



Earth Environmental
& Geotechnical

Phase 1 GeoEnvironmental Assessment

Claremont Road

Rusholme

January 2022

On behalf of

RS Drylining MCR

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**CLAREMONT ROAD
RUSHOLME
PHASE I
ENVIRONMENTAL DESK STUDY
FOR
RS DRYLINING MCR**

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Report No. A2212/17

January 2022

Report Title:	Claremont Road, Rusholme Phase I Environmental Desk Study
Report Reference:	A2212/17
Client:	RS Drylining MCR
Issue Date:	15th January 2022
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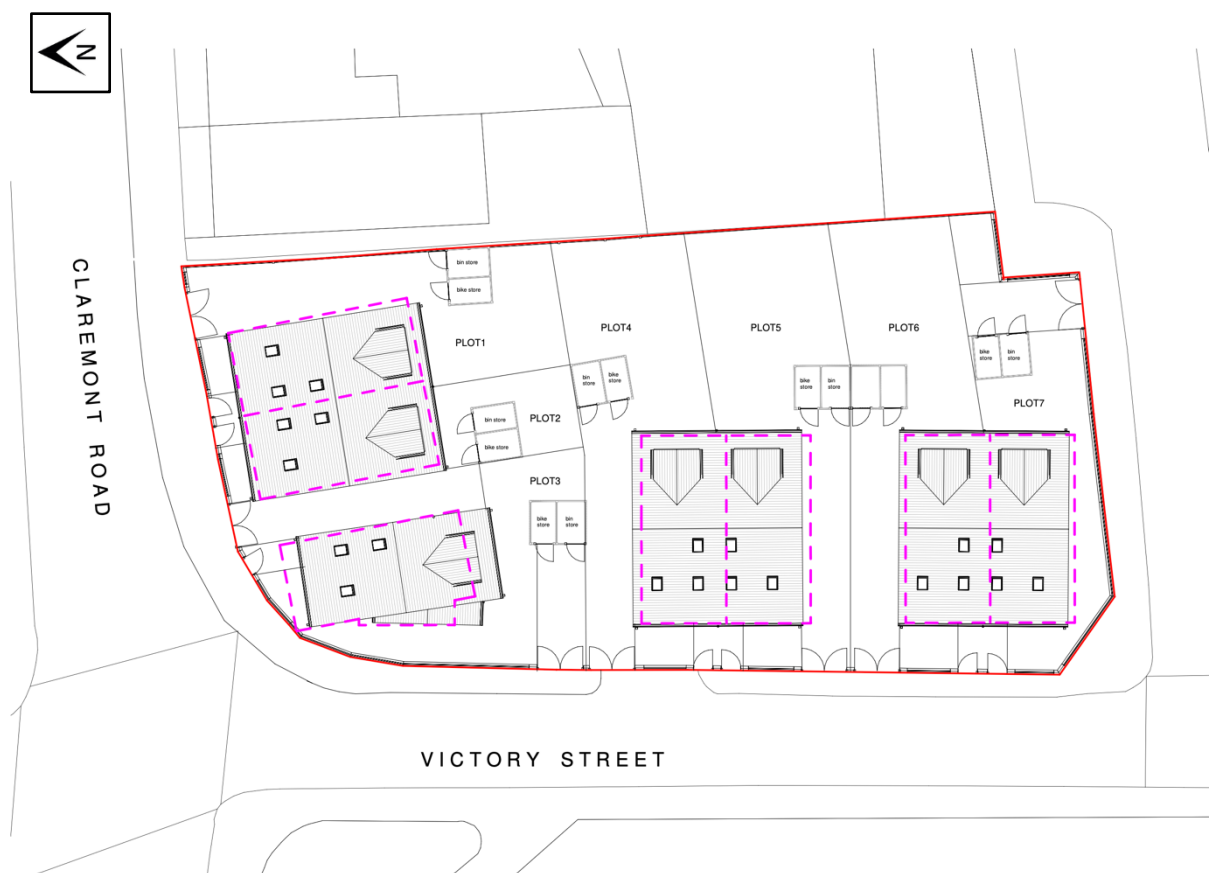
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1.0 INTRODUCTION

Appointment

- 1.1 Earth Environmental & Geotechnical was commissioned by PHA Architects on behalf of RS Drylining MCR (the client) to undertake a Phase I Environmental Desk Study at Claremont Road, Rusholme, Manchester.
- 1.2 The proposal includes the development of seven residential dwellings with private garden areas.

Figure 1 Site Development Plan



Objective

- 1.3 The purpose of the Desk Study is to collate available geological and environmental data for the site (and its environment) and provide a preliminary geotechnical and geo-environmental appraisal, with a site specific conceptual model. This enables a preliminary assessment of geo-environmental risks to be undertaken and, if necessary, provides information for the design of a Phase 2 Ground Investigation.

Scope

1.4 The Phase I Environmental Desk Study comprises of a site reconnaissance visit and a review of the following information sources some of which was provided by the client.

- British Geological Survey online maps.
- Google Earth imagery.
- Environment Agency online mapping data.
- Historical Ordnance Survey maps.
- The site and surrounding areas environmental, geological and mining data presented in the site specific GroundSure Reports (Appendix 1).
- Coal Authority Interactive Viewer.
- Manchester City Council Planning Portal.

2.0 SITE LOCATION AND DESCRIPTION

- 2.1 The site is situated between and bounded by Claremont Road to the north, Victory Street to the west with a park further west, Stenbury Close to the south and residential homes and gardens to the east.
- 2.2 The site is located approximately 3.1km south of the centre of Manchester and 1.25km north of Fallowfield. Access to the site is from the east via Victory Street. The approximate National Grid Reference for the centre of the site is SJ 85087 95107 (X: 385087 Y: 395107) with the closest postcode being M14 5AB.
- 2.3 The site occupies approximately 0.10ha across a rectangular shaped, generally level parcel of land, approximately 50m long and 20m wide.
- 2.4 A location plan is shown as Figure 2, below.

Figure 2 Site Location Plan



Site Utility Services

- 2.5 A site service plan has been not provided by the client. The status of all services should be checked with the statutory providers prior to any development (including site investigation) commencing.

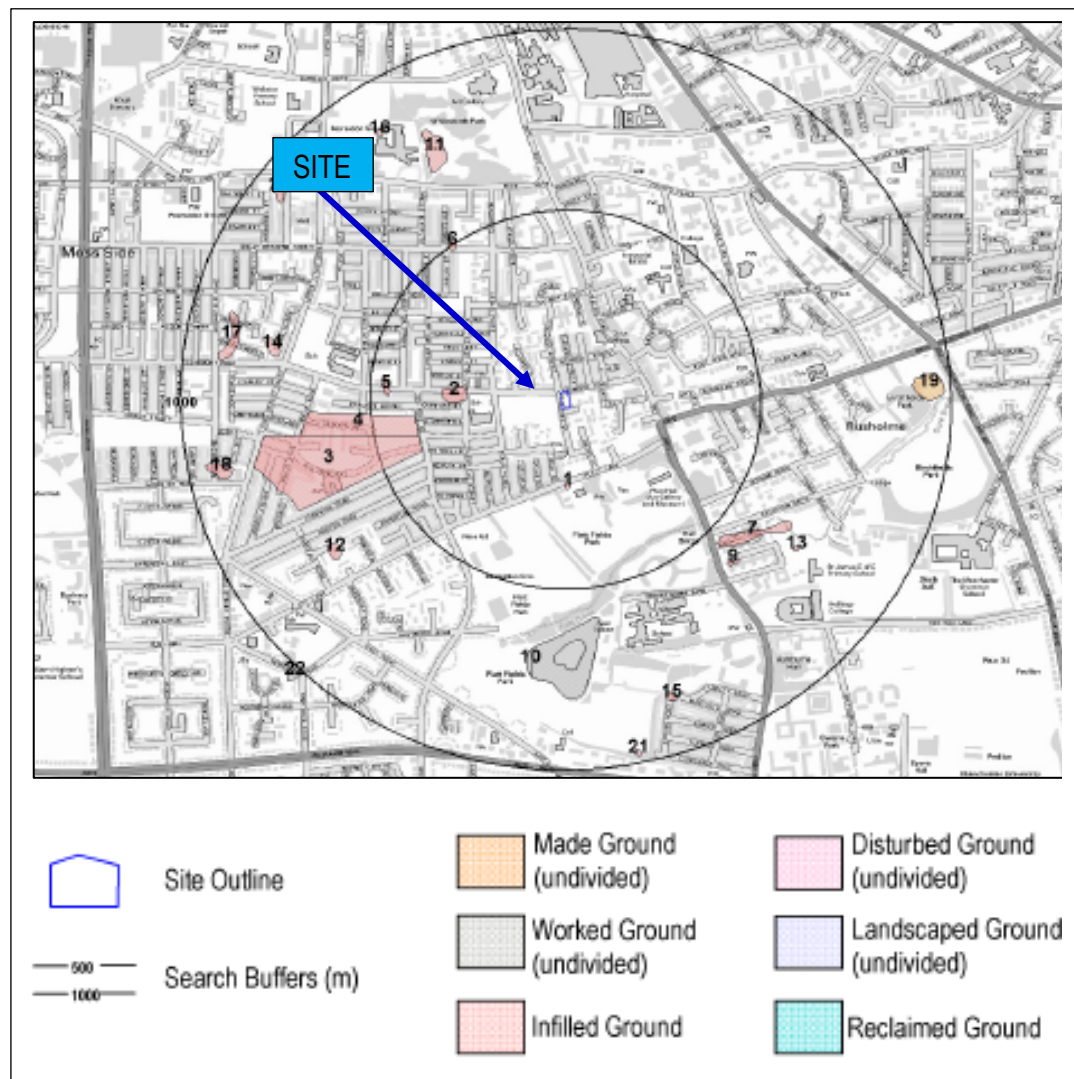
3.0 ENVIRONMENTAL SETTING

- 3.1 The geology of the site is covered by British Geological Survey (BGS) online data and the site specific GroundSure GeoInsight report (Appendix 1).
- 3.2 Environmental conditions are covered by Environment Agency (EA) and British Geological Survey (BGS) online data, and the site specific GroundSure EnviroInsight report (Appendix 1).

Geology

- 3.3 The BGS states that the site is not underlain by any made ground. The nearest record of artificial ground is located 202m south of the site. A copy of the artificial ground map is included below as Figure 3.

Figure 3 Artificial Ground Map



- 3.4 The site is underlain by Devensian Till superficial deposits.
- 3.5 The superficial deposits are underlain by the Chester Pebble Beds Formation consisting of sandstone, fine to coarse grained, commonly pebbly, with conglomerates and sporadic siltstones.
- 3.6 There are no records of geological faults within 500m of the site boundary.
- 3.7 There are no records of landslips within 500m of the site boundary.
- 3.8 There are 10no. borehole records identified within 250m of the site, with the nearest 17m south west of the site. The nearest borehole proved clay to the base of the borehole at 5m.
- 3.9 The site is in an area where the hazard rating is negligible or very low with regards to, landslides, shrink-swell clays, ground dissolution of rocks, natural subsidence, collapsible deposits, compressible deposits and running sands.

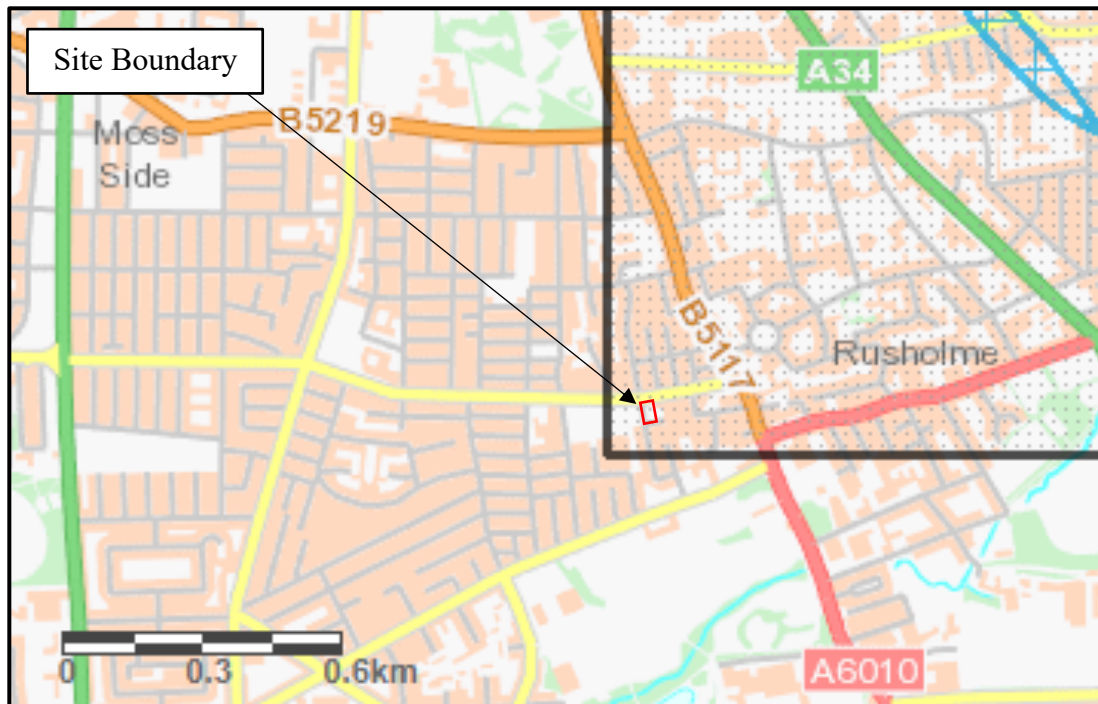
Ground Workings

- 3.10 There are no records of historical surface ground working features identified within 250m of the site boundary.
- 3.11 There are no records of historical underground working features identified within 1km of the site boundary.
- 3.12 There is 1no. current ground working feature identified 539m west of the site with a ceased status.
- 3.13 There are no historical railway features recorded within 250m of the site.
- 3.14 There are no historical railway lines or other tunnels within 250m of the site.
- 3.15 There are no current active railway features within 250m of the site boundary.
- 3.16 The site is not within 5km of the route of the High Speed 2 or Crossrail 1 rail projects.
- 3.17 There are no underground railway lines identified within 250m of the site.

Mining and Other Underground Workings

- 3.18 There are no historical mining records within 1km of the site
- 3.19 There is 1no. record of coal mining onsite although according to the Coal Authority Interactive Viewer, the site is not located within a coal mining development high risk area and there are no mine entries nearby.

Figure 3 Coal Mining Development High Risk Area



- 3.20 There are no non-coal mining areas located within 1km of the site.
- 3.21 There are no areas of gypsum extraction, brine extraction, tin mining or clay mining within 1km of the site.
- 3.22 There are no non-coal cavities or natural cavities identified within 1km of the site.
- 3.23 There are no historical underground working features identified within 1km of the site.

Radon Potential

- 3.24 The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level and therefore no radon protection measures are necessary.

Hydrogeology and Hydrology

- 3.25 The underlying superficial Devensian Till deposits are classified by the Environment Agency (EA) as a Secondary (undifferentiated) Aquifer with a mixed flow type and high maximum and low minimum permeability. The BGS states the following:

'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.'

- 3.26 The underlying Chester Formation (mixed flow type, moderate minimum and high maximum) is classified by the Environment Agency (EA) as a Principal Aquifer. The BGS states the following:

'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.'

- 3.27 The EA classifies the groundwater vulnerability and soil leaching potential on site as HU for major aquifer with high leaching potential, where the BGS states:

'Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information'

- 3.28 There are 13no. historical and active groundwater abstraction licence within 2km of the site. The nearest is located 1.4km north west of the site for general cooling.
- 3.29 There is no surface water abstraction license within 2km of the site.
- 3.30 There are no portable water abstraction licences within 2km of the site.
- 3.31 There is one groundwater Source Protection Zone 3 recorded located onsite.
- 3.32 The site is not within 500m of a Source Protection Zone within a confined aquifer.
- 3.33 There are 2no. detailed river network records within 500m of the site. The closest record refers to Platt Brook, a primary river 424m south east of the site.
- 3.34 There are no identified surface water features located within 250m of the site.
- 3.35 There is 1no. biological river quality record located 1.18km south west of the site.
- 3.36 There are no chemical river quality records.

Landfill and Waste Management Activity

- 3.37 There are 9no. records of historical potentially infilled land identified within 500m of the site. The closest record is a pond located 79m south west of the site. Other uses include water bodies, brick works, unspecified pits and depository's.
- 3.38 There are no records of EA landfill sites within 1km of the site.
- 3.39 There are no records of historic EA landfill sites within 1.5km of the site.
- 3.40 There are no records of landfills from Local Authority and Historical Mapping Records within 1.5km of the site.
- 3.41 There are no BGS/DoE non-operational landfill sites within 1.5km of the site.
- 3.42 There are no waste treatment, transfer or disposal site within 500m of the study site.
- 3.43 There are 3no. records of Environment Agency/Natural Resources Wales licensed waste sites within 1.5km of the site, the closest being a clinical waste transfer station 836m north of the site.

Industrial Land Use Information

- 3.44 There are 27no. records of historically potentially contaminative uses identified within 500m of the site. There are 4no. records located within 100m of site comprising of police stations and unspecified works. In the vicinity are records for slaughter houses, fire stations, electrical substations, garages, laundries, unspecified factories, brickworks, unspecified works and a depository.
- 3.45 There are 9no. records of current potentially contaminative uses identified within 250m of the site. The nearest record is ATS Euromaster Ltd for vehicle parts and accessories located 161m east of the site. Other records within the vicinity include electrical features, vehicle repair, testing and servicing, jewellery, baking, airline services, unspecified works or factories and food and beverage industry machinery.
- 3.46 There are 11no. records of historical tanks identified within 250m of the site. There are 3no. records located 122m~ north west of the site comprising of tanks dating to 1950. Other records within the vicinity include unspecified tanks.
- 3.47 There are 14no. records of historical energy features identified within 500m of the site, the closest record refers to an electricity substation 154m north east of the site, dated 1950. Other records include electricity substations.
- 3.48 There are no records of historical petrol or fuel sites within 500m of the site.
- 3.49 There are 3no. records of petrol or fuel sites within 500m of the site. The nearest being an open shell garage 427m north.
- 3.50 There are 32no. historical garages and motor vehicle repair sites identified within 500m of the site. The closest is car body work shop located 257m east. Other uses include garages and coach works.
- 3.51 There are no National Grid high voltage underground electricity transmission cables or high pressure gas transmission pipelines within 500m of the site.

Environmental Permits, Incidents and Registers

- 3.52 The Groundsure Report includes records of environmental permits, incidents and registers within 500m of the site, which are summarised in Table 1, below.

Table 1: Environmental Permits, Incidents and Registers within 500m of the site

Historic IPC Authorisations	None
Part A (1) and IPPC Authorised Activities	None
Red List Discharge Consents	None
List 1 Dangerous Substances Inventory Sites	None
List 2 Dangerous Substances Inventory Sites	None
Part A (2) and Part B Activities and Enforcements	5
Category 3 or 4 Radioactive Substance Authorisations	None
Licensed Discharge Consents	1
Water Industry Referrals	None
Planning Hazardous Substance Consents and Enforcements	None
Dangerous or Hazardous (COMAH and NIHHS) Sites	None
National Incidents Recording System (Pollution Incidents), List 2	None
National Incidents Recording System (Pollution Incidents), List 1	None
Sites Determined as Contaminated Land under Part 2A EPA1990	None

3.53 There are 5no. records for Part A (2) and Part B Activities within 500m of the site. The nearest record refers to a Part B petrol vapour recovery process located 309m east.

3.54 There is 1no. Licensed Discharge Consent recorded 284m north of the site for sewage discharges.

Environmentally Sensitive Sites

3.55 There are no Designated Environmentally Sensitive Sites records within 2km of the study site.

Ecology

3.56 It should be noted that an ecological assessment of the site falls outside the brief of this report and that an ecological specialist should be consulted in this regard.

Archaeology

3.57 An archaeological assessment falls outside the brief of this report. Where considered necessary, advice should be sought from an archaeological specialist in this respect.

Potential Flood Risks

- 3.58 Detailed assessment of flood risks is outside the scope of this report. However, the site does not lie within 250m of an Environment Agency Zone 2 (Fluvial/Tidal Models) or within 250m of a zone 3 Fluvial Models) floodplain.
- 3.59 There are no records of flood defences, areas benefitting from flood defences or areas used for flood storage within 250m of the site.
- 3.60 According to the Environment Agency the highest risk of flooding on site is very low.
- 3.61 According to the BGS there are areas within 50m of the site boundary that may be susceptible to clearwater flooding. The highest susceptibility to groundwater flooding is 'potential at surface' and the BGS confidence rating is low. The BGS states:

'The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.'

Previous Site Investigations

- 3.62 Earth Environmental & Geotechnical Ltd are unaware of any previous site investigations.

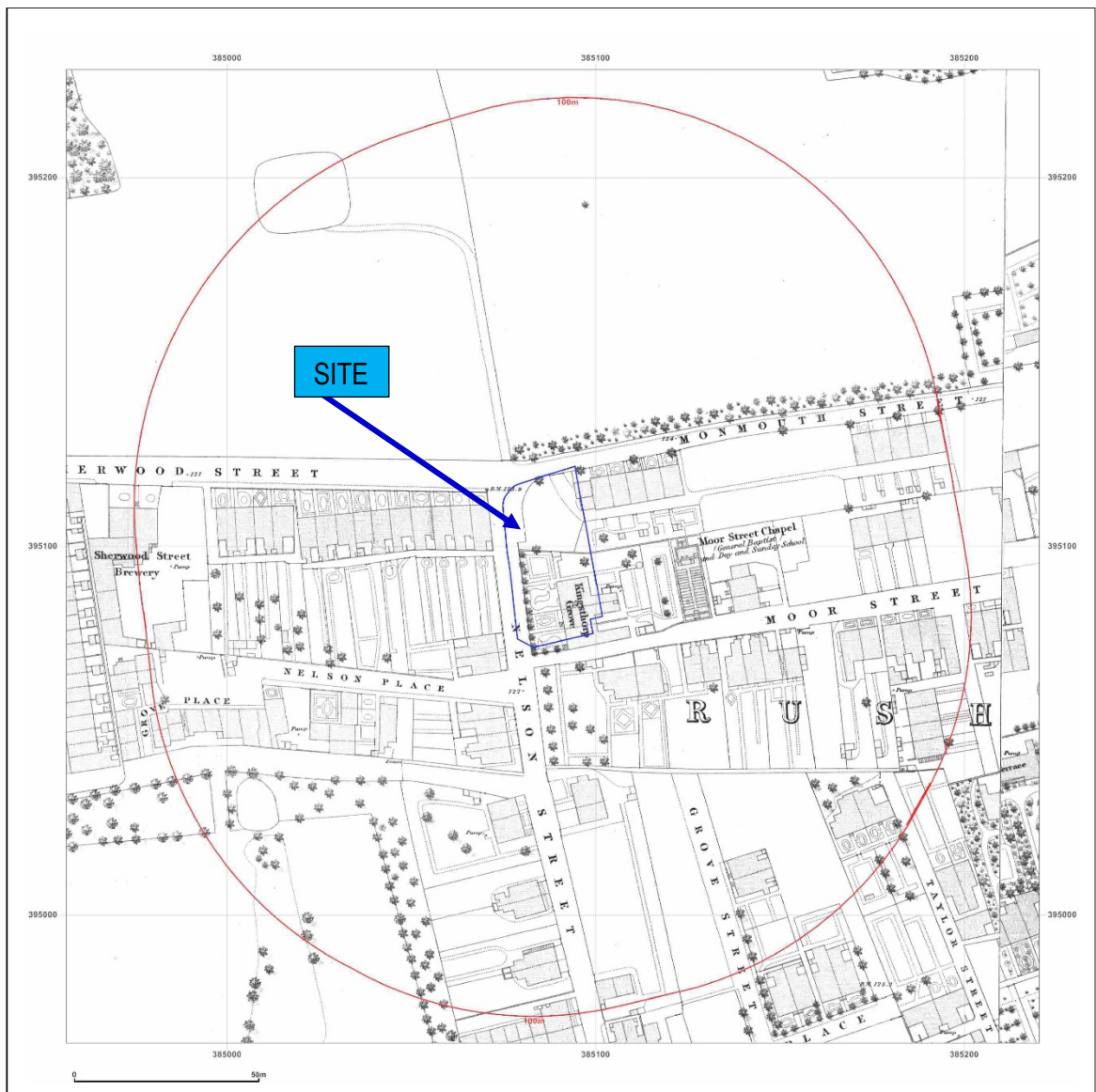
4.0 SITE HISTORY

- 4.1 The historical development of the site has been determined by reference historical plans and Google Earth imagery. The reviewed historical plans comprise only readily available records and may be limited; however, the information available to date indicates that additional searches are unlikely to add to our understanding of the site. The earliest available historical mapping covering the site dates back to 1849.
- 4.2 The site history is summarised in Table 2, below, followed by selected extracts from maps and aerial photographs.

Table 2: Summary of Site History

Date	Site	Surrounding Land Use
1849	The site appears to be undeveloped and unoccupied however the current land use is not clear.	Mixed rural and residential setting with mills or factories in the vicinity. Adjacent to the N boundary is Regents Park. Adjacent to the E boundary are residential homes with parks, agricultural land and homes further to the east. Adjacent to the southern boundary is a residential development. This development ends at a church 250m south of the site before continued by agricultural land. A smaller residential development is located to the west of the site followed by agricultural land with small ponds. The nearest pond located approximately 100m south west. Plat Brook located approximately 500m south of the site running northeast- southwest.
1850	Clearer imagery indicates the site is occupied by Kingsthorpe Grove comprising of three residential dwellings with associated gardens. North of the site is open soft verge.	Moor Street Chapel 50m to the east.
1891, 1892, 1905, 1923	The soft verge area now situates six residential homes with small garden areas.	Large scale development of homes and road infrastructure. A police station has been built adjacent to the northern boundary. (1891-1923) A fire station (1891-1905) and Slaughter house (1891-1934) 50m to the west. Followed by a Brick Works with a reservoir. Churches and schools to the south. A public Hall and Library, churches and playing fields to the east. The creation of a Boating lake in Fallowfield 0.75km south of the site. (1932)
1934, 1938, 1950, 1956, 1961, 1966, 1968, 1972, 1976,	Homes still present south of the site with a new public house development.	More development of homes and road infrastructure. The brick works have been replaced by a football ground.

Figure 6 OS Map Extract 1850



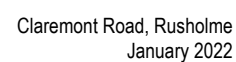


Figure 8 OS Map Extract 1988

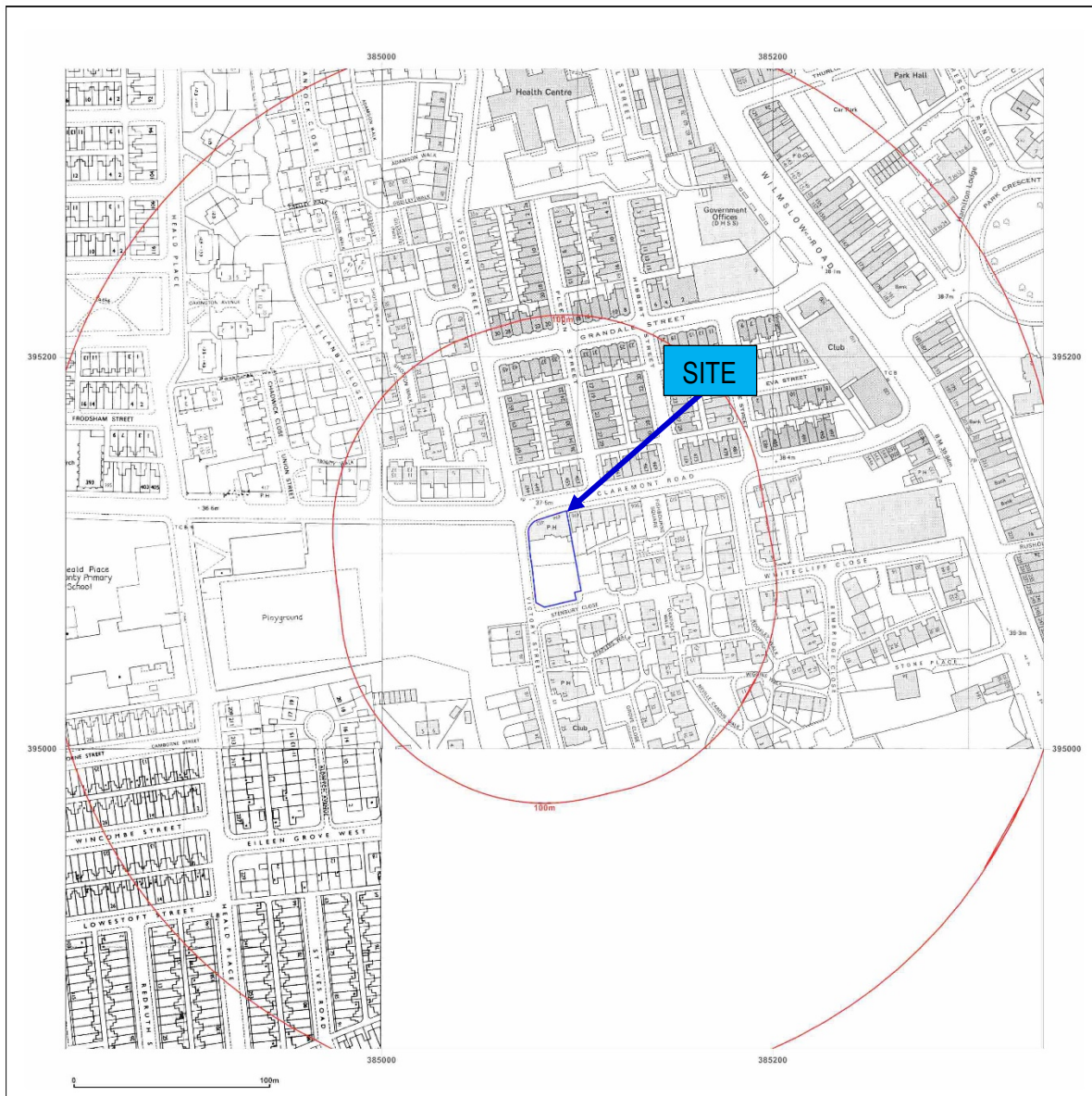
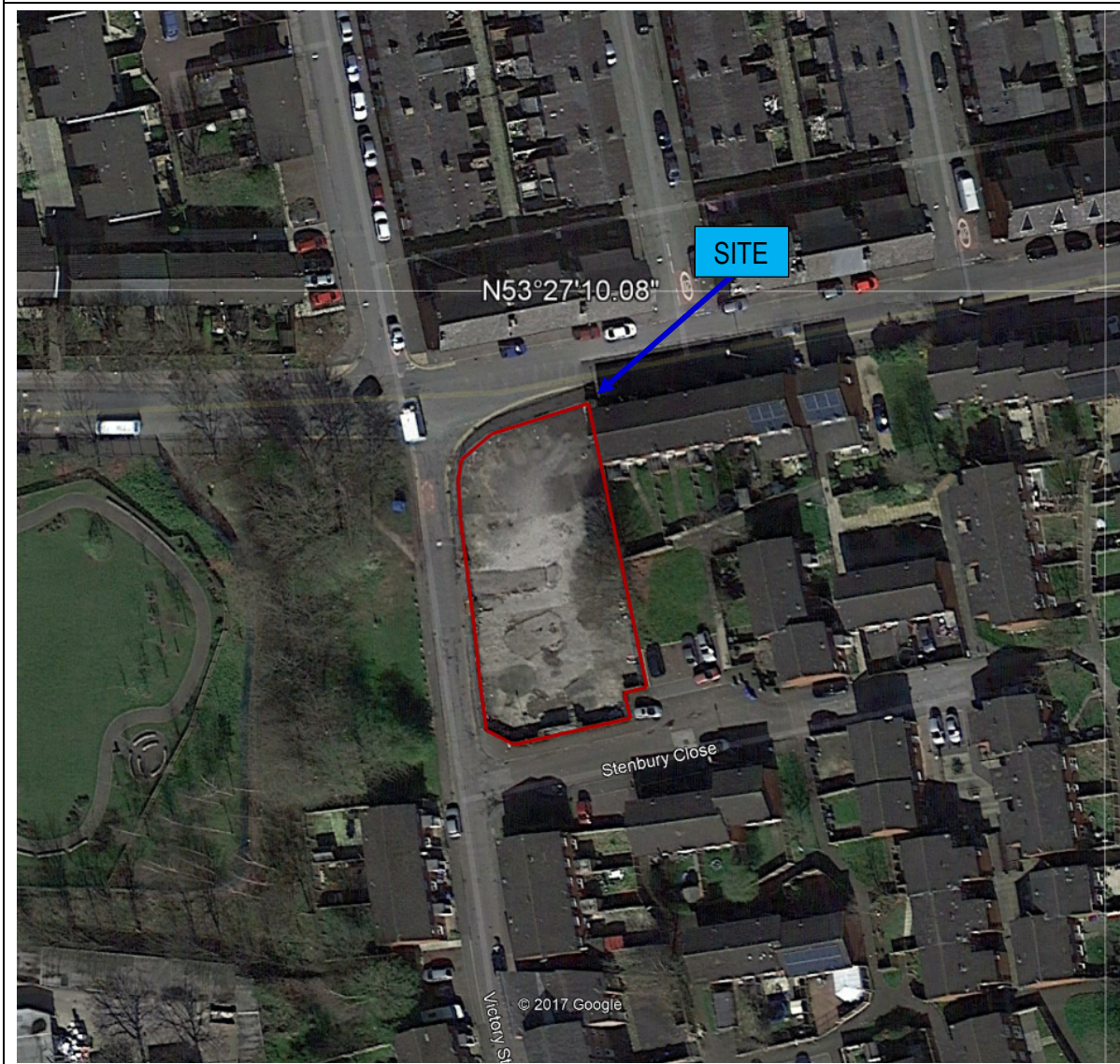


Figure 9 Google Earth Image 2017



5.0 WALKOVER SURVEY

- 5.1 A walkover survey was completed on the 25th August 2017. The photographs and notes from this survey are appended to this report as Appendix 2 and Appendix 3 respectively.
- 5.2 The site is an unoccupied plot with an access gate located along the eastern site boundary (Victory Street).
- 5.3 The site is generally level. There are small amounts of light vegetation on-site comprising of grass and shrubs due to poor maintenance. Mature trees are located along the eastern site boundary.
- 5.1 The site currently has no existing structures.
- 5.2 The site is on hardstanding (asphalt).
- 5.3 The site is bounded by the residential homes to the north, east and south. West of the site is a soft verge followed by a park.
- 5.4 Presence of fly-tipped material includes a stockpile of wood, pallets, plastic and piping. These are generally construction materials located south of the site.
- 5.5 There are two empty Intermediate Bulk Containers (IBCs) located north east of the site.
- 5.6 There are no tankers, electrical substations or transformers located on site.
- 5.7 Materials on site consist of inert waste. In addition, the site is being used for storage of; wood and plastics, two storage containers, two IBCs, scaffolding, plastic piping, vehicles (lorry & caravan), a trailer, fencing and stillages.

6.0 PRELIMINARY CONTAMINATION RISK ASSESSMENT

Introduction

- 6.1 The following paragraphs outline a Preliminary Risk Assessment (PRA) for the site as defined by DEFRA and the EA Model Procedures for the Management of Land Contamination, CLR11 (2004).
- 6.2 Table 3 provides a Preliminary Conceptual Model (PCM) which defines the site in terms of a potential pollution linkage, that is, whether a pathway exists between a contamination source and a sensitive environmental receptor (Source-Pathway-Receptor relationship).
- 6.3 Table 3 considers whether a pollution linkage is potentially present and provides a preliminary qualitative assessment of risk based on the information currently available. Where a possible linkage is identified, it does not necessarily mean that a significant risk exists, but indicates that further information is required through appropriate site investigation to substantiate the conceptual model.

Table 3: Preliminary Conceptual Model

- 6.4 The PCM/PRA is based on a potential residential; end use, representing the most sensitive potential receptors.

Source	Pathway	Receptor	Linkage	Comment
Due to the presence of made ground, on site the likelihood of significant ground contamination sources being present at the site, associated with historical land use, is considered LOW .	Direct contact, ingestion of soil, dermal contact, dust exposure pathways.	Current Site Users	Unlikely	As the site is currently unoccupied, the risk associated with current site users via direct exposure is considered to be LOW .
		Adjacent land users	Unlikely	The neighbouring properties are residential. The current risk is considered LOW .
		Construction Workers	Unlikely	Standard industry working practices for working on sites will be sufficient to manage any potential risks. Therefore, the risk associated with construction workers via direct exposure is considered to be LOW .
		Future land users	Unlikely	If the site is used residential purposes and covered with hardstanding the risk associated with future site users via direct exposure is considered to be LOW .



Due to the presence of made ground on site the likelihood of soluble and/or liquid and therefore mobile contaminants occurring at the site due to its past use is considered LOW .	Direct downward migration through leaching and/or mobile liquids.	Groundwater	Possible	The site lies upon Secondary (Undifferentiated) Aquifer. The perceived risk to groundwater is considered LOW .
	Off-site migration in groundwater or surface water flow.	Surface water	Possible	There are no surface water abstraction licences within 2km of the site. The perceived risk to surface water is considered LOW .
		Groundwater / surface water abstractions	Possible	The nearest active surface groundwater abstraction licence 1.5km from the site. The risk to water abstractions is therefore considered LOW .
		Adjacent Properties	Possible	There is expected to be clay underlying the site. The preliminary risk to adjacent properties is considered LOW .
		Ecology	Unlikely	The site is in a developed area. The risk to ecology is therefore considered LOW .
Due to the current and past land use associated with the site, the likelihood of volatile contaminants at the site due to its this is considered LOW .	Inhalation of harmful vapours (indoor and outdoor airspaces)	Current Site Users	Unlikely	As the site is currently unoccupied, the risk associated with current site users is considered to be LOW .
		Adjacent Properties	Unlikely	The potential risk to adjoining site users is therefore considered LOW .

Due to the nature of the past buildings on site. The likelihood of degradable materials with the potential to generate hazardous ground gas is LOW .	Emissions from the ground collecting in confined spaces and excavations	Construction/ services maintenance workers	Unlikely	The preliminary risk is therefore considered LOW .
	Migration of gases on/off site and collecting in confined spaces on/off site.	Adjoining site users	Unlikely	The potential risk to adjoining site users is therefore considered LOW .
		Current/future site users	Unlikely	The potential of commercial end use represents sensitive receptors. The potential risk is considered LOW .
Chemicals which could prove aggressive to construction materials may be present on site.	Direct contact	Construction concrete, plastic water pipes.	Unlikely	Risks to construction materials can be identified via site investigation prior to the proposed construction works. The perceived risk is considered LOW .

Preliminary Risk Assessment

- 6.5 The site was primarily undeveloped until 1850 after which residential dwellings were built in the southern sector of the site. There was then a public house and works on the site.
- 6.6 The majority of the potential pollution linkages are considered unlikely or possible and the preliminary risks are assessed as **LOW** due to the historic and current land uses.

7.0 CONCLUSIONS AND RECOMMENDATIONS

- 7.1 The likelihood of contamination on the site is overall Low.
- 7.2 The site is underlain by Devensian Till superficial deposits and the Chester Formation.
- 7.3 There are no surface water features within the 250m of the site.

Recommendations

- 7.4 An intrusive investigation should be undertaken to establish geotechnical parameters for the design of foundations, floor slabs and pavement construction for the proposed new structures and surrounding area.
- 7.5 As part of the geotechnical investigation, it is recommended that samples of soil are recovered from proposed garden areas for contamination testing and to confirm whether there are any potential risks.

APPENDIX 1

GROUNDSURE REPORTS



Earth Environmental & Geotechnical Ltd
334 ASHBOURNE BUSINESS CENTRE LTD,
WELLINGTON ROAD NORTH,
STOCKPORT, SK4 5DA

Groundsure Reference: GS-4209618
Your Reference: A2212_Claremont_Road

Report Date 24 Aug 2017

Report Delivery Method: Email - pdf

Enviro Insight

Address: 2, STENBURY CLOSE, MANCHESTER, M14 5AB

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Address: 2, STENBURY CLOSE, MANCHESTER, M14 5AB

Date: 24 Aug 2017

Reference: GS-4209618

Client: Earth Environmental & Geotechnical Ltd

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 11-Jun-2015

Grid Reference: 385092,395094

Site Size: 0.10ha

Report Reference: GS-4209618

Client Reference: A2212_Claremont_Road

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Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	0	2	9	16
1.2 Additional Information – Historical Tank Database	0	0	3	8
1.3 Additional Information – Historical Energy Features Database	0	0	6	8
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	32
1.6 Potentially Infilled Land	0	0	3	6
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	5
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	0	1
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	0
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	0	0	0
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	0	3	0

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	0	9	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	3
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	Yes
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m					
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes					
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes					
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	13
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	1	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	0	0	Not searched	Not searched

Section 6: Hydrogeology and Hydrology	0-500m					
	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site?	No	No	No	No	No	Yes
6.10 Detailed River Network entries within 500m of the site	0	0	0	2	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	No	Not searched	Not searched	Not searched

Section 7: Flooding						
7.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	No					
7.2 Are there any Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	No					
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low					
7.4 Are there any Flood Defences within 250m of the study site?	No					
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No					
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No					
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Limited potential					
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low					

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	0
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	0	0	0	0	0	0
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards	
9.1 What is the maximum risk of natural ground subsidence?	Very Low
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Very Low
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Very Low
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Negligible
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Very Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining	
10.1 Are there any coal mining areas within 75m of the study site?	Yes
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	No
10.3 Are there any brine affected areas within 75m of the study site?	No

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

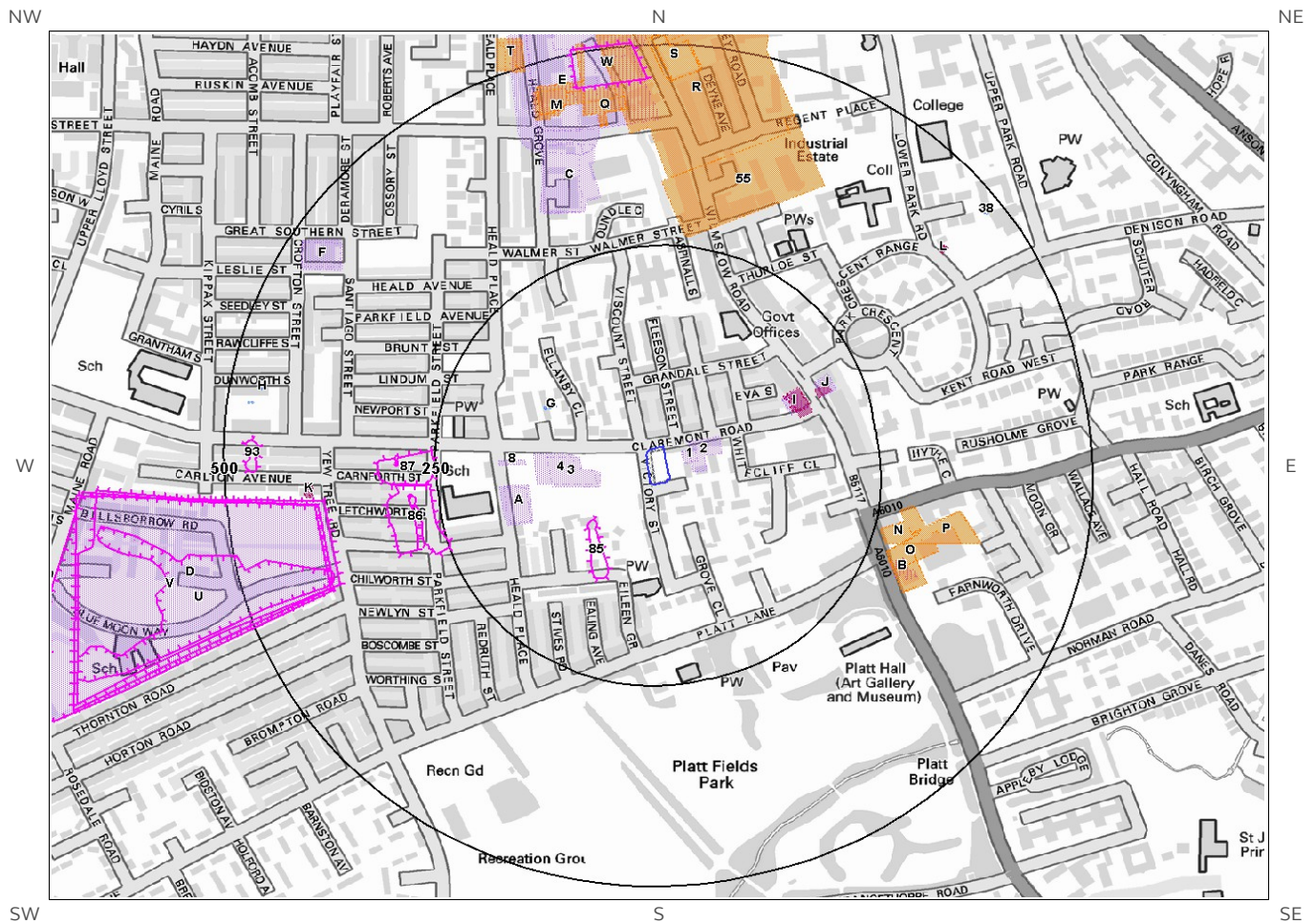
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use



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Historical 1:10,000 and 1:10,560 scale mapping



Site Outline



Industrial Land Use



Potentially Infilled Land

Historical 1:2,500, 1:1,250 and 1:500 scale mapping



Search Buffers (m)



Energy Features



Petrol Stations



Tanks



Garages

1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 27

ID	Distance [m]	Direction	Use	Date
1	20	E	Police Station	1890
2	28	E	Police Station	1968
3	57	W	Unspecified Works	1923
4	63	W	Unspecified Works	1915
5A	143	W	Slaughter Houses	1916
6A	143	W	Slaughter House	1905
7A	143	W	Slaughter House	1923
8	143	W	Fire Station	1890
9A	146	W	Slaughter Houses	1892
10I	151	E	Electric Substation	1915
11J	195	NE	Electricity Substation	1923
12B	280	E	Garage	1974
13B	280	E	Garage	1983
14C	306	N	Laundry	1923
15C	308	N	Laundry	1938
16C	308	N	Laundry	1915
17C	308	N	Laundry	1934
18E	376	N	Unspecified Factory	1923
19D	383	W	Brick Works	1905
20U	390	W	Unspecified Pit	1905
21D	391	W	Brick Works	1923
22D	395	W	Brick Works	1916
23E	402	N	Unspecified Commercial/Industrial	1934
24E	404	N	Unspecified Factory	1915
25F	427	NW	Unspecified Works	1923
26F	431	NW	Unspecified Works	1915
27W	456	N	Depository	1923

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary:

11

ID	Distance (m)	Direction	Use	Date
28G	122	NW	Tanks	1951
29G	123	NW	Tanks	1950
30G	123	NW	Tanks	1951
31H	461	W	Unspecified Tank	1950
32H	461	W	Unspecified Tank	1951
33H	461	W	Unspecified Tank	1951
34H	468	W	Unspecified Tank	1950
35H	468	W	Unspecified Tank	1951
36H	468	W	Unspecified Tank	1951
37H	468	W	Unspecified Tank	1950
38	477	NE	Unspecified Tank	1893

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary:

14

ID	Distance (m)	Direction	Use	Date
39I	154	NE	Electricity Substation	1950
40I	157	E	Electricity Substation	1983
41I	158	E	Electricity Substation	1994
42I	159	E	Electricity Substation	1922
43I	159	NE	Electricity Substation	1950
44J	192	E	Electricity Substation	1908
45K	397	W	Electricity Substation	1993
46K	397	W	Electricity Substation	1988
47K	397	W	Electricity Substation	1987
48L	406	NE	Electricity Substation	1983
49L	407	NE	Electricity Substation	1994
50L	411	NE	Electricity Substation	1983
51M	436	N	Electricity Substation	1994
52M	446	N	Electricity Substation	1994

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary:

0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary:

32

ID	Distance (m)	Direction	Use	Date
53N	257	E	Car Bodies Works	1950
54N	257	E	Car Bodies Works	1950
55	262	N	Garage	1991
56B	272	E	Garage	1992
57B	272	E	Garage	1983
58O	273	E	Garage	1956
59O	273	E	Garage	1966
60O	273	E	Garage	1956
61P	285	E	Garage	1994
62P	286	E	Garage	1980
63P	286	E	Garage	1983
64P	301	E	Garage	1983
65R	333	N	Garage	1991
66Q	405	N	Coach Works	1950
67Q	405	N	Coach Works	1950
68Q	406	N	Coach Works	1970
69M	429	N	Coach Works	1933
70M	435	N	Coach Works	1950
71M	435	N	Coach Works	1949
72M	435	N	Coach Works	1951
73M	435	N	Coach Works	1951
74R	454	N	Garage	1986
75S	455	N	Garage	1991
76S	455	N	Garage	1991
77R	455	N	Garage	1993
78R	455	N	Garage	1970
79E	464	N	Coach Works	1951
80E	464	N	Coach Works	1949
81E	465	N	Coach Works	1951
82T	494	N	Garage	1951
83T	494	N	Garage	1949

84T	495	N	Garage	1951
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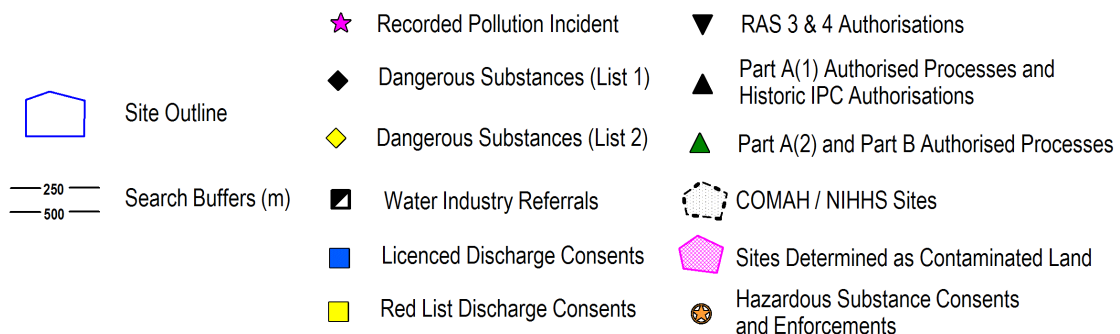
1.6 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 9

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
85	79	SW	Pond	1851
86	248	W	Water Body	1851
87	250	W	Pond	1851
88D	383	W	Brick Works	1905
89U	390	W	Unspecified Pit	1905
90V	391	W	Brick Works	1923
91V	395	W	Brick Works	1916
92W	456	N	Depository	1923
93	458	W	Pond	1851

2. Environmental Permits, Incidents and Registers Map



2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

5

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
2	309	E	385400 395000	Address: Wilmslow Serv Stn, Wilmslow Rd, M14 5NL Process: Petrol Vapour Recovery Process Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
3	423	NW	384900 395500	Address: Save, Moss Lane East, M14 4PA Process: Petrol Vapour Recovery Process Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
4A	426	N	385071 395547	Address: Moss Side Service Station, Wilmslow Road, Rusholme, M14 5AQ Process: Unloading of Petrol into Storage at Service Stations Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
5A	430	N	385076 395551	Address: Total Convenience Store (Rusholme), 25-33 Wilmslow Road, Rusholme, M14 5AQ Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
6	478	N	385100 395600	Address: Rusholme Serv Stn, Wilmslow Rd, M14 5TB Process: Petrol Vapour Recovery Process Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

1

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
1	284	N	385150 395400	Address: WALMER ST/WILMSLOW RD, MANCHESTER, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0382 Permit Version: 1 Receiving Water: - Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01-Jan-1995 Revocation Date: -

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

0

Database searched and no data found.

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

Database searched and no data found.

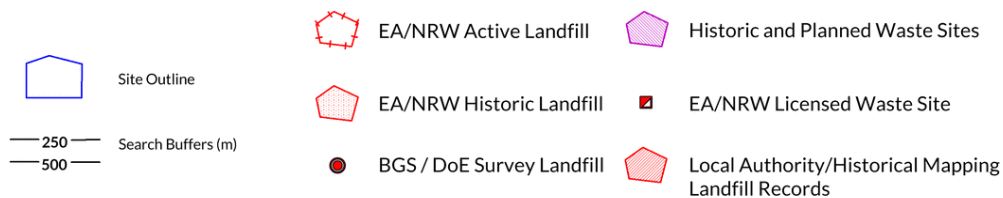
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site?

0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

0

Database searched and no data found.

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

0

Database searched and no data found.

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

0

Database searched and no data found.

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

0

Database searched and no data found.

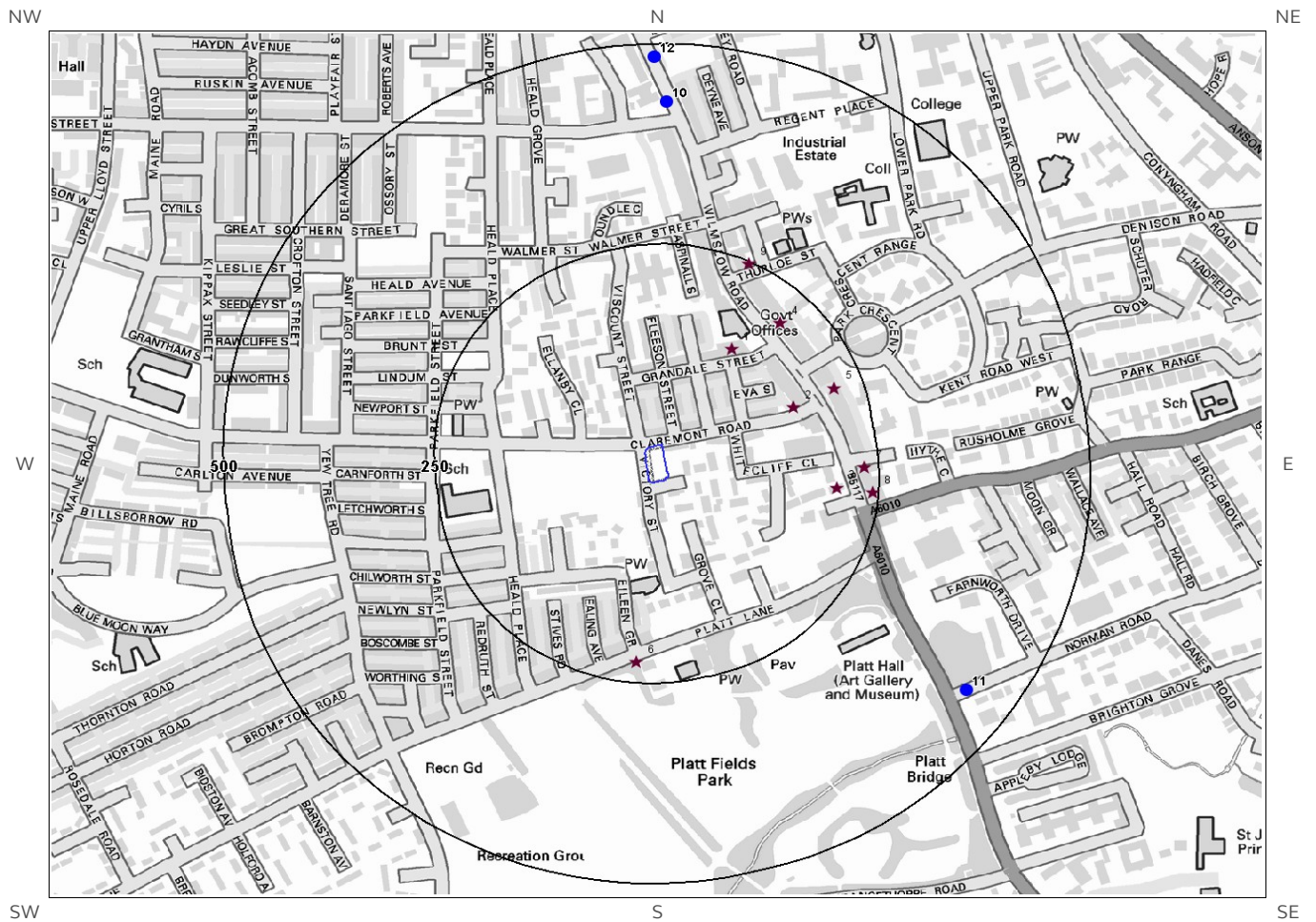
3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

3

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
Not shown	836	N	385400 395900	Site Address: - Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CMH001 EPR reference: - Operator: Central Manchester Area Health Authority Waste Management licence No: 53906 Annual Tonnage: 417.0 Issue Date: 18/04/1990 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Manchester Royal Infirmary Correspondence Address: Facilities Directorate, Gate 9, Oxford Road, Manchester, M13 9WL
Not shown	836	N	385400 395900	Site Address: Manchester Royal Infirmary, Oxford Road, Manchester, M13 9WL Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CMH001 EPR reference: EA/EPR/PP3391CE/A001 Operator: Central Manchester & Manchester Childrens University Hospital Nhs Trust Waste Management licence No: 53906 Annual Tonnage: 417.0 Issue Date: 18/04/1990 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Central Manchester & Manchester Childrens University Hospital Nhs Trust Correspondence Address: -
Not shown	836	N	385400 395900	Site Address: Manchester Royal Infirmary, Oxford Road, Manchester, M13 9WL Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CMH001 EPR reference: EA/EPR/PP3391CE/S002 Operator: Central Manchester University Hospitals N H S Foundation Trust Waste Management licence No: 53906 Annual Tonnage: 110088.0 Issue Date: 18/04/1990 Effective Date: - Modified: - Surrendered Date: 2.01208e+016 Expiry Date: 0 Cancelled Date: 0 Status: Surrendered Site Name: Central Manchester University Hospitals N H S Foundation Trust Correspondence Address: -

4. Current Land Use Map



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Site Outline

★ Current Industrial Sites

— Electricity Transmission Cables

— 250 — Search Buffers (m)
— 500 —

● Petrol & Fuel Sites

— Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site:

9

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	145	NE	ATS Euromaster Ltd	385177 395241	98, Wilmslow Road, Manchester, M14 5AL	Vehicle Parts and Accessories	Motoring
2	161	E	Electricity Sub Station	385249 395168	M14	Electrical Features	Infrastructure and Facilities
3	200	E	Charles Wilson	385301 395067	160-164, Wilmslow Road, Manchester, M14 5LQ	Vehicle Repair, Testing and Servicing	Repair and Servicing
4	206	NE	Eastern Gold	385234 395273	161, Wilmslow Road, Manchester, M14 5AP	Jewellery, Gems, Clocks and Watches	Consumer Products
5	215	E	Amees Catering Equipment	385297 395192	195-197, Wilmslow Road, Manchester, M14 5AQ	Food and Beverage Industry Machinery	Industrial Products
6	223	S	Electricity Sub Station	385064 394850	M14	Electrical Features	Infrastructure and Facilities
7	232	E	Eggfree Cake Box	385333 395093	231-233, Wilmslow Road, Manchester, M14 5LW	Baking and Confectionery	Foodstuffs
8	243	E	Sylhet Travel Services	385343 395061	249-251, Wilmslow Road, Manchester, M14 5LW	Airlines and Airline Services	Transport, Storage and Delivery
9	248	NE	Works	385197 395347	M14	Unspecified Works Or Factories	Industrial Features

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site:

3

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
10	427	N	385100 395549	Shell	Rusholme Service Station, 10, Wilmslow Road, Wilmslow Road, Rusholme, Manchester, Greater Manchester, M14 5TQ	No	Open

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
11	441	SE	385454 394814	Obsolete	Wilmslow Service Station, 261-263, Wilmslow Road, Wilmslow Road, Rusholme, Manchester, Greater Manchester, M14 5LN	Not Applicable	Obsolete
12	483	N	385085 395605	Obsolete	Rusholme Service Station, 25-33, Wilmslow Road, Wilmslow Road, Rusholme, Manchester, Greater Manchester, M14 5TB	Not Applicable	Obsolete

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site:

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site:

0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

5.3 Bedrock and Solid Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
CHES-SDST	CHESTER FORMATION	SANDSTONE

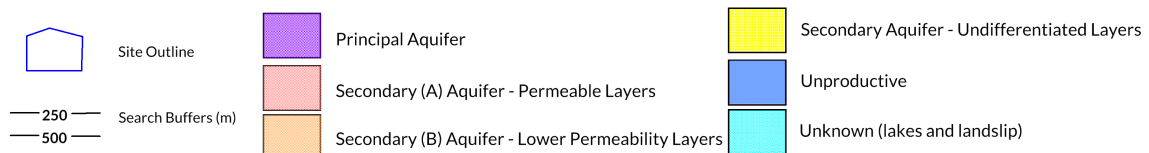
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

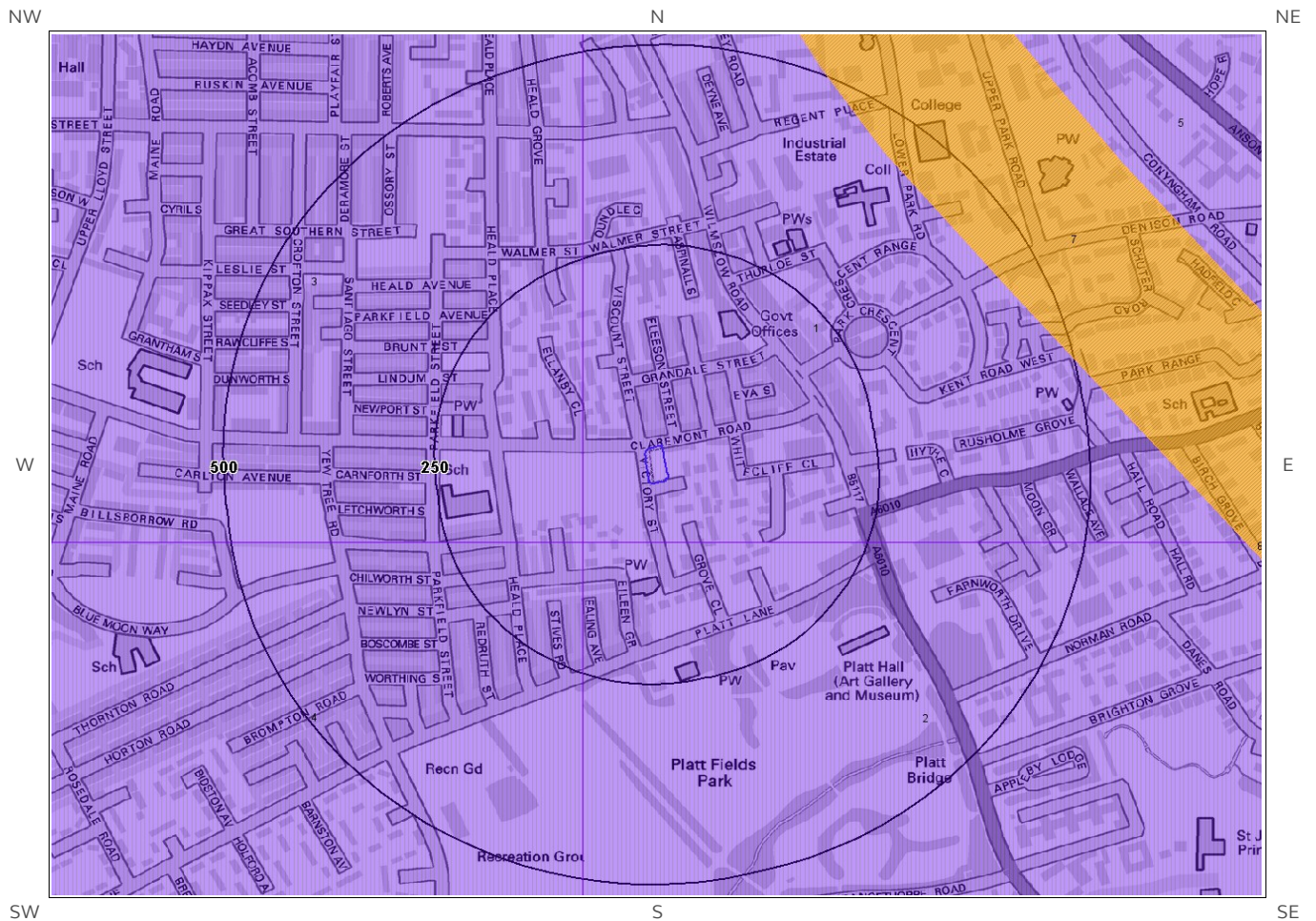
6a. Aquifer Within Superficial Geology



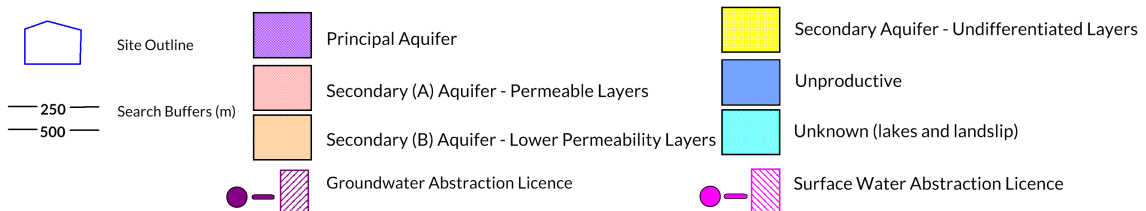
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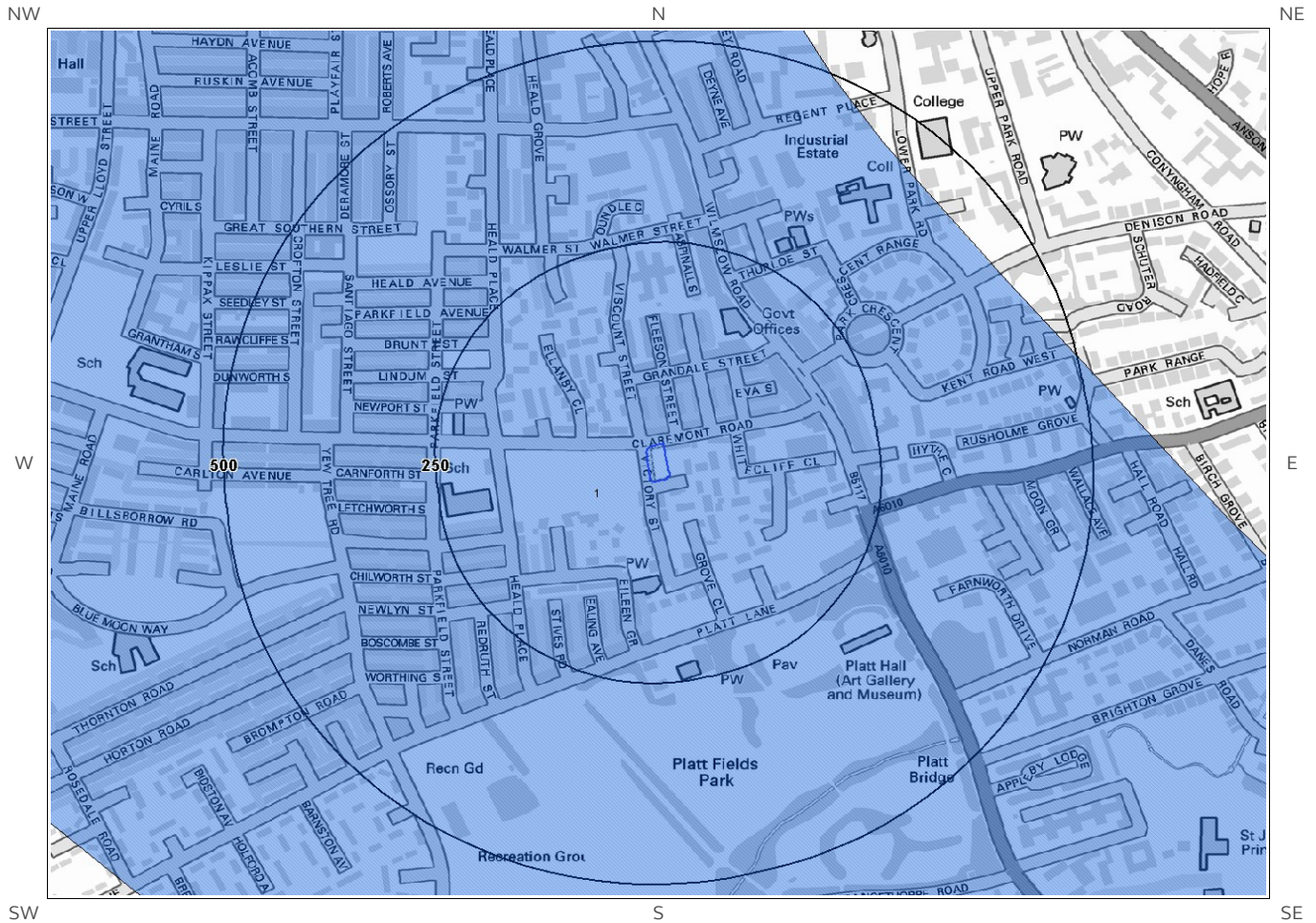
6b. Aquifer Within Bedrock Geology and Abstraction Licenses



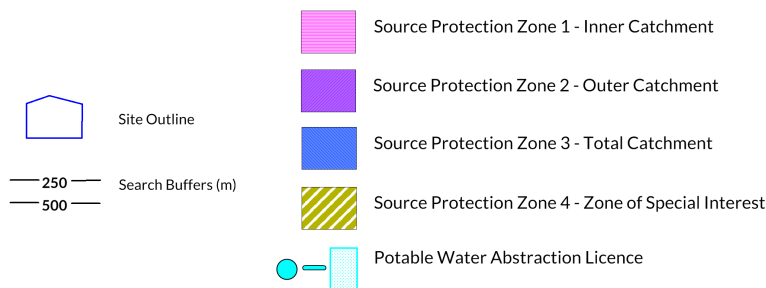
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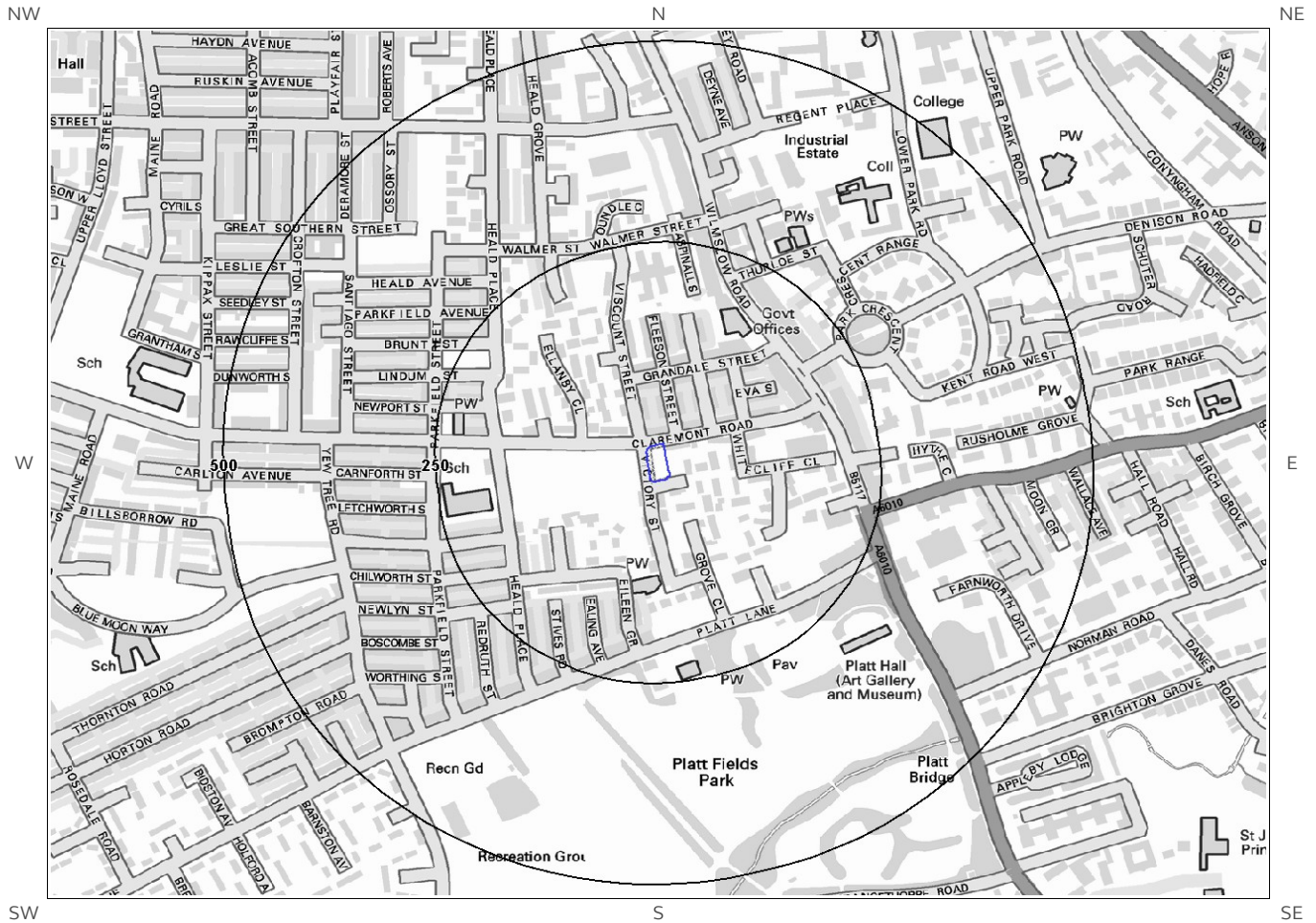
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



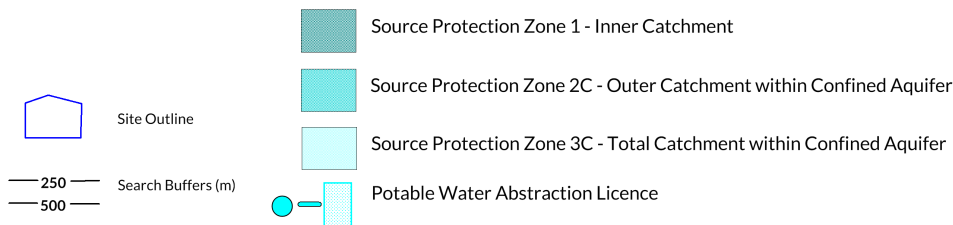
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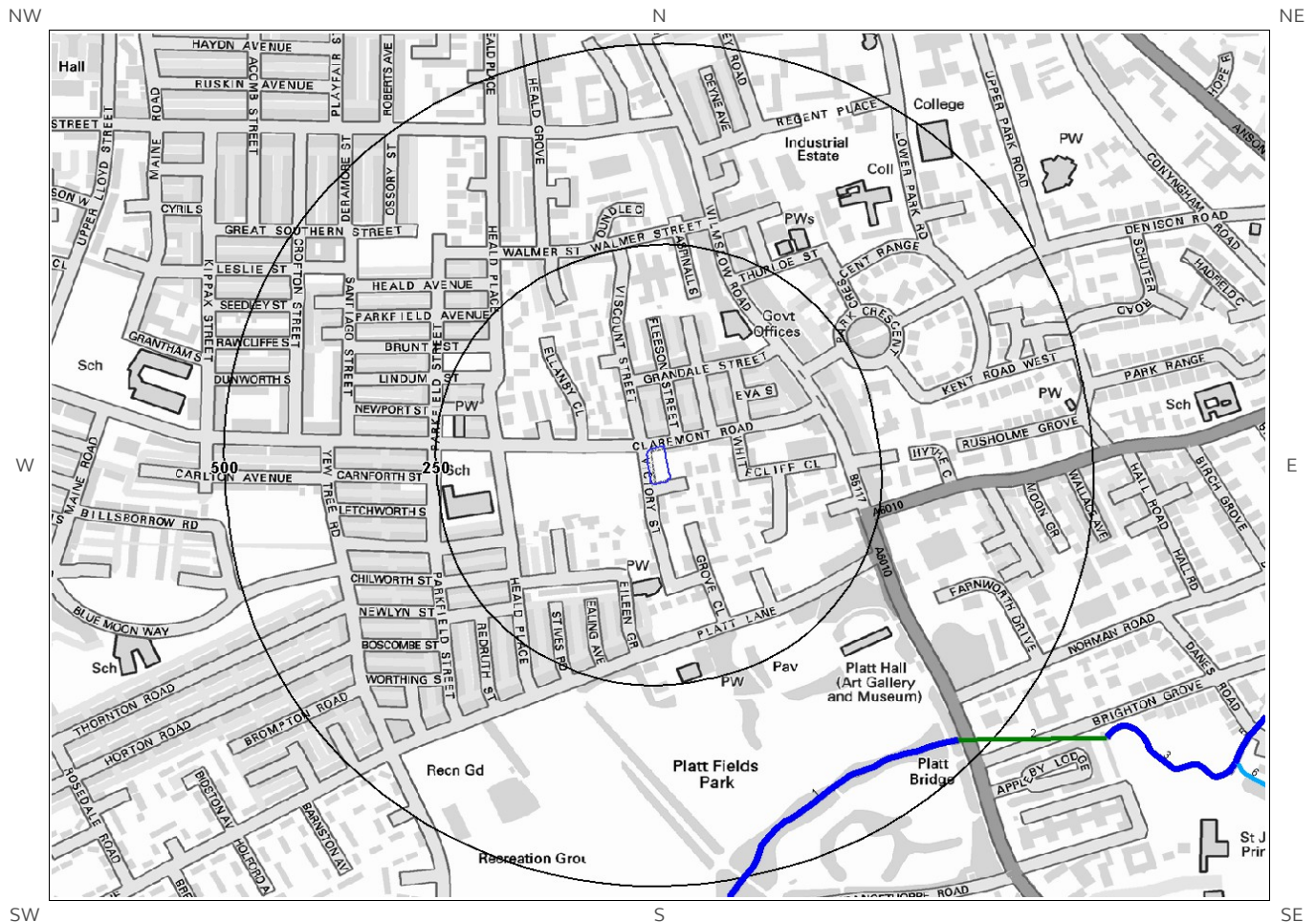
6d. Hydrogeology – Source Protection Zones within confined aquifer



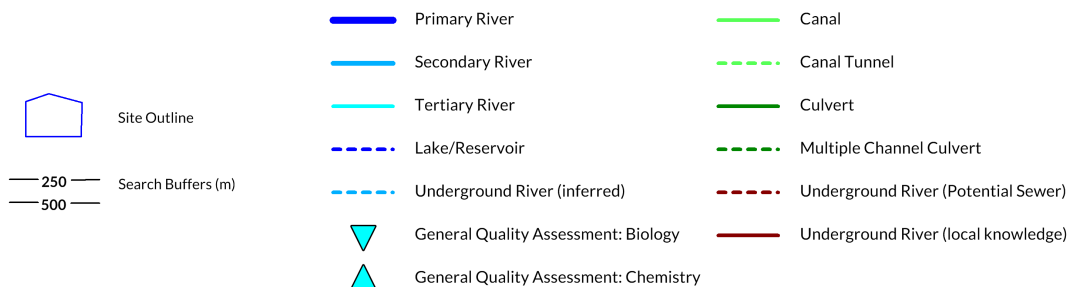
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6e. Hydrology – Detailed River Network and River Quality



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6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? **Yes**

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	73	S	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
3	75	W	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
4	109	SW	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? **Yes**

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	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	73	S	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
3	75	W	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
4	109	SW	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

ID	Distance (m)	Direction	Designation	Description
7	438	NE	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

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
Not shown	1414	NW	383900 395900	Status: Historical Licence No: 2569007007 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: Borehole At Premises, Moss Side, Manchester Data Type: Point Name: SCOTTISH COURAGE BREWING LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 0389 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/12/2003 Version End Date:
Not shown	1414	NW	383900 395900	Status: Historical Licence No: 2569007007 Details: Process water Direct Source: Ground Water - North West Region Point: Borehole At Premises, Moss Side, Manchester Data Type: Point Name: SCOTTISH COURAGE BREWING LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 0389 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/12/2003 Version End Date:
Not shown	1414	NW	383900 395900	Status: Historical Licence No: 2569007007 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: "borehole At Premises, Moss Side, Manchester" Data Type: Point Name: SCOTTISH COURAGE BREWING LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 389 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/8/1995 Version End Date:
Not shown	1414	NW	383900 395900	Status: Historical Licence No: 2569007007 Details: Process water Direct Source: Ground Water - North West Region Point: "borehole At Premises, Moss Side, Manchester" Data Type: Point Name: SCOTTISH COURAGE BREWING LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 389 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/8/1995 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1414	NW	383900 395900	Status: Historical Licence No: 2569007007 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: Borehole At Premises Moss Side Manchester Data Type: Point Name: Heineken UK Ltd	Annual Volume (m³): 227000 Max Daily Volume (m³): 900 Original Application No: NPS/WR/002641 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 23/11/2009 Version End Date:
Not shown	1414	NW	383900 395900	Status: Historical Licence No: 2569007007 Details: Process Water Direct Source: Ground Water - North West Region Point: Borehole At Premises Moss Side Manchester Data Type: Point Name: Heineken UK Ltd	Annual Volume (m³): 227000 Max Daily Volume (m³): 900 Original Application No: NPS/WR/002641 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 23/11/2009 Version End Date:
Not shown	1448	NW	383865 395909	Status: Active Licence No: 2569007007 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: Borehole At Premises Moss Side Manchester Data Type: Point Name: Heineken UK Ltd	Annual Volume (m³): 227000 Max Daily Volume (m³): 900 Original Application No: NPS/WR/015793 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 103 Version Start Date: 8/5/2014 Version End Date:
Not shown	1448	NW	383865 395909	Status: Active Licence No: 2569007007 Details: Process Water Direct Source: Ground Water - North West Region Point: Borehole At Premises Moss Side Manchester Data Type: Point Name: Heineken UK Ltd	Annual Volume (m³): 227000 Max Daily Volume (m³): 900 Original Application No: NPS/WR/015793 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 103 Version Start Date: 8/5/2014 Version End Date:
Not shown	1742	N	385729 396778	Status: Active Licence No: NW/069/0004/005 Details: Heat Pump Direct Source: Ground Water - North West Region Point: Area Of Abstraction - Lower Carboniferous Limestone Data Type: Region Name: G T Energy UK Limited	Annual Volume (m³): 2049840 Max Daily Volume (m³): 8640 Original Application No: NPS/WR/013554 Original Start Date: 17/1/2013 Expiry Date: 16/1/2037 Issue No: 2 Version Start Date: 11/6/2013 Version End Date:
Not shown	1996	W	383220 395850	Status: Historical Licence No: 2569007009 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: Borehole At Premises, Moss Lane West Manchester Data Type: Point Name: HYDES BREWERY LTD	Annual Volume (m³): 66826.2 Max Daily Volume (m³): 372.772 Original Application No: CW0703 Original Start Date: 21/2/1966 Expiry Date: - Issue No: 101 Version Start Date: 7/10/2000 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1996	W	383220 395850	Status: Historical Licence No: 2569007009 Details: Process water Direct Source: Ground Water - North West Region Point: "borehole At Premises, Moss Lane West Manchester" Data Type: Point Name: HYDES BREWERY LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0703 Original Start Date: 21/2/1966 Expiry Date: - Issue No: 101 Version Start Date: 7/10/2000 Version End Date:
Not shown	1996	W	383220 395850	Status: Historical Licence No: 2569007009 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "borehole At Premises, Moss Lane West Manchester" Data Type: Point Name: HYDES BREWERY LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0703 Original Start Date: 21/2/1966 Expiry Date: - Issue No: 101 Version Start Date: 7/10/2000 Version End Date:
Not shown	1996	W	383220 395850	Status: Active Licence No: 2569007009 Details: Process Water Direct Source: Ground Water - North West Region Point: Borehole At Premises, Moss Lane West Manchester Data Type: Point Name: HYDES BREWERY LTD Annual Volume (m³): 66826.2 Max Daily Volume (m³): 930 Original Application No: 0703 Original Start Date: 21/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 12/4/2006 Version End Date:

6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site?

No

Database searched and no data found.

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site?

No

Database searched and no data found.

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site?

Yes

The following Source Protection Zones records are represented on the SPZ and Potable Water Abstraction Map (6c):

ID	Distance (m)	Direction	Zone	Description
1	0	On Site	3	Total catchment

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site?

No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site?

Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Major Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

6.9 River Quality

Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site?

Yes

6.9.1 Biological Quality:

Biological Quality data describes water quality in terms of 83 groups of macroinvertebrates, some of which are pollution sensitive. The results are graded from A ('Very Good') to F ('Bad').

The following Biological Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
Not shown	1176	SW	384600 394000	River Name: Chorlton Bk Reach: Qsl At North Reddish To Chorlton Bk. End/Start of Stretch: End of Stretch NGR	D	D	D	D	D

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site? Yes

The following Detailed River Network records are represented on the Hydrology Map (6e):

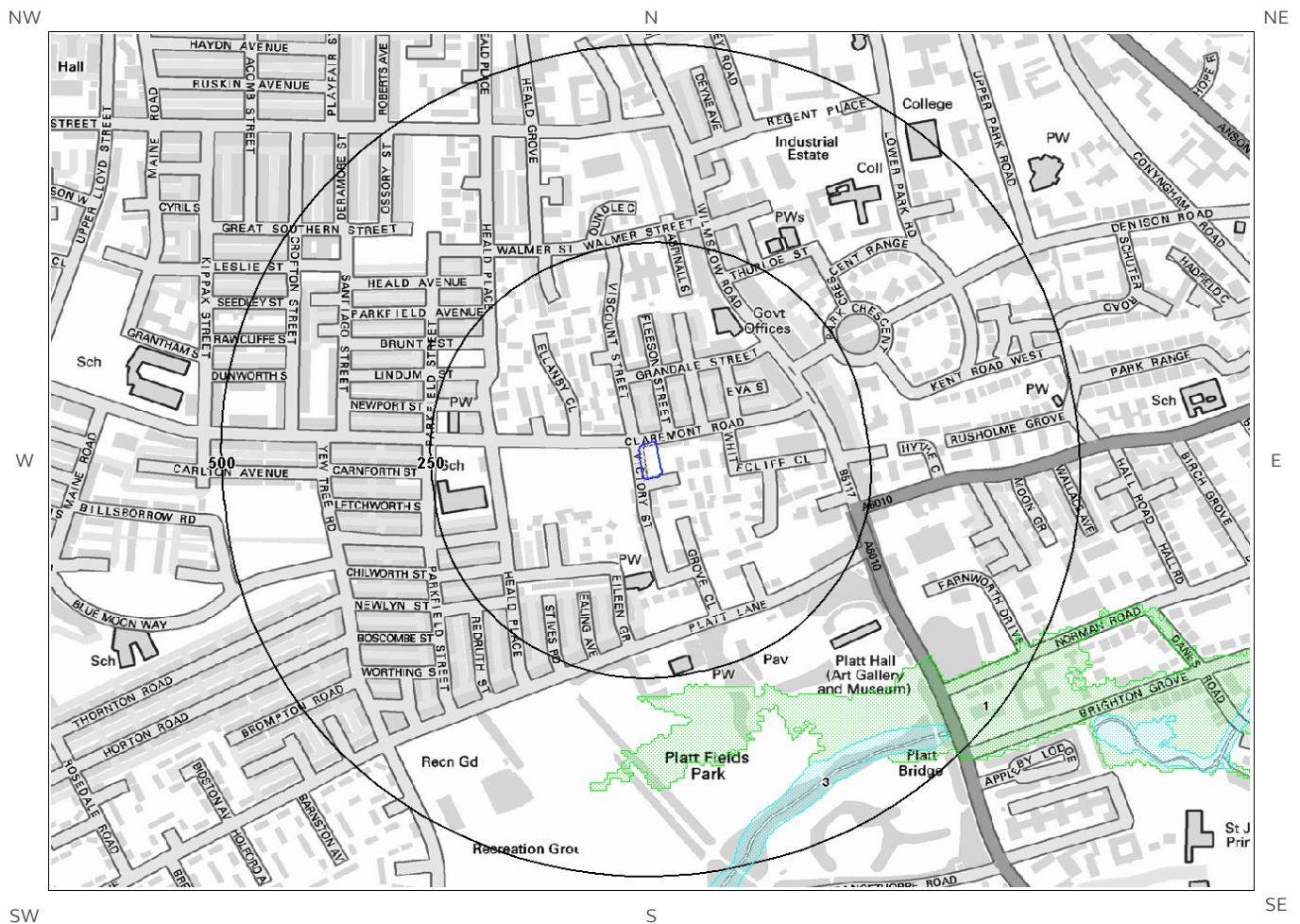
ID	Distance (m)	Direction	Details
1	424	SE	River Name: Platt Brook Welsh River Name: - Alternative Name: - River Type: Primary River Main River Status: Currently Undefined
2	470	SE	River Name: Platt Brook Welsh River Name: - Alternative Name: - River Type: Culvert Main River Status: Currently Undefined

6.11 Surface Water Features

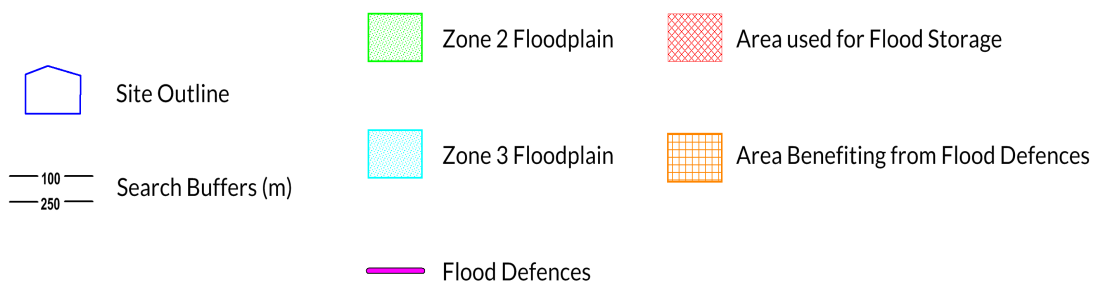
Are there any surface water features within 250m of the study site? No

Database searched and no data found.

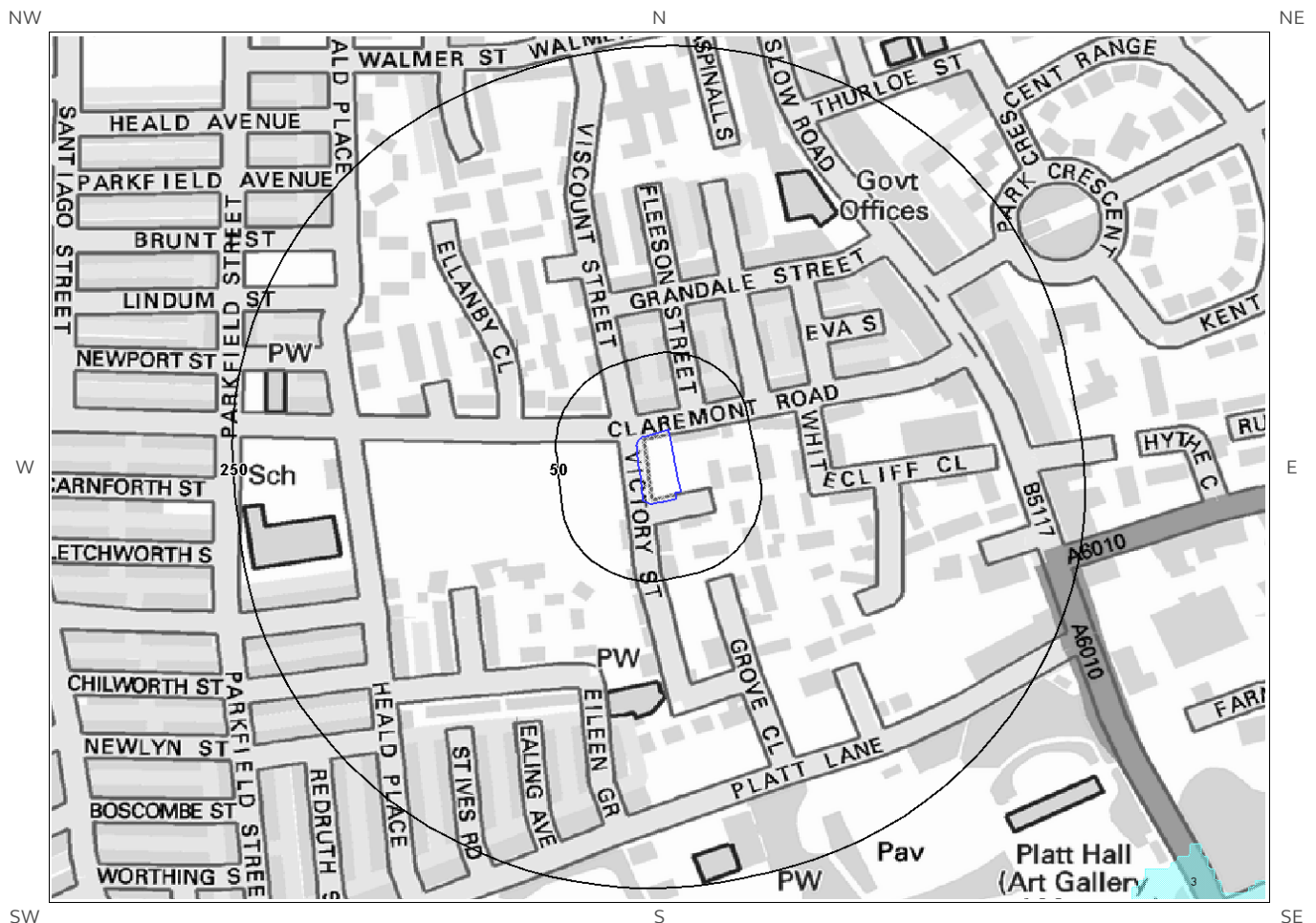
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



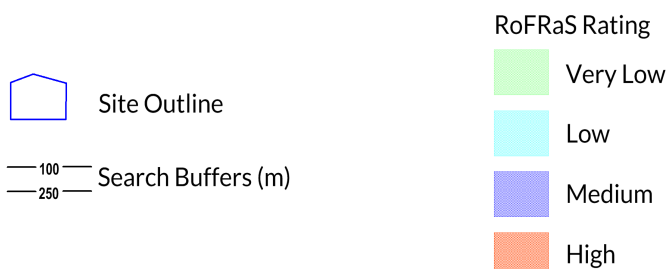
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7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 2 floodplain? No

Environment Agency/Natural Resources Wales Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

Database searched and no data found.

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 3 floodplain? No

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

Database searched and no data found.

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

What is the highest risk of flooding onsite? Very Low

The Environment Agency/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Very Low (less than 1 in 1000) chance of flooding in any given year.

7.4 Flood Defences

Are there any Flood Defences within 250m of the study site? No
Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? No

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site?

No

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding?

Clearwater Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Limited potential

Where limited potential for groundwater flooding to occur is indicated, this means that although given the geological conditions there may be a groundwater flooding hazard, unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area, you need take no further action in relation to groundwater flooding hazard.

7.8 Groundwater Flooding Confidence Areas

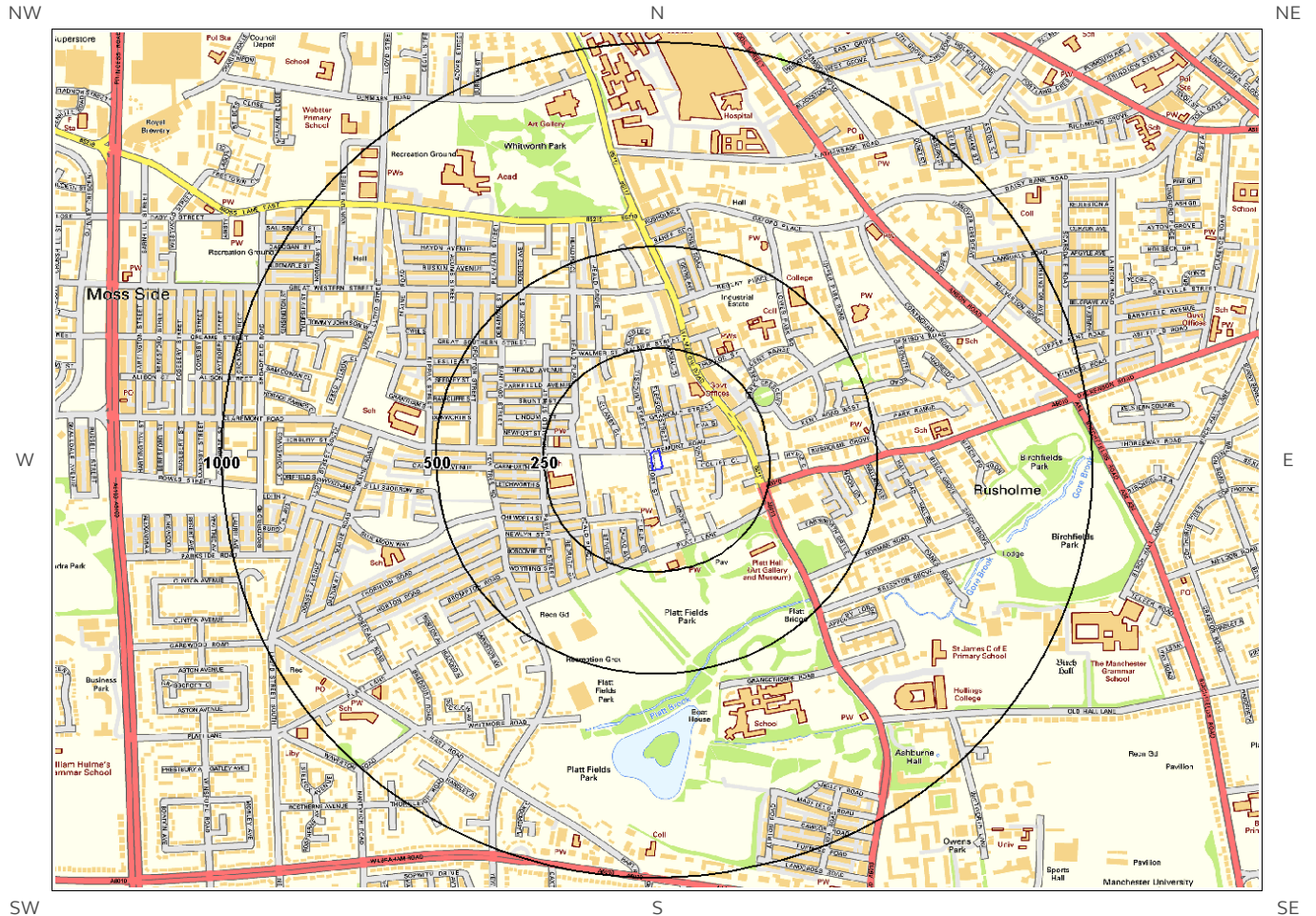
What is the British Geological Survey confidence rating in this result?

Low

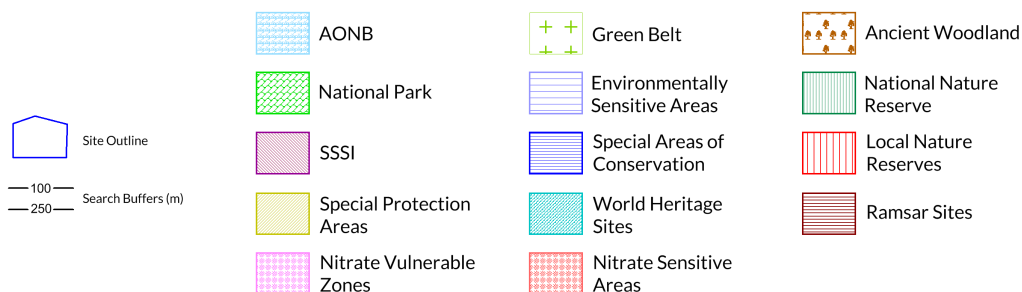
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site? No

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

0

Database searched and no data found.

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

0

Database searched and no data found.

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

8.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

8.6 Records of Ancient Woodland within 2000m of the study site:

0

Database searched and no data found.

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

0

Database searched and no data found.

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

0

Database searched and no data found.

8.14 Records of Green Belt land within 2000m of the study site:

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a **Groundsure Geo Insight**, available from our **website**. The following information has been found:

9.1.1 Shrink Swell

What is the maximum Shrink-Swell* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

9.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

9.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

What is the maximum Running Sand** hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

* This indicates an automatically generated 50m buffer and site.

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing

ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Are there any coal mining areas within 75m of the study site?

Yes

The following coal mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary?

No

Database searched and no data found.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site?

No

Guidance: No Guidance Required.

Contact Details

Groundsure Helpline
Telephone: 08444 159 000
info@groundsure.com



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Keyworth, Nottingham NG12 5GG
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Fax: 0115 936 3276.
Email:

Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk



Environment Agency
National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 03708 506 506
Web: www.environment-agency.gov.uk
Email: enquiries@environment-agency.gov.uk



Public Health England
Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000



The Coal Authority
200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk



Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505



Local Authority
Authority: Manchester City Council
Phone: 0161 234 5000
Web: <http://www.manchester.gov.uk/>
Address: Town Hall, Albert Square, Manchester, M60 2LA

Gemapping PLC
Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444



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Client Ref: A2212_Claremont_Road
Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: 1056 Scale Town Plan

Map date: 1850

Scale: 1:1,056

Printed at: 1:1,056



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Client Ref: A2212_Claremont_Road
Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: County Series Town Plan

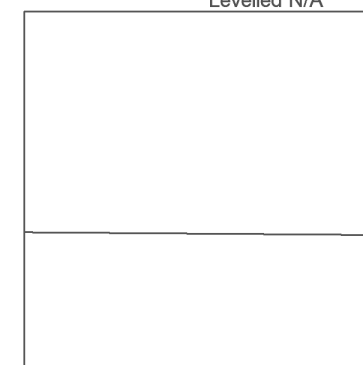
Map date: 1891

Scale: 1:500

Printed at: 1:1,000



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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: County Series

Map date: 1893

Scale: 1:2,500

Printed at: 1:2,500



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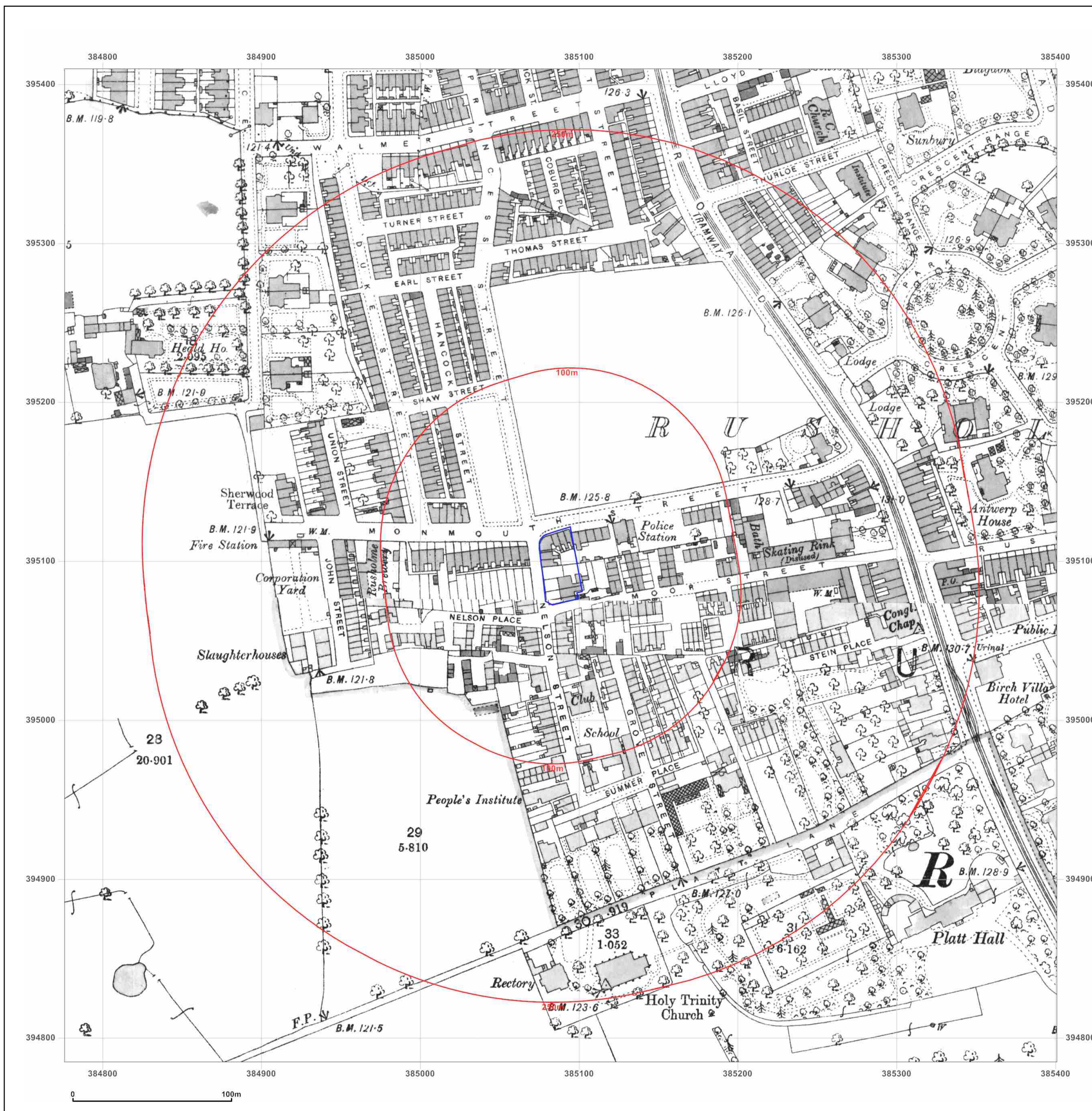


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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: County Series

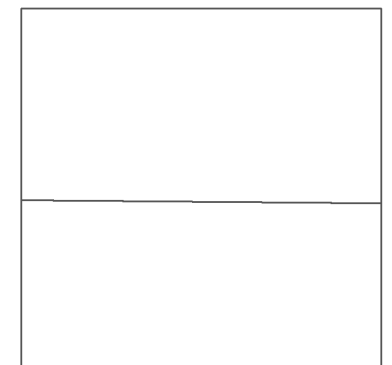
Map date: 1907-1908

Scale: 1:2,500

Printed at: 1:2,500



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Grid Ref: 385088, 395097

Map Name: County Series

Map date: 1922

Scale: 1:2,500

Printed at: 1:2,500



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Surveyed 1922
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Edition 1922
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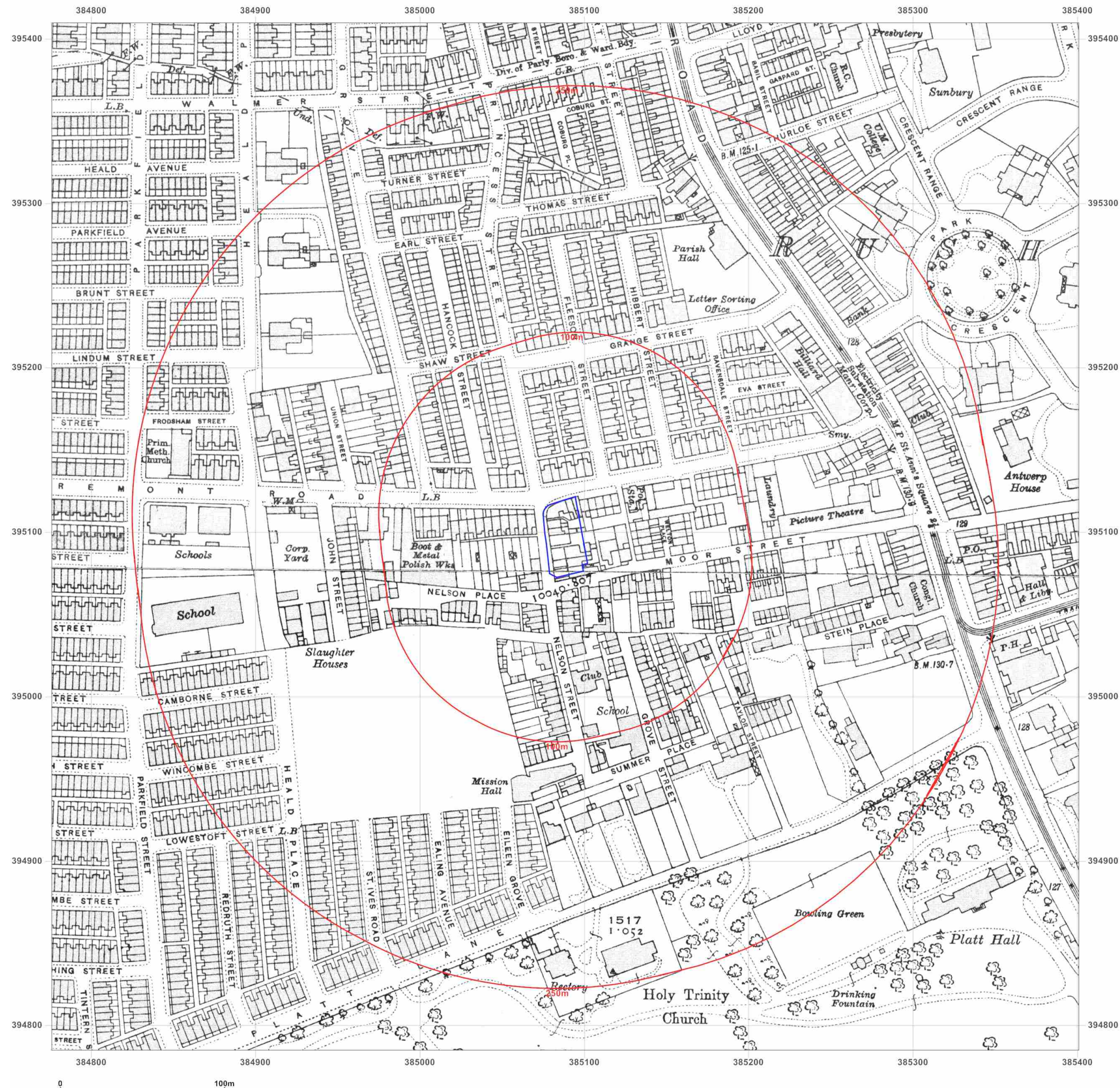


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Client Ref: A2212_Claremont_Road
Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: County Series

Map date: 1933-1934

Scale: 1:2,500

Printed at: 1:2,500



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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: National Grid

Map date: 1950

Scale: 1:1,250

Printed at: 1:2,000



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Grid Ref: 385088, 395097

Map Name: National Grid

Map date: 1950

Scale: 1:2,500

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Grid Ref: 385088, 395097

Map Name: National Grid

Map date: 1951-1956

Scale: 1:1,250

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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: National Grid

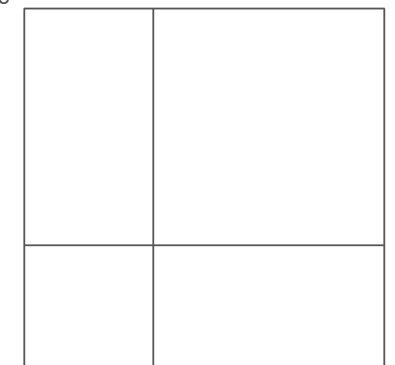
Map date: 1951-1956

Scale: 1:2,500

Printed at: 1:2,500



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Surveyed 1956
Revised 1956
Edition N/A
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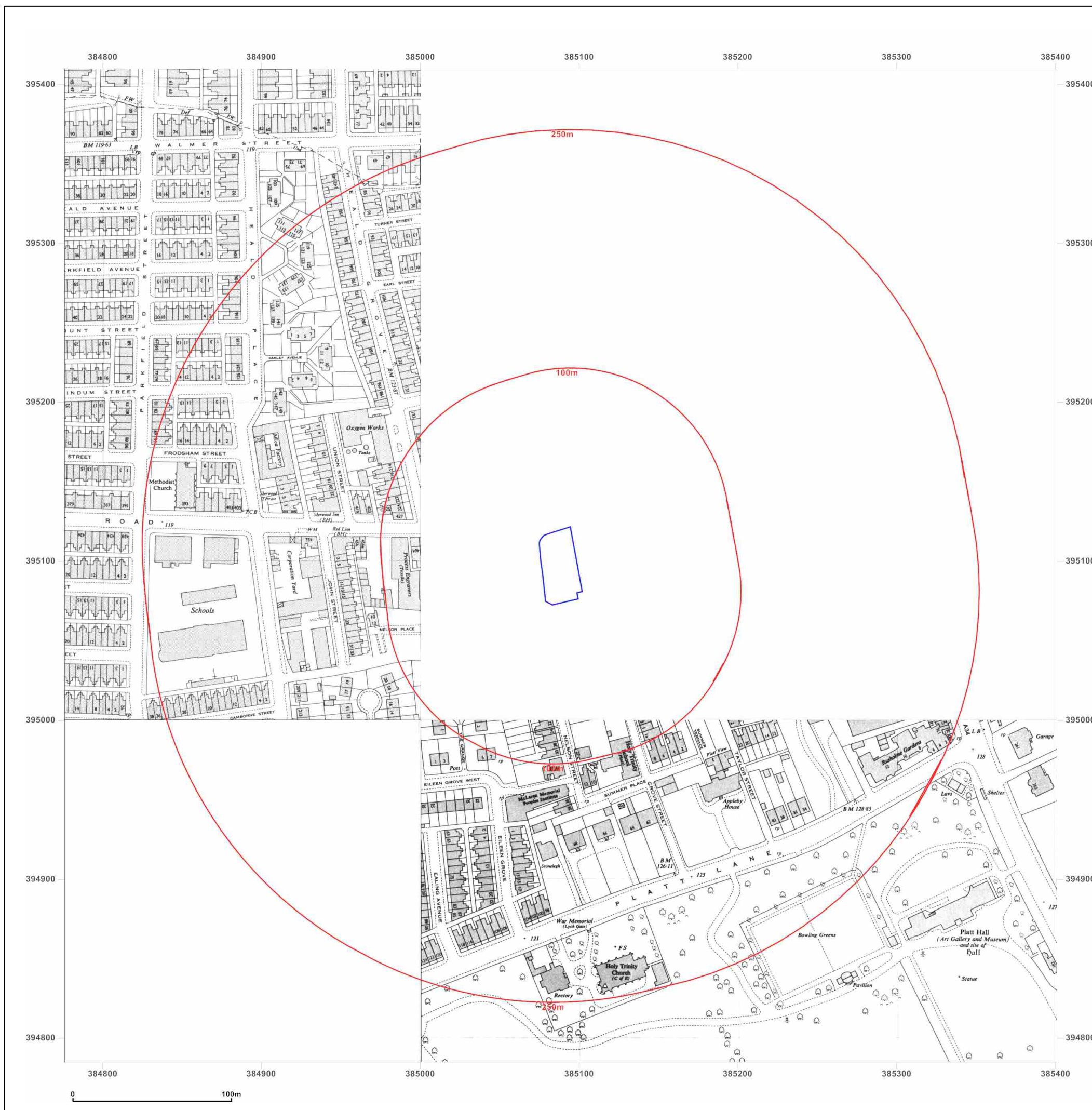


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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: National Grid

Map date: 1961

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1960
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Edition N/A
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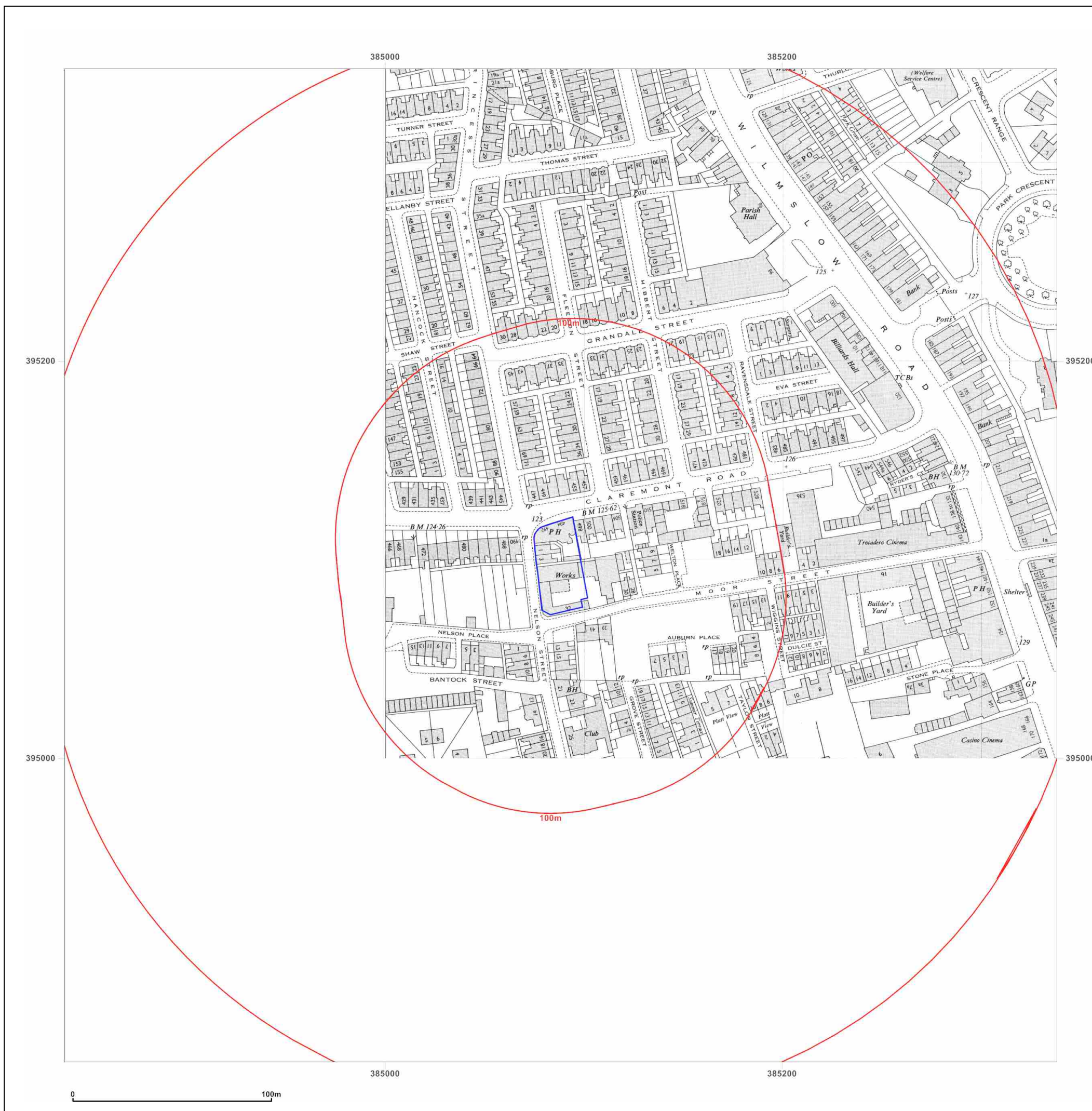


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Map Name: National Grid

Map date: 1966

Scale: 1:2,500

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Surveyed 1966
Revised 1966
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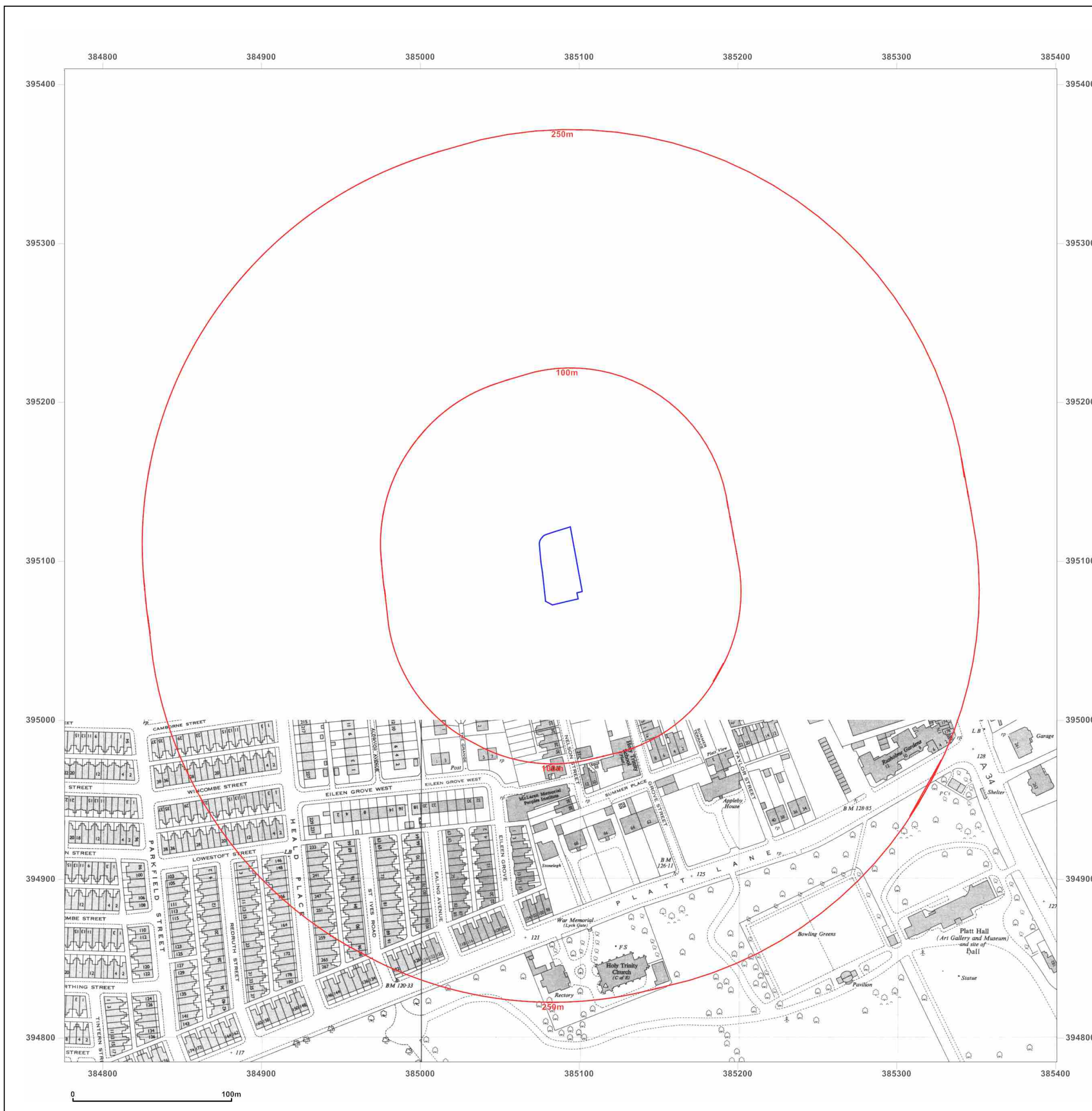


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Map Name: National Grid

Map date: 1972

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1950
Revised 1972
Edition N/A
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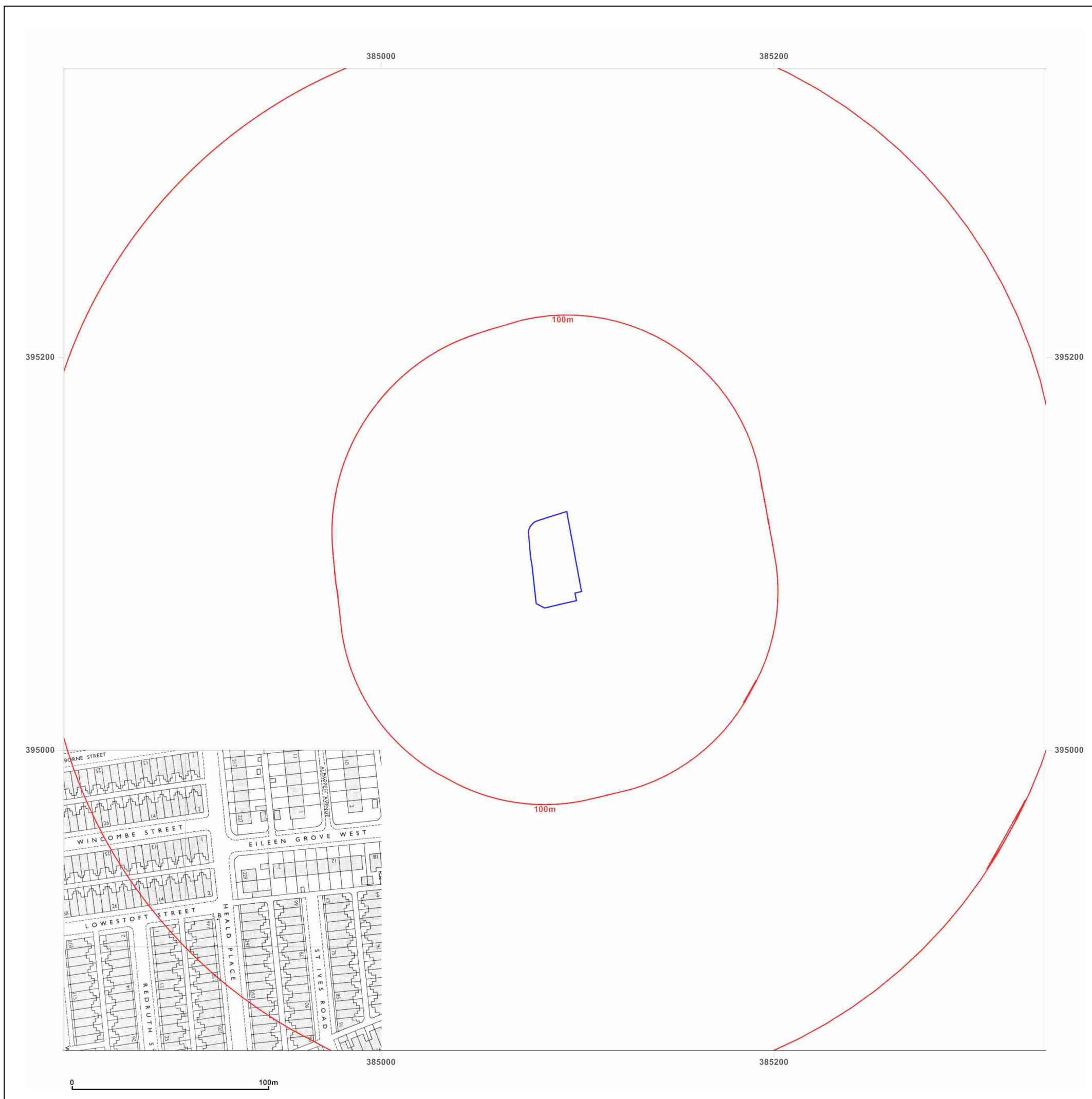


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Grid Ref: 385088, 395097

Map Name: National Grid

Map date: 1979-1982

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: National Grid

Map date: 1980-1983

Scale: 1:1,250

Printed at: 1:2,000



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	Surveyed N/A Revised N/A Edition N/A Copyright 1983 Levelled 1958

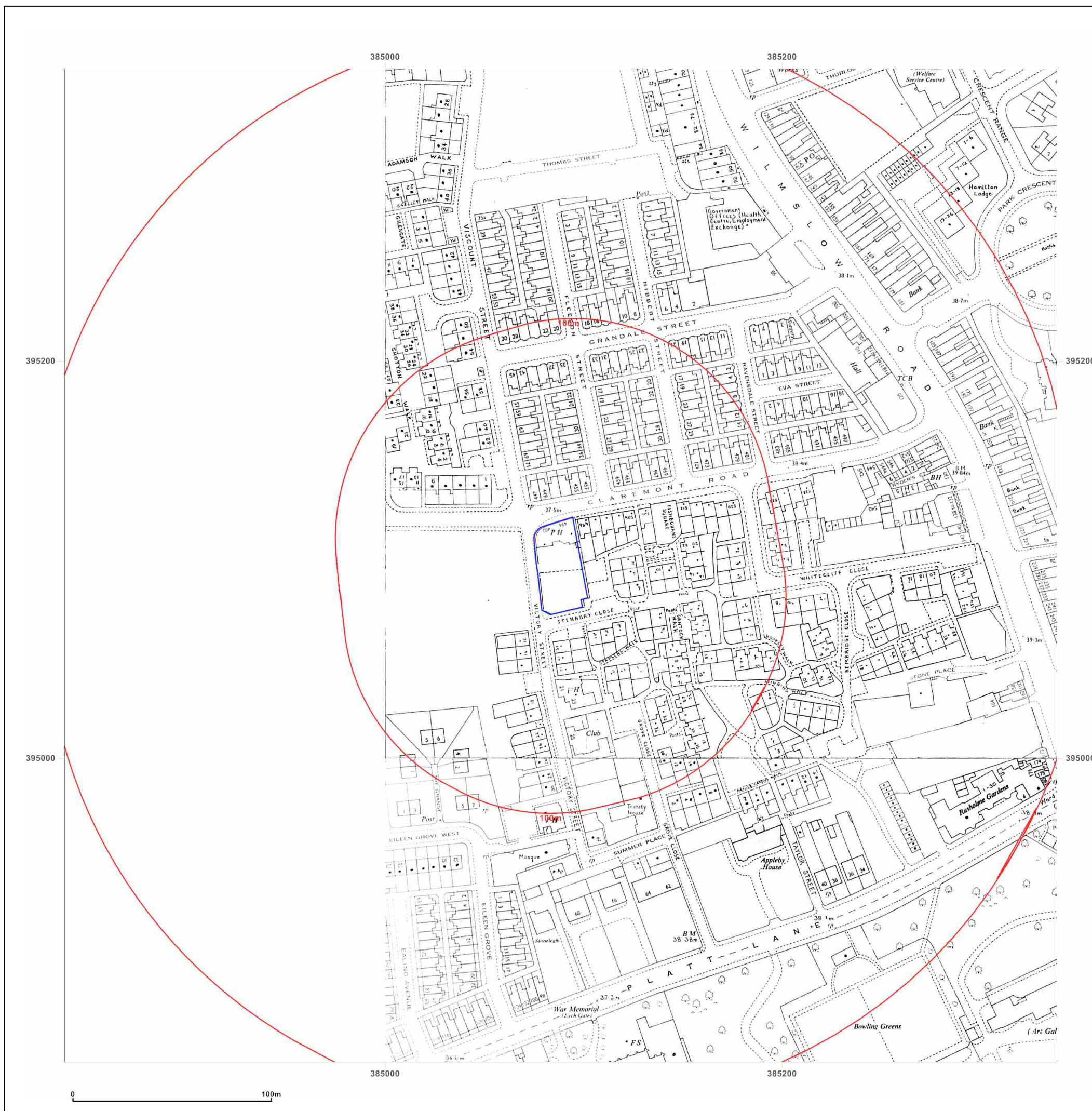


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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: National Grid

Map date: 1983-1988

Scale: 1:1,250

Printed at: 1:2,000



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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: National Grid

Map date: 1990-1992

Scale: 1:1,250

Printed at: 1:2,000



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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: National Grid

Map date: 1993-1994

Scale: 1:1,250

Printed at: 1:2,000



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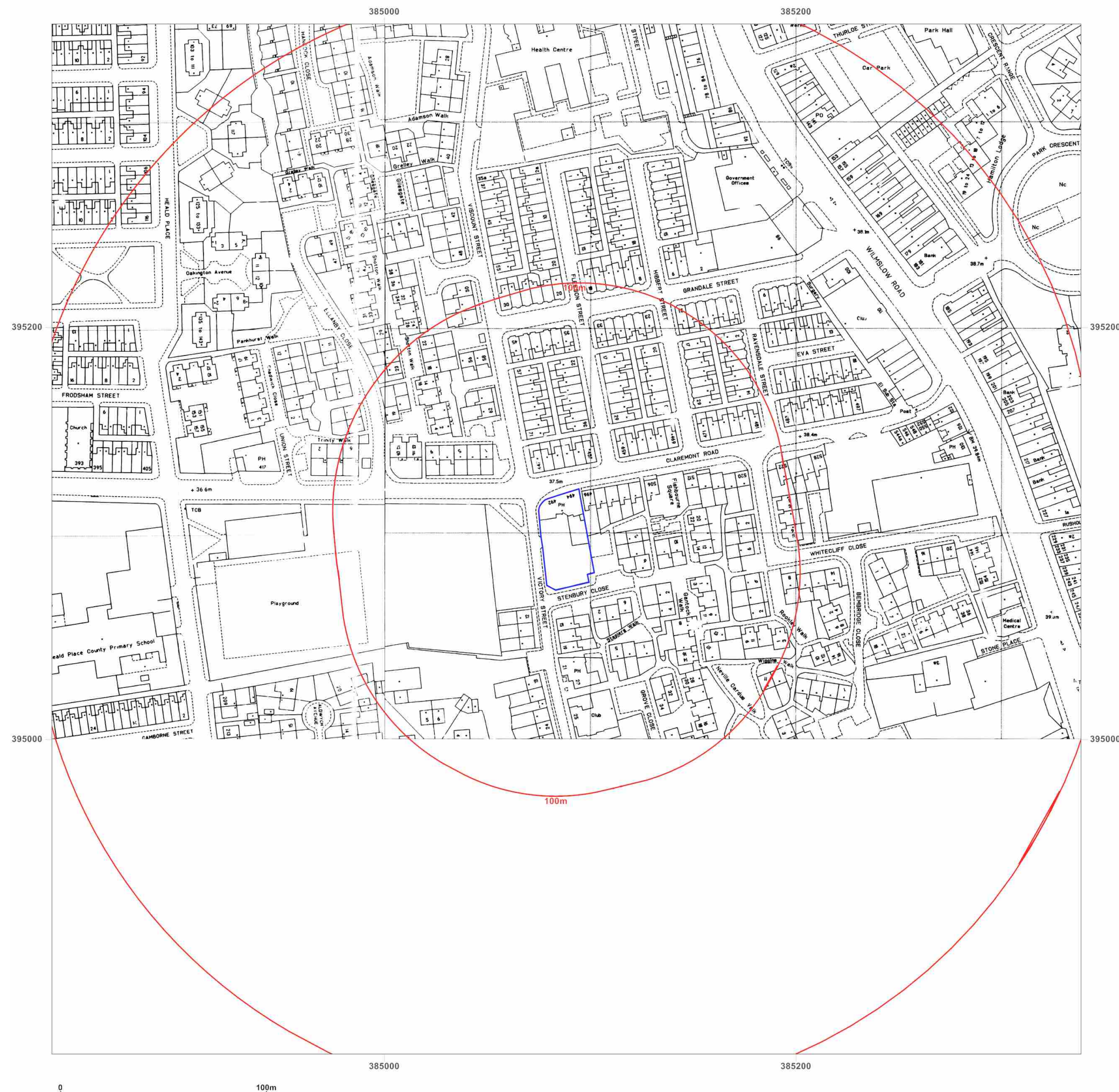


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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: National Grid

Map date: 1993-1994

Scale: 1:1,250

Printed at: 1:2,000



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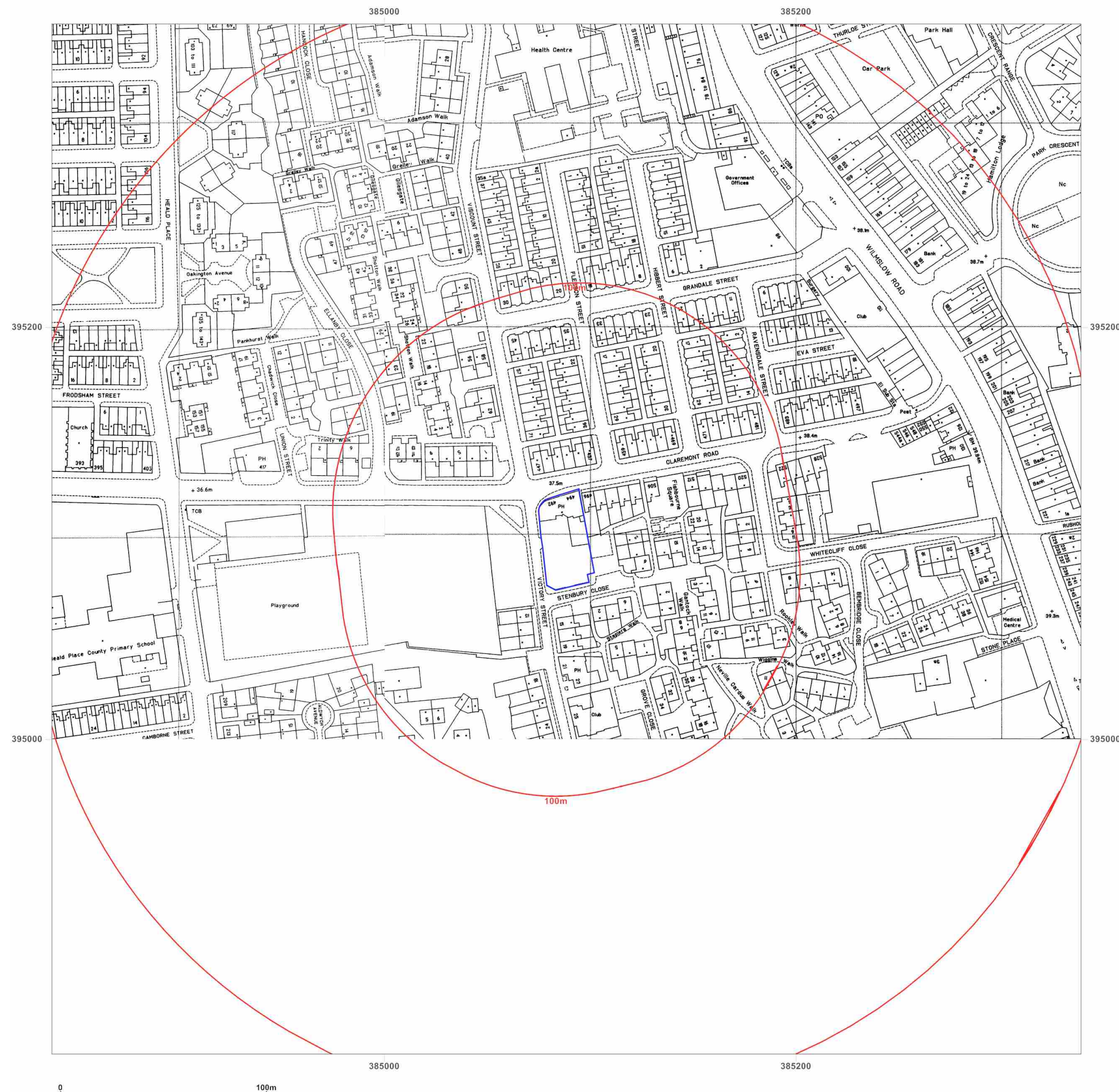


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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: County Series

Map date: 1848-1849

Scale: 1:10,560

Printed at: 1:10,560



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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: County Series

Map date: 1905

Scale: 1:10,560

Printed at: 1:10,560



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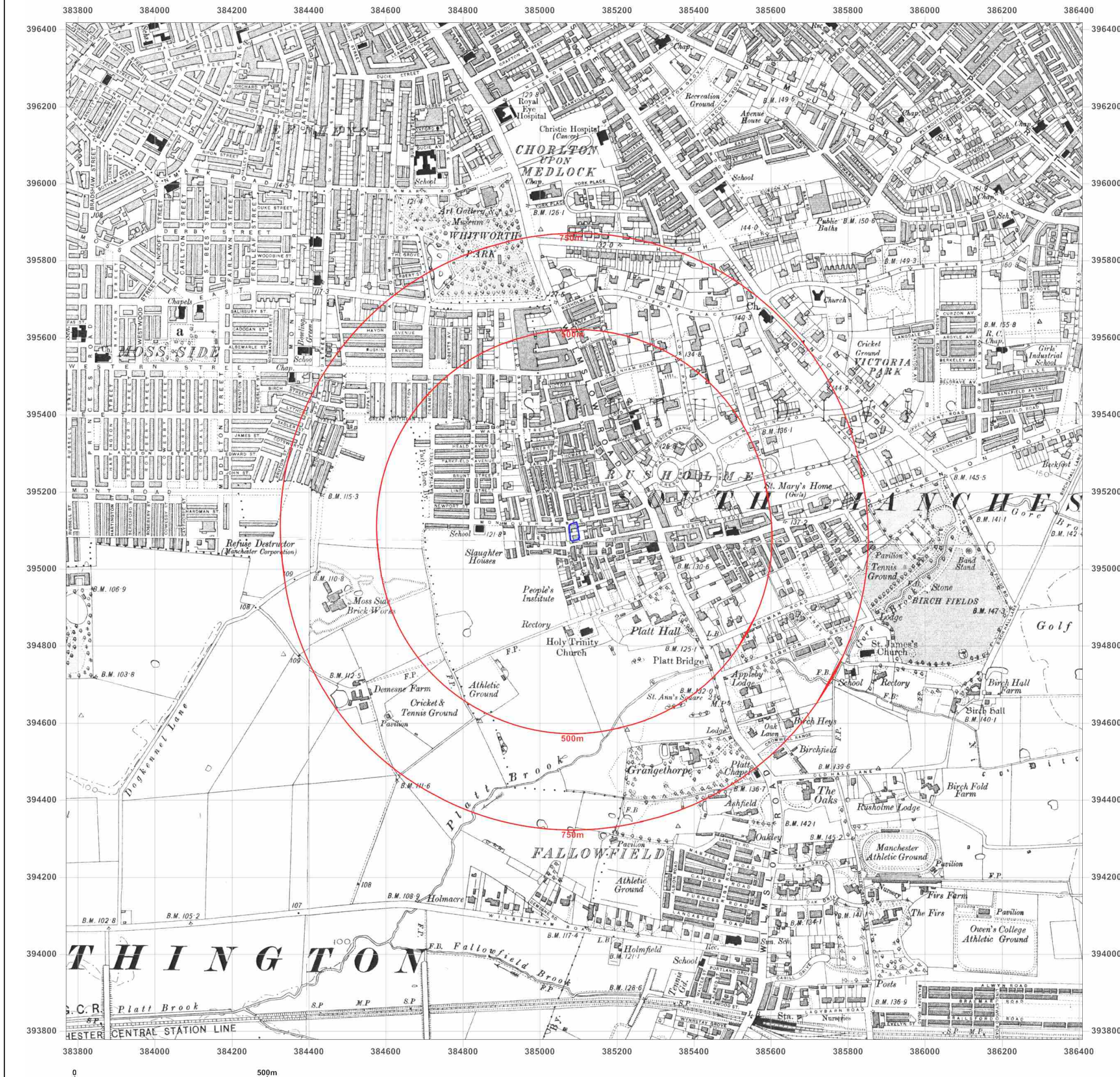


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MANCHESTER, M14 5AB

Client Ref: A2212_Claremont_Road
Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: County Series

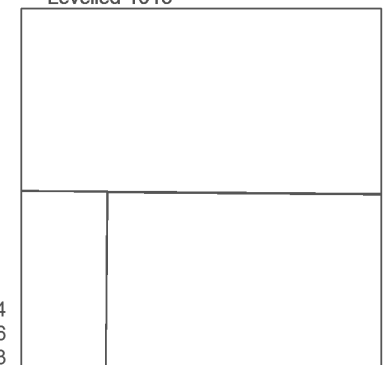
Map date: 1923

Scale: 1:10,560

Printed at: 1:10,560



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Edition 1923
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Edition 1923
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Map Name: County Series

Map date: 1932-1934

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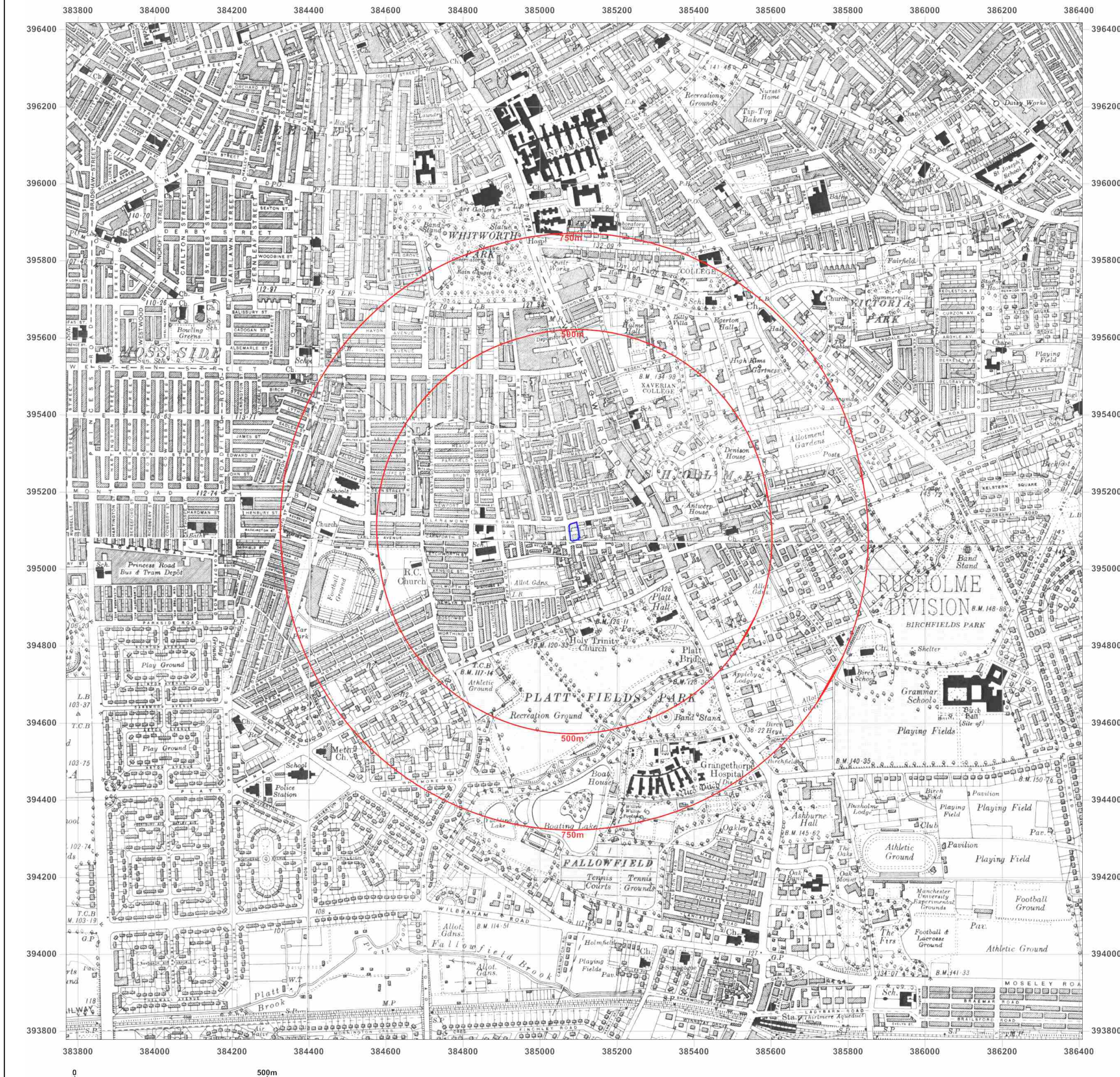


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Grid Ref: 385088, 395097

Map Name: County Series

Map date: 1938

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Printed at: 1:10,560



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Revised 1938
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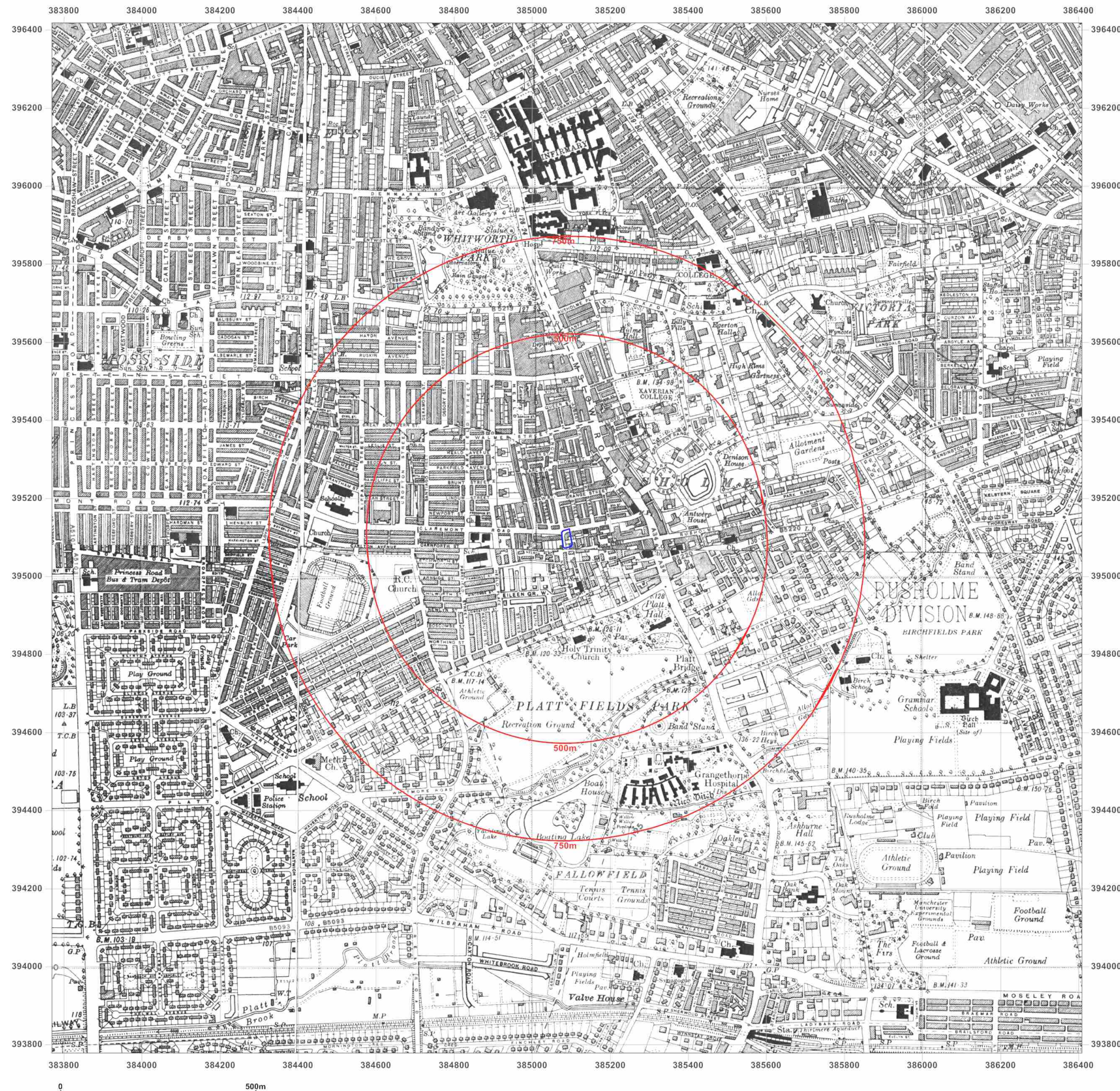


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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: Provisional

Map date: 1955-1956

Scale: 1:10,560

Printed at: 1:10,560



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Edition N/A
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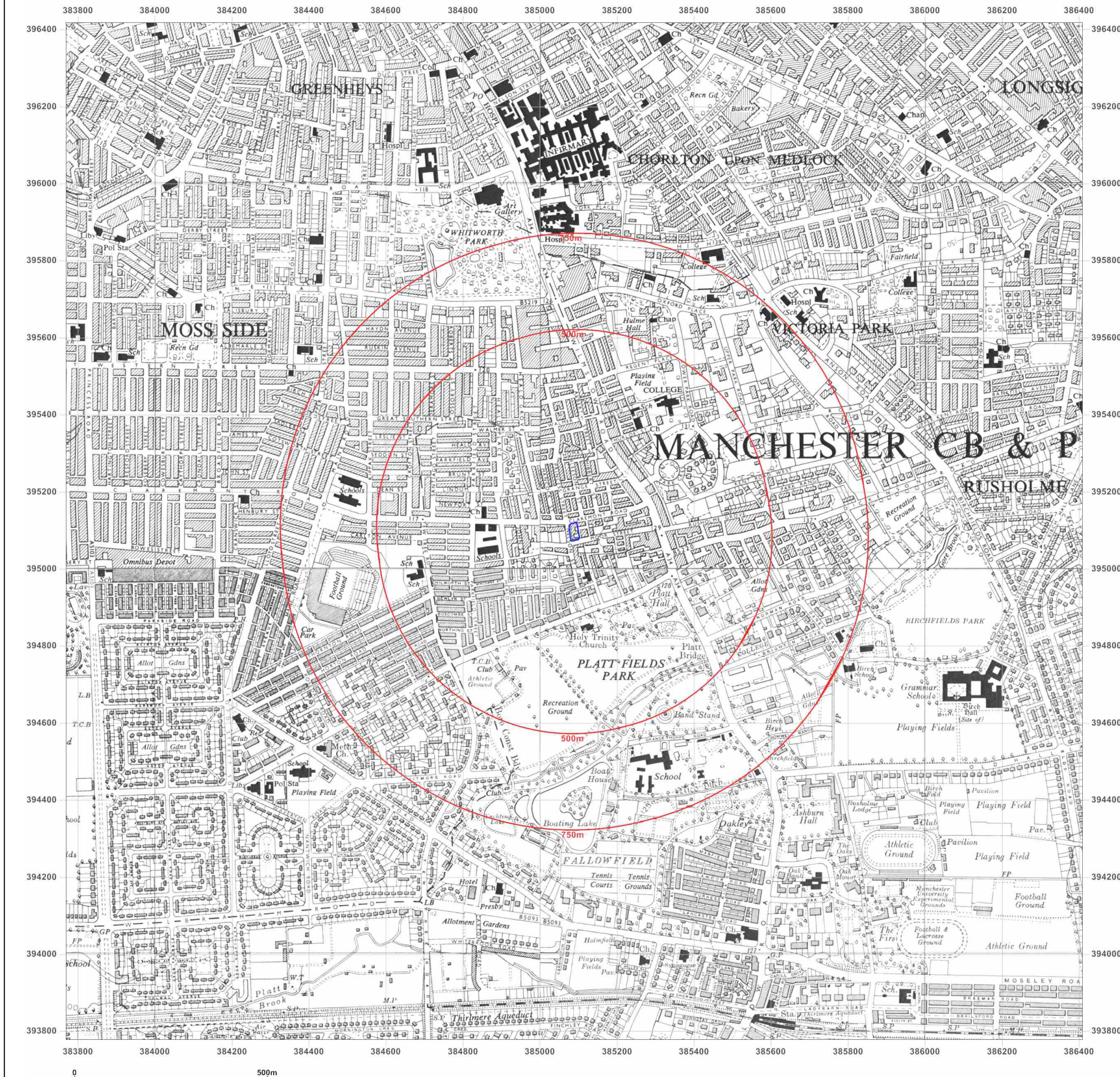


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Client Ref: A2212_Claremont_Road
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Grid Ref: 385088, 395097

Map Name: Provisional

Map date: 1965-1968

Scale: 1:10,560

Printed at: 1:10,560



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Surveyed 1966
Revised 1966
Edition N/A
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Revised 1965
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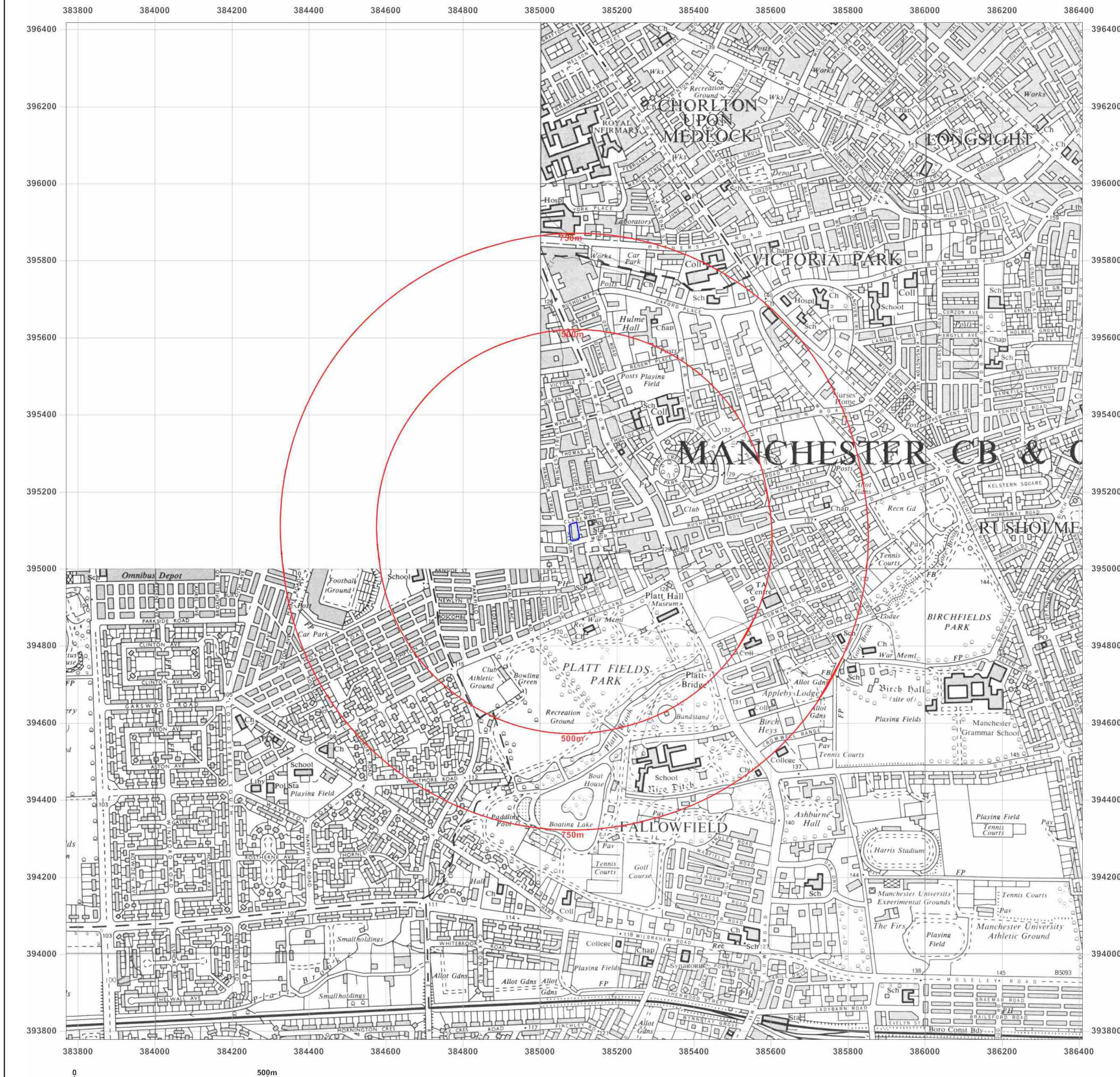


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Client Ref: A2212_Claremont_Road
Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: National Grid

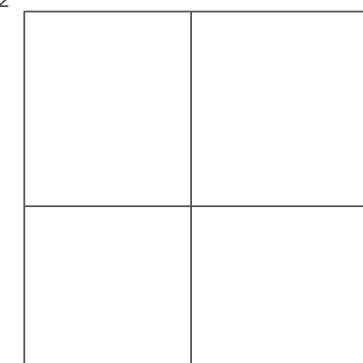
Map date: 1972-1976

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1971
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Surveyed 1974
Revised 1975
Edition N/A
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Levelled 1964

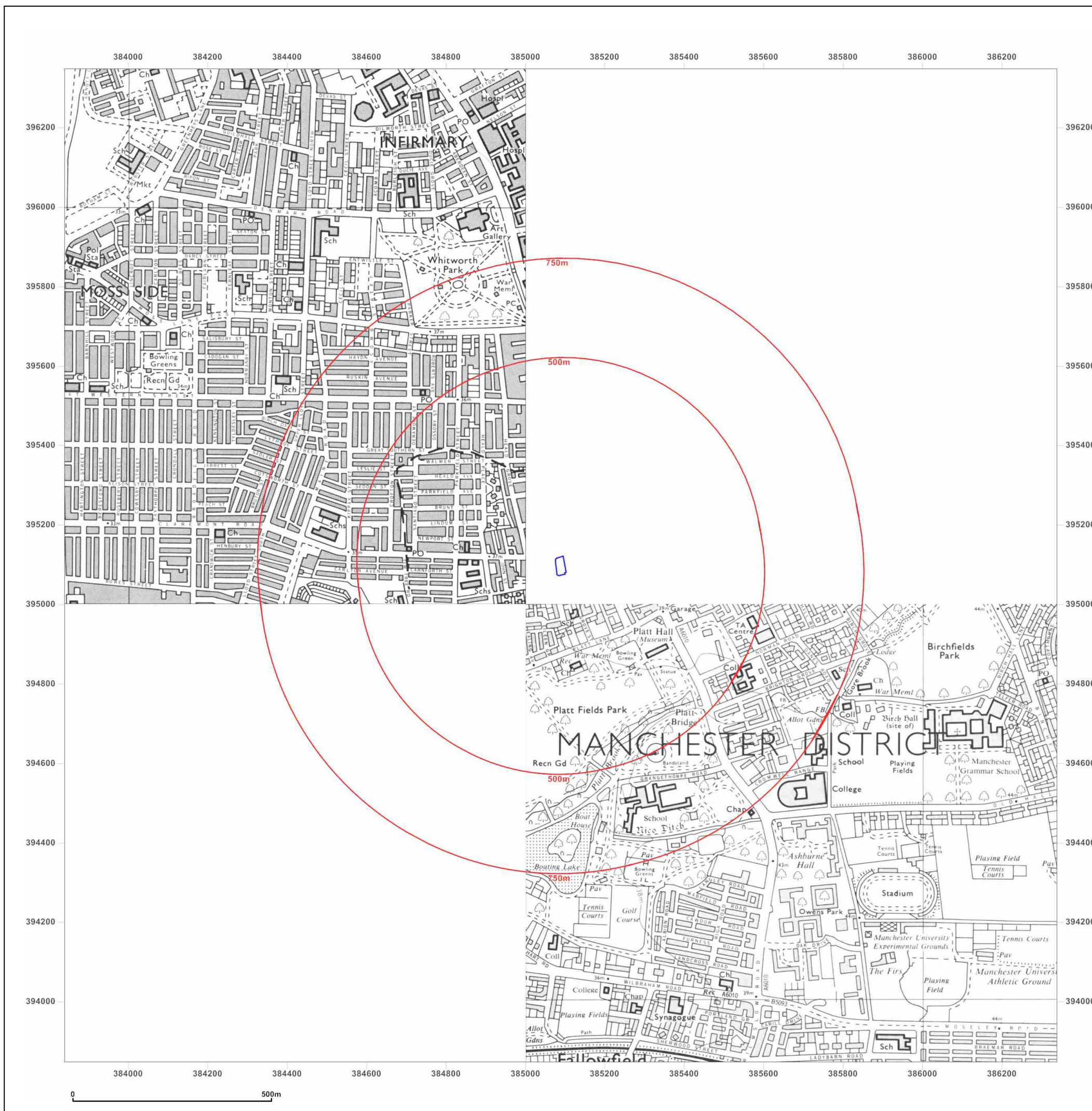


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Client Ref: A2212_Claremont_Road
Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: National Grid

Map date: 1980-1983

Scale: 1:10,000

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Revised 1981
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Revised 1983
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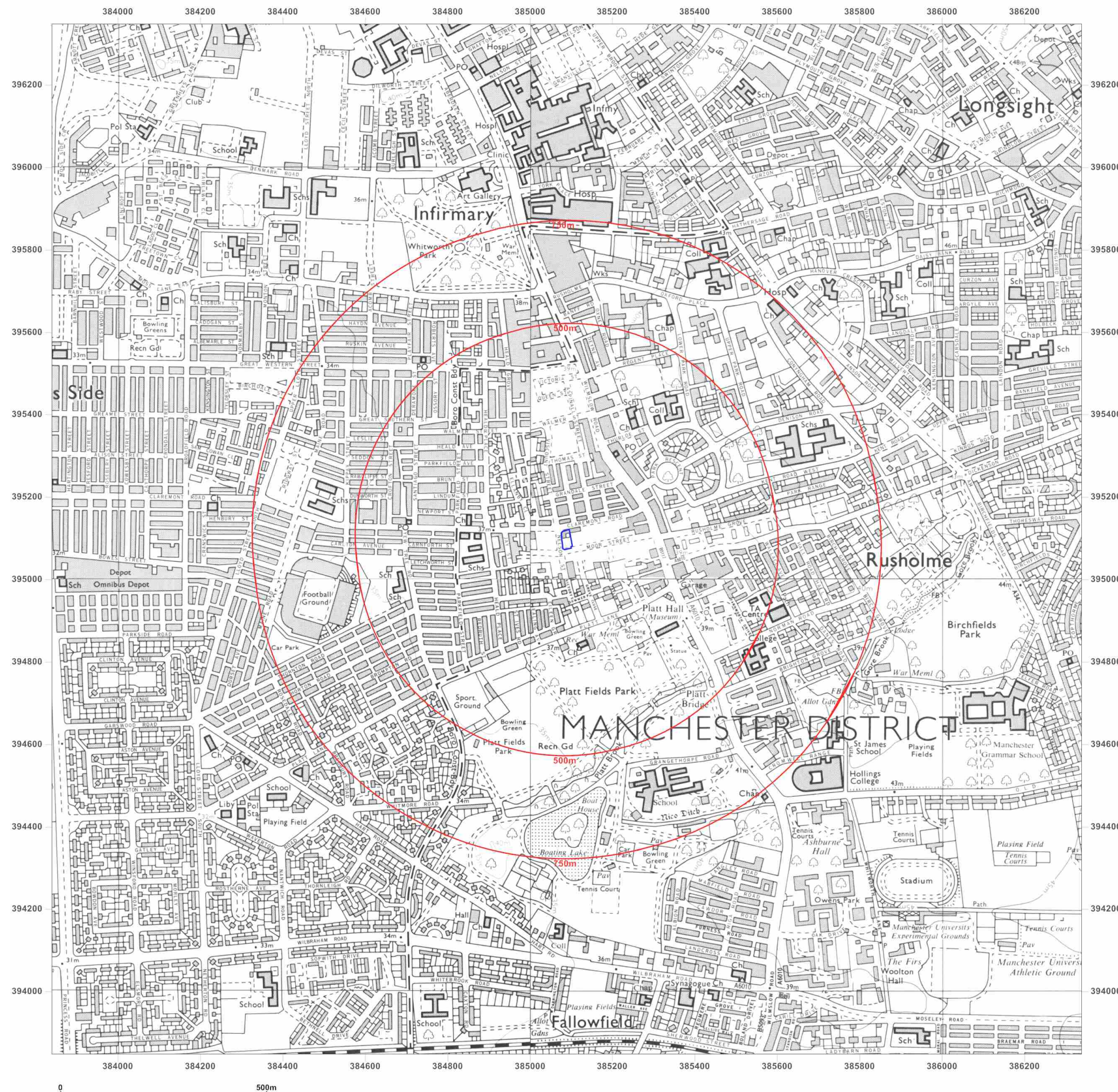


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Client Ref: A2212_Claremont_Road
Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: National Grid

Map date: 1988-1991

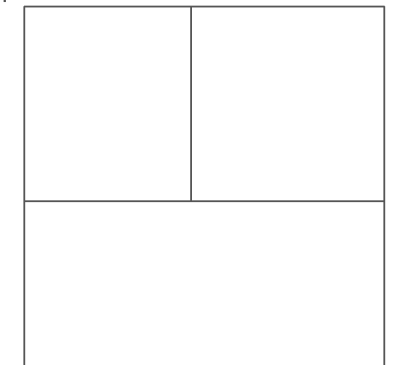
Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1986
Revised 1988
Edition N/A
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Levelled 1981

Surveyed 1985
Revised 1991
Edition N/A
Copyright 1991
Levelled 1981

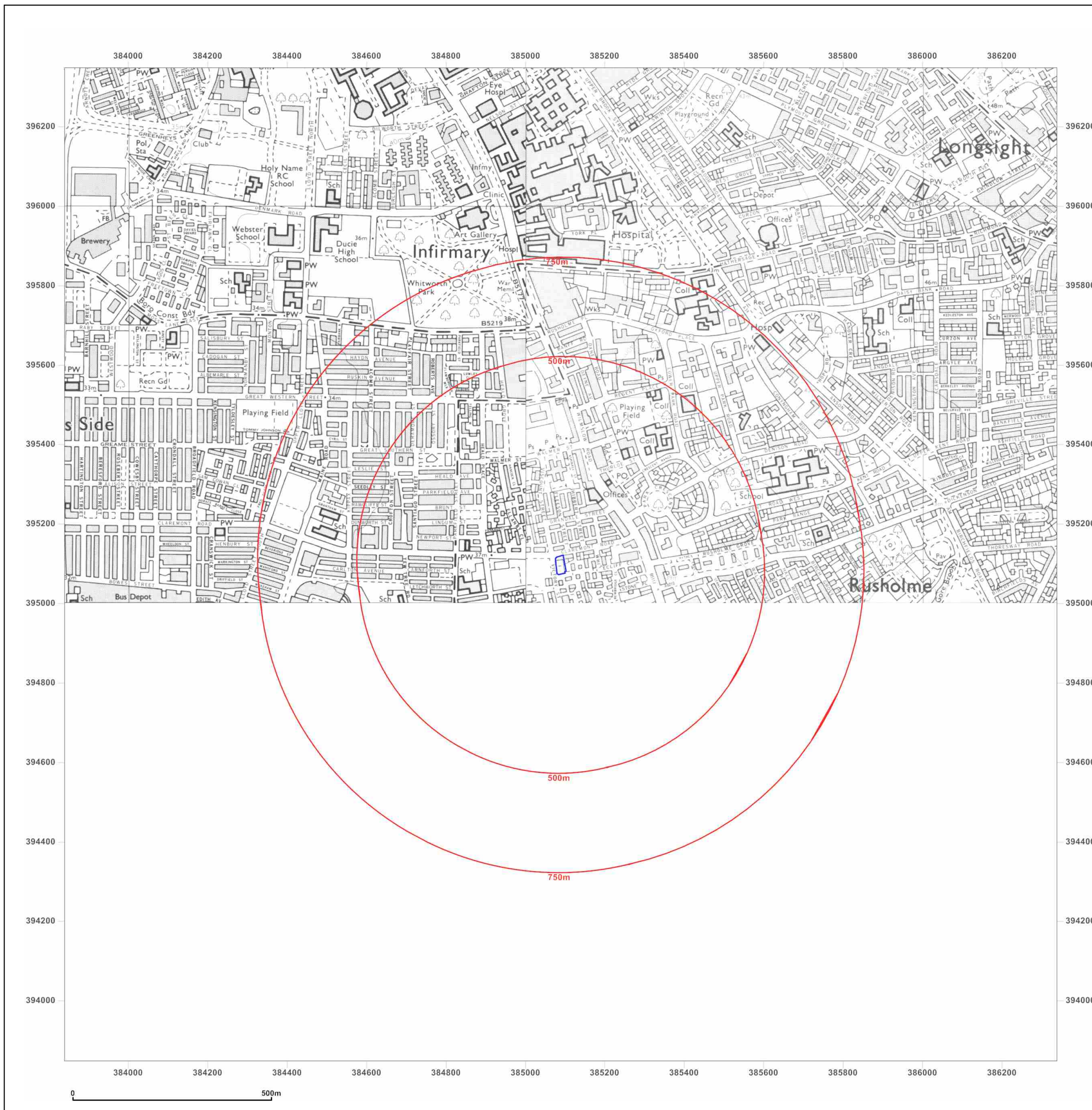


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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: National Grid

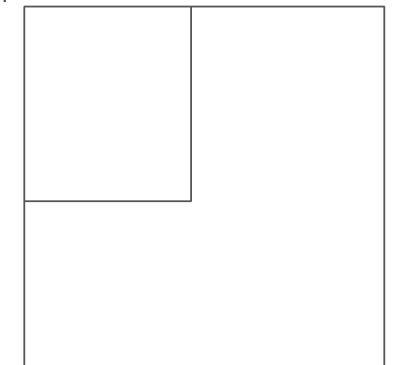
Map date: 1994

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1986
Revised 1994
Edition N/A
Copyright 1994
Levelled 1981

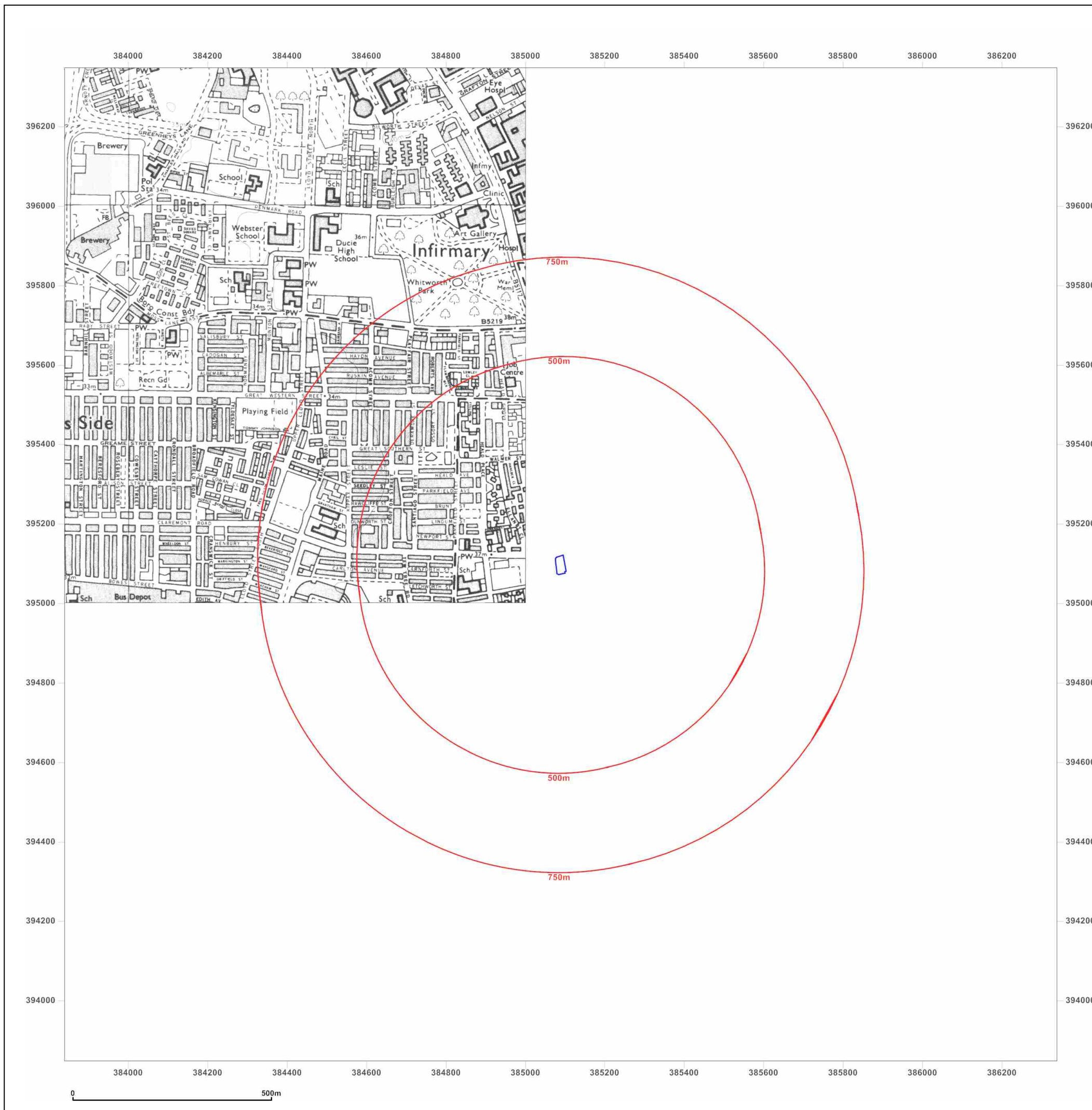


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Client Ref: A2212_Claremont_Road
Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000



2002



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Client Ref: A2212_Claremont_Road
Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



2010

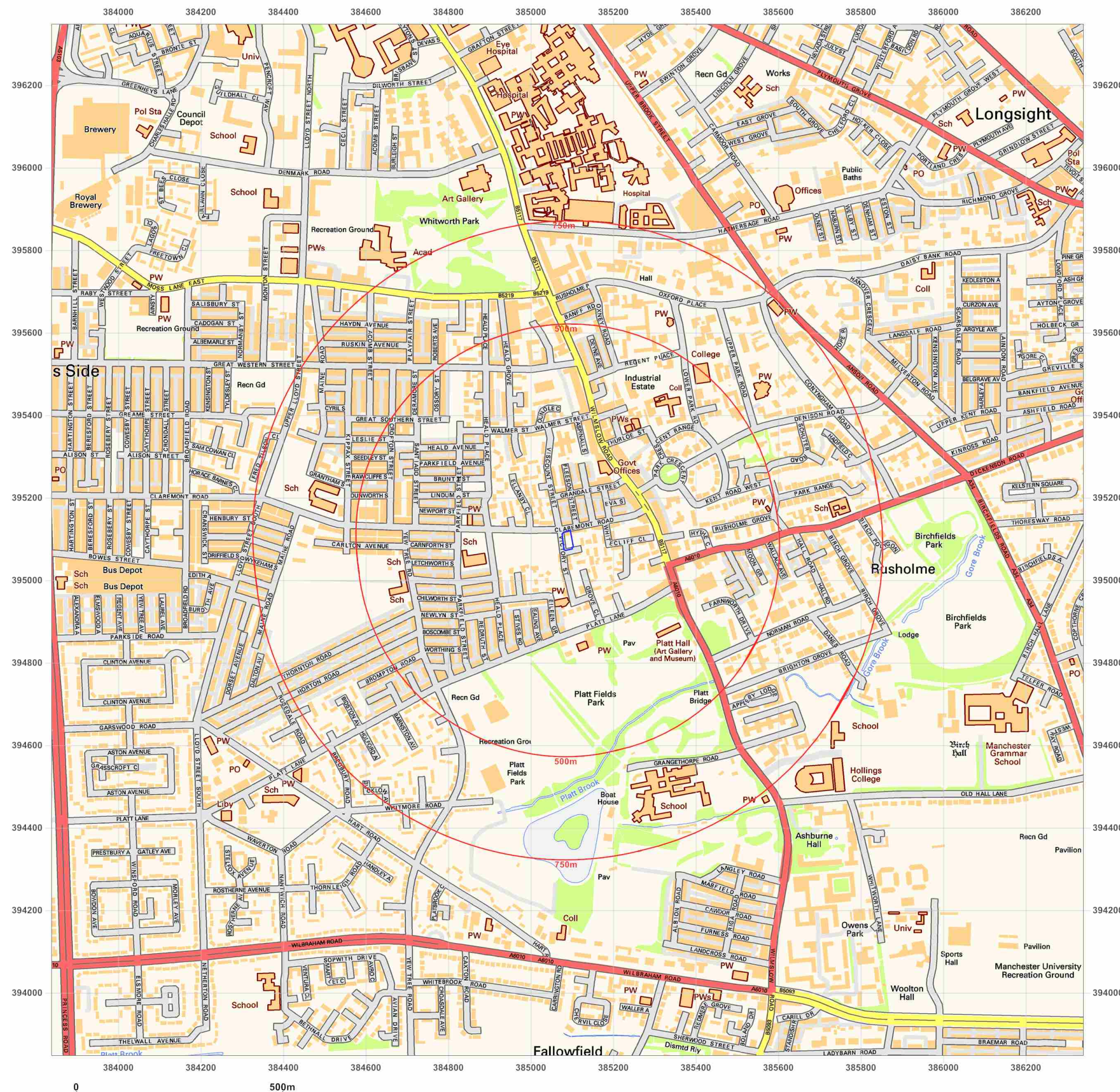


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Report Ref: GS-4209825
Grid Ref: 385088, 395097

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000



2014

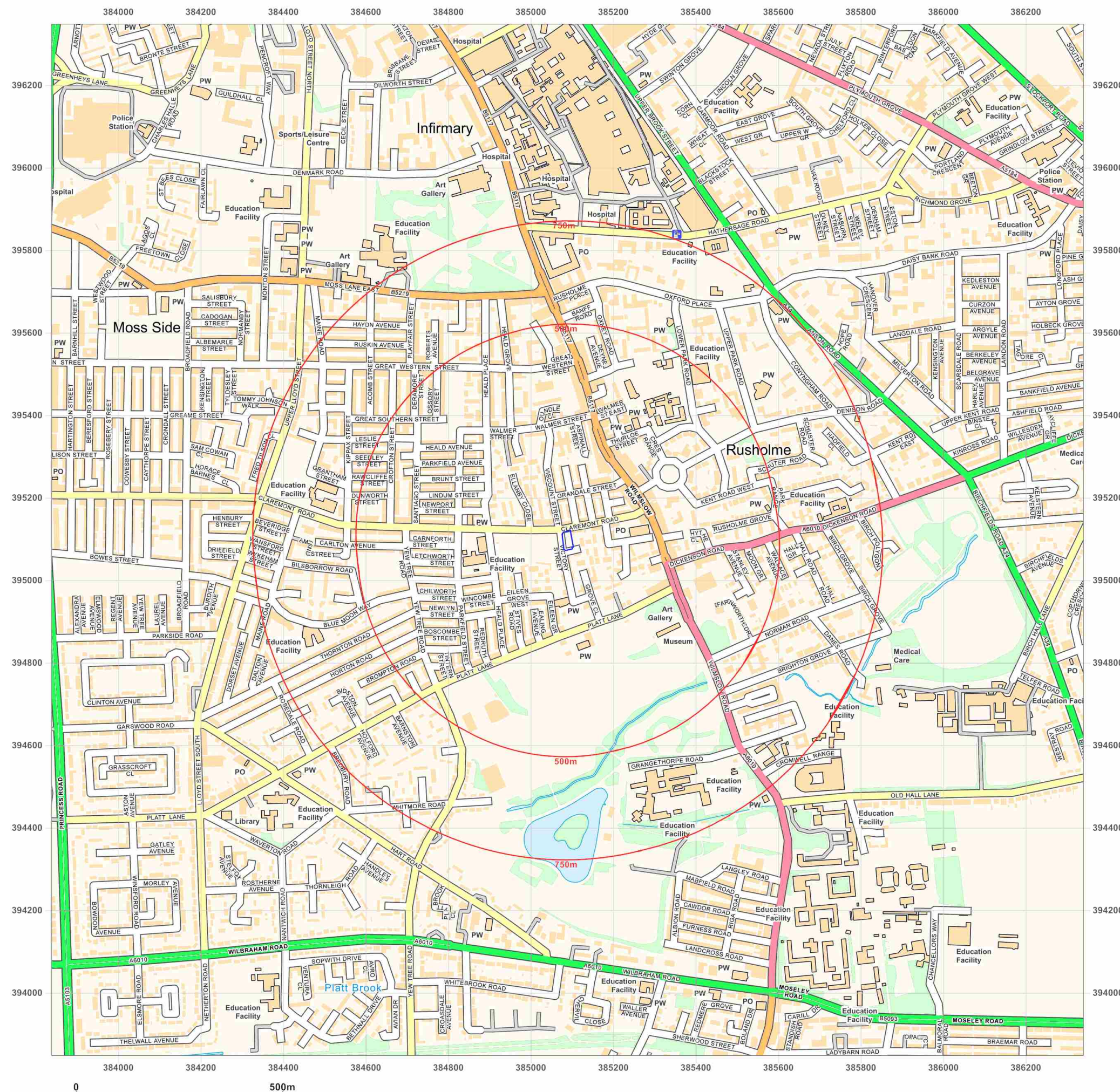


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Earth Environmental & Geotechnical Ltd
334 ASHBOURNE BUSINESS CENTRE LTD,
WELLINGTON ROAD NORTH,
STOCKPORT, SK4 5DA

Groundsure Reference: GS-4209619
Your Reference: A2212_Claremont_Road
Report Date: 24 Aug 2017
Report Delivery Method: Email - pdf

Geo Insight

Address: 2, STENBURY CLOSE, MANCHESTER, M14 5AB

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geo Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Address: 2, STENBURY CLOSE, MANCHESTER, M14 5AB

Date: 24 Aug 2017

Reference: GS-4209619

Client: Earth Environmental & Geotechnical Ltd



Aerial Photograph Capture date: 11-Jun-2015

Grid Reference: 385092,395094

Site Size: 0.10ha

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Overview of Findings

The Groundsure Geo Insight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 and 1:10,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Non-coal mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Geology 1:10,000 Scale

1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	Yes
	1.2.2 Are there any records of landslide within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and Faults	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of faults within 500m of the study site boundary at 1:10,000 scale?	No

Section 2: Geology 1:50,000 Scale

2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	No
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslide within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and Faults

2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.

2.3.2 Are there any records relating to permeability of bedrock ground within the study site boundary?

Yes

2.3.3 Are there any records of faults within 500m of the study site boundary?

No

Section 3: Radon

3. Radon

3.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	0	0	0	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
4.3 Current Ground Workings	0	0	0	0	1

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	0
5.2 Coal Mining	1	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	1	0	3	0	4
5.4 Non-Coal Mining*	0	0	0	0	0
5.5 Non-Coal Mining Cavities	0	0	0	0	0
5.5 Natural Cavities	0	0	0	0	0

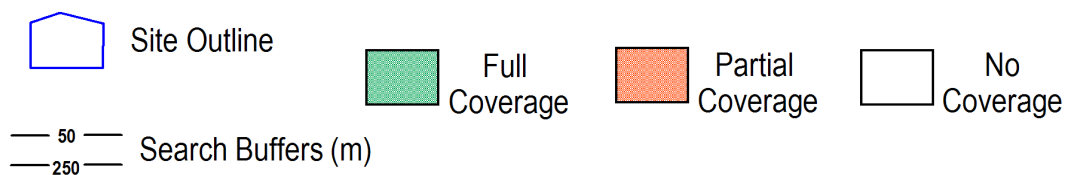
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Very Low				
6.2 Landslides	Very Low				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	Negligible				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Very Low				
Section 7: Borehole Records	On-site	0-50m	51-250		
7 BGS Recorded Boreholes	0	1	9		
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
8 Records of Background Soil Chemistry	1	0	0		
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	0	0	0	Not Searched	
9.3 Historical Railways	0	0	0	Not Searched	
9.4 Active Railways	0	0	0	Not Searched	
9.5 Railway Projects	0	0	0	0	

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

The following information represents the availability of the key components of the 1:10,000 scale geological data.

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	Some deposits are mapped
2	73.0	Some deposits are mapped	Full	Full	No coverage
3	75.0	Some deposits are mapped	Full	Full	No coverage
4	109.0	Some deposits are mapped	Full	Full	No coverage

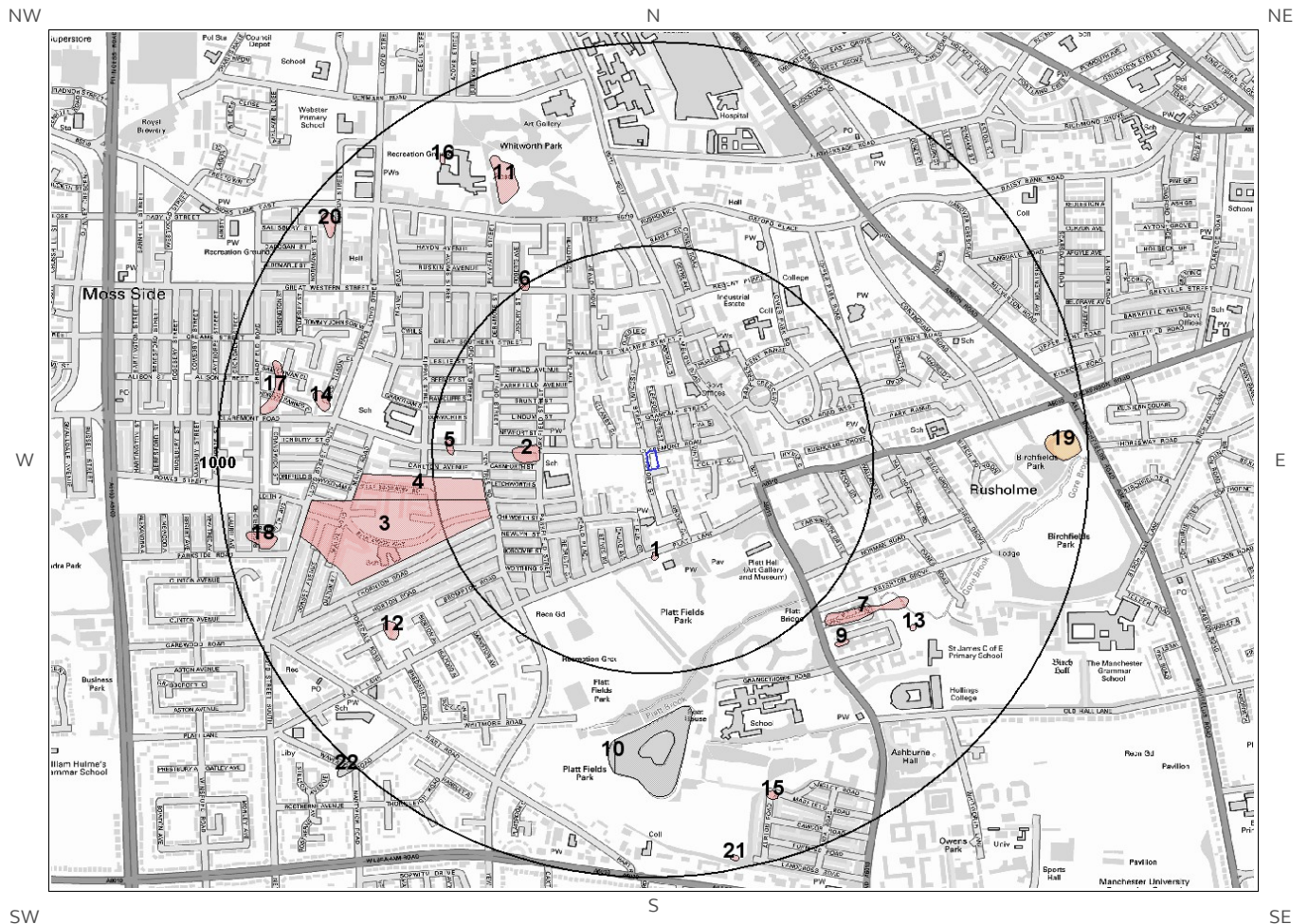
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not all themes are mapped or available on every map sheet. Therefore a coverage layer showing the availability of the four themes is presented above.

The definitions of coverage are as follows:

Geology	Full Coverage	Partial Coverage	No Coverage
Bedrock	The whole tile has been mapped	Some but not all the tile has been mapped	No coverage
Superficial	The whole tile has been mapped	Some but not all of the tile has been mapped	No coverage
Artificial	Some deposits are mapped on this tile	-	No deposits are mapped
Mass Movement	Some deposits are mapped on this tile	-	No coverage

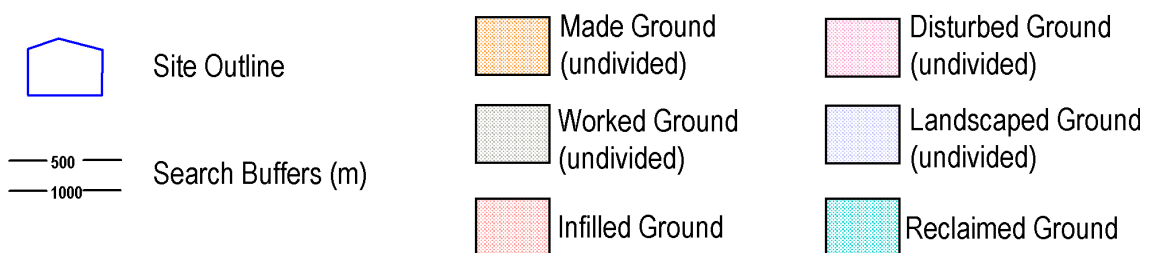
1 Geology (1:10,000 scale).

1.1 Artificial Ground Map (1:10,000 scale)



Artificial Ground Legend

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1. Geology 1:10,000 scale

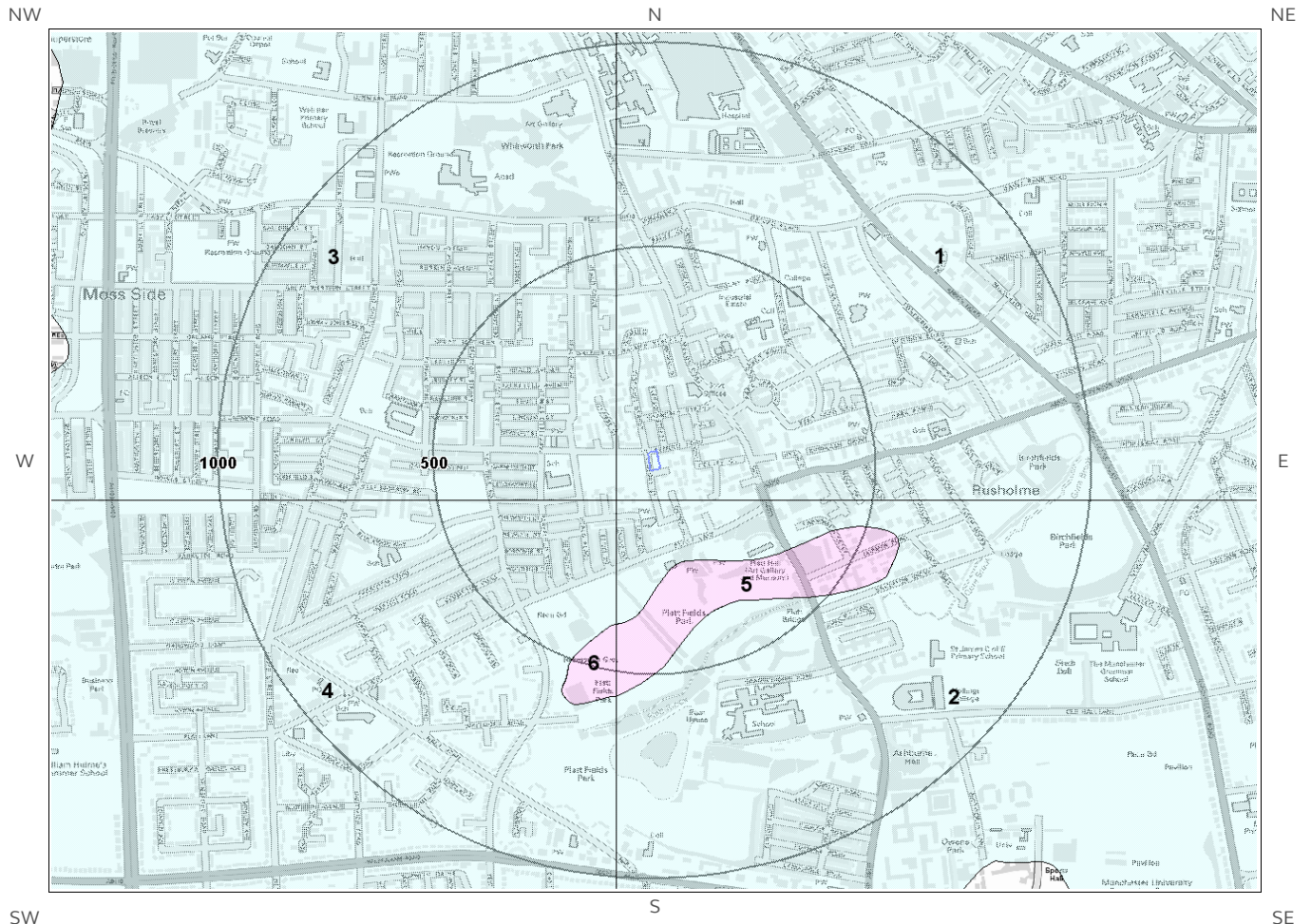
1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? Yes

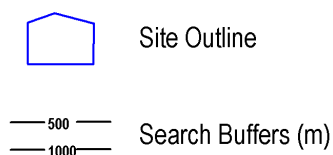
ID	Distance	Direction	LEX Code	Description	Rock Description
1	202.0	S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
2	250.0	W	WMGR-ARTDP	Infilled Ground	Artificial Deposit
3	385.0	W	WMGR-ARTDP	Infilled Ground	Artificial Deposit
4	385.0	W	WMGR-ARTDP	Infilled Ground	Artificial Deposit
5	450.0	W	WMGR-ARTDP	Infilled Ground	Artificial Deposit
6	488.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit

1.2 Superficial Deposits and Landslips Map (1:10,000 scale)



Artificial Ground Legend

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1.2 Superficial Deposits and Landslips

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
2	73.0	S	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
3	75.0	W	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
4	109.0	SW	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
5	233.0	S	GFICD-XSV	Glaciofluvial Ice Contact Deposits, Devensian - Sand And Gravel	Sand And Gravel
6	385.0	S	GFICD-XSV	Glaciofluvial Ice Contact Deposits, Devensian - Sand And Gravel	Sand And Gravel

1.2.2 Landslip

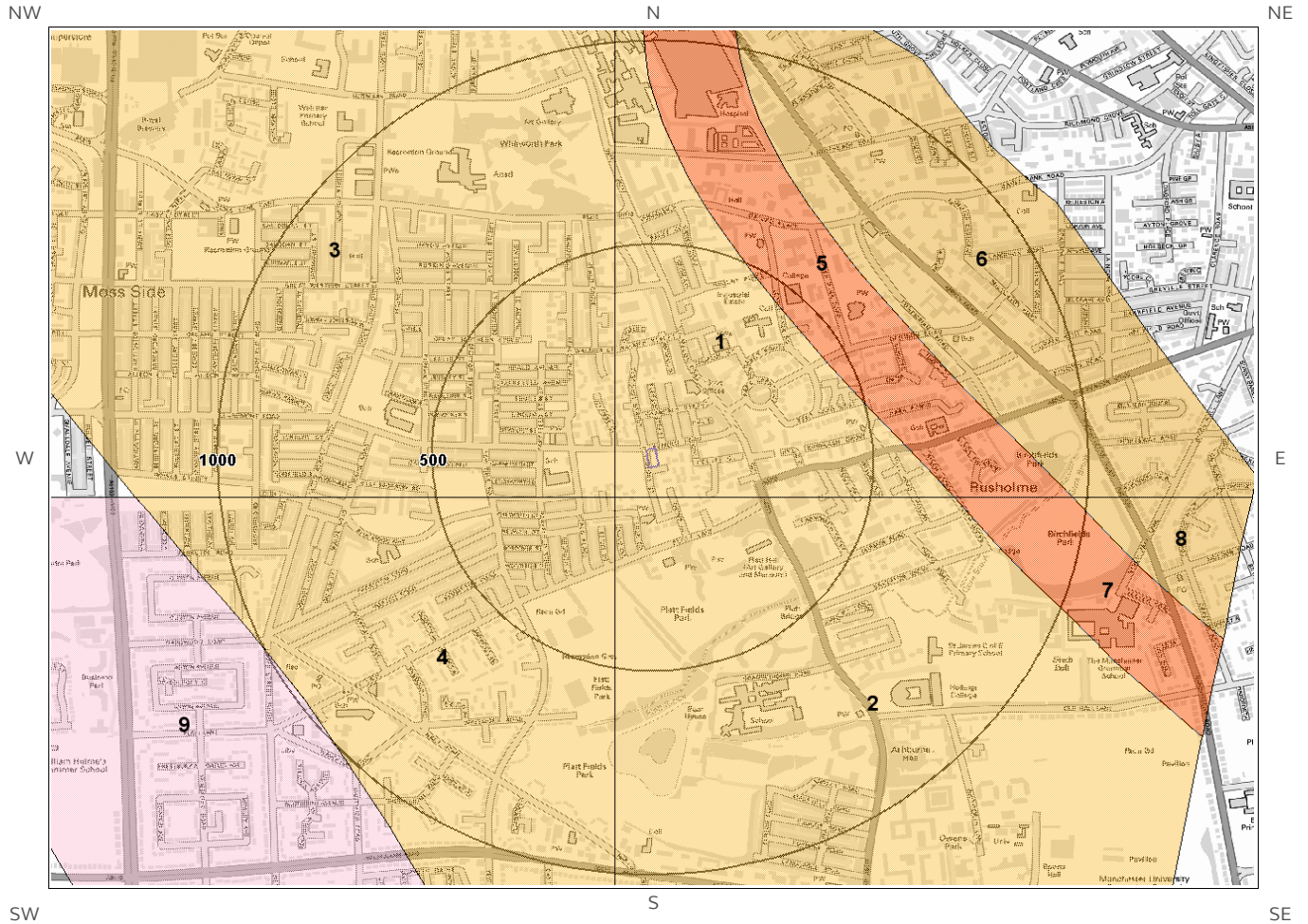
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale

This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3 Bedrock and Faults Map (1:10,000 scale)

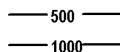


Bedrock and Faults Legend

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Site Outline



Search Buffers (m)

1.3 Bedrock and Faults

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary at 1:10,000 scale.

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
2	73.0	S	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
3	75.0	W	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
4	109.0	SW	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
5	442.0	NE	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]

1.3.2 Faults

Are there any records of Faults within 500m of the study site boundary at 1:10,000 scale? No

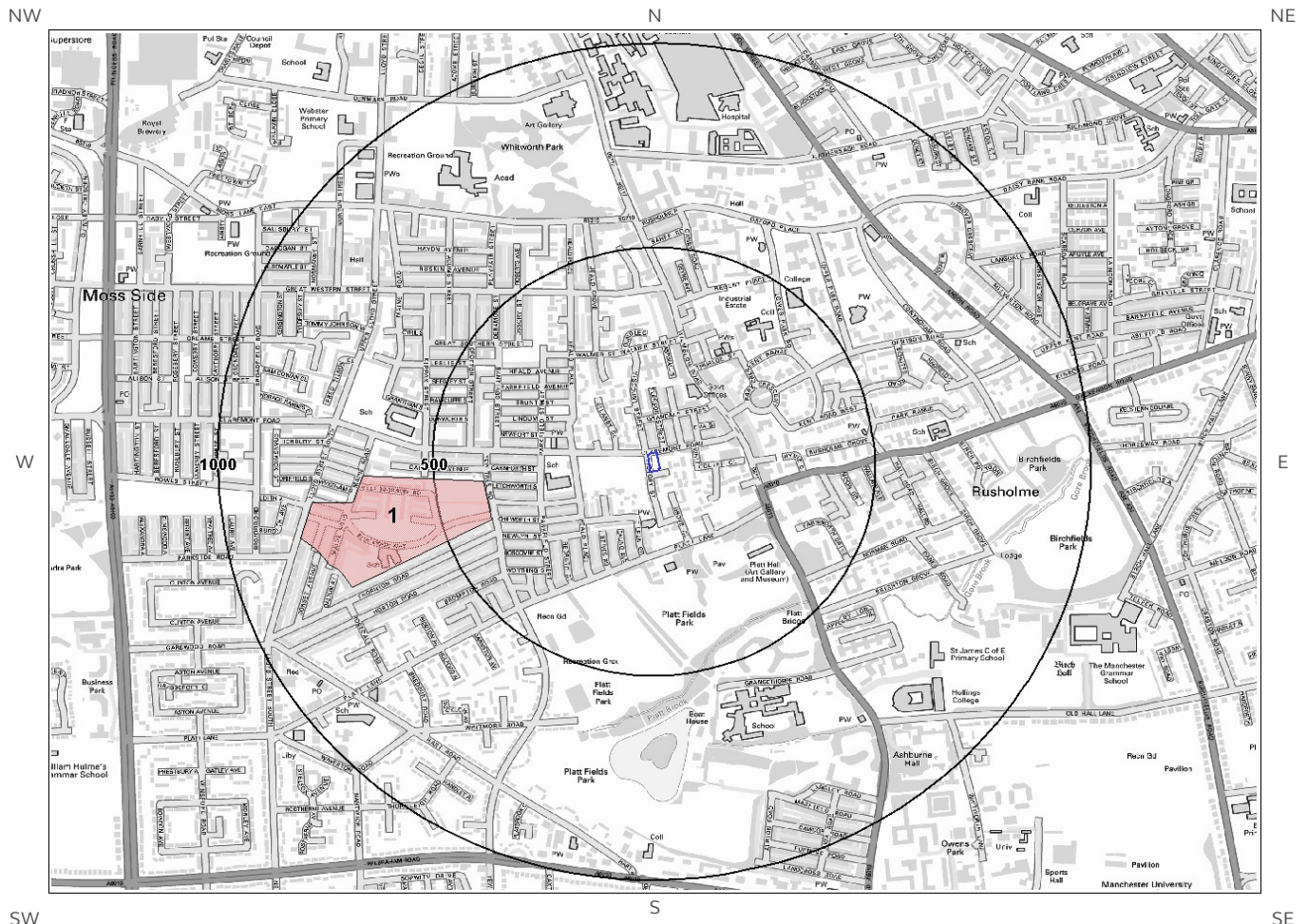
Database searched and no data found at this scale.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of great Britain at 1:10,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

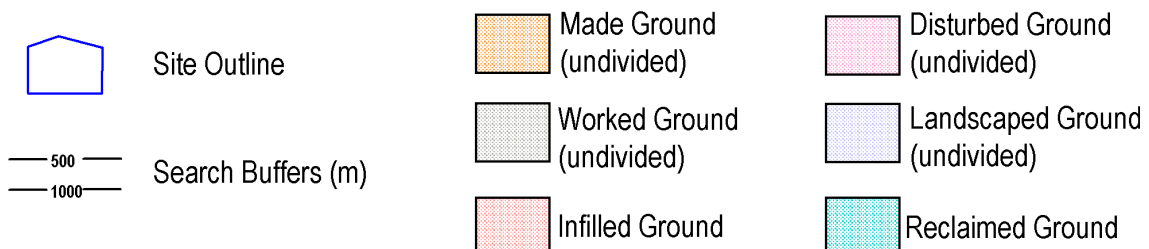
2 Geology 1:50,000 Scale

2.1 Artificial Ground Map



Ground Workings Legend

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2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 085

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

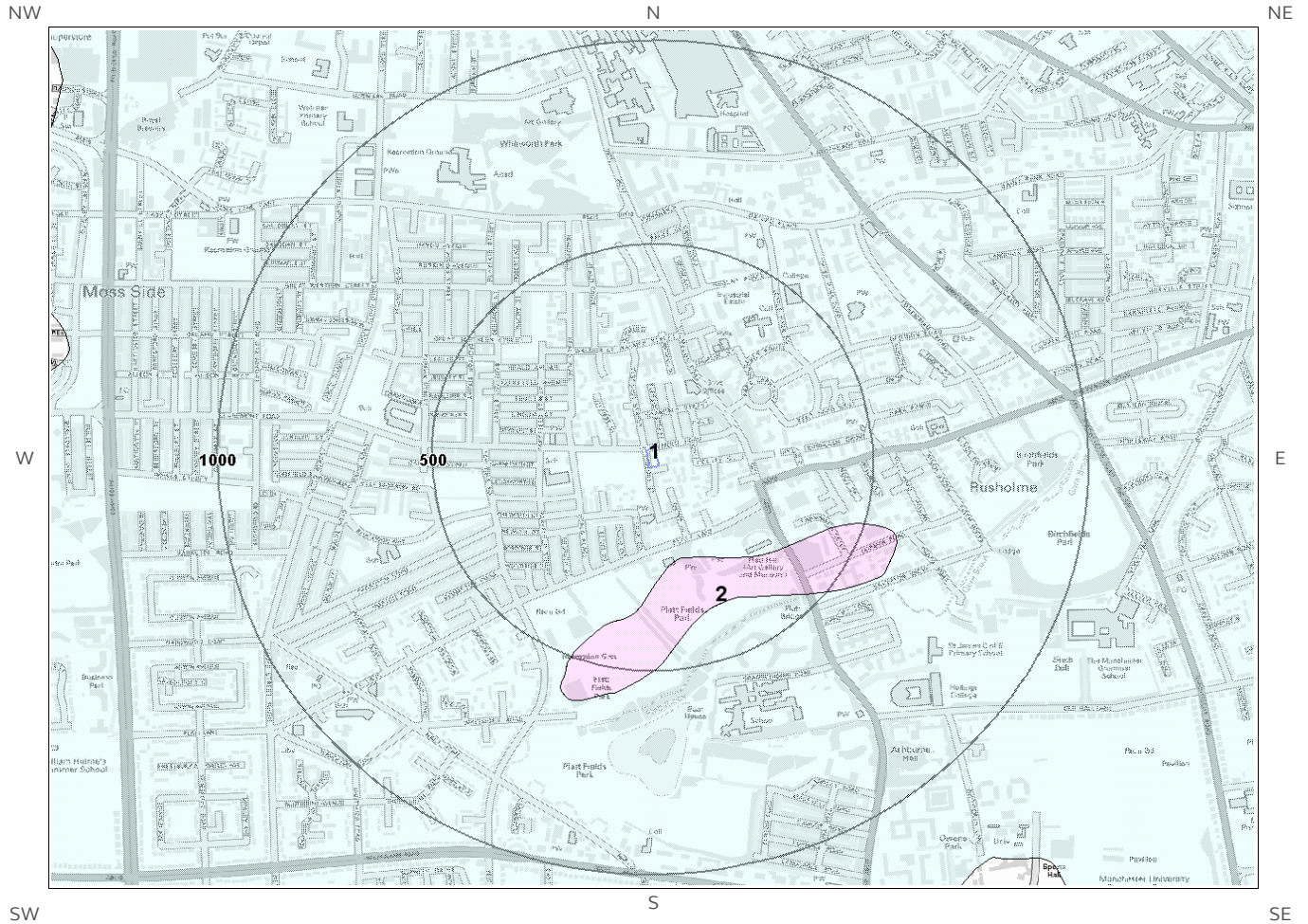
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	385.0	W	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT

2.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.

2.2 Superficial Deposits and Landslips Map (1:50,000 scale)

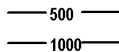


Ground Workings Legend

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Site Outline



Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
2	232.0	S	GFICD-XSV	GLACIOFLUVIAL ICE CONTACT DEPOSITS, DEVENSIAN	SAND AND GRAVEL

2.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	High	Low

2.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

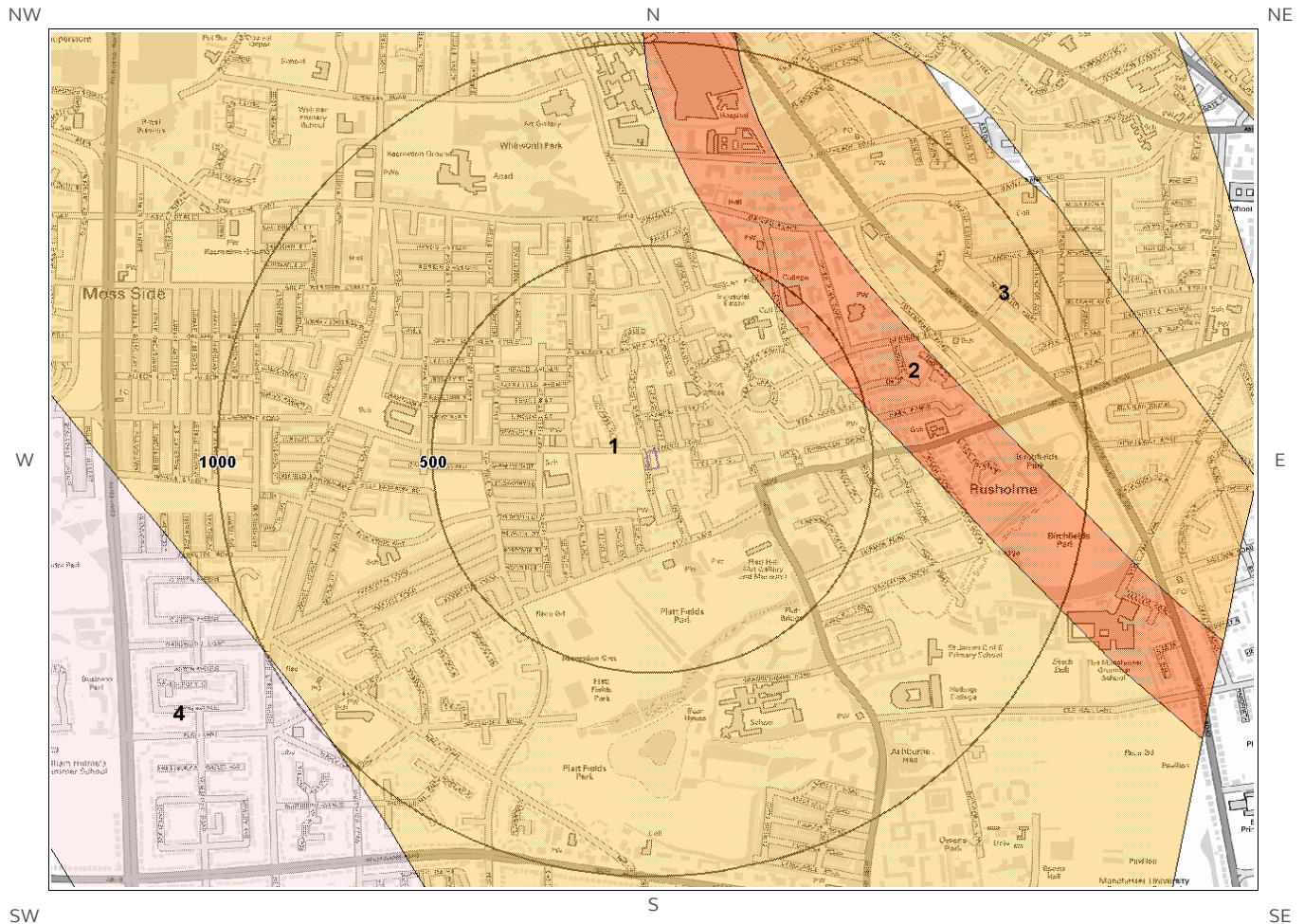
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site boundary? No

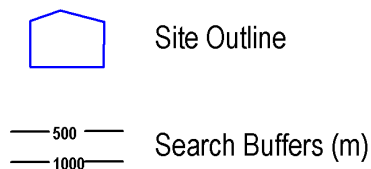
Database searched and no data found.

2.3 Bedrock and Faults Map (1:50,000 scale)



Ground Workings Legend

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2.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 085

2.3.1 Bedrock/Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary:

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	CHES-SDST	CHESTER FORMATION - SANDSTONE	OLENEKIAN
2	442.0	NE	MM-MDST	MANCHESTER MARLS FORMATION - MUDSTONE	-

2.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site boundary? Yes

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	High	Moderate

2.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nation wide coverage.

3 Radon Data

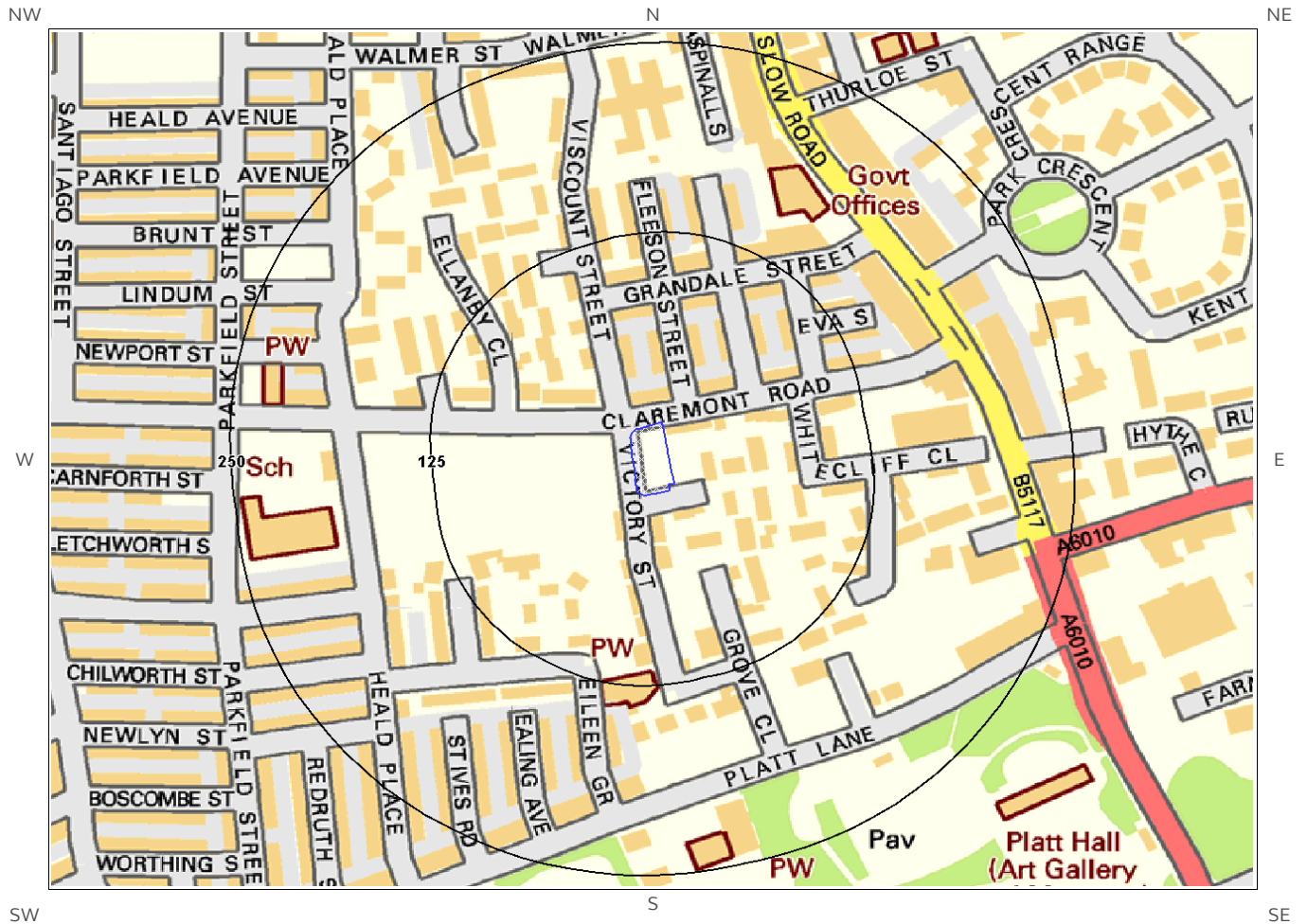
3.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

3.2 Radon Protection

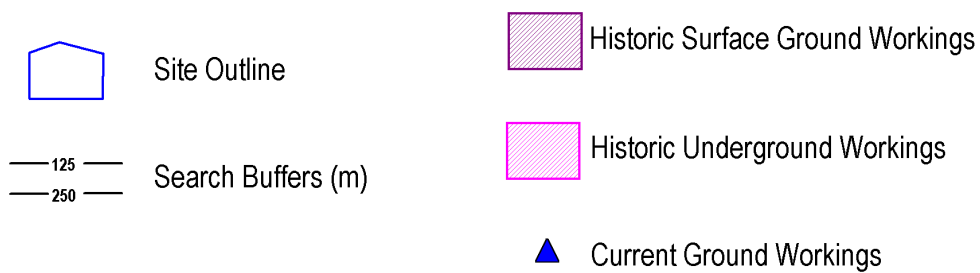
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 Ground Workings Map



Ground Workings Legend

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4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? No

Database searched and no data found.

4.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? No

Database searched and no data found.

4.3 Current Ground Workings

This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

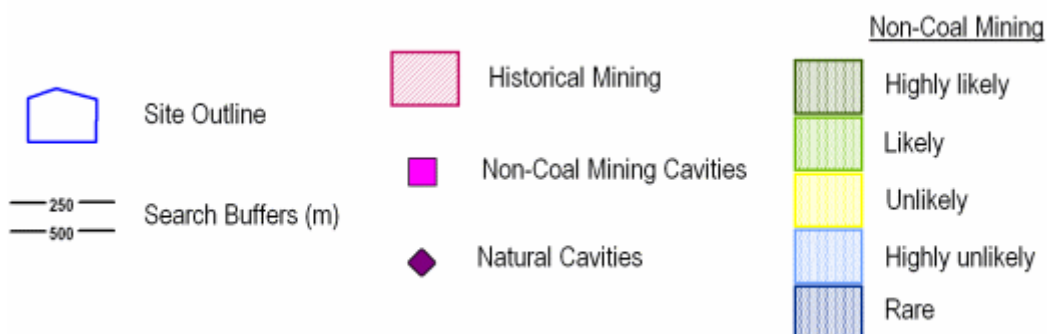
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	539.0	W	384556 394942	Clay & Shale	Moss Side Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

5 Mining, Extraction & Natural Cavities Map



Mining, Extraction and
Natural Cavities Legend

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5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? Yes

The following Coal Mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0.0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

5.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? Yes

The following information provided by JPB is not represented on mapping: In addition to being located inside an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property which may supplement this information. Further details and a quote for services can be obtained by emailing this report to enquiries.gs@jpb.co.uk.

5.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled “Review of mining instability in Great Britain, 1990” PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level..

Are there any Tin Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.10 Clay Mining

This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

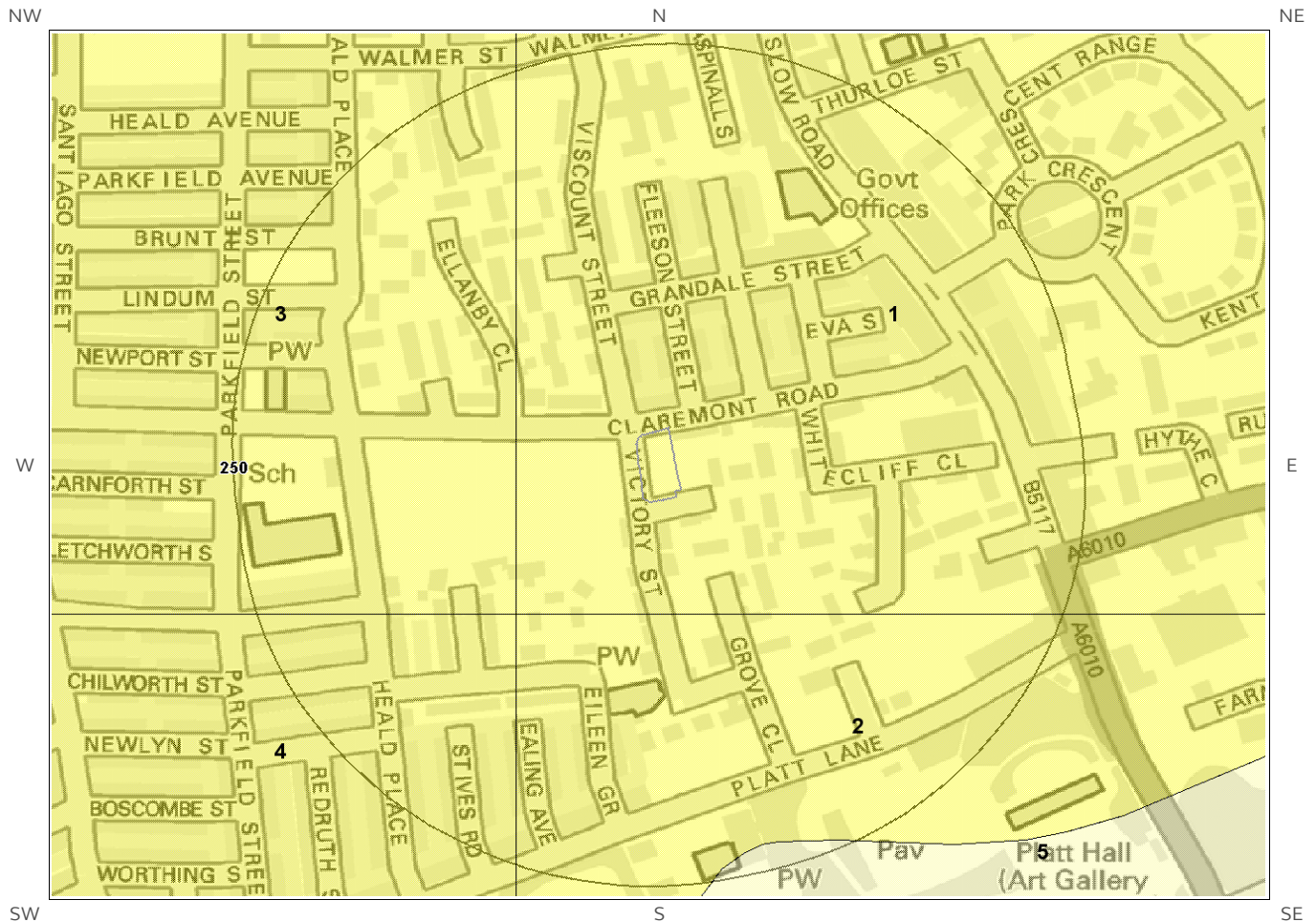
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay Map

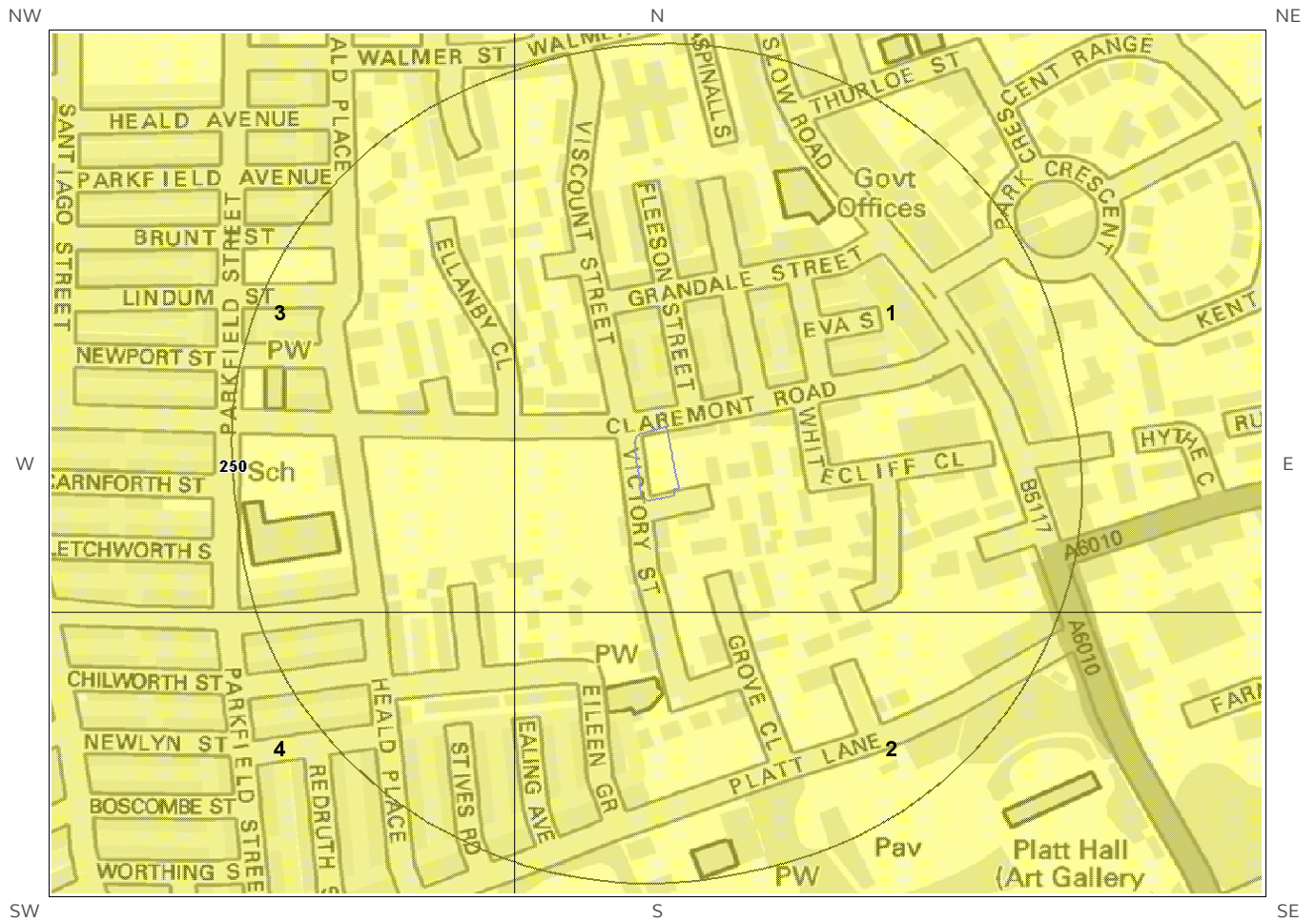


Shrink Swell Clay Legend

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6.2 Landslides Map



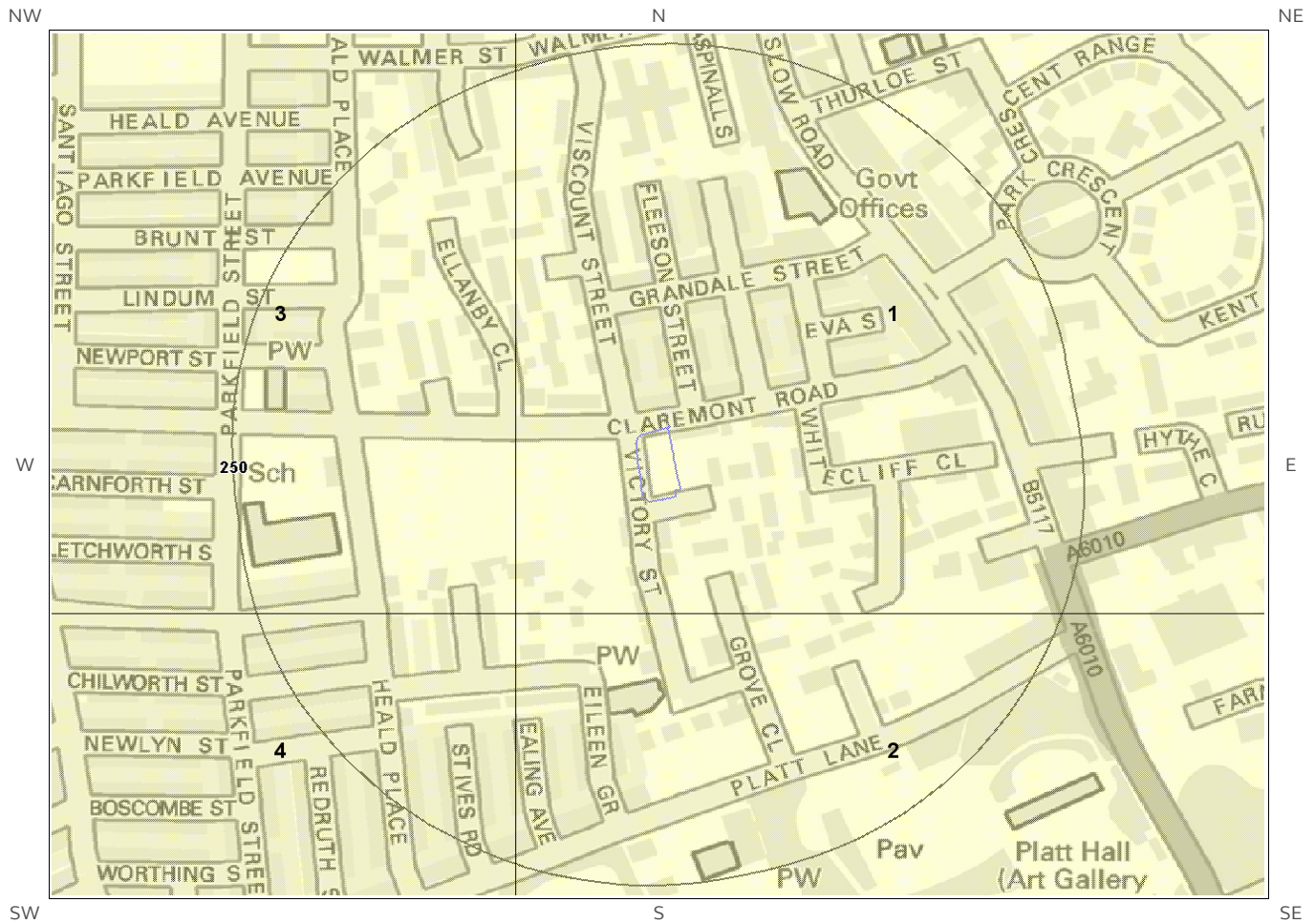
Landslides Legend

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6.4 Compressible Deposits Map

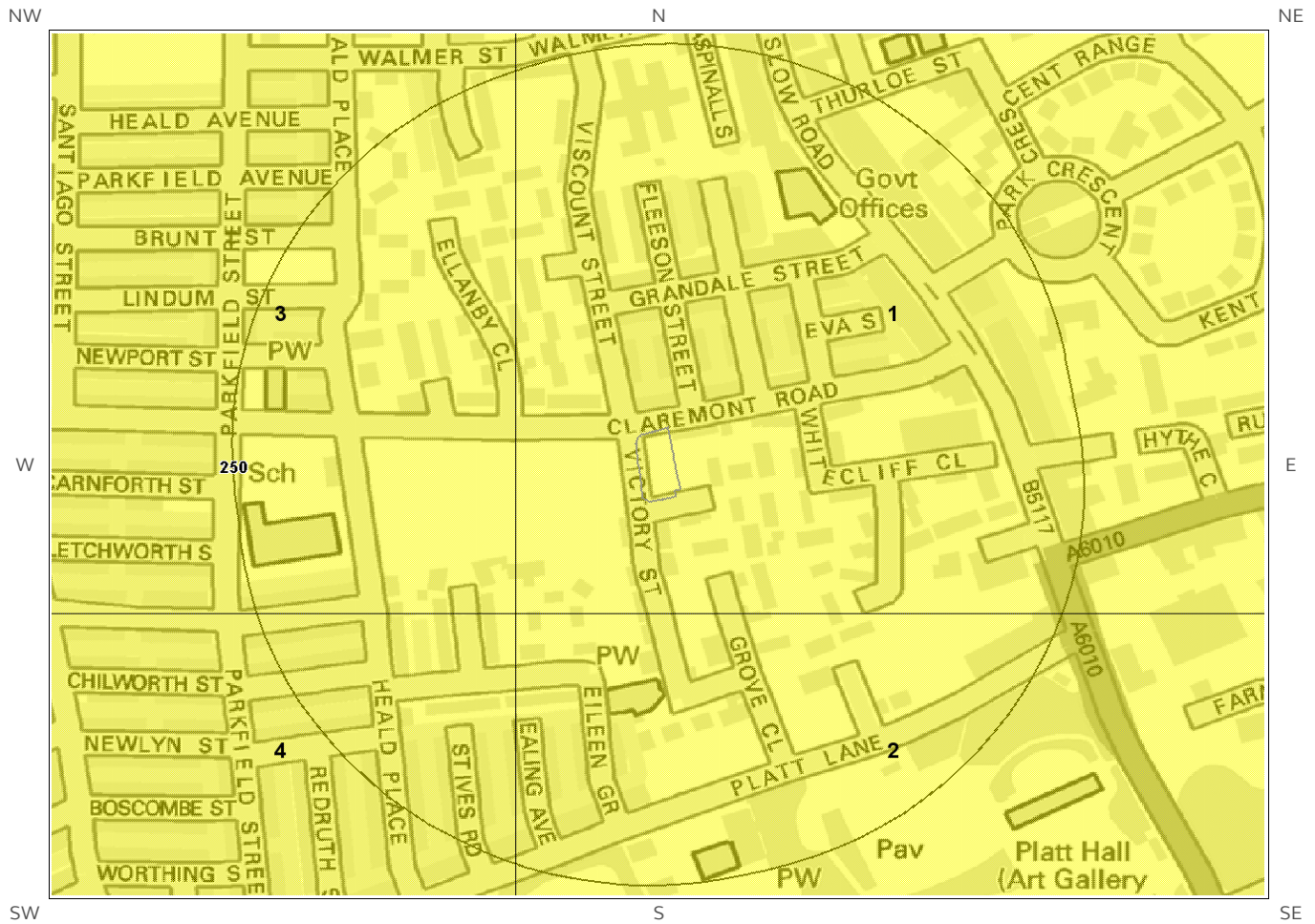


Compressible Deposits Legend

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6.5 Collapsible Deposits Map

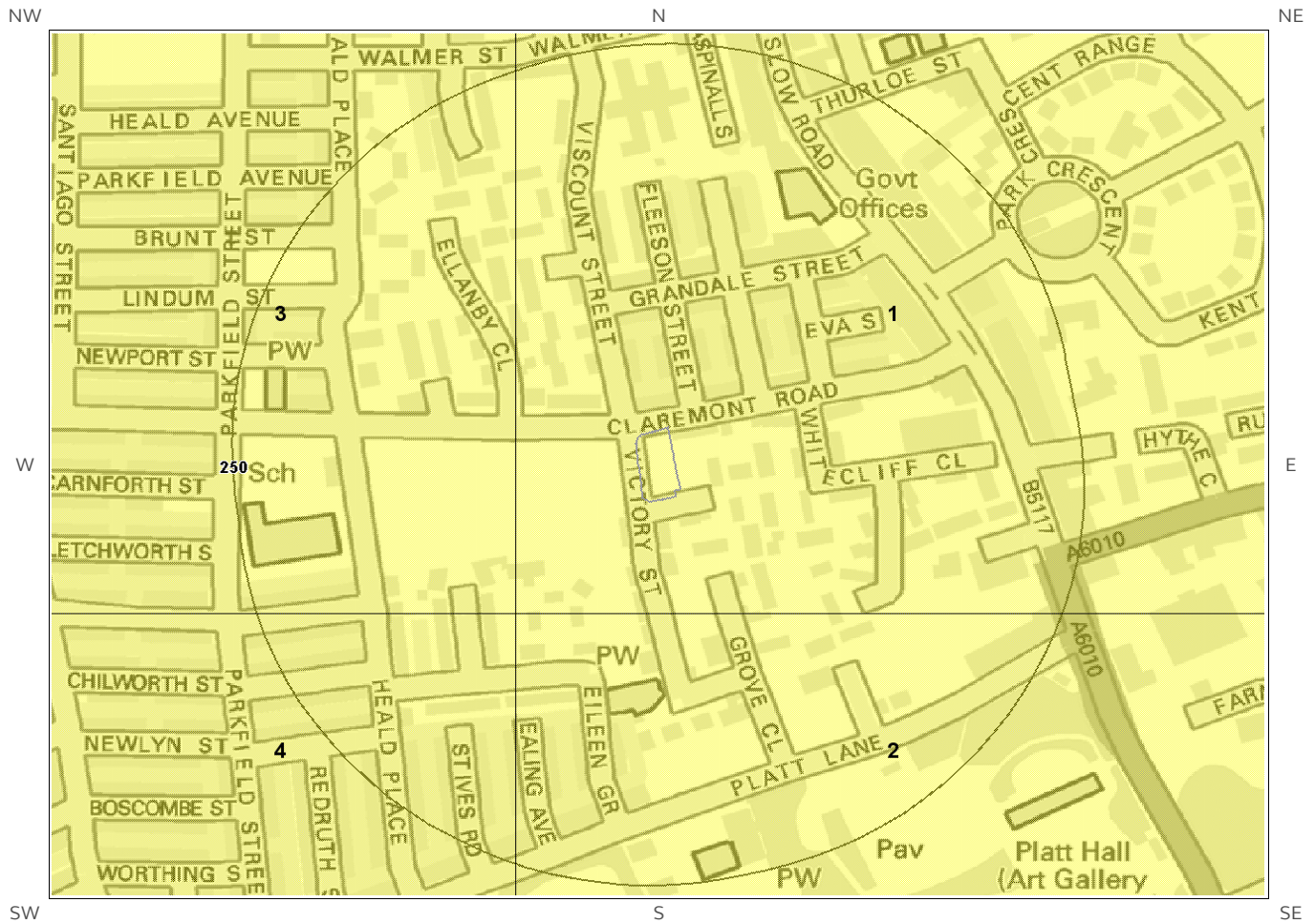


Collapsible Deposits Legend

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6.6 Running Sand Map



Running Sand Legend

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6 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site** boundary? Very Low

6.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

6.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* This includes an automatically generated 50m buffer zone around the site

6.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

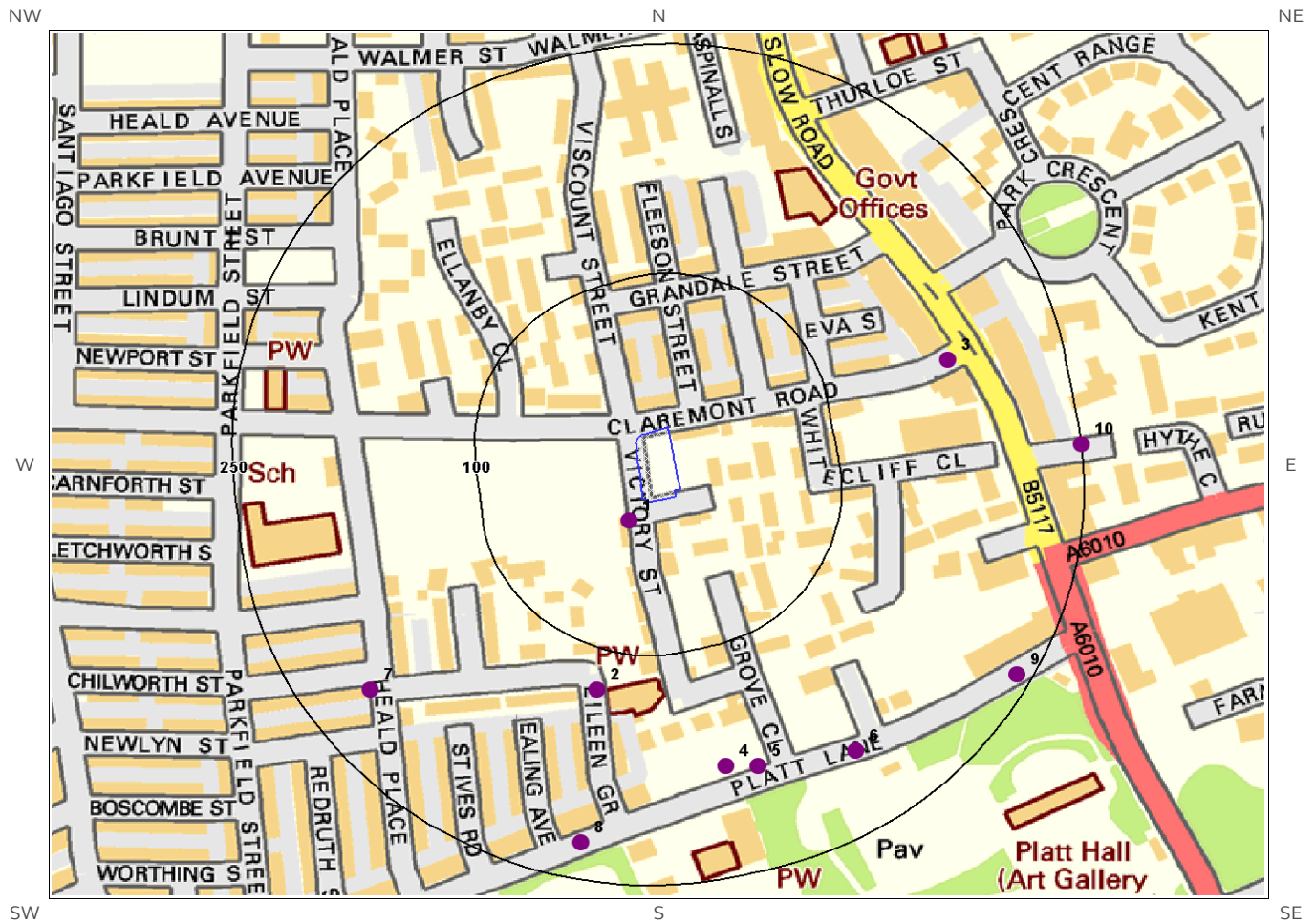
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

6.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

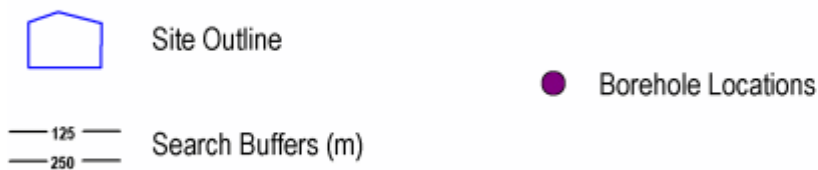
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

7 Borehole Records Map



Borehole Records Legend

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7 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

10

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	17.0	SW	385070 395060	SJ89NE841	5.0	PLATT LANE CATCHMENT 9
2	127.0	S	385050 394950	SJ89SE520	-1.0	PLATT LANE 4
3	178.0	E	385267 395165	SJ89NE39	12.5	MANCHESTER CORP. WILNSLOW ROAD
4	179.0	S	385130 394900	SJ89SE566	-1.0	PLATT LANE CATCHMENT 10
5	184.0	S	385150 394900	SJ89SE567	-1.0	PLATT LANE CATCHMENT 11
6	200.0	SE	385210 394910	SJ89SE521	-1.0	PLATT LANE 5
7	210.0	SW	384910 394950	SJ89SW487	-1.0	PLATT LANE CATCHMENT 7
8	227.0	S	385040 394850	SJ89SE519	-1.0	PLATT LANE 3
9	241.0	SE	385310 394960	SJ89SE522	-1.0	PLATT LANE 6
10	250.0	E	385350 395110	SJ89NE865	-1.0	RUSHOLME GROVE 1

The borehole records are available using the hyperlinks below: Please note that if the donor of the borehole record has requested the information be held as commercial-in-confidence, the additional data will be held separately by the BGS and a formal request must be made for its release.

#1: scans.bgs.ac.uk/sobi_scans/boreholes/937258

#3: scans.bgs.ac.uk/sobi_scans/boreholes/936440

8 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

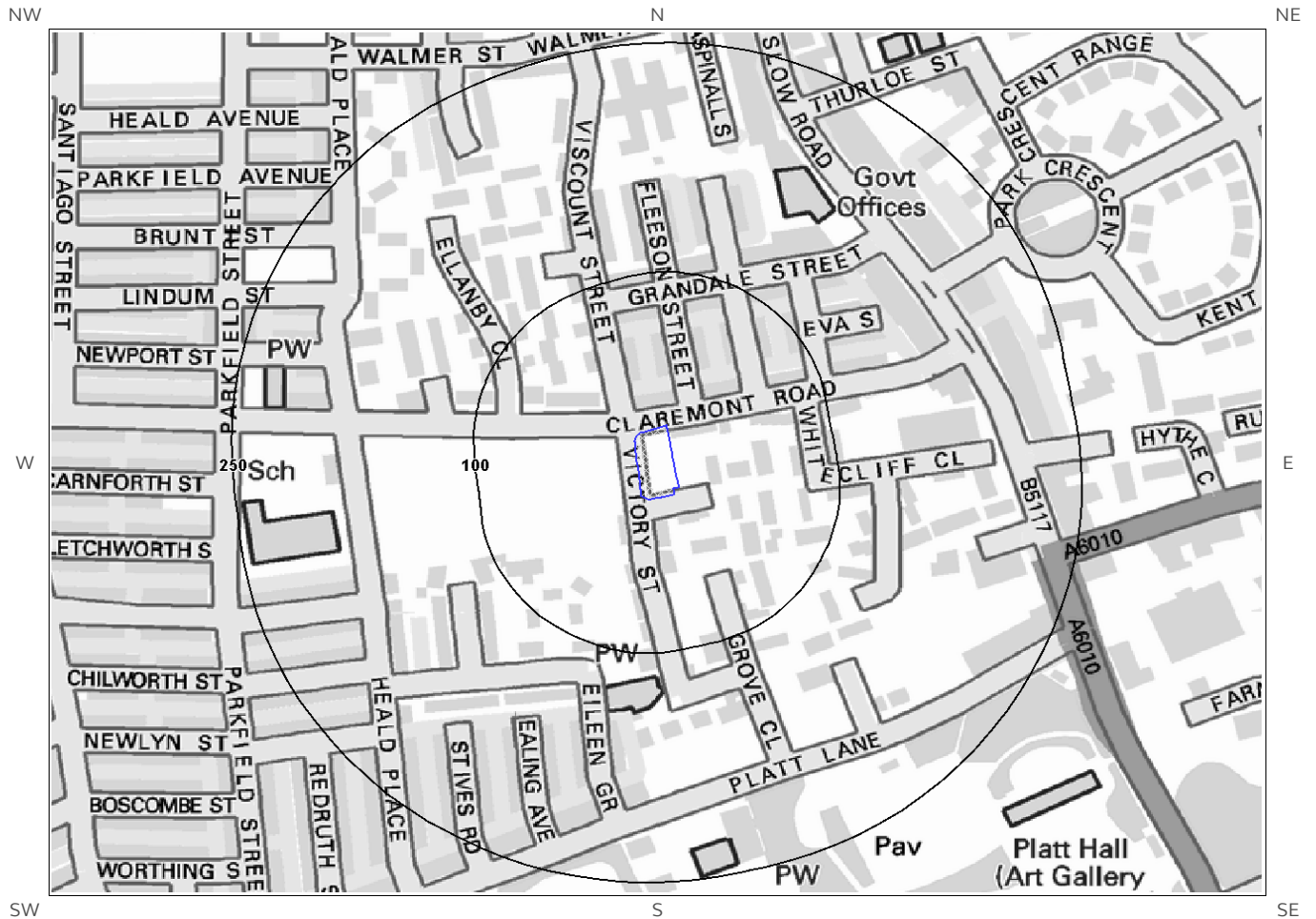
1

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geo Insight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg

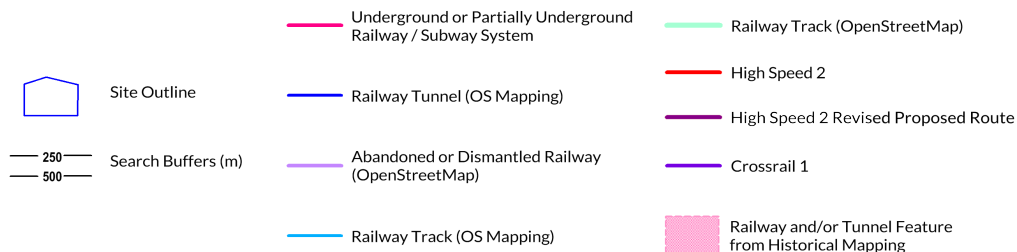
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels Map



Railways and Tunnels Legend

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© OpenStreetMapContributors



9 Railways and Tunnels

9.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

9.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? No

Have any historical railway or tunnel features been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

9.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? No

Have any historical railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels Map.

9.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? No

Have any active railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels Map.

9.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1 .

Is the study site within 5km of the route of the High Speed 2 rail project? Yes

Is the study site within 500m of the route of the Crossrail 1 rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail 1 Report.

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

Contact Details

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Telephone: 08444 159 000
info@groundsure.com



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Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries



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133-155 Waterloo Road, London, SE1 8UG
<https://www.gov.uk/government/organisations/public-health-england>
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This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:
<https://www.groundsure.com/terms-and-conditions-sept-2016/>

APPENDIX 2

SITE PHOTOGRAPHS

Earth Environmental & Geotechnical Ltd Tel: 0161 975 6088 Email: info@earthenvironmental.co.uk Web: www.earthenvironmental.co.uk	SITE PHOTOGRAPHS 
Job No.: A2212/17	Site: Claremont Road, Rusholme
Plate 1 SE of the site boundary, looking N along the site boundary.	Plate 2 SE of the site boundary, looking W along the site boundary.
	
Date: 25th August 2017	Date: 25th August 2017
Plate 3 SW of the site boundary, looking N along the site boundary.	Plate 4 W of the site boundary, looking E at the site boundary.
	
Date: 25th August 2017	Date: 25th August 2017

Earth Environmental & Geotechnical Ltd Tel: 0161 975 6088 Email: info@earthenvironmental.co.uk Web: www.earthenvironmental.co.uk	SITE PHOTOGRAPHS 
Job No.: A2212/17	Site: Claremont Road, Rusholme
Plate 5 W of the site boundary, looking SE at the site boundary.	Plate 6 W of the site boundary, looking NE at the site boundary.
	
Date: 25th August 2017	Date: 25th August 2017
Plate 7 NW of the site looking NE of the site. (two IBCs)	Plate 8 NW of the site looking SE of the site (vehicles and storage containers).
	
Date: 25th August 2017	Date: 25th August 2017

Earth Environmental & Geotechnical Ltd Tel: 0161 975 6088 Email: info@earthenvironmental.co.uk Web: www.earthenvironmental.co.uk	SITE PHOTOGRAPHS 
Job No.: A2212/17	Site: Claremont Road, Rusholme
Plate 9 N of the site looking S.	Plate 10 SW of the site looking NE.
	
Date: 25th August 2017	Date: 25th August 2017
Plate 11 SW of the site looking E.	Plate 12 SE of the site looking N.
	
Date: 25th August 2017	Date: 25th August 2017

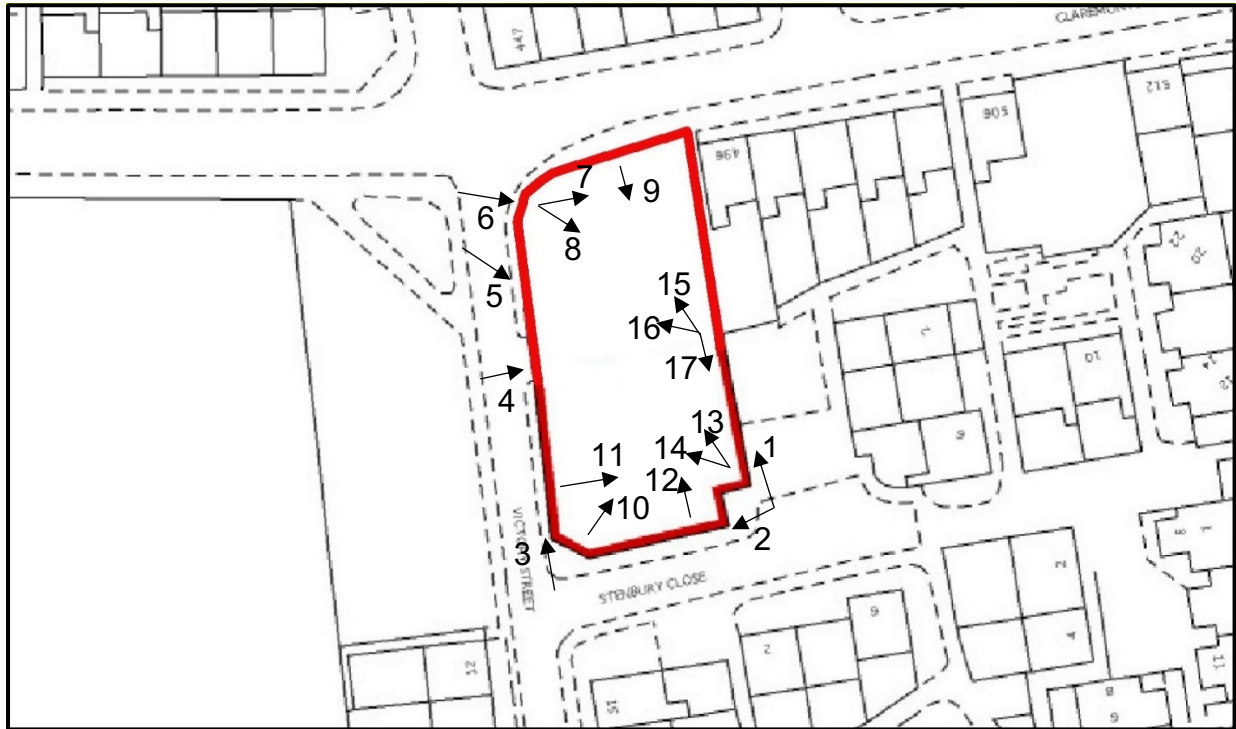
Earth Environmental & Geotechnical Ltd Tel: 0161 975 6088 Email: info@earthenvironmental.co.uk Web: www.earthenvironmental.co.uk	SITE PHOTOGRAPHS 
Job No.: A2212/17	Site: Claremont Road, Rusholme
Plate 13 SE of the site looking NW.	Plate 14 SE of the site looking W.
	
Date: 25th August 2017	Date: 25th August 2017
Plate 15 W of the site looking NE.	Plate 16 W of the site looking E.
	
Date: 25th August 2017	Date: 25th August 2017



Earth Environmental
& Geotechnical

Earth Environmental & Geotechnical Ltd Tel: 0161 975 6088 Email: info@earthenvironmental.co.uk Web: www.earthenvironmental.co.uk	SITE PHOTOGRAPHS 
Job No.: A2212/17	Site: Claremont Road, Rusholme
Plate 17 W of the site looking E.	Plate 18 W of the site looking N.
	
Date: 25th August 2017	Date: 25th August 2017

Figure 10 Site Walkover Photo Locations



APPENDIX 3

SITE WALKOVER NOTES

WALK OVER SURVEY REPORT

Site: Claremont Road, Manchester

Date: 25th August 2017

Job No: A2212

Undertaken By: Nigel Ramsumair

Purpose of Site Walkover:

- 1) Provide further information for the Desk Study Report;
- 2) Identify potential contamination sources, pathways and receptors;
- 3) Identify geotechnical features and potential geohazards;
- 4) Determine locations for exploratory boreholes.

Desk Study features checked during site visit	Feature and Information required	Present	Description / Comments
Site Setting	Description required for: Town/Country/Suburb Setting Industrial/Residential/Retail Usage Current Site use (if undertaking security and access to the site)		Town setting of Rusholme, Manchester. Predominantly residential with the nearest commercial surroundings along the curry mile 200m east. Orientated N-S. A park is located adjacent to the west. Residential homes are located north and south of the site. The site is not currently active and is being used for storage. This includes the following; wood and plastic, two containers, scaffolding, plastic piping, vehicles (lowry & caravan), trailer, fencing and stillages.
Evidence of Past Activities	Are there: Any relevant street names in area? Features or relics which indicate past history?	Yes/No Yes/No	The site is boarder by Stenbury Close in the south, Victory street in the west and Claremont road to the North.
Geographic Setting	Description required for: Low lying flood plain/dry valley/rolling hills etc.		Site is primarily flat lying across the service yard or car park.
Ground Conditions	Is there any evidence of: Mining, Mine entries Subsidence Landslip/slope erosion Former investigation works	Yes/No Yes/No Yes/No	

Desk Study features checked during site visit	Feature and Information required	Present	Description / Comments
Topography	Description required for: Are there apparent differences between site and surrounding area? (If yes describe the presence of retaining walls, and slopes). Is there evidence of Made Ground / Fill on site?	Yes/No Yes/No	The site is located at the end of a housing estate to the east. Soft verge west of the site across Victory Street The site boundary is comprised of a combination of steel fencing and retaining walls. The Brick wall is predominantly along the eastern boundary line. The site is covered in hard standing (asphalt).
Site Boundaries and Neighbours	Description required for: Type of boundary demarcation (if any) on each side of site, usage of adjacent land and name of industrial/commercial occupiers. Note any adjacent features such as water course and other potentially environmentally sensitive uses (residential, school, infirmary, SSSI etc)		The site boundary is comprised of a combination of steel fencing and retaining walls. The Brick wall is predominantly along the eastern boundary line. The nearest commercial surroundings along the curvy mile 200m east. Orientated N-S. A park is located adjacent to the west. Residential homes are located north and south of the site.
Vegetation	Is there any vegetation/trees on or close to side (if yes describe locations, type, maturity, etc) Is there any evidence of poor health / distress?	Yes/No Yes/No	There is light vegetation and shrubs growing on site due to is inactivity. There are mature trees along the eastern boundary along the side on the existing retaining wall.
Ground Surface	Are there areas of hardstanding and estimate the split between hard and soft cover. (If yes describe locations, types and conditions). Is the any evidence of any spillages or staining?	Yes/No Yes/No	The site is completely covered in hardstanding (asphalt).

Desk Study features checked during site visit	Feature and Information required	Present	Description / Comments
Site Drainage	Are there any drain covers / soakaways (if yes describe locations)	Yes /No	There were no visible manhole covers however the site is currently being using for storage so it is possible that may have been covered at the time of the walkover.
	Are there any outfalls/water courses on site (note the condition of water courses in open water courses. discolouration, odour, eutrophication, oily sheen, gas bubbling water, clear or cloudy)	Yes /No	
	Where a watercourse runs alongside or crosses a site are there any differences in visible water quality upstream and downstream of the site?	Yes /No	
Electrical Equipment	Are there any electricity sub stations on or adjacent to the site? Are there any electrical transformers, capacitors, pylons etc on site?	Yes /No	
Buildings	Is there any evidence of asbestos construction materials e.g. roofing, insulation materials.	Yes /No	
	Do any buildings have basements?	Yes /No	
	Do any buildings have a boiler room (if yes, describe fuel type and storage arrangements)?	Yes /No	

Desk Study features checked during site visit	Feature and Information required	Present	Description / Comments
Landfilling	Is there any evidence of gas protection measures (gas membrane, gravel-filled trenches, venting pipes, etc)?	Yes /No	N/A
Process Air Emissions	Point Source: Are there any stacks / vents / cooling towers / abatement equipment? Fugitive Source: is there any stockpiled material / windblown dust / vapour process?	Yes /No Yes/ No	The is a stockpile of building materials predominantly along the northern boundary of the site (wood and plastics).
Storage of fuels & Chemicals	Are there any drums / containers (if yes, describe quantity, full /empty, stored on hard standing / soft landscaping, bunding)? Are there any above ground fuel tanks (if yes, describe locations, volumes, how many, bunding, used / disused, condition?) Is there any evidence of underground fuel tanks (fuel pumps, covers, vent pipes, how many and how large, fill point, used / disused, and condition)?	Yes/ No Yes /No Yes /No	There are empty Intermediate bulk containers (IBCs) stored north east of the site.
Accidents	In the event of a large spillage would runoff affect any vulnerable watercourse/culverts? Are emergency procedures / equipment in place?	Yes/ No Yes /No	A spillage could potentially run into road drainage.

Desk Study features checked during site visit	Feature and Information required	Present	Description / Comments
Waste	Are there any waste skips present on site? Are waste storage facilities adequate? Is there any litter/fly tipped material?	Yes/No Yes/No Yes/No	The is a stockpile of building materials predominantly along the southern boundary of the site (wood and plastics).
Atmospheric	Are there any fumes, odours originating from site or affecting site from neighbouring sites?	Yes /No	
Access / Further Investigations	If a Phase 2 Investigation is likely to be required, describe any access problems including headroom where relevant, services, overhead cables, restricted access areas, confined spaces, trafficked areas, etc that are likely to affect investigation scope/techniques. Identify possible site office and storage locations. Identify possible water supply	Yes/ No	There are no issues accessing the inactive site. Difficulties will arise if access is required to an area currently being used as storage. The site is inactive and there is adequate space for storage.
Site Environs	Are there any local features that could have a harmful influence e.g. landfill, industrial processes, railway land? Are there any sensitive water features/courses near to the site?	Yes/No Yes/No	
Local Knowledge / Anecdotal Evidence			
Site Dimensions	Describe shape of Site in plan and measure dimensions.		The site is rectangular approximately 50m x 20m.

APPENDIX 4

REPORT LIMITATIONS

LIMITATIONS

This contract was completed by Earth Environmental & Geotechnical Ltd on the basis of a defined programme and scope of works and terms and conditions agreed with the client. This report was compiled with all reasonable skill, and care, bearing in mind the project objectives, the agreed scope of works, the prevailing site conditions, the budget and staff resources allocated to the project.

Other than that expressly contained in the above paragraph, Earth Environmental & Geotechnical Ltd provides no other representation 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 consulting 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 Earth Environmental & Geotechnical Ltd.

If a third party relies on this report, it does so wholly at its own and sole risk and Earth Environmental & Geotechnical Ltd disclaims any liability to such parties.

It is Earth Environmental & Geotechnical Ltd understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was an important factor in determining the scope and level of the services. Should the purpose for which the report is used, or the proposed use of the site change, this report will no longer be valid and any further use of, or reliance upon the report in those circumstances by the client without Earth Environmental & Geotechnical Ltd review and advice shall be at the client's sole and own risk.

The report was written in 2022 and should be read in light of any subsequent changes in legislation, statutory requirements and industry best practices. Ground conditions can also change over time and further investigations or assessment should be made if there is any significant delay in acting on the findings of this report. The passage 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 contained in this report should not be relied upon in the future without the written advice of Earth Environmental & Geotechnical Ltd. In the absence of such written advice of Earth Environmental & Geotechnical Ltd, reliance on the report in the future shall be at the client's own and sole risk. Should Earth Environmental & Geotechnical Ltd be requested to review the report in the future, Earth Environmental & Geotechnical Ltd shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between Earth Environmental & Geotechnical Ltd and the client.

The observations and conclusions described in this report are based solely upon the services that were provided pursuant to the agreement between the client and Earth Environmental & Geotechnical Ltd. Earth Environmental & Geotechnical Ltd has not performed any observations, investigations, studies or testing not specifically set out or mentioned within this report.

Earth Environmental & Geotechnical Ltd is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, Earth Environmental & Geotechnical Ltd did not seek to evaluate the presence on or off the site of electromagnetic fields, lead paint, radon gas or other radioactive materials.

The services are based upon Earth Environmental & Geotechnical Ltd observations of existing physical conditions at the site gained from a walkover survey of the site together with Earth Environmental & Geotechnical Ltd 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 whilst Earth Environmental & Geotechnical Ltd have no reason to doubt the accuracy and that it has been provided in full from those it was requested from, the items relied on have not been verified.

No responsibility can be accepted for errors within third party items presented in this report. Further Earth Environmental & Geotechnical Ltd was not authorised and did not attempt 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. Earth Environmental & Geotechnical Ltd is not liable for any inaccurate information, misrepresentation of data or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to Earth Environmental & Geotechnical Ltd and including the doing of any independent investigation of the information provided to Earth Environmental & Geotechnical Ltd save as otherwise provided in the terms of the contract between the client and Earth Environmental & Geotechnical Ltd.

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 and as investigation excavations 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. The extent of the limited area depends on the soil and groundwater conditions, together with the position of any current structures and underground facilities and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters [as stipulated in the contract between the client and Earth Environmental & Geotechnical Ltd] 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 normal speed of investigation usually does not permit the recording of an equilibrium water level for any one water strike. Moreover, 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 drawing(s) provided in this report is (are) not meant to be an accurate base plan, but is (are) used to present the general relative locations of features on, and surrounding, the site.