



PHASE 1 DESK STUDY

1750 – 5 East View, Summerseat

Matthew McCabe - Cubic Surveying Solutions Ltd

 **soilutions**



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	Site Location Plan
	Site Boundary Plan
	Proposed Development Plan
	Proposed Site Investigation Layout Plan
APPENDIX II	Groundsure Report
APPENDIX III	Historical Mapping

Limitations

This report was produced by Soilutions Ltd for Cubic Surveying Solutions Ltd as the Phase 1 Geo-Environmental Desk Study Report for the 5 East View, Summerseat to provide a preliminary assessment of potential ground related development constraints and to support a planning application.

This report may not be used by any person other than Cubic Surveying Solutions Ltd and must not be relied upon by any other party without the explicit written permission of Soilutions Ltd. In any event, Soilutions Ltd accepts no liability for any costs, liabilities or losses arising as a result of the use or reliance upon the contents of this report by any person other than Cubic Surveying Solutions Ltd, or the client if payment in full has not been received.

All parties to this report do not intend any of the terms of the Contracts (Rights of Third Party Act 1999) to apply to this report. Please note that this report does not purport to provide definitive legal advice.

The findings of the desk study are based on the available published information at the time of the production of the report.



EXECUTIVE SUMMARY

1. EXECUTIVE SUMMARY

Soilutions has been commissioned by Cubic Surveying Solutions Ltd to provide a Phase 1 Geo-environmental Desk Study report. The purpose of the report is to collate background historical and geo-environmental data to address where possible land contamination within Planning Policy Guidance and geo-environmental constraints for development.

The site is located to the east of East View, approximately 0.42 km north west of Summerseat village centre. The approximate National Grid Reference for the centre of the site is (NGR) 379300, 415142. It is proposed to reconstruct two damaged terraced houses at the site.

The site has been occupied by the existing houses since the earliest mapping (1851). The surrounding area was predominantly agricultural to the west and north with a railway line and cotton mill to the east. The mill expanded before being partially demolished and redeveloped as housing in the 1980s. The railway line now runs as a heritage railway with steam trains.

Residential development took place to the west of the site in the late 19th century and redevelopment of this area took place in the 1980s. There was a gas works to the west of this residential area until the late 1970s. The River Irwell is present to the south of the site. In the mid 19th century a large reservoir was present beyond the River Irwell which was later infilled.

Made Ground is not indicated within the site boundary on the published geological mapping. Made ground is likely to be present on site associated with the development of the site and has been identified in boreholes in the area immediately around the site at depths of up to 1.50m. Offsite sources have been identified comprising an infilled reservoir.

The site is underlain by bedrock of the Millstone Grit Group. Superficial deposits comprising alluvium are expected across the site.

The bedrock geology is designated as a Secondary A aquifer. The superficial deposits are classified as a Secondary A aquifer. The site is not within a Groundwater Source Protection Zone.

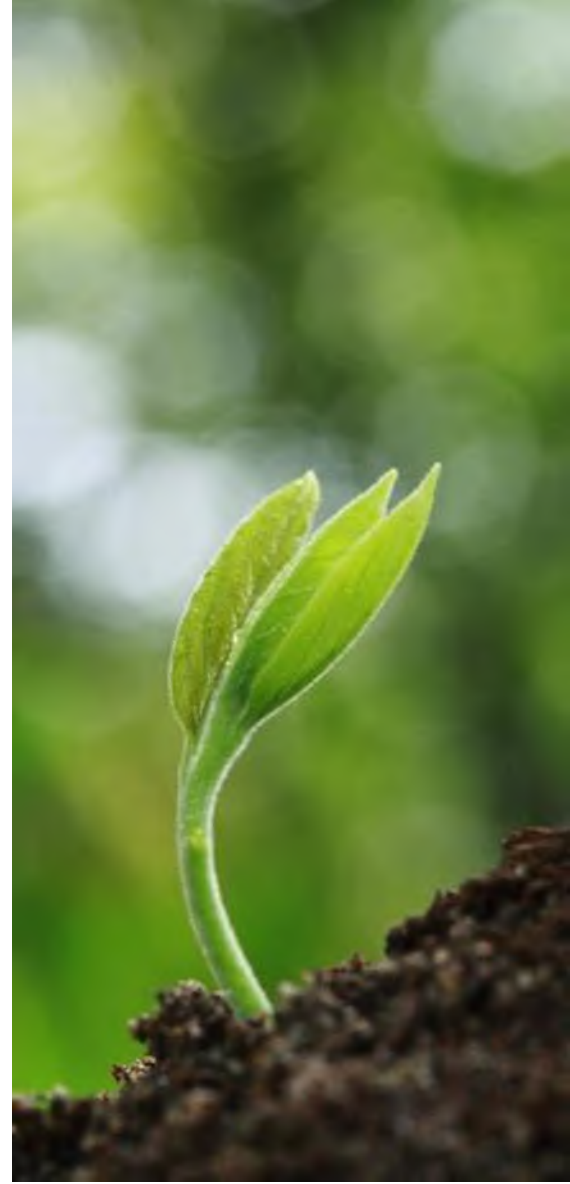
The site lies within a Coal Authority reporting area. A Consultant's Mining Report will be required for the development if new foundations are proposed.

The soils at the site are at moderate risk of compression. The soils should not be dewatered or loaded with new buildings without consultation.

The Preliminary Conceptual Site Model indicates a high possibility that harm could arise to a designated receptor from identified hazards.

A ground investigation is recommended to assess the geo-environmental constraints identified on site by this desk study.

The executive summary contains an overview of key findings and conclusions. However, no reliance should be placed on the executive summary until the whole of the report has been read. Other sections of the report may contain information which puts into context the findings noted within the executive summary.



INTRODUCTION

2. INTRODUCTION

2.1 Background

Soilutions were commissioned by Cubic Surveying Solutions Ltd (the Client) to conduct a Phase 1 Geo-environmental Desk Study for their site at 5 East View, Summerseat (the site).

The Phase 1 Desk Study report has been prepared in general accordance with the Environment Agency's Land Contamination Risk Management (LCRM) guidance and BS10175 (Code of Practice for the Investigation of Potentially Contaminated Sites).

BS10175 recommends that a Preliminary Investigation includes data collection, qualitative interpretation and reporting. Data collection includes documentary research, to:

- Formulate an initial conceptual site model
- Assess need for, and scope of, further investigation; and
- Provide a preliminary risk assessment in a final report.

If the Phase 1 Desk Study identifies potentially significant risks to human health and/or the environment, a subsurface ground investigation may be required to characterise ground conditions at the site. The investigation would determine if contaminative substances are indeed present at or around the site and help quantify the risk to human health and/or the environment.

2.2 Objectives and Scope of Work

The scope and aims of the Phase 1 report, in accordance with BS10175, are to:

- Review historic information and the environmental setting of the site;
- Identify the geology and hydrogeology beneath the site, and within a buffer zone of 250m around the site, using information from the BGS and other sources;
- Review an environmental data report, online and published sources to determine if site specific geo-environmental and geotechnical risks to the site pose a potentially significant risk to development;
- Formulate an initial conceptual site model and preliminary risk assessment (PRA) which identifies possible pollution linkages between contamination sources and receptors via plausible migration and exposure pathways;
- Design an intrusive investigation if the PRA concludes potentially significant risks may be present.

2.3 Proposed Development

It is proposed to reconstruct two terrace houses in a row of six houses with associated restoration of the gardens. The houses are two storeys high with basements. It is not clear at this stage if the existing basement structures will be retained or replaced. A proposed development plan is included in **APPENDIX I**.

2.4 References

A full reference list is included in **section 8**. Key sources of information used in the production of this report include:

- Groundsure Historical Mapping ref. GS-XW4-EFH-Q8A-PSQ
- Groundsure Enviro and Geo Insight Report ref. GS-GBH-7CT-JOI-C4Q
- British Geological Survey. (BGS) Geology of Britain Map Viewer www.bgs.ac.uk
- Department of the Environment Industry Profiles.



SETTING

3. SETTING

3.1 Location

The site is located off East View, 420m north west of Summerseat village centre. The site is roughly rectangular in shape and approximately 0.03 ha in area. The approximate national grid reference is 379300, 415142. A site location plan is included in **APPENDIX I**.

3.2 Site Description

The site is currently part of a row of six terraced houses with associated gardens. The site was occupied by two terraced houses one of which was destroyed and the other damaged by an explosion caused by a mains gas leak in 2021. Number 5 was completely destroyed and number 4 significantly damaged. The houses are two storeys high with basements and have front yards to the west and gardens to the east. Along East View is a high wall with standard size doorways to access the houses.

The site is bound by the stone wall to the west, 6 East View to the north, 3 East View to the south and a stone wall to the east.

No discreet pollution sources have been identified at the site, however as the buildings were destroyed by an explosion rather than demolished professionally, there is a risk of contaminants such as lead from flashing and pipes, zinc from roof fittings and any asbestos from insulation will have been spread indiscriminately across the site.

Vegetation at the site comprises grass and bushes in the garden of number 4. A specialist ecologist should be consulted if required to confirm the presence or absence of invasive species.

The topography of the site is generally level. Levels on the Ordnance Survey maps are around 110 metres above Ordnance Datum (mAOD).

Vehicle access at the site is limited. The stone walls along the boundary only provide access for small plant such as window sample drilling rigs which can fit through a doorway.

Overhead telecommunications cables run across the south western part of the site.

3.3 Site Vicinity

The area around the site is occupied by:

North	Number 6 East View with woodland and a steep upward slope beyond.
East	Railway viaduct and heritage steam railway line with former mill converted to flats and offices beyond.
South	Numbers 1 to 3 East View with Waterside Road and the River Irwell beyond.
West	Residential area.

3.4 Planning History

The local authority's planning portal has been consulted. No previous applications for the site have been identified.

3.5 Investigation History

No previous reports have been provided by the client.

3.6 Geology

3.6.1 Strata

The BGS mapping for the site (Ref 1) indicates that the geology at the site comprises:

Table 1: Table summarising geology on-site.

	Unit Name	BGS Description
Anthropogenic	Not shown	N/A
Superficial	Alluvium	Sand, silt and gravel
Bedrock	Millstone Grit Group	Broadly upward-coarsening cyclic sequences of sandstone, siltstone and grey mudstone, with subordinate and typically thin coal seams and seatearth (palaeosol) horizons.

Made ground is not shown on site but an area of worked ground is shown 15m to the east associated with the railway viaduct. This is recorded as a void, suggesting ground has actually been removed rather than made ground deposited. A larger area of made ground is present 200m to the south where there is a railway embankment.

Made ground may also be present on site associated with historic development. Made ground of up to 1.20m depth has been identified in boreholes drilled in the vicinity of the site.

3.6.2 Faulting

No faults have been identified in the vicinity of the site.

3.6.3 Borehole Records

The following BGS borehole records have been reviewed (Ref 15):

Table 2: Table summarising borehole records from the site and surrounding area.

BGS Reference	Drilled By	Method	Strata		Distance (m)	Direction
			Depth (m)	Description		
SD71NE234	Norwest Holst	Cable Percussive	0.00-0.20	Made Ground	26	NW
			0.20-6.00	Silty CLAY		
SD71E233	Norwest Holst	Cable Percussive	0.00-1.20	Made Ground	31	W
			1.20-1.90	Silty CLAY		
			1.90-3.00	Silty SAND		
			3.00-7.80	Silty CLAY		
			7.80-10.00	Sandy GRAVEL		
SD71NE223	Norwest Holst	Cable Percussive	0.00-0.20	Made Ground	32	W
			0.20-3.50	Sandy silty GRAVEL		
			3.50-4.20	Sandy GRAVEL		
SD71NE232	Norwest Holst	Cable Percussive	0.00-0.20	Made Ground	44	NW
			0.20-10.00	CLAY		



SITE HISTORY

4. SITE HISTORY

4.1 Map Review

A summary of the information obtained from the available historical maps and aerial photographs are presented in the table below. Copies of the historic maps are provided in **APPENDIX III**.

Table 3: Table summarising site history from historical mapping.

Date	Scale	Map	Observations
1851	1:10,560		On Site The row of terraced houses at the site today is shown. Off Site (within 250m) To the north the site is bound by woodland which is still present today. To the west is a field and to the south is the River Irwell. A reservoir is shown 200m to the south west. A second reservoir is shown 200m to the east. Adjacent to the east is a viaduct and railway line, beyond which is a cotton mill and residential development in Brooks Bottom. A goods shed for the railway line is shown 150m to the south.
1891-1978	1:1,250 1:2,500 1:10,560		On Site No significant changes. Off Site (within 250m) The cotton mill to the east has expanded significantly. Adjacent to the west, residential development has taken place. A gas works is shown 200m to the west. An electricity sub-station is shown from 1962, 110m to the south west. The reservoir to the south west has been infilled and an earthwork is shown in its place. A sewage works is shown 240m to the south from 1910.
1980-2024	1:1,250 1:2,500 1:10,000		On Site No significant changes. Off Site (within 250m) The mill to the east has been partially demolished and redeveloped as flats and offices. The residential area to the west appears to have been redeveloped with some streets removed. The gas works is no longer shown.



ENVIRONMENTAL SENSITIVITY

5. ENVIRONMENTAL SENSITIVITY

5.1 Radon

The site is not recorded to be within a radon affected area as <1 % of properties are above the action level. Radon protection measures are not required in any new buildings at the site.

5.2 Geological Hazards

The following ground stability hazard ratings for the site are detailed in the Groundsure report:

Table 4: Table summarising geological hazards on and off-site.

Hazard	Direction	Hazard Rating
Potential for Shrinking or Swelling Clay Ground Stability Hazards	On site	Very low
Potential for Running Sand Ground Stability Hazards	On site	Low
Potential for Compressible Ground Stability Hazards	On site	Moderate
Potential for Collapsible Rocks Stability Hazards	On site	Negligible
Potential for Landslide Ground Stability Hazards	On site	Low
Potential for Ground Dissolution Stability Hazards	On site	Negligible

There is a moderate potential of compressible ground stability hazards at the site. Ground at the site should not be drained, loaded or de-watered without consultation. The development incorporates a basement. Ground investigation for structural design is likely to be required if a new basement structure is proposed. Consultation with a structural engineer to determine the scope of the investigation will be required.

5.3 Mining

5.3.1 Non-Coal Extractions

The following records of non-coal mining activity within 250m of the site are detailed in the Groundsure report:

Table 5: Table summarising non-coal mining extractions on and off-site in the surrounding area.

Name	Resource Extracted	Active?	Distance (m)	Direction
Unknown	Vein mineral	No	On site	N/A

The BGS notes that underground workings may have taken place but that the potential for difficult ground conditions is unlikely and at a level where they need not be considered.

The Groundsure report also notes that there are railway tunnels and cuttings to the east of the site and a former sewage works to the south.

5.3.2 Coal Mining

The site lies within a Coal Authority Reporting Area. A consultant's coal mining report will be required if the development involves any excavations or replacement of the existing basement structure.

5.4 Contaminated Land

No sites in the vicinity are identified as Contaminated Land under Part 2A of the Environmental Protection Act 1990 (Ref 11).

5.5 Water Environment

5.5.1 Hydrogeology

The following aquifer classifications have been identified for the site:

Table 6: Table summarising the hydrogeology on-site.

	Unit Name	Aquifer Classification
Superficial	Alluvium	Secondary A ^a
Bedrock	Millstone Grit Group	Secondary A ^a

^aEnvironment Agency Classification (Ref 18) ^bSEPA Classification (Ref 12) ^cMcDonald et Al Classification (Ref 17)

The site is not located in a Source Protection Zone.

The Groundsure report notes that the soils at the site are of low soil leaching potential, defined by the Environment Agency as “soils in which potential pollutants are unlikely to move down through the soil due to low permeability”.

5.5.2 Hydrology

The closest surface water features to the site are detailed below:

Table 7: Table summarising nearby surface water features.

Name	Orientation	Classification	Depth (m)	Distance (m)	Direction
Unnamed stream	N-S	None	NR	10	NW
River Irwell	E-W	Moderate ^a	NR	22	S
Reservoir	N/A	None	NR	197	E

^aEnvironment Agency Classification

The stream to the north west appears to be culverted adjacent to the site and flows into the River Irwell.

5.5.3 Flooding

The site lies within an Environment Agency floodplain at moderate risk from coastal, river or surface flooding.

Although the report provides information on flood risk this does not constitute a flood risk assessment for the site. The flood risk information does not account for flooding from sources such as blockages in drainage systems, artificial water features and overland flow. A separate Flood Risk Assessment may be required for the site.

5.5.4 Water Abstractions

The following groundwater abstraction licenses are listed in the Groundsure report within 2km of the site.

Table 8: Table summarising groundwater abstractions within 2km.

Site Name	Water Use	Potable?	Distance (m)	Direction
Nuttall Hall Farm	General use	No	544	N
Summerseat Borehole	General use	No	844	S
Danisco Paper Ltd	Process water	No	1544	N
Mosley and Thwaites, Walmersley	General use	No	1550	E
Holcombe	Drinking, Cooking, Sanitary, Washing	Yes	1624	NW
Holcombe, Davenport	General use	No	1809	W
Howarth, Walmersley	General farming and domestic	No	1897	E

No surface water abstraction licenses are listed in the Groundsure report within 250m of the site.

5.5.5 Discharge Consents

The following surface water discharge consents are listed in the Groundsure report within 250m of the site.

Table 9: Table showing discharge consents within 250m.

Site Name	Receptor	Type	Active?	Distance (m)	Direction
Brooksbottom Mill SWO	River Irwell	Surface Water	No	93	SE

5.5.6 Pollution Incidents

No Environment Agency Recorded Pollution Incidents to Controlled Water are listed in the Groundsure report within 250m of the site.

5.6 Waste Sites

No records of historic or current landfills or other waste sites are listed in the Groundsure report within 250m of the site.

5.7 Licensed Industrial Activity

5.7.1 Licensed Sites

No Integrated Pollution Prevention and Controls, Environment Agency or Local Authority Integrated Pollution Controls, Environmental Permits or Enforcements are listed in the Groundsure report within 250m of the site.

No Radioactive Substance Licenses are listed in the Groundsure report within 250m of the site.

No Part A(2) or Part B activities are listed in the Groundsure report within 250m of the site.

5.7.2 Current Industrial Activities

Four records of industrial activity are recorded within 250m of the site. The closest industrial activities to the site are:

Table 10: Table showing current industrial activities within 250m.

Site Name	Activities	Active?	Distance (m)	Direction
Electricity sub station	Electrical features	Yes	103	W
Electricity sub station	Electrical features	Yes	133	S
C-Air Filtration	Air and water filtration	Yes	220	N
KP Fire Engineering	Special purpose machinery and equipment	Yes	249	N

The sub-stations are both shown on the historic maps before the use of PCBs in the UK was banned, however given their distance from the site it is unlikely they pose a potentially significant risk to the development.

5.7.3 Fuel Stations and Tanks

No petrol filling station records are listed in the Groundsure report within 250m of the site.

The following records of tanks are listed in the Groundsure report within 250m of the site.

Table 11: Table showing tanks listed within 250m.

Site Name	Tank Type	Date	Distance (m)	Direction
Gas works	Unknown	1891-1910	126	W
Tanks	Unknown	1937-1980	131-133	E
Unspecified tank	Unknown	1937-1970	140-141	E
Unspecified tank	Unknown	1891-1937	188	E
Gas works	Gasometer	1891-1910	189	W
Unspecified tank	Unknown	1937-1970	193-195	E
Gas works	Gasometer	1891-1910	204	W
Sewage works	Sludge tanks	1910-1977	237-244	S

The unspecified tanks to the east are associated with the cotton mill and are likely to have contained water for washing and processing.

5.8 Sensitive Land Uses

The following records of sensitive land use (nitrate vulnerable zones, ancient woodland, Sites of Special Scientific Interest, greenbelt etc.) are listed in the Groundsure report within 250m of the site.

Table 12: Table showing sensitive land uses within 250m.

Site Name	Sensitive Land Use	Distance (m)	Direction
Gollinrod Wood	Designated Ancient Woodland	187	E
Merseyside and Greater Manchester	Green Belt	On site	N/A

5.9 Data Integrity Assessment

The data has been collated from information supplied by third parties. While the data is understood to be contemporary, some changes to land-use may have occurred since the time of data collection. However, it is considered that any changes in land-use will not have any detrimental impact to the property on the basis that potentially contaminating land-uses are regulated in a manner that reduces potential for impact.

No evidence has been presented during this study that indicates that historic or contemporary data is inaccurate and as such may be relied upon to provide reasonable evidence of potential risk as it relates to the proposed development.



CONCEPTUAL SITE MODEL

6. CONCEPTUAL SITE MODEL

6.1 Site Setting

The geo-environmental setting of the site, determined by the information detailed in sections 2, 3 and 4, is summarised below.

Table 13: Table summarising the geo-environmental setting of the site.

Site Description	The site is occupied by two terraced houses, one of which was destroyed and the other damaged by an explosion caused by a leaking gas main. The houses have yards to the west and gardens to the east. The houses are two storeys with a basement.	
Site History	The site has been occupied by the existing houses since the earliest mapping (1851). The surrounding area was predominantly agricultural to the west and north with a railway line and cotton mill to the east. The mill expanded before being partially demolished and redeveloped as housing in the 1980s. The railway line now runs as a heritage railway with steam trains. Residential development took place to the west of the site in the late 19th century and redevelopment of this area took place in the 1980s. There was a gas works to the west of this residential area until the late 1970s. The River Irwell is present to the south of the site. In the mid 19th century, a large reservoir was present beyond the River Irwell which was later infilled.	
Geology	Made Ground	Made ground is not shown on the BGS mapping. Made ground may be present associated with the historic development of the site and was found up to 1.20m depth in boreholes drilled in the vicinity of the site.
	Superficial	Superficial deposits comprising alluvium are expected at the site.
	Bedrock	Bedrock deposits comprising the Millstone Grit Group are expected at the site.
Water Environment	Aquifers	The bedrock deposits are classified as a Secondary A aquifer. The superficial deposits are a Secondary A aquifer.
	Surface Water	The closest surface water feature is an unnamed stream 10m to the north west. The River Irwell is present 22m to the south.

At this stage, the following uncertainties exist due to gaps in the available data:

- No chemical data is available for the site.
- No data on groundwater levels is available.
- The depth and nature of made ground is unknown.
- The ground gas regime is unknown.

6.2 Preliminary Conceptual Site Model (PCSM)

A preliminary conceptual site model has been prepared for the site based on the guidance given Environment Agency's Land Contamination Risk Management (LCRM) guidance (Ref 19). The basis of this approach is the development of a conceptual site model (CSM) to represent the source-pathway-receptor pollutant linkages which form the basis of the assessment of risk.

The production of the risk assessment follows the principles given in LCRM, using a tiered assessment hierarchy.

Table 14: Table summarising tiered assessment hierarchy.

Tier 1	Identification of possible pollutant linkages and creation of PCSM
Tier 2	Non-site-specific assessment of chemical data using generic assessment criteria (GAC)
Tier 3	Site-specific assessment of chemical data using site specific assessment criteria (SSAC) where GAC are not available or applicable.

This report comprises a Tier 1 assessment. No site investigation has taken place and so the source-path-receptor linkage has been identified using the information included in the Groundsure report, Department of the Environment Industry Profiles (Ref 3) and other sources detailed in the reference list.

6.3 Potential Contamination Sources

6.3.1 On-site

Table 15: Sources identified on-site.

Source	Contaminants
S1: Contamination associated with destruction of the buildings	The buildings were damaged in an explosion rather than expertly dismantled. Contamination from lead flashing, zinc roof fixings and any asbestos in the building and other sources will have been spread indiscriminately across the site.
S2: Alluvium	Source of ground gas.
S3: Possible made ground	Source of heavy metals, polycyclic and polyaromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs), phenols, asbestos and ground gas.

6.3.2 Off-site

Table 16: Sources identified off-site.

Source	Contaminants
S4: Alluvium	Source of ground gas.
S5: Made ground including infilled reservoir.	Source of heavy metals, polycyclic and polyaromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs), phenols, asbestos and ground gas.
S6: Historic and contemporary land use (gas works, steam railway, mill)	Source of heavy metals, polycyclic and polyaromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs), phenols and asbestos.

6.4 Pathways

Table 17: Pathways identified.

Pathway
P1: Human Uptake
• Dermal contact with soils and dust • Ingestion of soils and dust • Inhalation of soils, dust and vapour • Ingestion of homegrown produce and soil adhered to it
P2: Migration in solution through groundwater
P3: Migration along preferential pathways via underground services and drainage runs (pipes, culverts and granular material)
P4: Migration by surface run off
P5: Ground gas and vapour migration
P6: Root uptake

6.5 Receptors

Table 18: Receptors identified.

Source	Details
R1: End Users	A residential development is proposed.

Source	Details
R2: Controlled Water: Groundwater	The bedrock deposits are classified as a Secondary A aquifer.
R3: Controlled Water: Surface Water	The superficial deposits are a Secondary A aquifer. The closest surface water feature is a stream 10m to the north west which is a tributary of the River Irwell, 22m to the south.
R4: Property	Services (e.g. drinking water supply pipes) and structures/buildings (concrete used in foundations)
R5: Adjacent Property	The site is bound to the north, south and west by residential properties.
R6: Proposed Flora and Fauna	The redevelopment includes gardens in the east of the site.

The conceptual site model is present in the table below. The risk assessment has been produced using the risk model in **Table 19** and **Table 20**, adapted from CIRIA C552, "Contaminated Land Risk Assessment- A Guide to Good Practice" (Ref 9):

Table 19: Table summarising severity and probability for risk assessment model.

	Category	Definition
Potential Severity	Severe	Acute risks to human health, catastrophic damage to buildings/property, major pollution of controlled waters
	Medium	Chronic risk to human health, pollution of sensitive ecosystems or species, significant damage to buildings or structures.
	Mild	Pollution of non-sensitive waters, minor damage to buildings/property.
	Minor	Requirement for protective equipment during site works to mitigate health effects, damage to non-sensitive ecosystems or species.
Probability of Risk	High Likelihood	Pollutant linkage may be present and risk is almost certain to occur in long term, or there is evidence of harm to the receptor.
	Likely	Pollutant linkage may be present and it is probable that the risk will occur over the long term.
	Low Likelihood	Pollutant linkage may be present and there is a possibility of the risk occurring, although there is no certainty that it will do.
	Unlikely	Pollutant linkage may be present but the circumstances under which harm would occur are improbable.

Table 20: Table summarising overall risk for assessment model.

		Potential Severity			
Probability of Risk	High Likelihood	Severe	Medium	Mild	Minor
	Likely	Very High	High	Moderate	Moderate/Low
	Low Likelihood	High	Moderate	Moderate/Low	Low
	Unlikely	Moderate	Moderate/Low	Low	Negligible
		Moderate/Low	Low	Negligible	Negligible

The preliminary conceptual site model is produced on the following page (**Table 21**).

Preliminary Conceptual Site Model

Table 21: Table summarising preliminary conceptual site model.

Source		Pathway		Receptor		Severity	Probability	Risk	Comments	Proposed Investigation	
On-Site		P1	Human uptake	R1	End Users	Medium	Likely	Moderate	End users may interact with the soils through leisure or maintenance activities. Contamination associated with heavy metals and asbestos spread across the site by the explosion and made ground, and contamination from off site sources including the adjacent steam railway, made ground, gas works and mill, may be present at the site. The risk to human health is Moderate .	Samples of soil should be collected from the proposed gardens and submitted for chemical analysis.	
S1	Contamination associated with the destruction of the buildings Alluvium Possible made ground	P2	Migration in solution through groundwater	R2	Groundwater	Medium	Low	Moderate/Low	The site is underlain by bedrock of the Millstone Grit Group, which is classified as a Secondary A aquifer. Superficial deposits at the site are a Secondary A aquifer. Contamination associated with heavy metals and asbestos spread across the site by the explosion and made ground, and contamination from off site sources including the adjacent steam railway, made ground, gas works and mill may be present at the site. The superficial soils are of low leaching potential and the bedrock aquifer is therefore unlikely to be affected. Based on the information available, the risk to groundwater is considered to be Moderate/Low .	Leachate samples should be taken from the soil at the site. If elevated levels of contamination are identified in the leachate, samples of groundwater should be collected to determine if the leachate is impacting the aquifer.	
S2		P3	Migration through preferential pathways								
S3		P4	Migration by surface run off								
Off-Site		P2	Migration in solution through groundwater	R3	Surface Water	Medium	Unlikely	Low	The nearest surface water feature is a stream 10m to the north west of the site which is then culverted beneath East View before entering the River Irwell 22m to the south. Contamination associated with heavy metals and asbestos spread across the site by the explosion and made ground, and contamination from off site sources including the adjacent steam railway, made ground, gas works and mill may be present at the site. As the stream is culverted uphill from the site, it is unlikely that contamination will reach the surface water feature by overland flow. Contamination may run overground and into drains on the road adjacent to the River Irwell, however this is likely to mix with run off from the road which will probably contain higher concentrations of contaminants from vehicles. Based on the information available, the risk to surface water is considered to be Low .	Leachate samples should be taken from the soil at the site.	
		P3	Migration through preferential pathways								
		P4	Migration by surface run off								
S4	Alluvium Made ground Historic and contemporary land use (gas works, steam railway, mill)	P2	Migration in solution through groundwater	R1	End Users	Severe	Likely	High	Made ground and the underlying natural geology may contain hazardous ground gases that could migrate along preferential natural structures as well as man-made pathways. The alluvium, made ground and infilled reservoir in the vicinity of the site are deemed to be a potential source of ground gases. It is considered that until gas monitoring has been undertaken to identify gas levels at the site, that the risk is High .	Gas monitoring boreholes should be installed in the garden and yard and monitored on six occasions at two week intervals.	
S5			P3								Migration through preferential pathways
S6			P5								Ground gas and vapour migration
		P2	Migration in solution through groundwater	R4	Property	Medium	Unlikely	Low	Made ground and the underlying natural geology may contain contaminants that could migrate along preferential natural structures as well as man-made pathways. It is possible that made ground and natural deposits may contain sulphates and therefore present a risk to buried concrete and water pipes. At this stage, the risk to buried structures is considered to be Low .	The water supplier may require full UKWIR testing which should be carried out in the construction phase. BRE Sulphate testing should be carried out to determine the risk to buried concrete if the existing basement structure is to be replaced.	
		P3	Migration through preferential pathways								
		P4	Migration by surface run off	R5	Adjacent Property						
		P5	Ground gas and vapour migration								
		P6	Root uptake	R6	Proposed Flora and Fauna	Medium	Likely	Moderate	The plans indicate gardens which may include vegetable planting or fruit bearing trees in soft landscaping. Contamination associated with heavy metals and asbestos spread across the site by the explosion and made ground, and contamination from off site sources including the adjacent steam railway, made ground, gas works and mill may be present at the site. The risk of uptake to proposed flora and fauna is Moderate .	Samples of soil should be collected from the proposed gardens and submitted for chemical analysis.	



CONCLUSIONS

7. CONCLUSIONS

7.1 Conclusions

Based on the information obtained and reviewed as part of this investigation and the Conceptual Site Model and Pollutant Linkage Assessment, it is concluded that the soils at the site present a potentially significant risk to site users, contractors or the wider environment and that a potentially significant risk from off-site contamination is present at the site associated with material, including flashing and roof fixings containing lead and zinc along with asbestos, spread by the explosion, possible on-site made ground, alluvium on and off site, off site made ground including an infilled reservoir and contamination associated with the adjacent steam railway, a former cotton mill and a gas works.

In addition, the soils at the site are at moderate risk of compression if loaded or dewatered.

The constraints to the development include:

- Possible low strength soils which are likely to require further investigation for the proposed basement if the structure is to be replaced
- Contamination associated with made ground, a steam railway, gas works, cotton mill and demolition material may be present at the site which poses a potentially significant risk to human health
- Contamination associated with made ground, a steam railway, gas works, cotton mill and demolition material may be present at the site which poses a potentially significant risk to groundwater and surface water
- On and off site alluvium and made ground, including an infilled reservoir, are potential sources of harmful ground gases
- The site lies within an area which may be affected by coal workings.

7.2 Recommendations

A ground investigation is recommended at the site to address the constraints identified by this desk study. A proposed investigation has been designed. The scope is detailed in **Table 22**. If the basements in the building are to be removed and new structures built, further investigation will be required to determine the basement design and the impact of the compressible soils at the site.

The site lies within a Coal Authority reporting area. A Consultant's Mining Report will be required for the development if new foundations are proposed.

Access at the site is limited by narrow doorways. Access to the rear gardens may be restricted by stairs. The drilling rig will have to be reloaded into the van to move it from the rear to the front gardens as it is not permitted on the road. This may result in the investigation taking longer than typical.

The ground investigation should be carried out in accordance with BS5930:2015, "Code of Practice for Site Investigations" (Ref 5). Locations may need to be relocated based on the location of services – service plans have not been consulted in the design of this investigation and should be reviewed before any intrusive investigation is carried out.

The locations of the boreholes are both targeted on areas of likely contamination and untargeted to provide general site coverage. Chemical samples should be taken at a rate of every change of strata in the top 1.00m, with a minimum of two samples. Geotechnical samples should be taken at 1.00m intervals and at every change of strata to the terminal depth of the hole.

Standard penetration testing should be carried out in all boreholes at intervals of 1.00m to 5.00m begl, then at 1.50m intervals if required by the structural engineer.

A risk of ground gas and groundwater contamination exists at the site. Monitoring wells should be installed in the boreholes detailed in the table. These should be constructed using

50mm HDPE slotted pipe surrounded by gravel, capped with a minimum of 1.00m of plain pipe with a bentonite surround and concrete cap supporting a lockable cover.

Gas monitoring should be carried out at two-week intervals for twelve weeks in accordance with CIRIA C665, "Assessing Risks Posed by Hazardous Ground Gases to Buildings" (Ref 14)

Table 22: Table summarising proposed site investigation.

Hole Ref	Type	Depth (m begl)	Location	Well	Specifics
WS01	WS	5.00	Yard of number 5	Yes	To determine depth of made ground and ground gas concentrations
WS02	WS	5.00	Yard of number 4	Yes	To determine depth of made ground and ground gas concentrations
WS03	WS	5.00	Garden of number 5	Yes	Test for contamination in gardens and determine ground gas concentrations
WS04	WS	5.00	Garden of number 5	No	Test for contamination in gardens
WS05	WS	5.00	Garden of number 4	Yes	Test for contamination in gardens and determine ground gas concentrations
WS06	WS	5.00	Garden of number 4	No	Test for contamination in gardens

The exact specification of the laboratory testing should be determined following the site investigation. As a minimum, the environmental testing should test for those detailed in **Table 23**.

Table 23: Table detailing contaminants tested for during laboratory testing.

Material	Contaminants			
Soil	Metals		Inorganics/Other	
	Arsenic	Lead	pH	
	Aluminium	Manganese	Asbestos Identification	
	Boron (Water Soluble)	Mercury	Cyanide, total and free	
	Cadmium	Nickel	Total Organic Carbon	
	Chromium (III and VI)	Selenium	Organic Matter	
	Copper	Zinc	Sulphide and Sulphate as SO4	
	Total Phenol	Speciated and Total Petroleum Hydrocarbons (TPHs)	Speciated Polycyclic Aromatic Hydrocarbons (PAHs)	
Water/Leachate	Metals		Inorganics/Other	
	Arsenic	Lead	pH	Soluble Sulphate
	Boron	Mercury	Cyanide, total	DO
	Cadmium	Nickel	Sulphide	COD/BOD
	Chromium (III and VI)	Selenium	Hardness	EC
	Copper	Zinc	Chloride	
	Total Phenol	Speciated and Total Petroleum Hydrocarbons (TPHs)	Speciated Polycyclic Aromatic Hydrocarbons (PAHs)	



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8. REFERENCES

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APPENDIX I

Figures

Site Location Plan

Site Boundary Plan

Proposed Development Plan

LEGEND

Boundary



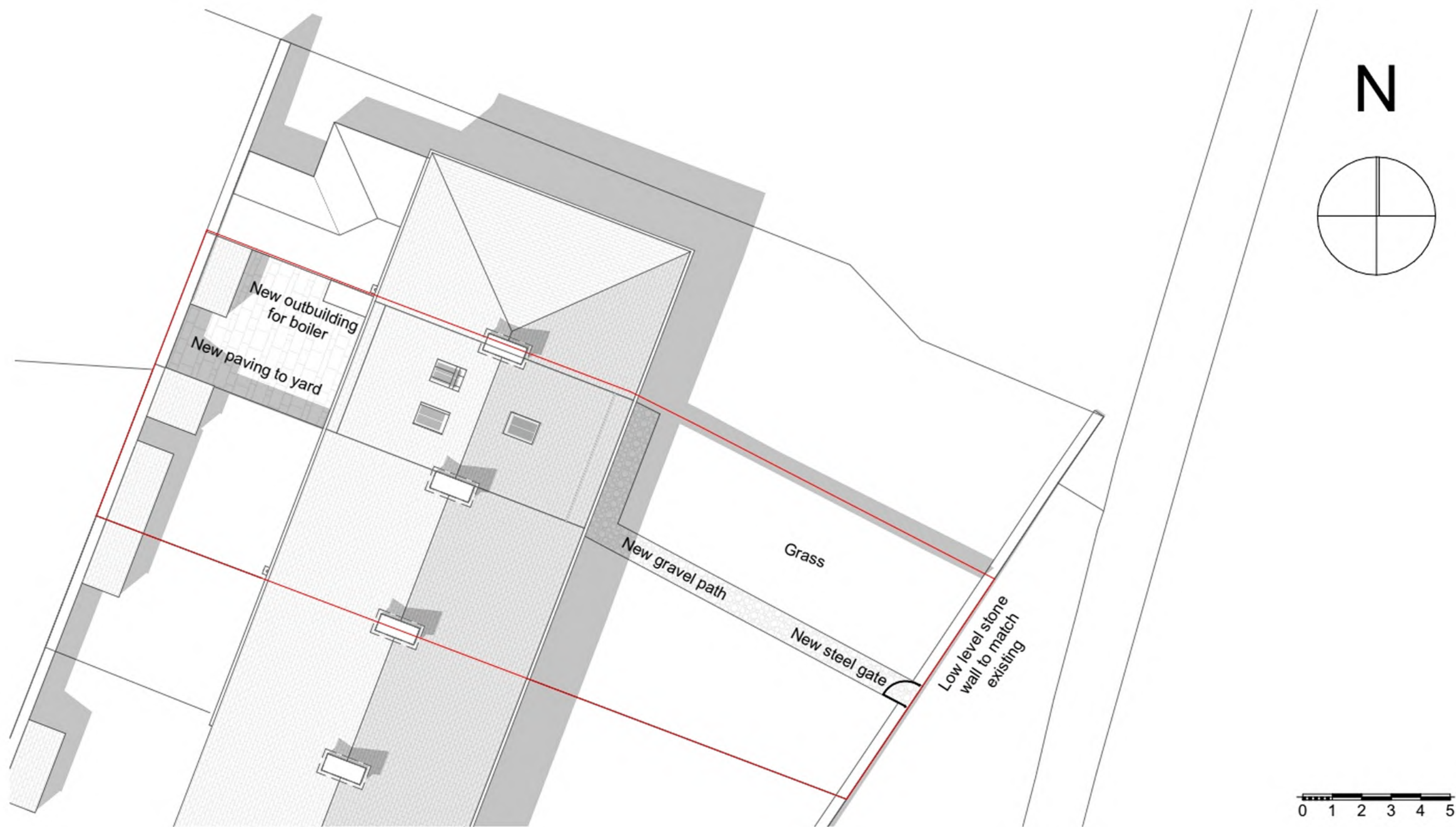
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TITLE: SITE LOCATION PLAN		SCALE (A3) 1:5000	DRAWN MTF	CHECKED JC	REVISION 0	

LEGEND

Boundary



SITE: 5 EAST VIEW, SUMMERSEAT	DRAWING NO: 1750/002		PROJECT NO: 1750	DATE: 14.2.24	soilutions soilutions.co.uk 0800 0209 307 info@soilutions.co.uk
	SCALE (A3) 1:200	DRAWN MTF	CHECKED JC	REVISION 0	



SITE: 5 EAST VIEW, SUMMERSEAT	DRAWING NO: 1750/003		PROJECT NO: 1750	DATE: 14.2.24	 soilutions.co.uk 0800 0209 307 info@soilutions.co.uk
	SCALE (A3) See bar	DRAWN MTF	CHECKED JC	REVISION 0	



APPENDIX II

Groundsure Report

5, EAST VIEW, SUMMERSEAT, BL9 5PG

Order Details

Date: 13/02/2024
Your ref: 1750
Our Ref: GS-GBH-7CT-JOI-C4Q

Site Details

Location: 379300 415142
Area: 0.03 ha
Authority: [Bury Metropolitan Borough Council](#) ↗



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Summary of findings

[p. 2 >](#)

Aerial image

[p. 9 >](#)

OS MasterMap site plan

[p.13 >](#)

groundsure.com/insightuserguide ↗

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	6	20	40	-
17 >	1.2 >	Historical tanks >	0	0	13	23	-
19 >	1.3 >	Historical energy features >	0	0	11	4	-
19	1.4	Historical petrol stations	0	0	0	0	-
20	1.5	Historical garages	0	0	0	0	-
20	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
21 >	2.1 >	Historical industrial land uses >	0	7	41	68	-
26 >	2.2 >	Historical tanks >	0	0	22	32	-
28 >	2.3 >	Historical energy features >	0	0	19	7	-
29	2.4	Historical petrol stations	0	0	0	0	-
29	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
30	3.1	Active or recent landfill	0	0	0	0	-
30	3.2	Historical landfill (BGS records)	0	0	0	0	-
31	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
31 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	0	1	-
31	3.5	Historical waste sites	0	0	0	0	-
31	3.6	Licensed waste sites	0	0	0	0	-
32	3.7	Waste exemptions	0	0	0	0	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
33 >	4.1 >	Recent industrial land uses >	0	0	4	-	-
34	4.2	Current or recent petrol stations	0	0	0	0	-
34	4.3	Electricity cables	0	0	0	0	-
34	4.4	Gas pipelines	0	0	0	0	-
34	4.5	Sites determined as Contaminated Land	0	0	0	0	-



34	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
35	4.7	Regulated explosive sites	0	0	0	0	-
35	4.8	Hazardous substance storage/usage	0	0	0	0	-
35	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
35	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
35	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
36	4.12	Radioactive Substance Authorisations	0	0	0	0	-
36 >	4.13 >	<u>Licensed Discharges to controlled waters ></u>	0	0	1	1	-
36	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
37	4.15	Pollutant release to public sewer	0	0	0	0	-
37	4.16	List 1 Dangerous Substances	0	0	0	0	-
37	4.17	List 2 Dangerous Substances	0	0	0	0	-
37	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
37	4.19	Pollution inventory substances	0	0	0	0	-
38	4.20	Pollution inventory waste transfers	0	0	0	0	-
38	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	<u>Hydrogeology ></u>	On site	0-50m	50-250m	250-500m	500-2000m
39 >	5.1 >	<u>Superficial aquifer ></u>	Identified (within 500m)				
41 >	5.2 >	<u>Bedrock aquifer ></u>	Identified (within 500m)				
43 >	5.3 >	<u>Groundwater vulnerability ></u>	Identified (within 50m)				
44	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
44	5.5	Groundwater vulnerability- local information	None (within 0m)				
45 >	5.6 >	<u>Groundwater abstractions ></u>	0	0	0	0	14
49 >	5.7 >	<u>Surface water abstractions ></u>	0	0	0	0	15
53 >	5.8 >	<u>Potable abstractions ></u>	0	0	0	0	3
54	5.9	Source Protection Zones	0	0	0	0	-
54	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	<u>Hydrology ></u>	On site	0-50m	50-250m	250-500m	500-2000m
55 >	6.1 >	<u>Water Network (OS MasterMap) ></u>	0	5	16	-	-



57 >	6.2 >	Surface water features >	0	3	7	-	-
57 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
58 >	6.4 >	WFD Surface water bodies >	0	1	0	-	-
58 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
59 >	7.1 >	Risk of flooding from rivers and the sea >	High (within 50m)				
60 >	7.2 >	Historical Flood Events >	0	1	0	-	-
60	7.3	Flood Defences	0	0	0	-	-
60	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
61	7.5	Flood Storage Areas	0	0	0	-	-
62 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
63 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				
Page	Section	Surface water flooding >					
64 >	8.1 >	Surface water flooding >	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
66 >	9.1 >	Groundwater flooding >	Low (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
67 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	0	0	0	0	1
68	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
68	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
68	10.4	Special Protection Areas (SPA)	0	0	0	0	0
68	10.5	National Nature Reserves (NNR)	0	0	0	0	0
69 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	2
69 >	10.7 >	Designated Ancient Woodland >	0	0	1	2	2
69	10.8	Biosphere Reserves	0	0	0	0	0
70	10.9	Forest Parks	0	0	0	0	0
70	10.10	Marine Conservation Zones	0	0	0	0	0
70 >	10.11 >	Green Belt >	1	0	0	0	1
70	10.12	Proposed Ramsar sites	0	0	0	0	0



71	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
71	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
71	10.15	Nitrate Sensitive Areas	0	0	0	0	0
71	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
72 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
73 >	10.18 >	SSSI Units >	0	0	0	0	1
Page	Section	Visual and cultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
75	11.1	World Heritage Sites	0	0	0	-	-
76	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
76	11.3	National Parks	0	0	0	-	-
76 >	11.4 >	Listed Buildings >	0	0	1	-	-
77 >	11.5 >	Conservation Areas >	1	0	0	-	-
77	11.6	Scheduled Ancient Monuments	0	0	0	-	-
77	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
78 >	12.1 >	Agricultural Land Classification >	Grade 4 (within 250m)				
79	12.2	Open Access Land	0	0	0	-	-
79 >	12.3 >	Tree Felling Licences >	0	1	0	-	-
79	12.4	Environmental Stewardship Schemes	0	0	0	-	-
79	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
80 >	13.1 >	Priority Habitat Inventory >	0	7	15	-	-
81 >	13.2 >	Habitat Networks >	2	0	2	-	-
82	13.3	Open Mosaic Habitat	0	0	0	-	-
82	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
83 >	14.1 >	10k Availability >	Identified (within 500m)				
84 >	14.2 >	Artificial and made ground (10k) >	0	1	1	5	-
86 >	14.3 >	Superficial geology (10k) >	1	1	5	4	-



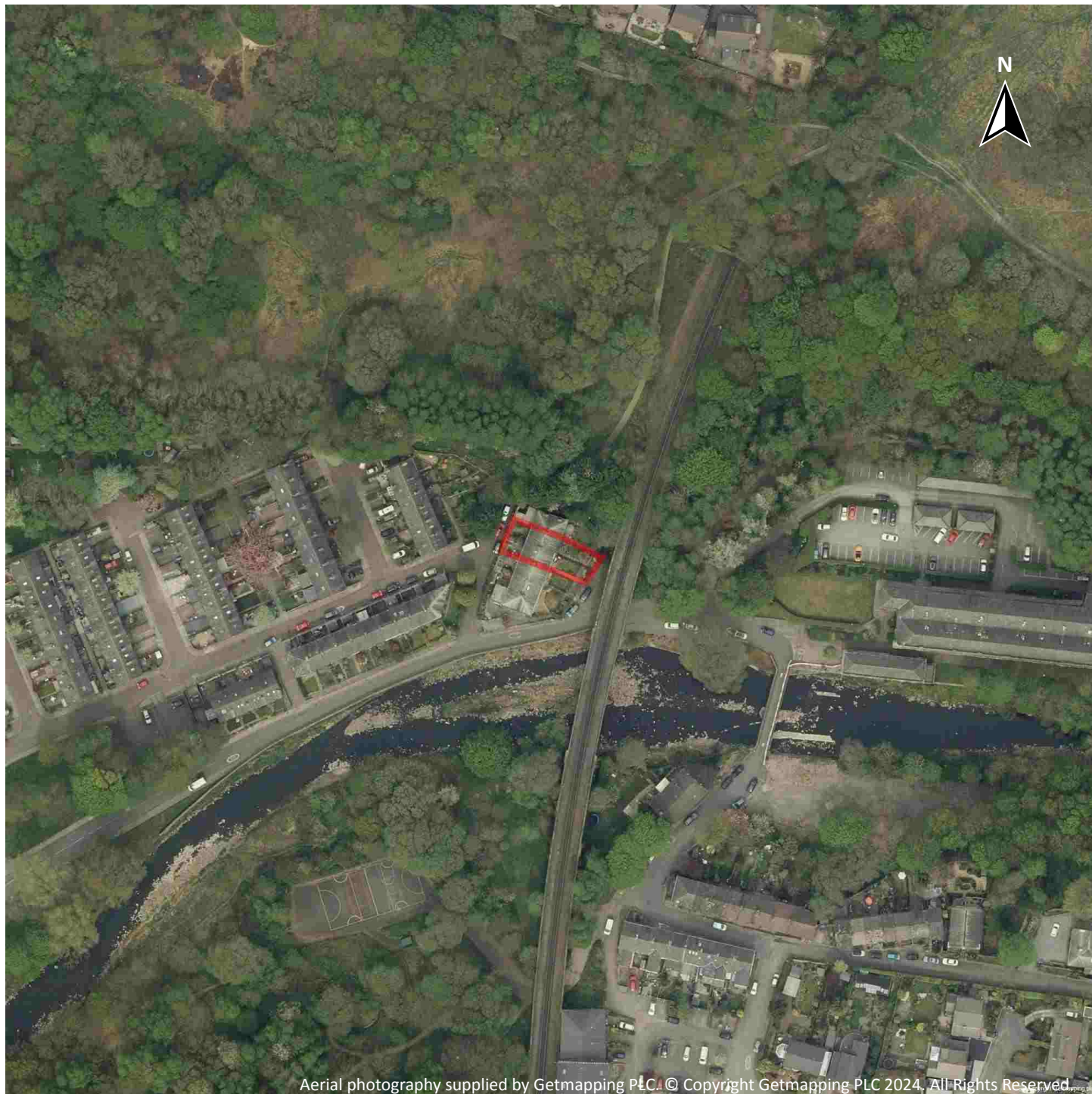
87 >	14.4 >	Landslip (10k) >	0	1	0	2	-
88 >	14.5 >	Bedrock geology (10k) >	1	0	2	3	-
89 >	14.6 >	Bedrock faults and other linear features (10k) >	0	0	0	4	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
90 >	15.1 >	50k Availability >	Identified (within 500m)				
91	15.2	Artificial and made ground (50k)	0	0	0	0	-
91	15.3	Artificial ground permeability (50k)	0	0	-	-	-
92 >	15.4 >	Superficial geology (50k) >	1	1	2	3	-
93 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
93 >	15.6 >	Landslip (50k) >	0	1	0	0	-
94 >	15.7 >	Landslip permeability (50k) >	Identified (within 50m)				
95 >	15.8 >	Bedrock geology (50k) >	1	0	1	1	-
96 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
96 >	15.10 >	Bedrock faults and other linear features (50k) >	0	0	0	2	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
97 >	16.1 >	BGS Boreholes >	0	7	11	-	-
Page	Section	Natural ground subsidence >					
99 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
100 >	17.2 >	Running sands >	Low (within 50m)				
102 >	17.3 >	Compressible deposits >	Moderate (within 50m)				
104 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
105 >	17.5 >	Landslides >	Moderate (within 50m)				
107 >	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
109 >	18.1 >	BritPits >	0	0	0	3	-
110 >	18.2 >	Surface ground workings >	0	0	27	-	-
111 >	18.3 >	Underground workings >	0	0	7	0	7
112	18.4	Underground mining extents	0	0	0	0	-
112	18.5	Historical Mineral Planning Areas	0	0	0	0	-



113 >	18.6 >	Non-coal mining >	1	0	1	0	2
113	18.7	JPB mining areas	None (within 0m)				
114	18.8	The Coal Authority non-coal mining	0	0	0	0	-
114	18.9	Researched mining	0	0	0	0	-
114	18.10	Mining record office plans	0	0	0	0	-
114	18.11	BGS mine plans	0	0	0	0	-
115 >	18.12 >	Coal mining >	Identified (within 0m)				
115	18.13	Brine areas	None (within 0m)				
115	18.14	Gypsum areas	None (within 0m)				
115	18.15	Tin mining	None (within 0m)				
115	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
116	19.1	Natural cavities	0	0	0	0	-
116	19.2	Mining cavities	0	0	0	0	0
116	19.3	Reported recent incidents	0	0	0	0	-
116	19.4	Historical incidents	0	0	0	0	-
117	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
118 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
120 >	21.1 >	BGS Estimated Background Soil Chemistry >	1	1	-	-	-
120	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
120	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
121	22.1	Underground railways (London)	0	0	0	-	-
121	22.2	Underground railways (Non-London)	0	0	0	-	-
122 >	22.3 >	Railway tunnels >	0	0	1	-	-
122 >	22.4 >	Historical railway and tunnel features >	0	0	27	-	-
123	22.5	Royal Mail tunnels	0	0	0	-	-

123	22.6	Historical railways	0	0	0	-	-
124 >	22.7 >	Railways >	0	6	5	-	-
124	22.8	Crossrail 1	0	0	0	0	-
124	22.9	Crossrail 2	0	0	0	0	-
125	22.10	HS2	0	0	0	0	-

Recent aerial photograph



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Capture Date: 23/05/2019

Site Area: 0.03ha



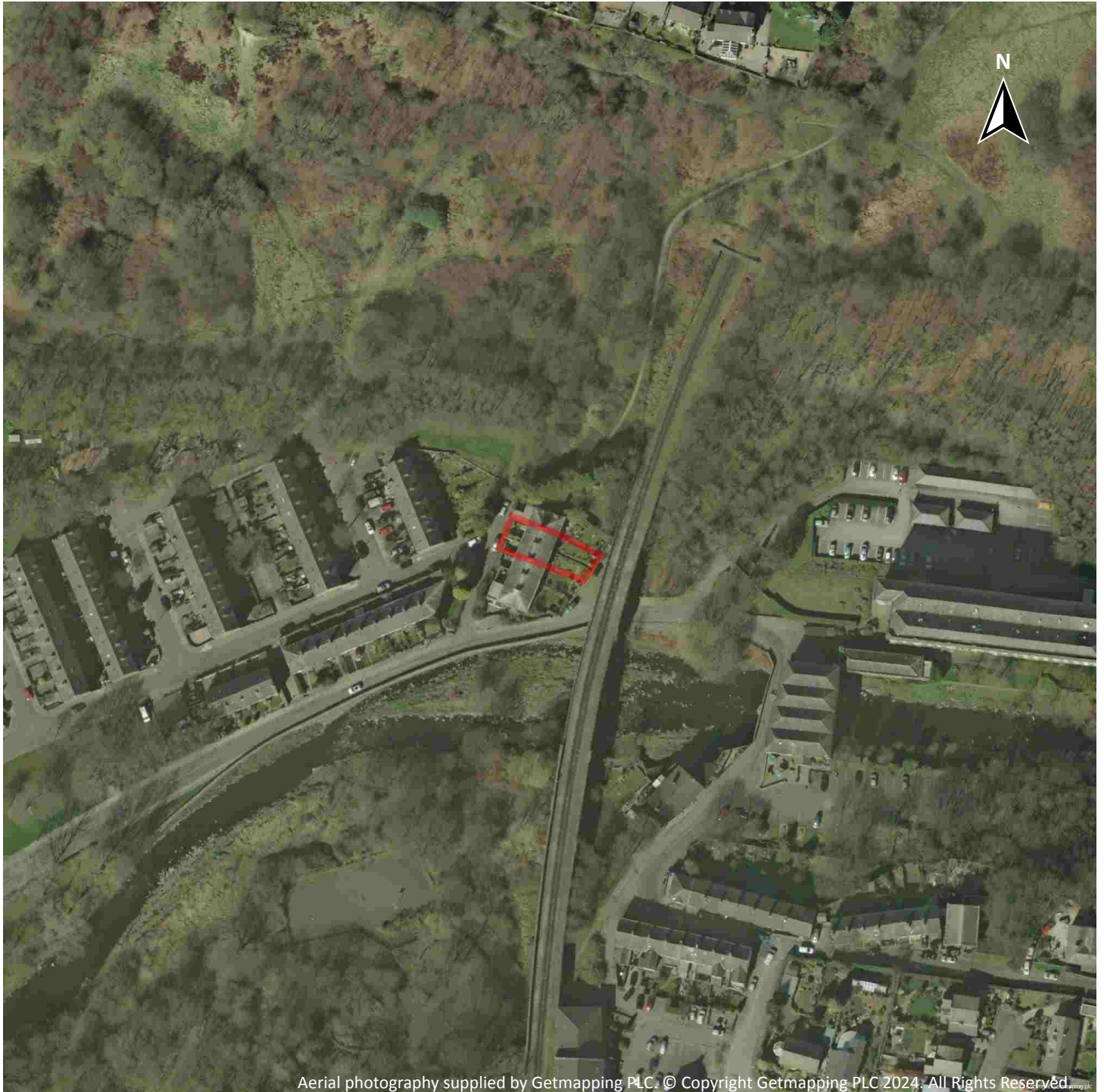
Contact us with any questions at:

info@groundsure.com

01273 257 755

Date: 13 February 2024

Recent site history - 2012 aerial photograph



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Capture Date: 26/03/2012

Site Area: 0.03ha



Contact us with any questions at:

info@groundsure.com

01273 257 755

Date: 13 February 2024

Recent site history - 2001 aerial photograph



Capture Date: 07/05/2001

Site Area: 0.03ha



Contact us with any questions at:

info@groundsure.com

01273 257 755

Date: 13 February 2024

Recent site history - 2000 aerial photograph



Capture Date: 07/05/2000

Site Area: 0.03ha



Contact us with any questions at:

info@groundsure.com

01273 257 755

Date: 13 February 2024

OS MasterMap site plan



Site Area: 0.03ha



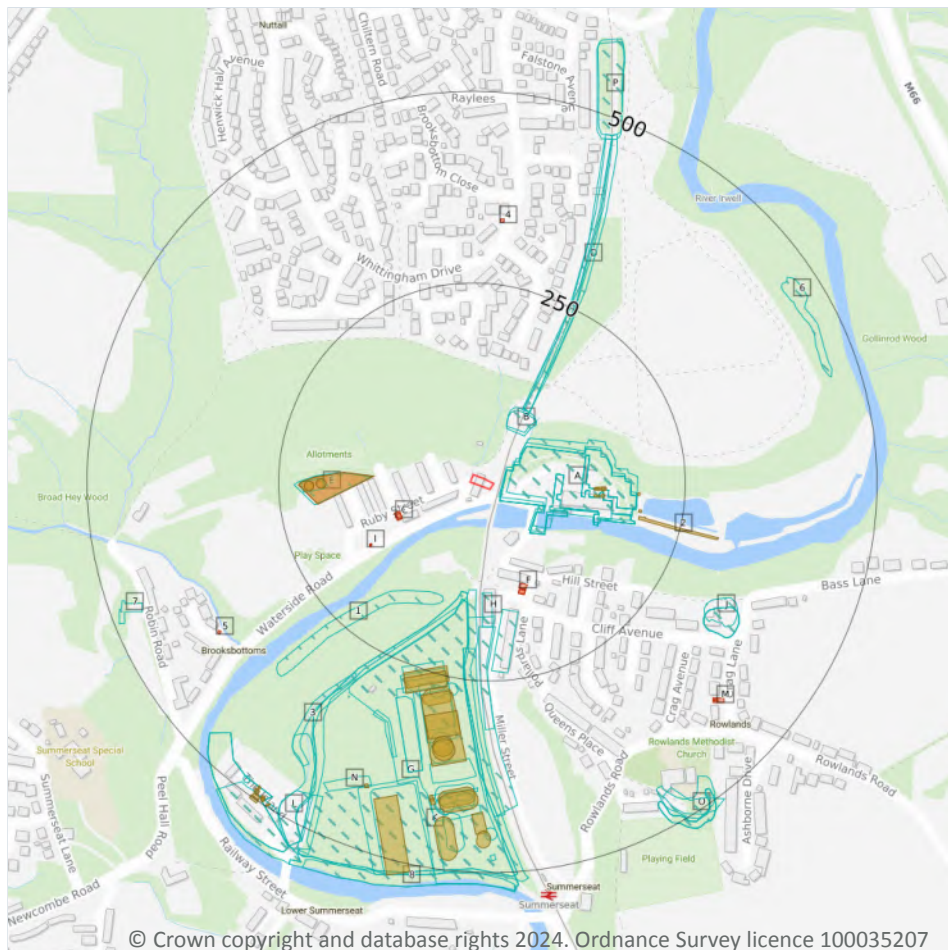
Contact us with any questions at:

info@groundsure.com

01273 257 755

Date: 13 February 2024

1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

66

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
A	11m E	Cotton Mill	1955	750678



ID	Location	Land use	Dates present	Group ID
A	13m E	Cotton Mill	1948	696226
A	13m E	Cotton Mill	1908	702899
A	13m E	Unspecified Mill	1927	717523
A	13m E	Unspecified Mill	1891	746428
A	19m E	Unspecified Mill	1968 - 1980	758876
B	72m NE	Cuttings	1891 - 1948	695440
B	75m NE	Cuttings	1955 - 1968	717010
D	100m NE	Tunnel	1891 - 1948	759251
D	104m NE	Tunnel	1980	714489
D	104m NE	Tunnel	1955 - 1968	787851
E	128m W	Gas Works	1891 - 1908	760079
G	132m S	Sewage Works	1974 - 1980	778260
H	135m S	Goods Shed	1927 - 1948	700140
G	138m S	Unspecified Commercial/Industrial	1956	735796
G	138m S	Unspecified Commercial/Industrial	1969	783837
G	147m S	Sewage Works	1927 - 1948	750169
G	148m S	Sewage Works	1908	735300
1	151m S	Unspecified Heap	1891 - 1948	767731
H	157m S	Goods Shed	1927 - 1948	788422
G	166m S	Railway Sidings	1956	757540
H	179m S	Railway Sidings	1908 - 1948	776304
E	191m W	Gasometers	1891 - 1908	764411
G	209m S	Railway Sidings	1908	712148
G	232m S	Sludge Tanks	1956	710231
G	240m S	Sludge Tanks	1908 - 1948	769078
G	257m S	Unspecified Tanks	1956	713764
G	257m S	Unspecified Tanks	1974 - 1980	726073
G	268m S	Unspecified Tanks	1908 - 1948	738406



ID	Location	Land use	Dates present	Group ID
G	280m S	Unspecified Tanks	1927 - 1956	760030
3	291m SW	Unspecified Ground Workings	1908	648101
G	291m S	Filter Beds	1908	665750
J	319m SE	Unspecified Quarry	1956	667806
G	321m SW	Unspecified Ground Workings	1908	648100
G	323m S	Unspecified Tank	1956 - 1980	747711
J	324m SE	Unspecified Old Quarry	1908	680659
J	324m SE	Unspecified Pit	1891	735514
J	324m SE	Unspecified Pit	1927 - 1948	754188
G	335m S	Unspecified Tanks	1927 - 1948	746468
G	352m S	Unspecified Tank	1956	674748
G	384m S	Unspecified Tanks	1956 - 1980	751702
K	387m S	Unspecified Ground Workings	1908	648097
G	390m S	Unspecified Ground Workings	1908	648096
L	391m SW	Unspecified Pit	1908 - 1927	731554
G	397m S	Unspecified Tanks	1927 - 1948	737181
G	405m S	Unspecified Tank	1927 - 1948	772132
N	406m S	Unspecified Heap	1908	650814
G	425m S	Unspecified Tanks	1974 - 1980	775419
G	442m S	Unspecified Tank	1974 - 1980	733888
O	447m SE	Unspecified Quarry	1956	667807
L	452m SW	Unspecified Commercial/Industrial	1980	643116
L	452m SW	Dye and Print Works	1956	652174
L	452m SW	Unspecified Works	1969 - 1974	761562
6	454m NE	Unspecified Old Quarry	1908	680658
O	455m SE	Unspecified Pit	1974 - 1980	695543
7	456m W	Disused Cotton Mill	1908	680211
L	457m SW	Unspecified Ground Workings	1908	648099



ID	Location	Land use	Dates present	Group ID
O	464m SE	Unspecified Old Quarry	1908	680661
O	464m SE	Unspecified Ground Workings	1891	763997
O	464m SE	Unspecified Ground Workings	1927 - 1948	789434
P	469m N	Cuttings	1891 - 1948	738567
P	475m N	Cuttings	1955 - 1980	712937
G	476m S	Pump House	1948	693619
L	481m SW	Chimney	1969 - 1980	735351
L	492m SW	Printing and Dyeing Works	1908 - 1927	781625
8	499m S	Unspecified Heap	1908	650813

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

36

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

Features are displayed on the Past land use map on [page 14 >](#)

ID	Location	Land use	Dates present	Group ID
E	126m W	Gas Works	1891 - 1910	94938
A	131m E	Tanks	1962 - 1970	102259
A	132m E	Tanks	1937	87208
A	133m E	Tanks	1980	98281
A	140m E	Unspecified Tank	1962 - 1970	88936
A	141m E	Unspecified Tank	1937	82663
A	188m E	Unspecified Tank	1891 - 1937	91937
E	189m W	Gasometer	1891 - 1910	90135
A	193m E	Unspecified Tank	1962 - 1970	91222



ID	Location	Land use	Dates present	Group ID
2	195m E	Unspecified Tank	1937	82662
E	204m W	Gasometer	1891 - 1910	98051
G	237m S	Tanks	1977	87221
G	244m S	Sludge Tanks	1910 - 1937	99145
G	265m S	Tanks	1970 - 1977	91197
G	268m S	Sluices Tanks	1910 - 1937	103904
G	292m S	Tanks	1977	87193
G	328m S	Unspecified Tank	1962 - 1970	89386
G	331m S	Tanks	1977	87194
G	390m S	Tanks	1962 - 1970	90765
G	394m S	Tanks	1977	103418
G	406m S	Unspecified Tank	1970	82787
G	409m S	Tanks	1977	87192
N	416m S	Tanks	1937	87191
K	417m S	Tanks	1977	87190
G	421m S	Sludge Tanks	1937	85893
G	432m S	Tanks	1970 - 1977	99340
G	446m S	Unspecified Tank	1970 - 1977	90952
L	482m SW	Unspecified Tank	1977 - 1992	99809
L	488m SW	Tanks	1992	87188
L	490m SW	Unspecified Tank	1970	102340
L	491m SW	Unspecified Tank	1910 - 1937	92792
L	491m SW	Tanks	1992	87189
L	493m SW	Unspecified Tank	1977	97945
L	493m SW	Tanks	1977 - 1992	94102
L	494m SW	Unspecified Tank	1992	82790
L	498m SW	Tanks	1937	87187

This data is sourced from Ordnance Survey / Groundsure.



1.3 Historical energy features

Records within 500m

15

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

Features are displayed on the Past land use map on [page 14](#) >

ID	Location	Land use	Dates present	Group ID
C	100m W	Electricity Substation	1970 - 1992	50240
C	100m W	Electricity Substation	1992	53221
E	126m W	Gas Works	1891 - 1910	59108
F	129m S	Electricity Substation	1970 - 1980	52584
F	135m S	Electricity Substation	1978 - 1992	58994
F	136m S	Electricity Substation	1992	53761
I	152m SW	Gas Governor	1992	57979
I	153m SW	Gas Governor	1978	58913
I	153m SW	Gas Governor	1992	54320
E	189m W	Gasometer	1891 - 1910	59273
E	204m W	Gasometer	1891 - 1910	57597
4	331m N	Electricity Substation	1992	47314
5	379m SW	Electricity Substation	1978 - 1992	56731
M	398m SE	Electricity Substation	1977 - 1992	46771
M	400m SE	Electricity Substation	1970	49875

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

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



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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

0

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

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



ID	Location	Land Use	Date	Group ID
A	13m E	Cotton Mill	1908	702899
A	13m E	Unspecified Mill	1891	746428
A	19m E	Unspecified Mill	1968	758876
A	21m E	Unspecified Mill	1980	758876
B	72m NE	Cuttings	1948	695440
B	72m NE	Cuttings	1927	695440
B	72m NE	Cuttings	1908	695440
B	72m NE	Cuttings	1891	695440
B	75m NE	Cuttings	1968	717010
B	75m NE	Cuttings	1955	717010
D	100m NE	Tunnel	1948	759251
D	100m NE	Tunnel	1927	759251
D	100m NE	Tunnel	1908	759251
D	100m NE	Tunnel	1891	759251
D	104m NE	Tunnel	1980	714489
D	104m NE	Tunnel	1968	787851
D	104m NE	Tunnel	1955	787851
E	128m W	Gas Works	1891	760079
G	132m S	Sewage Works	1980	778260
G	132m S	Sewage Works	1974	778260
E	133m W	Gas Works	1908	760079
H	135m S	Goods Shed	1948	700140
H	135m S	Goods Shed	1927	700140
G	138m S	Unspecified Commercial/Industrial	1969	783837
G	138m S	Unspecified Commercial/Industrial	1956	735796
G	147m S	Sewage Works	1948	750169
G	147m S	Sewage Works	1927	750169
G	148m S	Sewage Works	1908	735300



ID	Location	Land Use	Date	Group ID
I	151m S	Unspecified Heap	1948	767731
I	151m S	Unspecified Heap	1927	767731
I	151m S	Unspecified Heap	1908	767731
I	151m S	Unspecified Heap	1891	767731
H	157m S	Goods Shed	1948	788422
H	157m S	Goods Shed	1927	788422
G	166m S	Railway Sidings	1956	757540
H	179m S	Railway Sidings	1948	776304
H	179m S	Railway Sidings	1927	776304
H	179m S	Railway Sidings	1908	776304
E	191m W	Gasometers	1891	764411
E	196m W	Gasometers	1908	764411
G	209m S	Railway Sidings	1908	712148
G	232m S	Sludge Tanks	1956	710231
G	240m S	Sludge Tanks	1948	769078
G	240m S	Sludge Tanks	1927	769078
G	240m S	Sludge Tanks	1908	769078
G	257m S	Unspecified Tanks	1956	713764
G	257m S	Unspecified Tanks	1980	726073
G	257m S	Unspecified Tanks	1974	726073
G	268m S	Unspecified Tanks	1948	738406
G	268m S	Unspecified Tanks	1927	738406
G	268m S	Unspecified Tanks	1908	738406
G	280m S	Unspecified Tanks	1956	760030
2	291m SW	Unspecified Ground Workings	1908	648101
G	291m S	Filter Beds	1908	665750
G	291m S	Unspecified Tanks	1948	760030
G	291m S	Unspecified Tanks	1927	760030



ID	Location	Land Use	Date	Group ID
K	319m SE	Unspecified Quarry	1956	667806
G	321m SW	Unspecified Ground Workings	1908	648100
G	323m S	Unspecified Tank	1980	747711
G	323m S	Unspecified Tank	1969	747711
G	323m S	Unspecified Tank	1974	747711
G	323m S	Unspecified Tank	1956	747711
K	324m SE	Unspecified Pit	1948	754188
K	324m SE	Unspecified Pit	1927	754188
K	324m SE	Unspecified Pit	1891	735514
K	324m SE	Unspecified Old Quarry	1908	680659
G	335m S	Unspecified Tanks	1948	746468
G	335m S	Unspecified Tanks	1927	746468
G	352m S	Unspecified Tank	1956	674748
G	384m S	Unspecified Tanks	1980	751702
G	384m S	Unspecified Tanks	1969	751702
G	384m S	Unspecified Tanks	1974	751702
G	384m S	Unspecified Tanks	1956	751702
N	387m S	Unspecified Ground Workings	1908	648097
G	390m S	Unspecified Ground Workings	1908	648096
O	391m SW	Unspecified Pit	1927	731554
G	397m S	Unspecified Tanks	1948	737181
G	397m S	Unspecified Tanks	1927	737181
G	405m S	Unspecified Tank	1948	772132
G	405m S	Unspecified Tank	1927	772132
Q	406m S	Unspecified Heap	1908	650814
G	425m S	Unspecified Tanks	1980	775419
G	425m S	Unspecified Tanks	1974	775419
G	442m S	Unspecified Tank	1980	733888



ID	Location	Land Use	Date	Group ID
G	442m S	Unspecified Tank	1974	733888
R	447m SE	Unspecified Quarry	1956	667807
O	452m SW	Unspecified Commercial/Industrial	1980	643116
O	452m SW	Unspecified Works	1969	761562
O	452m SW	Unspecified Works	1974	761562
O	452m SW	Dye and Print Works	1956	652174
O	453m SW	Unspecified Pit	1908	731554
3	454m NE	Unspecified Old Quarry	1908	680658
R	455m SE	Unspecified Pit	1980	695543
R	455m SE	Unspecified Pit	1974	695543
4	456m W	Disused Cotton Mill	1908	680211
O	457m SW	Unspecified Ground Workings	1908	648099
R	464m SE	Unspecified Ground Workings	1948	789434
R	464m SE	Unspecified Ground Workings	1927	789434
R	464m SE	Unspecified Ground Workings	1891	763997
R	464m SE	Unspecified Old Quarry	1908	680661
S	469m N	Cuttings	1948	738567
S	469m N	Cuttings	1927	738567
S	469m N	Cuttings	1908	738567
S	469m N	Cuttings	1891	738567
S	475m N	Cuttings	1980	712937
S	475m N	Cuttings	1968	712937
S	475m N	Cuttings	1955	712937
G	476m S	Pump House	1948	693619
O	481m SW	Chimney	1980	735351
O	481m SW	Chimney	1969	735351
O	481m SW	Chimney	1974	735351
O	492m SW	Printing and Dyeing Works	1908	781625



ID	Location	Land Use	Date	Group ID
5	499m S	Unspecified Heap	1908	650813

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

54

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

Features are displayed on the Past land use - un-grouped map on [page 21 >](#)

ID	Location	Land Use	Date	Group ID
E	126m W	Gas Works	1891	94938
E	126m W	Gas Works	1910	94938
A	131m E	Tanks	1962	102259
A	131m E	Tanks	1970	102259
A	132m E	Tanks	1937	87208
A	133m E	Tanks	1980	98281
A	140m E	Unspecified Tank	1962	88936
A	140m E	Unspecified Tank	1970	88936
A	141m E	Unspecified Tank	1937	82663
A	188m E	Unspecified Tank	1891	91937
A	188m E	Unspecified Tank	1910	91937
A	188m E	Unspecified Tank	1937	91937
E	189m W	Gasometer	1891	90135
E	189m W	Gasometer	1910	90135
A	193m E	Unspecified Tank	1962	91222
A	193m E	Unspecified Tank	1970	91222
1	195m E	Unspecified Tank	1937	82662
E	204m W	Gasometer	1891	98051
E	204m W	Gasometer	1910	98051



ID	Location	Land Use	Date	Group ID
G	237m S	Tanks	1977	87221
G	244m S	Sludge Tanks	1910	99145
G	244m S	Sludge Tanks	1937	99145
G	265m S	Tanks	1970	91197
G	267m S	Tanks	1977	91197
G	268m S	Sluices Tanks	1910	103904
G	268m S	Sluices Tanks	1937	103904
G	292m S	Tanks	1977	87193
G	328m S	Unspecified Tank	1962	89386
G	328m S	Unspecified Tank	1970	89386
G	331m S	Tanks	1977	87194
G	390m S	Tanks	1962	90765
G	390m S	Tanks	1970	90765
G	394m S	Tanks	1977	103418
G	406m S	Unspecified Tank	1970	82787
G	409m S	Tanks	1977	87192
Q	416m S	Tanks	1937	87191
N	417m S	Tanks	1977	87190
G	421m S	Sludge Tanks	1937	85893
G	432m S	Tanks	1970	99340
G	436m S	Tanks	1977	99340
G	446m S	Unspecified Tank	1970	90952
G	450m S	Unspecified Tank	1977	90952
O	482m SW	Unspecified Tank	1992	99809
O	483m SW	Unspecified Tank	1977	99809
O	488m SW	Tanks	1992	87188
O	490m SW	Unspecified Tank	1970	102340
O	491m SW	Unspecified Tank	1910	92792



ID	Location	Land Use	Date	Group ID
O	491m SW	Unspecified Tank	1937	92792
O	491m SW	Tanks	1992	87189
O	493m SW	Unspecified Tank	1977	97945
O	493m SW	Tanks	1992	94102
O	494m SW	Unspecified Tank	1992	82790
O	495m SW	Tanks	1977	94102
O	498m SW	Tanks	1937	87187

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

26

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 21 >](#)

ID	Location	Land Use	Date	Group ID
C	100m W	Electricity Substation	1992	50240
C	100m W	Electricity Substation	1992	53221
C	100m W	Electricity Substation	1980	50240
C	101m W	Electricity Substation	1978	50240
C	102m W	Electricity Substation	1970	50240
E	126m W	Gas Works	1891	59108
E	126m W	Gas Works	1910	59108
F	129m S	Electricity Substation	1970	52584
F	129m S	Electricity Substation	1980	52584
F	135m S	Electricity Substation	1978	58994
F	136m S	Electricity Substation	1992	58994
F	136m S	Electricity Substation	1992	53761
J	152m SW	Gas Governor	1992	57979



ID	Location	Land Use	Date	Group ID
J	153m SW	Gas Governor	1978	58913
J	153m SW	Gas Governor	1992	54320
E	189m W	Gasometer	1891	59273
E	189m W	Gasometer	1910	59273
E	204m W	Gasometer	1891	57597
E	204m W	Gasometer	1910	57597
L	331m N	Electricity Substation	1992	47314
L	331m N	Electricity Substation	1992	47314
M	379m SW	Electricity Substation	1992	56731
M	380m SW	Electricity Substation	1978	56731
P	398m SE	Electricity Substation	1977	46771
P	399m SE	Electricity Substation	1992	46771
P	400m SE	Electricity Substation	1970	49875

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



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

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 30 >](#)

ID	Location	Details		
1	266m S	Site Address: Miller Street, Summerseat, Near Bury Licence Holder Address: 2 Meadoway, Summerseat, near Bury	Waste Licence: Yes Site Reference: C053, RD/LIC/173/79 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 07/12/1979 Licence Surrender: 09/11/1987	Operator: - Licence Holder: G T Botham First Recorded 31/12/1979 Last Recorded: 31/12/1984

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

3.5 Historical waste sites

Records within 500m**0**

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

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

3.6 Licensed waste sites

Records within 500m**0**

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

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



3.7 Waste exemptions

Records within 500m

0

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.

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



4 Current industrial land use



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

4.1 Recent industrial land uses

Records within 250m

4

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 33](#) >

ID	Location	Company	Address	Activity	Category
2	103m W	Electricity Sub Station	Greater Manchester, BL9	Electrical Features	Infrastructure and Facilities
3	133m S	Electricity Sub Station	Greater Manchester, BL9	Electrical Features	Infrastructure and Facilities
A	220m N	C-air Filtration	18, Cleveland Close, Ramsbottom, Greater Manchester, BL0 9FH	Air and Water Filtration	Industrial Products



ID	Location	Company	Address	Activity	Category
A	249m N	K P Fire Engineering	191, Whittingham Drive, Ramsbottom, Greater Manchester, BL0 9NY	Special Purpose Machinery and Equipment	Industrial Products

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0
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Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

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

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

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

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

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

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

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

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

This data is sourced from the Health and Safety Executive.



4.7 Regulated explosive sites

Records within 500m

0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m

0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m

0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

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

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

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

Records within 500m

0

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

This data is sourced from Local Authority records.



4.12 Radioactive Substance Authorisations

Records within 500m

0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m

2

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

Features are displayed on the Current industrial land use map on [page 33](#) >

ID	Location	Address	Details	
1	93m SE	BROOKSBOTTOM MILL SWO, WATERSIDE ROAD/KAY STREET, SUMMERSEAT, GREATER MANCHESTER	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016990632 Permit Version: 1 Receiving Water: RIVER IRWELL	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/07/1985 Revocation Date: 01/07/1991
4	489m W	THOMAS ROBINSON(VYELLA) LTD, HOPE WORKS, BOLTON ROAD WEST, RAMSBOTTOM, GREATER MANCHESTER	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 016990081 Permit Version: 1 Receiving Water: TRIBUTARY HOLCOMBE BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/01/1900 Revocation Date: 31/08/1990

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

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

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



4.15 Pollutant release to public sewer

Records within 500m**0**

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m**0**

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

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

4.17 List 2 Dangerous Substances

Records within 500m**0**

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m**0**

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

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

4.19 Pollution inventory substances

Records within 500m**0**

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

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



4.20 Pollution inventory waste transfers

Records within 500m

0

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

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

4.21 Pollution inventory radioactive waste

Records within 500m

0

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

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



ID	Location	Designation	Description
3	131m SE	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
4	137m S	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
5	140m S	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
6	401m W	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
7	482m NW	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers

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

2

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 41](#) >

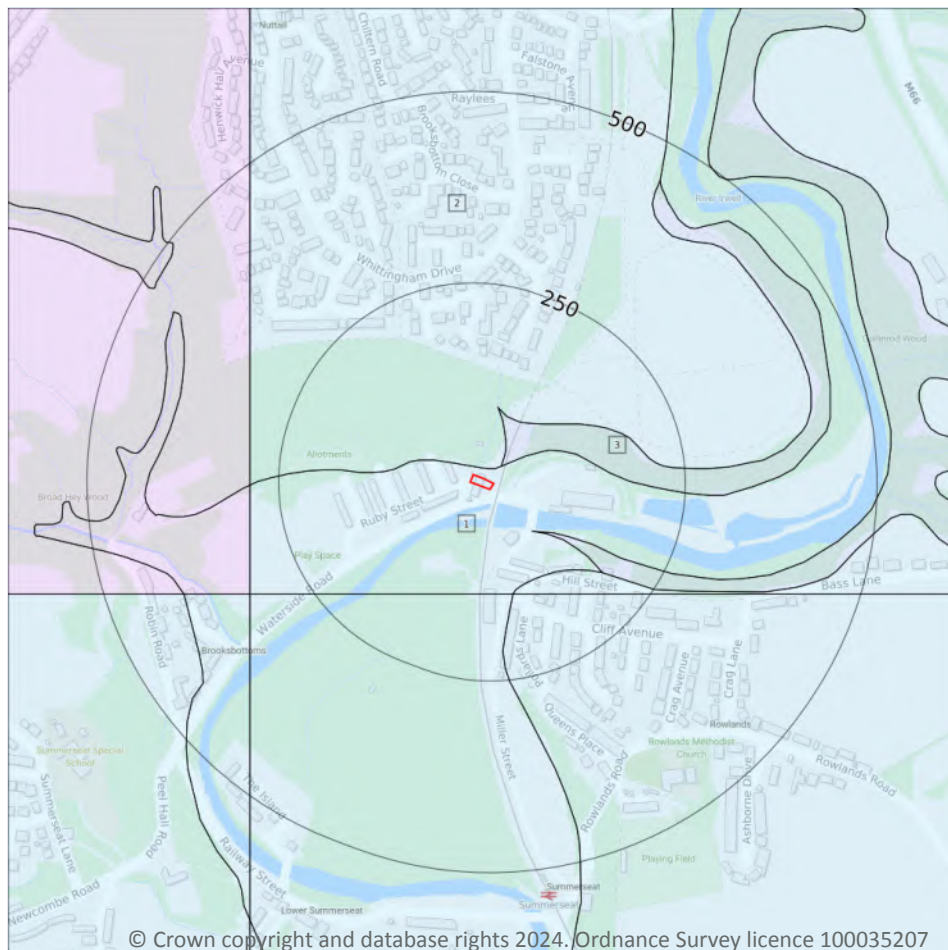
ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	137m S	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers



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



Groundwater vulnerability



— 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

3

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 43](#) >



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: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
2	10m NW	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: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
3	24m NE	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site

0

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

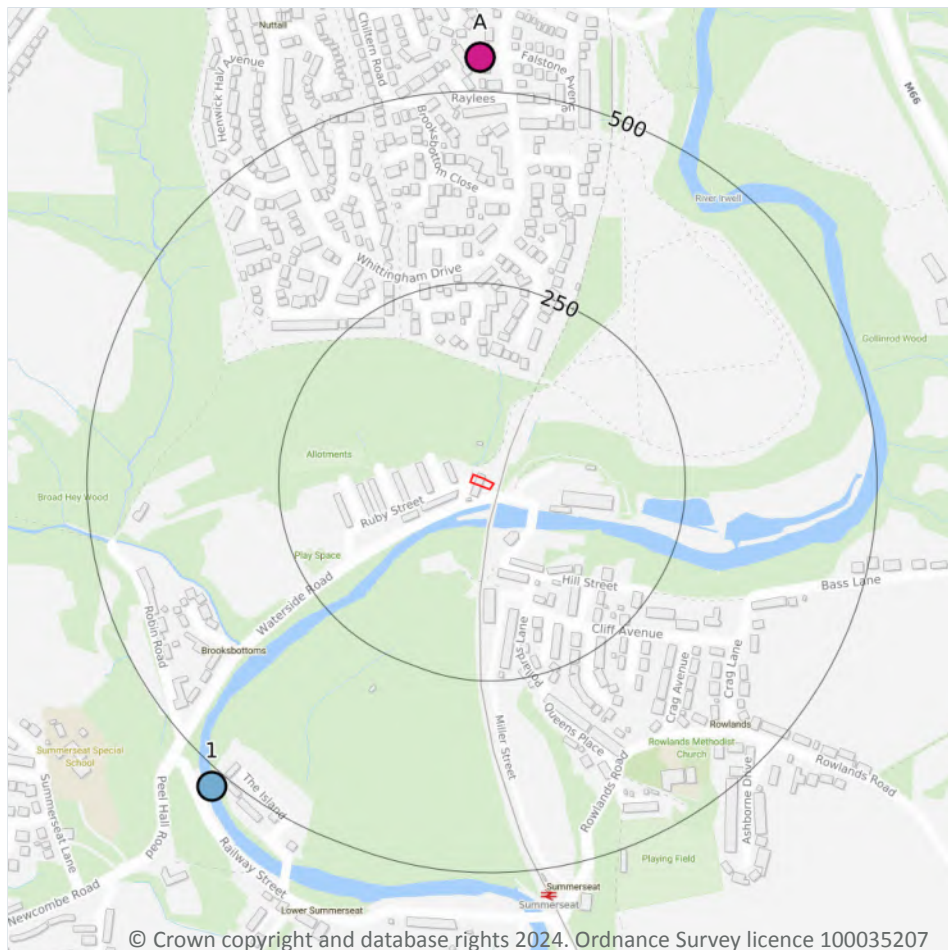
0

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



- 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
Point features
- 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

14

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 45 >](#)



ID	Location	Details	
A	544m N	Status: Historical Licence No: 2569001101 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "SPRING FED CATCHPIT AT NUTTAL HALL FARM, RAMSBOTTOM" Data Type: Point Name: WHITTAKER Easting: 379300 Northing: 415700	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
A	544m N	Status: Historical Licence No: 2569001101 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: SPRING FED CATCHPIT AT NUTTAL HALL FARM, RAMSBOTTOM Data Type: Point Name: WHITTAKER Easting: 379300 Northing: 415700	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
-	844m S	Status: Active Licence No: 2569001208 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT SUMMERSEAT, BURY Data Type: Point Name: KENYON Easting: 379200 Northing: 414300	Annual Volume (m ³): 14974.52 Max Daily Volume (m ³): 40.91 Original Application No: 2554 Original Start Date: 27/07/1979 Expiry Date: - Issue No: 101 Version Start Date: 26/11/2007 Version End Date: -
-	844m S	Status: Historical Licence No: 2569001208 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT SUMMERSEAT, BURY" Data Type: Point Name: JOHN KENYON & SONS Easting: 379200 Northing: 414300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 27/07/1979 Expiry Date: - Issue No: 100 Version Start Date: 27/07/1979 Version End Date: -



ID	Location	Details	
-	1544m N	Status: Historical Licence No: 2569001030 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PEEL BRIDGE MILLS, RAMSBOTTOM" Data Type: Point Name: DANISCO PAPER LTD Easting: 379300 Northing: 416700	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/08/1999 Version End Date: -
-	1544m N	Status: Historical Licence No: 2569001030 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PEEL BRIDGE MILLS, RAMSBOTTOM Data Type: Point Name: MONDI HOLCOMBE LIMITED Easting: 379300 Northing: 416700	Annual Volume (m ³): 359149 Max Daily Volume (m ³): 1637 Original Application No: - Original Start Date: 14/02/1966 Expiry Date: 31/03/2015 Issue No: 105 Version Start Date: 11/08/2008 Version End Date: -
-	1550m E	Status: Historical Licence No: 2569001190 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: SPRING FED COLLECTING CHAMBER AT WALMERSLEY Data Type: Point Name: MOSLEY AND THWAITES Easting: 380800 Northing: 415600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 08/05/1972 Expiry Date: - Issue No: 100 Version Start Date: 08/05/1972 Version End Date: -
-	1624m NW	Status: Active Licence No: 2569001228 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE AT HOLCOMBE, NEAR BURY, LANCS Data Type: Point Name: DARUL ULOOM Easting: 377800 Northing: 415800	Annual Volume (m ³): 22730 Max Daily Volume (m ³): 90.92 Original Application No: 2785 Original Start Date: 20/06/1990 Expiry Date: - Issue No: 100 Version Start Date: 20/06/1990 Version End Date: -



ID	Location	Details	
-	1624m NW	Status: Historical Licence No: 2569001228 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "BOREHOLE AT HOLCOMBE, NEAR BURY, LANCS" Data Type: Point Name: DARUL ULOOM Easting: 377800 Northing: 415800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/06/1990 Expiry Date: - Issue No: 100 Version Start Date: 20/06/1990 Version End Date: -
-	1624m NW	Status: Historical Licence No: 2569001228 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE AT HOLCOMBE, NEAR BURY, LANCS Data Type: Point Name: DARUL ULOOM Easting: 377800 Northing: 415800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/06/1990 Expiry Date: - Issue No: 100 Version Start Date: 20/06/1990 Version End Date: -
-	1809m W	Status: Historical Licence No: 2569001204 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT HOLCOMBE, BURY Data Type: Point Name: DAVENPORT Easting: 377600 Northing: 415800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 30/07/1979 Expiry Date: - Issue No: 100 Version Start Date: 30/07/1979 Version End Date: -
-	1809m W	Status: Historical Licence No: 2569001204 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT HOLCOMBE, BURY" Data Type: Point Name: DAVENPORT Easting: 377600 Northing: 415800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 30/07/1979 Expiry Date: - Issue No: 100 Version Start Date: 30/07/1979 Version End Date: -



ID	Location	Details	
-	1897m E	Status: Active Licence No: 2569001188 Details: General Farming & Domestic Direct Source: Ground Water - North West Region Point: BOREHOLE AT WALMERSLEY, NEAR BURY Data Type: Point Name: HOWARTH Easting: 381200 Northing: 414900	Annual Volume (m ³): 12456 Max Daily Volume (m ³): 34 Original Application No: 2339 Original Start Date: 17/06/1971 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2007 Version End Date: -
-	1897m E	Status: Historical Licence No: 2569001188 Details: General Farming & Domestic Direct Source: Ground Water - North West Region Point: "BOREHOLE AT WALMERSLEY, NEAR BURY" Data Type: Point Name: HOWARTH Easting: 381200 Northing: 414900	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 17/06/1971 Expiry Date: - Issue No: 100 Version Start Date: 09/07/1973 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	15
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Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 45 >](#)

ID	Location	Details	
1	520m SW	Status: Historical Licence No: 2569001038 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: RIVER IRWELL IN RAMSBOTTOM Data Type: Point Name: GREENLEAF ENTERPRISES LTD Easting: 378950 Northing: 414750	Annual Volume (m ³): 23639.7 Max Daily Volume (m ³): 90.92 Original Application No: - Original Start Date: 25/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/03/2003 Version End Date: -



ID	Location	Details	
-	1644m N	Status: Historical Licence No: 2569001029 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: R.IRWELL AT RAMSBOTTOM Data Type: Point Name: MONDI PAPER LIMITED Easting: 379300 Northing: 416800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 11/09/2001 Version End Date: -
-	1644m N	Status: Historical Licence No: 2569001224 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: R.IRWELL AT RAMSBOTTOM Data Type: Point Name: MONDI HOLCOMBE LIMITED Easting: 379300 Northing: 416800	Annual Volume (m ³): 90920 Max Daily Volume (m ³): 1091.04 Original Application No: - Original Start Date: 12/04/1988 Expiry Date: - Issue No: 103 Version Start Date: 11/08/2008 Version End Date: -
-	1644m N	Status: Historical Licence No: 2569001029 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: GOIT FED BY SURFACE DRAINAGE AND RIVER IRWELL AT RAMSBOTTOM Data Type: Point Name: MONDI HOLCOMBE LIMITED Easting: 379300 Northing: 416800	Annual Volume (m ³): 322766 Max Daily Volume (m ³): 1637 Original Application No: - Original Start Date: 14/02/1966 Expiry Date: 31/03/2015 Issue No: 105 Version Start Date: 11/08/2008 Version End Date: -
-	1695m N	Status: Historical Licence No: 2569001246 Details: Supply to a Leat for Throughflow Direct Source: "Surface, Non-Tidal - North West Region" Point: "RIVER IRWELL AT BRIDGE STREET, RAMSBOTTOM" Data Type: Point Name: BURY METROPOLITAN BOROUGH COUNCIL Easting: 379350 Northing: 416850	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 19/01/1994 Expiry Date: - Issue No: 100 Version Start Date: 11/08/2000 Version End Date: -



ID	Location	Details	
-	1695m N	Status: Historical Licence No: 2569001246 Details: Supply to a Leat for Throughflow Direct Source: Surface, Non-Tidal - North West Region Point: RIVER IRWELL AT BRIDGE STREET, RAMSBOTTOM Data Type: Point Name: BURY METROPOLITAN BOROUGH COUNCIL Easting: 379350 Northing: 416850	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 19/01/1994 Expiry Date: - Issue No: 100 Version Start Date: 11/08/2000 Version End Date: -
-	1695m N	Status: Historical Licence No: 2569001246 Details: Supply To A Leat For Throughflow Direct Source: Surface, Non-Tidal - North West Region Point: RIVER IRWELL AT BRIDGE STREET RAMSBOTTOM Data Type: Point Name: BURY METROPOLITAN BOROUGH COUNCIL Easting: 379350 Northing: 416850	Annual Volume (m ³): 63115200 Max Daily Volume (m ³): 172920 Original Application No: 7253 Original Start Date: 19/01/1994 Expiry Date: - Issue No: 100 Version Start Date: 11/08/2000 Version End Date: -
-	1947m N	Status: Historical Licence No: 2569001047 Details: Boiler Feed Direct Source: "Surface, Non-Tidal - North West Region" Point: "R IRWELL AT PREMISES, BRITANNIA WORKS, KENYON STREET, RA" Data Type: Point Name: KAYS RAMSBOTTOM LTD Easting: 379400 Northing: 417100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date: -
-	1947m N	Status: Historical Licence No: 2569001047 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "R IRWELL AT PREMISES, BRITANNIA WORKS, KENYON STREET, RA" Data Type: Point Name: KAYS RAMSBOTTOM LTD Easting: 379400 Northing: 417100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date: -



ID	Location	Details	
-	1947m N	Status: Historical Licence No: 2569001047 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: R IRWELL AT PREMISES, BRITANNIA WORKS, KENYON STREET, RA Data Type: Point Name: KAYS RAMSBOTTOM LTD Easting: 379400 Northing: 417100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date: -
-	1947m N	Status: Historical Licence No: 2569001047 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: R IRWELL AT PREMISES, BRITANNIA WORKS, KENYON STREET, RA Data Type: Point Name: KAYS RAMSBOTTOM LTD Easting: 379400 Northing: 417100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date: -
-	1947m N	Status: Historical Licence No: 2569001047 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: R IRWELL AT, BRITANNIA WORKS, KENYON STREET, RAMSBOTTOM Data Type: Point Name: KAYS RAMSBOTTOM LTD Easting: 379400 Northing: 417100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date: -
-	1947m N	Status: Historical Licence No: 2569001047 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: R IRWELL AT, BRITANNIA WORKS, KENYON STREET, RAMSBOTTOM Data Type: Point Name: KAYS RAMSBOTTOM LTD Easting: 379400 Northing: 417100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date: -



ID	Location	Details	
-	1947m N	Status: Historical Licence No: 2569001047 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: RIVER IRWELL AT BRITANNIA WORKS KENYON STREET RAMSBOTTOM Data Type: Point Name: KAYS RAMSBOTTOM LTD Easting: 379400 Northing: 417100	Annual Volume (m ³): 159111 Max Daily Volume (m ³): 636.44 Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date: -
-	1947m N	Status: Historical Licence No: 2569001047 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: RIVER IRWELL AT BRITANNIA WORKS KENYON STREET RAMSBOTTOM Data Type: Point Name: KAYS RAMSBOTTOM LTD Easting: 379400 Northing: 417100	Annual Volume (m ³): 159111 Max Daily Volume (m ³): 636.44 Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m

3

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 45 >](#)

ID	Location	Details	
-	1624m NW	Status: Active Licence No: 2569001228 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE AT HOLCOMBE, NEAR BURY, LANCS Data Type: Point Name: DARUL ULOOM Easting: 377800 Northing: 415800	Annual Volume (m ³): 22730 Max Daily Volume (m ³): 90.92 Original Application No: 2785 Original Start Date: 20/06/1990 Expiry Date: - Issue No: 100 Version Start Date: 20/06/1990 Version End Date: -



ID	Location	Details	
-	1624m NW	Status: Historical Licence No: 2569001228 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "BOREHOLE AT HOLCOMBE, NEAR BURY, LANCs" Data Type: Point Name: DARUL ULOOM Easting: 377800 Northing: 415800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/06/1990 Expiry Date: - Issue No: 100 Version Start Date: 20/06/1990 Version End Date: -
-	1624m NW	Status: Historical Licence No: 2569001228 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE AT HOLCOMBE, NEAR BURY, LANCs Data Type: Point Name: DARUL ULOOM Easting: 377800 Northing: 415800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/06/1990 Expiry Date: - Issue No: 100 Version Start Date: 20/06/1990 Version End Date: -

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

5.9 Source Protection Zones

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m	0
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Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

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

6 Hydrology



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

6.1 Water Network (OS MasterMap)

Records within 250m

21

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 55](#) >

ID	Location	Type of water feature	Ground level	Permanence	Name
B	10m NW	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
C	11m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	22m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Irwell
A	40m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Irwell
D	42m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Irwell
C	70m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	71m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	71m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Irwell
B	72m SW	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
B	75m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
5	76m W	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
6	77m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Irwell
E	144m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
7	177m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
D	197m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	199m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	199m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	200m E	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	240m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	243m E	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	243m E	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

10

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 55 >](#)

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 55 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River	Irwell (Rossendale STW to Roch)	GB112069064620	Croal Irwell	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 55 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
3	45m S	River	Irwell (Rossendale STW to Roch)	GB112069064620 ↗	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
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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 55 >](#)

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	Northern Manchester Carboniferous Aquifers	GB41202G101800 ↗	Poor	Poor	Good	2019

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



7 River and coastal flooding



- Site Outline
- Search buffers in metres (m)
- River and coastal flooding:
- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

7.1 Risk of flooding from rivers and the sea

Records within 50m

12

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).

Features are displayed on the River and coastal flooding map on [page 59](#) >



Distance	Flood risk category
On site	Medium
0 - 50m	High

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

7.2 Historical Flood Events

Records within 250m	1
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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.

Features are displayed on the River and coastal flooding map on [page 59 >](#)

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
7	37m E	Ea013_Watersidepub, Bury	2015-12-26 2015-12-26	Main river	Channel capacity exceeded (no raised defences)	Fluvial

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

7.3 Flood Defences

Records within 250m	0
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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



- Site Outline
- Search buffers in metres (m)
- Flood zone 2
- Flood zone 3

7.6 Flood Zone 2

Records within 50m

1

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.

Features are displayed on the River and coastal flooding map on [page 59](#) >

Location	Type
On site	Zone 2 - (Fluvial /Tidal Models)

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

7.7 Flood Zone 3

Records within 50m

1

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.

Features are displayed on the River and coastal flooding map on [page 59](#) >

Location	Type
On site	Zone 3 - (Fluvial Models)

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

Negligible

Highest risk within 50m

1 in 30 year, Greater than 1.0m

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

Features are displayed on the Surface water flooding map on [page 64 >](#)

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	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



— Site Outline
Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

9.1 Groundwater flooding

Highest risk on site

Low

Highest risk within 50m

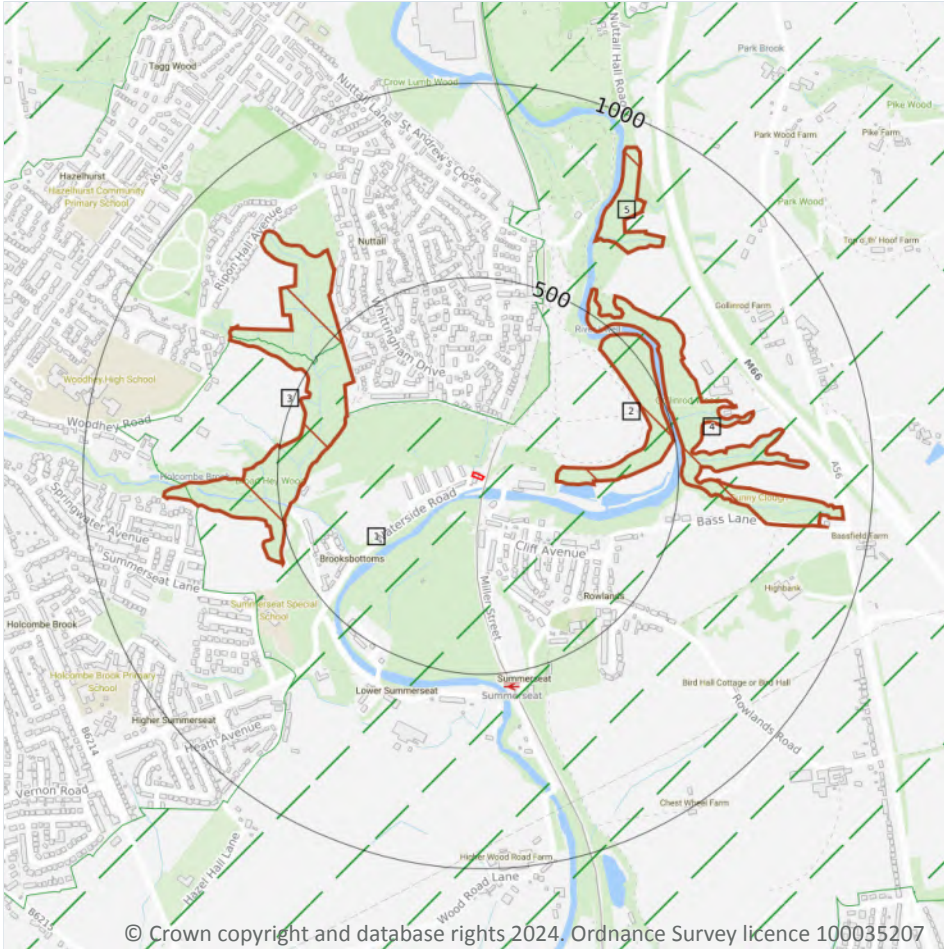
Low

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 66](#) >

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- + Local Nature Reserves (LNR)
- Designated Ancient Woodland
- Green Belt

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

1

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

Features are displayed on the Environmental designations map on [page 67](#) >

ID	Location	Name	Data source
-	1712m NW	West Pennine Moors	Natural England



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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m

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

2

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 67 >](#)

ID	Location	Name	Data source
-	1555m W	Redisher Wood	Natural England
-	1695m SW	Kirklees Valley	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m

5

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 67 >](#)

ID	Location	Name	Woodland Type
2	187m E	Gollinrod Wood	Ancient & Semi-Natural Woodland
3	352m W	Broad Hey Wood	Ancient & Semi-Natural Woodland
4	472m NE	Gollinrod Wood	Ancient & Semi-Natural Woodland
5	670m NE	Nuttall Wood	Ancient & Semi-Natural Woodland
-	1567m W	Dawes Bank Wood	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

2

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

Features are displayed on the Environmental designations map on [page 67 >](#)

ID	Location	Name	Local Authority name
1	On site	Merseyside and Greater Manchester	Bury
6	1531m NE	Merseyside and Greater Manchester	Rossendale

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

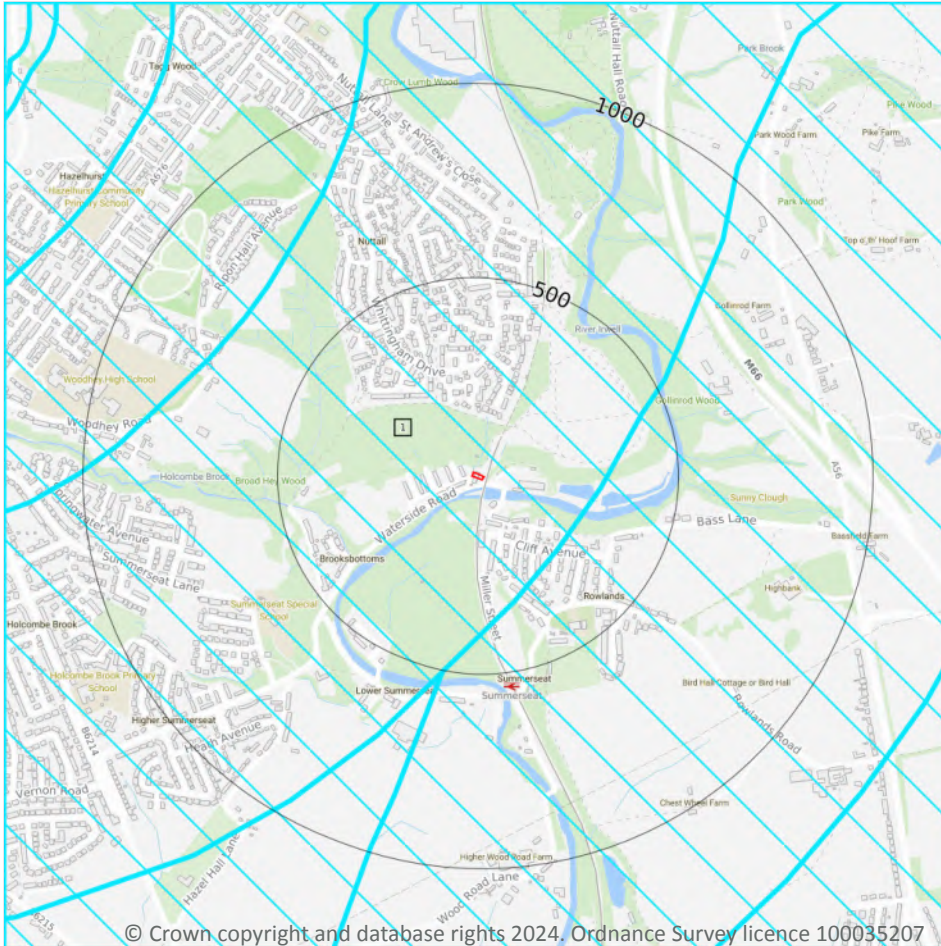
Records within 2000m**0**

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.

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



SSSI Impact Zones and Units



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

10.17 SSSI Impact Risk Zones

Records on site

1

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

Features are displayed on the SSSI Impact Zones and Units map on [page 72 >](#)

ID	Location	Type of developments requiring consultation
1	On site	Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals. 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 > 200m², manure stores > 250t). Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	1
-----------------------------	----------

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

Features are displayed on the SSSI Impact Zones and Units map on [page 72 >](#)

ID: -
 Location: 1712m NW
 SSSI name: West Pennine Moors
 Unit name: Unit 1
 Broad habitat: Bogs - Upland
 Condition: Unfavourable - No change
 Reportable features:

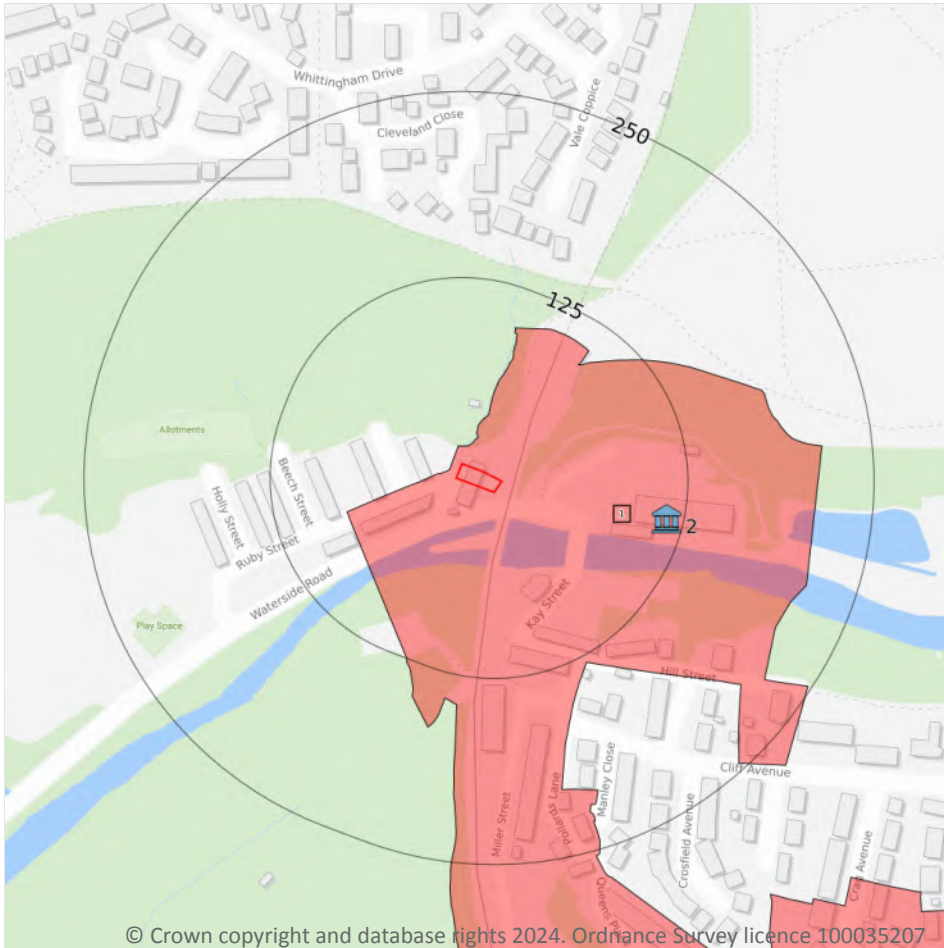
Feature name	Feature condition	Date of assessment
Assemblages of breeding birds - Upland moorland without waterbodies and upland in-bye and allotment farmland	Favourable	31/08/2012
Blanket bog and valley bog (upland)	Unfavourable - No change	17/12/2013
Subalpine dwarf-shrub heath	Favourable	17/12/2013
Wet heath (upland)	Favourable	17/12/2013



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 75 >](#)

ID	Location	Name	Grade	Reference Number	Listed date
2	114m E	Brooksbottom Mill	II	1356822	30/07/1979

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



11.5 Conservation Areas

Records within 250m

1

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.

Features are displayed on the Visual and cultural designations map on [page 75 >](#)

ID	Location	Name	District	Date of designation
1	On site	Brooksbottoms and Rowlands	Bury	1975

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 78](#) >

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



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

1

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

Features are displayed on the Agricultural designations map on [page 78](#) >

ID	Location	Description	Reference	Application date
2	12m E	Selective Fell/Thin (Unconditional)	010/146/08-09	02/02/2009

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

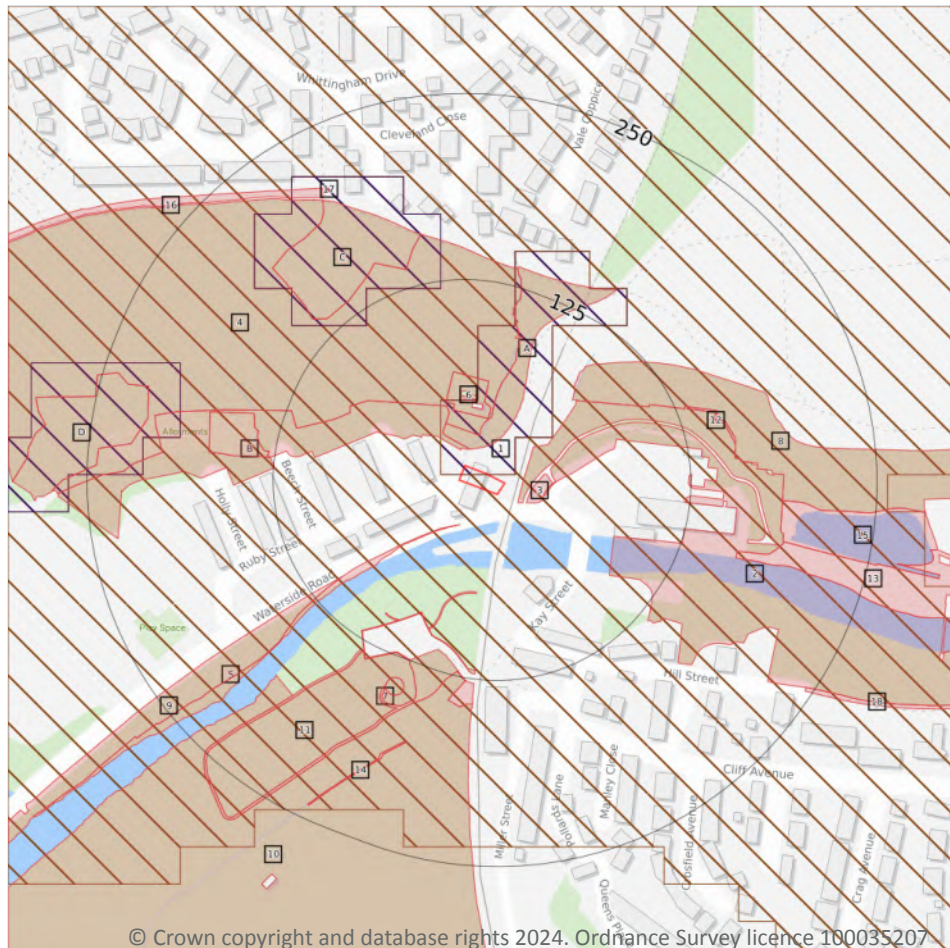
0

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

22

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 80](#) >

ID	Location	Main Habitat	Other habitats
B	11m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	12m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	12m N	Lowland dry acid grassland	Main habitat: LDAGR (INV > 50%)
3	18m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)



ID	Location	Main Habitat	Other habitats
4	22m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%); LDAGR (INV > 50%)
5	28m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	35m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%); LDAGR (INV > 50%)
7	67m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
8	72m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
9	103m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
10	122m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
11	123m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	129m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
12	132m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
C	135m NW	Lowland dry acid grassland	Main habitat: LDAGR (INV > 50%)
13	163m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
14	177m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
15	187m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
16	204m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%); LDAGR (INV > 50%)
17	206m NW	Lowland dry acid grassland	Main habitat: LDAGR (INV > 50%)
D	213m W	Lowland dry acid grassland	Main habitat: LDAGR (INV > 50%)
18	244m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

4

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

Features are displayed on the Habitat designations map on [page 80 >](#)

ID	Location	Type	Habitat
1	On site	Network Enhancement Zone 2	Not specified
A	On site	Primary Habitat	Lowland dry acid grassland



ID	Location	Type	Habitat
C	115m NW	Primary Habitat	Lowland dry acid grassland
D	190m W	Primary Habitat	Lowland dry acid grassland

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

0

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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

2

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.

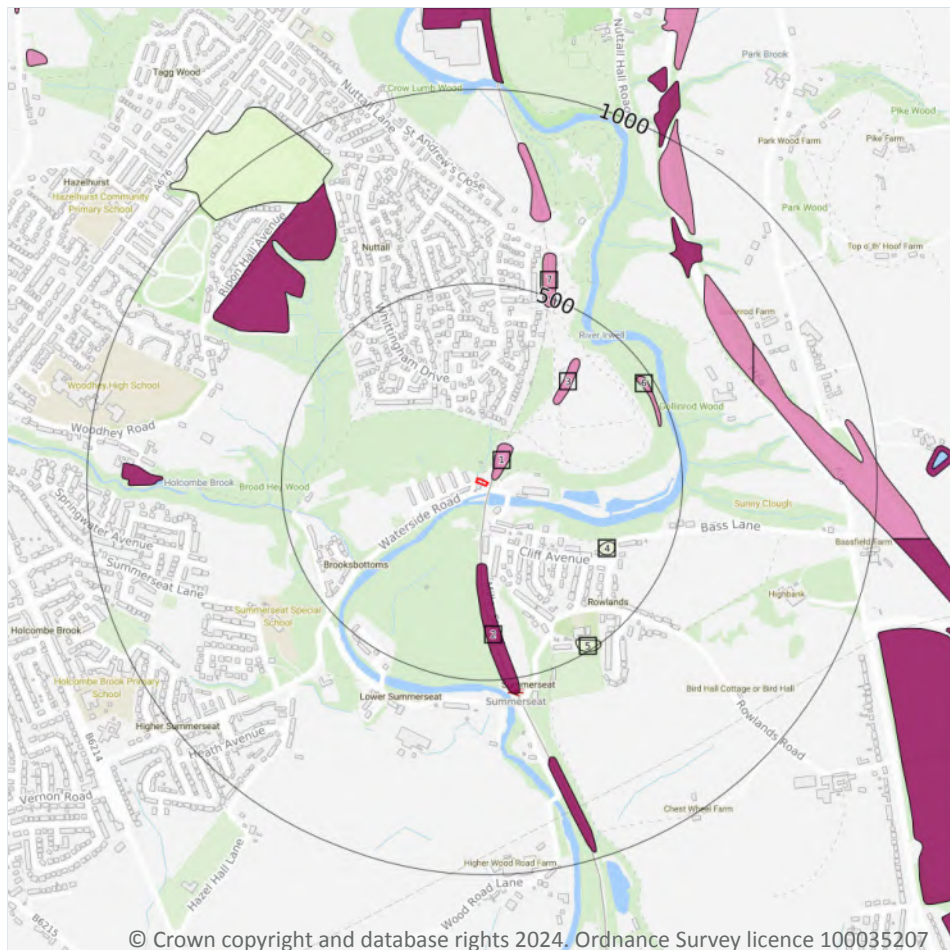
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 83](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SD71NE
2	137m S	Full	Full	Full	Full	SD71SE

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

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14.2 Artificial and made ground (10k)

Records within 500m

7

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 84](#) >

ID	Location	LEX Code	Description	Rock description
1	15m E	WGR-VOID	Worked Ground (Undivided)	Void
2	200m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	266m NE	WGR-VOID	Worked Ground (Undivided)	Void
4	330m SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit



ID	Location	LEX Code	Description	Rock description
5	459m SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
6	463m E	WGR-VOID	Worked Ground (Undivided)	Void
7	476m N	WGR-VOID	Worked Ground (Undivided)	Void

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

11

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 86](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
2	11m NW	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
4	71m SE	GFDUD-XSV	Glaciofluvial Deposits, Devensian - Sand And Gravel	Sand And Gravel
5	131m SE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton



ID	Location	LEX Code	Description	Rock description
6	137m S	GFDUD-XSV	Glaciofluvial Deposits, Devensian - Sand And Gravel	Sand And Gravel
7	137m S	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
8	140m S	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
9	402m W	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
10	415m E	RTD1-XSV	River Terrace Deposits, 1 - Sand And Gravel	Sand And Gravel
13	475m NW	HEAD-DMTN	Head - Diamicton	Diamicton
14	498m NE	RTD1-XSV	River Terrace Deposits, 1 - Sand And Gravel	Sand And Gravel

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

3

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.

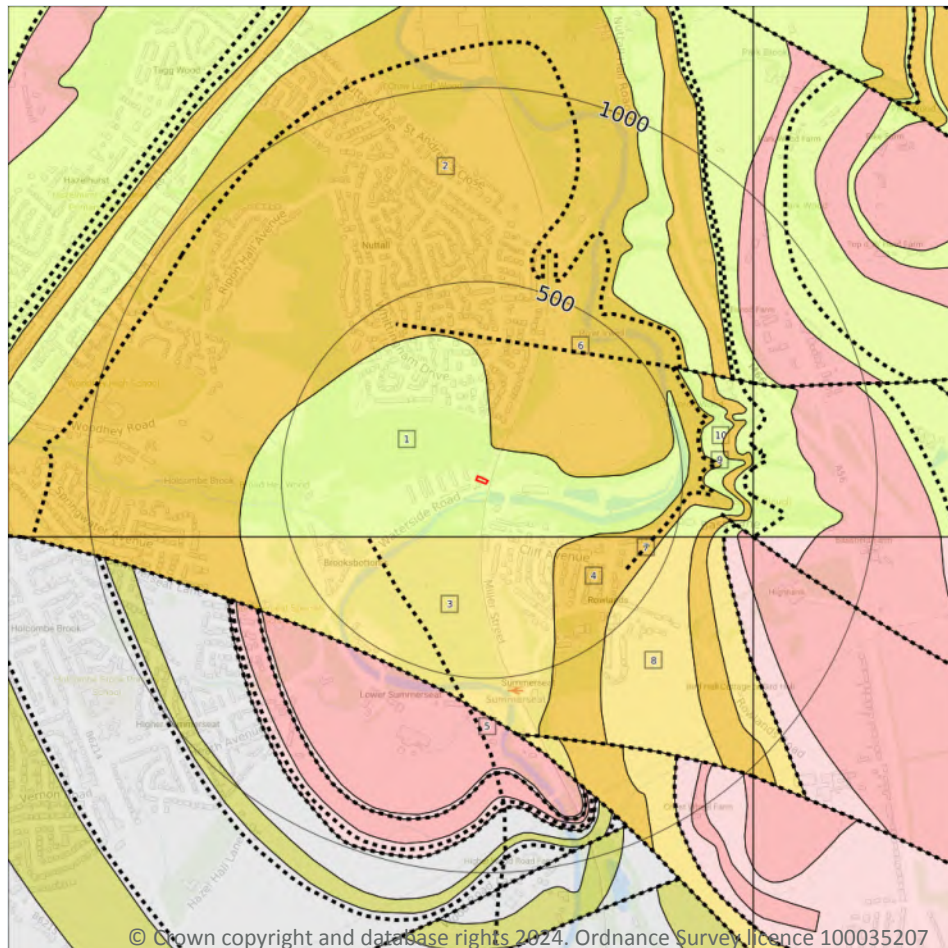
Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 86 >](#)

ID	Location	LEX Code	Description	Rock description
3	11m NW	SLIP-UNKNOWN	Landslide Deposits	Unknown/unclassified Entry
11	439m W	SLIP-UNKNOWN	Landslide Deposits	Unknown/unclassified Entry
12	444m W	SLIP-UNKNOWN	Landslide Deposits	Unknown/unclassified Entry

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 88](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	MG-MDSI	Millstone Grit Group [see Also Migr] - Mudstone And Siltstone	Namurian Age
2	84m N	BBS-SDST	Brooksbottoms Grit - Sandstone	Marsdenian Sub-age
3	137m S	MARSD-MDSI	Marsden Formation - Mudstone And Siltstone	Marsdenian Sub-age



ID	Location	LEX Code	Description	Rock age
4	251m SE	BBS-SDST	Brooksbottoms Grit - Sandstone	Marsdenian Sub-age
8	448m SE	MARSD-MDSI	Marsden Formation - Mudstone And Siltstone	Marsdenian Sub-age
10	475m E	MG-MDSI	Millstone Grit Group [see Also Migr] - Mudstone And Siltstone	Namurian Age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

4

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 88 >](#)

ID	Location	Category	Description
5	314m SW	LANDFORM	Buried channel or valley margin
6	355m N	FAULT	Normal fault, inferred
7	422m SE	ROCK	Coal seam, inferred
9	452m E	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline
Search buffers in metres (m)

☐ Geological map tile

15.1 50k Availability

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 90](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	Full	EW076_rochdale_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

7

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 92](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
2	11m NW	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
4	71m SE	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
5	131m SE	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON



ID	Location	LEX Code	Description	Rock description
6	393m E	RTD1-XSV	RIVER TERRACE DEPOSITS, 1	SAND AND GRAVEL
7	460m NE	RTD1-XSV	RIVER TERRACE DEPOSITS, 1	SAND AND GRAVEL
8	482m NW	HEAD-DMTN	HEAD	DIAMICTON

This data is sourced from the British Geological Survey.

15.5 Superficial 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 any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	High	Very Low
11m NW	Mixed	High	Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

1

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.

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 92 >](#)

ID	Location	LEX Code	Description	Rock description
3	11m NW	SLIP-UNKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY

This data is sourced from the British Geological Survey.



15.7 Landslip 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 landslip deposits (the zone between the land surface and the water table).

Flow type	Maximum permeability	Minimum permeability
Mixed	Very High	Low

This data is sourced from the British Geological Survey.



This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m

1

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Low	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

2

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

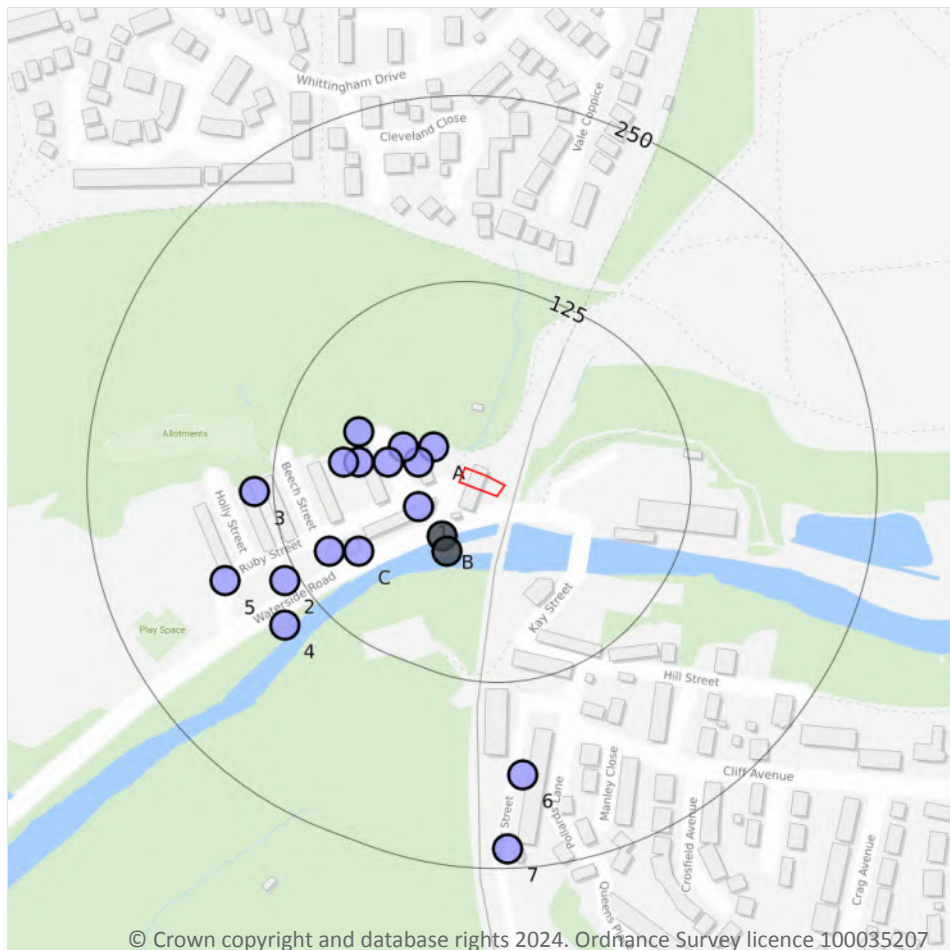
Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 95 >](#)

ID	Location	Category	Description
3	314m SW	LANDFORM	Approximate margin of buried (superficial deposit-filled) channel or valley
4	355m N	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

18

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 97](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	26m NW	379270 415170	SUMMERSEAT 14	6.0	N	13211066 ↗
A	31m W	379260 415160	SUMMERSEAT 13	10.0	N	13211063 ↗



ID	Location	Grid reference	Name	Length	Confidential	Web link
1	32m W	379260 415130	SUMMERSEAT 3	4.2	N	13211049 ↗
B	38m SW	379276 415110	WATERSIDE ROAD RETAINING WALL SUMMERSEAT TP 4	-	Y	N/A
A	44m NW	379250 415170	SUMMERSEAT 12	10.0	N	13211062 ↗
B	46m SW	379279 415100	WATERSIDE ROAD RETAINING WALL SUMMERSEAT TP 3	-	Y	N/A
A	49m W	379240 415160	SUMMERSEAT 11	8.0	N	13211061 ↗
A	69m W	379220 415160	SUMMERSEAT 9	8.0	N	13211059 ↗
A	75m W	379220 415180	SUMMERSEAT 10	6.5	N	13211060 ↗
A	79m W	379210 415160	SUMMERSEAT 2	3.5	N	13211048 ↗
C	82m SW	379220 415100	SUMMERSEAT 5	4.2	N	13211053 ↗
C	99m SW	379200 415100	SUMMERSEAT 4	5.2	N	13211051 ↗
2	135m SW	379170 415080	SUMMERSEAT 7	6.2	N	13211056 ↗
3	138m W	379150 415140	SUMMERSEAT 1	3.2	N	13211039 ↗
4	152m SW	379170 415050	SUMMERSEAT 6	4.2	N	13211055 ↗
5	171m W	379130 415080	SUMMERSEAT 8	5.2	N	13211058 ↗
6	188m S	379330 414950	STAGE 3 INTERCEPTOR SEWER BH1	5.0	N	22812 ↗
7	237m S	379320 414900	STAGE 3 INTERCEPTOR SEWER BH2	5.0	N	22813 ↗

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

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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).

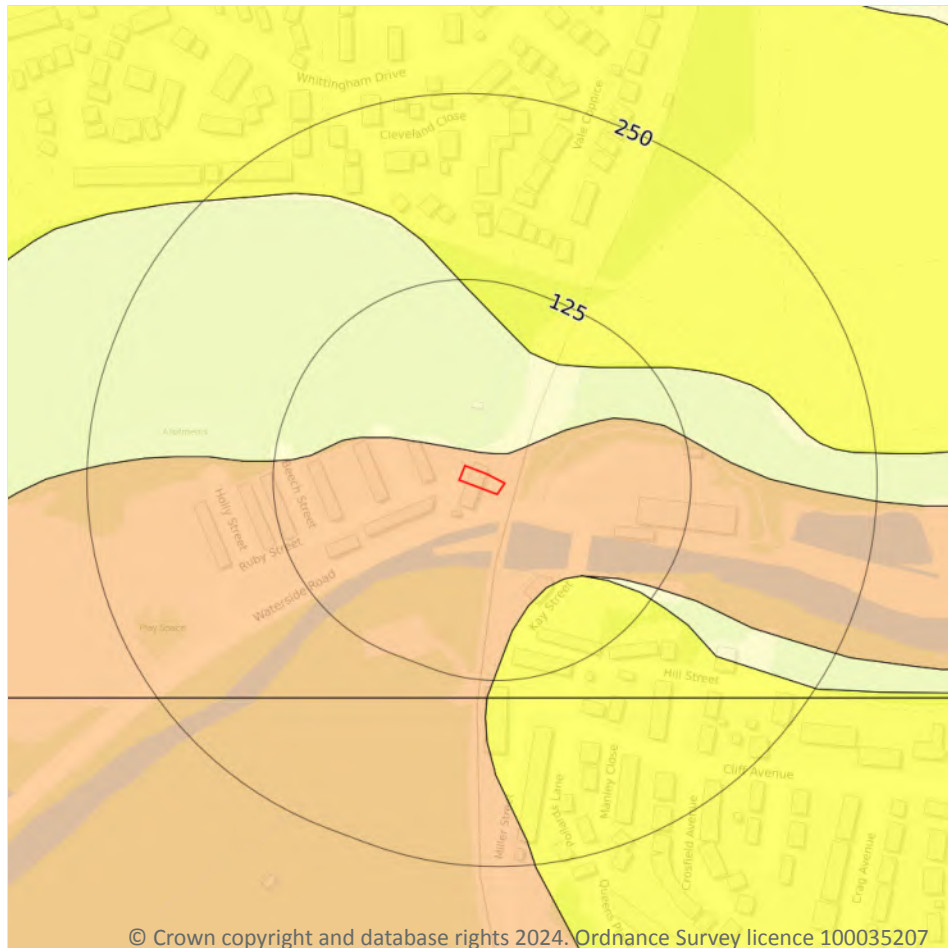
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 99](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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

17.2 Running sands

Records within 50m

2

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 100 >](#)

Location	Hazard rating	Details
On site	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

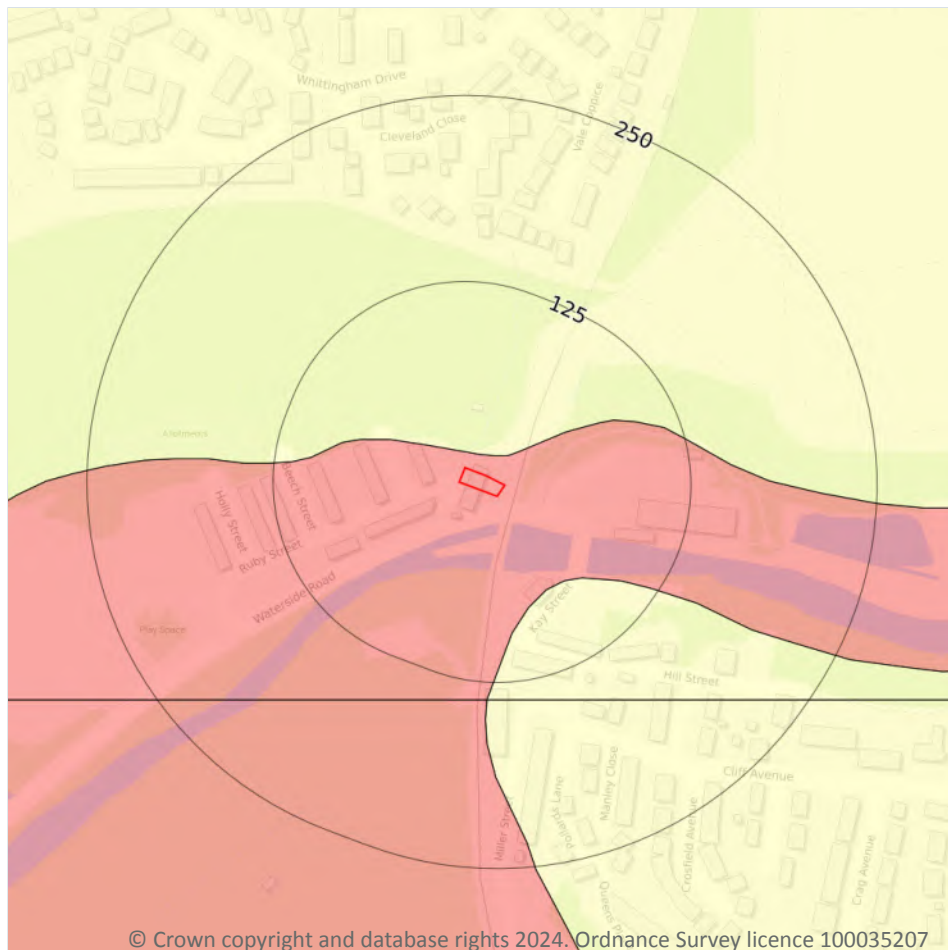


Location	Hazard rating	Details
11m NW	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

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

2

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 102 >](#)

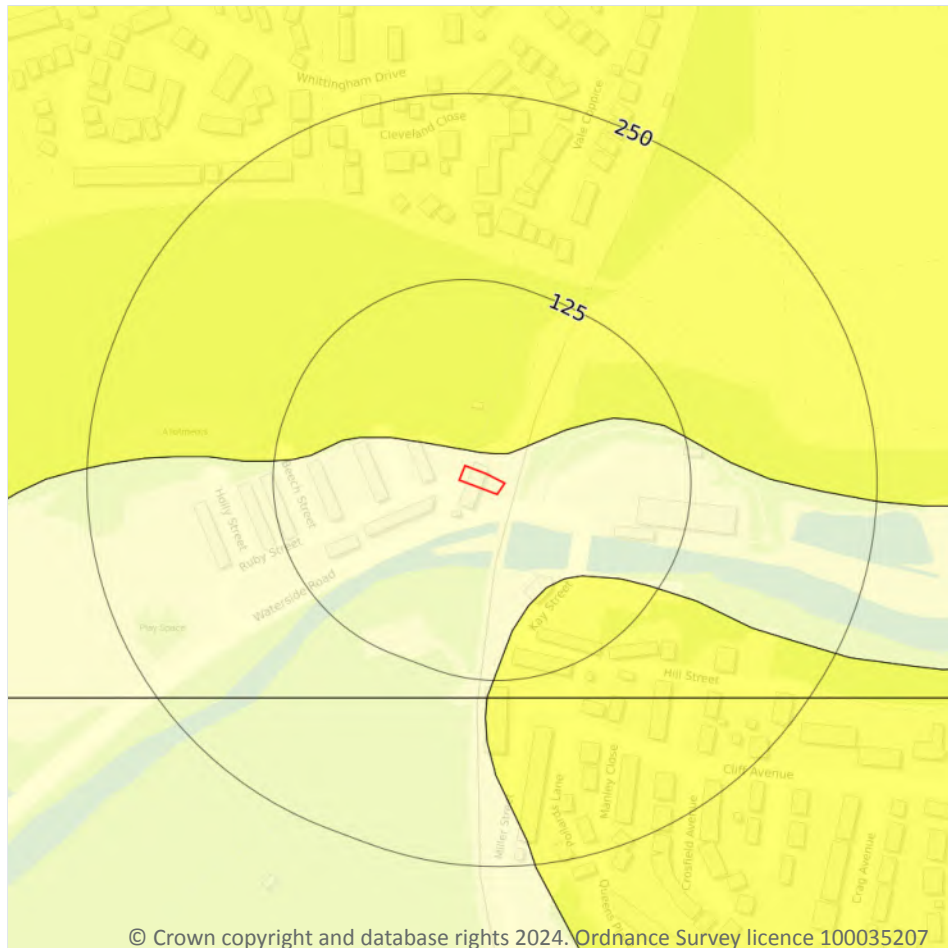
Location	Hazard rating	Details
On site	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.
11m NW	Negligible	Compressible strata are not thought to occur.



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

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17.4 Collapsible deposits

Records within 50m

2

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.

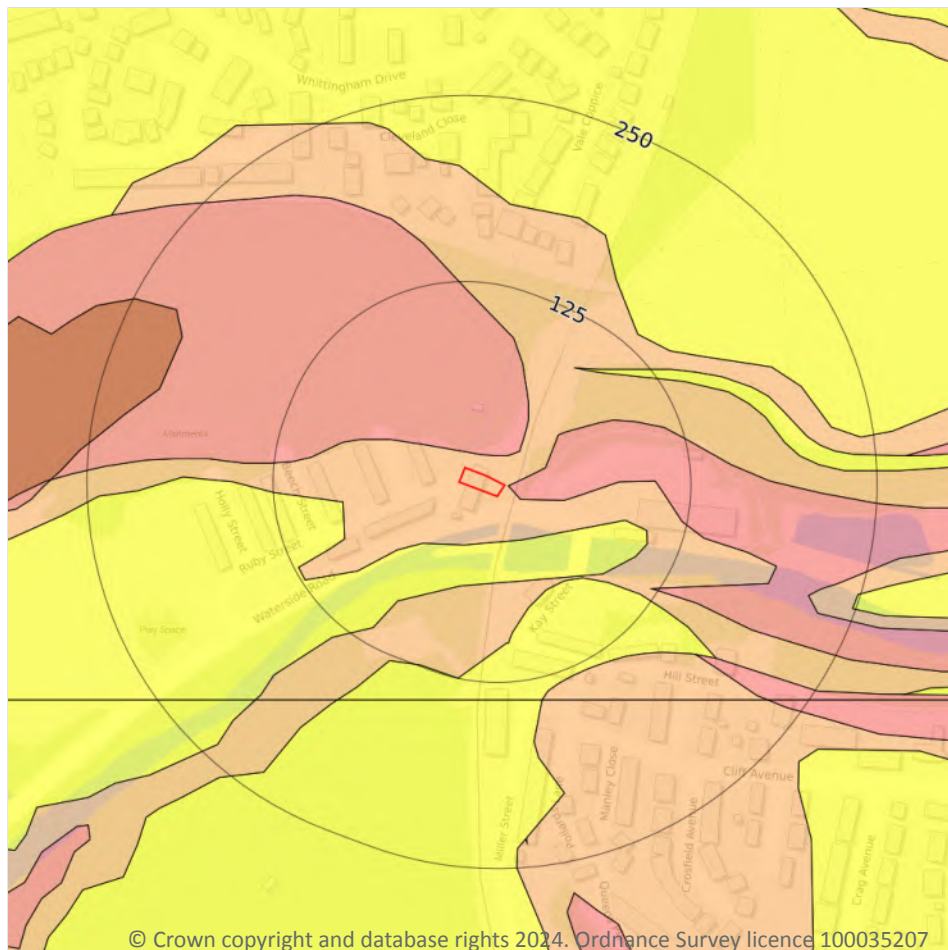
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 104](#) >

Location	Hazard rating	Details
On site	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.
11m NW	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



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

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17.5 Landslides

Records within 50m

4

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 105](#) >

Location	Hazard rating	Details
On site	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.



Location	Hazard rating	Details
3m E	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.
11m NW	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.
31m S	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.

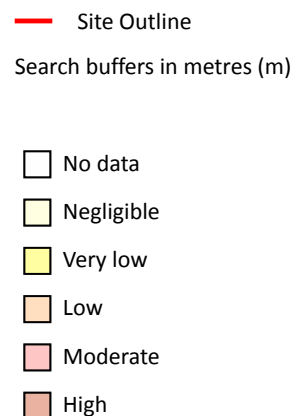
This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



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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 107](#) >

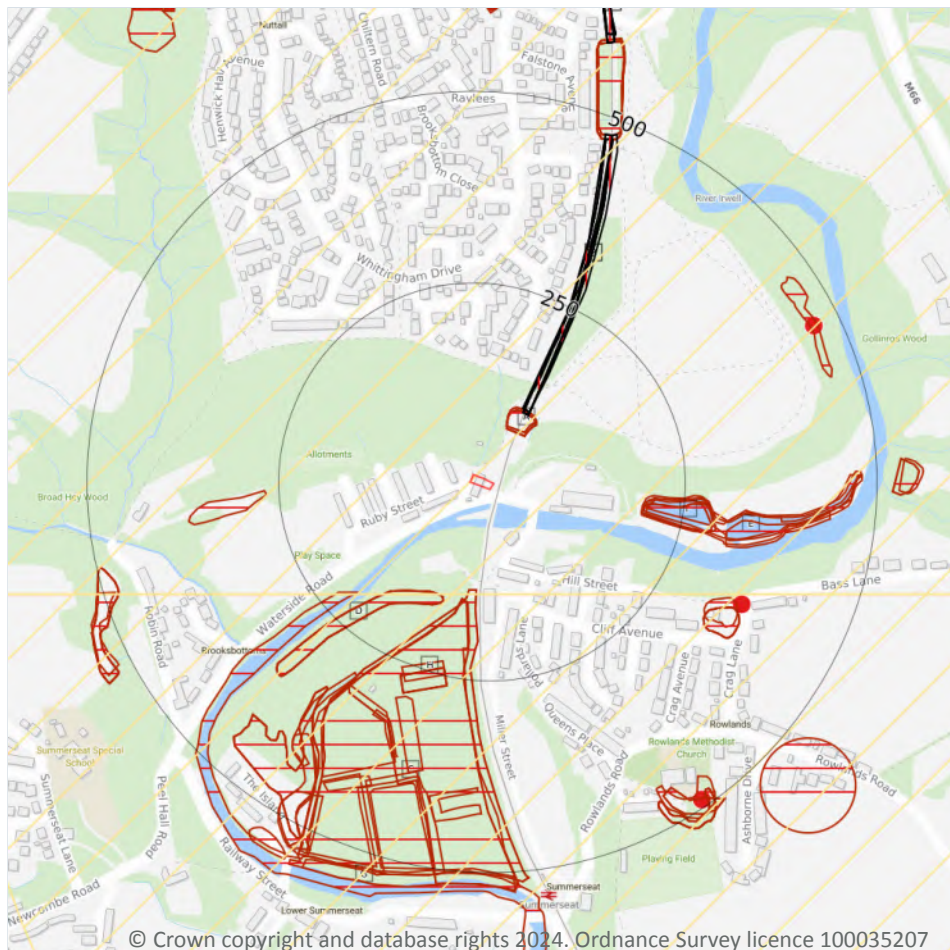
Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.



This data is sourced from the British Geological Survey.



18 Mining and ground workings



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

18.1 BritPits

Records within 500m

3

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 109](#) >

ID	Location	Details	Description
I	360m SE	Name: Cragg Farm Address: Brooksbottom, RAMSBOTTOM, Lancashire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
L	465m NE	Name: Brooksbottom Address: Brooksbottom, RAMSBOTTOM, Lancashire Commodity: Sandstone 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
K	490m SE	Name: Rowlands Address: Brooksbottom, RAMSBOTTOM, Lancashire Commodity: Sandstone 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

27

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 109](#) >

ID	Location	Land Use	Year of mapping	Mapping scale
A	72m NE	Cuttings	1948	1:10560
A	72m NE	Cuttings	1927	1:10560
A	72m NE	Cuttings	1908	1:10560
A	72m NE	Cuttings	1891	1:10560
A	75m NE	Cuttings	1968	1:10560
A	75m NE	Cuttings	1955	1:10560
C	132m S	Sewage Works	1980	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
C	132m S	Sewage Works	1974	1:10000
C	147m S	Sewage Works	1948	1:10560
C	147m S	Sewage Works	1927	1:10560
C	148m S	Sewage Works	1908	1:10560
D	151m S	Unspecified Heap	1948	1:10560
D	151m S	Unspecified Heap	1927	1:10560
D	151m S	Unspecified Heap	1908	1:10560
D	151m S	Unspecified Heap	1891	1:10560
E	196m E	Reservoirs	1955	1:10560
F	197m E	Reservoirs	1948	1:10560
F	197m E	Reservoirs	1927	1:10560
F	197m E	Reservoirs	1908	1:10560
E	198m E	Ponds	1968	1:10560
E	201m E	Ponds	1980	1:10000
F	202m E	Pond	1891	1:10560
G	207m SW	Canal	1956	1:10560
H	232m S	Sludge Tanks	1956	1:10560
H	240m S	Sludge Tanks	1948	1:10560
H	240m S	Sludge Tanks	1927	1:10560
H	240m S	Sludge Tanks	1908	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

14

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

Features are displayed on the Mining and ground workings map on [page 109](#) >



ID	Location	Land Use	Year of mapping	Mapping scale
B	100m NE	Tunnel	1848	1:10560
B	100m NE	Tunnel	1927	1:10560
B	100m NE	Tunnel	1908	1:10560
B	100m NE	Tunnel	1891	1:10560
B	104m NE	Tunnel	1980	1:10000
B	104m NE	Tunnel	1968	1:10560
B	104m NE	Tunnel	1949	1:10560
P	590m N	Tunnel	1848	1:10560
P	590m N	Tunnel	1927	1:10560
P	590m N	Tunnel	1908	1:10560
P	590m N	Tunnel	1891	1:10560
P	601m N	Tunnel	1980	1:10000
P	601m N	Tunnel	1968	1:10560
P	601m N	Tunnel	1949	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m

0

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.



18.6 Non-coal mining

Records within 1000m

4

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).

Features are displayed on the Mining and ground workings map on [page 109](#) >

ID	Location	Name	Commodity	Class	Likelihood
1	On site	Not available	Vein Mineral	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
2	137m S	Not available	Vein Mineral	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	682m E	Not available	Vein Mineral	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	697m E	Not available	Vein Mineral	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

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.

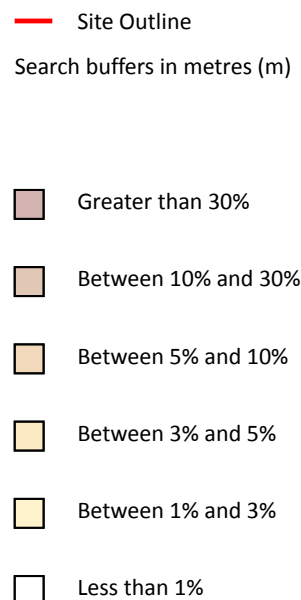
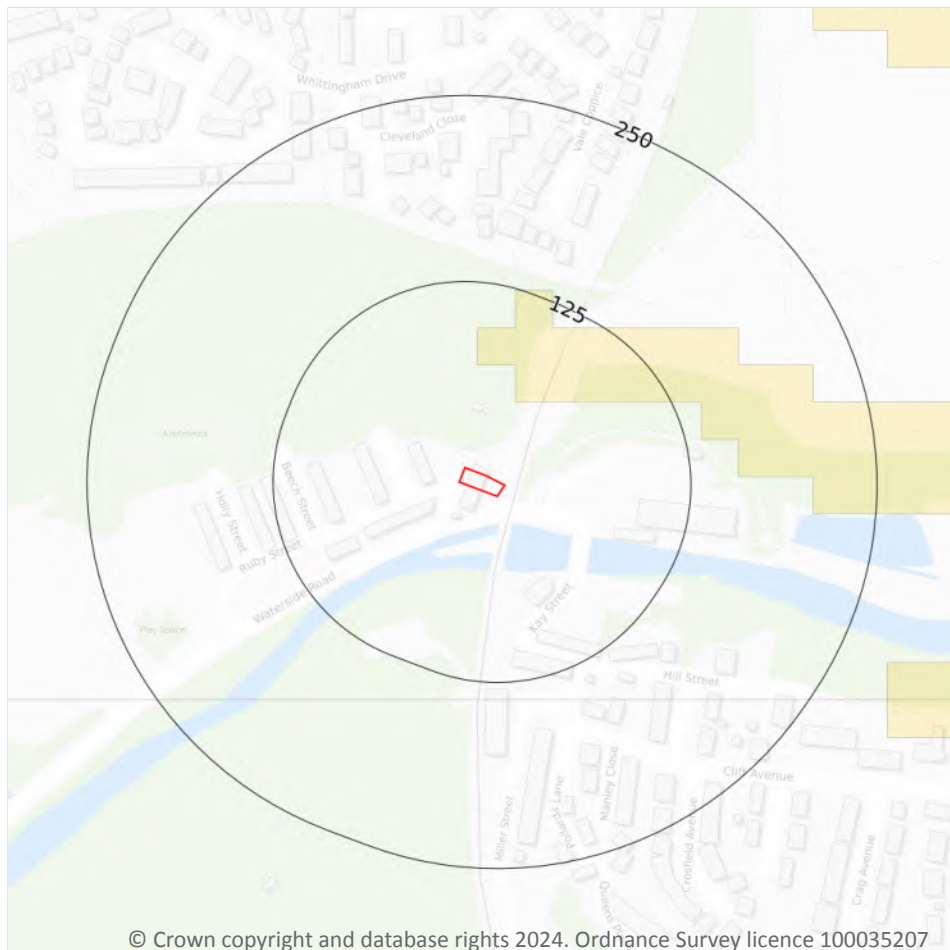
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over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



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 118 >](#)

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

2

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
26m N	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)**
- C1 Crossrail 1 Stations
- Crossrail 1 Route
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

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

1

Railway tunnels taken from contemporary Ordnance Survey mapping.

Features are displayed on the Railway infrastructure and projects map on [page 121 >](#)

Location	Type
99m NE	Railway Tunnel

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m

27

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.

Features are displayed on the Railway infrastructure and projects map on [page 121 >](#)

Location	Land Use	Year of mapping	Mapping scale
100m NE	Tunnel	1992	1250
100m NE	Tunnel	1988	-
100m NE	Tunnel	1948	10560
100m NE	Tunnel	1927	10560
100m NE	Tunnel	1908	10560
100m NE	Tunnel	1891	10560
101m NE	Tunnel	1978	1250
101m NE	Tunnel	1970	2500
101m NE	Tunnel	1962	2500
101m NE	Tunnel	1992	1250
103m NE	Tunnel	1891	2500
103m NE	Tunnel	1910	2500
103m NE	Tunnel	1937	2500



Location	Land Use	Year of mapping	Mapping scale
104m NE	Tunnel	1980	10000
104m NE	Tunnel	1968	10560
104m NE	Tunnel	1955	10560
109m NE	Tunnel	1980	2500
166m S	Railway Sidings	1956	10560
179m S	Railway Sidings	1891	2500
179m S	Railway Sidings	1910	2500
179m S	Railway Sidings	1937	2500
179m S	Railway Sidings	1948	10560
179m S	Railway Sidings	1927	10560
179m S	Railway Sidings	1908	10560
199m S	Railway Sidings	1910	2500
199m S	Railway Sidings	1937	2500
209m S	Railway Sidings	1908	10560

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

11

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways. Features are displayed on the Railway infrastructure and projects map on [page 121 >](#)

Location	Name	Type
8m E	Not given	Single Track
9m E	East Lancashire Railway	rail
9m E	Not given	Preserved
25m NE	East Lancashire Railway	rail
27m NE	Not given	Preserved
35m NE	Not given	Single Track
100m NE	Brooksbottoms Tunnel	rail
102m NE	Brooksbottoms Tunnel	Preserved
142m S	Not given	Single Track
145m S	Not given	Preserved
147m S	East Lancashire Railway	rail

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> ↗.

Terms and conditions

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





APPENDIX III

Historical Mapping

Site Details:

5, EAST VIEW, SUMMERSEAT,
BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: County Series

Map date: 1891

Scale: 1:2,500

Printed at: 1:2,500



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

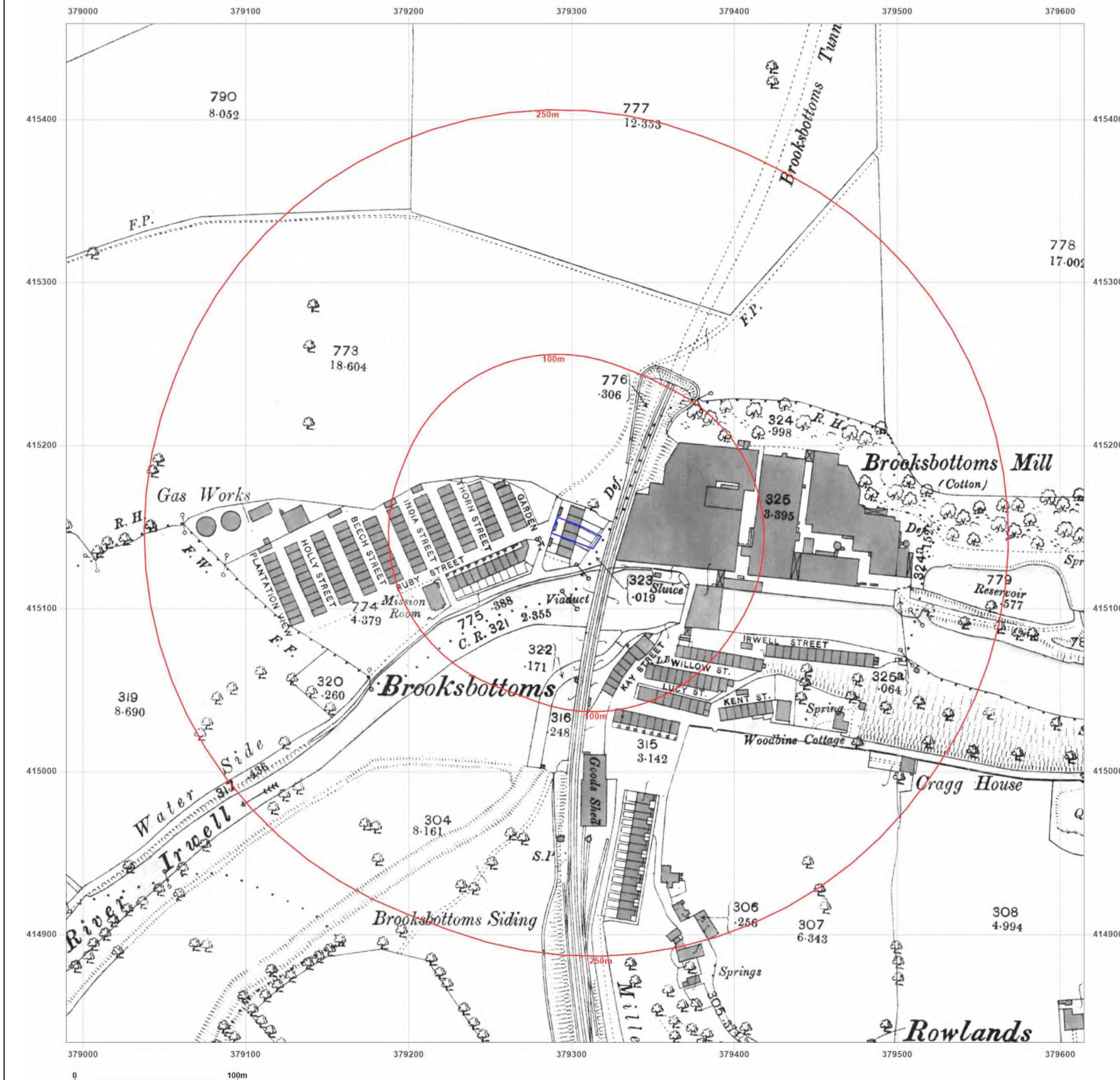


Produced by
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W: www.groundsure.com

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Production date: 13 February 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

5, EAST VIEW, SUMMERSEAT,
BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: County Series

Map date: 1910

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1910
Revised 1910
Edition N/A
Copyright N/A
Levelled N/A

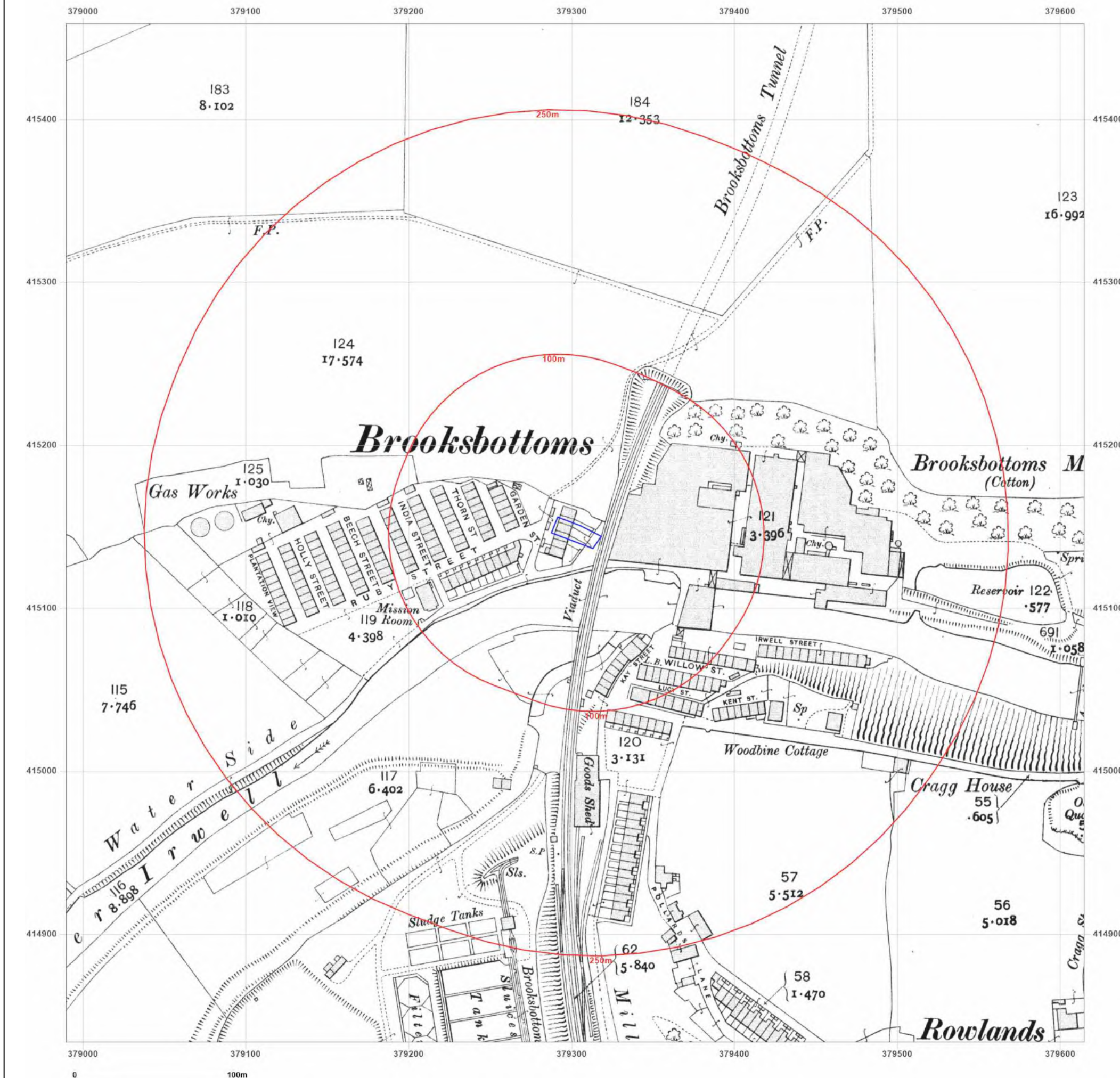


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Site Details:

5, EAST VIEW, SUMMERSEAT,
BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: County Series

Map date: 1929

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1929
Revised 1929
Edition N/A
Copyright N/A
Levelled N/A

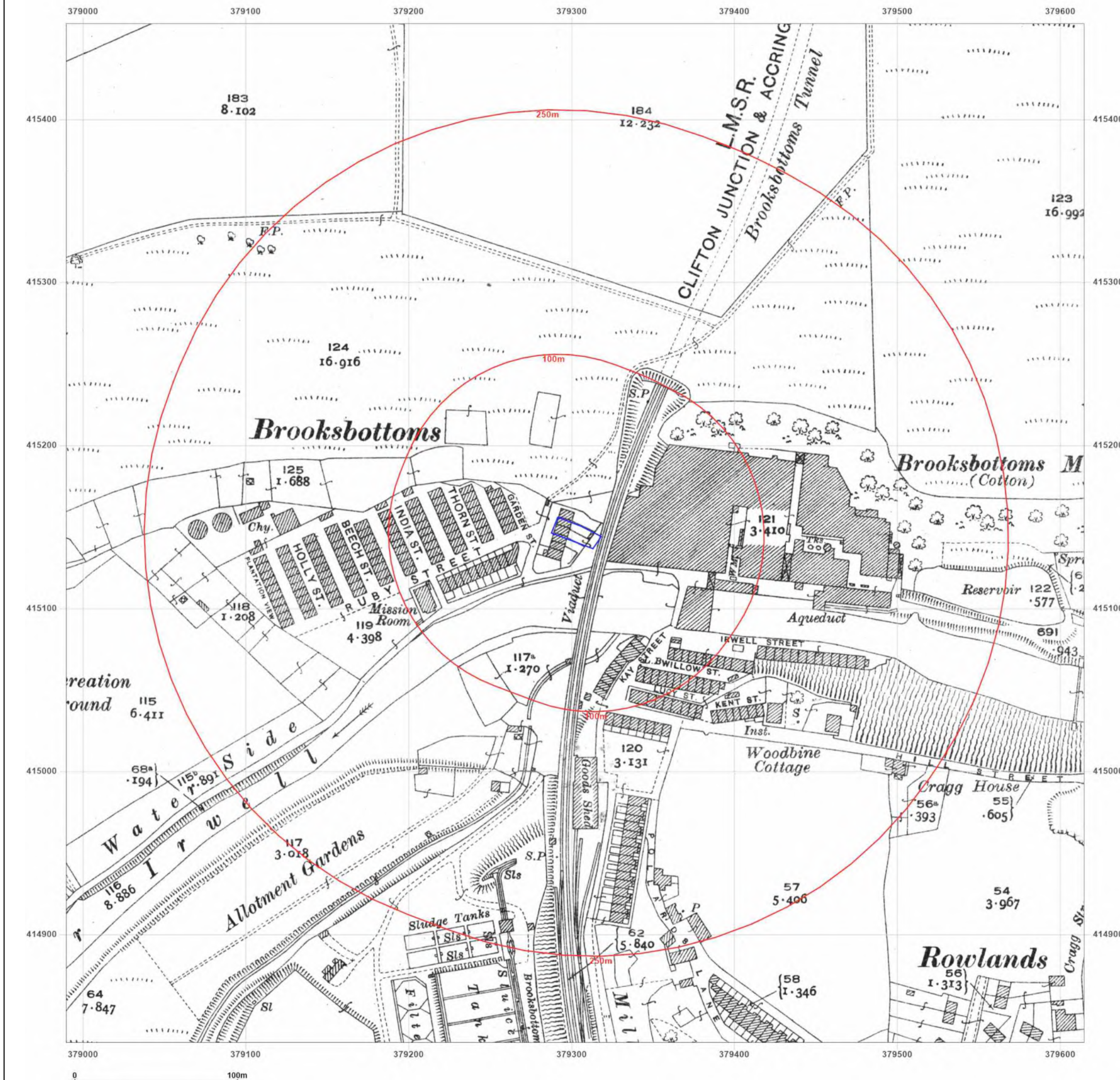


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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: County Series

Map date: 1937

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1937
Revised 1937
Edition N/A
Copyright N/A
Levelled N/A

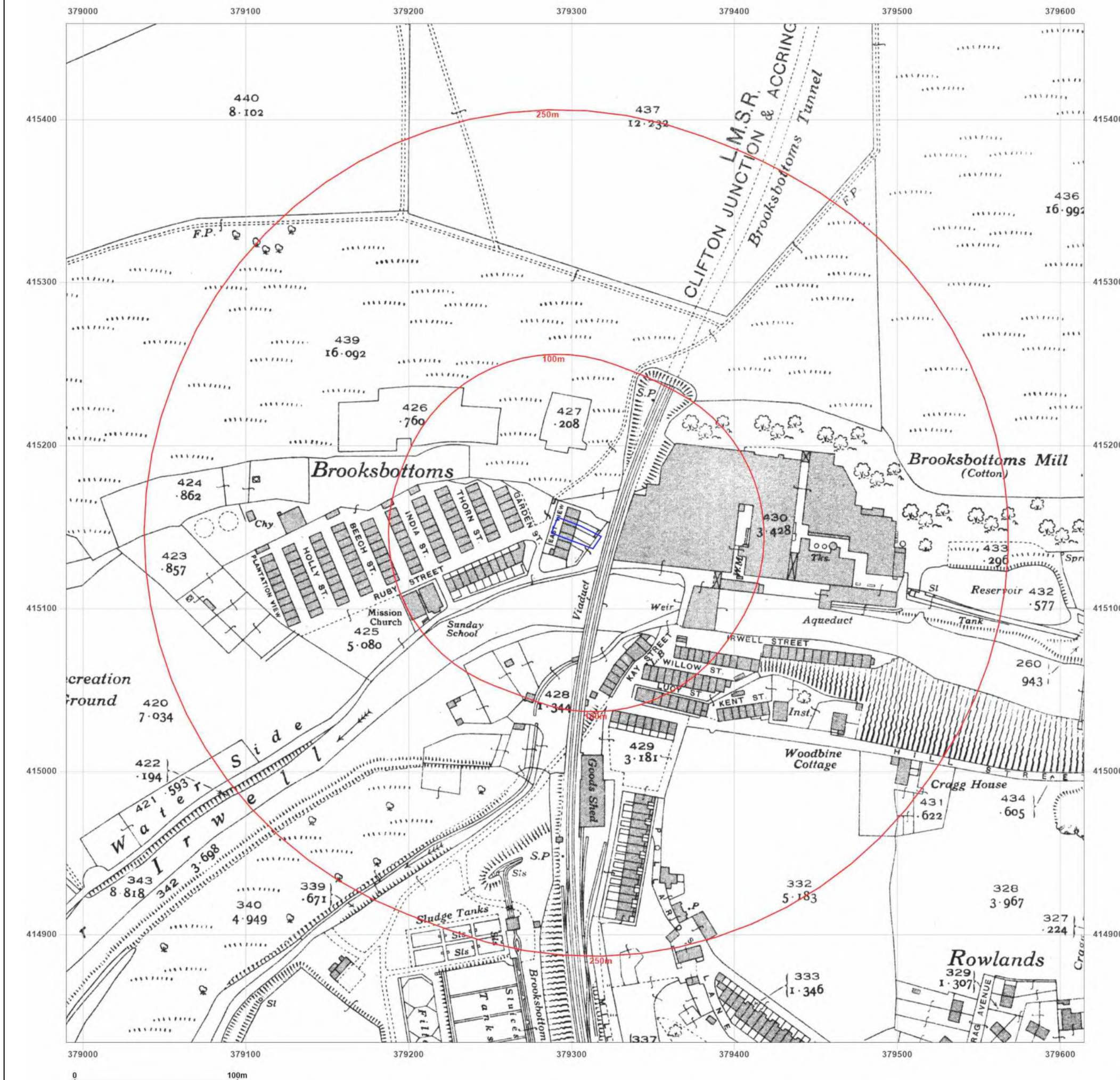


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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: National Grid

Map date: 1962

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1962
Revised 1962
Edition N/A
Copyright 1963
Levelled 1957

Surveyed 1962
Revised 1962
Edition N/A
Copyright 1963
Levelled 1957



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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: National Grid

Map date: 1970

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1970
Revised 1970
Edition N/A
Copyright 1971
Levelled 1963

Surveyed 1970
Revised 1970
Edition N/A
Copyright 1971
Levelled 1963

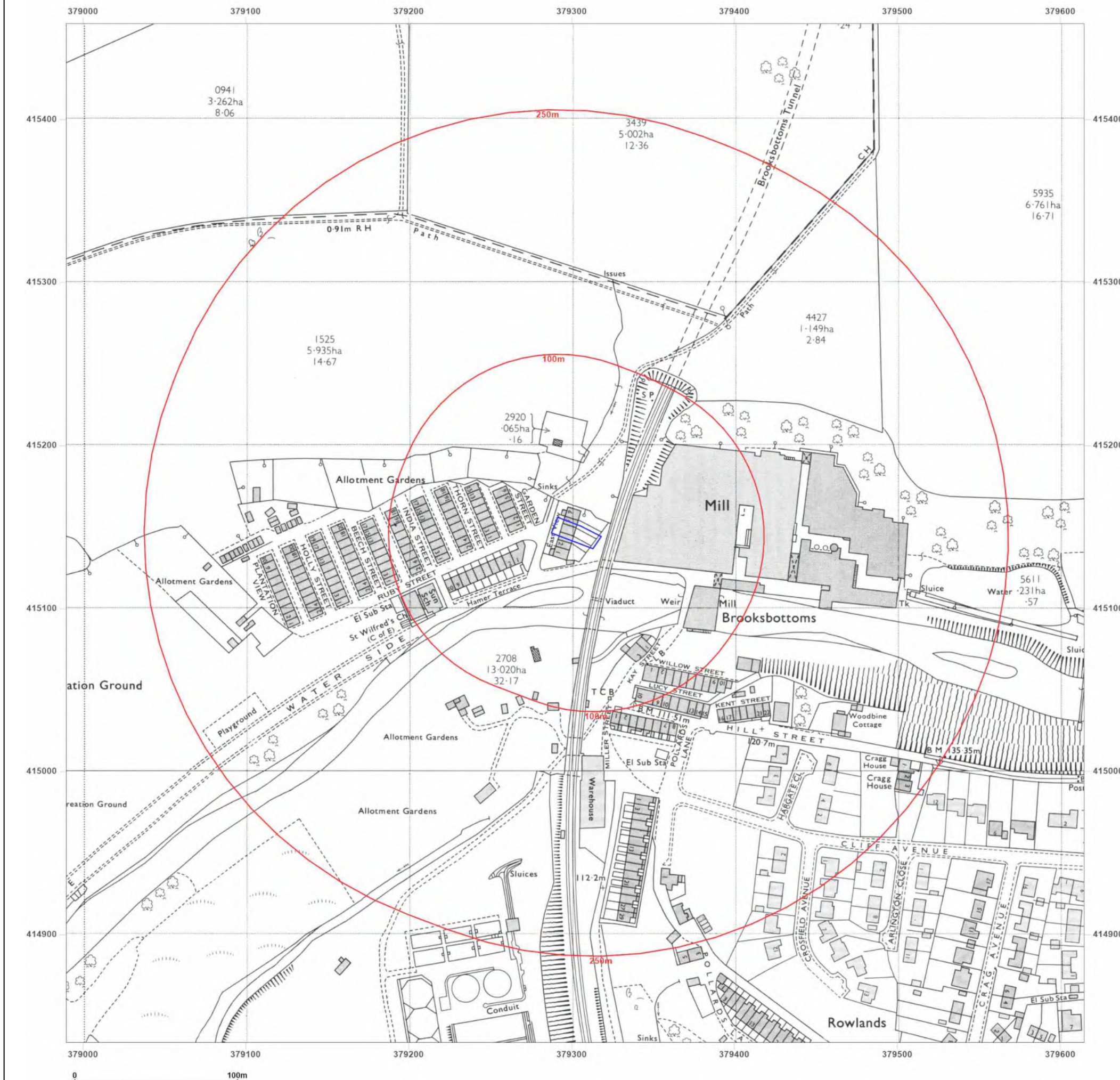


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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: National Grid

Map date: 1971

Scale: 1:2,500

Printed at: 1:2,500



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

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

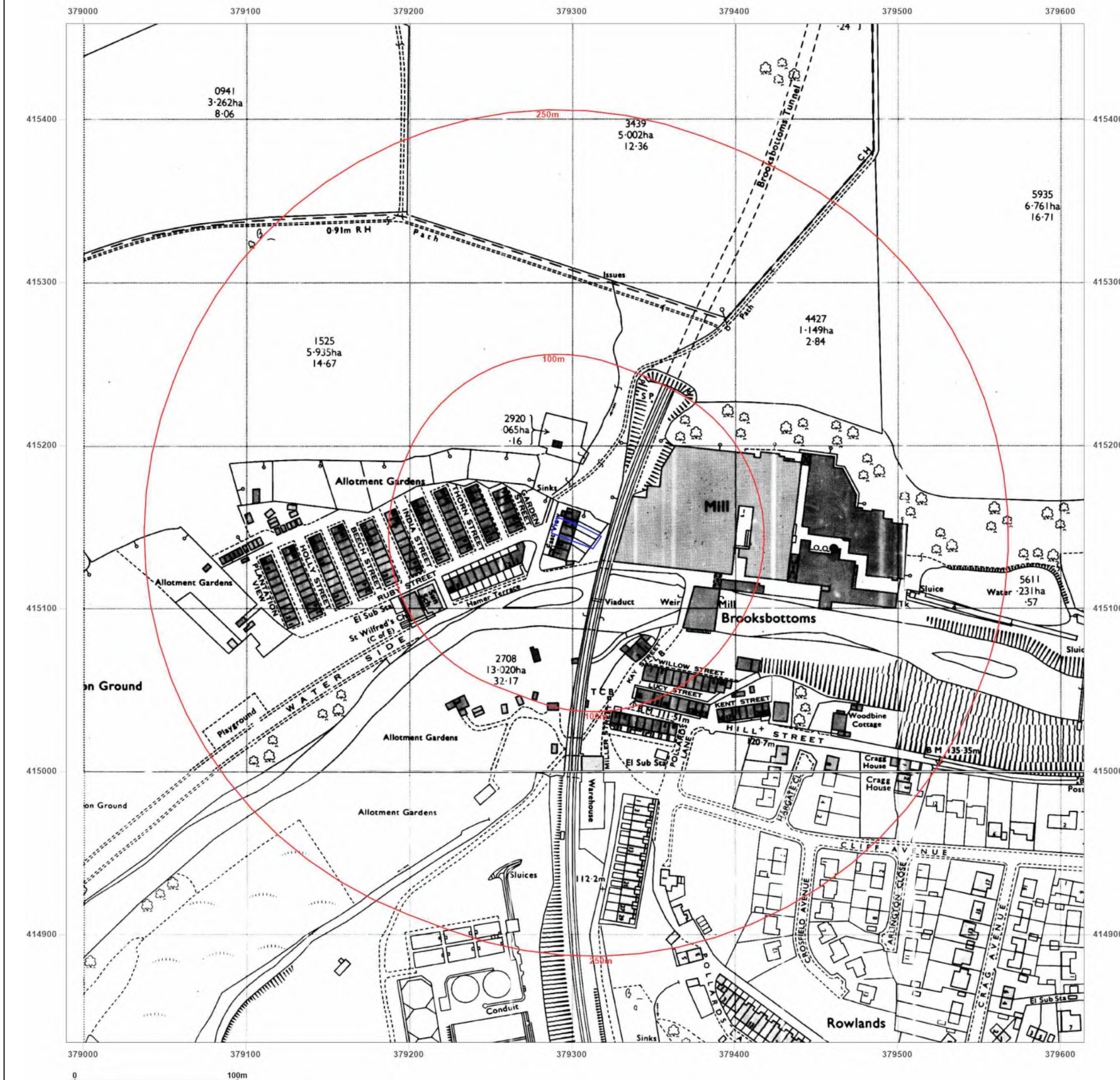


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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: National Grid

Map date: 1977-1978

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1977
Revised 1977
Edition N/A
Copyright 1978
Levelled 1963

Surveyed 1976
Revised 1976
Edition N/A
Copyright 1977
Levelled 1963

Surveyed 1976
Revised 1976
Edition N/A
Copyright 1977
Levelled 1963

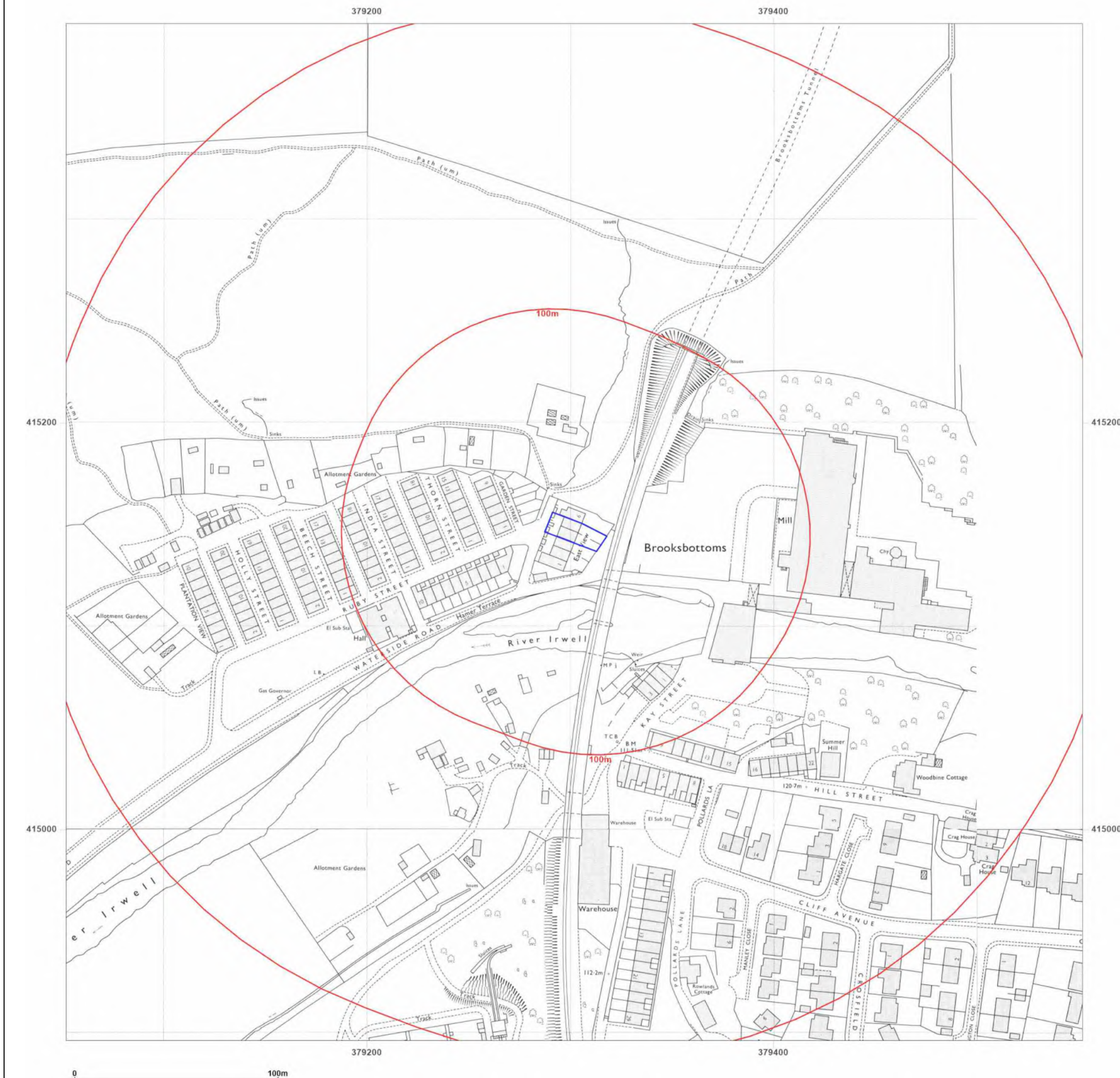


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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: National Grid

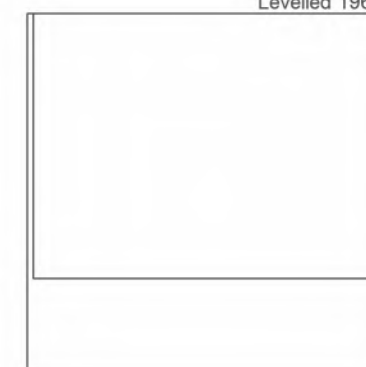
Map date: 1980

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition N/A
Copyright 1980
Levelled 1963

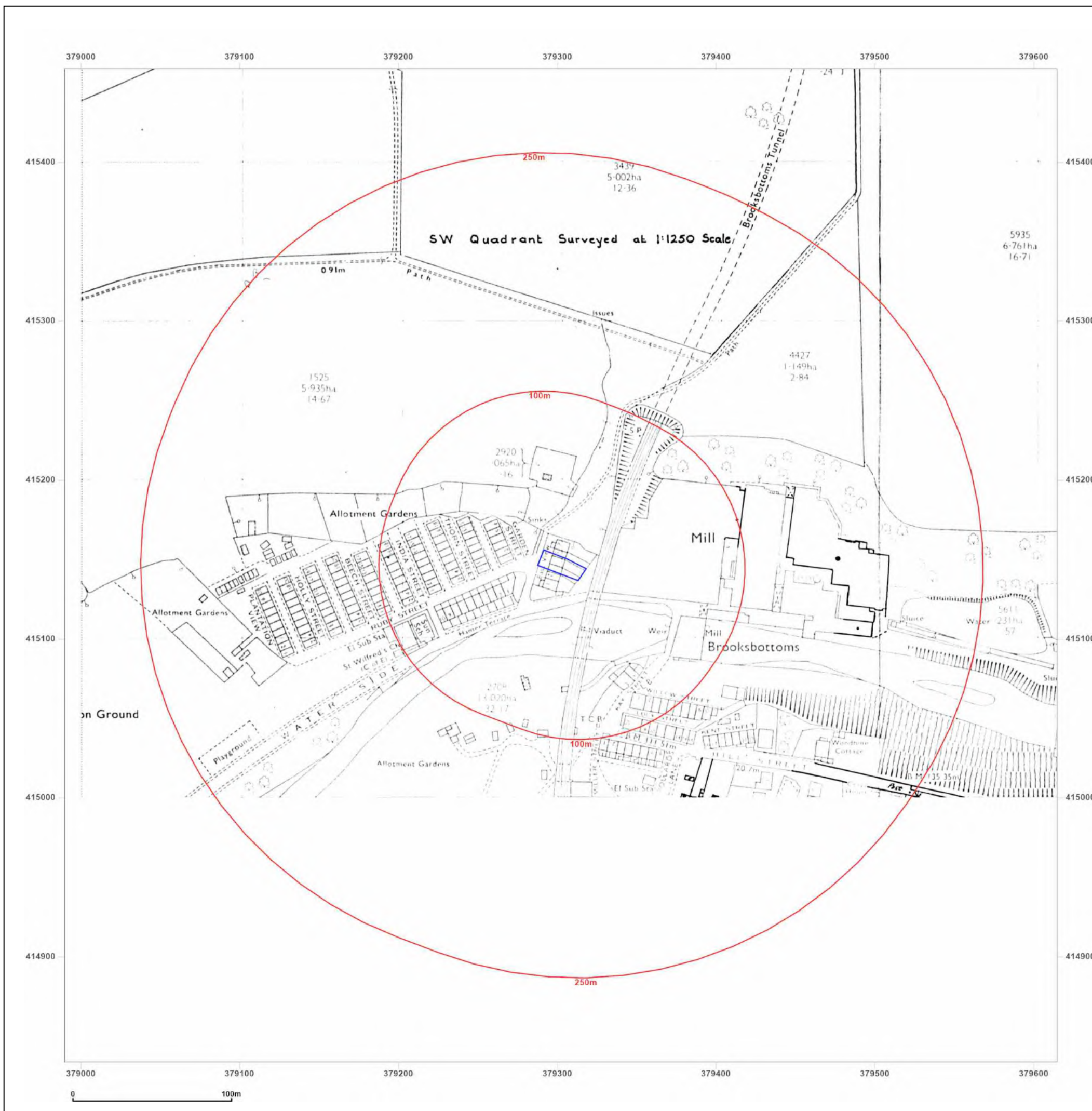


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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: National Grid

Map date: 1992

Scale: 1:1,250

Printed at: 1:2,000



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

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

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Edition N/A
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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: National Grid

Map date: 1992

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1992
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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: County Series

Map date: 1850-1851

Scale: 1:10,560

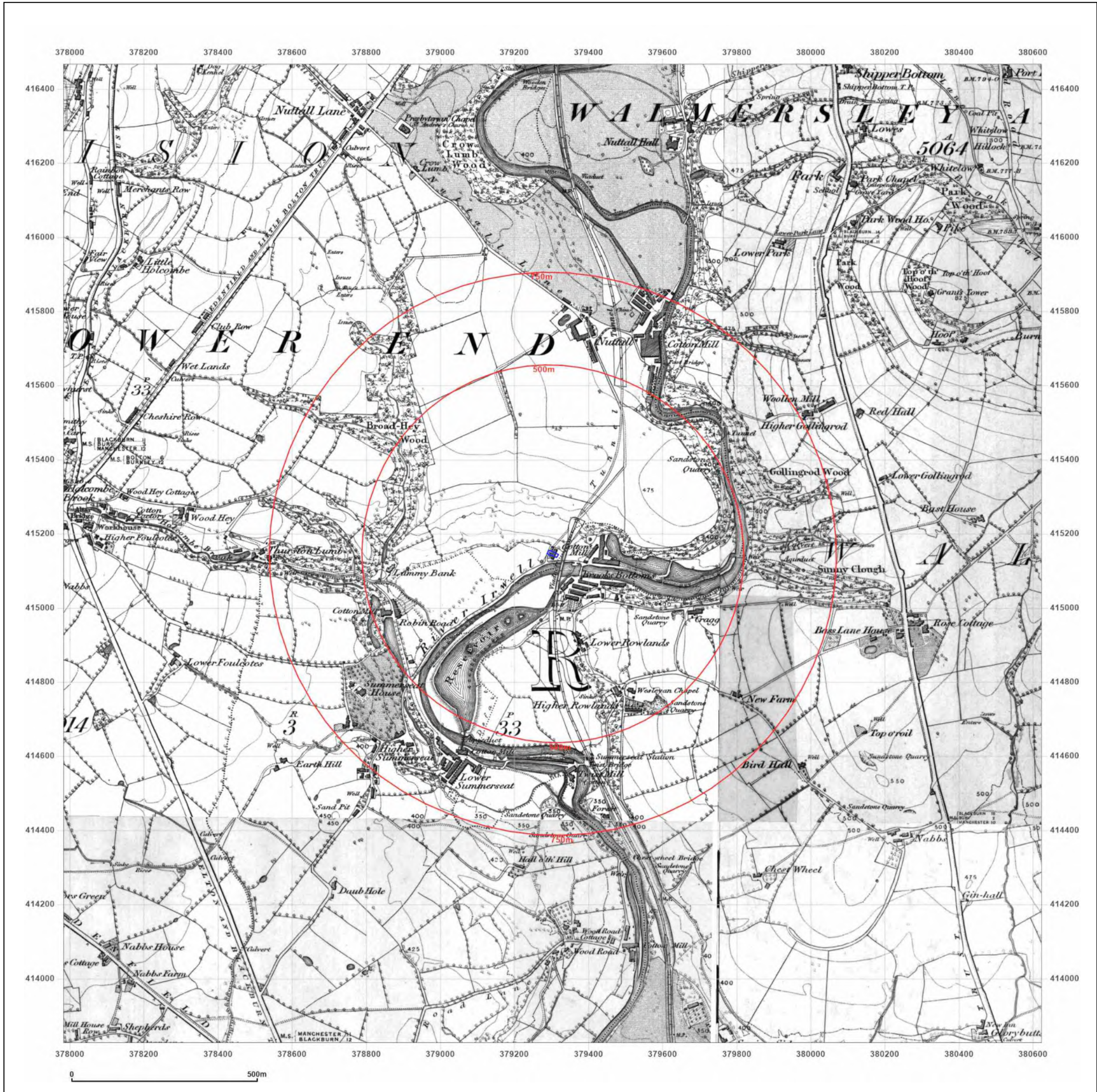
Printed at: 1:10,560

Surveyed 1847
Revised N/A
Edition 1850
Copyright N/A
Levelled N/A

Surveyed 1848
Revised N/A
Edition 1851
Copyright N/A
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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: County Series

Map date: 1908-1909

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1848
Revised 1908
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1908
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1908
Edition N/A
Copyright N/A
Levelled N/A

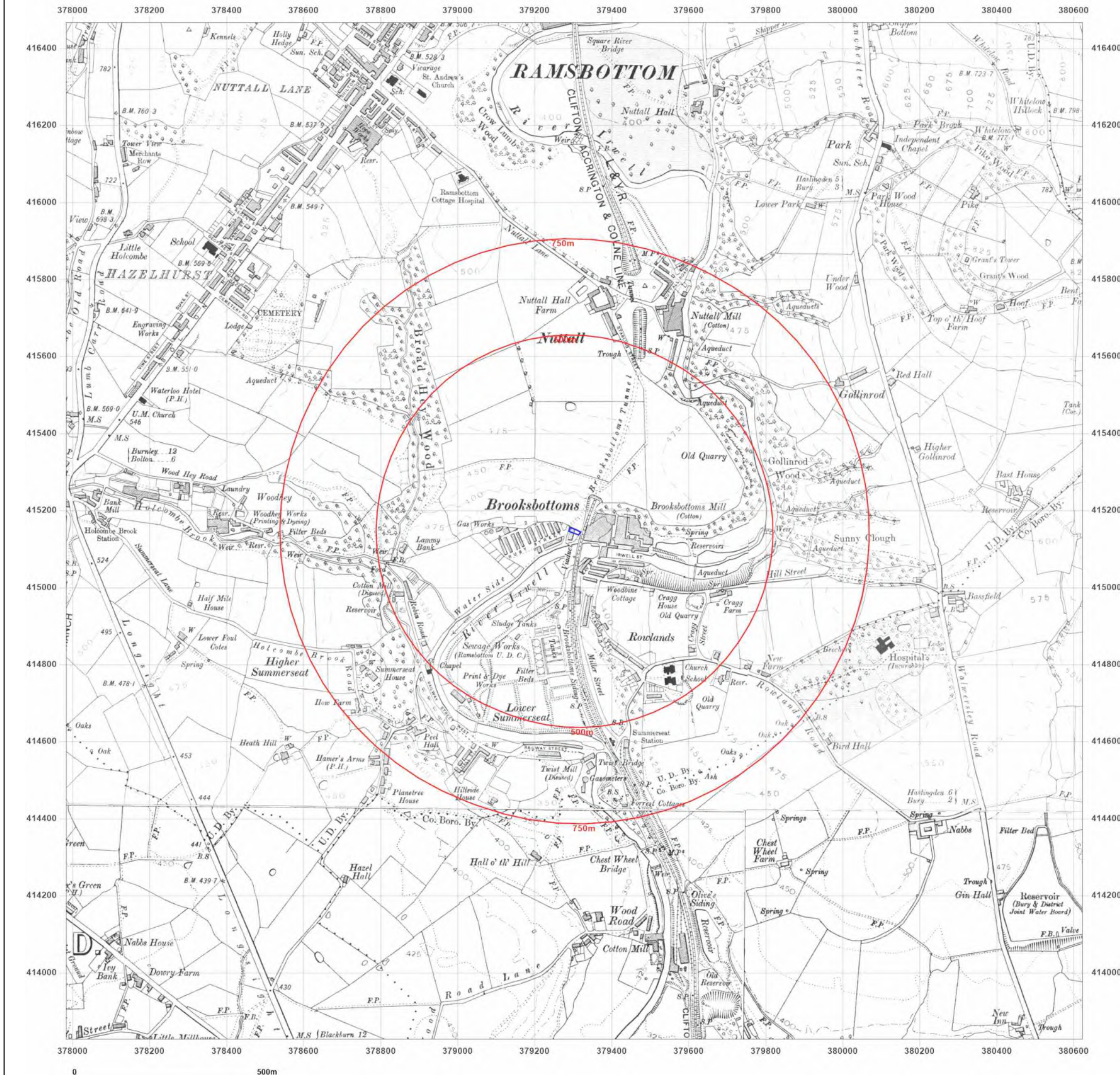


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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: County Series

Map date: 1927-1928

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1848
Revised 1927
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1928
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1928
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1928
Edition N/A
Copyright N/A
Levelled N/A

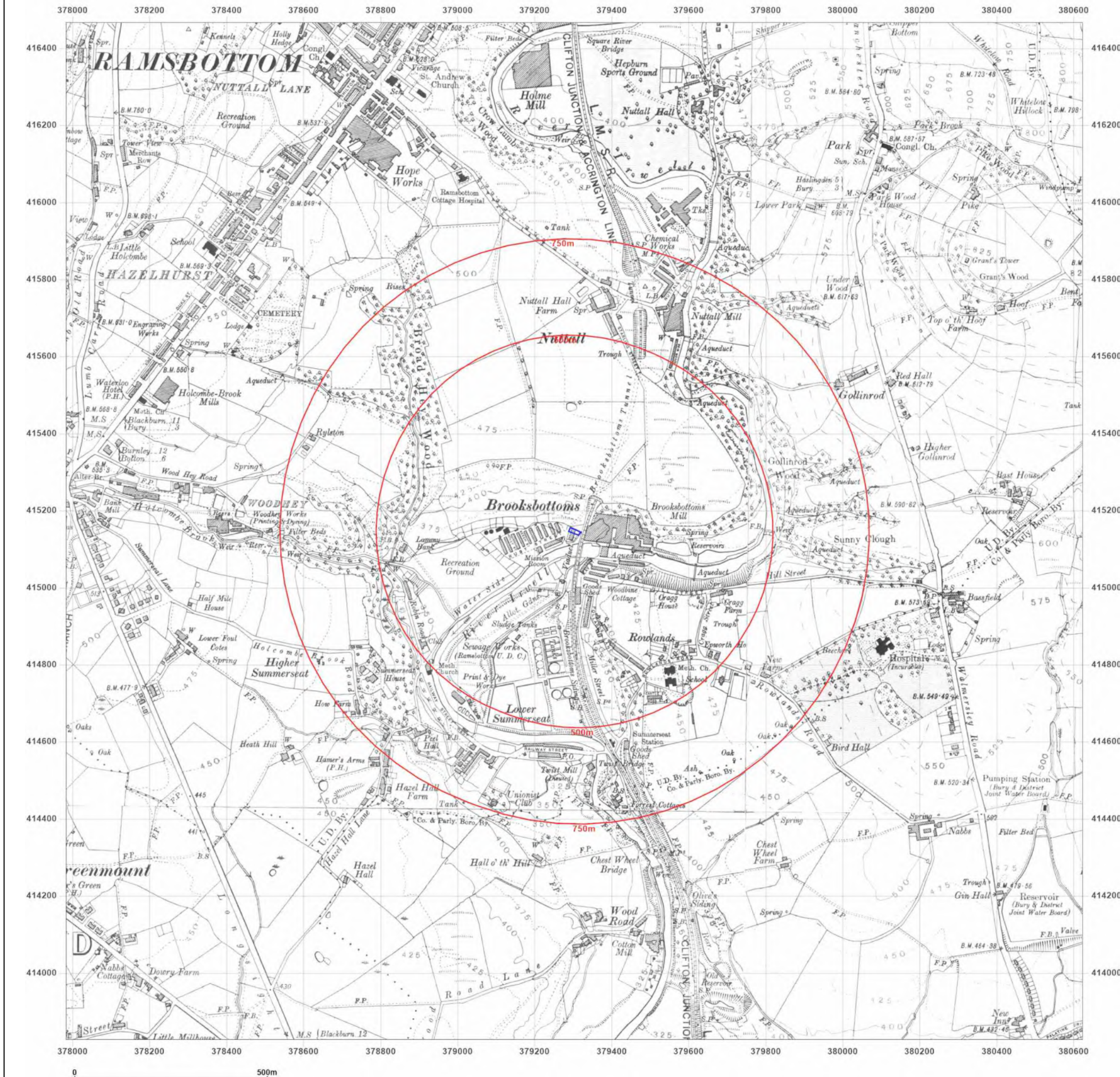


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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1848
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

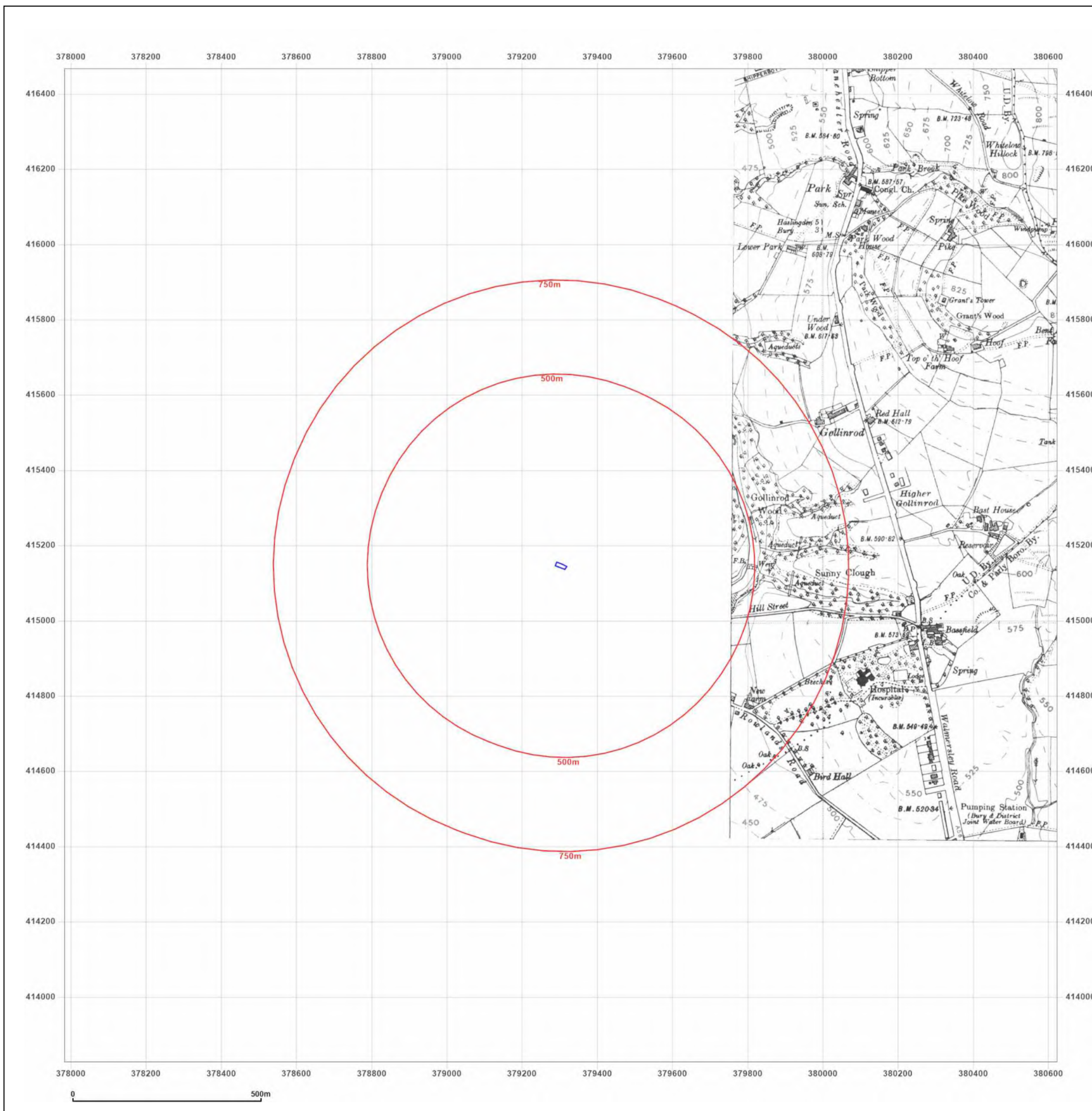


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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: County Series

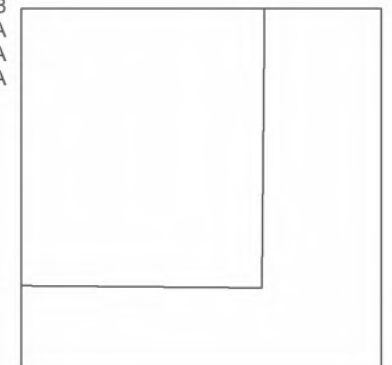
Map date: 1948

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1948
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A

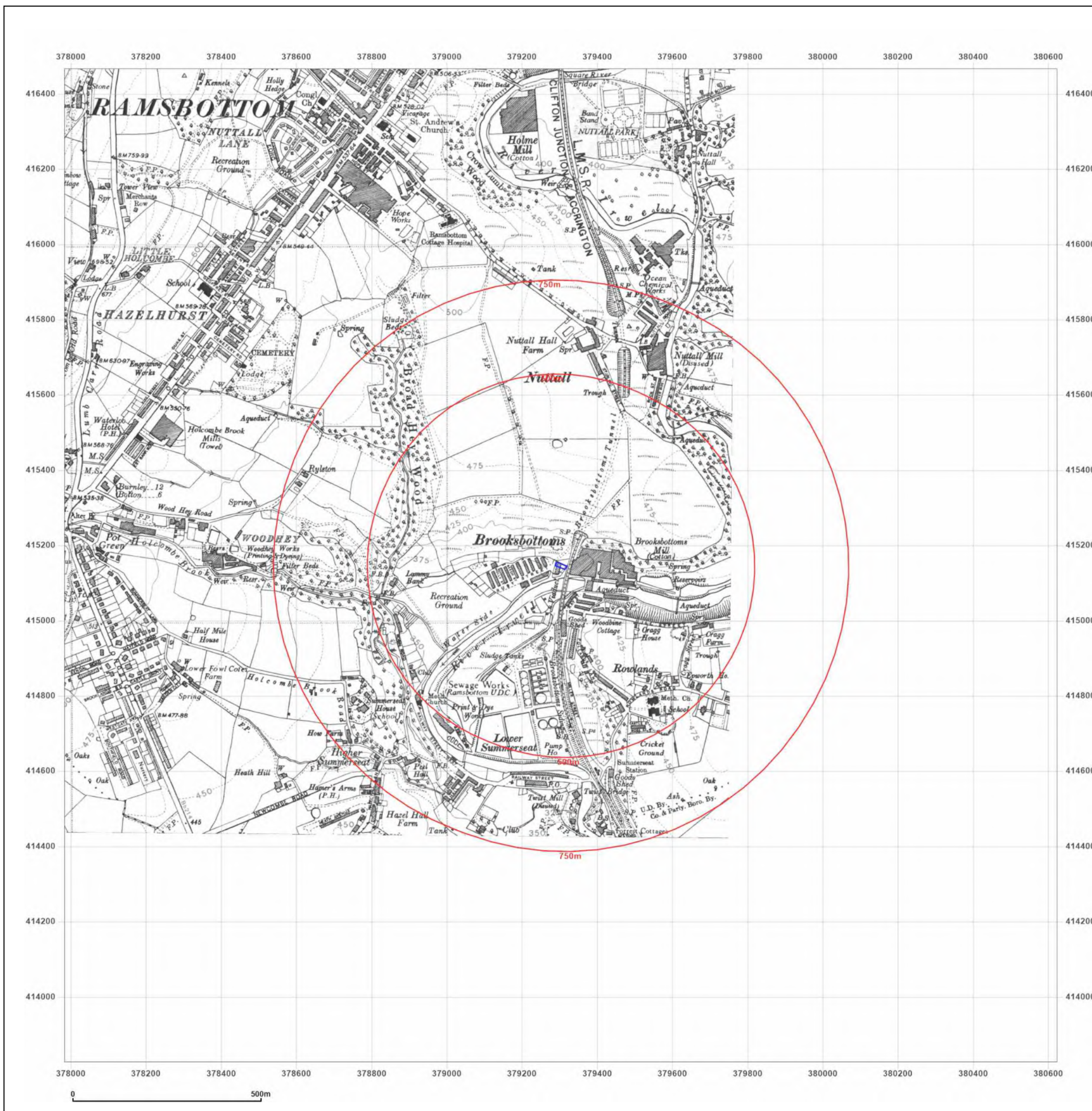


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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: Provisional

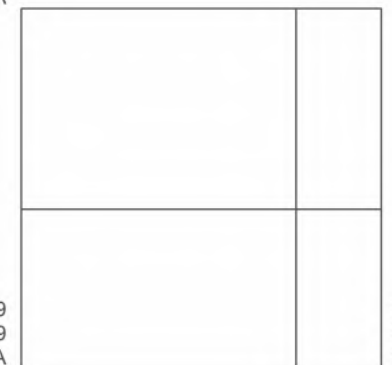
Map date: 1955-1956

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1949
Revised 1949
Edition N/A
Copyright 1955
Levelled N/A



Surveyed 1949
Revised 1949
Edition N/A
Copyright 1956
Levelled N/A

Surveyed 1949
Revised 1949
Edition N/A
Copyright 1956
Levelled N/A

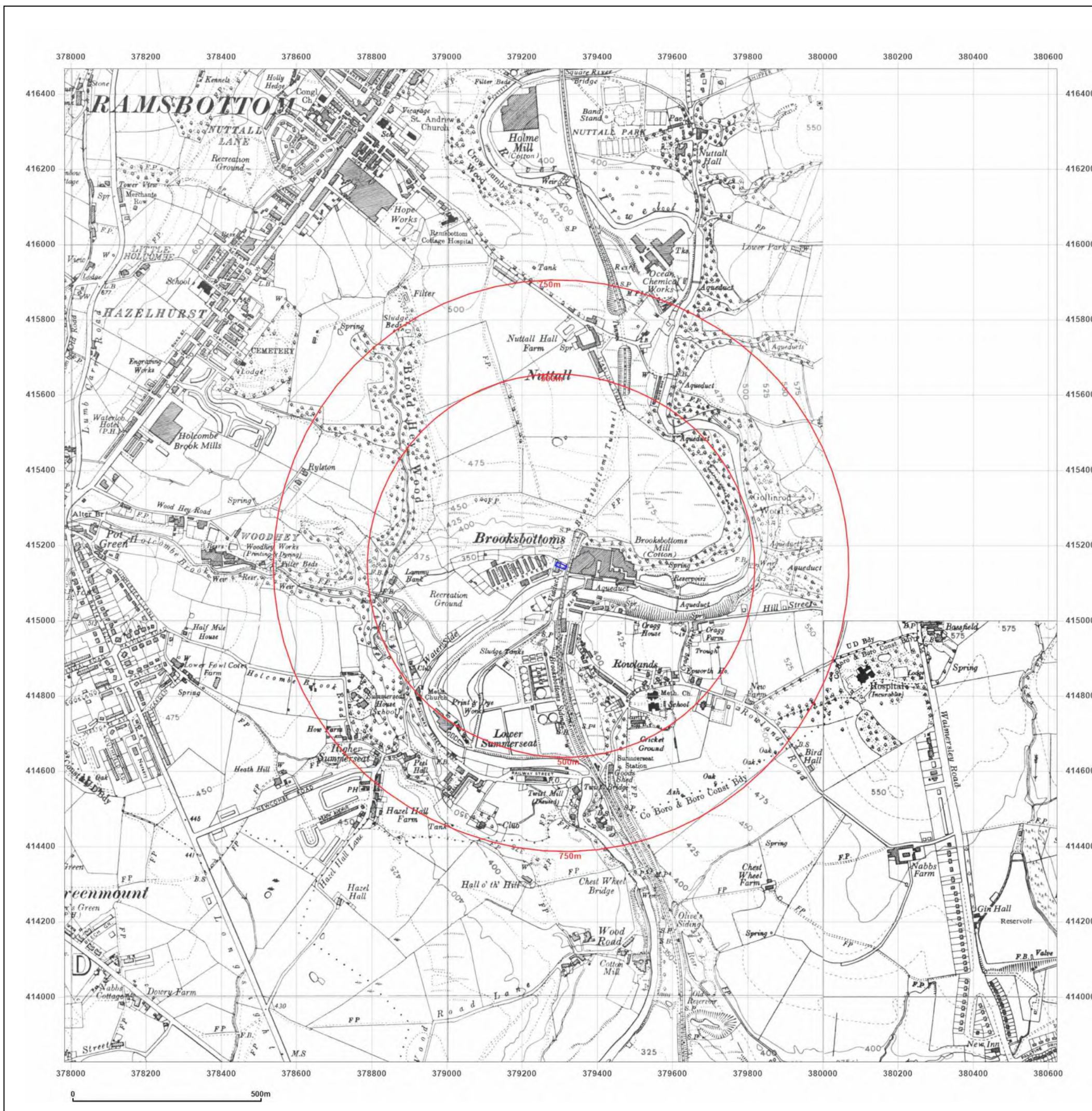


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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: Provisional

Map date: 1967-1969

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1968
Revised 1968
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1967
Revised 1967
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1969
Revised 1969
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1967
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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: National Grid

Map date: 1974

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1974
Revised 1974
Edition N/A
Copyright N/A
Levelled N/A

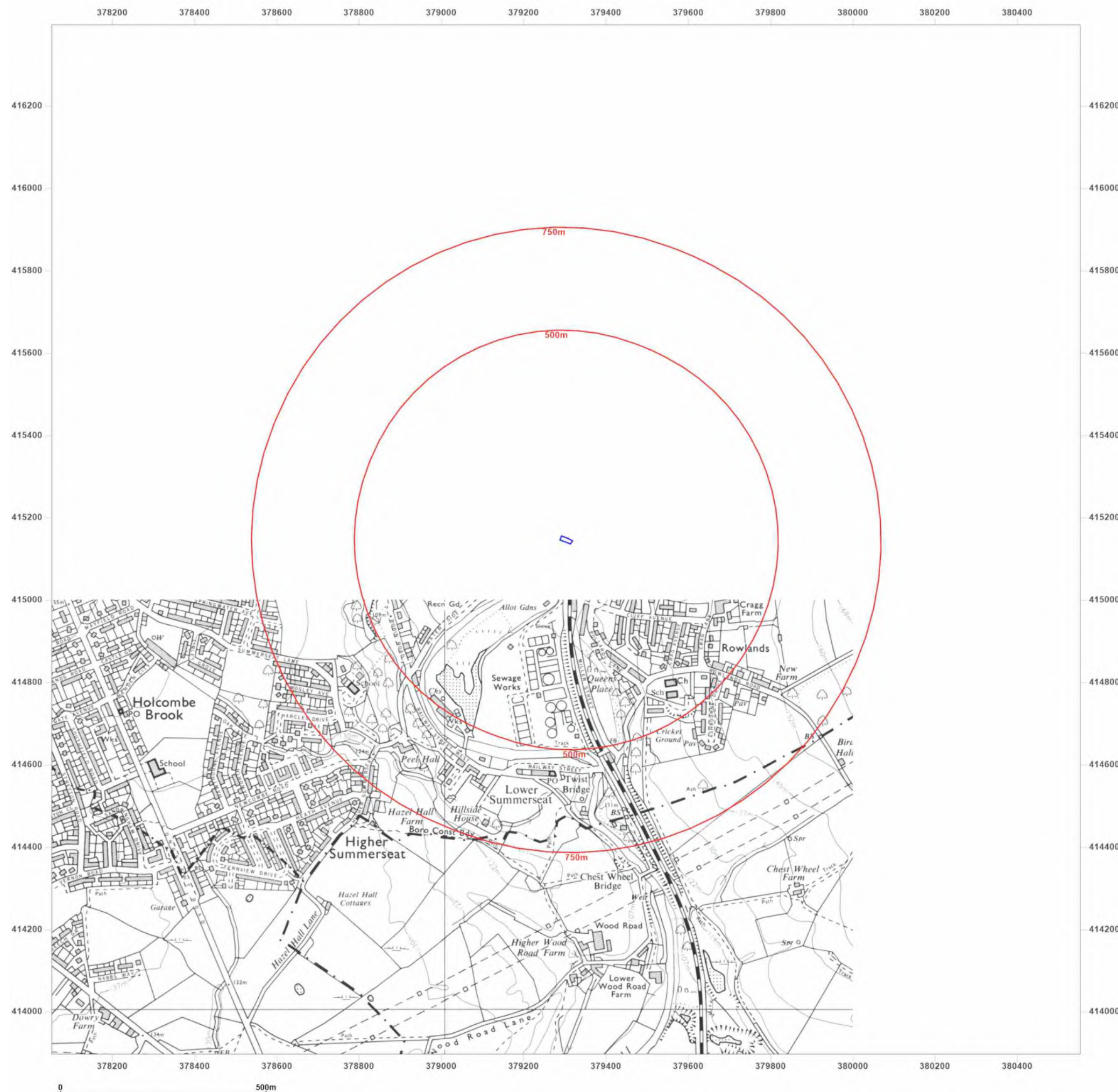


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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: National Grid

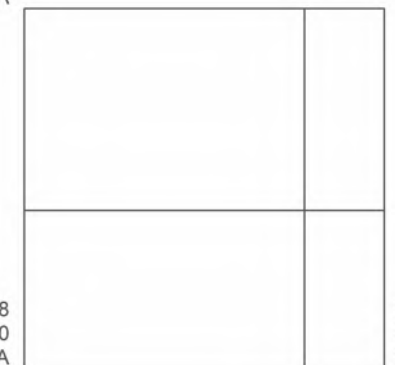
Map date: 1980-1983

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1978
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1978
Revised 1980
Edition N/A
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BL9 5PG

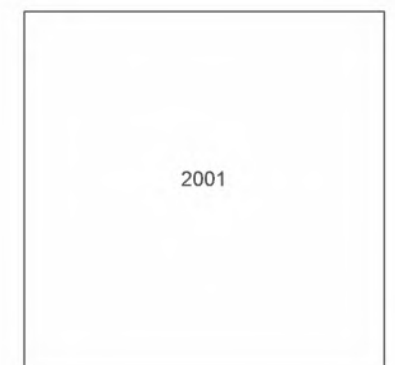
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Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000

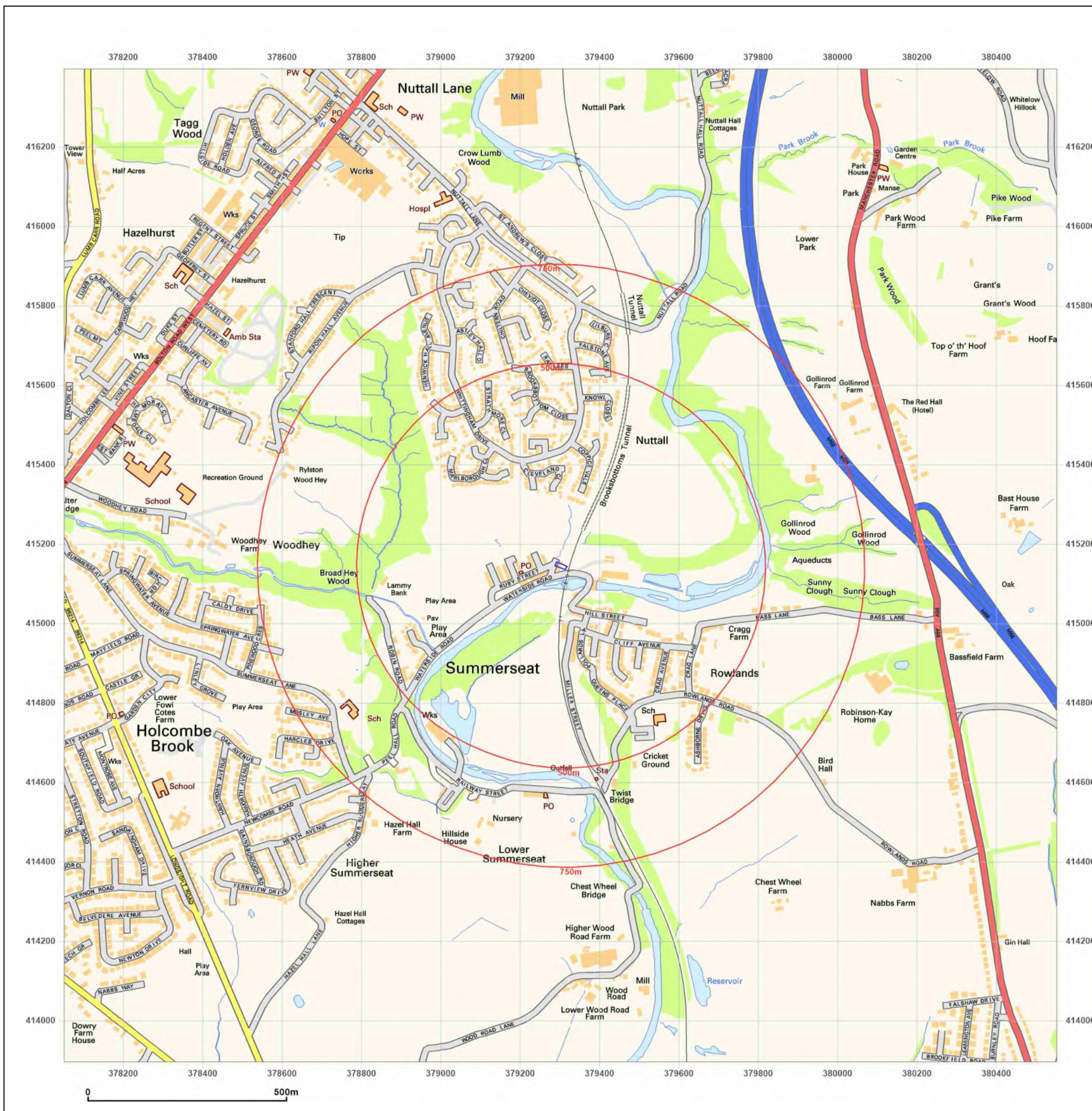


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BL9 5PG

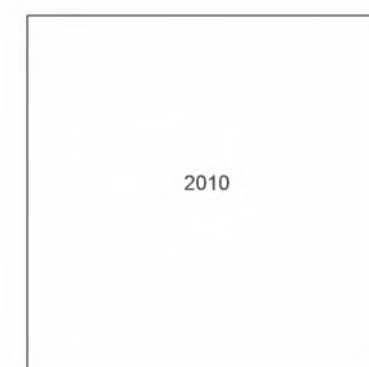
Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000

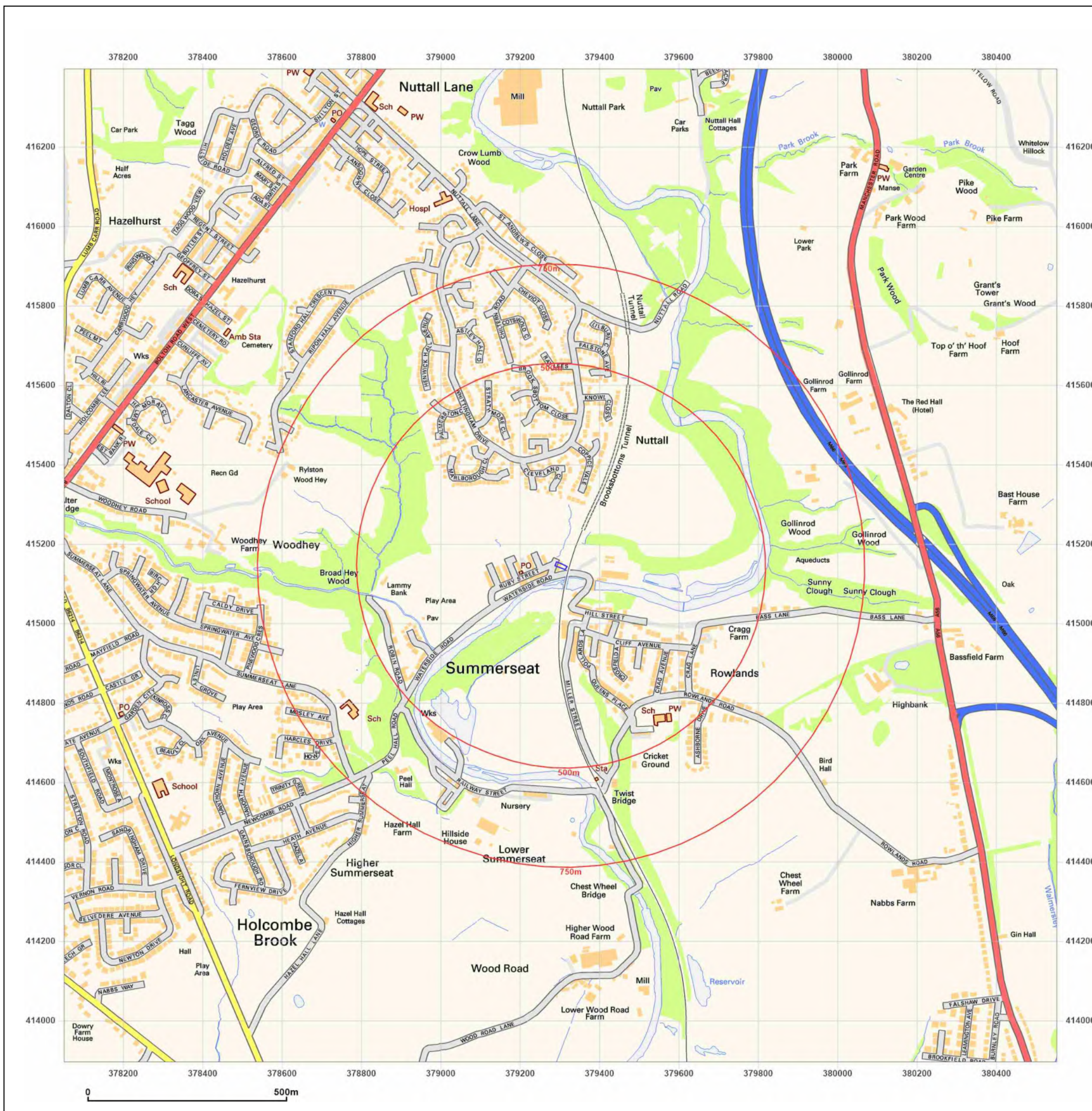


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Site Details:

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BL9 5PG

Client Ref: 1750
Report Ref: GS-XW4-EFH-Q8A-PSQ
Grid Ref: 379302, 415146

Map Name: National Grid

Map date: 2024

Scale: 1:10,000

Printed at: 1:10,000

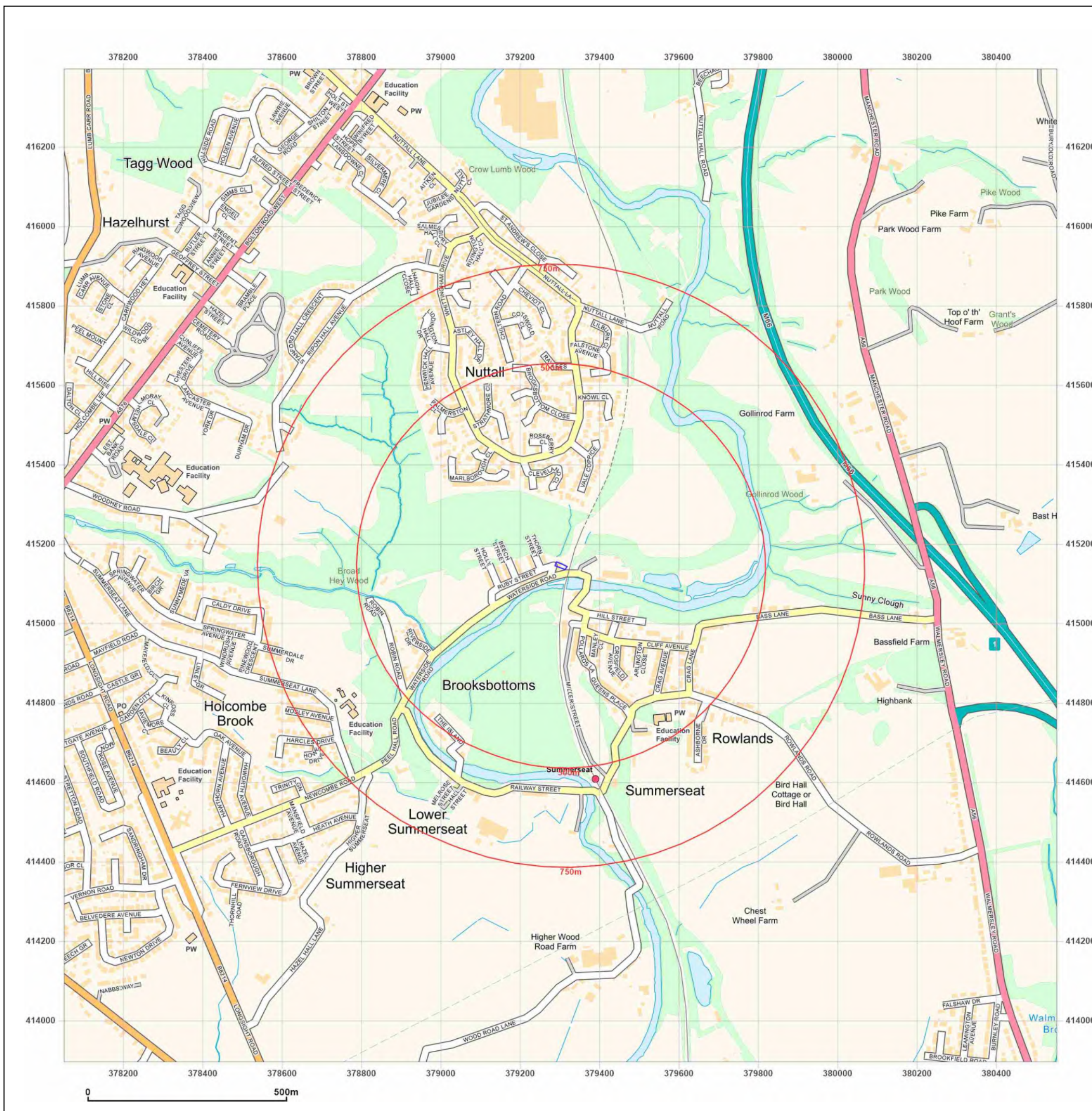


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Report Limitations

The comments given in the report and the opinion expressed herein are based on the information sourced by the desk study and other published information. Third party information was therefore used in the preparation of this report and Soilutions Limited cannot guarantee the accuracy or completeness of this information.

There may be other sources of information not included in those listed that hold data relevant to the Desk Study undertaken at the site that could materially affect the conclusions made in this report. The interpretation of the maps and/or other data commented on in this report is subjective.

During site clearance works where previously unidentified contaminated materials are encountered, this must be noted by the contractor and reported to Soilutions in order to determine whether the risk assessment and remediation strategies for the site require amendment.

The conclusions in this report represent our professional opinion, these conclusions have been drawn up with the greatest care to ensure that all apparent issues were addressed properly in accordance with applicable UK guidance and accepted practice.

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