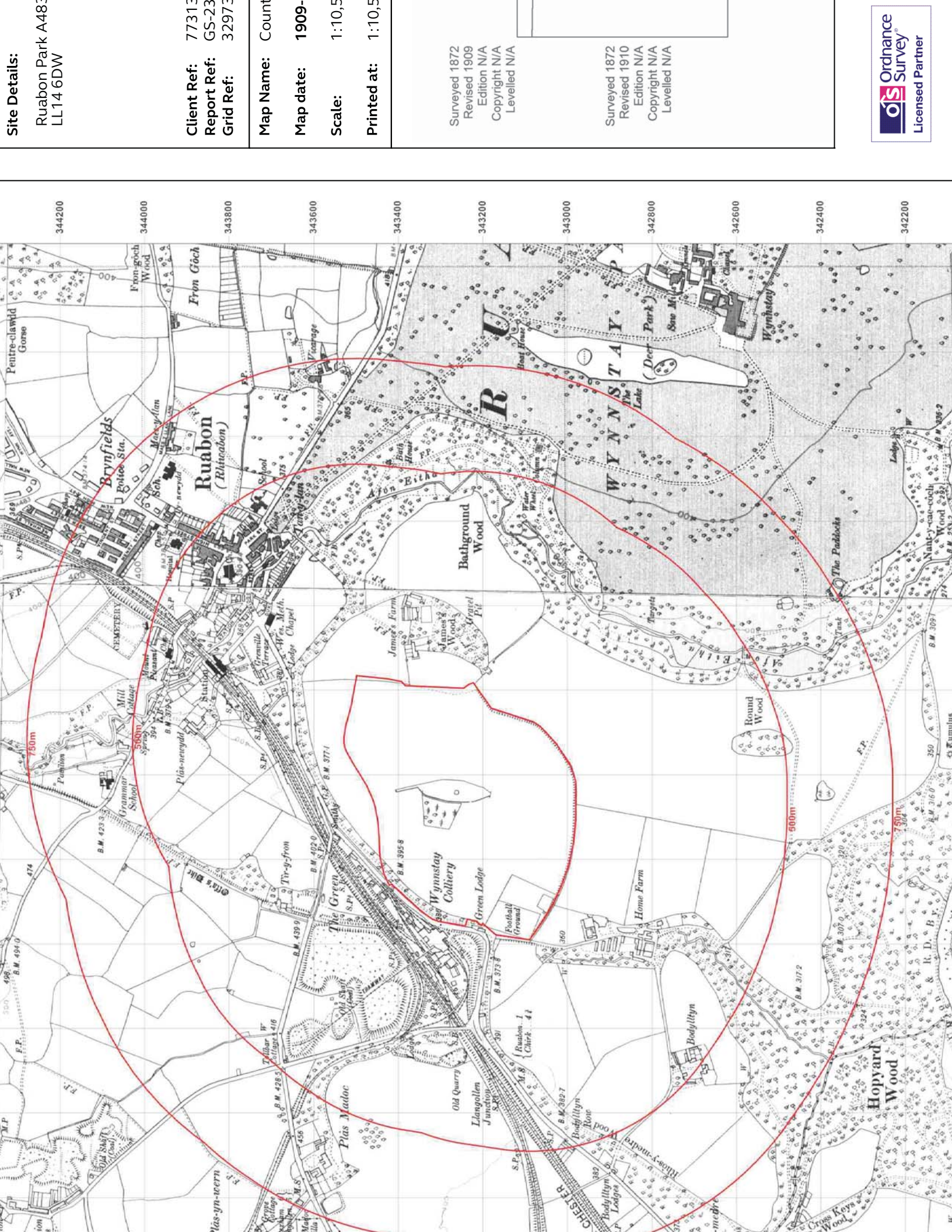


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Ruabon Park A483
LL14 6DW

Map Name: Count
Map date: 1898-
Scale: 1:10,5
Printed at: 1:10,5

Surveyed 1872
Revised 1898
Edition N/A
Copyright N/A
Levelled N/A



Site Details:

Ruabon Park A48
LL14 6DW

Client Ref:	77313	Count
Report Ref:	GS-23	Map date:
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Surveyed 1872
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

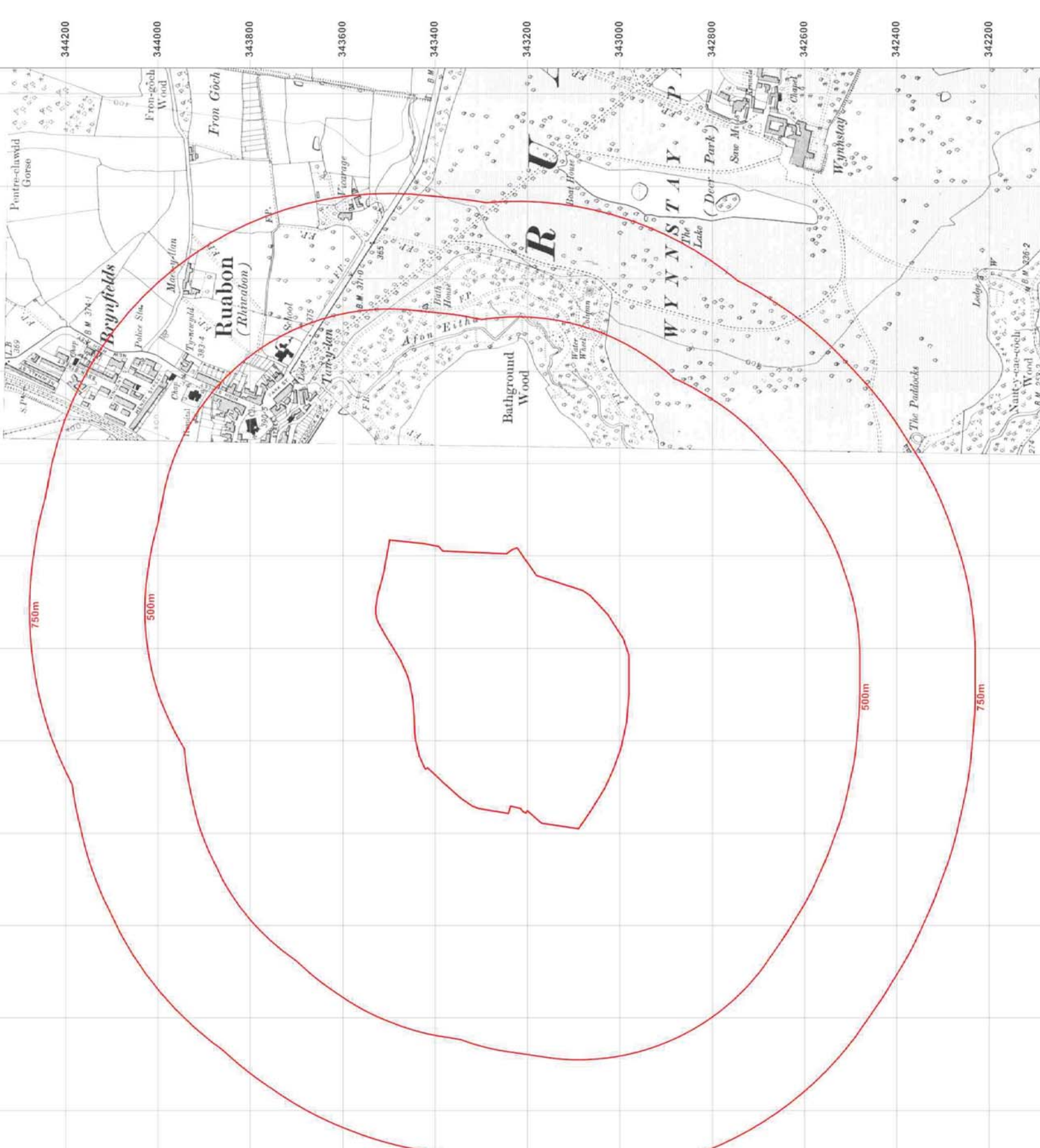
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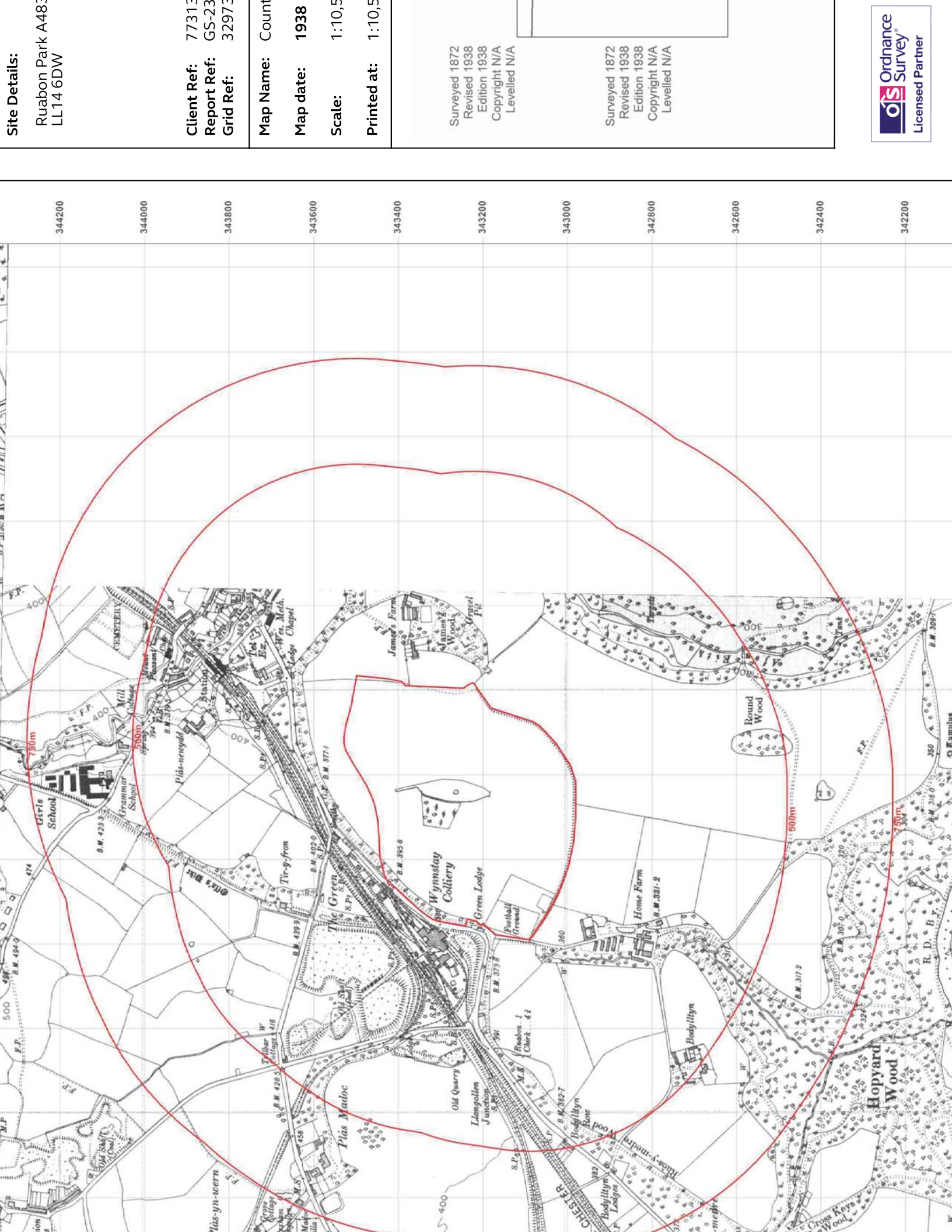
Site Details:

Ruabon Park A48
LL14 6DW

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Grid Ref: 32973

Map Name: Count
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Printed at: 1:10,5





Site Details:

Ruabon Park A48
LL14 6DW

Client Ref: 77313

Report Ref: GS-23

Grid Ref: 32973

Map Name: Count

Map date: 1938

Scale: 1:10,5

Printed at: 1:10,5

Surveyed 1872
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A

Surveyed 1872
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A

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Site Details:

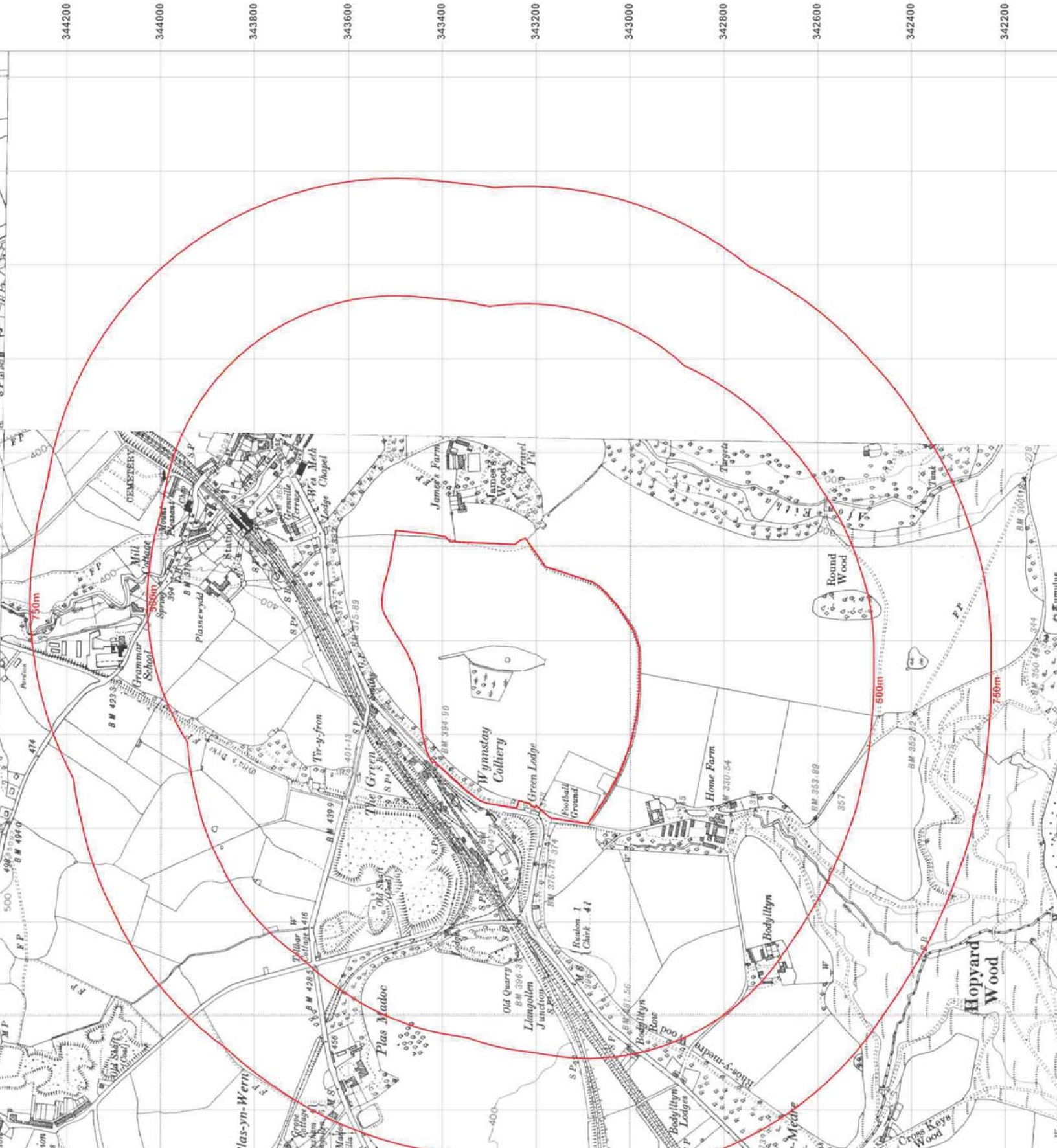
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Map Name: Count
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Printed at: 1:10,5

Surveyed 1872
Revised 1949
Edition N/A
Copyright N/A
Levelled N/A

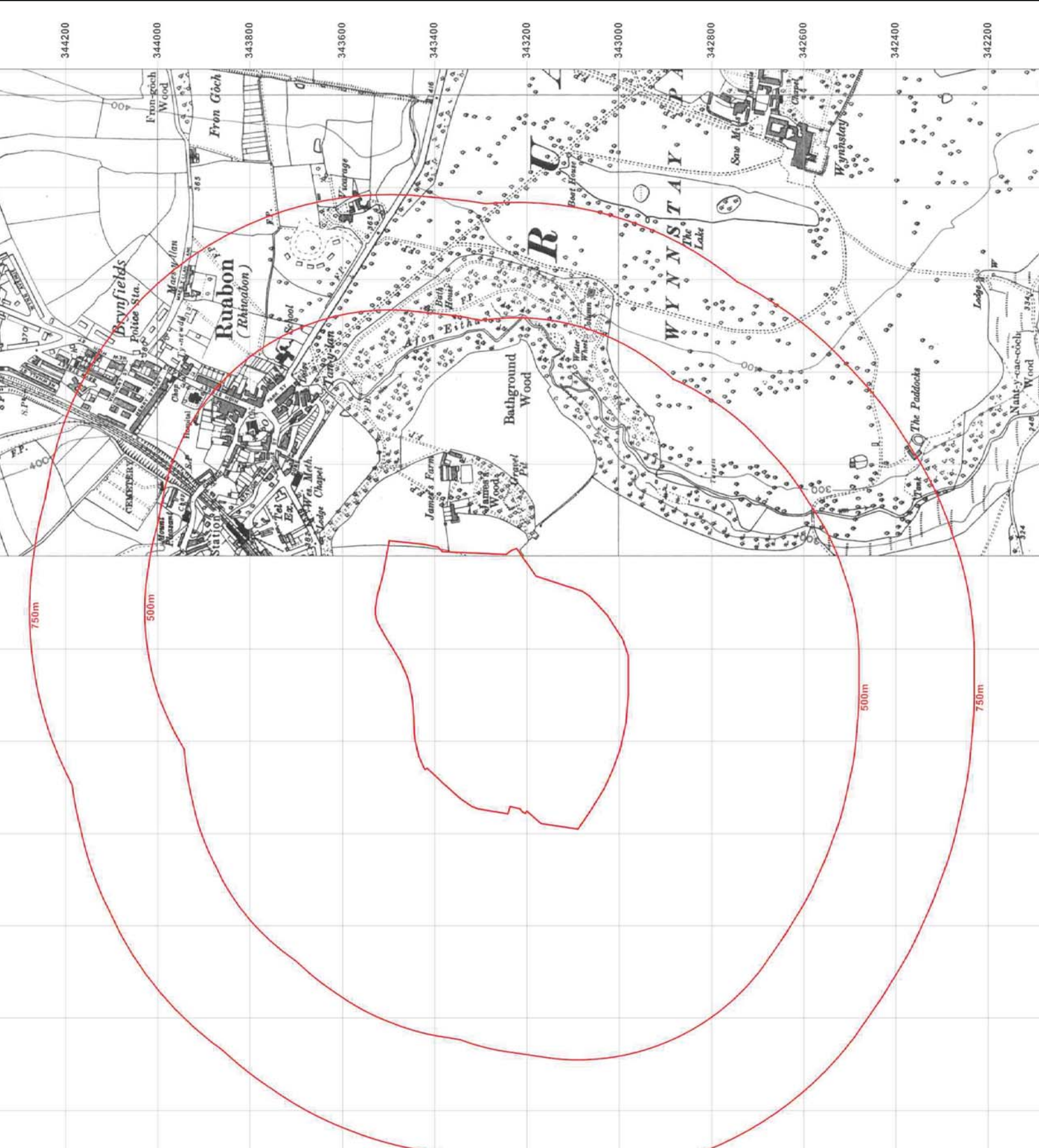
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Edition N/A
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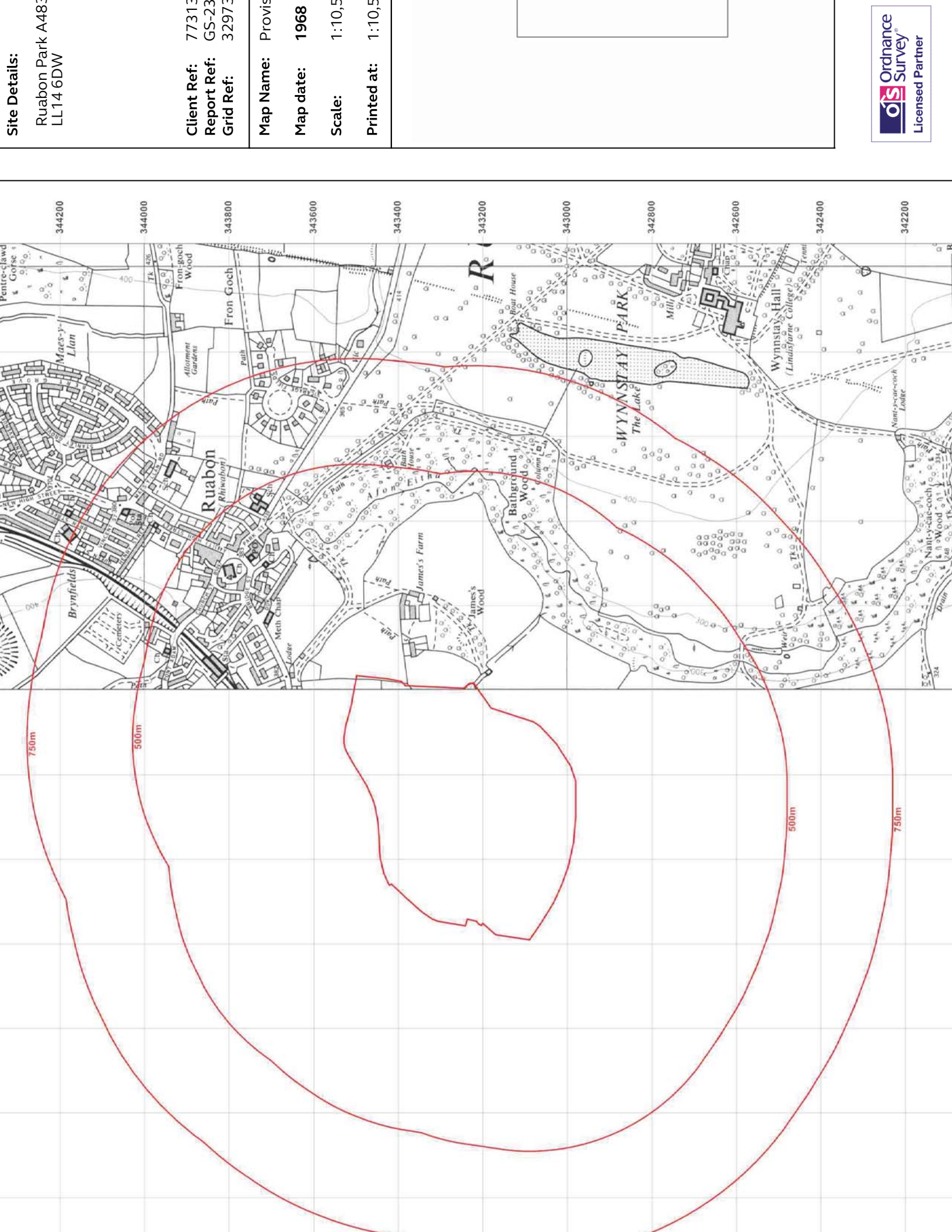
Ruabon Park A48
LL14 6DW

Client Ref:	77313	Provis
Report Ref:	GS-23	
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Map Name:	1949	
Map date:		
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Printed at:	1:10,5	





Site Details:		Client Ref: 77313		Provis	
Ruabon Park A48		Report Ref: GS-23		Map Name:	
LL14 6DW		Grid Ref: 32973		Map date: 1960	
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				Surveyed 1960	
				Revised 1960	
				Edition N/A	
				Copyright N/A	
				Levelled N/A	
				Ordnance Survey	
				Licensed Partner	



Site Details:		Client Ref: 77313		Map Name: Provis	
Ruabon Park A48		Report Ref: GS-23		Map date: 1968	
LL14 6DW		Grid Ref: 32973		Scale: 1:10,5	
				Printed at: 1:10,5	



Site Details:		Client Ref: 77313		Map Name: Natio	
Ruabon Park A48		Report Ref: GS-23		Map date: 1974	
LL14 6DW		Grid Ref: 32973		Scale: 1:10,0	
				Printed at: 1:10,0	
				Surveyed 1971	
				Revised 1974	
				Edition N/A	
				Copyright N/A	
				Levelled N/A	
				Ordnance Survey	
				Licensed Partner	



Site Details:

Ruabon Park A48
LL14 6DW

Client Ref: 77313
Report Ref: GS-23
Grid Ref: 32973

Map Name: Nation
Map date: 1985
Scale: 1:10,000
Printed at: 1:10,000

Surveyed 1971
Revised 1985
Edition N/A
Copyright N/A
Levelled N/A



Site Details:

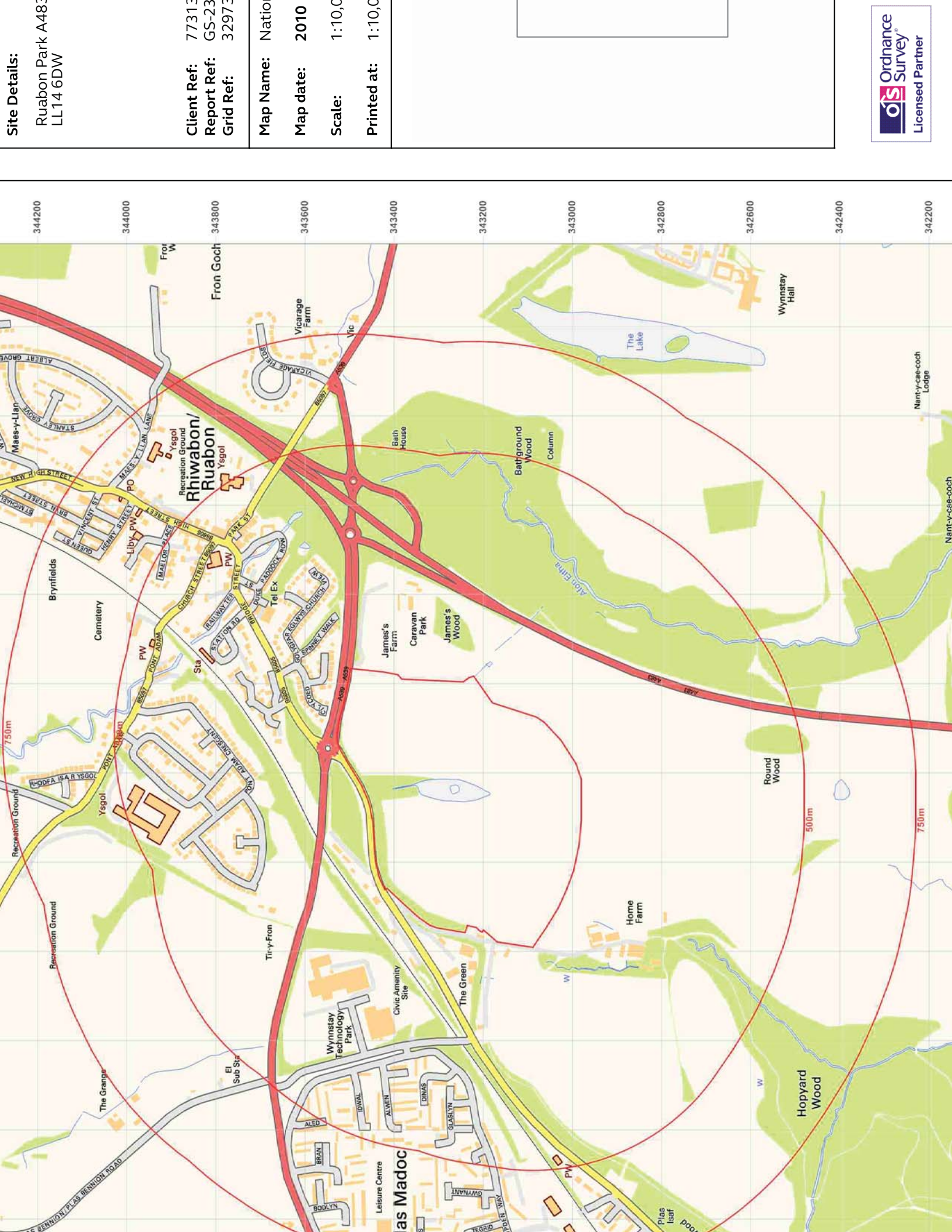
Ruabon Park A483
LL14 6DW

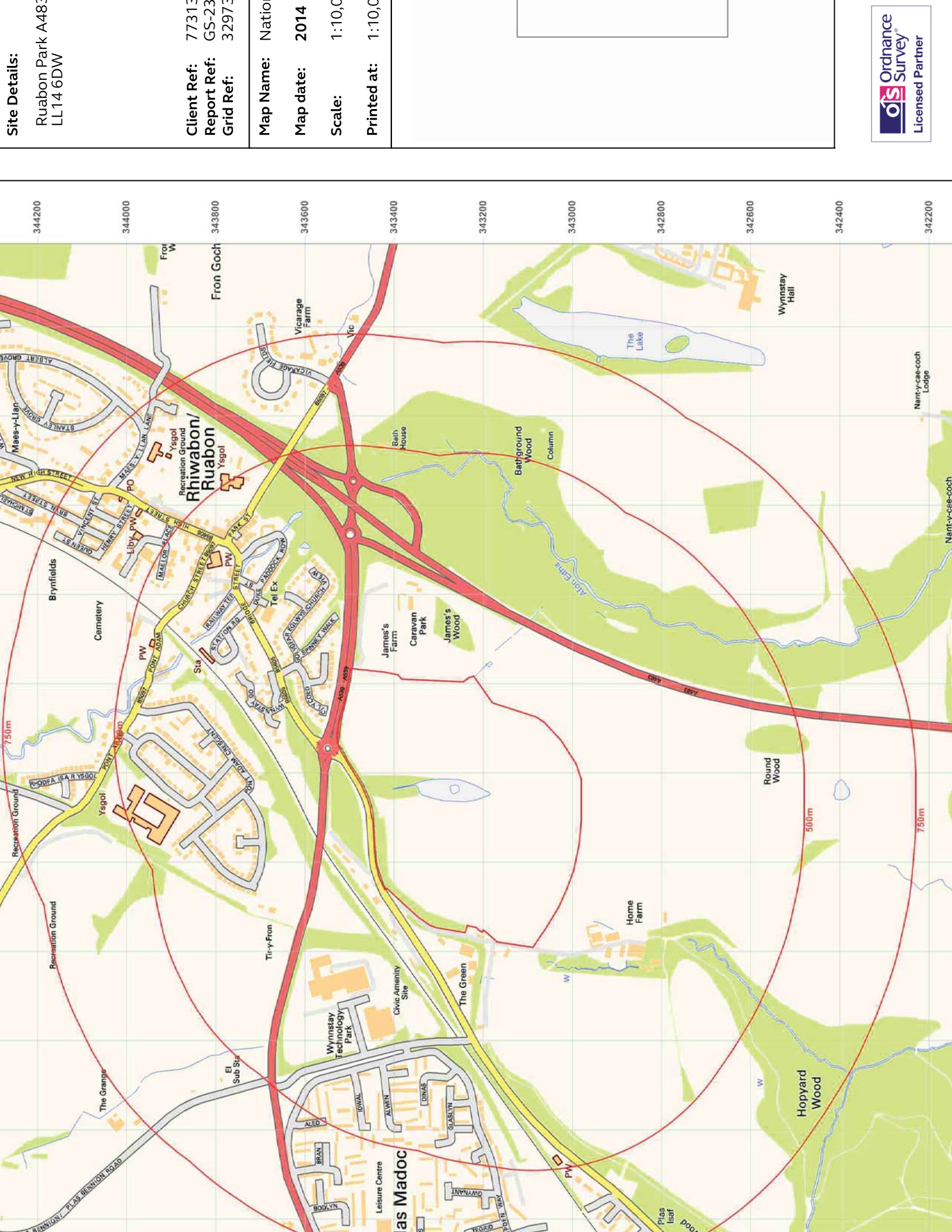
Client Ref: 77313
Report Ref: GS-23
Grid Ref: 32973

Map Name: Nation
Map date: 1993-
Scale: 1:10,000
Printed at: 1:10,000

Surveyed 1971
Revised 1994
Edition N/A
Copyright N/A
Levelled N/A







Site Details:		Client Ref: 77313		Map Name: Nation	
Ruabon Park A48		Report Ref: GS-23		Map date: 2014	
LL14 6DW		Grid Ref: 32973		Scale: 1:10,000	
				Printed at: 1:10,000	

Appendix B

Coal Authority Mining Report



Issued by:

The Coal Authority, Property Search Services, 200 Lichfield Lane, Berry Hill, Mansfield, Nottinghamshire, NG18 4RG

Website: www.groundstability.com Phone: 0345 762 6848 DX 716176 MANSFIELD 5

**GROUNDSURE LTD
SOVEREIGN HOUSE
CHURCH STREET
BRIGHTON
BN1 1UJ**

Our reference: **51001011099001**
Your reference: **GS-2480871**
Date of your enquiry: **06 October 2015**
Date we received your enquiry: **06 October 2015**
Date of issue: **06 October 2015**

This report is for the property described in the address below and the attached plan.

Non-Residential Coal Authority Mining Report

RUABON PARK A483, WREXHAM, WREXHAM, LL14 6D

This report is based on and limited to the records held by, the Coal Authority, and the Cheshire Brine Subsidence Compensation Board's records, at the time we answer the search.

Coal mining	See comments below
Brine Compensation District	No

Information from the Coal Authority

Underground coal mining

Past

The property is in the likely zone of influence from workings in 9 seams of coal at 100m to 580m depth, and last worked in 1927.

Any ground movement from these coal workings should have stopped by now.

Present

The property is not in the likely zone of influence of any present underground coal workings.

Future

The property is not in an area for which the Coal Authority is determining whether to grant a licence to remove coal using underground methods.

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

The property is not in an area that is likely to be affected at the surface from any planned future workings.

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

No notice of the risk of the land being affected by subsidence has been given under section 46 of the Coal Mining Subsidence Act 1991.

Mine entries

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

Coal mining geology

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

Opencast coal mining

Past

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

Present

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

Future

The property is not within 800 metres of the boundary of an opencast site for which the Coal Authority is determining whether to grant a licence to remove coal by opencast methods.

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.

Coal mining subsidence

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

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

The 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.

Mine gas

There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.

Hazards related to coal mining

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

Withdrawal of support

The property is not in an area for which a notice of entitlement to withdraw support has been published.

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

Working facilities orders

The property is not in an area for which 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.

Payments to owners of former copyhold land

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

The property lies outside the Cheshire Brine Compensation District.

Additional Remarks

Information provided by the Coal Authority in this report is compiled in response to the Law Society's Con29M Coal Mining and Brine Subsidence Claim enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. Please note that Brine Subsidence Claim enquiries are only relevant for England and Wales. This report is prepared in accordance with the Law Society's Guidance Notes 2006, the User Guide 2006 and the Coal Authority and Cheshire Brine Board's Terms and Conditions applicable at the time the report was produced.

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Issued by:	The Coal Authority, 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG
Tax Point Date:	06 October 2015
Issued to:	GROUNDSURE LTD SOVEREIGN HOUSE CHURCH STREET BRIGHTON BN1 1UJ
Property Search for:	RUABON PARK A483, WREXHAM, WREXHAM, LL14 6D
Reference Number:	51001011099001
Date of Issue:	06 October 2015
Cost:	£59.00
VAT @ 20%:	£11.80
Total Received:	£70.80
VAT Registration	598 5850 68

Location map



Approximate position
of property

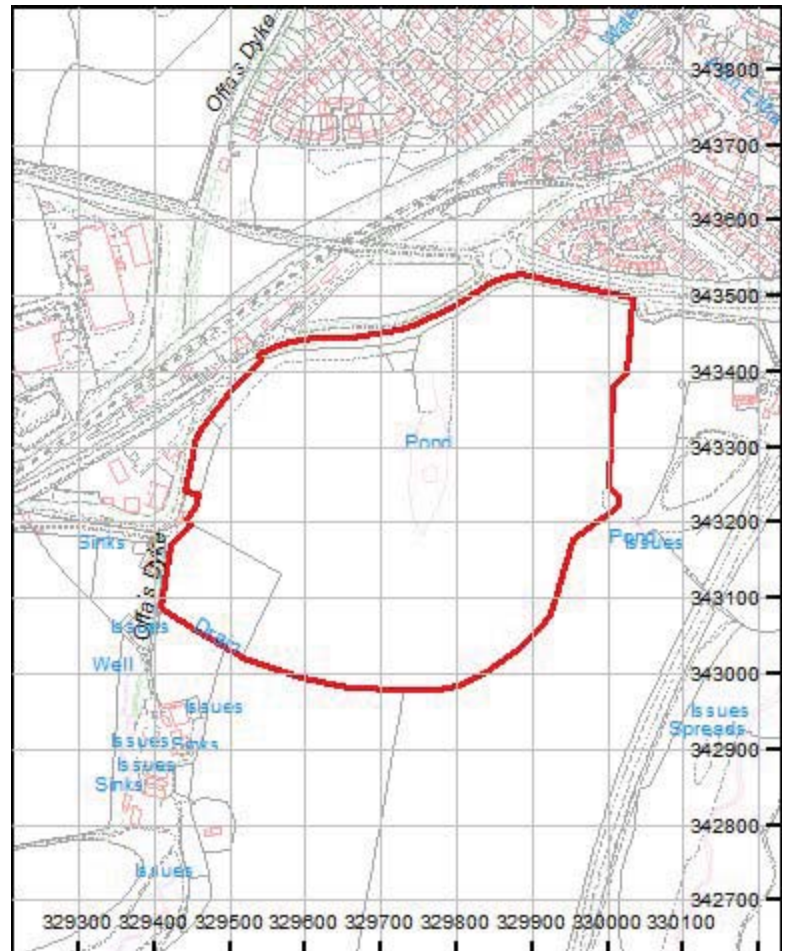


Enquiry boundary

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Key

Approximate position of enquiry
boundary shown



Appendix C:

Risk Definitions

Identification of Unacceptable Risk

The method for risk evaluation is qualitative and is developed from the model provided in CIRIA C552 *Contaminated Land Risk Assessment – a guide to good practice* (DETR 2001). It involves classifying risk in terms of (a) magnitude of the potential consequence (severity) of occurrence and (b) the probability (likelihood) of occurrence. The risk rating derived is used to determine what action, if any, is needed to further investigate that risk and/or remediate to reduce risk to an acceptable level.

Task 1: Classification of Consequence

Classification	Definition	Examples
Severe	- Short-term (acute) risk to human health likely to result in "significant harm" (as defined in EPA90 Part 2a). - Short-term (acute) risk of pollution of sensitive water resource. - Short-term (acute) risk to an ecosystem, or organism forming part of an ecosystem.	Unusually high concentration of toxic substance on the surface of a garden or recreation area. Major spillage of contamination from the site into controlled waters. EA Category 1 pollution incident. Closure of an abstraction point. Explosion, causing building collapse (and death if occupied).
Medium	- Chronic damage to human health likely to result in "significant harm". - Pollution of sensitive water resource. - Significant change in a particular ecosystem, or organism forming part of such ecosystem.	Concentration of contaminant from site exceeds generic or site-specific assessment criteria for human health or water supply pipes. Presence of asbestos. Leaching of contaminants from a site to a principal or secondary (A) aquifer. Concentration exceeds DWS or EQS in Inner Source Protection Zone (SPZ1). EA Category 2 pollution incident. Death of a species or loss of habitat within an area of national importance.
Mild	- Exposure is unlikely to result in "significant harm" to human health. - Pollution of non-sensitive water resource. - Damage to sensitive buildings, structures and services or the environment.	Concentration of contaminant from site below generic or site-specific assessment criteria. Pollution of secondary (B or undifferentiated) aquifer. EA Category 3 pollution incident. Damage to a building rendering it unsafe to occupy. Death of a species or loss of habitat within an area of local importance. Loss of plants in garden or landscape areas (BS3882 limits exceeded).
Minor	- Harm (but not significant harm) resulting in a financial loss or expenditure to resolve. - Non-permanent human health effects. - Easily repairable damage to buildings, structures and services.	Pollution of unproductive strata.

Task 2: Classification of Probability

Classification	Definition
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 actual evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur in the very long term.

Task 3: Risk Estimation

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Low risk	Low risk
	Low Likelihood	Moderate risk	Low risk	Low risk	Very low risk
	Unlikely	Low risk	Low risk	Very low risk	Very low risk
	No linkage	No risk			

Task 4: Description of the Estimated Risks and Likely Action Required

Risk	Action
Very high risk	There is a high probability that severe harm could arise or there is evidence that severe harm is currently happening. This risk, if realised, is likely to result in substantial liability. Urgent investigation and remediation are required for the site in its existing state and for development.
High risk	Harm is likely to arise. Realisation of the risk is likely to present a significant liability. Urgent investigation is required and remedial works may be necessary in the short term and are likely over the long term. Remediation will be required for development.
Moderate risk	A potential linkage is identifiable. However, it is either relatively unlikely that harm would be severe or, if any harm were to occur, it is more likely that the harm would be relatively mild. Investigation is required to quantify the risk and determine potential liability. Remediation will be required for development.
Low risk	It is possible that harm could arise but it is likely that this harm, if realised, would at worst normally be mild. Investigation is not normally required but could be useful to confirm a preliminary assessment. Remedial works are unlikely to be required or will be limited.
Very low risk	There is a low possibility that harm could arise. In the event of such harm being realised it is not likely to be severe. Site is not capable of being determined under Part 2a. No further action recommended.