



GROUNDTECH
CONSULTING

MANCHESTER MACCABI

PRELIMINARY RISK ASSESSMENT

PURE PADEL

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TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	PROJECT OBJECTIVES	1
1.2	PROPOSED DEVELOPMENT.....	1
1.3	LIMITATIONS.....	2
2.0	SITE SETTING.....	3
2.1	LOCATION	3
2.2	SITE DESCRIPTION	3
3.0	ENVIRONMENTAL SETTING.....	5
3.1	SITE HISTORY	5
3.2	GEOLOGY.....	6
3.3	HYDROGEOLOGY.....	7
3.4	HYDROLOGY	8
3.5	ENVIRONMENTAL CONSULTATIONS.....	8
3.6	RADON	9
3.7	COAL AUTHORITY CONSULTATION	9
4.0	LAND QUALITY CONCEPTUAL SITE MODEL AND RISK ASSESSMENT	11
4.1	INTRODUCTION.....	11
4.2	POTENTIAL CONTAMINATION SOURCES	11
4.3	POLLUTION LINKAGES	12
4.4	RECEPTORS.....	12
4.5	PRELIMINARY CONCEPTUAL SITE MODEL (CSM)	12
5.0	GROUND ENGINEERING RECOMENDATIONS AND POTENTIAL LIMITATIONS	19
5.1	PRELIMINARY FOUNDATION ASSESSMENT	19
5.2	ADDITIONAL LIMITATIONS.....	19
6.0	CONCLUSIONS AND GROUND INVESTIGATION RATIONALE.....	20
6.1	LAND QUALITY	20
6.2	GROUND ENGINEERING.....	20
6.3	ADDITIONAL CONSIDERATIONS.....	20
6.4	RECOMMENDED GROUND INVESTIGATION SCOPE.....	20
	APPENDIX 1 - PLANS	
	APPENDIX 2 - SITE PHOTOGRAPHS	
	APPENDIX 3 - HISTORICAL MAPS	
	APPENDIX 4 - BGS RECORDS	
	APPENDIX 5 - GROUNDSURE REPORT	
	APPENDIX 6 - COAL AUTHORITY REPORT	
	APPENDIX 7 - CIRIA RISK ASSESSMENT METHODOLOGY	
	APPENDIX 8 - RELEVANT CONTAMINATED LAND LEGISLATION	
	APPENDIX 9 - LIMITATIONS	

Plans		
Plan Reference	Revision	Title
GRO-24036-P01	-	Project Location Plan
GRO-24036-P02	1.1	Preliminary Development and Constraints Plan
GRO-24036-P03	-	Illustrative Preliminary CSM

1.0 INTRODUCTION

1.1 Project Objectives

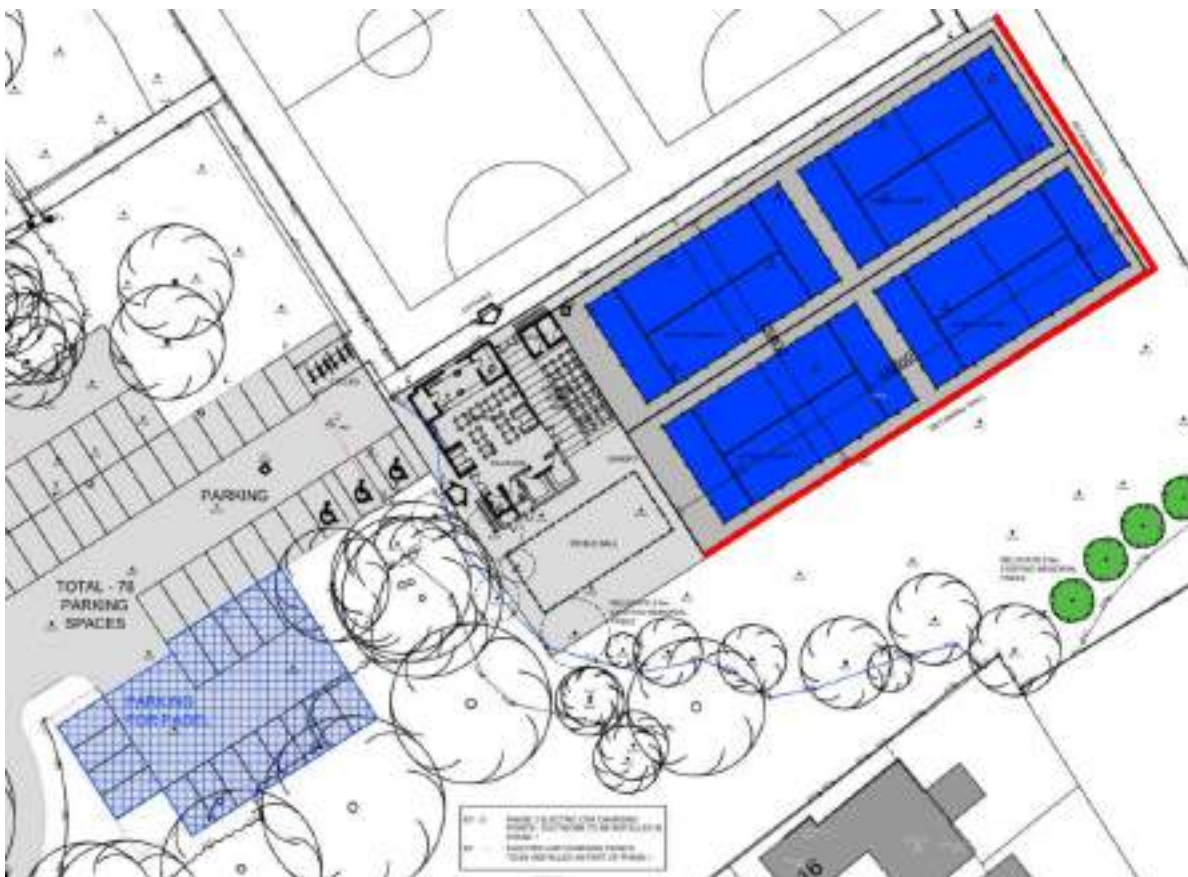
Groundtech Consulting Limited have been instructed by iLEX Project Management Ltd on behalf of Pure Padel to undertake a Preliminary Risk Assessment for a site at Manchester Maccabi Community and Sports Club in Prestwich.

The objectives of the Preliminary Risk Assessment were to establish the sites environmental and geotechnical background in order to generate a Conceptual Site Model to identify any potential constraints and linkages which may affect the redevelopment of the site.

The report has been undertaken to fulfil the requirements of a preliminary risk assessment in accordance with LCRM "Land Contamination Risk Management".

1.2 Proposed Development

The proposed development is commercial end use comprising the construction 4 No. covered padel courts, 1 No. uncovered pickleball court, ancillary pavilion, storeroom, covered social area and revised car with electric vehicle charging points and cycling parking.



Proposed Development

1.3 Limitations

This Preliminary Risk Assessment is based on information obtained from a number of sources, and the information is assumed to be correct.

Other conditions may exist on the site that have not been taken into account in this assessment as they are outside the scope of works. Groundtech Consulting are not responsible for these circumstances that are not outlined in the report.

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2.0 SITE SETTING

2.1 Location

The site is located circa 1.5km south east of Prestwich Town Centre, as shown on the Project Location Plan GRO-24036-P01. The site is approximately centred on National Grid Reference 382778, 402940.



Project Location

Access to the site is gained off Bury Old Road (A665) to the west of the site.

2.2 Site Description

The site is irregular in shape and approximately 1.95 hectares in area. The topography of the site comprises a steep downwards slope to the west towards Bury Old Road (A665), with the south eastern section of the site being approximately 3.0m higher than the western area. The surrounding area generally slopes towards the south.

Western Area

The site is predominantly occupied by a two-storey brick-built building named Manchester Maccabi Community & Sports Club with associated hardsurfacing car parking to the western and southern area of the site. A soft landscaping garden to the immediate east. There is another single storey commercial end use dwelling south of the Manchester Maccabi Community and Sports Club called the Sedgeley Ken Yu Kai Karate Club.

A tarmacked driveway and car parking is present in the southern area of the site, associated with the Community Centre and Karate Club.

Mature woodland occupies the northern, western and south western sections of site.

Eastern Area

The eastern area of site is occupied by 2 artificial football pitches. The pitches are encased by metal fencing and accessed via a footpath from the community centre to the west.

The remaining areas of the site are soft landscaping in the form of grass with semi-mature to mature trees to the southern and northern area of the site.

Boundaries and Surrounding Land Uses

Semi-mature, mature trees are situated along the northern and southern boundaries as undefined fencing. Semi-mature and mature trees are also situated on the western boundary with a hardstanding access road from Bury Old Road leading towards the Manchester Maccabi Community & Sports Club centre. The eastern boundary is defined by small wooden fences covered by soft landscaping and football pitches.

The site is surrounded by following features/land uses:

- North - Commercial building/carparking, woodland and residential housing.
- East - Soft landscaping football fields and residential housing.
- South - Pownall Avenue and residential properties.
- West - Bury Old Road (A665) and residential dwellings.

The site photographs are in *Appendix 2* and relevant features are recorded on the Preliminary Development and Constraints Plan *GRO-24036-P02*.

3.0 ENVIRONMENTAL SETTING

3.1 Site History

Available historical maps have been obtained, a list of dates and scale are listed in the table below:

Scale	Date
1:1,250	1951/52, 1952, 1990/92, 2003
1:2,500	1893, 1909, 1922, 1932, 1951/52, 1968, 1970/75
1:10,000/10,560	1848, 1891, 1907, 1915, 1923, 1932, 1938, 1956, 1968, 1977, 1985, 2001, 2010, 2024

The plans were examined and potential issues have been identified and summarised in the table below:

Date	Site	Surrounding Area
1848	<i>A lodge and associated outbuilding centre of the site surrounded by soft landscaping.</i>	<i>Unnamed Well c.150m to the north.</i> <i>Ponds c.100m to the east, c.300m to the north west and c.250m to the west.</i> <i>Culvert c.250m to the north east.</i> <i>Limited development with fields and woodland generally surrounding site.</i>
1891	<i>Building increase in size, labelled 'Brooklands'. Woodland indicated surrounding the central building. Small outbuilding present near western boundary.</i>	<i>Unnamed Well backfilled.</i> <i>Culvert no longer present, possibly backfilled.</i> <i>Majority of ponds c.100m south east backfilled.</i> <i>Unspecified buildings constructed c.50m north and west.</i>
1907	<i>Development of another unspecified building immediately north of existing building. Several greenhouses located adjacent to northern building.</i>	<i>No Change.</i>
1932	<i>No change.</i>	<i>Embankment c.175m to the southwest.</i> <i>Ponds Infilled c.300m to the northwest and c.250m to the west.</i>
1951/52	<i>Corporation yard present in northern area. Greenhouses no longer present, possible demolished.</i>	<i>Two Electricity substations c.175m to the east and c.185m to the southwest.</i> <i>Allotment Gardens immediately east and south.</i> <i>Remaining pond c.100m south east backfilled.</i>
1977	<i>Demolition of all existing buildings. Site predominantly occupied by shrubbery and woodland.</i>	<i>Allotment Gardens now indicated to be Playing Fields.</i>
1985	<i>Single outbuilding constructed in central eastern area.</i>	<i>Residential expansion surrounding site with exception of playing fields immediately south and east.</i>
2010	<i>Building constructed in northwestern section of site. Woodland remains around northern, western and southern areas. Outbuilding no longer indicated.</i>	<i>Roadway and residential land use constructed immediately south of site.</i>
2024	<i>Hardstanding Car Parking associated with Manchester Maccabi Community Sports & Social club and two artificial football pitches</i>	<i>Residential dwellings immediately south to the site and west of the site after the Bury Old Road.</i> <i>Public House immediately north of the site.</i>

The historical plans are presented in Appendix 3.

3.2 Geology

The following British Geological Survey (BGS) records and other available information were inspected to accurately determine the geology underlying the site:

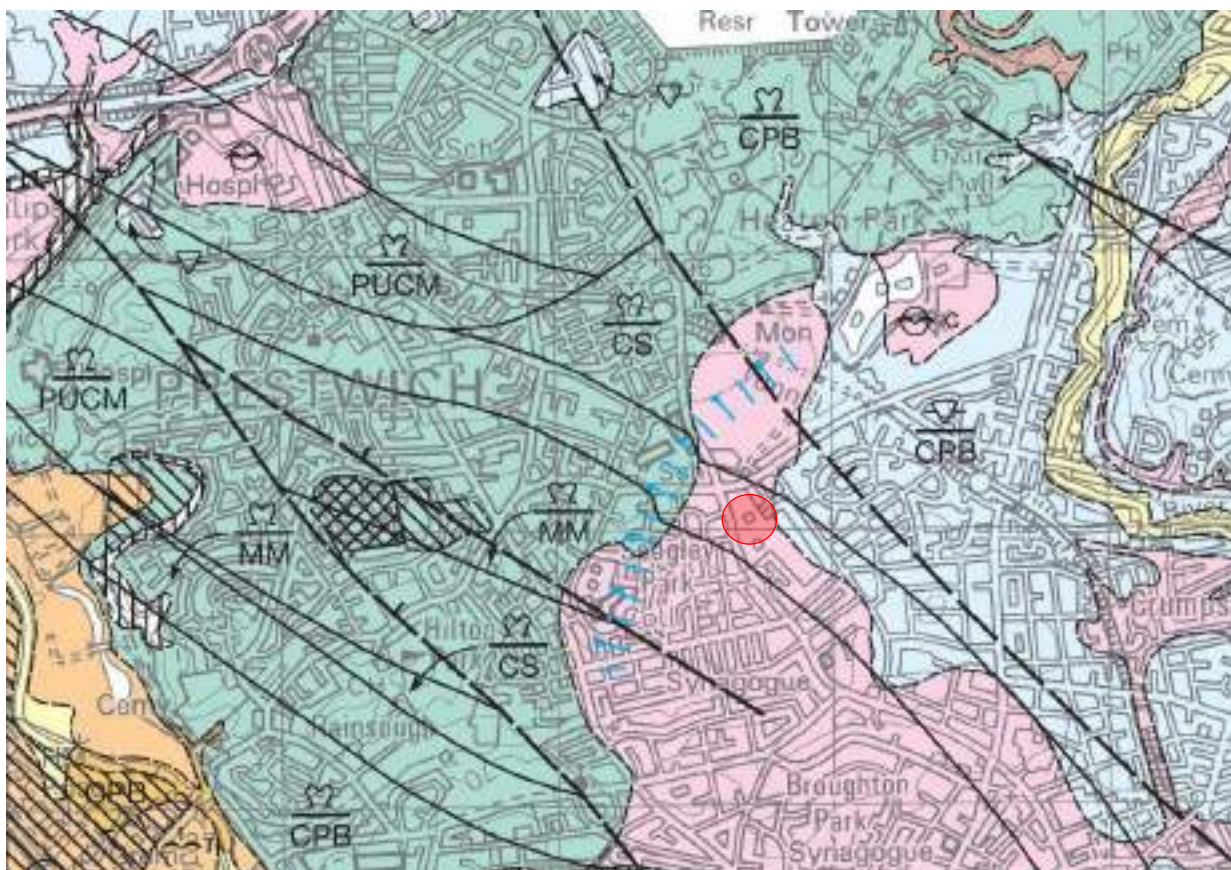
- 1:50,000 Scale Geological Sheet 85, Manchester - Bedrock and Superficial
- 1:50,000 Scale Geological Sheet 85, Manchester - Bedrock
- BGS Records.

Made Ground

Made Ground is not indicated to be present beneath the site on the available geological maps. However, due to previous construction at the site, some Made Ground is anticipated.

Superficial Deposits

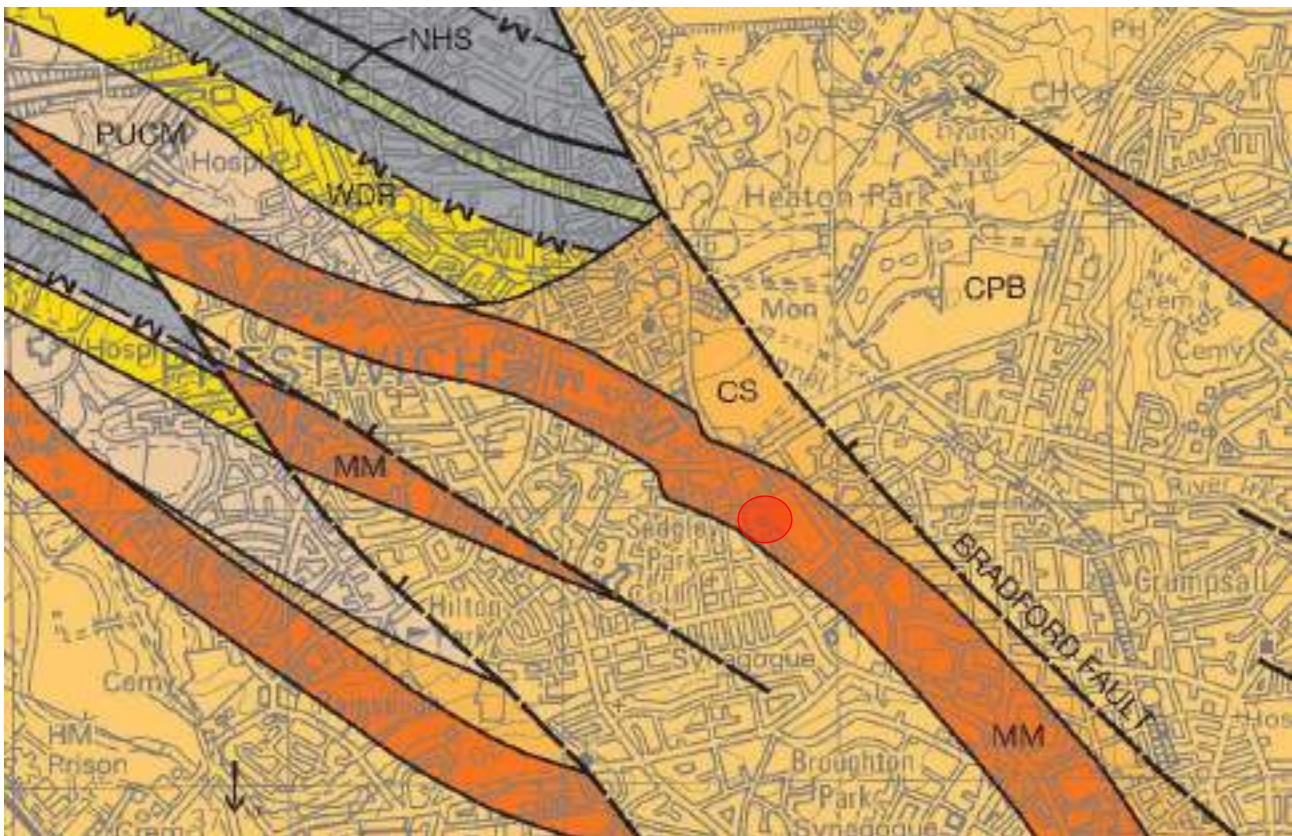
The site is indicated to be underlain by Devensian Glaciofluvial sheet deposits, this stratum characteristically comprises of sand and gravels.



Geological Map – Superficial & Bedrock Deposits

Solid Geology

The bedrock is the Manchester Marls Formation, consisting of Mudstone. The Chester Sandstone Formation is present to the extreme south of the site.



Geological Map – Solid Geology

Geological Faults

No geological faults are recorded within an influencing distance of the site. The Bradford fault is located circa 314m north east of the site and the fault indicates that its downthrows away from the site.

BGS Records

There are no available BGS records within 250m of the site boundary. The nearest available borehole is located approximately 320m north of the site and comprises silty gravelly clays underlying the site to 70m bgl with bands of gravel throughout. Bedrock was encountered at circa 70.0m bgl and comprised medium to coarse grained micaceous sandstone.

The BGS records are presented in *Appendix 4*.

3.3 Hydrogeology

The superficial glaciofluvial deposits in this area are classified by the Environment Agency as a Secondary A Aquifer (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).

The Manchester Marls bedrock deposits are classified by the Environmental Agency as a Secondary B Aquifer (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).

The Chester Sandstone Formation are classified by the Environmental Agency as a Principal Aquifer (Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers).

The soils beneath the site are indicated to be of high leaching potential but low bedrock vulnerability.

The site is not indicated to lie within 500m of a Source Protection Zone.

The nearest groundwater abstraction is an active license located 1297m southwest relating to direct spray irrigation at Prestwich Gold Club. There are no potable abstractions within 2km of the site.

3.4 Hydrology

There are no surface water features within 1km of site. The nearest named watercourse is the River Irwell 1331m southwest of the site. As of 2019, the river was given an overall rating of moderate and a chemical rating of fail.

The nearest discharge consents related to a dry cleaning process circa 156m south of the site.

There are no recorded surface water abstractions located within 2km of the site.

Environment Agency information indicates that the site is outside a flood risk zone and is not at Risk of Flooding from Rivers and Sea (RoFRaS).

3.5 Environmental Consultations

A request has been submitted to the Contaminated Land Officer at Bury Metropolitan Borough Council for information pertaining to the site, this information will be forwarded on receipt.

An environmental consultation has been conducted through Groundsure, which accesses British Geological Survey and Environment Agency databases. The complete Groundsure Report can be found in *Appendix 5*, a summary of the more relevant points are presented in the table below.

Record	<250m	250 – 500m	Description
<i>Authorised Processes</i>	1	2	<i>The nearest is an active permit relating to dry cleaning 156m south of the site. Remaining are historical permits 357m south relating to petrol vapour recovery and unloading of petrol at a petrol station.</i>
<i>Pollution Incidents</i>	-	-	-
<i>Landfill and Waste Treatment</i>	-	1	<i>Treating waste exemption associated with sorting controlled drugs for disposal 375m west.</i>
<i>Discharge Consents</i>	-	-	-
<i>Petrol Filling Stations</i>	-	1	<i>An obsolete petrol station 364m south east.</i>
<i>Current industrial Uses</i>	7	-	<i>Nearest industrial land use is 75m north east relating to electronic equipment. A gas governor is located 90m north west. Electricity substations indicated 145m east and 188m south west. Vehicle repair shop 207m west.</i>

3.6 Radon

In accordance with the latest Radon maps launched by UKHSA in December 2022, the site is in an area where an estimated less than 1% of homes exceed the Radon Action Level, and Manchester Maccabi is not in an area where radon precaution measures are required.

The radon data in the Groundsure report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland; the Groundsure report confirms that no radon precautions are required. 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 in this scale is 50m.

3.7 Coal Authority Consultation

The site lies in an area where the Law Society and Coal Authority recommends a mining search is undertaken due to past or current mining possible affecting the site.

A search was carried out with the Coal Authority, the report is presented in *Appendix 6*, the main findings are outlined below.

Past Mining

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

Present Mining

The site is not within the zone of influence of any present underground coal workings.

Future Mining

The property is not in an area where the Coal Authority are determining whether to grant a licence to remove coal by underground workings.

The property is not in an area likely to be affected at the surface by any planned underground workings.

Reserves of coal exist in the local area that may be worked in the future.

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

Mine Entries

There are no records of any mine entries on or within 20m of site boundary.

Coal Mining Geology

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

Opencast Coal Mining

The property is not in an area affected by past or present coal mining extracted by opencast methods. The property is also not in an area affected by a proposed opencast coal mine.

Subsidence

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

Mine Gas

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

Withdrawal of Support

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

Coal Authority Interactive Map

An extract of the Coal Authority Interactive Map is provided below:



Coal Authority Interactive Map – Mine Entry, development high risk areas & probable shallow coal mine workings.

4.0 LAND QUALITY CONCEPTUAL SITE MODEL AND RISK ASSESSMENT

4.1 Introduction

The potential level of risk posed by contaminants in soil and/or groundwater will be influenced by the type and concentration of the contamination at source, the likelihood of exposure occurring, the potential pollution linkages and the likely chronic or acute effects on the receptors.

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

Section 4.0 compiles the information from the previous sections to assemble a Conceptual Site Model to inform the risk assessment process. The potential sources identified on the site and off the site that are within influencing distance are assessed to determine if pollution linkages exist and an unacceptable risk is posed to human health and controlled waters. The assessment has been carried out on a qualitative basis and aims to produce a complete and comprehensive Preliminary Conceptual Site Model, the potential pollution linkages are displayed on GRO-23036-P03 Illustrative Preliminary CSM.

Three potential types of impacts exist for a site and all three need to be considered in the qualitative preliminary risk assessment:

- *Impacts from sources on the subject site.*
- *Impacts to the surrounding area from the subject site.*
- *Impacts to the subject site from the surrounding area.*

4.2 Potential Contamination Sources

Onsite Sources and Associated Contaminants of Concern (CoC)

From the information obtained during the preliminary risk assessment, limited potentially contaminative onsite sources have been identified which may affect the redevelopment of the site for commercial end use. These are:

- *Made Ground*
- *Demolition of former buildings/greenhouses*
- *Corporation Yard*
- *Allotment gardens*

The former unspecified buildings on site area potential source of Made Ground associated with the construction and demolition. Made Ground may contain general contaminants including heavy metals, speciated Polycyclic Aromatic Hydrocarbons (PAHs) and asbestos. In addition, permanent ground gases may be a risk if deep Made Ground is present, although unlikely.

The allotment gardens and greenhouses may be a source of heavy metals and fertilisers/pesticides.

The Corporation yard is a source of heavy metals, PAHs and asbestos.

Offsite Sources and Associated Contaminants of Concern (CoC)

Minimal potential offsite sources of contamination have been identified through the PRA and include the following:

- *Backfilled well c.150m north of the site*
- *Numerous infilled ponds with the nearest being c.250m north west of the site*
- *Current nearby industrial land uses and electricity substations c.424m north west of the site*
- *Historic allotment gardens encroaching site to the south and east*
- *Current wheel repair shop c.207m west to the site.*

The backfilled well, culvert and infilled ponds could be a source of permanent ground gases such as carbon dioxide and methane depending on the nature of the infill. The embankment may also be a source depending on the nature of the build up and level.

The electricity substations may be a source of polyChlorinated Biphenyls (PCBs) formerly used as cooling agents in transformers.

The current repair shop approximately 207m north west of the site is a potential source of general contaminations including heavy metals, petroleum hydrocarbons, speciated Polycyclic Aromatic Hydrocarbons (PAHs) and asbestos.

4.3 Pollution Linkages

The definition of a pollution linkage is a medium which allows a contaminant to impact a receptor. Potential pollution linkages have been recognized for the commercial development from the identified contamination sources that exist.

At this stage the contaminants identified above are considered to potentially pose an unacceptable risk human health and controlled waters through the following pollution linkages:

- *Direct soil and dust ingestion*
- *Dermal contact with soil both indoor and outdoors*
- *Indoor air inhalation from soil and vapour*
- *Outdoor inhalation of soil and vapour*
- *Migration and accumulation of ground gas into internal spaces*
- *Impaction of groundwater from soil contamination (diffuse and point)*
- *Impaction of groundwater from groundwater plume*
- *Migration of soil and groundwater contamination impacting surface waters*

4.4 Receptors

Receptors generally fall into the categories of human health or controlled waters within the river basin system. The recognized receptors are listed below:

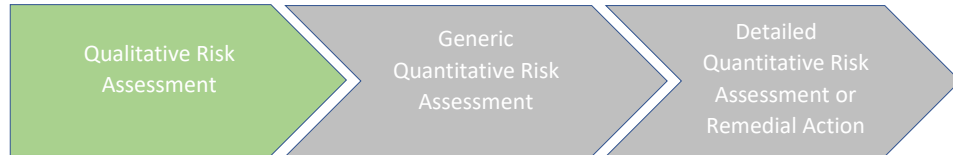
- *Site end users.*
- *Adjacent land users*
- *Secondary A Superficial Aquifer*
- *Principal Bedrock Aquifer*
- *Clean potable water supply pipe*

4.5 Preliminary Conceptual Site Model (CSM)

The factual information obtained from the consultations and summarised in Section 2.0 and 3.0 has been used to compile a Preliminary CSM. Using Source-Pathway-Receptor assessment criteria that is applicable in the UK, a

risk assessment has been completed to determine if a plausible pollution linkage exists between the identified contaminants and receptors. The risk classification has been estimated in accordance with the CIRIA C552 assessment criteria outlined in *Appendix 7*.

Human Health Pollution Linkage Assessment



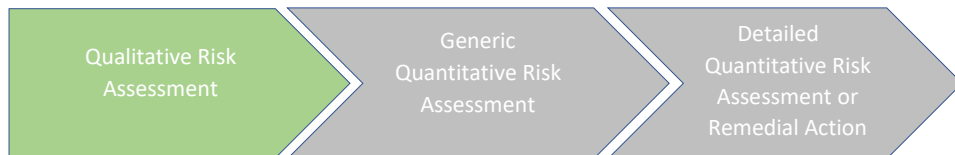
- The table below represents the first stage in the land quality risk assessment process - **the Qualitative Risk Assessment**.
- In order for a development site to be deemed 'suitable for use' the level of risk needs to be reduced to an acceptable level - low to negligible risk. The purpose of each stage of risk assessment is to establish if there is a requirement for additional stages of assessment in order to have sufficient confidence to support a risk characterisation or remedial action.

Conceptual Site Model					Qualitative Risk Assessment	
PL	Potential Source	Pollution Linkage	Likelihood	Consequence/ Severity	Risk Rating	Rationale and Action
PL1	Contaminated Soils	Ingestion of soil and dust. Dermal contact with soil.	Unlikely	Medium	Moderate to Low	Pollution Linkage 1 refers to proposed site users coming into contact with contaminated soils on the site. The site is currently used as a Community Sports and Social Club and a Karate Club. There are 2 artificial football pitches to the east of the site. It is proposed to construct 4 No. covered Padel Tennis courts, 1 No. uncovered Pickelball court along with food/beverage kiosks. The proposed development area focuses on the south eastern section of site which has historically remained undeveloped with the exception of allotment gardens that appear to have encroached onto site. Contaminants associated with pesticides may be present beneath the area. Depending on the materials used on the allotment gardens, some heavy metals such as lead and arsenic may be present in shallow soils.

Conceptual Site Model					Qualitative Risk Assessment	
PL	Potential Source	Pollution Linkage	Likelihood	Consequence/ Severity	Risk Rating	Rationale and Action
						The majority of the offsite sources are at sufficient distance to not pose a meaningful risk to the site. These off-site sources include electricity substations and wheel repair shop, with the nearest electricity substation c.145m east of the site. Following the development, the site will be covered by hardstanding surfacing which will break any pollution linkage. However, soft landscaping areas are proposed and due to the presence of historic allotment gardens in the proposed development area, a minor pollution linkage is considered to exist.
PL2	Contaminated Soils	Inhalation of vapour.	Low likelihood	Medium to Severe	Low	No significant sources of volatile contamination have been identified through the PRA, onsite or in the surrounding area. Therefore, no pollution linkage is considered to exist.
PL3	Contaminated Soils	Inhalation of soil dust by adjacent site users.	Unlikely	Medium	Low	No sources of mobile contamination have been identified. Furthermore, all the contaminative sources identified on site are indicative of the surrounding area and potentially less impactful sources than most surrounding sources, therefore no realistic pollution linkage from site is considered to exist.
PL4	Contaminated Soils	Attacking potable water supply pipe.	Likely	Medium	Low	Pollution Linkage 4 refers to the possible contaminants permeating potable water pipes and consumption by the future site end users of the tainted water supply.

Conceptual Site Model					Qualitative Risk Assessment	
PL	Potential Source	Pollution Linkage	Likelihood	Consequence/ Severity	Risk Rating	Rationale and Action
						Made Ground is unlikely to be present at installation depths and no pollution linkage is considered to exist.
PL5	Ground Gas	Migration and accumulation of ground gas in internal spaces.	Likely	Medium to Severe	Low to Moderate	Made Ground may be present beneath the site due to the past land use as Brookland and outbuildings at the proposed development area. Offsite sources from backfilled wells c.150m north of the site and infilled ponds c.250m north west of the site have all been identified. Limited sources of ground gases have been identified and an intrusive investigation comprising shallow gas monitoring installations is required. The site is not within an area requiring radon precautions within foundations.

Controlled Waters Pollution Linkage Assessment



- The table below represents the first stage in the land quality risk assessment process – **Qualitative Risk Assessment**.
- In order for a development site to be deemed ‘suitable for use’ the level of risk needs to be reduced to an acceptable level - low to negligible risk. The purpose of each stage of risk assessment is to establish if there is a requirement for additional stages of assessment in order to have sufficient confidence to support a risk characterisation or remedial action.

Conceptual Site Model					Qualitative Risk Assessment	
PL	Potential source	Pollution linkage	Likelihood	Severity	Level of risk	Rationale
PL6	Contaminated Soils	Impaction of groundwater from soil contamination (diffuse and point). Impaction of groundwater from groundwater plume.	Unlikely	Medium	Low	Potentially deep Made Ground may be present beneath the site. No hydrocarbon contamination is anticipated and contamination is likely to be relatively immobile. Geological maps indicate that the site is underlain by glaciofluvial deposits comprising sands and gravels (Secondary A Aquifer). The bedrock underlying the site is the Manchester Marls Formation (Secondary B Aquifer) which comprises mudstone. Glacial Till is indicated to underlie the sand and gravel (Secondary Undifferentiated Aquifer). A pollution linkage is currently not considered to exist. To the extreme south of the site, Chester Formation comprising Sandstone is present (Principal). The site is not within 500m of a SPZ and the nearest active groundwater abstraction is located c.1297m south west of the site. No sources of mobile contamination have been present and the groundwater is not considered to be a sensitive resource, therefore a realistic pollution linkage is not considered to exist.

Conceptual Site Model					Qualitative Risk Assessment	
PL	Potential source	Pollution linkage	Likelihood	Severity	Level of risk	Rationale
PL7	Contaminated Soils	Migration of soil and groundwater contamination impacting surface waters.	Likely	Medium	Low	There are no surface water features within 250m of site. No significant onsite sources of mobile contamination has been identified by the PRA. A plausible pollution linkage is not considered to exist.

5.0 GROUND ENGINEERING RECOMENDATIONS AND POTENTIAL LIMITATIONS

5.1 Preliminary Foundation Assessment

The site is currently occupied by a single storey building with associated hardstanding car parking and two artificial football pitches. Woodland and soft landscaping are present across the site.

It is proposed to construct 4 No. covered Padel Tennis courts, 1 No. uncovered Pickelball court along with food and beverage.

Made Ground is anticipated to be present on the site. The site is underlain by glaciofluvial deposits comprising of sand and gravel overlying Glacial Till. The Manchester Marls Mudstone Formation underlying the superficial deposits in the majority of the site, however the Chester Sandstone Formation is recorded along the southern area.

It is anticipated that traditional strip/trench and pad foundations will be feasible for the proposed courts and ancillary building constructed within the natural sand and gravel deposits. This is dependent on the proposed loads which are anticipated to be relatively low and Made Ground thickness.

A ground bearing floor slab will likely be able to be adopted, assuming less than 600mm of Made Ground is present. If Made Ground is encountered to depths greater than 600mm, a suspended floor slab will be required.

The above preliminary foundation recommendations are based on desk-based information and should be confirmed by a ground investigation in accordance with current guidance.

5.2 Additional Limitations

Mature trees and woodland are present in the northern, southern and western boundary, however based on the underlying material being granular, heave precautions are unlikely to be required within foundations. However, Glacial Till deposits are indicated beneath the Sand and Gravel deposits and may be present a shallow depth. If clay is encountered at shallow depths, heave precautions may be required.

SuDS drainage may be feasible at the development due to the anticipated granular material indicated to underlie the site. This should be confirmed or otherwise through completing soakaway tests in accordance with BRE Digest 365.

The south eastern section of the site is approximately 3.0m higher than the western area and the surrounding area generally slopes towards the south. The loadings placed on top of the slope in the eastern area of site should be considered.

6.0 CONCLUSIONS AND GROUND INVESTIGATION RATIONALE

6.1 Land Quality

Historically, the site has housed numerous buildings, including Brooklands, which have been demolished. These buildings were developed between 1848 and 1907, before being partially demolished in 1951. By 1877, all existing buildings on site have been demolished, before being constructed again in 1985 and 2010. The site is currently occupied by the Manchester Maccabi Community and Sports Club with associated hardstanding car parking to the west soft landscaping to the east along with two artificial football pitches. Woodlands and forestry are present along the western, northern and southern boundaries.

Made Ground of varying thickness may be present beneath the site due to former usage as Brooklands with associated outbuildings.

The risk to human health has been considered to be *Moderate to Low* based on allotment gardens encroaching the proposed development area. The majority of the proposed development is hardsurfaced which will act as a cover layer however areas of soft landscaping are proposed.

Potentially deep Made Ground may be present beneath the site and offsite gassing sources were identified and include backfilled ponds and well. Therefore, the risk of ground gases to end users is considered to be *Low*. The site is not in an area requiring any radon precautions in foundations.

No sources of mobile contamination have been identified and groundwater is not considered to be a sensitive resource. The risk to controlled waters is *Low*.

6.2 Ground Engineering

Made Ground is anticipated to be on site. Suitable strip/trench and pads within the underlying sands and gravels are anticipated to be feasible for the expected low loads.

Based on the underlying material being granular heave precautions are unlikely to be required. A ground bearing floor slab will be adopted if less than 600mm of Made Ground is present.

6.3 Additional Considerations

SuDS drainage may be feasible due to the site being underlain by glaciofluvial deposits which are likely to consist of sand and gravel, which may good drainage qualities. This should be confirmed by in-situ infiltration testing.

6.4 Recommended Ground Investigation Scope

Based on the information in this report we consider a main investigation is required in accordance with BS 10175:2017 and Eurocode 7. The following scope of works is recommended based on the Preliminary CSM compiled, additional works may be required as the result of planning conditions for the proposed development:

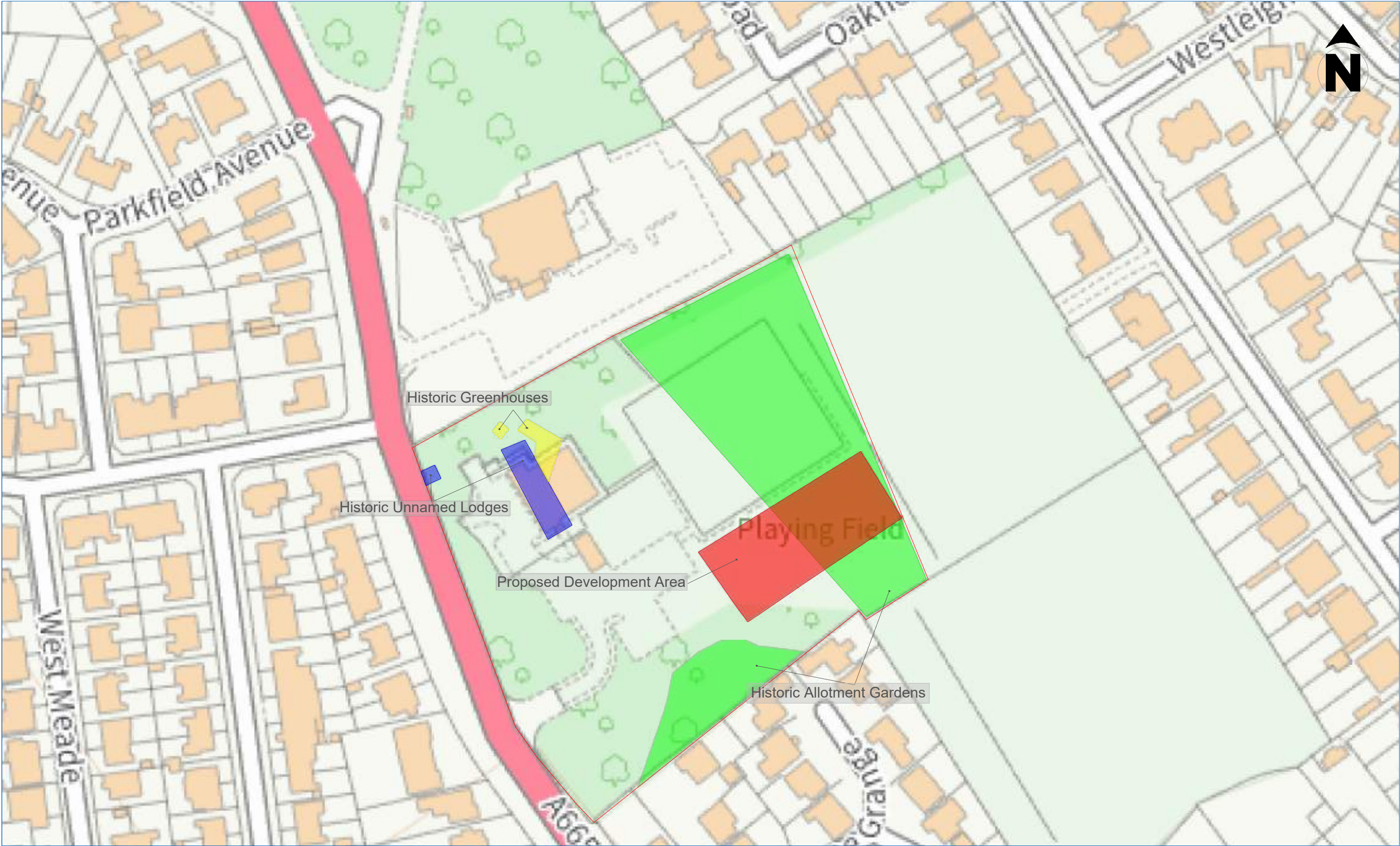
Method of Investigation	G / E
5 No. windowless sample boreholes to 5m bgl	G/E
1 to 2 No. Soil percolation tests.	G
Geo-Environmental testing comprising heavy metals, speciated PAHs and asbestos.	E
Geotechnical testing comprising aggressivity, classification, strength and stiffness.	G

Note Environmental (E) / Geotechnical (G)

APPENDIX 1 - Plans



GROUNDTECH CONSULTING	CLIENT	DATE				Status		Notes Site Location
	PURE PADEL	FEBRUARY 2024				Preliminary		
	PROJECT TITLE	SCALE				Draft		
	MANCHESTER MACCABI	NTS				Issued		
	PLAN TITLE	PLAN NUMBER				For Comment		
	PROJECT LOCATION PLAN	GRO-24036-P01	Rev.	Details	Date	Approved		

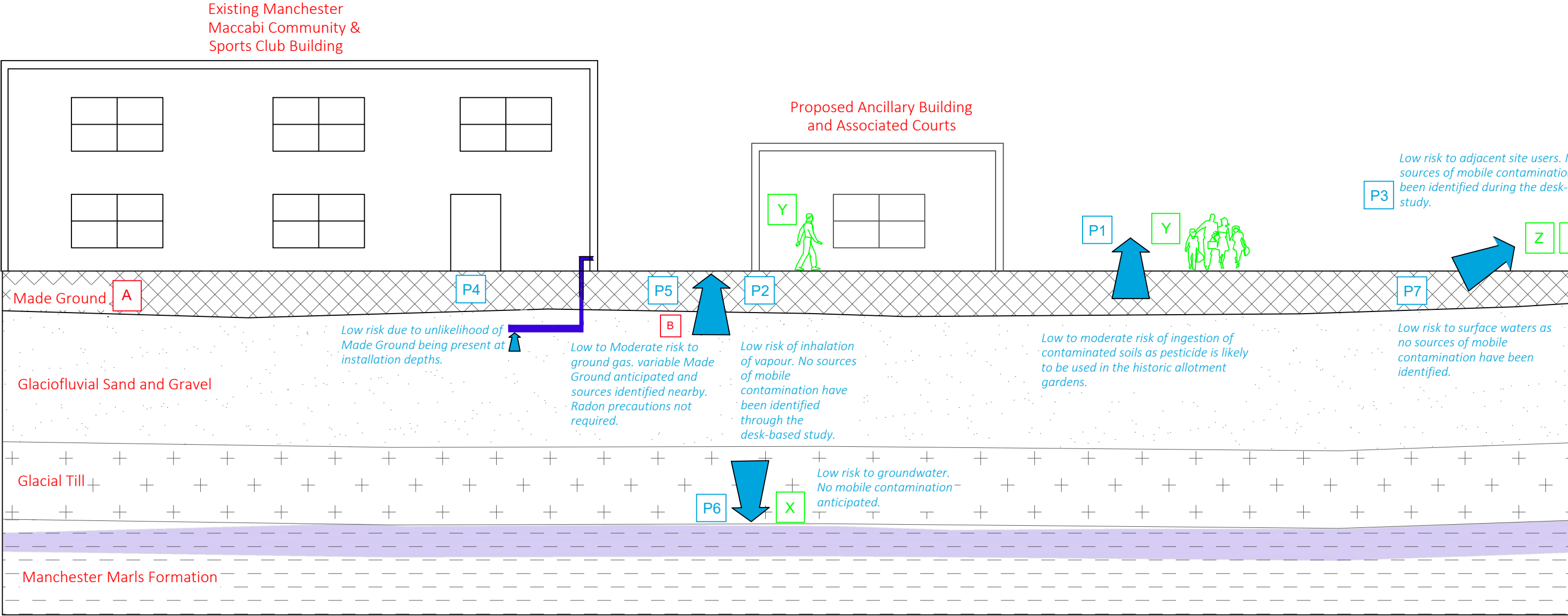


GROUNDTECH CONSULTING G	CLIENT	DATE				Status		Notes 1800s Industrial Land Use 1900s Industrial Land Use 1900s Agricultural Land Use Proposed Development Area
---	--------	------	--	--	--	--------	--	--

SOURCES
A. Contaminated soils / Made ground. B. Ground gas.

POLLUTION LINKAGES
P1. Ingestion of soil and dust. P2. Inhalation of vapour. P3. Inhalation of soil dust by adjacent site users. P4. Attacking of potable water supply pipe. P5. Migration and accumulation of ground gas in internal places. P6. Impaction of groundwater from soil contamination. P7. Migration of soil and groundwater contamination impacting surface waters.

RECEPTORS
W. Nearby Surface Waters X. Groundwater within the underlying aquifers. Y. Site end users. Z. Adjacent site users.



	CLIENT	DATE				Status	Notes
	PURE PADEL	FEBRUARY 2024				Preliminary	
	PROJECT TITLE	SCALE				Draft	
	MANCHESTER MACCABI	NTS				Issued	
	PLAN TITLE	PLAN NUMBER				For Comment	
	PRELIMINARY ILLUSTRATIVE CONCEPTUAL SITE MODEL	GRO-24036-P03	Rev.	Details	Date	Approved	

APPENDIX 2 - Site Photographs



Photograph 1 – General Site Photo facing Southern Boundary



Photograph 2 – General Site Photo for Access



Photograph 3 – General Site Photo facing Southern Boundary.



Photograph 4 – General Site Photo facing North Western Boundary.

APPENDIX 3 - Historical Maps

Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: County Series

Map date: 1893

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1893
 Revised 1893
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1893
 Revised 1893
 Edition N/A
 Copyright N/A
 Levelled N/A



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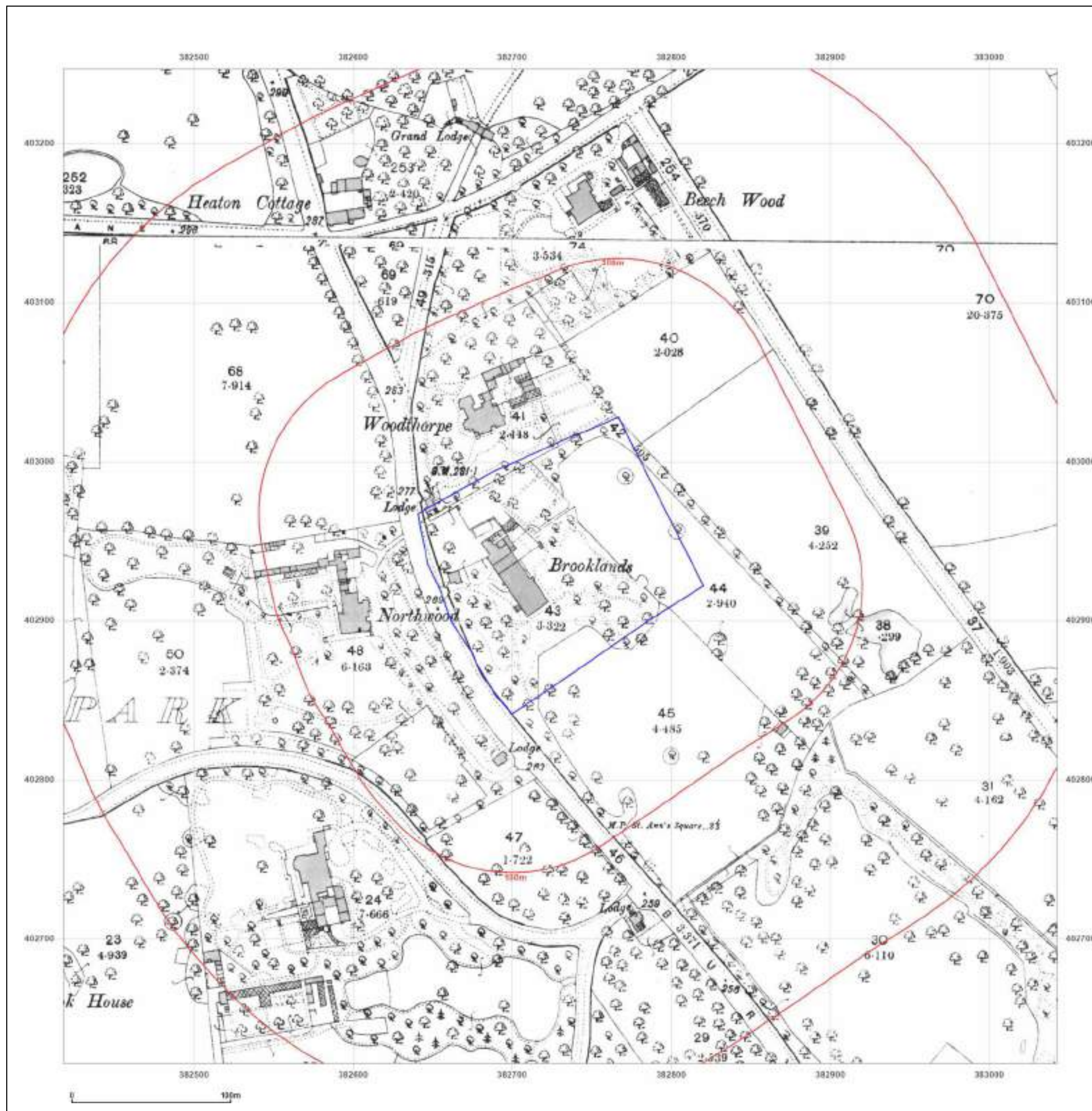


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Production date: 14 February 2024

Map legend available at:
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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: County Series

Map date: 1909

Scale: 1:2,500

Printed at: 1:2,500



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

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



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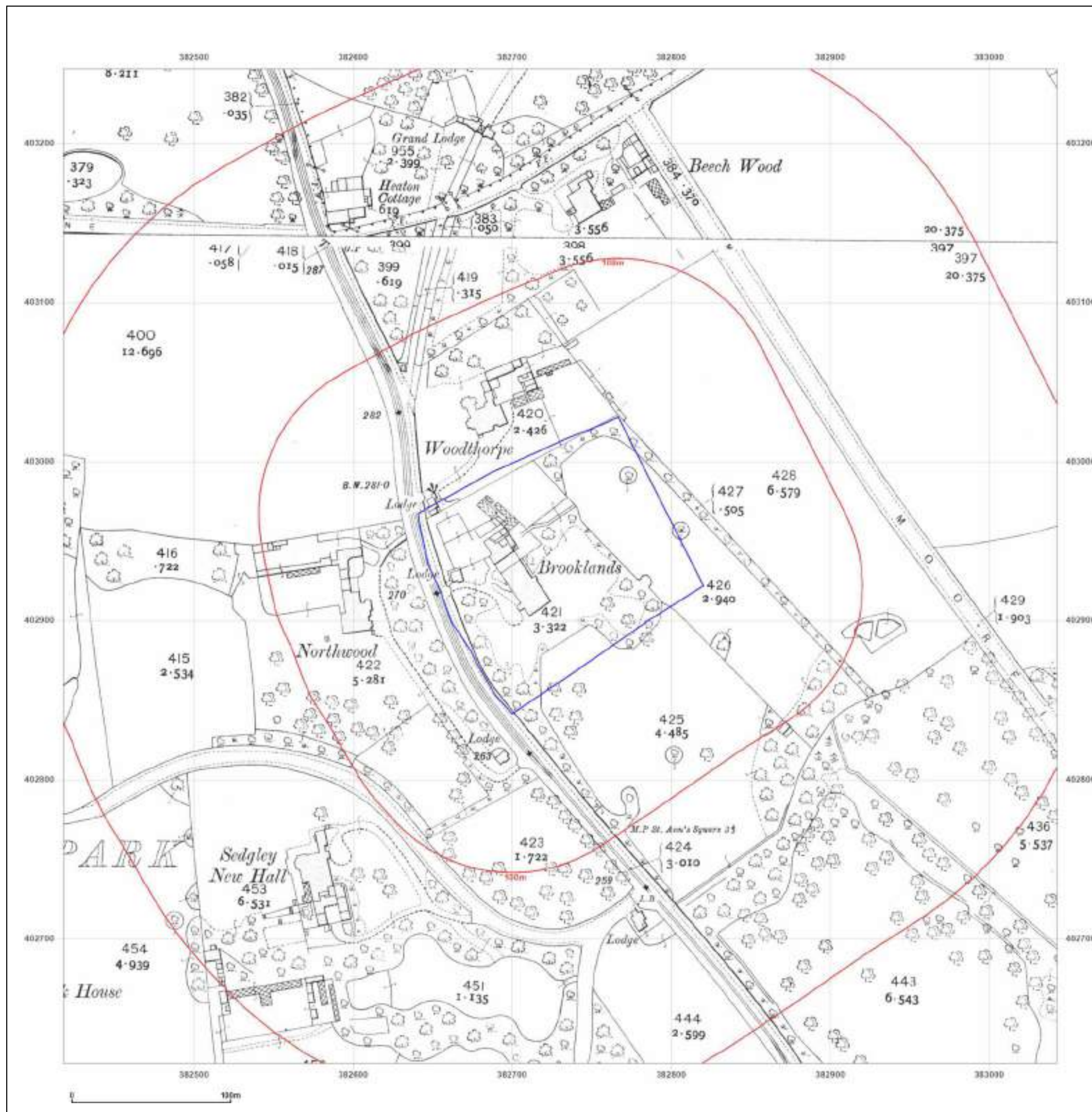


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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: County Series

Map date: 1922

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
Levelled N/A



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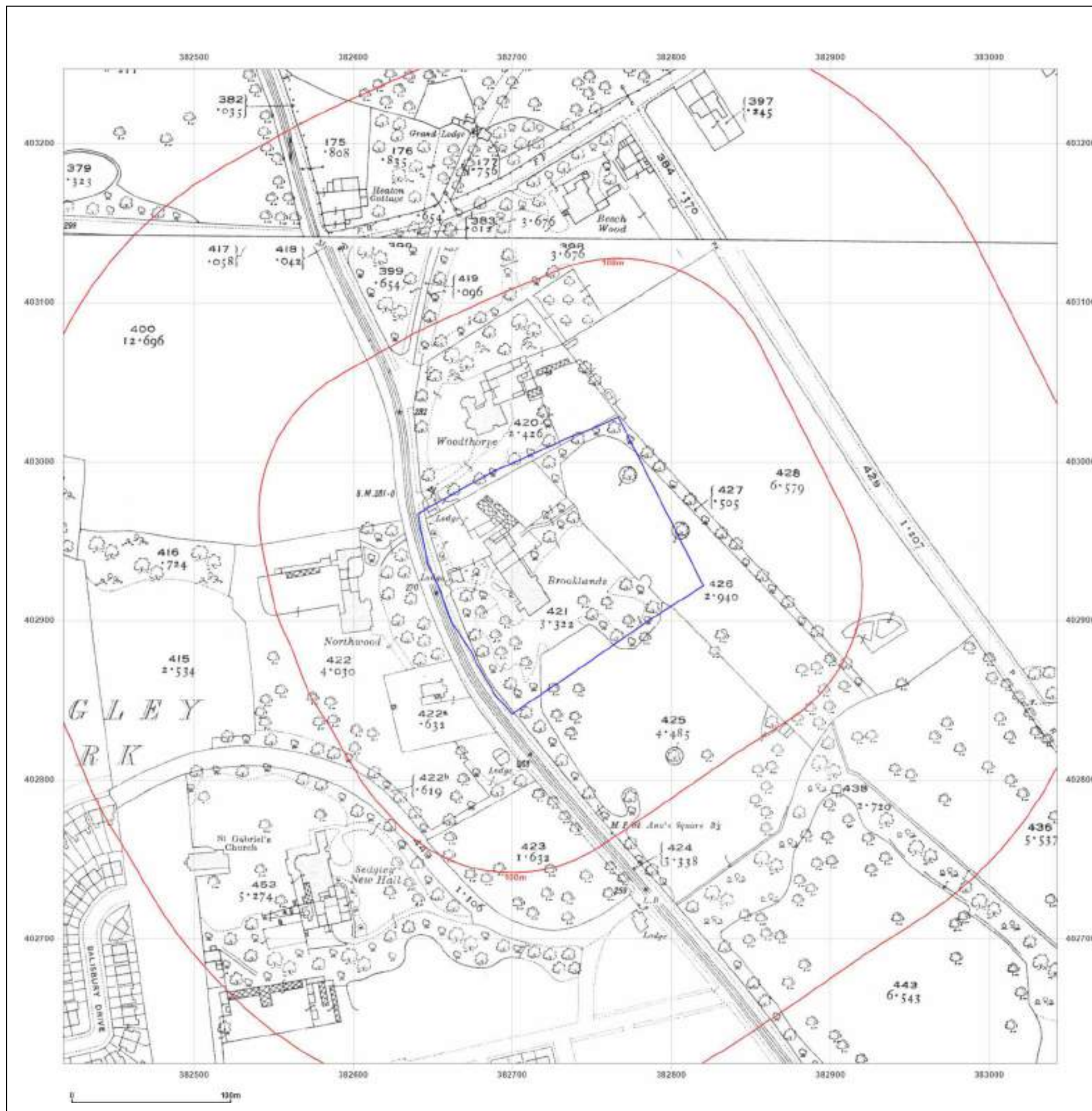


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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: County Series

Map date: 1932

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1932
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1932
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A



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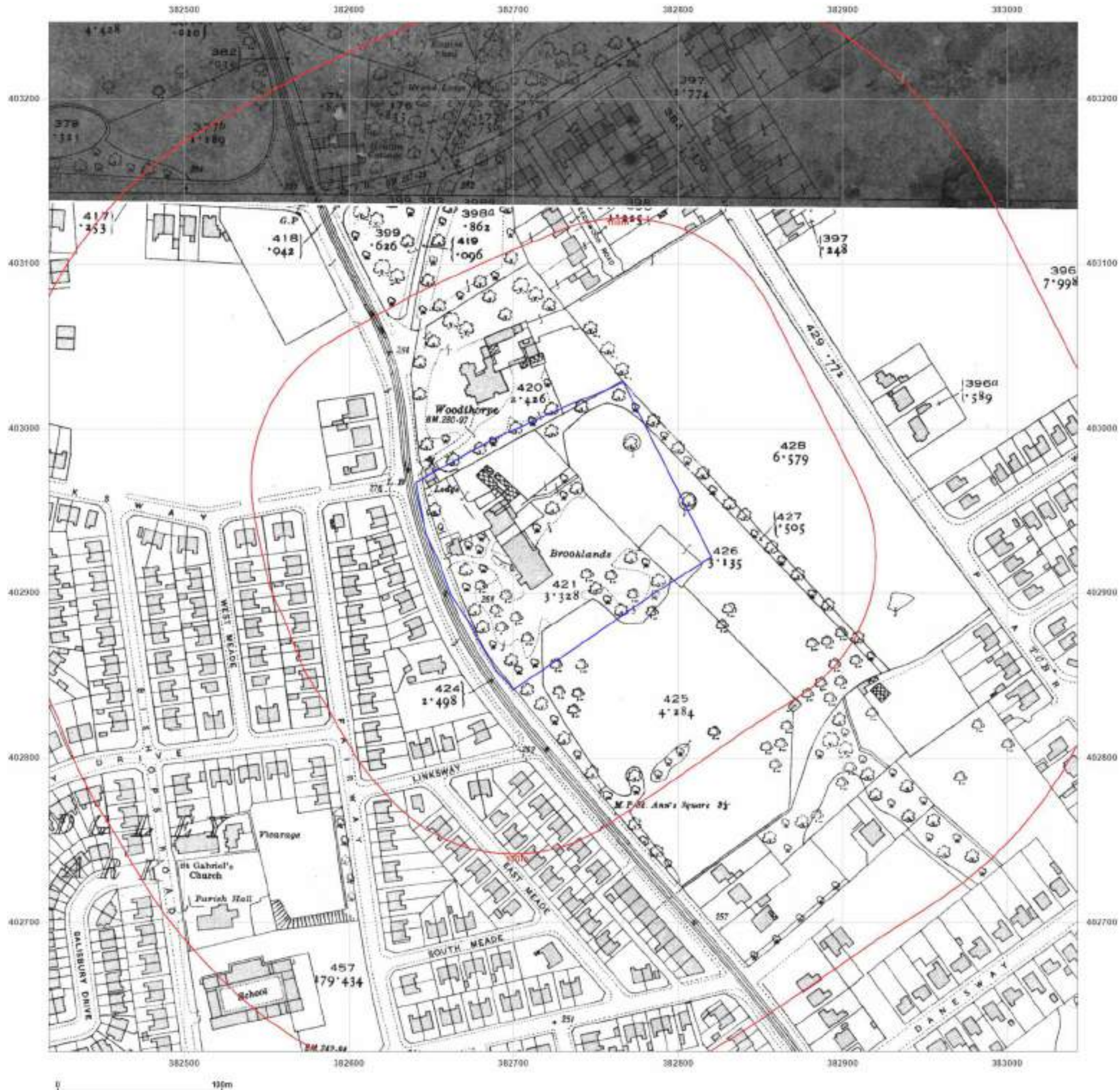


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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: National Grid

Map date: 1951-1952

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled 1948

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled 1948

Surveyed 1952
Revised 1952
Edition N/A
Copyright N/A
Levelled 1948

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled 1948



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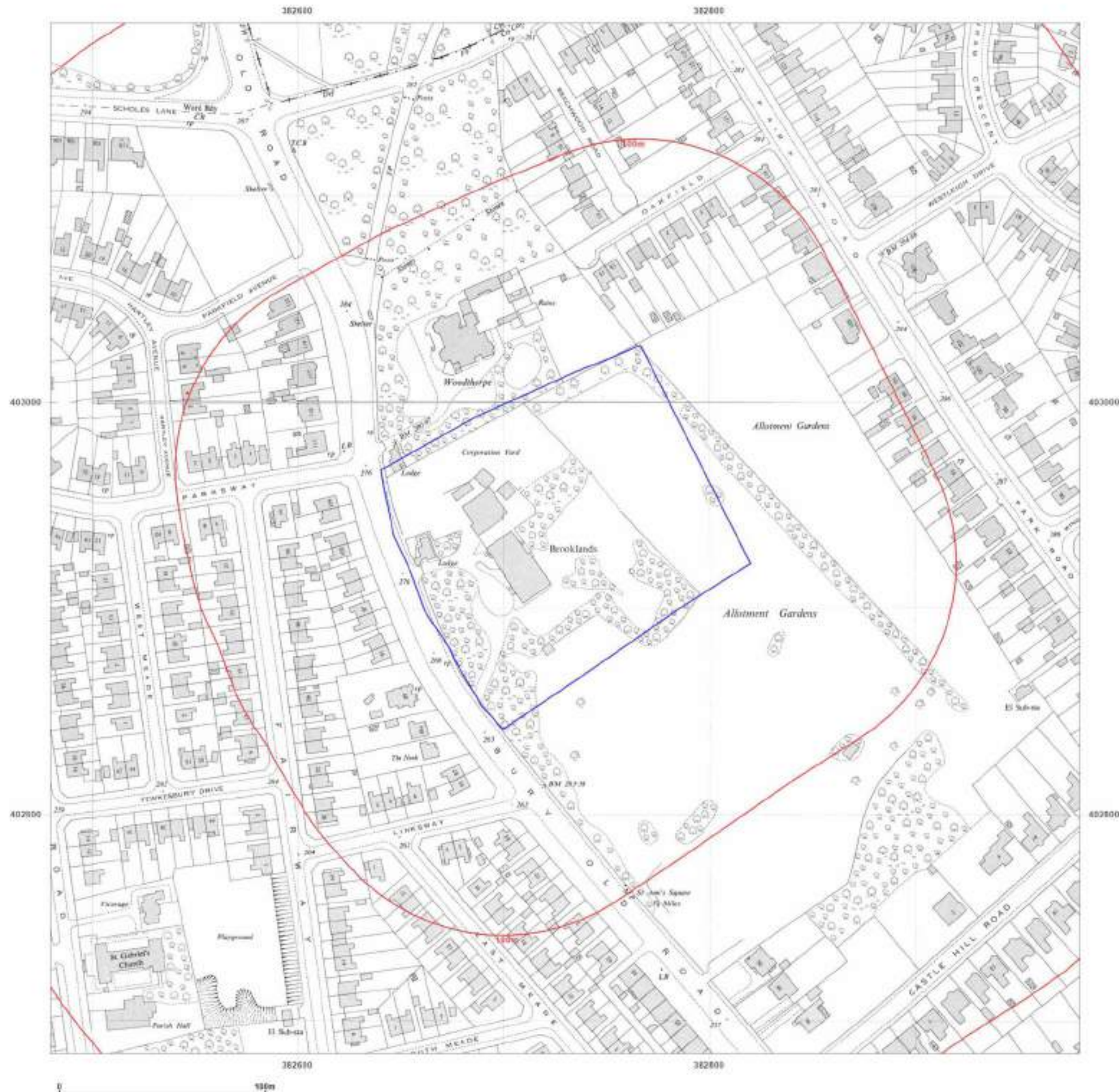


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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: National Grid

Map date: 1952

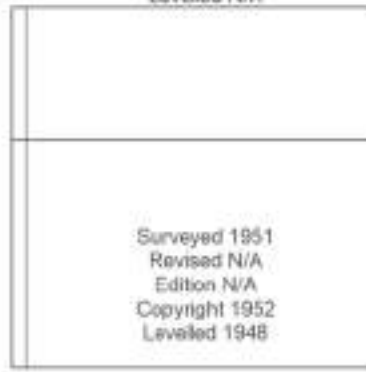
Scale: 1:1,250

Printed at: 1:2,000



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



Surveyed 1951
Revised N/A
Edition N/A
Copyright 1952
Levelled 1948



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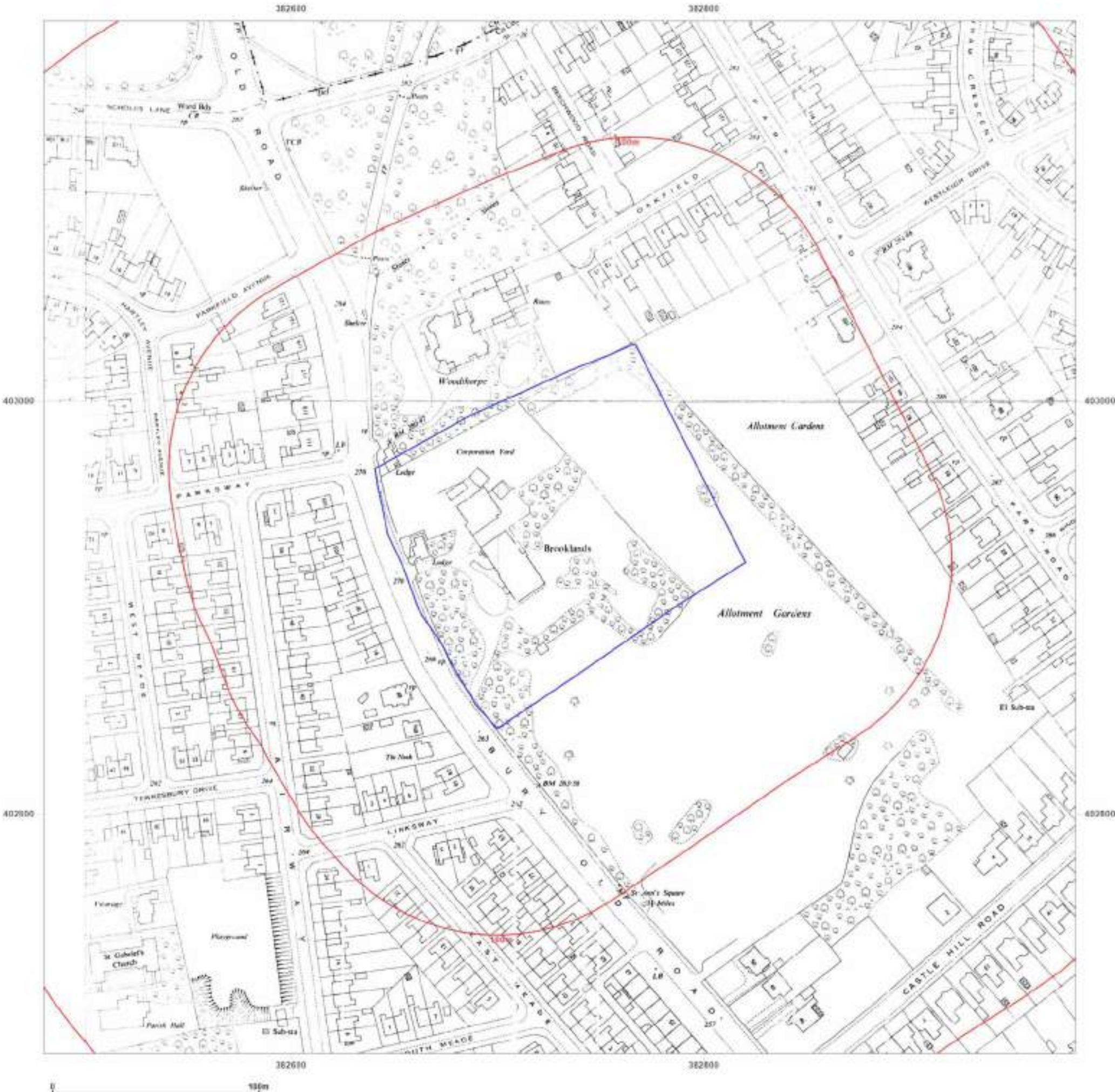


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Site Details:

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Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: National Grid

Map date: 1951-1952

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled 1948

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled 1948

Surveyed 1952
Revised 1952
Edition N/A
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Surveyed 1951
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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: National Grid

Map date: 1968

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1967
Revised 1968
Edition N/A
Copyright 1968
Levelled 1964



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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: National Grid

Map date: 1970-1975

Scale: 1:1,250

Printed at: 1:2,000



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

Surveyed 1961
Revised 1961
Edition N/A
Copyright 1975
Levelled 1963



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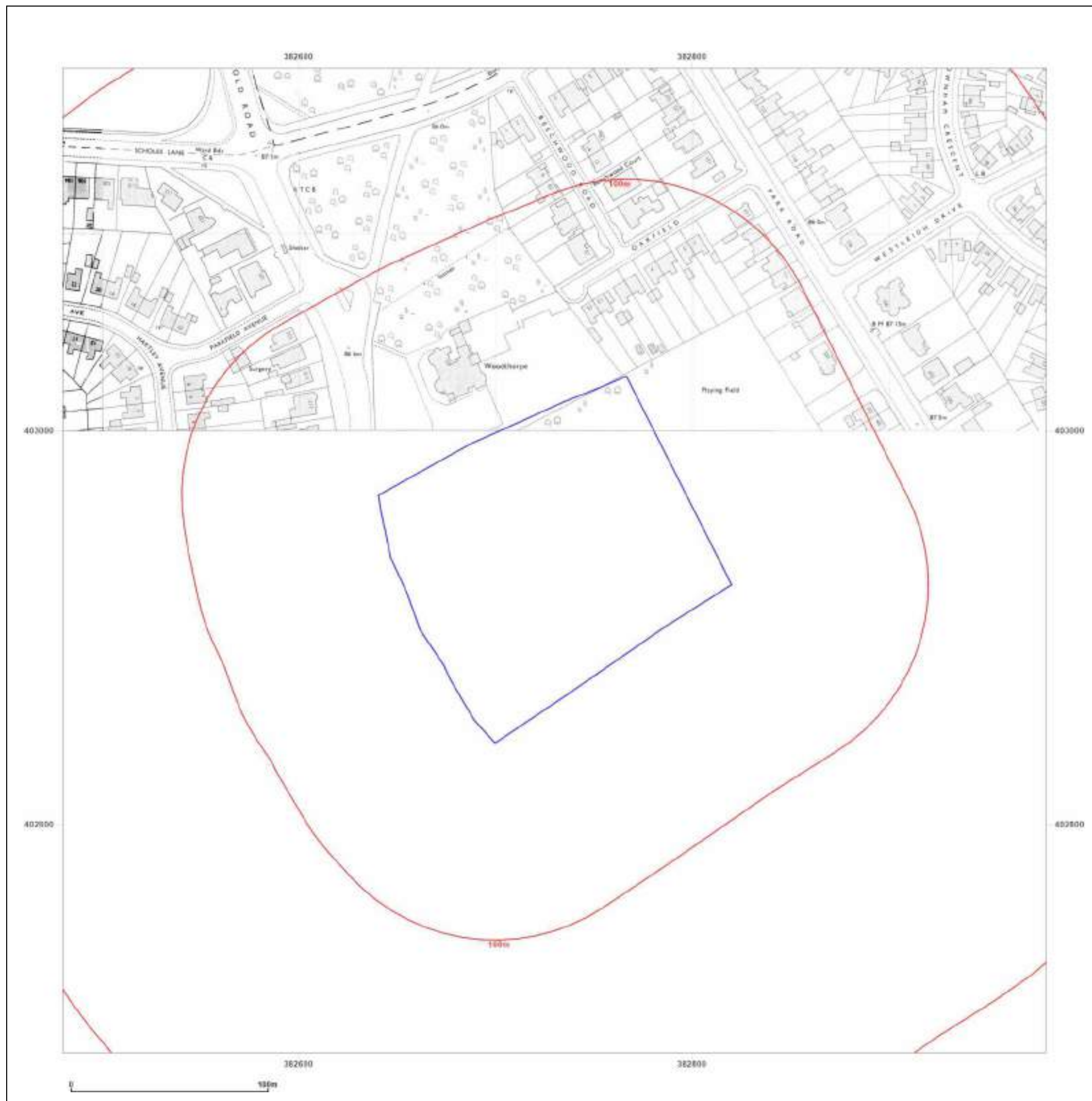


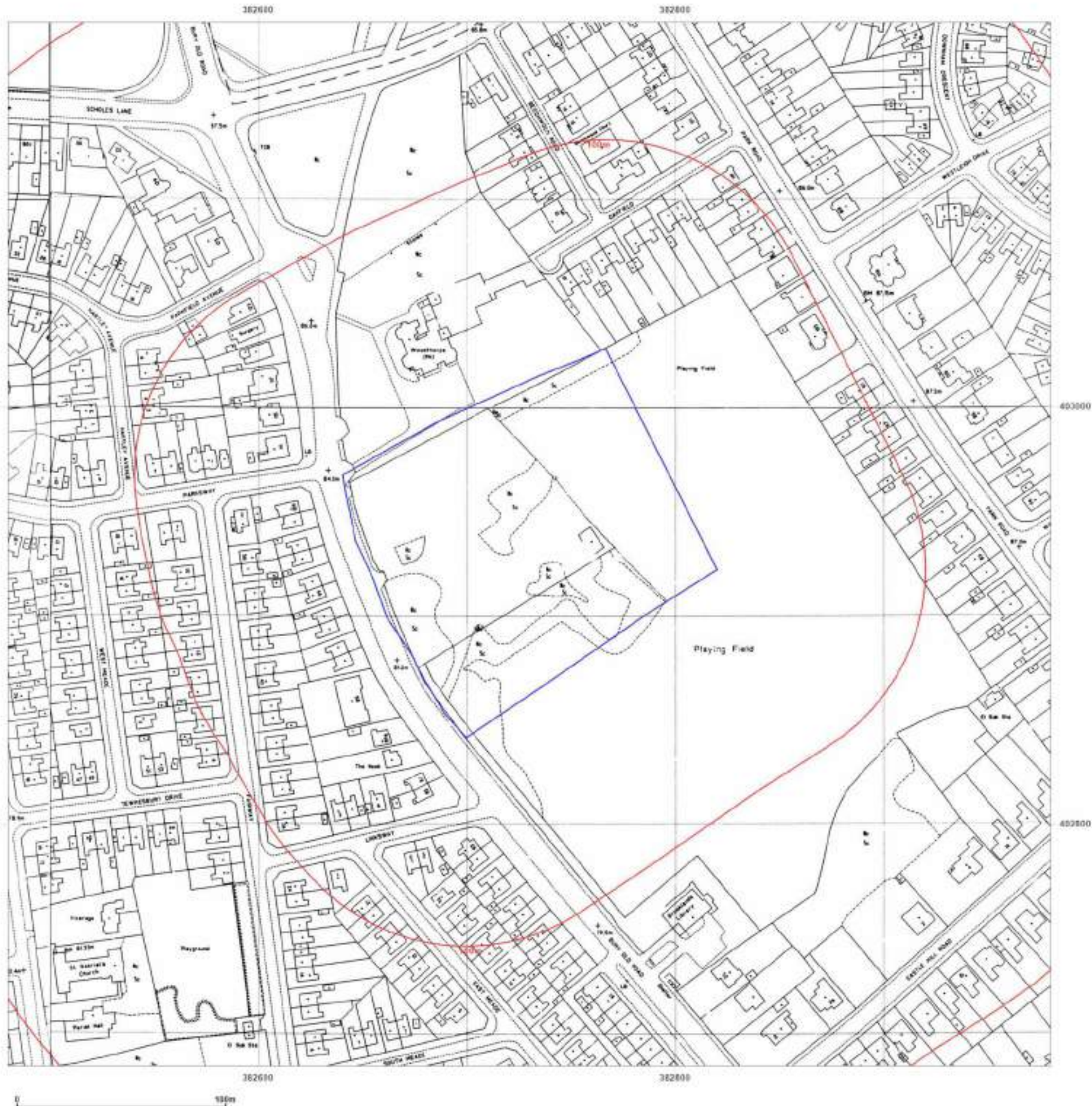
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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: National Grid

Map date: 1990-1992

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1951
Revised 1969
Edition N/A
Copyright 1990
Levelled N/A

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

Surveyed N/A
Revised N/A
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Copyright 1992
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Surveyed 1992
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Edition N/A
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Site Details:

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Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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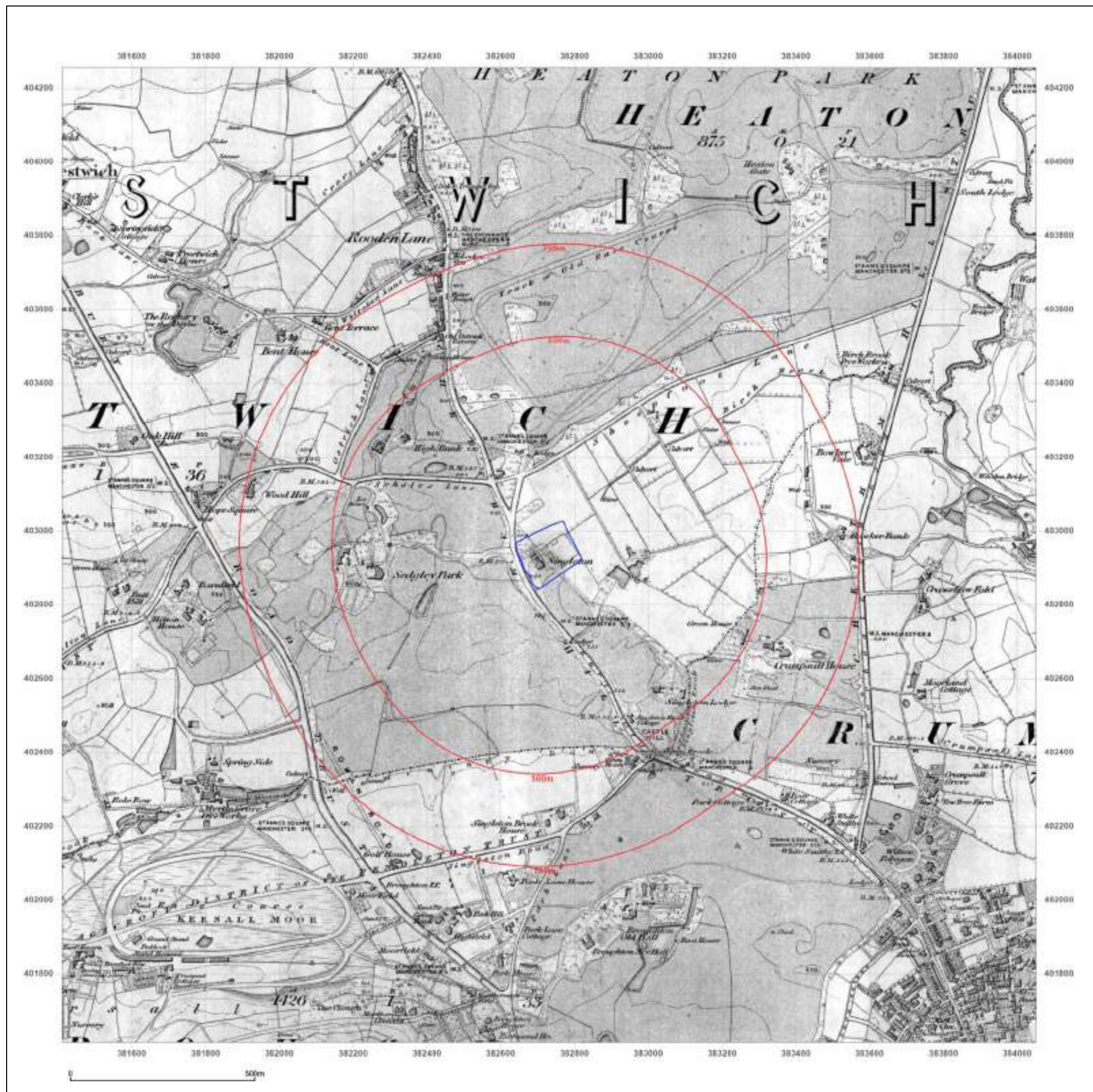


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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: County Series

Map date: 1848

Scale: 1:10,560

Printed at: 1:10,560



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



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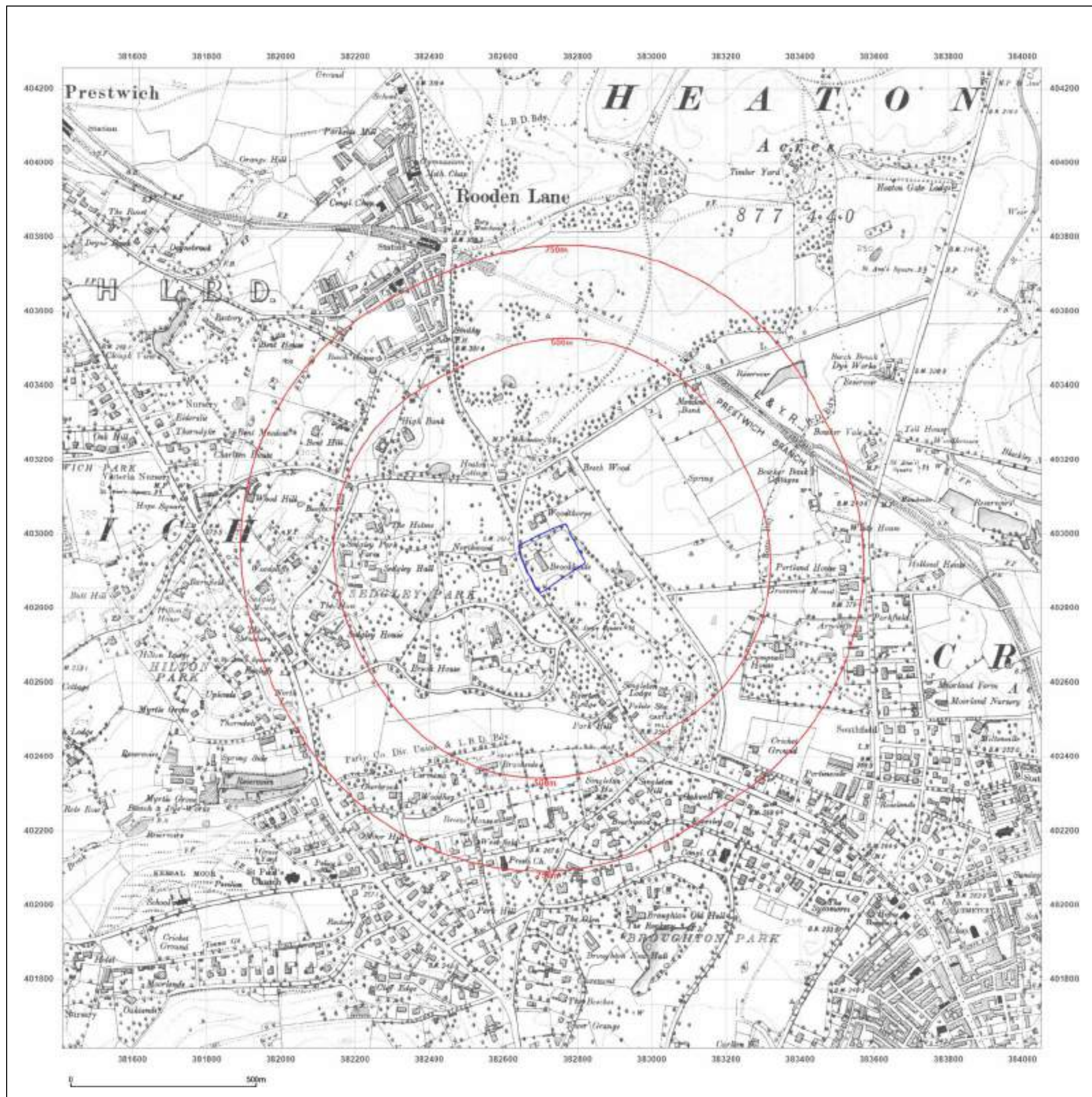


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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: County Series

Map date: 1891

Scale: 1:10,560

Printed at: 1:10,560



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

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: County Series

Map date: 1907

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1907
Edition N/A
Copyright N/A
Levelled N/A



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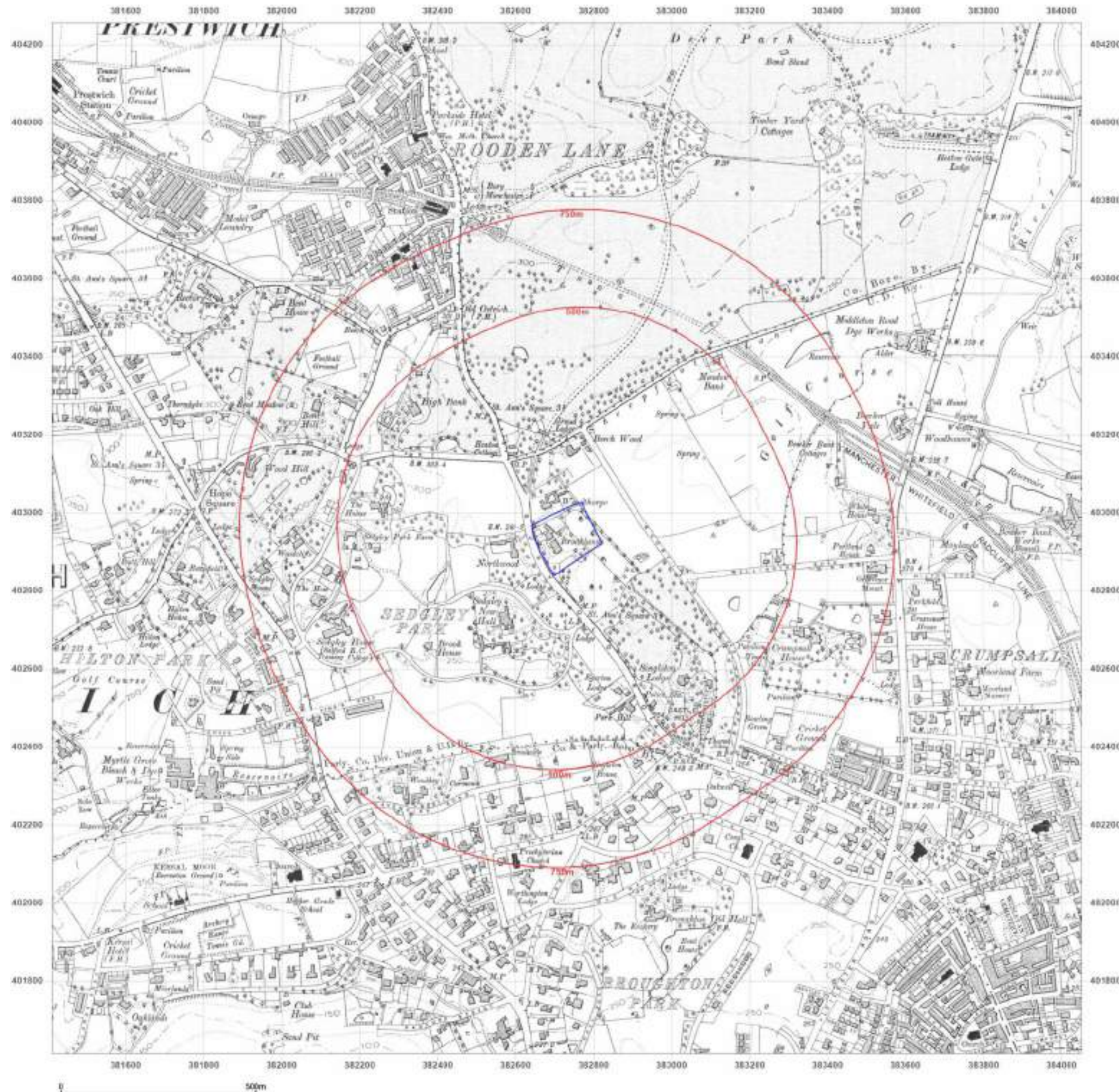


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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: County Series

Map date: 1915

Scale: 1:10,560

Printed at: 1:10,560



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



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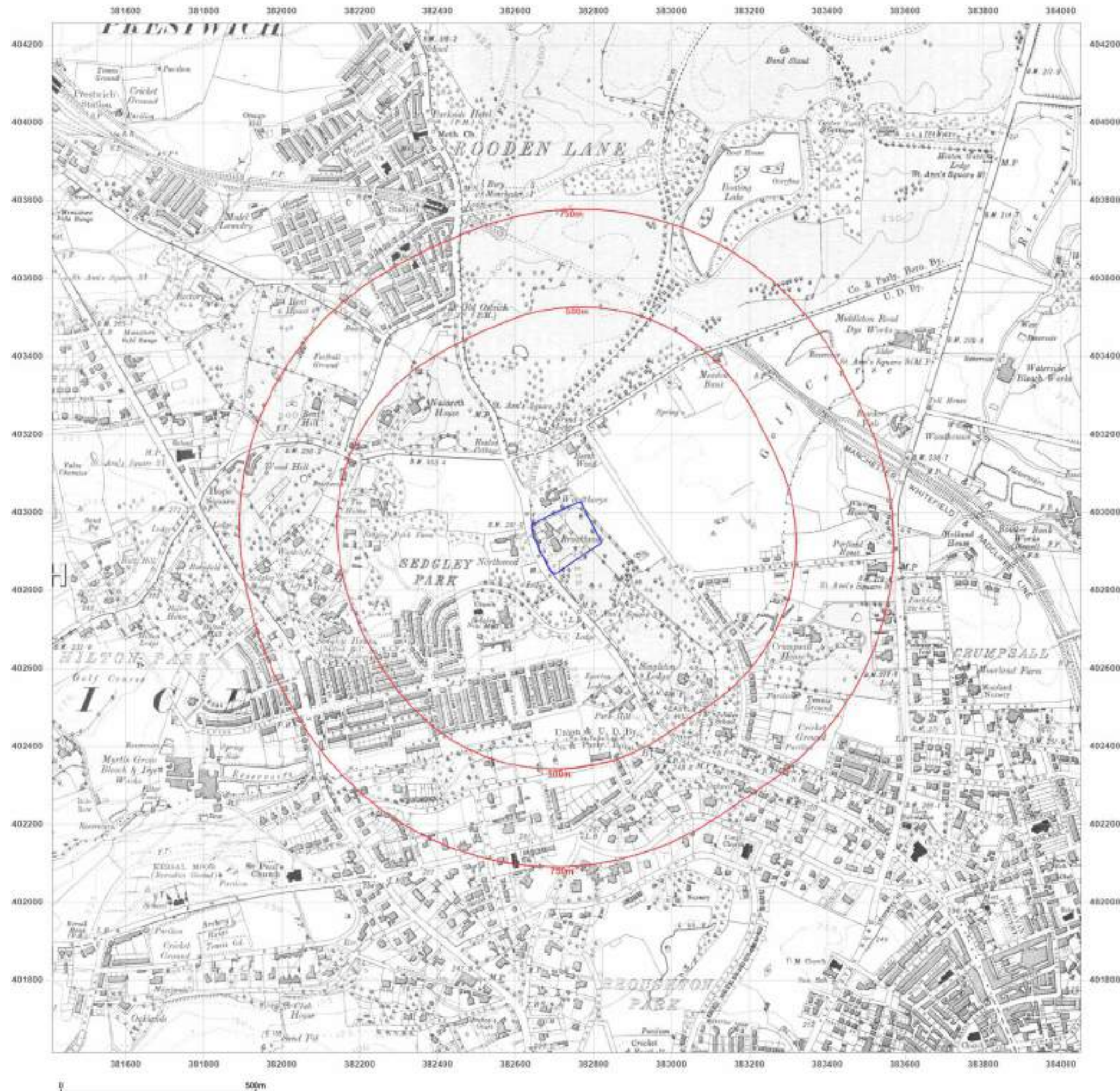


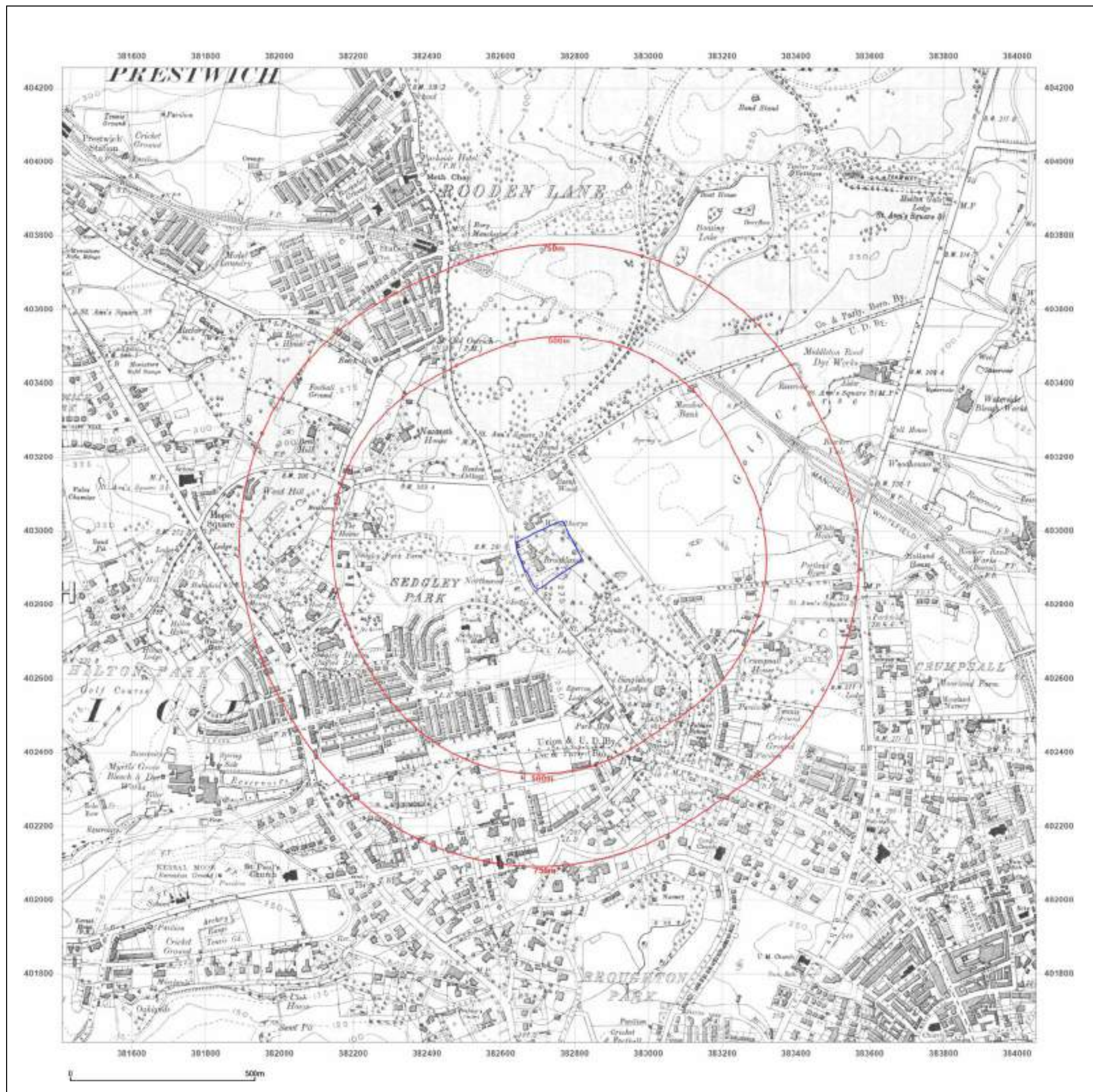
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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: County Series

Map date: 1923

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1923
Edition N/A
Copyright N/A
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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: County Series

Map date: 1932

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A



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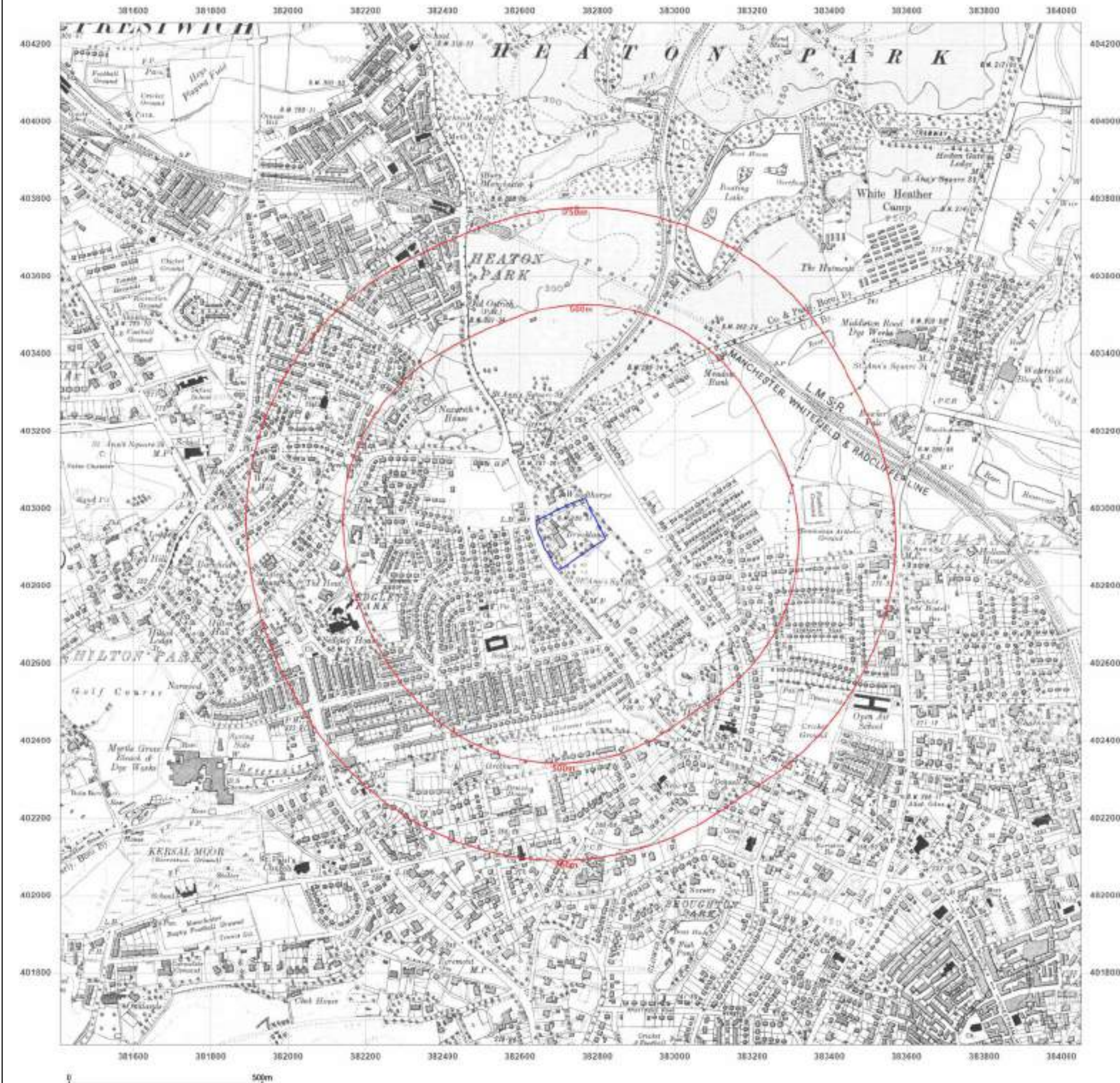


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Map legend available at:
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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



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



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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: Provisional

Map date: 1956

Scale: 1:10,560

Printed at: 1:10,560



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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: Provisional

Map date: 1968

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1968
Revised 1908
Edition N/A
Copyright N/A
Levelled N/A



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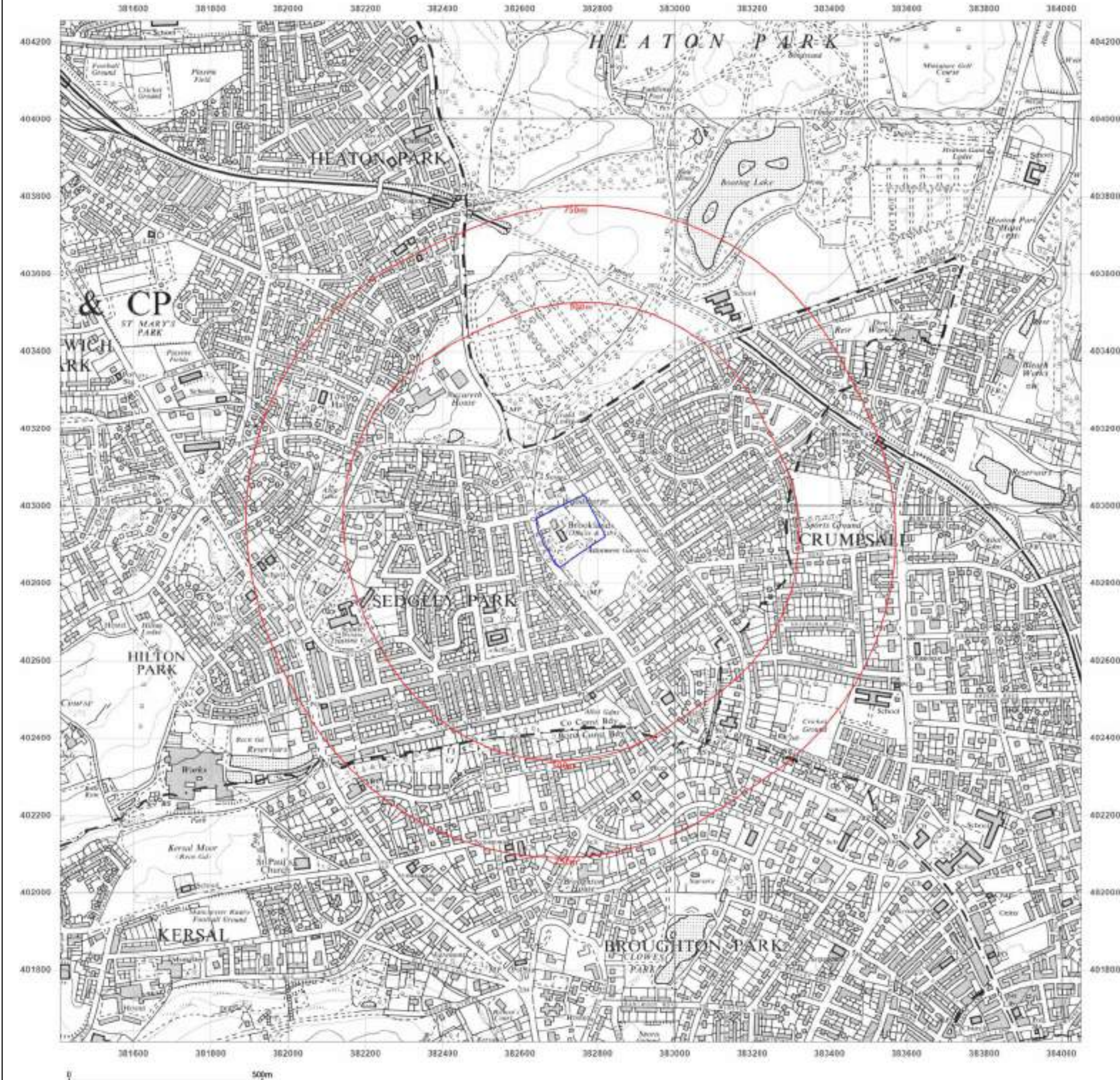


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Production date: 14 February 2024

Map legend available at:
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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: National Grid

Map date: 1977

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1975
Revised 1977
Edition N/A
Copyright N/A
Levelled N/A



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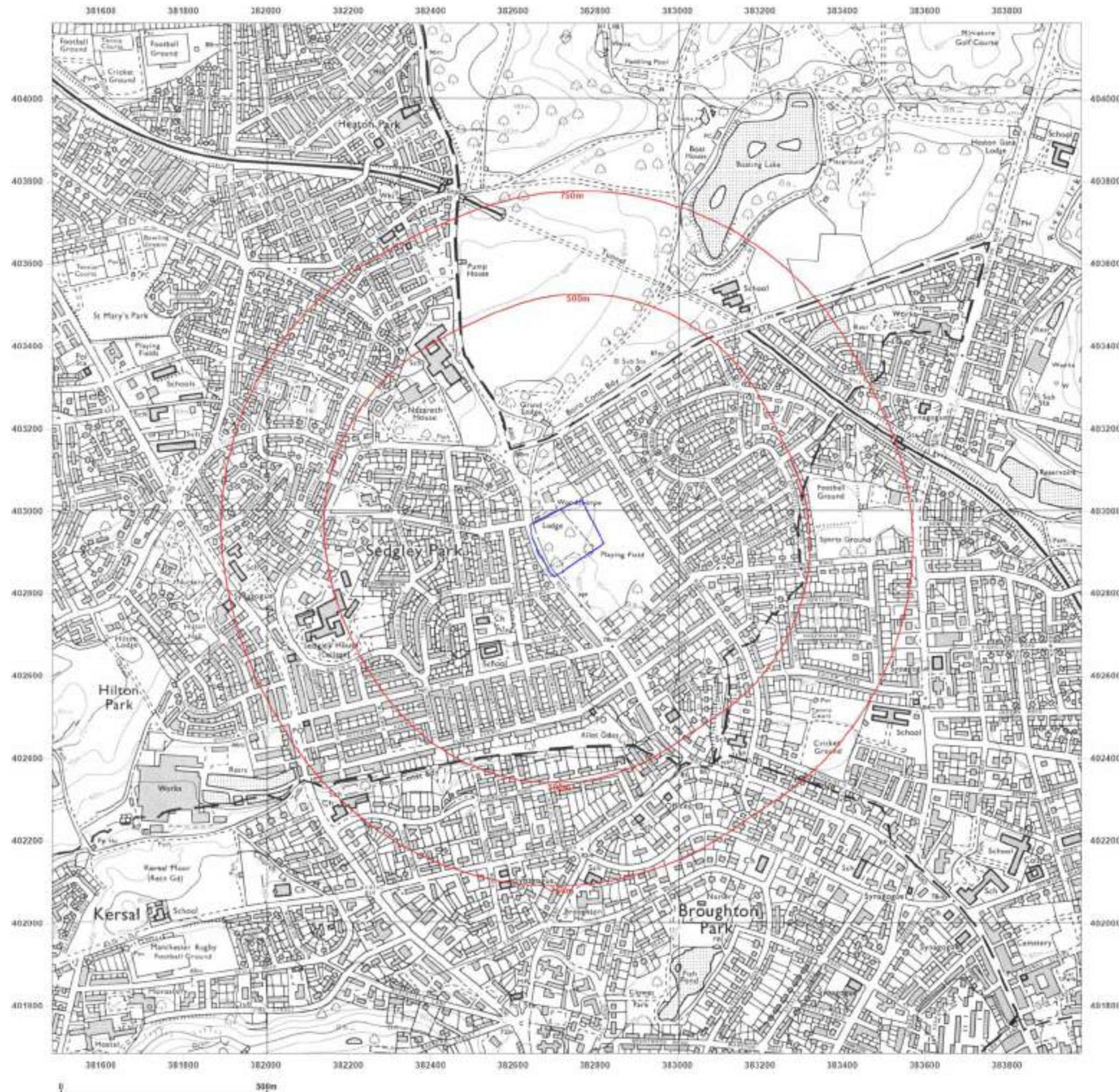


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Production date: 14 February 2024

Map legend available at:
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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: National Grid

Map date: 1985

Scale: 1:10,000

Printed at: 1:10,000



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



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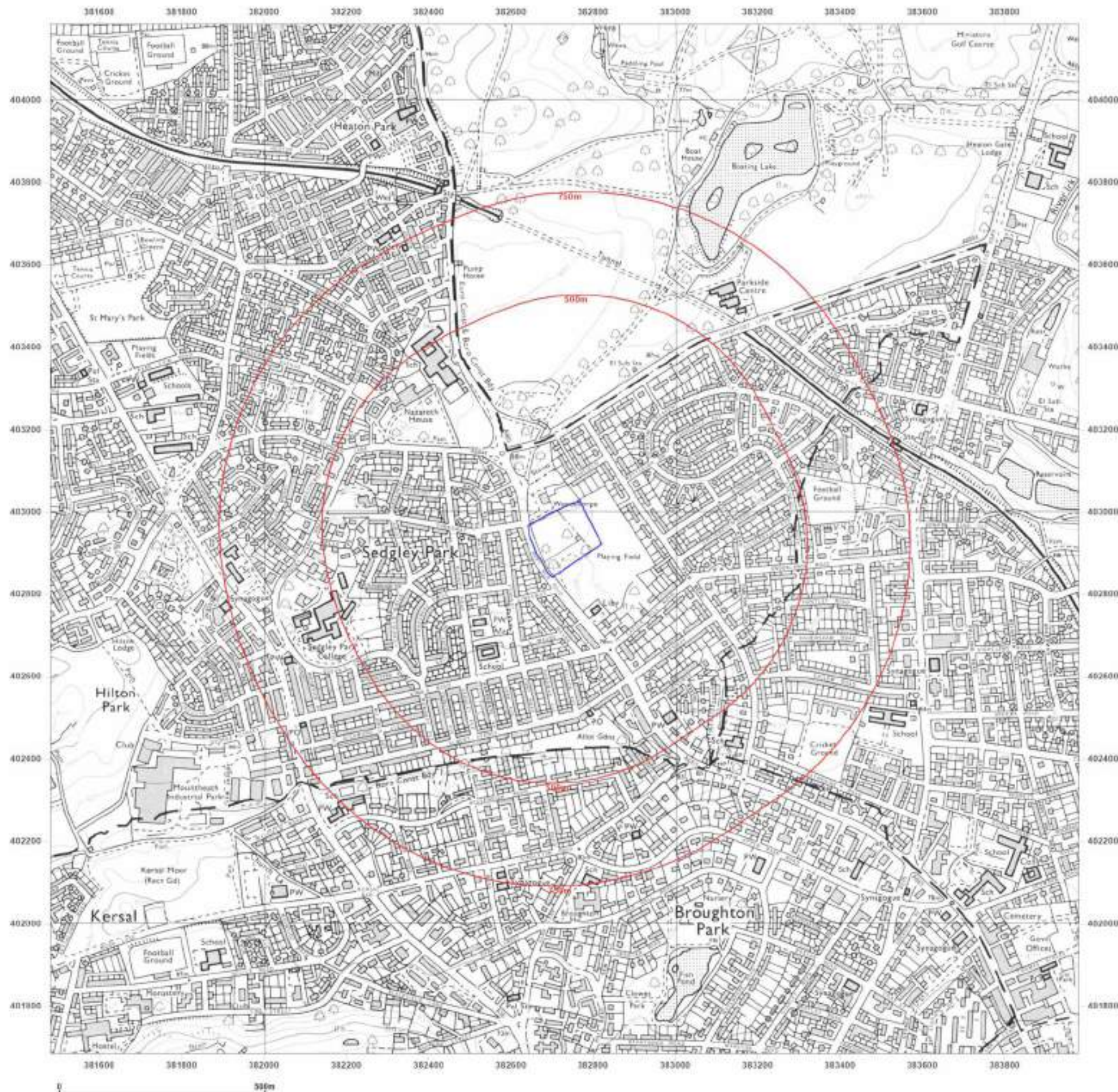


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Production date: 14 February 2024

Map legend available at:
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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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Map legend available at:
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Site Details:

unspecified

Client Ref: EMS_925246_1147549
Report Ref: EMS-925246_1178619
Grid Ref: 382730, 402934

Map Name: National Grid

Map date: 2024

Scale: 1:10,000

Printed at: 1:10,000



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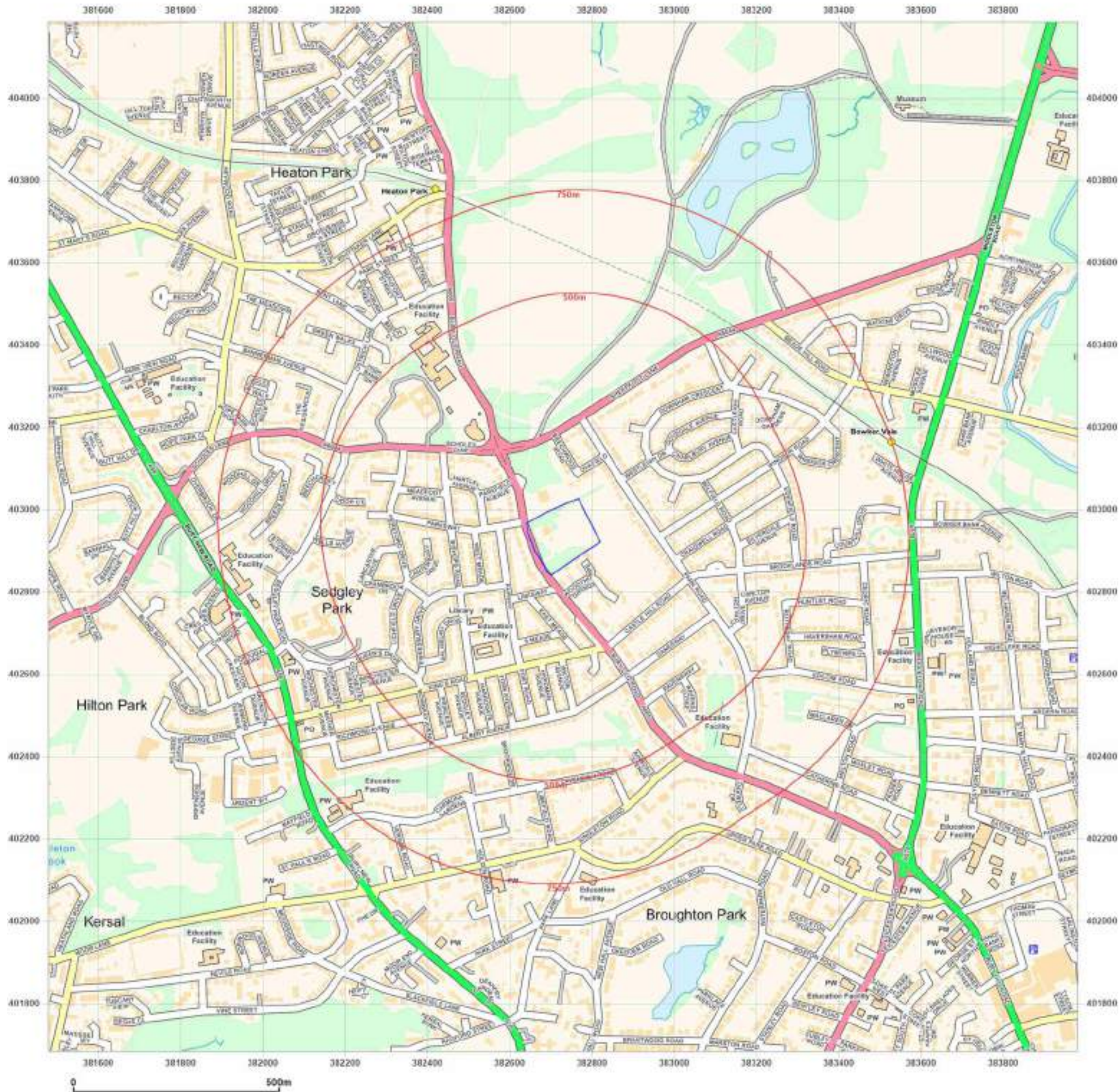


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Production date: 14 February 2024

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www.groundsure.com/sites/default/files/groundsure_legend.pdf



APPENDIX 4 - BGS Records

SD80SW

Location: 1/10 (British Post, Pre-1975)
No. 1 (Shallowest) Area.

Registration No.

38270 0329

Exact Site Latitude: - 53° - 31' - 30"
Longitude: - 2° - 15' - 11"

Level at which ~~sample~~ ^{sample} commenced relative to 273,524,1.0.0.

Date of sinking or boring 10.11.55. to 25.2.56.

Sinker or Borer: Various, including 100, 1000.

One Inch Geological Map: 95

Six Inch Map (County and Quarter Sheet) Lower 95 7.3.

NATURE OF STRATA

THICKNESS DEPTH

	Feet	In.	Feet	In.
Penetration drilling section to 250 ft.				
Soil - drilling log.	1	0	0-00	0
Heavy silty loam with small coarse pebbles (see specimen position - note type).	12	0	0-12	0
Silty sandy loam brown clay with small hard volcanic pebbles, more than in clay.	10	0	0-10	0
Silty clay with fine sand, buff brown colour.	15	0	0-15	0
	10	0	0-10	0
Lighter brown clay with calcareous fragments slightly sandy and silty.	10	0	0-10	0
Sandy lightish clay slightly sandy and silty.	10	0	0-10	0
Loose sandy clay slightly silty.	10	0	0-10	0
Gravel with fine shale fragments and coal fragments (not a deposit).	10	0	0-10	0
Coarse fine grained gravel with silty fragments. Dark brown sandy gravel pebbles over 1/2 in. fragments visible.	5	0	0-05	0
Fine grained sandy gravel with silty fragments fragments of large volcanic type.	10	0	0-10	0
Silty clay gravel sandy and silty as well as clayey.	15	0	0-15	0
Sandy silty clay, light brown colour.	15	0	0-15	0
Clay, sandy silty brown loam.	10	0	0-10	0
Clay, sandy silty red brown with pebbles of calcareous loam silty clay, buff brown.	5	0	0-05	0
	5	0	0-05	0
Clay silty brown colour.	10	0	0-10	0
Clay silty brown loam colour, fine coal fragments, loam, buff brown medium silty sandy and organic gravel, small shale fragments.	10	0	0-10	0
Loose silty loam and brown, with calcareous fragments fragments.	5	0	0-05	0
Clay sandy brown buff brown.	10	0	0-10	0
Loose brown sandy and organic gravel (brown-fine clayey).	5	0	0-05	0
Sandy clay buff brown.	5	0	0-05	0
	5	0	0-05	0
Loose brown sandy loam: fine medium grained sandstone of upper series covered with dark silty sandstone pebbles, dark fragments, calcareous gravel.	5	0	0-05	0
End of section - 250 ft.				
(Note from 250 ft.)				
Penetration section - gravel, silty, fine bedded small rounded gravel, coarse silty clayey fine bedded 1/2 - 1/4 in. with occasional pieces of coarse rounded fragments.	40	0	0-40	0

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பெருநகரப் பேரவை,
22

210742603 DEPT:
Pact In. d. Pact In.

4	2	26-15	230	0
5	2	27-10	235	3
66	2	101-14	330	0
27	2	100-10	374	0
5	2	115-12	373	0
28	2	171-54	420	0
2	2	120-53	457	0
257	6	154-42	534	0
25	6	170-49	583	0
258	2	261-65	656	0
3	2	203-41	653	0

115 0834-1 758 0

042 0834-1 758 0

47 7804 484527 5
2 3 510 203020 6

18 0 314-23 1032 0

20	5304-491000	5
2	0140-002701	5
4	2300-761-700	20

NATURE OF STRATA	THICKNESS		DEPTH	Remarks
	Feet	In.		
Massive highly siliceous sand, red green and bluish green, thin on chert.	1	0	1005	1005-1010
Thin bedded, blue green and bluish green, weathered bluish.	2	0	1006	1006-1008
Massive blue sandy and variegated.	2	0	1007	1007-1009
Massive and purple, thin, in siliceous red, tip approximately 1', bluish green sand greenish blue.	10	0	1007	1007-1017
Massive, sand tends to split along joints and siliceous layers, in fossiliferous.	10	0	1007	1007-1017
Highly siliceous sandstone, greenish, and massive stained siliceous sandstone.	2	0	1008	1008-1010
Massive, red purple stained occasional greenish streaks.	3	0	1008	1008-1011
Red purple sandstone massive highly siliceous with occasional laminae stained beds 1' - 2' some 1' 11 1/2' to 12 1/2'.	10	0	1008	1008-1018
Finely sandstone green grey highly siliceous streaks of fossiliferous sandstone.	2	0	1009	1009-1011
Mass unconsolidated, purple and green stained.	6	0	1009	1009-1015
Highly siliceous sandstone - mixture of sand and siltstone.	2	0	1009	1009-1011
Consolidated fine sand, slightly siliceous green colored sand with occasional streaks of blue-stained material.	3	0	1009	1009-1012
Consolidated fine sand with occasional stains, lower white sandstone in the lower part of section.	2	0	1009	1009-1011
Massive, thin siliceous and sandy, purple greenish white siliceous sandstone.	1	0	1009	1009-1010
Massive, highly siliceous.	1	0	1009	1009-1010
Finely sandstone highly siliceous.	1	0	1009	1009-1010
Consolidated, silty greenish in color, sandy preserved plant debris, occasional fossiliferous nodules. Siliceous sand 1' - 1 1/2'.	1	0	1009	1009-1010
Finely sandstone silty red purple stained, some bedded.	2	0	1009	1009-1011
Finely sandstone sandy sandstone and sandstone, purple stained siliceous (100').	2	0	1009	1009-1011
Highly siliceous sandy siliceous sandstone, red & green stained.	3	0	1009	1009-1012
Slightly sandy soft red purple, bedded green sandstone siliceous in places, sandy preserved nodules.	5	0	1009	1009-1014
Finely sandstone sandy with occasional massive and bluish nodules, greenish grey and purple - brown color, highly siliceous with siliceous of sandstone and larger type (100' - 100').	3	0	1009	1009-1012
Finely sandstone highly siliceous and purple stained, in places green.	5	0	1009	1009-1014
Sandy finely red purple and siliceous.	6	0	1009	1009-1015
Massive, sandy and siliceous, purple red red with plant debris (100' - 100').	4	0	1009	1009-1013
Massive, sandy and siliceous with thin sandy beds, purple green color, siliceous; some massive.	4	0	1009	1009-1013
Alternation of sandy sandstone and sandstone purple stained, flat siliceous.	5	0	1009	1009-1014
Thin greenish and thin sandstone beds, some sandy sandstone.	9	0	1009	1009-1018
Finely sandstone sandy sandstone, slightly siliceous, no siliceous greenish stained, small fragments, some sandy below 11 1/2' ft; well siliceous sand 11 1/2' to 11 3/4', below thin purple sandstone.	11	0	1009	1009-1020
Finely sandstone green-grey and purple red siliceous nodules of sandstone.	6	0	1009	1009-1015
Finely sandstone sandy purple red, brown stained sandstone with occasional fossiliferous nodules, the sandy preserved plant debris massive siliceous beds.	6	0	1009	1009-1015

16/07/2014

SECTION OF		Borehole 11/14 (Heaton Park, Manchester)		6 inch Map Ref. No.	
Six Inch Map (County and Quarter Sheet)		Sheet 26 20.		47.	
SATELITE 127 DATA		ELEVATION		DEPTH	
		Feet	Met	Feet	Met
below	about 30" x 100 micaceous microporous also present, highly microporous below 1175/10"	0	0 314-59	1175	0
micaceous	micaceous blocky, sandy, highly microporous, red stained.	1	0 314-59	1177	0
bed. in	micaceous, highly microporous, red-purple stained micaceous nodules and abundant rootlets	3	0 314-59	1178	0
facies	micaceous, hard, blocky, sandy and microporous, plants very poorly preserved, microporous having about 10" - 12" roots both abundant, microporous nodules abundant.	7	0 314-59	1187	0
(10p 100)	grading into micaceous, pink and purple stained, micaceous nodules.	2	0 314-59	1189	0
	micaceous hard	1	0 314-59	1190	0
	micaceous, sandy purple stained, highly microporous some 5" as 1173/10"	3	0 314-59	1193	0
	micaceous hard	3	0 314-59	1194	0
	micaceous, purple red sandy, micaceous, no microporous	2	0 314-59	1197	0
	micaceous hard	2	0 314-59	1197	0
	slightly sandy micaceous, red purple stained, micaceous nodules.	2	0 314-59	1199	0
	micaceous slightly sandy.	1	0 314-59	1200	0
	micaceous hard	1	0 314-59	1200	0
	micaceous slightly sandy, purple red stained thin layers of microporous micaceous.	1	0 314-59	1201	0
bed. in	slightly microporous micaceous and fault zone.	5	0 314-59	1201	0
	micaceous, slightly microporous, purple red staining, poorly preserved plant debris, occasional brown rich nodules.	6	0 314-59	1202	0
(10p 100)	fault zone.	4	0 314-59	1202	0
	micaceous slightly sandy; micaceous hard, micaceous greenish color.	1	0 314-59	1203	0
	micaceous micaceous hard sandy, purple stained.	2	0 314-59	1204	0
(10p 100)	micaceous, sandy micaceous, red and purple stained, no fossils.	0	0 314-59	1207	0
	micaceous, sandy greenish.	1	0 314-59	1208	0
	micaceous micaceous sandy.	0	0 314-59	1208	0
	micaceous, slightly sandy, micaceous poorly preserved, plant debris, microporous well developed but still tends to follow bedding below 1183/10" micaceous tends to be blocky and micaceous abundant nodules.	10	0 314-59	1208	0
bed. in	fault zone and highly microporous zone.	5	0 314-59	1209	0
bed. in	micaceous micaceous with abundant rootlets, some microporous.	6	0 314-59	1209	0
bed. in	highly microporous sandy micaceous nodules.	1	0 314-59	1210	0
bed. in	micaceous micaceous; not microporous micaceous nodules, because sandy zone below.	3	0 314-59	1212	0
	micaceous, pink and purple stained.	1	0 314-59	1213	0
bed. in	micaceous, blocky purple sandy abundant rootlets, grades into micaceous micaceous in places.	5	0 314-59	1215	0
bed. in	black greenish sandy micaceous bedding planes microporous and nodules.	6	0 314-59	1215	0
(10p 100)	grading into blocky micaceous micaceous + micaceous greenish stained with abundant nodules.	4	0 314-59	1215	0
	blocky micaceous micaceous with microporous micaceous slightly microporous, 1" - 2" microporous in the bedding and abundant micaceous in the bedding planes.	3	0 314-59	1215	0
bed. in	micaceous micaceous fault zone and micaceous and stained with nodules, fragments of micaceous and sandy micaceous sandy micaceous in micaceous.	1	0 314-59	1215	0
(10p 100)	Sandy micaceous, red stained, highly microporous, micaceous, less sandy as 1180".	4	0 314-59	1215	0

Contact BGS: ngdc@bgs.ac.uk

SECTION OF Highway 11/12 (Hector Park, Providence)
 Six Inch Map (County & Quarter Sheet) Range 16 E.

22.

DESCRIPTION OF STRATA		THICKNESS	DATE	DEPTH
Feet	Loc.	Feet	In.	In.
20	7 471-04	24.36	0	
12	6 441-10	24.38	6	
3	6 441-09	24.40	6	
2	6 441-08	24.42	6	
2	6 441-07	24.44	6	
1	6 441-06	24.46	3	
2	6 441-05	24.48	6	
1	6 441-04	24.50	3	
1	6 441-03	24.52	6	
2	6 441-02	24.54	3	
1	6 441-01	24.56	3	
2	6 441-00	24.58	3	
2	6 441-99	24.60	3	
2	6 441-98	24.62	3	
2	6 441-97	24.64	3	
2	6 441-96	24.66	3	
2	6 441-95	24.68	3	
2	6 441-94	24.70	3	
2	6 441-93	24.72	3	
2	6 441-92	24.74	3	
2	6 441-91	24.76	3	
2	6 441-90	24.78	3	
2	6 441-89	24.80	3	
2	6 441-88	24.82	3	
2	6 441-87	24.84	3	
2	6 441-86	24.86	3	
2	6 441-85	24.88	3	
2	6 441-84	24.90	3	
2	6 441-83	24.92	3	
2	6 441-82	24.94	3	
2	6 441-81	24.96	3	
2	6 441-80	24.98	3	
2	6 441-79	25.00	3	
2	6 441-78	25.02	3	
2	6 441-77	25.04	3	
2	6 441-76	25.06	3	
2	6 441-75	25.08	3	
2	6 441-74	25.10	3	
2	6 441-73	25.12	3	
2	6 441-72	25.14	3	
2	6 441-71	25.16	3	
2	6 441-70	25.18	3	
2	6 441-69	25.20	3	
2	6 441-68	25.22	3	
2	6 441-67	25.24	3	
2	6 441-66	25.26	3	
2	6 441-65	25.28	3	
2	6 441-64	25.30	3	
2	6 441-63	25.32	3	
2	6 441-62	25.34	3	
2	6 441-61	25.36	3	
2	6 441-60	25.38	3	
2	6 441-59	25.40	3	
2	6 441-58	25.42	3	
2	6 441-57	25.44	3	
2	6 441-56	25.46	3	
2	6 441-55	25.48	3	
2	6 441-54	25.50	3	
2	6 441-53	25.52	3	
2	6 441-52	25.54	3	
2	6 441-51	25.56	3	
2	6 441-50	25.58	3	
2	6 441-49	25.60	3	
2	6 441-48	25.62	3	
2	6 441-47	25.64	3	
2	6 441-46	25.66	3	
2	6 441-45	25.68	3	
2	6 441-44	25.70	3	
2	6 441-43	25.72	3	
2	6 441-42	25.74	3	
2	6 441-41	25.76	3	
2	6 441-40	25.78	3	
2	6 441-39	25.80	3	
2	6 441-38	25.82	3	
2	6 441-37	25.84	3	
2	6 441-36	25.86	3	
2	6 441-35	25.88	3	
2	6 441-34	25.90	3	
2	6 441-33	25.92	3	
2	6 441-32	25.94	3	
2	6 441-31	25.96	3	
2	6 441-30	25.98	3	
2	6 441-29	26.00	3	
2	6 441-28	26.02	3	
2	6 441-27	26.04	3	
2	6 441-26	26.06	3	
2	6 441-25	26.08	3	
2	6 441-24	26.10	3	
2	6 441-23	26.12	3	
2	6 441-22	26.14	3	
2	6 441-21	26.16	3	
2	6 441-20	26.18	3	
2	6 441-19	26.20	3	
2	6 441-18	26.22	3	
2	6 441-17	26.24	3	
2	6 441-16	26.26	3	
2	6 441-15	26.28	3	
2	6 441-14	26.30	3	
2	6 441-13	26.32	3	
2	6 441-12	26.34	3	
2	6 441-11	26.36	3	
2	6 441-10	26.38	3	
2	6 441-09	26.40	3	
2	6 441-08	26.42	3	
2	6 441-07	26.44	3	
2	6 441-06	26.46	3	
2	6 441-05	26.48	3	
2	6 441-04	26.50	3	
2	6 441-03	26.52	3	
2	6 441-02	26.54	3	
2	6 441-01	26.56	3	
2	6 441-00	26.58	3	
2	6 441-99	26.60	3	
2	6 441-98	26.62	3	
2	6 441-97	26.64	3	
2	6 441-96	26.66	3	
2	6 441-95	26.68	3	
2	6 441-94	26.70	3	
2	6 441-93	26.72	3	
2	6 441-92	26.74	3	
2	6 441-91	26.76	3	
2	6 441-90	26.78	3	
2	6 441-89	26.80	3	
2	6 441-88	26.82	3	
2	6 441-87	26.84	3	
2	6 441-86	26.86	3	
2	6 441-85	26.88	3	
2	6 441-84	26.90	3	
2	6 441-83	26.92	3	
2	6 441-82	26.94	3	
2	6 441-81	26.96	3	
2	6 441-80	26.98	3	
2	6 441-79	27.00	3	
2	6 441-78	27.02	3	
2	6 441-77	27.04	3	
2	6 441-76	27.06	3	
2	6 441-75	27.08	3	
2	6 441-74	27.10	3	
2	6 441-73	27.12	3	
2	6 441-72	27.14	3	
2	6 441-71	27.16	3	
2	6 441-70	27.18	3	
2	6 441-69	27.20	3	
2	6 441-68	27.22	3	
2	6 441-67	27.24	3	
2	6 441-66	27.26	3	
2	6 441-65	27.28	3	
2	6 441-64	27.30	3	
2	6 441-63	27.32	3	
2	6 441-62	27.34	3	
2	6 441-61	27.36	3	
2	6 441-60	27.38	3	
2	6 441-59	27.40	3	
2	6 441-58	27.42	3	
2	6 441-57	27.44	3	
2	6 441-56	27.46	3	
2	6 441-55	27.48	3	
2	6 441-54	27.50	3	
2	6 441-53	27.52	3	
2	6 441-52	27.54	3	
2	6 441-51	27.56	3	
2	6 441-50	27.58	3	
2	6 441-49	27.60	3	
2	6 441-48	27.62	3	
2	6 441-47	27.64	3	
2	6 441-46	27.66	3	
2	6 441-45	27.68	3	
2	6 441-44	27.70	3	
2	6 441-43	27.72	3	
2	6 441-42	27.74	3	
2	6 441-41	27.76	3	
2	6 441-40	27.78	3	
2	6 441-39	27.80	3	
2	6 441-38	27.82	3	
2	6 441-37	27.84	3	
2	6 441-36	27.86	3	
2	6 441-35	27.88	3	
2	6 441-34	27.90	3	
2	6 441-33	27.92	3	
2	6 441-32	27.94	3	
2	6 441-31	27.96	3	
2	6 441-30	27.98	3	
2	6 441-29	28.00	3	
2	6 441-28	28.02	3	
2	6 441-27	28.04	3	
2	6 441-26	28.06	3	
2	6 441-25	28.08	3	
2	6 441-24	28.10	3	
2	6 441-23	28.12	3	
2	6 441-22	28.14	3	
2	6 441-21	28.16	3	
2	6 441-20	28.18	3	
2	6 441-19	28.20	3	
2	6 441-18	28.22	3	
2	6 441-17	28.24	3	
2	6 441-16	28.26	3	
2	6 441-15	28.28	3	
2	6 441-14	28.30	3	
2	6 441-13	28.32	3	
2	6 441-12	28.34	3	
2	6 441-11	28.36	3	
2	6 441-10	28.38	3	
2	6 441-09	28.40	3	
2	6 441-08	28.42	3	
2	6 441-07	28.44	3	
2	6 441-06	28.46	3	
2	6 441-05	28.48	3	
2	6 441-04	28.50	3	
2	6 441-03	28.52	3	
2	6 441-02	28.54	3	
2	6 441-01	28.56	3	
2	6 441-00	28.58	3	
2	6 441-99	28.60	3	
2	6 441-98	28.62	3	
2	6 441-97	28.64	3	
2	6 441-96	28.66	3	
2	6 441-95	28.68	3	
2	6 441-94	28.70	3	
2	6 441-93	28.72	3	
2	6 441-92	28.74	3	
2	6 441-91	28.76	3	
2	6 441-90	28.78	3	
2	6 441-89	28.80	3	
2	6 441-88	28.82	3	
2	6 441-87	28.84	3	
2	6 441-86	28.86	3	
2	6 441-85	28.88	3	
2	6 441-84	28.90	3	
2	6 441-83	28.92	3	
2	6 441-82	28.94	3	
2	6 441-81	28.96	3	
2	6 441-80	28.98	3	
2	6 441-79	29.00	3	
2	6 441-78	29.02	3	
2	6 441-77	29.04	3	
2	6 441-76	29.06	3	
2	6 441-75	29.08	3	
2	6 441-74	29.10	3	
2	6 441-73	29.12	3	
2	6 441-72	29.14	3	
2	6 441-71	29.16	3	

● 2014年12月

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¹⁰ ENRS-9 Data.

	THICKNESS		DEPTH		
	Feet	In.	Feet	In.	M
Massive sandstone with siltstone. Large concretions of 1500' to 1500'. Sparsely to moderately 1500' to 1500'.	9	9	1560	0	4734.4
Thinly bedded sandstone and siltstone, both streaked in upper 1000', striped and spotted, micritic and argillaceous siltstone.	12	2	1572	2	4746.6
Thinly bedded sandstone, well streaked, fractured and micritic. Most in sandstone.	12	4	1584	4	4758.8
Thinly bedded sandstone and siltstone with siltstone and limestone beds.	6	6	1590	0	4764.8
Thinly bedded sandstone with small fragments, somewhat micritic and argillaceous. Sparsely to moderately 1500' to 1500'.	10	0	1596	0	4770.8
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	1	2	1602	2	4782.0
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	1	3	1603	3	4783.3
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	1	5	1604	5	4784.5
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	0	1606	0	4786.6
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1608	9	4788.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1610	9	4790.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1612	9	4792.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1614	9	4794.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1616	9	4796.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1618	9	4798.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1620	9	4800.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1622	9	4802.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1624	9	4804.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1626	9	4806.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1628	9	4808.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1630	9	4810.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1632	9	4812.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1634	9	4814.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1636	9	4816.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1638	9	4818.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1640	9	4820.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1642	9	4822.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1644	9	4824.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1646	9	4826.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1648	9	4828.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1650	9	4830.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1652	9	4832.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1654	9	4834.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1656	9	4836.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1658	9	4838.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1660	9	4840.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1662	9	4842.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1664	9	4844.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1666	9	4846.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1668	9	4848.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1670	9	4850.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1672	9	4852.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1674	9	4854.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1676	9	4856.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1678	9	4858.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1680	9	4860.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1682	9	4862.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1684	9	4864.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1686	9	4866.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1688	9	4868.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1690	9	4870.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1692	9	4872.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1694	9	4874.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1696	9	4876.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1698	9	4878.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1700	9	4880.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1702	9	4882.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1704	9	4884.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1706	9	4886.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1708	9	4888.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1710	9	4890.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1712	9	4892.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1714	9	4894.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1716	9	4896.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1718	9	4898.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1720	9	4900.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1722	9	4902.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1724	9	4904.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1726	9	4906.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1728	9	4908.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1730	9	4910.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1732	9	4912.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1734	9	4914.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1736	9	4916.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1738	9	4918.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1740	9	4920.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1742	9	4922.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1744	9	4924.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1746	9	4926.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1748	9	4928.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1750	9	4930.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1752	9	4932.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1754	9	4934.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1756	9	4936.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1758	9	4938.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1760	9	4940.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1762	9	4942.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1764	9	4944.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1766	9	4946.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1768	9	4948.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1770	9	4950.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1772	9	4952.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1774	9	4954.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1776	9	4956.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1778	9	4958.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1780	9	4960.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1782	9	4962.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1784	9	4964.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1786	9	4966.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1788	9	4968.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1790	9	4970.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1792	9	4972.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1794	9	4974.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1796	9	4976.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1798	9	4978.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1800	9	4980.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1802	9	4982.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1804	9	4984.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1806	9	4986.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1808	9	4988.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1810	9	4990.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1812	9	4992.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1814	9	4994.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1816	9	4996.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1818	9	4998.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1820	9	5000.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1822	9	5002.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1824	9	5004.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1826	9	5006.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1828	9	5008.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1830	9	5010.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1832	9	5012.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1834	9	5014.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1836	9	5016.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1838	9	5018.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1840	9	5020.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1842	9	5022.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1844	9	5024.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1846	9	5026.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1848	9	5028.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1850	9	5030.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1852	9	5032.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1854	9	5034.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1856	9	5036.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1858	9	5038.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1860	9	5040.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1862	9	5042.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1864	9	5044.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1866	9	5046.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1868	9	5048.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1870	9	5050.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1872	9	5052.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1874	9	5054.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1876	9	5056.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1878	9	5058.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1880	9	5060.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1882	9	5062.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1884	9	5064.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1886	9	5066.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1888	9	5068.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1890	9	5070.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1892	9	5072.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1894	9	5074.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1896	9	5076.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1898	9	5078.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1900	9	5080.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1902	9	5082.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1904	9	5084.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1906	9	5086.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1908	9	5088.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1910	9	5090.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1912	9	5092.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1914	9	5094.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1916	9	5096.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1918	9	5098.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1920	9	5100.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1922	9	5102.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1924	9	5104.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1926	9	5106.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1928	9	5108.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1930	9	5110.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1932	9	5112.9
Thinly bedded sandstone with small fragments of limestone 1500' to 1500'.	2	9	1934	9	5114.9

17-24574

6 Inch May
Road, N.C.

THURSDAY
FEBRUARY 1964

4	503-51	2652	25
5	504-52	2652	25
6	504-53	2652	25
7	504-54	2652	25
8	504-55	2652	25
9	504-56	2652	25
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11	504-58	2652	25
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21	504-68	2652	25
22	504-69	2652	25
23	504-70	2652	25
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25	504-72	2652	25
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86	505-33	2652	25
87	505-34	2652	25
88	505-35	2652	25
89	505-36	2652	25
90	505-37	2652	25
91	505-38	2652	25
92	505-39	2652	25
93	505-40	2652	25
94	505-41	2652	25

1967-68, 1968-69, 1969-70, 1970-71, 1971-72, 1972-73, 1973-74, 1974-75, 1975-76, 1976-77, 1977-78, 1978-79, 1979-80, 1980-81, 1981-82, 1982-83, 1983-84, 1984-85, 1985-86, 1986-87, 1987-88, 1988-89, 1989-90, 1990-91, 1991-92, 1992-93, 1993-94, 1994-95, 1995-96, 1996-97, 1997-98, 1998-99, 1999-00, 2000-01, 2001-02, 2002-03, 2003-04, 2004-05, 2005-06, 2006-07, 2007-08, 2008-09, 2009-10, 2010-11, 2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17, 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-23, 2023-24, 2024-25, 2025-26, 2026-27, 2027-28, 2028-29, 2029-30, 2030-31, 2031-32, 2032-33, 2033-34, 2034-35, 2035-36, 2036-37, 2037-38, 2038-39, 2039-40, 2040-41, 2041-42, 2042-43, 2043-44, 2044-45, 2045-46, 2046-47, 2047-48, 2048-49, 2049-50, 2050-51, 2051-52, 2052-53, 2053-54, 2054-55, 2055-56, 2056-57, 2057-58, 2058-59, 2059-60, 2060-61, 2061-62, 2062-63, 2063-64, 2064-65, 2065-66, 2066-67, 2067-68, 2068-69, 2069-70, 2070-71, 2071-72, 2072-73, 2073-74, 2074-75, 2075-76, 2076-77, 2077-78, 2078-79, 2079-80, 2080-81, 2081-82, 2082-83, 2083-84, 2084-85, 2085-86, 2086-87, 2087-88, 2088-89, 2089-90, 2090-91, 2091-92, 2092-93, 2093-94, 2094-95, 2095-96, 2096-97, 2097-98, 2098-99, 2099-00, 2100-01, 2101-02, 2102-03, 2103-04, 2104-05, 2105-06, 2106-07, 2107-08, 2108-09, 2109-10, 2110-11, 2111-12, 2112-13, 2113-14, 2114-15, 2115-16, 2116-17, 2117-18, 2118-19, 2119-20, 2120-21, 2121-22, 2122-23, 2123-24, 2124-25, 2125-26, 2126-27, 2127-28, 2128-29, 2129-30, 2130-31, 2131-32, 2132-33, 2133-34, 2134-35, 2135-36, 2136-37, 2137-38, 2138-39, 2139-40, 2140-41, 2141-42, 2142-43, 2143-44, 2144-45, 2145-46, 2146-47, 2147-48, 2148-49, 2149-50, 2150-51, 2151-52, 2152-53, 2153-54, 2154-55, 2155-56, 2156-57, 2157-58, 2158-59, 2159-60, 2160-61, 2161-62, 2162-63, 2163-64, 2164-65, 2165-66, 2166-67, 2167-68, 2168-69, 2169-70, 2170-71, 2171-72, 2172-73, 2173-74, 2174-75, 2175-76, 2176-77, 2177-78, 2178-79, 2179-80, 2180-81, 2181-82, 2182-83, 2183-84, 2184-85, 2185-86, 2186-87, 2187-88, 2188-89, 2189-90, 2190-91, 2191-92, 2192-93, 2193-94, 2194-95, 2195-96, 2196-97, 2197-98, 2198-99, 2199-00, 2200-01, 2201-02, 2202-03, 2203-04, 2204-05, 2205-06, 2206-07, 2207-08, 2208-09, 2209-10, 2210-11, 2211-12, 2212-13, 2213-14, 2214-15, 2215-16, 2216-17, 2217-18, 2218-19, 2219-20, 2220-21, 2221-22, 2222-23, 2223-24, 2224-25, 2225-26, 2226-27, 2227-28, 2228-29, 2229-30, 2230-31, 2231-32, 2232-33, 2233-34, 2234-35, 2235-36, 2236-37, 2237-38, 2238-39, 2239-40, 2240-41, 2241-42, 2242-43, 2243-44, 2244-45, 2245-46, 2246-47, 2247-48, 2248-49, 2249-50, 2250-51, 2251-52, 2252-53, 2253-54, 2254-55, 2255-56, 2256-57, 2257-58, 2258-59, 2259-60, 2260-61, 2261-62, 2262-63, 2263-64, 2264-65, 2265-66, 2266-67, 2267-68, 2268-69, 2269-70, 2270-71, 2271-72, 2272-73, 2273-74, 2274-75, 2275-76, 2276-77, 2277-78, 2278-79, 2279-80, 2280-81, 2281-82, 2282-83, 2283-84, 2284-85, 2285-86, 2286-87, 2287-88, 2288-89, 2289-90, 2290-91, 2291-92, 2292-93, 2293-94, 2294-95, 2295-96, 2296-97, 2297-98, 2298-99, 2299-00, 2300-01, 2301-02, 2302-03, 2303-04, 2304-05, 2305-06, 2306-07, 2307-08, 2308-09, 2309-10, 2310-11, 2311-12, 2312-13, 2313-14, 2314-15, 2315-16, 2316-17, 2317-18, 2318-19, 2319-20, 2320-21, 2321-22, 2322-23, 2323-24, 2324-25, 2325-26, 2326-27, 2327-28, 2328-29, 2329-30, 2330-31, 2331-32, 2332-33, 2333-34, 2334-35, 2335-36, 2336-37, 2337-38, 2338-39, 2339-40, 2340-41, 2341-42, 2342-43, 2343-44, 2344-45, 2345-46, 2346-47, 2347-48, 2348-49, 2349-50, 2350-51, 2351-52, 2352-53, 2353-54, 2354-55, 2355-56, 2356-57, 2357-58, 2358-59, 2359-60, 2360-61, 2361-62, 2362-63, 2363-64, 2364-65, 2365-66, 2366-67, 2367-68, 2368-69, 2369-70, 2370-71, 2371-72, 2372-73, 2373-74, 2374-75, 2375-76, 2376-77, 2377-78, 2378-79, 2379-80, 2380-81, 2381-82, 2382-83, 2383-84, 2384-85, 2385-86, 2386-87, 2387-88, 2388-89, 2389-90, 2390-91, 2391-92, 2392-93, 2393-94, 2394-95, 2395-96, 2396-97, 2397-98, 2398-99, 2399-00, 2400-01, 2401-02, 2402-03, 2403-04, 2404-05, 2405-06, 2406-07, 2407-08, 2408-09, 2409-10, 2410-11, 2411-12, 2412-13, 2413-14, 2414-15, 2415-16, 2416-17, 2417-18, 2418-19, 2419-20, 2420-21, 2421-22,

12	6 72 405	2653	6
6	6 516 03	1693	6
6	6 516 40	2700	6
6	6 516 13	2709	6
2	6 516 79	1752	6
6	6 516 06	1705	6

beds.
Sandstone fine grained limest., with few limestone
beds.
Grading into bluish sandy limestone.
Limest. core,
Sandstone bluish; limestone nodules.
Bluish finely-grained limestone.
Limest. core.
Limest. dark gray sandstone.
Fine grained silty sandstone.
Heavy limestone with sandy lenticles, 1" - 2" thickness,
occasional with abundant irregularly slightly sandy
or glassy. Limestone 2" to 1 1/2" / 6", 1" limestone &
1 1/2" / 6".
Limestone 3".
Black highly carbonaceous shale,
limestone.
Limestone, dark gray oil-saturated sandy bedding; plant
stems abundant, no corals,
quartz in limestone bed.

7	0 320-52 1732	0
6	0 320-34 1720	0
7	7 320-63 1720	7
1	3 320-51 1724	10
8	2 320-36 1730	6
3	0 320-22 1703	0
8	0 320-83 1725	0
2	0 320-99 1737	4
7	0 320-77 1704	0
2	0 320-18 1706	0
9	0 320-92 1722	0
3	2 320-58 1735	2
3	2 320-61 1724	3
5	0 320-19 1708	0
	3 320-21 1709	3
	4 320-11 1709	4
	1 320-30 1729	0
6	0 320-49 1724	5
	2 320-39 1721	7

Shrews highly characteristic and range with owl
fragments.
Small rodents - Sciurus spp. Peromyscus.
Shrews highly characteristic in northern - generally with
chipmunk, Peromyscus leucurus. Some "shrews" about
1900-1910.

$$\begin{array}{r} 2.54193776 \\ \underline{3.68141377} \\ 1.13947641 \end{array}$$

- 3 -

NAMES OF STRATA	THICKNESS		DEPTH		ELEVATION
	Feet	In.	Feet	In.	
Orange and blue.	2	0	1788	0	5414.54-19
Blocky sandstone with abundant frondose corals.	4	0	1792	0	5414.54-19
Irregular bed.	2	0	1794	0	5414.54-19
Massive light grey sandstone. Disconformity zone at 1797/00 with chert bed.	12	0	1796	0	5414.54-19
Massive in 1" bed.	1	0	1797	0	5414.54-19
Massive with plant debris, and abundant irregularly bedded sandstone at 1800/00. 2" sandstone at 1807/00.	5	0	1801	0	5414.54-19
Disconformity between sandstone.	1	0	1802	0	5414.54-19
Sandstone with irregular nodules and abundant plant debris in places.	4	0	1806	0	5414.54-19
Chert.	0	10	1807	0	5414.54-19
Chert.	0	10	1807	0	5414.54-19
Chert.	0	10	1807	0	5414.54-19
Flinty sand, highly calcareous, abundant frondose.	3	0	1810	0	5414.54-19
Fine grained silty sandstone. Greenish blue.	1	0	1811	0	5414.54-19
Sandy blocky sandstone with abundant frondose corals.	4	0	1815	0	5414.54-19
Blocky sandstone with corals: 1815/00, 1816/00, 1817/00, 1818/00, 1819/00, 1820/00.	2	0	1816	0	5414.54-19
Irregular bed and sandy shale.	2	0	1818	0	5414.54-19
Blocky blocky - sandstone.	12	0	1820	0	5414.54-19
Blocky sandstone.	6	0	1821	0	5414.54-19
Chert.	2	0	1823	0	5414.54-19
Sandy sandstone and silty sandstone.	3	0	1825	0	5414.54-19
Sandy sandstone and fine calcareous bedded sandstone.	7	0	1832	0	5414.54-19
Sandy sandstone with frondose corals and plants.	10	0	1842	0	5414.54-19
Gravelly sandstone with plant fragments and corals.	2	0	1844	0	5414.54-19
Disconformity sandstone.	2	0	1846	0	5414.54-19
Chert.	2	0	1848	0	5414.54-19
Chert.	2	0	1850	0	5414.54-19
Superior Chert. (1")	3	0	1853	0	5414.54-19
Disconformity blocky sandstone.	6	0	1859	0	5414.54-19
Flinty - grey and blocky.	1	0	1860	0	5414.54-19
Silty sandstone with many nodules.	15	0	1875	0	5414.54-19
Gravelly silty sandy sandstone.	3	0	1878	0	5414.54-19
Silty sandstone; fine grained, well sorted; corals and plant fragments.	24	0	1902	0	5414.54-19
Sandy sandstone with thin irregular beds.	2	0	1904	0	5414.54-19
Blocky sandstone (massive to blocky); abundant plant debris, coral fragments.	12	0	1916	0	5414.54-19
Blocky - sandstone with chert streaks 2" - 1" thick, abundant corals.	8	0	1924	0	5414.54-19
2" sandstone - blocky-sandstone.	2	0	1926	0	5414.54-19
2" inferior chert and blocky sand.	2	0	1928	0	5414.54-19
Superior chert.	1	0	1930	0	5414.54-19
Chert.	1	0	1931	0	5414.54-19
Carbonaceous flinty.	3	0	1934	0	5414.54-19
Superior chert and sandy sandstone.	1	0	1935	0	5414.54-19
Flinty.	1	0	1936	0	5414.54-19
Slightly carbonaceous flinty.	1	0	1937	0	5414.54-19
Inferior chert.	1	0	1938	0	5414.54-19
Slightly carbonaceous flinty.	1	0	1939	0	5414.54-19
Sandy sandstone with abundant plant debris corals.	2	0	1941	0	5414.54-19
Sandstone at 1941/00, 2" sandstone at 1947/00.	2	0	1943	0	5414.54-19
Chert, blocky.	1	0	1944	0	5414.54-19
Flinty - highly carbonaceous.	1	0	1945	0	5414.54-19
Carbonaceous sandstone bedded sandstone at 1947/00.	3	0	1948	0	5414.54-19
Sandstone at 1947/00.	1	0	1949	0	5414.54-19
Sandy sandy sandstone.	2	0	1951	0	5414.54-19
Irregular.	1	0	1952	0	5414.54-19
Sandy sandstone with frondose.	4	0	1956	0	5414.54-19
Sandstone with chert fragments.	2	0	1958	0	5414.54-19
Blocky sandstone with chert 2" sandstone corals.	2	0	1960	0	5414.54-19
2" sandstone bed at 1960/00.	2	0	1962	0	5414.54-19
Sandstone with chert fragments at 1963/00, 1964/00.	2	0	1964	0	5414.54-19
Sandy sandstone and silty sandstone.	2	0	1966	0	5414.54-19
Sandstone, slightly sandy with irregular beds, well sorted, base 20" - 200" brown slightly calcareous.	17	0	1983	0	5414.54-19
Corals at 1983/00.	17	0	1983	0	5414.54-19

- 16 -

107
S155000/19

6 inch Map
Sheet No.
21.

STATION OF Satchela (1/12, 1950-1951, 1952-1953)
Six Inch Map (County and Quarter Sheet) 1950-1951, 1952-1953.

NAME OF STRATA		THICKNESS	DEPTH	
		Feet	10-12-1950 Feet	In.
Bank	Soft clayey, gauge and soil fragments. Clayey - soft. Hard clayey with pebbles, gauge.	1 2 3	6 604-11 1950 6 605-12 1950 6 606-13 1950	9 9 1
	Clayey with abundant pebbles - boundary to clayey - retention type.	7	6 607-14 1950	7
	Clay gauge. Black highly carbonaceous clayey - boundary to clayey-retention type. Soft clay gauge.	7 6	6 608-11 1950 6 609-12 1950	11 0
Bank	(clayey soil.) (clay). Soft clay. Highly carbonaceous clayey. Soft clay gauge. Black light brown carbonaceous pebbles - clayey. Soft clay gauge. Soil. Black carbonaceous clayey. Soil. Black carbonaceous pebbles (clayey and all over in upper 6'). Light gray fine grained red brownish stained sandstone (clayey core). No core. Light stained fine grained sandstone broken core. "clayey" fragments clay black carbonaceous fragments. Red stained, siliceous and brown fine grained sandstone, shelled and broken.	1 1		

109 9650/27

SECRET

1990年12月25日，在“九二”香港回归前夕，香港各界人士纷纷发表文章，展望香港回归后的未来。其中，不少文章都提到了香港与内地的关系，以及香港在回归后将如何发挥其独特的优势，为内地的改革开放和现代化建设作出贡献。这些文章不仅反映了香港各界人士对香港未来的信心，也体现了香港与内地之间日益紧密的联系。

This document contains neither recommendations nor conclusions of the FBI. It is the property of the FBI and is loaned to your agency; it and its contents are not to be distributed outside your agency.

44-38861-164216-1058758 19.

Single: 0.25 10 24 3

David Noel Broderick

Penetration testing (Pentest)	1.50	1
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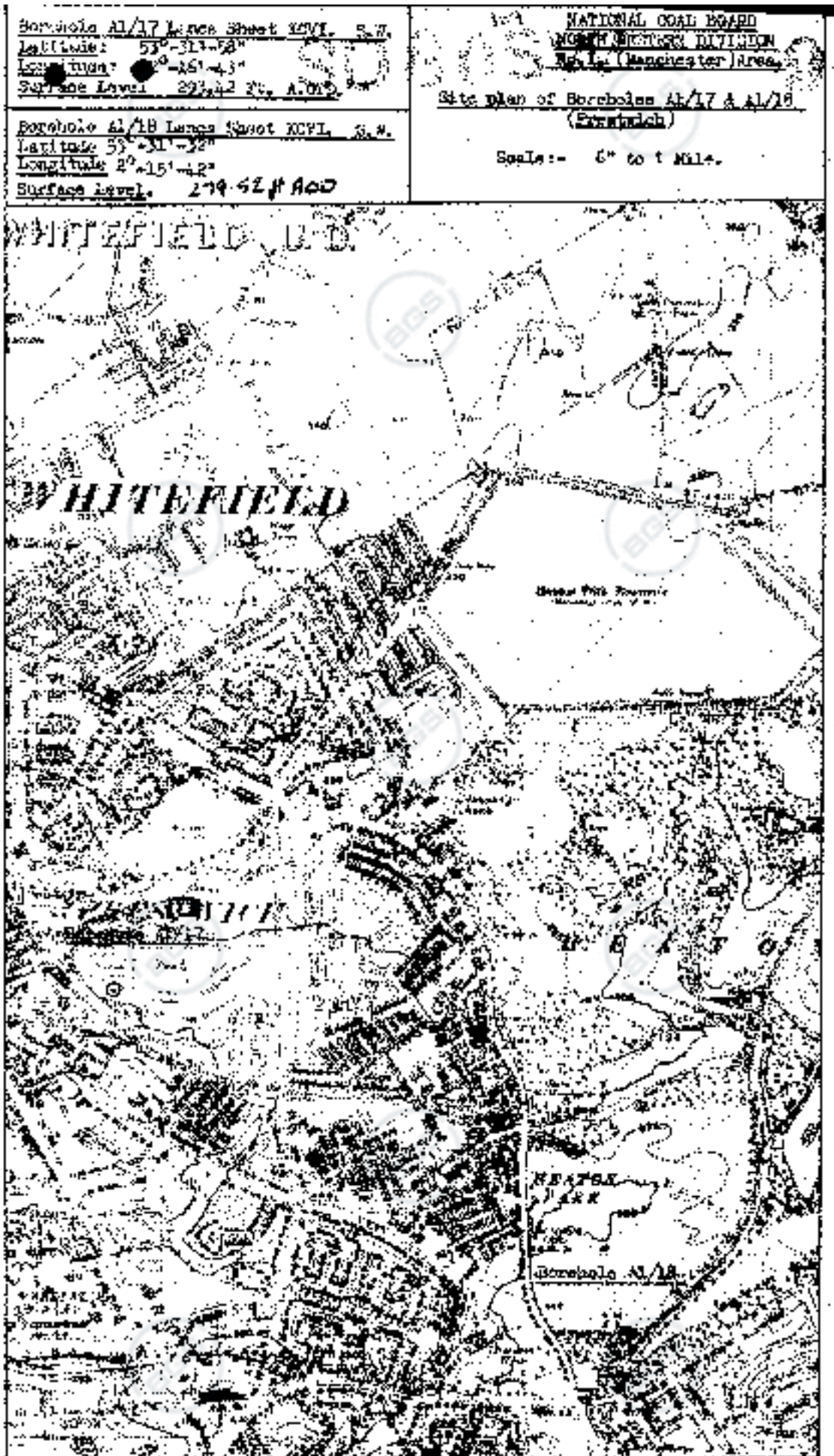
[illegible]

ಪೂರ್ವದಿಂದ ಬರುವ ಗಾಳಿಯಿಂದಾಗಿ ಈಗಾಗಲೇ ಮಳೆ ಸುರಿಯುತ್ತಿದೆ.

It was to send him personally to the National Guard for the evacuation in

[illegible]

சுருத்தி: 1993







APPENDIX 5 - Groundsure Report

unspecified

Order Details

Date: 14/02/2024
Your ref: EMS_925246_1147549
Our Ref: EMS-925246_1178620

Site Details

Location: 382726 402937
Area: 1.93 ha
Authority: [Bury Metropolitan Borough Council](#) ↗



[Summary of findings](#)

[p. 2 >](#)

[Aerial image](#)

[p. 9 >](#)

[OS MasterMap site plan](#)

[p.14 >](#)

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
15 >	1.1 >	Historical industrial land uses >	0	0	3	13	-
16 >	1.2 >	Historical tanks >	0	0	1	0	-
17 >	1.3 >	Historical energy features >	0	0	4	5	-
17	1.4	Historical petrol stations	0	0	0	0	-
18	1.5	Historical garages	0	0	0	0	-
18	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
19 >	2.1 >	Historical industrial land uses >	0	0	5	16	-
20 >	2.2 >	Historical tanks >	0	0	2	0	-
21 >	2.3 >	Historical energy features >	0	0	8	10	-
22	2.4	Historical petrol stations	0	0	0	0	-
22	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
23	3.1	Active or recent landfill	0	0	0	0	-
23	3.2	Historical landfill (BGS records)	0	0	0	0	-
24	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
24	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
24	3.5	Historical waste sites	0	0	0	0	-
24	3.6	Licensed waste sites	0	0	0	0	-
24 >	3.7 >	Waste exemptions >	0	0	0	1	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
26 >	4.1 >	Recent industrial land uses >	0	0	8	-	-
27 >	4.2 >	Current or recent petrol stations >	0	0	0	1	-
27	4.3	Electricity cables	0	0	0	0	-
27	4.4	Gas pipelines	0	0	0	0	-
28	4.5	Sites determined as Contaminated Land	0	0	0	0	-



28	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
28	4.7	Regulated explosive sites	0	0	0	0	-
28	4.8	Hazardous substance storage/usage	0	0	0	0	-
28	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
29	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
29 >	4.11 >	Licensed pollutant release (Part A(2)/B) >	0	0	1	2	-
29	4.12	Radioactive Substance Authorisations	0	0	0	0	-
30	4.13	Licensed Discharges to controlled waters	0	0	0	0	-
30	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
30	4.15	Pollutant release to public sewer	0	0	0	0	-
30	4.16	List 1 Dangerous Substances	0	0	0	0	-
30	4.17	List 2 Dangerous Substances	0	0	0	0	-
31	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
31	4.19	Pollution inventory substances	0	0	0	0	-
31	4.20	Pollution inventory waste transfers	0	0	0	0	-
31	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
32 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
34 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
36 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
37	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
38	5.5	Groundwater vulnerability- local information	None (within 0m)				
39 >	5.6 >	Groundwater abstractions >	0	0	0	0	6
41	5.7	Surface water abstractions	0	0	0	0	0
41	5.8	Potable abstractions	0	0	0	0	0
42	5.9	Source Protection Zones	0	0	0	0	-
42	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
43	6.1	Water Network (OS MasterMap)	0	0	0	-	-



43	6.2	Surface water features	0	0	0	-	-
44 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
44 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
44 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
46	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
46	7.2	Historical Flood Events	0	0	0	-	-
46	7.3	Flood Defences	0	0	0	-	-
47	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
47	7.5	Flood Storage Areas	0	0	0	-	-
48	7.6	Flood Zone 2	None (within 50m)				
48	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
49 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
51 >	9.1 >	Groundwater flooding >	Moderate (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
52	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
53	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
53	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
53	10.4	Special Protection Areas (SPA)	0	0	0	0	0
53	10.5	National Nature Reserves (NNR)	0	0	0	0	0
54 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	5
54 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	1
54	10.8	Biosphere Reserves	0	0	0	0	0
55	10.9	Forest Parks	0	0	0	0	0
55	10.10	Marine Conservation Zones	0	0	0	0	0
55 >	10.11 >	Green Belt >	0	0	1	0	3
55	10.12	Proposed Ramsar sites	0	0	0	0	0



56	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
56	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
56	10.15	Nitrate Sensitive Areas	0	0	0	0	0
56 >	10.16 >	Nitrate Vulnerable Zones >	1	1	0	0	1
58 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
59	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
60	11.1	World Heritage Sites	0	0	0	-	-
61	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
61	11.3	National Parks	0	0	0	-	-
61 >	11.4 >	Listed Buildings >	0	0	2	-	-
62	11.5	Conservation Areas	0	0	0	-	-
62	11.6	Scheduled Ancient Monuments	0	0	0	-	-
62 >	11.7 >	Registered Parks and Gardens >	0	0	1	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
63 >	12.1 >	Agricultural Land Classification >	Urban (within 250m)				
64	12.2	Open Access Land	0	0	0	-	-
64	12.3	Tree Felling Licences	0	0	0	-	-
64	12.4	Environmental Stewardship Schemes	0	0	0	-	-
64	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
65 >	13.1 >	Priority Habitat Inventory >	6	0	10	-	-
66	13.2	Habitat Networks	0	0	0	-	-
66	13.3	Open Mosaic Habitat	0	0	0	-	-
67	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
68 >	14.1 >	10k Availability >	Identified (within 500m)				
69 >	14.2 >	Artificial and made ground (10k) >	0	0	2	1	-
70 >	14.3 >	Superficial geology (10k) >	1	1	1	0	-

71	14.4	Landslip (10k)	0	0	0	0	-
72 >	14.5 >	Bedrock geology (10k) >	2	0	1	2	-
73 >	14.6 >	Bedrock faults and other linear features (10k) >	0	0	0	3	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
74 >	15.1 >	50k Availability >	Identified (within 500m)				
75	15.2	Artificial and made ground (50k)	0	0	0	0	-
75	15.3	Artificial ground permeability (50k)	0	0	-	-	-
76 >	15.4 >	Superficial geology (50k) >	1	1	1	0	-
77 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
77	15.6	Landslip (50k)	0	0	0	0	-
77	15.7	Landslip permeability (50k)	None (within 50m)				
78 >	15.8 >	Bedrock geology (50k) >	2	0	1	2	-
79 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
79 >	15.10 >	Bedrock faults and other linear features (50k) >	0	0	0	3	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
80 >	16.1 >	BGS Boreholes >	4	1	4	-	-
Page	Section	Natural ground subsidence >					
82 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
83 >	17.2 >	Running sands >	Very low (within 50m)				
84 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
85 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
86 >	17.5 >	Landslides >	Very low (within 50m)				
87 >	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
89	18.1	BritPits	0	0	0	0	-
90 >	18.2 >	Surface ground workings >	0	0	8	-	-
90 >	18.3 >	Underground workings >	0	0	0	0	11
91	18.4	Underground mining extents	0	0	0	0	-
91	18.5	Historical Mineral Planning Areas	0	0	0	0	-



91	18.6	Non-coal mining	0	0	0	0	0
92	18.7	JPB mining areas	None (within 0m)				
92	18.8	The Coal Authority non-coal mining	0	0	0	0	-
92	18.9	Researched mining	0	0	0	0	-
92	18.10	Mining record office plans	0	0	0	0	-
93	18.11	BGS mine plans	0	0	0	0	-
93 >	18.12 >	Coal mining >	Identified (within 0m)				
93	18.13	Brine areas	None (within 0m)				
93	18.14	Gypsum areas	None (within 0m)				
93	18.15	Tin mining	None (within 0m)				
94	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes >	On site	0-50m	50-250m	250-500m	500-2000m
95 >	19.1 >	Natural cavities >	0	0	0	1	-
96	19.2	Mining cavities	0	0	0	0	0
96	19.3	Reported recent incidents	0	0	0	0	-
96	19.4	Historical incidents	0	0	0	0	-
97	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
98 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
100 >	21.1 >	BGS Estimated Background Soil Chemistry >	3	2	-	-	-
100	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
101	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects >	On site	0-50m	50-250m	250-500m	500-2000m
102	22.1	Underground railways (London)	0	0	0	-	-
102	22.2	Underground railways (Non-London)	0	0	0	-	-
103	22.3	Railway tunnels	0	0	0	-	-
103 >	22.4 >	Historical railway and tunnel features >	0	0	2	-	-
103	22.5	Royal Mail tunnels	0	0	0	-	-



103	22.6	Historical railways	0	0	0	-	-
104	22.7	Railways	0	0	0	-	-
104	22.8	Crossrail 1	0	0	0	0	-
104	22.9	Crossrail 2	0	0	0	0	-
104	22.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 18/10/2022

Site Area: 1.93ha



Recent site history - 2019 aerial photograph



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Capture Date: 22/04/2019

Site Area: 1.93ha



Recent site history - 2015 aerial photograph



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Capture Date: 11/06/2015

Site Area: 1.93ha



Recent site history - 2009 aerial photograph

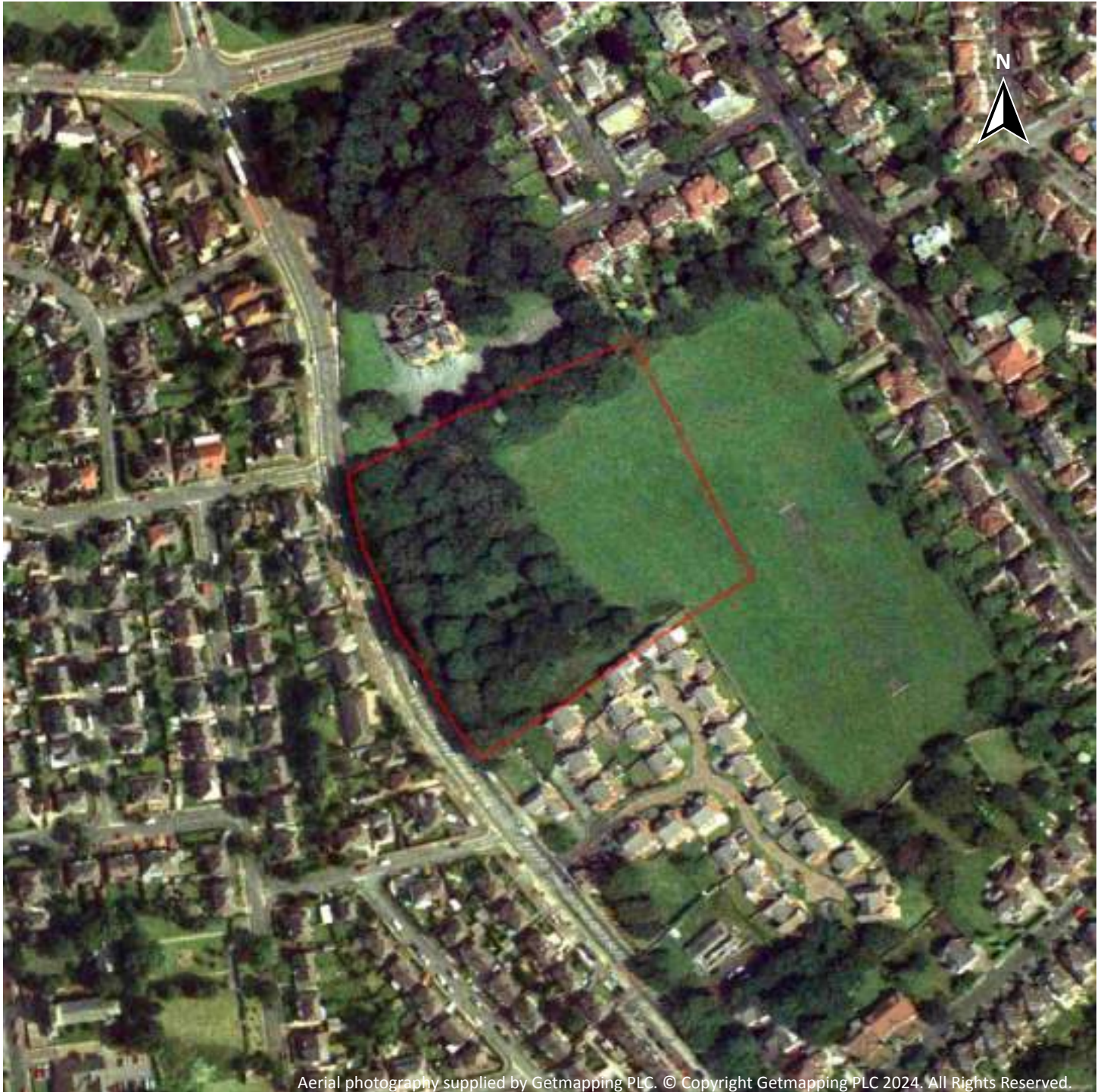


Capture Date: 02/06/2009

Site Area: 1.93ha



Recent site history - 2000 aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2024. All Rights Reserved.

Capture Date: 27/06/2000

Site Area: 1.93ha



OS MasterMap site plan



Site Area: 1.93ha



1 Past land use



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- 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

16

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

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

ID	Location	Land use	Dates present	Group ID
A	171m SW	Unspecified Ground Workings	1956 - 1977	733050



ID	Location	Land use	Dates present	Group ID
A	172m SW	Unspecified Ground Workings	1985	778108
2	226m N	Railway Sidings	1932	641692
B	339m NE	Electricity Substation	1977 - 1985	728792
5	376m SE	Police Station	1891 - 1907	696556
6	410m W	Ice House	1851	664449
C	415m SW	Unspecified Ground Workings	1932	759475
C	415m SW	Unspecified Ground Workings	1915	765835
E	432m SE	Nursery	1915	773484
E	437m SE	Nursery	1923	768222
7	438m S	Unspecified Ground Workings	1907	648330
F	441m SE	Unspecified Heap	1891	651088
8	447m S	Nursery	1851	679989
9	450m SE	Unspecified Ground Workings	1938	648334
F	453m SE	Unspecified Ground Workings	1907	648333
E	486m E	Nursery	1915	785744

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

1

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

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

ID	Location	Land use	Dates present	Group ID
A	186m SW	Unspecified Tank	1909 - 1922	93251

This data is sourced from Ordnance Survey / Groundsure.



1.3 Historical energy features

Records within 500m

9

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

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

ID	Location	Land use	Dates present	Group ID
1	140m E	Electricity Substation	1951 - 1997	50899
A	165m SW	Electricity Substation	1952 - 1967	48086
A	171m SW	Electricity Substation	1951	56089
A	175m SW	Electricity Substation	1997	54768
3	326m N	Electricity Substation	1951	50099
B	336m NE	Electricity Substation	1975 - 1992	55426
4	344m S	Electricity Substation	1997	45767
D	418m NW	Electricity Substation	1990	57603
D	424m NW	Electricity Substation	1951 - 1993	48018

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.



1.5 Historical garages

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

0

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

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



2 Past land use - un-grouped



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

2.1 Historical industrial land uses

Records within 500m

21

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

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

ID	Location	Land Use	Date	Group ID
B	171m SW	Unspecified Ground Workings	1977	733050
B	172m SW	Unspecified Ground Workings	1985	778108
B	177m SW	Unspecified Ground Workings	1968	733050



ID	Location	Land Use	Date	Group ID
B	177m SW	Unspecified Ground Workings	1956	733050
1	226m N	Railway Sidings	1932	641692
D	339m NE	Electricity Substation	1985	728792
D	339m NE	Electricity Substation	1977	728792
E	376m SE	Police Station	1891	696556
E	378m SE	Police Station	1907	696556
3	410m W	Ice House	1851	664449
F	415m SW	Unspecified Ground Workings	1932	759475
F	415m SW	Unspecified Ground Workings	1915	765835
H	432m SE	Nursery	1915	773484
H	437m SE	Nursery	1923	768222
4	438m S	Unspecified Ground Workings	1907	648330
I	441m SE	Unspecified Heap	1891	651088
5	447m S	Nursery	1851	679989
6	450m SE	Unspecified Ground Workings	1938	648334
I	453m SE	Unspecified Ground Workings	1907	648333
J	486m E	Nursery	1923	768222
J	486m E	Nursery	1915	785744

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

2

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

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

ID	Location	Land Use	Date	Group ID
B	186m SW	Unspecified Tank	1909	93251
B	186m SW	Unspecified Tank	1922	93251



This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	18
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Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

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

ID	Location	Land Use	Date	Group ID
A	140m E	Electricity Substation	1952	50899
A	140m E	Electricity Substation	1967	50899
A	140m E	Electricity Substation	1997	50899
A	140m E	Electricity Substation	1951	50899
B	165m SW	Electricity Substation	1952	48086
B	165m SW	Electricity Substation	1967	48086
B	171m SW	Electricity Substation	1951	56089
B	175m SW	Electricity Substation	1997	54768
C	326m N	Electricity Substation	1951	50099
C	327m N	Electricity Substation	1951	50099
D	336m NE	Electricity Substation	1992	55426
D	336m NE	Electricity Substation	1975	55426
2	344m S	Electricity Substation	1997	45767
G	418m NW	Electricity Substation	1990	57603
G	424m NW	Electricity Substation	1951	48018
G	424m NW	Electricity Substation	1951	48018
G	424m NW	Electricity Substation	1969	48018
G	425m NW	Electricity Substation	1993	48018

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)
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

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

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

3.2 Historical landfill (BGS records)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m**0**

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m**0**

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

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

3.5 Historical waste sites

Records within 500m**0**

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

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

3.6 Licensed waste sites

Records within 500m**0**

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

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

3.7 Waste exemptions

Records within 500m**1**

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

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

ID	Location	Site	Reference	Category	Sub-Category	Description
1	375m W	56 Parkway MANCHESTER M25 0JB	EPR/TF0200LV /A001	Treating waste exemption	Non- Agricultural Waste Only	Sorting and de-naturing of controlled drugs for disposal



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



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- △ Current or recent petrol stations
- Licensed pollutant release (Part A(2)/B)

4.1 Recent industrial land uses

Records within 250m

8

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 26 >](#)

ID	Location	Company	Address	Activity	Category
1	75m NE	Alef Security & Electrical	1, Oakfield, Prestwich, Greater Manchester, M25 ODP	Electronic Equipment	Industrial Products
2	90m NW	Gas Governor	Greater Manchester, M25	Gas Features	Infrastructure and Facilities
3	120m S	Rendex	9, East Meade, Prestwich, Greater Manchester, M25 OJJ	Construction Completion Services	Construction Services



ID	Location	Company	Address	Activity	Category
4	145m E	Electricity Sub Station	Greater Manchester, M25	Electrical Features	Infrastructure and Facilities
A	157m S	Manchester Jewish Advertiser	57, Bury Old Road, Prestwich, Greater Manchester, M25 0FG	Published Goods	Industrial Products
5	188m SW	Electricity Sub Station	Greater Manchester, M25	Electrical Features	Infrastructure and Facilities
6	207m W	Smart Wheels	51, Bishops Road, Prestwich, Greater Manchester, M25 0HS	Metals Manufacturers, Fabricators and Stockholders	Industrial Products
7	238m S	Innovate	43, Bury Old Road, Prestwich, Greater Manchester, M25 0EY	Baking and Confectionery	Foodstuffs

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	1
----------------------------	----------

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on [page 26 >](#)

ID	Location	Company	Address	LPG	Status
B	364m SE	UNBRANDED	19, Bury Old Road, Prestwich, Manchester, Greater Manchester, M25 0EY	Not Applicable	Obsolete

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	3
---------------------	---

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

Features are displayed on the Current industrial land use map on [page 26 >](#)

ID	Location	Address	Details	
A	156m S	B.B Cleaners, 57 Bury Old Road, Prestwich, M25 0FG	Process: Dry Cleaning Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
B	357m S	Esso, Bury Old Road, M25 0FG	Process: Petrol Vapour Recovery Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
B	357m S	Aleef Garages Ltd (Texaco Prestwich), 19 Bury Old Road, Prestwich, M25 0EY	Process: Unloading of Petrol into Storage at Service Stations Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

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

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m**0**

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

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m**0**

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

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

4.15 Pollutant release to public sewer

Records within 500m**0**

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m**0**

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

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

4.17 List 2 Dangerous Substances

Records within 500m**0**

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

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



4.18 Pollution Incidents (EA/NRW)

Records within 500m**0**

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

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

4.19 Pollution inventory substances

Records within 500m**0**

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

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

4.20 Pollution inventory waste transfers

Records within 500m**0**

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

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

4.21 Pollution inventory radioactive waste

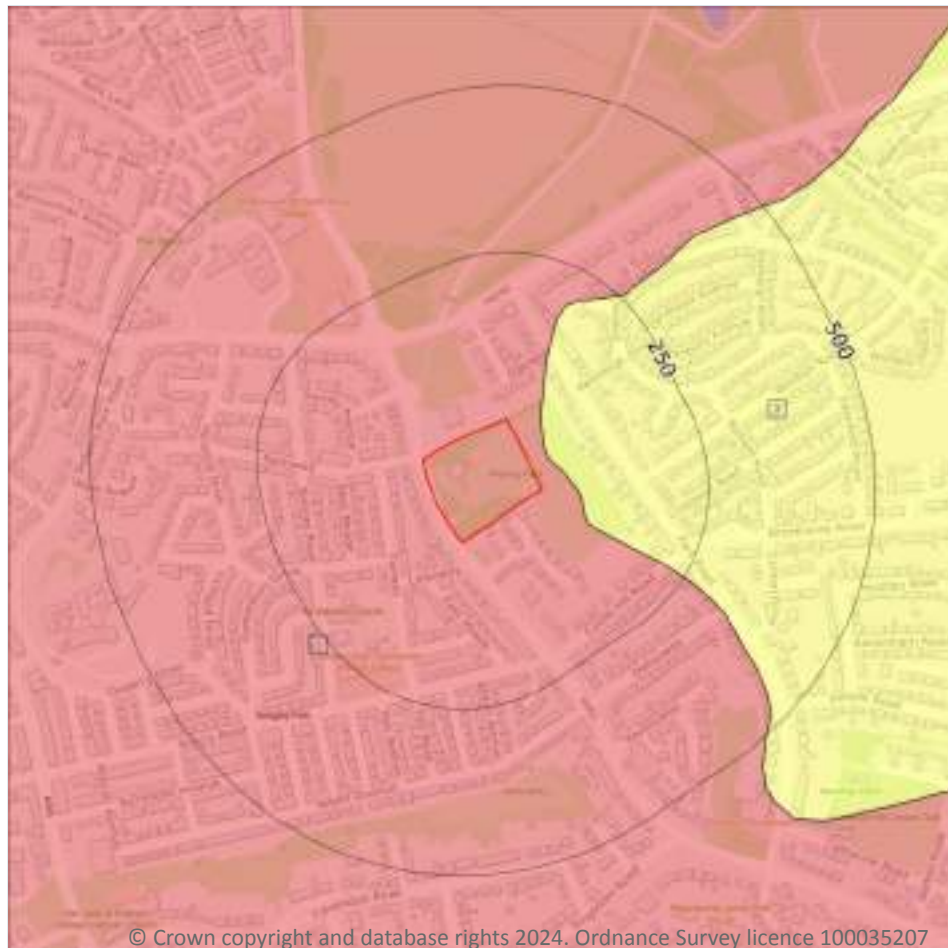
Records within 500m**0**

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

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



5 Hydrogeology - Superficial aquifer



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

5.1 Superficial aquifer

Records within 500m

2

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 32](#) >

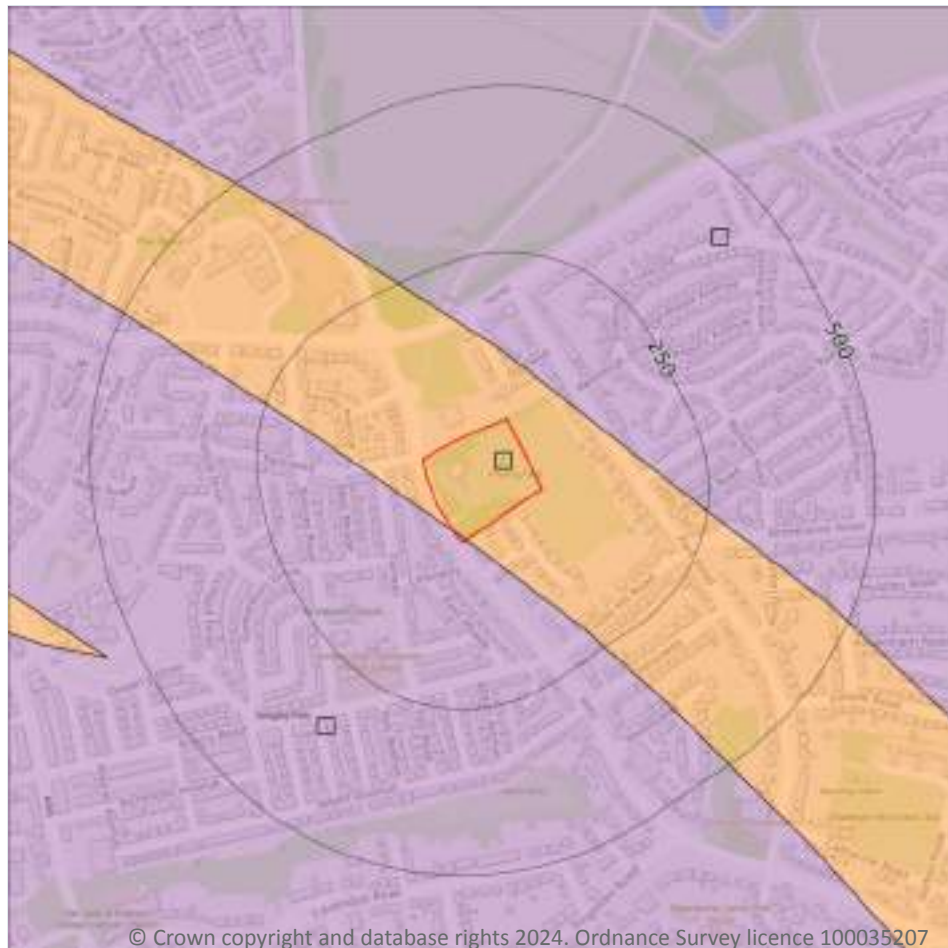
ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	30m E	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type



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



Bedrock aquifer



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

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5.2 Bedrock aquifer

Records within 500m

3

Aquifer status of groundwater held within bedrock geology.

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

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

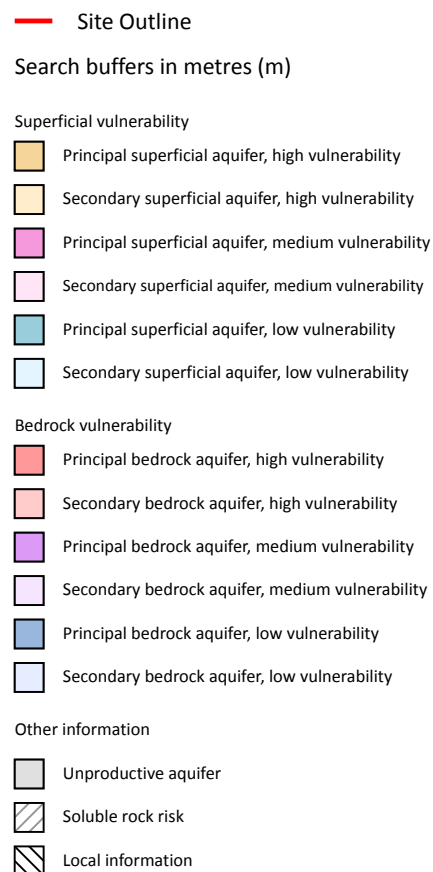
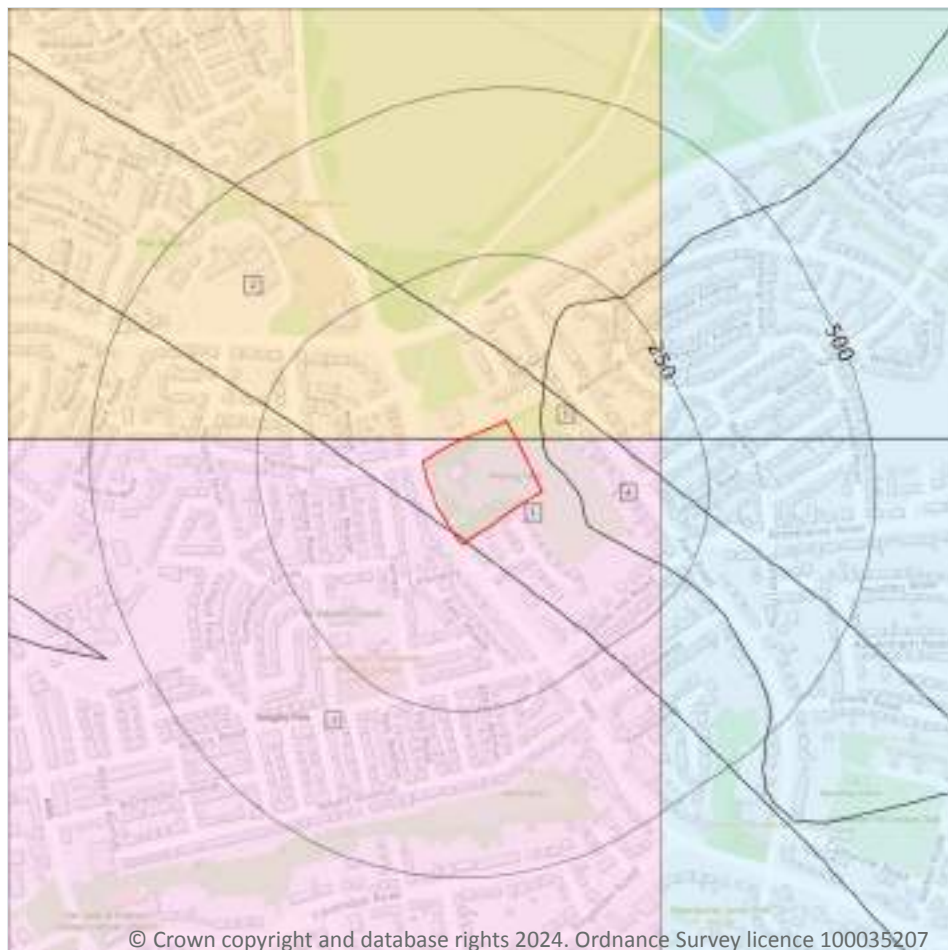


ID	Location	Designation	Description
3	76m NE	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

5

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 36](#) >



ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
3	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures
4	29m E	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
5	35m NE	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site

0

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
Polygon features
- Drinking water abstraction licences
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m

6

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 39](#) >

ID	Location	Details	
-	1297m SW	Status: Active Licence No: 2569004050 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT PRESTWICH GOLF CLUB, HILTON LANE, PRESTWICH Data Type: Point Name: PRESTWICH GOLF COMPANY LTD Easting: 381580 Northing: 402180	Annual Volume (m ³): 12000 Max Daily Volume (m ³): 100 Original Application No: 7320 Original Start Date: 05/10/1995 Expiry Date: - Issue No: 101 Version Start Date: 03/10/2006 Version End Date: -
-	1297m SW	Status: Historical Licence No: 2569004050 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PRESTWICH GOLF CLUB, HILTON LANE, PRESTWICH" Data Type: Point Name: PRESTWICH GOLF CLUB Easting: 381580 Northing: 402180	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 05/10/1995 Expiry Date: - Issue No: 100 Version Start Date: 25/03/1997 Version End Date: -
-	1791m E	Status: Active Licence No: 2569005044 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLES X 2 AT BLACKLEY MANCHESTER Data Type: Point Name: British Cables Company Limited Easting: 384610 Northing: 402990	Annual Volume (m ³): 477271 Max Daily Volume (m ³): 1363 Original Application No: - Original Start Date: 22/01/1966 Expiry Date: - Issue No: 106 Version Start Date: 11/10/2018 Version End Date: -
-	1791m E	Status: Historical Licence No: 2569005044 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: 2 BOREHOLES AT BLACKLEY, MANCHESTER 121 Data Type: Point Name: BELDEN (UK) LTD Easting: 384610 Northing: 402990	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 22/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 03/04/2000 Version End Date: -



ID	Location	Details	
-	1791m E	Status: Historical Licence No: 2569005044 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "2 BOREHOLES AT BLACKLEY, MANCHESTER \$121" Data Type: Point Name: BELDEN (UK) LTD Easting: 384610 Northing: 402990	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 22/01/1966 Expiry Date: - Issue No: 103 Version Start Date: 16/11/2001 Version End Date: -
-	1791m E	Status: Historical Licence No: 2569005044 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: 2 BOREHOLES AT BLACKLEY, MANCHESTER \$121 Data Type: Point Name: BELDEN (UK) LTD Easting: 384610 Northing: 402990	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 22/01/1966 Expiry Date: - Issue No: 103 Version Start Date: 16/11/2001 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	0
-----------------------------	----------

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

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

5.8 Potable abstractions

Records within 2000m	0
-----------------------------	----------

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

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



5.9 Source Protection Zones

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

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

5.10 Source Protection Zones (confined aquifer)

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

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



6 Hydrology



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

6.1 Water Network (OS MasterMap)

Records within 250m

0

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

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

0

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

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site

1

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

Features are displayed on the Hydrology map on [page 43](#) >

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River	Irwell (Croal to Irk)	GB112069061451	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 43](#) >

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	1331m SW	River	Irwell (Croal to Irk)	GB112069061451 ↗	Moderate	Fail	Moderate	2019

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

6.5 WFD Groundwater bodies

Records on site

1

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



Features are displayed on the Hydrology map on [page 43](#) >

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

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



7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m**0**

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

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

7.2 Historical Flood Events

Records within 250m**0**

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

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

7.3 Flood Defences

Records within 250m**0**

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

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



7.4 Areas Benefiting from Flood Defences

Records within 250m

0

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

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

7.5 Flood Storage Areas

Records within 250m

0

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

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



River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

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

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

7.7 Flood Zone 3

Records within 50m

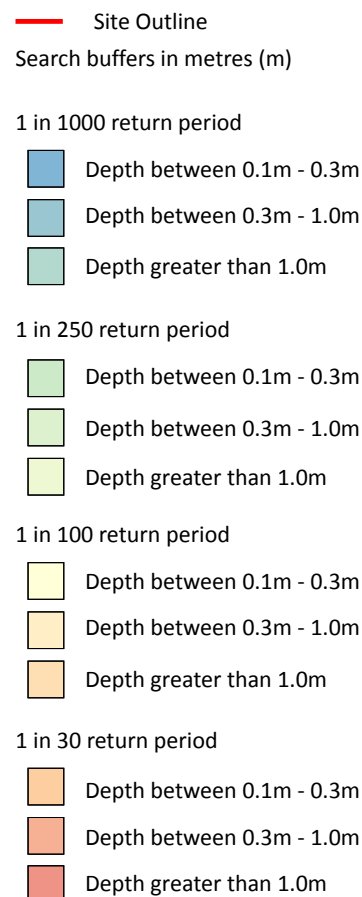
0

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

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



8 Surface water flooding



8.1 Surface water flooding

Highest risk on site

1 in 30 year, 0.3m - 1.0m

Highest risk within 50m

1 in 30 year, 0.3m - 1.0m

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

Features are displayed on the Surface water flooding map on [page 49](#) >

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



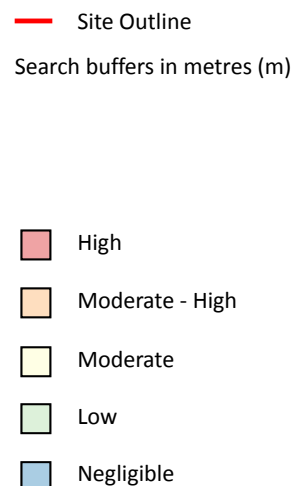
The table below shows the maximum flood depths for a range of return periods for the site.

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

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

Moderate

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 51](#) >

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- + Local Nature Reserves (LNR)
- ▨ Designated Ancient Woodland
- ▨ Green Belt

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10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m**0**

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m**0**

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m**0**

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m**0**

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m

5

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 52 >](#)

ID	Location	Name	Data source
2	993m SW	Kersal Moor	Natural England
3	1085m E	Blackley Forest	Natural England
4	1144m S	The Cliff / Kersal Dale	Natural England
-	1486m S	The Cliff / Kersal Dale	Natural England
9	1577m NE	Blackley Forest	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m

1

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 52 >](#)

ID	Location	Name	Woodland Type
5	1268m NW	Prestwich Clough 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

4

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

Features are displayed on the Environmental designations map on [page 52 >](#)

ID	Location	Name	Local Authority name
1	171m N	Merseyside and Greater Manchester	Manchester
6	1268m NW	Merseyside and Greater Manchester	Bury
-	1340m N	Merseyside and Greater Manchester	Bury
-	1653m N	Merseyside and Greater Manchester	Bury

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

3

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

Location	Name	Type	NVZ ID	Status
On site	Irwell / Man. Ship Canal (Kearsley to Irlam Locks) NVZ	Surface Water	643	Existing



Location	Name	Type	NVZ ID	Status
40m NE	River Irk (Moston Brook to River Irwell) NVZ	Surface Water	638	Existing
1272m E	River Irk (Moston Brook to River Irwell) NVZ	Surface Water	638	Existing

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



SSSI Impact Zones and Units



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

10.17 SSSI Impact Risk Zones

Records on site

1

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

Features are displayed on the SSSI Impact Zones and Units map on [page 58](#) >

ID	Location	Type of developments requiring consultation
1	On site	Air pollution - Livestock & poultry units with floorspace > 500m ² , slurry lagoons & digestate stores > 4000m ² . Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

0

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

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



11 Visual and cultural designations



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

11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

2

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

Features are displayed on the Visual and cultural designations map on [page 60](#) >

ID	Location	Name	Grade	Reference Number	Listed date
2	201m N	Grand Lodge To South South West Of Heaton Hall With Screen Walls And Wall Attached To West	II*	1200812	25/02/1952
3	209m SW	Church Of St Gabriel	II	1376148	20/08/1998

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



11.5 Conservation Areas

Records within 250m

0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

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

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

11.7 Registered Parks and Gardens

Records within 250m

1

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.

Features are displayed on the Visual and cultural designations map on [page 60](#) >

ID	Location	Name	Grade
1	184m N	Heaton Park	II

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



12 Agricultural designations



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

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12.1 Agricultural Land Classification

Records within 250m

1

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

Features are displayed on the Agricultural designations map on [page 63](#) >

ID	Location	Classification	Description
1	On site	Urban	-

This data is sourced from Natural England.



12.2 Open Access Land

Records within 250m**0**

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

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

12.3 Tree Felling Licences

Records within 250m**0**

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m**0**

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

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m**0**

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

This data is sourced from Natural England.



13 Habitat designations



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

13.1 Priority Habitat Inventory

Records within 250m

16

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

Features are displayed on the Habitat designations map on [page 65](#) >

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



ID	Location	Main Habitat	Other habitats
A	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	53m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
5	104m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	175m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
7	178m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
8	184m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
9	195m N	No main habitat but additional habitats present	Additional: DWOOD (INV 50%)
10	206m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
11	208m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
12	209m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
13	234m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

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

This data is sourced from Natural England.



13.4 Limestone Pavement Orders

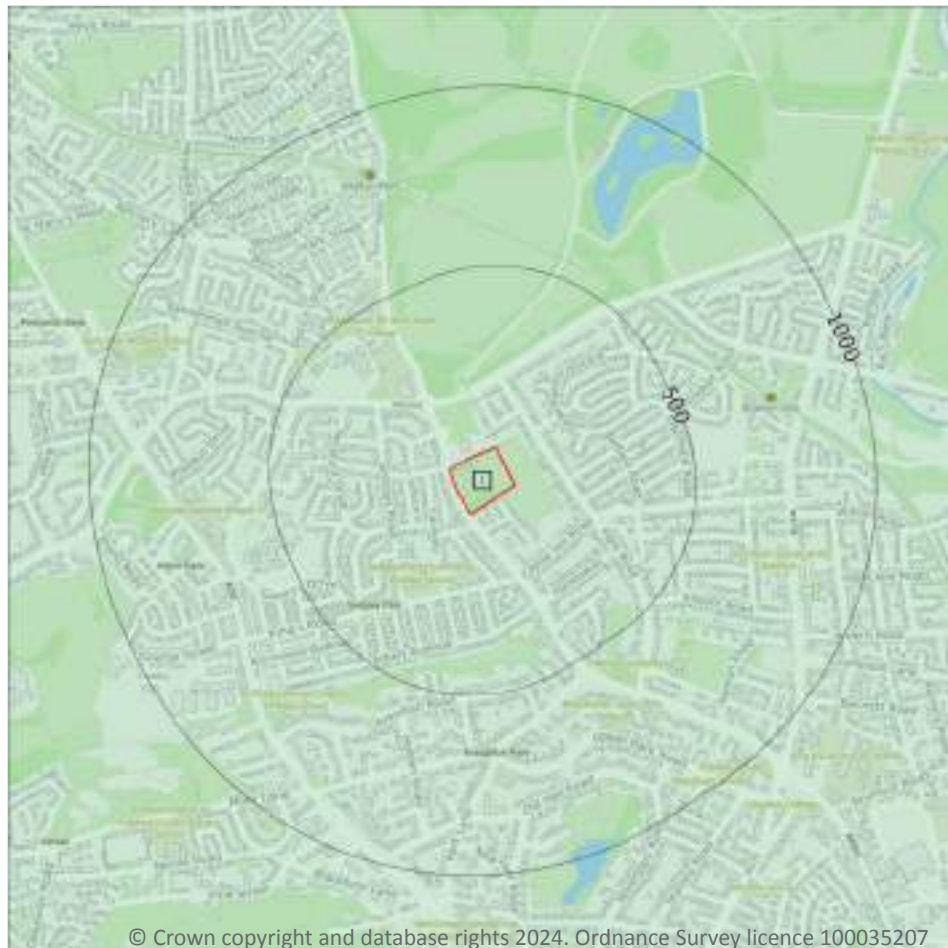
Records within 250m**0**

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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



- Site Outline
- Search buffers in metres (m)
- Full coverage
 - Partial coverage
 - No coverage

14.1 10k Availability

Records within 500m

1

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

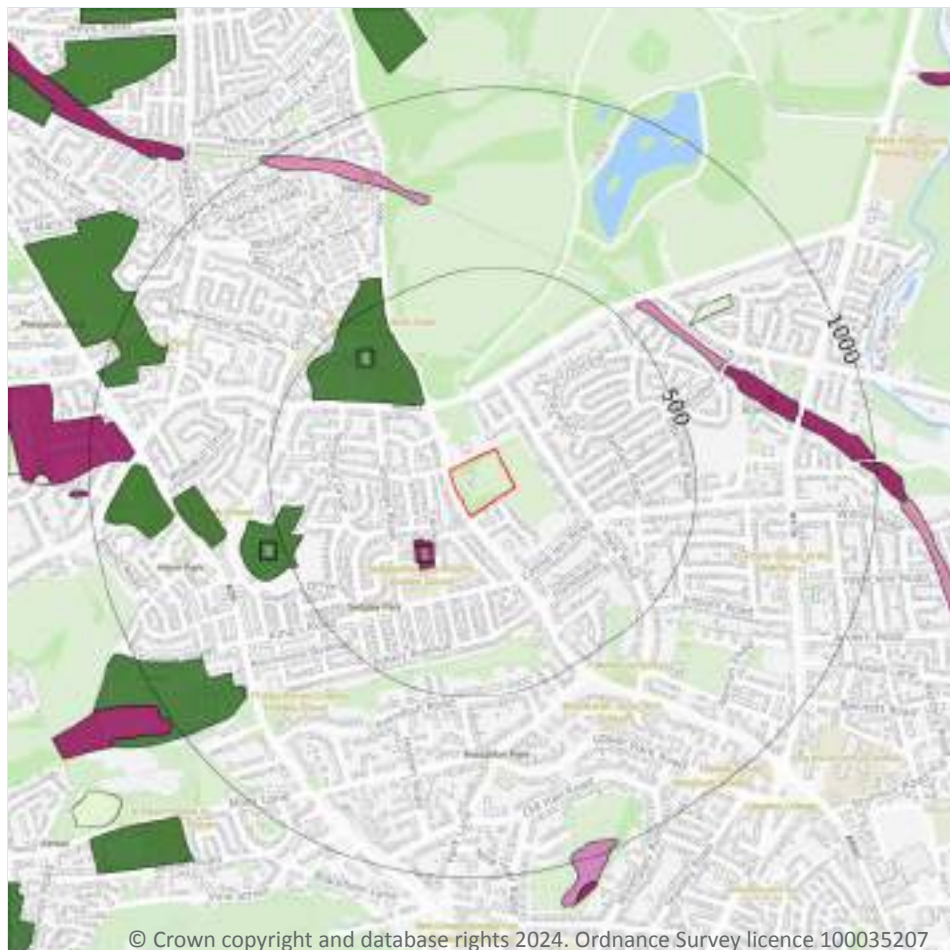
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 68](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SD80SW

This data is sourced from the British Geological Survey.



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



- Site Outline**
- Search buffers in metres (m)**
- Reclaimed ground
 - Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m

3

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

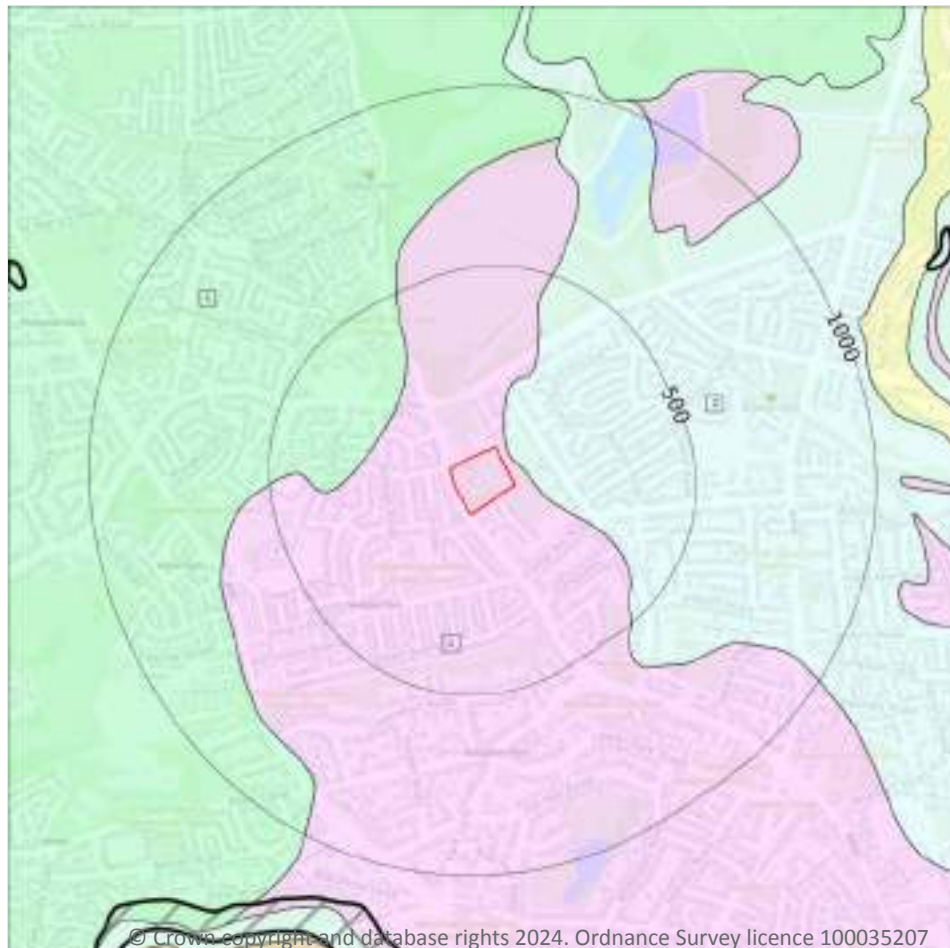
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 69](#) >

ID	Location	LEX Code	Description	Rock description
1	130m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	196m NW	LSGR-ARTDP	Landscaped Ground (Undivided)	Artificial Deposit
3	418m W	LSGR-ARTDP	Landscaped Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



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14.3 Superficial geology (10k)

Records within 500m

3

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 70 >](#)

ID	Location	LEX Code	Description	Rock description
1	On site	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
2	24m NE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
3	213m NW	HMGDD-XSV	Hummocky (moundy) Glacial Deposits, Devensian - Sand And Gravel	Sand And Gravel



This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

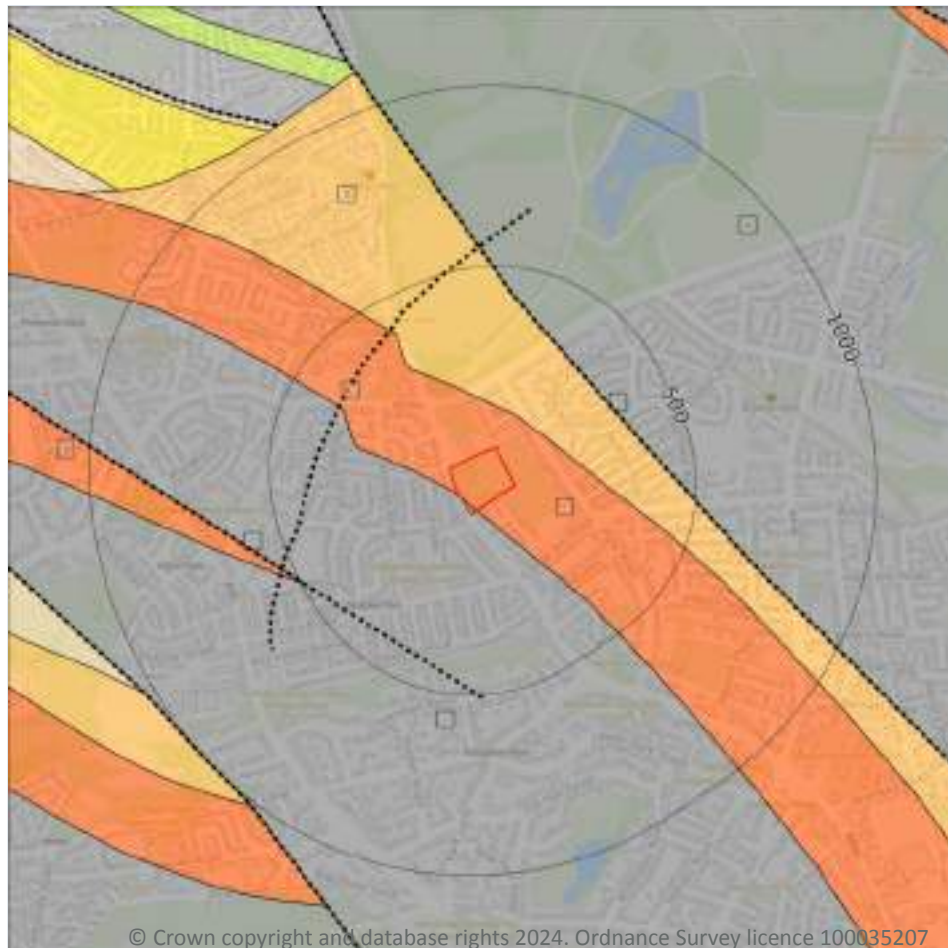
0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

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

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

14.5 Bedrock geology (10k)

Records within 500m

5

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 72 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
2	On site	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]
3	103m NE	CS-SDST	Collyhurst Sandstone Formation - Sandstone	Cisuralian Epoch



ID	Location	LEX Code	Description	Rock age
4	314m NE	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
8	489m SW	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

3

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 72 >](#)

ID	Location	Category	Description
5	314m NE	FAULT	Normal fault, inferred; crossmarks on downthrow side
6	351m NW	LANDFORM	Buried channel or valley margin
7	411m SW	FAULT	Normal fault, inferred; crossmarks on downthrow side

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



- Site Outline
- Search buffers in metres (m)
- ☐ Geological map tile

15.1 50k Availability

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 74](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	EW085_manchester_v4

This data is sourced from the British Geological Survey.



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

15.2 Artificial and made ground (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

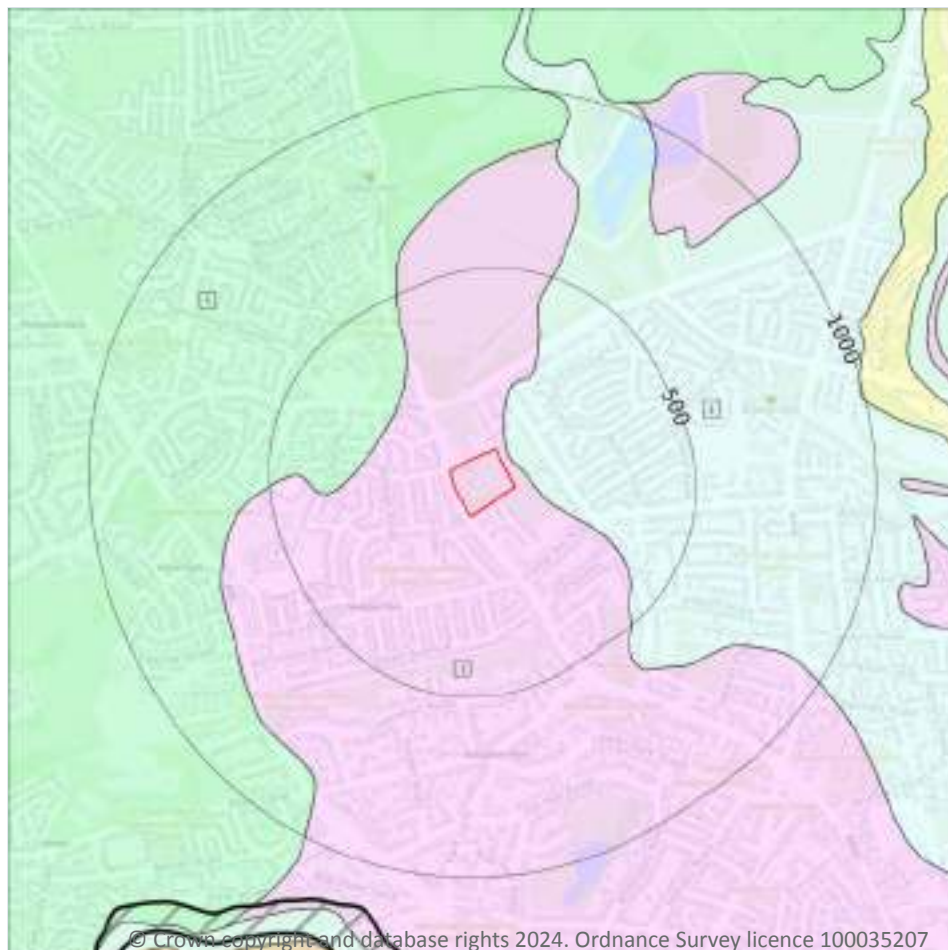
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



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15.4 Superficial geology (50k)

Records within 500m

3

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 76 >](#)

ID	Location	LEX Code	Description	Rock description
1	On site	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
2	24m NE	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
3	213m NW	HMGDD-XSV	HUMMOCKY (MOUNDY) GLACIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL



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	Very High	High
24m NE	Mixed	High	Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m

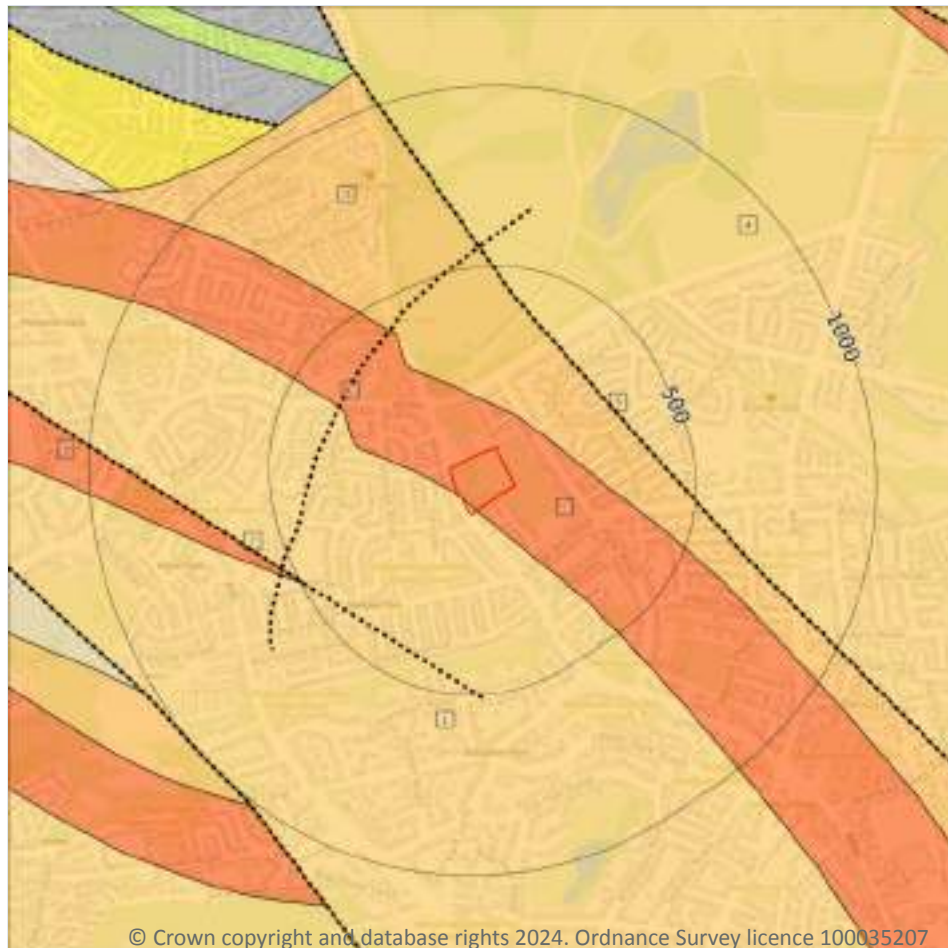
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

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

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

15.8 Bedrock geology (50k)

Records within 500m

5

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 78 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	CHES-SDST	CHESTER FORMATION - SANDSTONE	OLENEKIAN
2	On site	MM-MDST	MANCHESTER MARLS FORMATION - MUDSTONE	-
3	103m NE	CS-SDST	COLLYHURST SANDSTONE FORMATION - SANDSTONE	-
4	314m NE	CHES-SDST	CHESTER FORMATION - SANDSTONE	OLENEKIAN



ID	Location	LEX Code	Description	Rock age
8	489m SW	MM-MDST	MANCHESTER MARLS FORMATION - MUDSTONE	-

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	2
---------------------------	----------

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

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

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	3
----------------------------	----------

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

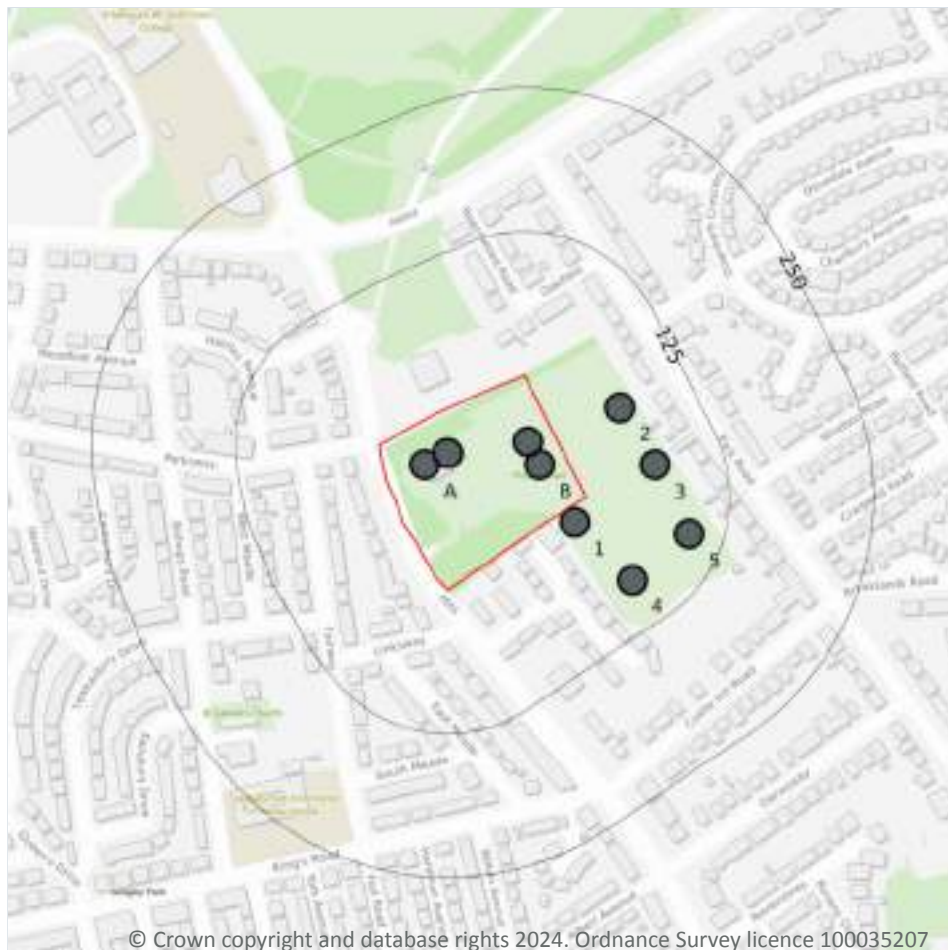
Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 78 >](#)

ID	Location	Category	Description
5	314m NE	FAULT	Fault, inferred
6	350m NW	LANDFORM	Approximate margin of buried (superficial deposit-filled) channel or valley
7	411m SW	FAULT	Fault, inferred

This data is sourced from the British Geological Survey.



16 Boreholes



- Site Outline**
- Search buffers in metres (m)**
- Confidential
 - 0 - 10m
 - 10 - 30m
 - 30m+
 - Unknown

16.1 BGS Boreholes

Records within 250m

9

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 80](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	On site	382680 402950	BROOKLANDS PLAYING FIELD PRESTWICH 1	-	Y	N/A
A	On site	382700 402960	BROOKLANDS PLAYING FIELD PRESTWICH 2	-	Y	N/A
B	On site	382780 402950	BROOKLANDS PLAYING FIELD PRESTWICH 3	-	Y	N/A



ID	Location	Grid reference	Name	Length	Confidential	Web link
B	On site	382770 402970	BROOKLANDS PLAYING FIELD PRESTWICH WS6	-	Y	N/A
1	13m SE	382810 402900	BROOKLANDS PLAYING FIELD PRESTWICH WS4	-	Y	N/A
2	62m NE	382850 403000	BROOKLANDS PLAYING FIELD PRESTWICH WS5	-	Y	N/A
3	66m E	382880 402950	BROOKLANDS PLAYING FIELD PRESTWICH WS3	-	Y	N/A
4	82m SE	382860 402850	BROOKLANDS PLAYING FIELD PRESTWICH WS2	-	Y	N/A
5	96m E	382910 402890	BROOKLANDS PLAYING FIELD PRESTWICH WS1	-	Y	N/A

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



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

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17.1 Shrink swell clays

Records within 50m

2

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 82 >](#)

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
24m NE	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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

17.2 Running sands

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Running sands map on [page 83](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



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

17.3 Compressible deposits

Records within 50m

1

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

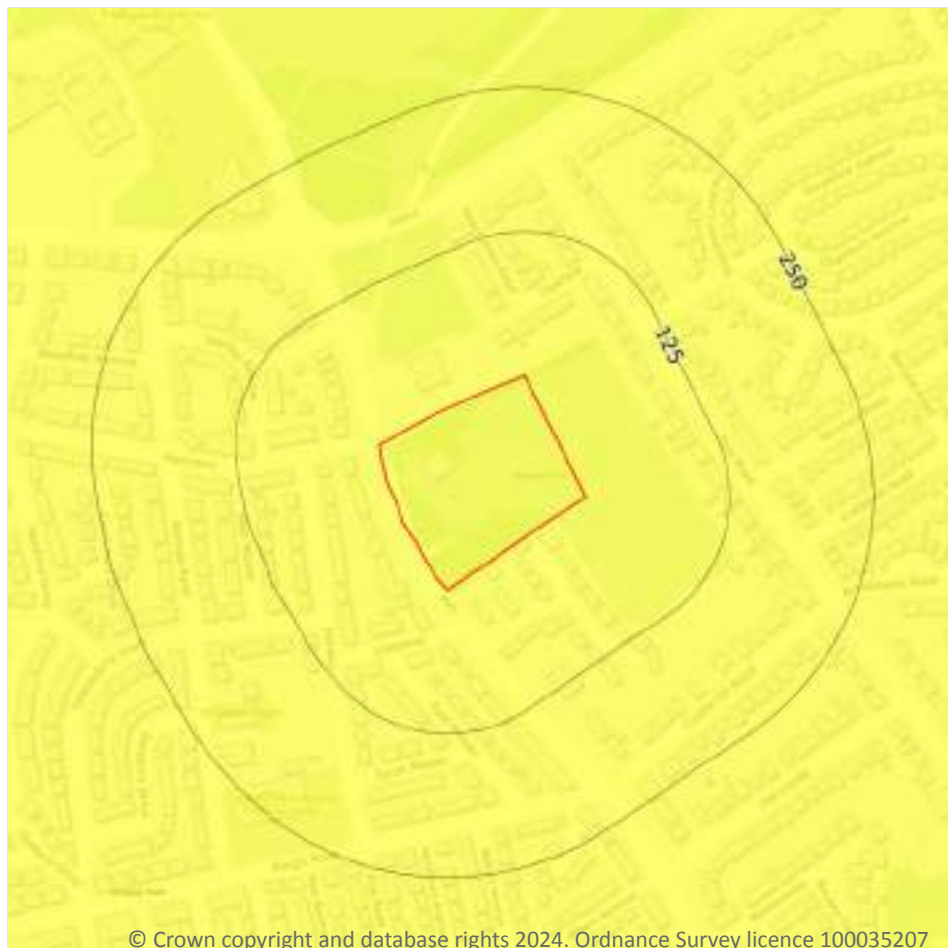
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 84](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



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

17.4 Collapsible deposits

Records within 50m

1

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

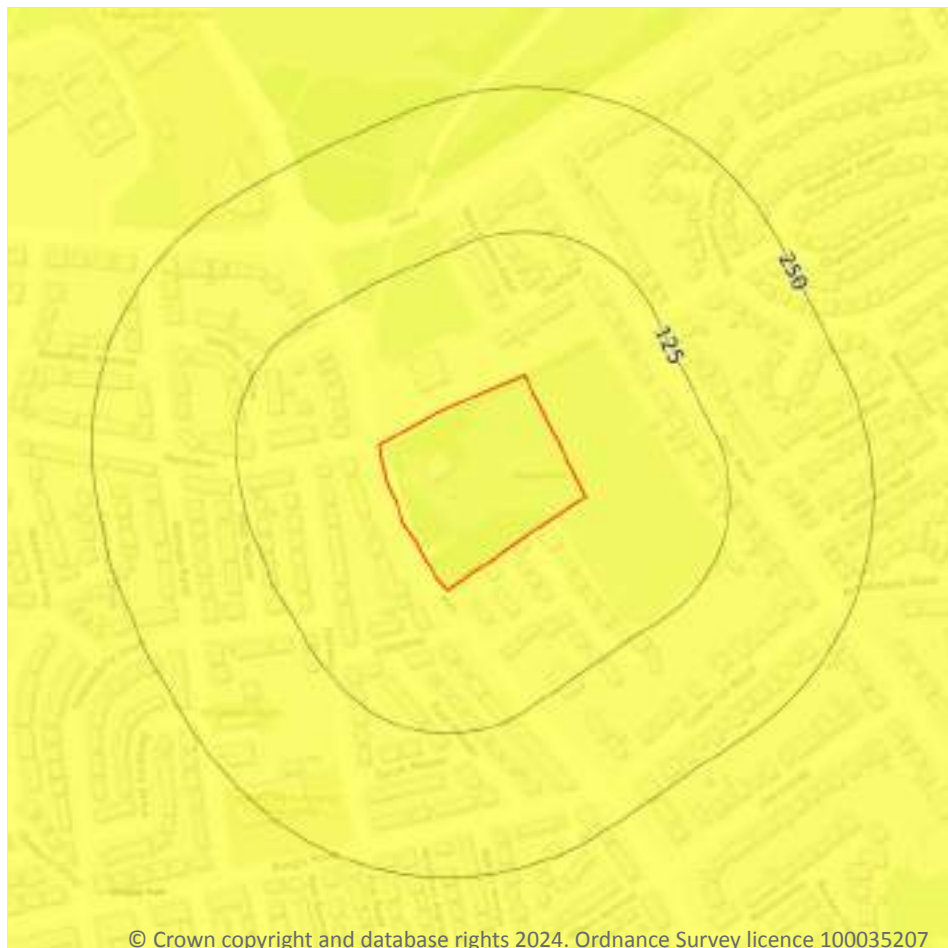
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 85 >](#)

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



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

17.5 Landslides

Records within 50m

1

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

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

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



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

17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 87](#)

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



This data is sourced from the British Geological Survey.



18 Mining and ground workings



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

18.1 BritPits

Records within 500m

0

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

This data is sourced from the British Geological Survey.



18.2 Surface ground workings

Records within 250m

8

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 89 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
A	78m E	Ponds	1851	1:10560
A	81m E	Ponds	1891	1:10560
B	171m SW	Unspecified Ground Workings	1977	1:10000
B	172m SW	Unspecified Ground Workings	1985	1:10000
B	177m SW	Unspecified Ground Workings	1968	1:10560
B	177m SW	Unspecified Ground Workings	1956	1:10560
C	235m W	Pond	1851	1:10560
C	235m W	Pond	1891	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

11

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 89 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
J	537m NE	Tunnel	1932	1:10560
J	537m NE	Tunnel	1915	1:10560
J	537m NE	Tunnel	1907	1:10560
J	538m NE	Tunnel	1938	1:10560
J	538m NE	Tunnel	1923	1:10560
J	539m NE	Tunnel	1891	1:10560
J	546m NE	Tunnel	1985	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
J	546m NE	Tunnel	1977	1:10000
J	546m NE	Tunnel	1968	1:10560
J	546m NE	Tunnel	1956	1:10560
-	775m N	Tunnel	1891	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

0

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

This data is sourced from the British Geological Survey.



18.7 JPB mining areas

Records on site

0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m

0

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

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m

0

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

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m

0

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

This data is sourced from Groundsure.



18.11 BGS mine plans

Records within 500m**0**

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

This data is sourced from Groundsure.

18.12 Coal mining

Records on site**1**

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

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site**0**

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

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

18.14 Gypsum areas

Records on site**0**

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site**0**

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.



18.16 Clay mining

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

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

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



19 Ground cavities and sinkholes



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- Mining cavities
- Reported recent incidents
- Historical incidents
- BGS karst database (Point)
- BGS karst database (Line)
- BGS karst database (Area)

19.1 Natural cavities

Records within 500m

1

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.

Features are displayed on the Ground cavities and sinkholes map on [page 95](#) >

ID	Location	Details	Source
1	285m S	Type: Piping in non-cohesive deposits Superficial Geology: - Bedrock Geology: Sherwood Sandstone Group	Simple Bibliography: - Full Bibliography: HARRISON, C. AND PETCH, J.R., Ground movements in part of Salford and Bury, Greater Manchester - Aspects of urban geomorphology., University of Salford., 1984; Discussion papers in geography Confidentiality: Data source can be revealed, data can be used freely

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.

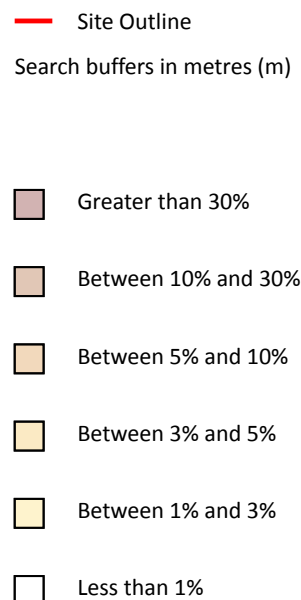
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 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 98](#) >

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

5

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 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
30m E	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
36m NE	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 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

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m

2

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 102 >](#)

Location	Land Use	Year of mapping	Mapping scale
226m N	Railway Sidings	1932	10560
231m N	Railway Sidings	1932	2500

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m

0

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

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m

0

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

This data is sourced from OpenStreetMap.



22.7 Railways

Records within 250m**0**

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 1

Records within 500m**0**

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

This data is sourced from publicly available information by Groundsure.

22.9 Crossrail 2

Records within 500m**0**

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

This data is sourced from publicly available information by Groundsure.

22.10 HS2

Records within 500m**0**

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

This data is sourced from HS2 Ltd.

Data providers

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

Terms and conditions

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



APPENDIX 6 - Coal Authority Report



The Coal
Authority

CON29M

coal mining report

BURY MBC, MANCHESTER MACCABI COMMUNITY AND SPORTS CLUB, BURY
OLD ROAD, PRESTWICH, BURY, M25 0EG



Known or potential coal mining risks

Future underground coal mining	Page 4
Withdrawal of support	Page 6



Further action

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

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



Professional opinion

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

Your reference: **ORD-24036-3996**
Our reference: **51003405289001**
Date: **14 February 2024**

Client name:
James Doyle

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



Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is
on the coalfield



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



Accessibility

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

Professional opinion



Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority.

MINE GAS: Please note, if there are no recorded instances of mine gas within the enquiry boundary, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed. In these instances, the Coal Authority recommends that a more detailed Gas Risk Assessment is undertaken by a competent assessor.

If you are looking to develop, or undertake works, within a coal mining development high risk area your Local Authority planning department may require a Coal Mining Risk Assessment to be undertaken by a qualified mining geologist or engineer. Should you require any additional information then please contact the Coal Authority on **0345 762 6848** or email **cmra@coal.gov.uk**.

Detailed findings

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

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1 Past underground coal mining

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

2 Present underground coal mining

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

3 Future underground coal mining

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

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

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

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

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

4 Mine entries

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

5 Coal mining geology

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

6 Past opencast coal mining

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

7 Present opencast coal mining

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

8 Future opencast coal mining

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

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

9 Coal mining subsidence

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

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

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

10 Mine gas

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

11 Hazards related to coal mining

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

12 Withdrawal of support

The property is in an area where a notice to withdraw support was given in 1959.

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

13 Working facilities order

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

14 Payments to owners of former copyhold land

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

Statutory cover



Coal mining subsidence

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

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

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

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



Coal mining hazards

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

Glossary



Key terms

adit - horizontal or sloped entrance to a mine

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

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

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

coal seams - bed of coal of varying thickness

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

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

mine entries - collective name for shafts and adits

mine gas - reports of alleged mine gas emissions received by the Coal Authority within the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded

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

shaft - vertical entry into a mine

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

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

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

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

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

APPENDIX 7 - CIRIA Risk Assessment Methodology

Contaminated Land Risk Assessment

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

Hazard Identification ➡ Hazard Assessment ➡ Risk Estimation ➡ Risk Evaluation

LCRM outlines the framework to be followed for risk assessment in the UK. The framework is designed to be consistent with UK legislation and policies including planning. The starting point of the risk assessment is to identify the context of the problem and the objectives of the process.

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

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

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

The likelihood of an event is classified on a four-point system using the following terms and definitions from CIRIA C552:

- **High likelihood:** There is a pollution linkage and an event appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution;
- **Likely:** There is a pollution linkage and all the elements are present and in the right place, which means it is probable that an event will occur. Circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term;
- **Low likelihood:** There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain even over a longer period such event would take place, and is less likely in the short term;
- **Unlikely:** There is a pollution linkage but circumstances are such that it is improbable the event would occur even in the long term.

The severity is also classified using a system based on CIRIA C552. The terms and definitions are:

- **Severe:** Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. A short-term risk to a particular ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);
Examples – High concentrations of contaminant on surface of recreation area, major spillage of contaminants from site into controlled waters, explosion causing building to collapse;

- **Medium:** Chronic damage to human health ('significant harm' as defined in DETR 2000). Pollution of sensitive water resources. A significant change in a particular ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);
Examples - Concentrations of contaminants exceed the generic assessment criteria, leaching of contaminants from a site to a Principal or Secondary Aquifer, death of species within a designated nature reserve;
- **Mild:** Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000). Damage to sensitive buildings, structures, services or the environment;
Examples – Pollution of non-classified groundwater or damage to buildings rendering it unsafe to occupy.
- **Minor:** harm, not necessarily significant harm, which may result in financial loss or expenditure to resolve. Non-permanent health effects to human health (easily prevented by use of personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.
Examples – Presence of contaminants at such concentrations PPE is required during site work, loss of plants in landscaping scheme or discolouration of concrete.

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

		Consequences			
		Severe	Medium	Mild	Minor
Probability	Highly likely	Very high	High	Moderate	Moderate/low
	Likely	High	Moderate	Moderate/low	Low
	Low likelihood	Moderate	Moderate/low	Low	Very low
	Unlikely	Moderate/low	Low	Very Low	Very low

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

- **Very high:** There is a high probability that severe harm could arise to a designated receptor from an identified hazard or there is evidence that severe harm is currently happening. This risk, if realised, could result in substantial liability. Urgent investigation and remediation are likely to be required;
- **High:** Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation is required and remedial works may be necessary in the short term and are likely over the longer term;
- **Moderate:** It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it would be more likely to be relatively mild. Investigation is normally required to clarify the risk and determine the liability. Some remedial works may be required in the longer term;
- **Low:** It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild;
- **Very Low:** There is a low possibility that harm could arise to a receptor. In the event of such harm being realised, it is not likely to be severe.

APPENDIX 8 - Relevant Contaminated Land Legislation

Legislative Background

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

- The 1995 Environment Act;
- The Contaminated Land (England) Regulations 2000;
- The DETR circular 02/2000 Environmental Protection Act 1990: Part IIA Contaminated Land.

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

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

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

- **Source** - substances that are potential contaminants or pollutants that may cause harm;
- **Pathway** - a potential route by which contaminants can move from the source to the receptor;
- **Receptor** - a receptor that may be harmed, for example the water environment, humans and water.

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

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

Relevant Guidance Documents

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

- LCRM – Model Procedures;
- Contamination and Environmental Matters - Their implications for Property Professionals (2nd Edition RICS Nov 2003);
- Brownfields – Managing the development of previously developed land – A client's guide, CIRIA 2002;
- DEFRA and Environment Agency publications CLR7 – 10, supported by the TOX guides and SGV guides, dated March 2002;
- DETR Circular 02/2000, Contaminated Land: Implementation of Part IIA of the Environmental Protection Act 1990;
- Environment Agency technical advice to third parties on Pollution of Controlled Waters for Part IIA of the EPA1990, May 2002;

Relevant Legislative Documents

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

- The Environment Act (1995);
- The Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance (2012);
- The Environment Protection Act (1990);
- The Contaminated Land (England) Act (2000);
- Contaminated Land (England) Regulations (2012);
- The Water Resources Act (1991);
- The Pollution Prevention and Control (England and Wales) Regulations (2000);
- The Landfill Regulations (England and Wales) Regulations (2002);
- The Landfill (England and Wales) (Amendment) Regulations (2004);
- Health and Safety at Work Act;

APPENDIX 9 - Limitations

Limitations

This contract was completed by Groundtech Consulting on the basis of a defined programme and scope of works and terms and conditions agreed with the client. This report was compiled with due skill and care, taking into consideration the project brief provided, project objectives, agreed scope of works, prevailing site conditions and budget allocation.

Other than that defined in the paragraph above, Groundtech Consulting provides no other accountability or warranty whether express or implied, is made in relation to the services. Unless otherwise agreed this report has been prepared exclusively for the use and reliance of the client in accordance with generally accepted industry practices and for the intended purposes as stated in the agreement under which this work was completed. This report may not be relied upon, or transferred to, by any other party without the written agreement of a Director of Groundtech Consulting. A third party who relies on this report, does so at their own and sole risk and no liability to such parties is provided by Groundtech Consulting.

It is the understanding of Groundtech Consulting that this report is to be used for the intended purpose as set out in the introduction. The purpose was instrumental in determining the scope and level of the services provided. Should the purpose of the report or the proposed end use of the site change, this report will no longer be directly applicable, and its validity readdressed. No reliance upon the report in the revised situation should be assumed by the client without the permission of Groundtech Consulting.

The report was written in 2020, later changes in legislation, statutory requirements and industry best practices have not been considered and this should be allowed for. Ground conditions can also change and should be investigated if there is any significant delay in acting on the findings of this report. The period of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions in this report should not be relied upon in the future without the written confirmation from Groundtech Consulting that it is safe to do so.

The observations and conclusions outlined in this report are based exclusively on the services that were provided as set out in the agreement between the client and Groundtech Consulting.

Groundtech Consulting are not liable for the existence of any condition, the discovery of which would require additional investigation outside the agreed scope of works or core competency. The services provided are based upon Groundtech Consulting observations of existing physical conditions at the site gained from site reconnaissance together with interpretation of information including documentation, obtained from third parties and from the client on the history and usage of the site. The findings and recommendations contained in this report are based in part upon information provided by third parties, and Groundtech Consulting assume the information to be correct.

No responsibility can be accepted for errors for third party information presented in this report. Groundtech Consulting were not authorised to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the services. Groundtech Consulting are not liable for any inaccurate information, misrepresentation of data or conclusions, which may inform the scope of investigation undertaken by Groundtech Consulting and forms the contract with the client.

Where field investigations have been carried out these have been restricted to a level of detail required to achieve the stated objectives of the work. Ground conditions can also be variable due to its heterogeneous properties and as investigation exploratory locations only allow examination of the ground at discrete locations. The potential exists for ground conditions to be encountered which are different to those considered in this report,

particularly between exploratory holes. The extent of the limited area depends on the soil and groundwater conditions, together with other constraints such as the position of any existing structures and underground utilities. Geo-Environmental testing was carried out for a limited number of parameters [as stipulated in the contract] based on an understanding of the available operational and historical information, and it should not be inferred that other chemical species are not present.

The groundwater conditions entered on the exploratory hole records are those observed at the time of investigation. The groundwater level often has not had time to reach equilibrium and a monitoring period is required. Furthermore, groundwater levels are subject to seasonal variation or changes in local drainage conditions and higher groundwater levels may occur at other times of the year than were recorded during this investigation.

Any site drawings provided in this report are not meant to be an accurate base plan, but are preliminary and used to present the general relative locations of features on, and surrounding, the site.

