Phase I Geoenvironmental Site Assessment
Lordship Close, Moston

Reference:16-713-R1
Date: July 2023

PHASE I GEOENVIRONMENTAL SITE ASSESSMENT

Lordship Close
Moston
Manchester
M9 4FN16-713

Prepared for:

Alan Johnston Partnership

Report Ref: 16-713-R1-1
Date Issued: 31 July 2023

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EXECUTIVE SUMMARY

Site Address	Lordship Close, Moston, Manchester, M9 4FN.
Grid Reference	E 386801, N 402117.
Site Area	0.19 Ha.
Proposed Development	The client intends to construct a low-rise residential development comprising nine residential dwellings with associated gardens, car parking, public open space and infrastructure.
Current Site Use	The site comprises three parcels of grassland separated by footpaths. There are no buildings located on-site, however, there are three semi-mature trees located within the site boundary. Dismantled football goalposts are located in the centre of the site and the site is surrounded by metal railings.
Site History	On mapping originating from circa 1848, the site is unoccupied agricultural land with a field boundary and trees recorded on site. By 1893, the site had been developed into eleven terraced houses and associated gardens. Three additional buildings were constructed circa 1933 in the northeast of the site, with a footpath also recorded running through the buildings in the south. By 1981, the site had been redeveloped with ten buildings now occupying the site. No gardens are recorded on the mapping. These structures were no longer recorded in 1985. The site was redeveloped again in 1993 with ten buildings and associated gardens located across the site. There was also a footpath running east to west, south of the northernmost buildings. All structures were removed from the site prior to 2010, with the site remaining vacant since.

ENVIRONMENTAL SETTING

Geology	**Drift Geology**	Till, Devensian – Clay, Silt, Sand.
	Bedrock Geology	Collyhurst Sandstone Formation – Sandstone.
	Faults	The nearest geological fault is located circa 75 m south of the Site trending roughly east to west.
Geomorphology	A review of relevant records indicates that the site has not been subject to significant anthropogenic changes with the current site topography broadly representing natural landform.	
Hydrogeology	Principal bedrock aquifer with no superficial deposits/aquifer recorded.	
	No groundwater abstraction points have been identified within 1km of the site.	
Hydrology	The nearest off-site surface water feature is Boggart Hole Brook located 182 m north. Based on the local topography and location of drainage infrastructure it is considered likely that shallow groundwater, if present, will flow off site and into drainage infrastructure in Lordship Close and Winston Road.	
	Unaffected by flooding from rivers.	

Utility Locations	A drainage survey has not been complete, however drainage is present adjacent to the site along Winston Road and Lordship Close, with the potential for connecting infrastructure to run under the site. Street lighting is present along the east of Winston Road and a telegraph pole is located in the far north of the site, connecting to the nearby residential housing.
Landfill Sites and Ground Gases	One landfill is located 240 m south of the site recorded as receiving commercial and household waste. The Site has undergone some historic development and ground working, the Made Ground associated with the historic development may produce hazardous ground gases such as methane and carbon dioxide.
Radon	Less than 1% of houses above the 'Action Level' – no special precautions required.
Hazardous Installations	No hazardous installations that could potentially prejudice the proposed construction of highly sensitive residential dwellings have been identified within influencing distance of the subject site.

PRELIMINARY CONTAMINATED LAND ASSESSMENT

Human Health	Due to the previously developed nature of the site, it is likely that Made Ground deposits will underlie the site throughout, mainly associated with former residential housing and the Public House. An intrusive investigation will be required to confirm the initial conceptual site model.
Controlled Waters	Leachable contamination may be present in the Made Ground. The presence of impermeable clay soil deposits may reduce the leachate produced from contaminated soils, and therefore reduce the impact to groundwater. Based on the presence of the underlying Principal Aquifer, but absnce of significant contaminant source, the risk to controlled waters is considered to be low/moderate.
Ground Gas	Made ground is likely to underlie the site and an infilled pond has been identified c. 80 m east of the site on historical mapping. Both may be potential sources of ground gas. Given the age of the infill and likelihood for intervening cohesive clays between the feature and the subject site, the risk from migrating ground gases is reduced.

PRELIMINARY GEOTECHNICAL ASSESSMENT

Geological	Historical slabs and foundations are likely to be present across the site associated with the previous use as residential housing. All existing underground foundations and obstructions beneath the proposed development will require grubbing out in their entirety, however it is considered that most of this hard material will be suitable for reuse in construction once excavated and processed.
Civil and Structural	All existing underground foundations and obstructions beneath the proposed development will require grubbing out in their entirety and backfilling with a suitably engineered fill to create a suitable development platform. There is potential for shallow groundwater to be present as perched groundwater due to the site being underlain by impermeable glacial till. If shallow groundwater is encountered localised dewatering may be required during the construction phase.

Abnormal Foundations	Deeper foundations may be required in areas of deep Made Ground e.g. former building footprints / infilled basements etc. Where trees are present, consideration for deepening of foundations will also be required where plots are founded in clays within influencing distance.

PRELIMINARY COAL MINING ASSESSMENT

Coal Mining/Land Stability	The site is not affected by coal mining therefore no assessment is required.

CONCLUSIONS AND RECOMMENDATIONS

An intrusive investigation is required to confirm the findings of this report. THIS SHOULD INCLUDE:

- Window sample probe holes
- Trial pits
- Chemical (soil and leachate) analysis
- Geotechnical analysis
- Ground gas and groundwater monitoring

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Drawing List

16-713-R1-001 - Site Location Plan
16-713-R1-003 - Historical Features Plan
16-713-R1-004 - Site Features Plan

1. INTRODUCTION

1.1. BACKGROUND

E3P has been commissioned by Alan Johnston Partnership (the client) to undertake a detailed Phase I Geoenvironmental Site Assessment of land off Lordship Close, Moston, Manchester; herein referred to as the site.

This report is required to determine potential contaminated land and geotechnical liabilities for the proposed site redevelopment.

1.2. PROPOSED DEVELOPMENT

The client intends to construct a low-rise residential development comprising nine residential dwellings with associated gardens, car parking, public open space and infrastructure. Drawing 16-713-002 (Appendix III) identifies the proposed development layout.

A snapshot of the proposed development layout is indicated in Figure 1.1.

FIGURE 1.1 SNAPSHOT OF THE PROPOSED DEVELOPMENT



1.3. OBJECTIVES

The objectives of the geoenvironmental site assessment are as follows:

- Review historical plans, geology, hydrogeology, site sensitivity, floodplain issues, mining records and any local authority information available in order to complete a desk study in line with Environment Agency (EA) document *Land Contamination: Risk Management (LCRM) (2021b)*.
- Assess the implications of any potential environmental risks, liabilities and development constraints associated with the site concerning the site's future use and in relation to off-site receptors.
- Assess the desk study information and, where possible, provide preliminary recommendations concerning foundations, pavement construction, general geotechnical issues, floor slabs and coal mining-related issues.
- Provide recommendations regarding future works required.

1.4. SOURCES OF INFORMATION

- Groundsure Enviro+Geo Insight Search Reference GS-4JM-6JL-JPC-LOK;
- Historical mapping dated 1848-2023. A selection of historical maps are reproduced in Appendix VI;
- Online planning records held by Manchester City Council;
- Consultations with representatives of Manchester City Council;
- Magic Map Groundwater Vulnerability Map;
- Radon: Guidance on protective measures for new buildings (BRE Document BR 211, 2007);
- British Geological Survey Map and Borehole Records;
- UXO - https://zeticauxo.com/downloads-and-resources/risk-maps/; and,
- Flood Risk - *https://flood-map-for-planning.service.gov.uk/location*

1.5. LIMITATIONS

The limitations of this report are presented in Appendix I.

1.6. RISK CLASSIFICATION

The description of risk classification and the likely action required as set out in CIRIA C552 are included in Appendix III.

1.7. CONFIDENTIALITY

E3P has prepared this report solely for the use of the client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from E3P; a charge may be levied against such consent.

2. SITE SETTING

2.1. SITE DETAILS

Site Address	Lordship Close, Moston, Manchester, M9 4FN.
National Grid Reference	E 386801, N 402117.
Site Area	0.19 Ha.

The Glossary presented in Appendix II defines all acronyms used within this report.

A site location map is presented in Appendix IV as Drawing 16-713-001.

2.2. CURRENT SITE USE

A site walkover was completed by an E3P representative on 27th June 2023, with the full details included in Table 2.2.

TABLE 2.1 SITE DESCRIPTION

Occupancy/Use	The site comprises three parcels of grassland separated by footpaths. There are no buildings located on-site, however, there are three semi-mature trees located within the site boundary. Dismantled football goalposts are located in the centre of the site and the site is surrounded by metal railings.	
Surface Cover (%)	**Buildings**	0%
	Hardstand	10%
	Soft Cover	90%
Structures	No structures are present within the site boundary.	
Retaining Structures	No retaining structures are present within the site boundary.	
Access	Pedestrian access can be granted from the west off Winston Road, the south off a footpath and the east off Lordship Close. No vehicular access has been identified due to the presence of metal railings around the site.	
Slope	There is a small bund in the centre of the western parcels of the site, extending approximately 1.00 m above ground level. The easternmost parcel of the site is topographically level.	
Vegetation/Ecology	The site is predominantly covered in grass soft-standing with three semi-mature trees across the site. Two are located in the northwestern corner with the other along the site boundary with Lordship Close.	
Hazardous Material Storage	No authorised industrial processes are identified at the subject site within data searches. The intended site use is unlikely to require the storage and use of potentially hazardous chemicals.	
Asbestos-Containing Material (ACM)	The buildings present on-site were constructed before 1992 and therefore ACM may have been used within the building fabric and could now be present in Made Ground beneath the site.	

Polychlorinated Biphenyls (PCBs)	No equipment that may contain PCBs, such as transformers or electric substations, are identified on the site.
Waste Storage	None known within the site boundary and no licenced waste activities are identified within data searches on-site.
Utilities	A drainage survey has not been completed, however, drainage is present adjacent to the site along Winston Road and Lordship Close, with the potential for connecting infrastructure to run under the site. Street lighting is present along the east of Winston Road and a telegraph pole is located in the far north of the site, connecting to the nearby residential housing.

2.3. SURROUNDING AREA

The surrounding area land uses are summarised in Table 2.2.

TABLE 2.2 SURROUNDING LAND USES

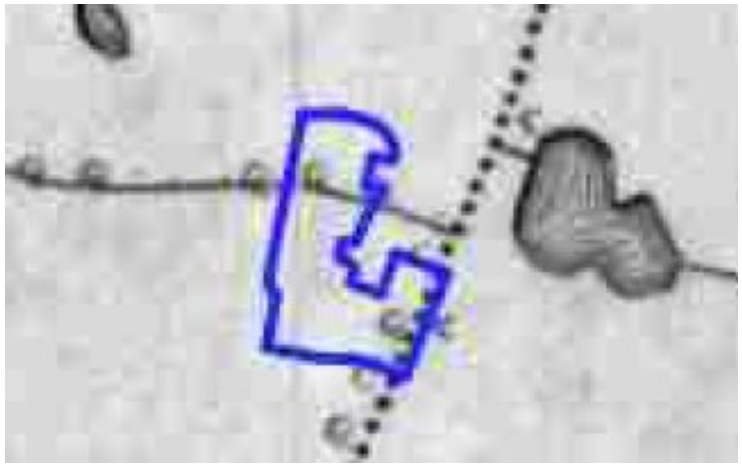
DIRECTION	LAND USE
North	Residential dwellings.
East	Residential dwellings, Kiddies Heritage Childminding, Vital Social Care Provider.
South	Residential dwellings.
West	Residential dwellings. Deep Cleaning Services.

3. SITE HISTORY

3.1. ON-SITE HISTORICAL DEVELOPMENT

A review of historical mapping and historical aerial imagery pertinent to the site is summarised in Table 3.1. In addition, historical site features are presented in Drawing 16-713-003 in Appendix III.

TABLE 3.1 HISTORICAL DEVELOPMENT

MAP EDITION	HISTORICAL LAND USE	HISTORICAL MAP EXCERPT
1848 **1:10,560**	The site is mapped as agricultural land with a field boundary running east/west through the north of the site. A number of trees are recorded along this field boundary and along the southeastern site boundary.	

MAP EDITION	HISTORICAL LAND USE	HISTORICAL MAP EXCERPT
1893 **1:2,500**	The site has been developed with eleven terraced houses occupying the western sector of the site. The gardens associated with these houses are located in the eastern sector of the site. The centre of the western sector is occupied by open space.	
1933 **1:2,500**	Three buildings are located in the north of the eastern sector of the site, with an additional one overlapping the boundary. A footpath is recorded between two houses in the south of the site.	

MAP EDITION	HISTORICAL LAND USE	HISTORICAL MAP EXCERPT
1981 **1:1,250**	The site has been redeveloped with two buildings located in the north of the site and six buildings along the western boundary. Two further buildings are situated in the north of the eastern sector. The remainder of the site is unoccupied.	
1993 **1:1,250**	There is a footpath running east to west, south of the northernmost buildings.	

MAP EDITION	HISTORICAL LAND USE	HISTORICAL MAP EXCERPT
2010 **1:10,000**	All structures have been removed from the site.	
2023 **1:10,000**	There are no further changes to the site.	

3.1.1. SUMMARY OF ON-SITE HISTORICAL DEVELOPMENT

The following summary points have been highlighted after a detailed review of the historical mapping series.

POTENTIAL HISTORICAL CONTAMINATION ISSUES

- Made Ground (location of former structures, infilled field boundaries) – Asbestos, heavy metals, PAHs, hazardous ground gases.

POTENTIAL HISTORICAL GEOTECHNICAL ISSUES

- Relict foundations/obstructions are anticipated across the site which will require grubbing out prior to construction.
- Former utility infrastructure may be present beneath the site. Redundant services should be sealed off and grubbed out and replaced with suitable compacted engineered fill.
- Heave precautions may need to be considered given the underlying cohesive clay deposits and both historical and current tree locations.

3.2. OFF-SITE HISTORICAL DEVELOPMENT

A review of potentially contaminative uses identified on historical Ordnance Survey maps within a 150 m radius of the site is summarised in Table 3.2.

TABLE 3.2 SURROUNDING HISTORICAL DEVELOPMENT

SURROUNDING FEATURE	DISTANCE	DATES	DIRECTION
Pond …then infilled and redeveloped	80 m	Pre1848 – Pre1909 Pre1909 – Present	East
Rope Walks …then no longer recorded	150 m	Pre1893 – Pre1922 Pre1922 – Present	West
Garage …no longer recorded	170 m	Pre1981 – Pre2010 Pre2010 – Present	Southwest
Tin Box Works …then no longer recorded	220 m	Pre1932 – Pre2001 Pre2001 – Present	West
Brookside Works (Engineering) …then recorded as Brookside Works (Woodwork) …then recorded as Brookside Works …then recorded as Works …then no longer recorded	240 m	Pre1909 – Pre1932 Pre1932 – Pre1950 Pre1950 – Pre1966 Pre1966 – Pre2001 Pre2001 – Present	West
Saw Mill …then recorded no longer recorded	250 m	Pre 1909 – Pre 1922 Pre 1922 – Present	South

It is considered that off-site source to the north are likely to be downgradient of the site, therefore reducing the potential for migration of contamination to the subject site.

3.3. PLANNING HISTORY

E3P has undertaken a review of the Manchester City Council planning website but no environmentally pertinent information has been identified.

3.4. ANECDOTAL INFORMATION

A web-based search of the subject site has recovered no pertinent information.

4. ENVIRONMENTAL SETTING

4.1. GEOLOGY AND HYDROGEOLOGY

The British Geological Survey (BGS) map for the site, (Sheet 85) and online records indicate the site is underlain by the geological sequence presented in Table 4.1.

TABLE 4.1 SUMMARY OF UNDERLYING GEOLOGY

GEOLOGICAL UNIT	CLASSIFICATION	DESCRIPTION	AQUIFER CLASSIFICATION
Drift	Till, Devensian	Devensian – Clay, Silt and Sand	Secondary Aquifer - Undifferentiated
Solid	Collyhurst Sandstone Formation	Sandstone	Principal Aquifer

E3P has reviewed the BGS database, which identified a single borehole within 250 m of the site. The borehole logs are summarised in Table 4.2 below.

TABLE 4.2 SUMMARY OF BGS BOREHOLE RECORDS

LOCATION	DEPTH	MADE GROUND	DRIFT	SOLID
180m S (ref: SD80SE905)	16.05 m	0.00–0.80 m	SILT, SAND and CLAY 0.80–16.05 m	Not encountered
180m SE (ref: SD80SE906)	16.00 m	0.00–0.50 m	SILT, SAND and CLAY 0.50–16.00 m	Not encountered

Given the distance from the subject site, ground conditions may vary between this borehole location and the site itself.

4.2. HYDROGEOLOGY

The Envirocheck report indicates that the site is not located within a groundwater source protection zone. Furthermore, there are no groundwater/potable abstractions within 1 km of the site.

Following a review of the site's historical and present day mapping, a pond has been identified in close proximity to the site, and recorded to be infilled pre 1909. Furthermore, a spring was located 260 m northeast of the site circa 1893.

Based on the local topography and location of drainage infrastructure it is considered likely that shallow groundwater, if present, will flow towards Bogarth Hole Clough to the north.

4.3. NATURAL LANDFORM AND GEOMORPHOLOGY

Based on the initial geological assessment, a review of available topographic data and pertinent mapping, E3P has undertaken a preliminary geomorphological evaluation of the landform and its possible mechanism for formation.

A review of relevant records indicates that the site has not been subject to significant anthropogenic changes with the current site topography broadly representing natural landform.

4.4. RADON RISK POTENTIAL

The Envirocheck report indicates that the site is situated in an area where less than 1% of homes are above the "Action Level" and that the BGS reports that full protective measures are not necessary for the construction of new dwellings or extensions.

4.5. HYDROLOGY

Surface water features within 250 m of the subject site are summarised in Table 4.4 below.

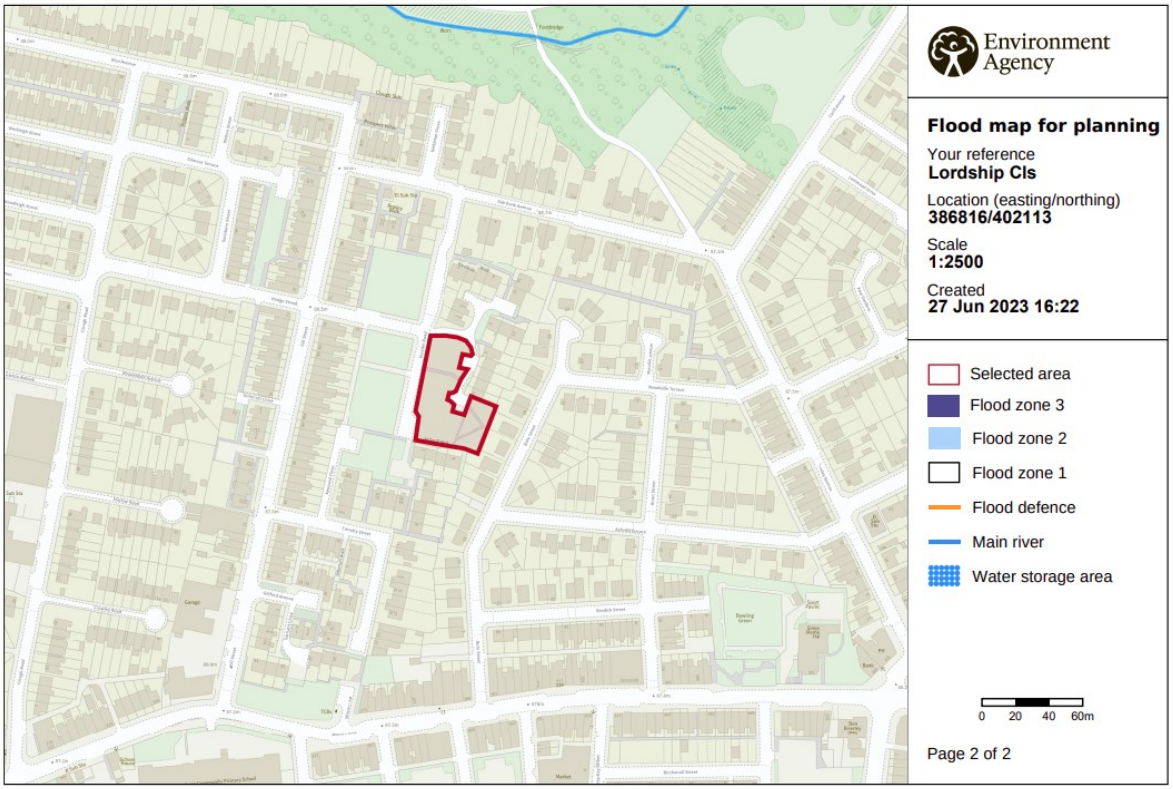
TABLE 4.4 SURFACE WATER FEATURES

SURFACE WATER FEATURE	QUALITY	DISTANCE (m)	DIRECTION
Boggart Hole Brook	Unknown	182–219 m	North
Unnamed water feature	Unknown	199 m	Northeast

The site is located within a currently defined area deemed as not being at risk from river, coastal or surface water flooding. Small areas within the site boundary are defined as having a medium risk of surface water flooding.

The EA Flood Risk Map is presented in Figure 4.1.

FIGURE 4.1 EA FLOOD RISK MAP

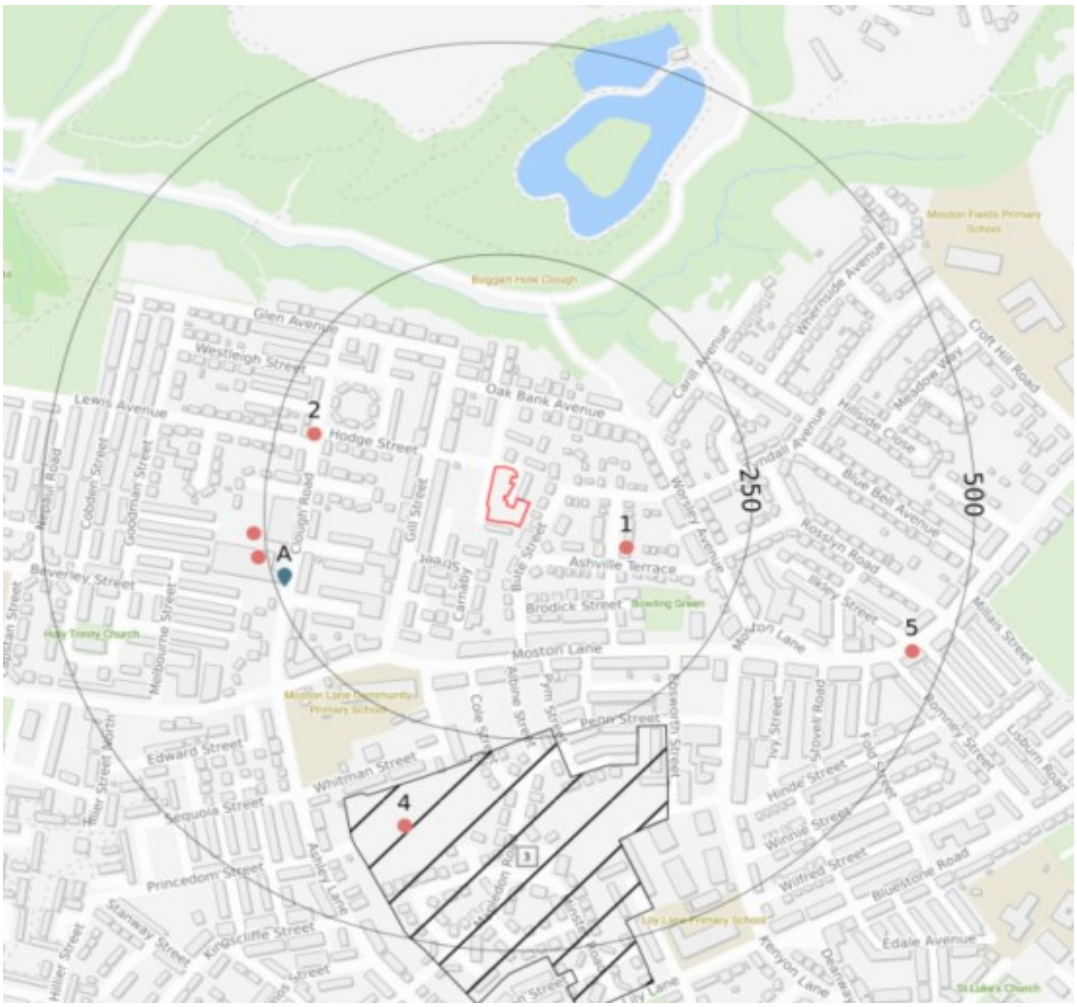


Source - https://flood-map-for-planning.service.gov.uk/location

4.6. LANDFILL SITES AND WASTE TREATMENT SITES

One landfill is located 240 m south of the site recorded as receiving commercial and household waste. A screenshot of the mapping showing landfill locations within 250 m radius of the site is included in Figure 4.2.

FIGURE 4.2 LANDFILL MAPPING



4.6.1. WASTE MANAGEMENT LICENSES & ENVIRONMENTAL PERMITS

Two waste exemptions are noted within 250 m of the site which are outlined in Table 4.5.

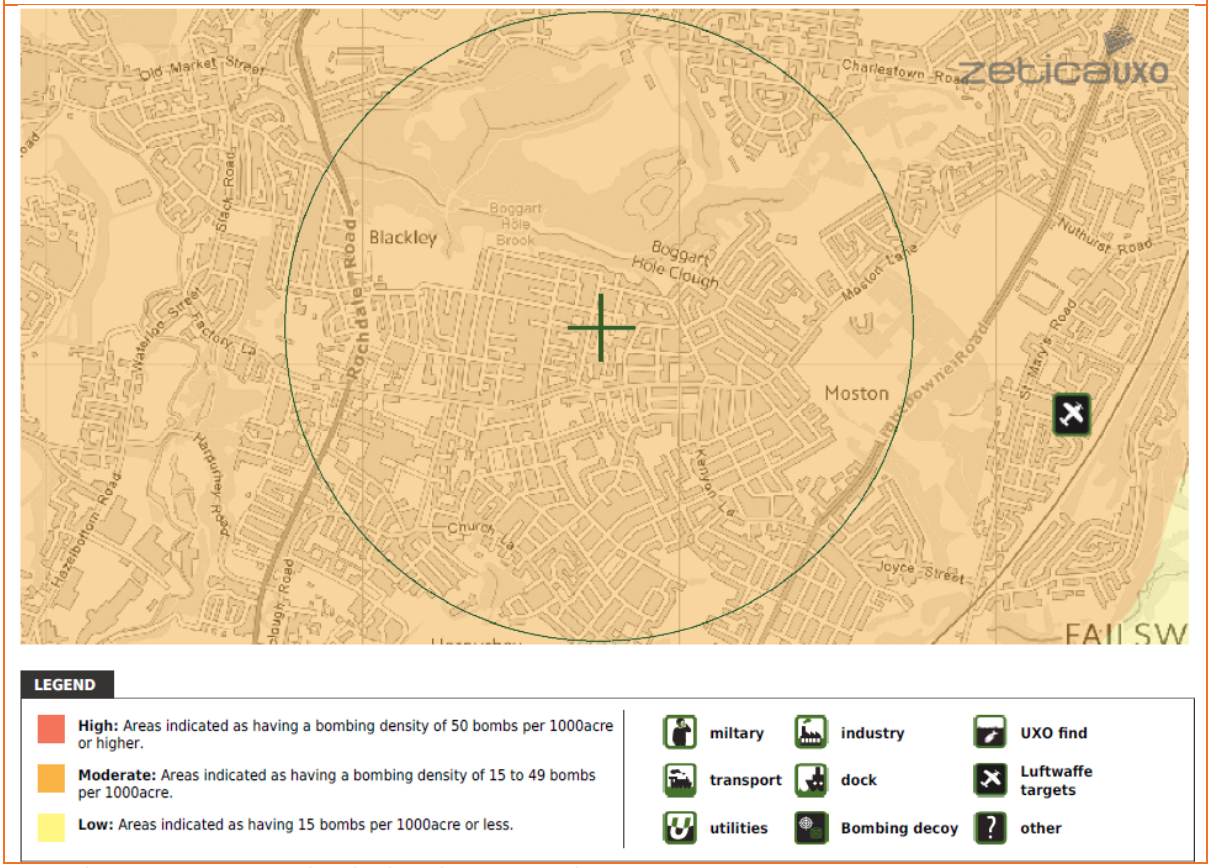
TABLE 4.5 WASTE EXEMPTIONS

ADDRESS	CATEGORY	LOCATION	DESCRIPTION
Woodville Gardens, Ashvlle Terrace, Moston, M40 9NN	Using waste exemption	120 m SE	Use of waste in construction
Unit 4 Brookside Works, Clough Road, M9 4FP	Storing waste exemption	207 m W	Storage of waste in a secure place

4.7. UNEXPLODED ORDNANCE

The regional unexploded bomb risk map from Zetica (2014) indicates that the site is in an area at moderate risk from possible unexploded ordnance (UXO) resulting from the Second World War. The Zetica UXO Risk Map is presented in Figure 4.3.

FIGURE 4.3 ZETICA UXO RISK MAP



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

4.8. INDUSTRIAL LAND USES

There are 11 active industrial land uses within 250 m of the site boundary which are summarised in Table 4.6.

TABLE 4.6 INDUSTRIAL LAND USES

COMPANY	ACTIVITY	DISTANCE (m)	DIRECTION
Electricity Sub Station	Electrical Features	85 m	North
Moston MOT Centre	Vehicle Repair, Testing and Servicing	165 m	South West
City Biz Communications	Published Goods	168 m	South
Divine Bedding & Home Appliances	Beds and Bedding	178 m	South

COMPANY	ACTIVITY	DISTANCE (m)	DIRECTION
Total Bird Control	Pest and Vermin Control	203 m	South East
Fonis Integrated Solutions	Published Goods	203 m	South East
Bromley Transport Services	Vehicle Repair, Testing and Servicing	227 m	West
Electricity Sub Station	Electrical Features	236 m	East
Electricity Sub Station	Electrical Features	242 m	West
Works	Unspecified Works or Factories	247 m	West

4.9. SITE SENSITIVITY ASSESSMENT

The site is assessed to be located within a "Low/Moderate" sensitivity setting as discussed in Table 4.7.

TABLE 4.7 SITE SENSITIVITY ASSESSMENT

SENSITIVITY PROFILE	DISCUSSION	RATING
Groundwater Source Protection Zone or Drinking Water Safeguard Zone	None identified.	**Low**
Distance to the Closest Groundwater Abstraction Point	None identified.	**Low**
Aquifer Classification in Superficial Drift Deposits	Sedondary undifferentiated aquifer.	**Low**
Aquifer Classification in Bedrock	Principal Bedrock Aquifer.	**High**
Is the Site Underlain by Low-Permeability Drift to Depths in Excess of 10 m?	The nearest BGS records indicate that drift strata, comprising predominantly clay, is present to circa. 16.00 m bgl. However, this may not be representative of the ground conditions beneath the subject site.	**Low/Moderate**
Is the Site Located Within 50 m of a Surface Watercourse?	No surface water features are located within 50 m of the site boundary.	**Low**
Sensitive Land Uses Within Close Proximity (e.g. Residential, School, Nursery, Local Nature Reserves)	The closest residential properties are located adjacent to the site. An area of designated ancient woodland is also located 129 m NE of the site at Boggart Hole Clough.	**Low/Moderate**
OVERALL SITE ENVIRONMENTAL SENSITIVITY		**Low/Moderate**

4.10. REGULATORY DATABASE

The information summarised in Table 4.8 has been obtained from a commercially available environmental database. The summary table only includes records from within 250 m of the subject site and not otherwise detailed in the report.

TABLE 4.8 SUMMARY OF ENVIRONMENTAL DATA

RECORD	ENTRIES WITHIN 250 m	DETAILS
Contaminated Land Register Entries and Notices	0	None Identified.
Authorised Industrial Processes (IPC/IPPC/LAPPC)	0	None Identified.
Fuel Stations Entries	0	None Identified.
Licensed Radioactive Substances	0	None Identified.
Enforcements, Prohibitions or Prosecutions	0	None Identified.
Discharge Consents	0	None identified.
Pollution Incidents	0	None Identified.
Consents Issued Under the Planning (Hazardous Substances) Act 1990	0	None Identified.
Control of Major Accident Hazard (COMAH) Sites	0	None Identified.

5. PRELIMINARY GEOTECHNICAL ASSESSMENT

5.1. GEOTECHNICAL DATA

Geotechnical data presented within a commercially available environmental database is summarised in Table 5.1.

TABLE 5.1 SUMMARY OF GEOTECHNICAL DATA

HAZARD	DESIGNATION
Shrink-Swell Clay	Very low risk
Landslides	Very low risk
Ground Dissolution	No hazard
Compressible Ground	No hazard
Collapsible Deposits	Very low risk
Running Sand	Very low risk

5.2. PRELIMINARY GEOTECHNICAL ASSESSMENT

Based on the desk-study information, the following geotechnical assessment has been made:

- Given the historically developed nature of the site, it is likely there will be Made Ground fill deposits and obstructions.
- Heave precautions may need to be considered given the likely underlying cohesive clay deposits and both historical and current tree locations.

5.3. COAL MINING

The site is not located in a coal mining reporting area and is not located within an area at risk from ground instability arising from historic coal mining activities. No further assessment is required in relation to coal mining.

5.4. PRELIMINARY GEOTECHNICAL RISK REGISTER

POTENTIAL ABNORMAL CONSTRAINT	LOCATION ON-SITE	ESTIMATED AREA OF SITE AT RISK (%)	ASSESSMENT AND MITIGATION
Remediation of contaminated soils	On-site	TBC	Made Ground deposits will be present on site due to previous development. Some remediation, such as the provision of a cover system to garden areas, may be required.
Bedrock	On-site	TBC	Bedrock is not anticipated to be encountered shallower than 15.00 m bgl.
Obstructions	All	100	Obstructions are anticipated to be encountered across the site in association with former drainage and historic foundations of the residential dwellings.
Concrete design	TBC	TBC	Concrete classification will depend on sulphur levels present within the underlying strata. Investigation will be required to determine the design parameters.
Volume change potential clay	On-site	100	The underlying Glacial Till will comprise clayey gravelly soils, therefore an intrusive site investigation will be required to determine the Volume Change Potential of the clay.
Open Cast Mine Workings	N/A	N/A	There is no evidence of Open Cast Mine Workings within 500 m of the site.
Low-permeability ground	On-site	100	Cohesive Glacial Till is anticipated to be present beneath the site.
Abnormal foundation solutions	TBC	TBC	Should deep Made Ground be encountered, deeper foundations/piles may be required.
Areas not investigated	Across site	100	Intrusive investigation will be required across the site as no previous investigations have been provided to E3P.
Sensitive on-site or off-site infrastructure	N/A	N/A	Services are anticipated to run along all boundaries of the site, connecting to street lighting along the boundaries. Relict services associated with former developments on-site may be present underground.

6. INITIAL CONCEPTUAL SITE MODEL

Under EA LCRM (2021b) and BSI 10175 (Code of Practice for Investigation of Potentially Contaminated Land), and BS EN ISO 21365:2021 (Soil Quality – Conceptual models for potentially contaminated sites), E3P has developed a Tier 1 Risk Assessment comprising an initial conceptual site model (CSM) to identify potential contamination sources, migration pathways and receptors within the study area. An initial screening of the on and potential off-site sources of contamination has been undertaken in Table 6.1, with the more detailed initial CSM included overleaf as Table 6.2.

TABLE 6.1 INITIAL CONTAMINANT SOURCE SCREENING

SOURCE	SOIL	GROUNDWATER	GROUND GAS
ON-SITE			
Made Ground in association with historic developments	Heavy metals, TPHs, PAHs	Heavy Metals, TPHs, PAHs	CO2, CH4
OFF-SITE			
Brookside Works (engineering)	Heavy metals, TPHs, PAHs – iron, steel, aluminium, oils, acidic and alkaline solutions	Unlikely given no surface water features within 150 m of the site.	Unliekly
Tin Box Works	Heavy metals, TPHs, PAHs – tin, iron, steel, aluminium, lubricating oils		
Garages/ Warehouses	TPHs, PAHs – lubricating oils, lead, copper, fuels, methanol (anti-freeze), polymerised glycols, polyurethanes		
Pond	-	-	CO2, CH4

6.1. INITIAL CONCEPTUAL SITE MODEL

Upon assessment of the information collated for the Phase 1 desk study, the initial conceptual site model shown in Table 6.2 has been prepared for the Site.

TABLE 6.2 INITIAL CONCEPTUAL MODEL

CONTAMINANT LINKAGE			PLAUSIBLE LINKAGE?	RISK	COMMENTARY AND PROPOSED RESPONSE
SOURCES	**MIGRATION PATHWAYS**	**RECEPTORS**			
SOIL					
Made Ground Heavy Metals, TPHs, PAHs	Soil ingestion. **PL1** Dermal contact and ingestion. **PL2**	Human Health - Site personnel, end land users, and users of adjacent sites	Yes	Low/Moderate	Contamination may be present associated with the historical residential properties. Furthermore, contaminants may have migrated from off-site sources such as Brookside Engineering Works and the Tin Box works. **Recommendation**: Further intrusive investigation will be required to determine the presence of inorganic compounds within the Made Ground.
Made Ground Asbestos (Asbestos containing materials (ACM) and loose fibres)	Inhalation (of fibres). Construction works disturbing bound material and releasing fibres. **PL3**	Human Health - Site personnel, end land users, and users of adjacent sites	Yes	Moderate	Asbestos may be present within Made Ground deposits on-site from previous development. Risk of inhalation of fibres during Ground Investigation and construction works. Disturbance of ACMs and dust derivatives from construction would increase the risk. **Recommendation:** Further intrusive investigation will be required to determine the presence of ACMs and develop appropriate mitigation measures. Construction works to be completed with appropriate PPE and welfare facilities.
Made Ground Sulphate from potential ash within the Made Ground.	Sulphate attack on concrete. **PL6**	Building concrete	Yes	Low/Moderate	Ahsy desposits may be present within the Made Ground underlying the site. The potential for sulphate in ash deposits is high which may impact the proposed building concrete. **Recommendation:**Intrusive investigation will be required to confirm the concrete classification. Construction works to be completed with appropriate PPE and welfare facilities.

CONTAMINANT LINKAGE			PLAUSIBLE LINKAGE?	RISK	COMMENTARY AND PROPOSED RESPONSE
SOURCES	**MIGRATION PATHWAYS**	**RECEPTORS**			
Made Ground TPHs, PAHs	Ingestion of tainted water supply. **PL7**	Human Health – End Users Water pipeline	Yes	Low/Moderate	Likely probability as contaminant exceedances are considered possible at pipeline depth across the site (0.75–1.35 m). Contamination may be present associated with the historical residential properties. **Recommendation:** It is considered possible that barrier pipe will be required across the site, however further intrusive investigation is required to confirm this.
Made Ground Phytotoxic contaminants	Direct contact (plant uptake). **PL8**	Flora	Yes	Low/Moderate	Phytotoxic contaminants may be present in topsoils/Made Ground. **Recommendation:** Intrusive investigation required.
CONTROLLED WATERS					
Leachate contaminants from the underlying Made Ground Heavy metals	Leaching of contaminants from Made Ground through infiltration and percolation of rainwater. **PL5**	Controlled waters, underlying Principal aquifer	Yes (limited)	Low/Moderate	Mobile contamination may be present within the Made Ground deposits associated with previous on-site development, albeit not anticipated to be extensive.The presence of impermeable clay soil deposits may reduce the impact to groundwater. **Recommendation:** Soil leachate analysis to be included with the site investigaton scope.
		Infrastructure and services	Yes (limited)	Low	The presence of impermeable clay soils will reduce the leachate produced from contaminated soils. Infrastructure and services will need to be designed to resist chemical attack and ingress.
Groundwater	Contact with contaminated groundwater. **PL2**	Human Health – site personnel	No	Low	Site personnel may come into contact with contaminated groundwater during excavation works. **Recommendation:** Suitable PPE shall be worn to mitigate the risks.



CONTAMINANT LINKAGE			PLAUSIBLE LINKAGE?	RISK	COMMENTARY AND PROPOSED RESPONSE
SOURCES	**MIGRATION PATHWAYS**	**RECEPTORS**			
	Migration from off-site **PL5**	Human Health – end users	No	Low	Contaminants leached from the Made Ground and off-site sources may be mobilised to greater distances through advective flow vertically and horizontally through permeable strata. However, the presence of low permeability strata will likely inhibit this.
GROUND GAS					
Ground gases (methane and carbon dioxide in infilled ponds/features within close proximity)	Inhalation of ground gas. **PL4** Accumulation of ground gas in confined spaces (asphyxiation or explosion)	Human Health – site personnel	Yes (limited)	Low	During excavation work, the removal of confining strata may expose workers to volumes of pocketed gas. Protective measures during the work required. Limited linkage based on expected gas concentrations within the ground.
		Human Health – end users	No	Low/Moderate	The design may include confined spaces below the building, where ground gas has the potential to collect. Ventilation may be required dependent on ground gas levels identified during the intrusive investigation.
		Infrastructure and services	No	Low	Service conduits may need to be designed with passive venting systems.

Notes:
Main exposure pathways: PL1 = soil ingestion, PL2 = dermal contact and ingestion, PL3 = dust inhalation; PL4 = Vapour/Gas Inhalation; PL5 = Vertical / Lateral Migration; PL6 = Corrosion of concrete; PL7=Tainting of water supply; PL8 = Uptake by plants.

7. CONCLUSIONS

7.1. SITE SUMMARY

Current Site Use	The site comprises three parcels of grassland separated by footpaths. There are no buildings located on-site, however, there are three semi-mature trees located within the site boundary. Dismantled football goalposts are located in the centre of the site and the site is surrounded by metal railings.
Historical Site Use	On mapping originating from circa 1848, the site is unoccupied agricultural land with a field boundary and trees recorded on site. By 1893, the site had been developed into eleven terraced houses and associated gardens. Three additional buildings were constructed circa 1933 in the northeast of the site, with a footpath also recorded running through the buildings in the south. By 1981, the site had been redeveloped with ten buildings now occupying the site. No gardens are recorded on the mapping. These structures were no longer recorded in 1985. The site was redeveloped again in 1993 with ten buildings and associated gardens located across the site. There was also a footpath running east to west, south of the northernmost buildings. All structures were removed from the site prior to 2010, with the site remaining vacant since.
Site Sensitivity	The closest residential properties are located adjacent to the site. An area of designated ancient woodland is also located 129m NE of the site at Boggart Hole Clough.

7.2. CONTAMINATED LAND ASSESSMENT

Human Health	Due to the previously developed nature of the site, it is likely that Made Ground deposits will underlie the site throughout, mainly associated with residential housing and the Public House. An intrusive investigation will be required to confirm the initial conceptual site model.
Controlled Waters	Leachable contamination may be present in the Made Ground. The presence of impermeable clay soil deposits may reduce the leachate produced from contaminated soils, and therefore reduce the impact to groundwater. Based on the presence of the underlying Principal Aquifer, but absnce of significant contaminant source, the risk to controlled waters is considered to be low/moderate.
Ground Gas	Made ground is likely to underlie the site and an infilled pond has been identified c. 80 m east of the site on historical mapping. Both may be potential sources of ground gas.

7.3. GEOTECHNICAL ASSESSMENT

Geological	Historical slabs and foundations are likely to be present across the site associated with the previous use as residential housing. All existing underground foundations and obstructions beneath the proposed development will require grubbing out in their entirety, however it is considered that most of this hard material will be suitable for reuse in construction once excavated and processed.
Civil and Structural	All existing underground foundations and obstructions beneath the proposed development will require grubbing out in their entirety and backfilling with a suitably engineered fill to create a suitable development platform. There is potential for shallow groundwater to be present as perched groundwater due to the site being underlain by impermeable glacial till. If shallow groundwater is encountered localised dewatering may be required during the construction phase.
Abnormal Foundations	Deeper foundations may be required in areas of deep Made Ground e.g. former building footprints / infilled basements etc. Where trees are present, consideration for deepening of foundations will also be required where plots are founded in clays within influencing distance.

END OF REPORT

APPENDIX I
LIMITATIONS

1. This report and its findings should be considered in relation to the terms of reference and objectives agreed between E3P and the client as indicated in Section 1.2.

2. For the work, reliance has been placed on publicly available data obtained from the sources identified. The information is not necessarily exhaustive and further information relevant to the site may be available from other sources. When using the information, it has been assumed it is correct. No attempt has been made to verify the information.

3. This report has been produced in accordance with current UK policy and legislative requirements for land and groundwater contamination which are enforced by the local authority and the Environment Agency. Liabilities associated with land contamination are complex and requires advice from legal professionals.

4. During the site walkover, reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover, no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not been made known or accessible.

5. Access considerations, the presence of services and the activities being carried out on the site limited the locations where sampling locations could be installed and the techniques that could be used.

6. Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities.

7. Where mention has been made to the identification of Japanese Knotweed and other invasive plant species and asbestos or asbestos-containing materials, this is for indicative purposes only and do not constitute or replace full and proper surveys.

8. The executive summary, conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the report in full.

9. E3P cannot be held responsible for any use of the report or its contents for any purpose other than that for which it was prepared. The copyright in this report and other plans and documents prepared by E3P is owned by them and no such plans or documents may be reproduced, published or adapted without written consent. Complete copies of this may, however, be made and distributed by the client as is expected in dealing with matters related to its commission. Should the client pass copies of the report to other parties for information, the whole report should be copied, but no professional liability or warranties shall be extended to other parties by E3P in this connection without their explicit written agreement there to by E3P.

10. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.

APPENDIX II
GLOSSARY

TERMS

ACM	Asbestos-containing material	**MMP**	Materials management plan
ADS	Acoustic design statement	**ND**	Not detected
AST	Above-ground storage tank	**NDP**	Nuclear density probe
BGS	British Geological Survey	**NMP**	Noise management plan
BSI	British Standards Institute	**NPSE**	Noise policy statement for England
BTEX	Benzene, toluene, ethylbenzene, xylenes	**NR**	Not recorded
CA	Coal Authority	**PAH**	Polycyclic aromatic hydrocarbon
CBR	California bearing ratio	**PCB**	Polychlorinated biphenyl
CIEH	Chartered Institute of Environmental Health	**PI**	Plasticity index
CIRIA	Construction Industry Research Association	**PID**	Photo ionisation detector
CLEA	Contaminated land exposure assessment	**POS**	Public open space
CML	Council of Mortgage Lenders	**PPE**	Personnel protective equipment
CoC	Contaminants of concern	**ProPG**	Professional practice guidance
CSM	Conceptual site model	**QA**	Quality assurance
DNAPL	Dense non-aqueous phase liquid (chlorinated solvents, PCB)	**SGV**	Soil guideline value
DWS	Drinking water standard	**SPH**	Separate-phase hydrocarbon
EA	Environment Agency	**SPT**	Standard penetration test
EQS	Environmental quality standard	**SVOC**	Semi-volatile organic compound
FFL	Finished floor level	**TPH**	Total and speciated petroleum hydrocarbon
GAC	General assessment criteria	**TPH CWG**	Total Petroleum Hydrocarbon (Criteria Working Group)
GL	Ground level	**UKWIR**	United Kingdom Water Infrastructure Risk
GSV	Gas screening value	**UST**	Underground storage tank
HCV	Health criteria value	**VCC**	Vibro-concrete column
ICSM	Initial conceptual site model	**VOC**	Volatile organic compound
LEL	Lower explosive limit	**VRSC**	Vibro-replacement stone columns
LMRL	Lower method reporting limit	**VSC**	Vibro-stone columns
LNAPL	Light non-aqueous phase liquid (petrol, diesel, kerosene)	**WHO**	World Health Organisation
MCV	Moisture condition value	**WRAP**	Waste and Resources Action Programme

MIBK	Methyl isobutyl ketone	**WTE**	Water table elevation
m	Metres	**ppm**	Parts per million
km	Kilometres	**mg/m^3**	Milligram per metre cubed
% v/v	Percent volume in air	**m bgl**	Metres below ground level
mb	Millibars (atmospheric pressure)	**m bcl**	Metre below cover level
l/hr	Litres per hour	**mAOD**	Metres above ordnance datum (sea level)
µg/l	Micrograms per litre (parts per billion)	**kN/m^2**	Kilonewtons per metre squared
ppb	Parts per billion	**µm**	Micrometre
mg/kg	Milligrams per kilogram (parts per million)		

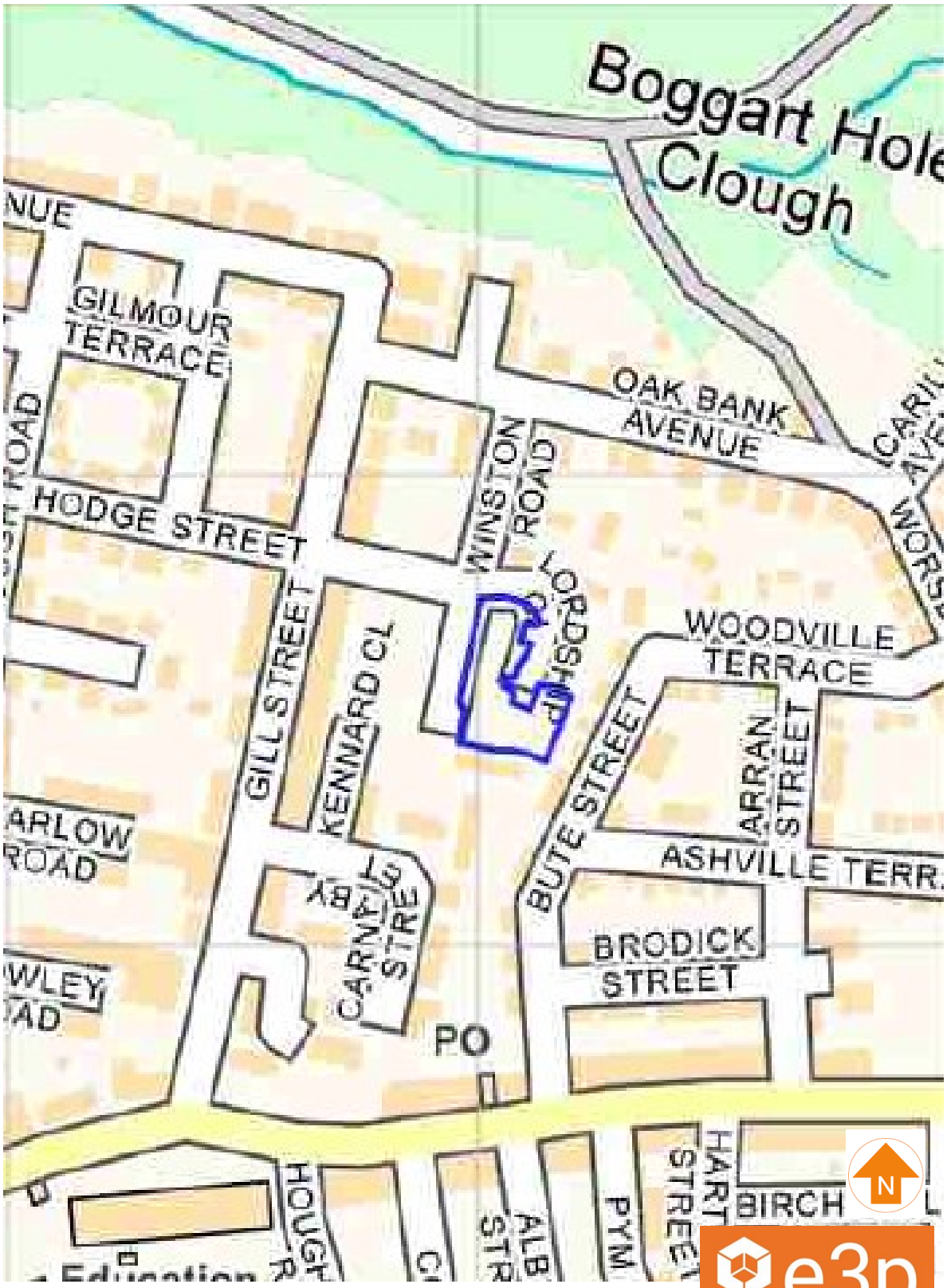
APPENDIX III
RISK CLASSIFICATION

RISK CLASSIFICATION

RISK	DEFINITION
Low	There are unlikely to be significant contaminated land liabilities/geotechnical constraints associated with the property.
Low Moderate	There are unlikely to be significant contaminated land liabilities/geotechnical constraints associated with the property with regard to the proposed use. However, minor issues may require further consideration in the event of future redevelopment of the Site.
Moderate	Some potential contaminated land liabilities/geotechnical constraints are likely to affect the property as a result of historical and/or current activities. The risks identified are unlikely to pose an immediate significant issue but the purchaser/developer may wish to make further enquiries of the vendor or undertake further environmental improvements. Redevelopment of the Site will likely require further site investigation.
Moderate High	Some potentially significant contaminated land liabilities/geotechnical constraints have been identified at the property that requires further assessment, including intrusive ground investigations.
High	Significant potential contaminated land liabilities/geotechnical constraints have been identified at the property. Further assessment including intrusive ground investigation will be required to determine the level of risk and associated liability.

APPENDIX IV
DRAWINGS

DRAWING 16-713-001 – SITE LOCATION PLAN





Historical Features

- Residential Housing
- Residential Housing
- Outbuildings

Notes:

P1	REVA	28.07.2023	LM	EF
Phase	Issue	Date	Drawn	Checked

Client: AJP

Job No: 16-713

Date: 28.07.2023

Drawing No: 003

Scale: 1:1000 @ A3

Job Title: Lordship Close, Moston

Drawing Title: Historical Features Plan

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Environmental Engineering Partnership Ltd
Taylor Road, Trafford Park
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Site Features

- Softstanding
- Trees
- Footpaths

Notes:

Client: AJP

Job No: 16-713

Date: 28.07.2023

Drawing No: 004

Scale: 1:1000 @ A3

P1	REVA	28.07.2023	LM	EF
Phase	Issue	Date	Drawn	Checked

Job Title: Lordship Close, Moston

Drawing Title: Site Features Plan

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APPENDIX V
HISTORICAL MAPS



Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

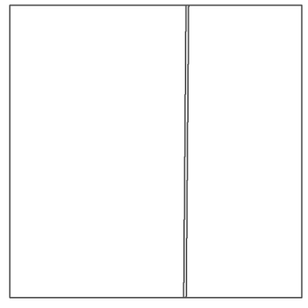
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Revised 1893
Edition N/A
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Revised 1893
Edition N/A
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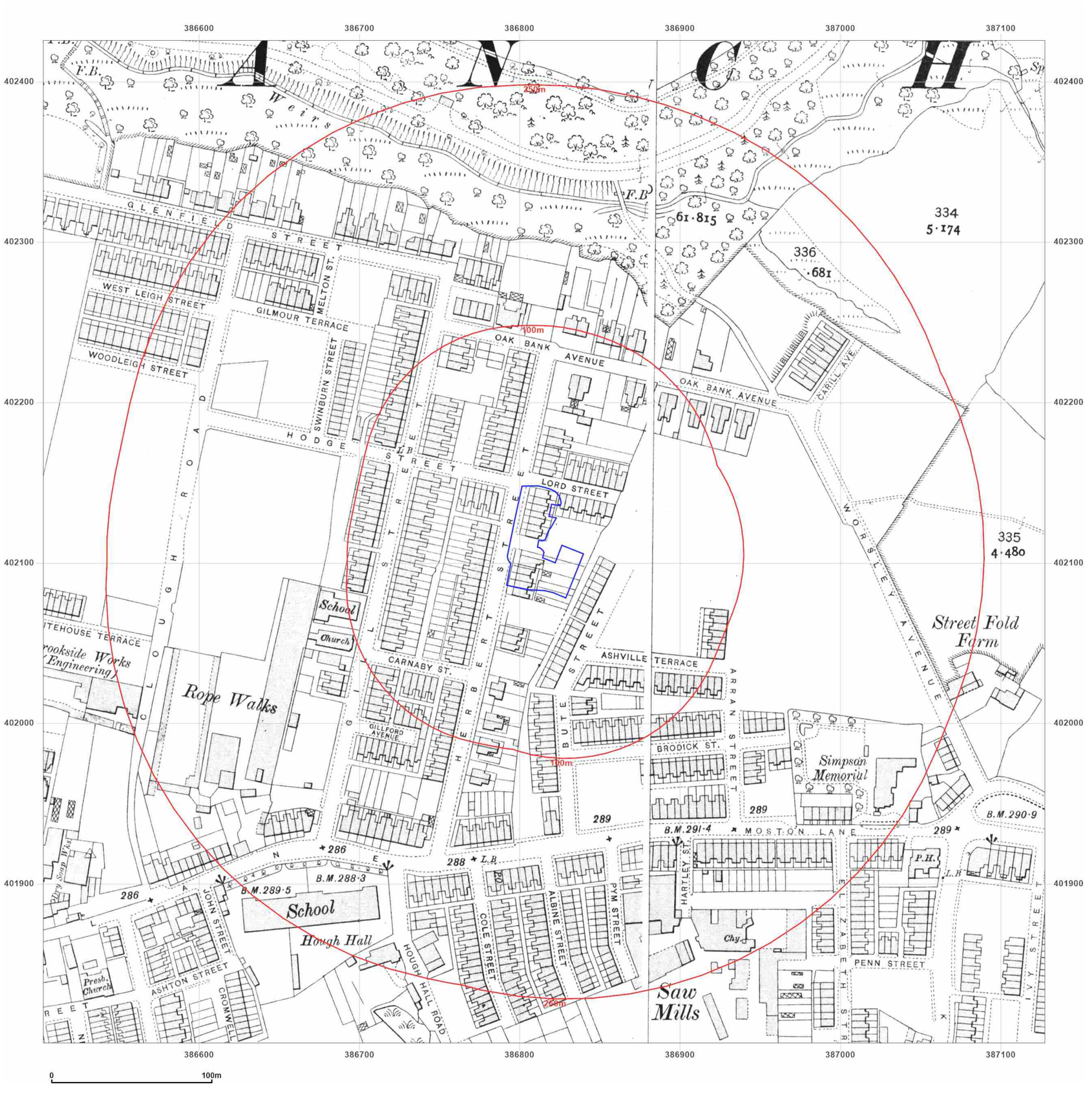
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Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

Map date: **1909**

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Report Ref: GS-V6L-LMG-J22-4AC
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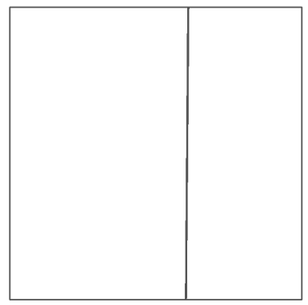
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Site Details:

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Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

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Revised 1933
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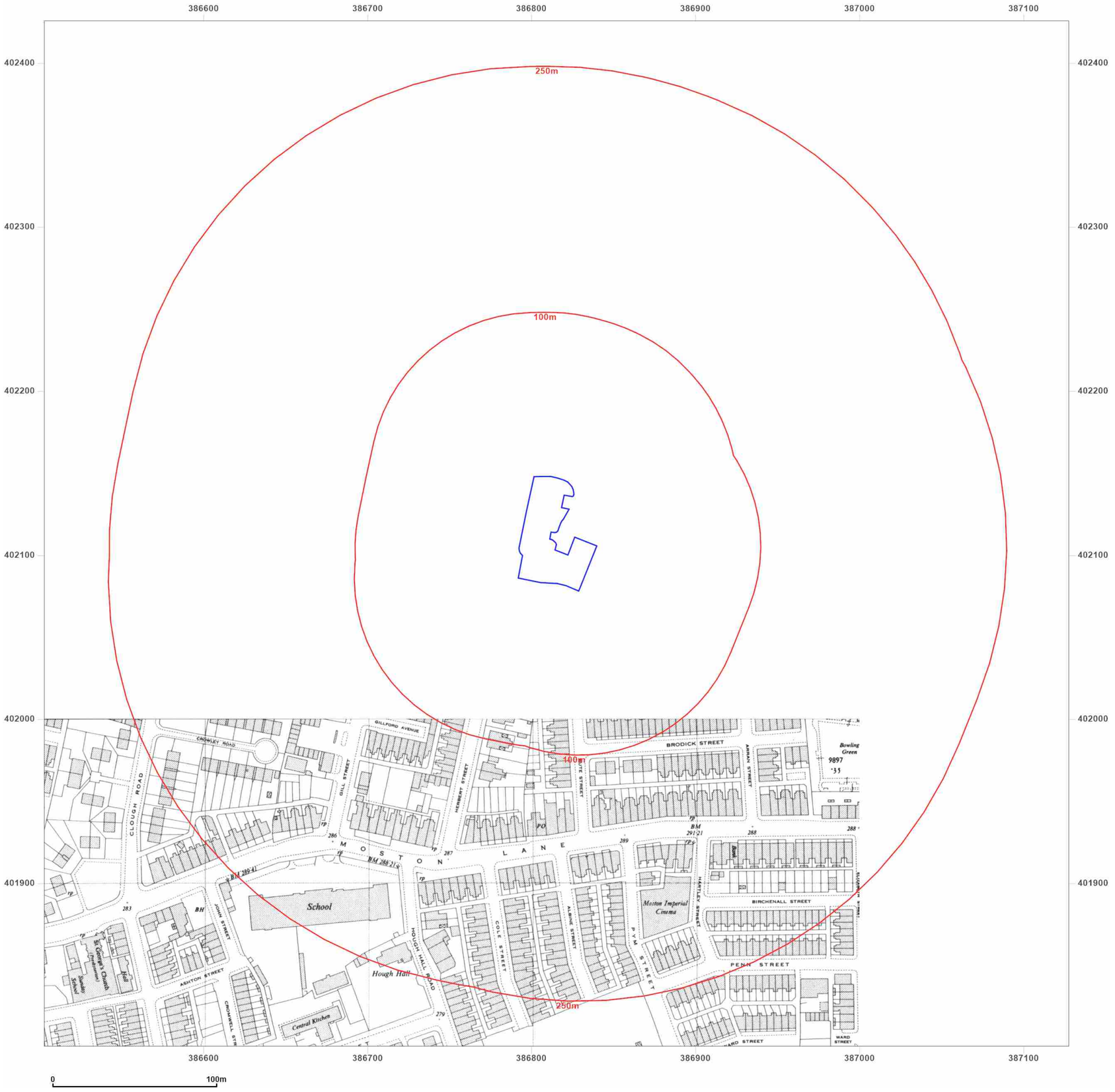
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Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1950**

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Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1950-1951**

Scale: 1:1,250

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Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1951**

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Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1950-1955**

Scale: 1:2,500

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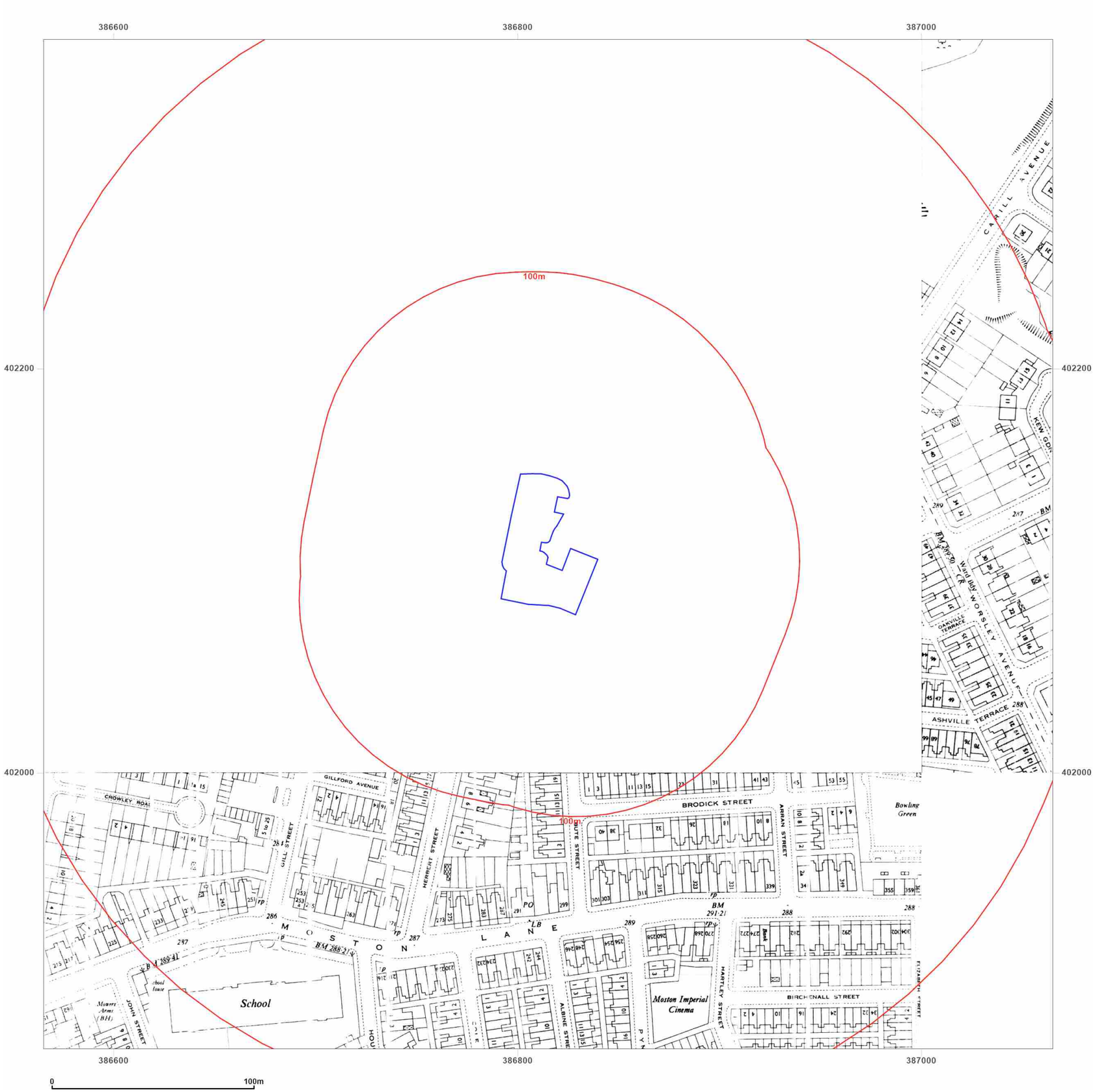
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Site Details:

386801, 402117

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Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1952-1957**

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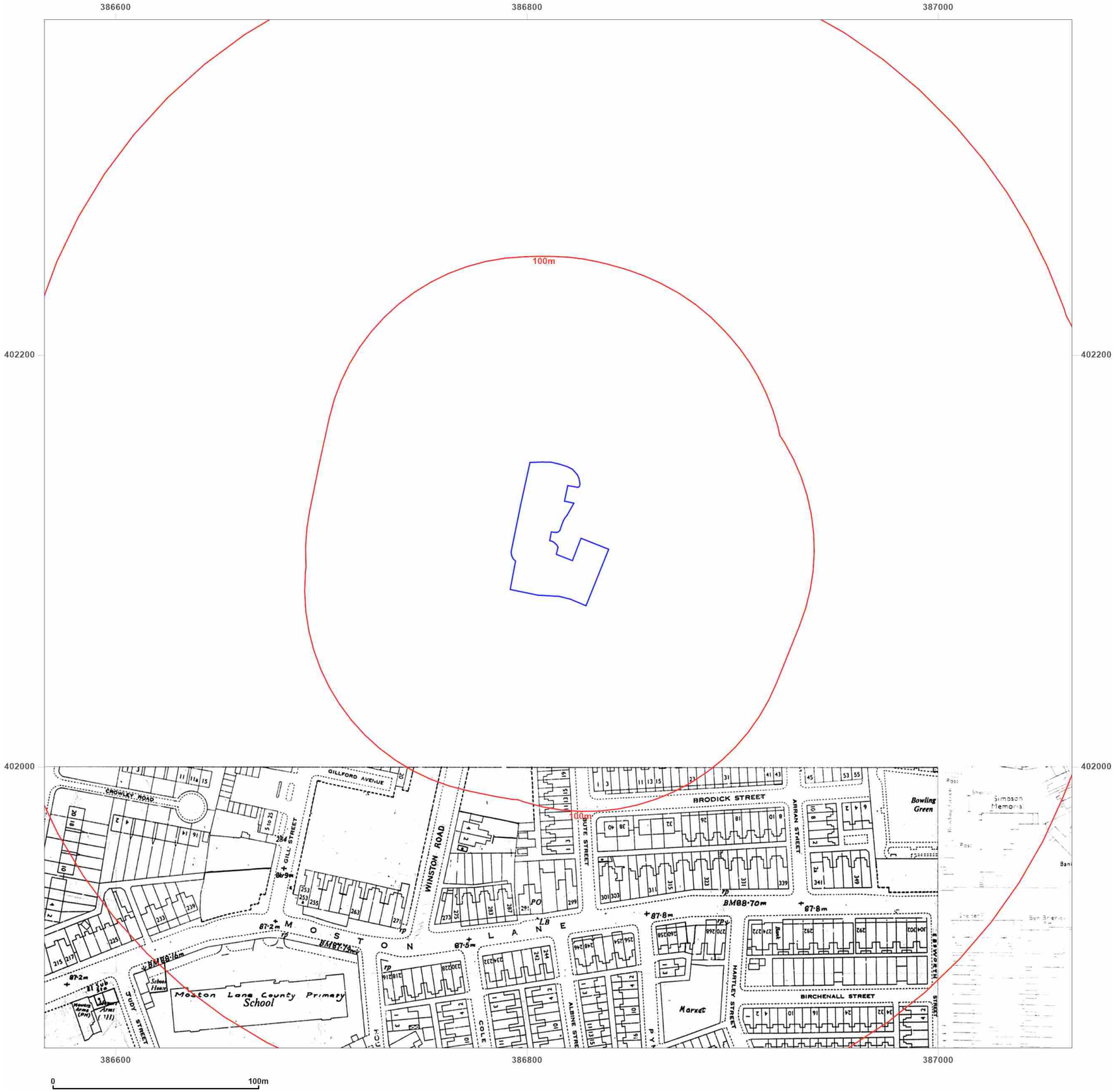
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Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1975-1979**

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Groundsure INSIGHTS

Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1981**

Scale: 1:1,250

Printed at: 1:2,000

N
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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1981
Levelled 1964

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Groundsure INSIGHTS

Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1981-1985**

Scale: 1:1,250

Printed at: 1:2,000

N
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~~Surveyed 1950~~
Revised 1980
Edition N/A
Copyright 1981
Levelled 1964

Surveyed 1964
Revised 1985
Edition N/A
Copyright 1985
Levelled 1964

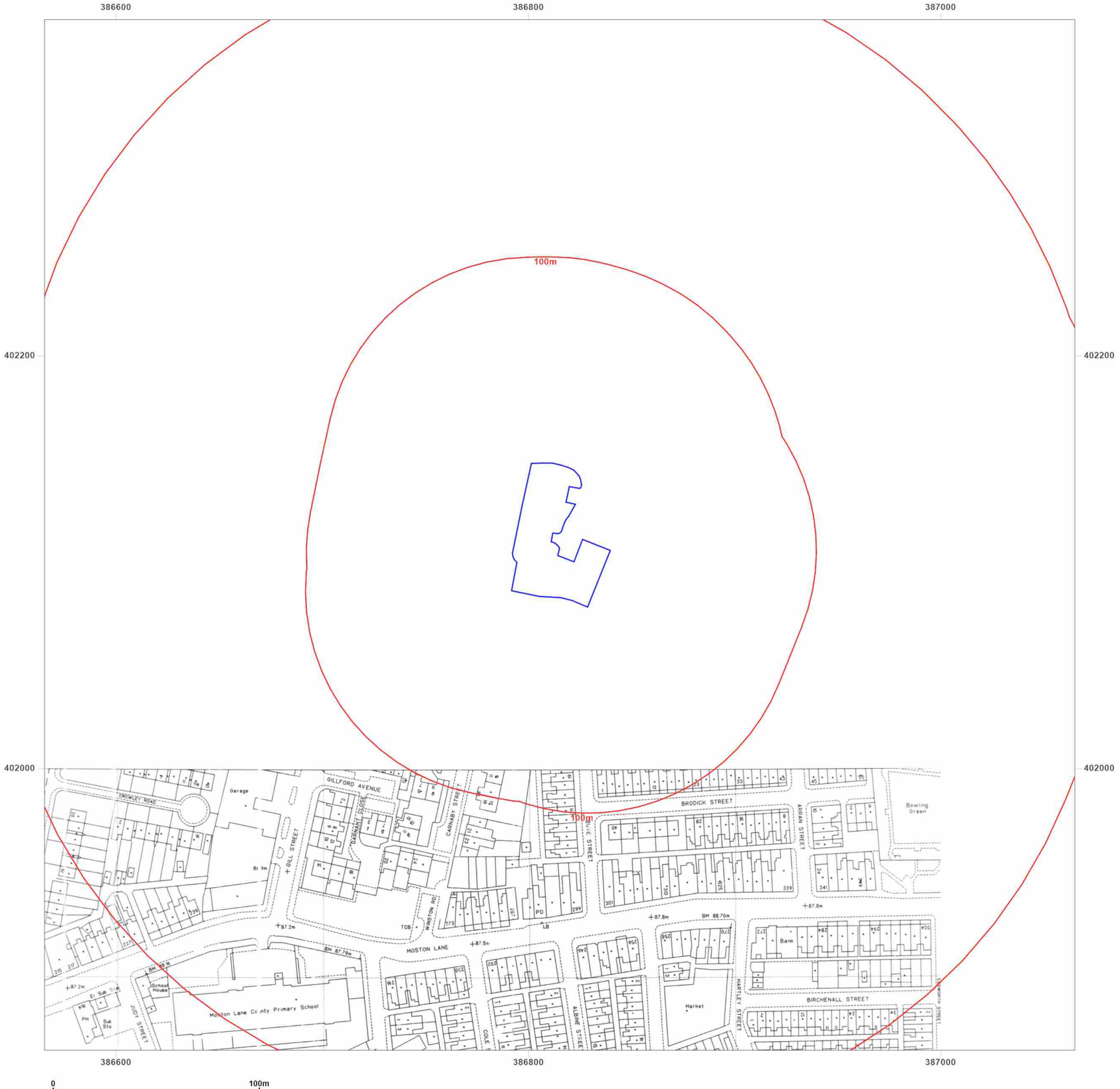
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Groundsure INSIGHTS

Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1992**

Scale: 1:1,250

Printed at: 1:2,000

N
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Surveyed 1992
Revised 1992
Edition N/A
Copyright N/A
Levelled N/A

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Groundsure INSIGHTS

Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1988-1992**

Scale: 1:1,250

Printed at: 1:2,000

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~~Surveyed 1992~~ Revised N/A Edition N/A Copyright 1992 Levelled N/A	Surveyed 1992 Revised N/A Edition N/A Copyright 1992 Levelled N/A
Surveyed 1952 Revised 1989 Edition N/A Copyright 1989 Levelled N/A	Surveyed 1964 Revised 1988 Edition N/A Copyright 1988 Levelled 1964

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Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1990-1993**

Scale: 1:1,250

Printed at: 1:2,000

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~~Surveyed 1992~~ Revised 1992 Edition N/A Copyright N/A Levelled N/A	Surveyed 1993 Revised N/A Edition N/A Copyright 1993 Levelled N/A
Surveyed 1962 Revised 1989 Edition N/A Copyright 1989 Levelled N/A	Surveyed 1992 Revised N/A Edition N/A Copyright 1992 Levelled N/A

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Groundsure INSIGHTS

Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

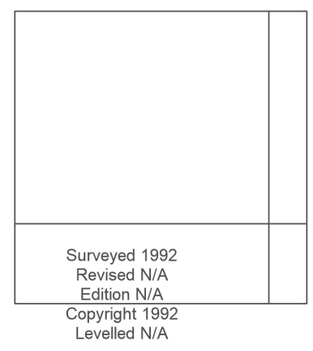
Map Name: National Grid

Map date: **1992-1993**

Scale: 1:1,250

Printed at: 1:2,000

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Groundsure INSIGHTS

Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: LandLine

Map date: **2003**

Scale: 1:1,250

Printed at: 1:1,250

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2003

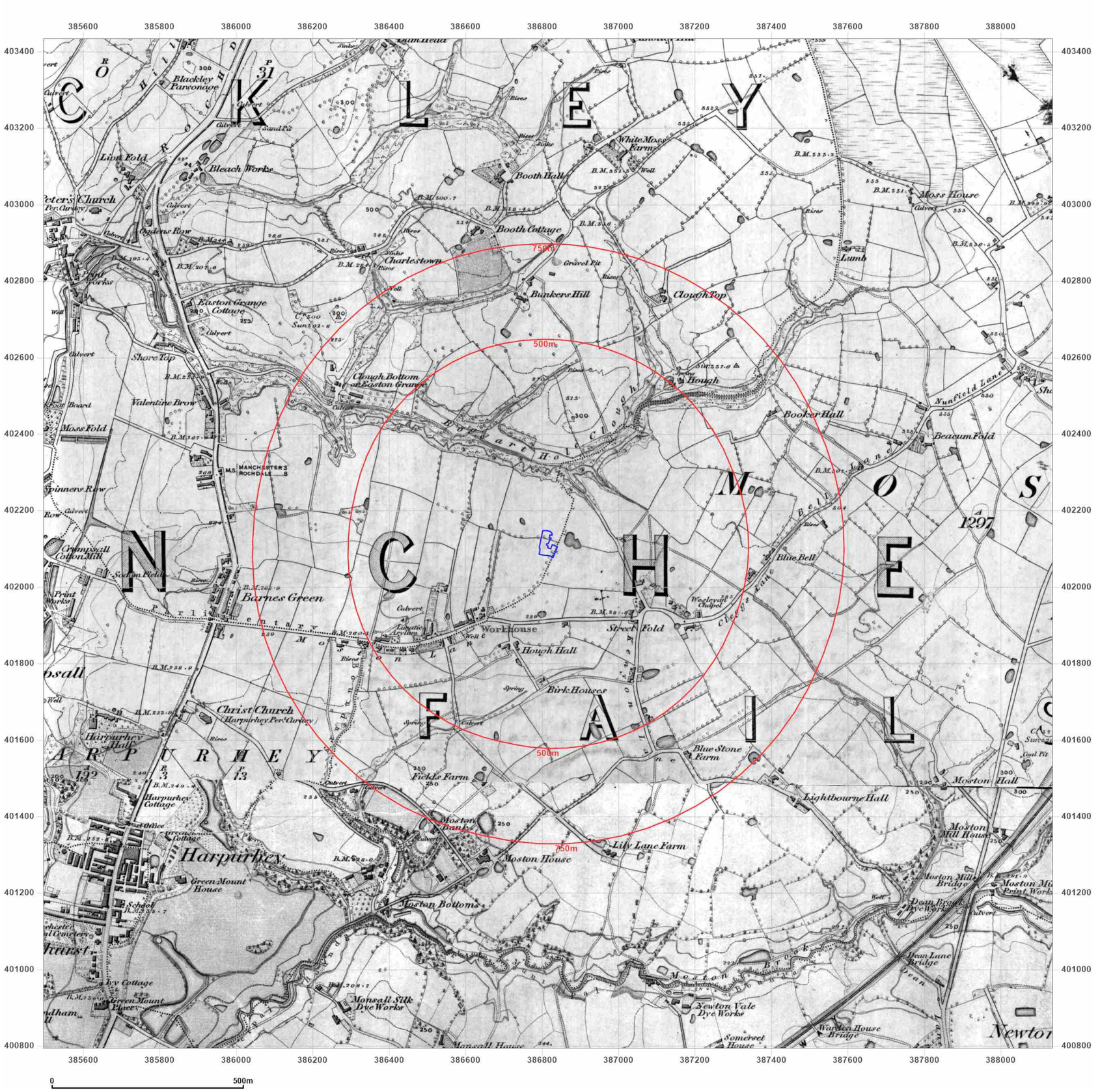
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Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

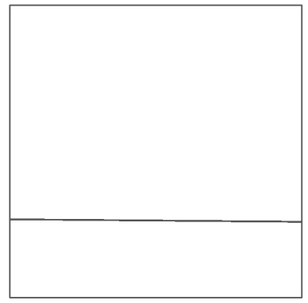
Map date: **1848**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1845
Revised N/A
Edition 1848
Copyright N/A
Levelled N/A



Surveyed 1845
Revised N/A
Edition 1848
Copyright N/A
Levelled N/A

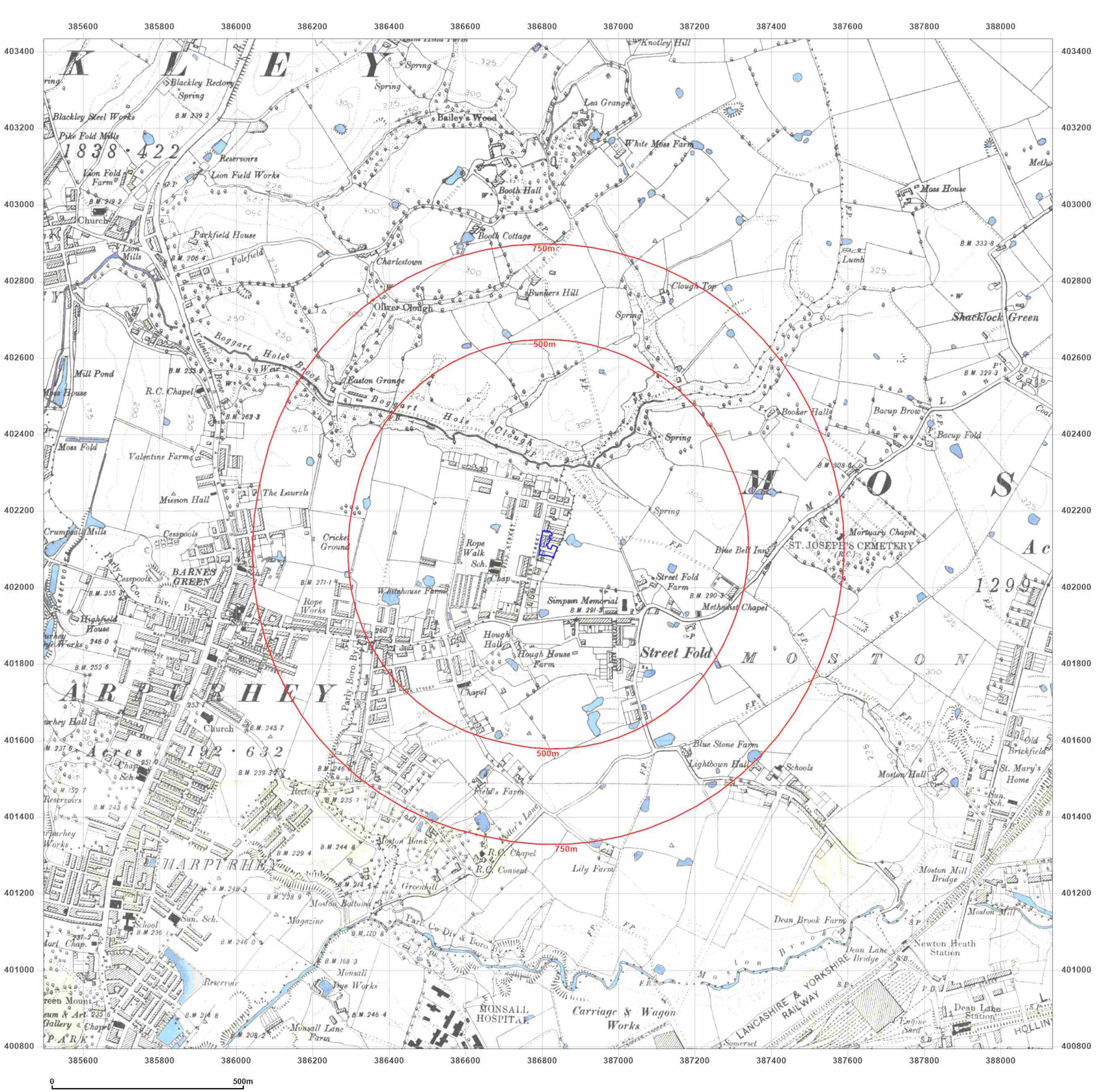
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Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

Map date: **1891**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1891
Revised 1891
Edition 1891
Copyright N/A
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Site Details:

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Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

Map date: **1906**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1844
Revised 1906
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1906
Edition 1906
Copyright N/A
Levelled N/A

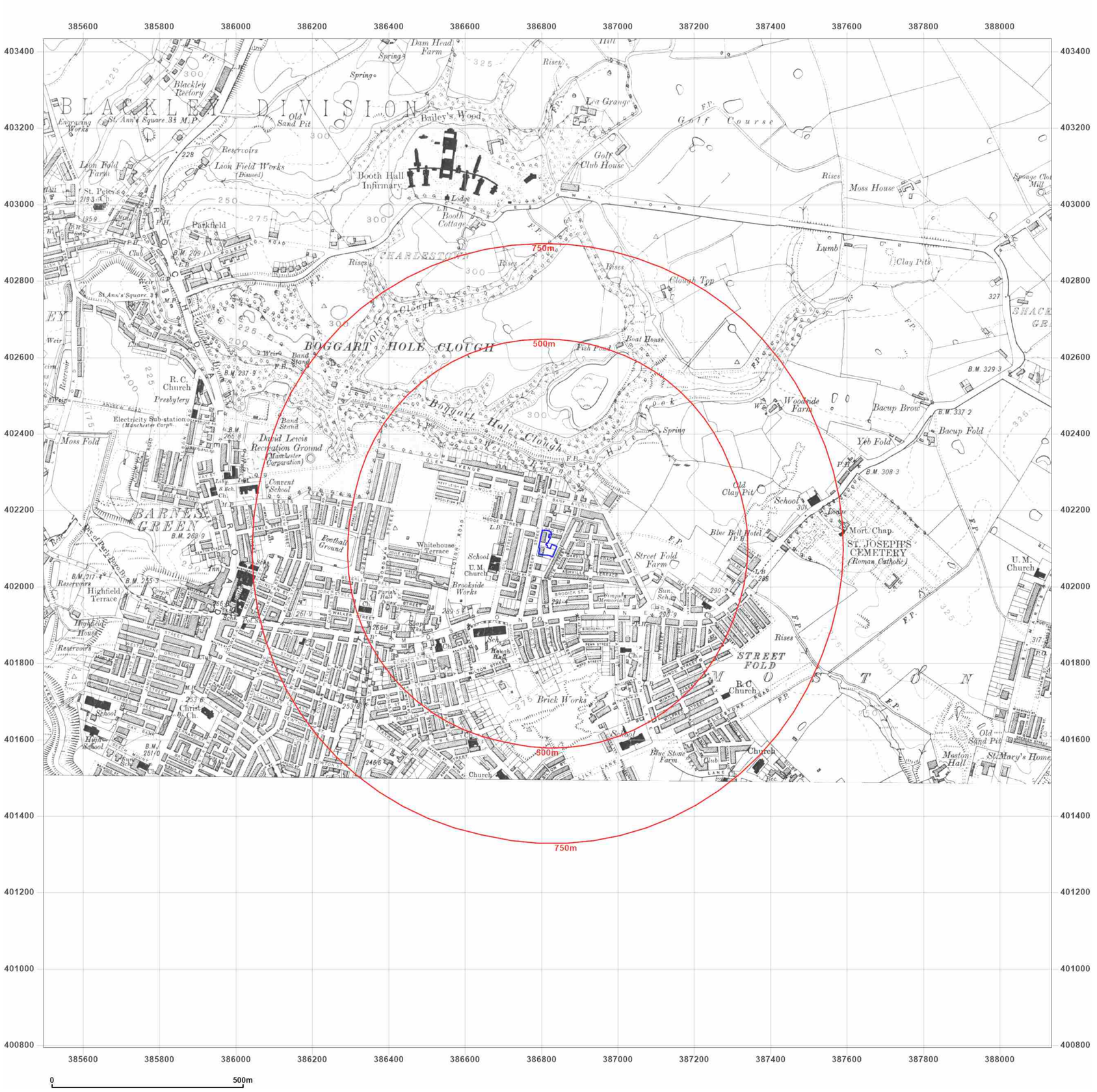
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Site Details:

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Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

Map date: **1915**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1844
Revised 1915
Edition N/A
Copyright N/A
Levelled N/A

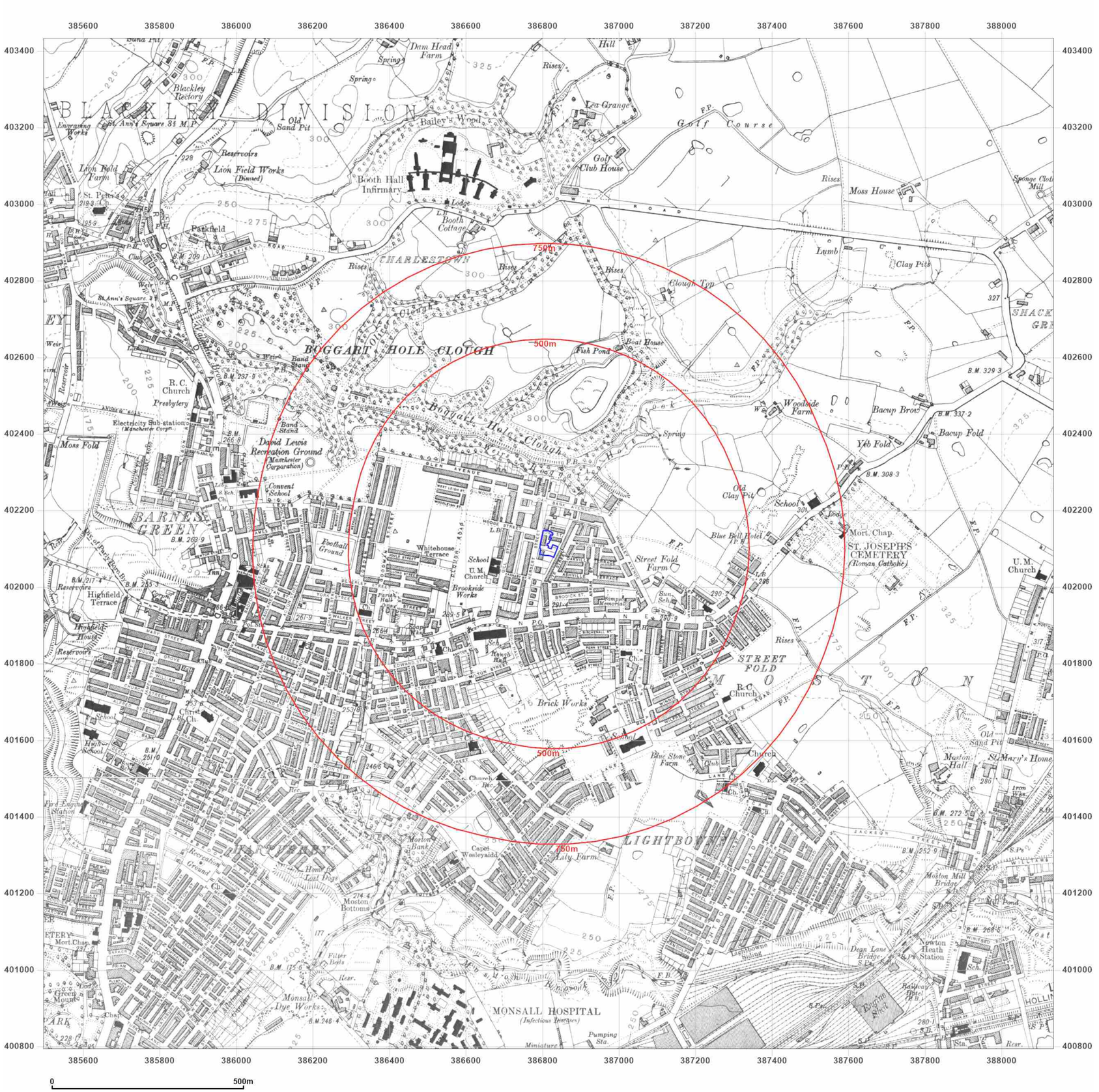
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Site Details:

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Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

Map date: **1923**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1844
Revised 1923
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1921
Edition 1923
Copyright N/A
Levelled 1906

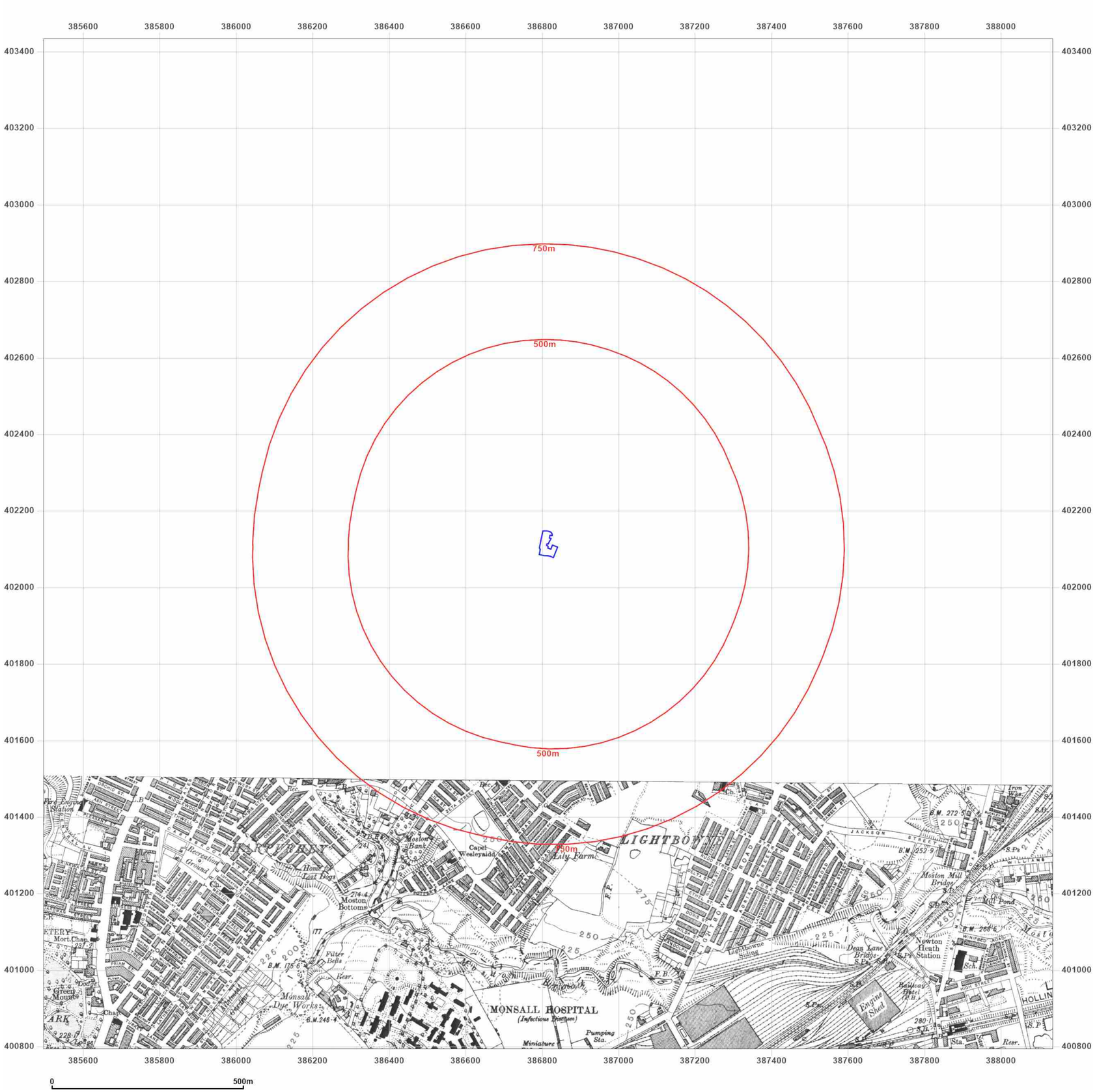
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Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

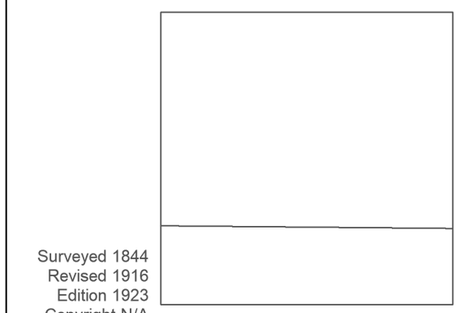
Map Name: County Series

Map date: **1923**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1844
Revised 1916
Edition 1923
Copyright N/A
Levelled 1915

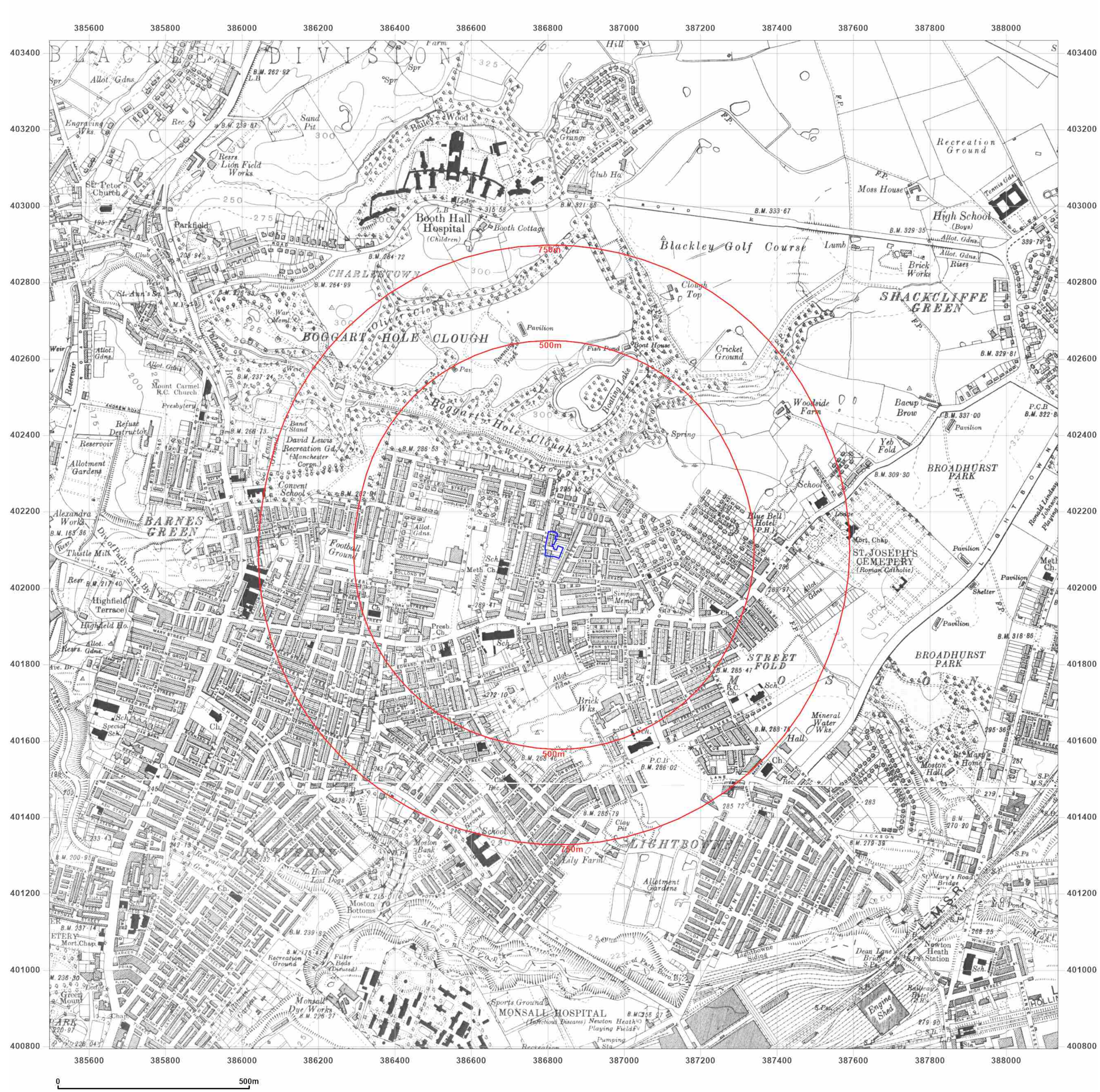
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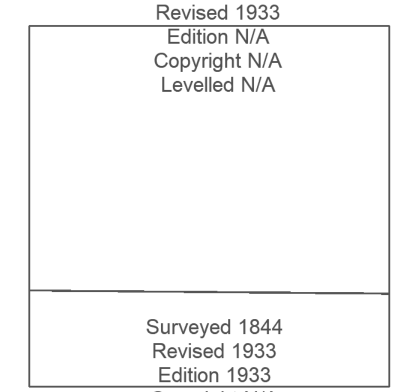
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Site Details:

386801, 402117

Client Ref:	005320
Report Ref:	GS-V6L-LMG-J22-4AC
Grid Ref:	386815, 402113

Map Name:	County Series
Map date:	**1933**
Scale:	1:10,560
Printed at:	1:10,560

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Surveyed 1844
Revised 1933
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1933
Edition 1933
Copyright N/A
Levelled 1927

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Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1844
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1938
Edition 1938
Copyright N/A
Levelled 1927

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Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: Provisional

Map date: **1956**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1956
Revised 1956
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

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Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: Provisional

Map date: **1966**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1966
Revised 1966
Edition N/A
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Levelled N/A

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Groundsure INSIGHTS

Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1975**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1975
Revised 1975
Edition N/A
Copyright N/A
Levelled N/A

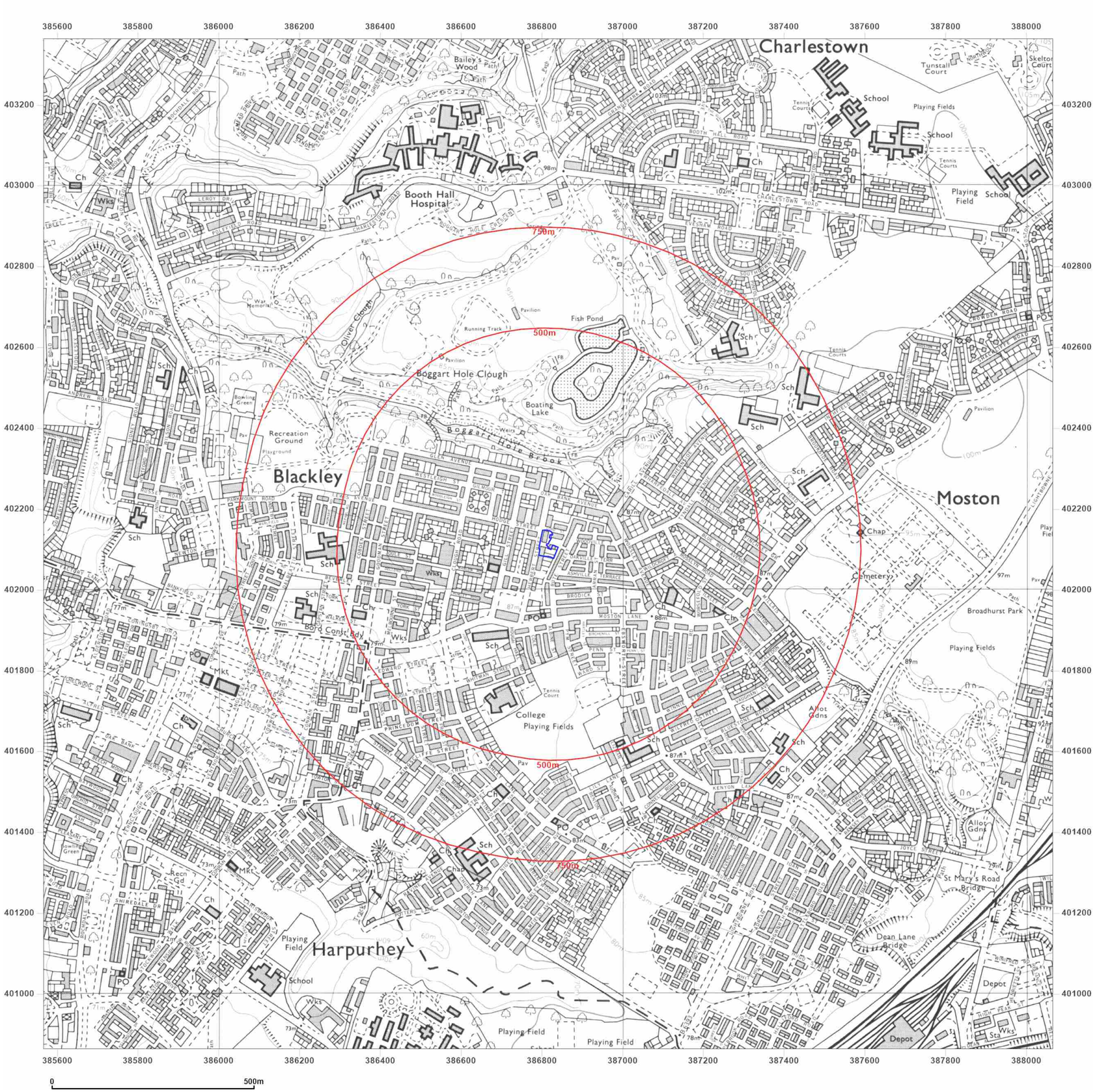
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Groundsure INSIGHTS

Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1980**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1980
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1988**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1987
Revised 1988
Edition N/A
Copyright N/A
Levelled N/A

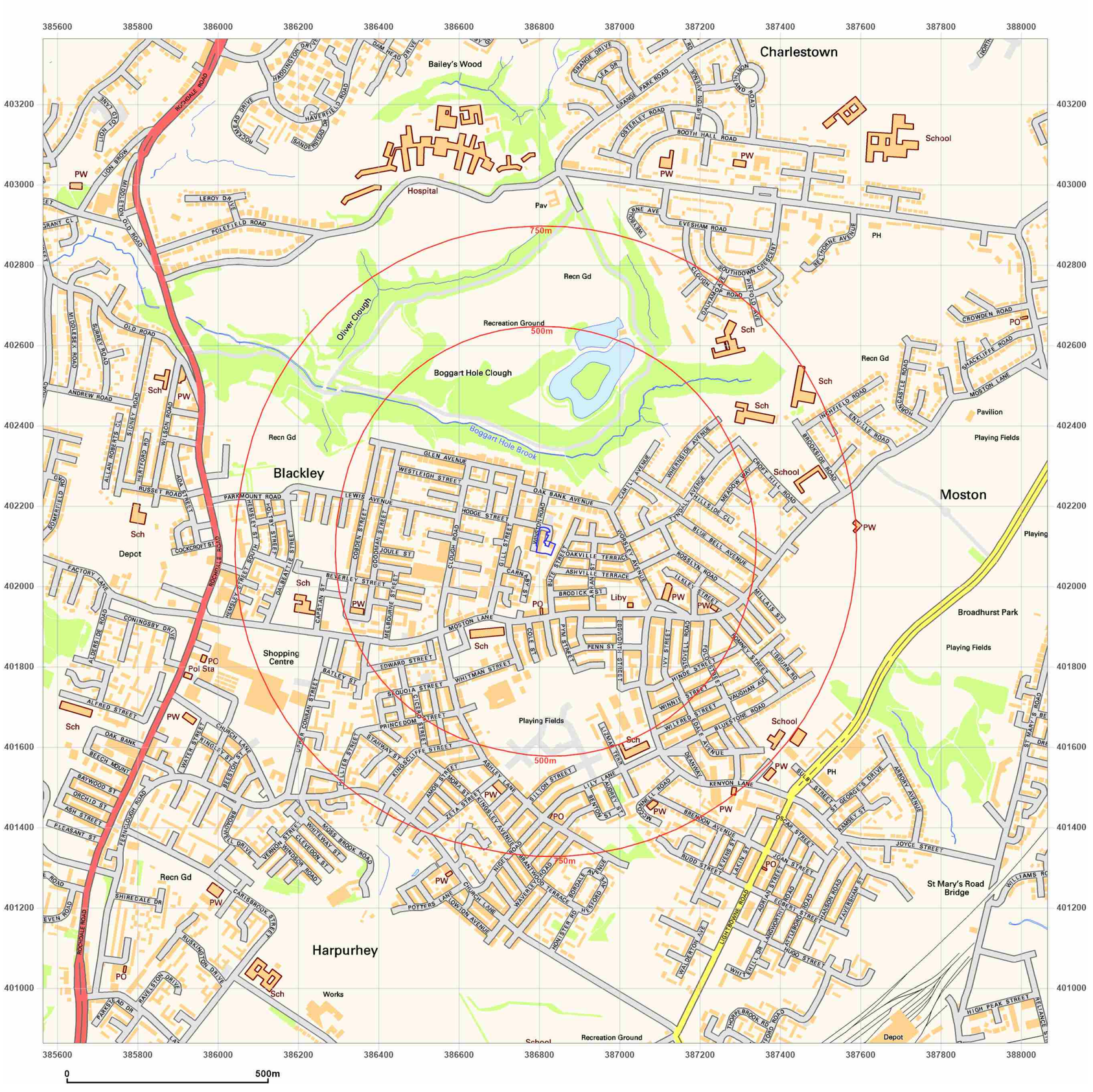
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Groundsure INSIGHTS

Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **2001**

Scale: 1:10,000

Printed at: 1:10,000

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2001

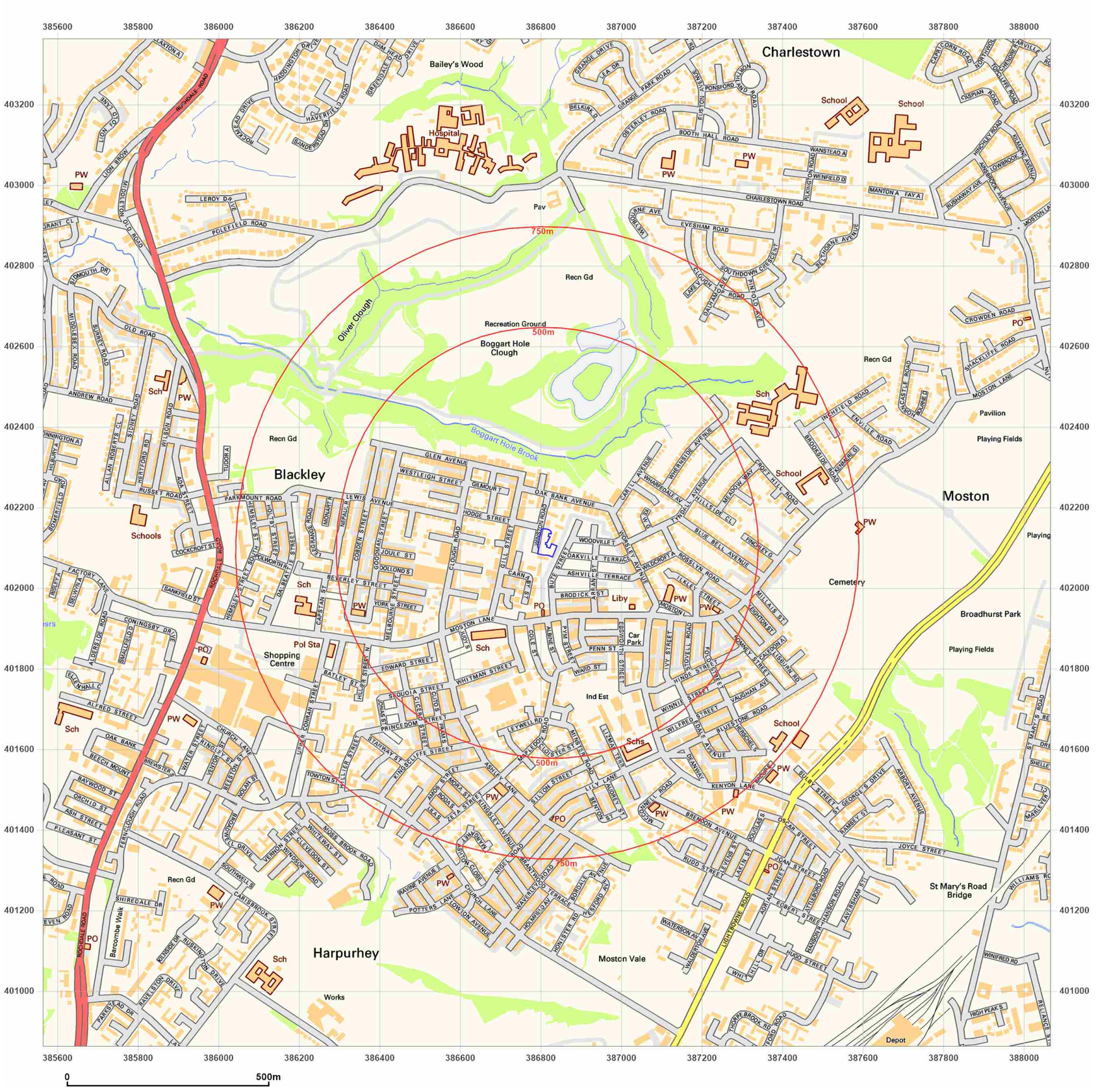
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Groundsure INSIGHTS

Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

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2010

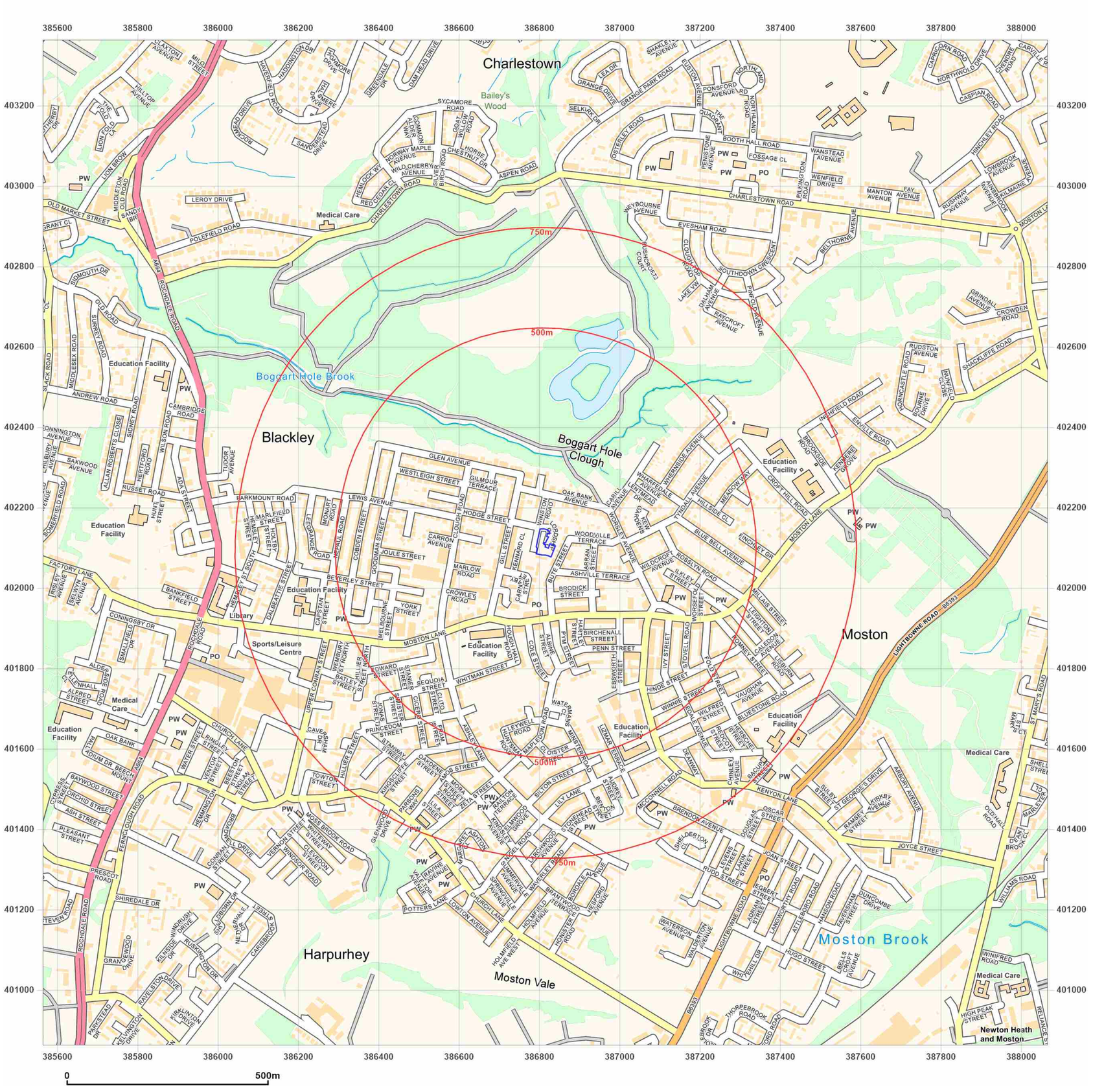
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Groundsure INSIGHTS

Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **2023**

Scale: 1:10,000

Printed at: 1:10,000

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2023

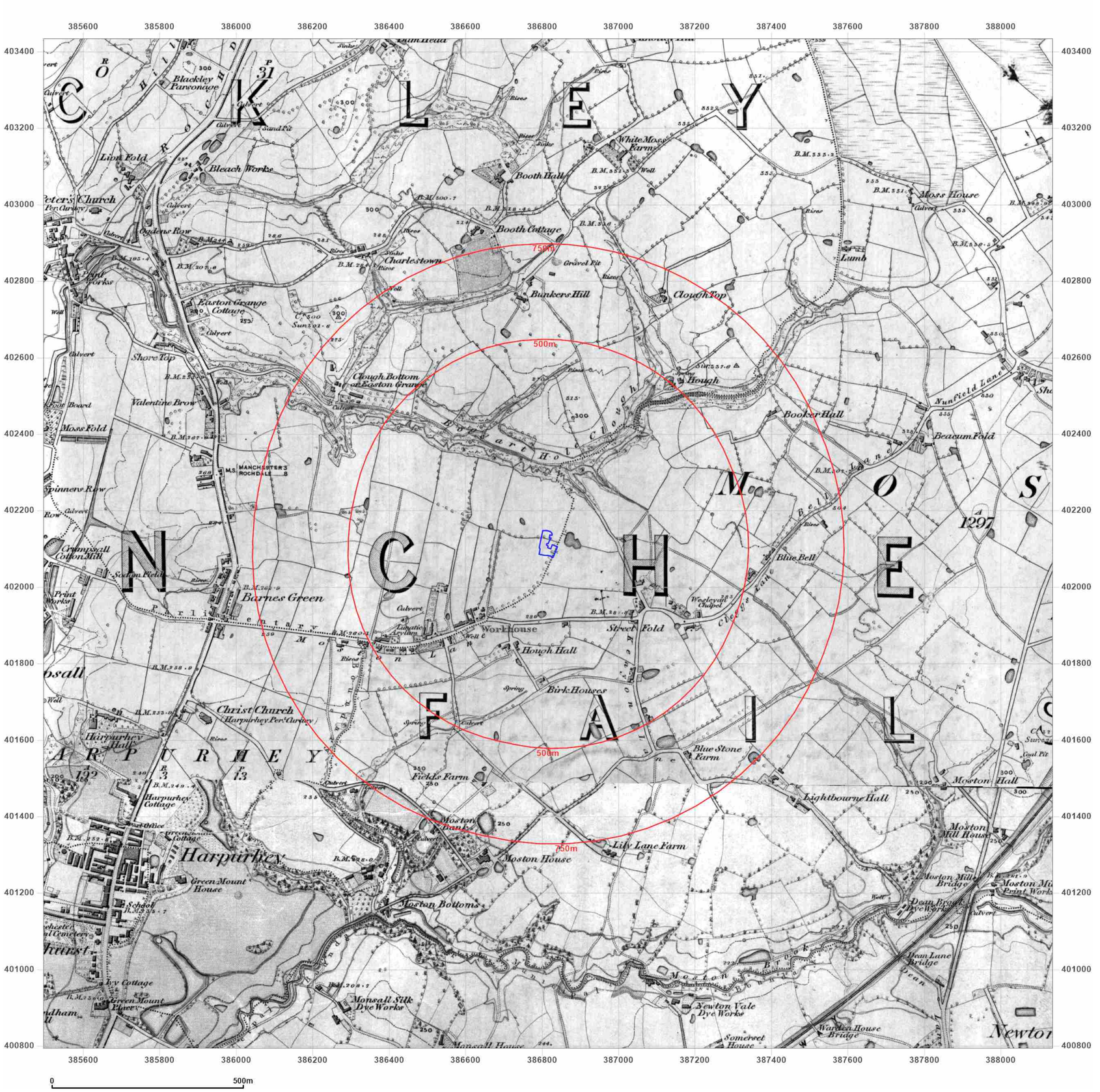
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Site Details:

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Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

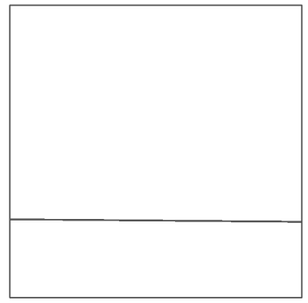
Map date: **1848**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
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Surveyed 1845
Revised N/A
Edition 1848
Copyright N/A
Levelled N/A



Surveyed 1845
Revised N/A
Edition 1848
Copyright N/A
Levelled N/A

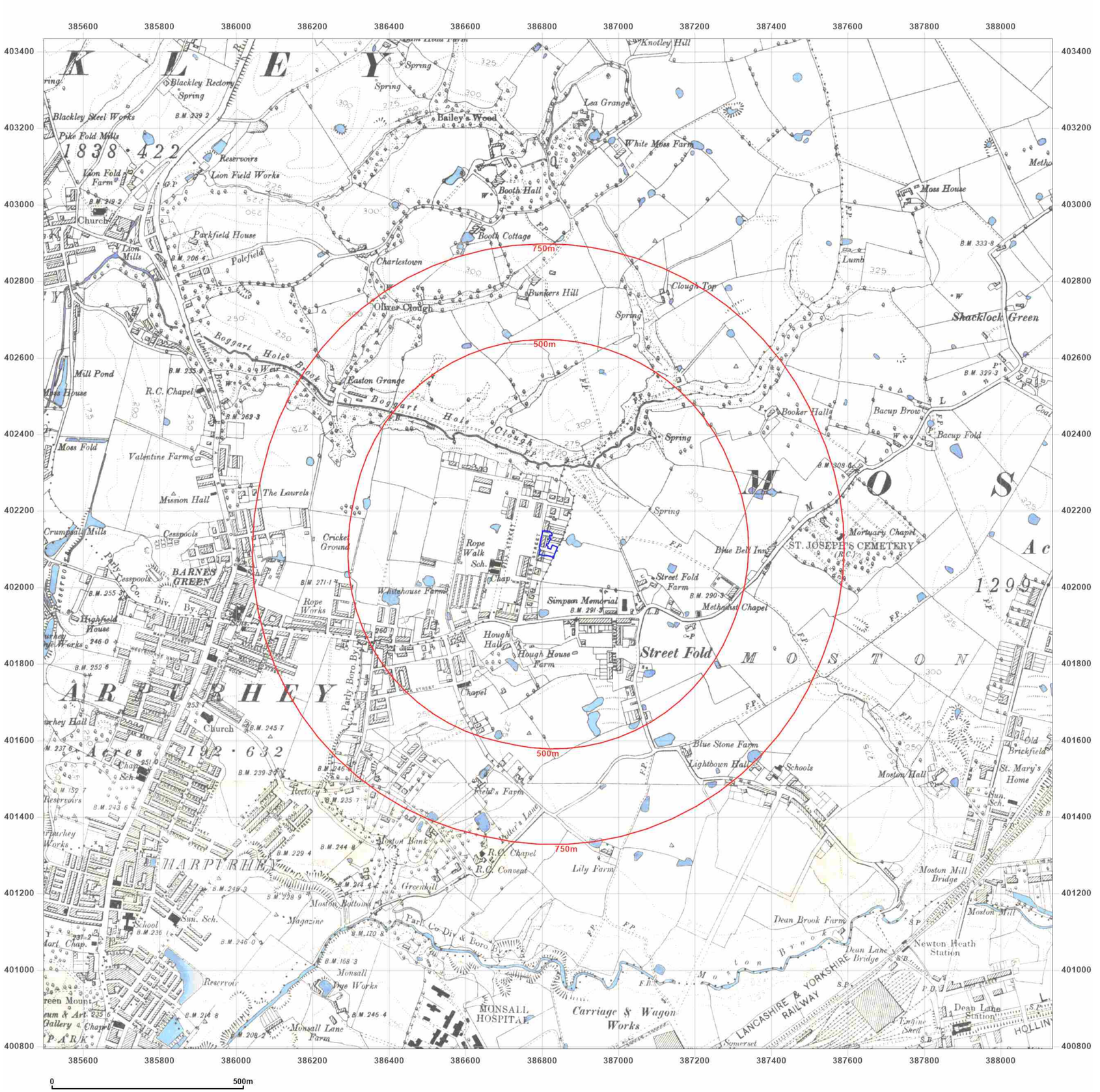
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Groundsure INSIGHTS

Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

Map date: **1891**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1891
Revised 1891
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Groundsure INSIGHTS

Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

Map date: **1906**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1844
Revised 1906
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1906
Edition 1906
Copyright N/A
Levelled N/A

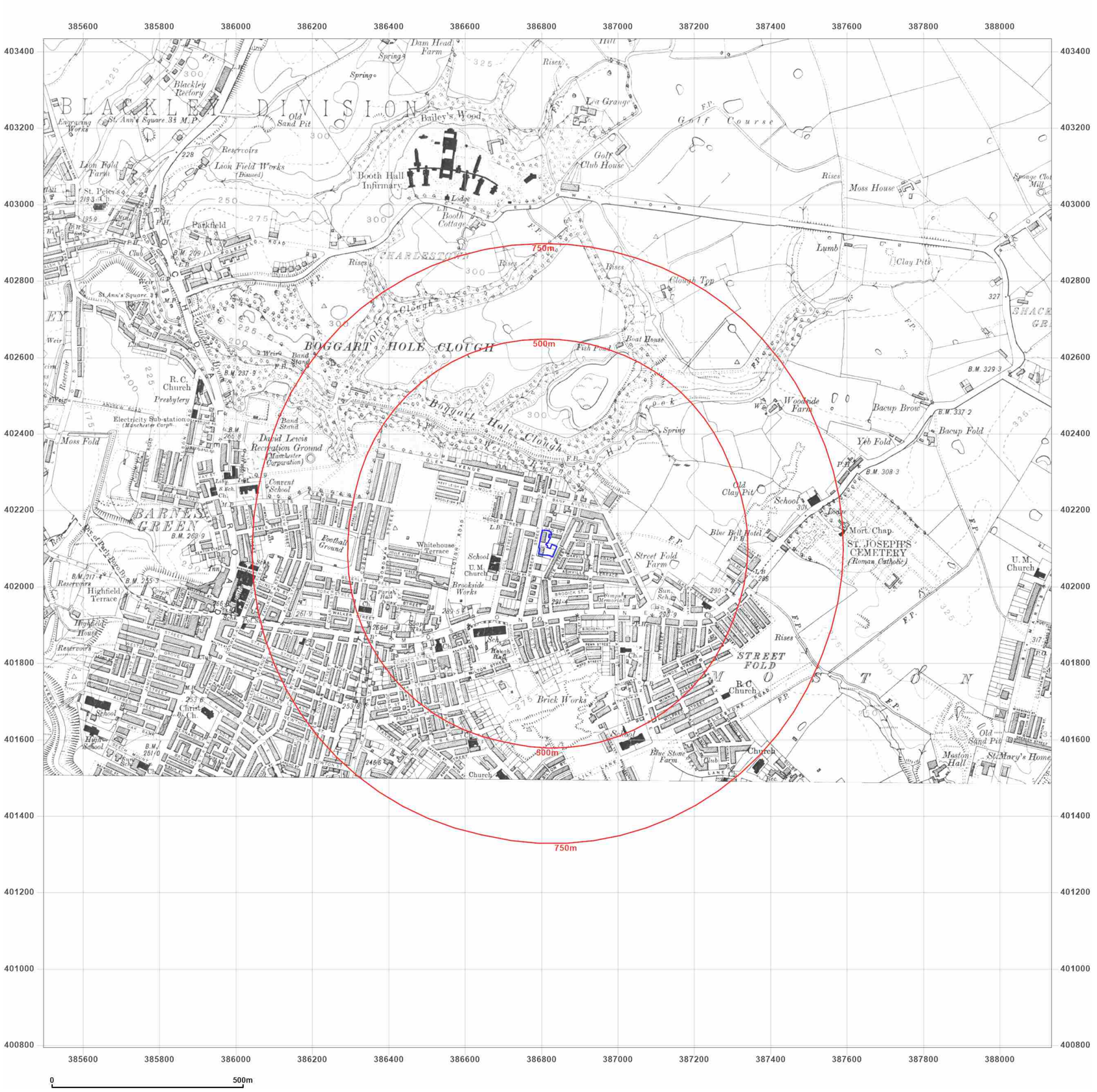
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Site Details:

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Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

Map date: **1915**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1844
Revised 1915
Edition N/A
Copyright N/A
Levelled N/A

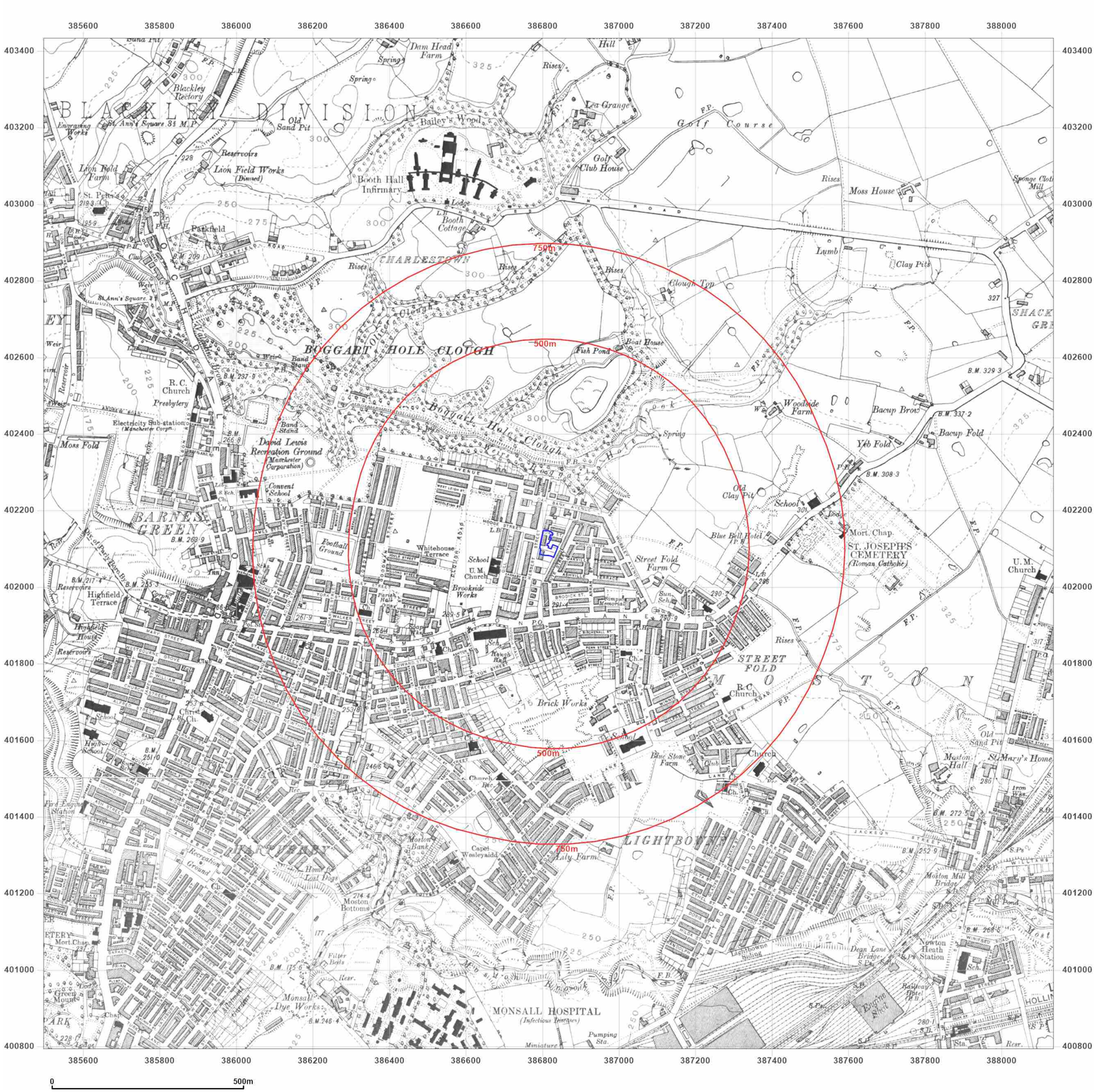
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Site Details:

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Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

Map date: **1923**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1844
Revised 1923
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1921
Edition 1923
Copyright N/A
Levelled 1906

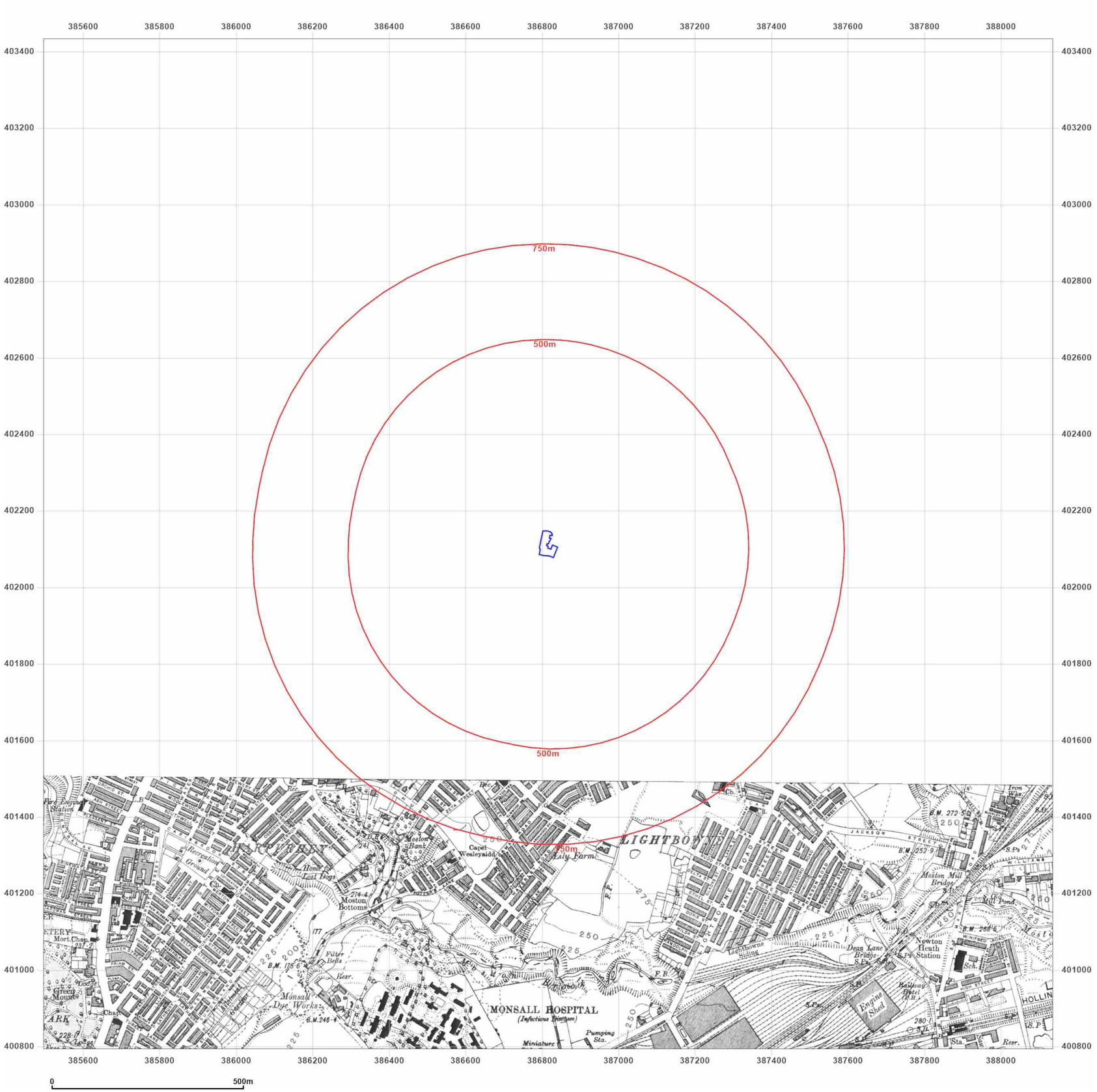
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Site Details:

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Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

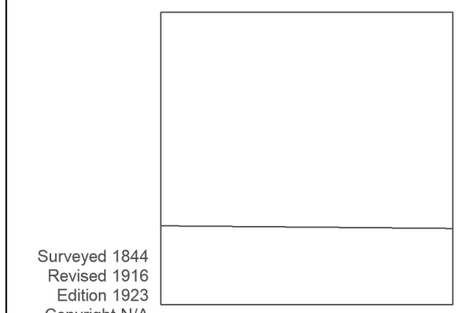
Map Name: County Series

Map date: **1923**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1844
Revised 1916
Edition 1923
Copyright N/A
Levelled 1915

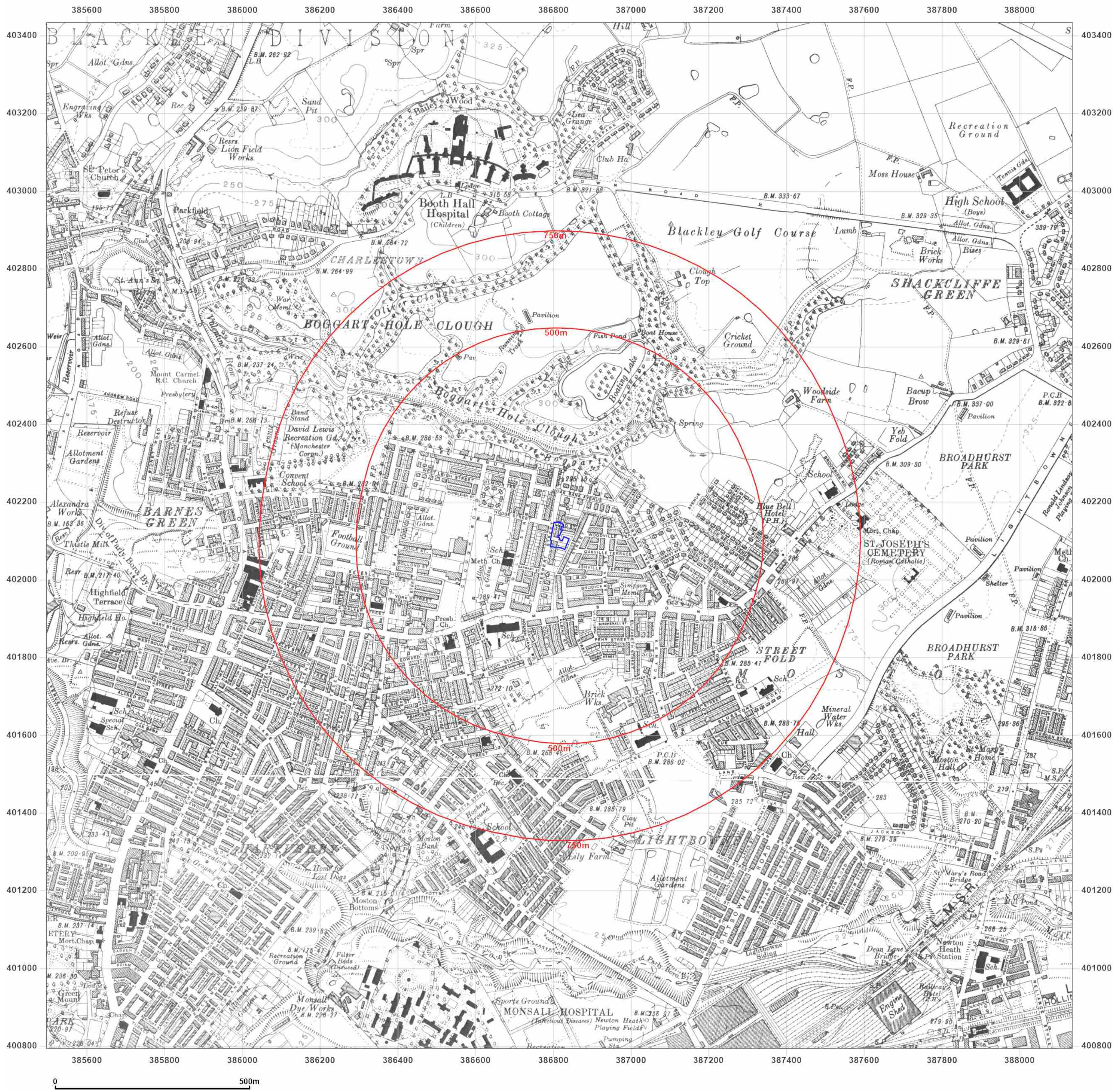
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Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

Map date: **1933**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1844
Revised 1933
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1933
Edition 1933
Copyright N/A
Levelled 1927

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Site Details:

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Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1844
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1938
Edition 1938
Copyright N/A
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Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: Provisional

Map date: **1956**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1956
Revised 1956
Edition N/A
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Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: Provisional

Map date: **1966**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1966
Revised 1966
Edition N/A
Copyright N/A
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Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1975**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1975
Revised 1975
Edition N/A
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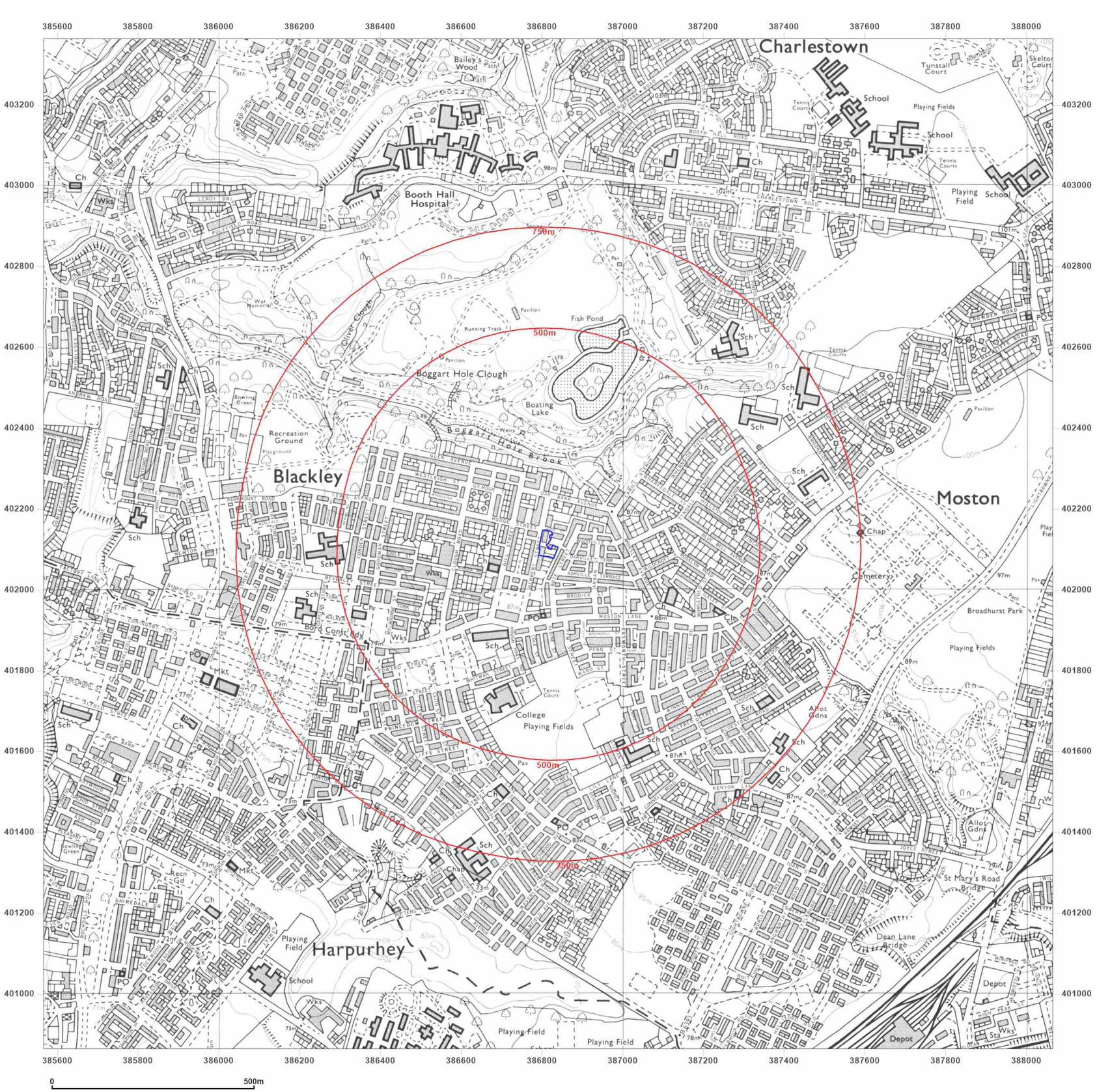
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Site Details:

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Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1980**

Scale: 1:10,000

Printed at: 1:10,000

N
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Revised 1980
Edition N/A
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Site Details:

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Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **1988**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1987
Revised 1988
Edition N/A
Copyright N/A
Levelled N/A

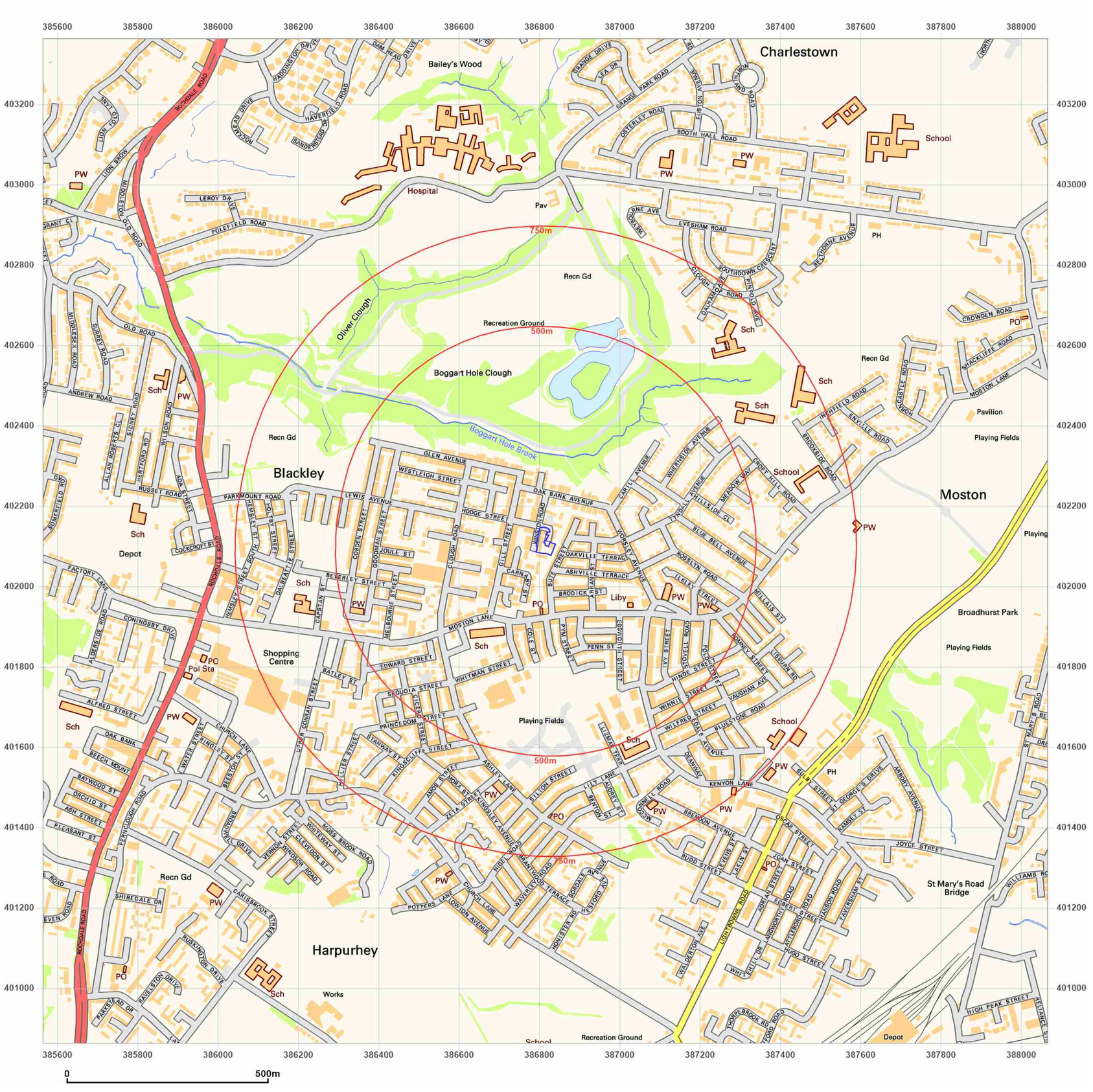
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Site Details:

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Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **2001**

Scale: 1:10,000

Printed at: 1:10,000

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2001

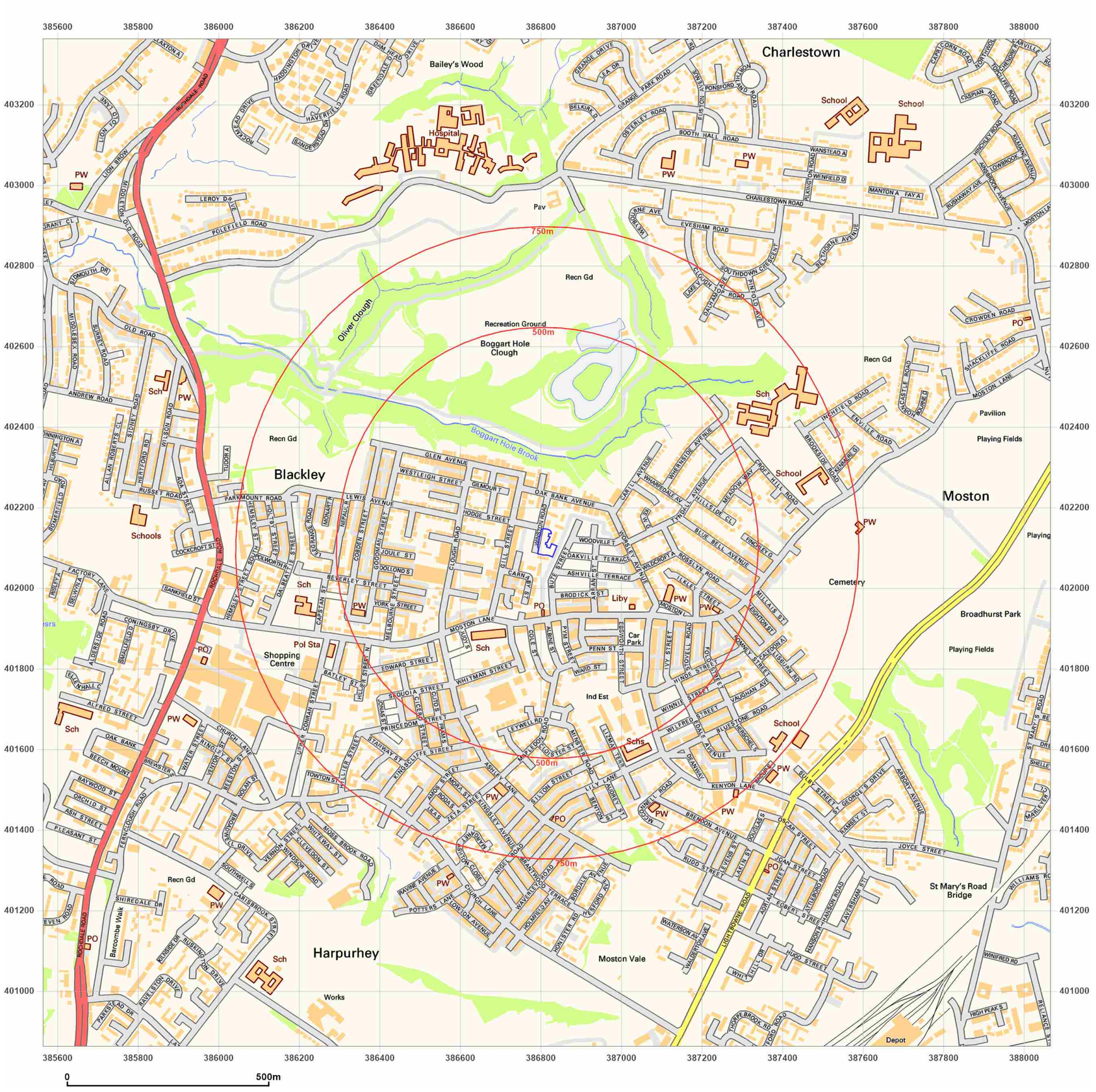
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Groundsure INSIGHTS

Site Details:

386801, 402117

Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

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2010

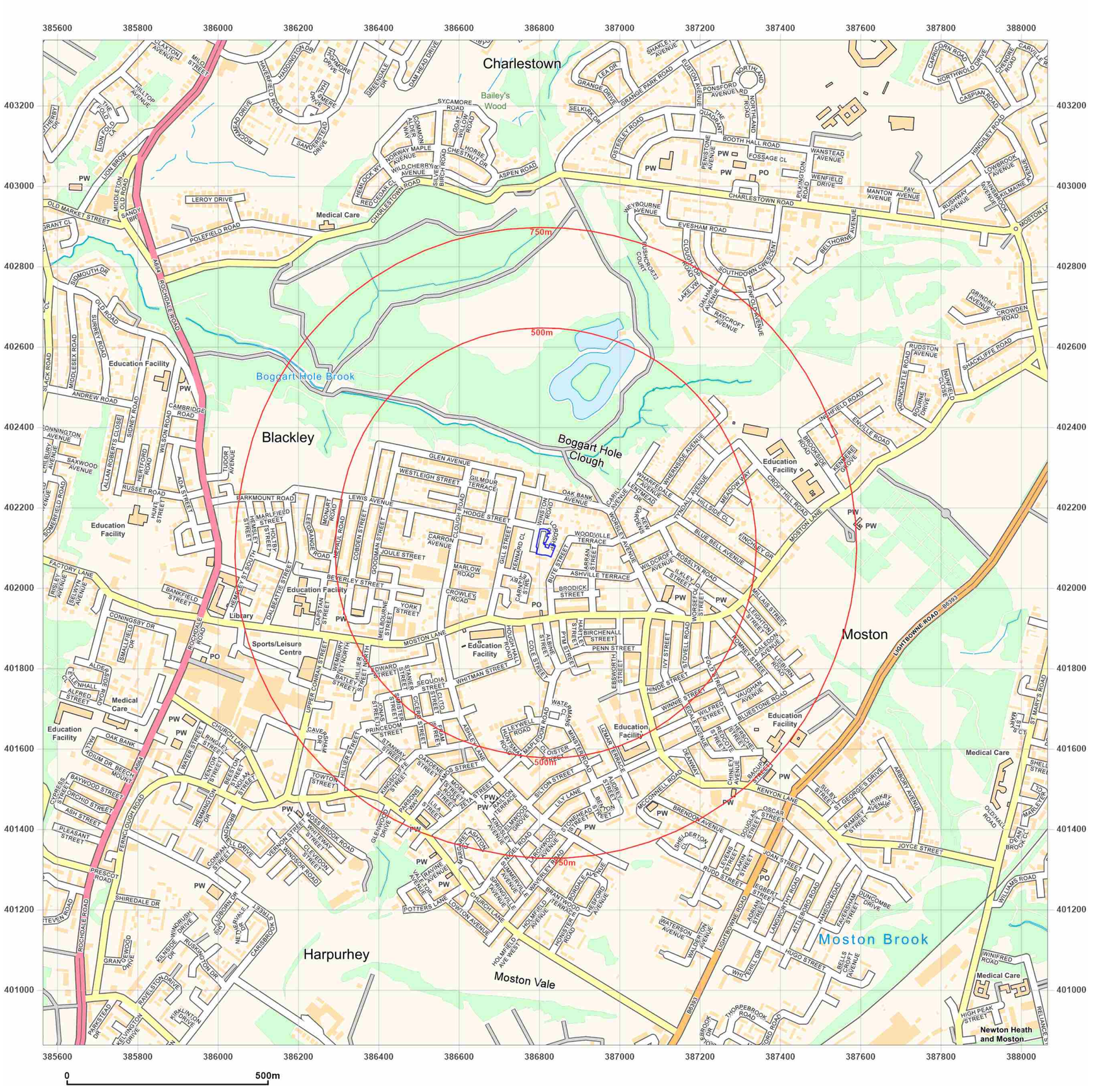
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Groundsure INSIGHTS

Site Details:

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Client Ref: 005320
Report Ref: GS-V6L-LMG-J22-4AC
Grid Ref: 386815, 402113

Map Name: National Grid

Map date: **2023**

Scale: 1:10,000

Printed at: 1:10,000

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2023

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Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

386801, 402117,

Order Details

Date: 26/06/2023

Your ref: 005320

Our Ref: GS-4JM-6JL-JPC-LOK

Site Details

Location: 386802 402096

Area: 0.19 ha

Authority: Manchester City Council ↗



Summary of findings p. 2 >

OS MasterMap site plan p.13 >

Aerial image p. 9 >

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

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
14 >	1.1 >	Historical industrial land uses >	0	0	12	39	-
16	1.2	Historical tanks	0	0	0	0	-
17 >	1.3 >	Historical energy features >	0	0	5	7	-
17	1.4	Historical petrol stations	0	0	0	0	-
18 >	1.5 >	Historical garages >	0	0	3	1	-
18	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
19 >	2.1 >	Historical industrial land uses >	0	0	20	45	-
22	2.2	Historical tanks	0	0	0	0	-
22 >	2.3 >	Historical energy features >	0	0	9	16	-
23	2.4	Historical petrol stations	0	0	0	0	-
24 >	2.5 >	Historical garages >	0	0	3	2	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
25	3.1	Active or recent landfill	0	0	0	0	-
25	3.2	Historical landfill (BGS records)	0	0	0	0	-
26	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
26 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	1	0	-
26	3.5	Historical waste sites	0	0	0	0	-
26 >	3.6 >	Licensed waste sites >	0	0	1	0	-
27 >	3.7 >	Waste exemptions >	0	0	2	12	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
29 >	4.1 >	Recent industrial land uses >	0	0	11	-	-
30	4.2	Current or recent petrol stations	0	0	0	0	-
30	4.3	Electricity cables	0	0	0	0	-
31	4.4	Gas pipelines	0	0	0	0	-
31	4.5	Sites determined as Contaminated Land	0	0	0	0	-

31	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
31	4.7	Regulated explosive sites	0	0	0	0	-
31	4.8	Hazardous substance storage/usage	0	0	0	0	-
32	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
32	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
32 >	**4.11 >**	**Licensed pollutant release (Part A(2)/B) >**	0	0	1	1	-
32	4.12	Radioactive Substance Authorisations	0	0	0	0	-
33	4.13	Licensed Discharges to controlled waters	0	0	0	0	-
33	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
33	4.15	Pollutant release to public sewer	0	0	0	0	-
33	4.16	List 1 Dangerous Substances	0	0	0	0	-
33	4.17	List 2 Dangerous Substances	0	0	0	0	-
34 >	**4.18 >**	**Pollution Incidents (EA/NRW) >**	0	0	0	1	-
34	4.19	Pollution inventory substances	0	0	0	0	-
34	4.20	Pollution inventory waste transfers	0	0	0	0	-
34	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	**Hydrogeology >**	On site	0-50m	50-250m	250-500m	500-2000m
36 >	**5.1 >**	**Superficial aquifer >**	Identified (within 500m)				
37 >	**5.2 >**	**Bedrock aquifer >**	Identified (within 500m)				
39 >	**5.3 >**	**Groundwater vulnerability >**	Identified (within 50m)				
40	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
40	5.5	Groundwater vulnerability- local information	None (within 0m)				
41 >	**5.6 >**	**Groundwater abstractions >**	0	0	0	0	2
42	5.7	Surface water abstractions	0	0	0	0	0
42	5.8	Potable abstractions	0	0	0	0	0
43	5.9	Source Protection Zones	0	0	0	0	-
43	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	**Hydrology >**	On site	0-50m	50-250m	250-500m	500-2000m
44 >	**6.1 >**	**Water Network (OS MasterMap) >**	0	0	3	-	-

45 >	6.2 >	Surface water features >	0	0	3	-	-
45 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
46 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
46 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-

Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
47	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
47	7.2	Historical Flood Events	0	0	0	-	-
47	7.3	Flood Defences	0	0	0	-	-
48	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
48	7.5	Flood Storage Areas	0	0	0	-	-
49	7.6	Flood Zone 2	None (within 50m)				
49	7.7	Flood Zone 3	None (within 50m)				

Page	Section	Surface water flooding >	
50 >	8.1 >	Surface water flooding >	1 in 1000 year, 0.1m - 0.3m (within 50m)

Page	Section	Groundwater flooding >	
52 >	9.1 >	Groundwater flooding >	Low (within 50m)

Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
53	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
54	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
54	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
54	10.4	Special Protection Areas (SPA)	0	0	0	0	0
54	10.5	National Nature Reserves (NNR)	0	0	0	0	0
55 >	10.6 >	Local Nature Reserves (LNR) >	0	0	1	0	0
55 >	10.7 >	Designated Ancient Woodland >	0	0	1	0	1
55	10.8	Biosphere Reserves	0	0	0	0	0
56	10.9	Forest Parks	0	0	0	0	0
56	10.10	Marine Conservation Zones	0	0	0	0	0
56	10.11	Green Belt	0	0	0	0	0
56	10.12	Proposed Ramsar sites	0	0	0	0	0

56	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
57	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
57	10.15	Nitrate Sensitive Areas	0	0	0	0	0
57 >	10.16 >	Nitrate Vulnerable Zones >	1	0	0	0	0
58 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
59	10.18	SSSI Units	0	0	0	0	0
Page	Section	**Visual and cultural designations >**	On site	0-50m	50-250m	250-500m	500-2000m
60	11.1	World Heritage Sites	0	0	0	-	-
61	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
61	11.3	National Parks	0	0	0	-	-
61 >	11.4 >	Listed Buildings >	0	0	1	-	-
62	11.5	Conservation Areas	0	0	0	-	-
62	11.6	Scheduled Ancient Monuments	0	0	0	-	-
62	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	**Agricultural designations >**	On site	0-50m	50-250m	250-500m	500-2000m
63 >	12.1 >	Agricultural Land Classification >	Urban (within 250m)				
64	12.2	Open Access Land	0	0	0	-	-
64	12.3	Tree Felling Licences	0	0	0	-	-
64	12.4	Environmental Stewardship Schemes	0	0	0	-	-
64	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	**Habitat designations >**	On site	0-50m	50-250m	250-500m	500-2000m
65 >	13.1 >	Priority Habitat Inventory >	0	0	8	-	-
66	13.2	Habitat Networks	0	0	0	-	-
66 >	13.3 >	Open Mosaic Habitat >	0	0	1	-	-
66	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
68 >	14.1 >	10k Availability >	Identified (within 500m)				
69 >	14.2 >	Artificial and made ground (10k) >	0	0	0	6	-
71 >	14.3 >	Superficial geology (10k) >	1	0	2	0	-

72	14.4	Landslip (10k)	0	0	0	0	-
73 >	14.5 >	Bedrock geology (10k) >	1	1	1	3	-
74 >	14.6 >	Bedrock faults and other linear features (10k) >	0	0	4	6	-
Page	Section	**Geology 1:50,000 scale** >	On site	0-50m	50-250m	250-500m	500-2000m
75 >	15.1 >	50k Availability >	Identified (within 500m)				
76	15.2	Artificial and made ground (50k)	0	0	0	0	-
76	15.3	Artificial ground permeability (50k)	0	0	-	-	-
77 >	15.4 >	Superficial geology (50k) >	1	0	2	0	-
78 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
78	15.6	Landslip (50k)	0	0	0	0	-
78	15.7	Landslip permeability (50k)	None (within 50m)				
79 >	15.8 >	Bedrock geology (50k) >	1	1	1	3	-
80 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
80 >	15.10 >	Bedrock faults and other linear features (50k) >	0	0	4	6	-
Page	Section	**Boreholes** >	On site	0-50m	50-250m	250-500m	500-2000m
82 >	16.1 >	BGS Boreholes >	0	0	2	-	-
Page	Section	**Natural ground subsidence** >					
84 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
85 >	17.2 >	Running sands >	Very low (within 50m)				
86 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
87 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
88 >	17.5 >	Landslides >	Very low (within 50m)				
89 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	**Mining and ground workings** >	On site	0-50m	50-250m	250-500m	500-2000m
91 >	18.1 >	BritPits >	0	0	0	1	-
92 >	18.2 >	Surface ground workings >	0	2	10	-	-
93	18.3	Underground workings	0	0	0	0	0
93	18.4	Underground mining extents	0	0	0	0	-
93 >	18.5 >	Historical Mineral Planning Areas >	0	0	0	1	-

93	18.6	Non-coal mining	0	0	0	0	0
94	18.7	JPB mining areas	None (within 0m)				
94	18.8	The Coal Authority non-coal mining	0	0	0	0	-
94	18.9	Researched mining	0	0	0	0	-
94	18.10	Mining record office plans	0	0	0	0	-
95	18.11	BGS mine plans	0	0	0	0	-
95 >	**18.12 >**	**Coal mining >**	Identified (within 0m)				
95	18.13	Brine areas	None (within 0m)				
95	18.14	Gypsum areas	None (within 0m)				
96	18.15	Tin mining	None (within 0m)				
96	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
97	19.1	Natural cavities	0	0	0	0	-
97	19.2	Mining cavities	0	0	0	0	0
97	19.3	Reported recent incidents	0	0	0	0	-
97	19.4	Historical incidents	0	0	0	0	-
98	19.5	National karst database	0	0	0	0	-
Page	Section	**Radon >**					
99 >	**20.1 >**	**Radon >**	Less than 1% (within 0m)				
Page	Section	**Soil chemistry >**	On site	0-50m	50-250m	250-500m	500-2000m
101 >	**21.1 >**	**BGS Estimated Background Soil Chemistry >**	1	0	-	-	-
101	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
101	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
102	22.1	Underground railways (London)	0	0	0	-	-
102	22.2	Underground railways (Non-London)	0	0	0	-	-
102	22.3	Railway tunnels	0	0	0	-	-
102	22.4	Historical railway and tunnel features	0	0	0	-	-
102	22.5	Royal Mail tunnels	0	0	0	-	-

103	22.6	Historical railways	0	0	0	-	-
103	22.7	Railways	0	0	0	-	-
103	22.8	Crossrail 1	0	0	0	0	-
103	22.9	Crossrail 2	0	0	0	0	-
103	22.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 22/04/2019

Site Area: 0.19ha

Recent site history - 2015 aerial photograph



Capture Date: 11/06/2015

Site Area: 0.19ha

Recent site history - 2009 aerial photograph



Capture Date: 02/06/2009

Site Area: 0.19ha

Recent site history - 2000 aerial photograph



Capture Date: 19/06/2000

Site Area: 0.19ha

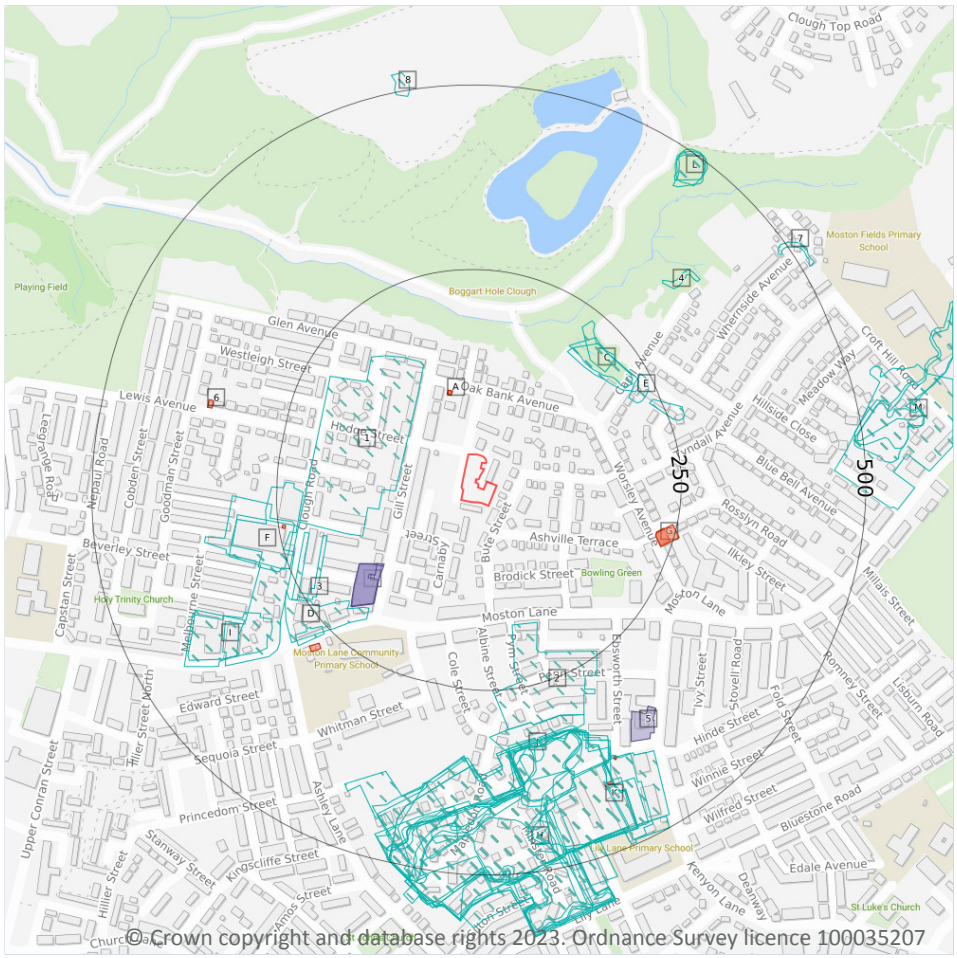
OS MasterMap site plan



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Site Area: 0.19ha

1 Past land use



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1.1 Historical industrial land uses

Records within 500m	51

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	85m NW	Rope Walk	1891	641269

ID	Location	Land use	Dates present	Group ID
2	165m S	Sawmills	1906	664360
C	182m NE	Unspecified Pit	1915 - 1923	722559
C	188m NE	Unspecified Pit	1933	764616
3	188m W	Rope Walks	1906	682943
D	193m SW	Unspecified Works	1923	679097
C	195m NE	Unspecified Pit	1956 - 1988	741108
E	211m NE	Refuse Heap	1933	678173
F	214m W	Unspecified Commercial/Industrial	1933	751525
F	223m W	Unspecified Works	1966 - 1988	780586
F	228m W	Unspecified Works	1915	719047
E	235m NE	Unspecified Pit	1956	691237
D	255m SW	Workhouse	1851	641723
H	299m S	Brick Works	1906	709015
I	304m SW	Soap Works	1915 - 1923	767104
H	318m S	Brick Works	1915	726635
J	320m S	Refuse Heap	1956 - 1966	712701
H	321m S	Brick Works	1956	742317
H	322m S	Unspecified Pit	1906	701556
H	323m S	Railway Sidings	1933 - 1938	703998
H	323m S	Brick Works	1938	790136
H	323m S	Brick Works	1933	765780
J	325m S	Unspecified Ground Workings	1938	648411
H	326m S	Brick Works	1923	706430
H	326m S	Unspecified Pit	1923	764321
H	327m S	Unspecified Pit	1933	764726
J	332m S	Unspecified Pit	1906	752168
I	335m SW	Unspecified Works	1980	679096
4	338m NE	Unspecified Ground Workings	1988	648413

ID	Location	Land use	Dates present	Group ID
K	377m SE	Industrial Estate	1988	652322
K	381m SE	Unspecified Works	1975	679095
H	388m S	Unspecified Ground Workings	1938	711082
H	390m S	Unspecified Ground Workings	1966	778694
H	393m S	Refuse Pit	1956	682318
H	408m S	Refuse Heap	1966	678180
H	410m S	Unspecified Ground Workings	1966	710655
H	418m S	Unspecified Heap	1938	651109
H	421m S	Refuse Heap	1956	678178
H	431m S	Unspecified Pit	1933	759869
L	448m NE	Unspecified Pit	1923	760921
L	455m NE	Unspecified Pit	1915	737523
M	458m E	Brick Works	1906	668983
L	458m NE	Unspecified Pit	1933 - 1938	781338
H	473m S	Unspecified Ground Workings	1938	648407
7	485m NE	Unspecified Ground Workings	1966	648412
H	488m S	Unspecified Ground Workings	1938	648408
M	488m E	Old Clay Pit	1915 - 1923	729971
M	490m E	Unspecified Pit	1906	768390
8	492m N	Cuttings	1933	642730
M	493m E	Unspecified Pit	1933 - 1938	766449
H	498m S	Refuse Heap	1956	678179

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	0

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 un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	**12**

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 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
A	83m N	Electricity Substation	1981 - 1992	49236
A	84m N	Electricity Substation	1981	54600
G	226m E	Electricity Substation	1993	50684
G	226m E	Electricity Substation	1950	58906
F	240m W	Electricity Substation	1981 - 1992	53562
D	273m SW	Electricity Substation	1979 - 1992	52165
6	352m W	Electricity Substation	1971 - 1992	52653
K	379m SE	Electricity Substation	1985	56117
K	380m SE	Electricity Substation	1988 - 1989	54150
K	381m SE	Electricity Substation	1992	52896
K	408m SE	Electricity Substation	1950 - 1951	49787
K	408m SE	Electricity Substation	1979	51780

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 un-grouped 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 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
B	136m SW	Garage	1985	17215
B	138m SW	Garage	1992	16845
B	144m SW	Garage	1989	15459
5	339m SE	Garage	1971 - 1988	17406

This data is sourced from Ordnance Survey / Groundsure.

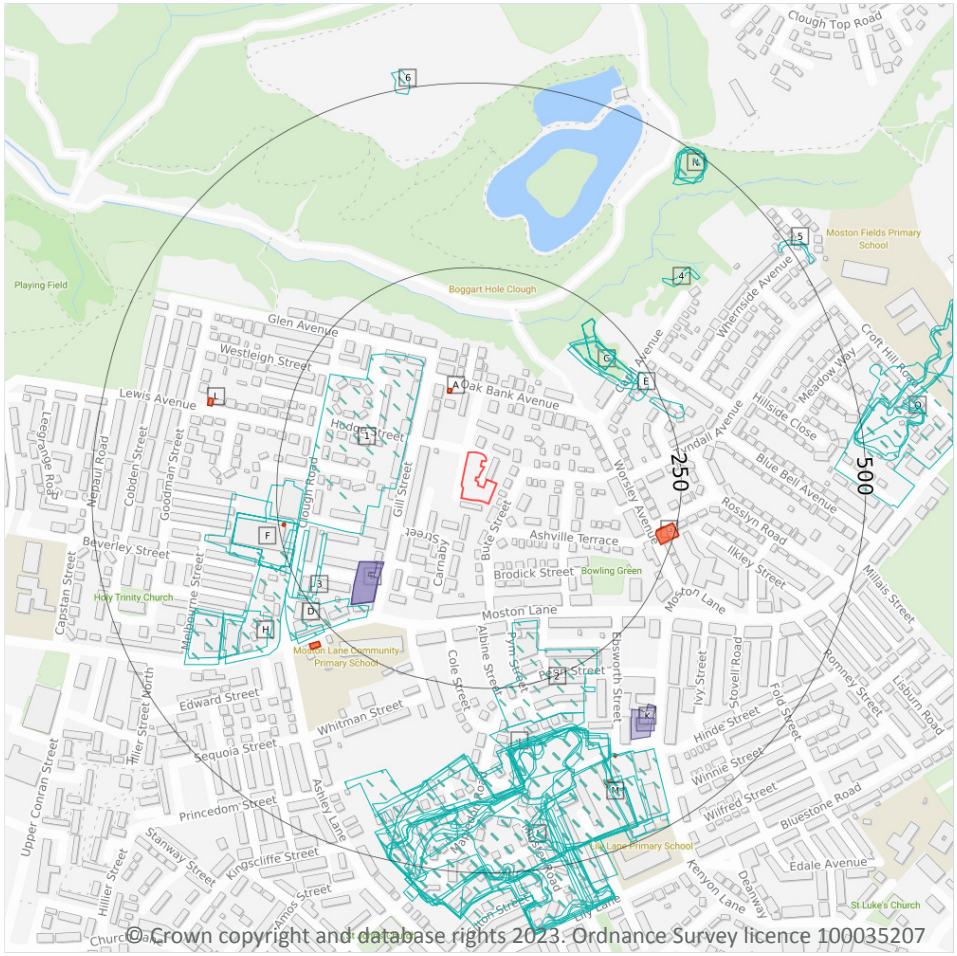
1.6 Historical military land

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 energy features

Historical garages

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2.1 Historical industrial land uses

Records within 500m	65

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

Features are displayed on the Past land use - un-grouped map on **page 19 >**

ID	Location	Land Use	Date	Group ID
1	85m NW	Rope Walk	1891	641269
2	165m S	Sawmills	1906	664360
C	182m NE	Unspecified Pit	1923	722559

ID	Location	Land Use	Date	Group ID
C	188m NE	Unspecified Pit	1933	764616
3	188m W	Rope Walks	1906	682943
C	188m NE	Unspecified Pit	1915	722559
D	193m SW	Unspecified Works	1923	679097
C	195m NE	Unspecified Pit	1980	741108
C	195m NE	Unspecified Pit	1966	741108
C	195m NE	Unspecified Pit	1988	741108
C	195m NE	Unspecified Pit	1975	741108
C	195m NE	Unspecified Pit	1956	741108
E	211m NE	Refuse Heap	1933	678173
F	214m W	Unspecified Commercial/Industrial	1933	751525
F	223m W	Unspecified Works	1980	780586
F	223m W	Unspecified Works	1966	780586
F	223m W	Unspecified Works	1988	780586
F	223m W	Unspecified Works	1975	780586
F	228m W	Unspecified Works	1915	719047
E	235m NE	Unspecified Pit	1956	691237
H	253m SW	Unspecified Commercial/Industrial	1933	751525
D	255m SW	Workhouse	1851	641723
I	299m S	Brick Works	1906	709015
H	304m SW	Soap Works	1915	767104
I	318m S	Brick Works	1915	726635
J	320m S	Refuse Heap	1966	712701
I	321m S	Brick Works	1956	742317
I	322m S	Unspecified Pit	1906	701556
I	323m S	Brick Works	1938	790136
I	323m S	Railway Sidings	1938	703998
I	323m S	Brick Works	1933	765780

ID	Location	Land Use	Date	Group ID
J	325m S	Unspecified Ground Workings	1938	648411
I	326m S	Brick Works	1923	706430
I	326m S	Unspecified Pit	1923	764321
I	327m S	Unspecified Pit	1933	764726
J	327m S	Refuse Heap	1956	712701
J	332m S	Unspecified Pit	1906	752168
H	335m SW	Unspecified Works	1980	679096
4	338m NE	Unspecified Ground Workings	1988	648413
H	360m SW	Soap Works	1923	767104
M	377m SE	Industrial Estate	1988	652322
M	381m SE	Unspecified Works	1975	679095
I	388m S	Unspecified Ground Workings	1938	711082
I	390m S	Unspecified Ground Workings	1966	778694
I	393m S	Refuse Pit	1956	682318
I	402m S	Railway Sidings	1933	703998
I	408m S	Refuse Heap	1966	678180
I	410m S	Unspecified Ground Workings	1966	710655
I	418m S	Unspecified Heap	1938	651109
I	421m S	Refuse Heap	1956	678178
I	431m S	Unspecified Pit	1933	759869
N	448m NE	Unspecified Pit	1923	760921
N	455m NE	Unspecified Pit	1915	737523
O	458m E	Brick Works	1906	668983
N	458m NE	Unspecified Pit	1933	781338
N	459m NE	Unspecified Pit	1938	781338
I	473m S	Unspecified Ground Workings	1938	648407
5	485m NE	Unspecified Ground Workings	1966	648412
I	488m S	Unspecified Ground Workings	1938	648408

ID	Location	Land Use	Date	Group ID
O	488m E	Old Clay Pit	1923	729971
O	489m E	Old Clay Pit	1915	729971
O	490m E	Unspecified Pit	1906	768390
6	492m N	Cuttings	1933	642730
O	493m E	Unspecified Pit	1933	766449
I	498m S	Refuse Heap	1956	678179

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**0**

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'.

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**25**

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

Features are displayed on the Past land use - un-grouped map on **page 19 >**

ID	Location	Land Use	Date	Group ID
A	83m N	Electricity Substation	1992	49236
A	84m N	Electricity Substation	1981	54600
A	85m N	Electricity Substation	1981	49236
G	226m E	Electricity Substation	1993	50684
G	226m E	Electricity Substation	1950	58906
G	226m E	Electricity Substation	1950	58906
F	240m W	Electricity Substation	1981	53562

ID	Location	Land Use	Date	Group ID
F	241m W	Electricity Substation	1992	53562
F	241m W	Electricity Substation	1981	53562
D	273m SW	Electricity Substation	1989	52165
D	274m SW	Electricity Substation	1992	52165
D	274m SW	Electricity Substation	1979	52165
D	274m SW	Electricity Substation	1985	52165
L	352m W	Electricity Substation	1992	52653
L	353m W	Electricity Substation	1971	52653
L	353m W	Electricity Substation	1986	52653
M	379m SE	Electricity Substation	1985	56117
M	380m SE	Electricity Substation	1989	54150
M	380m SE	Electricity Substation	1988	54150
M	381m SE	Electricity Substation	1992	52896
M	408m SE	Electricity Substation	1950	49787
M	408m SE	Electricity Substation	1951	49787
M	408m SE	Electricity Substation	1979	51780
M	408m SE	Electricity Substation	1950	49787
M	408m SE	Electricity Substation	1951	49787

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

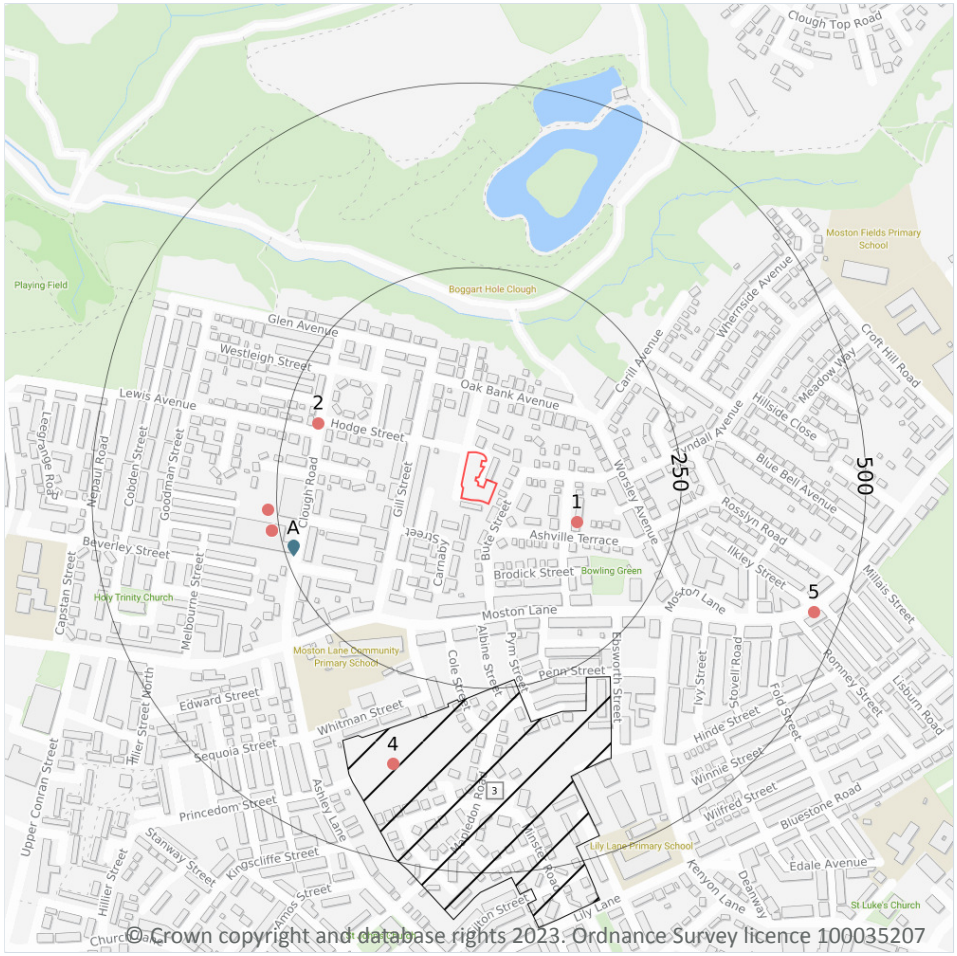
Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 19 >**

ID	Location	Land Use	Date	Group ID
B	136m SW	Garage	1985	17215
B	138m SW	Garage	1992	16845
B	144m SW	Garage	1989	15459
K	339m SE	Garage	1971	17406
K	352m SE	Garage	1988	17406

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



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Site Outline

Search buffers in metres (m)

Historical landfill (EA/NRW)

Licensed waste sites

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	1

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

Features are displayed on the Waste and landfill map on **page 25 >**

ID	Location	Details		
3	240m S	Site Address: Land at Moston College, Lizmar Terrace, Harpurhey, Manchester, Greater Manchester Licence Holder Address: -	Waste Licence: - Site Reference: F019 Waste Type: Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded 31/12/1947 Last Recorded: -

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	1

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

Features are displayed on the Waste and landfill map on **page 25 >**

ID	Location	Details		
A	237m W	Site Name: L & M Peugeot & Citroen Spares Site Address: Unit 1, Brookside Works, Clough Road, Manchester, M9 4FP Correspondence Address: -	Type of Site: ELV Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GRA005 EPR reference: EA/EPR/GP3294CH/A001 Operator: Grant Leslie Waste Management licence No: 50306 Annual Tonnage: 2500	Issue Date: 14/06/2004 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Part revoke

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

3.7 Waste exemptions

Records within 500m **14**

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.

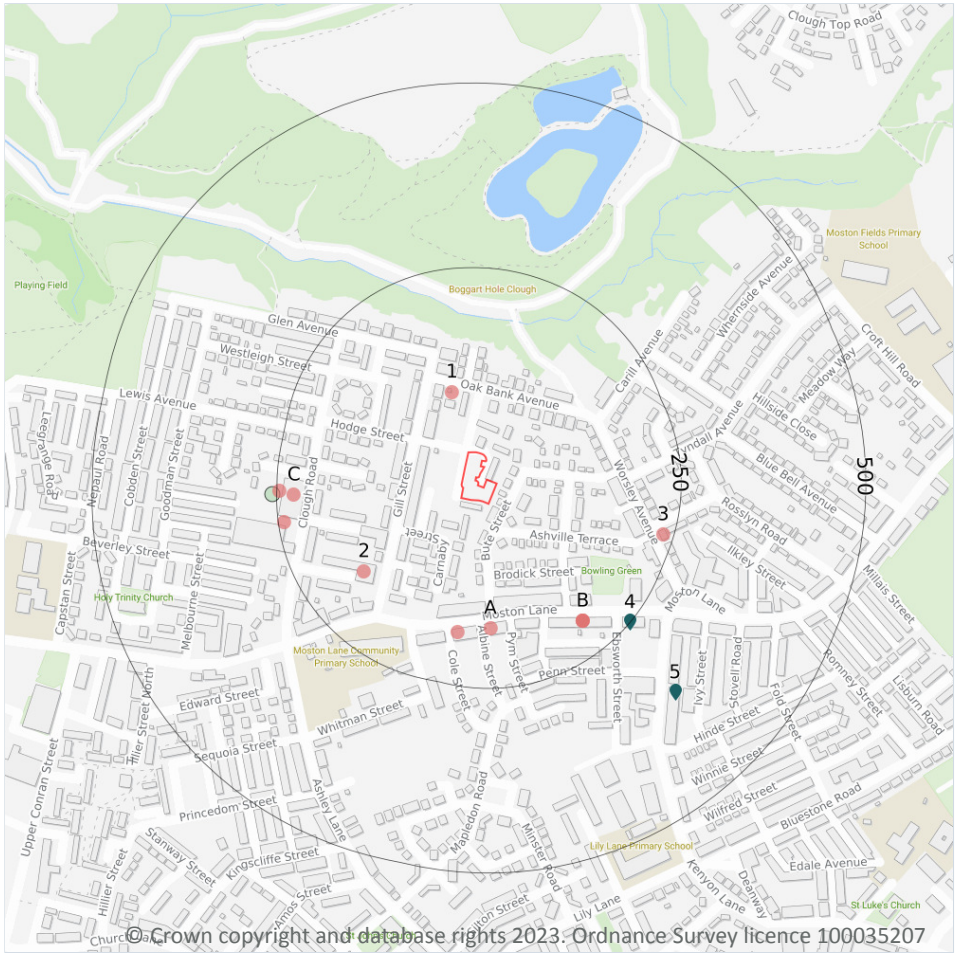
Features are displayed on the Waste and landfill map on **page 25 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	120m SE	WOODVILLE GARDENS (HOUSING DEVELOPMENT), ASHVILLE TERRACE, MOSTON, MANCHESTER, M40 9NN	WEX091117	Using waste exemption	Not on a farm	Use of waste in construction
2	207m W	Unit 4 Brookside Works Clough Road Manchester Manchester M9 4FP	EPR/YF0201TG/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place
A	261m W	Unit 2 Whitehouse Works Clough Road MANCHESTER M9 4FP	EPR/MH0915DX/A001	Treating waste exemption	Non-Agricultural Waste Only	Mechanical treatment of end-of-life tyres
A	261m W	Unit 2 Whitehouse Works Clough Road MANCHESTER M9 4FP	EPR/MH0915DX/A001	Using waste exemption	Non-Agricultural Waste Only	Use of baled end-of-life tyres in construction
A	261m W	Unit 1 Whitehouse Works Clough Road MANCHESTER M9 4FP	EPR/RH0877UC/A001	Treating waste exemption	Non-Agricultural Waste Only	Physical treatment of waste edible oil and fat to produce biodiesel
A	261m W	Unit 1 Whitehouse Works Clough Road MANCHESTER M9 4FP	EPR/RH0877UC/A001	Treating waste exemption	Non-Agricultural Waste Only	Mechanical treatment of end-of-life tyres

ID	Location	Site	Reference	Category	Sub-Category	Description
A	261m W	Unit 1 Whitehouse Works Clough Road MANCHESTER M9 4FP	EPR/RH0877UC/A001	Using waste exemption	Non-Agricultural Waste Only	Use of baled end-of-life tyres in construction
A	261m W	Unit 1 Whitehouse Works Clough Road MANCHESTER M9 4FP	EPR/RH0877UC/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste derived biodiesel as fuel
A	261m W	Unit 2 Whitehouse Works Clough Road MANCHESTER M9 4FP	EPR/WH0574NJ/A001	Treating waste exemption	Non-Agricultural Waste Only	Physical treatment of waste edible oil and fat to produce biodiesel
A	261m W	Unit 2 Whitehouse Works Clough Road MANCHESTER M9 4FP	EPR/WH0574NJ/A001	Treating waste exemption	Non-Agricultural Waste Only	Mechanical treatment of end-of-life tyres
A	261m W	Unit 2 Whitehouse Works Clough Road MANCHESTER M9 4FP	EPR/WH0574NJ/A001	Using waste exemption	Non-Agricultural Waste Only	Use of baled end-of-life tyres in construction
A	262m W	Unit 4b Clough Road, Brookside Works, Manchester, M9 4FP	EA/EPR/VP3840KK/A001	Treating waste exemption	Non-Agricultural waste only	Repair or refurbishment of WEEE
4	373m S	Former college campus. Imported soil from our nearby demolition site being used to landscape part of the site.	WEX268490	Using waste exemption	Not on a farm	Use of waste in construction
5	464m E	380 Moston Lane MANCHESTER M40 9LX	EPR/RF0102NA/A001	Treating waste exemption	Non-Agricultural Waste Only	Sorting and de-naturing of controlled drugs for disposal

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

4 Current industrial land use



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Site Outline

Search buffers in metres (m)

Recent industrial land uses

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

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	11

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 29 >**

ID	Location	Company	Address	Activity	Category
1	85m N	Electricity Sub Station	Greater Manchester, M9	Electrical Features	Infrastructure and Facilities
2	165m SW	Moston M O T Centre	1-9, Gill Street, Manchester, Greater Manchester, M9 4HA	Vehicle Repair, Testing and Servicing	Repair and Servicing

ID	Location	Company	Address	Activity	Category
A	168m S	City Biz Communications	248, Moston Lane, Manchester, Greater Manchester, M40 9WF	Published Goods	Industrial Products
A	178m S	Divine Bedding & Home Appliances	234, Moston Lane, Manchester, Greater Manchester, M40 9WT	Beds and Bedding	Consumer Products
B	203m SE	Total Bird Control	290, Moston Lane, Manchester, Greater Manchester, M40 9WB	Pest and Vermin Control	Contract Services
B	203m SE	Fonis Print	290, Moston Lane, Manchester, Greater Manchester, M40 9WB	Published Goods	Industrial Products
B	203m SE	Fonis Integrated Solutions	290, Moston Lane, Manchester, Greater Manchester, M40 9WB	Published Goods	Industrial Products
C	227m W	Bromley Transport Services	Unit 2 Brookside Works, Clough Road, Manchester, Greater Manchester, M9 4FP	Vehicle Repair, Testing and Servicing	Repair and Servicing
3	236m E	Electricity Sub Station	Greater Manchester, M40	Electrical Features	Infrastructure and Facilities
C	242m W	Electricity Sub Station	Greater Manchester, M9	Electrical Features	Infrastructure and Facilities
C	247m W	Works	Greater Manchester, M9	Unspecified Works Or Factories	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	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	0

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

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

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

Records within 500m	2

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 29 >**

ID	Location	Address	Details	
4	249m SE	As New Dry Cleaners, 312 Moston Lane, Moston, Manchester M40 9WB	Process: Dry Cleaning Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
5	359m SE	Kenyon Lane Dry Cleaners, 31 Kenyon Lane, Moston, Manchester M40 9JG	Process: Dry Cleaning Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement 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 29 >**

ID	Location	Details	
C	255m W	Incident Date: 03/04/2001 Incident Identification: 1430 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

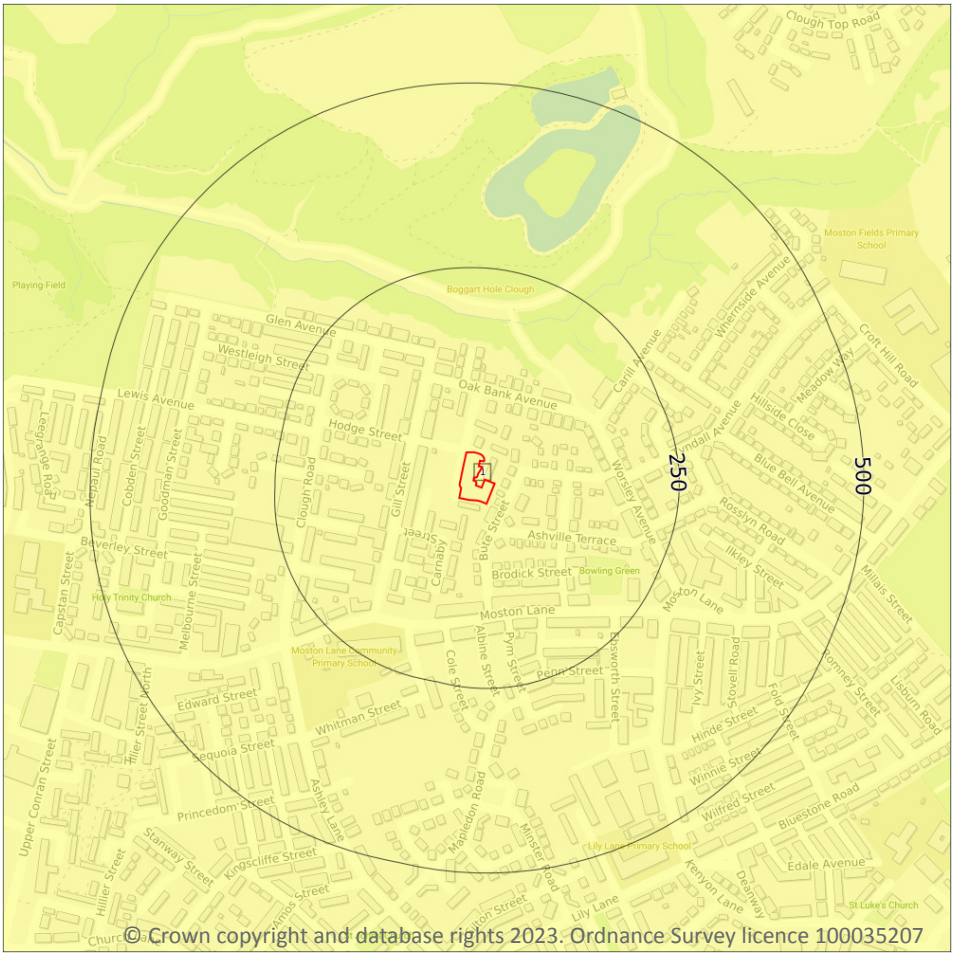
4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer



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5.1 Superficial aquifer

Records within 500m	1

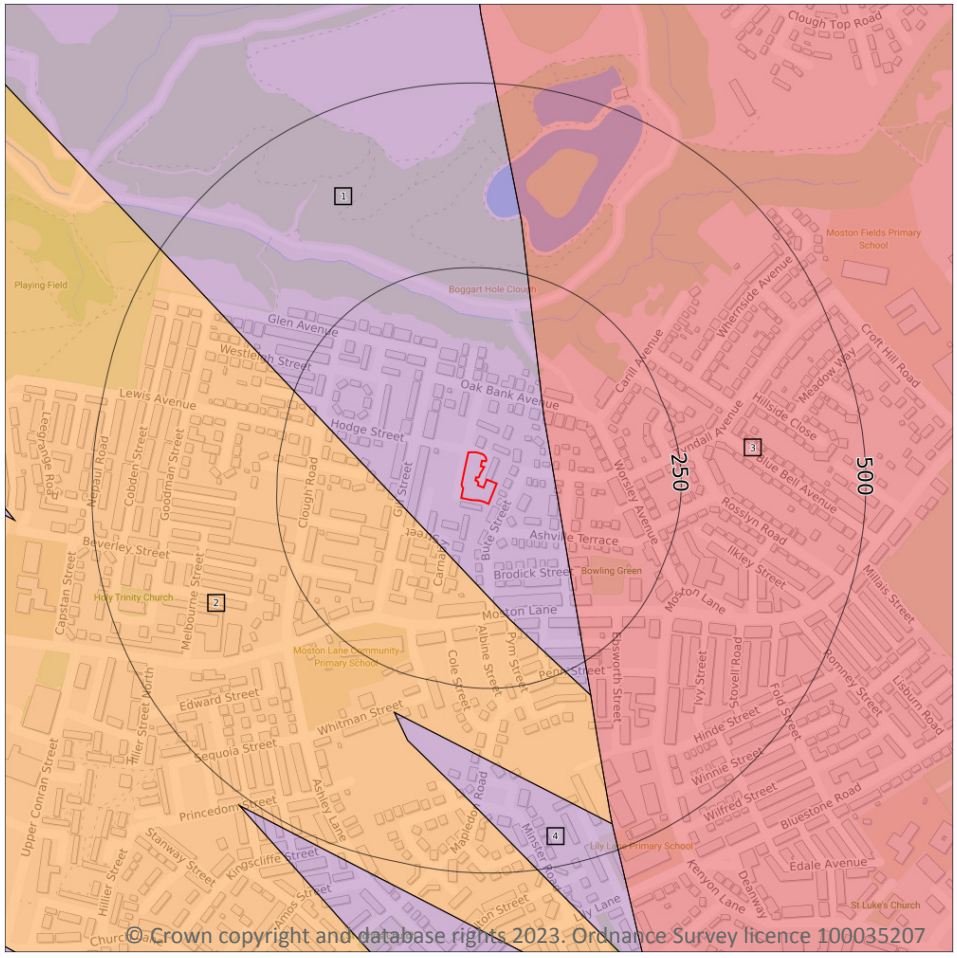
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 36 >**

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

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

Bedrock aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

5.2 Bedrock aquifer

Records within 500m	4

Aquifer status of groundwater held within bedrock geology.

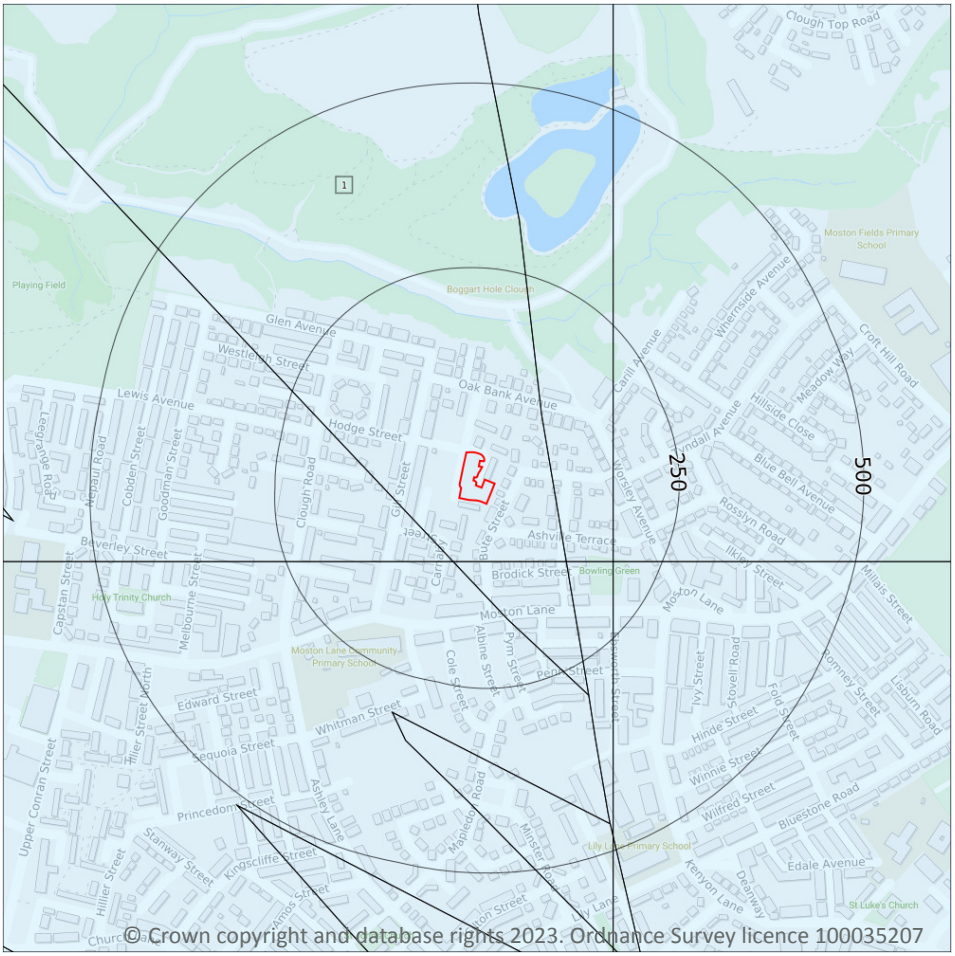
Features are displayed on the Bedrock aquifer map on **page 37 >**

ID	Location	Designation	Description
1	**On site**	**Principal**	**Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers**
2	65m SW	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers

ID	Location	Designation	Description
3	78m E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	304m S	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	1

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 39 >**

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

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.

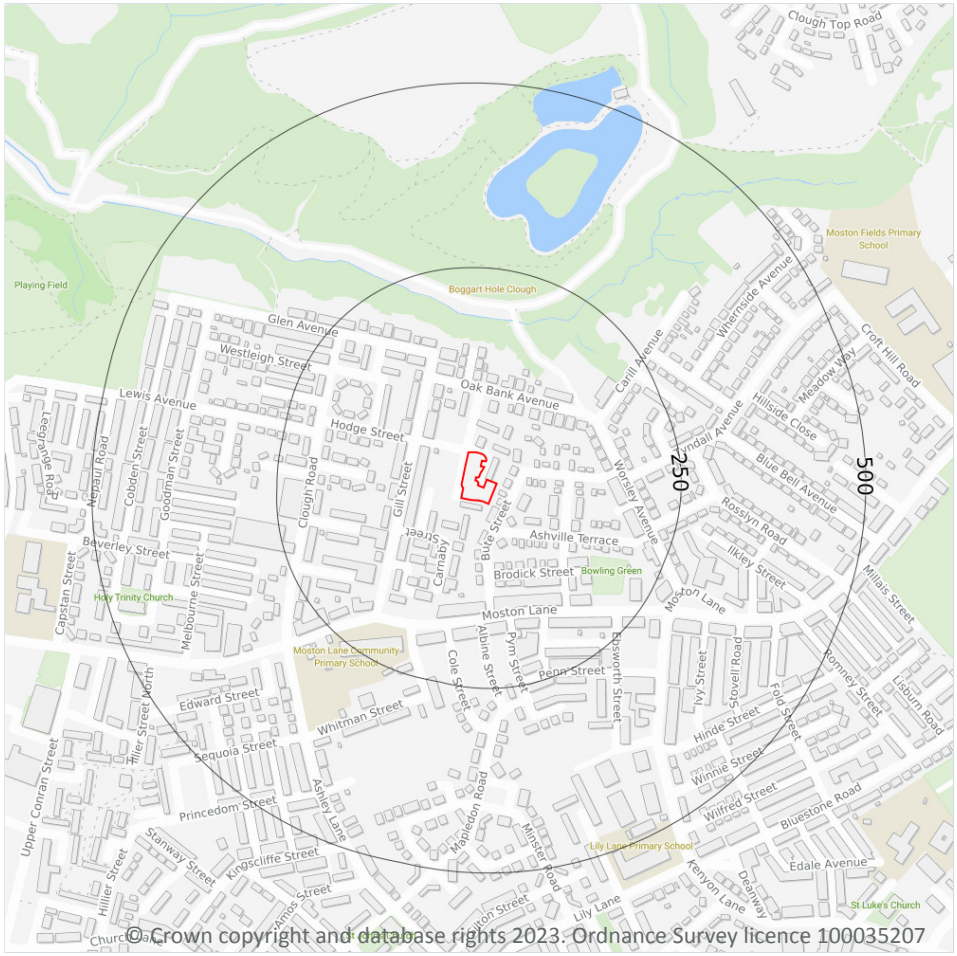
5.5 Groundwater vulnerability- local information

Records on site	0

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



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- 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
- 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	2

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 41 >**

ID	Location	Details	
-	1952m NW	Status: Historical Licence No: 2569005012 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT BLACKLEY, MANCHESTER" Data Type: Point Name: AVECIA LTD Easting: 385000 Northing: 402900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 23/05/1994 Expiry Date: - Issue No: 101 Version Start Date: 01/07/1999 Version End Date: -
-	1952m NW	Status: Historical Licence No: 2569005012 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT BLACKLEY, MANCHESTER Data Type: Point Name: AVECIA LTD Easting: 385000 Northing: 402900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 23/05/1994 Expiry Date: - Issue No: 101 Version Start Date: 01/07/1999 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**0**

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

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

5.8 Potable abstractions

Records within 2000m	**0**

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.

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

5.9 Source Protection Zones

Records within 500m	0

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.

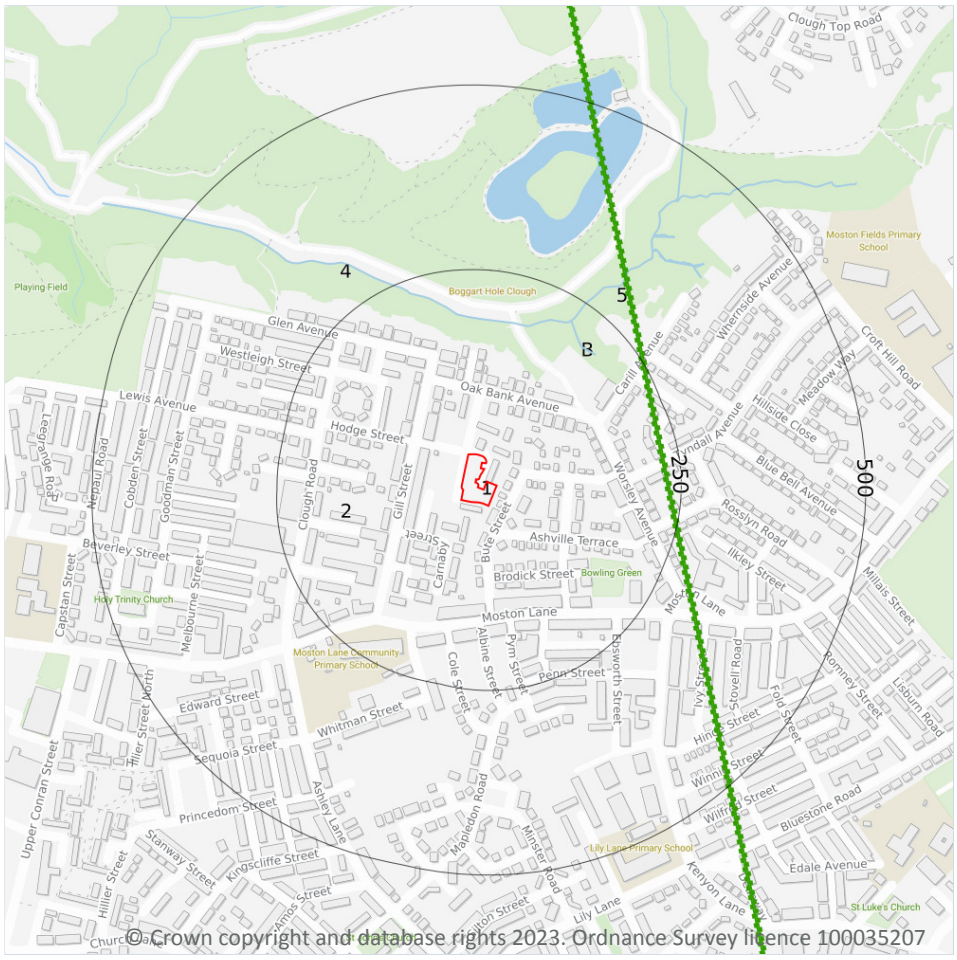
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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



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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	3

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

Features are displayed on the Hydrology map on **page 44 >**

ID	Location	Type of water feature	Ground level	Permanence	Name
4	182m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Boggart Hole Brook

ID	Location	Type of water feature	Ground level	Permanence	Name
B	199m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
5	219m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Boggart Hole Brook

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	**3**

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

Features are displayed on the Hydrology map on **page 44 >**

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 44 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	**On site**	**River**	**Irk (Wince to Irwell)**	**GB112069061131**	**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 44 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	945m S	River	Irk (Wince to Irwell)	GB112069061131 ↗	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 44 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	**On site**	**Manchester and East Cheshire Permo-Triassic Sandstone Aquifers**	**GB41201G101100 ↗**	**Poor**	**Poor**	**Poor**	**2019**

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

7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m	0

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

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

7.2 Historical Flood Events

Records within 250m	0

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

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

7.3 Flood Defences

Records within 250m	0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

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

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

7.5 Flood Storage Areas

Records within 250m	0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

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

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

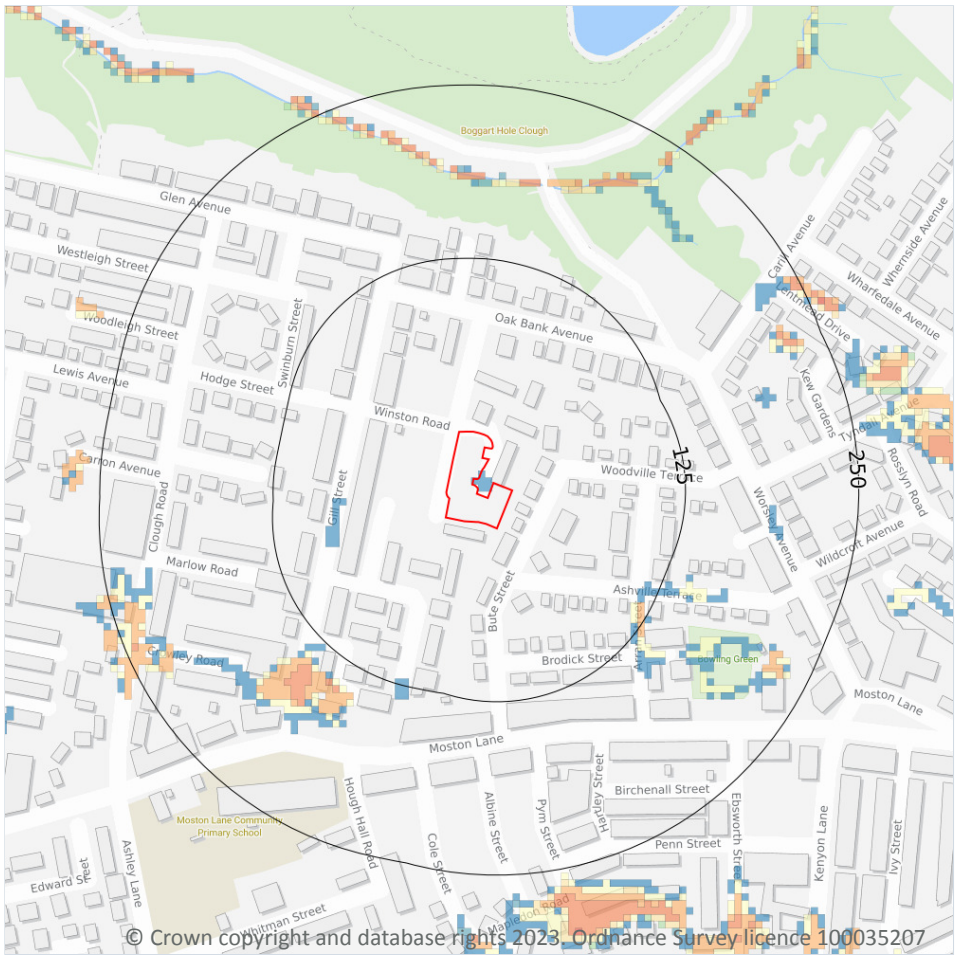
7.7 Flood Zone 3

Records within 50m	0

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

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

8 Surface water flooding



Site Outline

Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site	**1 in 1000 year, 0.1m - 0.3m**
Highest risk within 50m	**1 in 1000 year, 0.1m - 0.3m**

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 50 >**

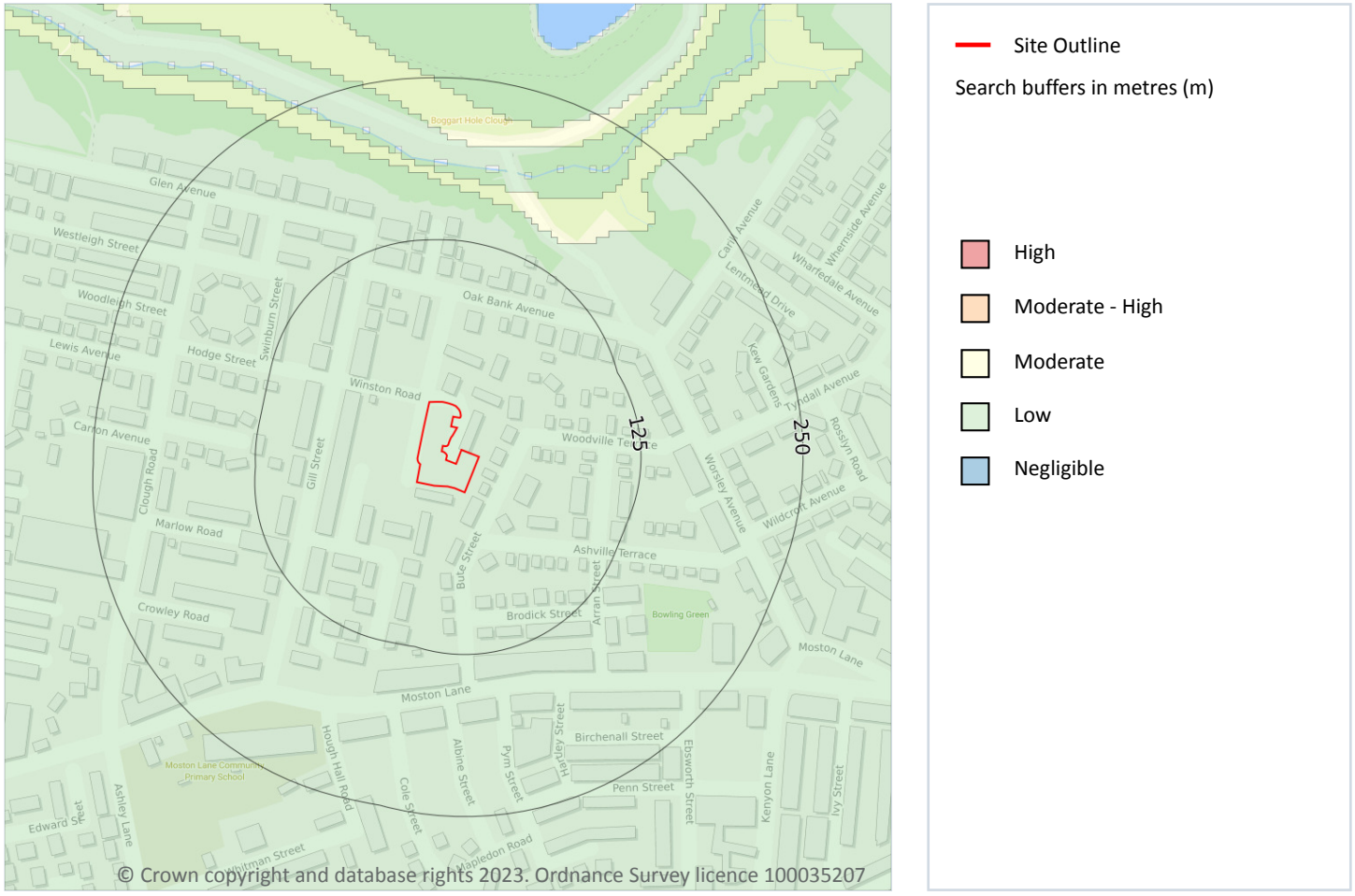
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on

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 0.1m and 0.3m
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiental 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 52 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m	0

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	1

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.

Features are displayed on the Environmental designations map on **page 53 >**

ID	Location	Name	Data source
1	125m NE	Boggart Hole Clough	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m	2

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.

Features are displayed on the Environmental designations map on **page 53 >**

ID	Location	Name	Woodland Type
2	129m NE	Boggart Hole Clough	Ancient & Semi-Natural Woodland
3	928m N	Unknown	Ancient & Semi-Natural Woodland

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	0

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

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

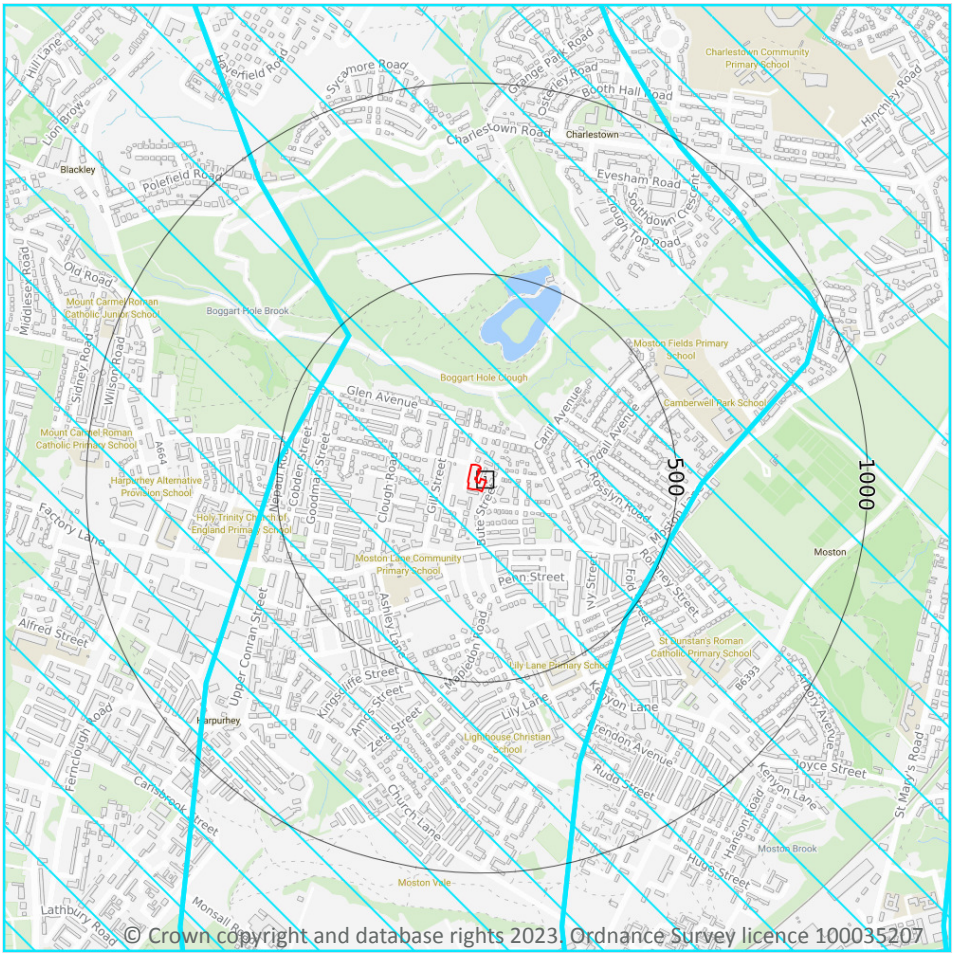
Records within 2000m	1

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
On site	**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



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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 58 >**

ID	Location	Type of developments requiring consultation
1	**On site**	**Infrastructure - Airports, helipads and other aviation proposals. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t). Combustion - General combustion processes >50mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	**0**

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

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

11 Visual and cultural designations



Site Outline

Search buffers in metres (m)

- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	1

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

Features are displayed on the Visual and cultural designations map on **page 60 >**

ID	Location	Name	Grade	Reference Number	Listed date
1	241m S	Hough Hall	II	1218710	03/10/1974

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

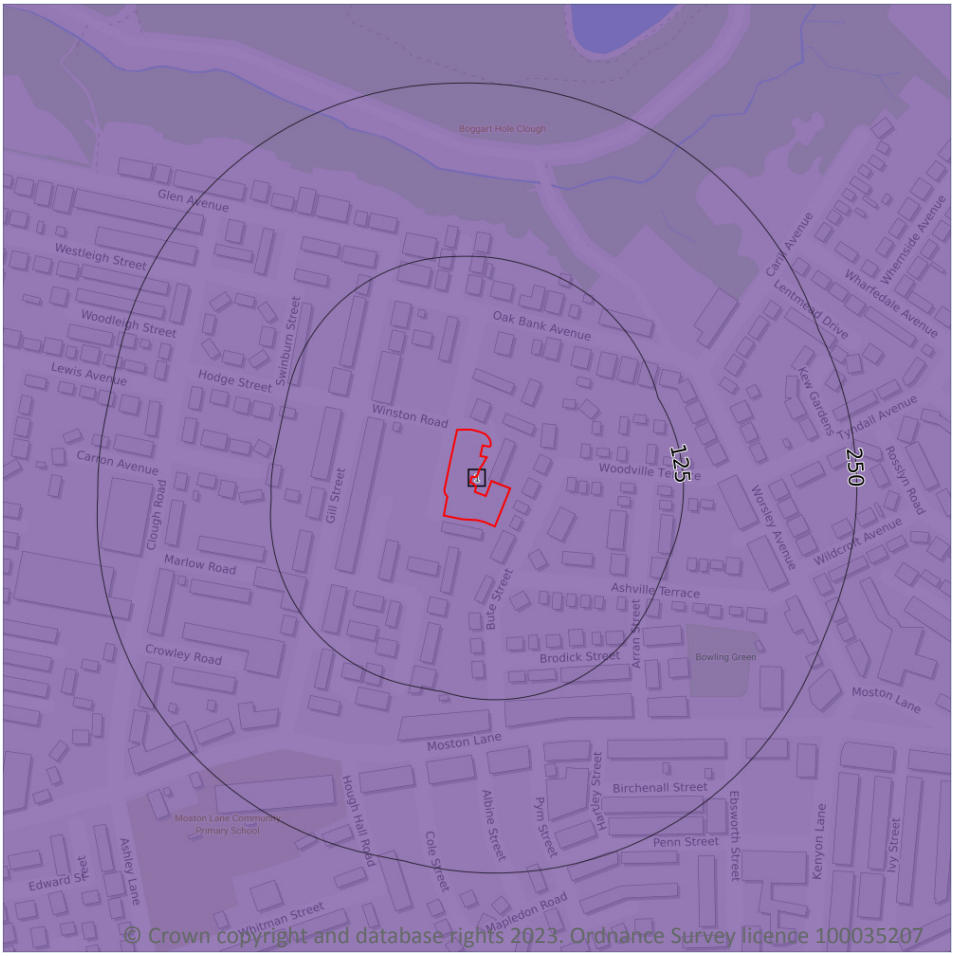
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



Site Outline

Search buffers in metres (m)

- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m	1

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

Features are displayed on the Agricultural designations map on **page 63 >**

ID	Location	Classification	Description
1	**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	0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

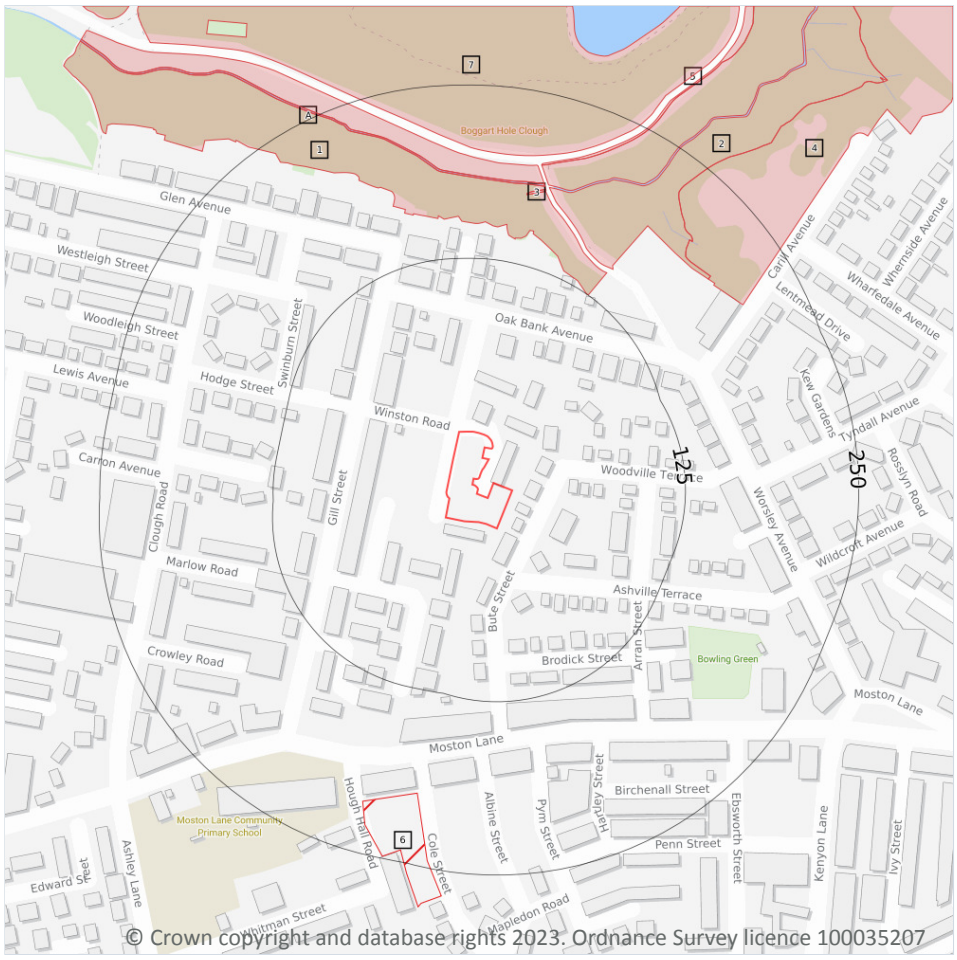
12.5 Countryside Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

13 Habitat designations



Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks

Primary Habitat
Restorable Habitat
Associated Habitats
Habitat Restoration-Creation
Network Enhancement Zone 1
Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	8

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 65 >**

ID	Location	Main Habitat	Other habitats
1	125m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	149m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	175m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	182m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

ID	Location	Main Habitat	Other habitats
A	183m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	193m NE	No main habitat but additional habitats present	Additional: DWOOD (INV 50%)
5	198m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
7	202m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	**0**

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	**1**

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.

Features are displayed on the Habitat designations map on **page 65 >**

ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
6	199m S	NLUD Ref: 421501794	Low	National Land Use Database - Previously Developed Land	UK Perspectives Aerial Photography	-

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

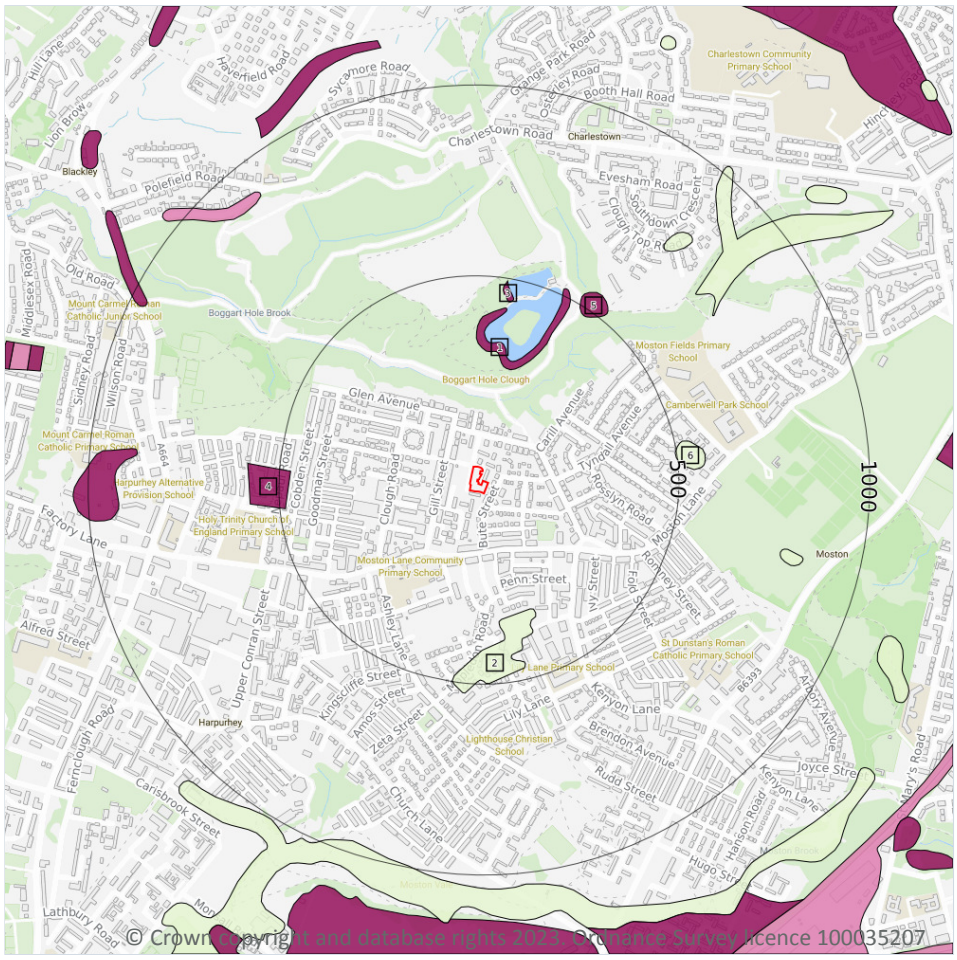
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 68 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**SD80SE**

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.

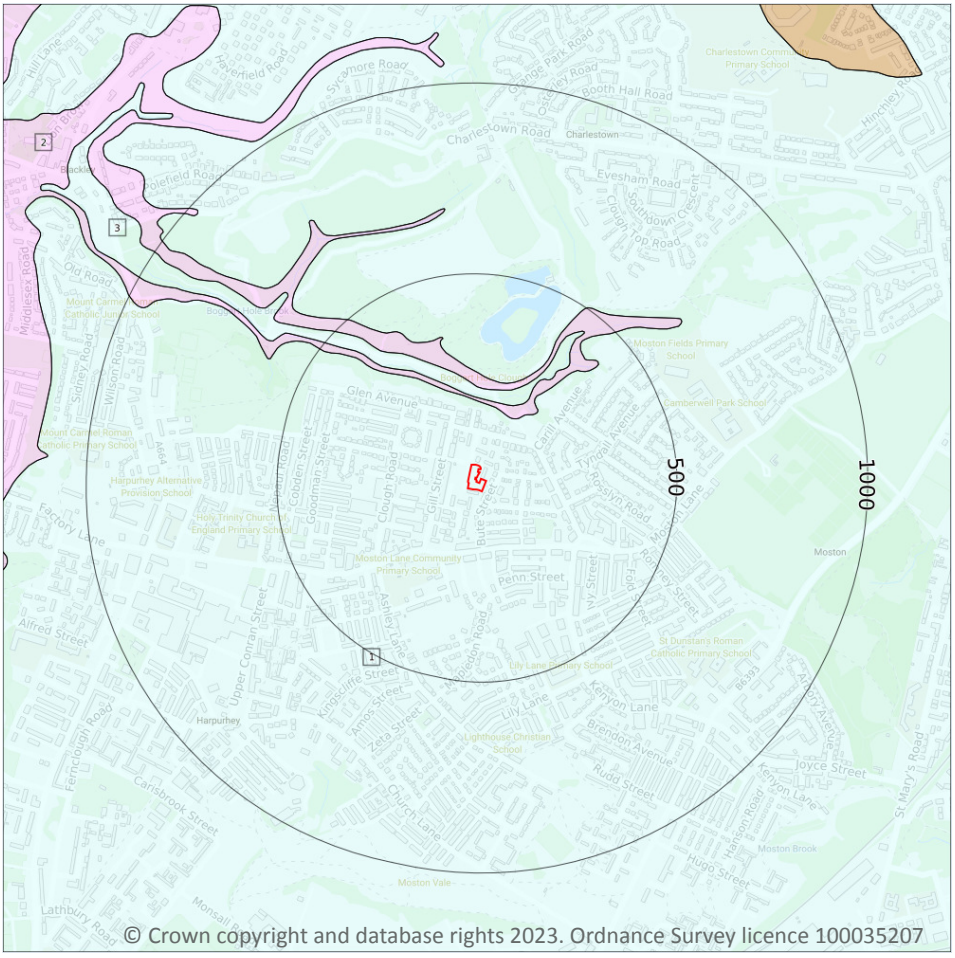
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 69 >**

ID	Location	LEX Code	Description	Rock description
1	268m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	326m S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
3	440m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	471m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

ID	Location	LEX Code	Description	Rock description
5	481m NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	496m E	WMGR-ARTDP	Infilled Ground	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 71 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**TILLD-DMTN**	**Till, Devensian - Diamicton**	**Diamicton**
2	150m NE	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
3	172m N	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton

This data is sourced from the British Geological Survey.

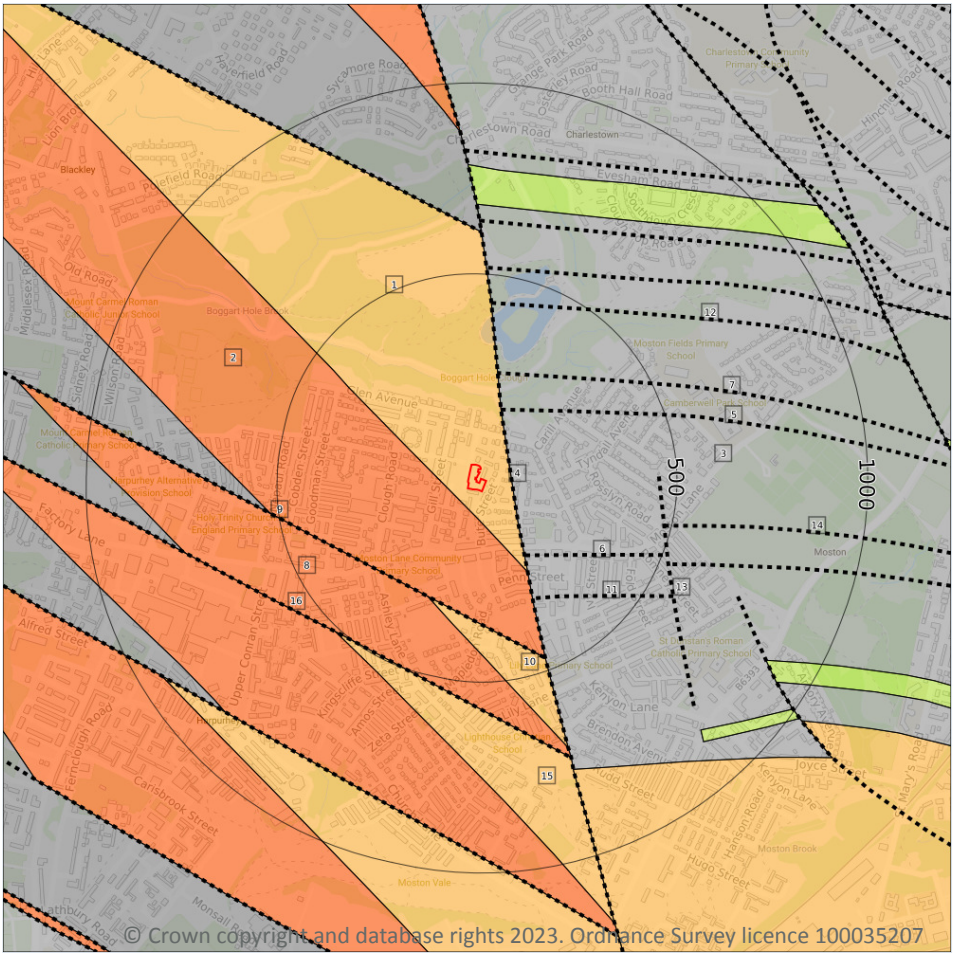
14.4 Landslip (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock



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 73 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**CS-SDST**	**Collyhurst Sandstone Formation - Sandstone**	**Cisuralian Epoch**
2	37m SW	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]
3	67m E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age

ID	Location	LEX Code	Description	Rock age
8	299m SW	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]
10	302m S	CS-SDST	Collyhurst Sandstone Formation - Sandstone	Cisuralian Epoch
15	494m SW	CS-SDST	Collyhurst Sandstone Formation - Sandstone	Cisuralian Epoch

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m	**10**

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 73 >**

ID	Location	Category	Description
4	67m E	FAULT	Normal fault, inferred; crossmarks on downthrow side
5	158m N	ROCK	Coal seam, inferred
6	203m SE	ROCK	Coal seam, inferred
7	247m N	ROCK	Coal seam, inferred
9	299m SW	FAULT	Normal fault, inferred; crossmarks on downthrow side
11	310m SE	FOSSIL_HORIZON	Fossil horizon, marine band
12	426m N	ROCK	Coal seam, inferred
13	453m E	FAULT	Normal fault, inferred; crossmarks on downthrow side
14	481m E	ROCK	Coal seam, inferred
16	494m SW	FAULT	Normal fault, inferred; crossmarks on downthrow side

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 75 >**

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.

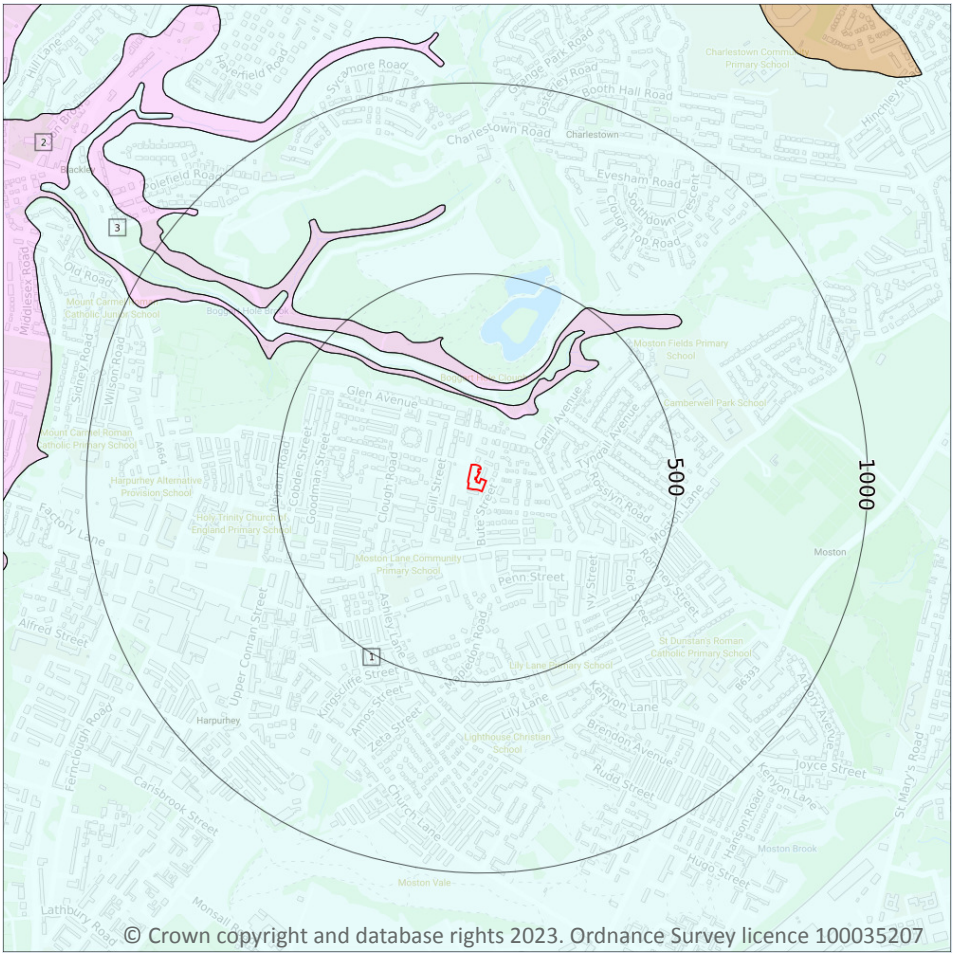
15.3 Artificial ground permeability (50k)

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 77 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**TILLD-DMTN**	**TILL, DEVENSIAN**	**DIAMICTON**
2	150m NE	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
3	172m N	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1

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

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

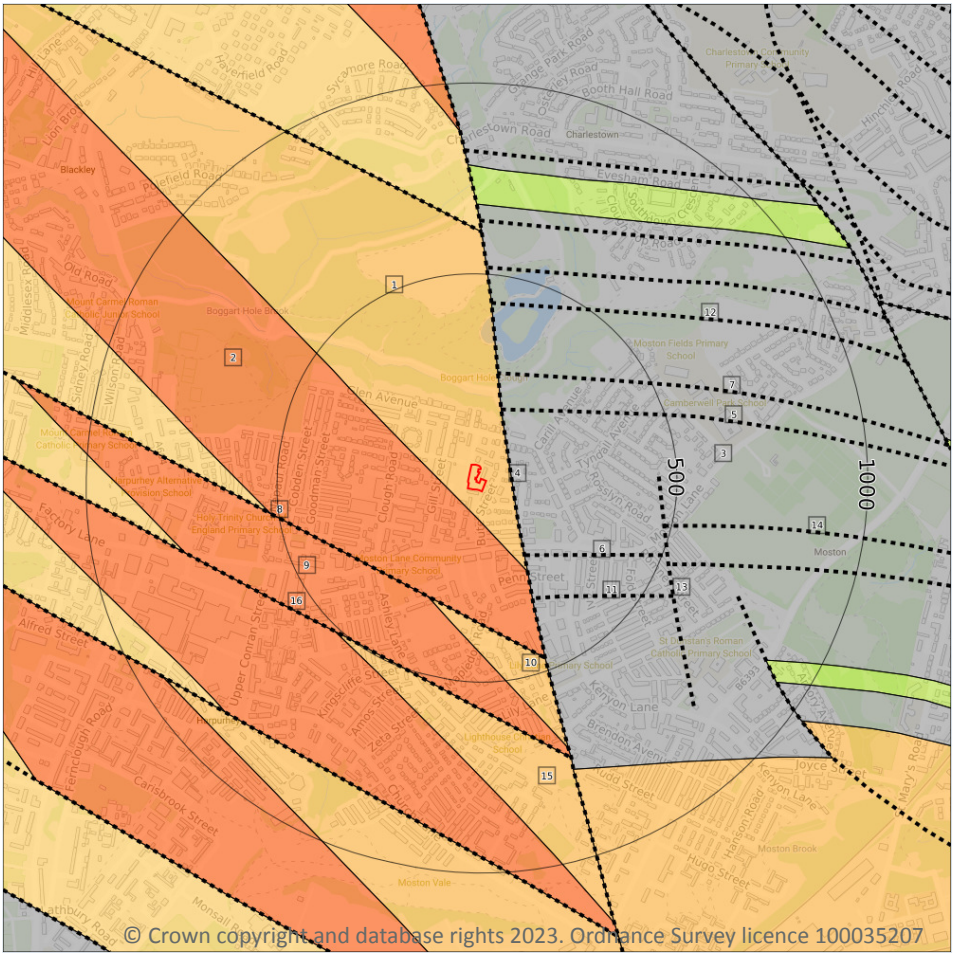
15.7 Landslip permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m **6**

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 79 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**CS-SDST**	**COLLYHURST SANDSTONE FORMATION - SANDSTONE**	**-**
2	38m SW	MM-MDST	MANCHESTER MARLS FORMATION - MUDSTONE	-
3	67m E	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
9	299m SW	MM-MDST	MANCHESTER MARLS FORMATION - MUDSTONE	-
10	302m S	CS-SDST	COLLYHURST SANDSTONE FORMATION - SANDSTONE	-
15	494m SW	CS-SDST	COLLYHURST SANDSTONE FORMATION - SANDSTONE	-

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	**Intergranular**	**High**	**High**
38m SW	Fracture	Low	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	**10**

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 79 >**

ID	Location	Category	Description
4	67m E	FAULT	Fault, inferred
5	159m N	ROCK	Coal seam, inferred
6	202m SE	ROCK	Coal seam, inferred
7	247m N	ROCK	Coal seam, inferred
8	299m SW	FAULT	Fault, inferred
11	310m SE	FOSSIL_HORIZON	Marine band
12	426m N	ROCK	Coal seam, inferred

ID	Location	Category	Description
13	453m E	FAULT	Fault, inferred
14	481m E	ROCK	Coal seam, inferred
16	494m SW	FAULT	Fault, inferred

This data is sourced from the British Geological Survey.

16 Boreholes



Site Outline

Search buffers in metres (m)

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

16.1 BGS Boreholes

Records within 250m	2

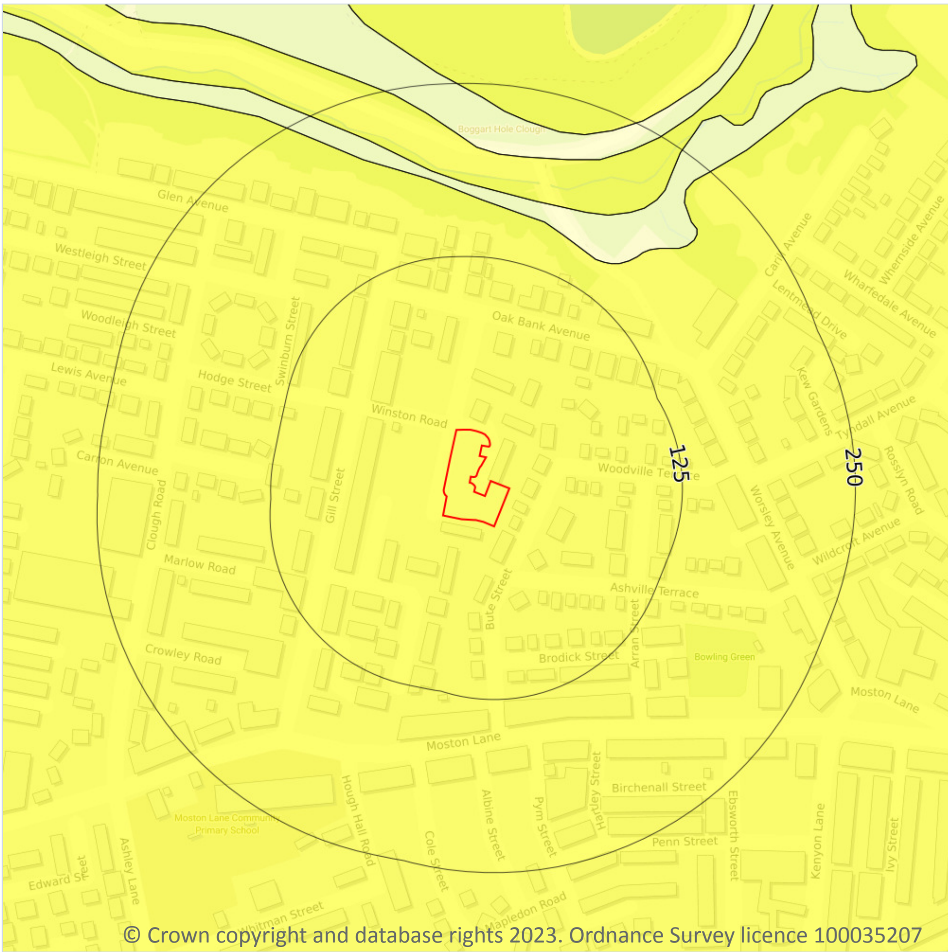
The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several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

Features are displayed on the Boreholes map on **page 82 >**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	139m S	386840 401940	NORTH MANCHESTER RELIEF SEWER 9	16.0	N	28513 ↗
2	178m SW	386690 401940	NORTH MANCHESTER RELIEF SEWER 8	16.05	N	28512 ↗

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**

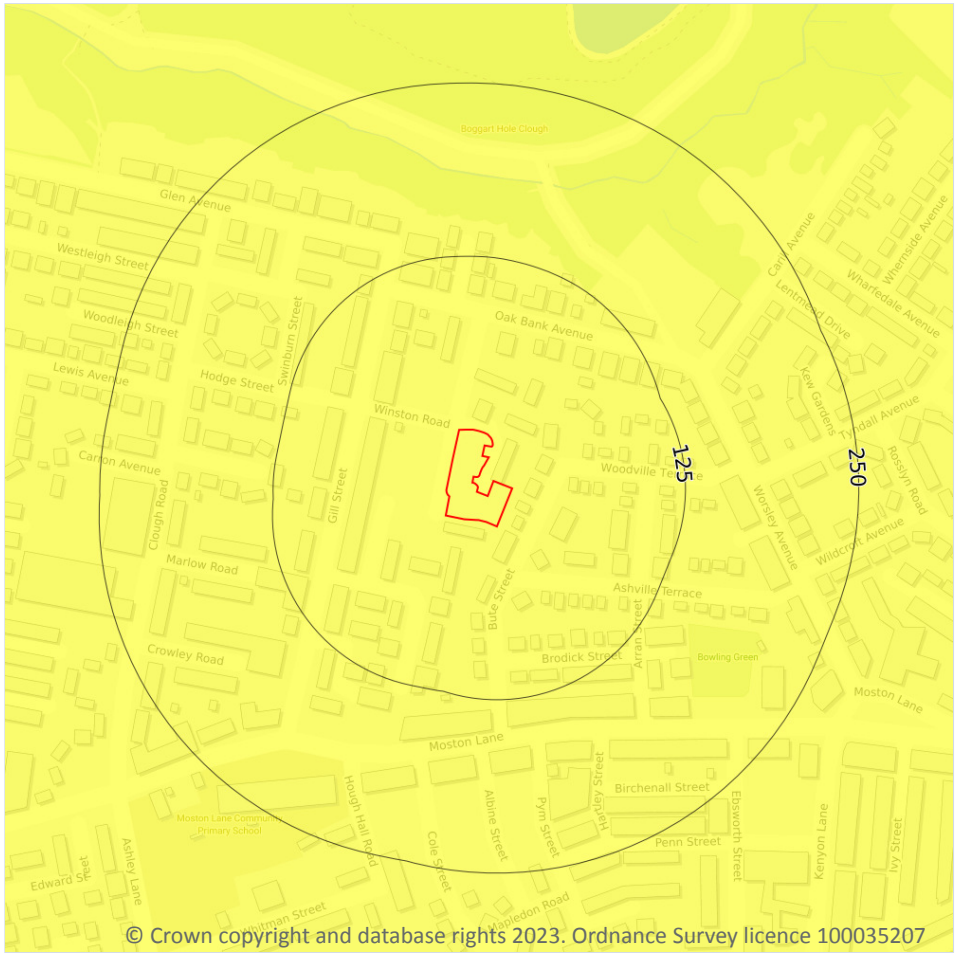
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 84 >**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



17.2 Running sands

Records within 50m	1

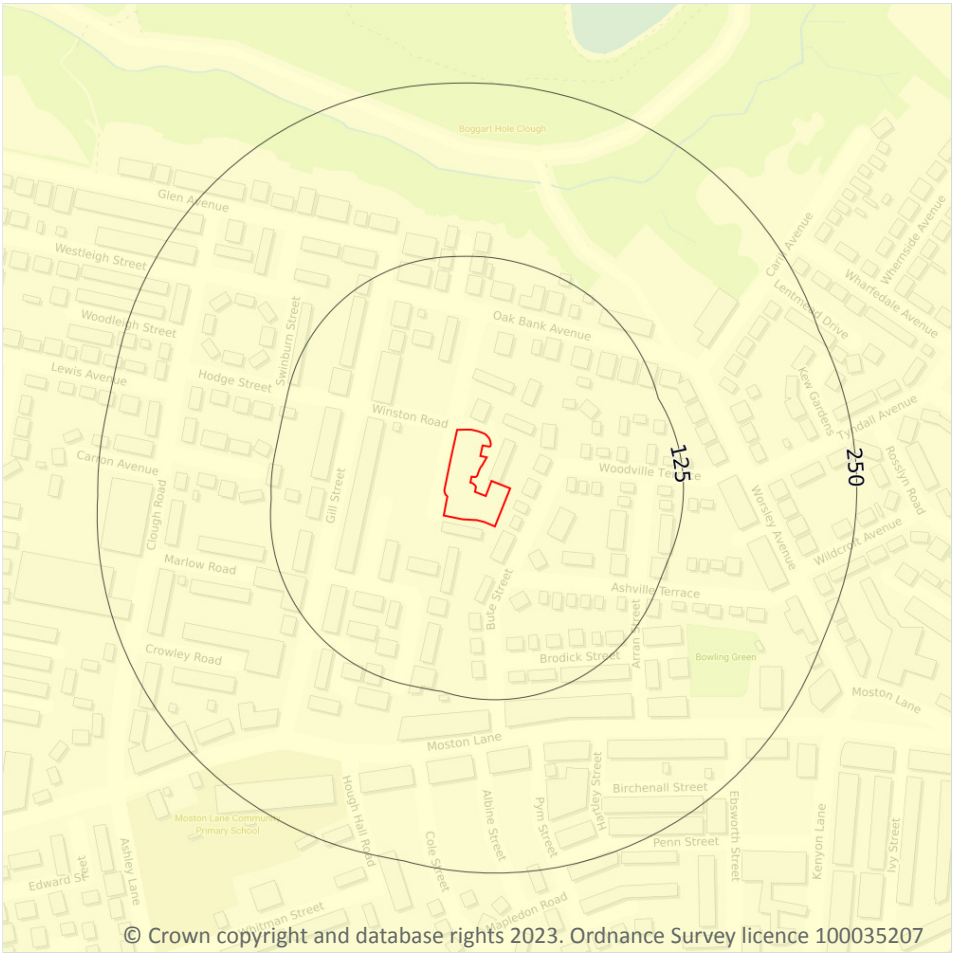
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 85 >**

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

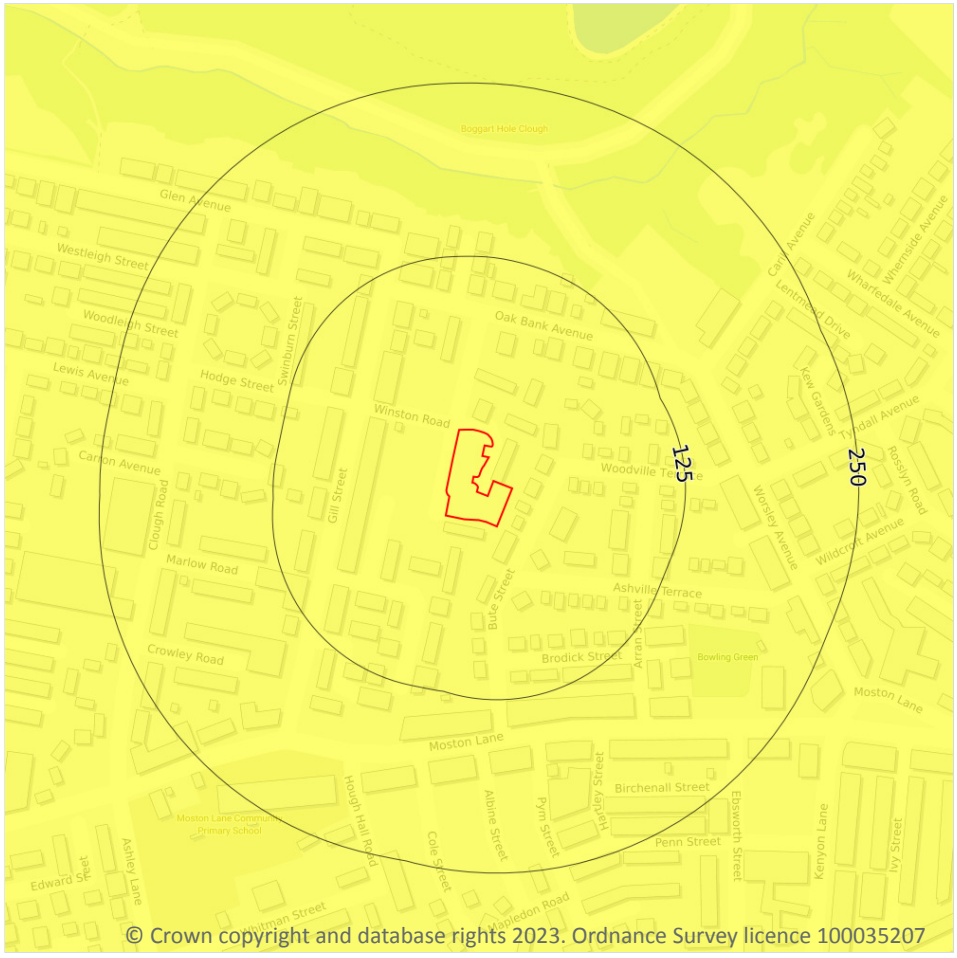
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 86 >**

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

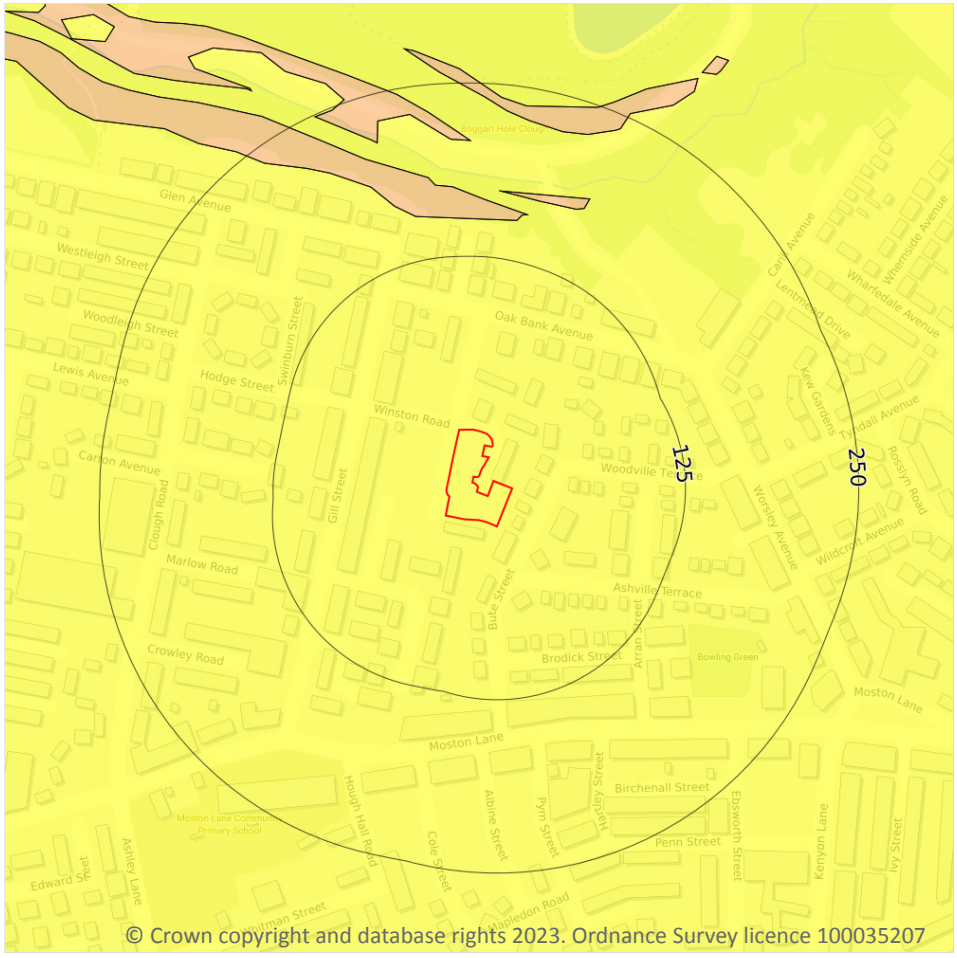
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 87 >**

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	1

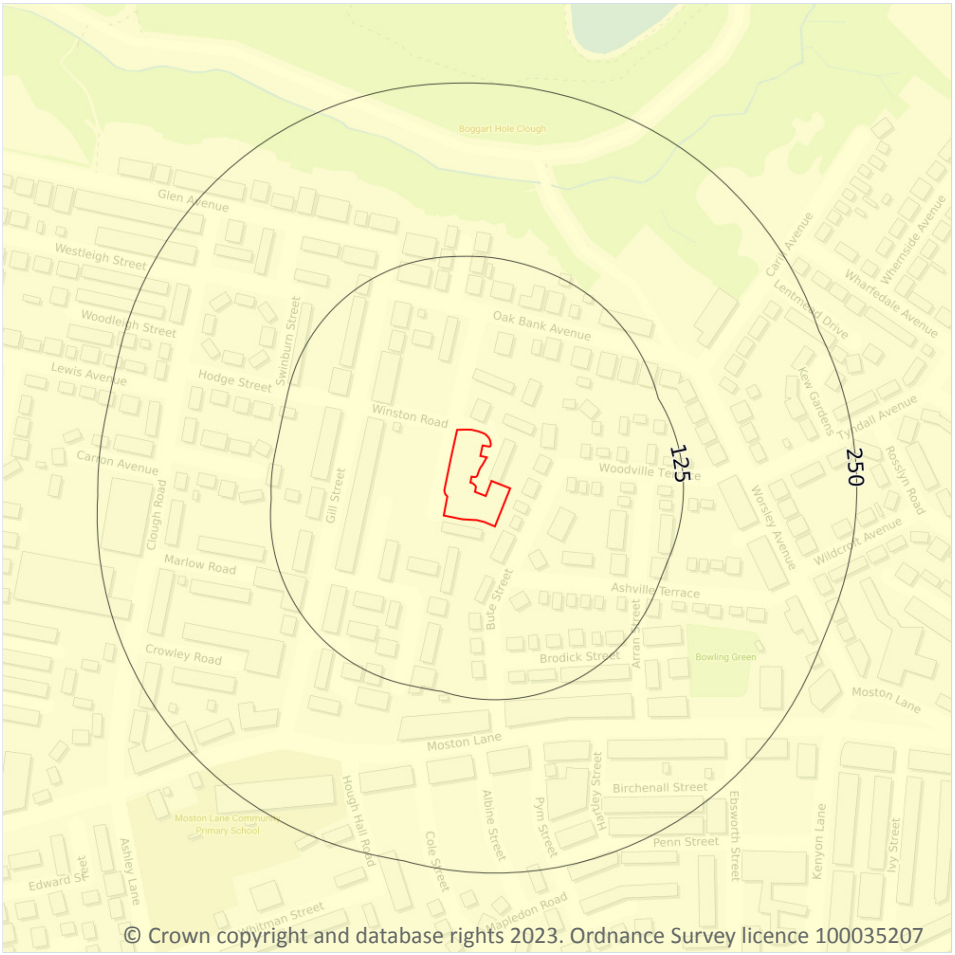
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 88 >**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.6 Ground dissolution of soluble rocks

Records within 50m	1

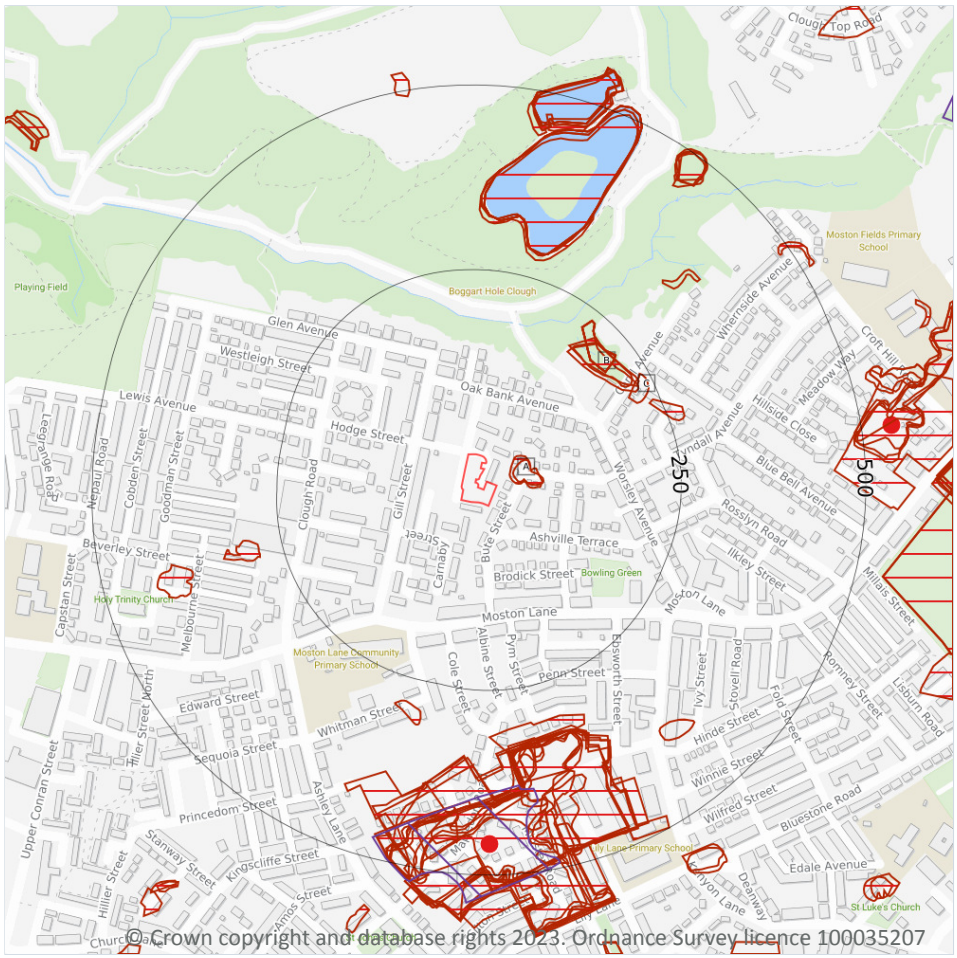
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 89 >**

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

This data is sourced from the British Geological Survey.

18 Mining and ground workings



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Site Outline

Search buffers in metres (m)

- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining

Non Coal Mining

- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m	1

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 and ground workings map on **page 91 >**

ID	Location	Details	Description
E	458m S	Name: Tulketh Street Brickworks Address: Moston, MANCHESTER, 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

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m **12**

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

Features are displayed on the Mining and ground workings map on **page 91 >**

ID	Location	Land Use	Year of mapping	Mapping scale
A	22m E	Pond	1851	1:10560
A	27m E	Pond	1891	1:10560
B	182m NE	Unspecified Pit	1923	1:10560
B	188m NE	Unspecified Pit	1933	1:10560
B	188m NE	Unspecified Pit	1915	1:10560
B	195m NE	Unspecified Pit	1980	1:10000
B	195m NE	Unspecified Pit	1966	1:10560
B	195m NE	Unspecified Pit	1988	1:10000
B	195m NE	Unspecified Pit	1975	1:10000
B	195m NE	Unspecified Pit	1956	1:10560
C	211m NE	Refuse Heap	1933	1:10560
C	235m NE	Unspecified Pit	1956	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	0

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

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	0

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	1

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.

Features are displayed on the Mining and ground workings map on **page 91 >**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
E	381m S	Tulketh Street	Clay, bricks	Surface mineral working	Valid	10/6/47

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	0

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

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	0

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

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	0

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

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

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

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

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

This data is sourced from Groundsure.

18.12 Coal mining

Records on site	1

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

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0

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

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

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

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

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m	0

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

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

This data is sourced from Groundsure.

19.5 National karst database

Records within 500m	0

This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.

20 Radon



Site Outline

Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

20.1 Radon

Records on site	1

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

Features are displayed on the Radon map on **page 99 >**

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

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

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m	1

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 km^2. 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 km^2; 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**	**30 - 45 mg/kg**

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km^2).

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km^2.

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m	0

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

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 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.

22.9 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.

22.10 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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