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Geo-Environmental Ltd

Consulting Geo-Environmental Engineers

Phase 1 Geo-Environmental Assessment

Cowm Top Lane, Rochdale

Report Ref:
22228-PWAG-00-XX-RP-G-1000-P01

Prepared for:
Supashed Rochdale Limited

Date:
October 2022

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Executive Summary

PWA Geo-Environmental Ltd (PWAG) was commissioned by Supashed Rochdale Limited to undertake a Phase 1 Geo-Environmental Assessment for a proposed residential development at Genesis Business Park, Cowm Top Lane, Rochdale. A summary of key geo-environmental considerations is provided below. However, other issues may exist so the report must be read in full.

Key Details	
Site:	The site is not secure and comprises undeveloped overgrown green space. Based on Google Streetview, levels were raised substantially between 2014 and 2019 to produce the current hummocky topography. There are multiple trees of varying sizes and neighbouring land is overgrown with trees. To the north and east are industrial units, to the west is residential and to the south is woodland. Other than an unmade track to the east, site boundaries are not clearly identified. The entrance to the site has recently been stoned up and is used for storing building materials. A stockpile of asphalt fragments and kerbstones was observed.
Site History:	The earliest map from 1851 shows the site undeveloped. A pond appears by 1910 but this is no longer present following possible land raising in the early 2010s. Surrounding land use was agricultural with residential development to the west by 1955, industrial development to the north by 1992 and industrial development to the east by 2018.
Geology:	The online BGS GeoIndex identifies that superficial strata comprises hummocky glacial deposits. Bedrock comprises mudstone, siltstone and sandstone of the Pennine Lower Coal Measures Formation. We also anticipate that the natural geology will be overlain by an unknown depth of made ground in places.
Hydrogeology:	Superficial strata is classed as a Secondary A Aquifer and bedrock beneath the site is a Secondary A Aquifer.
Flooding:	The site is not identified as at risk from flooding.
Hydrology:	There are no surface water features within a 250 m radius.
Sensitivity:	Overall, the site setting is considered medium sensitivity.

Geo-Environmental Findings	
Mining and Quarrying:	The risk to the proposed development from shallow coal mine workings is assessed as low and no further work is recommended with regard to shallow coal workings.
Ground Gas:	The desk study has not identified a ground gas risk associated with landfills, waste disposal sites or geogenic sources.
Radon:	Radon protective measures are not considered necessary.
Potential Contamination:	Possible made ground associated with former land raising may have caused localised contamination. Environmental testing should be undertaken.
Anticipated Foundations	Foundation solutions will be dependent on a number of parameters including finished levels, loadings, bearing capacity of the natural strata, depth to bedrock, groundwater levels, proximity of trees, etc. Further investigation is required to determine likely foundation solutions.

Contaminated Land Risk Assessment	
Based on the information contained in this report and with due regard to the proposed development, the site represents a medium risk with respect to contaminated land liability issues. Subject to the findings of further investigation work, and possible remediation, we anticipate that the site would represent a low risk with respect to contaminated land liability issues.	

Recommendations	
Given the import of material to site, we recommend that intrusive investigations are undertaken for both environmental and geotechnical purposes.	
In addition, suspect Japanese Knotweed was observed at one location, and we recommend the site is inspected by a specialist to advise on treatment.	

Contents

1	FOREWORD	1
2	INTRODUCTION	1
	2.1 The Commission and Brief	1
	2.2 Geo-Environmental Assessment Methodology	1
3	SITE PROFILE	2
	3.1 Site Location and Details	2
	3.2 Site Reconnaissance	3
	3.3 Site Regulatory and Environmental Data	4
	3.4 Site History	5
	3.5 Planning	5
4	ENVIRONMENTAL SETTING	5
	4.1 Geology	5
	4.2 Mining and Quarrying	6
	4.3 Radon	6
	4.4 Hydrogeology	6
	4.5 Hydrology	7
	4.6 Flood Risk	7
	4.7 Landfill and Ground Gas Risk	7
	4.8 Unexploded Ordnance	8
	4.9 Environmentally Sensitive Sites	8
	4.10 Summary of Environmental Sensitivity	8
5	PREVIOUS REPORTS	9
6	ENVIRONMENTAL RISK ASSESSMENT	9
	6.1 Preliminary Conceptual Site Model	9
	6.2 Qualitative Risk Assessment	9
7	RISK REGISTER	10
8	CONCLUSIONS AND RECOMMENDATIONS	11
9	REGULATORY APPROVALS	12

Appendices

Appendix A – Drawings

Drawing No.	Title
22.113.001.A	OS Plan
22.113.002.D	Proposed Site Plan

Appendix B – Environmental Data Report

Appendix C – Historical Maps

Appendix D – Coal Authority Mining Report

Appendix E – Risk Evaluation

1 FOREWORD

This report has been prepared for the sole use and reliance of Supashed Rochdale Limited (the Client) and cannot be relied upon by any other parties without the express written authorisation of PWA Geo-Environmental Ltd. Any unauthorised third party relies on this report at their own risk and the authors owe them no duty of care.

The report presents observations and factual data obtained during our site walkover, along with information reviewed during the desk study and intrusive works and provides an assessment of geo-environmental issues with respect to information provided by the Client regarding the site. There may be other conditions on site not encountered during this investigation and which have not been examined. We cannot accept responsibility for any conditions not revealed by this investigation and confirmation of ground conditions between exploratory locations should be undertaken if necessary. Any spatial inference of ground conditions between investigation locations are for guidance only and no liability can be accepted for their accuracy.

The groundwater conditions encountered on site and recorded on exploratory records are those observed at the time of investigation. The normal rate of investigation does not enable the recording of an equilibrium water level. Furthermore, groundwater levels are subject to seasonal variation, changes in weather and changes in local drainage conditions.

The report should be read in its entirety, including all associated drawings and appendices. PWA Geo-Environmental Ltd cannot be held responsible for any misinterpretations arising from the use of extracts that are taken out of context.

The findings and opinions conveyed in this report (including review of any third-party reports) are based on information obtained from the sources listed, which PWA Geo-Environmental Ltd understands are reliable. All reasonable skill, care and diligence has been applied in examining the information obtained. However, PWA Geo-Environmental Ltd accepts no responsibility for inaccuracies in the data supplied or for opinions based on any such inaccurate data.

Where the report refers to the potential presence of invasive weeds such as Japanese Knotweed, or the presence of asbestos containing materials, it should be noted that the observations are for information only and should be verified by a suitably qualified expert.

PWA Geo-Environmental Ltd reserves the right to amend their conclusions and recommendations in the light of further information that may become available.

2 INTRODUCTION

2.1 The Commission and Brief

PWA Geo-Environmental Ltd (PWAG) was commissioned by Supashed Rochdale Limited to undertake a Phase 1 Geo-Environmental Assessment as documented in our proposal. The proposed development will comprise a commercial building subdivided into three units with associated service yard, car parking, and landscaped areas. A draft layout plan showing the site boundary is included as Drawing No. 22.113.002.D in **Appendix A**. Any changes to the proposed layout, site levels and/ or end use may require amendments to this report.

This report presents the factual information collected during this assessment, interpretation of the data obtained and recommendations relevant to the commission and brief. General notes and limitations relevant to all PWA Geo-Environmental Ltd investigations are described in the Foreword. These should be read in conjunction with this report. Should this report not address particular questions relevant to your requirements then this must be brought to our attention in advance of works commencing so we can determine if additional work is needed.

2.2 Geo-Environmental Assessment Methodology

Key aspects of this Phase 1 are summarised as follows:

- Review the history of the site and surrounding area from historical Ordnance Survey (OS) maps and any available anecdotal information or historical reports.
- Review current activities and current condition of the site, based on information made available by the client and regulatory data relating to the site, further assisted by the preliminary site walkover.
- Assess the environmental setting for the site from a review of published geological, hydrogeological, hydrological and regulatory data.
- Assess anticipated ground conditions, including potential contaminants.

- Assess anticipated foundation issues associated with the proposed development.
- Review third party documentation listed in Section 5.
- Preparation of a conceptual site model and preliminary environmental risk assessment.
- Recommendations for further work, if required.

This review relied on published information and information provided by the client and other parties, including anecdotal information, during the given time period. Regulatory data from public registers and historical OS maps were obtained from a Groundsure report.

3 SITE PROFILE

3.1 Site Location and Details

Table 1. Site Location and Details.		
Address	Cowm Top Lane, Rochdale	
National Grid Reference	389006 410751	
Area	Approximately 1.07 hectares (see site areas drawing in Appendix A).	
Location	 Figure 1 (reproduced from the Groundsure Report) is included as a site location plan.	
Ground Cover	Ground Cover	Estimated percentage
	Grass and vegetation	100%
Known Services	The position of services is not known. A full utilities survey should be undertaken. A marker post for a medium pressure underground gas main is located next to the site entrance.	
Current Use	Vacant land.	
Proposed Use ¹	Commercial use.	

1. Different site uses may introduce changes to pollutant linkages that are not considered in this report.

3.2 Site Reconnaissance

Table 2. Site Description.				
Summary The site is not secure and comprises undeveloped overgrown green space. Based on Google Streetview, levels were raised substantially between 2014 and 2019 to produce the current hummocky topography. There are multiple trees of varying sizes and neighbouring land is overgrown with trees. To the north and east are industrial units, to the west is residential and to the south is woodland. Other than an unmade track to the east, site boundaries are not clearly identified. The entrance to the site has recently been stoned up and is used for storing building materials. A stockpile of asphalt fragments and kerbstones was observed.				
Access	Access is gained off of Cowm Top Lane from which a kerb entrance has been recently constructed.			
Topography	The entire site slopes up towards the northern boundary, with the greatest slope towards the southern portion of the site. Surrounding topography is similarly sloped.			
Description	The site comprises of green open space with a north south access track running to Cowm Top Cottage located along the eastern boundary with a landscape buffer between this track and Cowm Top Lane beyond. The site is bounded to the north and south by dense wooded areas. To the west of the site the land falls away to the rear of the properties towards a residential area on Kirklee Road. Pedestrian access / footpaths cross the site. Review of Google Streetview images reveals that the site was flat and at a similar level to the access road in 2014. By 2019 levels across the site had been raised substantially and the area was grassed over. Current observations identify that much of the site is hummocky ground that is heavily overgrown with bushes and saplings. Suspect Japanese Knotweed was observed at one location. Close to the site entrance is a level stoned up area that was being used for the storage of aggregate.			
	 Photo 1: New kerbs and footpath leading towards the site.	 Photo 2: Stockpiles of recently deposited material including asphalt and kerbstones.		
	 Photo 3: Unmade track running alongside eastern boundary.	 Photo 4: Aggregate storage on site.		
Site Boundaries	North	East	South	West
	No clear boundary marker.	No clear boundary marker alongside an existing track.	No clear boundary marker.	No clear boundary marker.
Adjacent Land Uses	Grass and trees with industrial units beyond.	Grass and trees with Cowm Top Lane beyond	Grass and trees.	Grass and trees with residential beyond.

Table 2. Site Description.				
		and industrial units beyond the road.		
Potential Sources of Contamination	Site levels have been raised and the source of this material is not known. A small stockpile of made ground including discarded asphalt and kerbstones was observed.			

3.3 Site Regulatory and Environmental Data

Information regarding environmental regulatory controls and pollution incidents in proximity to the site is taken from the Groundsure Enviro Insight Report presented in **Appendix B** and summarised in **Table 3**.

Table 3. Summary of Site Regulatory and Environmental Data.					
Data Type	On site	0-50m	51-250m	Details	Potential to impact site?
Historical Industrial Sites					
Historical industrial land uses	1	0	30	The onsite record relates to an unspecified works located immediately north of the site and shown on 1992 mapping. Records within 250 m generally refer to cuttings, unspecified heaps, unspecified ground workings and unspecified pits.	No
Historical tank database	0	1	5	Closest record refers to unspecified tank 44 m south west of the site in 1929.	No
Historical energy features	0	0	3	Closest records relate to an electricity substation 58 m north west on 1989 to 1992 mapping.	No
Historical petrol stations	0	0	0	None within 250 m of site.	No
Historical garages	0	0	0	None within 250 m of site.	No
Environmental Permits, Incidents and Registers					
IPC Authorisations	0	0	2	Both records were located 197m north west of the site and were for timber processes carried out by Dale Joinery Ltd.	No
Red List Discharge Consents	0	0	0	None listed.	No
Radioactive Substance Authorisations	0	0	0	None listed.	No
Licensed Discharges to controlled waters	0	0	0	None listed.	No
Record of COMAH or NIHHS Sites	0	0	0	None listed.	No
Licensed Industrial Activities	0	0	0	None listed.	No
List 2 Dangerous Substances	0	0	0	None listed.	No
Regulated explosive sites	0	0	0	None listed.	No
Recorded Pollution Incidents	0	0	0	None listed.	No
Sites Determined as Contaminated Land	0	0	0	None listed.	No
Current or Recent Land Use					
Industrial Sites Data	0	2	15	Records within 50 m refer to industrial products and industrial features, infrastructure, transport, repair and servicing.	No

Table 3. Summary of Site Regulatory and Environmental Data.					
Data Type	On site	0-50m	51-250m	Details	Potential to impact site?
IPC = Integrated Pollution Control; IPPC = Integrated Pollution Prevention & Control; LAPPC = Local Authority Pollution Prevention & Controls; APC = Air Pollution Control; COMAH = Control of Major Accident hazards; NIHHS – Notification of Installations Handling Hazardous Materials.					

3.4 Site History

A study of historical Ordnance Survey (OS) maps has been undertaken to identify potentially significant geo-environmental constraints on or near the site. Salient points relating to the history of the site and surrounding area are detailed in **Table 4**. A full copy of the historical maps are included in **Appendix C**.

Table 4. Site History Summary.		
Summary The earliest map from 1851 shows the site undeveloped. A pond appears by 1910 but this is no longer present following possible land raising in the early 2010s. Surrounding land use was agricultural with residential development to the west by 1955, industrial development to the north by 1992 and industrial development to the east by 2018.		
Date	Site	Surrounding Land
1851	The site is undeveloped agricultural land with the eastern boundary delineated by Cowm Top Lane.	Surrounding land use comprises mostly agricultural. There were some small unidentified buildings approximately 50 m to the south at Cowm Top
1890	No significant change.	Two reservoirs are present approximately 250 m to the west and an old gravel pit is present approximately 200 m to the south.
1910	A small pond is shown in the east of the site.	No significant change.
1929	No significant change.	Industrial development apparent approximately 300 m to the north west.
1955	The site is crossed by electricity cables.	Residential development has occurred approximately 50 m west of the site.
1974	Overhead electricity cables no longer shown.	The A627(M) appears approximately 100 m east of the site.
1992	No significant change.	A 'works' is shown immediately north of the site comprising four buildings.
2011 aerial photo	No significant change – the site is covered by open vegetation.	Extensive earthworks are underway to the east of the site including forming the new route of Cowm Top Lane and building platforms for the industrial units.
2018	Much of the site is bare soil with slopes indicating that levels have been raised. The area of the pond has been filled.	Cowm Top Lane is present and the industrial units to the east have been constructed. A plot immediately east remains undeveloped.
2019	Vegetation has established over the previously bare soil	Land immediately east of the site has been developed with a new unit.

3.5 Planning

Rochdale Borough Council planning portal identified a number of planning applications for the site including proposed residential development, office development and energy reserve facility.

There was a desk study available for the energy reserve facility. This identified a low risk to human health and controlled waters from potential contamination sources associated with made ground. The risk from ground gases was considered low and the risk from shallow coal mining was considered very low.

4 ENVIRONMENTAL SETTING

4.1 Geology

Online British Geological Survey (BGS) published geological data and the Geo Insight report presented in **Appendix B** shows the following geological sequence.

Table 5. Mapped Geology.	
Summary The online BGS GeoIndex identifies that superficial strata comprises hummocky glacial deposits. Bedrock comprises mudstone, siltstone and sandstone of the Pennine Lower Coal Measures Formation. We also anticipate that the natural geology will be overlain by an unknown depth of made ground in places.	
Item	Description
Topsoil	Not shown on mapping but expected to be present in landscaped areas.
Made Ground	Not indicated on mapping but expected to be present from historical development.
Superficial	Hummocky (moundy) glacial deposits. These are a highly variable mix of strata that have a characteristic moundy topographic form.
Bedrock	Bedrock beneath the site is indicated to be mudstone, siltstone and sandstone of the Pennine Lower Coal Measures Formation. In the south of the site, sandstone of the Old Lawrence Rock may be present.
BGS Borehole Records	Two BGS borehole records from 1996 were present close to the eastern boundary of the site (SD81SE433 and SD81SE434). - SD81SE433 identified 0.3 m of topsoil over firm sandy clay with very silty fine sand encountered from 2.1 m to the bottom of the trial pit at 3.8 m. - SD81SE434 identified 0.2 m of topsoil over sand with gravel to 0.6 m and firm and stiff sandy clay to 4.2 m.

4.2 Mining and Quarrying

The Coal Authority Interactive Map viewer and historical OS maps were reviewed to determine potential constraints associated with former mining and quarrying activities.

The site was found to be in a Coal Mining Reporting Area but not in a development high risk area. A copy of the Coal Authority mining report has been included in **Appendix D**.

This states that:

- The site is not within a surface area that could be affected by any past recorded underground coal mining;
- There are no known coal mining entries within, or within 20m of the site;
- The Coal Authority is not aware of any damages due to geological faults or other lines of weakness that have affected by coal mining;
- The property is not within an area affected by past or present opencast coal mining;
- The Coal Authority is not aware of issues associated with coal mining subsidence; and
- The Coal Authority has no record of a mine gas emission requiring action.

The risk to the proposed development from shallow coal mine workings is assessed as low and no further work is recommended with regard to shallow coal workings.

4.3 Radon

The site is within a Radon Affected Area where <1% of properties are affected. No radon protection measures are required for developments in these areas. However, the requirement for radon protection measures for any proposed development should be confirmed with local building control.

4.4 Hydrogeology

The following hydrogeological assessment is based upon data from the Groundsure report.

Table 6. Hydrogeology.		
Summary Superficial strata is classed as a Secondary A Aquifer and bedrock beneath the site is a Secondary A Aquifer.		
Detail	Superficial Geology	Bedrock Geology
Aquifer status	Secondary A Aquifer.	Secondary A Aquifer.
Abstractions within 500m	None.	
Source Protection Zone (within 500 m)	None.	

Table 6. Hydrogeology.		
Anticipated groundwater flow	Likely to follow natural topography to the north and north west.	Not known.
Permeability	Not known	Not known
Rainwater infiltration – potential for soakaways	Not known	Potential to be suitable where underlying bedrock is weathered sandstone and present at shallow depth. This would be subject to undertaking permeability testing.
Groundwater vulnerability	Vulnerability: High. Aquifer type: Secondary. Recharge potential: High.	Vulnerability: Low. Aquifer type: Secondary. Flow mechanism: Well-connected fractures.

4.5 Hydrology

The following hydrological assessment is based upon data from the Groundsure report and the EA Catchment Data Explorer.

Table 7. Hydrology.	
Summary There are no surface water features within a 250 m radius.	
Item (within 250 m radius)	Comments
Nearest surface waterbodies	None identified.
Pollution incidents	None identified.
Abstractions	None identified.
Discharge consents	None identified.
Latest ecological quality	Not applicable given absence of nearby surface waterbodies.
Latest chemical quality	Not applicable given absence of nearby surface waterbodies.
Surface water sensitivity	Not applicable given absence of nearby surface waterbodies.

4.6 Flood Risk

The site is not identified at Risk of Flooding from Rivers and the Sea (RoFRaS).

No Flood Zones 2 or 3 have been identified on site.

Surface water: The highest risk of surface water flooding on and within 50 m of the site for a 1 in 100 year event is 0.3-1.0 m. This risk appears to relate to a former pond that was infilled by 2018.

Groundwater: The highest risk of groundwater flooding on and within 50 m of the site is low.

4.7 Landfill and Ground Gas Risk

The following information regarding landfills and other waste sites is taken from the Groundsure Report.

Table 8. Summary of Landfill and Other Waste Sites.				
Summary				
The desk study has not identified a ground gas risk associated with landfills, waste disposal sites or geogenic sources.				
Data Type	0 - 250 m	251 - 500 m	Details	Potential for Impact on-site?
Historical landfill (LA/mapping records)	0	2	The closest record relates to a refuse tip 407 m west shown on 1963 mapping.	No
Historical landfill (EA/NRW records)	0	0	None listed.	No
Historical waste sites	0	0	None listed.	No
Licensed waste sites	0	0	None listed.	No
Waste exemptions	1	27	Closest record refers to a site 44 m east where an exemption was made for storage of waste in a secure place. The next closest record refers to a site 279 m north west where an exemption was made also for storage of waste in a secure place.	No
Geological Conditions	Based on a review of geological conditions we do not expect a ground gas risk to be associated with underlying glacial deposits.			
EA = Environment Agency; NRW = Natural Resources Wales; BGS = British Geological Survey; LA = Local Authority.				

4.8 Unexploded Ordnance

A Zetica Unexploded Bomb Risk Map indicates the site to be in an area of low risk. In such cases Zetica advises that 'there is no greater probability of encountering UXO than anywhere else in the UK' and 'works can proceed with no special precautions'.

4.9 Environmentally Sensitive Sites

Designated environmentally sensitive sites recorded within a 500 m radius include:

- Site of Special Scientific Interest (SSSI) associated with the Rochdale Canal;
- Special Area of Conservation (SAC) associated with the Rochdale Canal;
- Nitrate Vulnerable Zones; and
- SSSI impact risk zone.

4.10 Summary of Environmental Sensitivity

The environmental sensitivity of the site has been established based on the following reasons.

Table 9. Sensitivity of Environmental Receptors and Mitigating Aspects.			
Summary Overall, the site setting is considered medium sensitivity.			
Receptor Type	Receptor(s)	Sensitivity	Reason
Groundwater (superficial)	Secondary A Aquifer	Medium	Superficial hummocky glacial deposits are classified as a Secondary A Aquifer.
Groundwater (bedrock)	Secondary A Aquifer	Medium	Bedrock is anticipated at shallow depth. Bedrock comprises sandstone that is classified as a Secondary A Aquifer.
Surface water	None	N/A	No nearby surface water features have been identified.
Proposed land use.	Future site users	Medium	The site is proposed to be developed with commercial and residential units.
These factors are mitigated by: • The absence of any designated environmentally sensitive sites; and • The absence of groundwater/ surface water abstractions and source protection zones.			

5 PREVIOUS REPORTS

No existing geo-environmental reports were made available for this site.

6 ENVIRONMENTAL RISK ASSESSMENT

6.1 Preliminary Conceptual Site Model

Based on the desk study information, a preliminary conceptual site model (CSM) has been developed. This section summarises the understanding of surface and sub-surface features, potential contaminant sources, receptors that could be affected (such as human health and controlled waters) and pathways linking the two.

Table 10. Source, Pathway and Receptors.		
Potential Sources of Contamination	Potential Transport Pathways and Pollutant Linkages	Potential Receptors
On-site sources Made ground associated with historical land raising at the site. Potential contaminants could include a range of metals, organics (hydrocarbons), inorganic substances, plus asbestos.	- Direct exposure to potentially contaminated soils (direct contact, ingestion and dust inhalation). - Potential leaching of contaminants from made ground and the risk of infiltration into underlying groundwater. - Direct contact with conditions potentially aggressive to building materials and underground services (e.g. sulphates and hydrocarbons).	Controlled waters Underlying groundwater.
		Human Health - Current site users. - Future site users. - Construction workers during redevelopment works.
		Construction Materials - Buried concrete in ground (foundations and building materials). - Future buildings and services. - Neighboring properties. - Underground services.
Off-site sources None.		

6.2 Qualitative Risk Assessment

A qualitative risk assessment is undertaken of potential pollutant linkages following the guidance presented in **Appendix E**, and is based on consideration of both:

- The likelihood of an event (probability – considers both the presence of the hazard and receptor and the integrity of the pathway); and
- The severity of the potential consequence (considers both the potential severity of the hazard and the sensitivity of the receptor).

Potential risks related to these plausible linkages are based on development of the site with a proposed commercial end use assuming no mitigation is implemented. These are summarised in **Table 11**.

Table 11. Preliminary Environmental Risk Assessment.					
Source	Pathways to Receptor	Receptors	Associated Hazard [Potential severity]	Likelihood / Potential Mitigation	Potential Risk
Made ground.	Direct contact, ingestion and dust inhalation	Current site users. Future site users	Effect on human health [Mild]	Low: If any residual contaminated made ground is present, it is likely that this will not be significant given the absence of former industrial land use or waste disposal activities. If contamination is present this is likely to be limited and could be isolated beneath hardstand or a clean cover system to minimise risk to future site users. However, confirmatory testing of the material used to raise site levels is recommended.	Low
		Construction workers.		Low: It should be possible to mitigate against any risks by appropriate site management and use of suitable PPE during construction stage.	Low

Table 11. Preliminary Environmental Risk Assessment.					
Source	Pathways to Receptor	Receptors	Associated Hazard [Potential severity]	Likelihood / Potential Mitigation	Potential Risk
	Leaching and infiltration	Controlled waters – groundwater	Leaching and infiltration into groundwater [Mild]	Low: The underlying Secondary Aquifer is anticipated to be of high permeability and is considered vulnerable to site derived contamination. However, significant contamination is not expected. The site is not within a groundwater protection zone.	Low
	Direct contact	New in ground services and construction materials	Degradation [Mild]	Low: Potential risks can be mitigated by use of appropriate construction materials, chemical resistant supply pipes and use of oversized service trenches and clean fill.	Low

7 RISK REGISTER

Following completion of this report, several potential ground related constraints to redevelopment have been identified although this does not mean they are present. These have been compiled into a risk register along with potential mitigation measures. This is not intended to be a comprehensive list as other constraints would be identified by other specialists (such as ecological, flood, health and safety issues, etc) who will need to be consulted separately.

Table 12. Risk Register.		
Potential hazard/ constraint	Risk/ undesirable consequence	Potential mitigation
No geotechnical information available	Insufficient information available for foundation design (bearing capacity of natural soils). Unexpected ground conditions. Made ground may be present requiring deepening of foundations.	Undertake additional ground investigation to determine geotechnical properties of ground conditions.
It appears that material was imported to site by 2018. The depth and nature of fill is not known	The chemical suitability of imported material is not known. Geotechnical stability of material is not known.	Undertake additional ground investigation
Shallow groundwater	Ingress of water into excavations. Softening of soils. Unstable excavations	Undertake investigation.
Potentially aggressive ground conditions towards concrete and inground services	Ground conditions could result in deterioration of concrete, water pipes and other building materials.	Undertake chemical testing of soils to determine the most appropriate concrete mix for the building foundations and other below ground concrete elements. Underground services laid in oversize trenches, backfilled with clean virgin quarried material and positioned above groundwater. Subject to further chemical testing, water pipes likely to need up grading from standard polyethylene.
Live services on site	A marker post for a gas main was observed close to the site entrance. Service strike during ground investigation or construction.	All necessary service plans must be acquired by the client prior to ground being broken.
Ecological issues – potential for nesting birds/ bat roosts	Trees on site could be home to nesting birds/ bat roosts at times through the year. Could lead to works being delayed if endangered or protected species are discovered on site.	Undertake ecological survey.

Table 12. Risk Register.		
Potential hazard/ constraint	Risk/ undesirable consequence	Potential mitigation
Trees of variable sizes on site	Shrinkage and swelling of clays which can affect foundations.	Undertake tree survey. Deepening on foundations may be required depending on lab results and nature of trees.
Japanese Knotweed	A single stem of Japanese Knotweed was observed during the site inspection. This is likely to be more widespread and has potential to expand significantly if left untreated.	A Japanese Knotweed specialist should inspect the site and advise on treatment.

8 CONCLUSIONS AND RECOMMENDATIONS

This Phase 1 Geo-Environmental Assessment has been performed for the proposed development described in Section 2.1. If any of our assumptions are incorrect then the conclusions in this report may require reassessment.

Geotechnical Conclusions	The main issues considered in this report are based upon a review of environmental data, historical maps, and geological data. This report provides a brief assessment of geo-environmental issues and implications associated with the proposed development: - Underlying ground conditions across the site are expected to comprise a variable depth of made ground, underlain by hummocky glacial deposits with bedrock at unknown depth. - The risk to the proposed development from shallow coal mine workings is assessed as low and no further work is recommended with regard to shallow coal workings. - The site is within an area where radon protective measures are not considered necessary. - Given the presence of hummocky glacial deposits and imported fill, it is considered that soakaways may not be suitable for the disposal of surface water. - Due to the sloping ground and proposed development, it is assumed that cut and fill activities may be required. - Foundation solutions will be dependent on a number of parameters including finished levels, loadings, bearing capacity of the natural strata, depth to bedrock, groundwater levels, proximity of trees, etc. - Possible obstructions and voids are not expected given the absence of former buildings and structures. - An ecological survey including, but not limited to, trees and buildings may be required prior to any works commencing on site. - Before firm foundation, floor slab and pavement design recommendations can be provided an intrusive investigation should be undertaken.
Environmental Conclusions	The preliminary environmental risk assessment undertaken for the site has identified that the import of material could represent a source of contamination. Although this is not expected to be significant (as it was likely associated with recent development of land east of the site) this should be investigated.
Contaminated Land Risk Assessment	Based on the information contained in this report, and with due regard to the proposed commercial development, the site represents a medium risk with respect to contaminated land liability issues. Subject to the findings of further investigation work, and possible remediation, we anticipate that the site would represent a very low risk with respect to contaminated land liability issues.
Preliminary Remediation Recommendations	If made ground or contamination is found, a remediation strategy should be developed setting out how future site users will be separated from underlying made ground. This could be achieved through construction of hardcover to the development (buildings and paved areas), or with a clean cover system in gardens.
Unexpected Findings Protocol	If unexpected potentially contaminated materials (such as those with an unusual colour, odour or containing drums, chemicals or asbestos, etc) are encountered at any time during redevelopment then work should stop, and a suitably qualified environmental consultant should be contacted to advise on the appropriate course of action.
Other Considerations	Where it is necessary to remove material from site, this should be assessed for waste disposal, treatment or recycling requirements. Alternatively, subject to further evaluation, natural soils, if present, could be suitable for reuse on other developments where an approved materials management plan is in place.

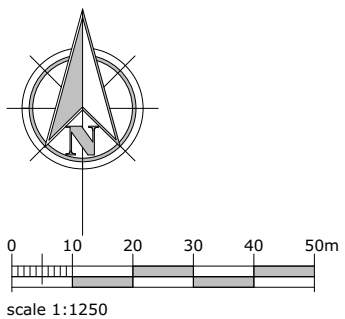
Recommendations for further work	Further intrusive investigation is recommended for environmental and geotechnical purposes. This should include: • Trial pits and/or boreholes to investigate the underlying ground conditions, evaluate geotechnical properties and confirm the depth to a suitable founding strata. • Chemical analyses of topsoil and made ground samples across site. • Geotechnical testing of soil samples to determine material properties, inform foundation design and concrete classification. • Develop a ground model to help inform foundation design. • Documentation of findings in a report. • Suspect Japanese Knotweed was observed at one location, and we recommend the site is inspected by a specialist to advise on treatment.
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9 REGULATORY APPROVALS

The conclusions and recommendations presented in this report are considered reasonable based on the information that was available. However, these are not guaranteed to gain approval from regulatory authorities. Therefore, we recommend that copies of this report are passed to the appropriate regulator for review and comment before undertaking any additional work.

Appendix A

Drawings



issue:

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A : original issue

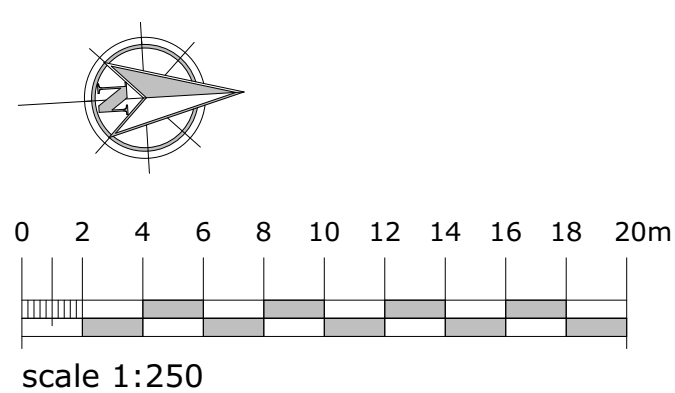
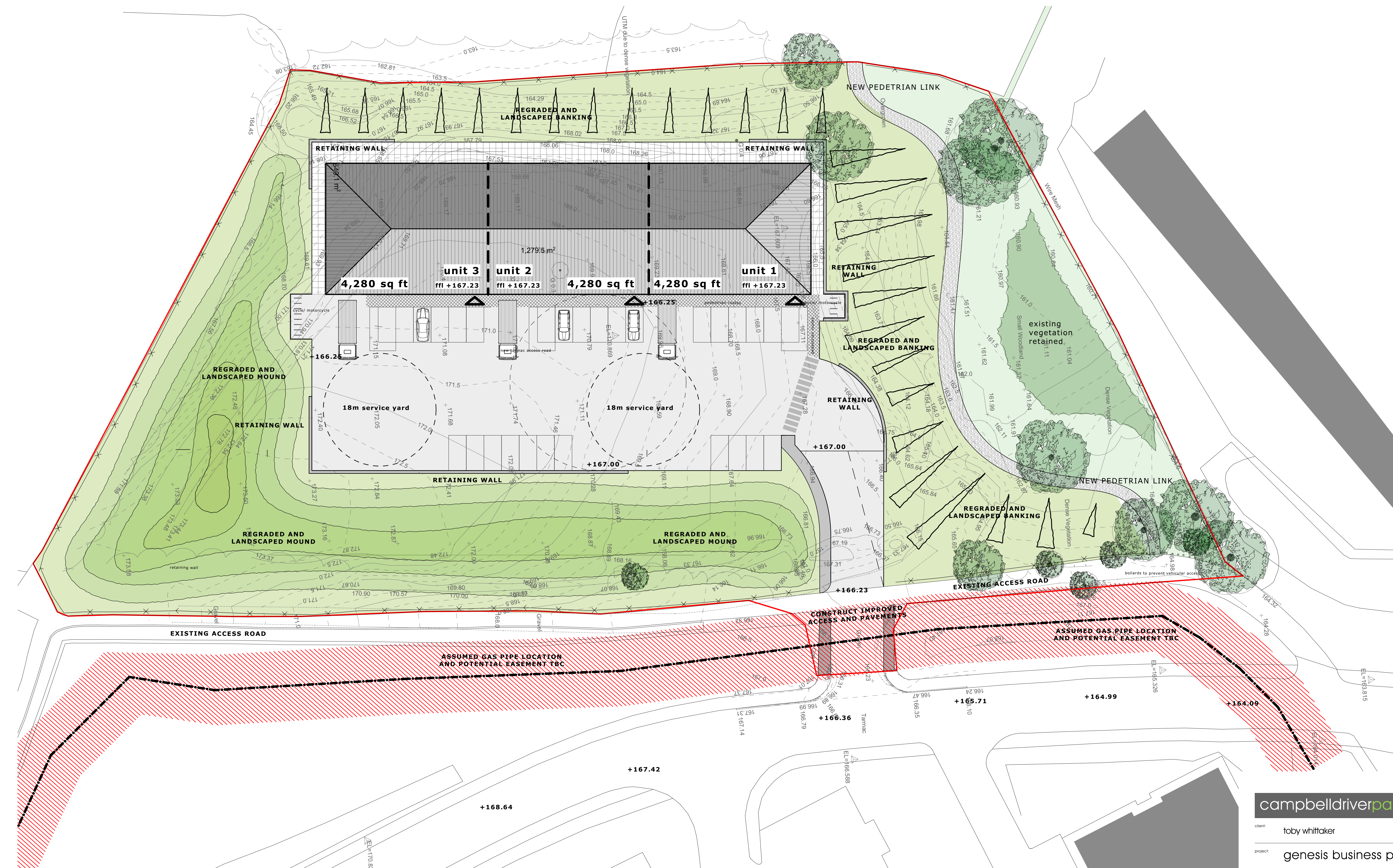
campbelldriverpartnership
architects

client: toby whittaker

project: genesis business park
cowm top lane rochdale

sheet: OS plan

job no:	22.113	dwg no:	001	A
scale:	1:1250 @ A4			
date:	02.03.22			
drawn:	lg			
				capricorn park blakewater road blackburn bb1 5qr t: 01254 297700 e: design@cdparchitects.co.uk



Appendix B

Environmental Data Report

UNIT 5, COWM TOP BUSINESS PARK, COWM TOP LANE, ROCHDALE, OL11 2PU

Order Details

Date: 18/10/2022

Your ref: 2228-G-01

Our Ref: GS-9135569

Site Details

Location: 389006 410751

Area: 1.07 ha

Authority: [Rochdale Metropolitan Borough Council](#)



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Summary of findings

p. 2

Aerial image

p. 8

OS MasterMap site plan

p.13

groundsure.com/insightuserguide

Contact us with any questions at:

info@groundsure.com

08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
14	1.1	<u>Historical industrial land uses</u>	1	0	30	67	-
18	1.2	<u>Historical tanks</u>	0	1	5	22	-
20	1.3	<u>Historical energy features</u>	0	0	3	12	-
20	1.4	Historical petrol stations	0	0	0	0	-
21	1.5	<u>Historical garages</u>	0	0	0	4	-
21	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
22	2.1	<u>Historical industrial land uses</u>	1	0	47	101	-
28	2.2	<u>Historical tanks</u>	0	1	9	36	-
30	2.3	<u>Historical energy features</u>	0	0	6	21	-
31	2.4	Historical petrol stations	0	0	0	0	-
31	2.5	<u>Historical garages</u>	0	0	0	5	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
33	3.1	Active or recent landfill	0	0	0	0	-
33	3.2	Historical landfill (BGS records)	0	0	0	0	-
34	3.3	<u>Historical landfill (LA/mapping records)</u>	0	0	0	2	-
34	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
34	3.5	Historical waste sites	0	0	0	0	-
34	3.6	Licensed waste sites	0	0	0	0	-
35	3.7	<u>Waste exemptions</u>	0	1	0	27	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
38	4.1	<u>Recent industrial land uses</u>	0	2	15	-	-
40	4.2	Current or recent petrol stations	0	0	0	0	-
40	4.3	Electricity cables	0	0	0	0	-
40	4.4	Gas pipelines	0	0	0	0	-
40	4.5	Sites determined as Contaminated Land	0	0	0	0	-



40	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
41	4.7	Regulated explosive sites	0	0	0	0	-
41	4.8	Hazardous substance storage/usage	0	0	0	0	-
41	4.9	<u>Historical licensed industrial activities (IPC)</u>	0	0	2	0	-
41	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
42	4.11	<u>Licensed pollutant release (Part A(2)/B)</u>	0	0	1	2	-
42	4.12	Radioactive Substance Authorisations	0	0	0	0	-
42	4.13	Licensed Discharges to controlled waters	0	0	0	0	-
43	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
43	4.15	Pollutant release to public sewer	0	0	0	0	-
43	4.16	List 1 Dangerous Substances	0	0	0	0	-
43	4.17	List 2 Dangerous Substances	0	0	0	0	-
43	4.18	<u>Pollution Incidents (EA/NRW)</u>	0	0	0	1	-
44	4.19	Pollution inventory substances	0	0	0	0	-
44	4.20	Pollution inventory waste transfers	0	0	0	0	-
44	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
45	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
47	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
48	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
49	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
49	5.5	Groundwater vulnerability- local information	None (within 0m)				
50	5.6	<u>Groundwater abstractions</u>	0	0	0	0	6
52	5.7	<u>Surface water abstractions</u>	0	0	0	0	8
54	5.8	<u>Potable abstractions</u>	0	0	0	0	2
55	5.9	Source Protection Zones	0	0	0	0	-
55	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
56	6.1	Water Network (OS MasterMap)	0	0	0	-	-



56	6.2	Surface water features	0	0	0	-	-
57	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
57	6.4	<u>WFD Surface water bodies</u>	0	0	0	-	-
58	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
59	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
59	7.2	Historical Flood Events	0	0	0	-	-
59	7.3	Flood Defences	0	0	0	-	-
60	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
60	7.5	Flood Storage Areas	0	0	0	-	-
61	7.6	Flood Zone 2	None (within 50m)				
61	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
62	8.1	<u>Surface water flooding</u>	1 in 100 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding					
64	9.1	<u>Groundwater flooding</u>	Low (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
65	10.1	<u>Sites of Special Scientific Interest (SSSI)</u>	0	0	0	1	5
66	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
66	10.3	<u>Special Areas of Conservation (SAC)</u>	0	0	0	1	5
67	10.4	Special Protection Areas (SPA)	0	0	0	0	0
67	10.5	National Nature Reserves (NNR)	0	0	0	0	0
67	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
68	10.7	Designated Ancient Woodland	0	0	0	0	0
68	10.8	Biosphere Reserves	0	0	0	0	0
68	10.9	Forest Parks	0	0	0	0	0
68	10.10	Marine Conservation Zones	0	0	0	0	0
68	10.11	<u>Green Belt</u>	0	0	0	0	3
69	10.12	Proposed Ramsar sites	0	0	0	0	0



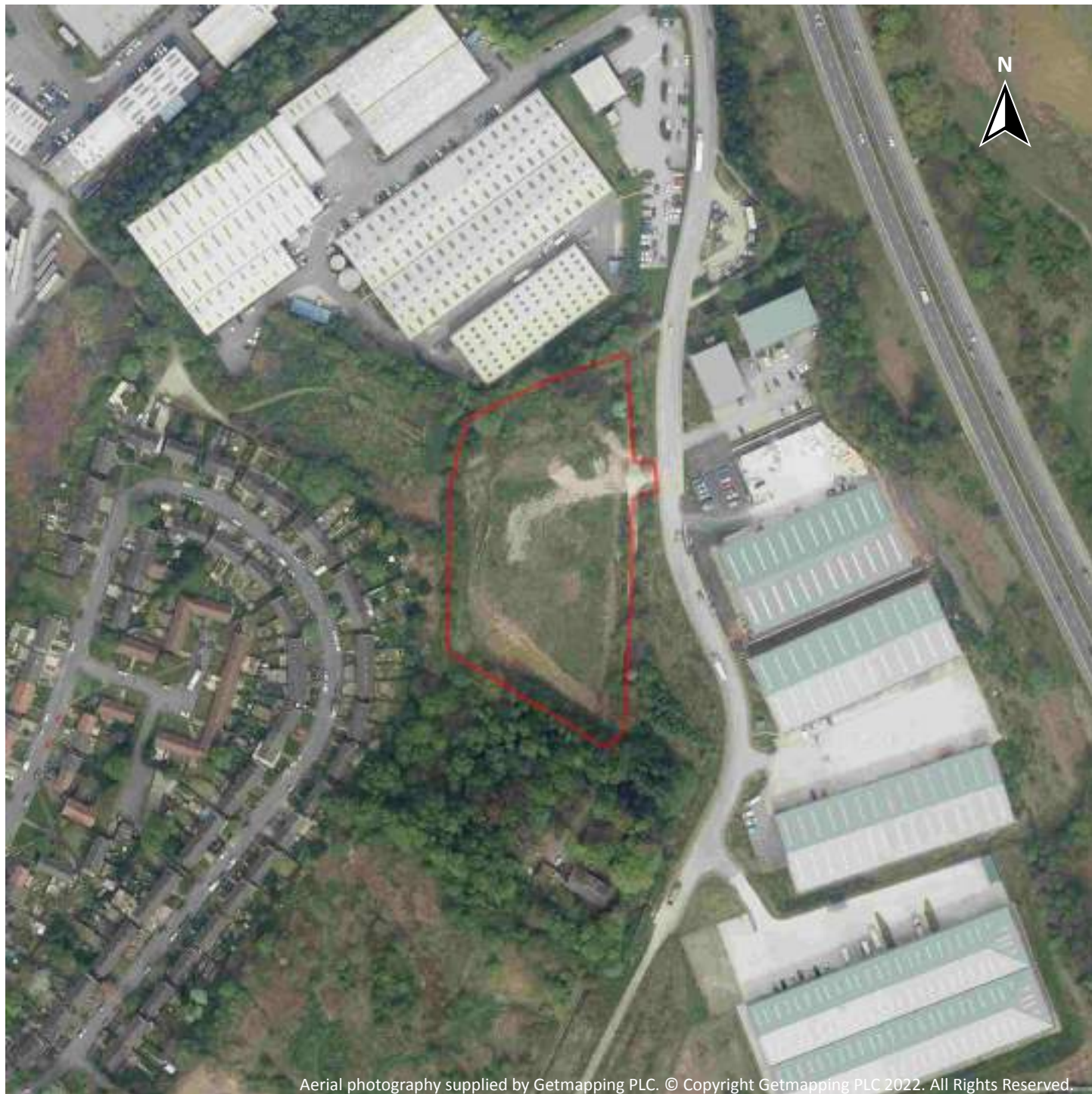
69	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
69	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
70	10.15	Nitrate Sensitive Areas	0	0	0	0	0
70	10.16	<u>Nitrate Vulnerable Zones</u>	0	0	1	0	0
71	10.17	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
72	10.18	<u>SSSI Units</u>	0	0	0	1	5
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
74	11.1	World Heritage Sites	0	0	0	-	-
74	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
74	11.3	National Parks	0	0	0	-	-
74	11.4	Listed Buildings	0	0	0	-	-
75	11.5	Conservation Areas	0	0	0	-	-
75	11.6	Scheduled Ancient Monuments	0	0	0	-	-
75	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
76	12.1	<u>Agricultural Land Classification</u>	Urban (within 250m)				
77	12.2	Open Access Land	0	0	0	-	-
77	12.3	<u>Tree Felling Licences</u>	0	0	10	-	-
78	12.4	Environmental Stewardship Schemes	0	0	0	-	-
78	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
79	13.1	<u>Priority Habitat Inventory</u>	1	0	0	-	-
80	13.2	<u>Habitat Networks</u>	0	0	2	-	-
80	13.3	Open Mosaic Habitat	0	0	0	-	-
80	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
81	14.1	<u>10k Availability</u>	Identified (within 500m)				
82	14.2	<u>Artificial and made ground (10k)</u>	0	0	4	2	-
84	14.3	<u>Superficial geology (10k)</u>	1	0	1	1	-

85	14.4	Landslip (10k)	0	0	0	0	-
86	14.5	<u>Bedrock geology (10k)</u>	2	1	2	1	-
87	14.6	<u>Bedrock faults and other linear features (10k)</u>	0	0	0	2	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
88	15.1	<u>50k Availability</u>	Identified (within 500m)				
89	15.2	Artificial and made ground (50k)	0	0	0	0	-
89	15.3	Artificial ground permeability (50k)	0	0	-	-	-
90	15.4	<u>Superficial geology (50k)</u>	1	0	1	1	-
91	15.5	<u>Superficial permeability (50k)</u>	Identified (within 50m)				
91	15.6	Landslip (50k)	0	0	0	0	-
91	15.7	Landslip permeability (50k)	None (within 50m)				
92	15.8	<u>Bedrock geology (50k)</u>	2	1	1	1	-
93	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
93	15.10	<u>Bedrock faults and other linear features (50k)</u>	0	0	0	2	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
94	16.1	<u>BGS Boreholes</u>	0	5	14	-	-
Page	Section	Natural ground subsidence					
96	17.1	<u>Shrink swell clays</u>	Low (within 50m)				
97	17.2	<u>Running sands</u>	Very low (within 50m)				
98	17.3	<u>Compressible deposits</u>	Negligible (within 50m)				
99	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
100	17.5	<u>Landslides</u>	Moderate (within 50m)				
102	17.6	<u>Ground dissolution of soluble rocks</u>	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
104	18.1	Natural cavities	0	0	0	0	-
105	18.2	<u>BritPits</u>	0	0	1	4	-
106	18.3	<u>Surface ground workings</u>	0	0	48	-	-
108	18.4	Underground workings	0	0	0	0	0
108	18.5	Historical Mineral Planning Areas	0	0	0	0	-



108	18.6	Non-coal mining	0	0	0	0	0
108	18.7	Mining cavities	0	0	0	0	0
108	18.8	JPB mining areas	None (within 0m)				
109	18.9	<u>Coal mining</u>	Identified (within 0m)				
109	18.10	Brine areas	None (within 0m)				
109	18.11	Gypsum areas	None (within 0m)				
109	18.12	Tin mining	None (within 0m)				
109	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
110	19.1	<u>Radon</u>	Less than 1% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
111	20.1	<u>BGS Estimated Background Soil Chemistry</u>	3	0	-	-	-
111	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
111	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
112	21.1	Underground railways (London)	0	0	0	-	-
112	21.2	Underground railways (Non-London)	0	0	0	-	-
112	21.3	Railway tunnels	0	0	0	-	-
112	21.4	Historical railway and tunnel features	0	0	0	-	-
112	21.5	Royal Mail tunnels	0	0	0	-	-
113	21.6	Historical railways	0	0	0	-	-
113	21.7	Railways	0	0	0	-	-
113	21.8	Crossrail 1	0	0	0	0	-
113	21.9	Crossrail 2	0	0	0	0	-
113	21.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 23/05/2019

Site Area: 1.07ha



Recent site history - 2018 aerial photograph



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Capture Date: 01/07/2018

Site Area: 1.07ha



Recent site history - 2011 aerial photograph



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Capture Date: 02/05/2011

Site Area: 1.07ha



Recent site history - 2000 aerial photograph

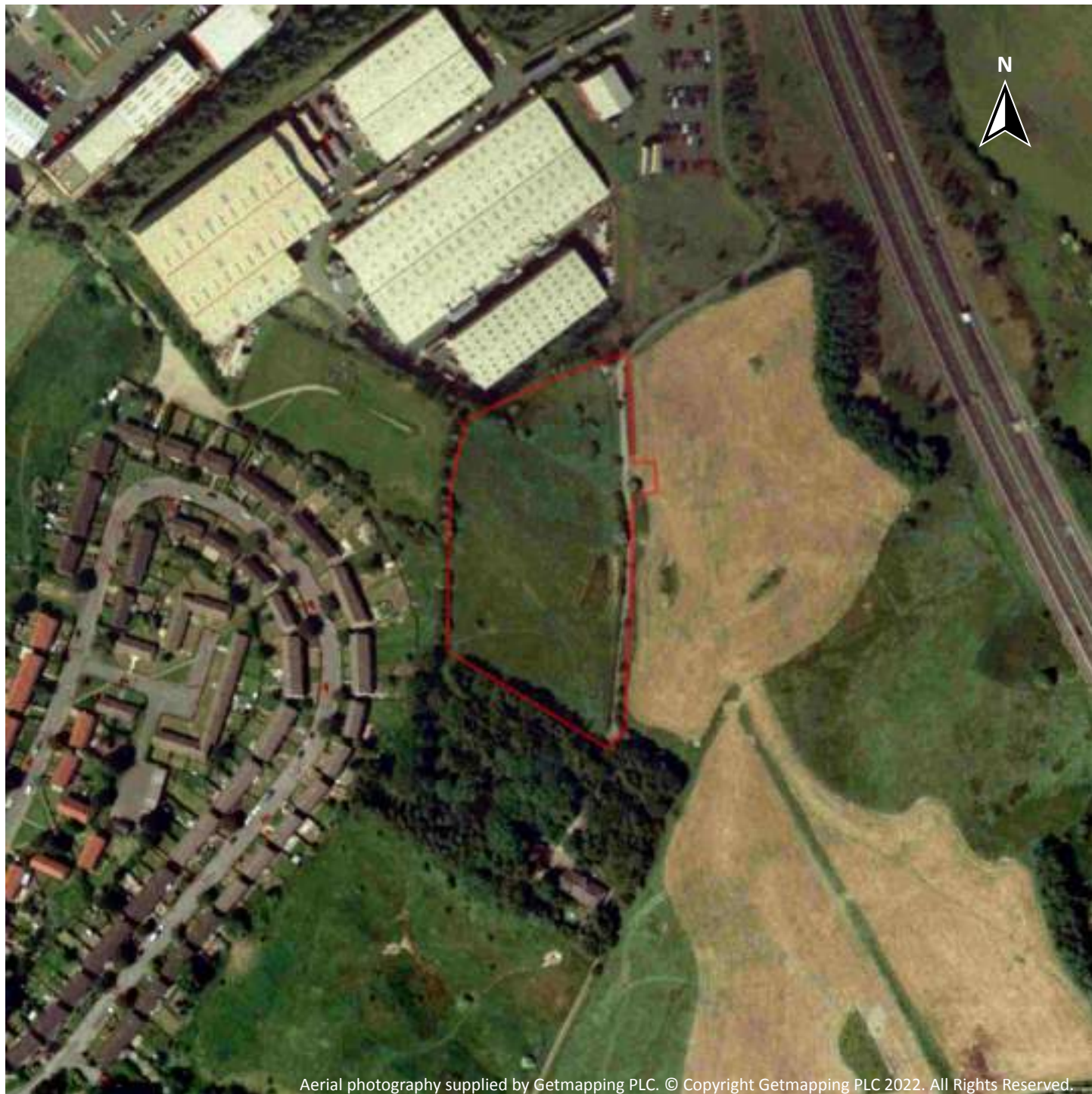


Capture Date: 19/06/2000

Site Area: 1.07ha



Recent site history - 1999 aerial photograph

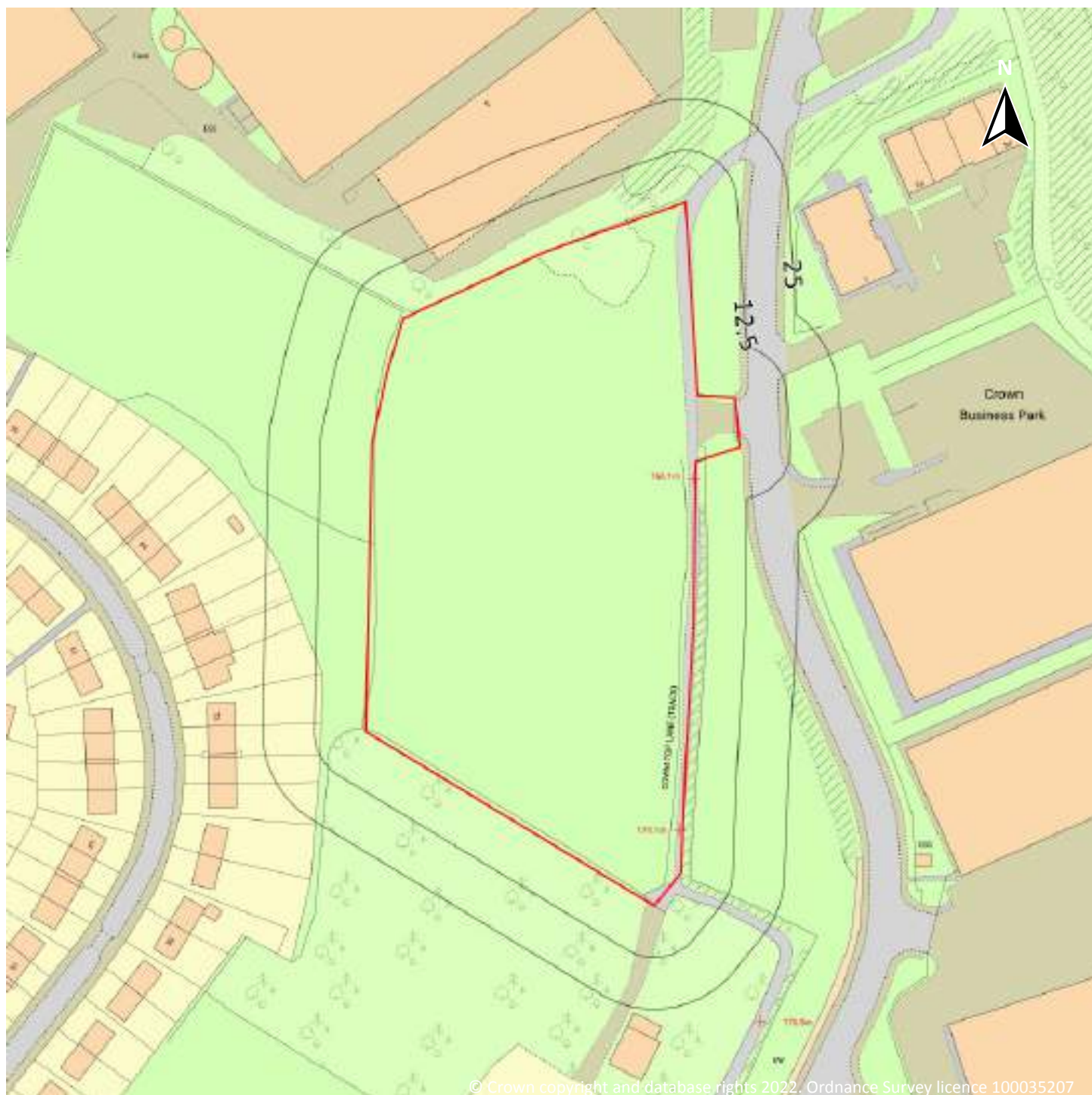


Capture Date: 10/09/1999

Site Area: 1.07ha



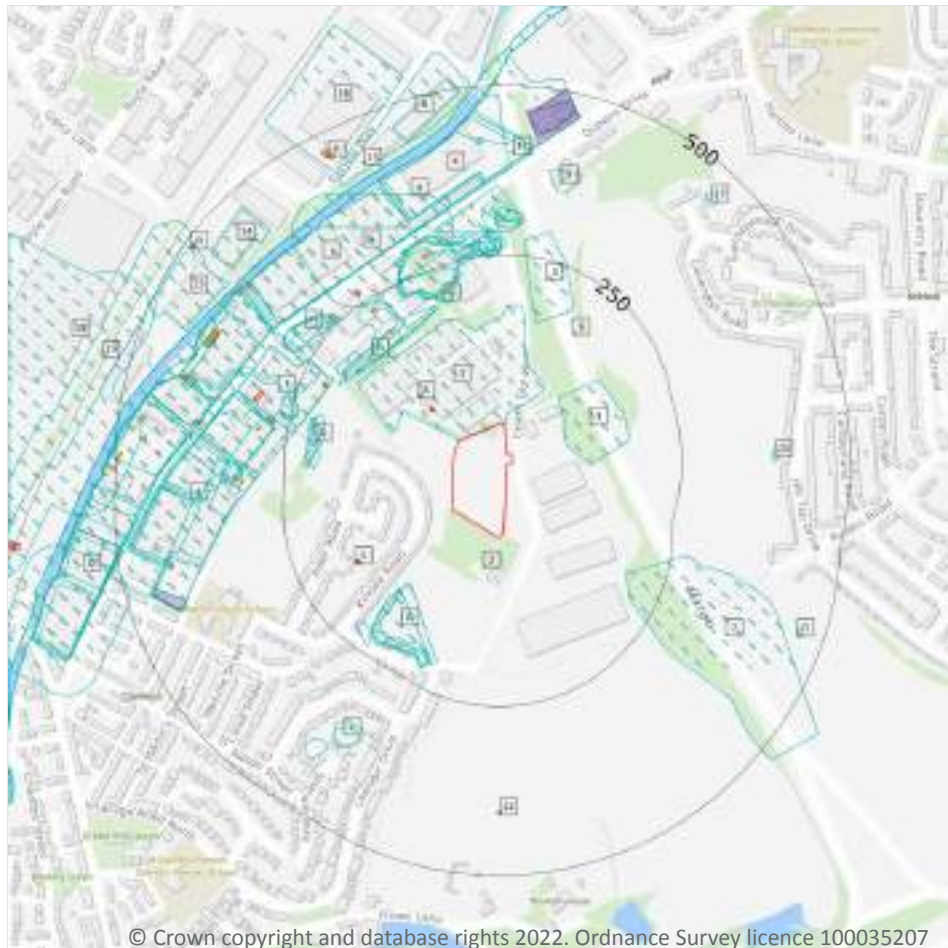
OS MasterMap site plan



Site Area: 1.07ha



1 Past land use



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

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1.1 Historical industrial land uses

Records within 500m

98

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 14**

ID	Location	Land use	Dates present	Group ID
1	On site	Unspecified Works	1992	679032



ID	Location	Land use	Dates present	Group ID
3	81m E	Cuttings	1987 - 1992	713089
B	125m SW	Unspecified Heap	1968 - 1992	769519
B	140m SW	Unspecified Heap	1938	703609
B	140m SW	Unspecified Heap	1890	704724
B	143m SW	Old Sand Pit	1909	682521
4	154m N	Cuttings	1975 - 1992	746187
C	169m NW	Unspecified Pit	1938	690935
C	170m NW	Unspecified Ground Workings	1968 - 1975	696850
C	171m NW	Unspecified Ground Workings	1928	765120
C	190m NW	Unspecified Works	1987	679033
7	193m E	Cuttings	1975 - 1992	704786
D	195m W	Unspecified Pit	1968 - 1975	699589
E	196m N	Unspecified Pit	1938	690936
B	197m SW	Unspecified Ground Workings	1949	647976
E	197m N	Unspecified Ground Workings	1949	730319
E	198m N	Unspecified Heap	1928	772313
D	200m W	Unspecified Pit	1949	740458
D	202m W	Unspecified Ground Workings	1928	648047
F	206m NW	Unspecified Mill	1968 - 1975	698108
F	206m NW	Unspecified Commercial/Industrial	1987 - 1992	704939
E	210m N	Unspecified Heap	1938	770435
B	211m SW	Unspecified Pit	1949	690934
E	212m N	Unspecified Ground Workings	1975	717339
E	215m N	Unspecified Ground Workings	1968	697380
F	228m NW	Brick Works	1890	668964
F	238m W	Unspecified Pit	1938 - 1949	773774
F	240m W	Unspecified Ground Workings	1909 - 1928	776680
F	241m W	Unspecified Mill	1968 - 1992	724370



ID	Location	Land use	Dates present	Group ID
G	244m NW	Unspecified Commercial/Industrial	1938	712450
E	246m N	Unspecified Ground Workings	1938	754652
H	251m NW	Unspecified Ground Workings	1938 - 1949	727454
E	252m N	Clay Pit	1909	676032
H	253m NW	Unspecified Heap	1928	772675
H	255m NW	Unspecified Heap	1968 - 1975	755243
I	268m W	Iron Works	1949	786343
F	270m W	Unspecified Mill	1909 - 1928	738288
F	271m W	Unspecified Mill	1938	769914
F	284m W	Unspecified Ground Workings	1890	648048
E	284m N	Brick Works	1908	668963
E	287m N	Unspecified Ground Workings	1908	768025
I	287m W	Unspecified Works	1968 - 1992	742961
E	290m N	Unspecified Ground Workings	1928 - 1938	771249
J	293m NW	Unspecified Commercial/Industrial	1949	772898
J	294m NW	Unspecified Mill	1928 - 1938	711860
G	294m NW	Unspecified Mills	1987 - 1992	775951
8	295m NW	Unspecified Mills	1975	736067
G	295m NW	Unspecified Mills	1968	756271
E	298m N	Unspecified Pit	1949	690688
E	299m N	Unspecified Ground Workings	1908	790499
I	311m W	Unspecified Ground Workings	1938 - 1949	761933
I	313m W	Unspecified Ground Workings	1928	775130
F	323m NW	Unspecified Mill	1975 - 1992	712499
F	323m NW	Unspecified Mill	1968	766895
F	323m NW	Unspecified Mill	1938 - 1949	766320
K	326m N	Unspecified Mill	1928 - 1938	774977
I	328m W	Unspecified Works	1909	782850

ID	Location	Land use	Dates present	Group ID
F	330m NW	Unspecified Mill	1909 - 1928	730848
K	330m N	Unspecified Mill	1908	783623
K	331m N	Unspecified Mill	1949	750104
I	332m W	Iron Works	1928 - 1938	787504
L	345m SW	Unspecified Pit	1968	690933
9	349m N	Unspecified Ground Workings	1949	647978
I	351m W	Leather Works	1890	681794
L	353m SW	Old Sand Pits	1909	668440
F	364m W	Corporation Yard	1938 - 1949	786083
F	368m W	Corporation Yard	1928	743726
I	373m W	Iron Works	1909	773630
F	377m NW	Disused Canal	1987	728752
F	377m NW	Disused Canal	1992	748585
F	377m NW	Disused Canal	1975	789732
I	383m W	Unspecified Manufactory	1890	652029
F	383m NW	Unspecified Tank	1987 - 1992	762103
10	384m E	Unspecified Ground Workings	1987 - 1992	752550
F	388m W	Unspecified Works	1968	745516
F	388m W	Unspecified Works	1975 - 1992	784315
F	388m NW	Unspecified Tanks	1949	776129
F	392m NW	Unspecified Tanks	1928 - 1938	788099
L	392m SW	Old Sand Pits	1909	668439
F	394m W	Unspecified Works	1890	770245
13	413m NW	Unspecified Works	1987 - 1992	770453
14	415m NW	Unspecified Works	1987 - 1992	703524
K	415m N	Unspecified Tank	1968 - 1975	747289
K	415m N	Chimney	1987 - 1992	781584
N	416m NW	Unspecified Works	1987 - 1992	717030



ID	Location	Land use	Dates present	Group ID
16	440m NW	Unspecified Warehouses	1987 - 1992	763796
N	440m N	Unspecified Warehouse	1975	652399
17	441m NE	Gravel Pit	1851	652936
O	457m E	Unspecified Tank	1928 - 1949	725402
Q	462m W	Unspecified Mills	1949	714494
18	464m W	Textile Machinery Works	1909 - 1928	705400
Q	469m W	Unspecified Mills	1938	754207
Q	486m W	Unspecified Mill	1890	726871
Q	492m W	Unspecified Mill	1968	697808
Q	492m W	Unspecified Mill	1975 - 1992	753558
Q	495m W	Tannery	1890	691827
19	497m NW	Railway Sidings	1975	758228
Q	499m W	Unspecified Mills	1909 - 1928	750692

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

28

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 14**

ID	Location	Land use	Dates present	Group ID
2	44m SW	Unspecified Tank	1929	84285
A	85m NW	Unspecified Tank	1990 - 1992	90394
A	86m NW	Unspecified Tank	1989	90161
6	169m NE	Unspecified Tank	1910 - 1930	98773
C	211m NW	Unspecified Tank	1990 - 1992	98129



ID	Location	Land use	Dates present	Group ID
C	227m NW	Unspecified Tank	1984 - 1996	103273
H	258m NW	Unspecified Tank	1910 - 1930	89500
E	267m N	Unspecified Tank	1996	84287
F	289m W	Unspecified Tank	1891	84283
I	309m W	Tanks	1990 - 1992	97840
E	322m N	Unspecified Tank	1910	84286
F	388m NW	Tanks	1929 - 1955	96023
F	389m NW	Tanks	1955	103599
F	395m W	Unspecified Tank	1955	99476
11	399m N	Unspecified Tank	1910	84288
12	403m S	Tanks	1910	87741
F	407m W	Unspecified Tank	1929 - 1937	90119
F	409m W	Unspecified Tank	1992	102031
F	410m W	Unspecified Tank	1990	89680
15	432m NW	Unspecified Tank	1984 - 1996	90010
F	434m W	Unspecified Tank	1929 - 1937	95534
F	455m W	Unspecified Tank	1929	84284
F	455m W	Unspecified Tank	1929 - 1937	103996
P	459m NW	Unspecified Tank	1984 - 1996	102307
O	461m E	Unspecified Tank	1930 - 1937	97171
F	462m W	Tanks	1910	87738
F	490m W	Unspecified Tank	1990 - 1997	101990
F	497m W	Unspecified Tank	1929 - 1937	98183

This data is sourced from Ordnance Survey / Groundsure.



1.3 Historical energy features

Records within 500m

15

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 14**

ID	Location	Land use	Dates present	Group ID
A	58m NW	Electricity Substation	1989 - 1992	53504
A	59m NW	Electricity Substation	1990	56217
5	156m SW	Electricity Substation	1989 - 1992	57885
C	261m NW	Electricity Substation	1984	45536
C	265m NW	Electricity Substation	1996	45537
F	271m W	Electricity Substation	1992	51813
F	271m W	Electricity Substation	1955 - 1990	58289
F	296m W	Electricity Substation	1990 - 1992	48931
F	379m W	Electricity Substation	1990 - 1992	51547
F	382m NW	Electricity Substation	1956	47338
F	388m NW	Electricity Substation	1981	45531
I	422m W	Electricity Substation	1990 - 1992	53867
P	465m NW	Electricity Substation	1981 - 1996	48015
R	484m NW	Electricity Substation	1981	56345
R	484m NW	Electricity Substation	1984 - 1996	57918

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

4

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'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
M	414m N	Garage	1978	16504
I	416m W	Garage	1990 - 1992	18188
M	428m N	Garage	1968	15934
M	428m N	Garage	1990	16890

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

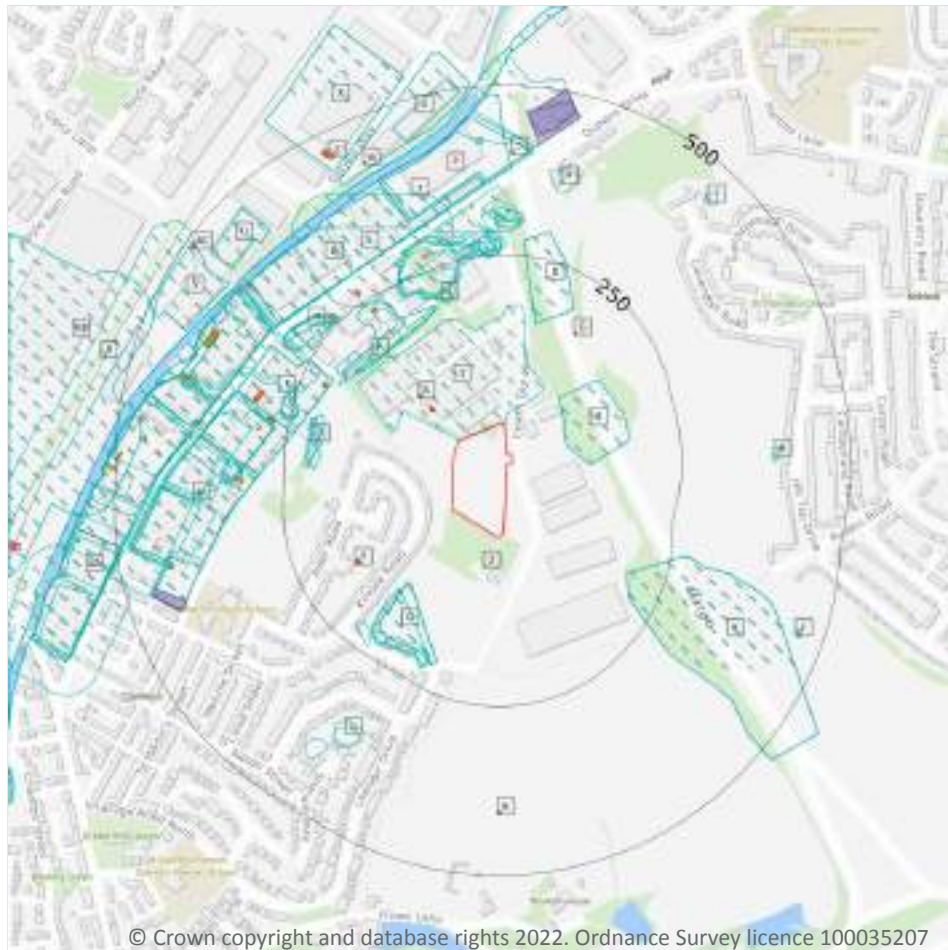
0

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
- Historical garages

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2.1 Historical industrial land uses

Records within 500m

149

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 22**

ID	Location	Land Use	Date	Group ID
1	On site	Unspecified Works	1992	679032
B	81m E	Cuttings	1992	713089
B	81m E	Cuttings	1987	713089



ID	Location	Land Use	Date	Group ID
C	125m SW	Unspecified Heap	1992	769519
C	125m SW	Unspecified Heap	1987	769519
C	125m SW	Unspecified Heap	1975	769519
C	125m SW	Unspecified Heap	1968	769519
C	140m SW	Unspecified Heap	1938	703609
C	140m SW	Unspecified Heap	1890	704724
C	143m SW	Old Sand Pit	1909	682521
D	154m N	Cuttings	1992	746187
D	154m N	Cuttings	1987	746187
D	154m N	Cuttings	1975	746187
F	169m NW	Unspecified Pit	1938	690935
F	170m NW	Unspecified Ground Workings	1975	696850
F	170m NW	Unspecified Ground Workings	1968	696850
F	171m NW	Unspecified Ground Workings	1928	765120
F	190m NW	Unspecified Works	1987	679033
H	193m E	Cuttings	1992	704786
H	193m E	Cuttings	1987	704786
H	193m E	Cuttings	1975	704786
I	195m W	Unspecified Pit	1975	699589
I	195m W	Unspecified Pit	1968	699589
J	196m N	Unspecified Pit	1938	690936
C	197m SW	Unspecified Ground Workings	1949	647976
J	197m N	Unspecified Ground Workings	1949	730319
J	198m N	Unspecified Heap	1928	772313
I	200m W	Unspecified Pit	1949	740458
I	202m W	Unspecified Ground Workings	1928	648047
K	206m NW	Unspecified Commercial/Industrial	1992	704939
K	206m NW	Unspecified Commercial/Industrial	1987	704939

ID	Location	Land Use	Date	Group ID
K	206m NW	Unspecified Mill	1975	698108
K	206m NW	Unspecified Mill	1968	698108
J	210m N	Unspecified Heap	1938	770435
C	211m SW	Unspecified Pit	1949	690934
J	212m N	Unspecified Ground Workings	1975	717339
J	215m N	Unspecified Ground Workings	1968	697380
K	228m NW	Brick Works	1890	668964
K	238m W	Unspecified Pit	1949	773774
K	240m W	Unspecified Ground Workings	1928	776680
K	240m W	Unspecified Ground Workings	1909	776680
K	241m W	Unspecified Mill	1992	724370
K	241m W	Unspecified Mill	1987	724370
K	241m W	Unspecified Mill	1975	724370
K	241m W	Unspecified Mill	1968	724370
K	241m W	Unspecified Pit	1938	773774
L	244m NW	Unspecified Commercial/Industrial	1938	712450
J	246m N	Unspecified Ground Workings	1938	754652
M	251m NW	Unspecified Ground Workings	1949	727454
J	252m N	Clay Pit	1909	676032
M	253m NW	Unspecified Ground Workings	1938	727454
M	253m NW	Unspecified Heap	1928	772675
M	255m NW	Unspecified Heap	1975	755243
M	255m NW	Unspecified Heap	1968	755243
N	268m W	Iron Works	1949	786343
K	270m W	Unspecified Mill	1928	738288
K	270m W	Unspecified Mill	1909	738288
K	271m W	Unspecified Mill	1938	769914
K	284m W	Unspecified Ground Workings	1890	648048

ID	Location	Land Use	Date	Group ID
J	284m N	Brick Works	1908	668963
J	287m N	Unspecified Ground Workings	1908	768025
N	287m W	Unspecified Works	1992	742961
N	287m W	Unspecified Works	1987	742961
N	287m W	Unspecified Works	1975	742961
N	287m W	Unspecified Works	1968	742961
J	290m N	Unspecified Ground Workings	1938	771249
J	290m N	Unspecified Ground Workings	1928	771249
O	293m NW	Unspecified Commercial/Industrial	1949	772898
O	294m NW	Unspecified Mill	1938	711860
L	294m NW	Unspecified Mills	1992	775951
L	294m NW	Unspecified Mills	1987	775951
O	294m NW	Unspecified Mill	1928	711860
3	295m NW	Unspecified Mills	1975	736067
L	295m NW	Unspecified Mills	1968	756271
J	298m N	Unspecified Pit	1949	690688
J	299m N	Unspecified Ground Workings	1908	790499
N	311m W	Unspecified Ground Workings	1949	761933
N	311m W	Unspecified Ground Workings	1938	761933
N	313m W	Unspecified Ground Workings	1928	775130
K	323m NW	Unspecified Mill	1992	712499
K	323m NW	Unspecified Mill	1987	712499
K	323m NW	Unspecified Mill	1975	712499
K	323m NW	Unspecified Mill	1968	766895
K	323m NW	Unspecified Mill	1949	766320
K	325m NW	Unspecified Mill	1938	766320
P	326m N	Unspecified Mill	1938	774977
P	326m N	Unspecified Mill	1928	774977

ID	Location	Land Use	Date	Group ID
N	328m W	Unspecified Works	1909	782850
K	330m NW	Unspecified Mill	1928	730848
K	330m NW	Unspecified Mill	1909	730848
P	330m N	Unspecified Mill	1908	783623
P	331m N	Unspecified Mill	1949	750104
N	332m W	Iron Works	1938	787504
N	336m W	Iron Works	1928	787504
Q	345m SW	Unspecified Pit	1968	690933
4	349m N	Unspecified Ground Workings	1949	647978
N	351m W	Leather Works	1890	681794
Q	353m SW	Old Sand Pits	1909	668440
K	364m W	Corporation Yard	1949	786083
K	368m W	Corporation Yard	1928	743726
K	368m W	Corporation Yard	1938	786083
N	373m W	Iron Works	1909	773630
K	377m NW	Disused Canal	1992	748585
K	377m NW	Disused Canal	1987	728752
K	377m NW	Disused Canal	1975	789732
N	383m W	Unspecified Manufactory	1890	652029
K	383m NW	Unspecified Tank	1992	762103
K	383m NW	Unspecified Tank	1987	762103
R	384m E	Unspecified Ground Workings	1992	752550
R	384m E	Unspecified Ground Workings	1987	752550
K	388m W	Unspecified Works	1992	784315
K	388m W	Unspecified Works	1987	784315
K	388m W	Unspecified Works	1975	784315
K	388m W	Unspecified Works	1968	745516
K	388m NW	Unspecified Tanks	1949	776129

ID	Location	Land Use	Date	Group ID
K	392m NW	Unspecified Tanks	1928	788099
Q	392m SW	Old Sand Pits	1909	668439
K	393m NW	Unspecified Tanks	1938	788099
K	394m W	Unspecified Works	1890	770245
S	413m NW	Unspecified Works	1992	770453
S	413m NW	Unspecified Works	1987	770453
U	415m NW	Unspecified Works	1992	703524
U	415m NW	Unspecified Works	1987	703524
P	415m N	Chimney	1992	781584
P	415m N	Chimney	1987	781584
P	415m N	Unspecified Tank	1975	747289
P	415m N	Unspecified Tank	1968	747289
V	416m NW	Unspecified Works	1992	717030
V	416m NW	Unspecified Works	1987	717030
X	440m NW	Unspecified Warehouses	1992	763796
X	440m NW	Unspecified Warehouses	1987	763796
V	440m N	Unspecified Warehouse	1975	652399
7	441m NE	Gravel Pit	1851	652936
Y	457m E	Unspecified Tank	1938	725402
Y	457m E	Unspecified Tank	1928	725402
Y	460m E	Unspecified Tank	1949	725402
AA	462m W	Unspecified Mills	1949	714494
AB	464m W	Textile Machinery Works	1928	705400
AB	464m W	Textile Machinery Works	1909	705400
AA	469m W	Unspecified Mills	1938	754207
AA	486m W	Unspecified Mill	1890	726871
AA	492m W	Unspecified Mill	1992	753558
AA	492m W	Unspecified Mill	1987	753558



ID	Location	Land Use	Date	Group ID
AA	492m W	Unspecified Mill	1975	753558
AA	492m W	Unspecified Mill	1968	697808
AA	495m W	Tannery	1890	691827
8	497m NW	Railway Sidings	1975	758228
AA	499m W	Unspecified Mills	1928	750692
AA	499m W	Unspecified Mills	1909	750692

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

46

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 22**

ID	Location	Land Use	Date	Group ID
2	44m SW	Unspecified Tank	1929	84285
A	85m NW	Unspecified Tank	1992	90394
A	85m NW	Unspecified Tank	1990	90394
A	86m NW	Unspecified Tank	1989	90161
G	169m NE	Unspecified Tank	1910	98773
G	169m NE	Unspecified Tank	1930	98773
F	211m NW	Unspecified Tank	1992	98129
F	212m NW	Unspecified Tank	1990	98129
F	227m NW	Unspecified Tank	1984	103273
F	227m NW	Unspecified Tank	1996	103273
M	258m NW	Unspecified Tank	1910	89500
M	258m NW	Unspecified Tank	1930	89500
J	267m N	Unspecified Tank	1996	84287
K	289m W	Unspecified Tank	1891	84283



ID	Location	Land Use	Date	Group ID
N	309m W	Tanks	1992	97840
N	310m W	Tanks	1990	97840
J	322m N	Unspecified Tank	1910	84286
K	388m NW	Tanks	1955	96023
K	389m NW	Tanks	1955	103599
K	390m NW	Tanks	1929	96023
K	390m NW	Tanks	1937	96023
K	395m W	Unspecified Tank	1955	99476
K	396m W	Unspecified Tank	1955	99476
5	399m N	Unspecified Tank	1910	84288
6	403m S	Tanks	1910	87741
K	407m W	Unspecified Tank	1929	90119
K	407m W	Unspecified Tank	1937	90119
K	409m W	Unspecified Tank	1992	102031
K	410m W	Unspecified Tank	1990	89680
W	432m NW	Unspecified Tank	1984	90010
W	432m NW	Unspecified Tank	1996	90010
K	434m W	Unspecified Tank	1929	95534
K	434m W	Unspecified Tank	1937	95534
K	455m W	Unspecified Tank	1929	84284
K	455m W	Unspecified Tank	1929	103996
K	455m W	Unspecified Tank	1937	103996
Z	459m NW	Unspecified Tank	1984	102307
Z	459m NW	Unspecified Tank	1996	102307
Y	461m E	Unspecified Tank	1930	97171
Y	461m E	Unspecified Tank	1937	97171
K	462m W	Tanks	1910	87738
K	490m W	Unspecified Tank	1997	101990



ID	Location	Land Use	Date	Group ID
K	490m W	Unspecified Tank	1996	101990
K	491m W	Unspecified Tank	1990	101990
K	497m W	Unspecified Tank	1929	98183
K	497m W	Unspecified Tank	1937	98183

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

27

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 22**

ID	Location	Land Use	Date	Group ID
A	58m NW	Electricity Substation	1992	53504
A	59m NW	Electricity Substation	1990	56217
A	59m NW	Electricity Substation	1989	53504
E	156m SW	Electricity Substation	1992	57885
E	157m SW	Electricity Substation	1990	57885
E	157m SW	Electricity Substation	1989	57885
F	261m NW	Electricity Substation	1984	45536
F	265m NW	Electricity Substation	1996	45537
K	271m W	Electricity Substation	1992	51813
K	271m W	Electricity Substation	1955	58289
K	271m W	Electricity Substation	1955	58289
K	272m W	Electricity Substation	1990	58289
K	296m W	Electricity Substation	1992	48931
K	297m W	Electricity Substation	1990	48931
K	379m W	Electricity Substation	1992	51547
K	382m NW	Electricity Substation	1956	47338



ID	Location	Land Use	Date	Group ID
K	382m NW	Electricity Substation	1956	47338
K	382m W	Electricity Substation	1990	51547
K	388m NW	Electricity Substation	1981	45531
N	422m W	Electricity Substation	1992	53867
N	423m W	Electricity Substation	1990	53867
Z	465m NW	Electricity Substation	1984	48015
Z	465m NW	Electricity Substation	1981	48015
Z	466m NW	Electricity Substation	1996	48015
AC	484m NW	Electricity Substation	1984	57918
AC	484m NW	Electricity Substation	1981	56345
AC	484m NW	Electricity Substation	1996	57918

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

5

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'.

Features are displayed on the Past land use - un-grouped map on **page 22**

ID	Location	Land Use	Date	Group ID
T	414m N	Garage	1978	16504
N	416m W	Garage	1992	18188



ID	Location	Land Use	Date	Group ID
N	416m W	Garage	1990	18188
T	428m N	Garage	1968	15934
T	428m N	Garage	1990	16890

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (LA/OS)
- 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

2

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

Features are displayed on the Waste and landfill map on **page 33**

ID	Location	Site address	Source	Data type
C	407m W	Refuse Tip	1963 mapping	Polygon
C	408m W	Refuse Tip	1963 mapping	Polygon

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

3.4 Historical landfill (EA/NRW records)

Records within 500m

0

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.

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

28

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 33**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	44m E	2e Crown Business Park Cowm Top Lane ROCHDALE Lancashire OL11 2PU	EPR/ZE5956C Q/A001	Storing waste exemption	Non- Agricultural Waste Only	Storage of waste in a secure place
A	279m NW	Ensor Mill Queensway ROCHDALE Lancashire OL11 2NU	EPR/PF0537W J/A001	Storing waste exemption	Non- Agricultural Waste Only	Storage of waste in a secure place
A	279m NW	Ensor Mill Queensway ROCHDALE Lancashire OL11 2NU	EPR/PF0537W J/A001	Treating waste exemption	Non- Agricultural Waste Only	Preparatory treatments (baling, sorting, shredding etc)
B	344m NW	ENSOR MILL, QUEENSWAY, ROCHDALE, OL11 2NU	WEX233899	Using waste exemption	Not on a farm	Use of waste for a specified purpose
B	344m NW	ENSOR MILL, QUEENSWAY, ROCHDALE, OL11 2NU	WEX233899	Using waste exemption	Not on a farm	Use of waste to manufacture finished goods
B	344m NW	ENSOR MILL, QUEENSWAY, ROCHDALE, OL11 2NU	WEX233899	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
B	344m NW	ENSOR MILL, QUEENSWAY, ROCHDALE, OL11 2NU	WEX233899	Storing waste exemption	Not on a farm	Storage of waste in secure containers
B	344m NW	ENSOR MILL, QUEENSWAY, ROCHDALE, OL11 2NU	WEX233899	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	344m NW	-	WEX265347	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	344m NW	-	WEX265347	Treating waste exemption	Not on a farm	Sorting mixed waste
B	344m NW	-	WEX265347	Storing waste exemption	Not on a farm	Storage of waste in secure containers
B	344m NW	GLOBAL COMPOUNDS LTD, UNIT LG2, ENSOR MILL, QUEENSWAY, ROCHDALE, OL112NU	WEX214738	Treating waste exemption	Not on a farm	Cleaning, washing, spraying or coating relevant waste



ID	Location	Site	Reference	Category	Sub-Category	Description
B	344m NW	GLOBAL COMPOUNDS LTD, UNIT LG2, ENSOR MILL, QUEENSWAY, ROCHDALE, OL112NU	WEX214738	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	344m NW	GLOBAL COMPOUNDS LTD, UNIT LG2, ENSOR MILL, QUEENSWAY, ROCHDALE, OL112NU	WEX214738	Storing waste exemption	Not on a farm	Storage of waste in secure containers
B	344m NW	GLOBAL COMPOUNDS LTD, UNIT LG2, ENSOR MILL, QUEENSWAY, ROCHDALE, OL112NU	WEX214738	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
B	344m NW	J K POLYMER LIMITED, UNIT NEW LG4, ENSOR MILL, QUEENSWAY, ROCHDLAE, OL11 2NU	WEX125773	Storing waste exemption	Not on a farm	Storage of waste in secure containers
B	344m NW	J K POLYMER LIMITED, UNIT NEW LG4, ENSOR MILL, QUEENSWAY, ROCHDLAE, OL11 2NU	WEX125773	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	344m NW	J K POLYMER LIMITED, UNIT NEW LG4, ENSOR MILL, QUEENSWAY, ROCHDLAE, OL11 2NU	WEX125773	Treating waste exemption	Not on a farm	Sorting mixed waste
B	344m NW	ENSOR MILL, QUEENSWAY, ROCHDALE, OL11 2NU	WEX089730	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	344m NW	ENSOR MILL, QUEENSWAY, ROCHDALE, OL11 2NU	WEX089730	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
B	344m NW	ENSOR MILL, QUEENSWAY, ROCHDALE, OL11 2NU	WEX089730	Using waste exemption	Not on a farm	Use of waste for a specified purpose
B	344m NW	ENSOR MILL, QUEENSWAY, ROCHDALE, OL11 2NU	WEX089730	Using waste exemption	Not on a farm	Use of waste to manufacture finished goods
B	344m NW	GLOBAL COMPOUNDS LTD, UNIT LG2, ENSOR MILL, QUEENSWAY, ROCHDALE, OL112NU	WEX070469	Storing waste exemption	Not on a farm	Storage of waste in secure containers
B	344m NW	GLOBAL COMPOUNDS LTD, UNIT LG2, ENSOR MILL, QUEENSWAY, ROCHDALE, OL112NU	WEX070469	Storing waste exemption	Not on a farm	Storage of waste in a secure place

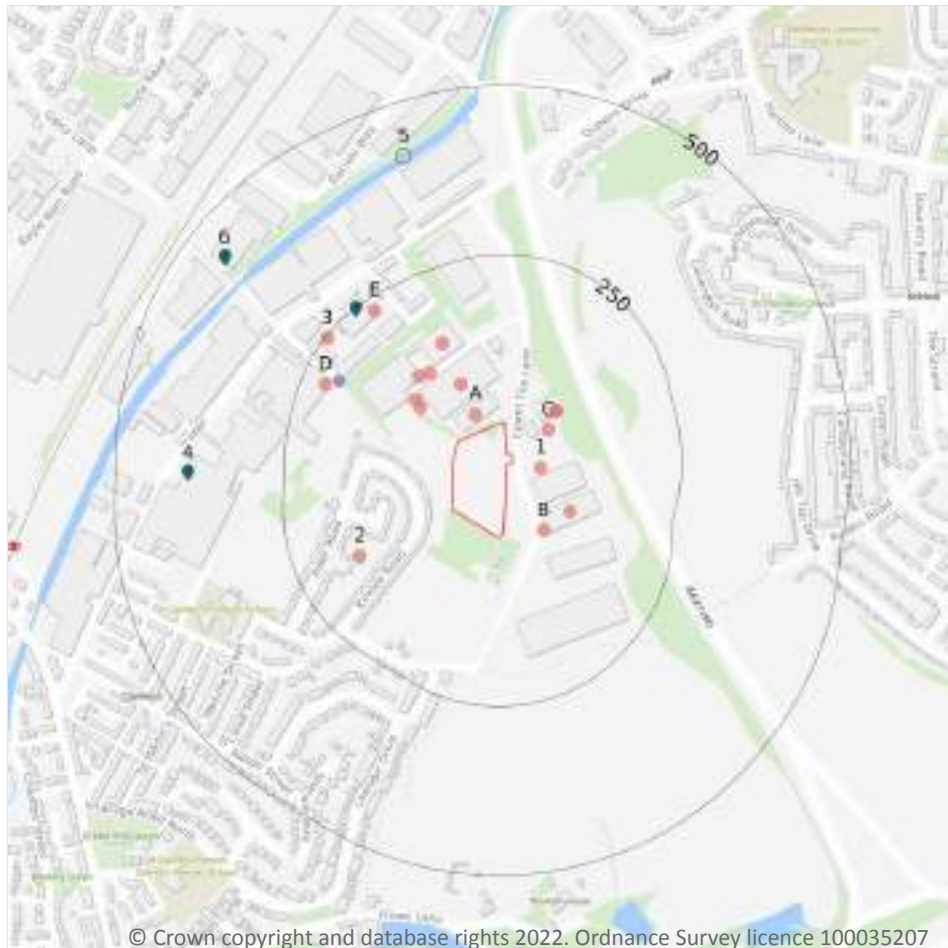


ID	Location	Site	Reference	Category	Sub-Category	Description
B	344m NW	GLOBAL COMPOUNDS LTD, UNIT LG2, ENSOR MILL, QUEENSWAY, ROCHDALE, OL112NU	WEX070469	Treating waste exemption	Not on a farm	Cleaning, washing, spraying or coating relevant waste
B	344m NW	GLOBAL COMPOUNDS LTD, UNIT LG2, ENSOR MILL, QUEENSWAY, ROCHDALE, OL112NU	WEX070469	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
2	446m NW	Unit 25-27 Gorrells Way ROCHDALE Lancashire OL11 2PX	EPR/VE5985ZR /A001	Storing waste exemption	Non- Agricultural Waste Only	Storage of waste in a secure place
3	499m NW	UNIT 4D, TRANS PENNINE TRADING ESTATE, GORRELLS WAY, ROCHDALE, OL11 2PX	WEX248178	Storing waste exemption	Not on a farm	Storage of waste in a secure place

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
- Historical licensed industrial activities
- Licensed pollutant release (Part A(2)/B)
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

17

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 38**

ID	Location	Company	Address	Activity	Category
A	26m N	Hafco Ltd	Unit 5 Cowm Top Business Park, Cowm Top Lane, Rochdale, Greater Manchester, OL11 2PU	Textiles, Fabrics, Silk and Machinery	Industrial Products
1	42m E	Business Park	Greater Manchester, OL11	Business Parks and Industrial Estates	Industrial Features



ID	Location	Company	Address	Activity	Category
B	59m E	Electricity Sub Station	Greater Manchester, OL11	Electrical Features	Infrastructure and Facilities
C	65m E	Lone Worker Solutions	Crown Business Park, Cowm Top Lane, Rochdale, Greater Manchester, OL11 2PU	Workwear	Industrial Products
A	75m NW	Electricity Sub Station	Greater Manchester, OL11	Electrical Features	Infrastructure and Facilities
A	76m NW	Parcel & Pass Warehousing Service Ltd	Unit 2i to L, Cowm Top Business Park, Cowm Top Lane, Rochdale, Greater Manchester, OL11 2QA	Container and Storage	Transport, Storage and Delivery
C	79m E	Mike Wood Electronic Services Ltd	Unit 2e Crown Business Park, Cowm Top Lane, Rochdale, Greater Manchester, OL11 2PU	Electrical Equipment Repair and Servicing	Repair and Servicing
C	79m E	Dansette	Unit 2e Crown Business Park, Cowm Top Lane, Rochdale, Greater Manchester, OL11 2PU	Electrical Equipment Repair and Servicing	Repair and Servicing
A	89m NW	Tank	Greater Manchester, OL11	Tanks (Generic)	Industrial Features
B	97m E	Store First	Unit 5 Crown Business Park, Cowm Top Lane, Rochdale, Greater Manchester, OL11 2PU	Container and Storage	Transport, Storage and Delivery
A	110m NW	Electricity Sub Station	Greater Manchester, OL11	Electrical Features	Infrastructure and Facilities
A	112m NW	Business Park	Greater Manchester, OL11	Business Parks and Industrial Estates	Industrial Features
A	142m NW	Tyne Insulation Supplies Ltd	Unit 3, Cowm Top Business Park, Cowm Top Lane, Rochdale, Greater Manchester, OL11 2PU	General Construction Supplies	Industrial Products
2	153m SW	Electricity Sub Station	Greater Manchester, OL11	Electrical Features	Infrastructure and Facilities
D	214m NW	Tank	Greater Manchester, OL11	Tanks (Generic)	Industrial Features
E	231m NW	Tank	Greater Manchester, OL11	Tanks (Generic)	Industrial Features
3	248m NW	Sherwood Business Park	Greater Manchester, OL11	Business Parks and Industrial Estates	Industrial Features

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

2

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.

Features are displayed on the Current industrial land use map on **page 38**

ID	Location	Details	
D	197m NW	Operator: Dale Joinery Ltd Address: Queensway, Rochdale, OL11 2PR Process: Timber Processes Permit Number: AV5071	Original Permit Number: IPCAPP Date Approved: 2-12-1996 Effective Date: 9-12-1996 Status: Superseded By Variation
D	197m NW	Operator: Dale Joinery Ltd Address: Queensway, Rochdale, OL11 2PR Process: Timber Processes Permit Number: BD5771	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked

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

3

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.

Features are displayed on the Current industrial land use map on **page 38**

ID	Location	Address	Details	
E	248m NW	Taylor Engineering & Plastics, Queensway, Rochdale, Lancashire, OL11 2QW	Process: Coating Processes Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
4	392m W	Farrel Ltd, Queensway, Rochdale, Lancashire, OL11 2PF	Process: Laboratory Processes; Rubber Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
6	441m NW	Inx International Ltd, Hilltop Road, Hareshill Distribution Park, Heywood, Lancashire, OL10 2TW	Process: Manufacture of Coating Materials; Coating Processes Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

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

0

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

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**1**

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

Features are displayed on the Current industrial land use map on **page 38**

ID	Location	Details	
5	421m N	Incident Date: 29/08/2001 Incident Identification: 27638 Pollutant: Inert Materials and Wastes Pollutant Description: Other Inert Material or Waste	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m	0
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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
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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
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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



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

5.1 Superficial aquifer

Records within 500m

2

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 45**

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	68m NW	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.

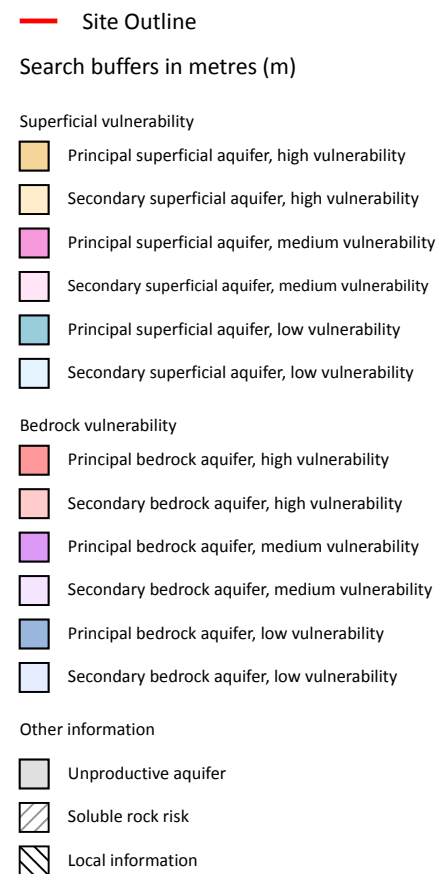
Features are displayed on the Bedrock aquifer map on **page 47**

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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 48**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

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

6

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 50**

ID	Location	Details	
-	1702m SE	Status: Historical Licence No: 2569005017 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "SPRING FED WELL AT THORNHAM FOLD FARM, SLATTOCKS, MIDDLET" Data Type: Point Name: GREENWOOD Easting: 389700 Northing: 409100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/02/1966 Version End Date: -
-	1702m SE	Status: Historical Licence No: 2569005017 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: SPRING FED WELL AT THORNHAM FOLD FARM, SLATTOCKS, MIDDLET Data Type: Point Name: GREENWOOD Easting: 389700 Northing: 409100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/02/1966 Version End Date: -
-	1743m SE	Status: Historical Licence No: 2569005028 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "SPRING FED WELL AT CINDER HILL FARM, SLATTOCKS, MIDDLETON, M" Data Type: Point Name: H DH MD AND MW TETLOW Easting: 389800 Northing: 409100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
-	1743m SE	Status: Historical Licence No: 2569005021 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "SPRING FED WELL AT TANGLE HILL TAVERN, THORNHAM FOLD, N" Data Type: Point Name: J W LEES & CO BREWERS LTD Easting: 389800 Northing: 409100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/02/1966 Version End Date: -



ID	Location	Details	
-	1743m SE	Status: Historical Licence No: 2569005028 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: SPRING FED WELL AT CINDER HILL FARM, SLATTOCKS, MIDDLETON, M Data Type: Point Name: H DH MD AND MW TETLOW Easting: 389800 Northing: 409100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
-	1743m SE	Status: Historical Licence No: 2569005021 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: SPRING FED WELL AT TANGLE HILL TAVERN, THORNHAM FOLD, N Data Type: Point Name: J W LEES & CO BREWERS LTD Easting: 389800 Northing: 409100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/02/1966 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

8

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.

Features are displayed on the Abstractions and Source Protection Zones map on **page 50**

ID	Location	Details	
-	1504m NE	Status: Historical Licence No: 2569002178 Details: Boiler Feed Direct Source: "Surface, Non-Tidal - North West Region" Point: "CATCHPIT FED BY SURFACE DRAINAGE AT PREMISES, ROCHDALE" Data Type: Point Name: DUNPHY COMBUSTION LTD. Easting: 390200 Northing: 411800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 12/02/1991 Version End Date: -



ID	Location	Details	
-	1504m NE	Status: Active Licence No: 2569002178 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: CATCHPIT FED BY SURFACE DRAINAGE AT PREMISES, ROCHDALE Data Type: Point Name: DUNPHY COMBUSTION LTD Easting: 390200 Northing: 411800	Annual Volume (m ³): 2,318.46 Max Daily Volume (m ³): 34.09 Original Application No: CW 1093 Original Start Date: 18/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 12/02/1991 Version End Date: -
-	1520m NE	Status: Historical Licence No: 2569002107 Details: Boiler Feed Direct Source: "Surface, Non-Tidal - North West Region" Point: "ROCHDALE CANAL AT QUEENSWAY,ROCHDALE" Data Type: Point Name: SEALOCRETE PLA LTD Easting: 390070 Northing: 411960	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/12/1993 Version End Date: -
-	1520m NE	Status: Historical Licence No: 2569002107 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "ROCHDALE CANAL AT QUEENSWAY,ROCHDALE" Data Type: Point Name: SEALOCRETE PLA LTD Easting: 390070 Northing: 411960	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/12/1993 Version End Date: -
-	1520m NE	Status: Historical Licence No: 2569002107 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: ROCHDALE CANAL AT QUEENSWAY,ROCHDALE Data Type: Point Name: SEALOCRETE PLA LTD Easting: 390070 Northing: 411960	Annual Volume (m ³): 10455.8 Max Daily Volume (m ³): 45.46 Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -

ID	Location	Details	
-	1520m NE	Status: Historical Licence No: 2569002107 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: ROCHDALE CANAL AT QUEENSWAY,ROCHDALE Data Type: Point Name: SEALOCRETE PLA LTD Easting: 390070 Northing: 411960	Annual Volume (m ³): 10455.8 Max Daily Volume (m ³): 45.46 Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1680m SW	Status: Active Licence No: 2569005053 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: TRUB BRK AT ROCHDALE Data Type: Point Name: THE MANCHESTER GOLF CLUB LTD Easting: 387800 Northing: 409500	Annual Volume (m ³): 1,473 Max Daily Volume (m ³): 26.20 Original Application No: 1704 Original Start Date: 18/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1927m NE	Status: Historical Licence No: 2569002076 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: ROCHDALE CANAL AT ROCHDALE, LANCS Data Type: Point Name: J & J MAKIN CONVERTORS LTD Easting: 390300 Northing: 412300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 18/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1993 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m

2

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 50**



ID	Location	Details	
-	1743m SE	Status: Historical Licence No: 2569005021 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "SPRING FED WELL AT TANGLE HILL TAVERN, THORNHAM FOLD, N" Data Type: Point Name: J W LEES & CO BREWERS LTD Easting: 389800 Northing: 409100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/02/1966 Version End Date: -
-	1743m SE	Status: Historical Licence No: 2569005021 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: SPRING FED WELL AT TANGLE HILL TAVERN, THORNHAM FOLD, N Data Type: Point Name: J W LEES & CO BREWERS LTD Easting: 389800 Northing: 409100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/02/1966 Version End Date: -

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

5.9 Source Protection Zones

Records within 500m	0
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Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m	0
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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

0

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

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

0

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.

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site

1

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 56**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	On site	River	Irk (Source to Wince Brook)	GB112069061161	Roch Irk Medlock	Irwell

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

6.4 WFD Surface water bodies

Records identified

1

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 56**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	1275m SW	River	Irk (Source to Wince Brook)	GB112069061161	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 56**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	On site	Northern Manchester Carboniferous Aquifers	<u>GB41202G101800</u>	Poor	Poor	Good	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

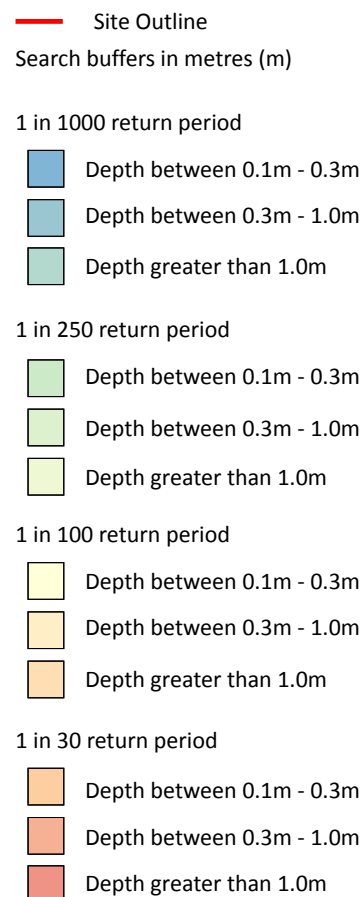
0

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



8.1 Surface water flooding

Highest risk on site

1 in 100 year, 0.3m - 1.0m

Highest risk within 50m

1 in 100 year, 0.3m - 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 62**

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.

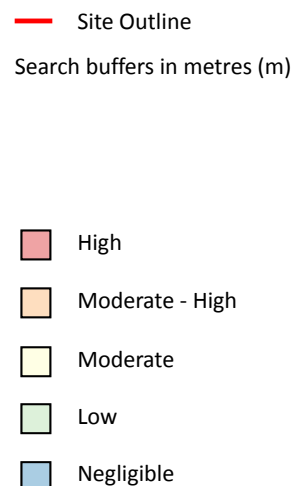
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Between 0.3m and 1.0m
1 in 250 year	Between 0.3m and 1.0m
1 in 100 year	Between 0.3m and 1.0m
1 in 30 year	Negligible

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 64**

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- Special Areas of Conservation (SAC)
- Green Belt

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

6

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.

Features are displayed on the Environmental designations map on **page 65**

ID	Location	Name	Data source
A	380m NW	Rochdale Canal	Natural England

ID	Location	Name	Data source
B	661m W	Rochdale Canal	Natural England
C	670m N	Rochdale Canal	Natural England
D	820m N	Rochdale Canal	Natural England
E	1091m NE	Rochdale Canal	Natural England
F	1179m SW	Rochdale Canal	Natural England

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	6
-----------------------------	----------

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.

Features are displayed on the Environmental designations map on **page 65**

ID	Location	Name	Features of interest	Habitat description	Data source
A	380m NW	Rochdale Canal	Floating water-plantain.	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Inland water bodies (Standing water, Running water)	Natural England
B	661m W	Rochdale Canal	Floating water-plantain.	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Inland water bodies (Standing water, Running water)	Natural England
C	670m N	Rochdale Canal	Floating water-plantain.	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Inland water bodies (Standing water, Running water)	Natural England



ID	Location	Name	Features of interest	Habitat description	Data source
D	820m N	Rochdale Canal	Floating water-plantain.	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Inland water bodies (Standing water, Running water)	Natural England
E	1091m NE	Rochdale Canal	Floating water-plantain.	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Inland water bodies (Standing water, Running water)	Natural England
F	1179m SW	Rochdale Canal	Floating water-plantain.	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Inland water bodies (Standing water, Running water)	Natural England

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 65**



ID	Location	Name	Local Authority name
1	750m S	Merseyside and Greater Manchester	Rochdale
2	1332m SE	Merseyside and Greater Manchester	Oldham
-	1868m E	Merseyside and Greater Manchester	Rochdale

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

1

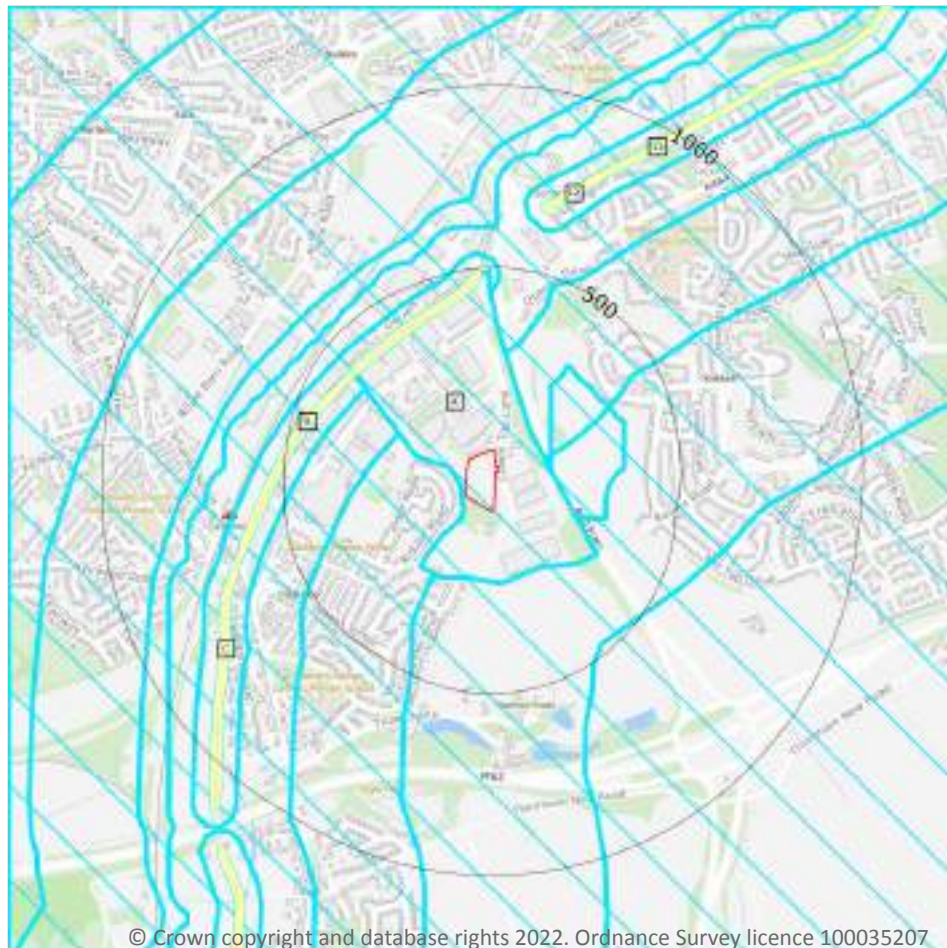
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
145m S	River Irk (Moston Brook to River Irwell) NVZ	Surface Water	638	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 71**

ID	Location	Type of developments requiring consultation
A	On site	All applications - All planning applications - except householder applications. Notes: If surface water drainage connects to main drain that discharges into the rochdale canal sac, appropriate assessment required.

This data is sourced from Natural England.



10.18 SSSI Units

Records within 2000m

6

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.

Features are displayed on the SSSI Impact Zones and Units map on **page 71**

ID: B
 Location: 380m NW
 SSSI name: Rochdale Canal
 Unit name: Failsworth
 Broad habitat: Standing Open Water And Canals
 Condition: Unfavourable - Recovering
 Reportable features:

Feature name	Feature condition	Date of assessment
Population of Schedule 8 plant - Luronium natans, Floating Water-plantain	Unfavourable - Recovering	25/11/2010

ID: C
 Location: 661m W
 SSSI name: Rochdale Canal
 Unit name: Failsworth
 Broad habitat: Standing Open Water And Canals
 Condition: Unfavourable - Recovering
 Reportable features:

Feature name	Feature condition	Date of assessment
Population of Schedule 8 plant - Luronium natans, Floating Water-plantain	Unfavourable - Recovering	25/11/2010

ID: 12
 Location: 670m N
 SSSI name: Rochdale Canal
 Unit name: Failsworth
 Broad habitat: Standing Open Water And Canals
 Condition: Unfavourable - Recovering
 Reportable features:

Feature name	Feature condition	Date of assessment
Population of Schedule 8 plant - Luronium natans, Floating Water-plantain	Unfavourable - Recovering	25/11/2010



ID: 13
Location: 820m N
SSSI name: Rochdale Canal
Unit name: Failsworth
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
Population of Schedule 8 plant - Luronium natans, Floating Water-plantain	Unfavourable - Recovering	25/11/2010

ID: 16
Location: 1091m NE
SSSI name: Rochdale Canal
Unit name: Failsworth
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
Population of Schedule 8 plant - Luronium natans, Floating Water-plantain	Unfavourable - Recovering	25/11/2010

ID: 17
Location: 1179m SW
SSSI name: Rochdale Canal
Unit name: Failsworth
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
Population of Schedule 8 plant - Luronium natans, Floating Water-plantain	Unfavourable - Recovering	25/11/2010

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



11 Visual and cultural designations

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

0

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.



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

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12.1 Agricultural Land Classification

Records within 250m

2

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 76**

ID	Location	Classification	Description
1	On site	Grade 4	Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

ID	Location	Classification	Description
2	On site	Urban	-

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	10
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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.

Features are displayed on the Agricultural designations map on **page 76**

ID	Location	Description	Reference	Application date
3	80m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
4	133m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
5	149m NE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
6	162m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
7	164m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
8	169m NE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
9	179m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
10	186m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
11	193m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
12	195m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-

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

1

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 79**

ID	Location	Main Habitat	Other habitats
1	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.



13.2 Habitat Networks

Records within 250m

2

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.

Features are displayed on the Habitat designations map on **page 79**

ID	Location	Type	Habitat
2	100m NW	Network Enhancement Zone 2	Not specified
3	187m N	Network Enhancement Zone 1	Not specified

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

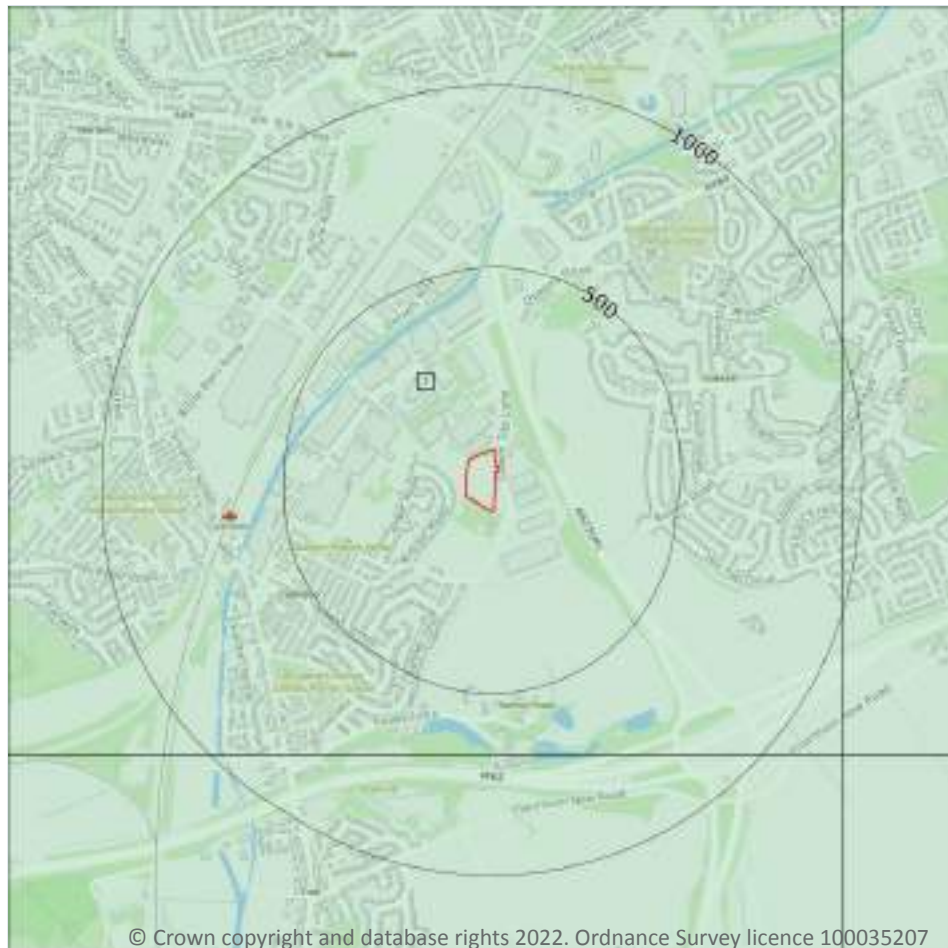
0

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.

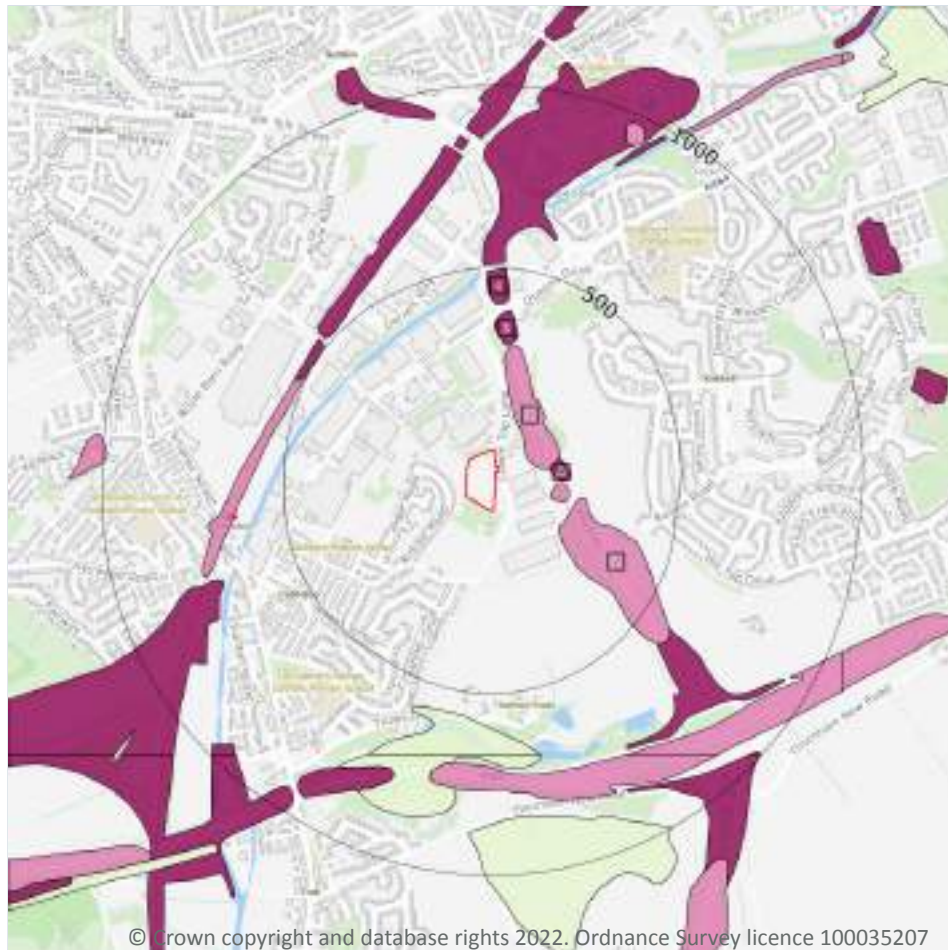
Features are displayed on the Geology 1:10,000 scale - Availability map on **page 81**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SD81SE

This data is sourced from the British Geological Survey.



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



— Site Outline
Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m

6

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.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 82**

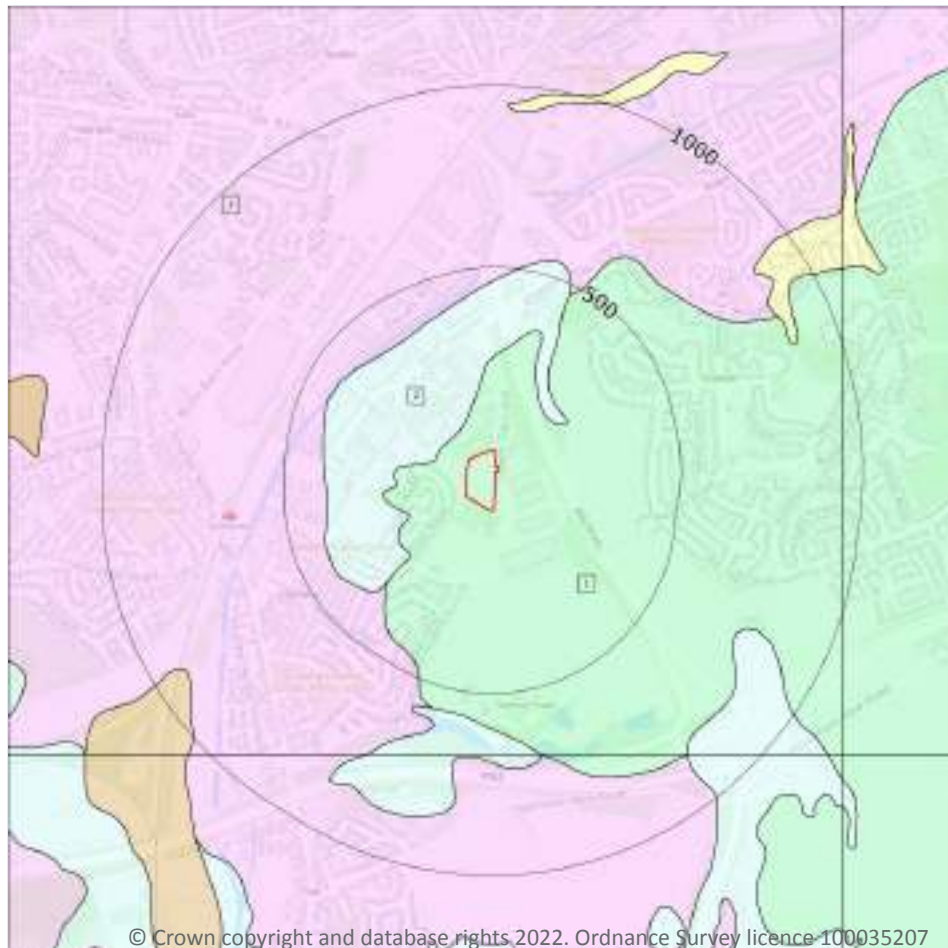
ID	Location	LEX Code	Description	Rock description
1	80m NE	WGR-VOID	Worked Ground (Undivided)	Void
A	139m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
A	153m E	WGR-VOID	Worked Ground (Undivided)	Void
2	188m E	WGR-VOID	Worked Ground (Undivided)	Void

ID	Location	LEX Code	Description	Rock description
3	287m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	399m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m

3

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 84**

ID	Location	LEX Code	Description	Rock description
1	On site	HMGDD-DMTN	Hummocky (moundy) Glacial Deposits, Devensian - Diamicton	Diamicton
2	75m NW	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
3	319m SW	GFDUD-XSV	Glaciofluvial Deposits, Devensian - Sand And Gravel	Sand And Gravel

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



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m

6

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 86**

ID	Location	LEX Code	Description	Rock age
1	On site	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
2	On site	OL-SDST	Old Lawrence Rock - Sandstone	Langsettian Sub-age
3	43m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age

ID	Location	LEX Code	Description	Rock age
4	184m SW	OL-SDST	Old Lawrence Rock - Sandstone	Langsettian Sub-age
5	244m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
6	342m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age

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 86**

ID	Location	Category	Description
7	342m NE	FAULT	Normal fault, inferred; crossmarks on downthrow side
8	447m SW	ROCK	Coal seam, inferred

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 88**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	EW085_manchester_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

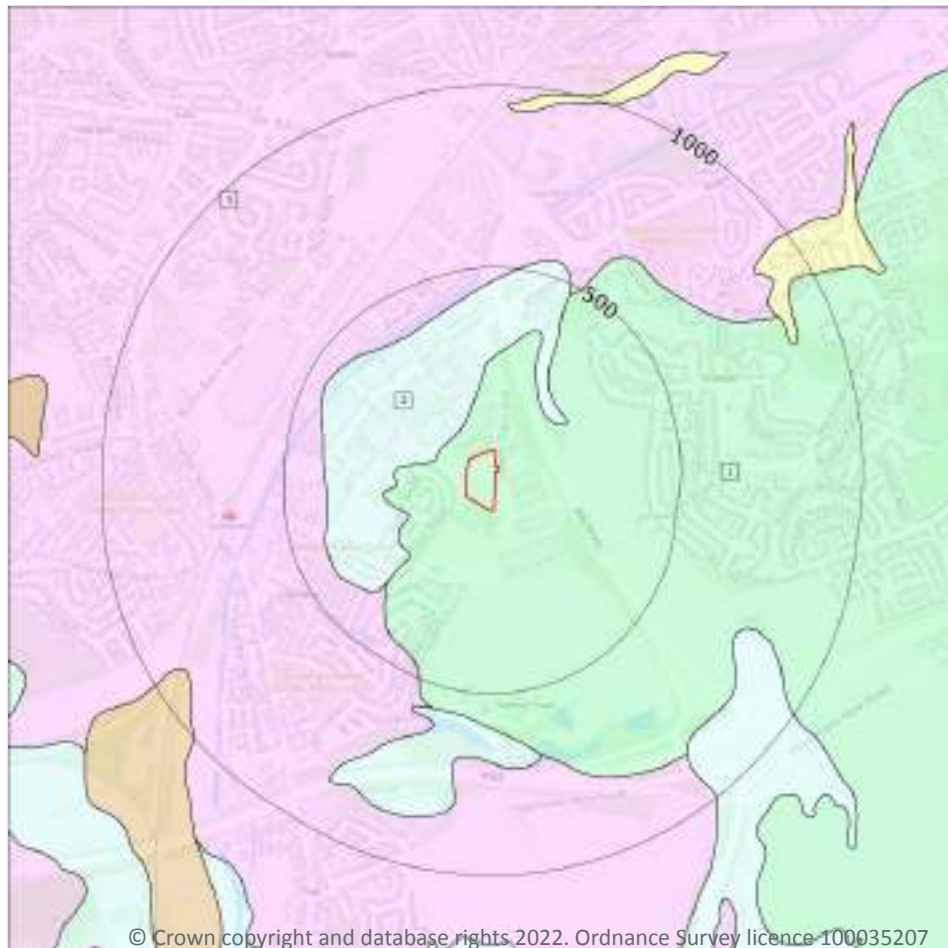
0

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

3

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 90**

ID	Location	LEX Code	Description	Rock description
1	On site	HMGDD-DMTN	HUMMOCKY (MOUNDY) GLACIAL DEPOSITS, DEVENSIAN	DIAMICTON
2	75m NW	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
3	319m SW	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL

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

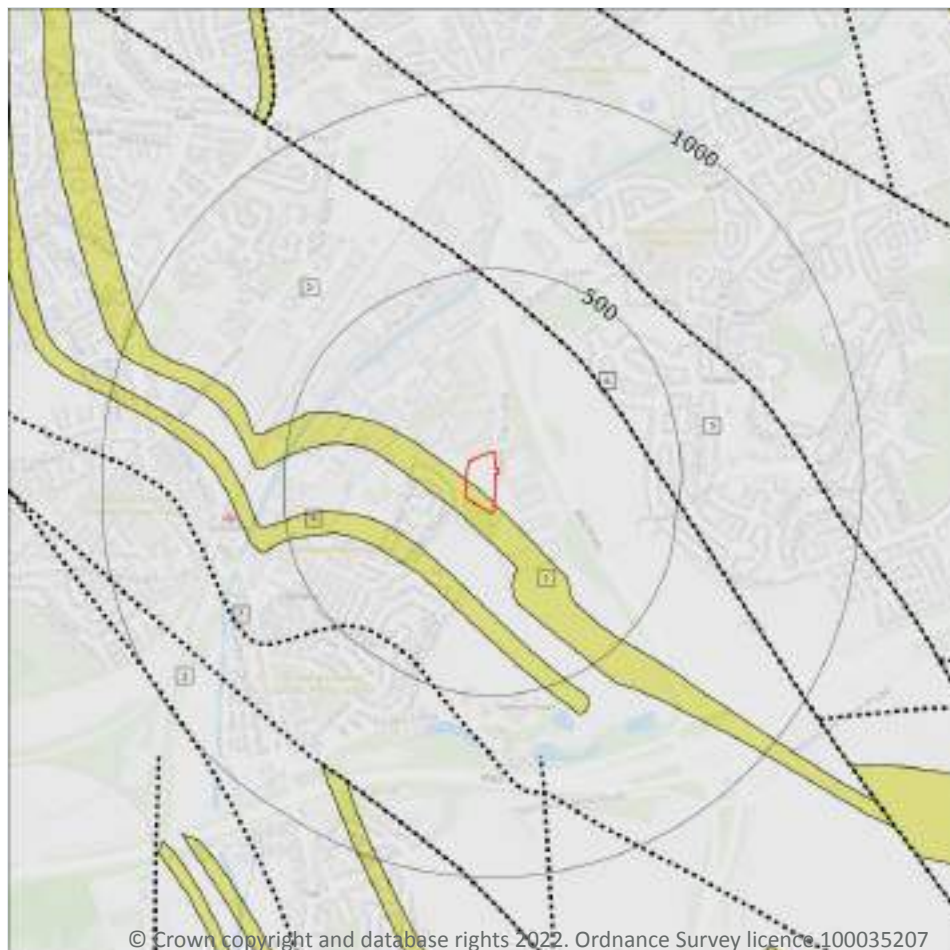
0

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

5

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 92**

ID	Location	LEX Code	Description	Rock age
1	On site	OL-SDST	OLD LAWRENCE ROCK - SANDSTONE	WESTPHALIAN
2	On site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
3	43m SW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
4	184m SW	OL-SDST	OLD LAWRENCE ROCK - SANDSTONE	WESTPHALIAN
5	342m NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m

2

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	Fracture	High	Moderate
On site	Fracture	Moderate	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

2

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 92**

ID	Location	Category	Description
6	342m NE	FAULT	Fault, inferred
7	447m SW	ROCK	Coal seam, 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

19

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 94**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	10m NE	389060 410800	JUNCTION 20 PROJECT ROCHDALE TP5	3.8	N	30159
2	25m SE	389070 410720	JUNCTION 20 PROJECT ROCHDALE TP6	4.2	N	30160
3	44m E	389100 410770	JUNCTION 20 PROJECT ROCHDALE 5	10.0	N	30151

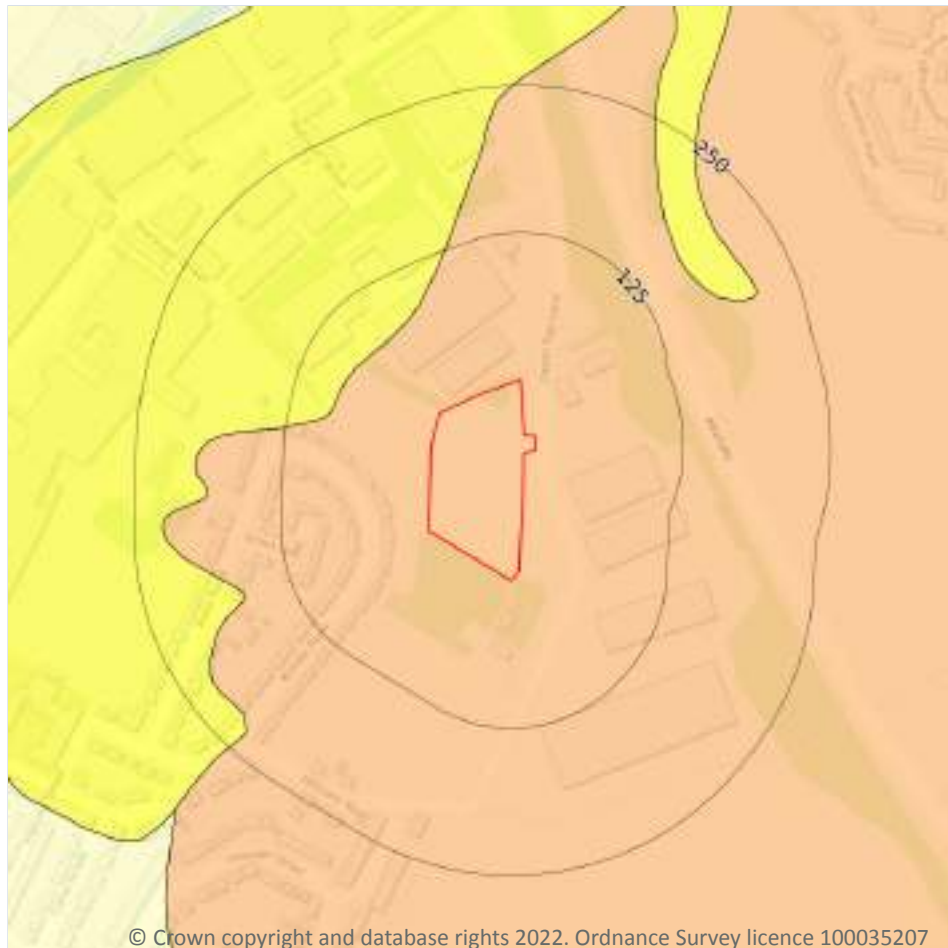


ID	Location	Grid reference	Name	Length	Confidential	Web link
4	45m NE	389090 410820	JUNCTION 20 PROJECT ROCHDALE 6	5.0	N	30152
5	45m SE	389080 410650	JUNCTION 20 PROJECT ROCHDALE TP7	4.1	N	30161
6	77m NE	389120 410850	JUNCTION 20 PROJECT ROCHDALE 8	6.0	N	30154
A	89m S	389050 410580	JUNCTION 20 PROJECT ROCHDALE TP8	4.2	N	30162
A	94m S	389070 410580	JUNCTION 20 PROJECT ROCHDALE 2	8.0	N	30148
7	104m SE	389130 410620	JUNCTION 20 PROJECT ROCHDALE TP2	4.0	N	30156
8	135m E	389180 410720	JUNCTION 20 PROJECT ROCHDALE TP4	4.2	N	30158
9	137m SE	389180 410680	JUNCTION 20 PROJECT ROCHDALE 7	10.0	N	30153
10	158m SE	389190 410620	JUNCTION 20 PROJECT ROCHDALE 4	12.0	N	30150
11	158m S	389040 410510	JUNCTION 20 PROJECT ROCHDALE TP1	3.9	N	30155
12	158m E	389210 410740	JUNCTION 20 PROJECT ROCHDALE TP3	4.1	N	30157
13	158m SE	389130 410540	JUNCTION 20 PROJECT ROCHDALE TP9	3.5	N	30163
14	189m S	389100 410490	JUNCTION 20 PROJECT ROCHDALE 1	8.0	N	30147
15	193m SE	389210 410580	JUNCTION 20 PROJECT ROCHDALE TP11	4.2	N	30165
16	197m E	389240 410670	JUNCTION 20 PROJECT ROCHDALE TP10	3.8	N	30164
17	217m SE	389220 410550	JUNCTION 20 PROJECT ROCHDALE 3	12.0	N	30149

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 96**

Location	Hazard rating	Details
On site	Low	Ground conditions predominantly medium 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 97**

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 98**

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.

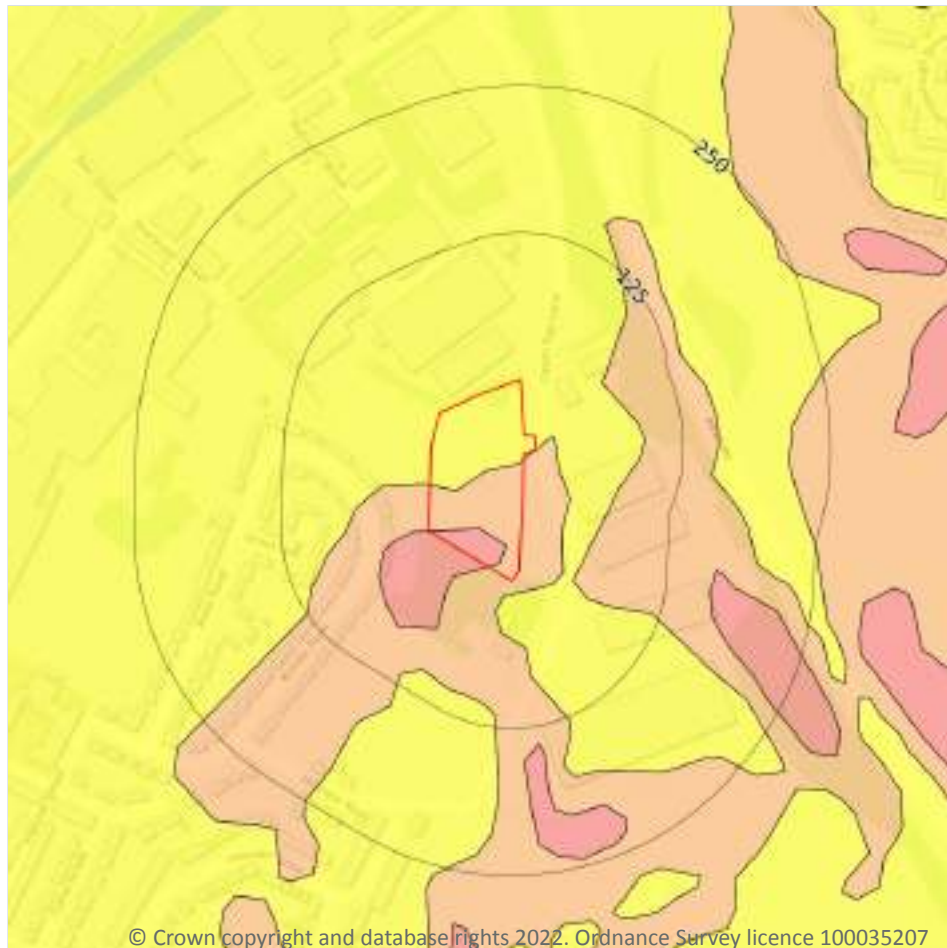
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 99**

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

17.5 Landslides

Records within 50m

3

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 100**

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.

Location	Hazard rating	Details
On site	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.
On site	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.

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 102**

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, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities
- 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 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.

18.2 BritPits

Records within 500m

5

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.

Features are displayed on the Mining, ground workings and natural cavities map on **page 104**

ID	Location	Details	Description
B	211m SW	Name: Windy Bank Sand Pit Address: Castleton, ROCHDALE, Lancashire Commodity: Sand Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
G	302m N	Name: Martin Bridge Address: Castleton, ROCHDALE, Lancashire Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
L	356m SW	Name: Windy Bank Sand Pit Address: Castleton, ROCHDALE, Lancashire Commodity: Sand Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
I	367m W	Name: Castleton Brick Works Address: Castleton, ROCHDALE, Lancashire Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
Q	459m NE	Name: March Barn Gravel Pit Address: Kirkholt, ROCHDALE, Lancashire Commodity: Sand & Gravel Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.



18.3 Surface ground workings

Records within 250m

48

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, ground workings and natural cavities map on **page 104**

ID	Location	Land Use	Year of mapping	Mapping scale
A	81m E	Cuttings	1992	1:10000
A	81m E	Cuttings	1987	1:10000
B	125m SW	Unspecified Heap	1992	1:10000
B	125m SW	Unspecified Heap	1987	1:10000
B	125m SW	Unspecified Heap	1975	1:10000
B	125m SW	Unspecified Heap	1968	1:10560
B	140m SW	Unspecified Heap	1938	1:10560
B	140m SW	Unspecified Heap	1890	1:10560
B	143m SW	Old Sand Pit	1909	1:10560
C	154m N	Cuttings	1992	1:10000
C	154m N	Cuttings	1987	1:10000
C	154m N	Cuttings	1975	1:10000
D	169m NW	Unspecified Pit	1938	1:10560
D	170m NW	Unspecified Ground Workings	1975	1:10000
D	170m NW	Unspecified Ground Workings	1968	1:10560
D	171m NW	Unspecified Ground Workings	1928	1:10560
E	193m E	Cuttings	1992	1:10000
E	193m E	Cuttings	1987	1:10000
E	193m E	Cuttings	1975	1:10000
F	195m W	Unspecified Pit	1975	1:10000
F	195m W	Unspecified Pit	1968	1:10560
G	196m N	Unspecified Pit	1938	1:10560
B	197m SW	Unspecified Ground Workings	1949	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
G	197m N	Unspecified Ground Workings	1949	1:10560
G	198m N	Unspecified Heap	1928	1:10560
F	200m W	Unspecified Pit	1949	1:10560
F	202m W	Unspecified Ground Workings	1928	1:10560
H	206m W	Pond	1975	1:10000
H	206m W	Pond	1968	1:10560
G	210m N	Unspecified Heap	1938	1:10560
F	211m W	Pond	1909	1:10560
B	211m SW	Unspecified Pit	1949	1:10560
G	212m N	Unspecified Ground Workings	1975	1:10000
F	213m W	Pond	1890	1:10560
G	215m N	Unspecified Ground Workings	1968	1:10560
H	218m W	Reservoir	1938	1:10560
H	220m W	Reservoir	1949	1:10560
H	223m W	Reservoir	1928	1:10560
H	223m W	Reservoir	1909	1:10560
H	225m W	Reservoir	1890	1:10560
H	226m W	Pond	1992	1:10000
H	226m W	Pond	1987	1:10000
I	228m NW	Brick Works	1890	1:10560
F	238m W	Unspecified Pit	1949	1:10560
F	240m W	Unspecified Ground Workings	1928	1:10560
F	240m W	Unspecified Ground Workings	1909	1:10560
F	241m W	Unspecified Pit	1938	1:10560
G	246m N	Unspecified Ground Workings	1938	1:10560

This is data is sourced from Ordnance Survey/Groundsure.



18.4 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.

18.5 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 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.

18.8 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.



18.9 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.

18.10 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.

18.11 Gypsum areas

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

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

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

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.13 Clay mining

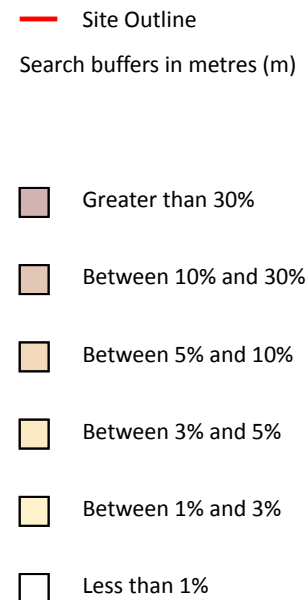
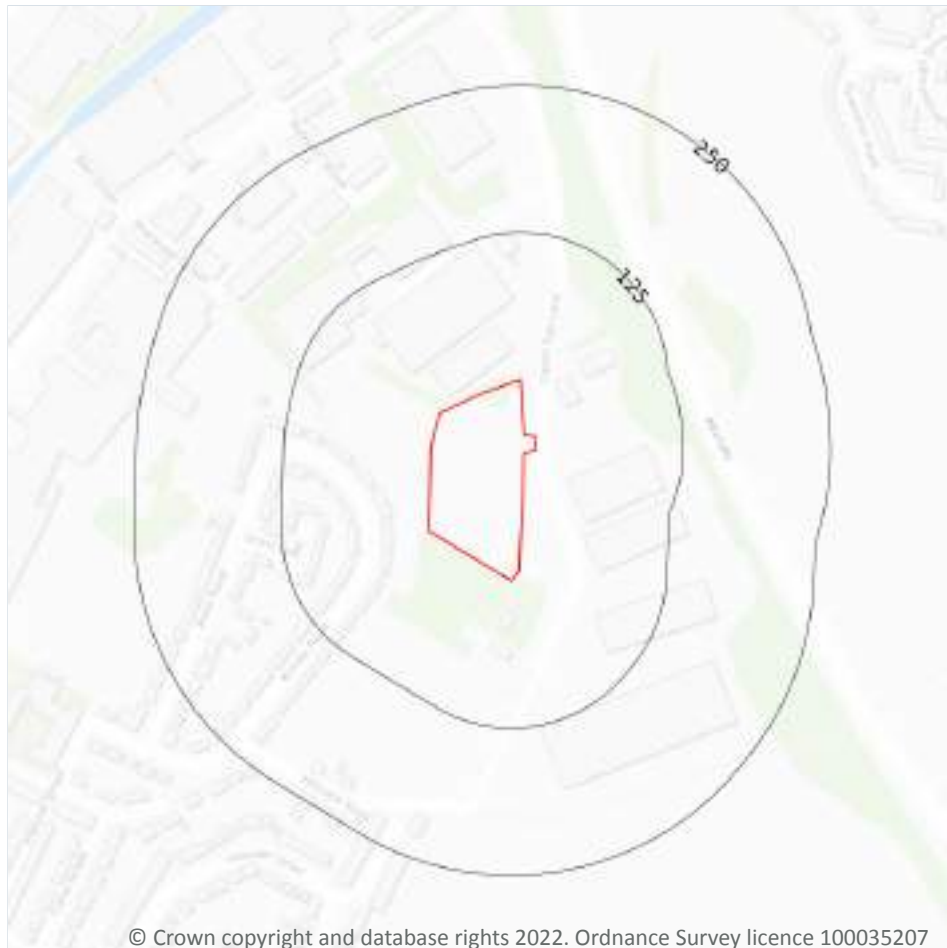
Records on site	0
-----------------	---

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 Radon



19.1 Radon

Records on site

1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 110**

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

This data is sourced from the British Geological Survey and Public Health England.



20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

3

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 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 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.

20.3 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.



21 Railway infrastructure and projects

21.1 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.

21.2 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.

21.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 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.

21.5 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.

21.6 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.

21.7 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.

21.8 Crossrail 1

Records within 500m

0

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

21.9 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.

21.10 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>.

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Appendix C

Historical Maps

Site Details:

UNIT 5, COWM TOP BUSINESS
PARK, COWM TOP LANE,
ROCHDALE, OL11 2PU

Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: County Series

Map date: 1890

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1890
Revised 1890
Edition N/A
Copyright N/A
Levelled N/A

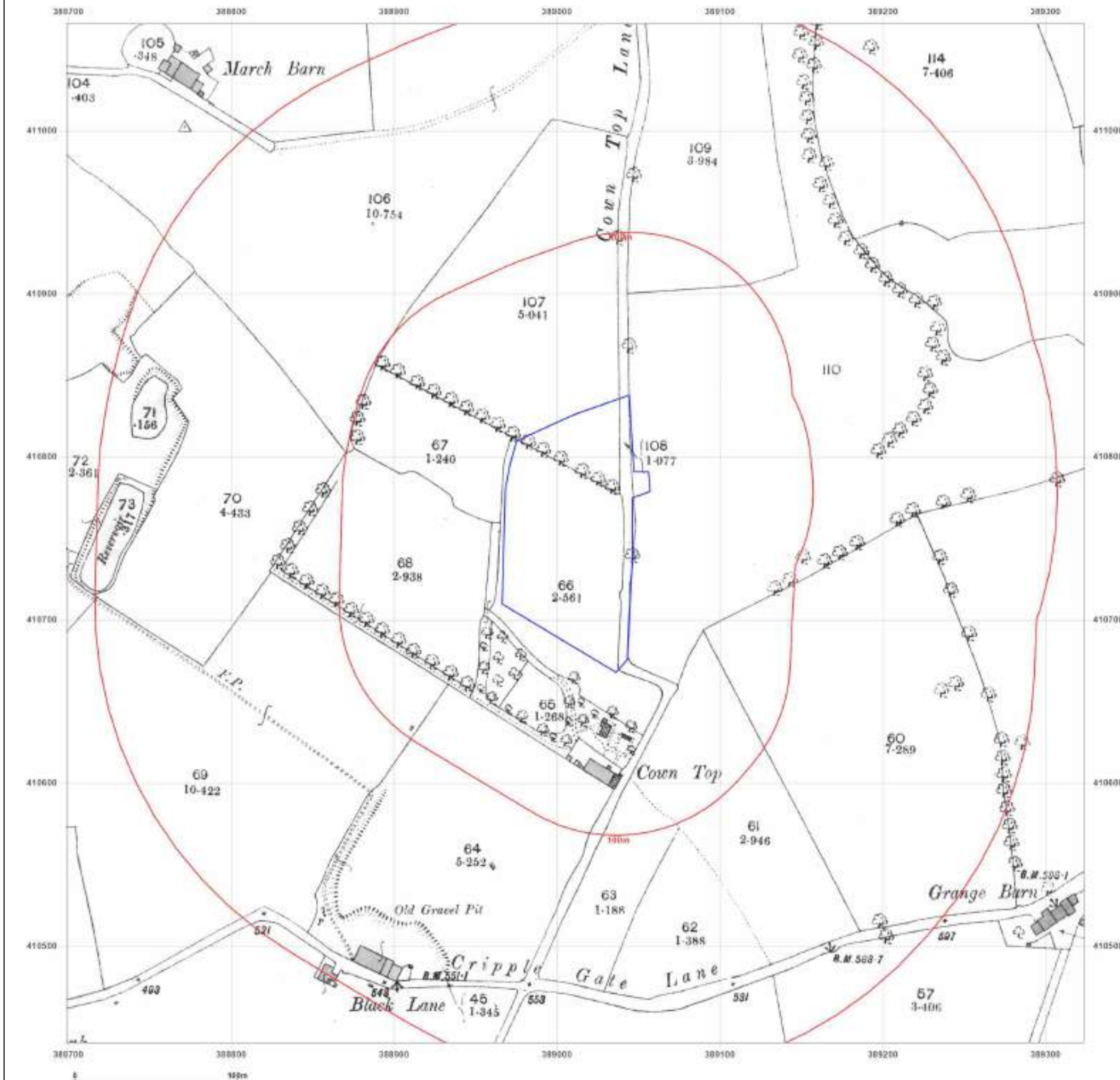


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Site Details:

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Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: County Series

Map date: 1910

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1910
Revised 1910
Edition N/A
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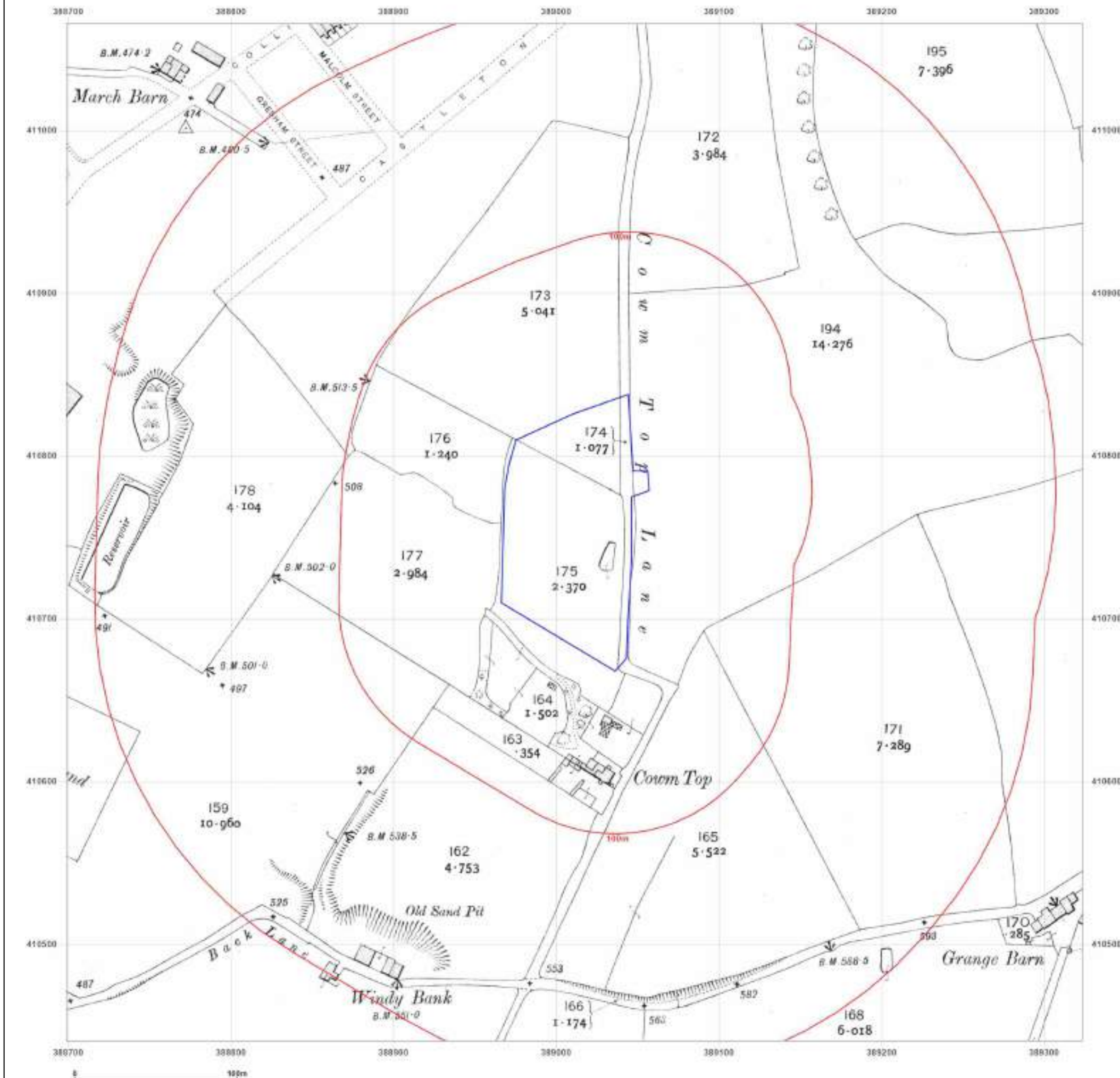


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Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: County Series

Map date: 1929

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1929
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Edition N/A
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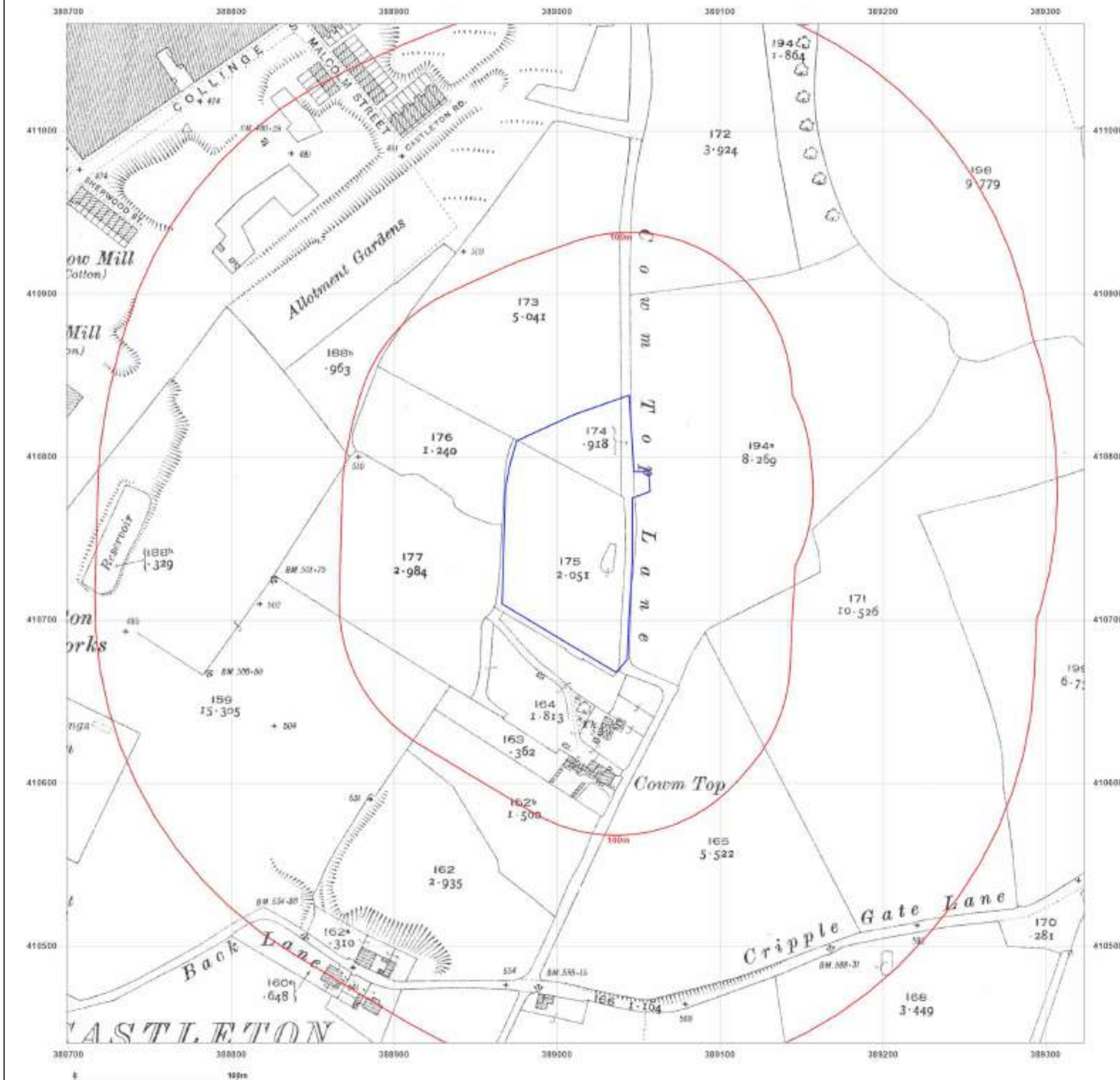


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ROCHDALE, OL11 2PU

Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: National Grid

Map date: 1955-1956

Scale: 1:1,250

Printed at: 1:2,000



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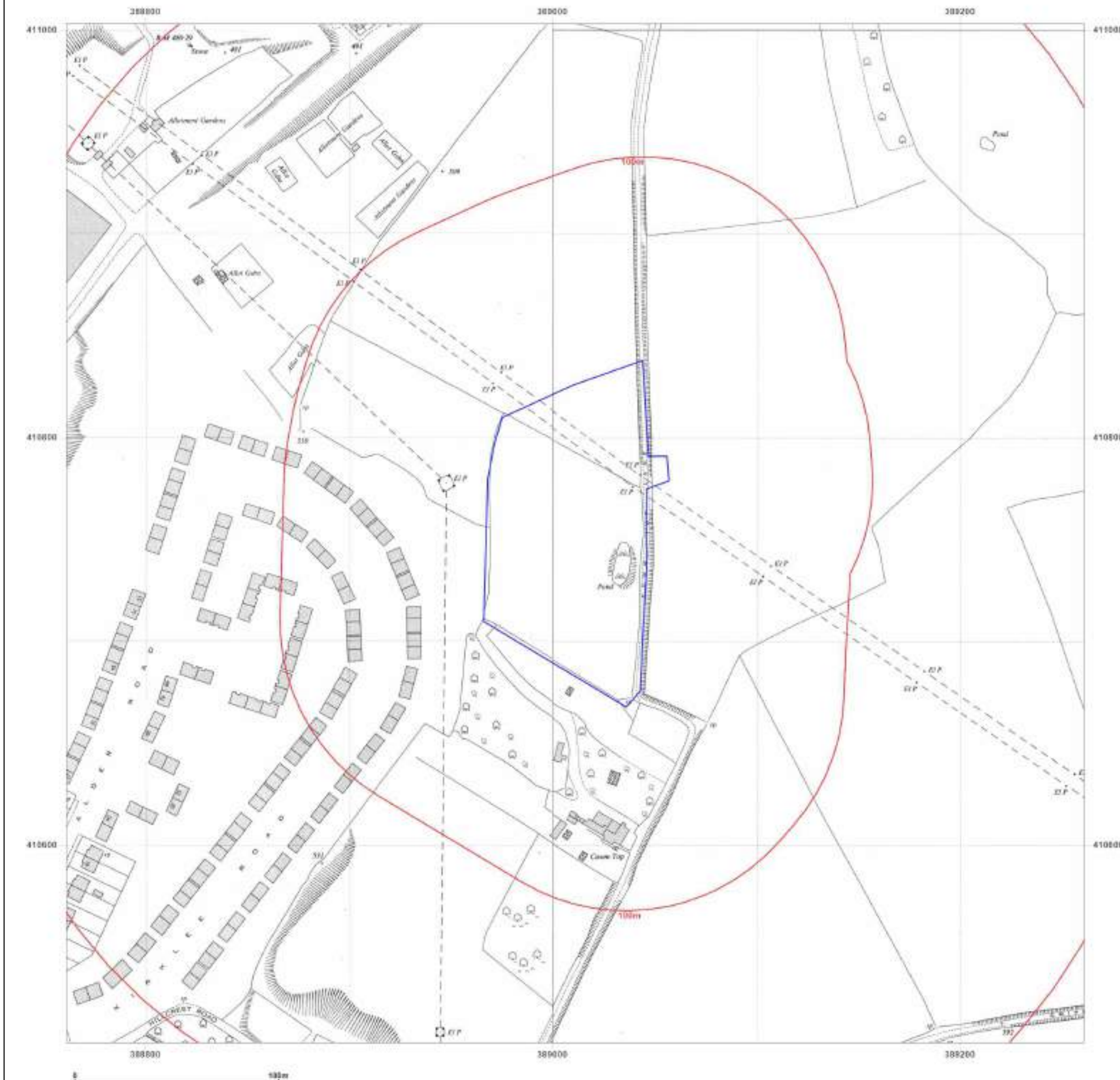


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Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: National Grid

Map date: 1956-1957

Scale: 1:1,250

Printed at: 1:2,000



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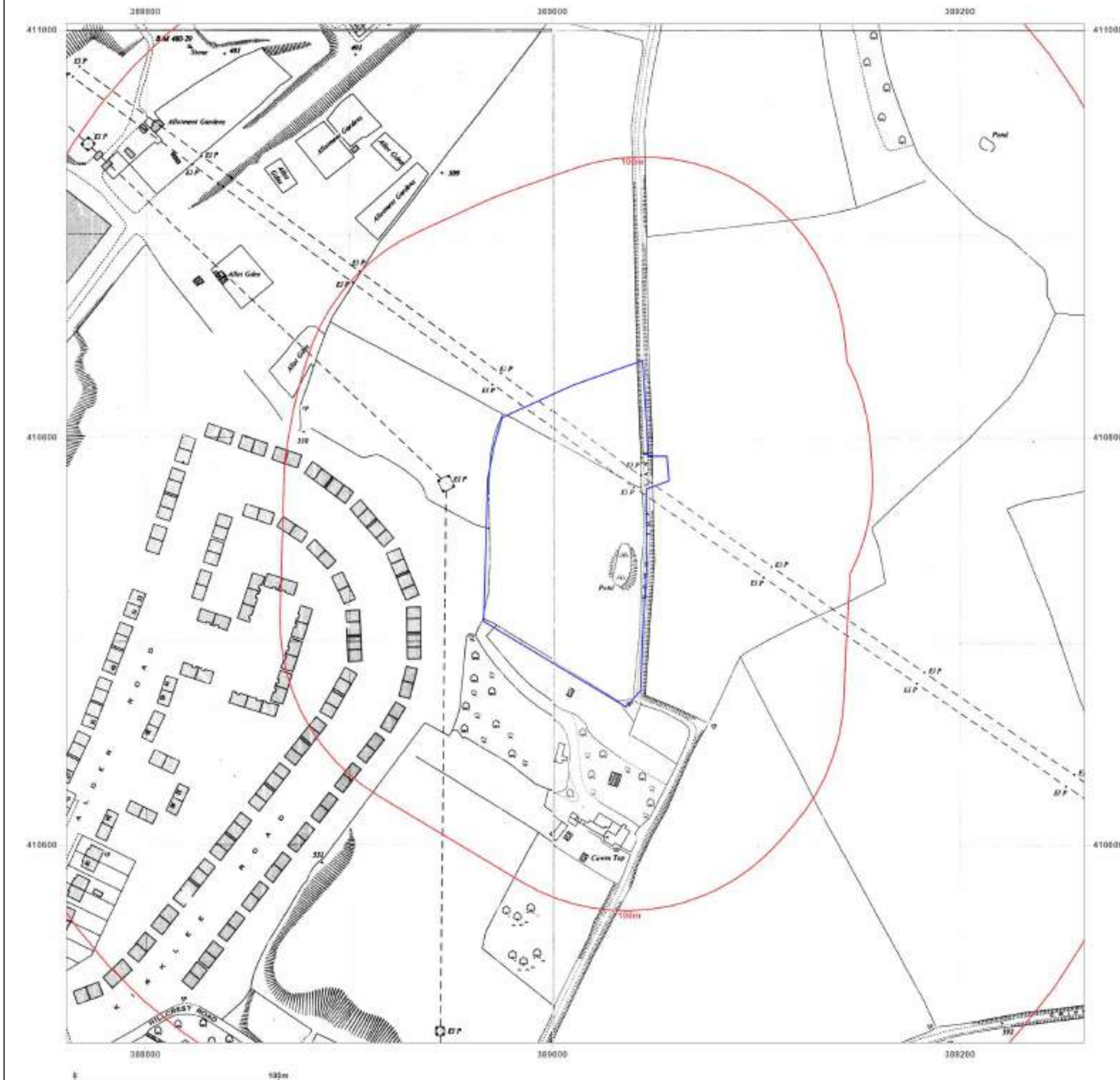


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Client Ref: 2228-G-01
Report Ref: GS-9135568
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Map Name: National Grid

Map date: 1956-1958

Scale: 1:2,500

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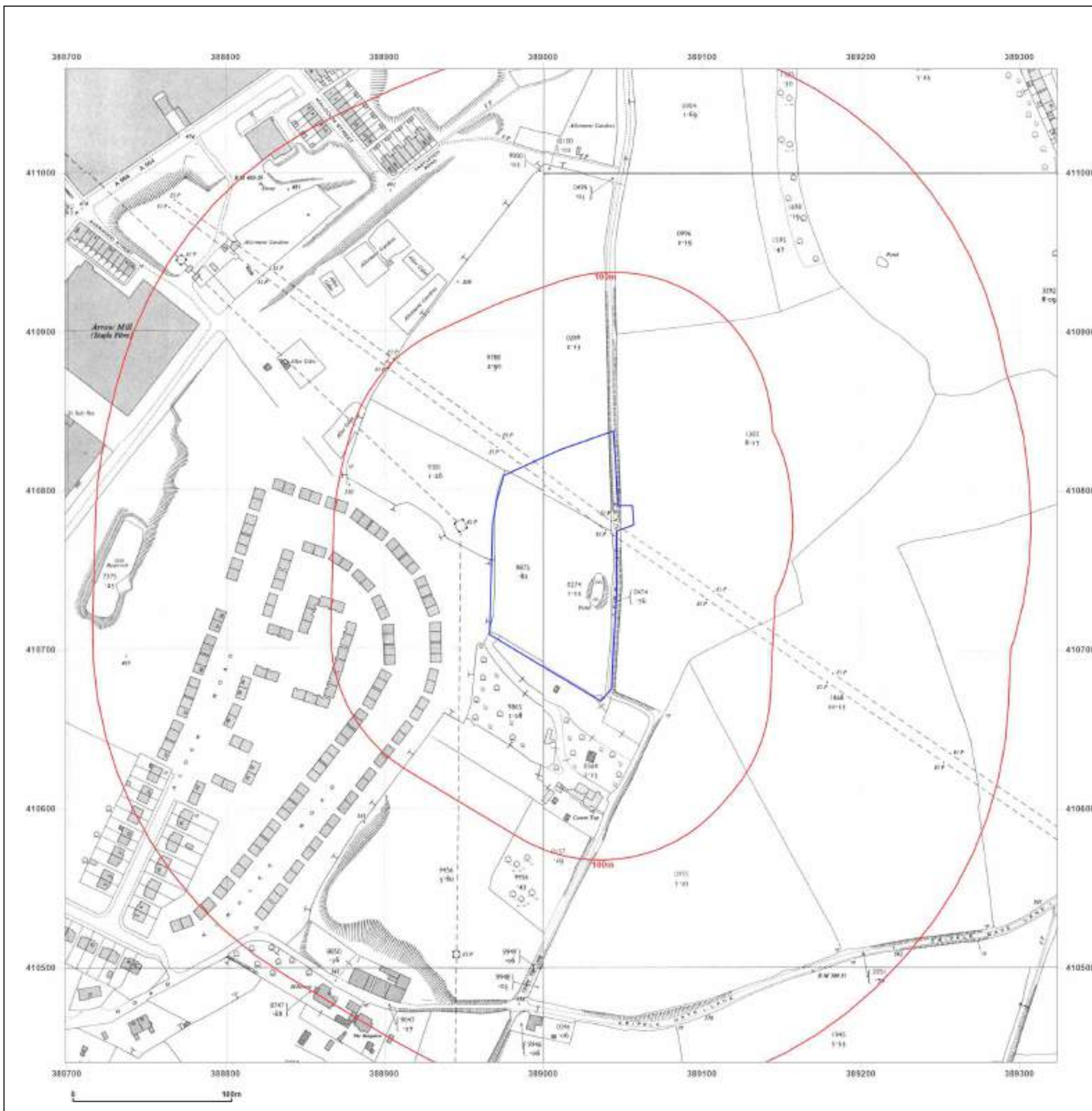


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Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: National Grid

Map date: 1963-1968

Scale: 1:1,250

Printed at: 1:2,000



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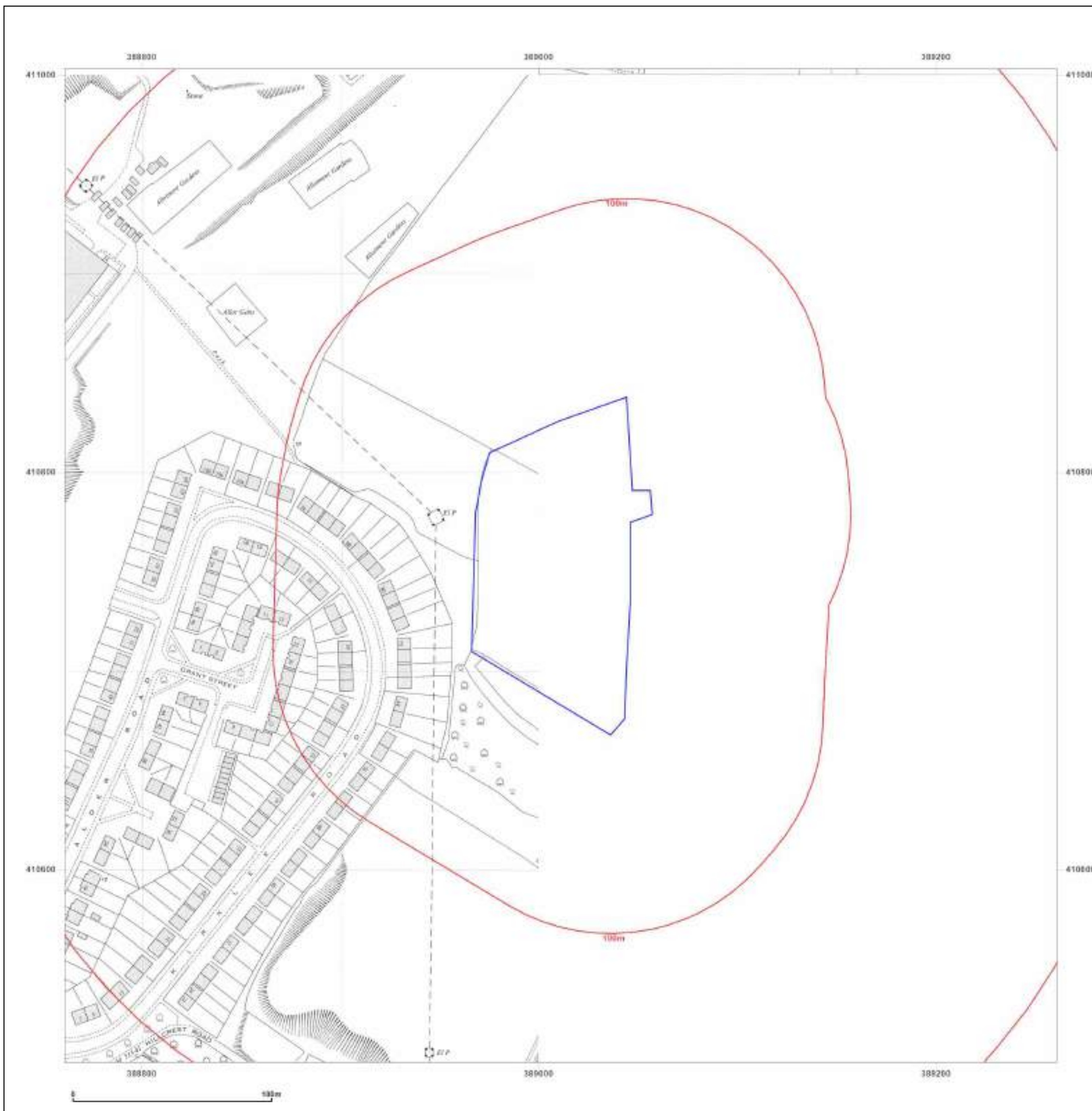


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Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: National Grid

Map date: 1975

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
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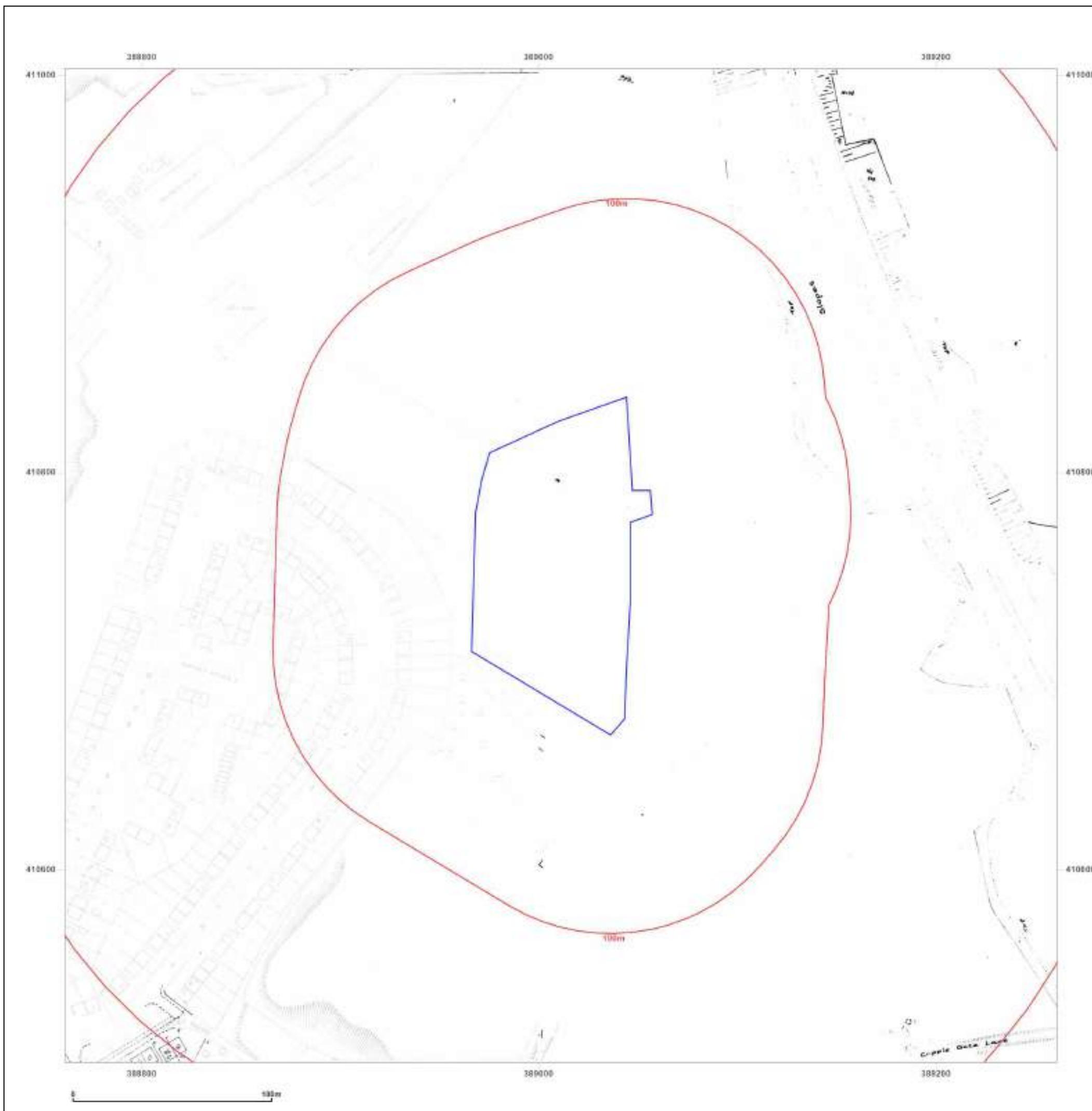


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Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: National Grid

Map date: 1976

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
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Edition N/A
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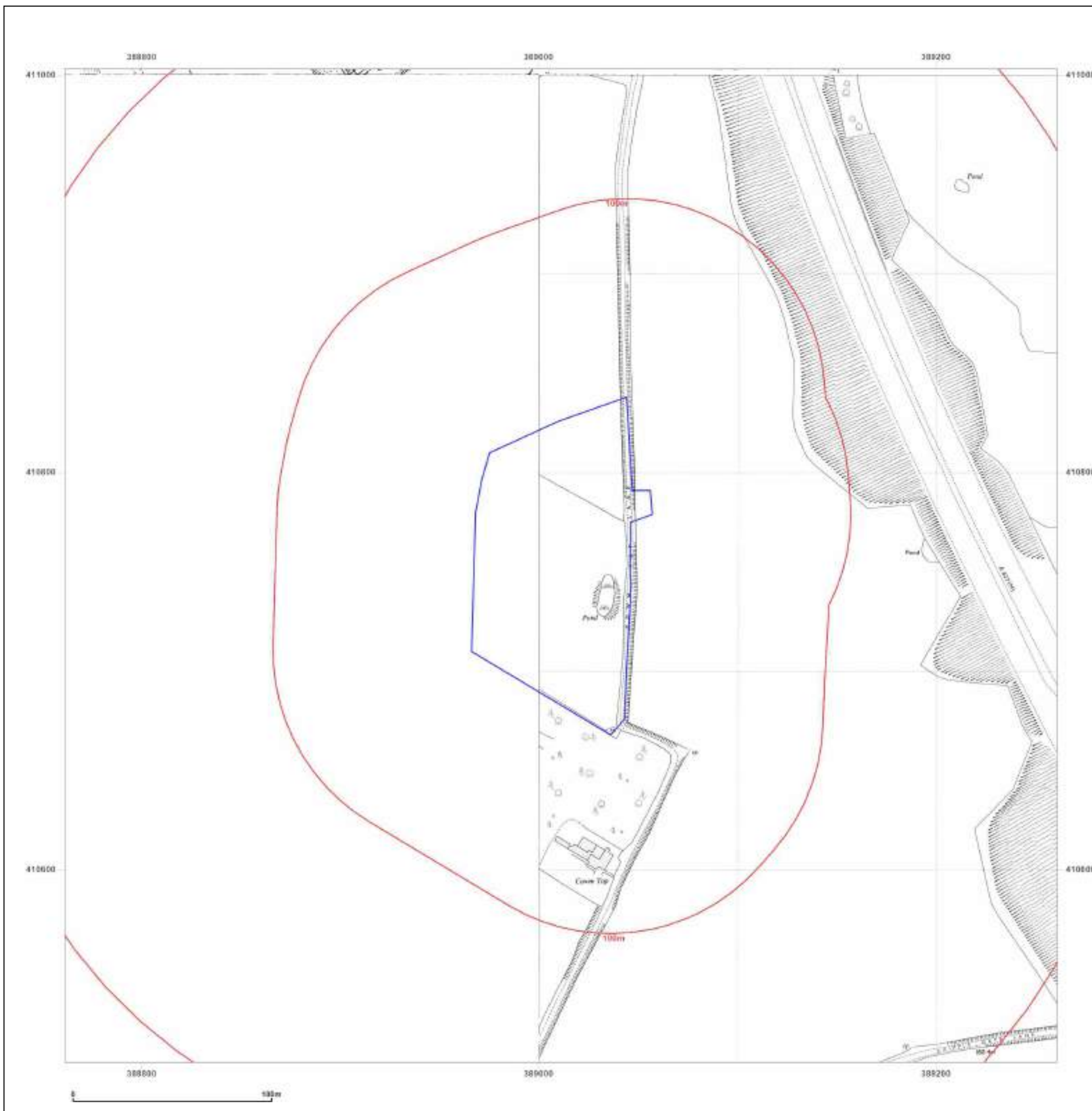


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Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: National Grid

Map date: 1984

Scale: 1:1,250

Printed at: 1:2,000



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Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: National Grid

Map date: 1984

Scale: 1:1,250

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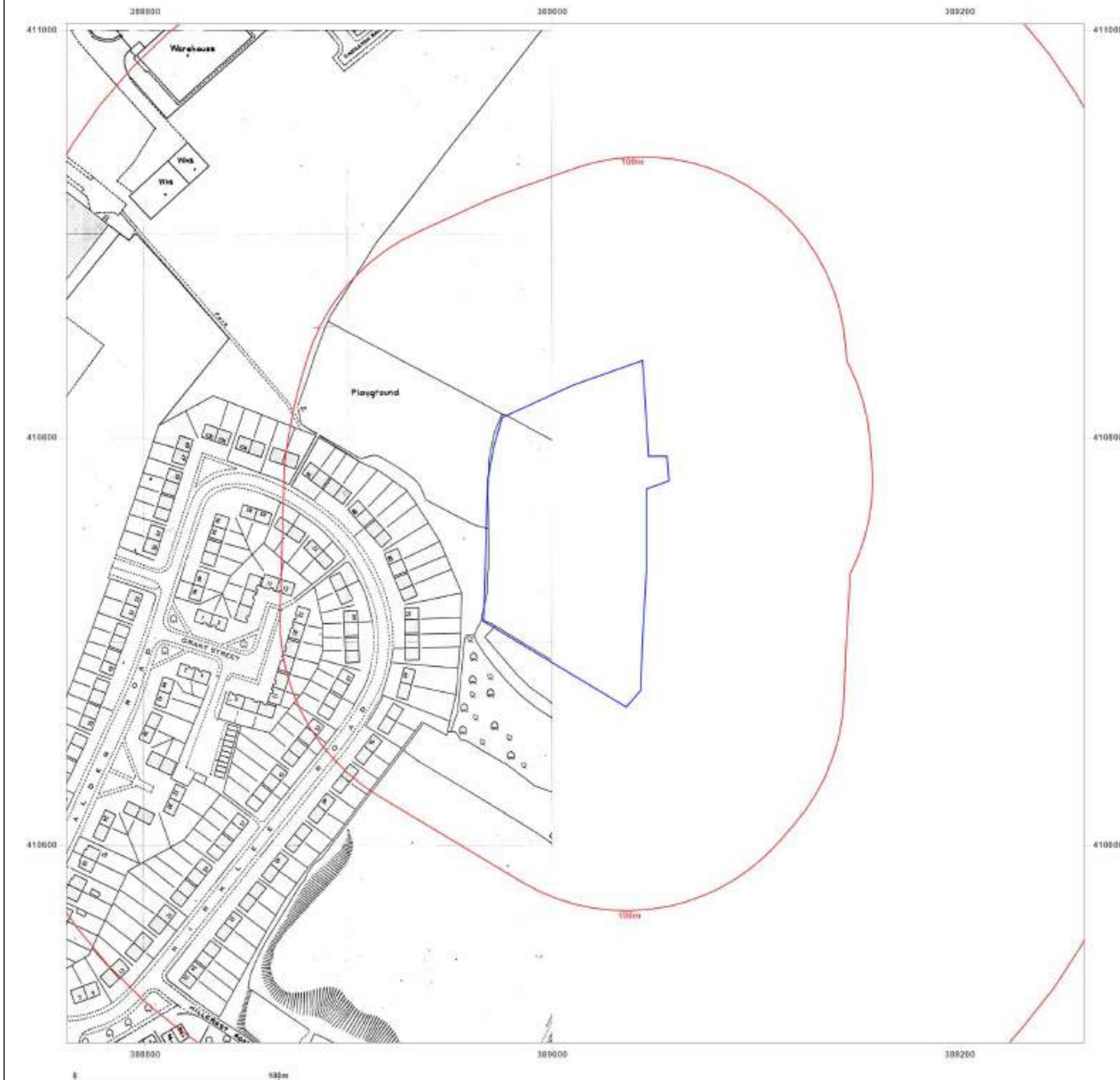


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Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: National Grid

Map date: 1992

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ROCHDALE, OL11 2PU

Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: National Grid

Map date: 1989-1992

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
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Revised 1989
Edition N/A
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Revised N/A
Edition N/A
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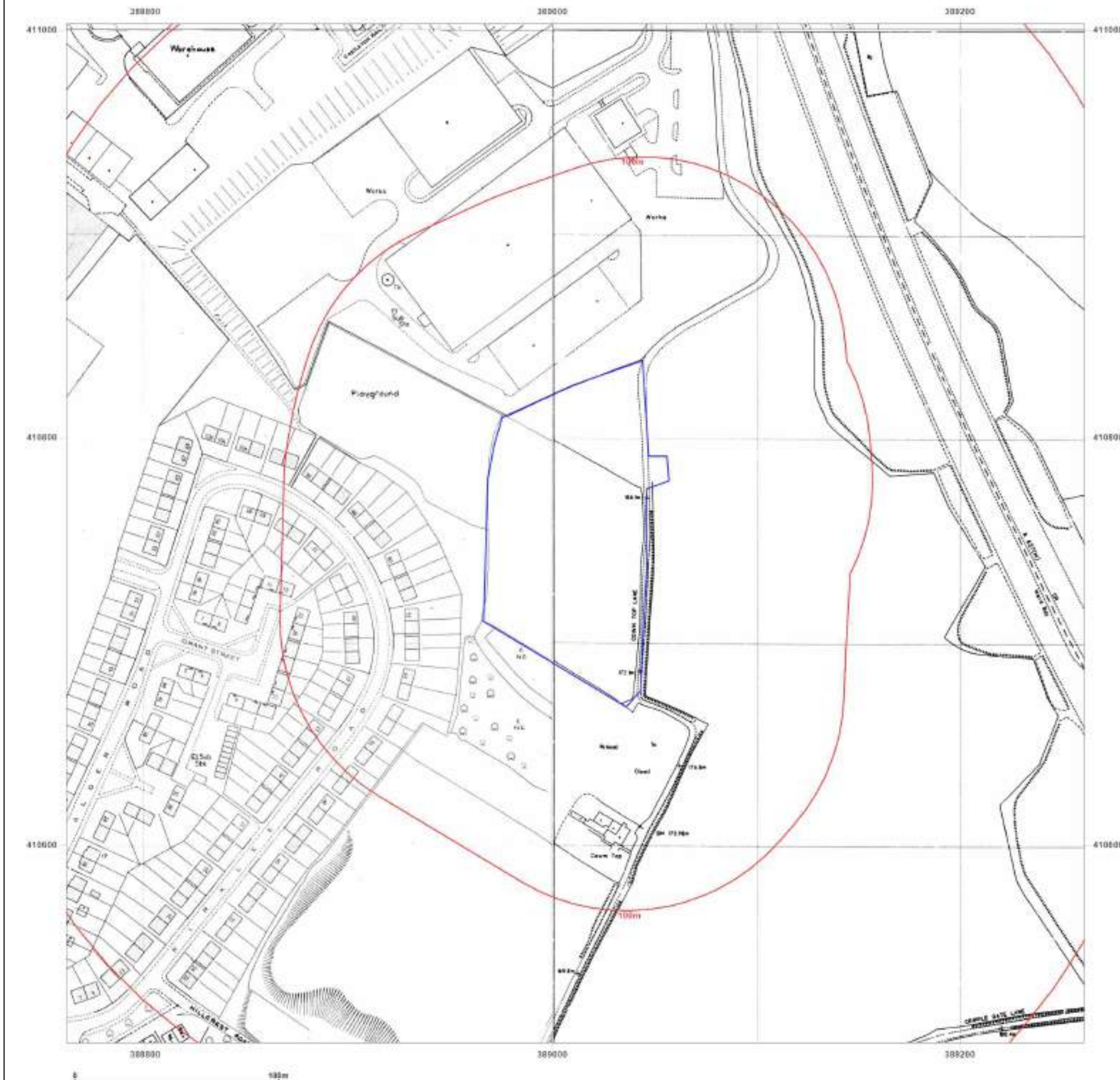


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ROCHDALE, OL11 2PU

Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: National Grid

Map date: 1990-1992

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
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Surveyed 1992
Revised N/A
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Surveyed 1962
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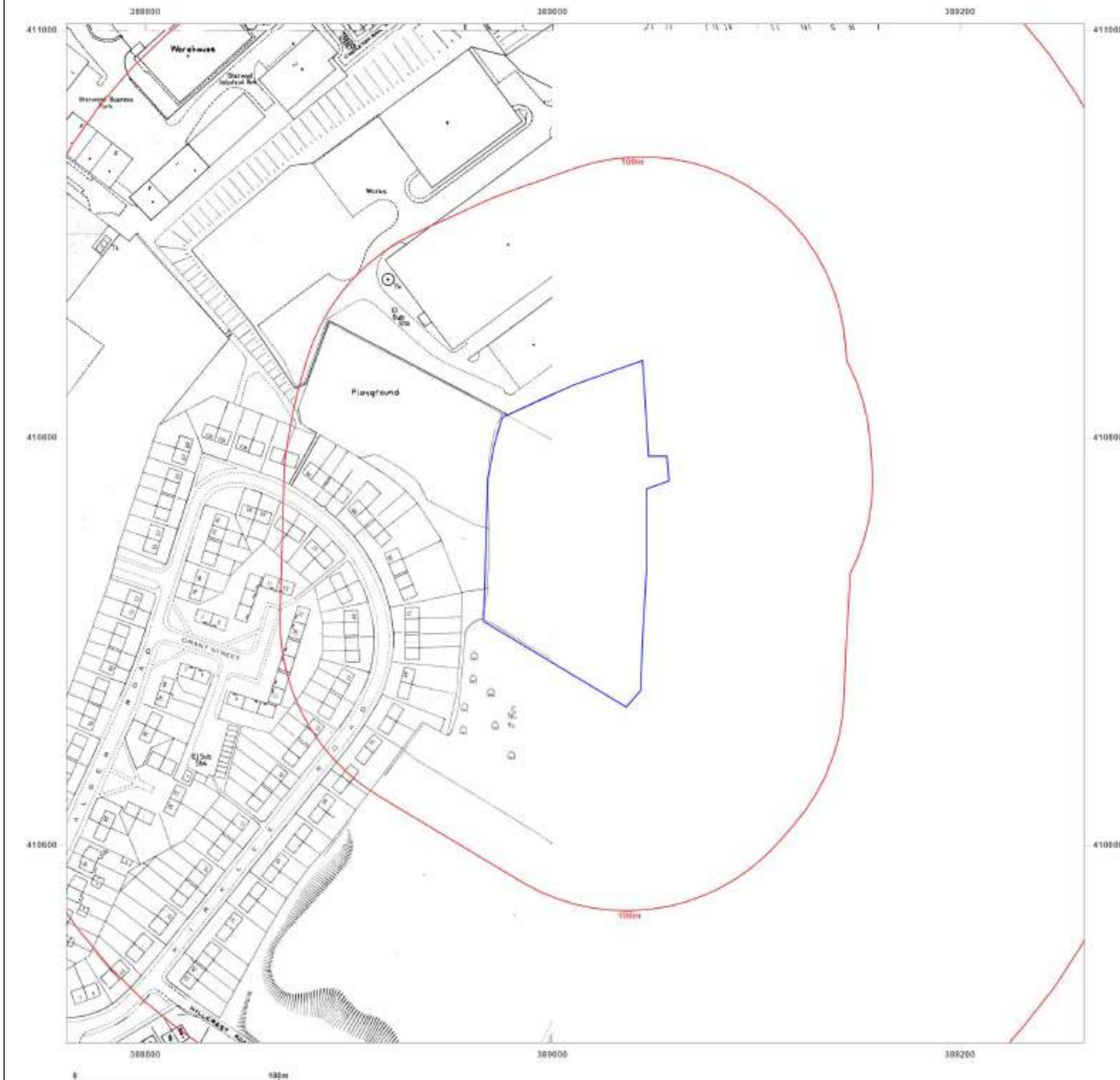


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ROCHDALE, OL11 2PU

Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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Site Details:

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ROCHDALE, OL11 2PU

Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: County Series

Map date: 1851

Scale: 1:10,560

Printed at: 1:10,560



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Edition 1851
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Surveyed 1848
Revised N/A
Edition 1851
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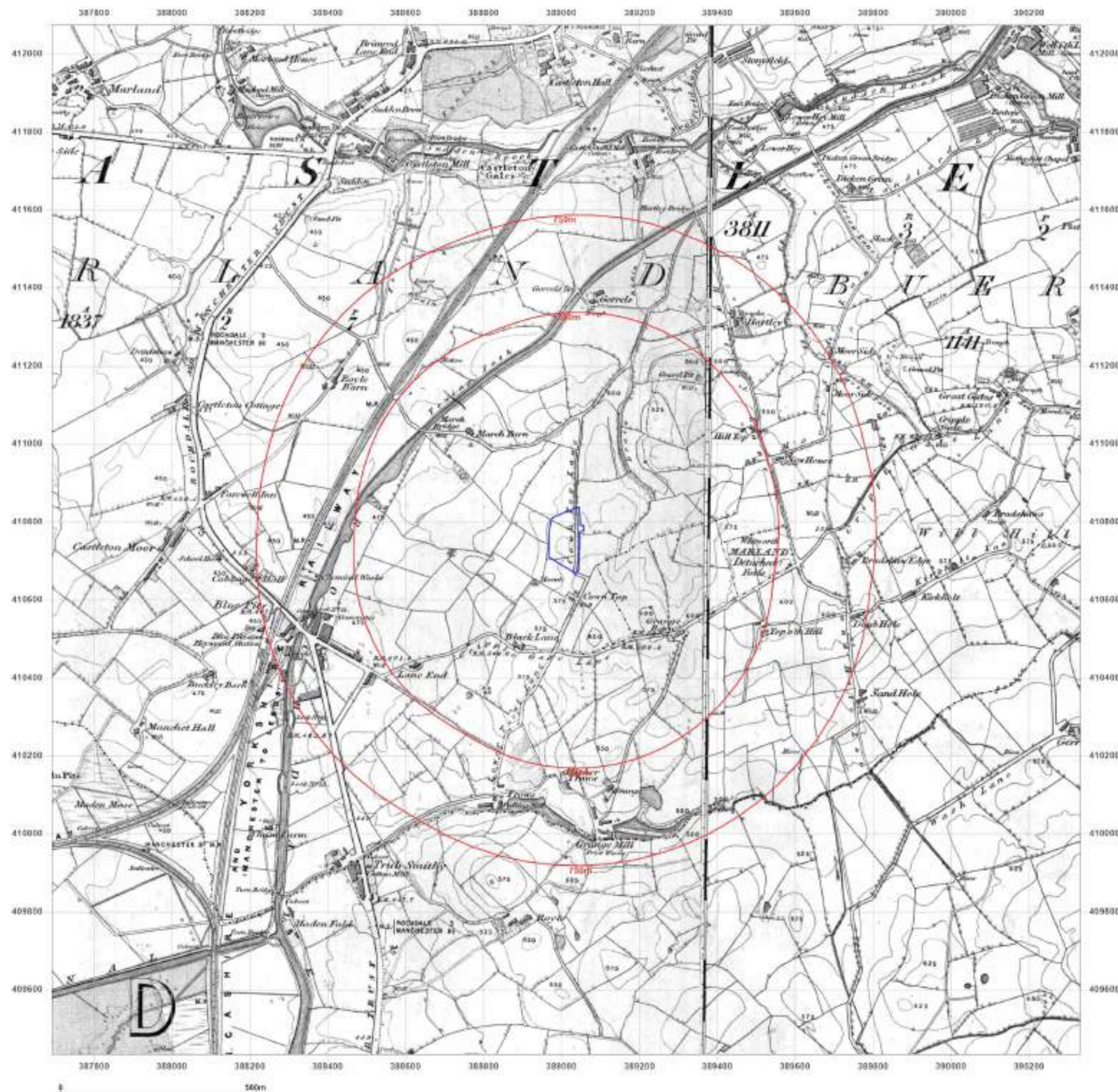


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ROCHDALE, OL11 2PU

Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: County Series

Map date: 1890

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1890
Edition N/A
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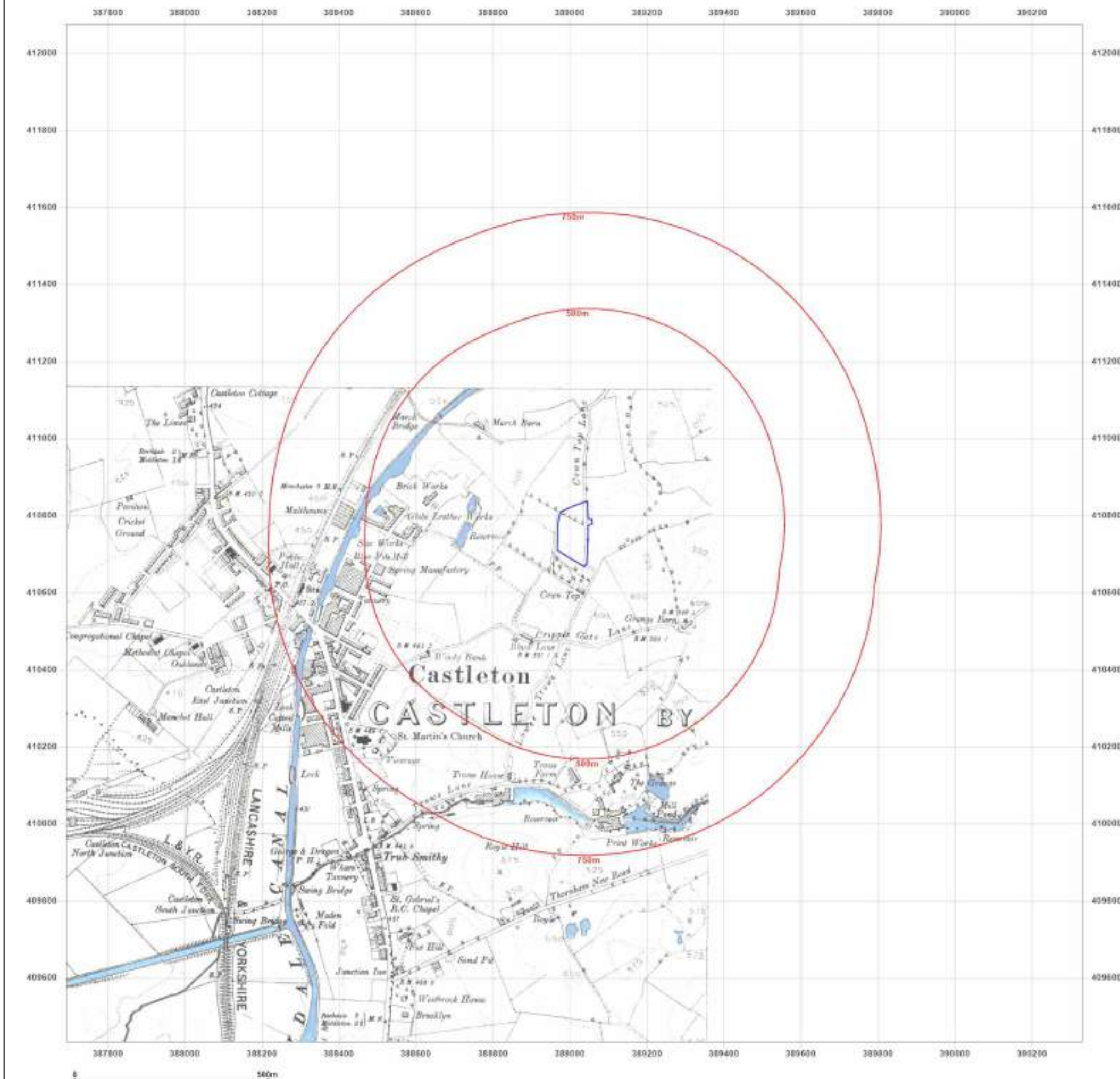


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Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: County Series

Map date: 1890-1891

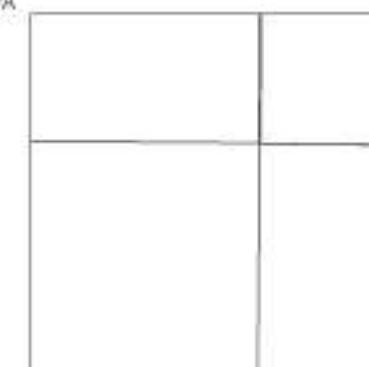
Scale: 1:10,560

Printed at: 1:10,560



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Revised 1890
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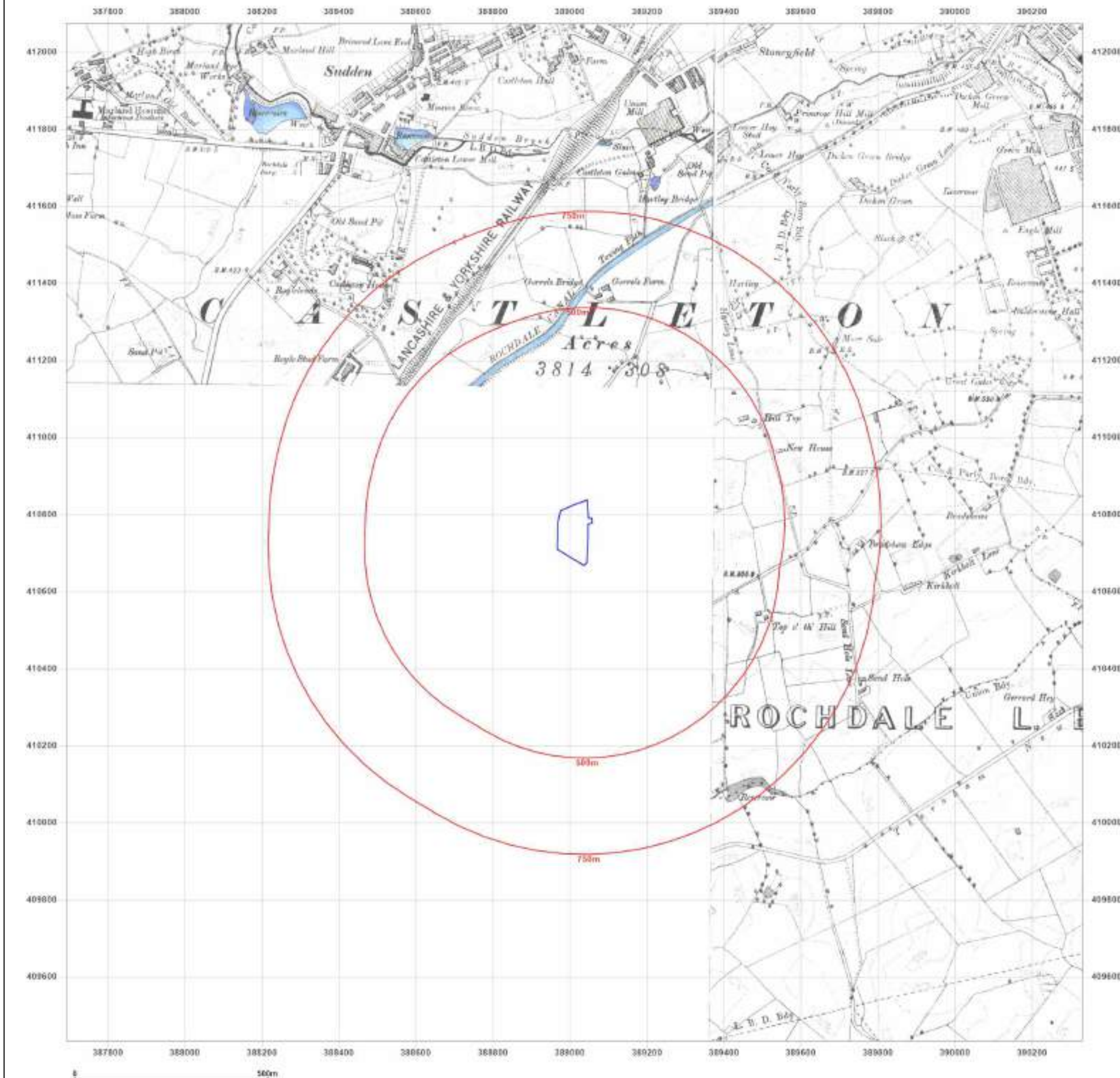


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Client Ref: 2228-G-01
Report Ref: GS-9135568
Grid Ref: 389011, 410753

Map Name: County Series

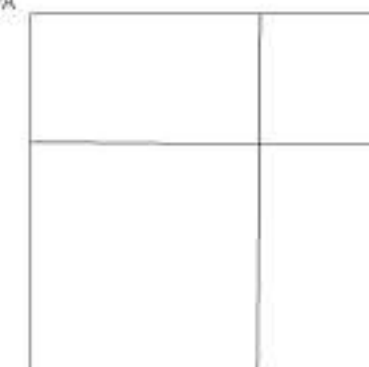
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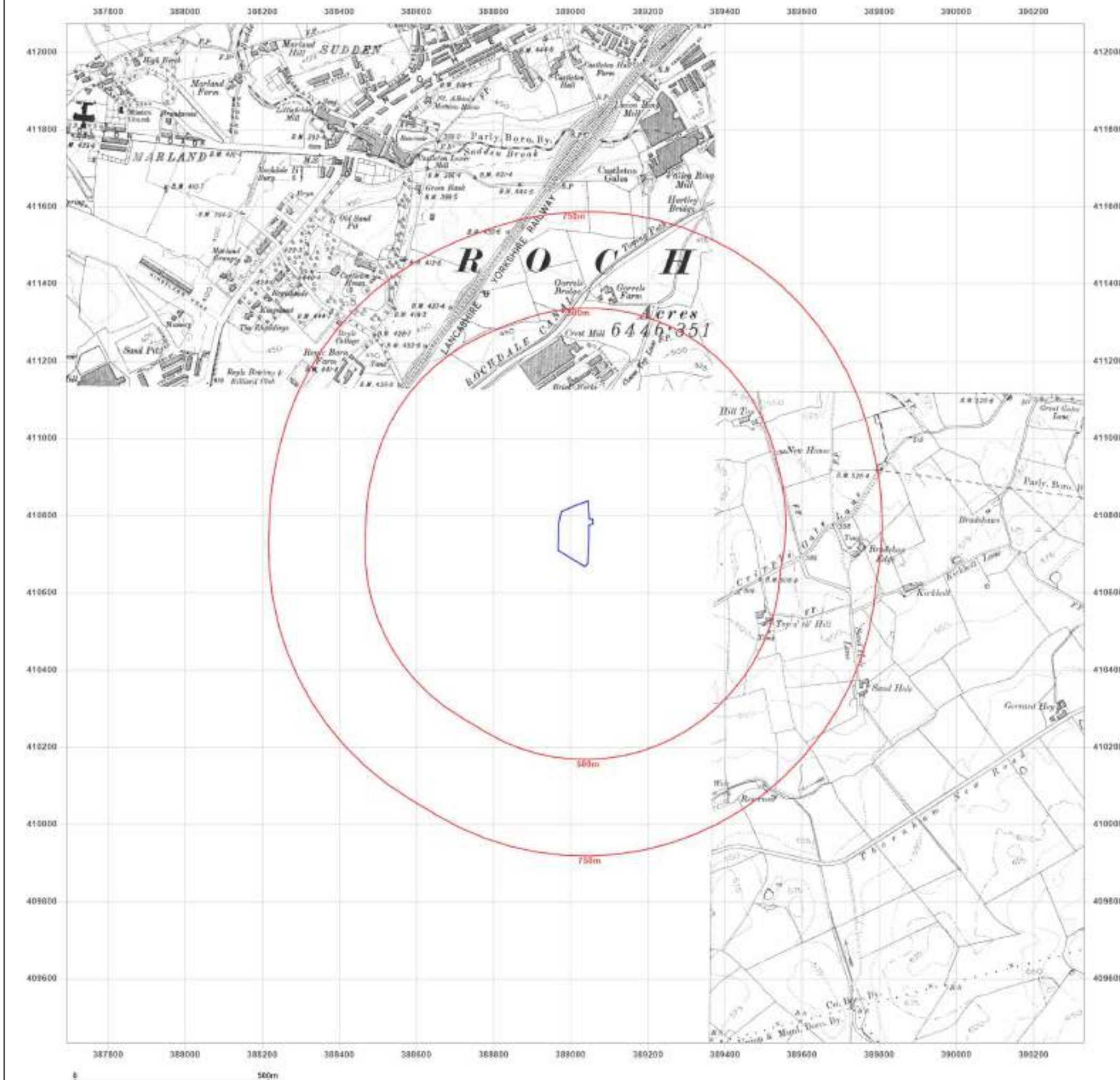


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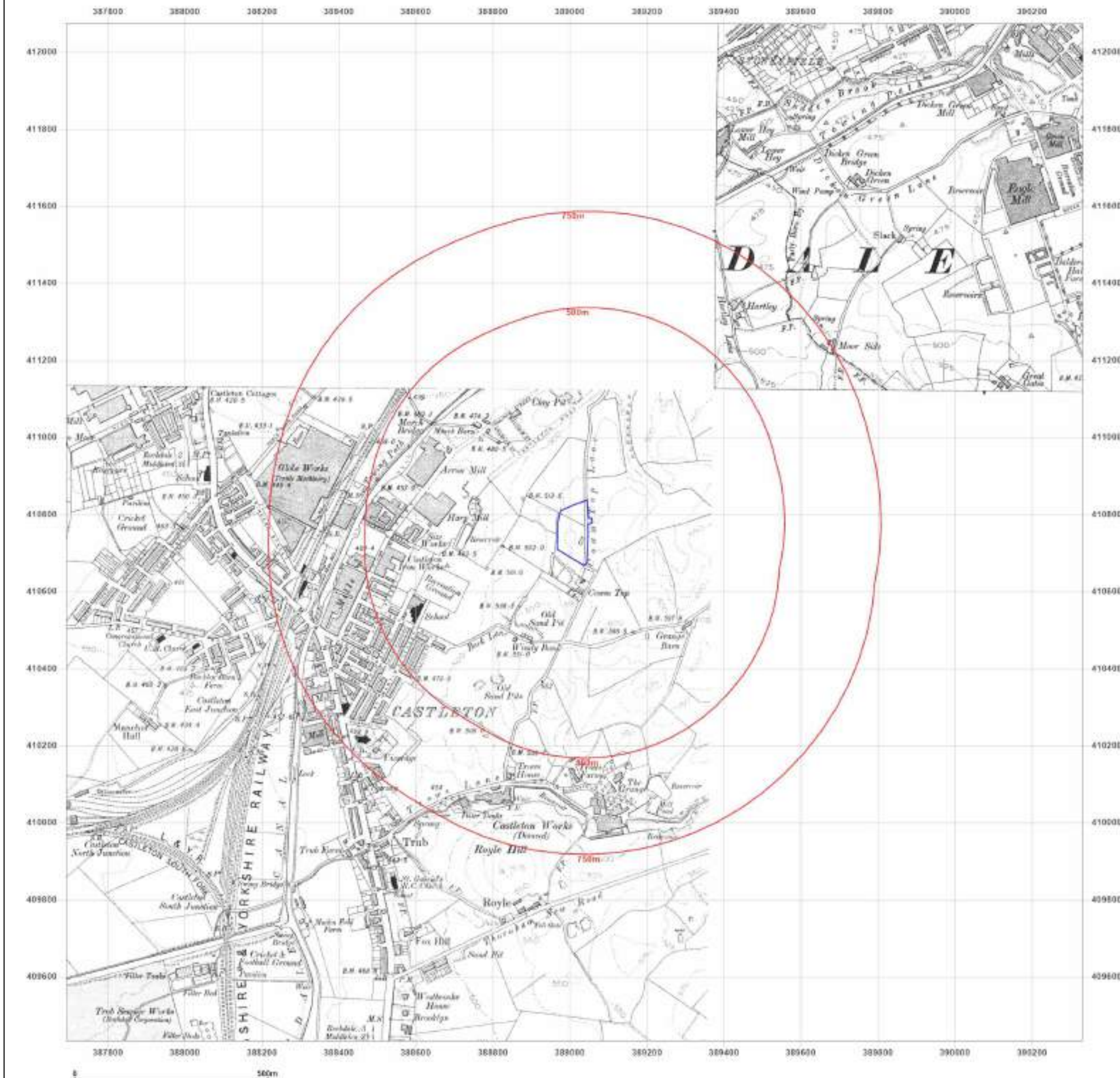


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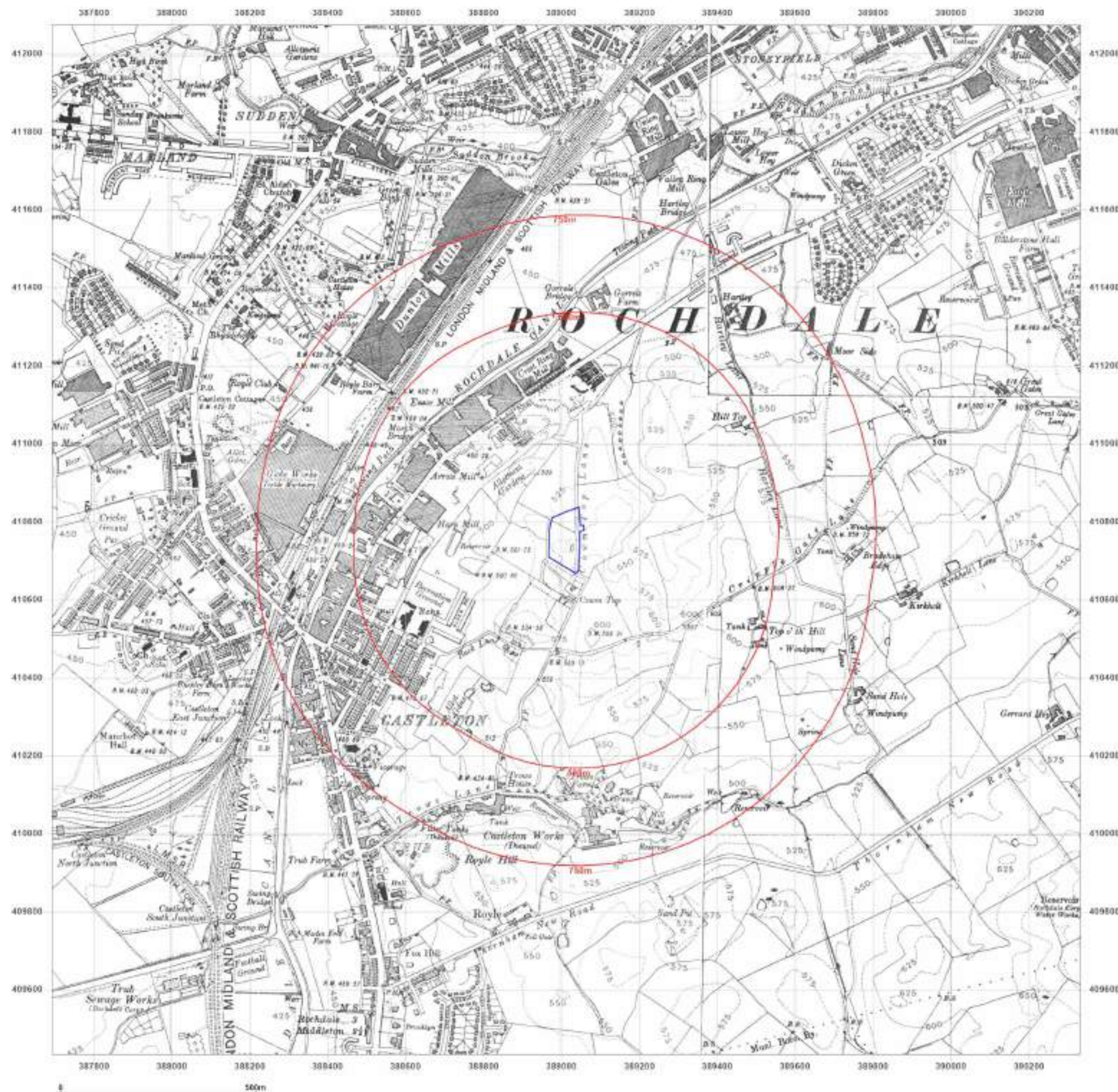


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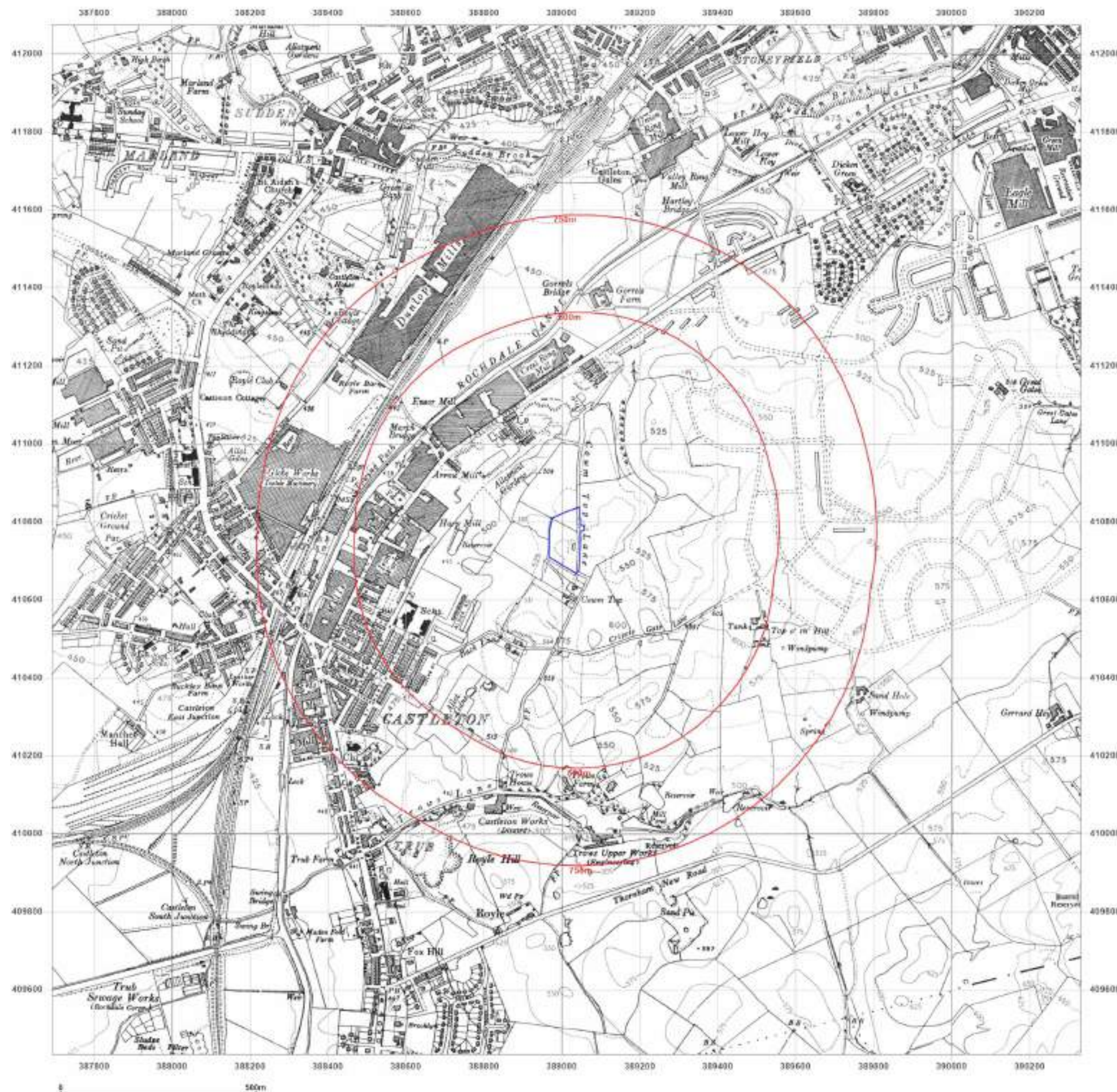


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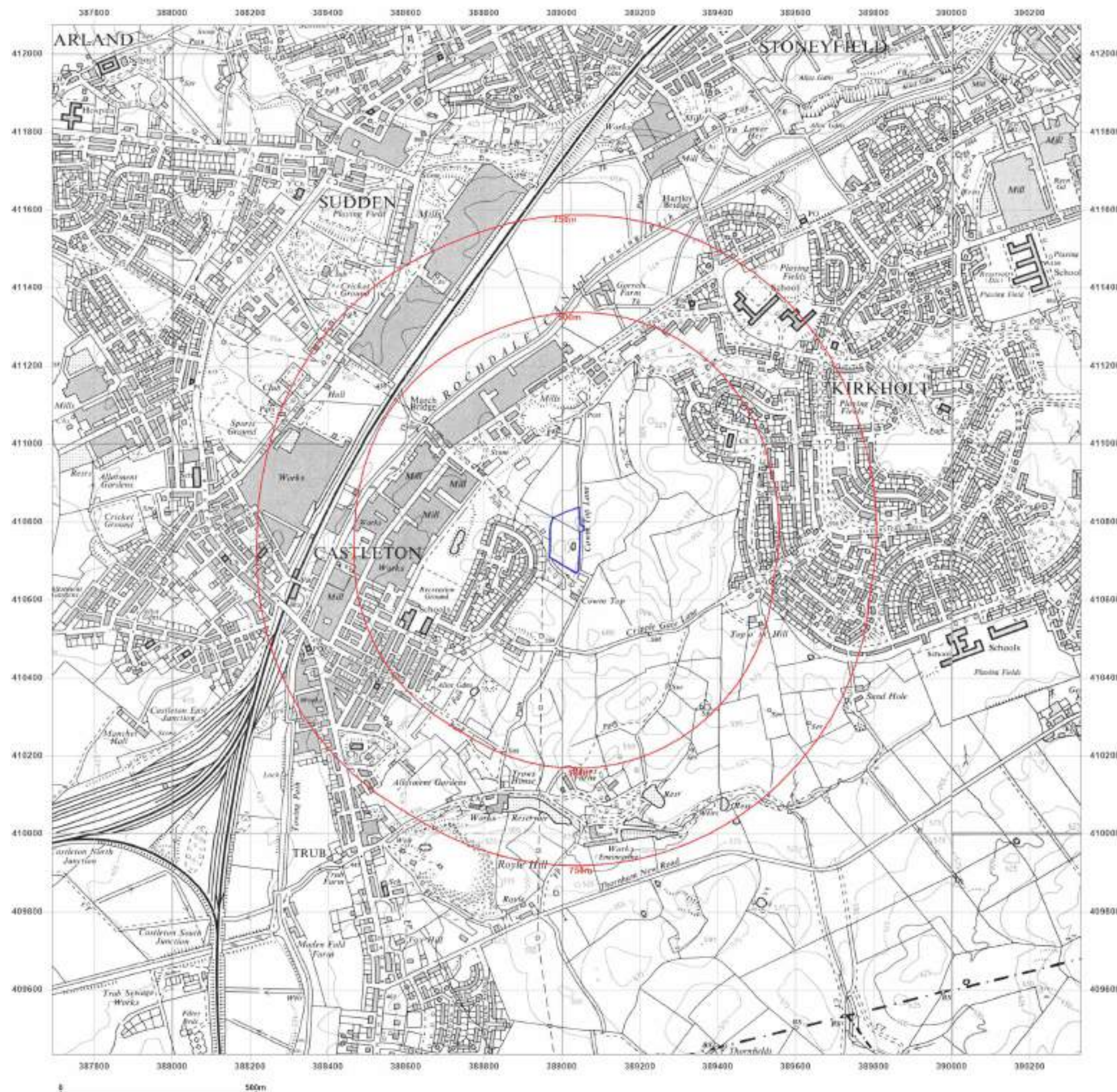


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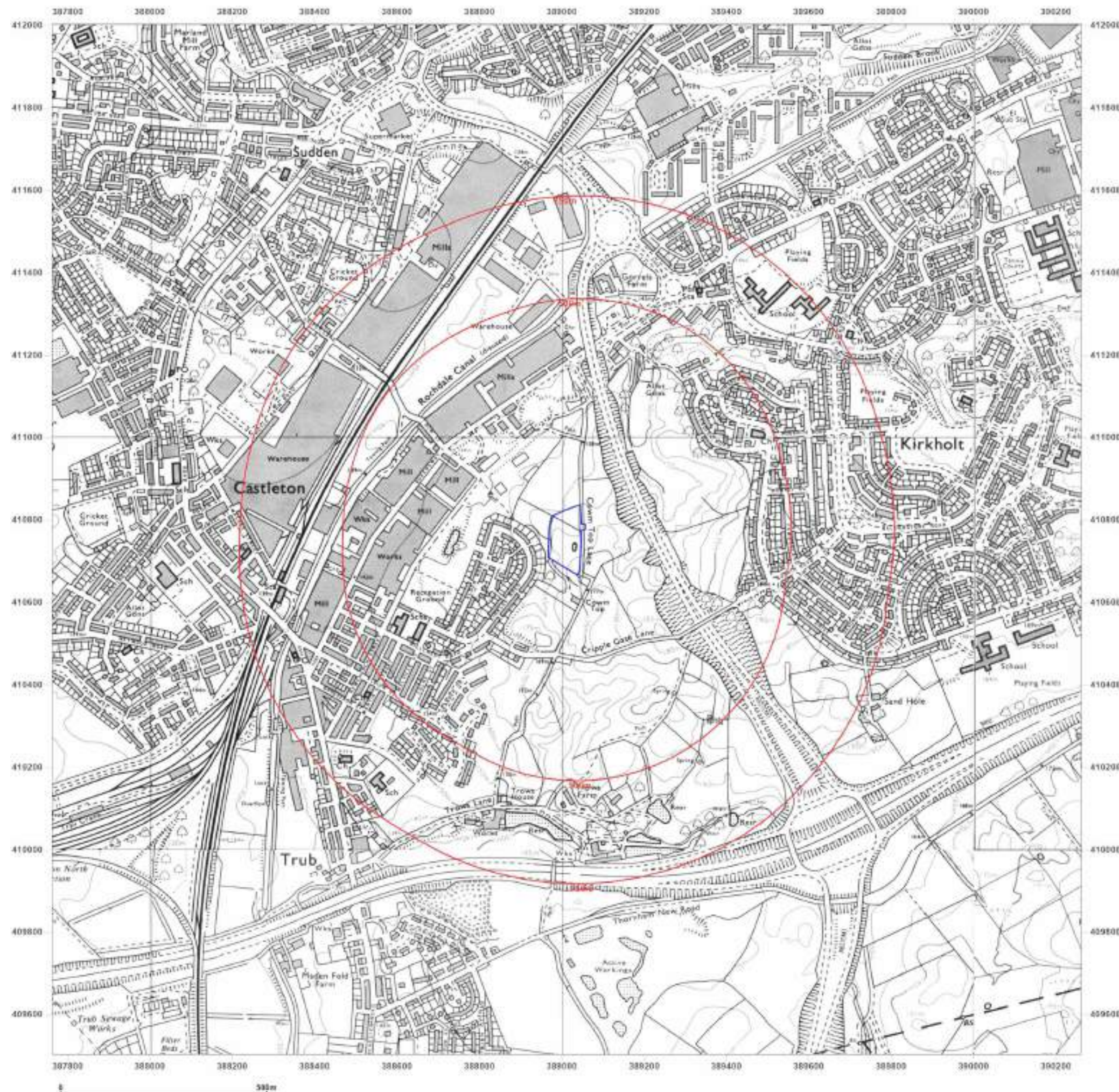


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Report Ref: GS-9135568
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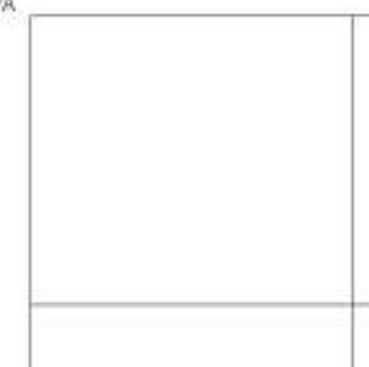
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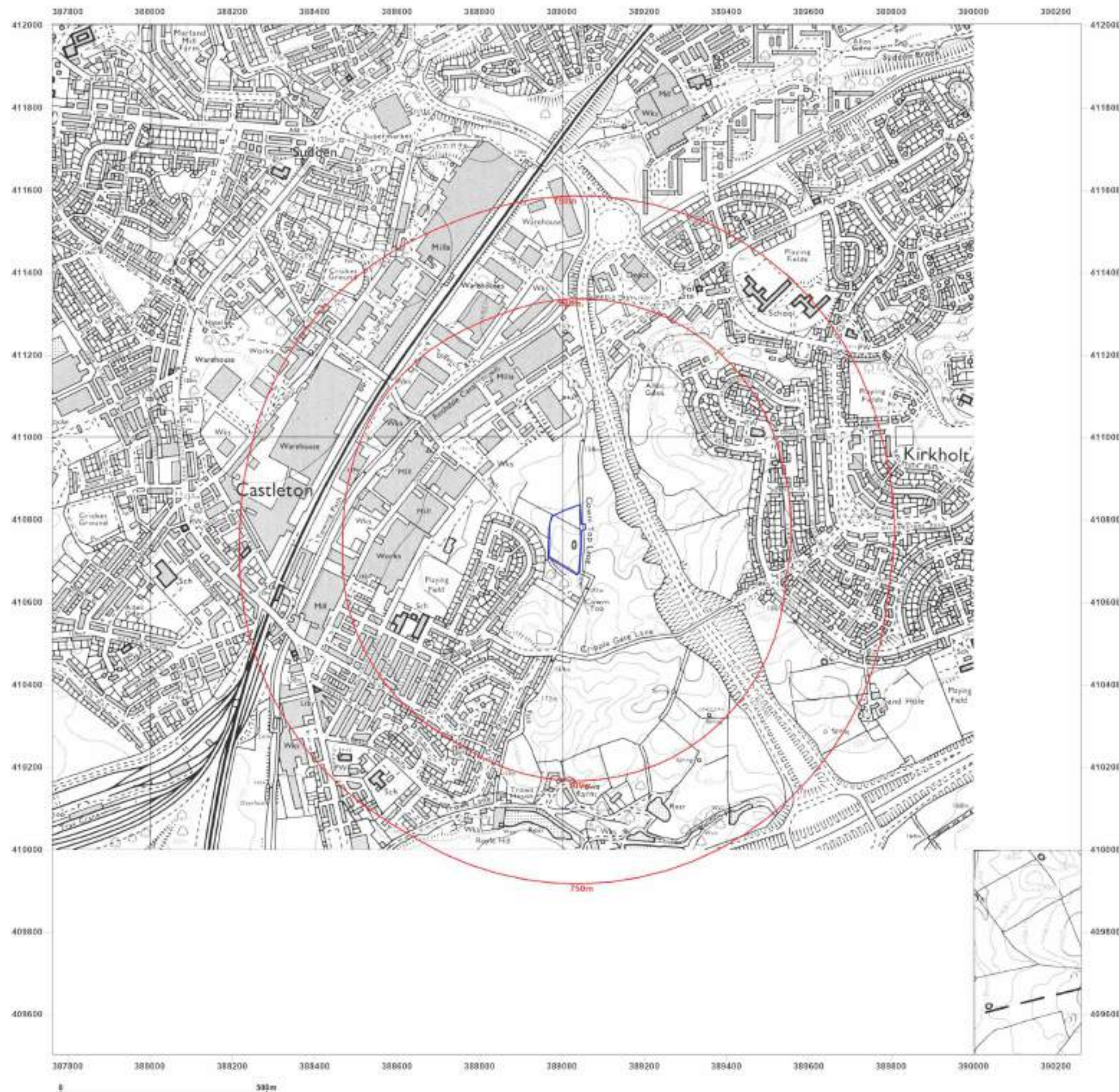


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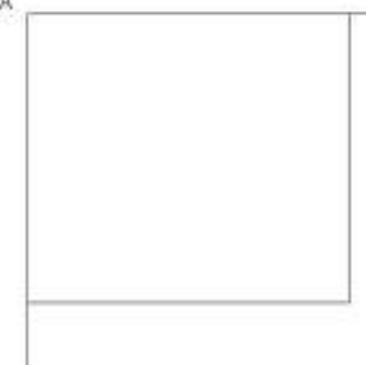
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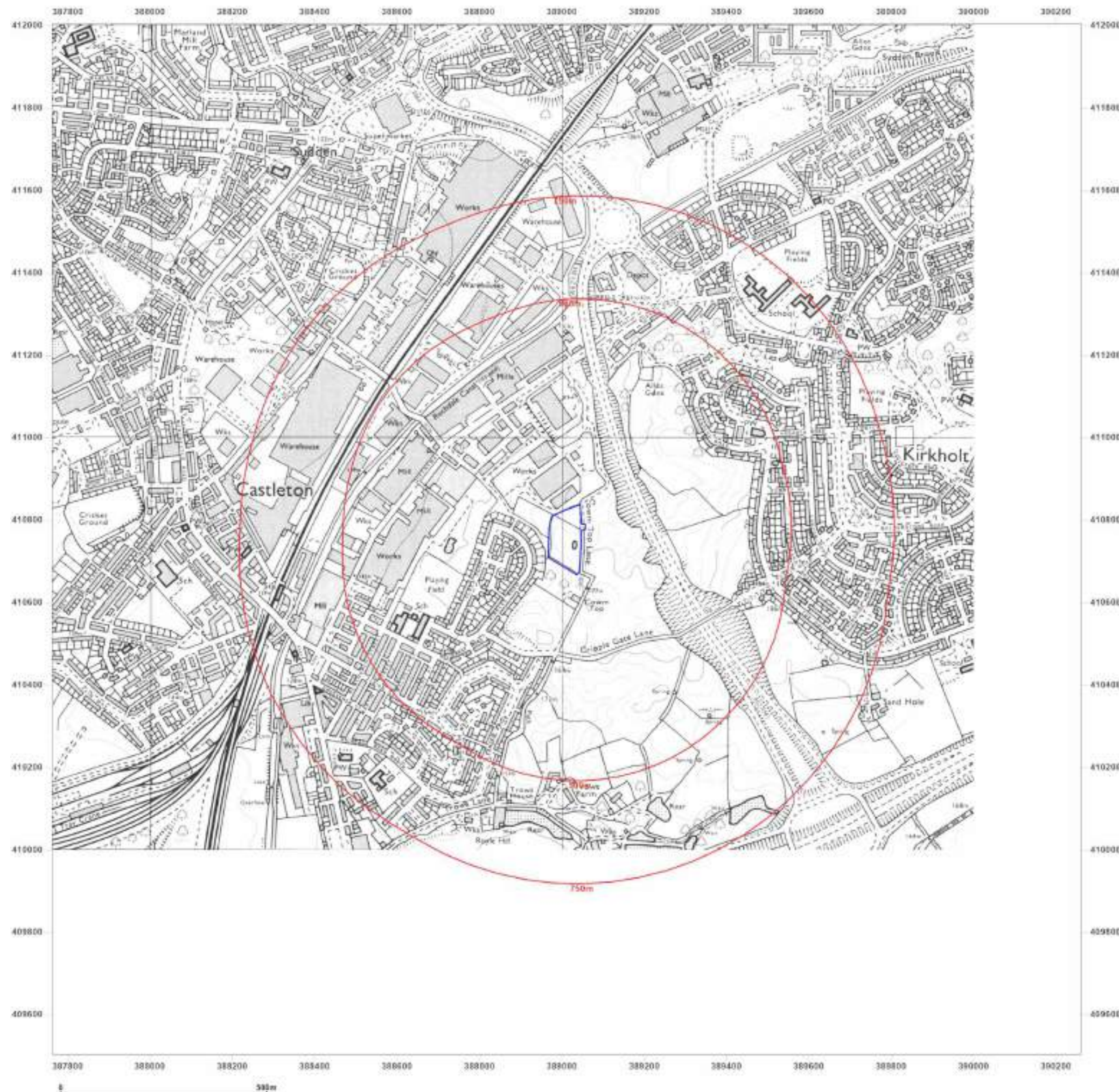


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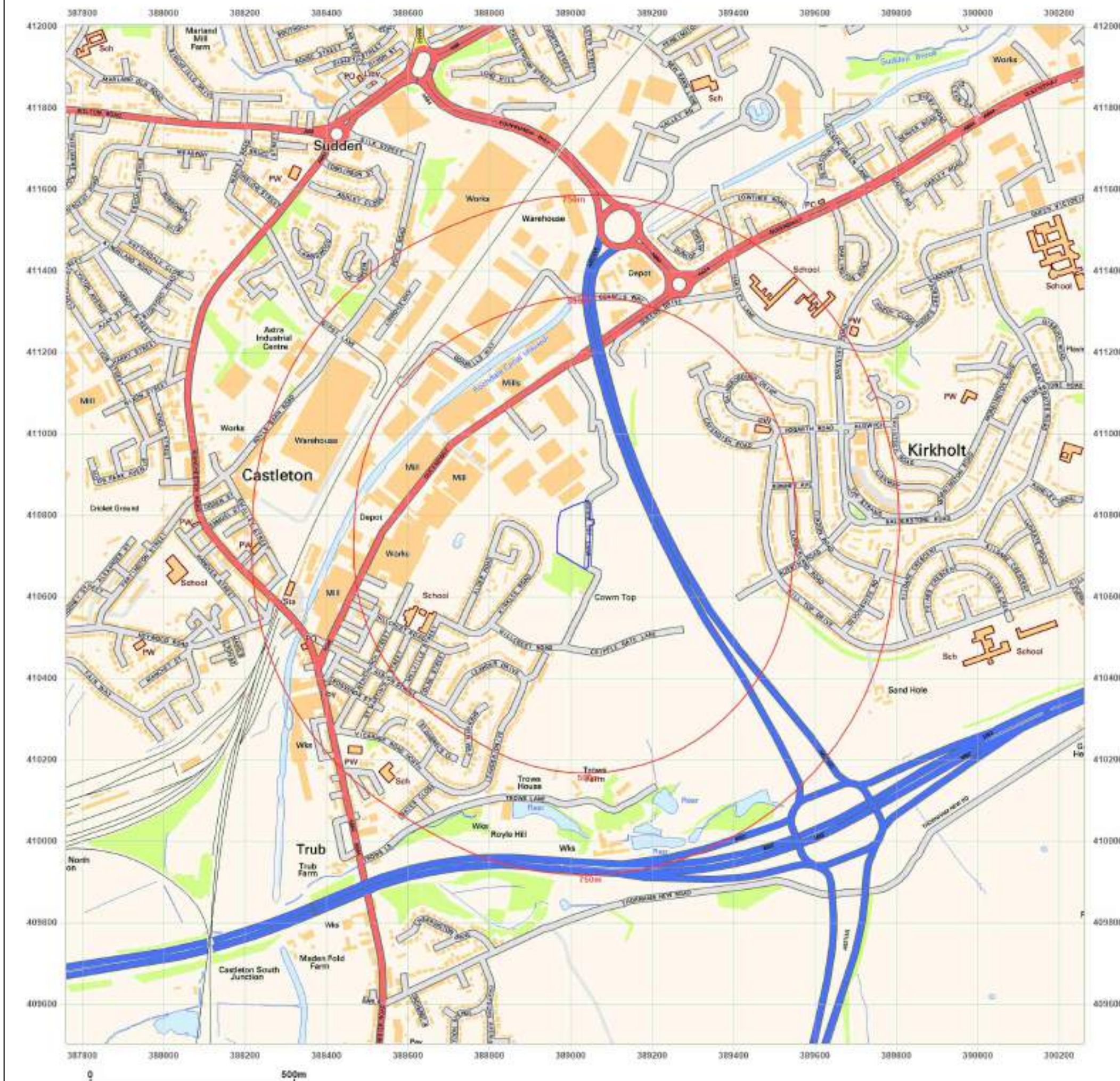


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Client Ref: 2228-G-01
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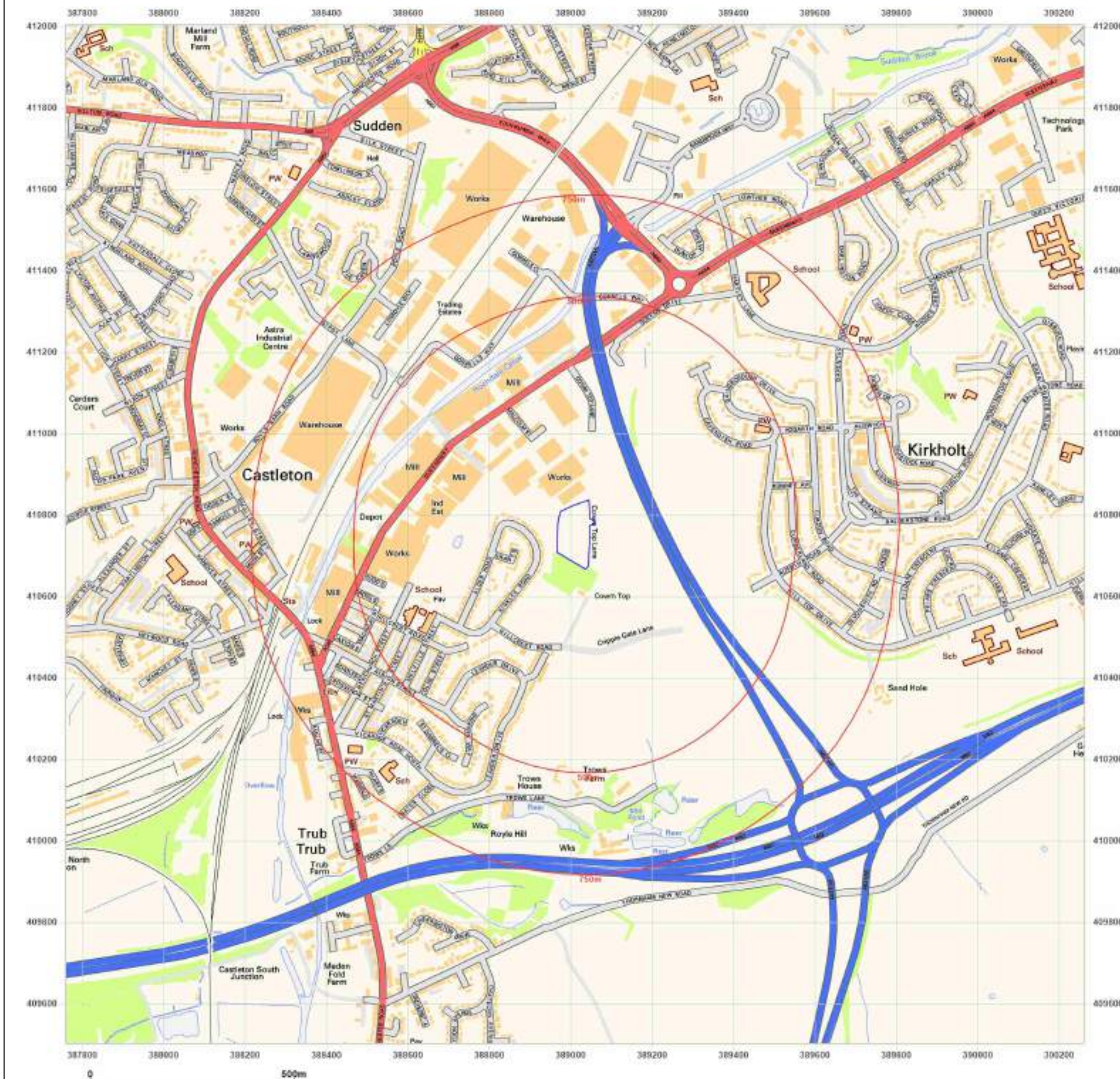


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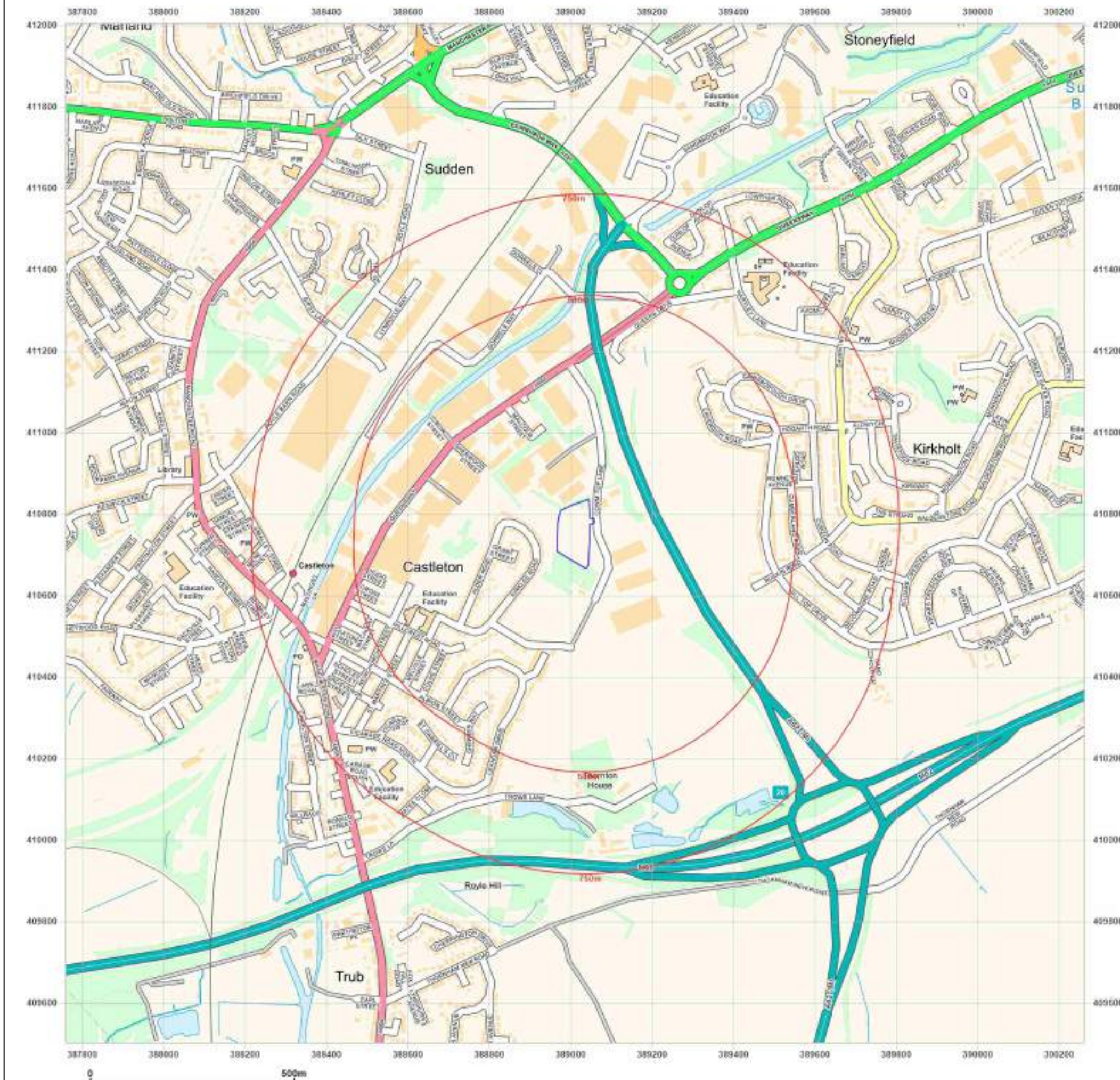


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Appendix D

Coal Authority Mining Report



The Coal
Authority

CON29M

coal mining report

COWM TOP LANE FOOTPATH, ROCHDALE, OL11 2PU



Known or potential coal mining risks

Future underground coal mining

Page 3



Further action

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

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



Professional opinion

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

Your reference: **22228.G.01**
Our reference: **51003318958001**
Date: **18 October 2022**

Client name:
PAUL WAITE ASSOCIATES

If you require any further assistance please
contact our experts on:
0345 762 6848
groundstability@coal.gov.uk



The Law
Society

Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is
on the coalfield



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



Accessibility

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

Detailed findings

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

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1 Past underground coal mining

The property is not within a surface area that could be affected by any past recorded underground coal mining.

2 Present underground coal mining

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

3 Future underground coal mining

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

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

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

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

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

4 Mine entries

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

5 Coal mining geology

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

6 Past opencast coal mining

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

7 Present opencast coal mining

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

8 Future opencast coal mining

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

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

9 Coal mining subsidence

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

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

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

10 Mine gas

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

11 Hazards related to coal mining

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

12 Withdrawal of support

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

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

13 Working facilities order

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

14 Payments to owners of former copyhold land

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

Statutory cover



Coal mining subsidence

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

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

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

www.gov.uk/government/publications/coal-mining-subsidence-damage-notice-form



Coal mining hazards

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

Glossary



Key terms

adit - horizontal or sloped entrance to a mine

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

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

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

coal seams - bed of coal of varying thickness

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

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

mine entries - collective name for shafts and adits

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

shaft - vertical entry into a mine

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

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

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

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

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

Appendix E

Risk Evaluation

Risk Evaluation

To ensure consistency in our qualitative method for risk evaluation we have used the classification scheme presented CIRIA C552 Contaminated Land Risk Assessment – A Guide to Good Practice, 2001. The overall risk rating for any potential pollutant linkage is set out in **Table I** and based upon a combination of the:

- Magnitude of the potential consequence (severity) of risk occurring (defined in **Table II**); and
- Magnitude of the probability (likelihood) of the risk occurring (defined in **Table III**).

The definition of the overall risk rating and likely action required is defined in **Table IV**.

Table I: Comparison of consequence against likelihood

		Consequence (severity)			
		Severe	Medium	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Moderate/ low risk
	Likely	High risk	Moderate risk	Moderate/ low risk	Low risk
	Low likelihood	Moderate risk	Moderate/ low risk	Low risk	Very low risk
	Unlikely	Moderate/ low risk	Low risk	Very low risk	Very low risk

Table II: Classification of Consequence (Severity)

Class ⁿ	Definition	Examples
Severe	Short-term (acute) risk to human health likely to result in significant harm. Short term risk of pollution of sensitive water resource. Catastrophic damage to buildings/property. A short term risk to a particular ecosystem, or organism forming part of such ecosystem.	• High concentrations of cyanide on the surface of an informal recreation area. • Major spillage of contaminants into controlled water. • Explosion, causing building collapse (can also equate to a short term human health risk if buildings are occupied).
Medium	Chronic damage to human health. Pollution of sensitive water resources. A significant change in a particular ecosystem, or organism forming part of such an ecosystem.	• Concentrations of a contaminant from site exceed the generic, or site specific assessment criteria. • Leaching of contaminants from site to an aquifer. • Death of a species within a designated nature reserve.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings/ structures/ services or the environment.	• Pollution of non-classified groundwater. • Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability).
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by PPE). Easily repairable effects of damage to buildings, structures and services.	• The presence of contaminants at such concentrations that PPE is required during site works. • The loss of plants in a landscaping scheme. • Discoloration of concrete.

Table III: Classification of Likelihood (Probability)

Class ⁿ	Definition
High likelihood	There is a pollution linkage and an event that either 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.
Likely	There is a pollution linkage and all the elements are in the right place, which means that it is probable that an event will occur.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over longer period such event would take place and is less likely in the shorter term.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Table IV: Classification of risks and likely action required

Class ⁿ	Definition
Very high risk	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 to a designated receptor is currently happening. This risk, if realized, is likely to result in a substantial liability. Urgent investigation and remediation works are likely to be required.
High risk	Harm is likely to arise to a 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 risk	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 is more likely that the harm would be relatively mild. Investigation is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realized, would at worst normally be mild.
Very low risk	There is a low possibility that harm could arise to a receptor. In the vent of such harm being realized it is not likely to be severe.



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