



**BROWNFIELD
SOLUTIONS LTD**

GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

BELLWAY HOMES

Land off Cronton Road, Widnes

Phase I Geo-Environmental Assessment Report

AF/C6114/14159

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PROJECT QUALITY CONTROL DATA SHEET

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DRAWINGS

Drawing Number	Rev	Title
BHNW189 SK01	P4	Proposed Development Layout Plan
C6114/01	-	Site Location Plan
C6114/02	-	Site Features Plan

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

1.0 INTRODUCTION

1.1 Context

This report describes a desk-based Phase I Geo-Environmental Assessment Report carried out by Brownfield Solutions Limited (BSL) for Bellway Homes on a site off Cronton Road, Widnes and has been completed in general accordance with the following guidance:

-
- Environment Agency guidance - Land Contamination: Risk Management (LCRM).
 - BS 10175:2011+A2:2017 Investigation of Potentially Contaminated Sites.
 - BS5930: 2015+A1:2020 Code of Practice for Ground Investigations.
 - BS EN 1997-1:2004+A1:2013 Eurocode 7. Geotechnical design. General rules plus UK National Annex.
 - BS EN 1997-2:2007 Eurocode 7 Geotechnical design. Ground investigation and testing plus UK National Annex.
 - NHBC Standards. Chapter 4.1: Land Quality - Managing Ground Conditions.
-

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

1.2 Proposed Development

The proposed development is for a residential end use with associated private gardens, roads, public open space (POS) areas and infrastructure as shown on the proposed development plan - Cronton Road Sketch Layout, Job No. BHNW189, Dwg No. SK01 Rev. P4, provided to BSL by the client.

1.3 Objectives and Scope

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

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

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

1.4 Limitations

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

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

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

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

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

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

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

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

2.0 THE SITE

2.1 Location

The site is located off Cronton Road, Widnes, WA8 5BU, centred on National Grid Reference 349047, 388319 as shown on the Site Location Plan, Drawing No. C6114/01.

2.2 Site Description

A site reconnaissance survey was carried out at the site on 23rd April 2025. The main site features and potential issues identified during this survey are detailed below and are shown on the Site Features Plan, Drawing No. C6114/02. A selection of photographs from the site walkover are presented to the rear of this report.

Feature	Description
Site Area	Approximately 4.31 hectares.
Site Access	Access to the site is gained off Cronton Road to the South.
Site Overview Imagery	 Orientated North Update from Google: All images: Imagery Google©2023, Imagery ©2023 Airbus, CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The Geoinformation Group, Map data ©2023.
Current Land Use and Site Features	The site comprises three adjoining open grass fields, with a manhole located in the northern portion of the area. Historical mapping suggests the land was originally used for agricultural purposes. There appears to have been no significant development or change in use, and the site currently remains undeveloped and grass-covered. A narrow stream runs on-site adjacent to the northern boundary; however, the surrounding ground appears undisturbed by its presence.
Potential Sources of Gross Contamination	Evidence of potential sources of gross contamination were not identified.
Vegetation / Ecology	The site is bordered by hedgerows interspersed with occasional mature and semi-mature trees. Bramble growth is frequent along the western boundary, while the remainder of the site supports sparse weed cover, consistent with a large grassland setting.
Topography	The site is predominantly flat across its central and southern areas. However, there is a noticeable downward slope towards the northern boundary sloping from around 35m to 29.5m, terminating at the narrow stream that runs on the site's boundary.
Site Boundaries	The site is enclosed by vegetation along the northern, western, and parts of the southern boundaries. The eastern boundary is defined by wooden fencing, which separates the site from adjacent residential properties.
Surrounding Area	The site is located within a mixed rural and residential setting. Residential properties are situated off site to the immediate east and south-east, while open agricultural fields border the site to the north, west, and portions of the south.

3.0 GEO-ENVIRONMENTAL SETTING

3.1 Historical Setting

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

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

Feature	Distance (m) & Direction	Years Present	Description
Potentially infilled pond	On-site	1849 - 1977	A pond was recorded on-site in 1849 on the eastern section of the field and is no longer shown on the map dated 1985, believed to have been infilled prior to this date.
	On-site	1849 - 1907	A small pond was recorded in the middle/ central within the site between 1849 - 1907, which has likely been infilled.
	On-site	1849- 1850	A small pond was present towards the northern boundary between 1849-1850 but was no longer seen past this date. Likely to have been infilled or dried up.
	Encroaching the northern boundary of western field.	1849 - 1989	A pond was present encroaching the northern boundary of western field in 1849 and is no longer shown on the map dated 2001, believed to have been infilled prior to this date.
	12m S	1959 - 1982	Historical mapping indicates the presence of a pond approximately 12m S of the site, last recorded on the 1982 edition. It is believed that the pond was infilled since.
	40m W	1891 - 1959	Historic off-site pond recorded between 1891 and 1959, potentially infilled.
	74m S	1959 - 2010	A pond was present 74m S from site between 1959 - 2010 and is believed to have been infilled since.
	113m S	1959 - 2010	A pond was recorded 113m S from the proposed site between 1959 – 2010 where it has presumed to have been infilled sometime after this date.
Welchmans Farm	Immediately adjacent to the southern boundary	1927 - 2010	Welchmans Farm was historically located immediately adjacent to the site's southern boundary. It first appears on mapping dated 1897 and remained present on historical maps until at least 2010.
Refuse Tip	112m NW	1989 - 1993	A former refuse tip was recorded approximately 112m northwest of the site, with mapping evidence indicating its presence between 1989 and 1993. By 2001, it no longer appeared on available mapping, suggesting it was no longer operating.

In summary, the map evidence indicates that the site has remained as open fields up until the present day. Former ponds, now believed to have been potentially infilled or dried up, were present on-site.

Historically, land use in the surrounding area has been primarily residential and agricultural, with a farm located directly adjacent to the southern boundary and a refuse tip situated to the northwest of the site.

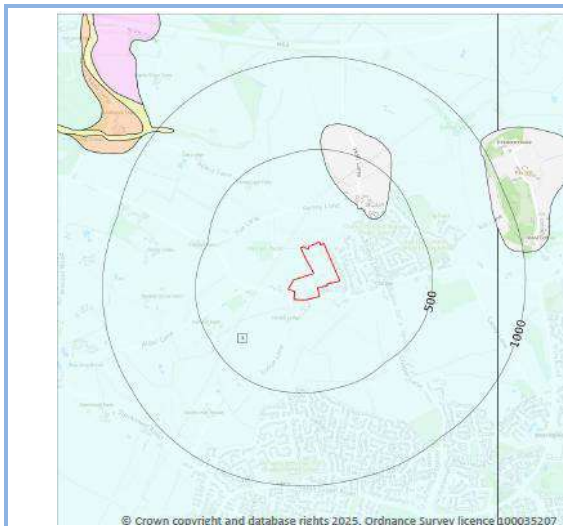
3.2 Published Geology

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

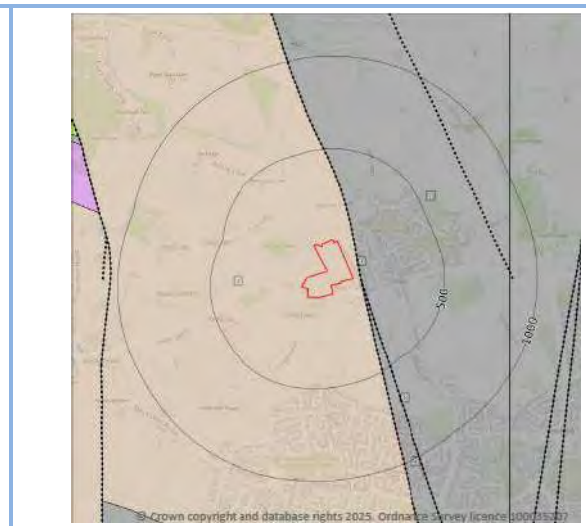
- British Geological Survey (BGS) 1:50,000 Scale Geological Map Sheet 97 Runcorn. Solid and Drift Edition.
- BGS Geology of Britain Map Viewer.
- BGS GeoIndex Onshore.
- BGS 1:10,000 Scale Geological Map SJ48NE.
- Mining Remediation Authority Interactive Map.
- Geo-Environmental Data Report.

Extracts of the 1:10,000 geological mapping from the Geo-Environmental Data Report are presented below for reference:

BGS 1:10 000 Superficial Geology



BGS 1:10 000 Solid Geology



Made Ground

BGS mapping does not display Made Ground deposits on-site. Historical mapping has shown potential for localised Made Ground on-site due to possibly infilled ponds.

Superficial Deposits

The site is indicated to be underlain by Till, Devensian. This stratum typically comprises Diamicton.

Solid Geology

The deeper solid geology is indicated to be part of the Kinnerton Sandstone Formation which typically comprises fine to medium grained sandstone.

Two faults are shown to lie 40 and 41m east of the site, striking north west to south east. Any movements associated with this fault should now have stopped.

The site lies within the potential zone of influence of recorded workings in 1 seam(s) of coal. The CON29M report states that the site is underlain by underground working located approx. 720m bgl, last worked in 1977.

3.3 BGS Exploratory Hole Records

There are three BGS exploratory hole records within a relevant distance of the site (assumed as an approximate 50m radius), however they are marked as confidential. There are no other records at a reasonable distance from the site.

3.4 Mining and Mineral Extraction

The site is outside the area of a designated coalfield or brine extraction area and no further consideration of coal mining/brine related risks is required. A mining search report is attached in Appendix D.

3.5 Hydrogeology

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

Stratum	Coverage	Aquifer Designation
Superficial Aquifer	Full Site	Secondary Aquifer (Undifferentiated). Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
Bedrock Aquifer	Full Site	Principal Aquifer. Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

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

Feature	Distance (m) & Direction	Details
Nearest Active Groundwater Abstraction	984m SW	Status: Active Licence No: 2569028009 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: BOREHOLES (3) AT STOCKSWELL PUMPING STATION, WHISTON Annual Volume (m3): 3360000 Original Start Date: 23/03/1966
Nearest Active Potable Groundwater Abstraction	984m SW	Status: Active Licence No: 2569028009 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: BOREHOLES (3) AT STOCKSWELL PUMPING STATION, WHISTON Annual Volume (m3): 3360000 Original Start Date: 23/03/1966
Source Protection Zones	On-Site	Type 3- Total catchment

3.6 Hydrology

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

Feature	Distance (m) & Direction	Details
Nearest Watercourse	On-site – directly on the Northern Boundary	Dog Clog Brook (including Mill Brook): Inland river not influenced by normal tidal action Located flowing westerly along the northern site boundary, confirmed after initial site investigation and site drawings.
Nearest Active Surface Water Abstraction	-	None within 2000m.
Closest Active Licenced Discharge Consent	-	None within 500m.

Information obtained from the Environment Agency (EA) Risk of Flooding from Rivers and the Sea (RoFRaS) database indicates that the risk of flooding across the site is low (greater than 1 in 1000 but less than 1 in 100 chance of flooding in any given year).

The site is indicated to lie within an EA designated Zone 3 flood plain.

The British Geological Survey indicate there is a potential for groundwater flooding at the subject site, with a low risk rating.

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

3.7 Landfill and Waste Management Sites

There are no current landfill sites recorded within 500m.

There is one recorded historic landfill within 500m, recorded 194m west at George's Hall Farm, stated to accept Inert and industrial wastes after 1984 and last recorded in 1985, but no end date given. This matches the feature recorded in historical maps, with the distance discrepancy attributed to the landfill site hub's position, as identified during the mapping review

There are no current waste management sites recorded within 250m of the site.

There are no historical waste management sites within 250m of the site.

3.8 Environmental Regulatory Data

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

Entry	On-site	0 – 50m	50 – 250m	Details
Recent Industrial Land Uses	-	-	6	Five of the identified land uses relate to electrical infrastructure, comprising electrical substations and pylons. An additional feature is a telecommunications mast.
Historic tanks	-	-	2	Two unspecified tanks have been identified roughly 80m south east and 100m north east of the site, dated 1990-1993 and 1959 respectively. No other information is provided on the tanks.
Current or Recent Fuel Stations	-	-	-	None recorded within 250m.
Licensed Industrial Activities (Part A(1))	-	-	-	None recorded within 250m.
Licensed Pollutant Release (Part A(2)/B)	-	-	-	None recorded within 250m.

Entry	On-site	0 – 50m	50 – 250m	Details
Radioactive Substances	-	-	-	None recorded within 250m.
Pollution Incidents (EA/NRW)	-	-	-	None recorded within 250m.

3.9 Radon

Information from the environmental database report indicates the property is in an area where <1% of properties are above the Action Level for radon, and therefore radon protective measures are not required in accordance with BRE Report 211 'Radon – Guidance on protective measures for new dwellings'.

It should be noted that the Atlas of Radon in Great Britain (1:100,000 scale) Interactive Map, locates the site within an area where 1-3% of the homes are at or above the action level. However, the environmental database report states that it '*should supersede any estimations derived from the Indicative Atlas of Radon*'.

3.10 UXO Risk

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

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

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

3.11 Other Potential Development Constraints

If asbestos is present in soils, these will need to be dealt with in accordance with the Control of Asbestos Regulations (CAR) 2012 and CARSOILS™.

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

4.0 PHASE 1 SUMMARY AND RISK ASSESSMENT

4.1 Introduction

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

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

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

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

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

4.2 Potential Contaminative Sources

On-Site

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

-
- Potentially infilled ponds – Made Ground.
-

A significant amount of time has elapsed since the ponds were last recorded, allowing for any potential ground gases to have naturally dissipated to the surface. Given the age of the features, it is also possible that the ponds dried out rather than being infilled with degradable material. Combined with the low permeability of the underlying geology, which will minimise lateral and vertical gas movement, the likelihood of gas migration is considered to be very low. We therefore can remove it from further consideration for ground gas risk.

Off-Site

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

-
- Potentially infilled ponds – Made Ground.
 - Former refuse Tip (112m Northwest).
 - Historic unspecified tanks, (80m Southeast and 100m Northeast).
-

The risk of ground gas migration from the off-site former ponds is considered very low due to their small size, age, lack of a direct migration pathway, and the presence of underlying low-permeability geology. Any limited gas that may have been generated is likely to have dissipated over time, and as such, no further assessment of gas risk is required.

Given the age and distance of these historic, unspecified tanks, along with the area's underlying geology, a feasible migration pathway is unlikely, and the site can be excluded from further consideration.

Associated Contaminants

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

Contaminative Sources	Department of the Environment Industry Profile or Other Source	Commonly Associated Contaminants
On-Site		
Infilled Ponds – Made Ground	AGS Guides BS8485 and BS8576	Heavy metals, polycyclic aromatic hydrocarbons (PAHs), Total Petroleum Hydrocarbons (TPHs) asbestos, ground gases (carbon dioxide and methane).
Off-Site		
Infilled Ponds – Made Ground	AGS Guides BS8485 and BS8576	Heavy metals, PAHs, TPHs, ground gases (carbon dioxide and methane).
Refuse tip	Waste recycling treatment	Heavy metals, oils, hydrocarbons, ground gases (carbon dioxide and methane).

4.3 Pathways

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

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

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

4.4 Receptors

The identified receptors are listed below:

- Residential end users (human health).
- Structures/Property/Potable water supply pipes.

-
- Controlled waters:
 - Nearest watercourse (northern boundary) - Dog Clog Brook (including Mill Brook).
 - Superficial Undifferentiated Aquifer - Till, Devensian/Diamicton.
 - Bedrock Principal Aquifer - Kinnerton Sandstone Formation.
-

Under current UK health and safety legislation (CDM, 2015, Management of Health and Safety Regulation, 1999 & Health and safety at work act, 1974), employers are required to carry out their own appropriate site-specific risk assessments and mitigation to protect employees. It has been assumed that any future construction works onsite will be undertaken in compliance with these requirements. Therefore, construction workers have not been specifically considered as part of this assessment.

5.0 PRELIMINARY GEOTECHNICAL ASSESSMENT

5.1 Preliminary Conceptual Site Model (CSM)

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

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

Human Health						
Potential Source	Potential Pathway	Potential Receptor	Likelihood	Severity	Level of Risk	Justification
On-site Made ground associated with potentially infilled pond. Heavy metals, polycyclic aromatic hydrocarbons (PAHs).	Ingestion, direct contact, inhalation of vapours	End-users	Unlikely	Medium	Low	Historical mapping indicates that small, shallow ponds were once present on site but are no longer visible, suggesting they were either infilled or had dried up. The infill, if present, is assumed to be localised. No infilled material was observed during the initial site investigation, making a pathway between any potential made ground and end users at the surface unlikely. Given the age, limited size, and localised extent, the risk of the former pond to end users is considered low.
On-site Made ground. Metals and organic contamination.	Migration into/ chemical attack of water supply pipelines	Water Pipeline/ End users	Unlikely	Medium	Very low	Contaminants within the soil/groundwater could potentially attack the clean potable water supply pipe, contaminants should be assessed to determine the correct pipe material and level of precautions required.
Off-site Made ground associated with potentially infilled pond. Heavy metals, polycyclic aromatic hydrocarbons (PAHs),	Ingestion, direct contact, inhalation of vapours	End-users	Unlikely	Medium	Low	Multiple former off-site ponds are shown on historical mapping but are no longer present, indicating they were either naturally infilled or drained over time. These features were likely shallow and small in scale, with any infill material remaining localized. Given their off-site location, limited potential for historical waste disposal, and the presence of low-permeability glacial till in the area, the risk of significant contaminant to the development site is considered low.
Off-site Refuse tip. Ground gases (carbon dioxide and methane).	Migration into confined spaces, inhalation and asphyxiation/ explosion	End-users / property / structures	Unlikely	Severe	Moderate/ Low	An off-site refuse heap is noted in historical records, however, its distance from the proposed development, combined with the presence of the underlying low-permeability geology, significantly reduces the potential for lateral ground gas migration. The likelihood of gas reaching the site is low. Given the potentially severe consequences of ground gas, the overall risk is assessed as moderate/ low, based on current evidence.

Controlled Waters						
Potential Source	Potential Pathway	Potential Receptor	Likelihood	Severity	Level of Risk	Justification
Made Ground associated with infilled ponds. PAHs, TPHs Metals.	Overland flow, / migration through saturated zone	Dog Clog Brook along northern boundary (Surface waters)	Unlikely	Medium	Low	It is considered contaminants associated with the made ground from the former pond are unlikely to impact the watercourse due to limited volumes and the low permeability of the till underlying the area, which will limit lateral migration. Therefore, there is a low risk posed to the watercourse along the northern boundary.
	Leaching through unsaturated zone / Migration through saturated zone	Secondary (Undifferentiated) Aquifer (Groundwater)	Unlikely	Mild	Very Low	Contamination from the made ground is not anticipated. However, if present, such contaminants could potentially leach into and migrate through the underlying superficial groundwater, particularly in areas of gardens and soft landscaping. The made ground is not expected to be heavily contaminated, and the sensitivity of the Secondary Undifferentiated Aquifer is considered mild due to its low permeability and low potential for contaminant migration.
	Leaching through unsaturated zone / Migration through saturated zone	Principal Aquifer (Groundwater)	Unlikely	Medium	Low	Contamination from the made ground is not anticipated. However, should any contaminants be present, there is potential for migration through the underlying principal aquifer. The made ground is not expected to be significantly contaminated, and the associated risk to potential receptors is considered low, primarily due to the presence of low-permeability till, which will restrict vertical migration.

Human Health Risk – Soils Contamination Summary

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

Human Health Risk – Ground Gas Summary

For the majority of the site, CL:AIRE RB17 states that where only natural soils are present that do not produce methane and can only produce carbon dioxide, this is not considered a significant ground gas source, therefore gas monitoring is not required, and the site would fall into the definition of Characteristic Situation 1 (CS1), where no protection measures are required in construction.

However, should ground investigation identify significant volumes of infilled ground with putrescible waste being a notable constituent, ground gas monitoring may be considered.

Therefore, the only notable source of ground gas is the off-site historic landfill, which is considered to present a **moderate to low** risk and further investigation is required to allow assessment of this source.

Controlled Waters Risk - Summary

Based on the preliminary CSM, BSL believes the overall risk to controlled waters at the site is **low**.

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

Property and Potable water supply pipes Risk – Summary

Based on the preliminary CSM, BSL believe the overall risk to structures and pipelines is **very low**.

The above assessed level of risk will need to be confirmed by intrusive investigation to determine the correct pipe material and level of precautions required.

5.2 Hazard Identification

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

- Made Ground of unknown nature; if placed in a non-engineered manner may cause excessive settlement of foundations, highways and infrastructure.
- Low strength, compressible ground (peat and soft organic clays); may cause excessive settlement of foundations, highways and infrastructure.
- Although not anticipated, the presence of obstruction in the ground from the manhole in the centre of the site causing difficulties with excavations or penetrative works (e.g. piling).
- Attack of buried concrete by aggressive ground conditions; the site may contain unknown Made Ground and potentially sulphate bearing soils.
- Shrink / swell of clay; settlement / heave of foundations and floor slabs when located within the influence of trees and vegetation.
- Running sands or loose fill materials leading to difficulty with excavation due to trench collapse.
- Shallow groundwater/groundwater rise causing resulting in difficulties with excavations due to trench collapse.

Although the site is located within a Mining Remediation Authority reporting area, available information indicates a very low risk of mining-induced instability, as the underground workings lie approximately 720 m below ground level and were last active in 1977. No further consideration is deemed necessary.

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

5.3 Foundation and Geotechnical Design

The proposed development will comprise residential end use with associated private gardens, roads, public open space (POS) areas and infrastructure. The type of foundation solution should be informed by an on-site intrusive investigation to confirm ground conditions and obtain geotechnical parameters for preliminary foundation and floor slab design. Intrusive investigation should also obtain data to allow appropriate concrete classification in accordance with BRE SD1 and for preliminary highways/pavement design.

5.4 Drainage

Given the site is underlain by low permeability clays, it is unlikely that drainage to SuDS such as traditional soakaways will be suitable.

5.5 Recommendations

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

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Geo-Environmental Summary

The risk from on and off-site sources of contamination is considered to be low.

The risk from permanent ground gases is considered to be moderate to low.

Radon is not considered to pose a risk.

The overall risk to controlled waters is considered to be low to very low.

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

6.2 Geotechnical Summary

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

Whilst the site lies within a Mining Remediation Authority Reporting Area, mining related instability is not considered to pose a risk to the site.

Drainage to SuDS is unlikely to be a viable option for the site due to the underlying geology.

6.3 Further Work

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

-
- Topographical survey / utility mapping.
 - Intrusive ground investigation comprising:
 - Trial pitting, windowless sampling and cable percussive drilling (if required).
 - Installation of standpipes in boreholes to allow gas concentrations and groundwater levels to be monitored.
 - Preliminary 3 ground gas monitoring rounds for boreholes installed in the western area of the site, to assess if ground gas from the historic offsite landfill is migrating onto site.
 - The undertaking of soil infiltration rate testing (if required).
 - Geotechnical testing of soils.
 - Contamination analyses of soil.
 - Assessment and recommendations based on the above, including requirements for further work, if necessary.
-

7.0 ABBREVIATIONS AND DEFINITIONS

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

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

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

8.0 REFERENCES

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

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

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

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

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

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

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

CIRIA C574 'Engineering in Chalk'. 2002.

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

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

CIRIA C753 'The SuDS Manual'. 2015.

CIRIA C758 'Abandoned Mine Workings Manual'. 2019.

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

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

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

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

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

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

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

Highways England. CD 622, 'Managing geotechnical risk'. 2020.

National Planning Policy Framework (NPPF). 2023.

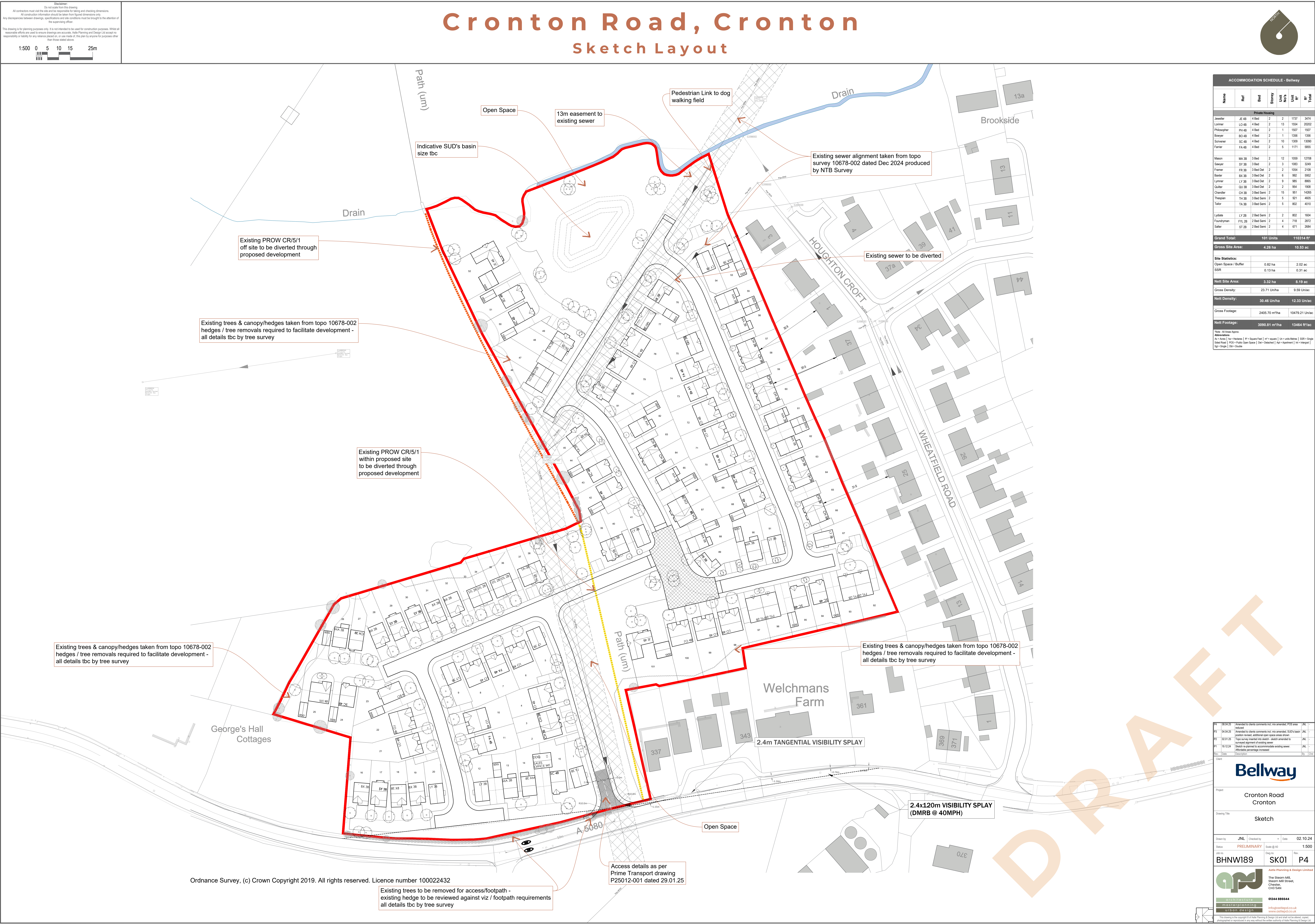
National Planning Policy Framework - Technical Guidance. March 2012.

NHBC Standards. Chapter 4.1: Land Quality - Managing Ground Conditions.

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

Water Framework Directive, 2000.

DRAWINGS



ACCOMMODATION SCHEDULE - Bellway									
Name	Ref	Bed	Storey	Unit	Units	Unit	Unit	#	Total
Private Housing									
Jeweller	JE 4B	4 Bed	2	2	1737	3074			
Louiser	LO 4B	4 Bed	2	13	1554	20203			
Philosopher	PH 4B	4 Bed	2	1	1507	1507			
Bowyer	BO 4B	4 Bed	2	1	1356	1356			
Schwamer	SC 4B	4 Bed	2	10	1309	13090			
Fairer	FA 4B	4 Bed	2	5	1171	5855			
Mason	MA 3B	3 Bed	2	12	1069	12708			
Sawyer	SY 3B	3 Bed	2	3	1069	3249			
Fraser	FR 3B	3 Bed Det	2	2	1004	2108			
Bauer	BA 3B	3 Bed Det	2	6	992	5952			
Lynner	LY 3B	3 Bed Det	2	9	985	8865			
Quiler	QU 3B	3 Bed Det	2	2	954	1908			
Chandler	CH 3B	3 Bed Semi	2	15	951	14265			
Thespan	TH 3B	3 Bed Semi	2	5	921	4605			
Talor	TA 3B	3 Bed Semi	2	5	902	4510			
Lydale	LY 2B	2 Bed Semi	2	2	802	1604			
Foundryman	FYL 2B	2 Bed Semi	2	4	718	2872			
Safer	ST 2B	2 Bed Semi	2	4	671	2684			
Grand Total:				101 Units	110314 ft ²				
Gross Site Area:				4.26 ha	10.53 ac				
Site Statistics:									
Open Space / Buffer				0.82 ha	2.02 ac				
SSR				0.13 ha	0.31 ac				
Nett Site Area:				3.32 ha	8.19 ac				
Gross Density:				23.71 Units/ha	9.59 Units/ac				
Nett Density:				30.46 Units/ha	12.33 Units/ac				
Gross Footage:				2405.70 m ² /ha	10479.21 Units/ac				
Nett Footage:				3090.81 m ² /ha	13464 ft ² /ac				
Notes - All Areas Approx. Abbreviations: A/L = Access A/L = Access R = Square Feet m ² = square U = Units Meters SSR = Single Solid Road PDS = Public Open Space Det = Detached Apt = Apartment Int = Intergral Sgr = Single Dtr = Double									

Rev	Date	Description	By	CHK
01	08.04.25	Approved to clients comments incl: this amended. PDS area included	JNL	JNL
02	04.04.25	Amended to clients comments incl: this amended. SUD's basin position moved, additional open space area added	JNL	JNL
03	02.04.25	Topo survey inserted into sketch - sketch amended to include alignment of existing sewer	JNL	JNL
04	18.12.24	Sketch re-planned to accommodate existing sewer. Additional percentage increased	JNL	JNL
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04	18.12.24	Sketch re-planned to accommodate existing sewer. Additional percentage increased	JNL	JNL

Client

Bellway

Project
Cronton Road
Cronton

Drawing Title
Sketch

Drawn by
JNL

Checked by
PRELIMINARY

Date
02.10.24

Status
PRELIMINARY

Scale
@ A3

1:500

Job no.
BHNW189

Rev.
SK01

P4

Austin Planning & Design Limited

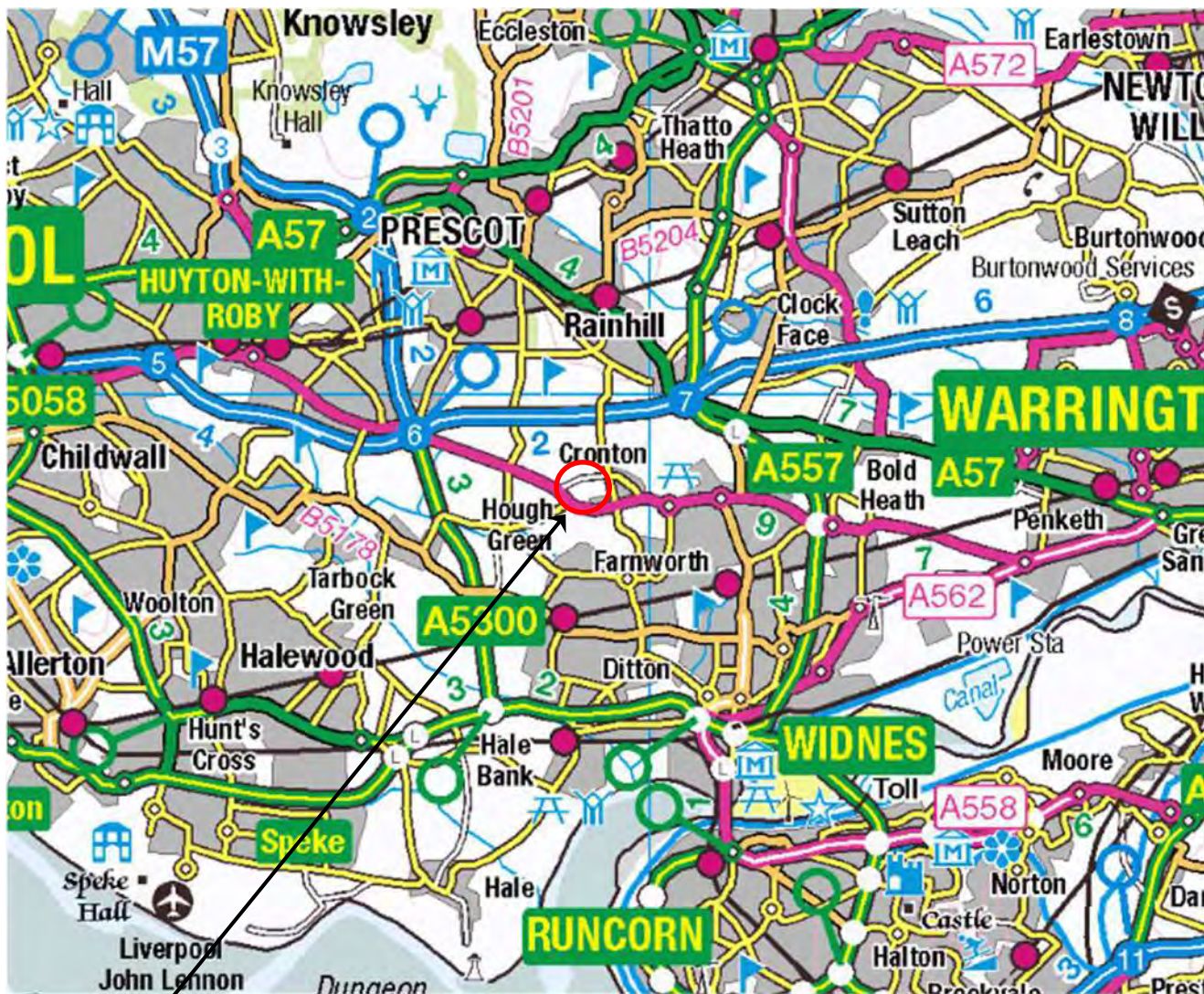
The Steam Mill,
Stewart Mill Street,
Chesham,
CH3 5AN

01244 886644

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urban design

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SITE LOCATION

NEAREST POSTCODE: WA8 5BU

SITE ENTRANCE WHAT3WORDS:
///MODELS.DUSTY.FAMILY



REV	DATE	DESCRIPTION	BY	CKD



**BROWNFIELD
SOLUTIONS LTD**
CEO ENVIRONMENTAL ENGINEERING EXCELLENCE

CLIENT

BELLWAY HOMES LTD

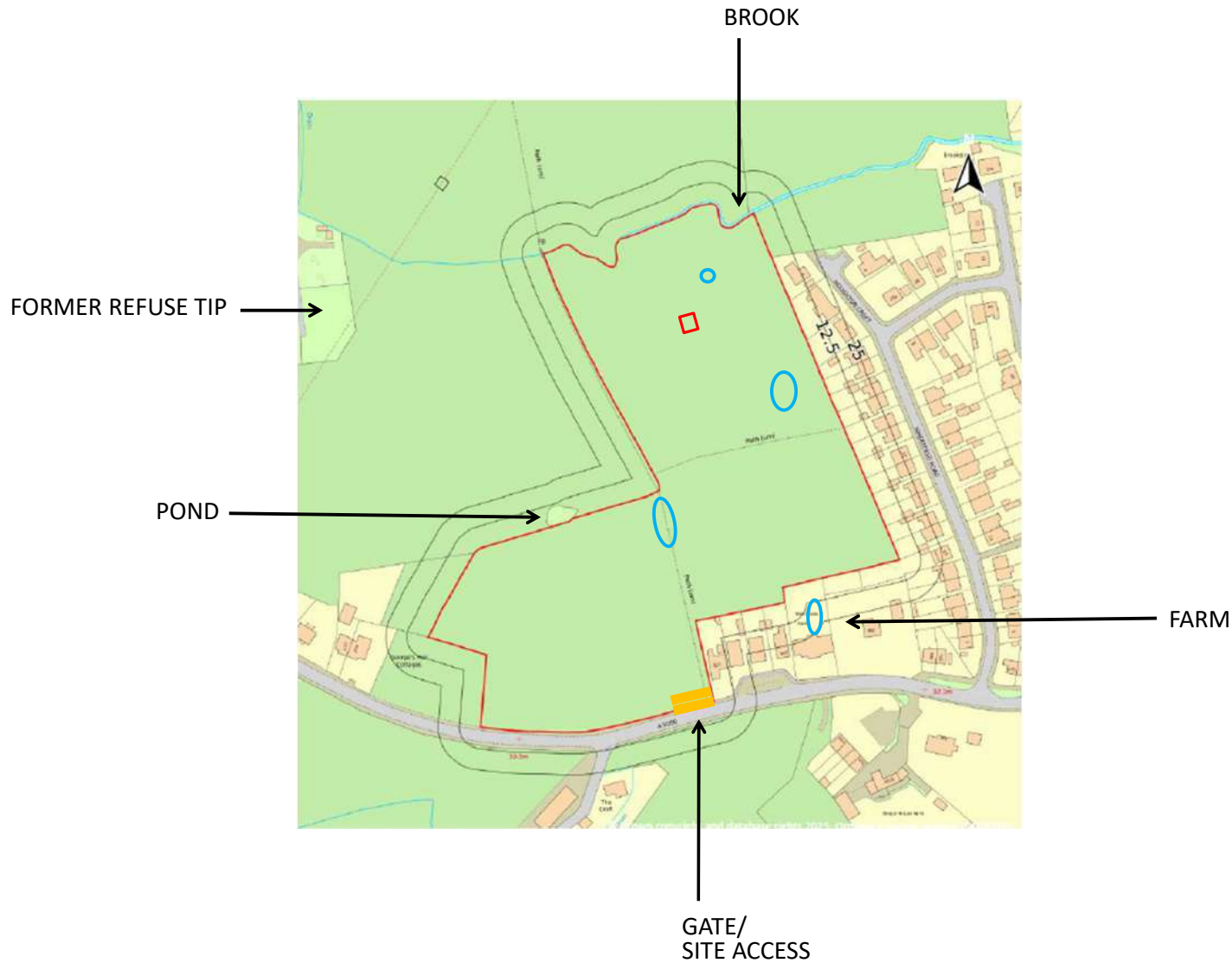
PROJECT TITLE

CRONTON ROAD, WIDNES

DRAWING TITLE

SITE LOCATION PLAN

DRAWING No. C6114/01	REVISION -	SCALE NTS	DATE 15/04/25
DRAWN BY SD		CHECKED BY AF	



KEY

- APPROXIMATE SITE BOUNDARY
- MANHOLE
- GATE/ SITE ACCESS
- FORMER POND

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS REPORTS. THIS DRAWING IS COPYRIGHT OF BSL.
3. DRAWING NOT FOR CONSTRUCTION PURPOSES.

REV	DATE	DESCRIPTION	BY	CKD



CLIENT

BELLWAY HOMES

PROJECT TITLE

LAND OFF CRANTON ROAD

DRAWING TITLE

SITE FEATURES PLAN

DRAWING No.	REVISION	SCALE	DATE
C6114/02	-	NTS	27/04/25
DRAWN BY		CHECKED BY	
AF		AD	

PHOTOGRAPHS



Photograph 1: Gate for access.



Photograph 2: Open access point next to gate.



Photograph 3: Overall topography and greenfield space.



Photograph 4: General Vegetation bordering the site.



Photograph 5: Dog Clog Brook, Northern boundary.



Photograph 6: Manhole in northern field in centre.



Photograph 7: Dog Clog Brook running along northern boundary.



Photograph 8: Western Field.



Photograph 9: Surrounding agricultural fields



Photograph 10: Overhead lines in distance from site.



Photograph 11: Surrounding vegetation/hedgerows.



Photograph 12: Sloping Towards Brook.

APPENDIX A

BSL Methodology and Guidance

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

Background

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

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

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

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

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

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

Contaminated Land - Legislative Background

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

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

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

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

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

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

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

Source - substances that are potential contaminants or pollutants that may cause harm.

Pathway - a potential route by which contaminants can move from the source to the receptor, and the impact of that migration on the source e.g., attenuation.

Receptor - a receptor that may be harmed, for example the water environment, humans and water, considering the sensitivity of the receptor.

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



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

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

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

Relevant Guidance Documents

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

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

Relevant Legislative Documents

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

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

Contaminated Land Risk Assessment Approach

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



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

Further information can be found at the below site:

<https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>

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

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

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

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

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

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

High likelihood: There is a pollution linkage and an event appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.

Examples - Extensive areas with concentrations above saturation limits for mobile contamination e.g. petroleum hydrocarbons within the water table.

Likely: There is a pollution linkage and all the elements are present and in the right place, which means it is probable that an event will occur. Circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term.

Examples – Localised areas of contaminants with concentrations above saturation limits for mobile contamination e.g. localised petroleum hydrocarbons within the water table; shallow contamination above relevant human health generic assessment criteria is present with little or no hardstanding,

Low likelihood: There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain even over a longer period such event would take place, and is less likely in the short term.

Examples - A thickness/distance of low permeability deposits preventing contaminant migration to a receptor is present; a site is mostly covered hard standing preventing exposure to soil contamination.

Unlikely: There is a pollution linkage but circumstances are such that it is improbable the event would occur even in the long term.

Examples – A site is underlain by a substantial thickness of low permeability clays, between the source and potential receptors which will inhibit significantly, but not completely rule out migration to sensitive receptors.

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

Severe: Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. A short-term risk to a particular ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);

Examples – High concentrations of contaminant on surface of recreation area, major spillage of contaminants from site into controlled waters, explosion causing building to collapse.

Medium: Chronic damage to human health ('significant harm' as defined in DETR 2000). Pollution of sensitive water resources. A significant change in a particular ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);

Examples - Concentrations of contaminants exceed the generic assessment criteria, leaching of contaminants from a site to a Principal or Secondary Aquifer, death of species within a designated nature reserve.

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

Examples - Pollution of non-classified groundwater or damage to buildings rendering it unsafe to occupy.

Minor: harm, not necessarily significant harm, which may result in financial loss or expenditure to resolve. Non-permanent health effects to human health (easily prevented by use of personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.

Examples - Presence of contaminants at such concentrations PPE is required during site work, loss of plants in landscaping scheme or discolouration of concrete.

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

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

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

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

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

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

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

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

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

Ground Gas Risk Assessment

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

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

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

Legislative Framework

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

Generation Potential of Sources

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

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

Frequency and Duration of Monitoring

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

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

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

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

Typical/idealised periods of monitoring

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

Typical/idealised frequency of monitoring/Number of Visits Required

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

Notes

- 1 Generation potential of sources based on descriptions within BS 8576:2013.
- 2 At least two sets of readings should be at low and falling atmospheric pressure (but not restricted to periods below <1000 mb) known as worst case conditions. Historical data can be used as part of the data set (Table 5.5b).

RB17 Approach

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

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

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

Radon

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

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

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

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

Unexploded Ordnance (UXO) Guidance

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

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

Geotechnical Guidance

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

APPENDIX B

Historical Maps

Site Details:

WHEATFIELD ROAD,
CRONTON, KNOWSLEY, WA8
5BU

Client Ref: C6114-6363-SD
Report Ref: BRO-BFV-YAU-VRM-3RE
Grid Ref: 349010, 388340

Map Name: County Series

Map date: 1849-1850

Scale: 1:10,560

Printed at: 1:10,560



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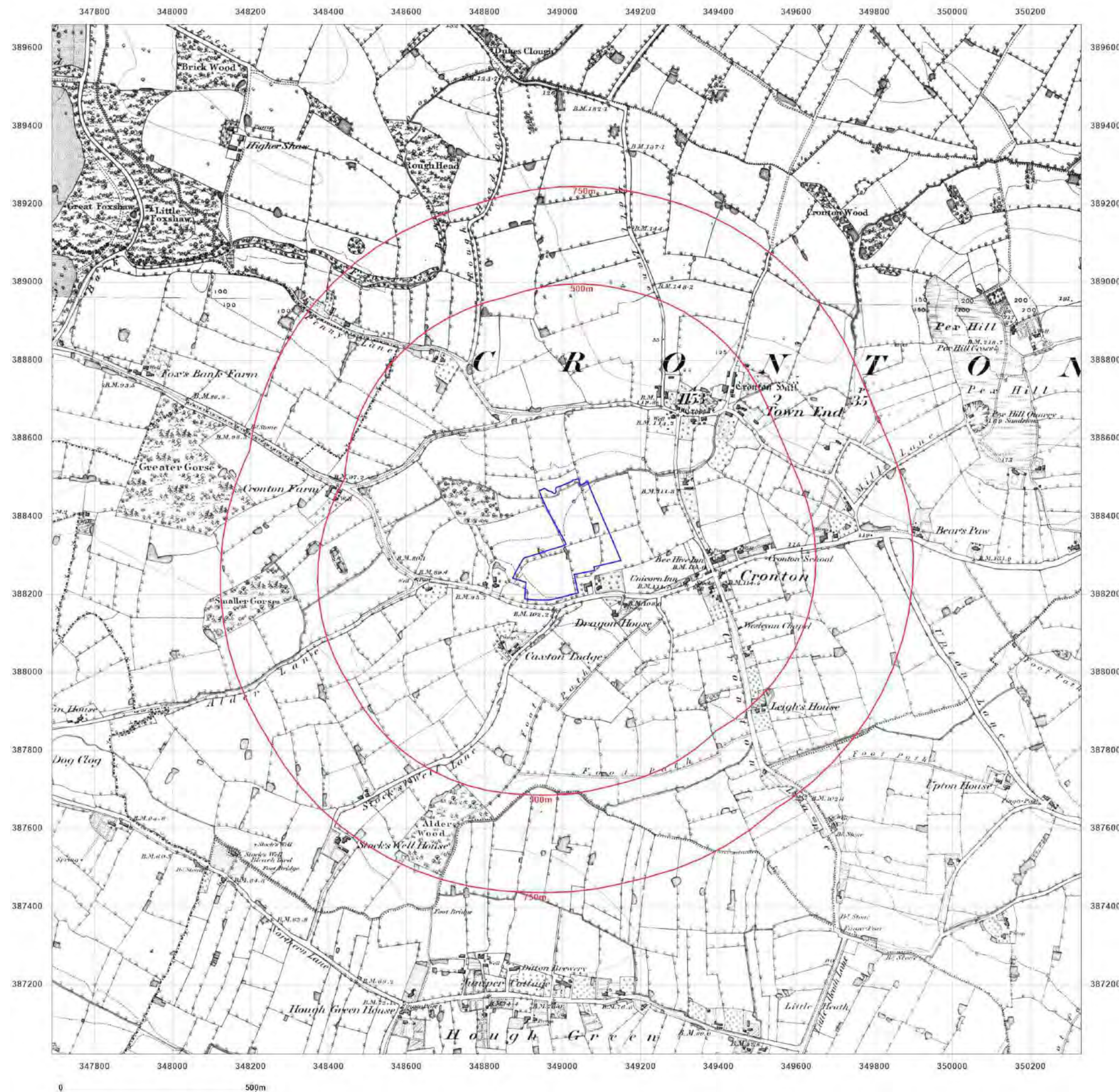


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Client Ref: C6114-6363-SD
Report Ref: BRO-BFV-YAU-VRM-3RE
Grid Ref: 349010, 388340

Map Name: County Series

Map date: 1891

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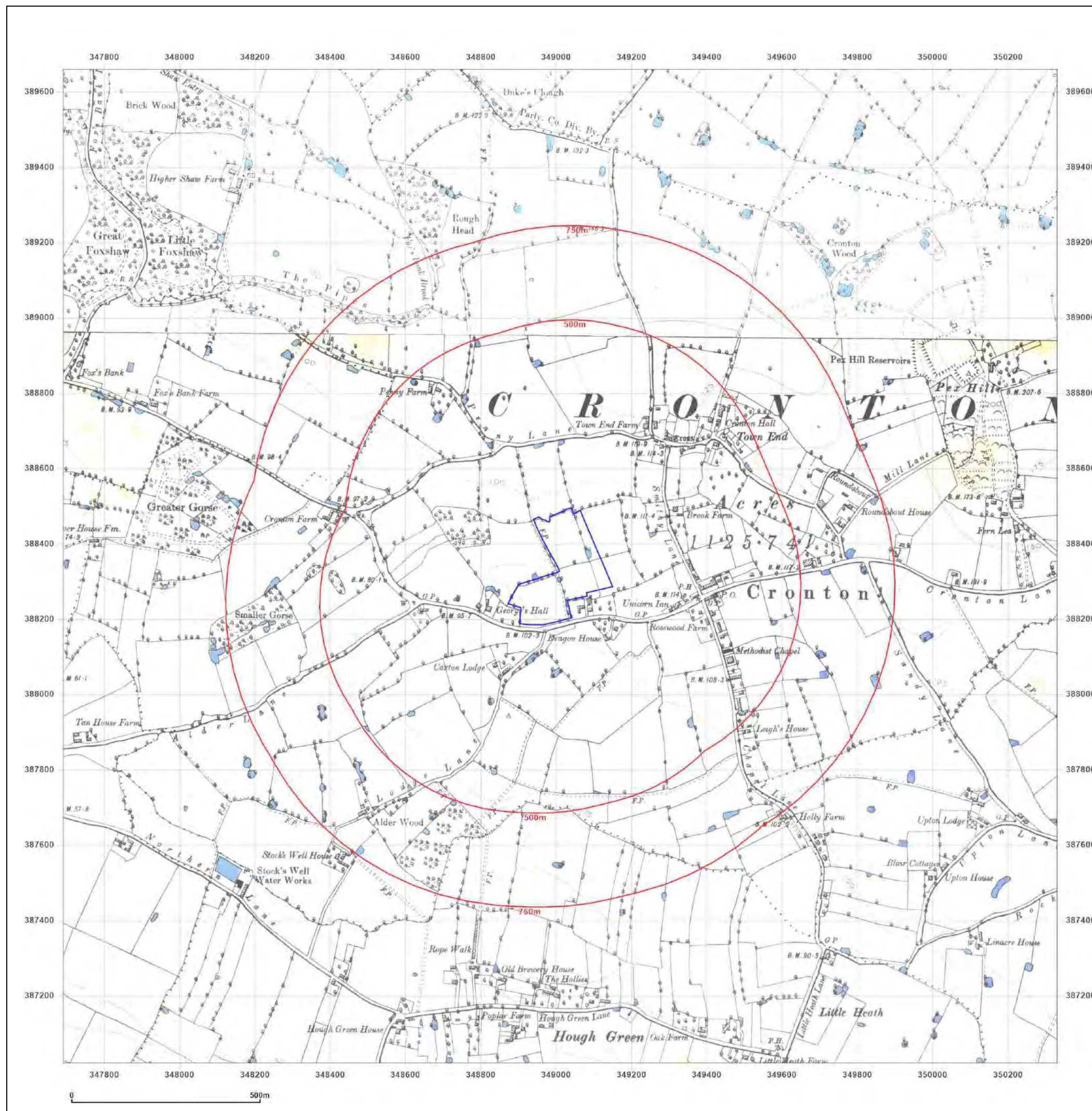


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Client Ref: C6114-6363-SD
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Grid Ref: 349010, 388340

Map Name: County Series

Map date: 1925

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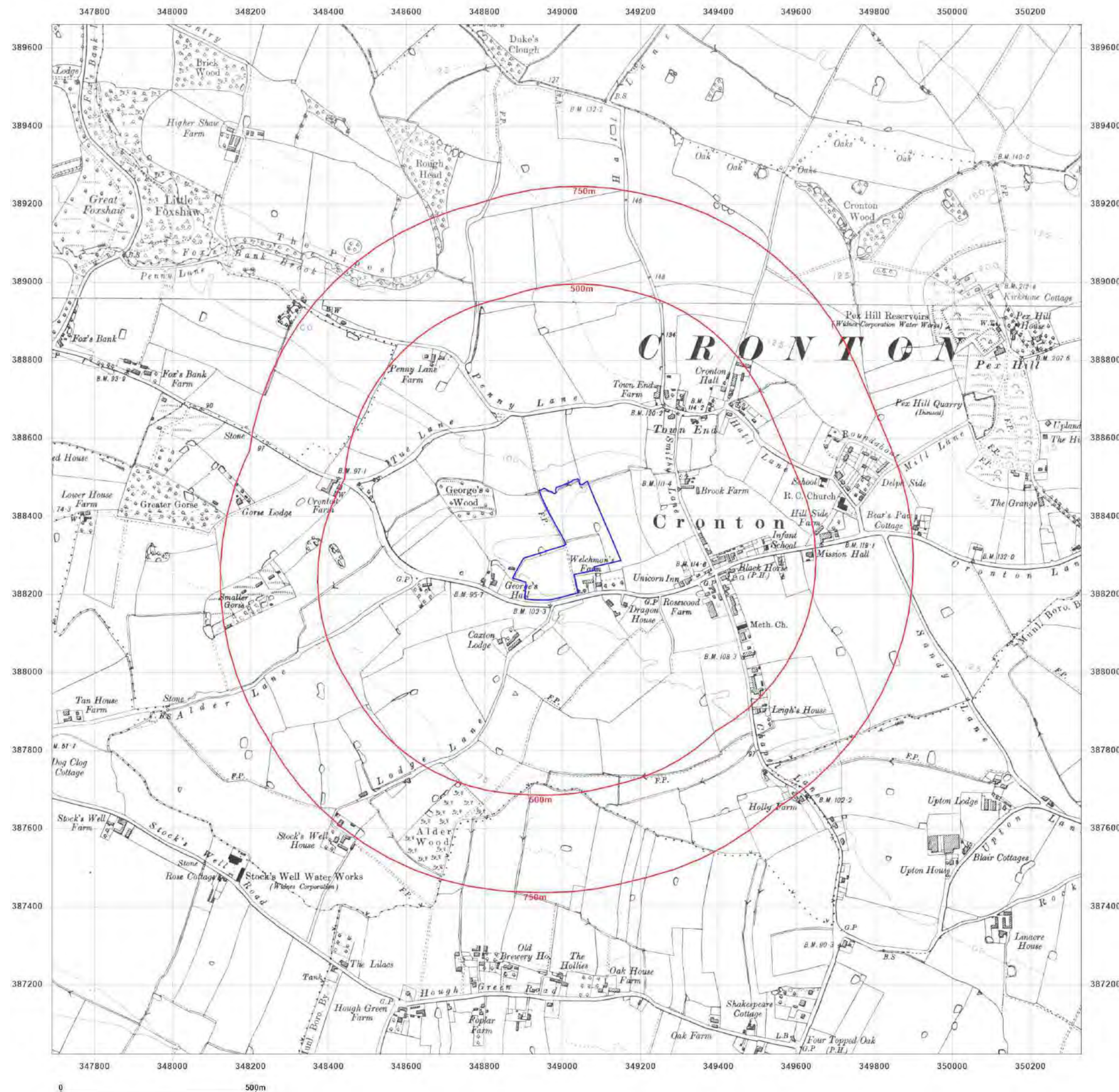


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Client Ref: C6114-6363-SD
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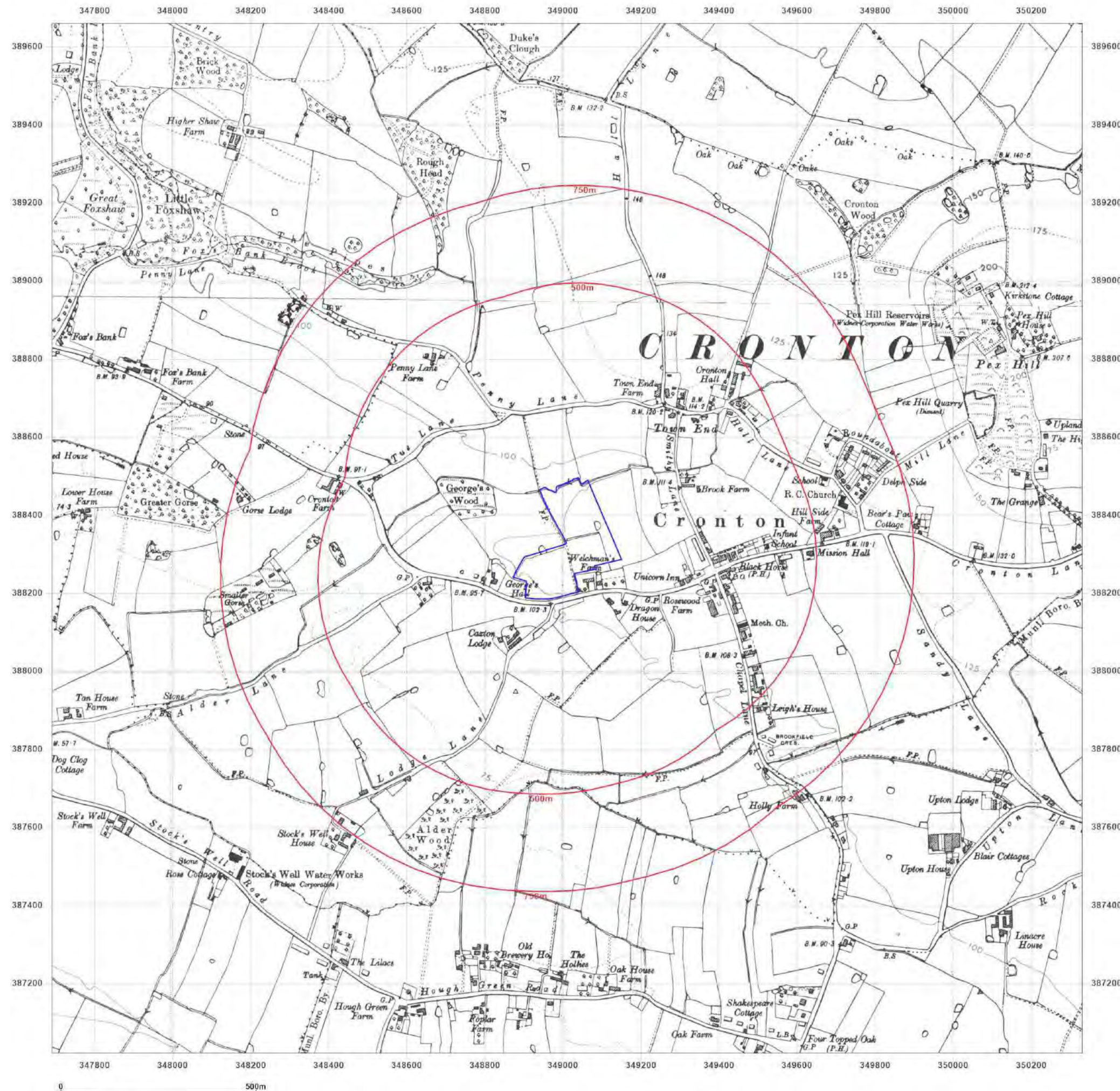


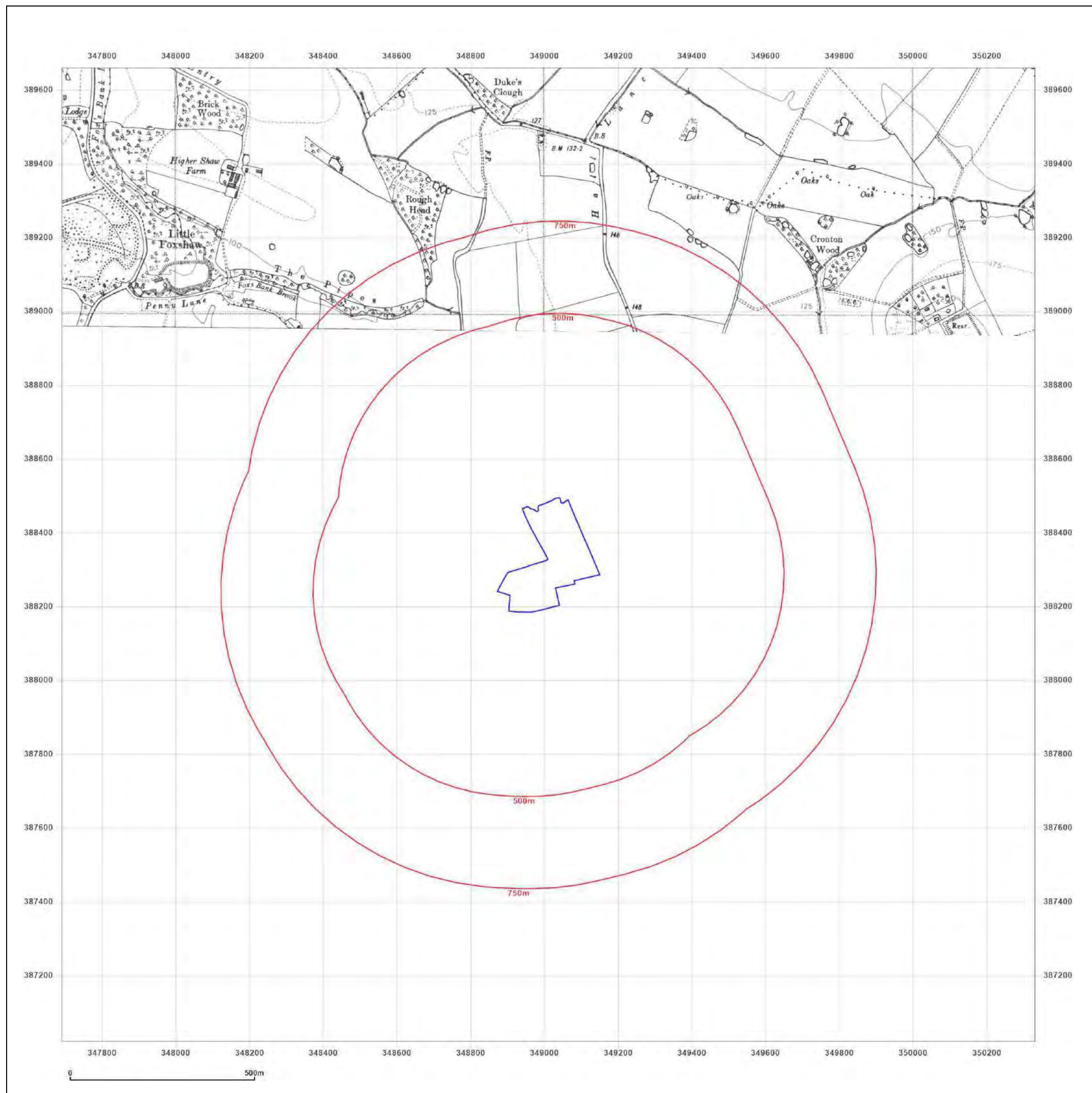
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Report Ref: BRO-BFV-YAU-VRM-3RE
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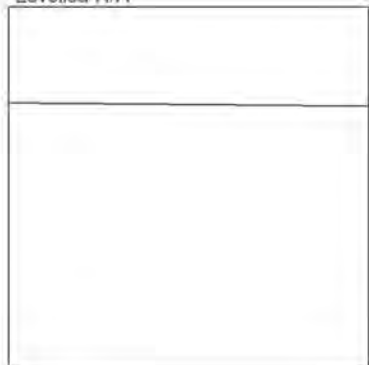
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Map Name: Provisional

Map date: 1955-1956

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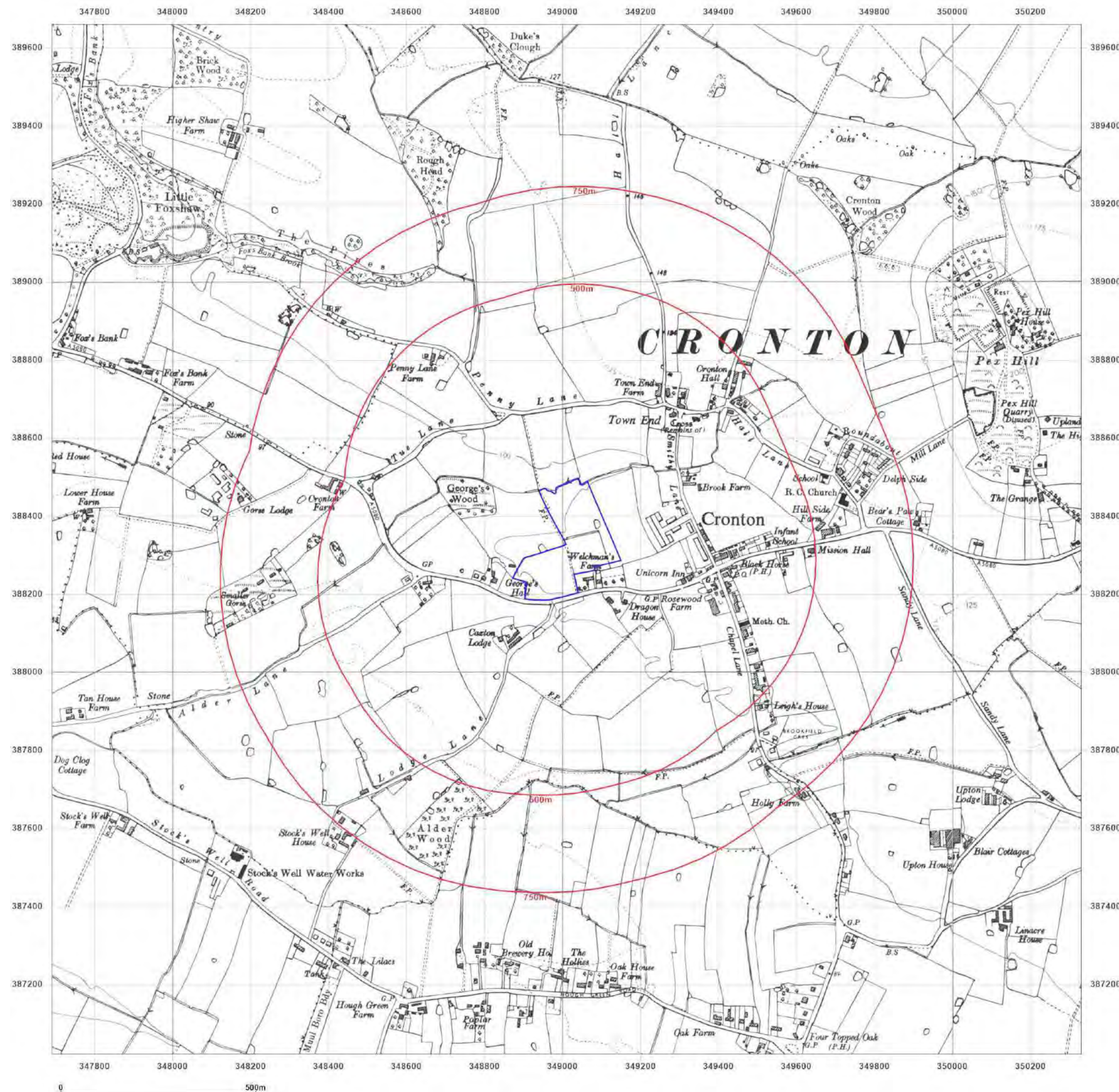


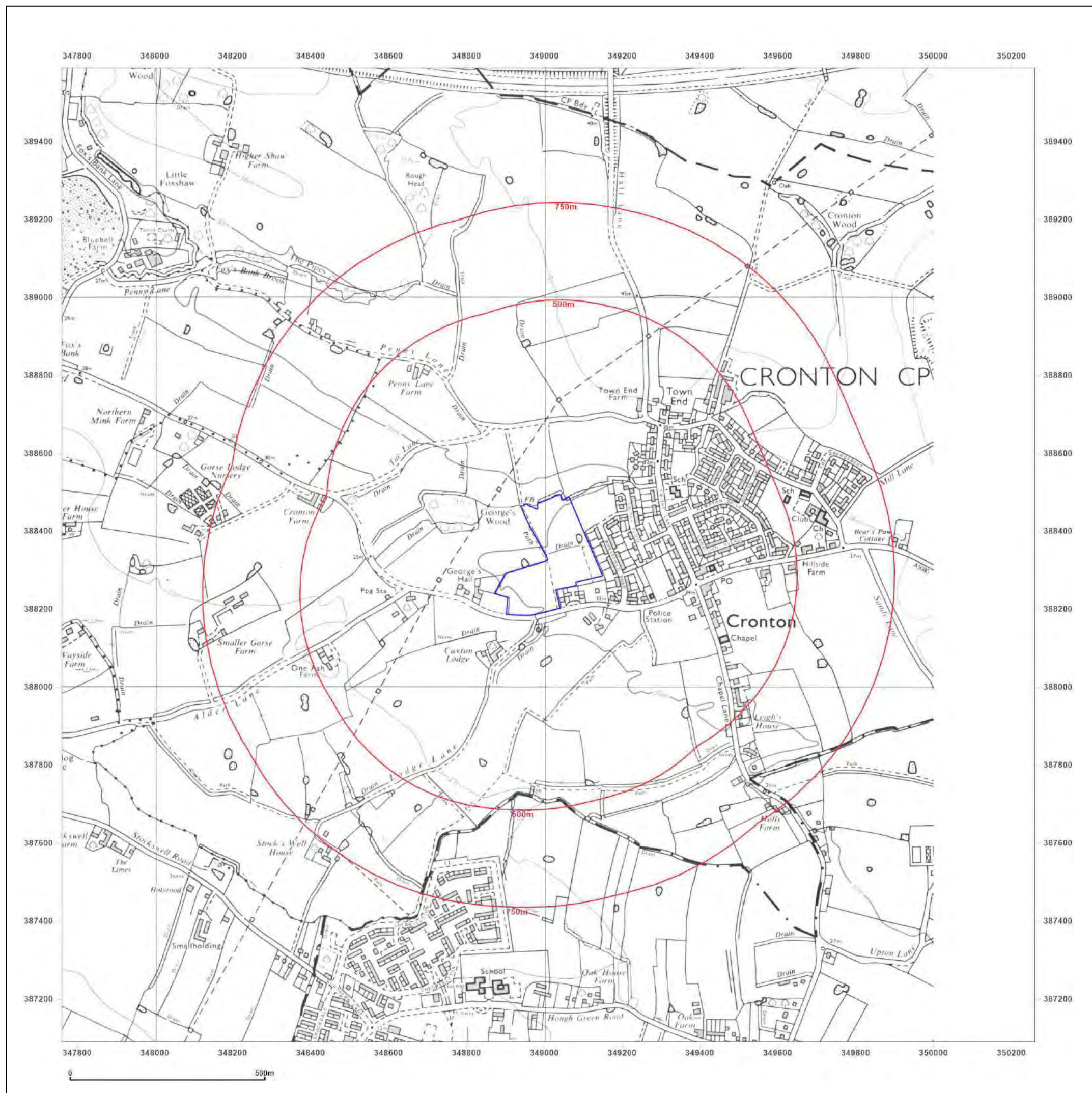
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Grid Ref: 349010, 388340

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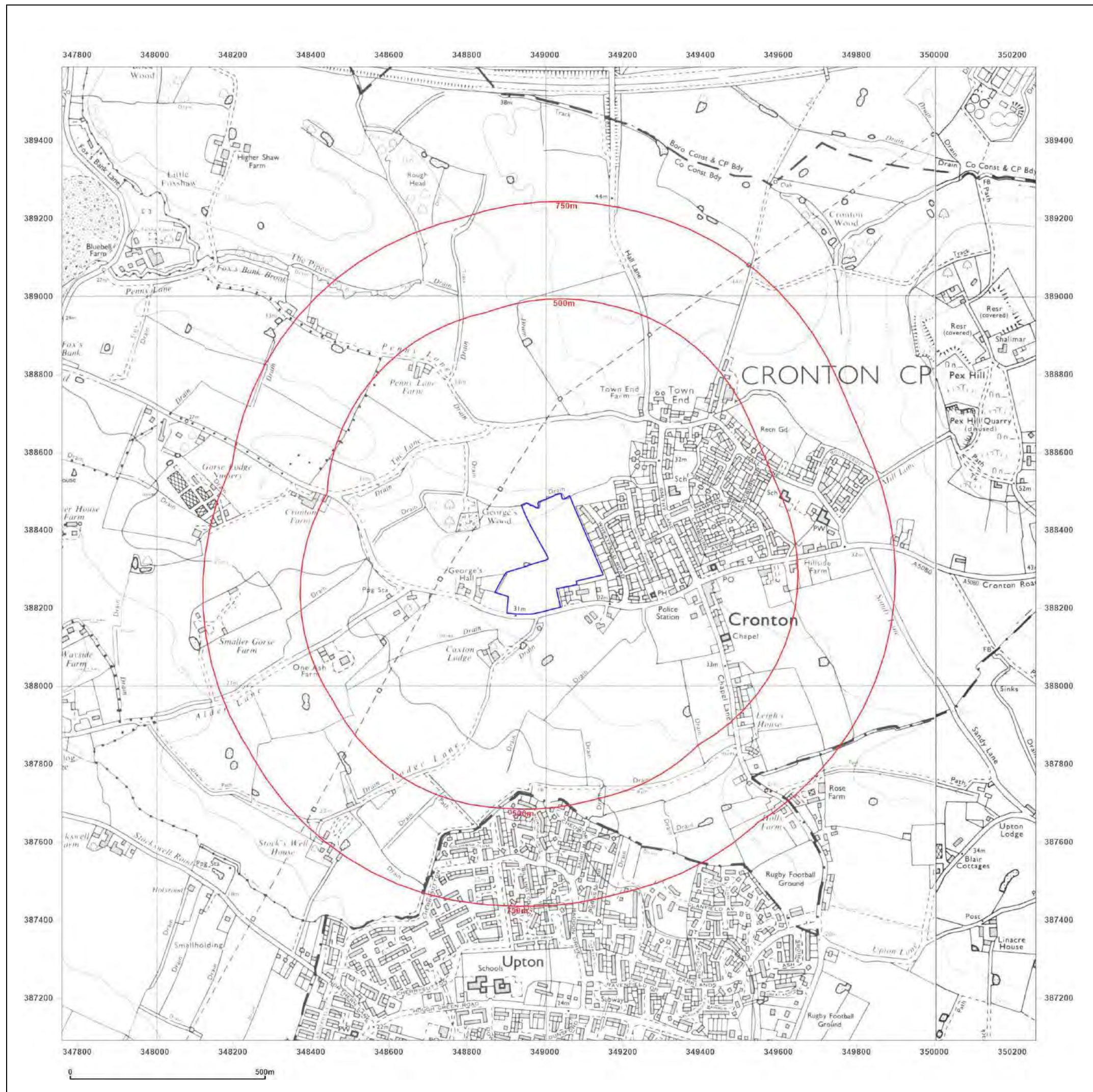


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Grid Ref: 349010, 388340

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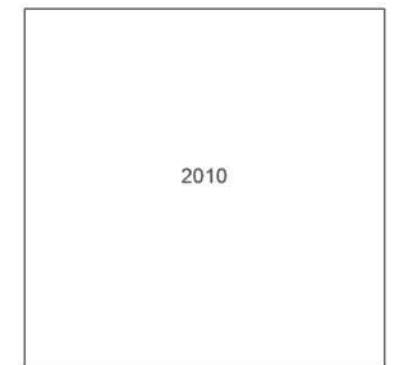
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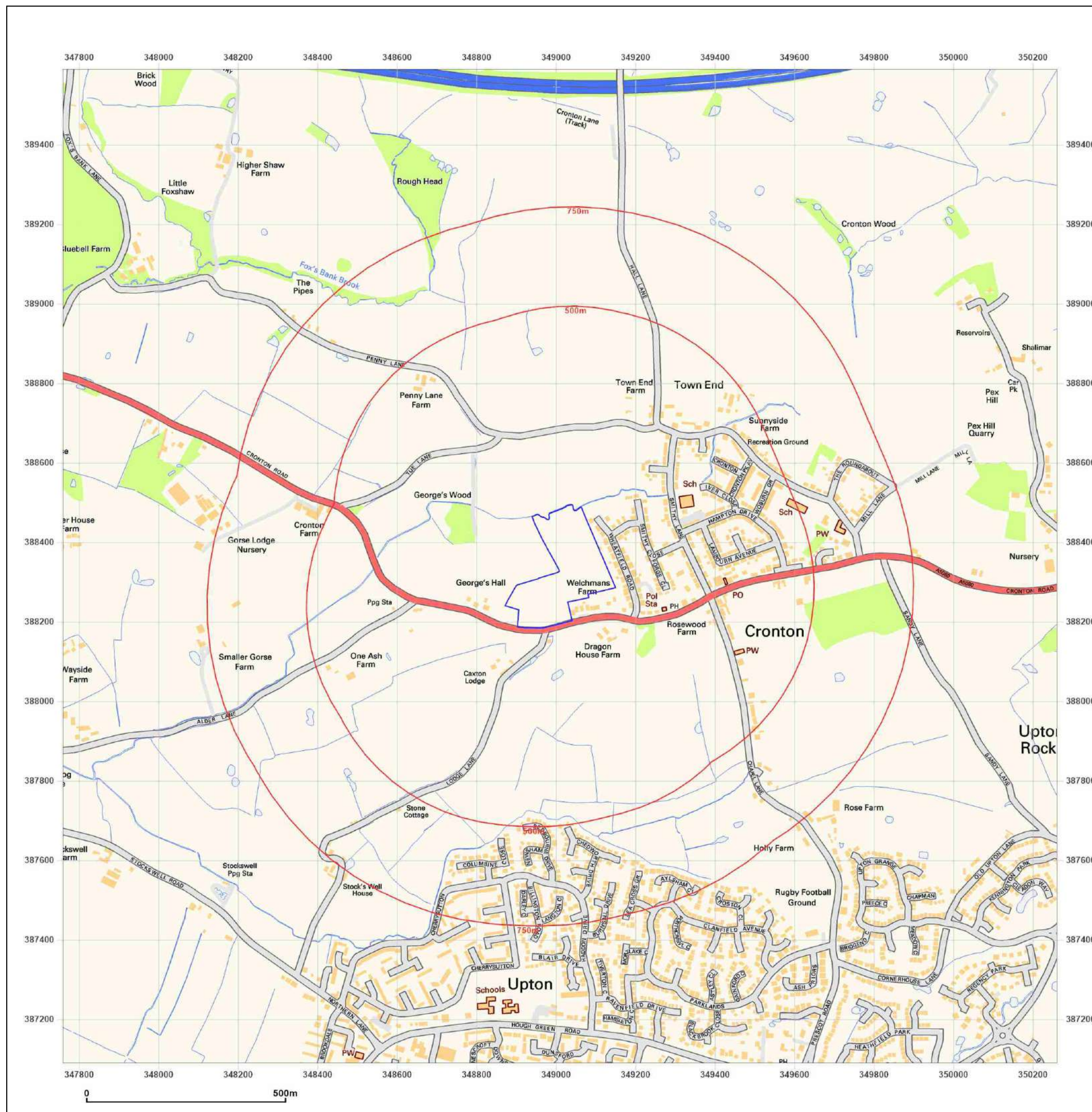


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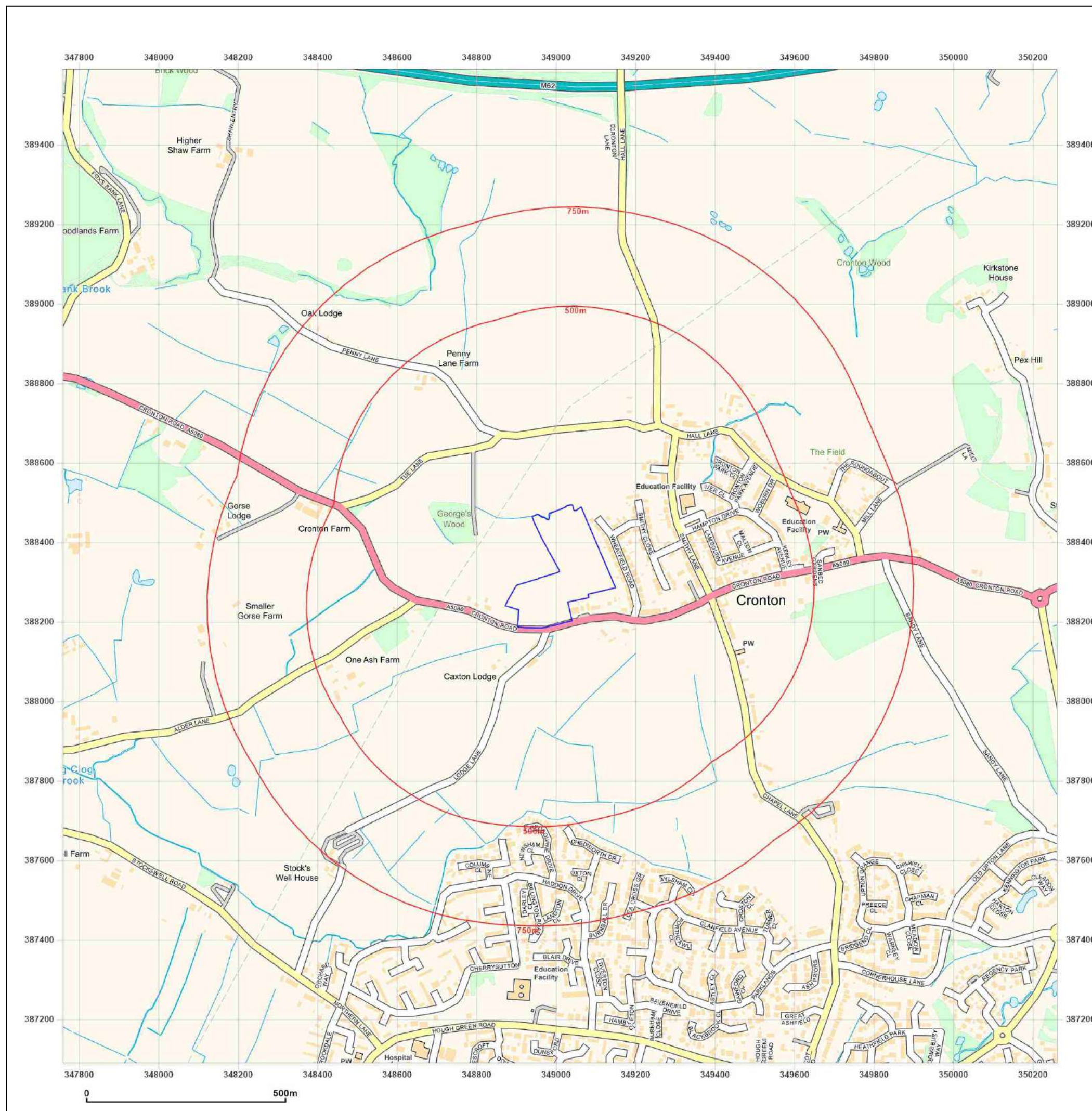


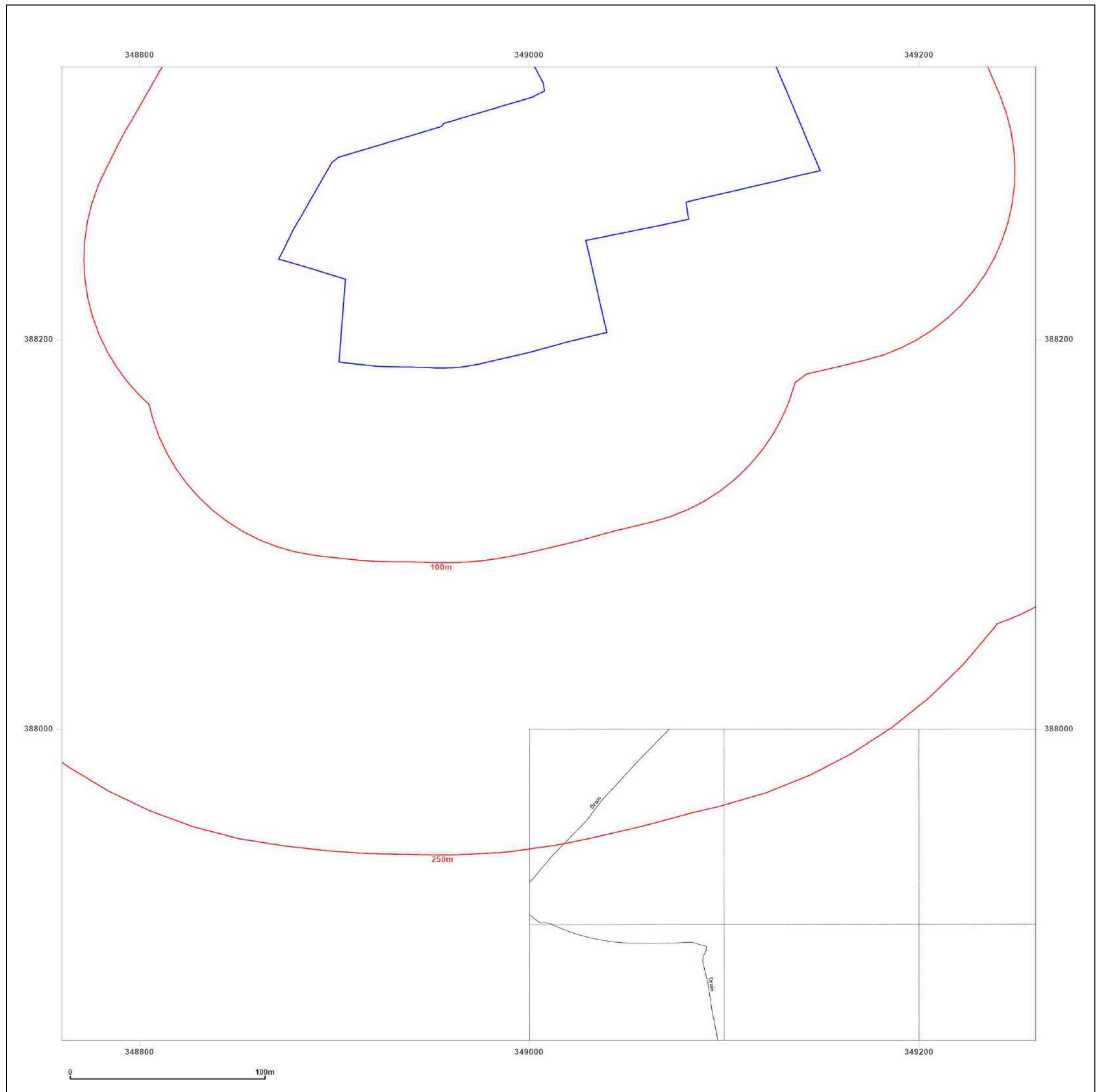
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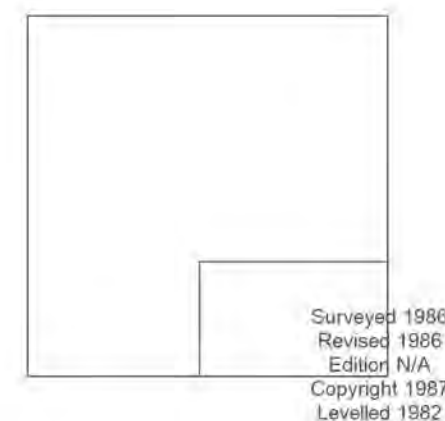
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Grid Ref: 349010, 388090

Map Name: National Grid

Map date: 1986-1991

Scale: 1:1,250

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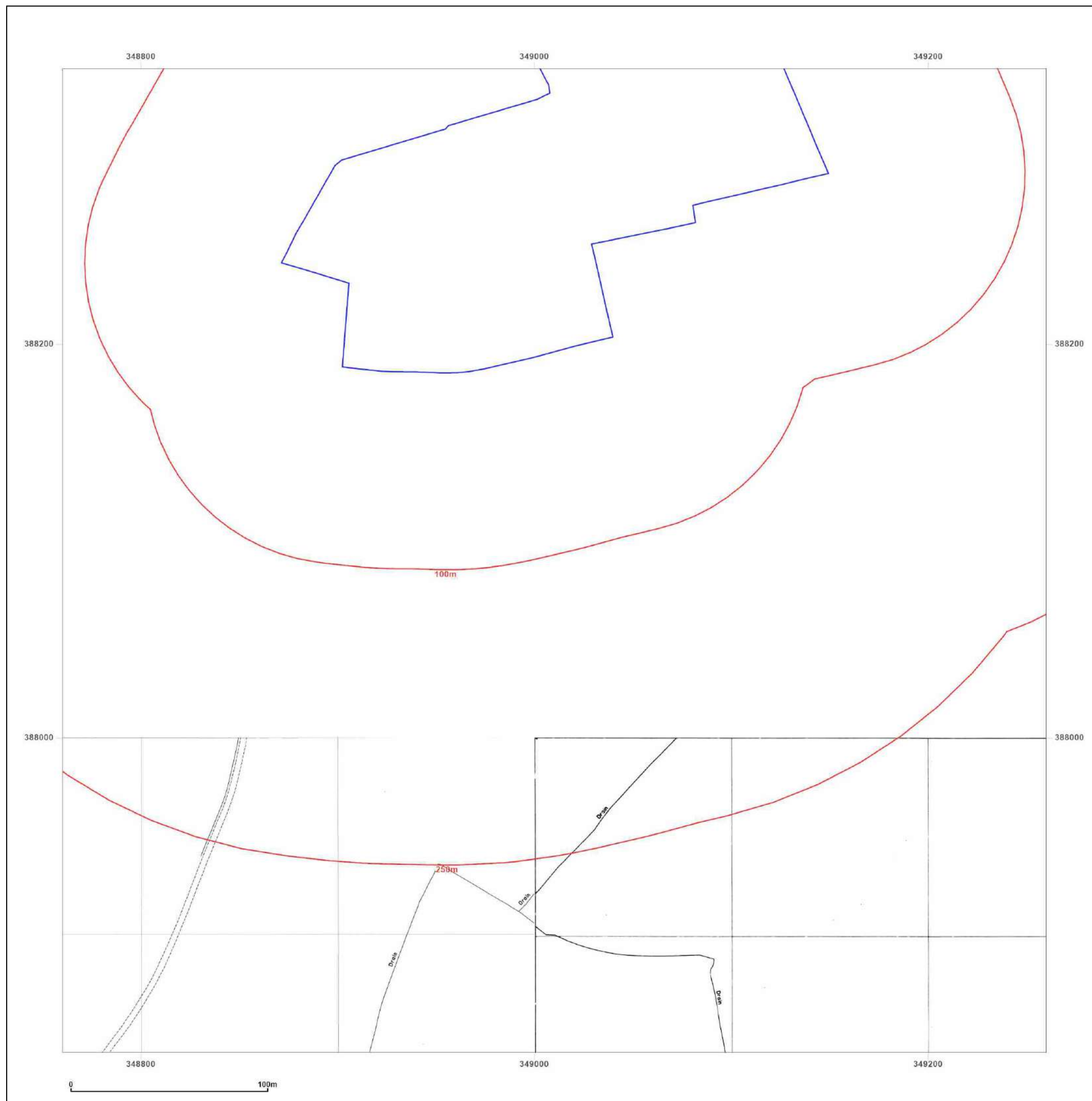


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Report Ref: BRO-BFV-YAU-VRM-3RE_1250_1_1
Grid Ref: 349010, 388090

Map Name: National Grid
Map date: 1993
Scale: 1:1,250
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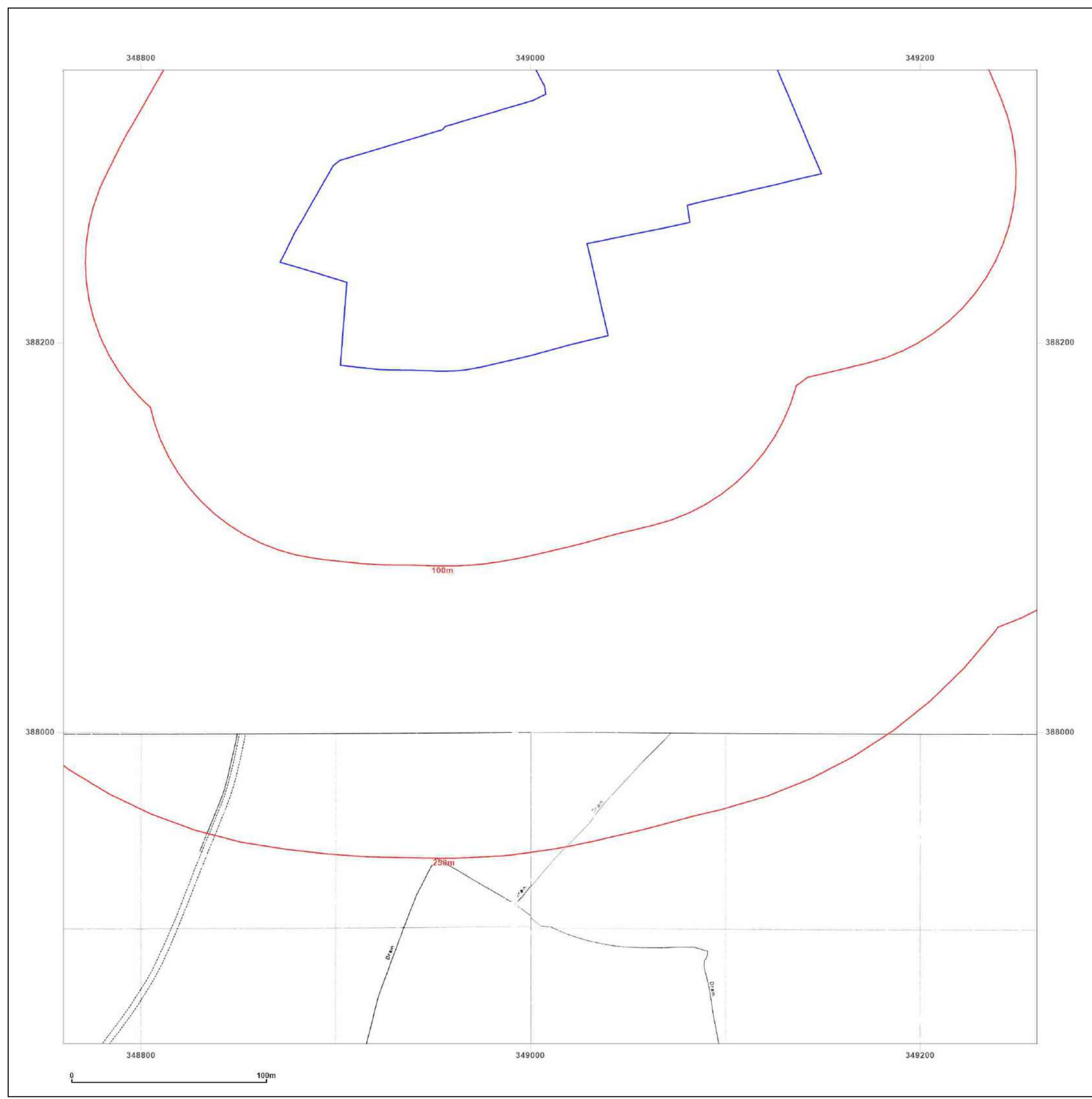


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Client Ref: C6114-6363-SD
Report Ref: BRO-BFV-YAU-VRM-3RE_2500
Grid Ref: 349010, 388340

Map Name: County Series

Map date: 1893

Scale: 1:2,500

Printed at: 1:2,500



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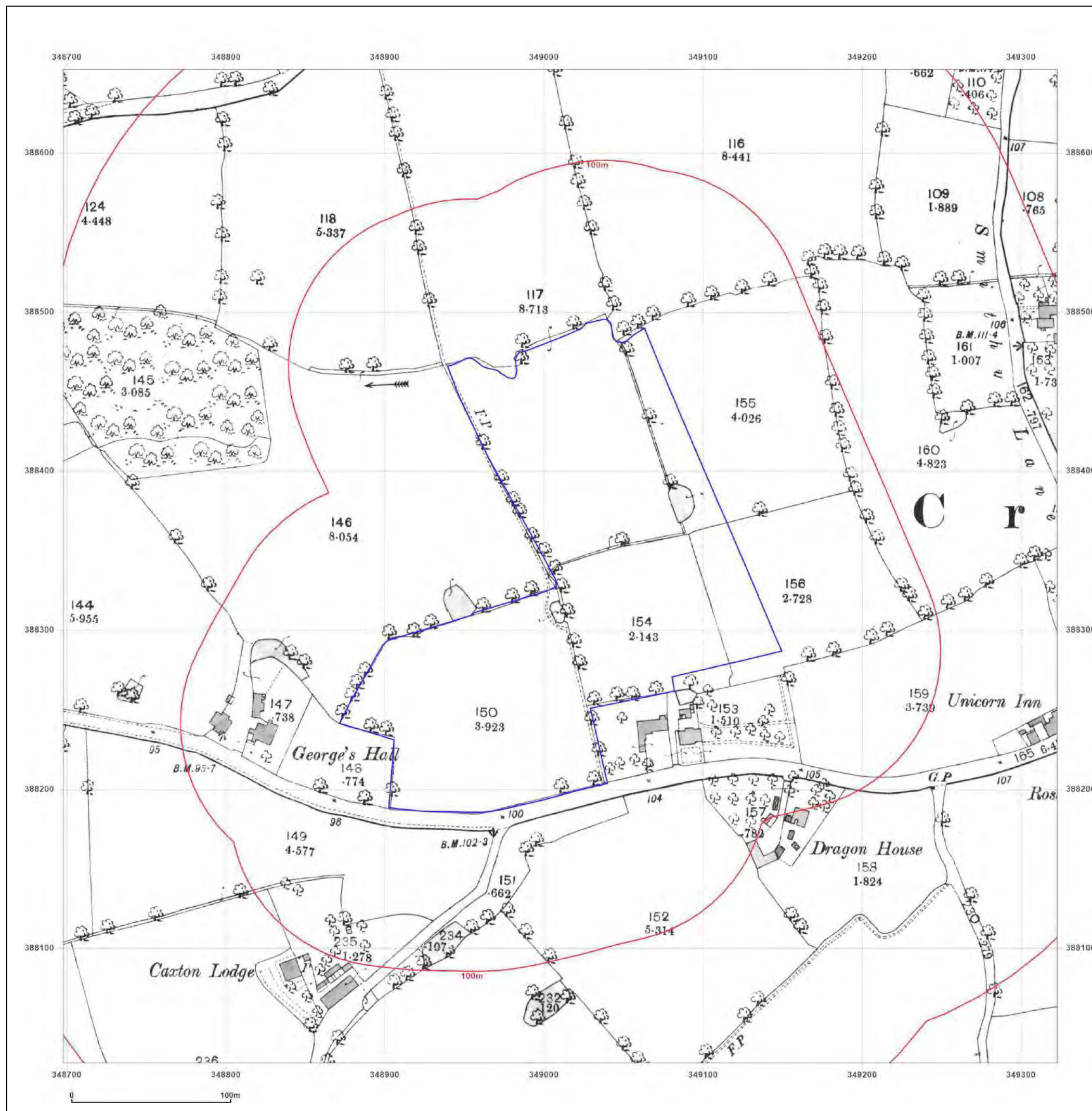


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Report Ref: BRO-BFV-YAU-VRM-3RE_2500
Grid Ref: 349010, 388340

Map Name: County Series

Map date: 1907

Scale: 1:2,500

Printed at: 1:2,500



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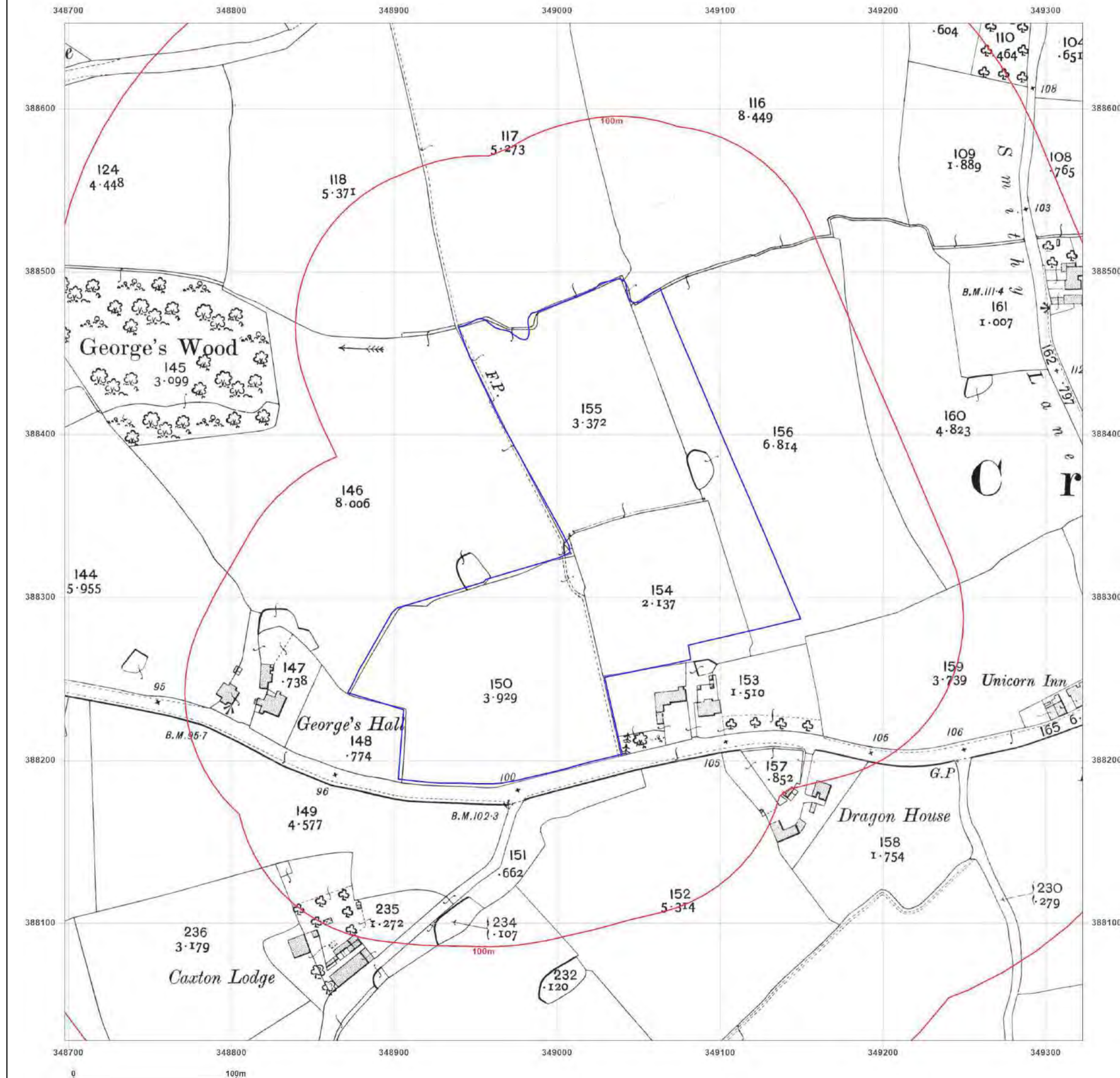


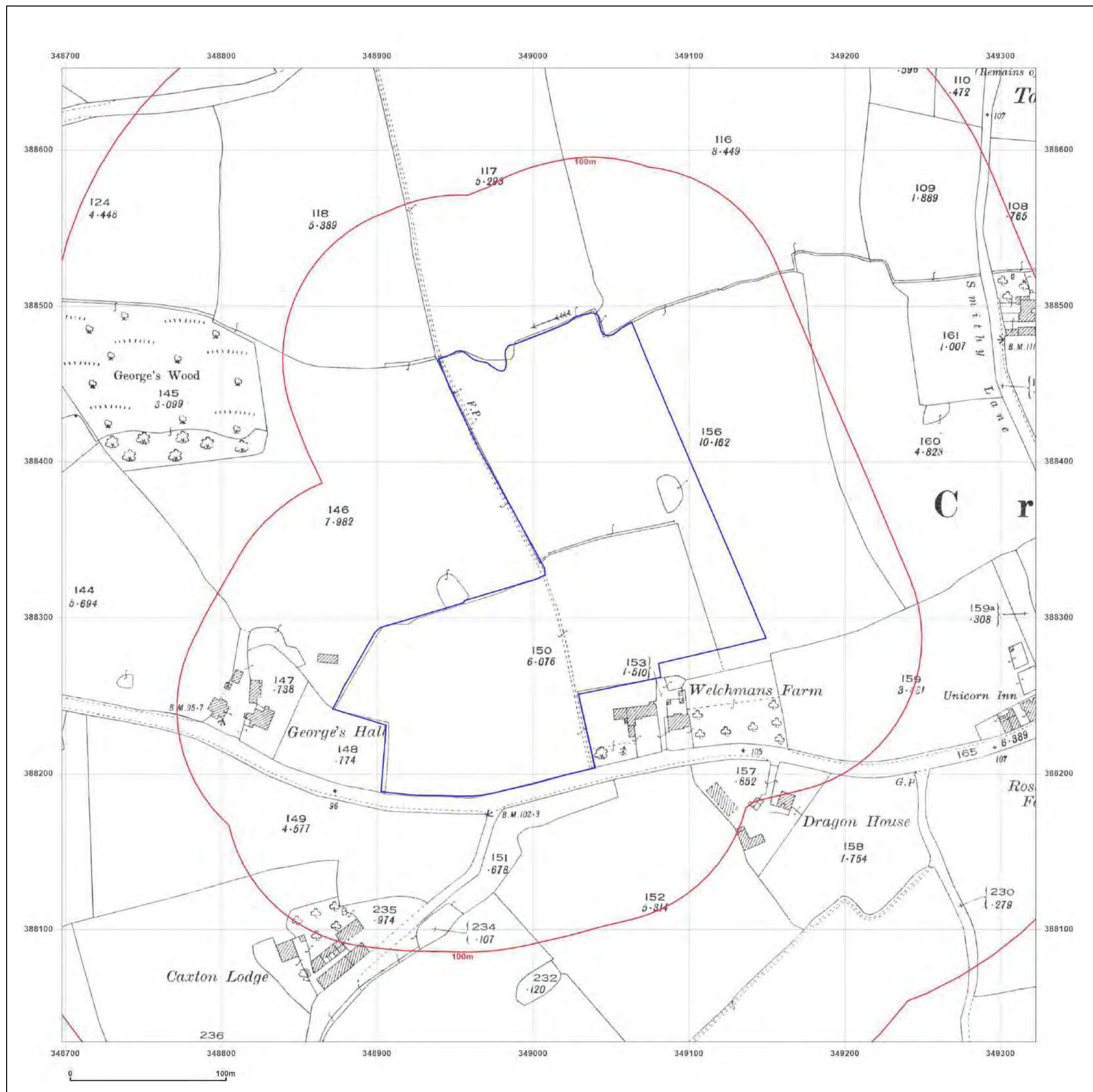
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Report Ref: BRO-BFV-YAU-VRM-3RE_2500
Grid Ref: 349010, 388340

Map Name: County Series

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Client Ref: C6114-6363-SD
Report Ref: BRO-BFV-YAU-VRM-3RE_2500
Grid Ref: 349010, 388340

Map Name: National Grid

Map date: 1959

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1958
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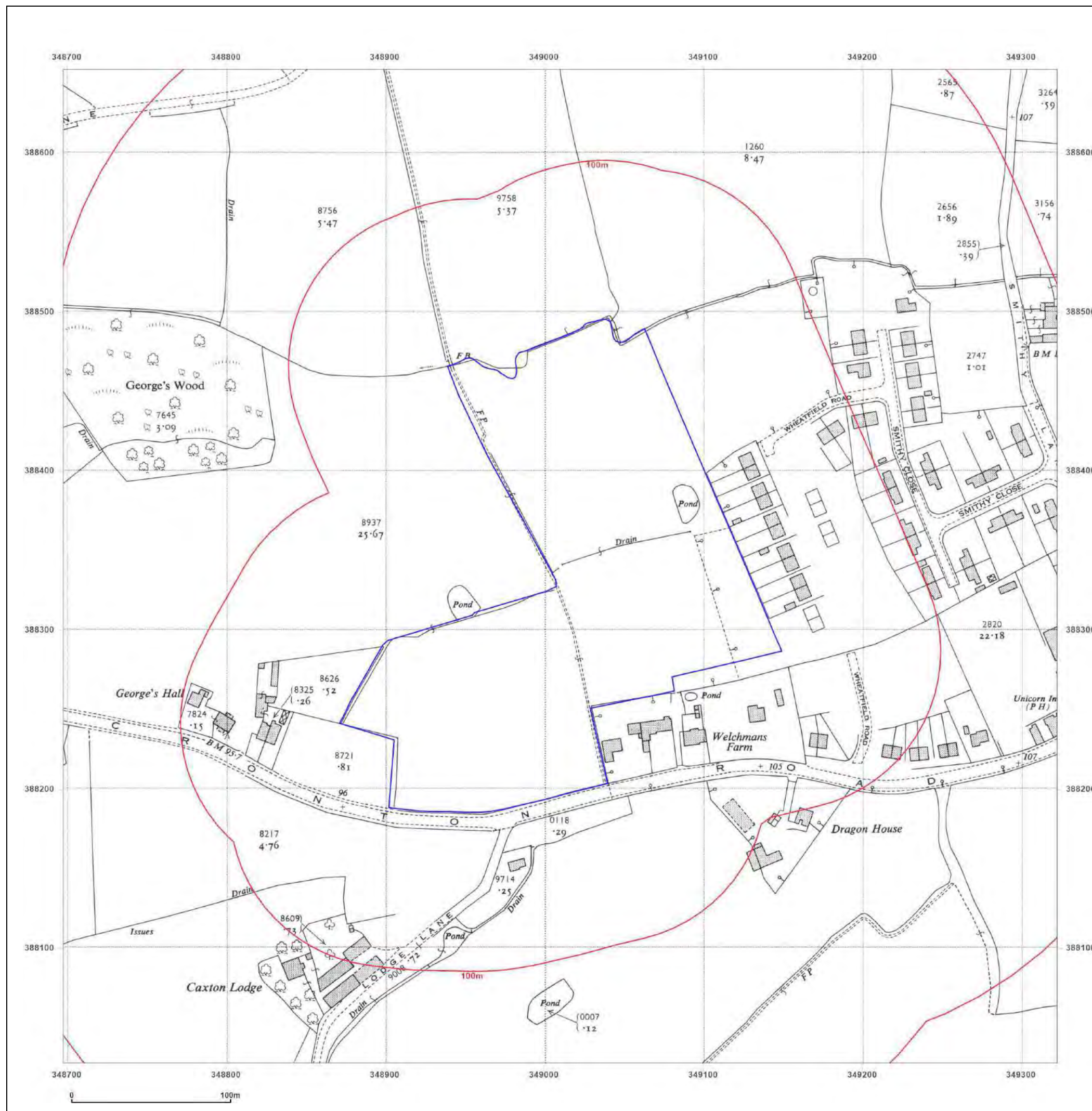


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Client Ref: C6114-6363-SD
Report Ref: BRO-BFV-YAU-VRM-3RE_2500
Grid Ref: 349010, 388340

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Client Ref: C6114-6363-SD
Report Ref: BRO-BFV-YAU-VRM-3RE_2500
Grid Ref: 349010, 388340

Map Name: National Grid

Map date: 1969

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
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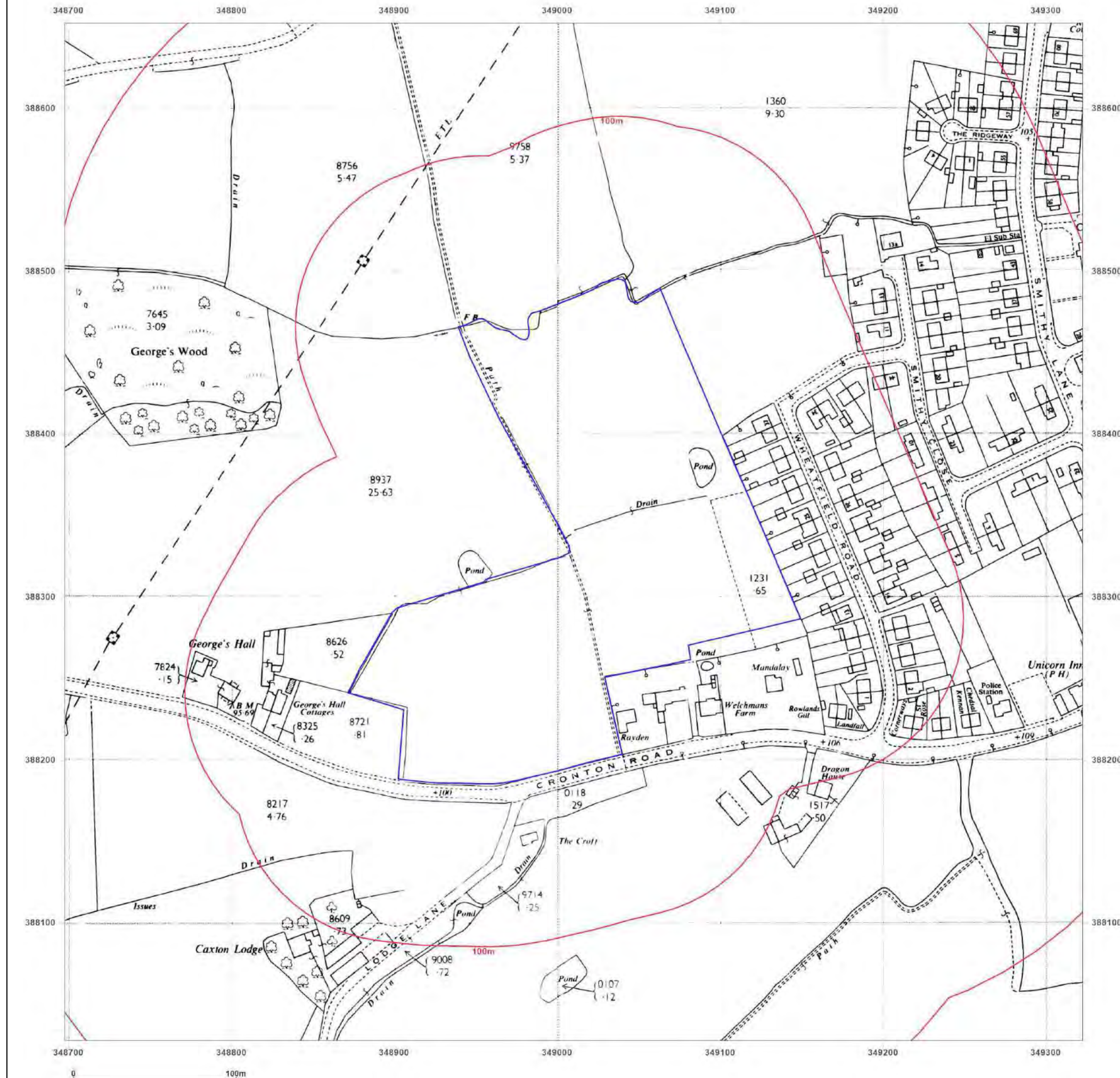


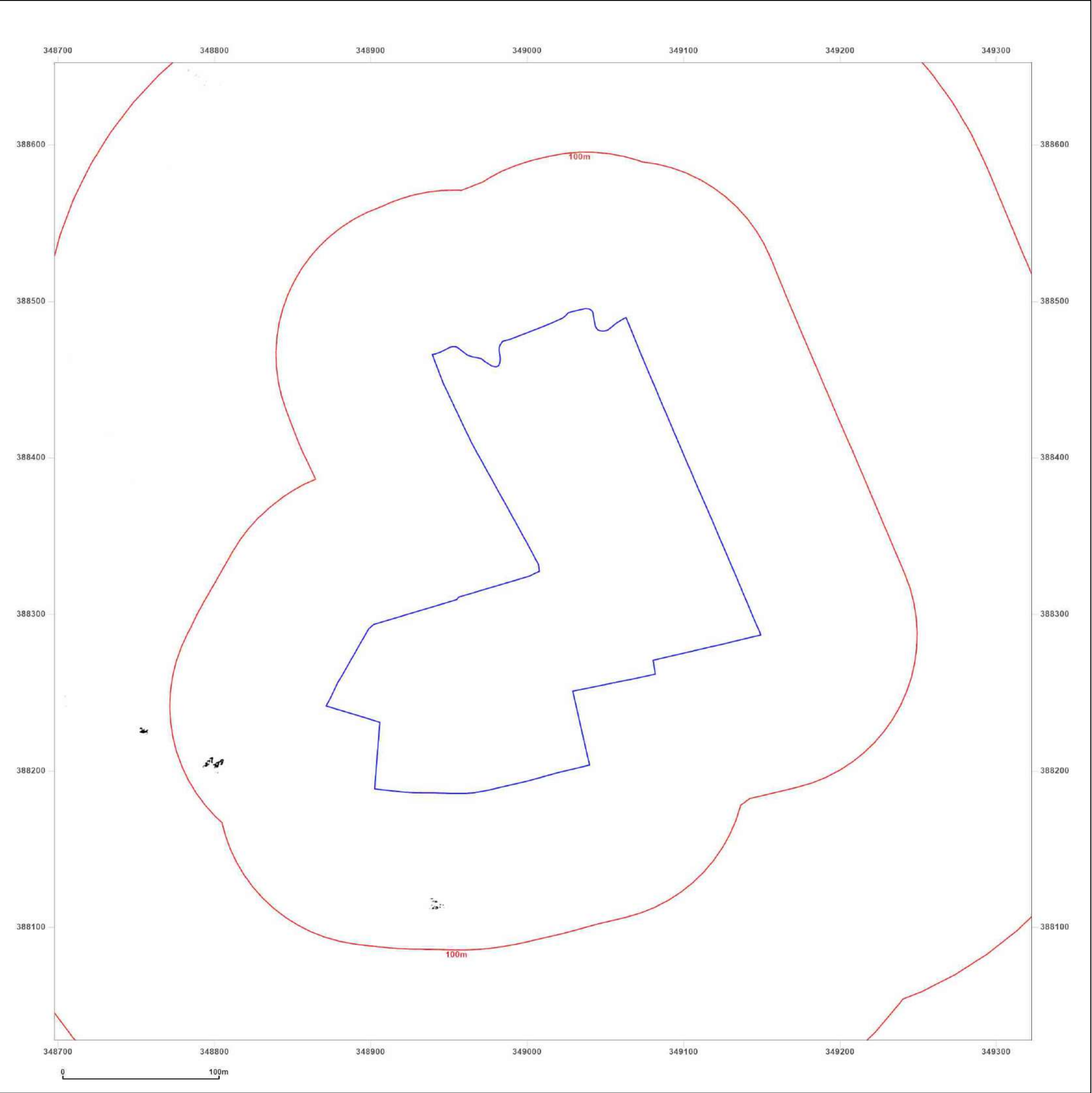
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Report Ref: BRO-BFV-YAU-VRM-3RE_2500
Grid Ref: 349010, 388340

Map Name: National Grid

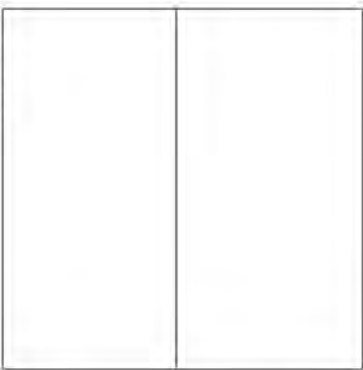
Map date: 1975

Scale: 1:2,500

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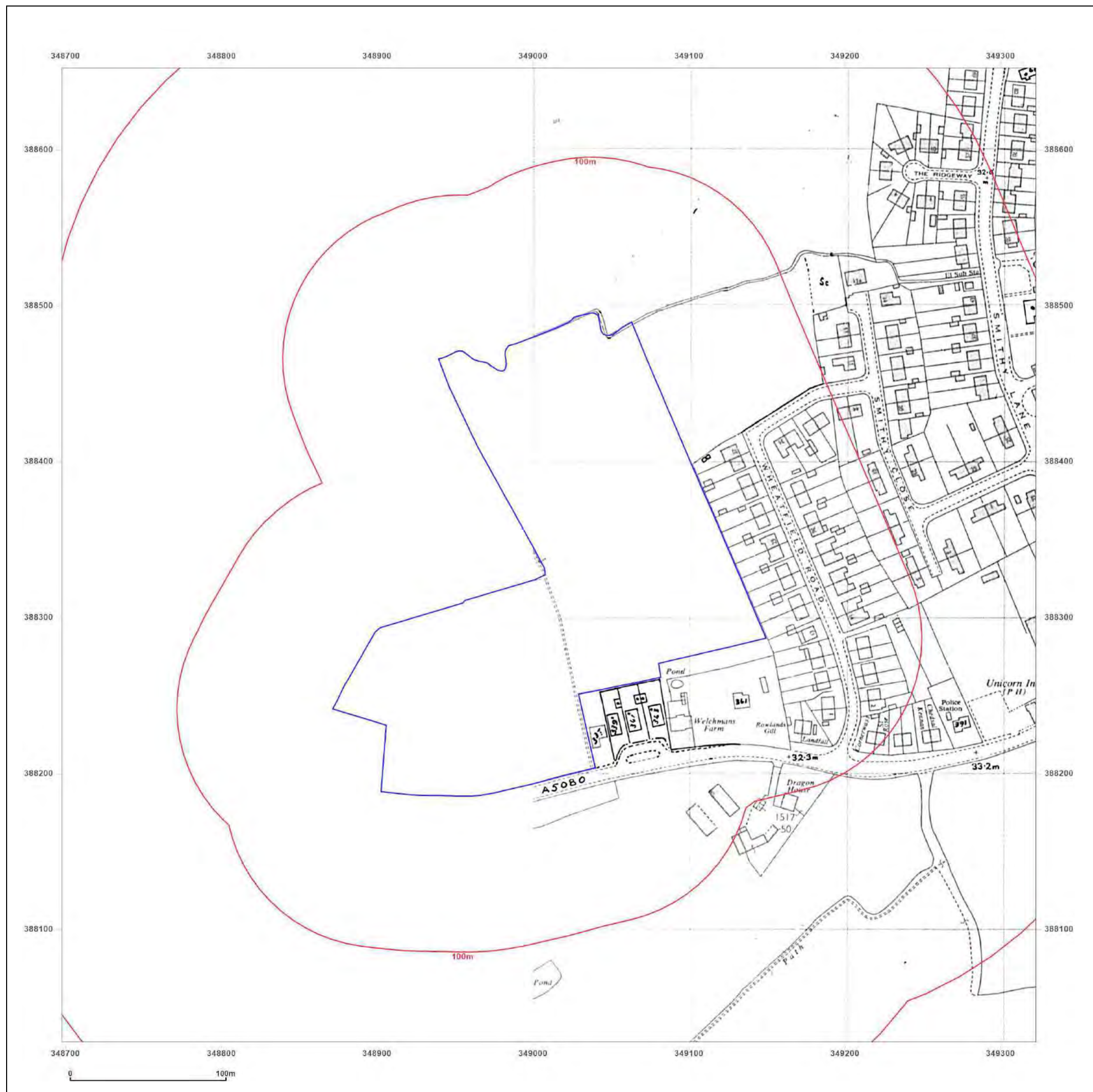


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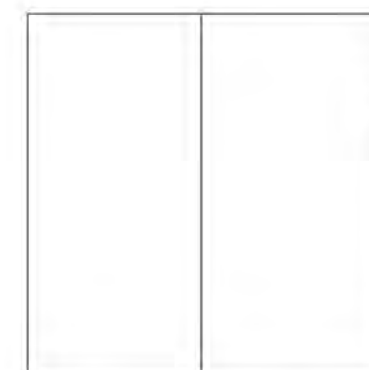
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Report Ref: BRO-BFV-YAU-VRM-3RE_2500
Grid Ref: 349010, 388340

Map Name: National Grid

Map date: 1982

Scale: 1:2,500

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Surveyed 1982
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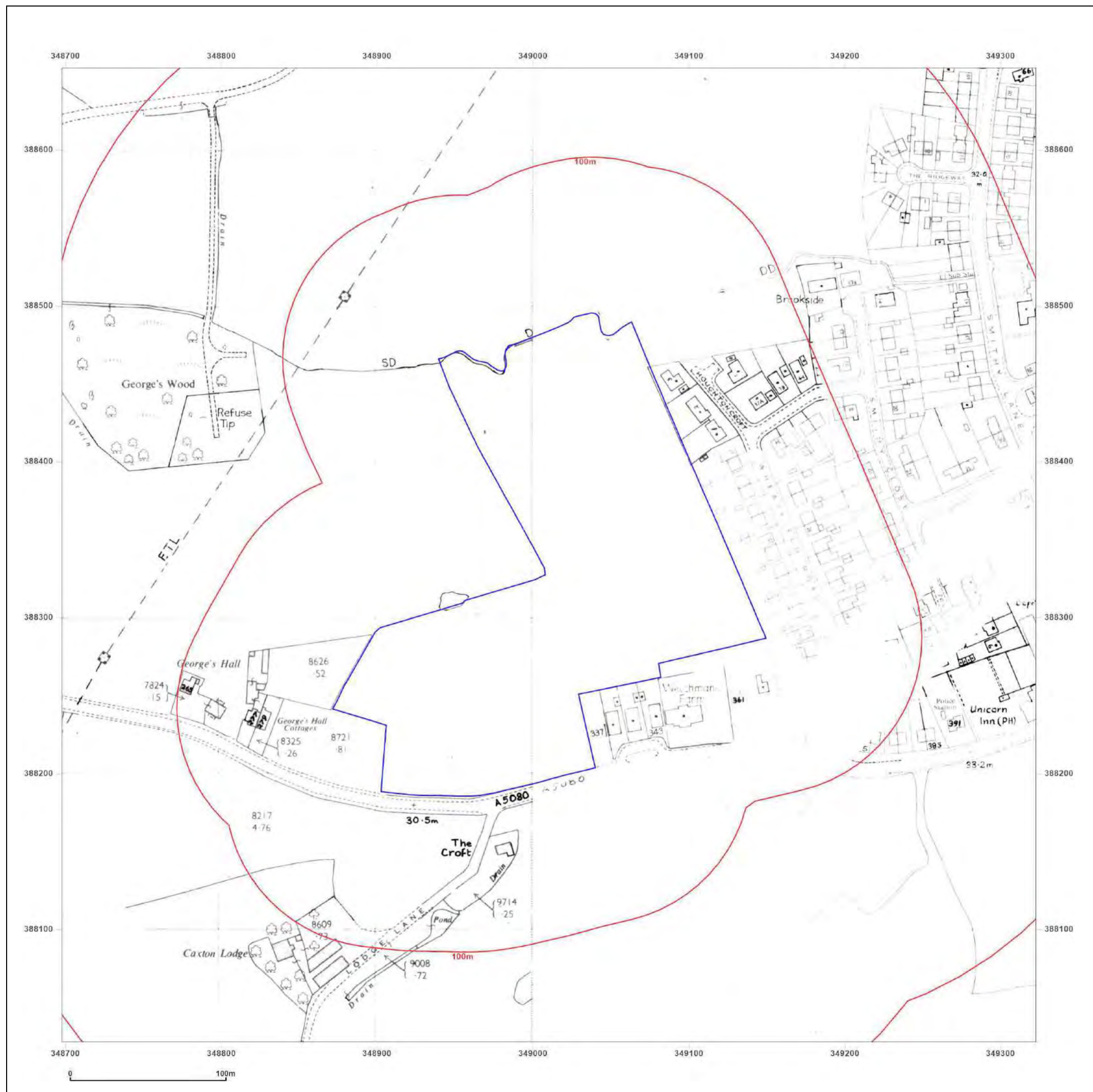


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Client Ref: C6114-6363-SD
Report Ref: BRO-BFV-YAU-VRM-3RE_2500
Grid Ref: 349010, 388340

Map Name: National Grid

Map date: 1989

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1963
Revised 1989
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Revised N/A
Edition N/A
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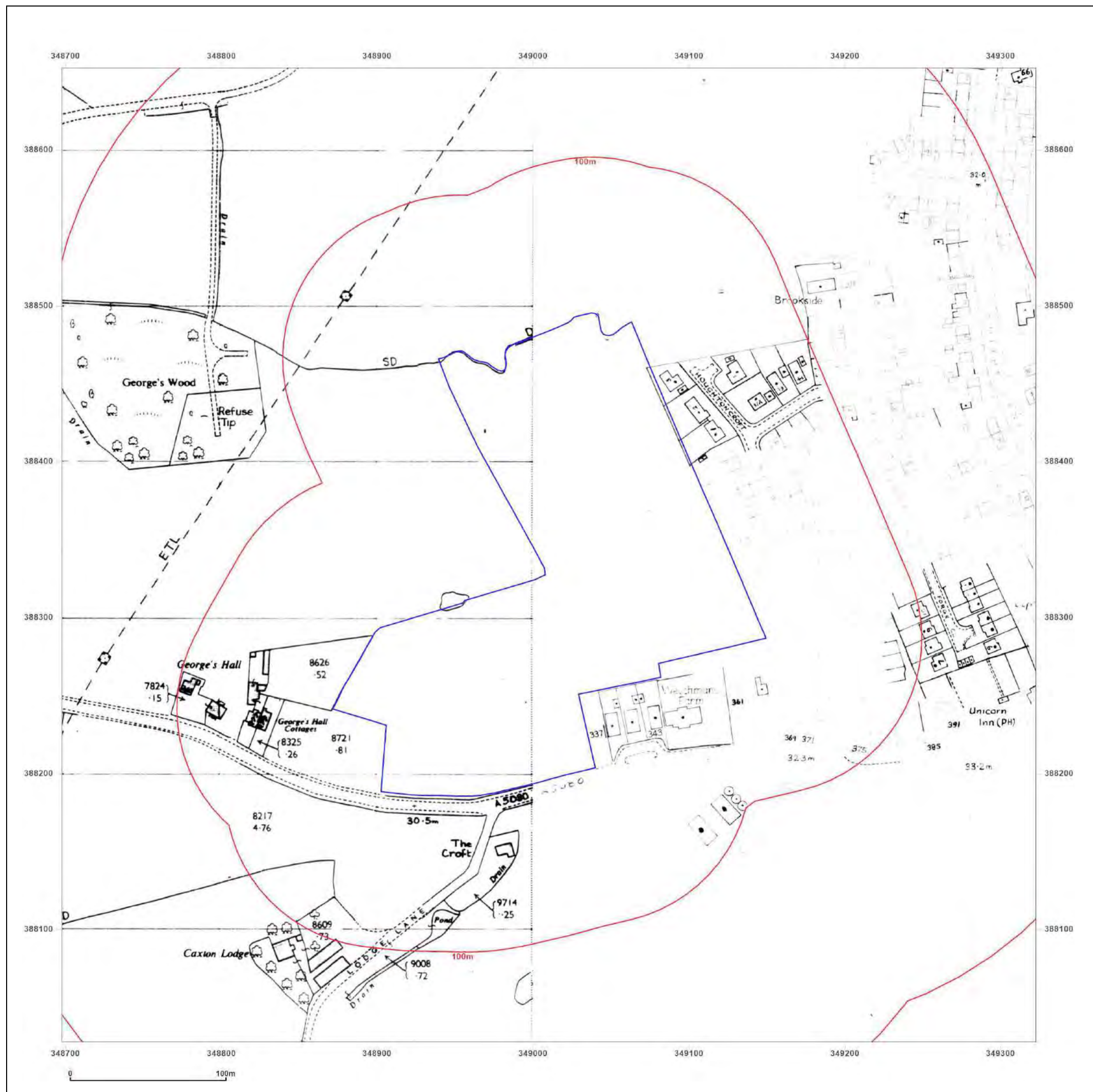


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Client Ref: C6114-6363-SD
Report Ref: BRO-BFV-YAU-VRM-3RE_2500
Grid Ref: 349010, 388340

Map Name: National Grid

Map date: 1989-1990

Scale: 1:2,500

Printed at: 1:2,500



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Client Ref: C6114-6363-SD
Report Ref: BRO-BFV-YAU-VRM-3RE_2500
Grid Ref: 349010, 388340

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

Printed at: 1:2,500



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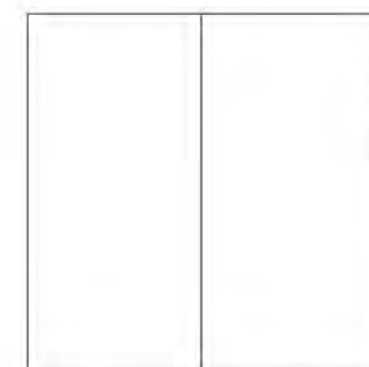
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Report Ref: BRO-BFV-YAU-VRM-3RE_2500
Grid Ref: 349010, 388340

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

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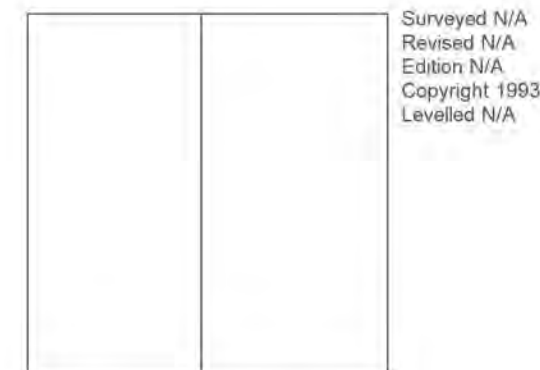
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Report Ref: BRO-BFV-YAU-VRM-3RE_2500
Grid Ref: 349010, 388340

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

Printed at: 1:2,500



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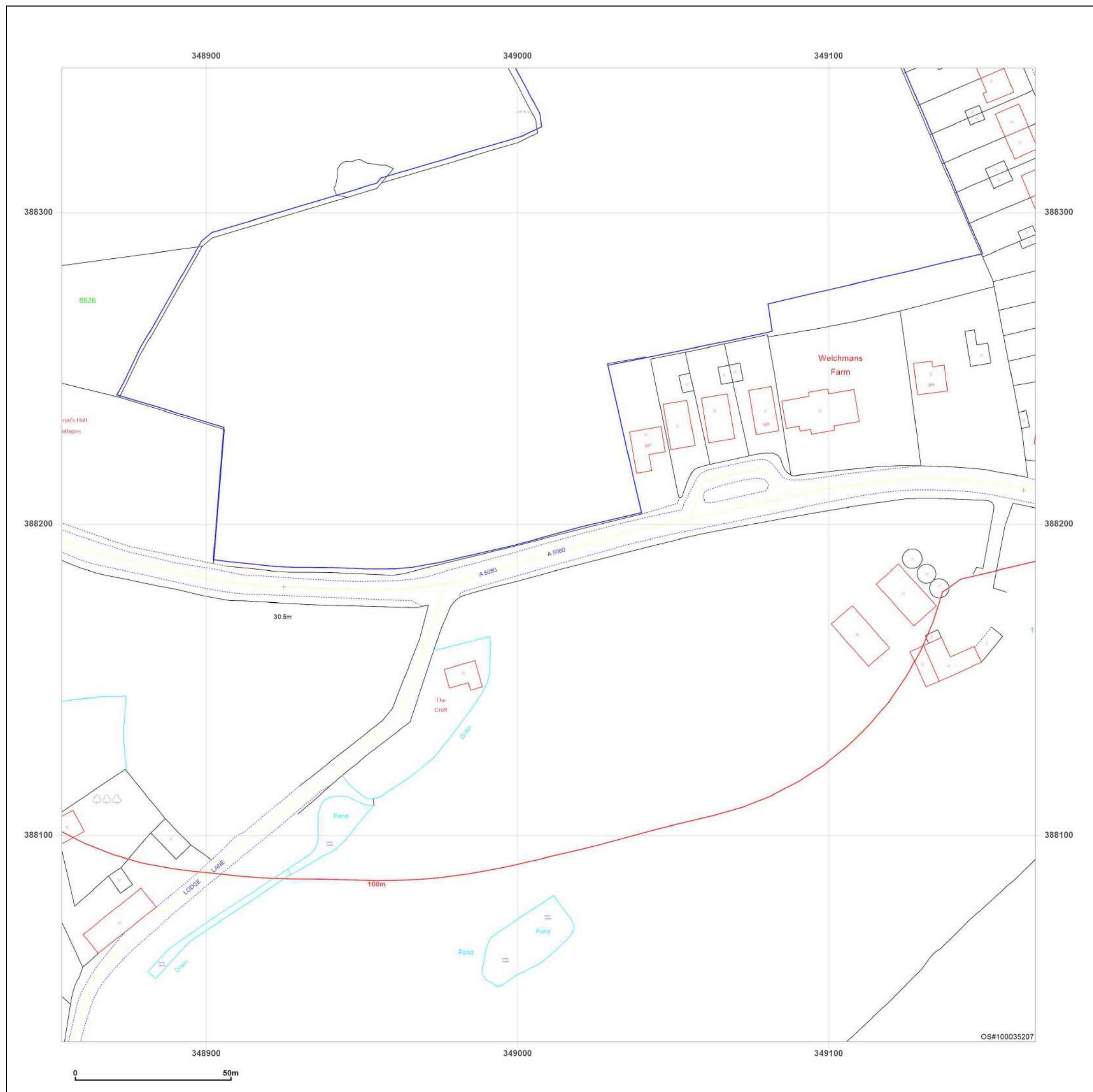


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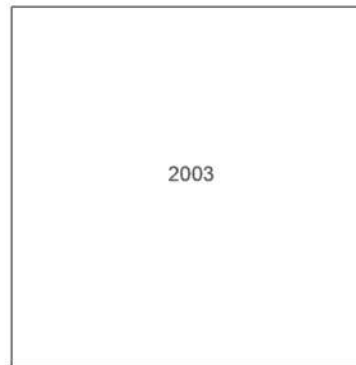
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Report Ref: BRO-BFV-YAU-VRM-3RE_Landline_1_1
Grid Ref: 349010, 388190

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250

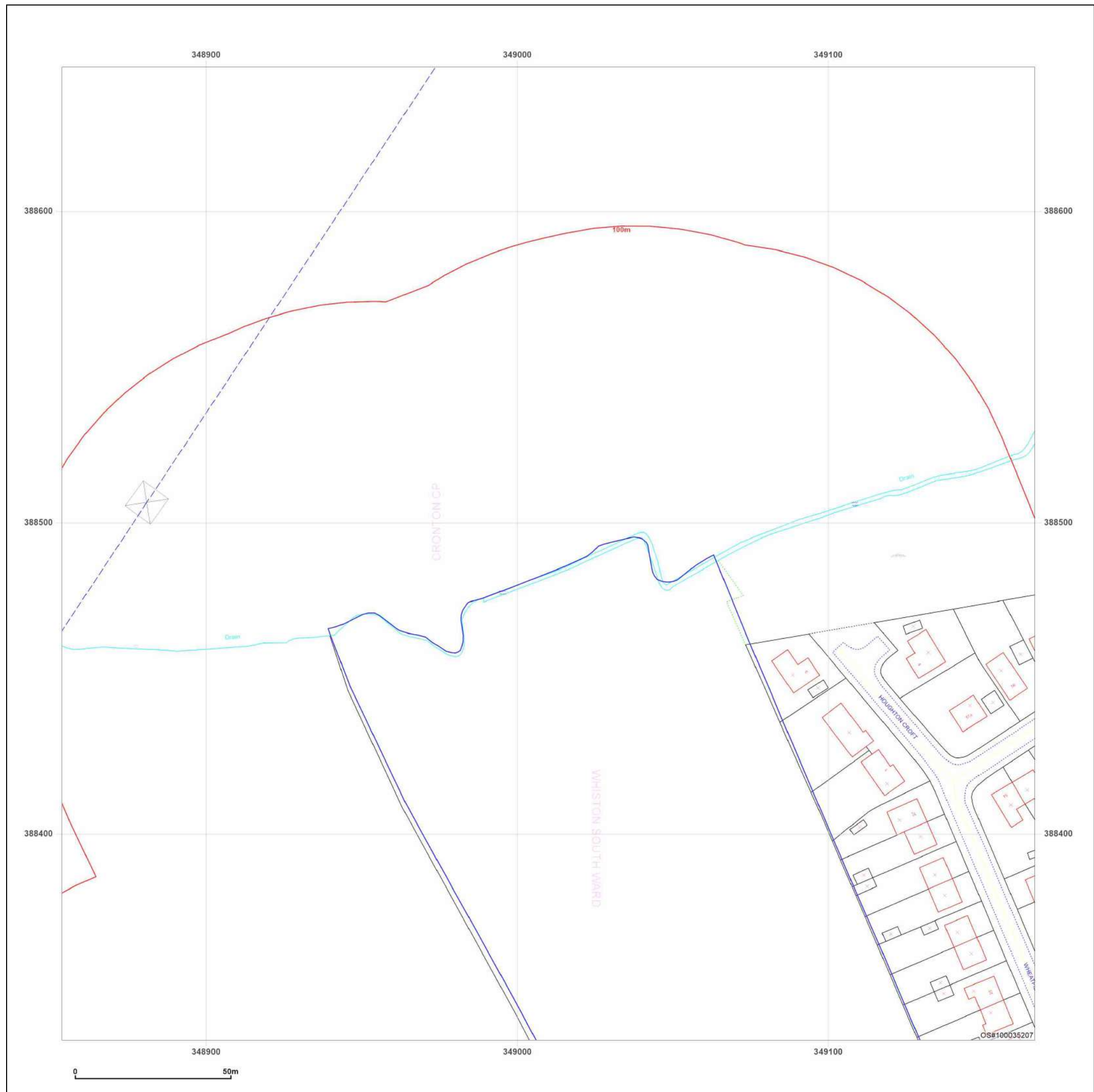


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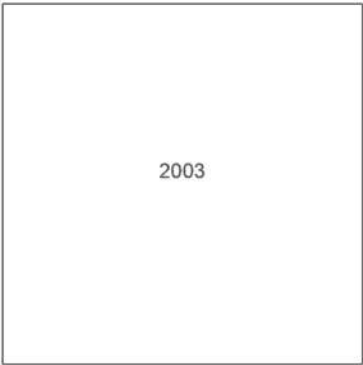
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Report Ref: BRO-BFV-YAU-VRM-3RE_Landline_1_2
Grid Ref: 349010, 388490

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250

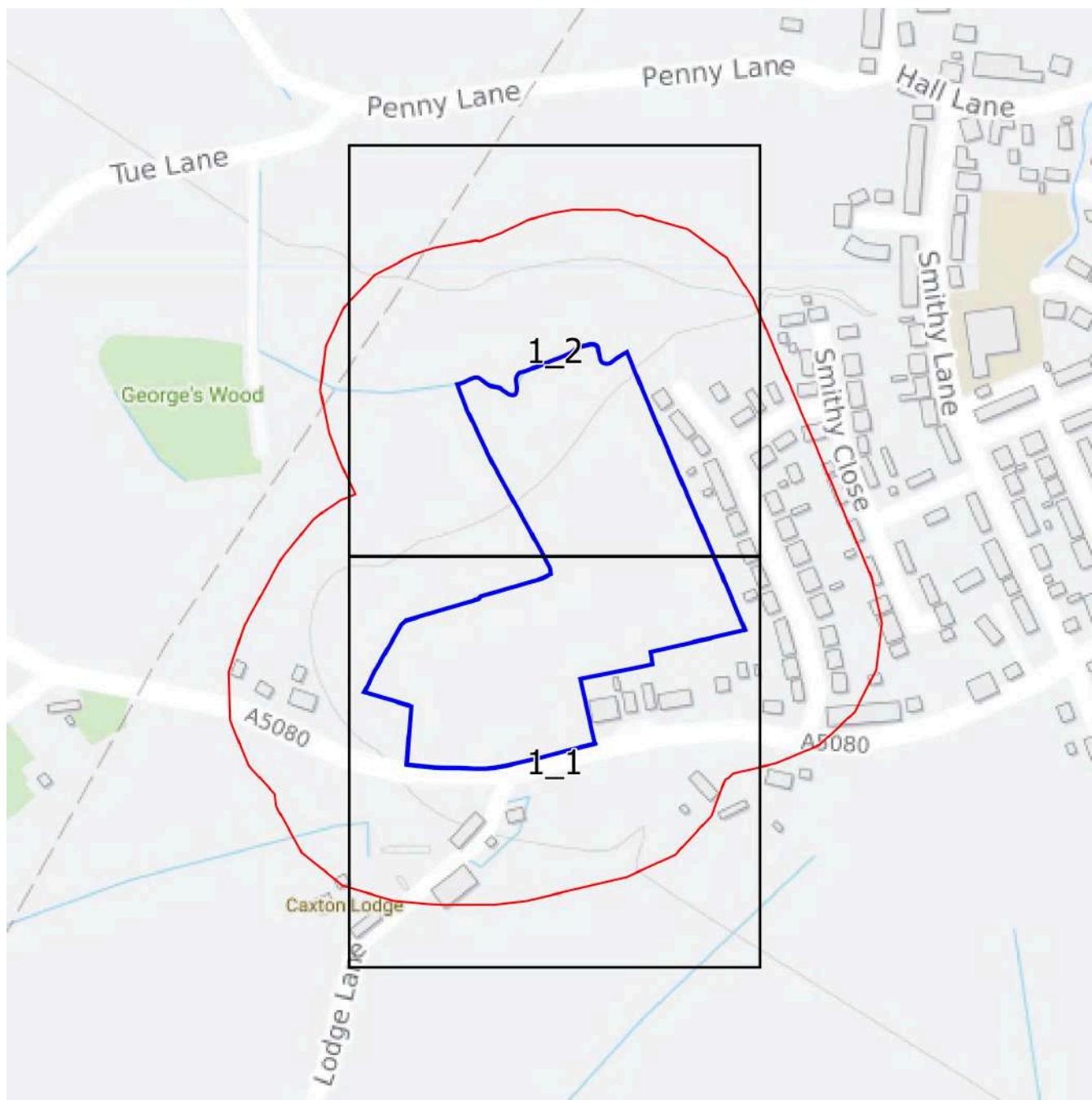


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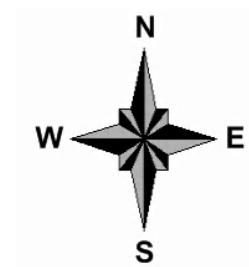
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Groundsure
INSIGHTS

Landline Scale Grid Index



APPENDIX C

Geo-Environmental Data Report

WHEATFIELD ROAD, CRANTON, KNOWSLEY, WA8 5BU

Order Details

Date: 15/04/2025
Your ref: C6114-6363-SD
Our Ref: BRO-4EB-WJC-SFW-1IK

Site Details

Location: 349014 388328
Area: 4.31 ha
Authority: [Knowsley Metropolitan Borough Council](#)
↗



Summary of findings

[p. 2 >](#) **Aerial image**

[p. 9 >](#)

OS MasterMap site plan

[p.14 >](#) **Insight User Guide** ↗

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	0	0	5	4	-
16 >	1.2 >	Historical tanks >	0	0	2	2	-
16 >	1.3 >	Historical energy features >	0	0	6	2	-
17	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	Historical garages	0	0	0	0	-
18	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
19 >	2.1 >	Historical industrial land uses >	0	0	5	4	-
20 >	2.2 >	Historical tanks >	0	0	4	7	-
21 >	2.3 >	Historical energy features >	0	0	11	6	-
22	2.4	Historical petrol stations	0	0	0	0	-
22	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
23	3.1	Active or recent landfill	0	0	0	0	-
23	3.2	Historical landfill (BGS records)	0	0	0	0	-
24	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
24 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	1	0	-
24	3.5	Historical waste sites	0	0	0	0	-
24	3.6	Licensed waste sites	0	0	0	0	-
25 >	3.7 >	Waste exemptions >	0	0	12	1	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
27 >	4.1 >	Recent industrial land uses >	0	0	6	-	-
28	4.2	Current or recent petrol stations	0	0	0	0	-
28	4.3	Electricity cables	0	0	0	0	-
28	4.4	Gas pipelines	0	0	0	0	-
28	4.5	Sites determined as Contaminated Land	0	0	0	0	-



29	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
29	4.7	Regulated explosive sites	0	0	0	0	-
29	4.8	Hazardous substance storage/usage	0	0	0	0	-
29	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
29	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
30	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
30	4.12	Radioactive Substance Authorisations	0	0	0	0	-
30 >	4.13 >	<u>Licensed Discharges to controlled waters ></u>	0	0	4	0	-
31	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
31	4.15	Pollutant release to public sewer	0	0	0	0	-
31	4.16	List 1 Dangerous Substances	0	0	0	0	-
31	4.17	List 2 Dangerous Substances	0	0	0	0	-
32	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
32	4.19	Pollution inventory substances	0	0	0	0	-
32	4.20	Pollution inventory waste transfers	0	0	0	0	-
32	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	<u>Hydrogeology ></u>	On site	0-50m	50-250m	250-500m	500-2000m
33 >	5.1 >	<u>Superficial aquifer ></u>	Identified (within 500m)				
34 >	5.2 >	<u>Bedrock aquifer ></u>	Identified (within 500m)				
35 >	5.3 >	<u>Groundwater vulnerability ></u>	Identified (within 50m)				
36	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
36	5.5	Groundwater vulnerability- local information	None (within 0m)				
37 >	5.6 >	<u>Groundwater abstractions ></u>	0	0	0	0	17
42	5.7	Surface water abstractions	0	0	0	0	0
42 >	5.8 >	<u>Potable abstractions ></u>	0	0	0	0	10
45 >	5.9 >	<u>Source Protection Zones ></u>	1	0	0	1	-
45	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	<u>Hydrology ></u>	On site	0-50m	50-250m	250-500m	500-2000m
46 >	6.1 >	<u>Water Network (OS MasterMap) ></u>	1	2	8	-	-



47 >	6.2 >	Surface water features >	1	2	4	-	-
48 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
48 >	6.4 >	WFD Surface water bodies >	1	0	0	-	-
49 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
50	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
50	7.2	Historical Flood Events	0	0	0	-	-
50	7.3	Flood Defences	0	0	0	-	-
51	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
51	7.5	Flood Storage Areas	0	0	0	-	-
52	7.6	Flood Zone 2	None (within 50m)				
52	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
53 >	8.1 >	Surface water flooding >	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
55 >	9.1 >	Groundwater flooding >	Low (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
56	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
57	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
57	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
57	10.4	Special Protection Areas (SPA)	0	0	0	0	0
57	10.5	National Nature Reserves (NNR)	0	0	0	0	0
58	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
58	10.7	Designated Ancient Woodland	0	0	0	0	0
58	10.8	Biosphere Reserves	0	0	0	0	0
58	10.9	Forest Parks	0	0	0	0	0
59	10.10	Marine Conservation Zones	0	0	0	0	0
59 >	10.11 >	Green Belt >	1	0	0	0	2
59	10.12	Proposed Ramsar sites	0	0	0	0	0



59	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
60	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
60	10.15	Nitrate Sensitive Areas	0	0	0	0	0
60 >	10.16 >	Nitrate Vulnerable Zones >	1	0	0	0	1
61 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
62	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
63	11.1	World Heritage Sites	0	0	0	-	-
64	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
64	11.3	National Parks	0	0	0	-	-
64 >	11.4 >	Listed Buildings >	0	0	1	-	-
65	11.5	Conservation Areas	0	0	0	-	-
65	11.6	Scheduled Ancient Monuments	0	0	0	-	-
65	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
66 >	12.1 >	Agricultural Land Classification >	Grade 2 (within 250m)				
67	12.2	Open Access Land	0	0	0	-	-
67	12.3	Tree Felling Licences	0	0	0	-	-
67	12.4	Environmental Stewardship Schemes	0	0	0	-	-
68	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
69 >	13.1 >	Priority Habitat Inventory >	0	0	2	-	-
70	13.2	Habitat Networks	0	0	0	-	-
70	13.3	Open Mosaic Habitat	0	0	0	-	-
70	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
71 >	14.1 >	10k Availability >	Identified (within 500m)				
72	14.2	Artificial and made ground (10k)	0	0	0	0	-
73 >	14.3 >	Superficial geology (10k) >	1	0	0	0	-

74	14.4	Landslip (10k)	0	0	0	0	-
75 >	14.5 >	Bedrock geology (10k) >	1	2	0	0	-
76 >	14.6 >	Bedrock faults and other linear features (10k) >	0	2	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
77 >	15.1 >	50k Availability >	Identified (within 500m)				
78	15.2	Artificial and made ground (50k)	0	0	0	0	-
78	15.3	Artificial ground permeability (50k)	0	0	-	-	-
79 >	15.4 >	Superficial geology (50k) >	1	0	0	0	-
80 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
80	15.6	Landslip (50k)	0	0	0	0	-
80	15.7	Landslip permeability (50k)	None (within 50m)				
81 >	15.8 >	Bedrock geology (50k) >	1	0	2	0	-
82 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
82 >	15.10 >	Bedrock faults and other linear features (50k) >	0	0	3	0	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
83 >	16.1 >	BGS Boreholes >	2	1	4	-	-
Page	Section	Natural ground subsidence >					
85 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
86 >	17.2 >	Running sands >	Very low (within 50m)				
87 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
88 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
89 >	17.5 >	Landslides >	Very low (within 50m)				
90 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
92	18.1	BritPits	0	0	0	0	-
93 >	18.2 >	Surface ground workings >	0	5	15	-	-
94	18.3	Underground workings	0	0	0	0	0
94	18.4	Underground mining extents	0	0	0	0	-
94	18.5	Historical Mineral Planning Areas	0	0	0	0	-



94	18.6	Non-coal mining	0	0	0	0	0
94	18.7	JPB mining areas	None (within 0m)				
95	18.8	The Coal Authority non-coal mining	0	0	0	0	-
95	18.9	Researched mining	0	0	0	0	-
95	18.10	Mining record office plans	0	0	0	0	-
95	18.11	BGS mine plans	0	0	0	0	-
96 >	18.12 >	Coal mining >	Identified (within 0m)				
96	18.13	Brine areas	None (within 0m)				
96	18.14	Gypsum areas	None (within 0m)				
96	18.15	Tin mining	None (within 0m)				
96	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
97	19.1	Natural cavities	0	0	0	0	-
97	19.2	Mining cavities	0	0	0	0	0
97	19.3	Reported recent incidents	0	0	0	0	-
97	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
99 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
101 >	21.1 >	BGS Estimated Background Soil Chemistry >	3	3	-	-	-
101	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
102	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
103	22.1	Underground railways (London)	0	0	0	-	-
103	22.2	Underground railways (Non-London)	0	0	0	-	-
103	22.3	Railway tunnels	0	0	0	-	-
103	22.4	Historical railway and tunnel features	0	0	0	-	-
103	22.5	Royal Mail tunnels	0	0	0	-	-
104	22.6	Historical railways	0	0	0	-	-



104	22.7	Railways	0	0	0	-	-
104	22.8	Crossrail 2	0	0	0	0	-
104	22.9	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 28/09/2022

Site Area: 4.31ha



Recent site history - 2019 aerial photograph



Capture Date: 22/04/2019

Site Area: 4.31ha



Recent site history - 2009 aerial photograph



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Capture Date: 24/06/2009

Site Area: 4.31ha



Recent site history - 2005 aerial photograph



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Capture Date: 02/09/2005

Site Area: 4.31ha



Recent site history - 2000 aerial photograph



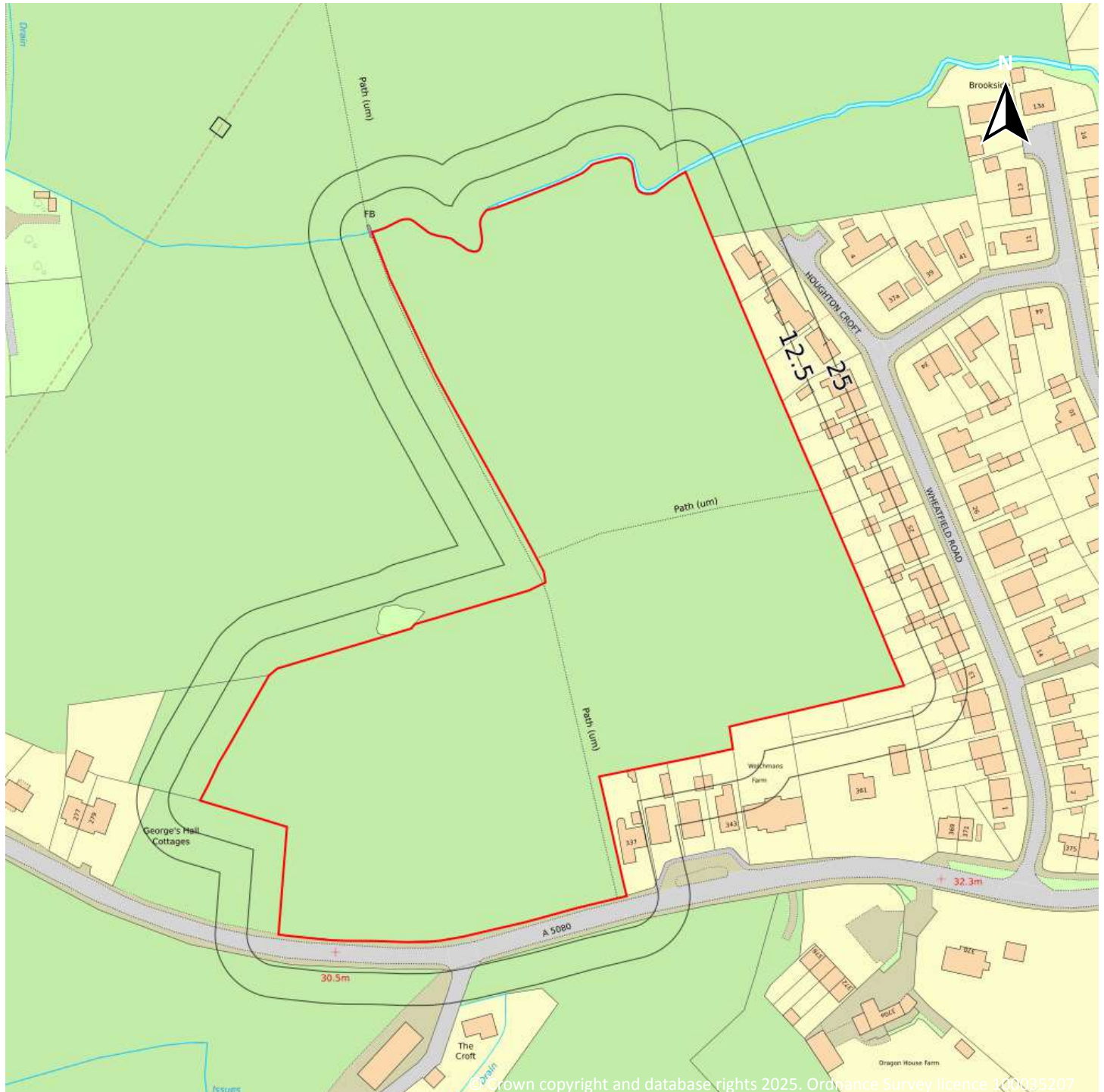
Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2025. All Rights Reserved

Capture Date: 21/07/2000

Site Area: 4.31ha



OS MasterMap site plan



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Site Area: 4.31ha



1 Past land use



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features

1.1 Historical industrial land uses

Records within 500m

9

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
B	107m E	Police Station	1989	913033



ID	Location	Land use	Dates present	Group ID
B	107m E	Police Station	1977	946038
2	112m NW	Refuse Heap	1989	810125
A	116m SE	Pump	1849	834641
3	123m SW	Pump	1849	834639
4	256m E	Pump	1849	834637
E	266m W	Pumping Station	1977	885708
E	266m W	Pumping Station	1989	999543
F	341m NE	Unspecified Tanks	1989	819894

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

4

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
A	82m SE	Tanks	1990 - 1993	144285
1	104m NE	Unspecified Tank	1959	118999
F	334m NE	Tanks	1989 - 1993	131774
5	414m SW	Tanks	1989 - 1993	126513

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

8

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or



succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
C	200m NE	Electricity Substation	1993	85677
C	207m NE	Electricity Substation	1969	75856
C	209m NE	Electricity Substation	1982	77719
C	209m NE	Electricity Substation	1989 - 1990	78869
D	210m E	Electricity Substation	1993	87621
D	214m E	Electricity Substation	1982 - 1990	90027
G	401m NE	Electricity Substation	1969 - 1990	85205
G	401m NE	Electricity Substation	1993	77180

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m

0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.



1.6 Historical military land

Records within 500m

0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.



2 Past land use - un-grouped



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features

2.1 Historical industrial land uses

Records within 500m

9

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 19](#) >

ID	Location	Land Use	Date	Group ID
B	107m E	Police Station	1977	946038
B	107m E	Police Station	1989	913033
2	112m NW	Refuse Heap	1989	810125



ID	Location	Land Use	Date	Group ID
A	116m SE	Pump	1849	834641
3	123m SW	Pump	1849	834639
4	256m E	Pump	1849	834637
E	266m W	Pumping Station	1977	885708
E	266m W	Pumping Station	1989	999543
F	341m NE	Unspecified Tanks	1989	819894

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

11

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 19](#) >

ID	Location	Land Use	Date	Group ID
A	82m SE	Tanks	1990	144285
A	83m SE	Tanks	1993	144285
A	83m SE	Tanks	1993	144285
1	104m NE	Unspecified Tank	1959	118999
F	334m NE	Tanks	1993	131774
F	334m NE	Tanks	1993	131774
F	334m NE	Tanks	1989	131774
F	334m NE	Tanks	1990	131774
H	414m SW	Tanks	1993	126513
H	417m SW	Tanks	1989	126513
H	417m SW	Tanks	1989	126513

This data is sourced from Ordnance Survey / Groundsure.



2.3 Historical energy features

Records within 500m

17

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 19](#) >

ID	Location	Land Use	Date	Group ID
C	200m NE	Electricity Substation	1993	85677
C	203m NE	Electricity Substation	1993	85677
C	207m NE	Electricity Substation	1969	75856
C	209m NE	Electricity Substation	1982	77719
C	209m NE	Electricity Substation	1989	78869
C	209m NE	Electricity Substation	1990	78869
D	210m E	Electricity Substation	1993	87621
D	210m E	Electricity Substation	1993	87621
D	214m E	Electricity Substation	1982	90027
D	214m E	Electricity Substation	1989	90027
D	214m E	Electricity Substation	1990	90027
G	401m NE	Electricity Substation	1969	85205
G	401m NE	Electricity Substation	1993	77180
G	401m NE	Electricity Substation	1993	77180
G	403m NE	Electricity Substation	1982	85205
G	403m NE	Electricity Substation	1989	85205
G	403m NE	Electricity Substation	1990	85205

This data is sourced from Ordnance Survey / Groundsure.



2.4 Historical petrol stations

Records within 500m

0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m

0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (EA/NRW)
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m

0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m

0

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m

1

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

Features are displayed on the Waste and landfill map on [page 23 >](#)

ID	Location	Details		
1	194m W	Site Address: George's Hall Farm, Cranton, Knowsley, Merseyside Licence Holder Address: 1st Floor, Midland Bank Chambers, Ulverston, Cumbria	Waste Licence: Yes Site Reference: 135A/01, GDO M143 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 05/09/1984 Licence Surrender: -	Operator: Emitcart Limited Licence Holder: Emitcourt Limited First Recorded 01/10/1984 Last Recorded: 01/09/1985

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m

0

Waste site records derived from Local Authority planning records and high detail historical mapping.

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.

3.6 Licensed waste sites

Records within 500m

0

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.



3.7 Waste exemptions

Records within 500m	13
----------------------------	-----------

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on [page 23 >](#)

ID	Location	Site	Reference	Category	Sub-Category	Description
A	68m SW	Lodge Lane Farm Lodge Lane Wa8 4qa	EPR/CE5751J W/A001	Disposing of waste exemption	Agricultural waste only	Deposit of waste from dredging of inland waters
A	68m SW	Lodge Lane Farm Lodge Lane Wa8 4qa	EPR/CE5751J W/A001	Storing waste exemption	Agricultural waste only	Storage of waste in secure containers
A	68m SW	Lodge Lane Farm Lodge Lane Wa8 4qa	EPR/CE5751J W/A001	Storing waste exemption	Agricultural waste only	Storage of waste in a secure place
A	68m SW	Lodge Lane Farm Lodge Lane Wa8 4qa	EPR/CE5751J W/A001	Using waste exemption	Agricultural waste only	Use of waste for a specified purpose
A	68m SW	Lodge Lane Farm Lodge Lane Wa8 4qa	EPR/CE5751J W/A001	Disposing of waste exemption	Agricultural waste only	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
A	68m SW	Lodge Lane Farm Lodge Lane Wa8 4qa	EPR/CE5751J W/A001	Disposing of waste exemption	Agricultural waste only	Burning waste in the open
B	120m SW	Lodge Lane Farm, Lodge Lane, Widnes, Wa8 4qa	WEX018669	Using waste exemption	On a farm	Use of waste for a specified purpose
B	120m SW	Lodge Lane Farm, Lodge Lane, Widnes, Wa8 4qa	WEX018669	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
B	120m SW	Lodge Lane Farm, Lodge Lane, Widnes, Wa8 4qa	WEX018669	Storing waste exemption	On a farm	Storage of waste in secure containers
B	120m SW	Lodge Lane Farm, Lodge Lane, Widnes, Wa8 4qa	WEX018669	Storing waste exemption	On a farm	Storage of waste in a secure place
B	120m SW	Lodge Lane Farm, Lodge Lane, Widnes, Wa8 4qa	WEX018669	Disposing of waste exemption	On a farm	Burning waste in the open
B	120m SW	Lodge Lane Farm, Lodge Lane, Widnes, Wa8 4qa	WEX018669	Disposing of waste exemption	On a farm	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice



ID	Location	Site	Reference	Category	Sub-Category	Description
2	481m E	Lodge Lane Farm Lodge Lane Cranton Cheshire Wa8 4qa	EPR/VE5142LL /A001	Storing waste exemption	Non- agricultural waste only	Storage of sludge

This data is sourced from the Environment Agency and Natural Resources Wales.



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- Licensed Discharges to controlled waters

4.1 Recent industrial land uses

Records within 250m

6

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 27 >](#)

ID	Location	Company	Address	Activity	Category
1	73m NW	Pylon	Merseyside, WA8	Electrical Features	Infrastructure and Facilities
2	149m W	Pylon	Merseyside, WA8	Electrical Features	Infrastructure and Facilities



ID	Location	Company	Address	Activity	Category
A	188m W	Mast (Telecommu nication)	Merseyside, WA8	Telecommunications Features	Infrastructure and Facilities
3	207m NE	Electricity Sub Station	Merseyside, WA8	Electrical Features	Infrastructure and Facilities
4	212m E	Electricity Sub Station	Merseyside, WA8	Electrical Features	Infrastructure and Facilities
6	246m N	Pylon	Merseyside, WA8	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0
----------------------------	----------

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0
----------------------------	----------

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0
----------------------------	----------

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0
----------------------------	----------

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m**0**

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m**0**

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m**0**

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m**0**

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.10 Licensed industrial activities (Part A(1))

Records within 500m**0**

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from the Environment Agency and Natural Resources Wales.



4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m**0**

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m**0**

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.13 Licensed Discharges to controlled waters

Records within 500m**4**

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on [page 27 >](#)

ID	Location	Address	Details	
A	140m NW	CRONTONSTW,TU ELANE,CRONTON,C HESHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 016930120 Permit Version: 3 Receiving Water: DOG CLOG BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 26/06/1985 Revocation Date: 21/06/1989
A	140m NW	CRONTONSTW,TU ELANE,CRONTON,C HESHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 016930120 Permit Version: 2 Receiving Water: DOG CLOG BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 31/01/1985 Revocation Date: 25/06/1985
A	140m NW	CRONTONSTW,TU ELANE,CRONTON,C HESHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 016930120 Permit Version: 1 Receiving Water: DOG CLOG BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 12/01/1980 Revocation Date: 30/01/1985



ID	Location	Address	Details	
5	242m NW	CRONTONSTW,TU ELANE,CRONTON,C HESHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 016930295 Permit Version: 1 Receiving Water: DOG CLOG BROOK	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: - Effective Date: 31/10/1981 Revocation Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0
----------------------------	----------

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.15 Pollutant release to public sewer

Records within 500m	0
----------------------------	----------

Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.16 List 1 Dangerous Substances

Records within 500m	0
----------------------------	----------

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 2 Dangerous Substances

Records within 500m	0
----------------------------	----------

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 Pollution Incidents (EA/NRW)

Records within 500m

0

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution inventory substances

Records within 500m

0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.20 Pollution inventory waste transfers

Records within 500m

0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.21 Pollution inventory radioactive waste

Records within 500m

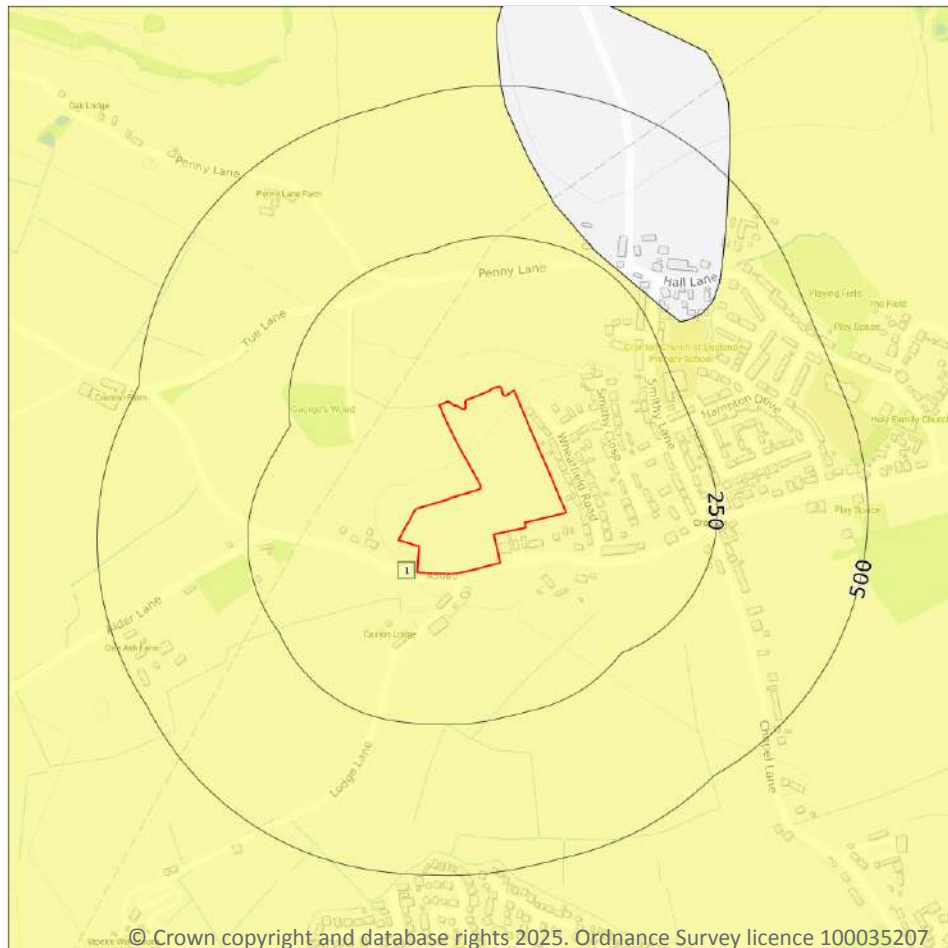
0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.



5 Hydrogeology - Superficial aquifer



5.1 Superficial aquifer

Records within 500m

1

Aquifer status of groundwater held within superficial geology.

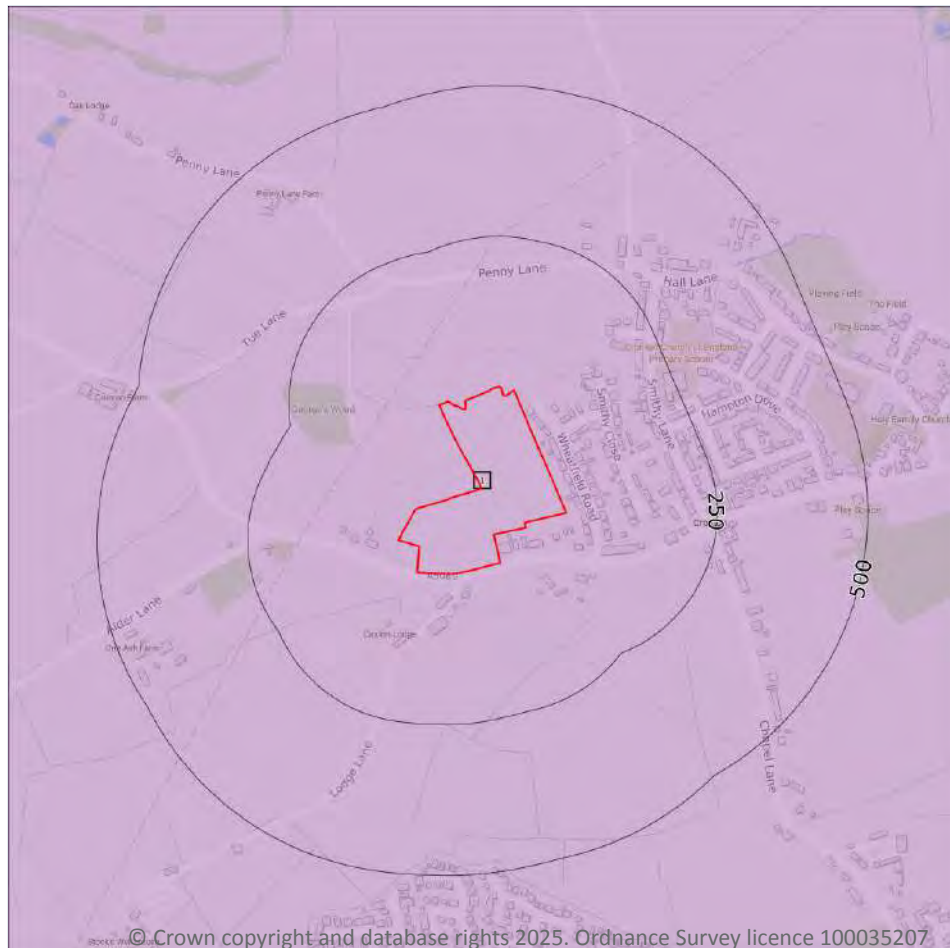
Features are displayed on the Hydrogeology map on [page 33](#) >

ID	Location	Designation	Description
1	On site	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Bedrock aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

1

Aquifer status of groundwater held within bedrock geology.

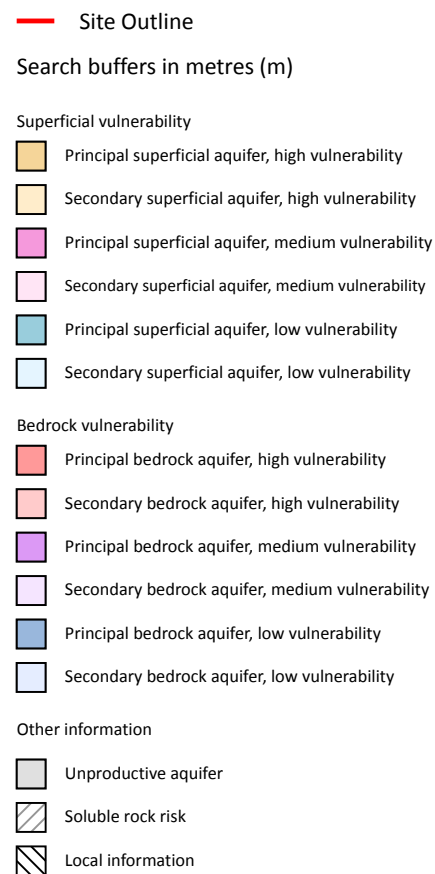
Features are displayed on the Bedrock aquifer map on [page 34 >](#)

ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

2

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on [page 35](#) >



ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300- 550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Principal Flow mechanism: Intergranular
2	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300- 550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0
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This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

This data is sourced from the British Geological Survey and the Environment Agency.

5.5 Groundwater vulnerability- local information

Records on site	0
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This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk ↗.

This data is sourced from the British Geological Survey and the Environment Agency.

Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (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
- Source Protection Zone 1c
Inner catchment - confined aquifer
- Source Protection Zone 2c
Outer catchment - confined aquifer
- Source Protection Zone 3c
Total catchment - confined aquifer
- Drinking water abstraction licences
Polygon features
- Drinking water abstraction licences
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m

17

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 37 >](#)

ID	Location	Details	
-	984m SW	Status: Active Licence No: 2569028009 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: BOREHOLES (3) AT STOCKSWELL PUMPING STATION, WHISTON Data Type: Point Name: United Utilities Water Ltd Easting: 348200 Northing: 387500	Annual Volume (m ³): 3360000 Max Daily Volume (m ³): 10900 Original Application No: 1604 Original Start Date: 23/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/09/2002 Version End Date: -
-	984m SW	Status: Historical Licence No: 2569028009 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: "BOREHOLES (3) AT STOCKSWELL PUMPING STATION, WHISTON" Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 348200 Northing: 387500	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/09/2002 Version End Date: -
-	1040m W	Status: Active Licence No: 2569028024R01 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT ALDER LANE, CRANTON, WIDNES Data Type: Point Name: MORPHET Easting: 347880 Northing: 387926	Annual Volume (m ³): 34000 Max Daily Volume (m ³): 110 Original Application No: NPS/WR/017518 Original Start Date: 01/04/2015 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 01/04/2015 Version End Date: -
-	1040m W	Status: Active Licence No: 2569028024R01 Details: Water Bottling Direct Source: Ground Water - North West Region Point: BOREHOLE AT ALDER LANE, CRANTON, WIDNES Data Type: Point Name: MORPHET Easting: 347880 Northing: 387926	Annual Volume (m ³): 34000 Max Daily Volume (m ³): 110 Original Application No: NPS/WR/017518 Original Start Date: 01/04/2015 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 01/04/2015 Version End Date: -



ID	Location	Details	
-	1040m W	Status: Historical Licence No: 2569028024 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT ALDER LANE, CRANTON, WIDNES Data Type: Point Name: MORPHET Easting: 347880 Northing: 387926	Annual Volume (m ³): 34000 Max Daily Volume (m ³): 108.97 Original Application No: - Original Start Date: 03/12/2002 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 01/02/2007 Version End Date: -
-	1040m W	Status: Historical Licence No: 2569028024 Details: Water Bottling Direct Source: Ground Water - North West Region Point: BOREHOLE AT ALDER LANE, CRANTON, WIDNES Data Type: Point Name: MORPHET Easting: 347880 Northing: 387926	Annual Volume (m ³): 34000 Max Daily Volume (m ³): 108.97 Original Application No: - Original Start Date: 03/12/2002 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 01/02/2007 Version End Date: -
-	1042m W	Status: Historical Licence No: 2569028023 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT ALDER LANE, CRANTON, WIDNES Data Type: Point Name: C S MORPHET & SONS LTD Easting: 347880 Northing: 387920	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: 31/03/2005 Issue No: 1 Version Start Date: 10/03/2000 Version End Date: -
-	1042m W	Status: Historical Licence No: 2569028024 Details: Water Bottling Direct Source: Ground Water - North West Region Point: "BOREHOLE AT ALDER LANE, CRANTON, WIDNES" Data Type: Point Name: C S MORPHET & SONS LTD Easting: 347880 Northing: 387920	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 03/12/2002 Expiry Date: 31-Mar-15 Issue No: 1 Version Start Date: 03/12/2002 Version End Date: -



ID	Location	Details	
-	1042m W	Status: Historical Licence No: 2569028024 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT ALDER LANE, CRANTON, WIDNES" Data Type: Point Name: C S MORPHET & SONS LTD Easting: 347880 Northing: 387920	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 03/12/2002 Expiry Date: 31-Mar-15 Issue No: 1 Version Start Date: 03/12/2002 Version End Date: -
-	1042m W	Status: Historical Licence No: 2569028024 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT ALDER LANE, CRANTON, WIDNES Data Type: Point Name: MORPHET Easting: 347880 Northing: 387920	Annual Volume (m ³): 34000 Max Daily Volume (m ³): 108.97 Original Application No: - Original Start Date: 03/12/2002 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 01/02/2007 Version End Date: -
-	1042m W	Status: Historical Licence No: 2569028024 Details: Water Bottling Direct Source: Ground Water - North West Region Point: BOREHOLE AT ALDER LANE, CRANTON, WIDNES Data Type: Point Name: MORPHET Easting: 347880 Northing: 387920	Annual Volume (m ³): 34000 Max Daily Volume (m ³): 108.97 Original Application No: - Original Start Date: 03/12/2002 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 01/02/2007 Version End Date: -
-	1076m NE	Status: Active Licence No: 2569028010 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: BOREHOLES (2) AT PEX HILL PUMPING STATION, WHISTON, WIDNES Data Type: Point Name: United Utilities Water Ltd Easting: 350100 Northing: 388800	Annual Volume (m ³): 2150000 Max Daily Volume (m ³): 9100 Original Application No: 1607 Original Start Date: 23/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/09/2001 Version End Date: -



ID	Location	Details	
-	1076m NE	Status: Historical Licence No: 2569028010 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: "BOREHOLES (2) AT PEX HILL PUMPING STATION, WHISTON, WIDNES" Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 350100 Northing: 388800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/09/2001 Version End Date: -
-	1908m N	Status: Active Licence No: 2569028021 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: B/HOLE AT BLUNDELLS HILL GOLF CLUB, BLUNDELLS LANE, RAINHILL Data Type: Point Name: BLUNDELLS HILL GOLF CLUB LTD Easting: 348550 Northing: 390340	Annual Volume (m ³): 21966.87 Max Daily Volume (m ³): 191.81 Original Application No: NPS/WR/029993 Original Start Date: 06/09/1994 Expiry Date: - Issue No: 103 Version Start Date: 07/11/2018 Version End Date: -
-	1908m N	Status: Active Licence No: 2569028021 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: B/HOLE AT BLUNDELLS HILL GOLF CLUB, BLUNDELLS LANE, RAINHILL Data Type: Point Name: BLUNDELLS HILL GOLF CLUB LTD Easting: 348550 Northing: 390340	Annual Volume (m ³): 21966.87 Max Daily Volume (m ³): 191.81 Original Application No: NPS/WR/029993 Original Start Date: 06/09/1994 Expiry Date: - Issue No: 103 Version Start Date: 07/11/2018 Version End Date: -
-	1908m N	Status: Historical Licence No: 2569028021 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "B/HOLE AT BLUNDELLS HILL GOLF CLUB, BLUNDELLS LANE, RAINHILL" Data Type: Point Name: BLUNDELLS HILL GOLF CLUB LTD Easting: 348550 Northing: 390340	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 06/09/1994 Expiry Date: - Issue No: 101 Version Start Date: 19/02/2001 Version End Date: -



ID	Location	Details	
-	1908m N	Status: Historical Licence No: 2569028021 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: "B/HOLE AT BLUNDELLS HILL GOLF CLUB, BLUNDELLS LANE, RAINHILL" Data Type: Point Name: BLUNDELLS HILL GOLF CLUB LTD Easting: 348550 Northing: 390340	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 06/09/1994 Expiry Date: - Issue No: 101 Version Start Date: 19/02/2001 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m	0
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Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.8 Potable abstractions

Records within 2000m	10
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Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 37 >](#)

ID	Location	Details	
-	984m SW	Status: Active Licence No: 2569028009 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: BOREHOLES (3) AT STOCKSWELL PUMPING STATION, WHISTON Data Type: Point Name: United Utilities Water Ltd Easting: 348200 Northing: 387500	Annual Volume (m ³): 3360000 Max Daily Volume (m ³): 10900 Original Application No: 1604 Original Start Date: 23/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/09/2002 Version End Date: -



ID	Location	Details	
-	984m SW	Status: Historical Licence No: 2569028009 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: "BOREHOLES (3) AT STOCKSWELL PUMPING STATION, WHISTON" Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 348200 Northing: 387500	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/09/2002 Version End Date: -
-	1040m W	Status: Active Licence No: 2569028024R01 Details: Water Bottling Direct Source: Ground Water - North West Region Point: BOREHOLE AT ALDER LANE, CRANTON, WIDNES Data Type: Point Name: MORPHET Easting: 347880 Northing: 387926	Annual Volume (m ³): 34000 Max Daily Volume (m ³): 110 Original Application No: NPS/WR/017518 Original Start Date: 01/04/2015 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 01/04/2015 Version End Date: -
-	1040m W	Status: Historical Licence No: 2569028024 Details: Water Bottling Direct Source: Ground Water - North West Region Point: BOREHOLE AT ALDER LANE, CRANTON, WIDNES Data Type: Point Name: MORPHET Easting: 347880 Northing: 387926	Annual Volume (m ³): 34000 Max Daily Volume (m ³): 108.97 Original Application No: - Original Start Date: 03/12/2002 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 01/02/2007 Version End Date: -
-	1042m W	Status: Historical Licence No: 2569028024 Details: Water Bottling Direct Source: Ground Water - North West Region Point: "BOREHOLE AT ALDER LANE, CRANTON, WIDNES" Data Type: Point Name: C S MORPHET & SONS LTD Easting: 347880 Northing: 387920	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 03/12/2002 Expiry Date: 31-Mar-15 Issue No: 1 Version Start Date: 03/12/2002 Version End Date: -
-	1042m W	Status: Historical Licence No: 2569028024 Details: Water Bottling Direct Source: Ground Water - North West Region Point: BOREHOLE AT ALDER LANE, CRANTON, WIDNES Data Type: Point Name: MORPHET Easting: 347880 Northing: 387920	Annual Volume (m ³): 34000 Max Daily Volume (m ³): 108.97 Original Application No: - Original Start Date: 03/12/2002 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 01/02/2007 Version End Date: -



ID	Location	Details	
-	1076m NE	Status: Active Licence No: 2569028010 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: BOREHOLES (2) AT PEX HILL PUMPING STATION, WHISTON, WIDNES Data Type: Point Name: United Utilities Water Ltd Easting: 350100 Northing: 388800	Annual Volume (m ³): 2150000 Max Daily Volume (m ³): 9100 Original Application No: 1607 Original Start Date: 23/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/09/2001 Version End Date: -
-	1076m NE	Status: Historical Licence No: 2569028010 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: "BOREHOLES (2) AT PEX HILL PUMPING STATION, WHISTON, WIDNES" Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 350100 Northing: 388800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/09/2001 Version End Date: -
-	1908m N	Status: Active Licence No: 2569028021 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: B/HOLE AT BLUNDELLS HILL GOLF CLUB, BLUNDELLS LANE, RAINHILL Data Type: Point Name: BLUNDELLS HILL GOLF CLUB LTD Easting: 348550 Northing: 390340	Annual Volume (m ³): 21966.87 Max Daily Volume (m ³): 191.81 Original Application No: NPS/WR/029993 Original Start Date: 06/09/1994 Expiry Date: - Issue No: 103 Version Start Date: 07/11/2018 Version End Date: -
-	1908m N	Status: Historical Licence No: 2569028021 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "B/HOLE AT BLUNDELLS HILL GOLF CLUB, BLUNDELLS LANE, RAINHILL" Data Type: Point Name: BLUNDELLS HILL GOLF CLUB LTD Easting: 348550 Northing: 390340	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 06/09/1994 Expiry Date: - Issue No: 101 Version Start Date: 19/02/2001 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.



5.9 Source Protection Zones

Records within 500m**2**

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination. Features are displayed on the Abstractions and Source Protection Zones map on [page 37 >](#)

ID	Location	Type	Description
1	On site	3	Total catchment
2	490m SW	2	Outer catchment

This data is sourced from the Environment Agency and Natural Resources Wales.

5.10 Source Protection Zones (confined aquifer)

Records within 500m**0**

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.



6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m

11

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on [page 46 >](#)

ID	Location	Type of water feature	Ground level	Permanence	Name
1	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
6	1m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	26m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
8	51m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
10	147m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
11	148m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	169m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	189m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
12	216m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
E	241m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	250m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

7

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on [page 46](#) >



This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1
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The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on [page 46](#) >

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
3	On site	River	Dog Clog Brook (including Mill Brook)	GB112069060690	Ditton	Mersey Lower

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified	1
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Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on [page 46](#) >

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
4	On site	River	Dog Clog Brook (including Mill Brook)	GB112069060690 ↗	Moderate	Fail	Moderate	2019

This data is sourced from the Environment Agency and Natural Resources Wales.



6.5 WFD Groundwater bodies

Records on site

1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on [page 46 >](#)

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
5	On site	Lower Mersey Basin and North Merseyside Permo-Triassic Sandstone Aquifers	GB41201G101700 ↗	Poor	Poor	Poor	2019

This data is sourced from the Environment Agency and Natural Resources Wales.



7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m**0**

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m**0**

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m**0**

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.



7.4 Areas Benefiting from Flood Defences

Records within 250m

0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m

0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.



River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.7 Flood Zone 3

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.



8 Surface water flooding



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site

1 in 30 year, Greater than 1.0m

Highest risk within 50m

1 in 30 year, Greater than 1.0m

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on [page 53 >](#)

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

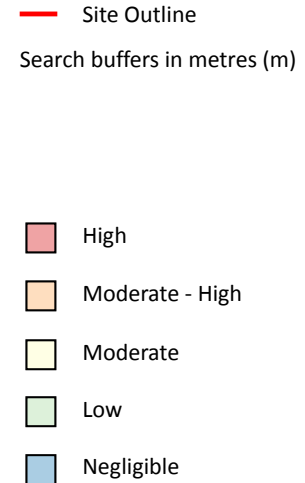
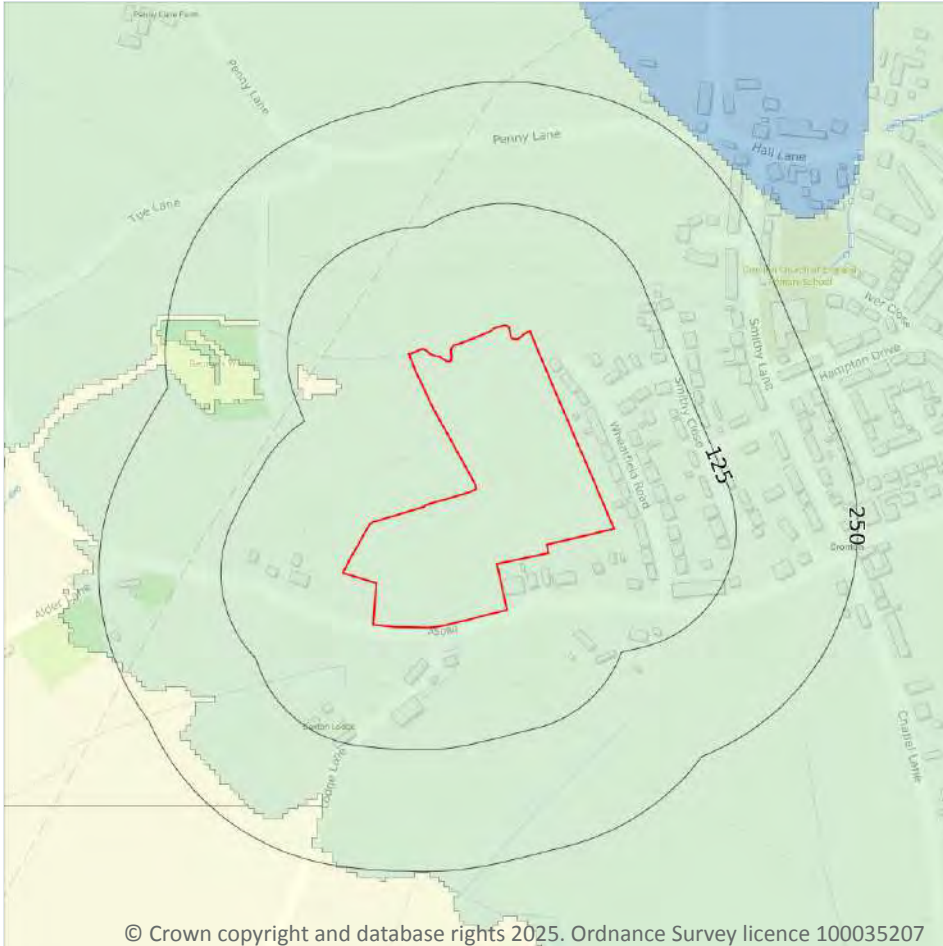
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Greater than 1.0m
1 in 250 year	Greater than 1.0m
1 in 100 year	Greater than 1.0m
1 in 30 year	Greater than 1.0m

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Low

Highest risk within 50m

Low

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on [page 55 >](#)

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Green Belt

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m**0**

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m**0**

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m**0**

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m**0**

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.6 Local Nature Reserves (LNR)

Records within 2000m**0**

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m**0**

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.8 Biosphere Reserves

Records within 2000m**0**

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m**0**

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m

3

Areas designated to prevent urban sprawl by keeping land permanently open.

Features are displayed on the Environmental designations map on [page 56 >](#)

ID	Location	Name	Local Authority name
1	On site	Merseyside and Greater Manchester Green Belt	Knowsley
2	1024m N	Merseyside and Greater Manchester Green Belt	St. Helens
-	1598m E	Merseyside and Greater Manchester Green Belt	Halton

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.



10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

2

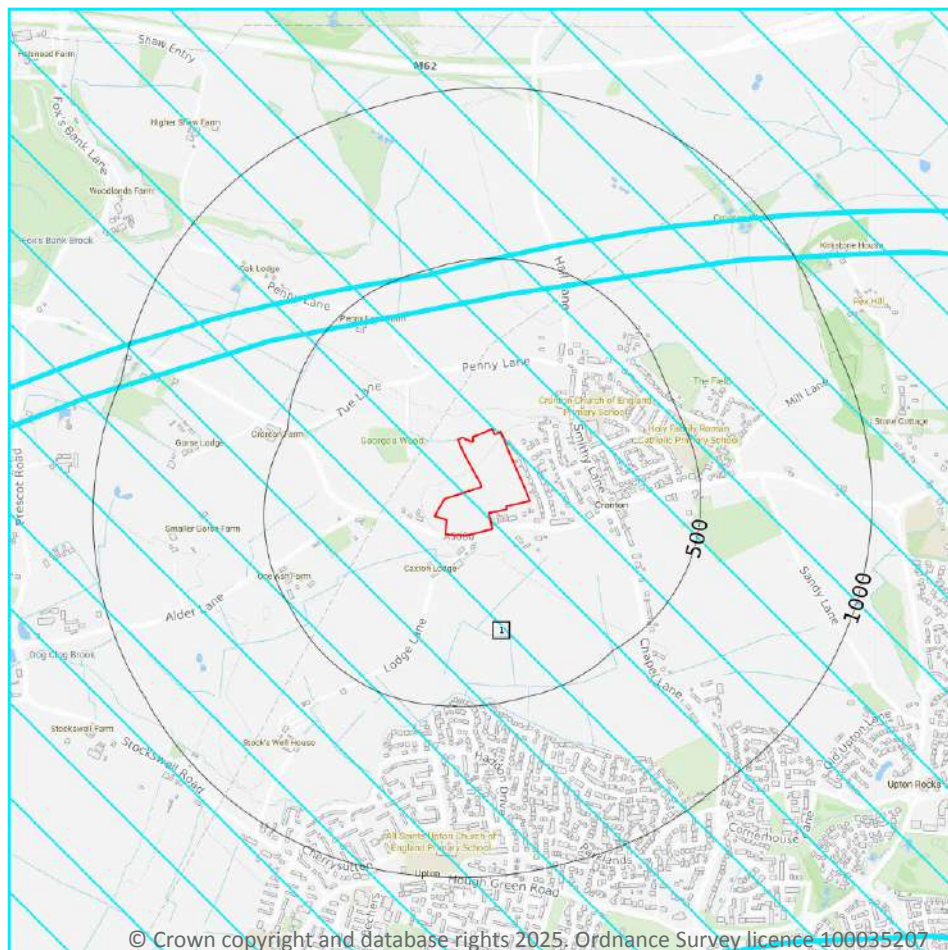
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	Dittton Brook (Halewood to Mersey Estuary) NVZ	Surface Water	640	Existing
1968m NE	Sankey Brook (Black Bk to Mersey) NVZ	Surface Water	639	Existing

This data is sourced from Natural England and Natural Resources Wales.



SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site

1

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on [page 61](#) >

ID	Location	Type of developments requiring consultation
1	On site	Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries: new proposals or extensions, outside or extending outside existing settlements/urban areas affecting greenspace, farmland or semi natural habitats. Oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t). Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill. Discharges - Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Notes: New residential developments in this area should consider recreational disturbance impacts on the coastal designated sites. Please consider this issue in the HRA screening.

This data is sourced from Natural England.

10.18 SSSI Units

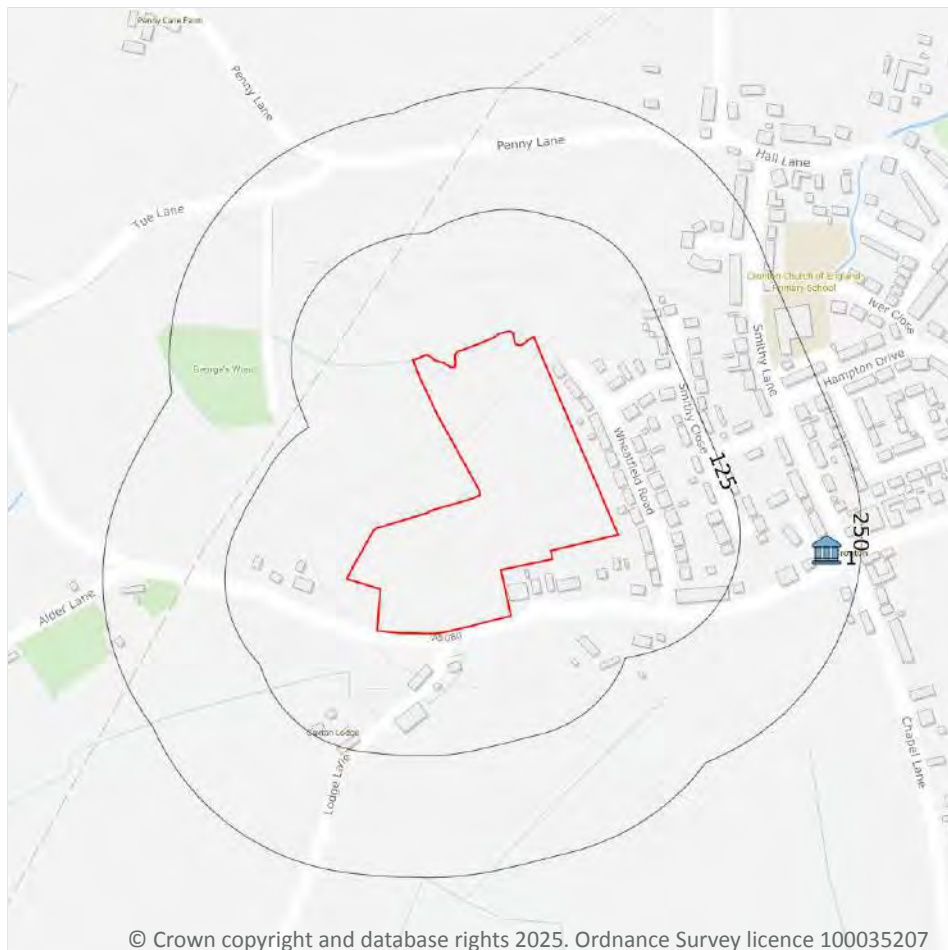
Records within 2000m	0
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Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

This data is sourced from Natural England and Natural Resources Wales.



11 Visual and cultural designations



- Site Outline
- Search buffers in metres (m)
- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m**0**

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m**0**

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m**1**

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

Features are displayed on the Visual and cultural designations map on [page 63 >](#)

ID	Location	Name	Grade	Reference Number	Listed date
1	214m E	Stocks	II	1253237	09/06/1952

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



11.5 Conservation Areas

Records within 250m

0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

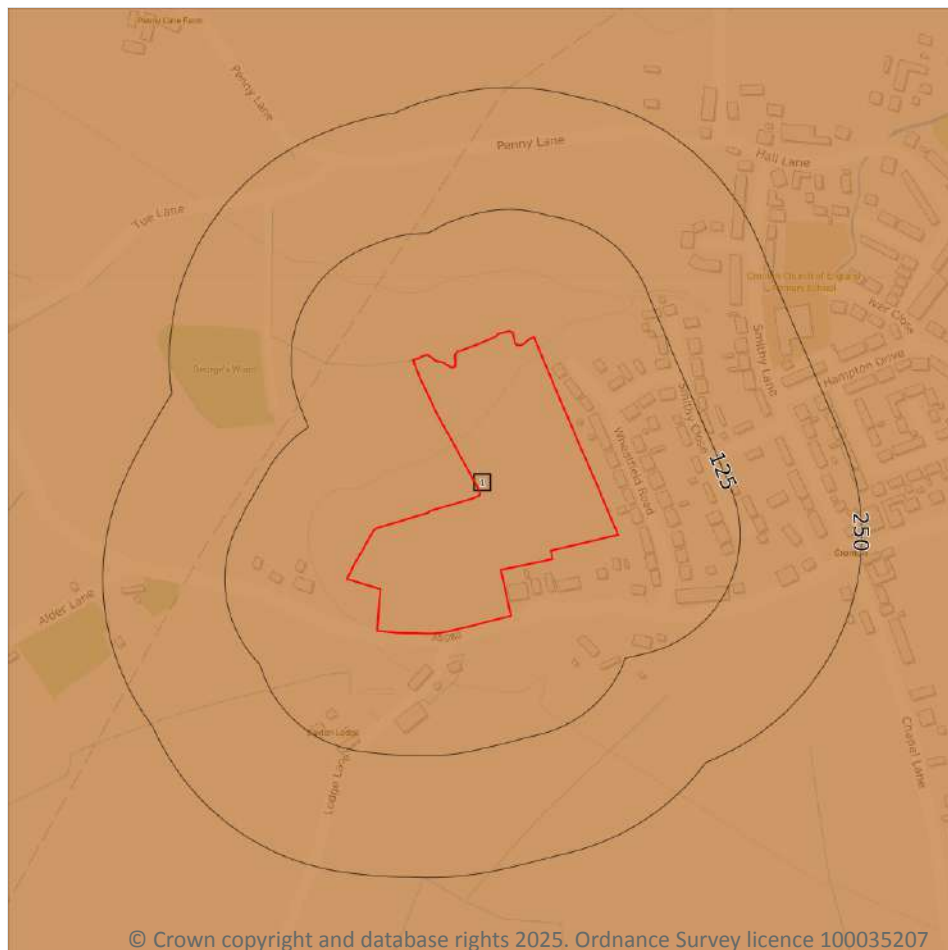
Records within 250m

0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m

1

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on [page 66](#) >

ID	Location	Classification	Description
1	On site	Grade 2	Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0
----------------------------	----------

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m	0
----------------------------	----------

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0
----------------------------	----------

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

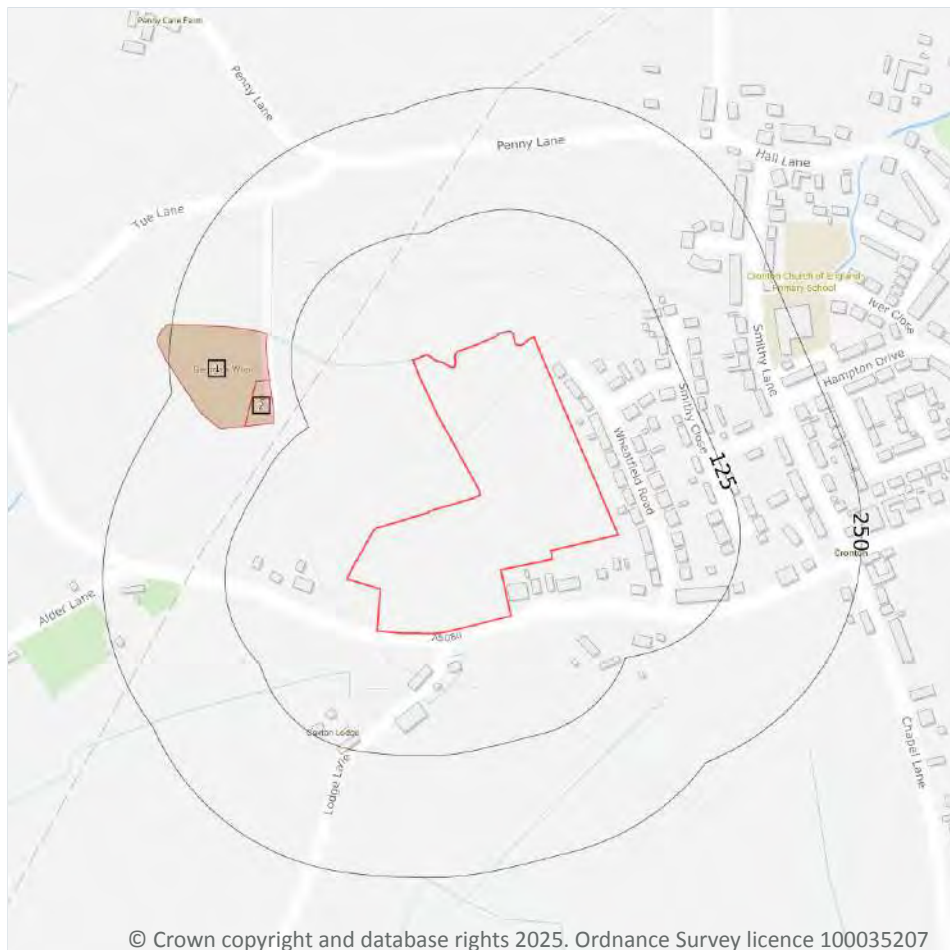
0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.



13 Habitat designations



- Site Outline
- Search buffers in metres (m)
- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders
- Habitat Networks
- Primary Habitat
- Restorable Habitat
- Associated Habitats
- Habitat Restoration-Creation
- Network Enhancement Zone 1
- Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m

2

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on [page 69](#) >

ID	Location	Main Habitat	Other habitats
1	148m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	148m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.



13.2 Habitat Networks

Records within 250m

0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on [page 71](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	SJ48NE

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Artificial and made ground

14.2 Artificial and made ground (10k)

Records within 500m

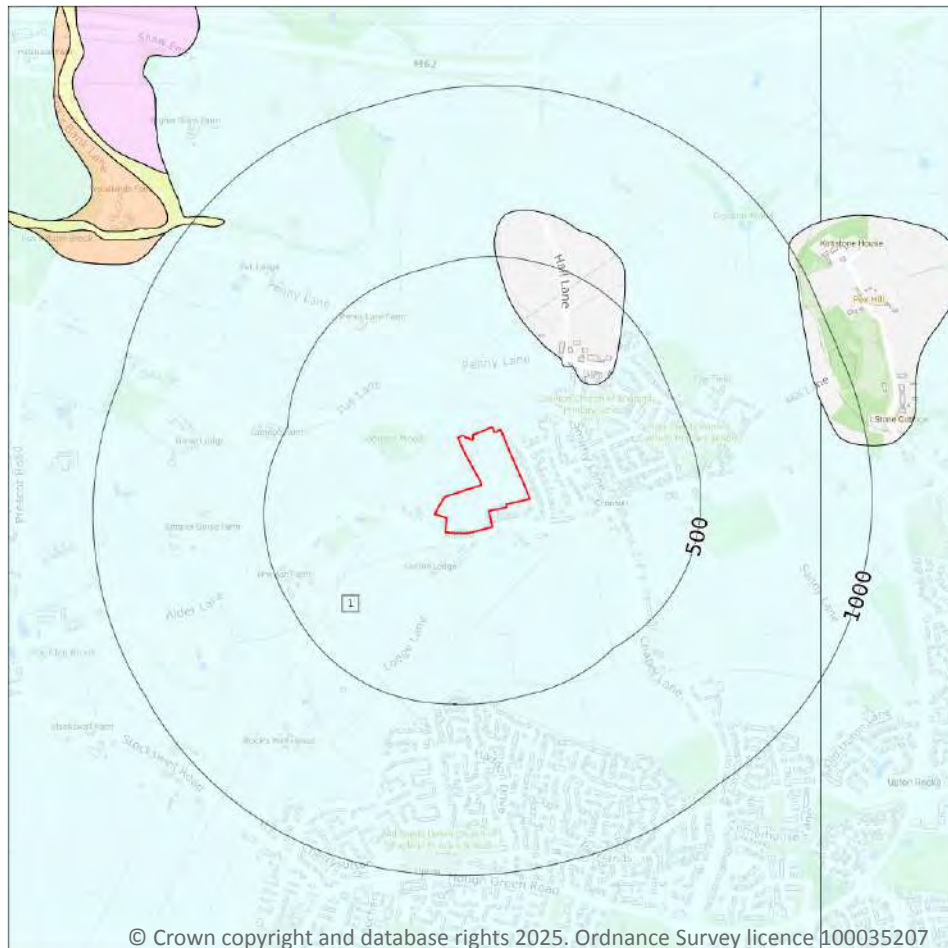
0

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



- Site Outline
- Search buffers in metres (m)
- 1 Landslip (10k)
- Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m

1

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 73](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton

This data is sourced from the British Geological Survey.



14.4 Landslip (10k)

Records within 500m

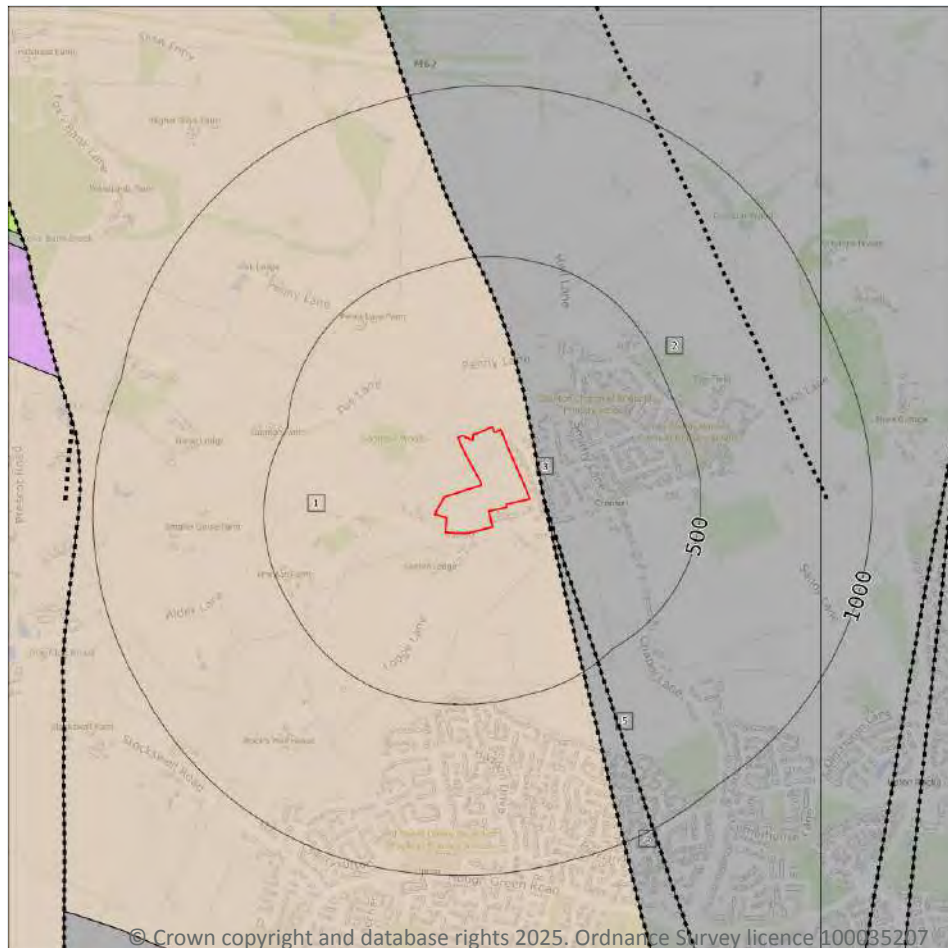
0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



14.5 Bedrock geology (10k)

Records within 500m

3

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 75 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	KNSF-SDST	Kinnerton Sandstone Formation - Sandstone	Early Triassic Epoch
2	40m E	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
4	41m E	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch

This data is sourced from the British Geological Survey.



14.6 Bedrock faults and other linear features (10k)

Records within 500m

2

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 75 >](#)

ID	Location	Category	Description
3	40m E	FAULT	Normal fault, inferred; crossmarks on downthrow side
5	41m E	FAULT	Normal fault, inferred; crossmarks on downthrow side

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline

Search buffers in metres (m)

□ Geological map tile

15.1 50k Availability

Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 77](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	EW097_runcorn_v4

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Artificial and made ground

15.2 Artificial and made ground (50k)

Records within 500m

0

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

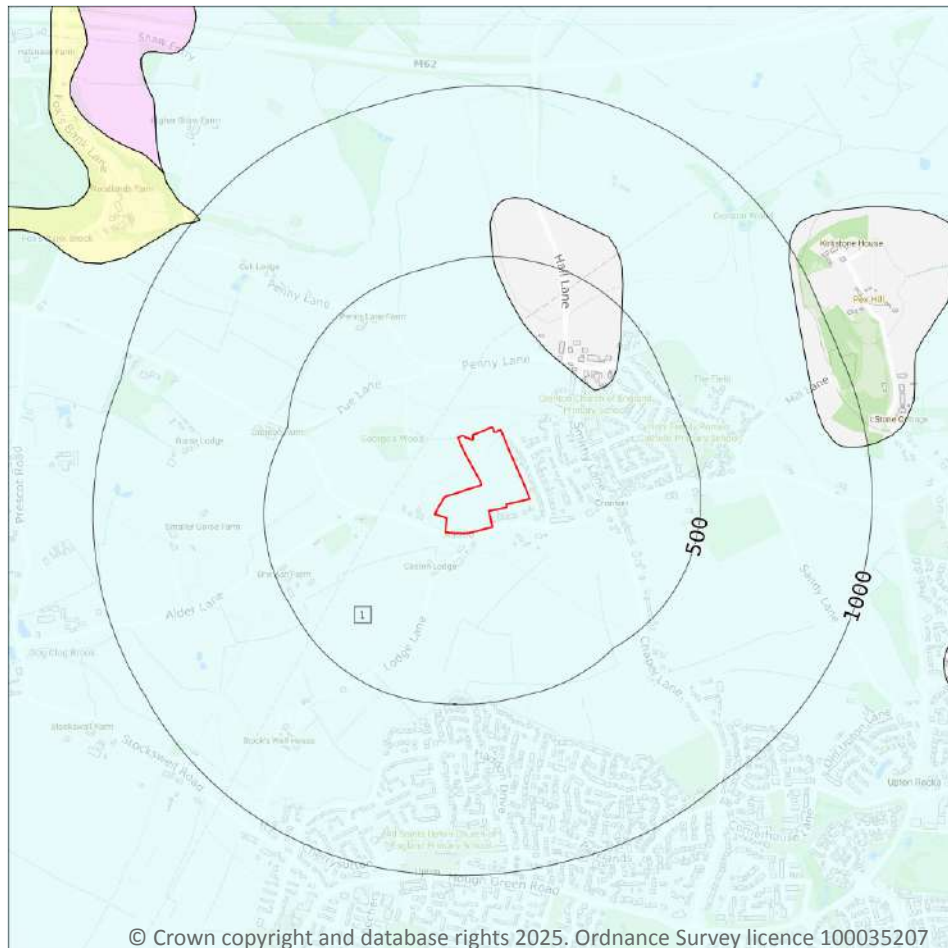
0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



- Site Outline
- Search buffers in metres (m)
- Landslip (50k)
- Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m

1

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 79](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON

This data is sourced from the British Geological Survey.



15.5 Superficial permeability (50k)

Records within 50m

1

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	High	Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m

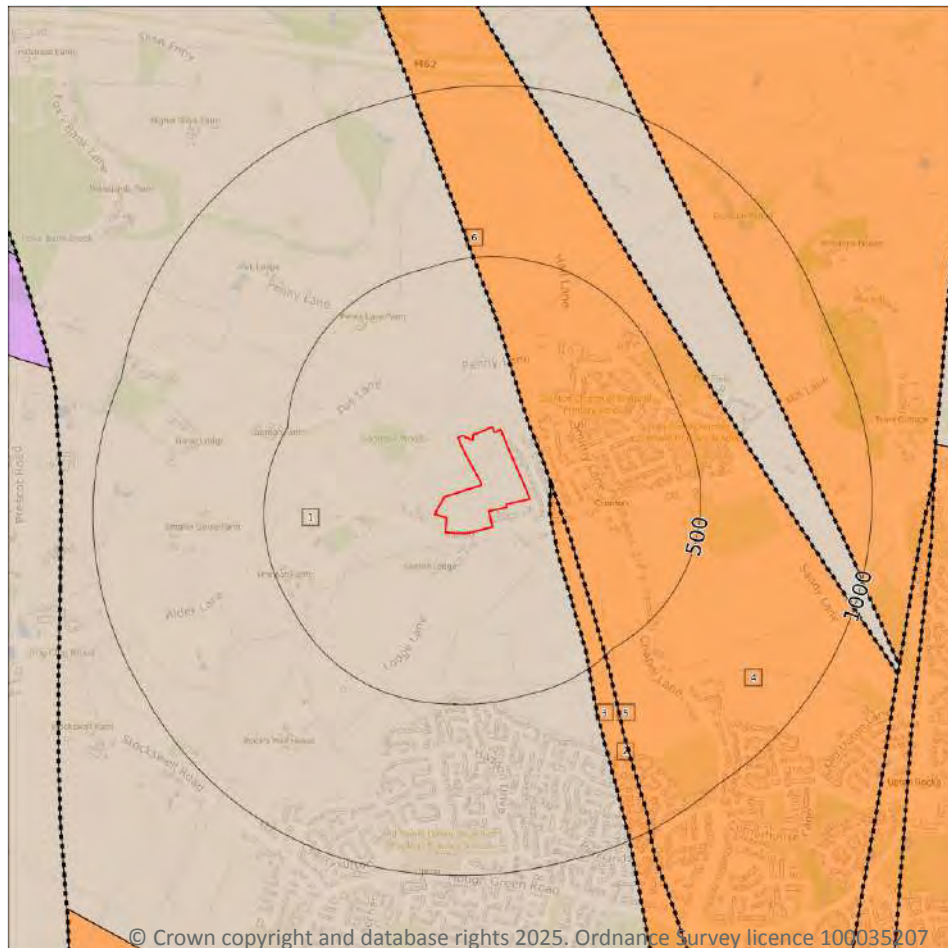
0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m

3

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 81](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	KNSF-SDST	KINNERTON SANDSTONE FORMATION - SANDSTONE	-
2	58m E	CHES-PESST	CHESTER FORMATION - SANDSTONE, PEBBLY (GRAVELLY)	OLENEKIAN
4	73m E	CHES-PESST	CHESTER FORMATION - SANDSTONE, PEBBLY (GRAVELLY)	OLENEKIAN

This data is sourced from the British Geological Survey.



15.9 Bedrock permeability (50k)

Records within 50m

1

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	High	High

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

3

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

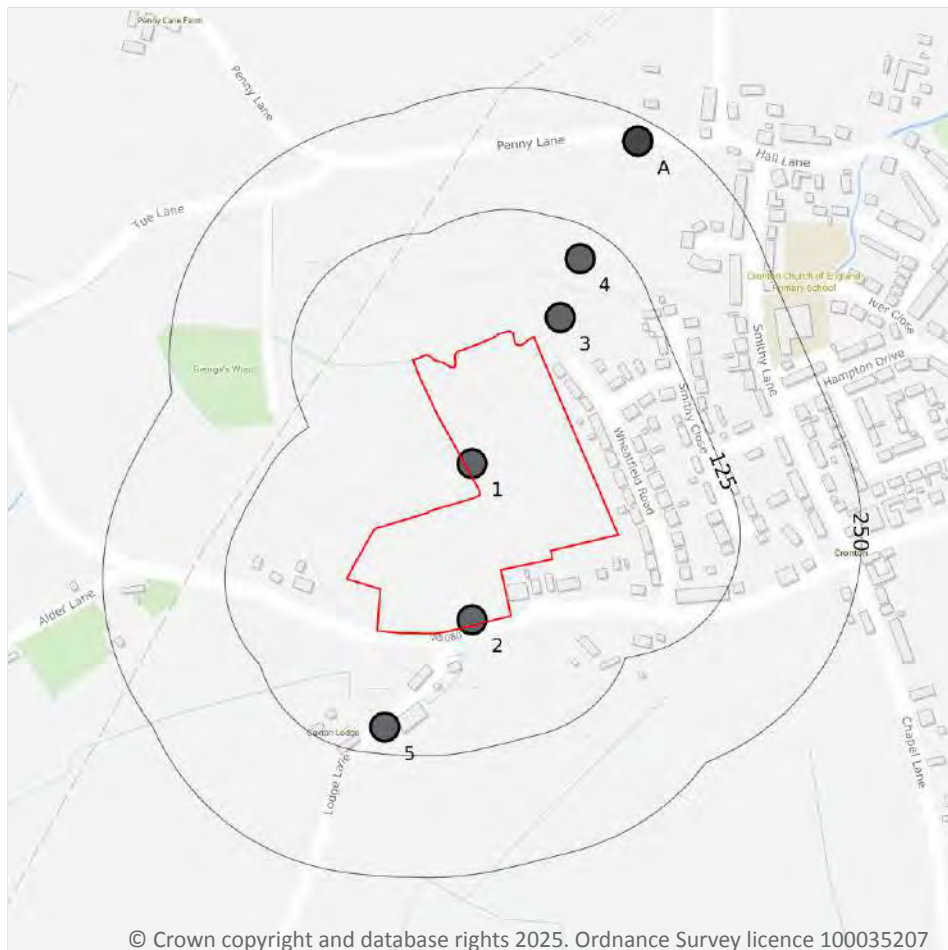
Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 81](#) >

ID	Location	Category	Description
3	58m E	FAULT	Fault, inferred
5	73m E	FAULT	Fault, inferred
6	75m E	FAULT	Fault, inferred

This data is sourced from the British Geological Survey.



16 Boreholes



— Site Outline
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m

7

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on [page 83](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	On site	349000 388360	RAINHILL HOUGH GREEN 12	-	Y	N/A
2	On site	349000 388200	RAINHILL HOUGH GREEN 13	-	Y	N/A
3	34m N	349090 388510	RAINHILL HOUGH GREEN 11	-	Y	N/A

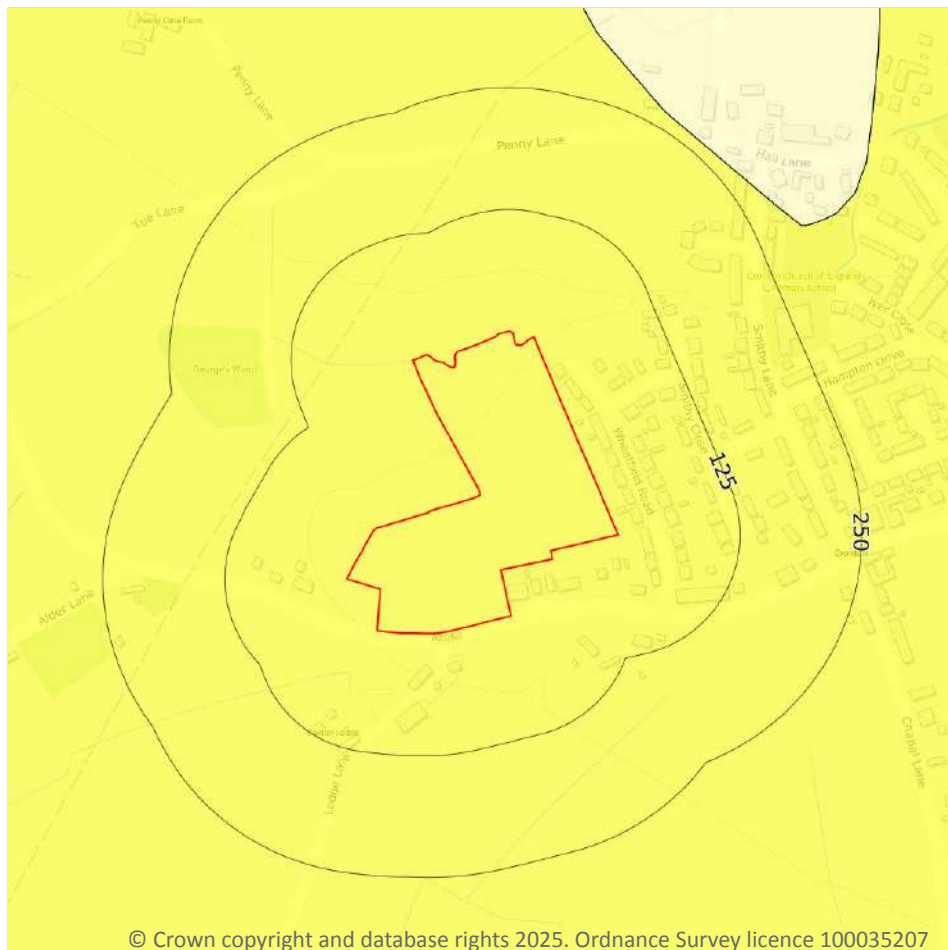


ID	Location	Grid reference	Name	Length	Confidential	Web link
4	93m N	349110 388570	RAINHILL HOUGH GREEN 23	-	Y	N/A
5	97m SW	348910 388090	RAINHILL HOUGH GREEN 14	-	Y	N/A
A	227m NE	349170 388690	RAINHILL HOUGH GREEN 10	-	Y	N/A
A	227m NE	349170 388690	RAINHILL HOUGH GREEN 10R	-	Y	N/A

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.1 Shrink swell clays

Records within 50m

1

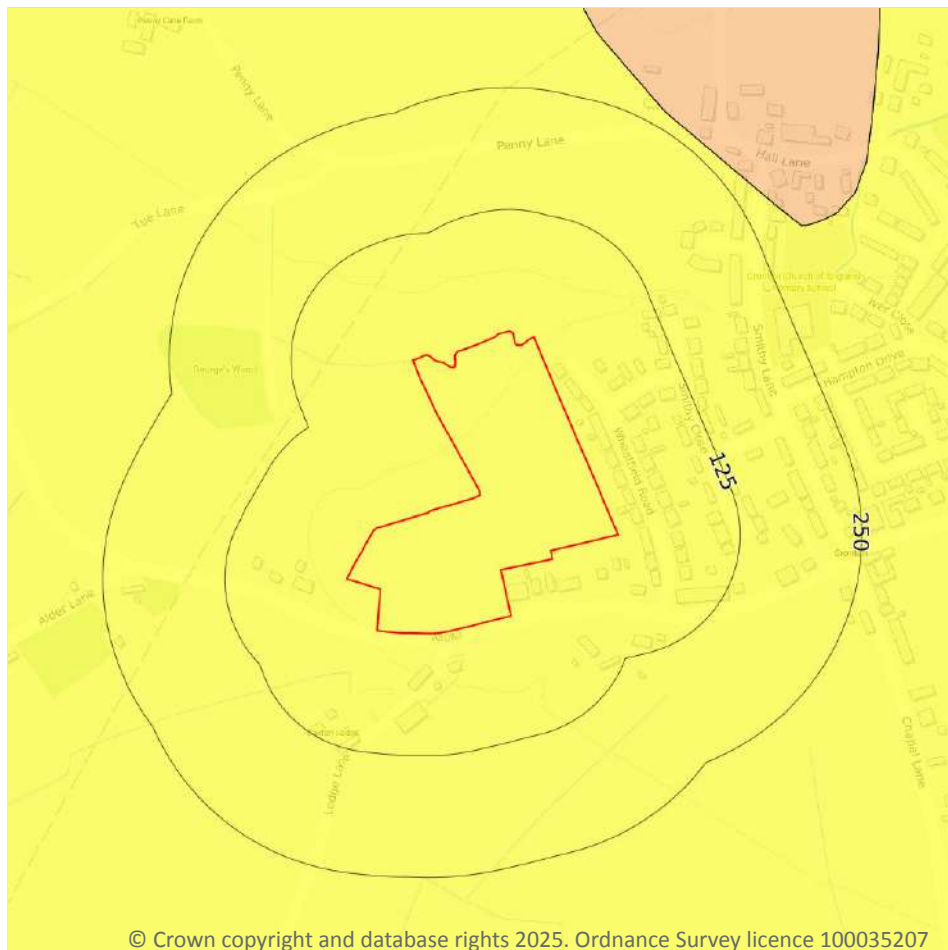
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 85 >](#)

Location	Hazard rating	Details
On site	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.2 Running sands

Records within 50m

1

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

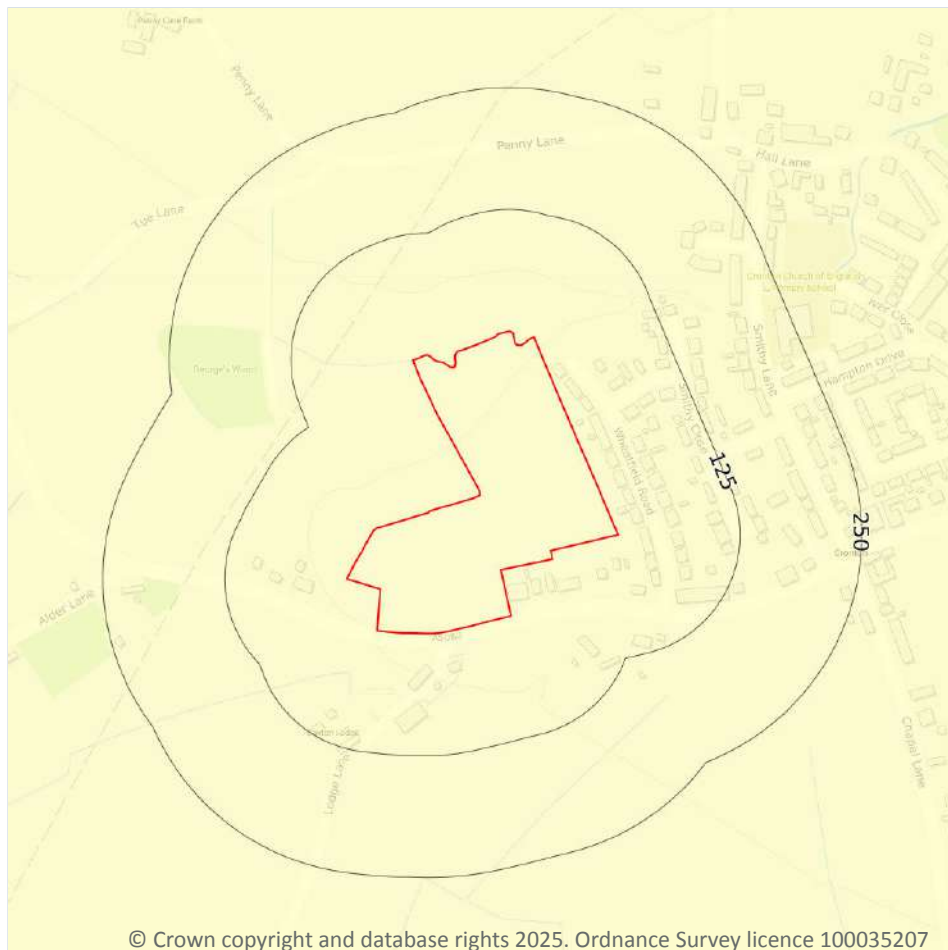
Features are displayed on the Natural ground subsidence - Running sands map on [page 86](#) >

Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.3 Compressible deposits

Records within 50m

1

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

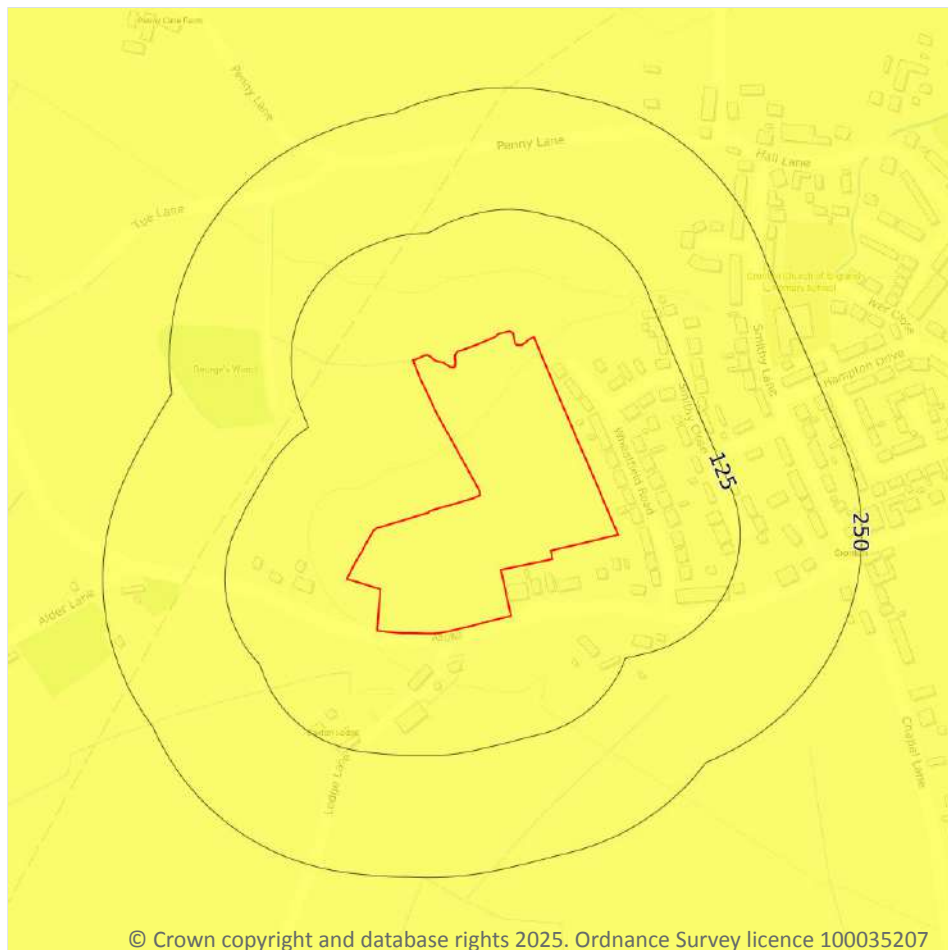
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 87](#) >

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.4 Collapsible deposits

Records within 50m

1

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

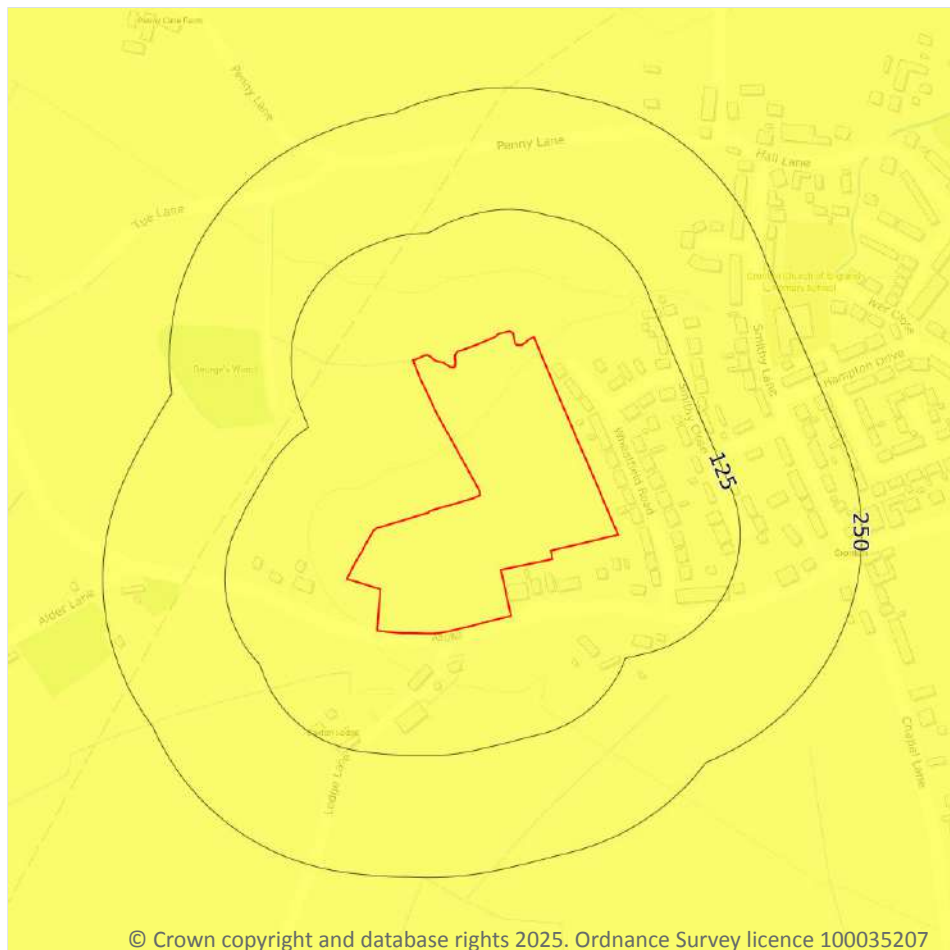
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 88](#) >

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

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17.5 Landslides

Records within 50m

1

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

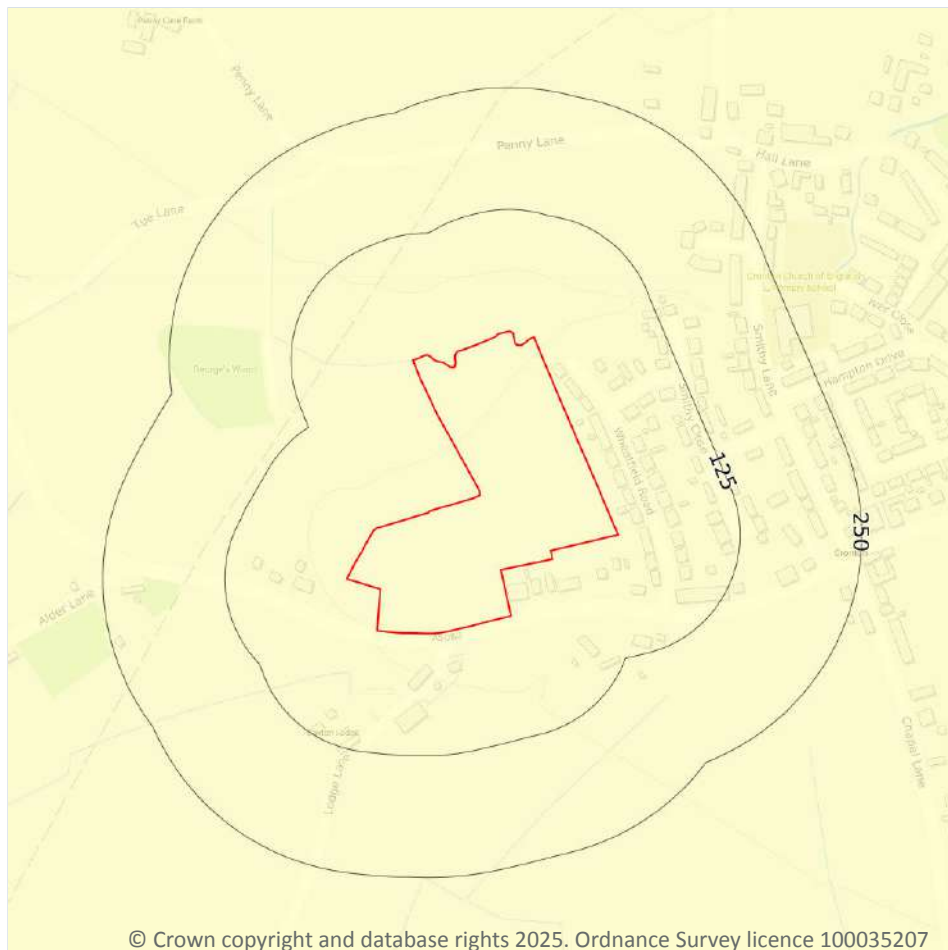
Features are displayed on the Natural ground subsidence - Landslides map on [page 89](#) >

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



- Site Outline**
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.6 Ground dissolution of soluble rocks

Records within 50m

1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 90](#)

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.



This data is sourced from the British Geological Survey.



18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- ▢ Surface ground workings
- ▢ Underground workings
- ▢ Underground mining extents
- ▢ Historical mineral planning areas
- ▢ TCA non-coal mining
- Non Coal Mining
- ▢ Sporadic underground mining of restricted extent possible
- ▢ Localised small scale underground mining possible
- ▢ Small scale mining possible
- ▢ Underground mining known or likely within or in close proximity
- ▢ Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m

0

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

This data is sourced from the British Geological Survey.



18.2 Surface ground workings

Records within 250m

20

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on [page 92](#) >

ID	Location	Land Use	Year of mapping	Mapping scale
A	28m W	Pond	1938	1:10560
A	28m W	Pond	1925	1:10560
A	28m W	Pond	1905	1:10560
A	28m W	Pond	1891	1:10560
A	28m W	Pond	1955	1:10560
B	71m S	Pond	1955	1:10560
B	75m S	Pond	1938	1:10560
B	75m S	Pond	1925	1:10560
B	75m S	Pond	1905	1:10560
B	75m S	Pond	1891	1:10560
1	112m NW	Refuse Heap	1989	1:10000
C	113m S	Pond	1955	1:10560
C	113m S	Pond	1967	1:10560
C	113m S	Pond	1977	1:10000
C	113m S	Pond	1989	1:10000
C	119m S	Pond	1938	1:10560
C	119m S	Pond	1925	1:10560
C	119m S	Pond	1905	1:10560
C	119m S	Pond	1891	1:10560
2	245m SE	Pond	1849	1:10560

This data is sourced from Ordnance Survey/Groundsure.



18.3 Underground workings

Records within 1000m**0**

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m**0**

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m**0**

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m**0**

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site**0**

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.



18.8 The Coal Authority non-coal mining

Records within 500m**0**

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m**0**

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m**0**

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m**0**

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.



18.12 Coal mining

Records on site	1
-----------------	---

Areas which could be affected by past, current or future coal mining.

Location	Details
On site	The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site. This can be ordered directly through Groundsure or your preferred search provider.

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0
-----------------	---

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.14 Gypsum areas

Records on site	0
-----------------	---

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0
-----------------	---

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0
-----------------	---

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).



19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

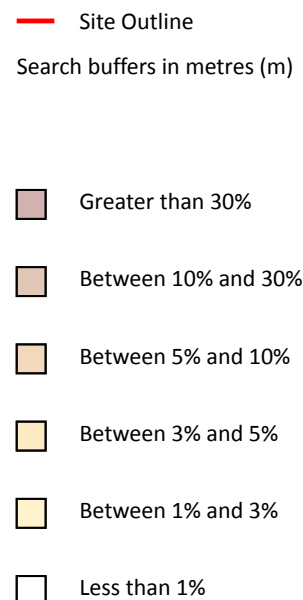
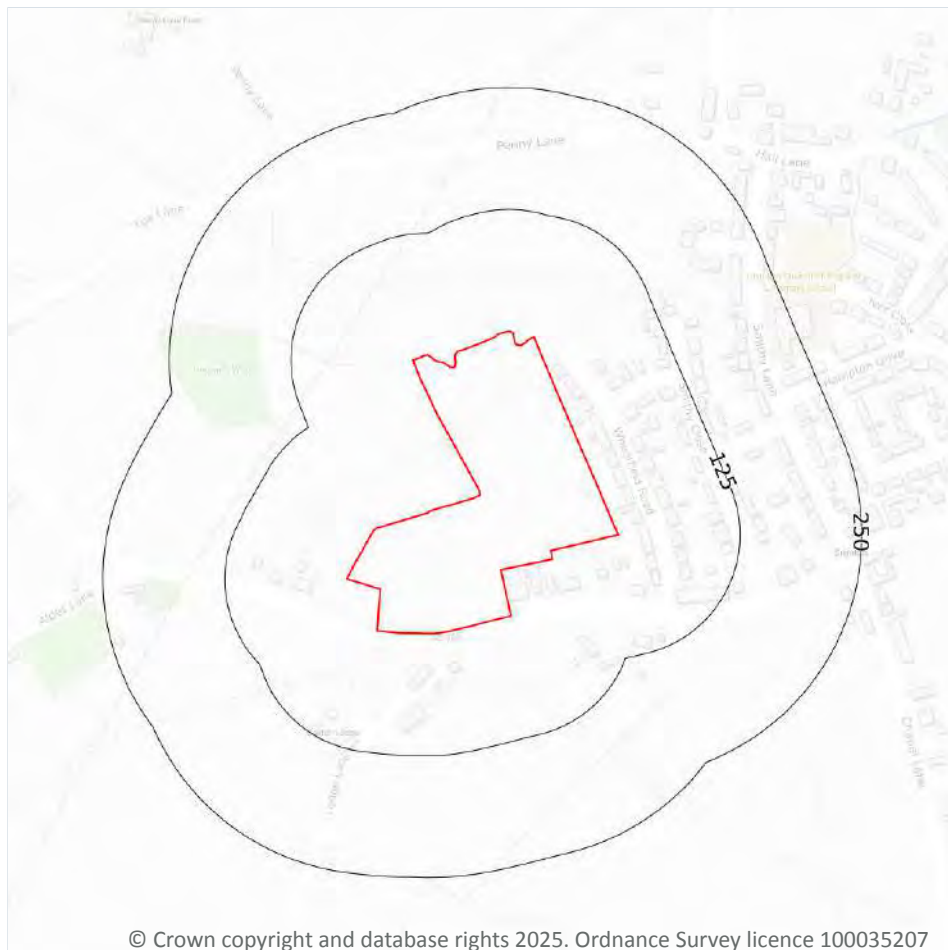
Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.



This data is sourced from Groundsure.



20 Radon



20.1 Radon

Records on site

1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 99](#) >

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None



This data is sourced from the British Geological Survey and UK Health Security Agency.



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

6

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
5m N	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
19m N	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
19m N	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

This data is sourced from the British Geological Survey.



21.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m**0**

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m**0**

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m**0**

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m**0**

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m**0**

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.



This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m

0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 2

Records within 500m

0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m

0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 Ltd.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference> ↗.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-and-conditions-april-2023/ ↗.



APPENDIX D

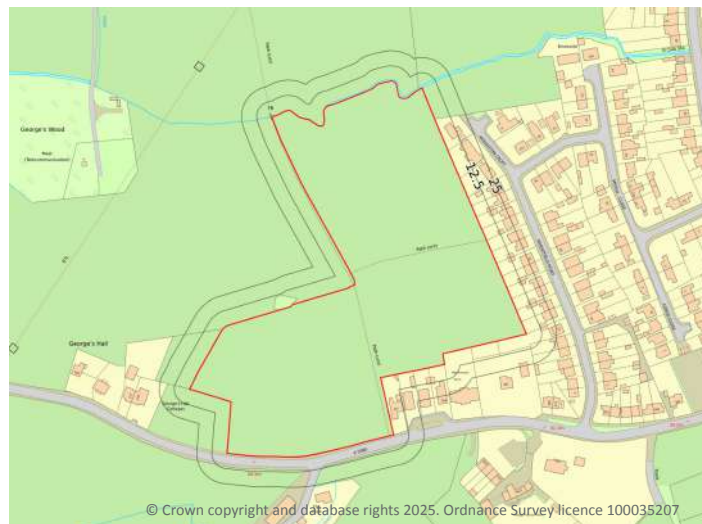
Mining Search Report

WHEATFIELD ROAD, CRANTON, KNOWSLEY, WA8 5BU

Professional opinion

Including mine entry interpretive assessment where appropriate

Site plan



Search results

	1. Past underground coal mining Identified	page 4 >		9. Coal mining subsidence claims Identified	page 6 >
	2. Present underground coal mining Not identified			10. Mine gas emissions Not identified	
	3. Future underground coal mining Not identified			11. Emergency Call Out incidents Not identified	
	4. Mine entries Not identified			12. Withdrawal of support Identified	page 7 >
	5. Coal mining geology Not identified			13. Working facilities orders Not identified	
	6. Past opencast coal mining Not identified			14. Payments to copyhold owners Not identified	
	7. Present opencast coal mining Not identified			Cheshire Brine Not identified	
	8. Future opencast coal mining Not identified				

Coal mining (CON29M) assessment

We consider there to be a potential risk to the property from past coal mining activity. For further details refer to: Coal mining subsidence claims.



Coal mining

Subsidence claims

A potential risk due to past underground coal mining has been identified within the boundary of the property. Whilst no further searches are required, it should be noted that in the event of coal mining settlement or subsidence occurring, the property will benefit from the protection of the Coal Mining Subsidence Acts of 1991 and as amended 1994.

Next steps for consideration:

- A survey encompassing a visual inspection of the property is likely to be available, and this survey would highlight any visible defects and signs of mining-related settlement or subsidence effects.
- If no such survey has been undertaken, you should consider obtaining this type of visual inspection.

Coal Mining Subsidence Act 1991

If any coal mining subsidence damage has occurred, as determined by the appropriate persons/bodies, the property will benefit from the protection of the Coal Mining Subsidence Acts of 1991 and as amended 1994.

This Act, however, does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester. In this instance it would be prudent to have the property visually inspected for signs of mining related settlement or subsidence by a suitably qualified and experienced person, who could be sought through www.ricsfirms.com ↗.

The Coal Authority provide a call out service on 01623 646 333 to take remedial action concerning the movement or collapse of any coal entries or coal mining surface hazards. Further details can be found on www.groundstability.com ↗.

CON29M reports are a requirement for conveyancing and are recommended throughout the official Coal Mining Reporting Area. This is the area within which it is deemed prudent to clarify the risk presented by coal mining, using the questions laid out in the Law Society's CON29M form. The need for a CON29M does not always translate to an identification of risk, and reports will often be assessed as free from risk or 'Passed' even though they are within the official Coal Mining Reporting Area.



Coal mining (CON29M)



- Site Outline
- Search buffers in metres (m)
- Mine entries
 - Adits
 - Shafts
 - Calculated 'zone of influence'
- Subsidence claims
 - Awaiting decision
 - Rejected
 - Admitted
 - Deferred
 - Settled
 - Withdrawn
 - Probable shallow coal mine workings
 - Coal outcrops
 - Past shallow coal mine workings

Coal mining (CON29M)

The map above shows relevant, mappable hazards identified that could constitute a risk to the property. It does not necessarily show all features or potential issues identified in this report. Further details of any features shown indicating the location of Mine Entries or Subsidence Claims can be found in the relevant sections of this report (4 and 9 respectively).

Responses to the Law Society CON29M Coal Mining search enquiries are produced using official Coal Authority data and the expert interpretation of Groundsure. This report is prepared in accordance with The Law Society CON29M (2018) Guidance Notes. Additional interpretation and calculation of mine entry zones of influence has also been carried out by Groundsure using Coal Authority and British Geological Survey data.

Please read this report carefully, and in particular any sections flagged with an amber 'i'.


[Back to Summary](#)

Contact us with any questions at:
info@groundsure.com 
 01273 257 755

Ref: BRO-ATC-OSC-QP1-BFH
 Your ref: C6114-6363-SD
 Grid ref: 349014 388328

A Law Society Licensed Provider

**The Law
Society**

These enquiries are The Law Society CON29M (2018) Coal Mining search enquiries and are used with permission of The Law Society. The Law Society CON29M Coal Mining search enquiries are protected by copyright owned by The Law Society of 113 Chancery Lane, London WC2A 1PL. The Law Society has no responsibility for information provided in response to CON29M (2018) Coal Mining search enquiries within this report or otherwise.

1. Past underground coal mining



Is the property within the zone of likely physical influence on the surface of past underground coal workings?

- The property lies within the potential zone of influence of recorded workings in 1 seam(s) of coal. The most recent underground working in the area was in 1977. These workings lie approximately 720 metres below surface. Any ground movement due to this coal mining activity should have stopped.

2. Present underground coal mining



Is the property within the zone of likely physical influence on the surface of present underground coal workings?

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

3. Future underground coal mining



(a) Is the property within any geographical area for which the Coal Authority is determining whether to grant a licence to remove coal by underground methods?

- The property does not lie within the boundary of an underground site for which the Coal Authority is determining whether to grant a licence to remove coal by underground methods.

(b) Is the property within any geographical area for which a licence to remove coal by underground methods has been granted?

- The property does not lie within the boundary of an underground site for which a licence to remove coal by underground methods has been granted.

(c) Is the property within the zone of likely physical influence on the surface of planned future underground coal workings?

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- The property does not lie within the zone of likely physical influence on the surface of planned future underground workings.

(d) Has any notice of proposals relating to underground coal mining operations been given under section 46 of the Coal Mining Subsidence Act 1991?

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

4. Mine entries



Are there any shafts and adits or other entries to underground coal mine workings within the property or within 20 metres of the boundary of the property?

- No coal mine entries are recorded to lie within 20 metres of the property.

5. Coal mining geology



Is there any record of any fault or other line of weakness due to coal mining at the surface within the boundary of the property that has made the property unstable?

- No damage arising from geological faults or other lines of weakness activated by coal mining are recorded within the property.

6. Past opencast coal mining



Is the property situated within the geographical boundary of an opencast site from which coal has been removed in the past by opencast methods?

- The property does not lie within the boundary of an opencast site from which coal was removed by opencast methods.

7. Present opencast coal mining



Is the property within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods?

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



8. Future opencast coal mining



(a) Is the property within 800 metres of the boundary of an opencast site for which the Coal Authority are determining whether to grant a licence to remove coal by opencast methods?

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

(b) Is the property within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted?

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

9. Coal mining subsidence claims



(a) Has any damage notice or claim for alleged coal mining subsidence damage to the property been given, made or pursued since 31st October 1994?

- **We have evidence of a damage notice or subsidence claim for the property or within 50m of the property since 31st October 1994.**

Distance	Type	Reference	Address	Claim date	Status	Status reason	Claim value
10 m	TCA	S66532-CI	FIELD OS 8590 DRAGON HOUSE FARM CRANTON CHESHIRE	09/02/2000	02 - Rejected	-	-

(b) In respect of any such notice or claim has the responsible person given notice agreeing that there is a remedial obligation or otherwise accepted that a claim would lie against them?

- **Responsible persons have not given notice agreeing that there is a remedial obligation or accepted that a claim would lie against them.**

(c) In respect of any such notice or acceptance has the remedial obligation or claim been discharged?

- **Remedial obligation or claims have not been discharged.**

(d) Does any current "Stop Notice" delaying the start of remedial works or repairs affect the property?

- **There are no current Stop Notices delaying the start of remedial works or repairs to the property.**

(e) Has any request been made under Section 33 of the 1991 Act to execute preventive works before coal is worked, which would prevent the occurrence or reduce the extent of subsidence damage to any buildings, structures or works and, if yes, has any person withheld consent or failed to comply with any such request to execute preventive works?



- There is no record of a request that has been made to carry out preventive works before coal is worked under Section 33 of the Coal Mining Subsidence Act 1991.

NB. Records of damage notices or subsidence claims before 31st October 1994 are excluded from The Coal Authority data from which this search is compiled.

10. Mine gas emissions



Does the Coal Authority have record of any mine gas emission within the boundary of the property being reported that subsequently required action by the Authority to mitigate the effects of the mine gas emission?

- No mine gas emissions are recorded within the boundary of the property.

11. Emergency Surface Hazard Call Out incidents



Have the Coal Authority carried out any work on or within the boundaries of the property following a report of an alleged hazard related to coal mining under the Authority's Emergency Surface Hazard Call Out procedures?

- No Emergency Surface Hazard Call Out procedures are recorded against the property.

12. Withdrawal of support



(a) Does the land lie within a geographical area in respect of which a notice of entitlement to withdraw support has been published?

- The property lies within an area where a notice of entitlement to withdraw support has been published. Notices were issued in: 1971, 1976.

(b) Does the land lie within a geographical area in respect of which a revocation notice has been given under section 41 of the Coal Industry Act 1994?

- The property does not lie within a geographical area in which a revocation notice has been given under section 41 of the Coal Industry Act 1994.

13. Working facilities orders



Is the property within a geographical area subject to an order in respect of the working of coal under the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof?

- The property is not in an area where a court order has been issued.



14. Payments to owners of former copyhold land



(a) Has any relevant notice, which may affect the property, been given?

- **The property does not lie within former copyholder land.**

(b) If yes, has any notice of retained interests in coal and coal mines been given?

- **No notices of retained interests in coal and coal mines been given.**

(c) If yes, has any acceptance notice or rejection notice been served?

- **No acceptance or rejection notices have been served.**

(d) If any such acceptance notice has been served, has any compensation been paid to a claimant?

- **No compensation has been paid to a claimant.**



Methodologies and limitations

Groundsure's methodologies and limitations are available here: knowledge.groundsure.com/methodologies-and-limitations ↗.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information in your report. To find out who they are and their areas of expertise see www.groundsure.com/sources-reference ↗.

Conveyancing Information Executive and our terms & conditions

IMPORTANT CONSUMER PROTECTION INFORMATION

This search has been produced by Groundsure Ltd. Groundsure adheres to the Conveyancing Information Executive Standards.

In addition to The Property Ombudsman (TPO) redress scheme covering consumers, TPO will also provide redress to small businesses (including Charities and Trusts) and where the customer meets the following criteria:

- a small business (or group of companies) with an annual turnover of less than £3 million;
- a charity with an annual income of less than £3 million;
- a Trust with a net asset value of less than £3 million.

Complaints Advice

If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure.

If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award up to £5,000 to you if the Ombudsman finds that you have suffered actual financial loss and/or aggravation, distress or inconvenience as a result of your search provider failing to keep to the Standards.

Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPOs.

COMPLAINTS PROCEDURE: If you want to make a complaint, we will:

- acknowledge it within 5 working days of receipt
- normally deal with it fully and provide a final response, in writing, within 20 working days of receipt
- liaise, at your request, with anyone acting formally on your behalf

Complaints should be sent to:

Operations Director, Groundsure Ltd, Nile House, Nile Street, Brighton, BN1 1HW. Tel: 01273 257 755. Email: info@groundsure.com

↗ If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs): Tel: 01722 333306, E-mail: admin@tpos.co.uk ↗ We will co-operate fully with the Ombudsman during an investigation and comply with their final decision.

Groundsure's Terms and Conditions can be viewed here: www.groundsure.com/terms-and-conditions-april-2023/ ↗

All of the advice and reports that Groundsure produces are covered by a comprehensive Remediation Contribution policy to ensure customers are protected, see www.groundsure.com/remediation ↗ for full details.



Coal Mining Report Insurance Policy



Coal Mining Report Insurance Policy

The Schedule

Policy Number: The Reference contained in the **Coal Mining Search Report**

Premium: £1.20 inclusive of Insurance Premium Tax at 12%

Property: The property which is the subject of the **Coal Mining Search Report**

Limit of Indemnity: £100,000 increasing by 10% compound per annum on each anniversary of and for the first 10 years following the **Commencement Date**

Commencement Date: The date of the **Coal Mining Search Report**

You/Your:

1. A purchaser of the **Property**
2. A lender providing a **Mortgage** in connection with a purchase of the **Property**
3. A lender providing a **Mortgage** by way of a re-mortgage of the **Property**

Definitions

Where a word is defined below or in the schedule it shall carry the same meaning wherever it appears in bold text in this policy

Insured Use: The continued use of the **Property** as a single house or flat or a single commercial premises

Market Value: The value as determined by a surveyor appointed by agreement between **You** and **Us** or (in default of agreement) the President for the time being of the Royal Institution of Chartered Surveyors

Mortgage: A mortgage or charge secured on the **Property** by an institutional mortgage lender

Coal Mining Search Report: The coal mining search report attached to this policy

Search: An official search comprising a search in form CON29M (2018) being mining searches relating to coal and brine in the area in which the **Property** is situated

We/Our/Us:

Zurich Insurance plc. A public limited company incorporated in Ireland. Registration No. 13460. Registered Office: Zurich House, Ballsbridge Park, Dublin 4, Ireland. UK Branch registered in England and Wales Registration No. BR7985. UK Branch Head Office: The Zurich Centre, 3000 Parkway, Whiteley, Fareham, Hampshire PO15 7JZ.

Zurich Insurance plc is authorised by the Central Bank of Ireland and authorised and subject to limited regulation by the Financial Conduct Authority. Details about the extent of our authorisation by the Financial Conduct Authority are available from us on request. Our FCA Firm Reference Number is 203093.

Communications may be monitored or recorded to improve our service and for security and regulatory purposes.

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Your Policy

This is a legal document and should be kept in a safe place.

This policy is an agreement between **You** and **Us** and cover is provided subject to the payment of the **Premium**.

You must read this policy and its conditions, exclusions, schedule and any endorsements as one contract. Please read all of them to make sure that they provide the cover **You** require. If they do not, please contact **Us** or **Your** insurance adviser who arranged the policy for **You**.

When **You** take out and make changes to the cover provided by this policy, **You** must take reasonable care to ensure that **You** accurately answer any questions which **We** ask of **You** and that any information **You** give **Us** is accurate. If **You** are taking out this policy for purposes which are mainly related to **Your** trade, business or profession, **You** must also let **Us** know about all facts which are material to **Our** decision to provide **You** with insurance. Failure to meet these obligations could result in this policy being invalidated, a claim not being paid, or an additional premium being charged.

Fair presentation of the risk

a) At inception of this policy and also whenever changes are made to it at **Your** request **You** must:

- i) where **You** have taken out this policy for purposes which are wholly or mainly related to **Your** trade, business or profession, disclose to **Us** all material facts in a clear and accessible manner and not misrepresent any material facts, and
- ii) where **You** have taken out this policy for purposes which are wholly or mainly unrelated to **Your** trade, business or profession, take reasonable care not to misrepresent any material facts.

b) If **You** do not comply with clause a) of this condition **We** may:

- i) avoid this policy which means that **We** will treat it as if it had never existed and refuse all claims where any non-disclosure or misrepresentation by **You** is proven by **Us** to be deliberate or reckless in which case **We** will not return the premium paid by **You**; and
- ii) recover from **You** any amount **We** have already paid for any claims including costs or expenses **We** have incurred.

c) If **You** do not comply with clause a) of this condition and the non-disclosure or misrepresentation is not deliberate or reckless this policy may be affected in one or more of the following ways depending on what **We** would have done if **We** had known about the facts which **You** failed to disclose or misrepresented:

- i) if **We** would not have provided **You** with any cover **We** will have the option to:
 1. avoid the policy which means that **We** will treat it as if it had never existed and repay the premium paid; and
 2. recover from **You** any amount **We** have already paid for any claims including costs or expenses **We** have incurred
- ii) if **We** would have applied different terms to the cover **We** will have the option to treat this policy as if those different terms apply. **We** may recover any payments made by **Us** on claims which have already been paid to the extent that such claims would not have been payable had such additional terms been applied
- iii) if **We** would have charged **You** a higher premium for providing the cover **We** will charge **You** the additional premium which **You** must pay in full.

d) If any insured person, other than **You**, is responsible for a misrepresentation or failure to make a fair presentation of the risk, **We** will invoke the remedies available to **Us** under this condition as against that particular person as if a separate insurance contract had been issued to them leaving the remainder of the policy unaffected.

NB: For the purposes of the duty of disclosure stated in paragraphs a) i) and ii) above the content of the **Coal Mining Search Report** will be deemed to satisfy **Your** disclosure obligations.

Cover

1. **You** are in the process of purchasing the **Property** relying on the **Coal Mining Search Report** and/or
2. **You** (being a lender) have agreed to provide a **Mortgage** in connection with **Your** borrower's purchase or re-mortgage of the **Property** relying on the **Coal Mining Search Report**.

We will pay the following losses sustained by **You** arising out of the **Property** being affected by any matter which would have been revealed by a **Search** had one been carried out on the date of the **Coal Mining Search Report** but which was not revealed by the **Coal Mining Search Report**:



1. any reduction in **Market Value** of the **Property** calculated at the date **You** become aware of the matter(s) and/or loss in connection with a **Mortgage** as a result of such reduction.
2. all other costs and expenses including out of court settlement costs incurred by **Us** or by **You** with **Our** prior written agreement.

Waiver of Breach of Policy Condition

We will not exercise **Our** right to avoid **Our** liability to **You** in respect of loss where **You** have inadvertently breached any term or condition of the policy provided that such breach does not prejudice **Our** rights and remedies under the policy or otherwise directly or indirectly result in or increase the amount of any loss.

Protection for Mortgagees and Successors in Title

We will not avoid **Our** liability to make a payment to **You** solely because another person breaches the terms and conditions of this policy, provided such breach was not committed on **Your** behalf or with **Your** agreement, and **We** will invoke the remedies available to **Us** under the Policy as against that other person as if a separate insurance contract had been issued to them leaving the remainder of the policy unaffected.

Joint Insured

Any party insured under this policy standing in the relation of parent company, subsidiary company, associated company, branch office or joint venture partner to each other will be deemed to be joint insured for the purposes of this policy and jointly liable and responsible for any breach of any terms and conditions of this policy. If there is any inconsistency between this clause and any other term of this policy, this clause shall prevail.

Exclusions

We will not pay for any:

1. amount in excess of the **Limit of Indemnity**.
2. loss which would be recoverable under a household buildings insurance policy.
3. loss arising from any matter that **You** were aware of at the **Commencement Date**.
4. loss if the **Property** is used for any purpose other than the **Insured Use**.

Claims Conditions and How to Claim

1. **You** must:

- i) give **Us** written notice as soon as possible of any potential or actual claim or any circumstances likely to result in a claim. Please provide the policy number, **Your** name, the full address of the **Property** and a brief description of the incident that has occurred. Notifications should be sent to: Speciality Lines Claims Team, Zurich Insurance, 8th Floor, 70 Mark Lane, London, EC3R 7NQ. Email: claims@uk.zurich.com ↗, Enquiry line: telephone 0207 648 3523
- ii) pass all court documents and/or other communications to **Us** as soon as possible after receipt
- iii) not deal with, make any admission of liability or attempt to settle a claim without **Our** prior written agreement.
- iv) agree to and carry out at **Our** expense all things necessary to minimise any loss.
- v) provide all information and assistance that **We** may require to help defend and settle the claim.

2. **We** are entitled to:

- i) decide how to settle or defend a claim and may carry out proceedings in the name of any person insured under this policy, including proceedings for recovering any claim.
- ii) pay to **You** at any time, an amount equal to the **Limit of Indemnity** or any lower amount for which the claim can be settled, after deduction of any sum already paid. **We** may then give up control of and have no further liability in connection with the claim.

3. If **We** admit liability for a claim but there is a dispute as to the amount to be paid the dispute will be referred to an arbitrator. The arbitrator will be appointed jointly by **You** and **Us** in accordance with the law at the time. **You** may not take any legal action against **Us** over the dispute before the arbitrator has reached a decision.

4. If **You** or anyone acting on Your behalf:



- a) makes a fraudulent or exaggerated claim under this policy; or
- b) uses fraudulent means or devices including the submission of false or forged documents in support of a claim whether or not the claim is itself genuine; or
- c) makes a false statement in support of a claim whether or not the claim is itself genuine; or
- d) submits a claim under this policy for loss or damage which **You** or anyone acting on **Your** behalf or in connivance with **You** deliberately caused; or
- e) realises after submitting what **You** reasonably believed was a genuine claim under this policy and then fails to tell **Us** that **You** have not suffered any loss or damage; or
- f) suppresses information which **You** know would otherwise enable **Us** to refuse to pay a claim under this policy

We will be entitled to refuse to pay the whole of the claim and recover any sums that **We** have already paid in respect of the claim.

If any fraud is perpetrated by or on behalf of an insured person and not on behalf of **You** this condition should be read as if it applies only to that insured person's claim and references to this policy should be read as if they were references to the cover effected for that person alone and not to the policy as a whole.

5. If any claim is covered by any other insurance, **We** will not pay for more than **Our** share of that claim.

6. The most **We** will pay for any loss (or all losses in the aggregate), including costs and expenses agreed by **Us** is the **Limit of Indemnity**. Once **We** have paid a loss or losses equal to the amount of the **Limit of Indemnity**, **We** will have no further liability under this policy.

General Conditions

1. Neither **You** (nor anyone acting on **Your** behalf) must disclose the existence of this policy to any other party except **Your** legal and other professional advisers, prospective purchasers, lessees and tenants of the **Property**, their respective mortgagees, legal and other professional advisers.
2. In the UK the law allows both **You** and **Us** to choose the law applicable to the contract. This contract will be subject to the relevant law of England and Wales, Scotland, Northern Ireland, the Isle of Man or the Channel Islands depending upon the Property address stated in the Schedule. If there is any dispute as to which law applies it will be English law. The parties agree to submit to the exclusive jurisdiction of the English courts.
3. Notwithstanding any other terms of this policy **We** will be deemed not to provide cover nor will **We** make any payment or provide any service or benefit to **You** or any other party to the extent that such cover, payment, service, benefit and/or any business or activity of **Yours** would violate any applicable trade or economic sanctions law or regulation.

Cancellation Clause

If **You** have taken out this policy for purposes which are wholly or mainly unrelated to **Your** trade, business or profession, **You** may cancel this policy within 14 days of receiving the policy by writing to **Us** and in such event **We** may, at **Our** discretion, charge **You** for the time that **You** have been on cover. Any refund will be made to the party who paid the premium. If **You** do cancel, **You** may be in breach of the terms of **Your** mortgage or the terms of the contract for the sale of **Your** property. If **You** are in doubt, **You** may wish to seek legal advice prior to cancellation.

Fair Processing and Complaints Procedure

Our Complaints Procedure

Our commitment to customer service

We are committed to providing a high level of customer service. If you feel we have not delivered this, we would welcome the opportunity to put things right for you.

Who to contact in the first instance

Many concerns can be resolved straight away. Therefore in the first instance, please get in touch with your usual contact at Zurich or your broker or insurance intermediary, as they will generally be able to provide you with a prompt response to your satisfaction.

Contact details will be provided on correspondence that we or our representatives have sent you.

Many complaints can be resolved within a few days of receipt

If we can resolve your complaint to your satisfaction within the first few days of receipt, we will do so. Otherwise, we will keep you



updated with progress and will provide you with our decision as quickly as possible.

Next steps if you are still unhappy

If you are not happy with the outcome of your complaint, you may be able to ask the Financial Ombudsman Service to review your case.

We will let you know if we believe the ombudsman service can consider your complaint when we provide you with our decision. The service they provide is free and impartial, but you would need to contact them within 6 months of the date of our decision.

More information about the ombudsman and the type of complaints they can review is available via their website www.financial-ombudsman.org.uk ↗.

You can also contact them as follows:

Post: Financial Ombudsman Service, Exchange Tower, London, E14 9SR

Telephone: 08000 234567 (free on mobile phones and landlines)

Email: complaint.info@financial-ombudsman.org.uk ↗

If the Financial Ombudsman Service is unable to consider your complaint, you may wish to obtain advice from the Citizens Advice Bureau or seek legal advice.

The Financial Services Compensation Scheme (FSCS)

We are covered by the Financial Services Compensation Scheme (FSCS) which means that you may be entitled to compensation if we are unable to meet our obligations to you. Further information is available on www.fscs.org.uk ↗ or by contacting the FSCS directly on 0800 678 1100.

How we use your information

Who controls your personal information

This notice tells you how Zurich Insurance plc ('Zurich'), as data controller, will deal with your personal information. Where Zurich introduces you to a company outside the group, that company will tell you how your personal information will be used.

You can ask for further information about our use of your personal information or complain about its use in the first instance, by contacting our Data Protection Officer at: Zurich Insurance Group, Tri-centre 1, Newbridge Square, Swindon, SN1 1HN or by emailing the Data Protection Officer at GBZ.General.Data.Protection@uk.zurich.com ↗.

If you have any concerns regarding our processing of your personal information, or are not satisfied with our handling of any request by you in relation to your rights, you also have the right to make a complaint to the Information Commissioner's Office. Their address is: First Contact Team, Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, SK9 5AF.

What personal information we collect about you

We will collect and process the personal information that you give us by phone, e-mail, filling in forms, including on our website, and when you report a problem with our website. We also collect personal information from your appointed agent such as your trustee, broker, intermediary or financial adviser in order to provide you with the services you have requested and from other sources, such as credit reference agencies and other insurance companies, for verification purposes. We will also collect information you have volunteered to be in the public domain and other industry-wide sources. We will only collect personal information that we require to fulfil our contractual or legal requirements unless you consent to provide additional information. The type of personal information we will collect includes; basic personal information (i.e. name, address and date of birth), occupation and financial details, health and family information, claims and convictions information and where you have requested other individuals be included in the arrangement, personal information about those individuals.

If you give us personal information on other individuals, this will be used to provide you with a quotation and/or contract of insurance and/or provision of financial services. You agree you have their permission to do so. Except where you are managing the contract on another's behalf, please ensure that the individual knows how their personal information will be used by Zurich. More information about this can be found in the 'How we use your personal information' section.

How we use your personal information

We and our selected third parties will only collect and use your personal information (i) where the processing is necessary in connection with providing you with a quotation and/or contract of insurance and/or provision of financial services that you have requested; (ii) to meet our legal or regulatory obligations; or (iii) for our 'legitimate interests'. It is in our legitimate interests to collect



your personal information as it provides us with the information that we need to provide our services to you more effectively including providing you with information about our products and services. We will always ensure that we keep the amount of information collected and the extent of any processing to the absolute minimum to meet this legitimate interest. Examples of the purposes for which we will collect and use your personal information are:

1. to provide you with a quotation and/or contract of insurance;
2. to identify you when you contact us;
3. to deal with administration and assess claims;
4. to make and receive payments;
5. to obtain feedback on the service we provide to you;
6. to administer our site and for internal operations including troubleshooting, data analysis, testing, research, statistical and survey purposes;
7. for fraud prevention and detection purposes.

We will contact you to obtain consent prior to processing your personal information for any other purpose, including for the purposes of targeted marketing unless we already have consent to do so.

Who we share your personal information with

Where necessary, we will share the personal information you gave us for the purposes of providing you with the goods and services you requested with the types of organisations described below:

associated companies including reinsurers, suppliers and service providers;
introducers and professional advisers;
regulatory and legal bodies;
survey and research organisations;
credit reference agencies;
healthcare professionals, social and welfare organisations; and
other insurance companies

Or, in order to meet our legal or regulatory requirements, with the types of organisations described below:

regulatory and legal bodies;
central government or local councils;
law enforcement bodies, including investigators;
credit reference agencies; and
other insurance companies

How we use your personal information for websites and email communications

When you visit one of our websites we may collect information from you such as your email address or IP address. This helps us to track unique visits and monitor patterns of customer website traffic, such as who visits and why they visit.

We use cookies and/or pixel tags on some pages of our website. A cookie is a small text file sent to your computer. A pixel tag is an invisible tag placed on certain pages of our website but not on your computer. Pixel tags usually work together with cookies to assist us to provide you with a more tailored service. This allows us to monitor and improve our email communications and website. Useful information about cookies, including how to remove them, can be found on our websites.

How we transfer your personal information to other countries

Where we transfer your personal information to countries that are outside of the UK and the European Union (EU) we will ensure that it is protected and that the transfer is lawful. We will do this by ensuring that the personal information is given adequate safeguards by using 'standard contractual clauses' which have been adopted or approved by the UK and the EU, or other solutions that are in line with the requirements of European data protection laws.

A copy of our security measures for personal information transfers can be obtained from our Data Protection Officer at: Zurich Insurance Group, Tri-centre 1, Newbridge Square, Swindon, SN1 1HN, or by emailing the Data Protection Officer at GBZ.General.Data.Protection@uk.zurich.com ↗.

How long we keep your personal information for

We will retain and process your personal information for as long as necessary to meet the purposes for which it was originally



collected. These periods of time are subject to legal, tax and regulatory requirements or to enable us to manage our business.

Your data protection rights

You have a number of rights under the data protection laws, namely:

- to access your data (by way of a subject access request);
 - to have your data rectified if it is inaccurate or incomplete;
 - in certain circumstances, to have your data deleted or removed;
 - in certain circumstances, to restrict the processing of your data;
 - a right of data portability, namely to obtain and reuse your data for your own purposes across different services;
 - to object to direct marketing;
 - not to be subject to automated decision making (including profiling), where it produces a legal effect or a similarly significant effect on you;
 - to claim compensation for damages caused by a breach of the data protection legislation.
- if we are processing your personal information with your consent, you have the right to withdraw your consent at any time.

We will, for the purposes of providing you with a contract of insurance, processing claims, reinsurance and targeted marketing, process your personal information by means of automated decision making and profiling where we have a legitimate interest or you have consented to this.

What happens if you fail to provide your personal information to us

If you do not provide us with your personal information, we will not be able to provide you with a contract or assess future claims for the service you have requested.

Fraud prevention and detection

In order to prevent and detect fraud we may at any time:

- check your personal data against counter fraud systems
- use your information to search against various publicly available and third party resources
- use industry fraud tools including undertaking credit searches and to review your claims history
- share information about you with other organisations including but not limited to the police, the Insurance Fraud Bureau (IFB), other insurers and other interested parties.

If you provide false or inaccurate information and fraud is identified, the matter will be investigated and appropriate action taken. This may result in your case being referred to the Insurance Fraud Enforcement Department (IFED) or other police forces and fraud prevention agencies. You may face fines or criminal prosecution. In addition, Zurich may register your name on the Insurance Fraud Register, an industry-wide fraud database.

Claims history

We may pass information relating to claims or potential claims to any relevant database. We and other insurers may search these databases when you apply for insurance, when claims or potential claims are notified to us or at time of renewal to validate your claims history or that of any other person or property likely to be involved in the policy or claim.

This helps to check information provided and prevent fraudulent claims.



APPENDIX E

UXO Screening Map

The logo for ZeticaUXO features the word "zetica" in a white, lowercase, sans-serif font, followed by "UXO" in a green, uppercase, sans-serif font. To the right of the text is a green, 3D isometric cube with a white grid pattern on its top and front faces.

Location: WA8 5BU,
Map Centre: 349185,388346



LEGEND

- High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- Low:** Areas indicated as having 15 bombs per 1000acre or less.



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

We typically recommend that a detailed UXO desk study and risk assessment is undertaken for sites in an area with a moderate or high bombing density. Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then [additional detailed research](#) is recommended.

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

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

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

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

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

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

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