WML CONSULTING
Civil, Structural and Geotechnical Engineers

Desk Study and Preliminary Geoenvironmental Assessment

For a site referred to as

Cornbrook Medical Centre, Hulme

Undertaken on behalf of

Mosscare St Vincent's Housing Group

8651G-WML-00-XX-RP-G-0001
February 2019

WML CONSULTING
Civil, Structural and Geotechnical Engineers

Report Title:	**Cornbrook Medical Centre, Hulme** **Desk Study and Preliminary Geoenvironmental Assessment**
Report Reference:	**8651G-WML-00-XX-RP-G-0001**
Client:	**Mosscare St Vincent's Housing Group**
Issue Date:	**27th February 2019**
Drafted By:	**T P Booth**
Reviewed By:	**P G Davies**
Authorised By:	**P G Davies**

This document has been prepared for the titled project (or named part thereof) and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authorization being obtained from WML Consulting. WML accepts no responsibility or liability for the consequences of the use of this document, wholly or in part, for any other purpose than that for which it was commissioned. Any persons so using or relying upon this document for such other purpose do so at their own risk.

This report was prepared for the sole use of the Client and shall not be relied upon or transferred to any other party without the express written authorisation of WML. It may contain material subject to copyright or obtained subject to license; unauthorised copying of this report will be in breach of copyright/license.

The findings and opinions provided in this document are given in good faith and are subject to the limitations imposed by employing site assessment methods and techniques, appropriate to the time of investigation and within the limitations and constraints defined within this document. The findings and opinions are relevant to the dates when the assessment was undertaken, but should not necessarily be relied upon to represent conditions at a substantially later date.

The findings and opinions conveyed in this report are based on information obtained from a variety of sources as detailed and which WML assumes to be reliable, but has not been independently confirmed. Therefore, WML cannot and does not guarantee the authenticity or reliability of third party information it has relied upon.

Where opinions expressed in this report are based on current available guidelines and legislation, no liability can be accepted by WML for the effects of any future changes to such guidelines and legislation.

The limitations of liability of WML for the contents of this document have been agreed with the Client, as set out in the terms and conditions of offer and related contract documentation.

WML Consulting Ltd
No. 8 Oak Green,
Earl Road,
Stanley Green Business Park,
Cheadle Hulme,
Cheshire
SK8 6QL

Tel: 0161 482 0600
Email:info@wmlconsulting.com
www.wmlconsulting.com

CONTENTS

1.0 INTRODUCTION 1
Appointment 1
Proposed Development 1
Objective 1
Scope 1
2.0 SITE SETTING 2
3.0 ENVIRONMENTAL SETTING 3
4.0 HISTORICAL SETTING 6
5.0 PRELIMINARY CONTAMINATION RISK ASSESSMENT 7
Introduction 7
Preliminary Risk Assessment 9
6.0 PRELIMINARY GEOTECHNICAL CONSIDERATIONS 10
7.0 SUMMARY AND RECOMMENDATIONS 11
Site Investigation 11

APPENDICES

Appendix 01 - Drawings
Appendix 02 - Photographs
Appendix 03 - GroundSure Environmental Insight Report
Appendix 04 - Qualitative Risk Assessment Guidance

1.0 INTRODUCTION

Appointment

1.1 WML Consulting has been commissioned by Mosscare St Vincent's Housing Group to undertake a Desk Study and Preliminary Geo-environmental Assessment in relation to re-development work at the Cornbrook Medical Centre, Booth Street West, Manchester, M15 6PR.

Proposed Development

1.2 It is understood that the development will comprise minor remodelling of the ground floor internal layout and the construction of a single-storey extension to the rear elevation in the location of the existing car park.

1.3 The proposed development plan is presented in Appendix 01.

Objective

1.4 The purpose of the desk study is to collate available geological and environmental data for the site and its environs in order to undertake a preliminary geotechnical and geoenvironmental appraisal and thus inform a site-specific conceptual model.

1.5 This enables a preliminary assessment of geo-environmental risks to be undertaken and provides information for the design of a geotechnical and geo-environmental ground investigation.

1.6 This follows recommendations set out in the Environment Agency (EA) Model Procedures for the Management of Land Contamination 2004, CLR11.

Scope

1.7 The desk study has comprised a site reconnaissance visit on 21st February 2019 and a review of the following information sources:

- British Geological Survey (BGS) 1:50,000 scale, Sheet 85 'Manchester' (Solid & Drift editions).
- BGS Digital Geological Map of Great Britain (DiGMapGB-50; available as a web map service).
- The site and surrounding area's geological and environmental setting from data presented in the site specific GroundSure Environmental Insight Report (Appendix 03).
- Historical Ordnance Survey maps as provided by GroundSure (Appendix 03).
- UKradon Indicative Atlas of Radon in England and Wales as provided by Public Health England.
- BRE Publication 211 (2015) "Radon: Guidance on Protective Measures for New Buildings".

2.0 SITE SETTING

Description	Comments
Site Address	Cornbrook Medical Centre Booth Street West Manchester M15 6PR
National Grid Reference	384211E, 396704N
Site Area	0.146 hectares.
Site Location	The proposed development area is located to the rear elevation of the existing Boundary Medical Centre. The development area is bounded by:- North – Existing Boundary Medical Centre. South & East – Residential Structure on Higher Cambridge Street and Boundary Lane. West – Car parking associated with neighbouring residential properties. The site location is indicated on the plan in Appendix 01 and the Groundsure report in Appendix 03.
Site Description	The proposed development site comprises a relatively level area of car parking to the rear of the existing Boundary Medical Centre. The rear elevation of the existing structure, which forms the northern boundary of the development area, is of single-storey brick construction. The southern and eastern site boundaries are formed by residential apartment structures with the western site boundary secured with a metal security fence. Access into the development area is from Boundary Lane to the west via a gate from the neighbouring car park. Photographs of the site and surrounding area are presented in Appendix 02.
Topography	A topographic survey had not been undertaken at the time of the Desk Study. However, during the inspection the site was noted to be generally level and commensurate with the surrounding area.

3.0 ENVIRONMENTAL SETTING

3.1 The following sections on the environmental setting of the site are summarised from the GroundSure Enviro Insight Report and a review of the information sources outlined within Section 1.7.

Description	Comments	
Geology (1:50, 000 scale Map Sheet and digital mapping)	**Superficial Deposits**	The site is indicated to be underlain by Devensian Glaciofluvial Sheet Deposits which mainly comprise interbedded sands and gravels.
	Solid Strata	The superficial deposits are indicated to be underlain by strata of the Triassic Chester Pebble Beds. These generally comprise sandstones.
	Geological Faults within 250m	None.
Radon	The property is not in a radon affected area as defined by the BGS/Public Health England as less than 1% of properties are above the action level of exposure. Therefore, no radon protection measures are necessary for new structures as described in publication BR211 by the Building Research Establishment.	
Coal Mining and Subsidence	In consideration of the underlying geology, risks of subsidence from coal mining can be discounted. Risks of subsidence from natural dissolution is also considered to be low and can be discounted.	
Hydrogeology	**Superficial Aquifer**	Secondary (A) Aquifer. These comprise permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.
	Bedrock Aquifer	Principal Aquifer. These are 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.
	Source Protection Zone (SPZ) within 250m	The site is located within an Environment Agency (EA) Zone 3 'Total Catchment' SPZ.
	Groundwater/Potable Abstractions within 500m	4no at Manchester Metropolitan University for heat pump and general use between 358m north and 460m west of the site.

<table>
<tr><th>Description</th><th colspan="2">Comments</th></tr>
<tr><td rowspan="2">Hydrology</td><td>Surface Water Features within 250m</td><td>Corn Brook, an underground river, runs roughly east to west some 106m south-east of the site.</td></tr>
<tr><td>Surface Water Abstractions within 1km</td><td>None.</td></tr>
<tr><td rowspan="3">Landfill and Waste Management Activity</td><td>Active Landfill within 1km</td><td>None.</td></tr>
<tr><td>Historical (EA/LA) Landfill within 500m</td><td>None.</td></tr>
<tr><td>Other Waste Sites within 500m</td><td>None.</td></tr>
<tr><td rowspan="3">Industrial Land Use Information</td><td>Potentially contaminative industrial sites within 250m</td><td>9no, the closest relate to electricity substations 107m and 148m north-west, published goods 113m north and a Territorial Army Centre 174m north-west.</td></tr>
<tr><td>Underground HP Pipelines within 500m</td><td>None.</td></tr>
<tr><td>Petrol Filling Stations within 250m</td><td>None.</td></tr>
<tr><td>Current Environmental Permits, Incidents and Registers</td><td colspan="2">
<table>
<tr><th>Permits Incidents/Registers</th><th>Distance (m)</th><th>Comments</th></tr>
<tr><td>IPC Authorisations, Part A(1),</td><td>250</td><td>None</td></tr>
<tr><td>Part A(2) Authorised Activities</td><td>250</td><td>None</td></tr>
<tr><td>Part B IPPC Authorised Activities</td><td>250</td><td>None</td></tr>
<tr><td>List 1 or List 2 Dangerous Substances Inventory Sites</td><td>250</td><td>None</td></tr>
<tr><td>Radioactive Substance Authorisations</td><td>250</td><td>None</td></tr>
<tr><td>Contaminated Land - Section 78R of the Environmental Protection Act 1990</td><td>250</td><td>None</td></tr>
</table>
</td></tr>
<tr><td>Potential Flood Risks</td><td colspan="2">Detailed assessment of flood risk is outside the scope of this report.
However, the Groundsure report indicates that the risk of flooding from rivers and the sea (RoFRaS) is currently designated as ‘medium’ with the site indicated to be located within an EA Zone 3 Floodplain.
However, the EA website initially indicates that the site is within a Flood Zone 1, but is within the extent of flooding from reservoirs and also within an area considered to be at a Medium flood risk from rivers or the sea. This is described as ‘each year this area has a chance of flooding of between 1%</td></tr>
</table>

Description	Comments
	and 3.3%'. The site is indicated on BGS records to be within an area which is considered to have a limited potential susceptibility to Clearwater Flooding (associated with unconfined aquifers). The BGS confidence rating for this assessment is considered 'Low'.
Environmentally Sensitive Sites	There are no recorded environmentally sensitive sites within 1km of the subject site.
Archaeological Information	No archaeological information has been obtained for the purpose of this report. Where considered necessary, an archaeological specialist should be consulted in this respect.

4.0 HISTORICAL SETTING

4.1 The historical development of the site has been summarised by reference to archive Ordnance Survey (OS) map extracts obtained from the GroundSure EnviroInsight Report in Appendix 03.

4.2 The earliest maps dated 1848 indicate the site and surrounding area to have comprised predominantly residential terraced housing with Carver Street extending roughly north-west to south-east across the central section of the site. An area of undeveloped land was located to the south of the site, with Corn Brook running roughly north-east to south-west some 100m south.

4.3 By 1893, the surrounding area had undergone further, predominantly residential development with localised industrial activities including breweries 125m south-east, 200m east and a warehouse 200m north.

4.4 By 1949, the south-eastern corner of the site had been cleared, along with a number of structures in the immediate surrounding area.

4.5 By 1978, the remaining structures at the site had been cleared and was in use as car parking with localised landscaping associated with Cooper House to the south. By this time the surrounding area had undergone extensive redevelopment including residential structures to the west, the University of Manchester to the east and a school to the south.

4.6 By 2002, the site had been redeveloped with the current structure located in the north and a car park in the southern section.

4.7 In view of the residential historical development of the site, the presence of significant sources of ground contamination is not envisaged. However, the presence of Asbestos Containing Materials (ACM) and asbestos fibres within the made ground associated with previous demolition of structures cannot be wholly discounted at this preliminary stage.

5.0 PRELIMINARY CONTAMINATION RISK ASSESSMENT

Introduction

5.1 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).

5.2 The table in Paragraph 5.4 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).

5.3 The table considers whether a pollution linkage is potentially present or not and provides a preliminary qualitative assessment of risk, based on the information currently available and in accordance with guidance provided in the CIRIA document C552 (2001) Contaminated Land Risk Assessment – A guide to good practice. The risk evaluation process is described further in Appendix 04.

5.4 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.

Source	Pathway	Receptor	Linkage potential	Comment
The likelihood of significant ground contamination sources being present at the site due to its past use is considered low. However, the presence of Asbestos Containing Materials (ACM) within any made ground associated with historical demolition cannot be wholly discounted.	Direct contact, ingestion of soil, dermal contact, dust exposure pathways.	Current Site Users	No linkage envisaged	The site is currently used for parking and is in transient use. No chronic exposure scenario is therefore plausible with the preliminary risk to human health assessed as **VERY LOW**.
		Site End Users	No linkage envisaged	The new building extension will continue to provide the hard cover and will therefore maintain a break in the direct contact pollution linkage. The preliminary risk to site end users is therefore considered **VERY LOW.**
		Construction Workers	Low	Construction workers could potentially be exposed to contaminated soils during earthworks and foundation construction. However, any perceived contamination risks will be mitigated by adopting good site working practices including appropriate health and safety measures during the works, thus providing a **LOW** preliminary risk.
		Adjacent land users	Unlikely	Contact via wind-blown dust/debris, particularly during the development phase is possible. The current risk is considered **VERY LOW** although this would increase during construction works. Appropriate health and safety measures adopted during site development will ensure that the risk remains low.
The likelihood of significant 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	Low	The site is underlain by a Secondary A (superficial) Aquifer and Principal (bedrock) Aquifer and is within an EA Zone 3 SPZ with 4no groundwater abstractions in the vicinity. However, no significant mobile contamination sources are considered to exist at the site. Therefore, the risk to groundwater is considered to be **LOW.**

Source	Pathway	Receptor	Linkage potential	Comment
	Off-site migration in groundwater or surface water flow.	Surface water	Unlikely	The nearest surface water is Corn Brook some 106m south-east of the site and which is culverted. The likelihood of a pollution linkage is therefore low with the preliminary risk to surface water considered **LOW.**
		Groundwater/ surface water abstractions	Low	The site is located within an EA Zone 3 SPZ and there are 4no nearby groundwater water abstractions, although none are for drinking water purposes. On the basis that no significant mobile contamination sources are considered to exist at the site, the risk to groundwater abstractions is considered **LOW**.
		Adjacent Properties	Unlikely	Underlying superficial deposits are likely to be generally granular and therefore relatively permeable in nature. As such, there is the potential pathway for off-site migration. However, significant sources of mobile contamination are not envisaged. Therefore, the preliminary risk to adjacent properties is considered **LOW.**
		Ecology	No linkage envisaged	There are no recorded ecologically sensitive sites within influencing distance of the subject site. The risk to ecology is therefore considered **VERY LOW**.
The likelihood of significant volatile contaminants occurring at the site due to its past use is considered low.	Inhalation of harmful vapours (indoor and outdoor airspaces)	Current Site Users	No linkage envisaged	Significant sources of volatile contaminants at the site are not anticipated. Also, with site use being currently transient, no plausible long-term pollution linkage is anticipated. Therefore, the preliminary risk to current site users is assessed as **VERY LOW**.
		Site End Users	No linkage envisaged	Significant sources of volatile contaminants at the site are not anticipated with site use remaining transient. As such, no chronic exposure scenario is anticipated. Therefore the preliminary risk from inhalation of indoor/outdoor air is considered **LOW.**
		Construction Workers	Unlikely	In the unlikely event of construction workers coming into contact with possible volatile compounds, the exposure time will be relatively short. The chronic exposure risk to construction workers, assuming that appropriate health and safety measures will be adopted, is therefore considered **LOW.**
		Adjacent Properties	Unlikely	Significant sources of volatile contaminants at the site are not anticipated. Therefore the perceived risk to adjacent properties and users is assessed as **LOW**.

Source	Pathway	Receptor	Linkage potential	Comment
The presence of degradable material with the potential to generate significant volumes of ground gas beneath the site is unlikely. There are no active or historic landfills recorded within influencing distance of the site. The presence of ground gas resulting from shallow unrecorded mine workings is unlikely.	Emissions from the ground beneath the site collecting in confined spaces and excavations	Construction/ services maintenance workers	Unlikely	The potential to generate significant volumes of toxic and/ or flammable/ explosive gas beneath the site is considered low. Assuming that appropriate health and safety measures will be adopted during construction, 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 likelihood of significantly volumes of ground gas arising from the site to migrate to adjoining properties is considered low. Therefore, the preliminary risk to adjacent properties from the site is considered **LOW.**
		Current/future site users	Unlikely	The potential to generate significant volumes of ground gas beneath the site or to migrate from off-site sources is low. Therefore, the preliminary risk to current and future site users in considered **LOW**.
The site is not in an area which is affected by naturally occurring radon gas.	Natural emissions from the ground collecting in confined spaces within buildings	Site end users	No linkage anticipated	The site is not located in an area where radon protection measures are required. No further action is necessary regarding radon protection as the risk is **VERY LOW**.
Chemicals which could prove aggressive to construction materials are unlikely to be present beneath the site.	Direct contact	Construction concrete, plastic water pipes.	Unlikely	Any risks to construction materials identified after site investigation and assessment will be mitigated as part of the structural design. The perceived risk is therefore considered **VERY LOW**.

Preliminary Risk Assessment

5.5 Under the proposed development scenario, potential pollution linkages are on the whole considered unlikely with associated preliminary risks being assessed as very low to low.

5.6 The approach at the Phase 1 Desk Study stage must, however, be precautionary until such time as uncertainties in the conceptual model can be verified by appropriate site investigation.

5.7 Such uncertainties relate in the main to the level of historical contamination as a result of the site's brownfield status and in particular the potential for ACM to be present as a result of previous building demolition.

6.0 PRELIMINARY GEOTECHNICAL CONSIDERATIONS

Consideration	Summary
Ground Obstructions	The presence of buried structures in the form of historic foundations and floor slabs cannot be wholly discounted, although these are unlikely to be significant.
Foundations and Floor Slabs	New structures could be supported on traditional (strip/pad) foundations on the glaciofluvial sand and gravel although the presence of deep made ground resulting from in-filled historic cellars cannot be discounted. This will need to be confirmed by appropriate site investigations.
Soakaways	Due to the granular nature of the underlying strata, the ground may be amenable to soakaway drainage. However, this would also depend upon the thickness of made ground and existing groundwater levels.

7.0 SUMMARY AND RECOMMENDATIONS

Development Considerations	Comments
Shallow Coal Mining	Very low risk.
Flooding	Detailed assessment of flood risk is outside the scope of this report. However, the Groundsure report indicates that the site is located within an EA Zone 3 Floodplain. However, conflicting information from the EA website initially indicates that the site is within a Flood Zone 1. Notwithstanding this the EA indicate that the site is within the extent of flooding from reservoirs and also within an area considered to be at a 'Medium' flood risk from rivers or the sea.
Foundations	New structures could be supported on traditional (strip/pad) foundations on the glaciofluvial sand and gravel although the presence of deep made ground resulting from in-filled historic cellars cannot be discounted. This will need to be confirmed by appropriate site investigations.
Ground Contamination	Preliminary low risk which can be managed as part of the development construction. No specific environmental remediation envisaged.
Hazardous Ground Gas	None envisaged, but may be subject to confirmatory monitoring if organic / degradable materials are encountered during ground investigations.
Radon	No radon protection measures required.
Soakaway drainage	Due to the granular nature of the underlying strata, the ground may be amenable to soakaway drainage. However, this would also depend upon the thickness of made ground and existing groundwater levels.

Site Investigation

7.1 Site investigations will be necessary to provide information on the physical and chemical ground conditions. This will enable assumptions made in the preliminary site conceptual model to be confirmed or modified so as to assess the actual environmental risks posed by the site.

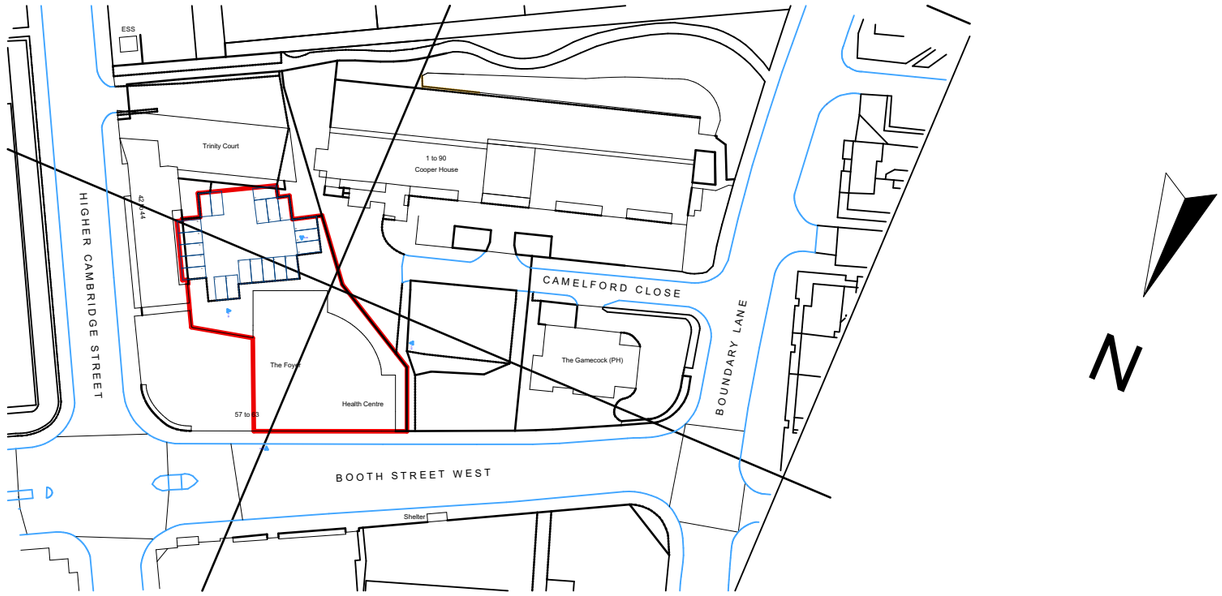
7.2 The investigation may also need to include measurement and sampling of any groundwater and the installation of ground gas monitoring standpipes with subsequent monitoring for hazardous ground gas concentrations and flow.

7.3 In addition, appropriate investigation will be required to establish geotechnical parameters for the design of foundations, floor slabs and pavement construction.

7.4 Site investigations should be undertaken in accordance with BS5930:2015, Code of Practice for Ground Investigations and BS 10175:2011, Investigation of Potentially Contaminated Sites, Code of Practice.

APPENDIX 01

Drawings



-1.
-

Site Location Plan
1:1250



-1.
-

Existing Site Plan
1:500

ARCUS CONSULTING

Arcus Consulting LLP
Wakefield 0192 466 9000
Liverpool 0151 708 1080
Manchester 0161 905 3222
Newcastle 0191 272 5781
Cambridge 0122 325 7706
info@arcus.uk.com
www.arcus.uk.com

Client
Mosscare St Vincents Housing

Project
The Foyer, Manchester

Title

Scale	Date	Stage

Job No	Drawing No	Rev
4725		

Drawn	Approved

This drawing is the copyright of Arcus. Contractors must check all dimensions on site. Do not scale the drawings.Only figured dimensions are to be worked to.

Trinity Court

42 to 44

HIGHER CAMPFIELD

P
P
P
D
D
D
D
D
D
D
D
C
C
F
F
F
F
F
F
F
?
?
E-02
phase 2 works
E-03
E-01
phase 2 works
phase 3 works
phase 3 works
phase 1 works
phase 1 works
MULTI FUNCTION HALL
STORE
STORE
STORE
LAUNDRY
PLANT
LIFT
WC
INTERVIEW ROOM
INTERVIEW ROOM
MALE W.C.
DIS W.C.
FEMALE W.C.
OFFICE
BOILER
CLNRS
RECORDS ROOM
STORE
WC
CONSULTATION ROOM
CONSULTATION ROOM
CONSULTATION ROOM
CONSULTATION ROOM
MEETING ROOM
FIRE ESCAPE STAIR
RECEPTION
Health Centre

ARCUS CONSULTING

Arcus Consulting LLP
Wakefield 0192 466 9000 Manchester 0161 905 3222 Cambridge 0122 325 7706
Liverpool 0151 708 1080 Newcastle 0191 272 5781 info@arcus.uk.com
www.arcus.uk.com

Client
St Vincents Housing Association

Project
The Foyer, Manchester

Title
Existing Car Park

Scale	Date	Stage
1:200 @ A3	08/08/18	FE
Job No	Drawing No	Rev
4725	005	-
Drawn	Approved	
KT	-	

This drawing is the copyright of Arcus. Contractors must check all dimensions on site. Do not scale the drawings.Only figured dimensions are to be worked to.

Trinity Court

1 to 9(

Cooper H(

42 to 44

P

D

?

C

F

E-02

E-03

E-01

phase 2 works

phase 3 works

phase 1 works

3,100

5,282

4,096

13,454

893

3,699

5,616

ac units

ac unit

escape route

RESIDENT'S ROOM

BOARDROOM

BREAKOUT / STAFF ROOM

CONSULTATION ROOM

OFFICE

MEDICAL STAFF ENTRANCE

MULTI FUNCTION HALL

BOILER

STORE

MALE W.C.

DIS W.C.

FEMALE W.C.

CLNRS

RECORDS ROOM

INTERVIEW ROOM

LAUNDRY

PLANT

LIFT

WC

EXAMINATION ROOM

COUNSELLING ROOM

FIRE ESCAPE STAIR

RECEPTION

The Foyer

ARCUS CONSULTING

Arcus Consulting LLP
Wakefield 0192 466 9000 Manchester 0161 905 3222 Cambridge 0122 325 7706
Liverpool 0151 708 1080 Newcastle 0191 272 5781 info@arcus.uk.com
www.arcus.uk.com

Client

Mosscare St Vincents Housing

Project

The Foyer, Manchester

Title

Proposed Car Park

Scale	Date	Stage
1:200 @ A3	08/08/18	FE
Job No	Drawing No	Rev
4725	006	-
Drawn	Approved	
KT	-	

This drawing is the copyright of Arcus. Contractors must check all dimensions on site. Do not scale the drawings.Only figured dimensions are to be worked to.

APPENDIX 02

Photographs



Photograph 1
View north towards the rear elevation of the existing structure.



Photograph 2
View north-west towards the rear elevation of the existing structure.



Photograph 3
View north-west along the western site boundary with the rear elevation of the existing structure in the right hand of the photograph.



Photograph 4
View west across the area of car parking forming the site with the existing structure in the background.



Photograph 5
View south-west across the site with existing structure in the right of the picture.



Photograph 6
View south-west across the car park forming the site with neighbouring residential structures in the background.

APPENDIX 03

Groundsure Environmental Insight Report

WML Consulting

UNIT 8 WRIGHT MOTTERSHAW LYDON CONSULTING LTD, STANLEY GREEN BUSINESS PARK,
CHEADLE/CHEADLE HULME, SK8 6QL

Groundsure Reference:	GS-5833360
Your Reference:	8651G
Report Date	20 Feb 2019
Report Delivery Method:	Email - pdf

Enviro Insight

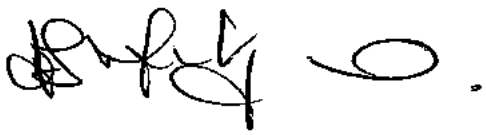
Address: BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

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

Enviro Insight

Address:	**BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR**
Date:	**20 Feb 2019**
Reference:	**GS-5833360**
Client:	**WML Consulting**

NW N NE

W E



SW S SE

Aerial Photograph Capture date: 11-Jun-2015
Grid Reference: 384211,396704
Site Size: 0.1460ha

Report Reference: GS-5833360
Client Reference: 8651G

Contents Page

Contents Page 3
Overview of Findings 6
Using this report 10
1. Historical Land Use 11
1. Historical Industrial Sites 12
1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping....12
1.2 Additional Information – Historical Tank Database....12
1.3 Additional Information – Historical Energy Features Database....13
1.4 Additional Information – Historical Petrol and Fuel Site Database....14
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database....14
1.6 Historical military sites....15
1.7 Potentially Infilled Land....15
2. Environmental Permits, Incidents and Registers Map 16
2. Environmental Permits, Incidents and Registers 17
2.1 Industrial Sites Holding Licences and/or Authorisations....17
2.1.1 Records of historic IPC Authorisations within 500m of the study site:....17
2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:....17
2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:....17
2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:....17
2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:....17
2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site: 18
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:....18
2.1.8 Records of Licensed Discharge Consents within 500m of the study site:....21
2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site: 22
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:....22
2.2 Dangerous or Hazardous Sites....22
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents....22
2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:....22
2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:....22
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990....23
3. Landfill and Other Waste Sites Map 24
3. Landfill and Other Waste Sites 25
3.1 Landfill Sites....25
3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site: 25
3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site: 25
3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:....25
3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:....25
3.2 Other Waste Sites....26
3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site: 26
3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site: 26
4. Current Land Use Map 28
4. Current Land Uses 29
4.1 Current Industrial Data....29
4.2 Petrol and Fuel Sites....29
4.3 National Grid High Voltage Underground Electricity Transmission Cables....30
4.4 National Grid High Pressure Gas Transmission Pipelines....30

5. Geology 31
5.1 Artificial Ground and Made Ground 31
5.2 Superficial Ground and Drift Geology 31
5.3 Bedrock and Solid Geology 31
6 Hydrogeology and Hydrology 32
6a. Aquifer Within Superficial Geology 32
6b. Aquifer Within Bedrock Geology and Abstraction Licences 33
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences 34
6d. Hydrogeology – Source Protection Zones within confined aquifer 35
6e. Hydrology – Watercourse Network and River Quality 36
6.Hydrogeology and Hydrology 37
6.1 Aquifer within Superficial Deposits 37
6.2 Aquifer within Bedrock Deposits 37
6.3 Groundwater Abstraction Licences 38
6.4 Surface Water Abstraction Licences 42
6.5 Potable Water Abstraction Licences 42
6.6 Source Protection Zones 43
6.7 Source Protection Zones within Confined Aquifer 43
6.8 Groundwater Vulnerability and Soil Leaching Potential 43
6.9 River Quality 43
6.9.1 Biological Quality: 43
6.9.2 Chemical Quality: 44
6.10 Ordnance Survey MasterMap Water Network 44
6.11 Surface Water Features 45
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea) 46
7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map 47
7 Flooding 48
7.1 River and Coastal Zone 2 Flooding 48
7.2 River and Coastal Zone 3 Flooding 48
7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating 48
7.4 Flood Defences 49
7.5 Areas benefiting from Flood Defences 49
7.6 Areas benefiting from Flood Storage 49
7.7 Groundwater Flooding Susceptibility Areas 49
7.8 Groundwater Flooding Confidence Areas 49
8. Designated Environmentally Sensitive Sites Map 50
8. Designated Environmentally Sensitive Sites 51
8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site: 51
8.2 Records of National Nature Reserves (NNR) within 2000m of the study site: 51
8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site: 51
8.4 Records of Special Protection Areas (SPA) within 2000m of the study site: 51
8.5 Records of Ramsar sites within 2000m of the study site: 51
8.6 Records of Ancient Woodland within 2000m of the study site: 52
8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site: 52
8.8 Records of World Heritage Sites within 2000m of the study site: 52
8.9 Records of Environmentally Sensitive Areas within 2000m of the study site: 52
8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site: 52
8.11 Records of National Parks (NP) within 2000m of the study site: 52
8.12 Records of Nitrate Sensitive Areas within 2000m of the study site: 52
8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site: 53

8.14 Records of Green Belt land within 2000m of the study site: 53
9. Natural Hazards Findings 54
9.1 Detailed BGS GeoSure Data 54
9.1.1 Shrink Swell 54
9.1.2 Landslides 54
9.1.3 Soluble Rocks 54
9.1.4 Compressible Ground 55
9.1.5 Collapsible Rocks 55
9.1.6 Running Sand 55
9.2 Radon 56
9.2.1 Radon Affected Areas 56
9.2.2 Radon Protection 56
10. Mining 57
10.1 Coal Mining 57
10.2 Non-Coal Mining 57
10.3 Brine Affected Areas 57
Contact Details 58
Standard Terms and Conditions 60

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	0	15	2
1.2 Additional Information – Historical Tank Database	0	0	2	6
1.3 Additional Information – Historical Energy Features Database	0	0	12	25
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	25
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	0	0	0	1

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	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	18
2.1.8 Records of Licensed Discharge Consents	0	0	0	7
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	1	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	1	7

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	0
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 Records of Artificial Ground and Made Ground present beneath the study site	None identified
5.2 Records of Superficial Ground and Drift Geology present beneath the study site	Identified
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 Records of Strata Classification in the Superficial Geology within 500m of the study site	Identified
6.2 Records of Strata Classification in the Bedrock Geology within 500m of the study site	Identified

	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	4	8	12
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	2
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	#250GWV #	#500GWV #	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 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	No	No	No	Yes
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	0	0	2	0	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 Enviroment Agency Zone 2 floodplains within 250m of the study site	Identified
7.2 Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Identified
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	High
7.4 Flood Defences within 250m of the study site	None identified
7.5 Areas benefiting from Flood Defences within 250m of the study site	None identified
7.6 Areas used for Flood Storage within 250m of the study site	None identified
7.7 Maximum BGS Groundwater Flooding susceptibility within 50m of the study site	Limited potential
7.8 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	1
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards

9.1 Maximum risk of natural ground subsidence	Very Low
9.1.1 Maximum Shrink-Swell hazard rating identified on the study site	Negligible
9.1.2 Maximum Landslides hazard rating identified on the study site	Very Low
9.1.3 Maximum Soluble Rocks hazard rating identified on the study site	Negligible
9.1.4 Maximum Compressible Ground hazard rating identified on the study site	Negligible
9.1.5 Maximum Collapsible Rocks hazard rating identified on the study site	Very Low
9.1.6 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 site 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 Coal mining areas within 75m of the study site	Identified
10.2 Non-Coal Mining areas within 50m of the study site boundary	None identified
10.3 Brine affected areas within 75m of the study site	None identified

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 licences, 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”.

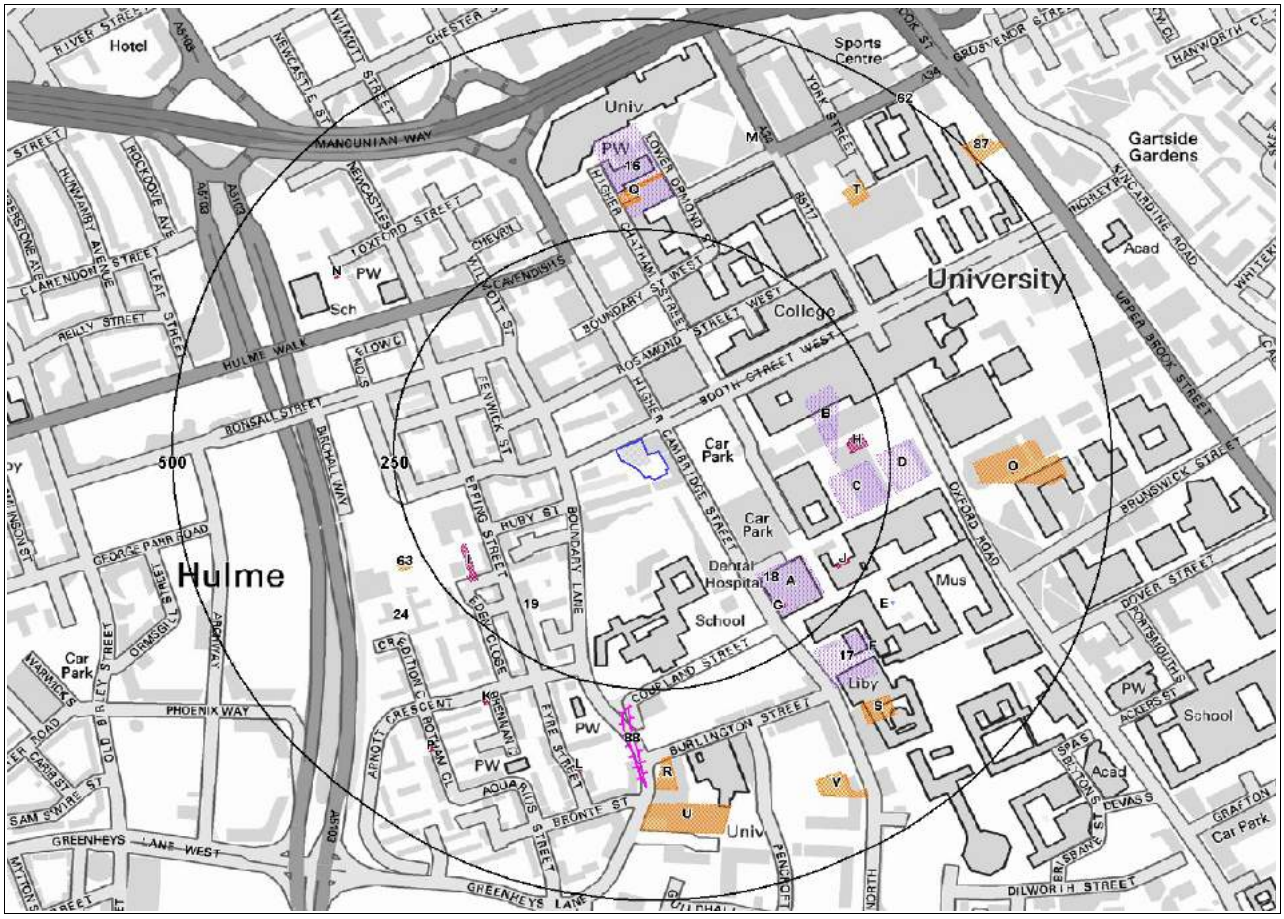
All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use

NW N NE

W E

SW S SE



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

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

Site Outline

Industrial Land Use

Potentially Infilled Land

250
500
Search Buffers (m)

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

Energy Features

Petrol Stations

Historical military sites

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: 17

ID	Distance [m]	Direction	Use	Date
1A	157	SE	Hospital	1994
2A	157	SE	Hospital	1985
3A	157	SE	Hospital	1978
4A	157	SE	Hospital	1988
5A	157	SE	Hospital	1956
6A	157	SE	Hospital	1971
7B	172	NE	Unspecified Works	1916
8B	176	E	Police Station	1971
9C	179	E	Corporation Yard	1934
10C	179	E	Corporation Yard	1915
11C	179	E	Corporation Yard	1938
12C	184	E	Corporation Yard	1923
13D	233	E	Hospital	1938
14D	233	E	Hospital	1934
15D	244	E	Hospital	1915
16	264	N	Hospital	1971
17	267	SE	Brewery	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: 8

ID	Distance (m)	Direction	Use	Date
18	173	SE	Unspecified Tank	1891
19	201	SW	Unspecified Tank	1891
20E	288	SE	Unspecified Tank	1949
21E	295	SE	Unspecified Tank	1951
22E	295	SE	Unspecified Tank	1948
23F	309	SE	Unspecified Tank	1963

24	309	SW	Unspecified Tank	1891
25F	310	SE	Unspecified Tank	1977

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: 37

ID	Distance (m)	Direction	Use	Date
26I	201	SW	Electricity Substation	1976
27G	201	SE	Electricity Substation	1995
28G	201	SE	Electricity Substation	1997
29G	202	SE	Electricity Substation	1976
30H	202	E	Electricity Substation	1949
31H	203	E	Electricity Substation	1948
32H	203	E	Electricity Substation	1951
33I	210	SW	Electricity Substation	1997
34I	210	SW	Electricity Substation	1995
35J	218	SE	Electricity Substation	1997
36J	218	SE	Electricity Substation	1995
37J	218	SE	Electricity Substation	1976
38K	316	SW	Electricity Substation	1977
39K	317	SW	Electricity Substation	1985
40K	317	SW	Electricity Substation	1985
41K	318	SW	Electricity Substation	1993
42L	349	S	Electricity Substation	1985
43L	349	S	Electricity Substation	1998
44L	349	S	Electricity Substation	1995
45L	349	S	Electricity Substation	1993
46L	350	S	Electricity Substation	1985
47N	373	NW	Electricity Substation	1973
48M	374	N	Electricity Substation	1998
49M	374	N	Electricity Substation	1995
50N	374	NW	Electricity Substation	1995
51N	374	NW	Electricity Substation	1997
52N	374	NW	Electricity Substation	1972
53M	375	N	Electricity Substation	1990
54O	384	E	Electricity Substation	1987
55O	386	E	Electricity Substation	1989
56O	386	E	Electricity Substation	1992
57P	399	SW	Electricity Substation	1978
58P	399	SW	Electricity Substation	1996

59P	399	SW	Electricity Substation	1995
60P	400	SW	Electricity Substation	1990
61P	400	SW	Electricity Substation	1988
62	498	NE	Electricity Substation	1987

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: 25

ID	Distance (m)	Direction	Use	Date
63	265	SW	Garage	1955
64Q	276	N	Garage	1965
65Q	276	N	Garage	1965
66Q	276	N	Garage	1962
67Q	281	N	Garage	1948
68Q	281	N	Garage	1953
69Q	282	N	Garage	1955
70Q	282	N	Garage	1955
71R	329	S	Garage	1993
72R	329	S	Garage	1995
73R	329	S	Garage	1998
74R	329	S	Garage	1985
75R	330	S	Garage	1985
76O	343	E	Carriage and Motor Manufactory	1922
77S	351	SE	Garage	1949
78S	351	SE	Garage	1949
79S	351	SE	Garage	1951
80T	364	NE	Garage	1962
81T	365	NE	Garage	1965
82T	365	NE	Garage	1965
83U	385	S	Garage	1961

84U	385	S	Garage	1951
85V	401	SE	Garage	1951
86V	401	SE	Garage	1961
87	494	NE	Garage	1954

1.6 Historical military sites

Certain military installations were not noted on historic mapping for security reasons. Whilst not all military land is necessarily of concern, Groundsure has researched and digitised a number of Ordnance Factories and other military industrial features (e.g. Ordnance Depots, Munitions Testing Grounds) which may be of contaminative concern. This research was drawn from a number of different sources, and should not be regarded as a definitive or exhaustive database of potentially contaminative military installations. The boundaries of sites within this database have been estimated from the best evidence available to Groundsure at the time of compilation.

Records of historical military sites within 500m of the search boundary: 0

Database searched and no data found.

1.7 Potentially Infilled Land

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

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

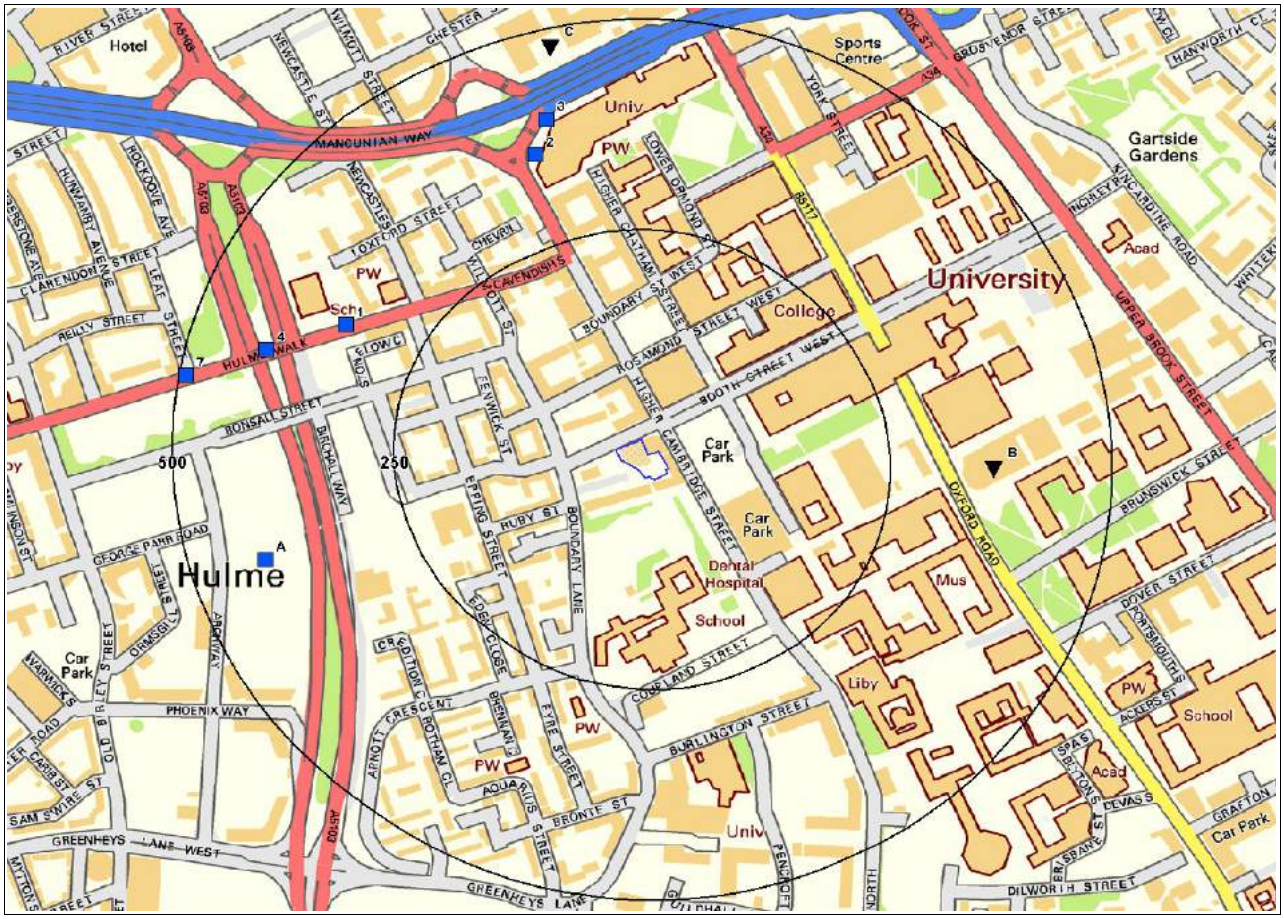
ID	Distance(m)	Direction	Use	Date
88	274	S	Pond	1851

2. Environmental Permits, Incidents and Registers Map

NW N NE

W E

SW S SE



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

- Site Outline
- Search Buffers (m) — 250 / 500
- Recorded Pollution Incident
- Dangerous Substances (List 1)
- Dangerous Substances (List 2)
- Water Industry Referrals
- Licenced Discharge Consents
- Red List Discharge Consents
- RAS 3 & 4 Authorisations
- Part A(1) Authorised Processes and Historic IPC Authorisations
- Part A(2) and Part B Authorised Processes
- COMAH / NIHHS Sites
- Sites Determined as Contaminated Land
- Hazardous Substance Consents and Enforcements

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:

0

Database searched and no data found.

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

18

The following RAS Licence (3 or 4) records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Address	Operator	Type	Permission Number	Dates	Status
26B	366	E	384600 396700	University Of Manchester, South Campus, Oxford Road, Manchester, M13 9PL	University Of Manchester	Disposal Of Radioactive Waste (was Rsa60 Section 6).	BX8564	Date of Approval:2/9/2004 Effective from:1/10/2004 Last date of update:2015-01-01	Superseded By Variation
27B	366	E	384600 396700	Central Manchester University Hospitals Nhs Foundation Trust, Radiological Protection Service,327 Oxford Road, Manchester, M13 9PL	Central Manchester University Hospitals Nhs Foundation Trust	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	BA0536	Date of Approval:6/3/1998 Effective from:6/3/1998 Last date of update:2015-01-01	Superseded By Variation
28B	366	E	384600 396700	University Of Manchester, South Campus, Oxford Road, Manchester, M13 9PL	University Of Manchester	Disposal Of Radioactive Waste (was Rsa60 Section 6).	BZ3067	Date of Approval:28/6/2005 Effective from:22/7/2005 Last date of update:2015-01-01	Superseded By Variation
29B	366	E	384600 396700	Victoria University Of Manchester,oxford Road, Manchester, Greater Manchester, M13 9PL	Victoria University Of Manchester	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	BG4739	Date of Approval:16/8/1999 Effective from:16/8/1999 Last date of update:2015-01-01	Superseded By Variation
30B	366	E	384600 396700	University Of Manchester, South Campus,oxford Road, Manchester, M13 9PL	University Of Manchester	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	CA1197	Date of Approval:27-1-2006 Effective from:27-1-2006 Last date of update:2006-04-06	Effective

ID	Distance (m)	Direction	NGR	Address	Operator	Type	Permission Number	Dates	Status
31B	366	E	384600 396700	Central Manchester University Hospitals Nhs Foundation Trust, Radiological Protection Service,327 Oxford Road, Manchester, M13 9PL	Central Manchester University Hospitals Nhs Foundation Trust	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	BM2918	Date of Approval:19/11/2001 Effective from:19/11/2001 Last date of update:2015-01-01	Superseded By Variation
32B	366	E	384600 396700	University Of Manchester, South Campus,oxford Road, Manchester, M13 9PL	University Of Manchester	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	CA6571	Date of Approval:22-8-2006 Effective from:22-8-2006 Last date of update:2006-10-01	Effective
33B	366	E	384600 396700	Central Manchester University Hospitals Nhs Foundation Trust, Radiological Protection Service,327 Oxford Road, Manchester, M13 9PL	Central Manchester University Hospitals Nhs Foundation Trust	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	BZ5027	Date of Approval:19/9/2005 Effective from:19/9/2005 Last date of update:2015-01-01	Superseded By Variation
34B	366	E	384600 396700	University Of Manchester, South Campus, Oxford Road, Manchester, M13 9PL	University Of Manchester	Disposal Of Radioactive Waste (was Rsa60 Section 6).	CB0137	Date of Approval:8/12/2006 Effective from:3/12/2007 Last date of update:2015-01-01	Effective
35B	366	E	384600 396700	Central Manchester University Hospitals Nhs Foundation Trust, Radiological Protection Service,327 Oxford Road, Manchester, M13 9PL	Central Manchester University Hospitals Nhs Foundation Trust	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	CA6121	Date of Approval:26/10/2006 Effective from:26/10/2006 Last date of update:2015-01-01	Superseded By Variation
36B	366	E	384600 396700	University Of Manchester, Oxford Road, Manchester, Greater Manchester, M13 9PL	University Of Manchester	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AD0155	Date of Approval:31/3/1991 Effective from:31/3/1991 Last date of update:2015-01-01	Revoked/cancelled
37B	366	E	384600 396700	University Of Manchester, South Campus,oxford Road, Manchester, M13 9PL	University Of Manchester	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	BX8548	Date of Approval:1/10/2004 Effective from:1/10/2004 Last date of update:2015-01-01	Effective

ID	Distance (m)	Direction	NGR	Address	Operator	Type	Permission Number	Dates	Status
38C	478	N	384100 397200	Manchester Metropolitan University, John Dalton Building, Chester Street, Manchester, Greater Manchester, M1 5GD	Manchester Metropolitan University	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AP8403	Date of Approval:9/3/1995 Effective from:9/4/1995 Last date of update:2015-01-01	Superseded By Variation
39C	478	N	384100 397200	Manchester Metropolitan University, John Dalton Building, Chester Street, Manchester, Greater Manchester, M1 5GD	Manchester Metropolitan University	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AO3155	Date of Approval:16/10/1994 Effective from:16/10/1994 Last date of update:2015-01-01	Superseded By Variation
40C	478	N	384100 397200	Manchester Metropolitan University, John Dalton Building, Chester Street, Manchester, Greater Manchester, M1 5GD	Manchester Metropolitan University	Disposal Of Radioactive Waste (was Rsa60 Section 6).	BW5861	Date of Approval:1/12/2003 Effective from:1/1/2004 Last date of update:2015-01-01	Superseded By Variation
41C	478	N	384100 397200	Manchester Metropolitan University, John Dalton Building, Chester Street, Manchester, Greater Manchester, M1 5GD	Manchester Metropolitan University	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AC9688	Date of Approval:31/3/1991 Effective from:31/3/1991 Last date of update:2015-01-01	Superseded By Variation
42C	478	N	384100 397200	John Dalton Building, Chester Street, Manchester, M1 5GD	Manchester Metropolitan University	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	BL0324	Date of Approval:23/5/2001 Effective from:23-05-2001 Last date of update:2018-11-01	Issued
43C	478	N	384100 397200	John Dalton Building, Chester Street, Manchester, M1 5GD	Manchester Metropolitan University	Disposal Of Radioactive Waste (was Rsa60 Section 6).	CA1464	Date of Approval:17/2/2006 Effective from:17-03-2006 Last date of update:2018-11-01	Issued

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

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	339	NW	383870 396870	Address: HULME WALK, MANCHESTER, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0362 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	359	N	384083 397072	Address: GSHP AT MANCHESTER METROPOLITAN UNI, MANCHESTER METROPOLITAN UNI, LOWER CHATHAM STREET, MANCHESTER, M15 6BH Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: EPRDP3526GN Permit Version: 1	Receiving Water: GROUNDWATERS Status: NEW ISSUED UNDER EPR 2010 Issue date: 23/08/2010 Effective Date: 01-Apr-2011 Revocation Date: -
3	395	N	384096 397114	Address: GSHP AT MANCHESTER METROPOLITAN UNI, MANCHESTER METROPOLITAN UNI, LOWER CHATHAM STREET, MANCHESTER, M15 6BH Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: EPRDP3526GN Permit Version: 1	Receiving Water: GROUNDWATERS Status: NEW ISSUED UNDER EPR 2010 Issue date: 23/08/2010 Effective Date: 01-Apr-2011 Revocation Date: -
4	412	W	383780 396840	Address: HULME WALK/PRINCESS RD, MANCHESTER, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0363 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: -
5A	416	W	383779 396591	Address: MANCHESTER METROPOLITAN UNIVERSITY, BIRLEY FIELDS CAMPUS, HULME, MANCHESTER, M15 6BH Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: EPRUB3936AX Permit Version: 1	Receiving Water: GROUNDWATER VIA A BOREHOLE Status: NEW ISSUED UNDER EPR 2010 Issue date: 14/08/2013 Effective Date: 14-Aug-2013 Revocation Date: -
6A	416	W	383779 396591	Address: MANCHESTER METROPOLITAN UNIVERSITY, BIRLEY FIELDS CAMPUS, HULME, MANCHESTER, M15 6BH Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: EPRUB3936AX Permit Version: 1	Receiving Water: GROUNDWATER VIA A BOREHOLE Status: NEW ISSUED UNDER EPR 2010 Issue date: 14/08/2013 Effective Date: 14-Aug-2013 Revocation Date: -
7	492	W	383690 396810	Address: HULME WALK/LEAF STREET, MANCHESTER, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0364 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

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

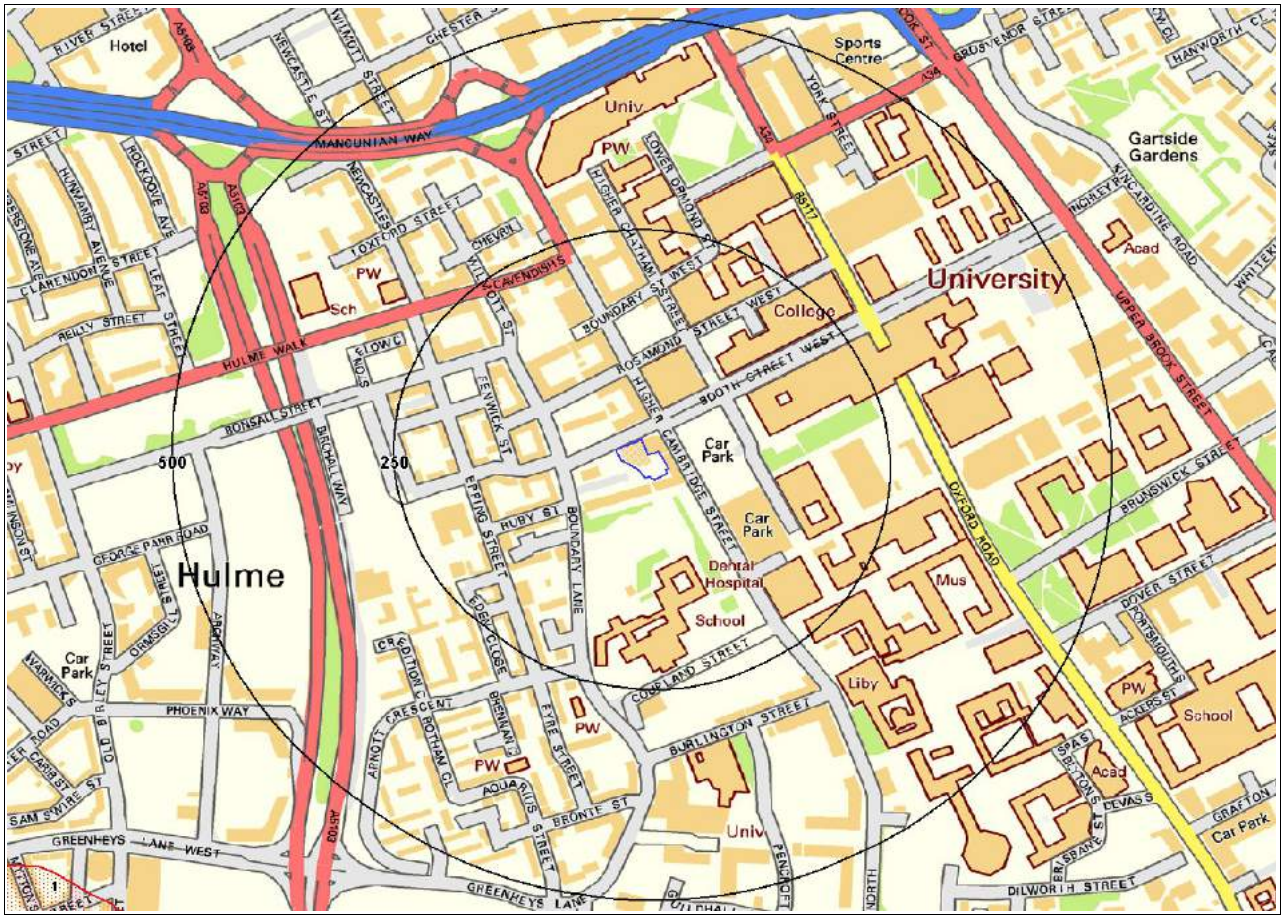
Database searched and no data found.

3. Landfill and Other Waste Sites Map

NW N NE

W E

SW S SE



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

250 / 500 Search Buffers (m)

EA/NRW Active Landfill

EA/NRW Historic Landfill

BGS / DoE Survey Landfill

Historic and Planned Waste Sites

EA/NRW Licensed Waste Site

Local Authority/Historical Mapping Landfill Records

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:

1

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
1	760	SW		Site Address: Moss Side Shopping Centre, Hulme, Manchester Waste Licence: Yes Site Reference: F061 ,0103, RD/LIC/1036/93 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 11-Apr-1994 Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Demolition Service Limited First Recorded: 31-May-1994 Last Recorded: 05-Jun-1995

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:

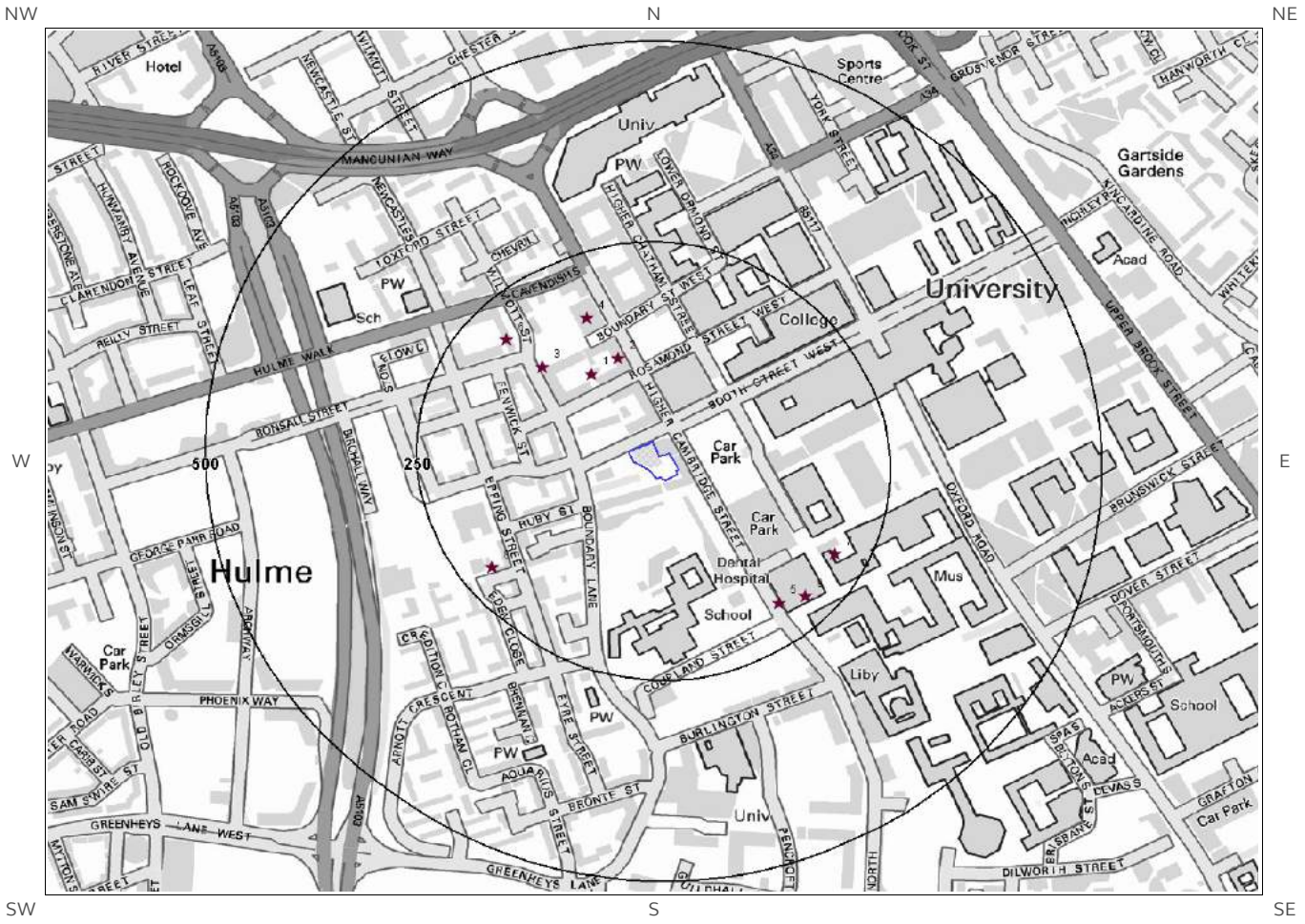
8

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	673	N	383998 397374	Site Address: Little Ireland Phase B, Great Marlborough Street, Manchester, M1 5NN Type: Mobile Plant Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: TER003 EPR reference: - Operator: Terra Vac (uk) Ltd Waste Management licence No: 50191 Annual Tonnage: 0.0	Issue Date: 17/06/2002 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Terra Vac (uk) Ltd Correspondence Address: Unit 7a, Whitwood Enterprise Park, Castleford, WF10 5PX
Not shown	1251	NE	385200 397500	Site Address: 2, Hoyle Street, Ardwick, Manchester, M12 6HG Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ADO001 EPR reference: EA/EPR/AP3092CD/A001 Operator: Donnelly Mr. A. Waste Management licence No: 53582 Annual Tonnage: 310.0	Issue Date: 11/10/1996 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Suspended Site Name: Ardwick Auto Spares Correspondence Address: -
Not shown	1282	NE	385235 397506	Site Address: Hoyle Trading Estate, Hoyle Street, Manchester, M12 6HL Type: Treatment of waste to produce soil <75,000 tpy Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: DEL043 EPR reference: EA/EPR/CB3601KL/A001 Operator: E Delaney Demolition Ltd Waste Management licence No: 402157 Annual Tonnage: 74999.0	Issue Date: 26/02/2015 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Aggregate Recycling Yard Correspondence Address: -
Not shown	1336	NE	385300 397510	Site Address: Temperance Street, Ardwick, Manchester, M12 6HS Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PML001 EPR reference: EA/EPR/AP3992CN/A001 Operator: Pye Metals Ltd Waste Management licence No: 53583 Annual Tonnage: 1733.33	Issue Date: 11/10/1996 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Pye Metals Ltd Correspondence Address: -
Not	1378	NE	385296	Site Address: Hoyle Street, Hoyle Trading	Issue Date: 01/06/2015

ID	Distance (m)	Direction	NGR	Details	
shown			397583	Estate, Manchester, M12 6JL Type: Inert & excavation Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CIT060 EPR reference: EA/EPR/CB3905MR/A001 Operator: City Excavations Ltd Waste Management licence No: 402399 Annual Tonnage: 75000.0	Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: City Excavations Aggregate Yard Correspondence Address: -
Not shown	1412	SE	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	1412	SE	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	1412	SE	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: 24/08/2012 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Central Manchester University Hospitals N H S Foundation Trust Correspondence Address: -

4. Current Land Use Map



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

Search Buffers (m)
250
500

Current Industrial Sites

Petrol & Fuel Sites

Electricity Transmission Cables

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	107	NW	Electricity Sub Station	384130 396819	Greater Manchester, M15	Electrical Features	Infrastructure and Facilities
2	113	N	Muprint Ltd	384162 396839	28, Higher Cambridge Street, Manchester, Greater Manchester, M15 6AA	Published Goods	Industrial Products
3	148	NW	Electricity Sub Station	384072 396828	Greater Manchester, M15	Electrical Features	Infrastructure and Facilities
4	174	NW	Territorial Army Centre	384125 396889	TA Centre, Boundary Lane, Manchester, Greater Manchester, M15 6GE	Armed Services	Central and Local Government
5	199	SE	Electricity Sub Station	384351 396534	Greater Manchester, M15	Electrical Features	Infrastructure and Facilities
6	202	NW	Crane	384030 396862	Greater Manchester, M15	Travelling Cranes and Gantries	Industrial Features
7	209	SE	Electricity Sub Station	384417 396595	Greater Manchester, M15	Electrical Features	Infrastructure and Facilities
8	212	SW	Electricity Sub Station	384013 396578	Greater Manchester, M15	Electrical Features	Infrastructure and Facilities
9	213	SE	University Dental Hospital of Manchester	384383 396542	University Dental Hospital of Manchester, Higher Cambridge Street, Manchester, Greater Manchester, M15 6FH	Hospitals	Health Practitioners and Establishments

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 0

Database searched and no data found.

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
GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL

5.3 Bedrock and Solid Geology

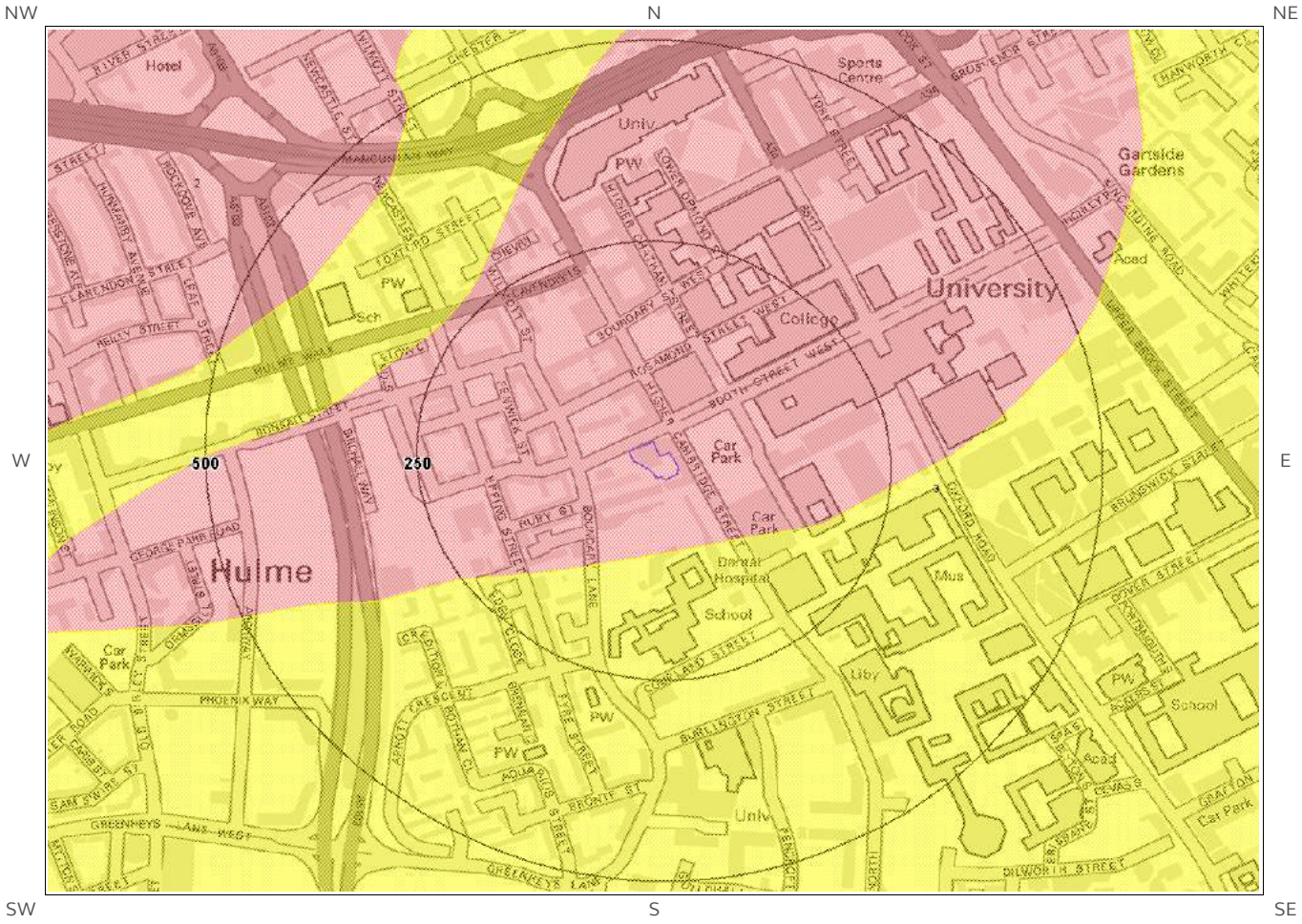
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
CHES-SDST	CHESTER FORMATION	SANDSTONE

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

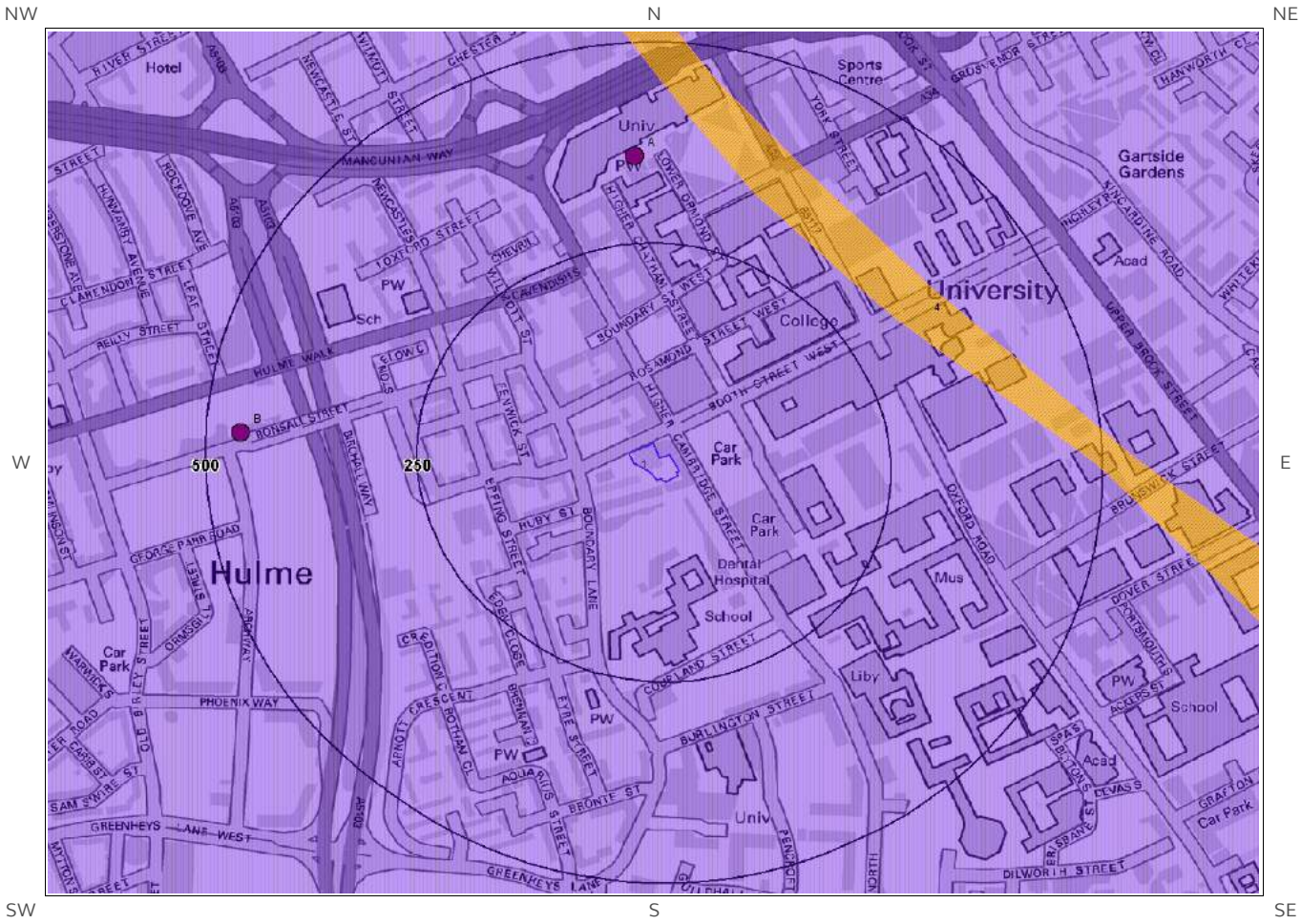
6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



© Crown copyright and database rights 2019
Ordnance Survey licence 100035207.

6b. Aquifer Within Bedrock Geology and Abstraction Licences



© Crown copyright and database rights 2019
Ordnance Survey licence 100035207.

Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

Secondary (B) Aquifer - Lower Permeability Layers

Groundwater Abstraction Licence

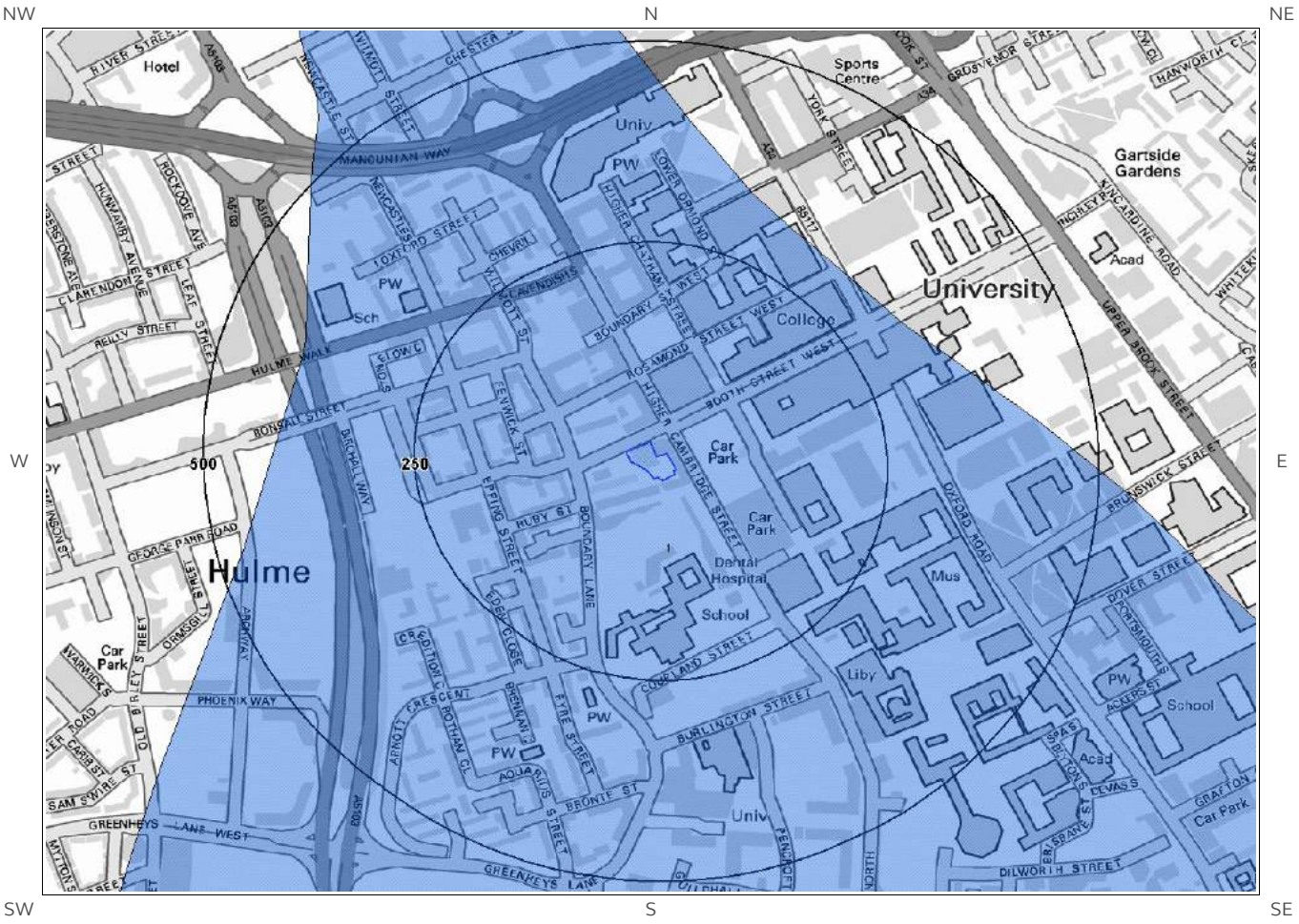
Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

Surface Water Abstraction Licence

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



© Crown copyright and database rights 2019
Ordnance Survey licence 100035207.

Site Outline

250 — 500 — Search Buffers (m)

Source Protection Zone 1 - Inner Catchment

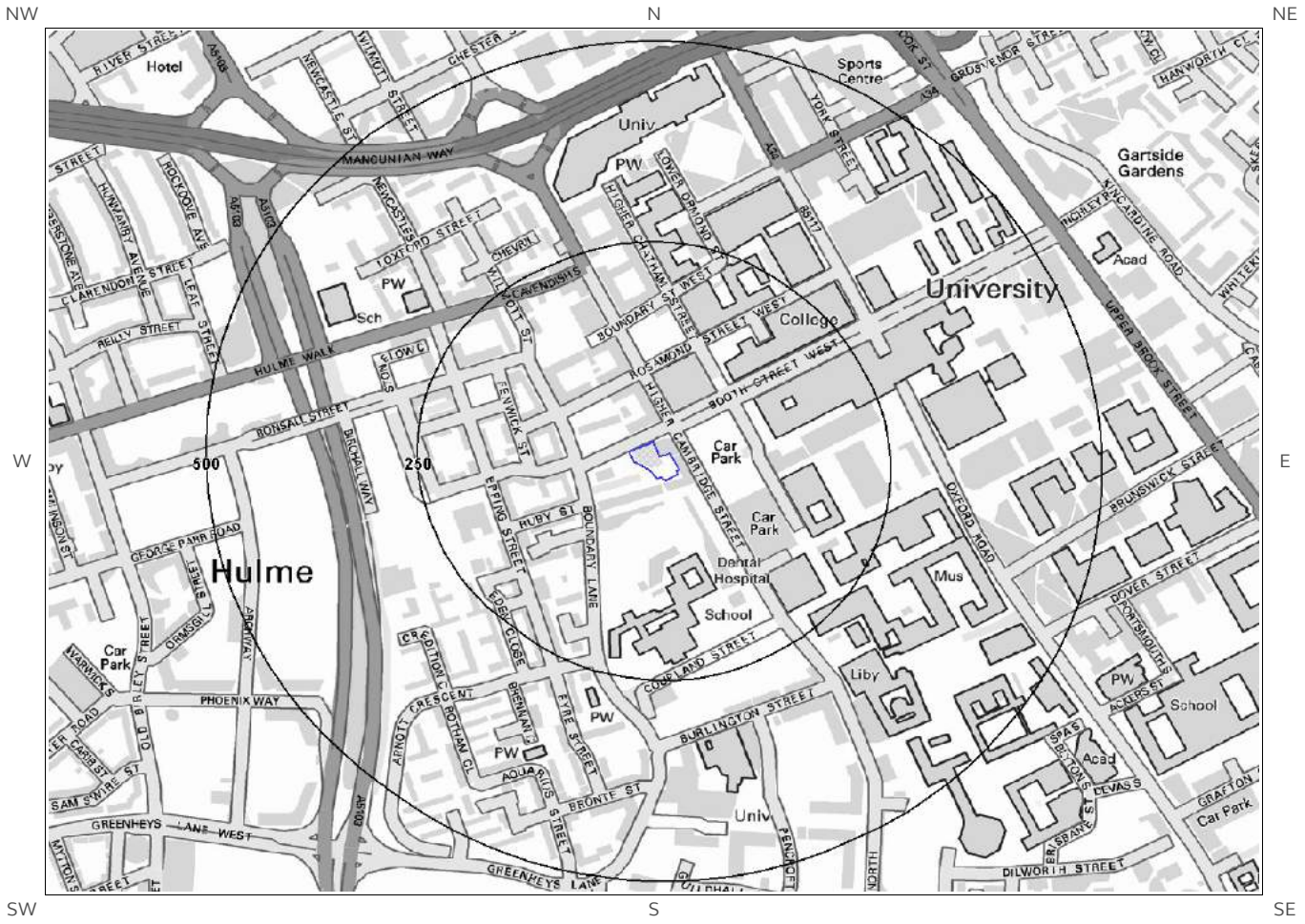
Source Protection Zone 2 - Outer Catchment

Source Protection Zone 3 - Total Catchment

Source Protection Zone 4 - Zone of Special Interest

Potable Water Abstraction Licence

6d. Hydrogeology – Source Protection Zones within confined aquifer



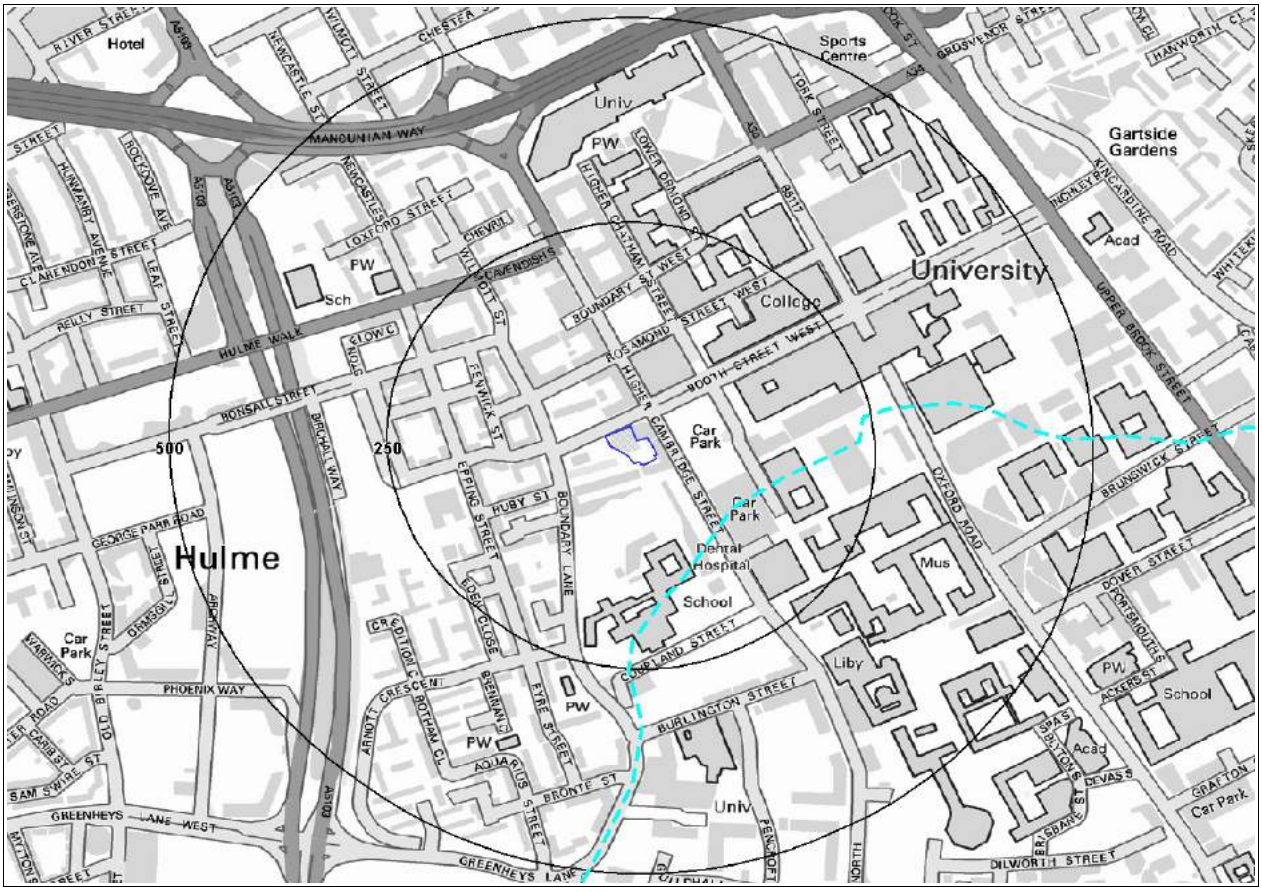
© Crown copyright and database rights 2019
Ordnance Survey licence 100035207.

6e. Hydrology – Watercourse Network and River Quality

NW N NE

W E

SW S SE



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

250 500 Search Buffers (m)

Tidal River

Inland River

Underground or Elevated Tidal River

Underground or Elevated Inland River

Foreshore

General Quality Assessment: Chemistry

Canal

Underground or Elevated Canal

Lock or Flight of Locks

Lake, Reservoir, or Marsh

Drain or Transfer

General Quality Assessment: Biology

6.Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

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 A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
3	89	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
2	427	NW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.2 Aquifer within Bedrock Deposits

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
4	305	NE	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers

6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site — Identified

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	
6A	358	N	384180 397091	Status: Active Licence No: NW/069/0006/003 Details: Heat Pump Direct Source: Ground Water - North West Region Point: BOREHOLE 1 AT LOWER CHATHAM STREET Data Type: Point Name: Manchester Metropolitan University	Annual Volume (m^3): 283240 Max Daily Volume (m^3): 1532 Original Application No: - Original Start Date: 04/04/2014 Expiry Date: 31/03/2027 Issue No: 2 Version Start Date: 04/04/2014 Version End Date:
7A	358	N	384180 397091	Status: Active Licence No: NW/069/0006/003 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE 1 AT LOWER CHATHAM STREET Data Type: Point Name: Manchester Metropolitan University	Annual Volume (m^3): 283240 Max Daily Volume (m^3): 1532 Original Application No: - Original Start Date: 04/04/2014 Expiry Date: 31/03/2027 Issue No: 2 Version Start Date: 04/04/2014 Version End Date:
8B	460	W	383715 396746	Status: Active Licence No: NW/069/0004/003 Details: Heat Pump Direct Source: Ground Water - North West Region Point: BOREHOLE AT MANCHESTER METROPOLITAN UNIVERSITY Data Type: Point Name: Manchester Metropolitan University	Annual Volume (m^3): 274115 Max Daily Volume (m^3): 751 Original Application No: - Original Start Date: 20/09/2013 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/01/2015 Version End Date:
9B	460	W	383715 396746	Status: Active Licence No: NW/069/0004/003 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT MANCHESTER METROPOLITAN UNIVERSITY Data Type: Point Name: Manchester Metropolitan University	Annual Volume (m^3): 274115 Max Daily Volume (m^3): 751 Original Application No: - Original Start Date: 20/09/2013 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/01/2015 Version End Date:
Not shown	845	S	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 (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/12/2003 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	845	S	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 (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/12/2003 Version End Date:
Not shown	845	S	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 (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/08/1995 Version End Date:
Not shown	845	S	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 (m^3): 227000 Max Daily Volume (m^3): 900 Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 23/11/2009 Version End Date:
Not shown	845	S	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 (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/08/1995 Version End Date:
Not shown	845	S	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 (m^3): 227000 Max Daily Volume (m^3): 900 Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 23/11/2009 Version End Date:
Not shown	850	SW	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 (m^3): 227000 Max Daily Volume (m^3): 900 Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 103 Version Start Date: 08/05/2014 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	850	SW	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 (m^3): 227000 Max Daily Volume (m^3): 900 Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 103 Version Start Date: 08/05/2014 Version End Date:
Not shown	1015	N	384378 397733	Status: Historical Licence No: NW0690006001 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: BOREHOLES AT ORIGIN DEVELOPMENTS, MANCHESTER Data Type: Point Name: West Contracting	Annual Volume (m^3): 139128 Max Daily Volume (m^3): 1010 Original Application No: - Original Start Date: 19/01/2009 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 19/01/2009 Version End Date:
Not shown	1015	N	384378 397733	Status: Historical Licence No: NW/069/0006/001 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: BOREHOLES AT ORIGIN DEVELOPMENTS, MANCHESTER Data Type: Point Name: West Contracting	Annual Volume (m^3): 139128 Max Daily Volume (m^3): 1010 Original Application No: - Original Start Date: 19/01/2009 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 19/01/2009 Version End Date:
Not shown	1271	N	384100 398000	Status: Historical Licence No: 2569007069 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT GEORGE ST, MANCHESTER" Data Type: Point Name: BRITISH TELECOM	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 27/01/1971 Expiry Date: - Issue No: 100 Version Start Date: 27/01/1971 Version End Date:
Not shown	1271	N	384100 398000	Status: Historical Licence No: 2569007069 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT GEORGE ST, MANCHESTER Data Type: Point Name: BRITISH TELECOMMUNICATIONS PLC	Annual Volume (m^3): 1100 Max Daily Volume (m^3): 860 Original Application No: - Original Start Date: 01/04/1984 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2007 Version End Date:
Not shown	1288	SW	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 (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 21/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 07/10/2000 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1288	SW	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 (m^3): 66826.2 Max Daily Volume (m^3): 372.772 Original Application No: - Original Start Date: 21/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 07/10/2000 Version End Date:
Not shown	1288	SW	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 (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 21/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 07/10/2000 Version End Date:
Not shown	1288	SW	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 (m^3): 66826.2 Max Daily Volume (m^3): 372.772 Original Application No: - Original Start Date: 21/02/1966 Expiry Date: - Issue No: 103 Version Start Date: 19/07/2018 Version End Date:
Not shown	1307	NE	385240 397540	Status: Historical Licence No: 2569006001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, BROADIE ST, ARDWICK, MANCHESTER Data Type: Point Name: MOSELEY RUBBER CO LTD	Annual Volume (m^3): 331858 Max Daily Volume (m^3): 909.2 Original Application No: - Original Start Date: 08/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 08/02/1966 Version End Date:
Not shown	1307	NE	385240 397540	Status: Historical Licence No: 2569006001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PREMISES, BROADIE ST, ARDWICK, MANCHESTER" Data Type: Point Name: MOSELEY RUBBER CO LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 08/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 08/02/1966 Version End Date:
Not shown	1480	E	385729 396778	Status: Historical 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: Poly4 Name: G T Energy UK Limited	Annual Volume (m^3): 2.04984e+006 Max Daily Volume (m^3): 8640 Original Application No: - Original Start Date: 17/01/2013 Expiry Date: 16/01/2037 Issue No: 2 Version Start Date: 11/06/2013 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not show n	1698	NW	383335 398310	Status: Historical Licence No: 2569007089 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: 2 BOREHOLES AT GARTSIDE STREET MANCHESTER Data Type: Line Name: HER MAJESTY'S COURT SERVICE	Annual Volume (m^3): 200000 Max Daily Volume (m^3): 1179 Original Application No: - Original Start Date: 26/01/2005 Expiry Date: 31/03/2011 Issue No: 2 Version Start Date: 10/07/2008 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site — Identified

The following Surface Water 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	1807	W	382500 397400	Status: Historical Licence No: 2569007053 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "R IRWELL AT IRWELL WORKS, ORDSALL LANE, SALFORD" Data Type: Point Name: CDS COMPUTER DESIGN SYSTEMS LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: - Original Start Date: 22/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/11/1987 Version End Date:
Not shown	1807	W	382500 397400	Status: Historical Licence No: 2569007053 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: R IRWELL AT IRWELL WORKS, ORDSALL LANE, SALFORD Data Type: Point Name: CDS COMPUTER DESIGN SYSTEMS LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: - Original Start Date: 22/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/11/1987 Version End Date:

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site — None identified

Database searched and no data found.

6.6 Source Protection Zones

Source Protection Zones within 500m of the study site — Identified

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

Source Protection Zones within the Confined Aquifer within 500m of the study site — None identified

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

Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site — Identified

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

Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site — Identified

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAHI). In England, each chemical sample is measured for ammonia and dissolved oxygen. In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad').

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

					Chemical Quality Grade				
ID	Distance (m)	Direction	NGR	River Quality Grade	2005	2006	2007	2008	2009
Not shown	1189	NW	383330 397558	River Name: Rochdale Canal Reach: Ashton Canal To Knott Mill End/Start of Stretch: Sample Point NGR	A	A	A	A	A
Not shown	1388	NW	383100 397600	River Name: Rochdale Canal Reach: Ashton Canal To Knott Mill End/Start of Stretch: End of Stretch NGR	A	A	A	A	A

6.10 Ordnance Survey MasterMap Water Network

Ordnance Survey MasterMap Water Network entries within 500m of the study site

This watercourse information is provided by Ordnance Survey MasterMap Water Network. The data provides a detailed centre line following the curve of the waterway precisely, so all distances provided in the report should be understood as measurements to the centreline rather than a measurement to the nearest point of the watercourse. Underground watercourses are inferred from entry and exit points so caution is advised in using these to indicate precise locations of underground watercourses when planning site investigation and development.

The following Ordnance Survey MasterMap Water Network records are represented on the Hydrology Map (6e):

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	106 SE	Corn Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
19	106 SE	Corn Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

6.11 Surface Water Features

Surface water features within 250m of the study site	None identified

Database searched and no data found.

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



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

Search Buffers (m)

Zone 2 Floodplain

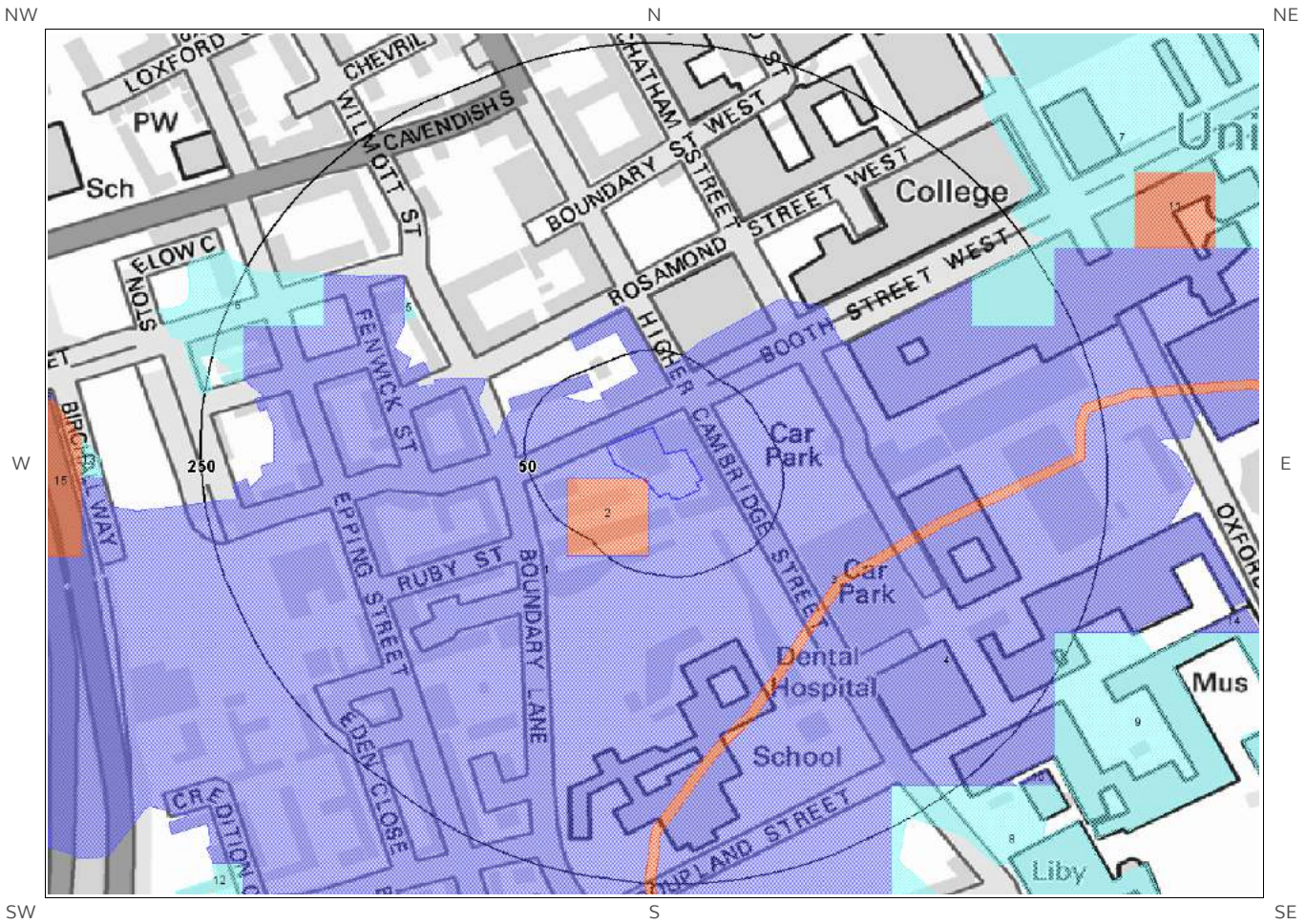
Zone 3 Floodplain

Flood Defences

Area used for Flood Storage

Area Benefiting from Flood Defences

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



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

100
250
Search Buffers (m)

RoFRaS Rating

- Very Low
- Low
- Medium
- High

Report Reference: GS-5833360
Client Reference: 8651G

7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m — Identified

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:

ID	Distance (m)	Direction	Update	Type
1	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m — Identified

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.

ID	Distance (m)	Direction	Update	Type
1	0	On Site	12-Oct-2018	Zone 3 - (Fluvial Models)

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

Highest risk of flooding onsite — High

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 High (1 in 30 or greater) chance of flooding in any given year.

Any relevant data within 250m is represented on the RoFRaS Flood map. Data to 50m is reported in the table below.

ID	Distance (m)	Direction	RoFRas flood Risk
1	0.0	On Site	Medium
2	0.0	On Site	High

7.4 Flood Defences

Flood Defences within 250m of the study site — None identified

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Areas benefiting from Flood Defences within 250m of the study site — None identified

7.6 Areas benefiting from Flood Storage

Areas used for Flood Storage within 250m of the study site — None identified

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site — Identified

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 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.

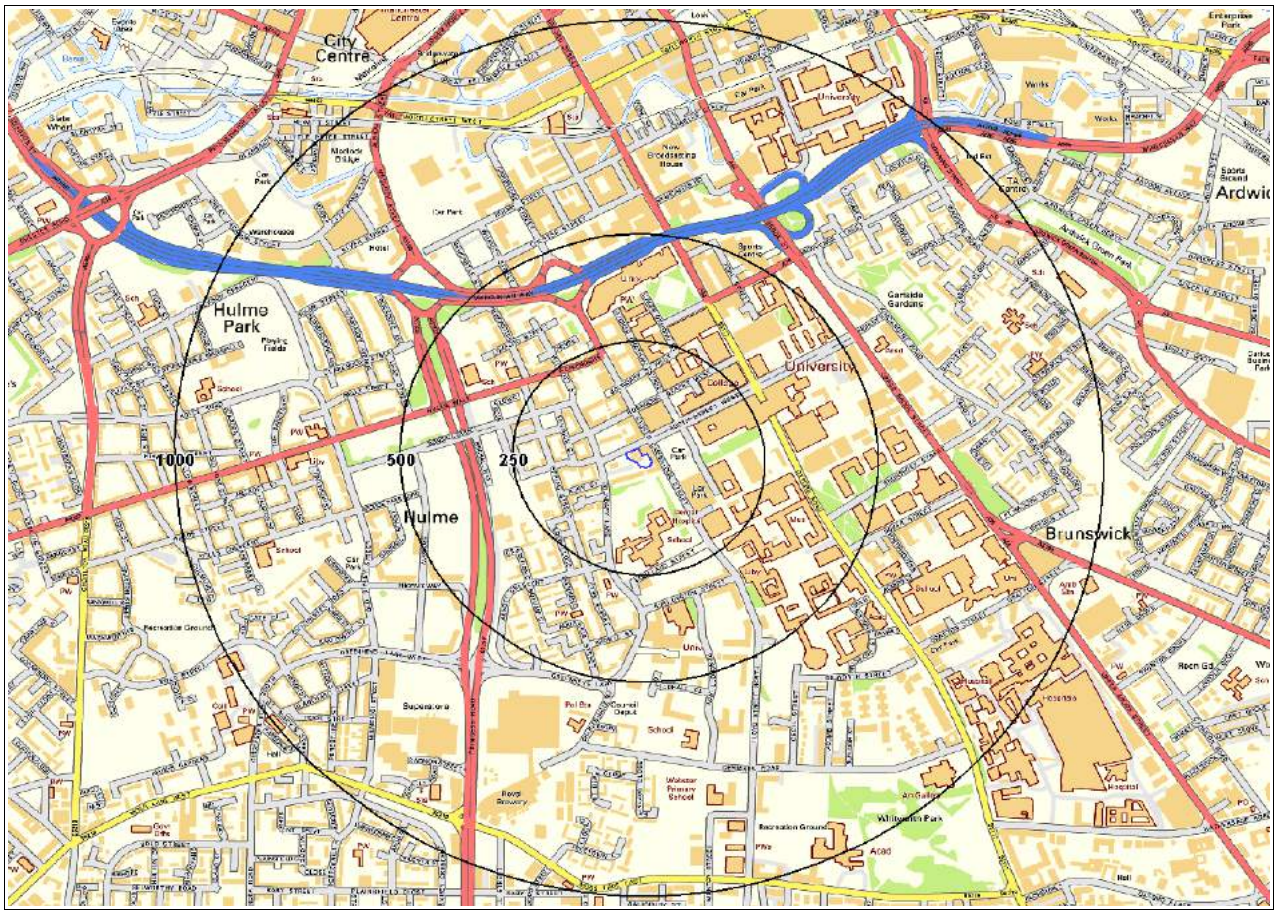
7.8 Groundwater Flooding Confidence Areas

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



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

100
250
Search Buffers (m)

AONB
National Park
SSSI
Special Protection Areas
Nitrate Vulnerable Zones

Green Belt
Environmentally Sensitive Areas
Special Areas of Conservation
World Heritage Sites
Nitrate Sensitive Areas

Ancient Woodland
National Nature Reserve
Local Nature Reserves
Ramsar Sites

8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site	Identified

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:

1

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NVZ Name	Data Source
Not shown	1670	N	Existing	DEFRA

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

Maximum Shrink-Swell*[*] 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
Ground conditions predominantly non-plastic. 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 likely due to potential problems with shrink-swell clays.

9.1.2 Landslides

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

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

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

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

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.

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

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

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

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

Coal mining areas within 75m of the study site — Identified

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

Non-Coal Mining areas within 50m of the study site boundary — None identified

Database searched and no data found.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site — None identified
Guidance: No Guidance Required.

Contact Details

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

British Geological Survey Enquiries
Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
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

Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England/Natural Resources Wales who retain the Copyright and Intellectual Property Rights for the data.
PointX © Database Right/Copyright, Thomson Directories Limited © Copyright Link Interchange Network Limited © Database Right/Copyright and Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028].
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-feb11-2019



Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: County Series

Map date: **1848**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

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

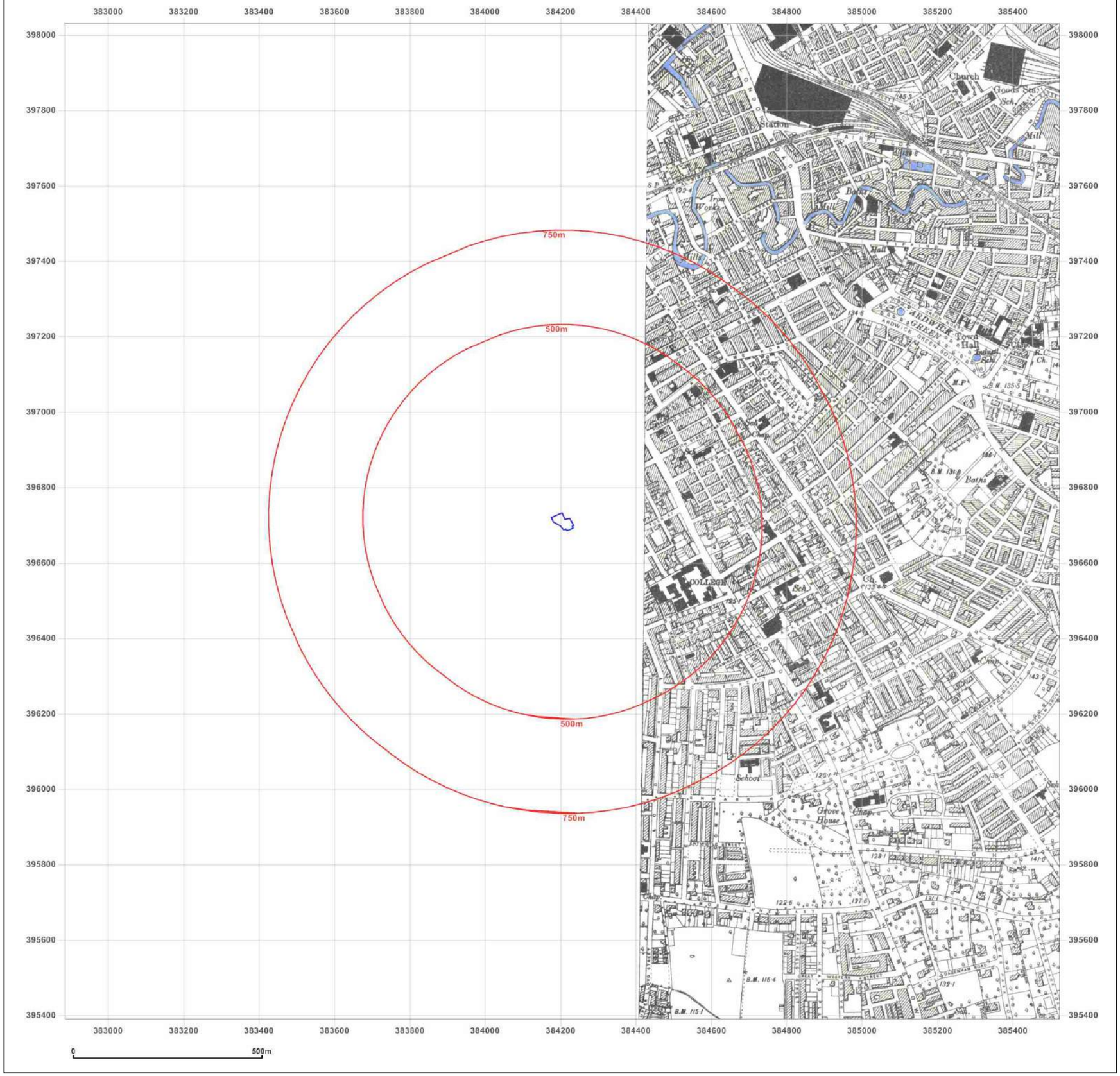
Powered by

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

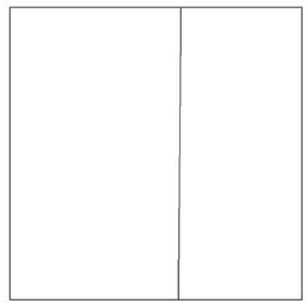
Map Name: County Series

Map date: **1890**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S



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

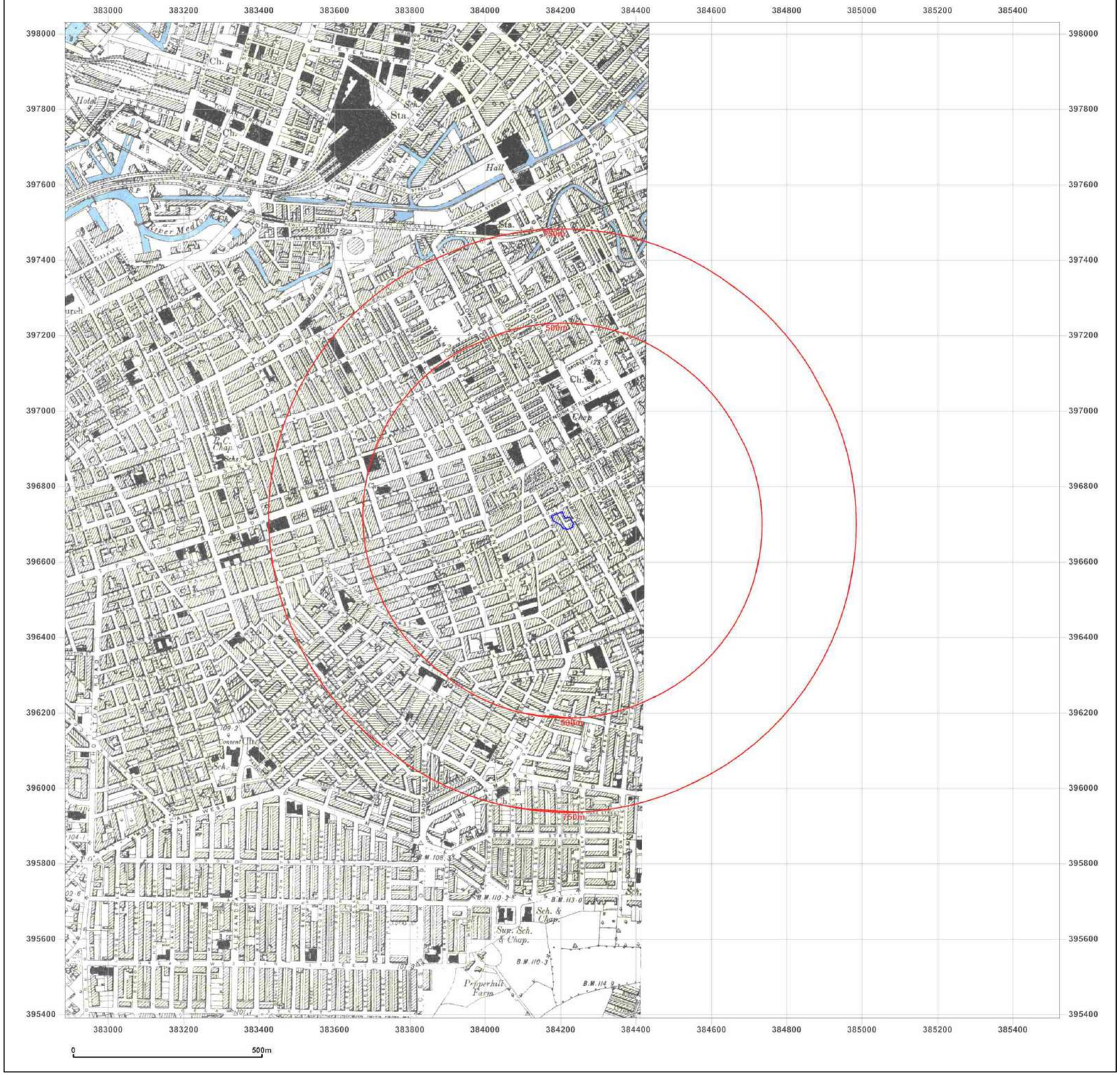
Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: County Series
Map date: **1896**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

Surveyed 1894
Revised 1896
Edition 1896
Copyright N/A
Levelled N/A

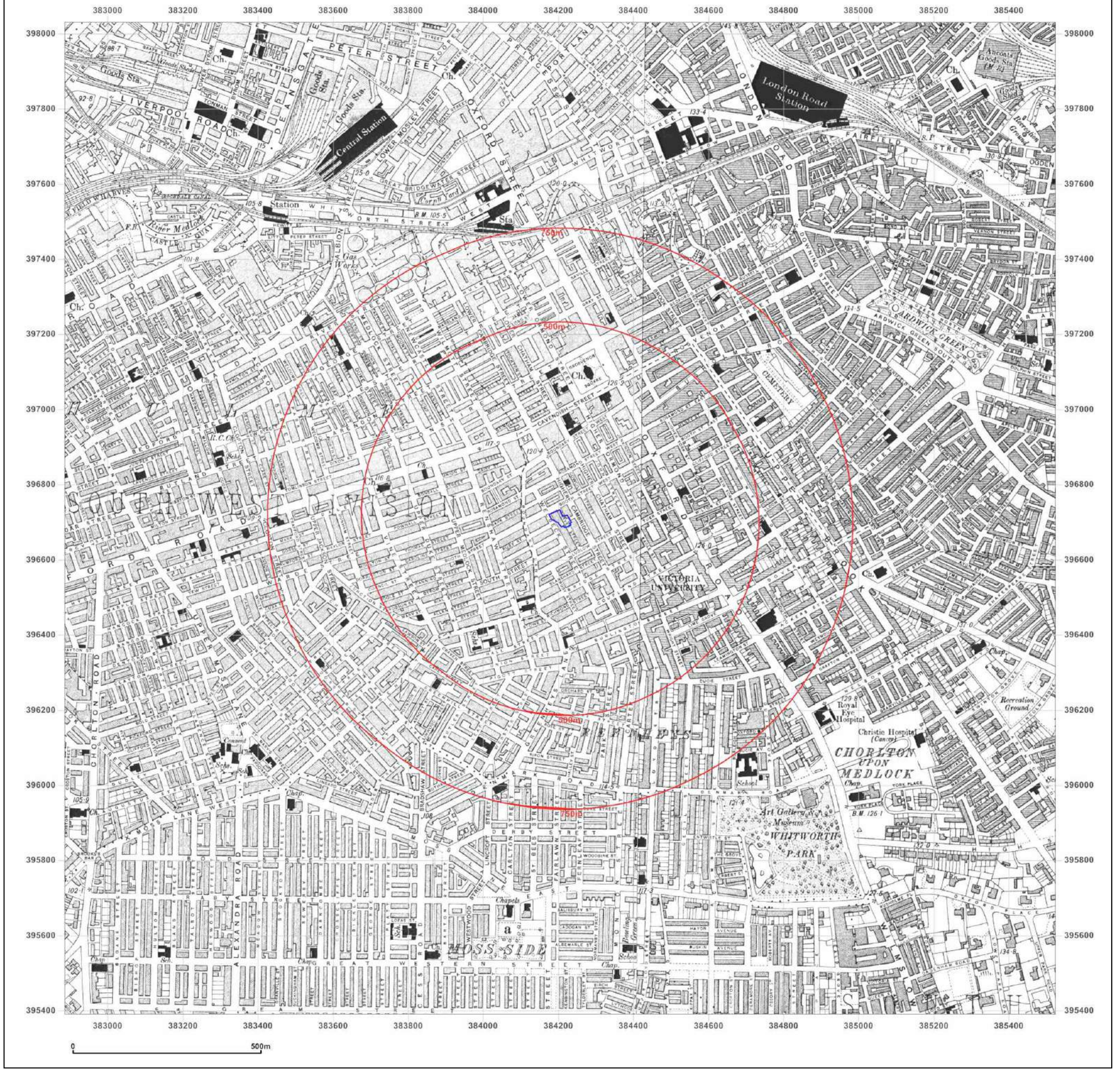


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: County Series

Map date: **1905**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1844
Revised 1905
Edition 1905
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1905
Edition 1905
Copyright N/A
Levelled N/A

Powered by OS

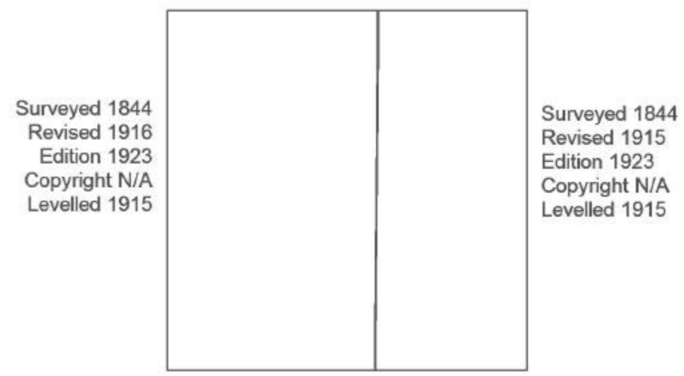
Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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





Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: County Series

Map date: **1923**

Scale: 1:10,560

Printed at: 1:10,560

N W E S

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: County Series

Map date: **1923**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

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

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

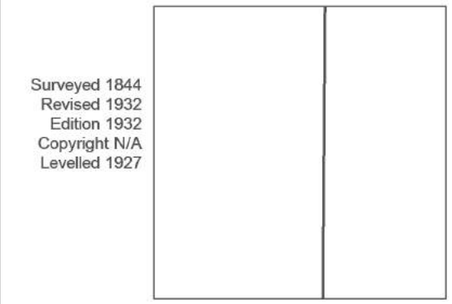
Map Name: County Series

Map date: **1932-1934**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S



Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

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

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

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: Provisional
Map date: **1956**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

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

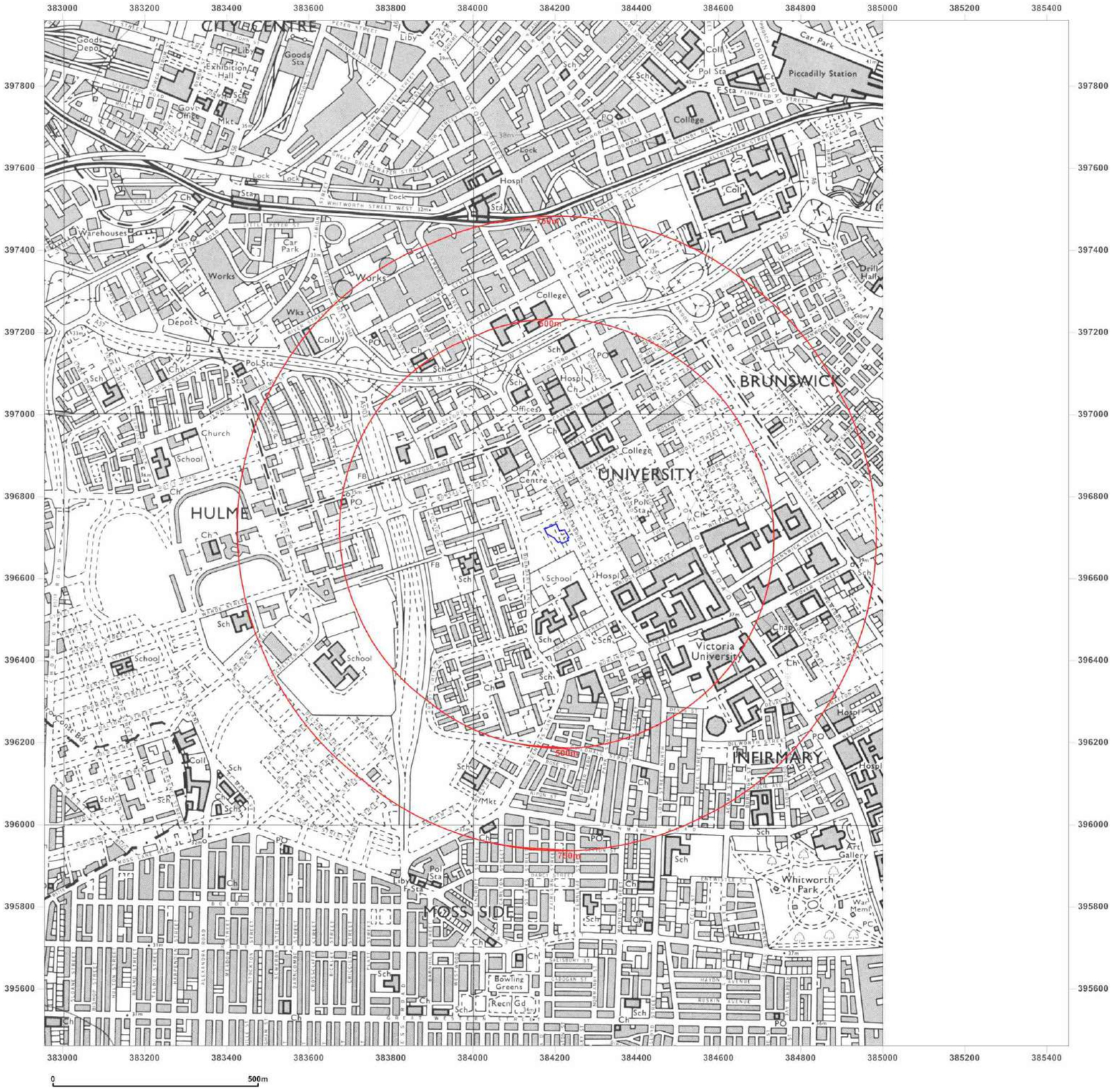
Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid

Map date: **1972**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1971
Revised 1972
Edition N/A
Copyright 1972
Levelled 1972

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Surveyed 1976
Revised 1980
Edition N/A
Copyright 1980
Levelled 1976

Surveyed 1976
Revised 1980
Edition N/A
Copyright 1981
Levelled 1976

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid

Map date: **1980-1981**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

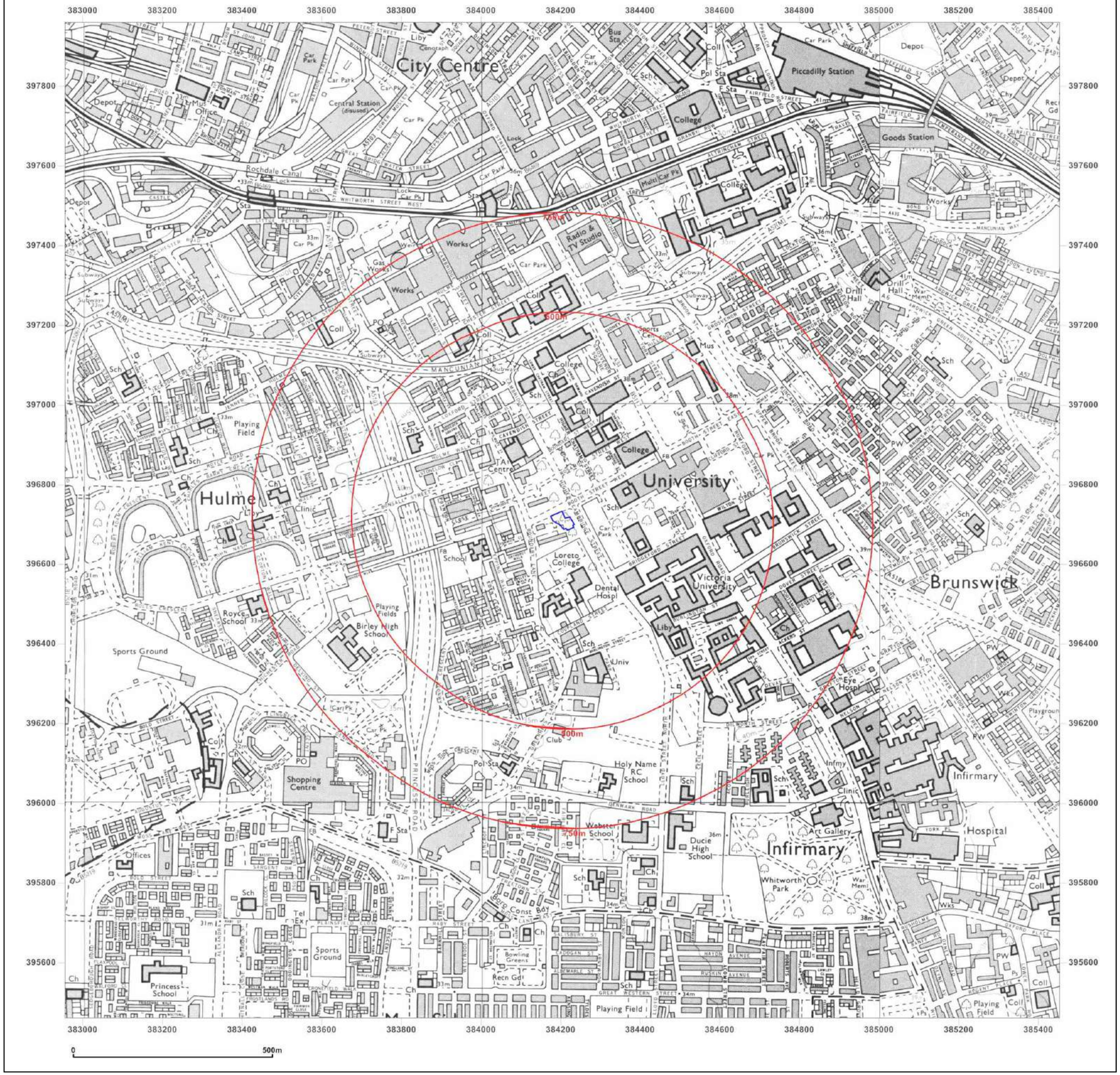
Powered by

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid

Map date: **1985**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1983
Revised 1985
Edition N/A
Copyright 1985
Levelled 1981

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

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid

Map date: **1988-1991**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1986
Revised 1988
Edition N/A
Copyright 1988
Levelled 1981

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

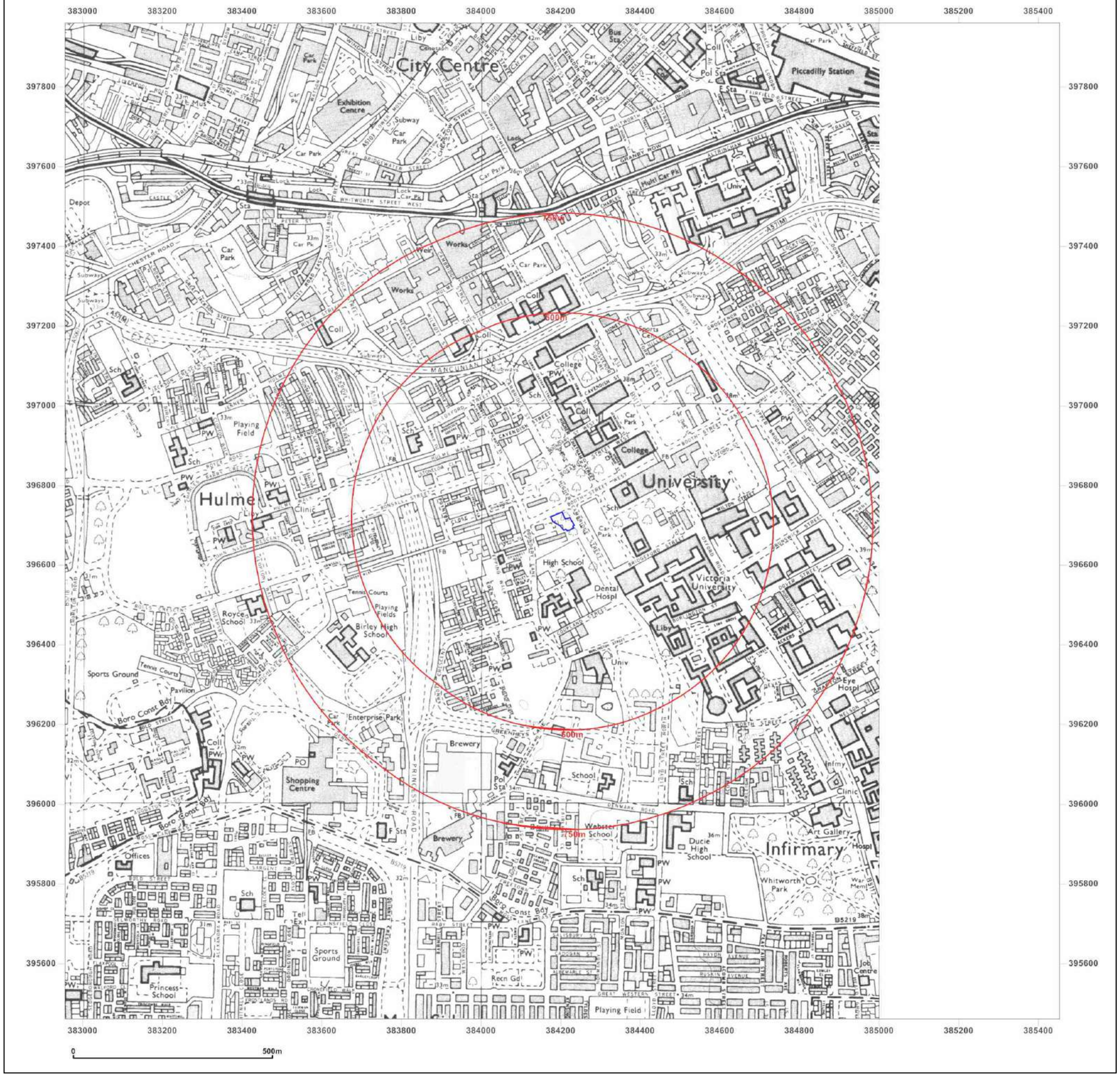
Powered by

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid

Map date: **1994**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

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

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: 1:10,000 Raster
Map date: **2002**
Scale: 1:10,000
Printed at: 1:10,000

N
W E
S

2002

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid
Map date: **2010**
Scale: 1:10,000
Printed at: 1:10,000

N
W E
S

2010

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid
Map date: 2014
Scale: 1:10,000
Printed at: 1:10,000

N W E S

2014

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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

Groundsure
LOCATION INTELLIGENCE

WML Consulting

UNIT 8 WRIGHT MOTTERSHAW LYDON CONSULTING LTD, STANLEY GREEN BUSINESS PARK,
CHEADLE/CHEADLE HULME, SK8 6QL

Groundsure Reference:	GS-5833361
Your Reference:	8651G
Report Date	20 Feb 2019
Report Delivery Method:	Email - pdf

Geo Insight

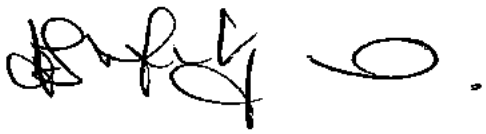
Address: BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

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

Geo Insight

Address:	**BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR**
Date:	**20 Feb 2019**
Reference:	**GS-5833361**
Client:	**WML Consulting**

NW N NE



W E

SW S SE

Aerial Photograph Capture date:	11-Jun-2015
Grid Reference:	384211,396704
Site Size:	0.1460ha

Contents Page

Contents Page ... 3
Overview of Findings ... 5
1:10,000 Scale Availability ... 8
Availability of 1:10,000 Scale Geology Mapping ... 9
1 Geology (1:10,000 scale) ... 10
1.1 Artificial Ground map (1:10,000 scale) ... 10
1. Geology 1:10,000 scale ... 11
1.1 Artificial Ground ... 11
1.2 Superficial Deposits and Landslips map (1:10,000 scale) ... 12
1.2 Superficial Deposits and Landslips ... 13
1.2.1 Superficial Deposits/ Drift Geology ... 13
1.2.2 Landslip ... 13
1.3 Bedrock and linear features map (1:10,000 scale) ... 14
1.3 Bedrock and linear features ... 15
1.3.1 Bedrock/ Solid Geology ... 15
1.3.2 Linear features ... 15
2 Geology 1:50,000 Scale ... 16
2.1 Artificial Ground map ... 16
2. Geology 1:50,000 scale ... 17
2.1 Artificial Ground ... 17
2.1.1 Artificial/ Made Ground ... 17
2.1.2 Permeability of Artificial Ground ... 17
2.2 Superficial Deposits and Landslips map (1:50,000 scale) ... 18
2.2 Superficial Deposits and Landslips ... 19
2.2.1 Superficial Deposits/ Drift Geology ... 19
2.2.2 Permeability of Superficial Ground ... 19
2.2.3 Landslip ... 19
2.2.4 Landslip Permeability ... 19
2.3 Bedrock and linear features map (1:50,000 scale) ... 20
2.3 Bedrock, Solid Geology & linear features ... 21
2.3.1 Bedrock/Solid Geology ... 21
2.3.2 Permeability of Bedrock Ground ... 21
2.3.3 Linear features ... 21
3 Radon Data ... 22
3.1 Radon Affected Areas ... 22
3.2 Radon Protection ... 22
4 Ground Workings map ... 23
4 Ground Workings ... 24
4.1 Historical Surface Ground Working Features derived from Historical Mapping ... 24
4.2 Historical Underground Working Features derived from Historical Mapping ... 24
4.3 Current Ground Workings ... 24
5 Mining, Extraction & Natural Cavities ... 26
5.1 Historical Mining ... 26
5.2 Coal Mining ... 26
5.3 Johnson Poole and Bloomer ... 26
5.4 Non-Coal Mining ... 26
5.5 Non-Coal Mining Cavities ... 27
5.6 Natural Cavities ... 27
5.7 Brine Extraction ... 27
5.8 Gypsum Extraction ... 27
5.9 Tin Mining ... 28
5.10 Clay Mining ... 28
6 Natural Ground Subsidence ... 29
6.1 Shrink-Swell Clay map ... 29
6.2 Landslides map ... 30
6.3 Ground Dissolution of Soluble Rocks map ... 31
6.4 Compressible Deposits map ... 32
6.5 Collapsible Deposits map ... 33
6.6 Running Sand map ... 34

6 Natural Ground Subsidence..... 35
6.1 Shrink-Swell Clays.....35
6.2 Landslides.....35
6.3 Ground Dissolution of Soluble Rocks.....35
6.4 Compressible Deposits.....36
6.5 Collapsible Deposits.....36
6.6 Running Sands.....36
7 Borehole Records..... 38
8 Estimated Background Soil Chemistry..... 39
9 Railways and Tunnels map..... 40
9 Railways and Tunnels..... 41
9.1 Tunnels 41
9.2 Historical Railway and Tunnel Features 41
9.3 Historical Railways.....42
9.4 Active Railways.....42
9.5 Railway Projects.....42

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 landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and linear features	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 linear features within 500m of the study site boundary at 1:10,000 scale?	Yes

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 landslip 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 linear features	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 linear features within 500m of the study site boundary?	Yes

Section 3: Radon

3. Radon	3.1Is 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.
	3.2Radon 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	0

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	1	2	4
5.4 Non-Coal Mining*	0	0	0	0	0
5.5 Non–Coal Mining Cavities	0	0	0	0	1
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

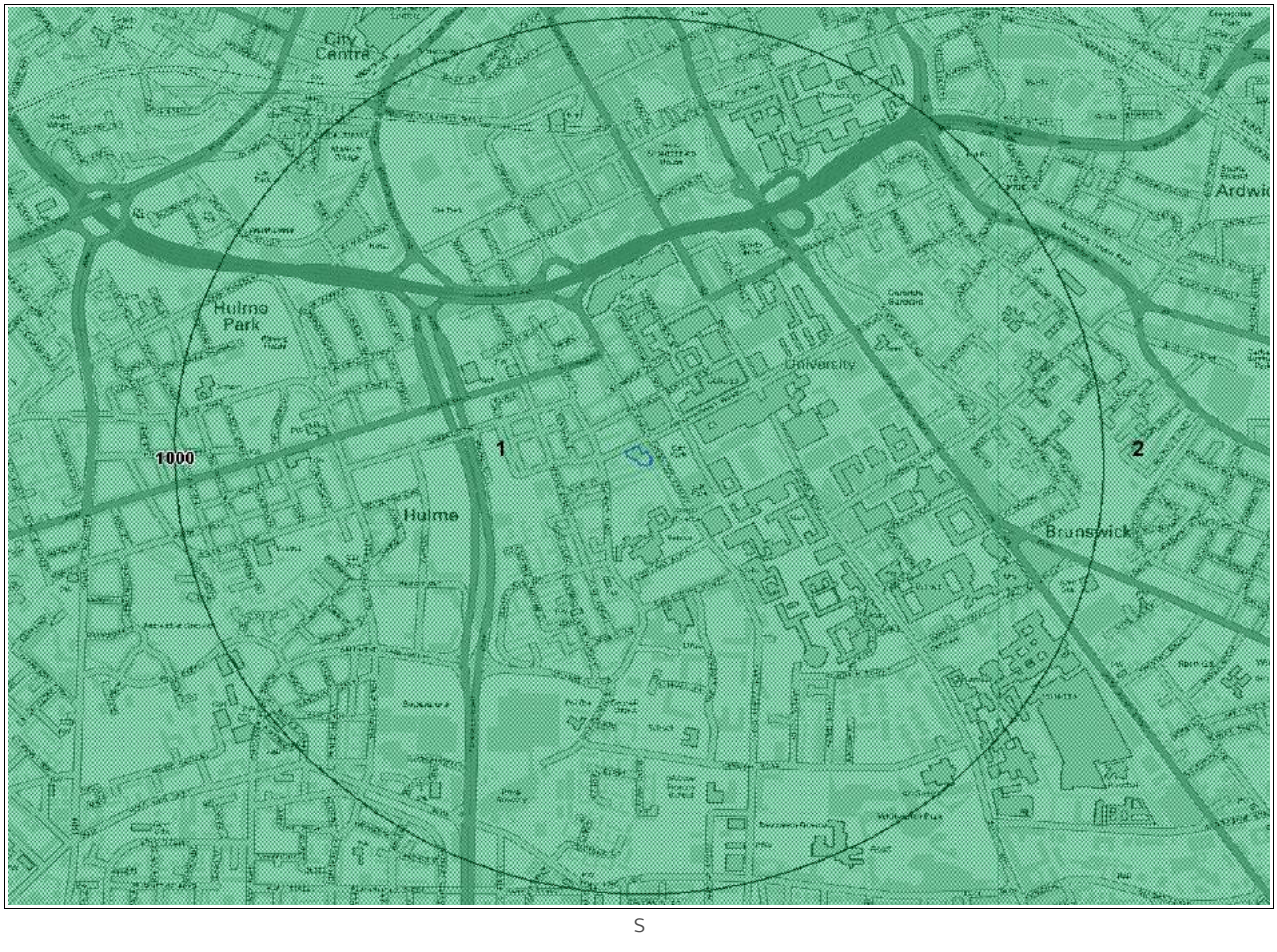
Section 6: Natural Ground Subsidence	On-site
6.1 Shrink-Swell Clay	Negligible
6.2 Landslides	Very Low
6.3 Ground Dissolution of Soluble Rocks	Negligible
6.4 Compressible Deposits	Negligible
6.5 Collapsible Deposits	Very Low
6.5 Running Sand	Very Low

Section 7: Borehole Records	On-site	0-50m	51-250
7 BGS Recorded Boreholes	0	0	12

Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250
8 Records of Background Soil Chemistry	1	0	0

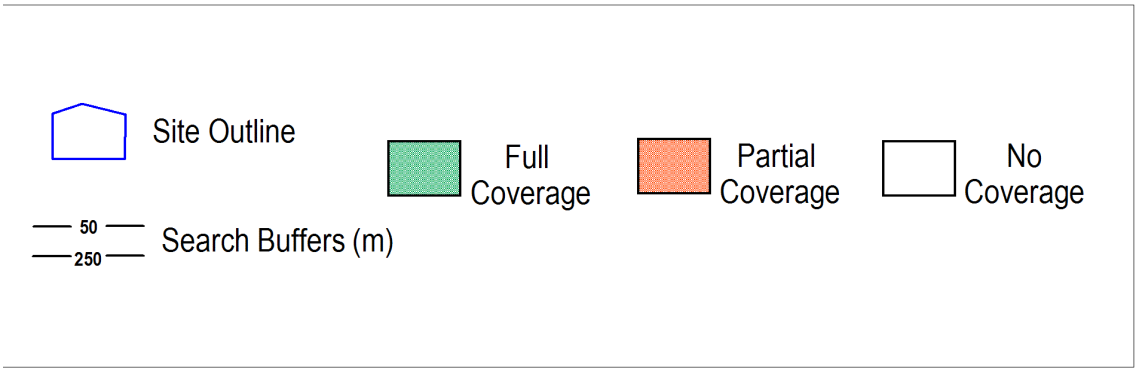
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500
9.1 Tunnels	0	0	0	Not Searched
9.2 Historical Railway and Tunnel Features	0	0	0	Not Searched
9.3 Historical Railways	0	0	0	Not Searched
9.4 Active Railways	0	0	0	Not Searched
9.5 Railway Projects	0	0	0	0

1:10,000 Scale Availability



1_10,000 Availability Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



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	No coverage
2	766.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N3	1686.0	Some deposits are mapped	Full	Full	No coverage
N4	1859.0	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

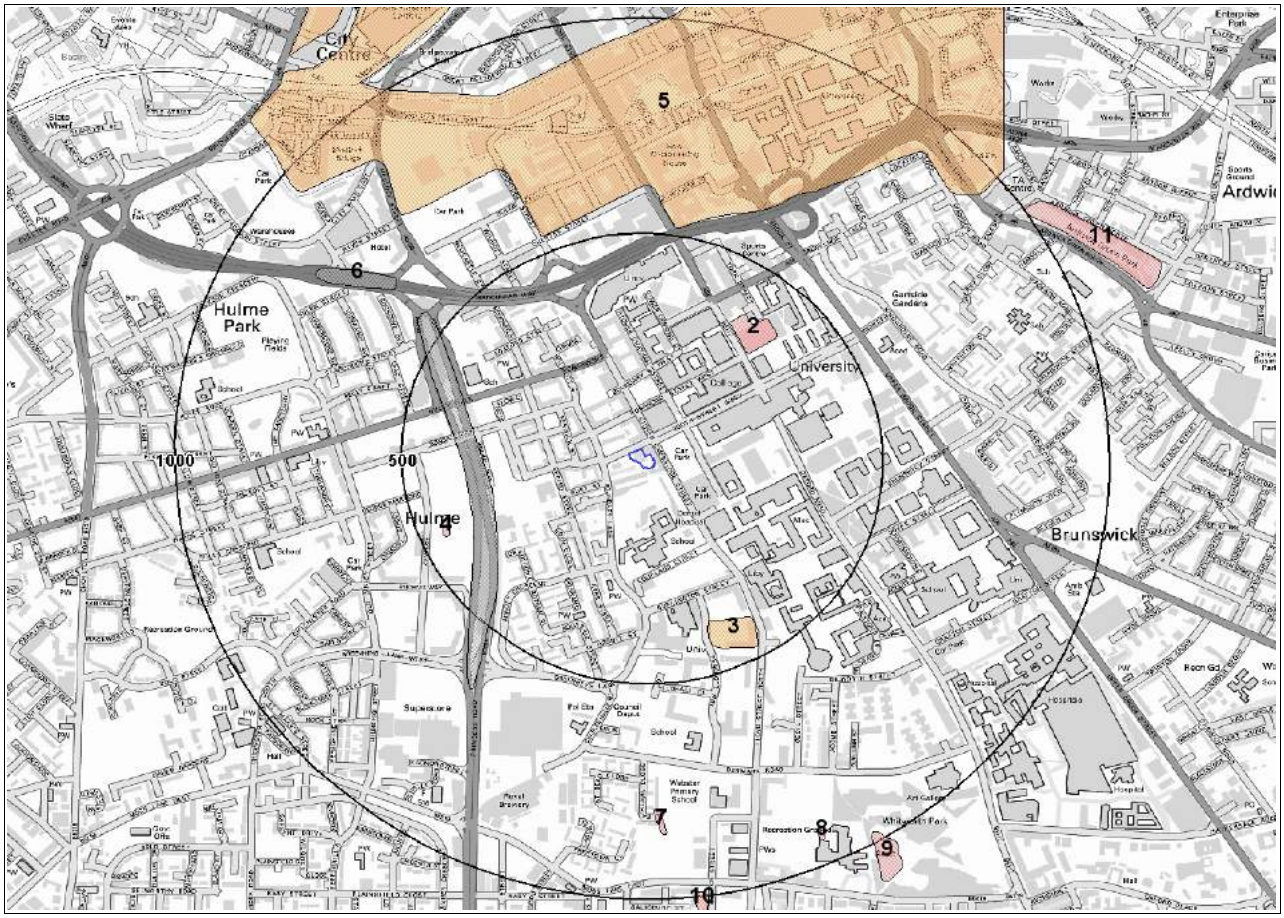
1 Geology (1:10,000 scale).

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

NW N NE

W E

SW S SE



Artificial Ground Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Worked Ground (undivided)

Infilled Ground

Disturbed Ground (undivided)

Landscaped Ground (undivided)

Reclaimed Ground

1. Geology 1:10,000 scale

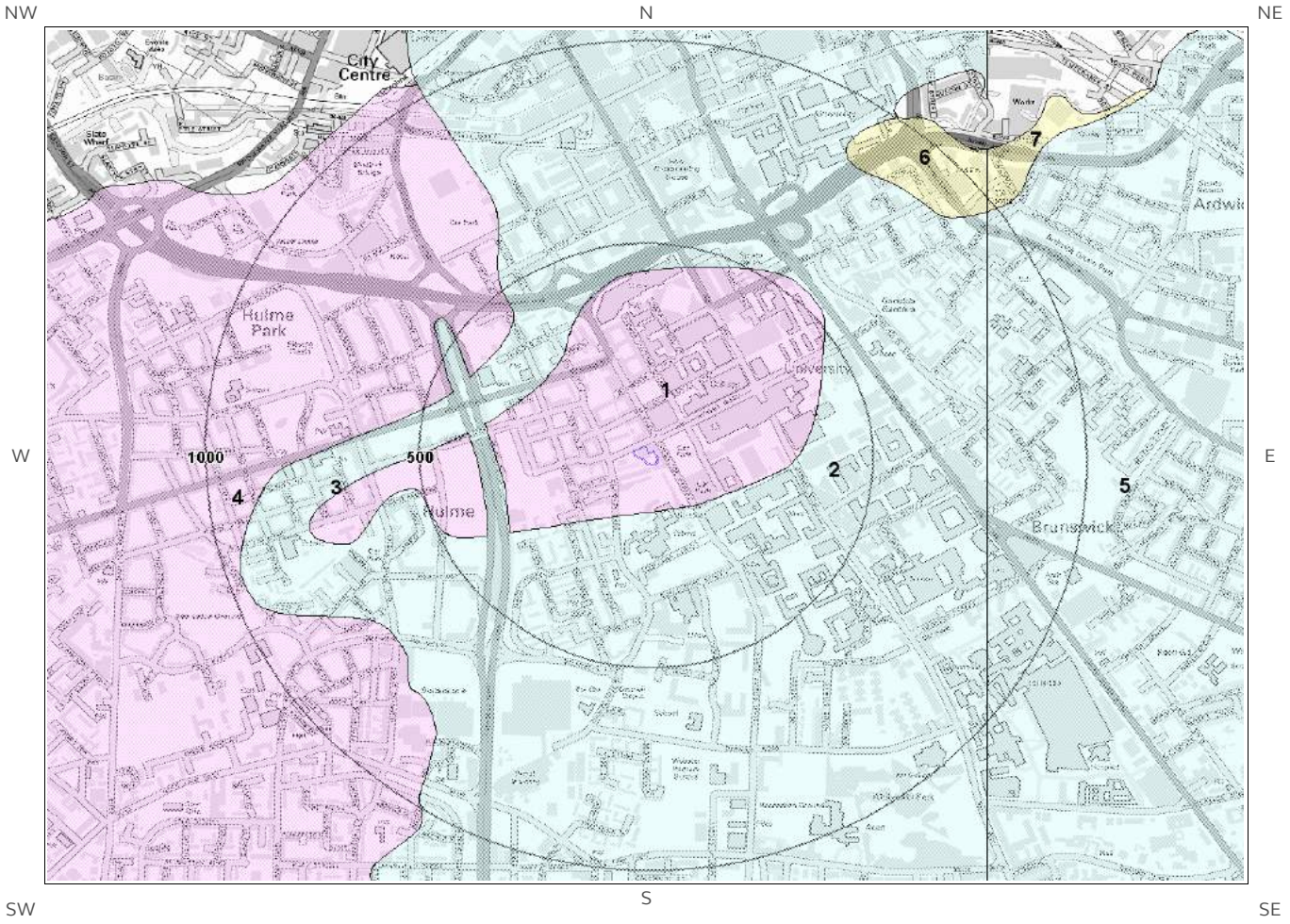
1.1 Artificial Ground

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	312.0	W	WGR-VOID	Worked Ground (Undivided)	Void
2	318.0	NE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
3	377.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	430.0	SW	WMGR-ARTDP	Infilled Ground	Artificial Deposit

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



Artificial Ground Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

500
1000
Search Buffers (m)

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	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
2	113.0	S	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
3	362.0	W	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
4	404.0	NW	GFSDD-XSV	Glaciofluvial Sheet 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?

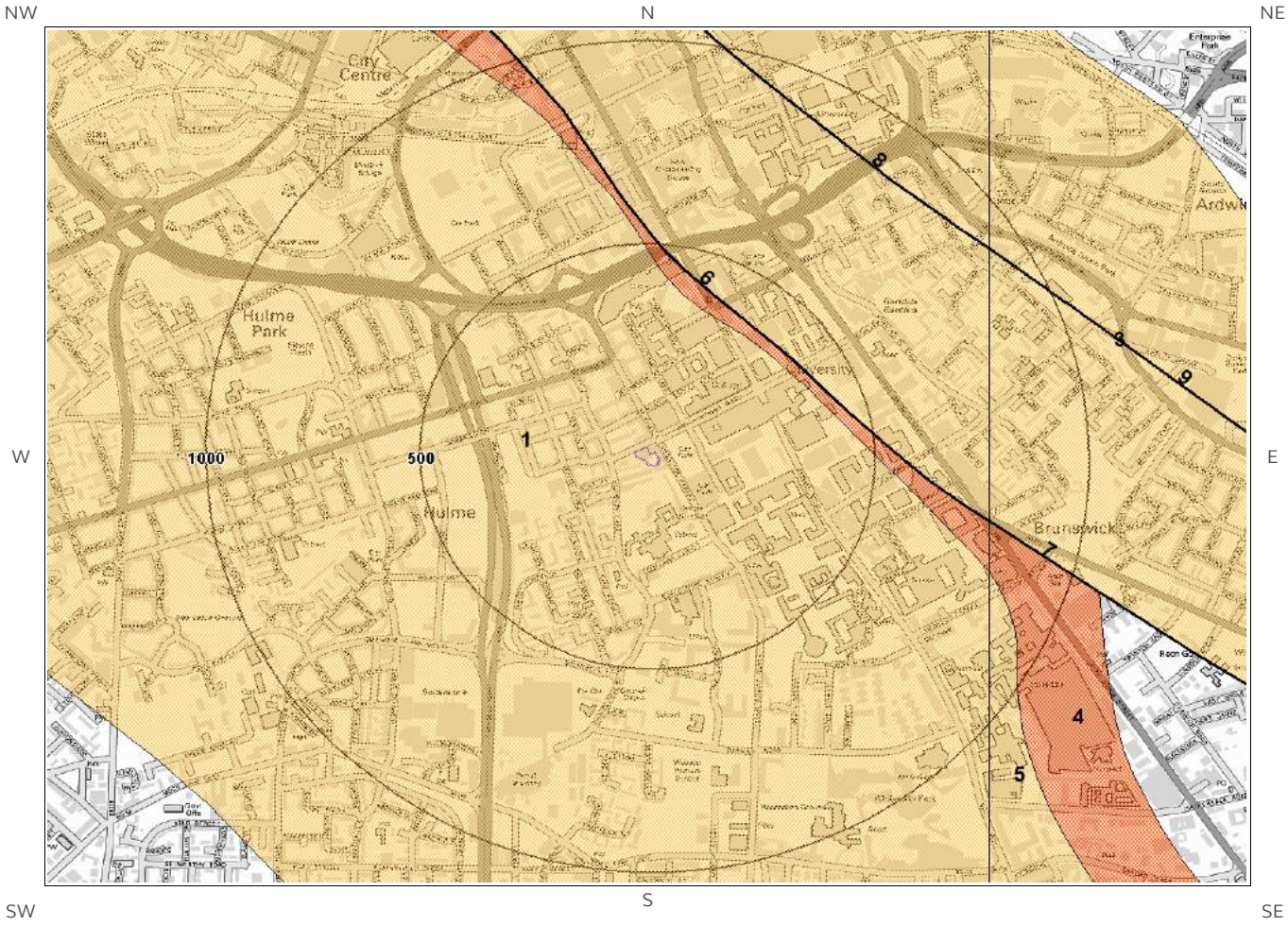
No

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 linear features map (1:10,000 scale)



Bedrock and linear features Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

500
1000
Search Buffers (m)

1.3 Bedrock and linear features

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	353.0	NE	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]

1.3.2 Linear features

Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	Category Description	Feature Description
6	383.0	NE	FAULT	Normal fault, inferred; crossmarks on downthrow side

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.

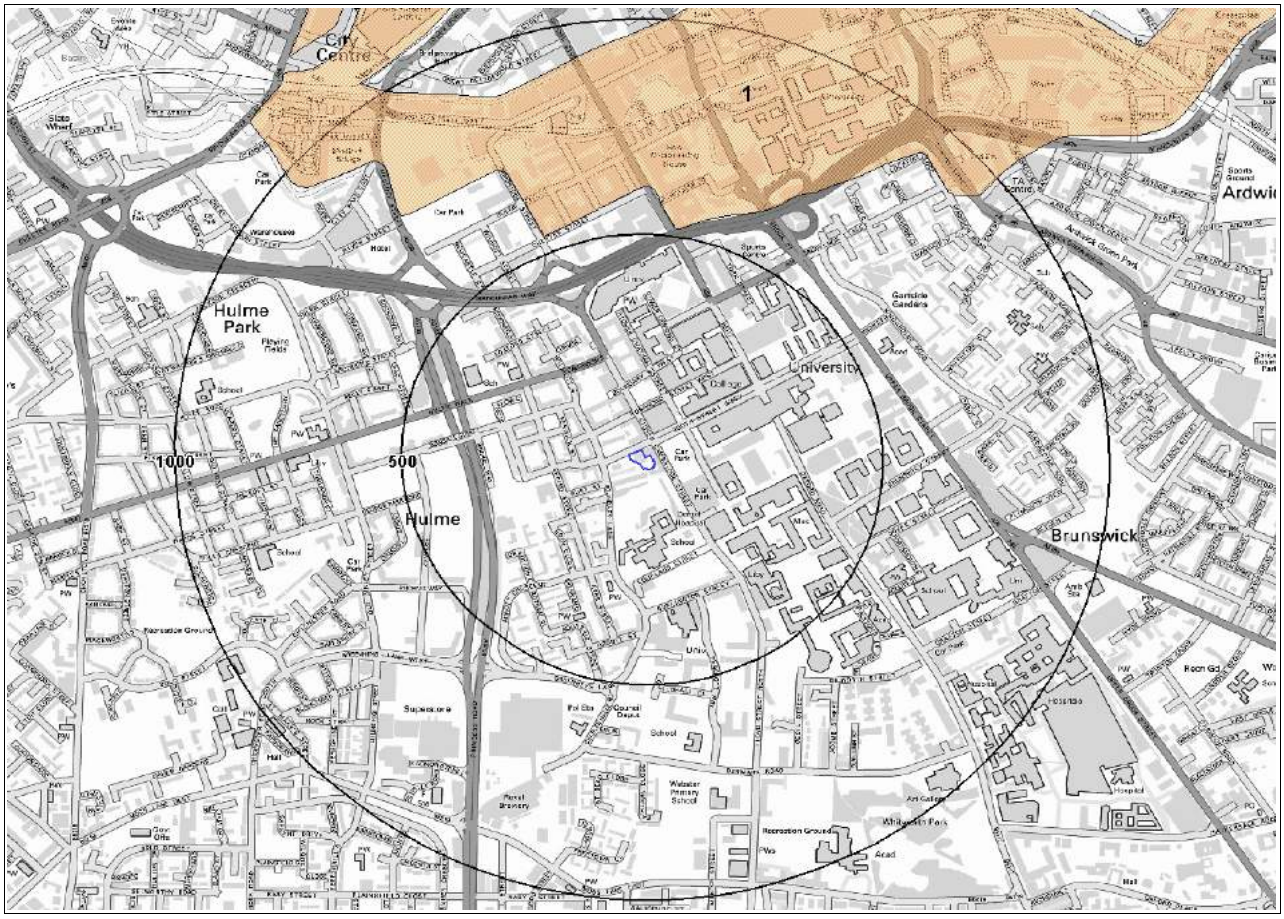
2 Geology 1:50,000 Scale

2.1 Artificial Ground map

NW N NE

W E

SW S SE



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Disturbed Ground (undivided)

Worked Ground (undivided)

Landscaped Ground (undivided)

Infilled Ground

Reclaimed Ground

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? No

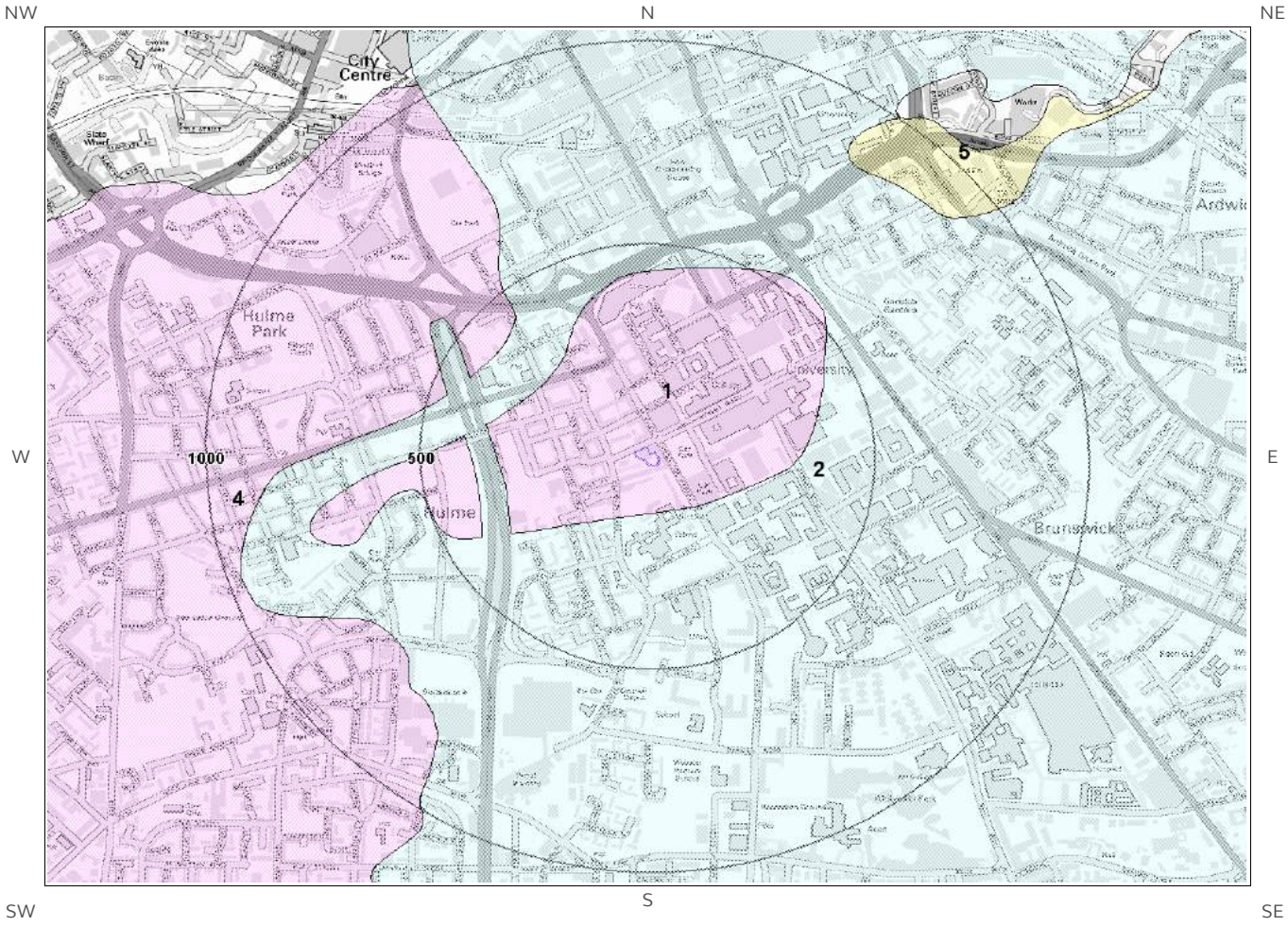
Database searched and no data found.

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)



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

500
1000
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	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
2	113.0	S	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
3	376.0	W	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
4	404.0	NW	GFSDD-XSV	GLACIOFLUVIAL SHEET 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	Intergranular	Very High	High

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.

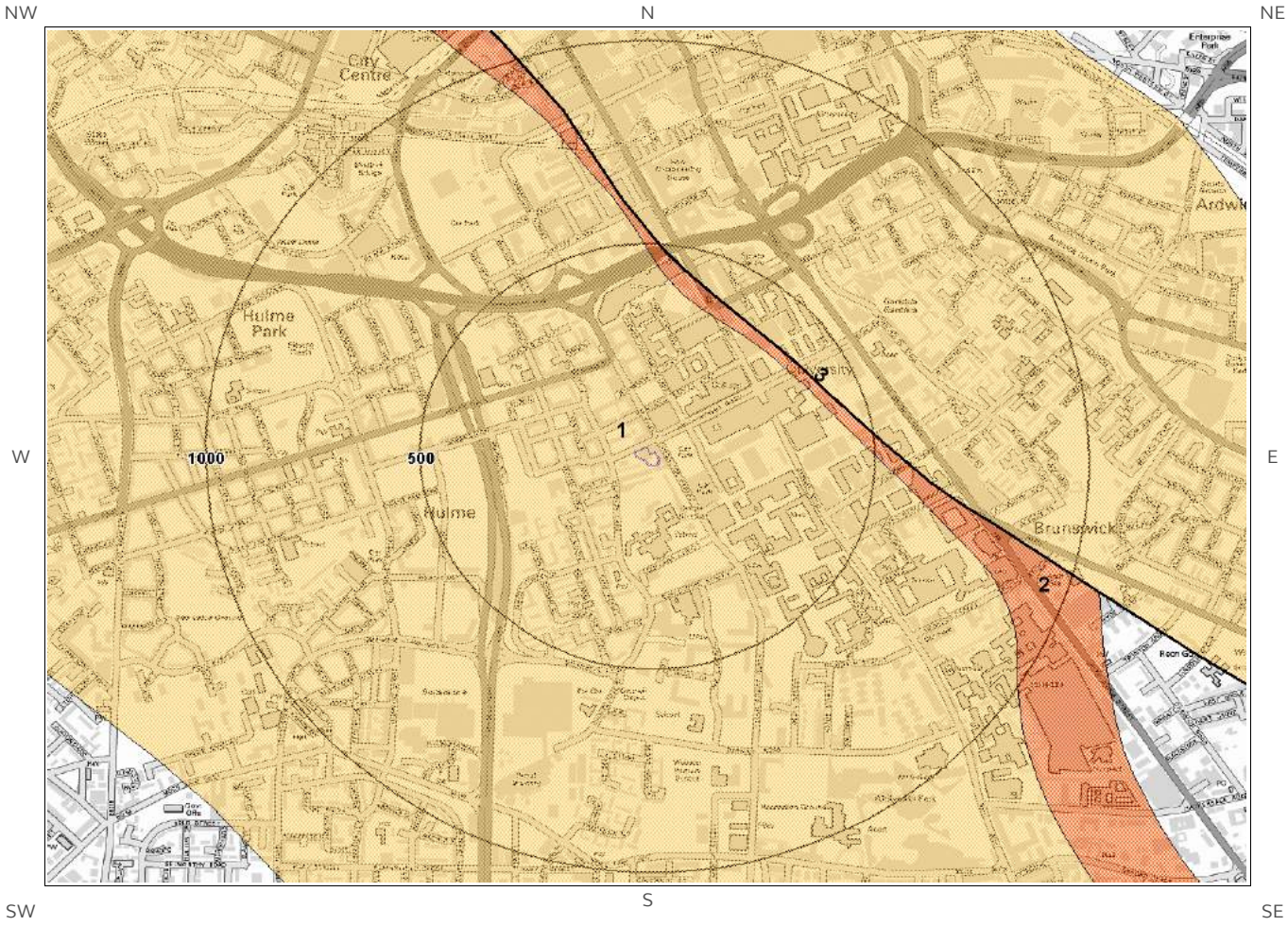
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

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 linear features map (1:50,000 scale)



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

500
1000
Search Buffers (m)

2.3 Bedrock, Solid Geology & linear features

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	353.0	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 Linear features

Are there any records of linear features within 500m of the study site boundary? Yes

ID	Distance	Direction	Category Description	Feature Description
3	383.0	NE	FAULT	Fault, inferred

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.

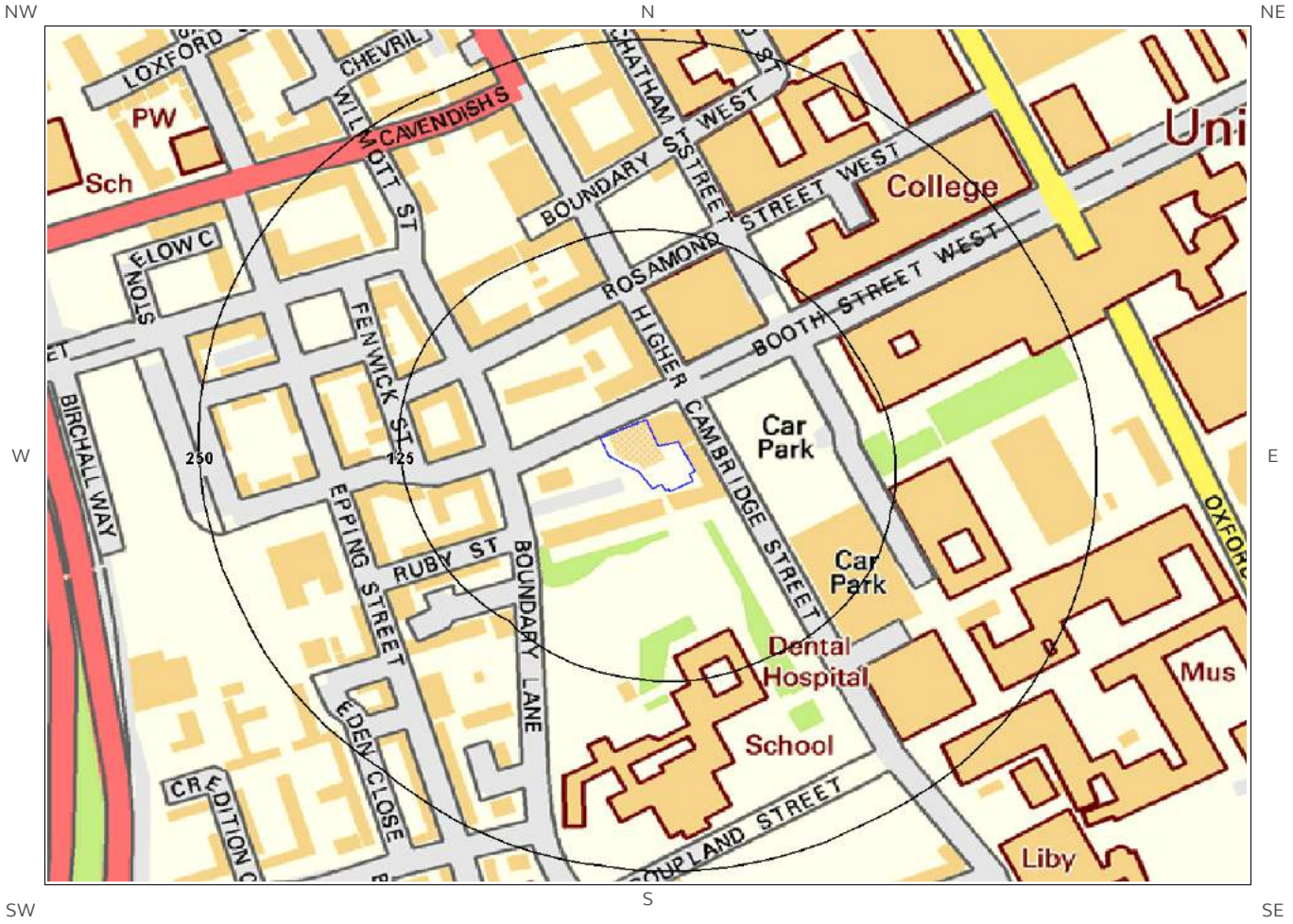
The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

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

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

125
250
Search Buffers (m)

Historic Surface Ground Workings

Historic Underground Workings

Current Ground Workings

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

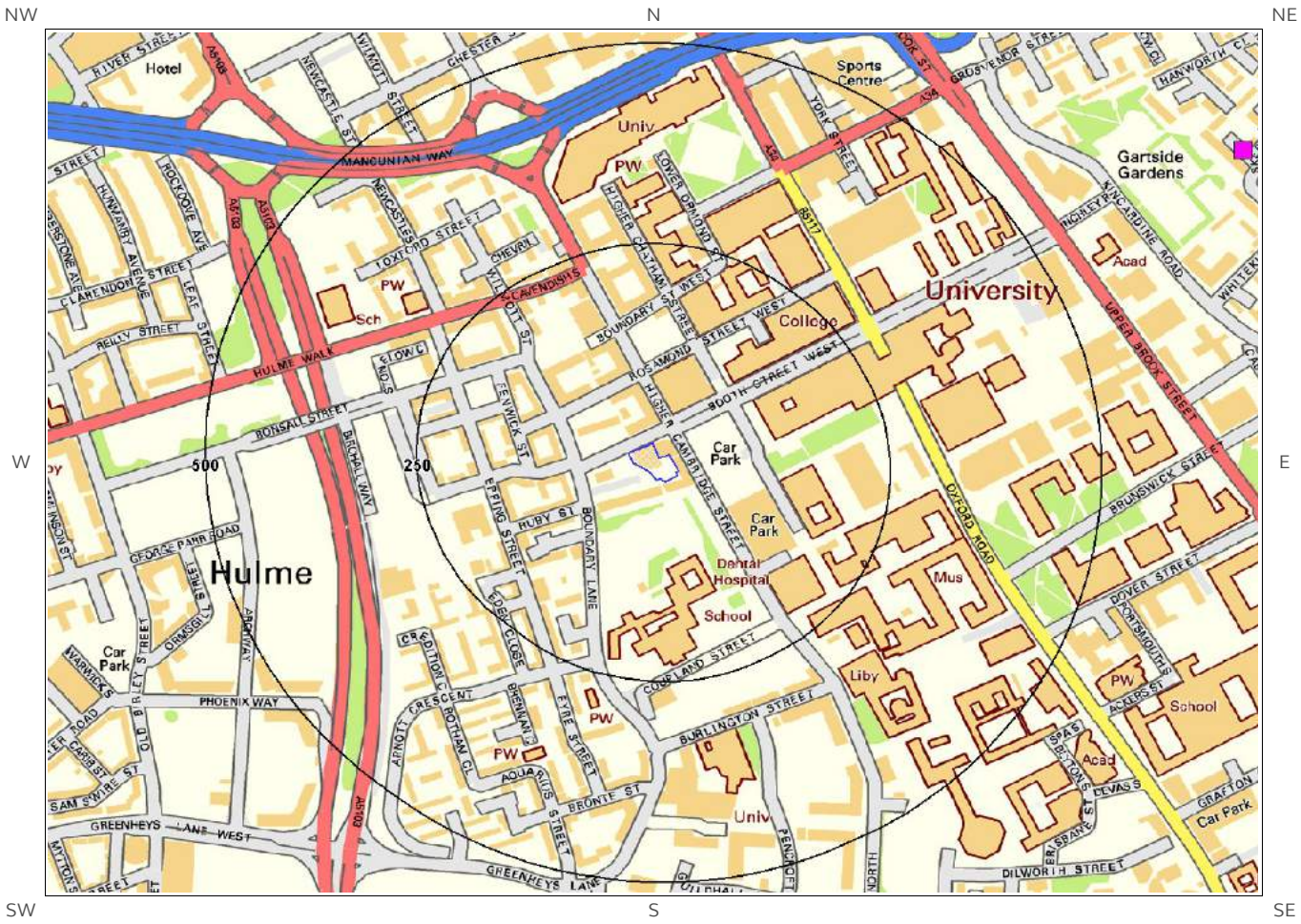
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary? No

Database searched and no data found.

---

5 Mining, Extraction & Natural Cavities map



Mining, Extraction and Natural Cavities Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

Search Buffers (m) — 250 — 500

Historical Mining

Non-Coal Mining Cavities

Natural Cavities (point data)

Natural Cavities (polygon data)

Non-Coal Mining

Highly likely

Likely

Unlikely

Highly unlikely

Rare

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? Yes

The following Non-Coal Mining Cavities information provided by Peter Brett Associates:

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
1	777.0	NE	384900 397100	Manchester, Greater Manchester	Glacial Till	Bunter Sandstone, Manchester Marls, Collyhurst Sandstone	Firestone, Freestone, Hearthstone, Honestone, Ragstone, Sandstone, Scythestone, Silver Sand, Whetstone

5.6 Natural Cavities

This dataset provides information based on the Peter Brett Associates natural cavities database. The dataset is made up of points and polygons. Where polygons are used these represent an area in which it is expected the cavities could be found. It does not indicate that cavities are present everywhere within the polygon, and caution should be used in the interpretation of this data.

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 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.

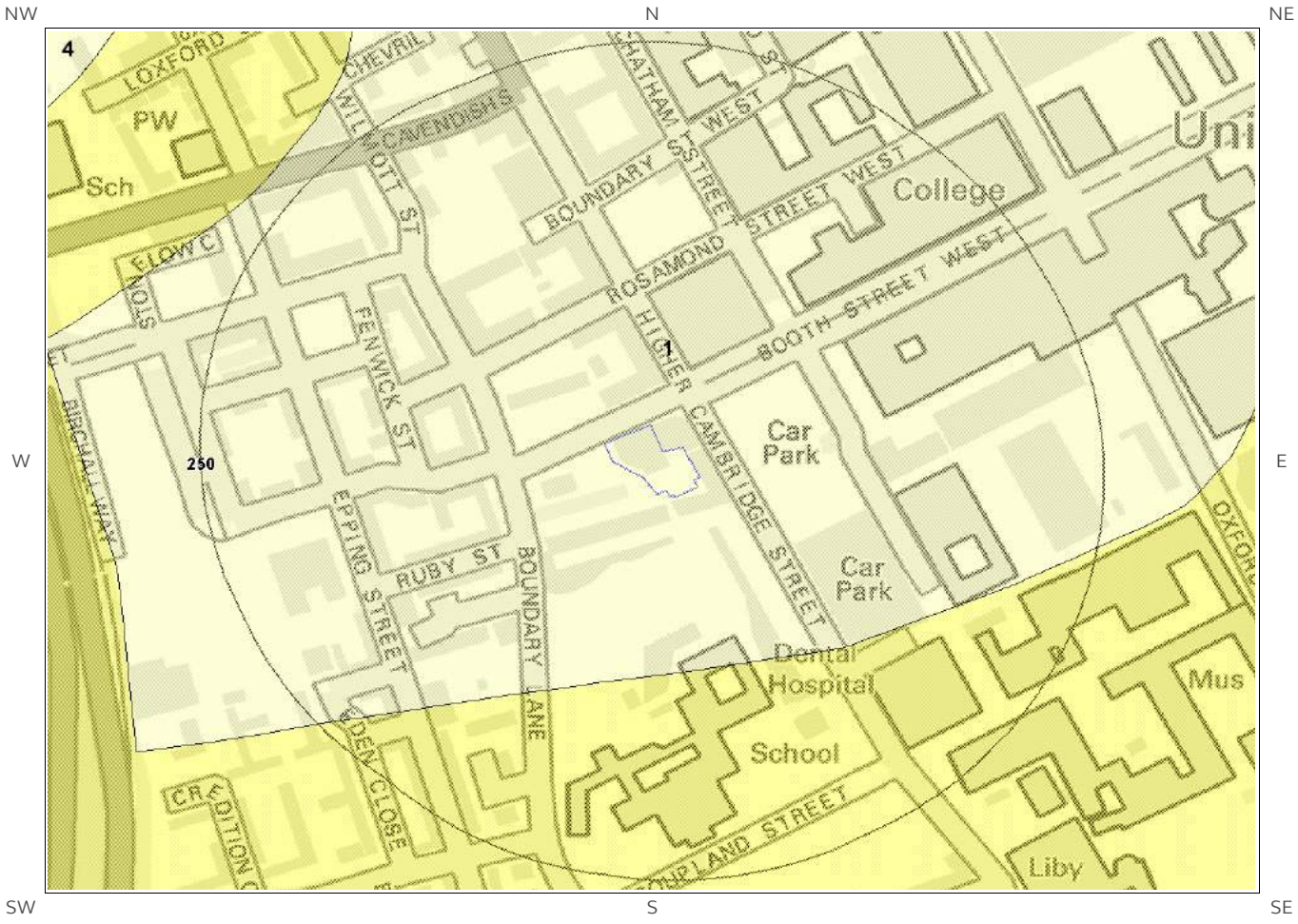
Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

---

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map



Shrink Swell Clay Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



6.2 Landslides map



Landslides Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



6.3 Ground Dissolution of Soluble Rocks map

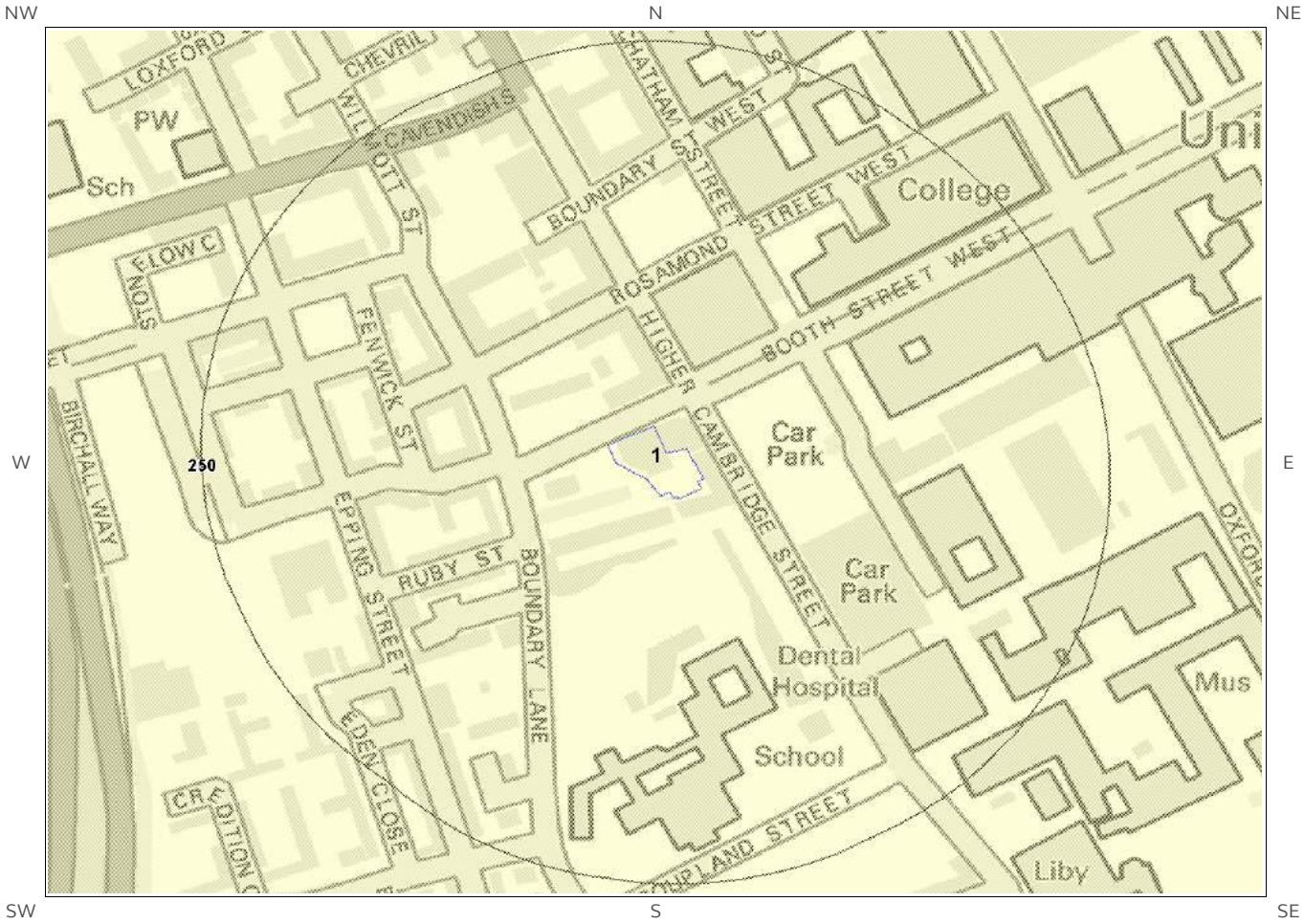


Ground Dissolution Soluble Rocks Legend

© Crown copyright and database rights 2019. Ordnance Survey licence 100035207.



6.4 Compressible Deposits map



Compressible Deposits Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



6.5 Collapsible Deposits map



Collapsible Deposits Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



6.6 Running Sand map



Running Sand Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



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	Negligible	Ground conditions predominantly non-plastic. 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 likely 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:

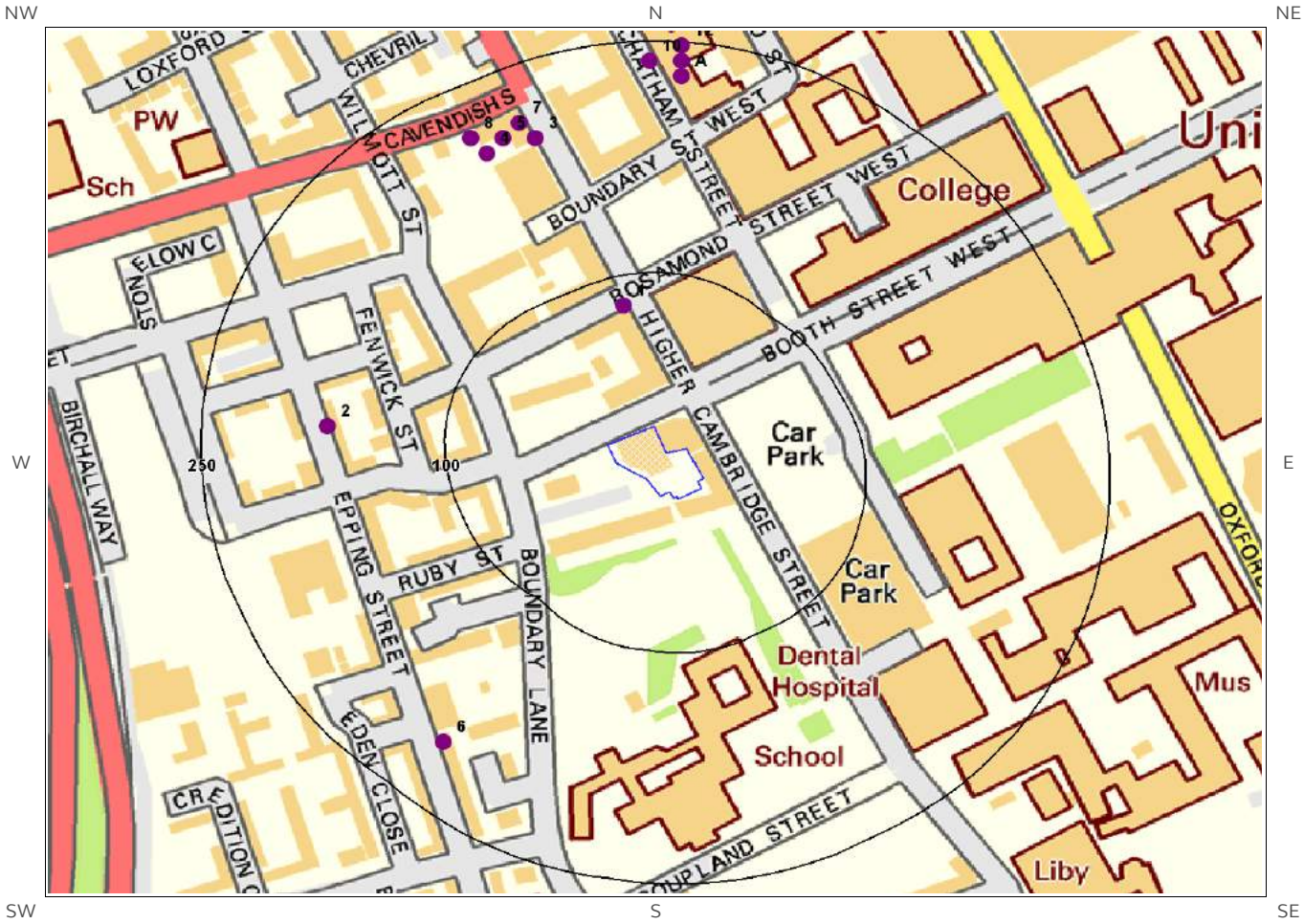
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible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

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

Site Outline

Borehole Locations

125
250
Search Buffers (m)

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: 12

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	80.0	N	384184 396811	SJ89NW19	14.17	MANCHESTER CORP. SEWER WORKS NO.4, HULME
2	173.0	W	384002 396733	SJ89NW20	14.02	MANCHESTER CORP. SEWER WORKS NO.4, HULME
3	200.0	N	384130 396920	SJ89NW1594	-1.0	HIGHER CAMBRIDGE ST MANCHESTER TP 4
4	203.0	NW	384100 396910	SJ89NW1593	-1.0	HIGHER CAMBRIDGE ST MANCHESTER TP 3
5	208.0	NW	384110 396920	SJ89NW1595	-1.0	HIGHER CAMBRIDGE ST MANCHESTER TP 5
6	209.0	SW	384073 396528	SJ89NW252	141.73	HARDY'S CROWN BREWERY RENSHAW STREET
7	213.0	NW	384120 396930	SJ89NW1591	-1.0	HIGHER CAMBRIDGE ST MANCHESTER TP 1
8	216.0	NW	384090 396920	SJ89NW1592	-1.0	HIGHER CAMBRIDGE ST MANCHESTER TP 2
9A	227.0	N	384220 396960	SJ89NW465	-1.0	MANCHESTER METRO' UNIVERS' TP 1
10	237.0	N	384200 396970	SJ89NW466	-1.0	MANCHESTER METRO' UNIVERS' TP 2
11A	237.0	N	384220 396970	SJ89NW468	-1.0	MANCHESTER METRO' UNIVERS' TP 4
12	247.0	N	384220 396980	SJ89NW467	-1.0	MANCHESTER METRO' UNIVERS' TP 3

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/1042161
#2: scans.bgs.ac.uk/sobi_scans/boreholes/1042162
#6: scans.bgs.ac.uk/sobi_scans/boreholes/1042406

8 Estimated Background Soil Chemistry

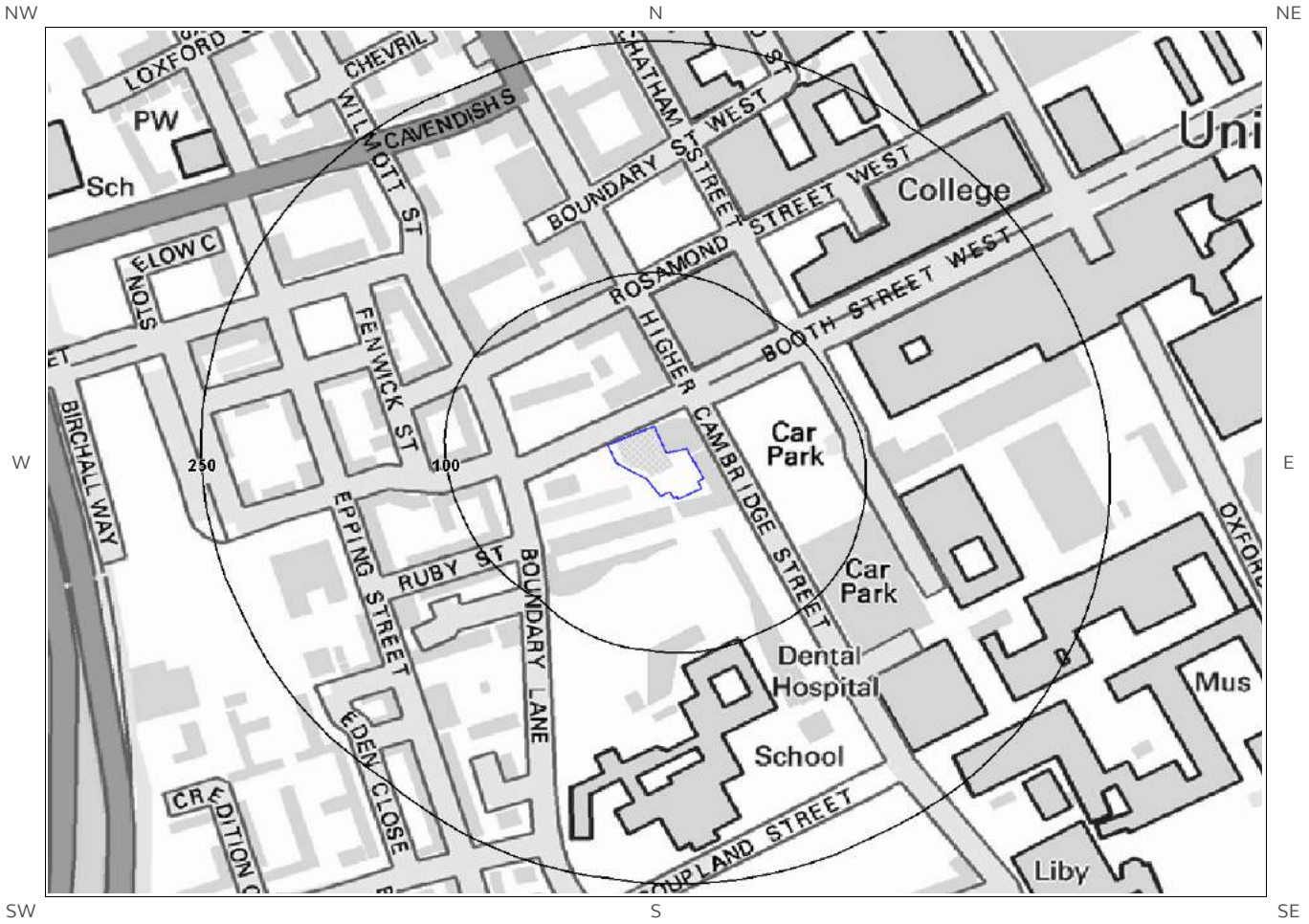
Records of background estimated soil chemistry within 250m of the study site boundary: 1

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

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.
© OpenStreetMapContributors

- Site Outline
- 250 / 500 Search Buffers (m)
- Underground or Partially Underground Railway / Subway System
- Railway Tunnel (OS Mapping)
- Abandoned or Dismantled Railway (OpenStreetMap)
- Railway Track (OS Mapping)
- Railway Track (OpenStreetMap)
- High Speed 2
- High Speed 2 Revised Proposed Route
- Crossrail 1
- Railway and/or Tunnel Feature from Historical Mapping

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

Groundsure Helpline

Telephone: 08444 159 000
info@groundsure.com

British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:**enquiries@bgs.ac.uk**
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries

British Gypsum

British Gypsum Ltd
East Leake
Loughborough
Leicestershire
LE12 6HX

The Coal Authority

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

Public Health England

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

Johnson Poole & Bloomer Limited

Harris and Pearson Building, Brettel Lane
Brierley Hill, West Midlands
DY5 3LH
Tel: +44 (0) 1384 262 000
Email:**enquiries.gs@jpb.co.uk**
Website: **www.jpb.co.uk**

Ordnance Survey

Adanac Drive, Southampton
SO16 0AS

Tel: 08456 050505
Website: http://www.ordnancesurvey.co.uk/

Getmapping PLC

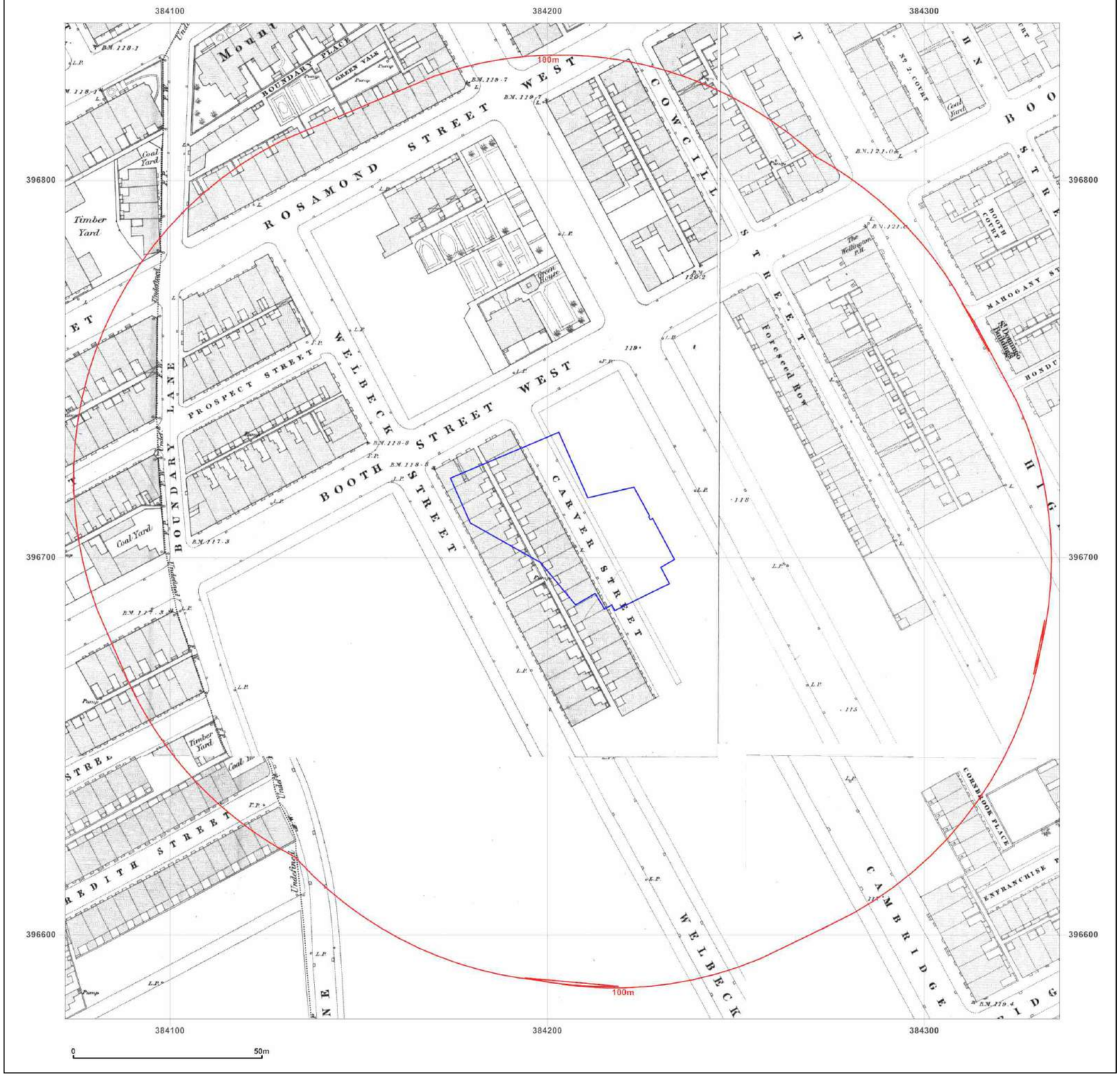
Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444
Website:**http://www1.getmapping.com/**

Peter Brett Associates
Caversham Bridge House
Waterman Place
Reading
Berkshire RG1 8DN
Tel: +44 (0)118 950 0761 E-mail:**reading@pba.co.uk**
Website:**http://www.peterbrett.com/home**

Acknowledgements: Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028]. 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-feb11-2019



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

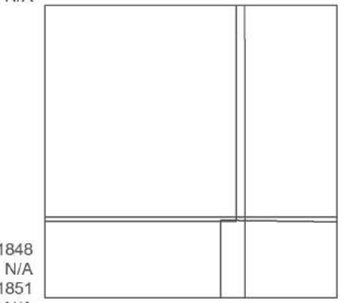
Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: 1056 Scale Town Plan
Map date: **1851**
Scale: 1:1,056
Printed at: 1:1,056

N
W E
S

Surveyed 1844
Revised N/A
Edition 1851
Copyright N/A
Levelled N/A

Surveyed 1849
Revised N/A
Edition 1851
Copyright N/A
Levelled N/A



Surveyed 1848
Revised N/A
Edition 1851
Copyright N/A
Levelled N/A

Surveyed 1850
Revised N/A
Edition 1851
Copyright N/A
Levelled N/A

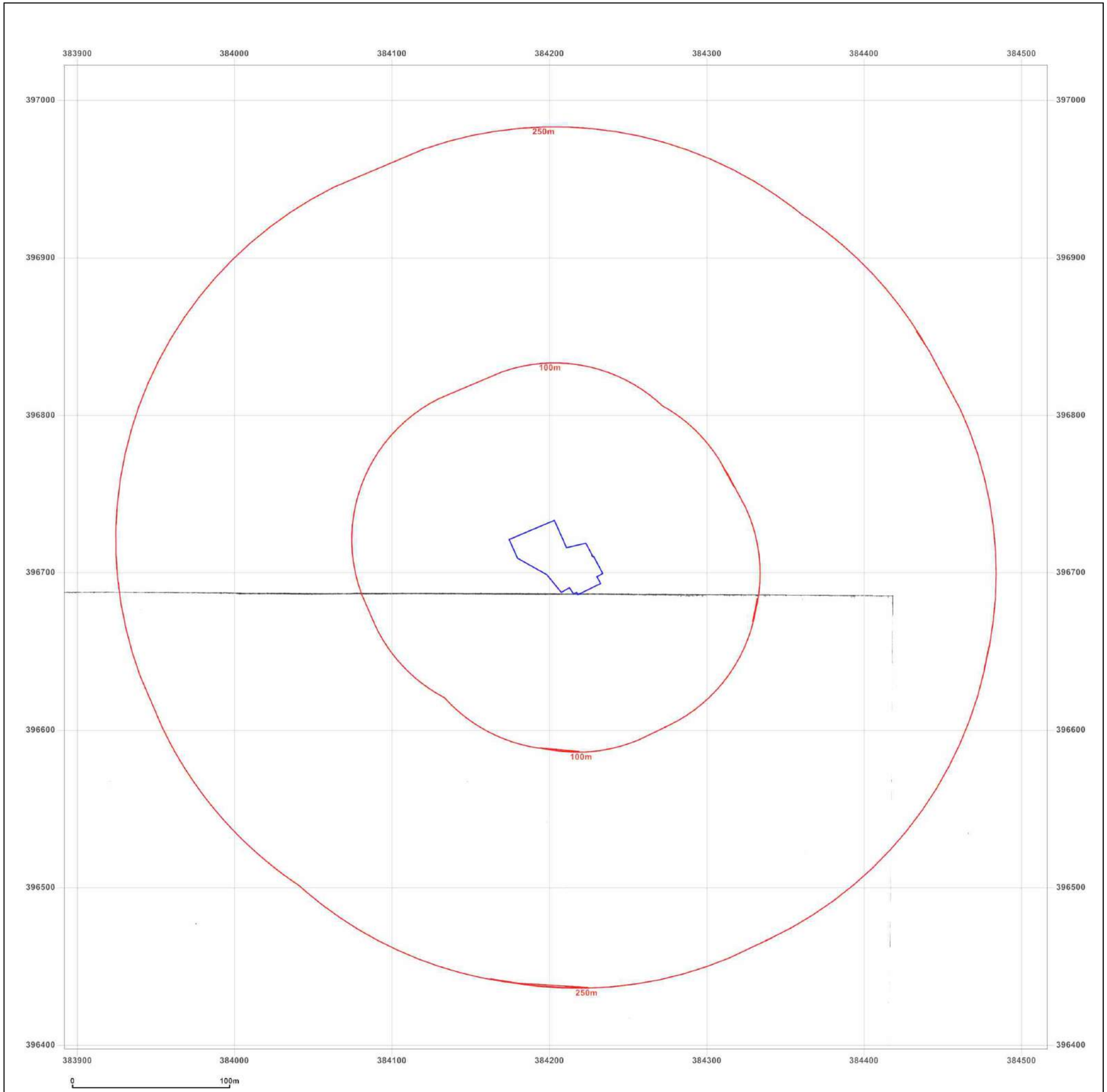
Powered by

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

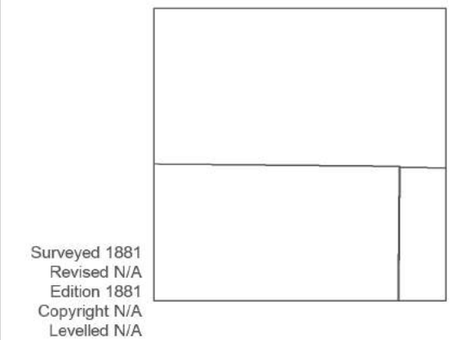
Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: County Series
Map date: **1881**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



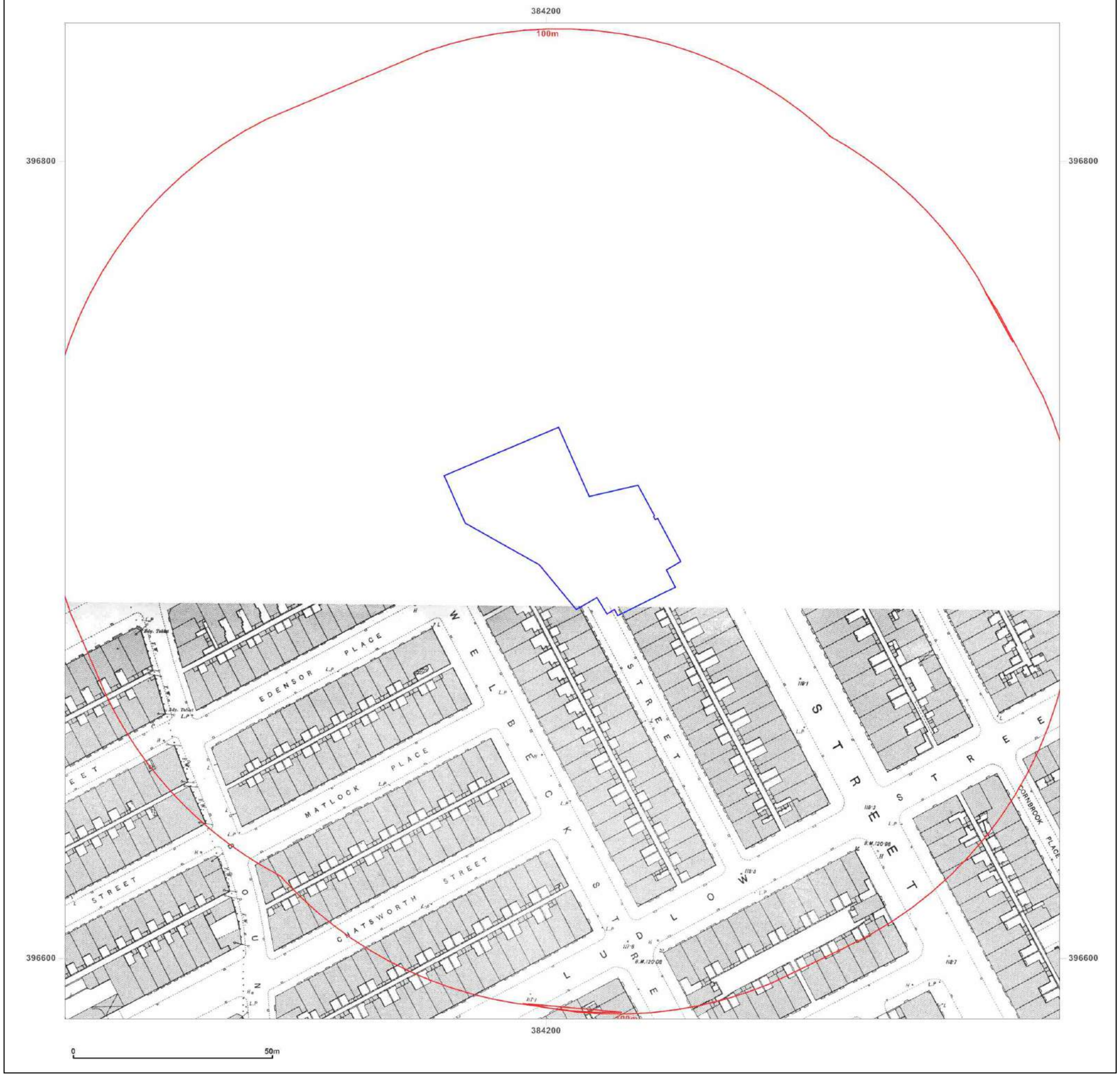
Powered by

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: County Series Town Plan
Map date: **1891**
Scale: 1:500
Printed at: 1:1,000

N
W E
S

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

Powered by

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: County Series

Map date: **1889-1893**

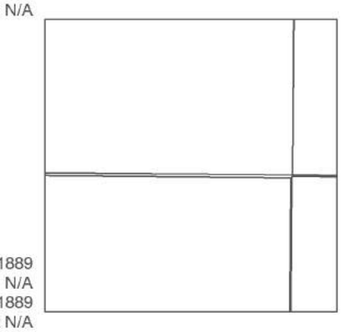
Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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

Surveyed 1889
Revised N/A
Edition 1889
Copyright N/A
Levelled N/A



Surveyed 1889
Revised N/A
Edition 1889
Copyright N/A
Levelled N/A

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

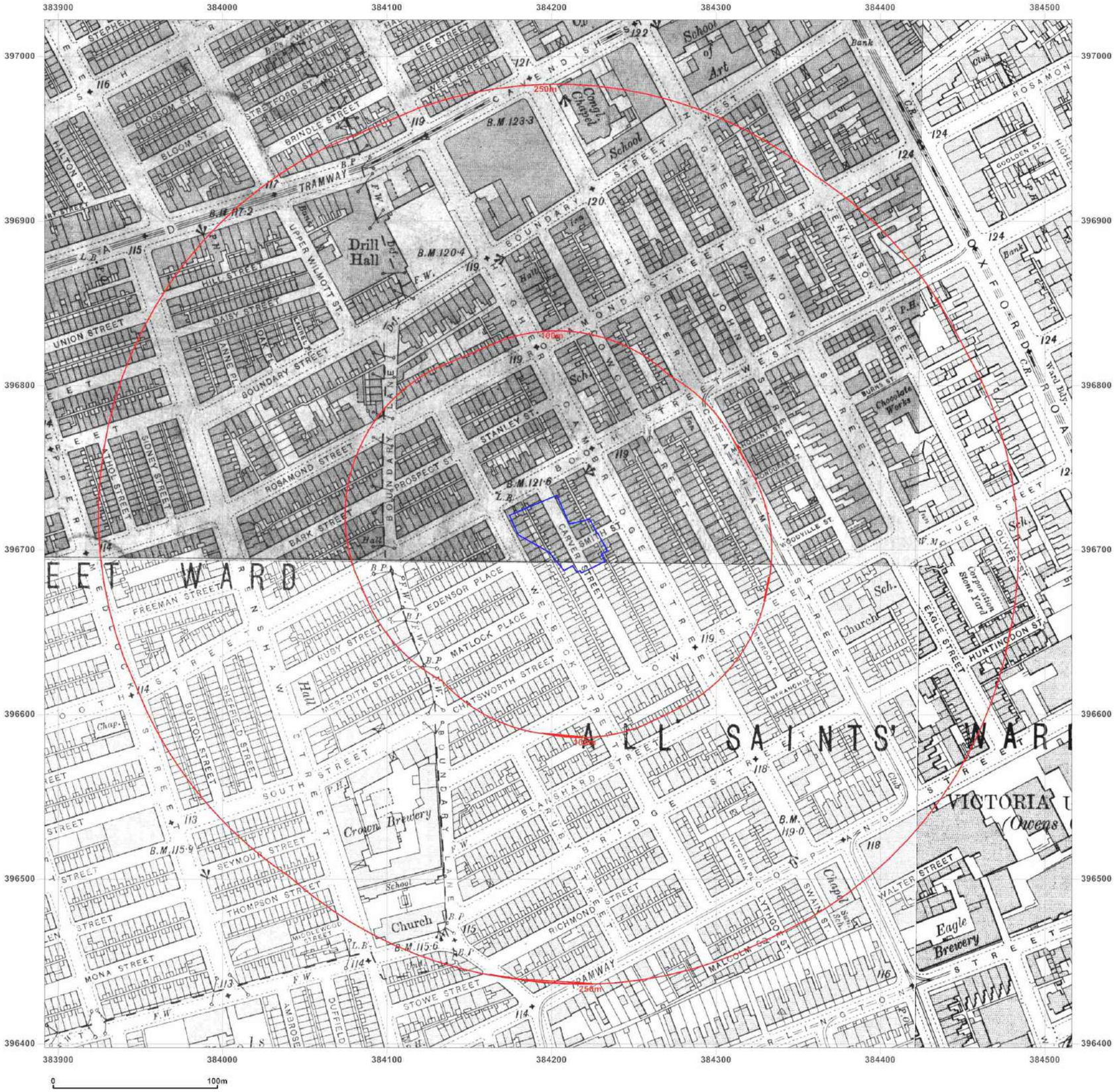
Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

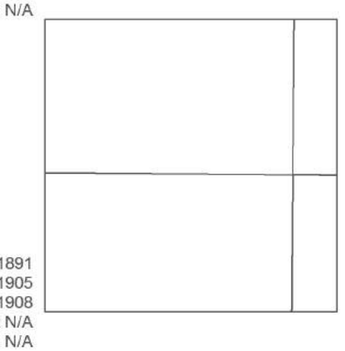
BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: County Series
Map date: **1908**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1891
Revised 1905
Edition 1908
Copyright N/A
Levelled N/A



Surveyed 1891
Revised 1905
Edition 1908
Copyright N/A
Levelled N/A

Surveyed 1891
Revised 1905
Edition 1908
Copyright N/A
Levelled N/A

Surveyed 1891
Revised 1905
Edition 1908
Copyright N/A
Levelled N/A

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: County Series

Map date: **1922**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1922 Revised 1916 Edition 1922 Copyright N/A Levelled 1915	Surveyed 1922 Revised 1916 Edition 1922 Copyright N/A Levelled 1915
Surveyed 1922 Revised 1916 Edition 1922 Copyright N/A Levelled 1915	Surveyed 1922 Revised 1916 Edition 1922 Copyright N/A Levelled 1915

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: County Series
Map date: **1932-1933**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1873
Revised 1932
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1873
Revised 1932
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1873
Revised 1932
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1873
Revised 1933
Edition N/A
Copyright N/A
Levelled 1927

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid

Map date: **1948-1949**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed 1948 Revised 1948 Edition N/A Copyright 1948 Levelled 1927	Surveyed 1948 Revised 1948 Edition N/A Copyright 1948 Levelled 1927
Surveyed 1949 Revised 1949 Edition N/A Copyright N/A Levelled 1927	Surveyed 1949 Revised 1949 Edition N/A Copyright 1949 Levelled 1928

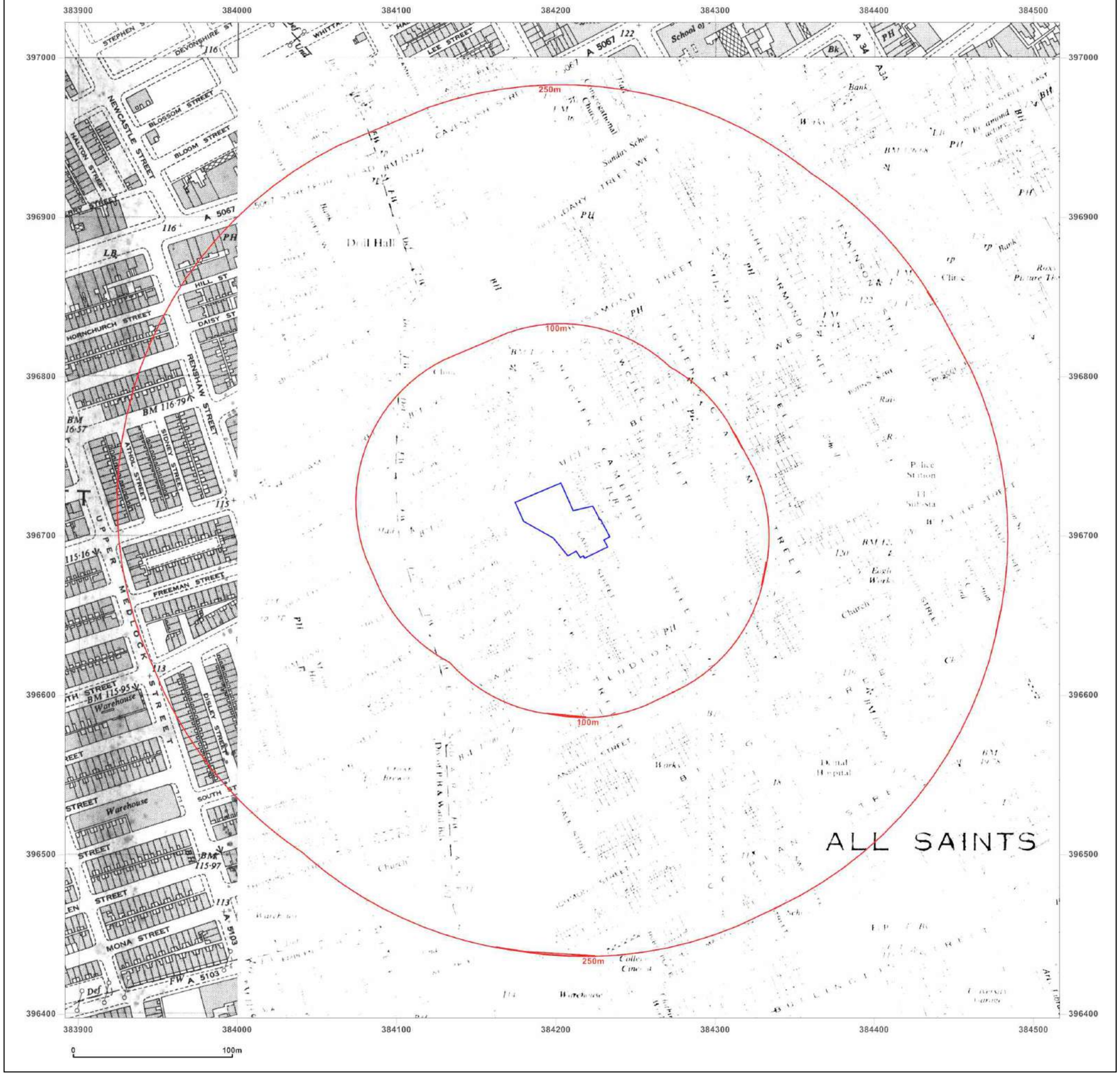
Powered by

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid
Map date: **1949-1951**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1948
Revised 1948
Edition N/A
Copyright 1949
Levelled 1927

Surveyed 1948
Revised 1948
Edition N/A
Copyright 1950
Levelled 1929

Surveyed 1949
Revised 1949
Edition N/A
Copyright 1950
Levelled 1927

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

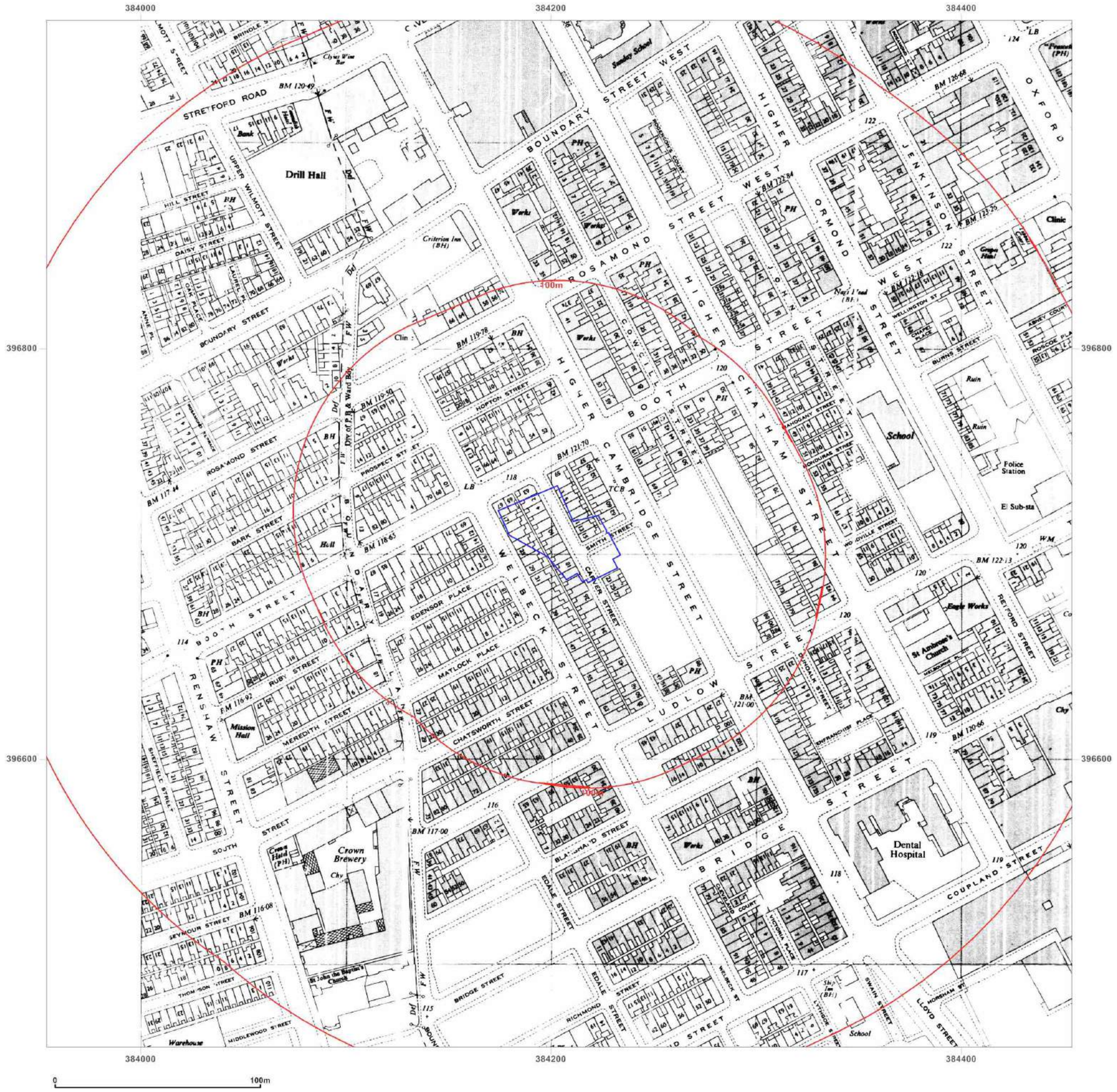
Powered by

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid

Map date: **1952**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

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

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

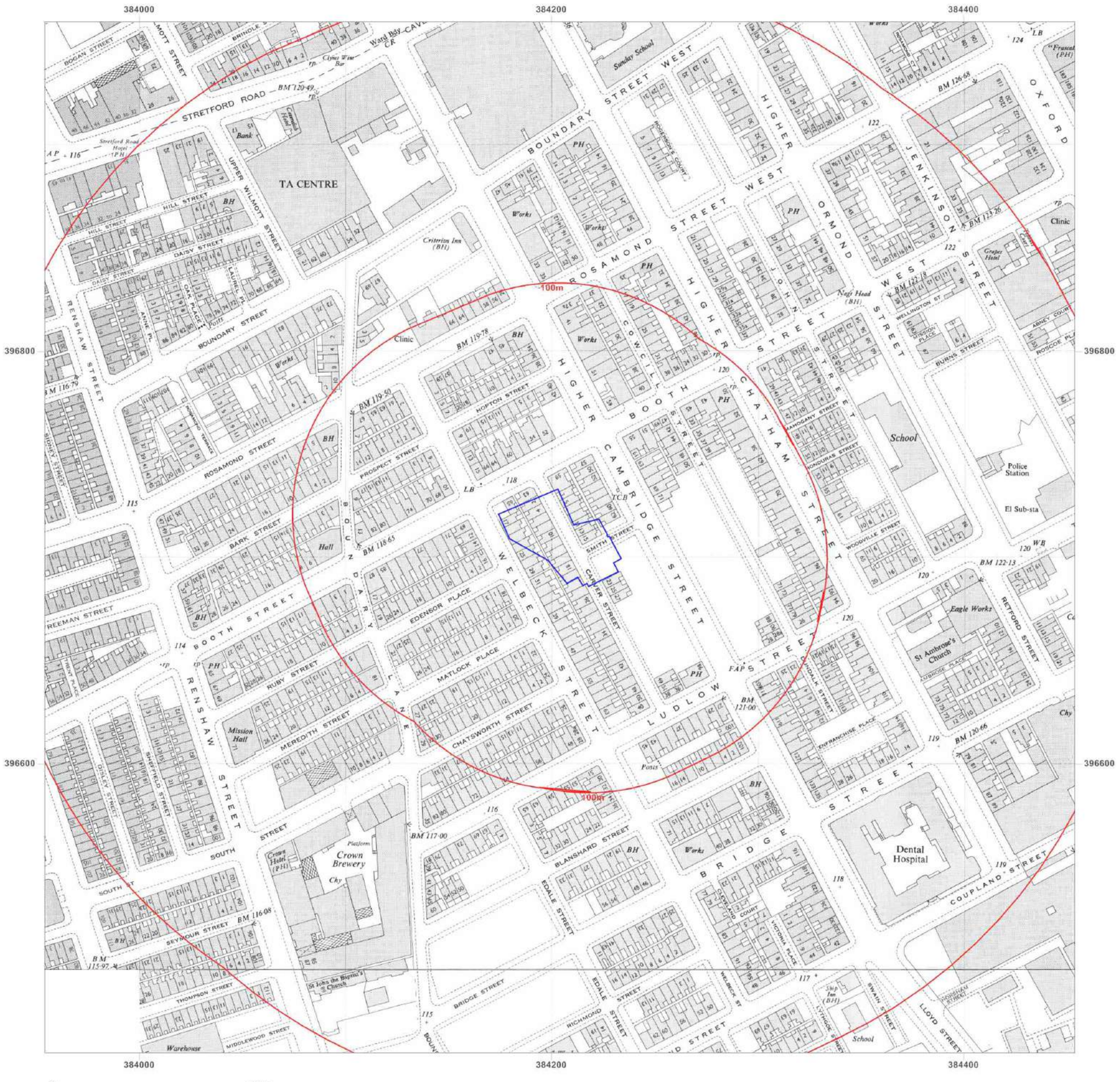
Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid

Map date: **1951-1955**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed 1948 Revised 1955 Edition N/A Copyright 1955 Levelled 1927	Surveyed 1951 Revised 1951 Edition N/A Copyright 1951 Levelled 1927
	Surveyed 1951 Revised 1951 Edition N/A Copyright 1951 Levelled 1928

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid

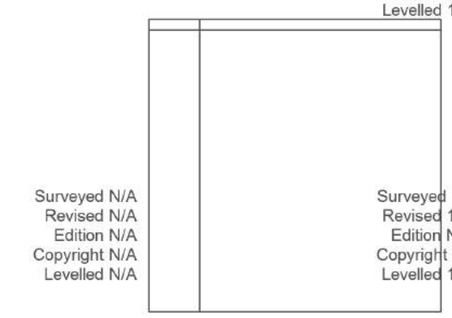
Map date: **1949-1955**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1953
Revised 1953
Edition 1955
Copyright N/A
Levelled 1929



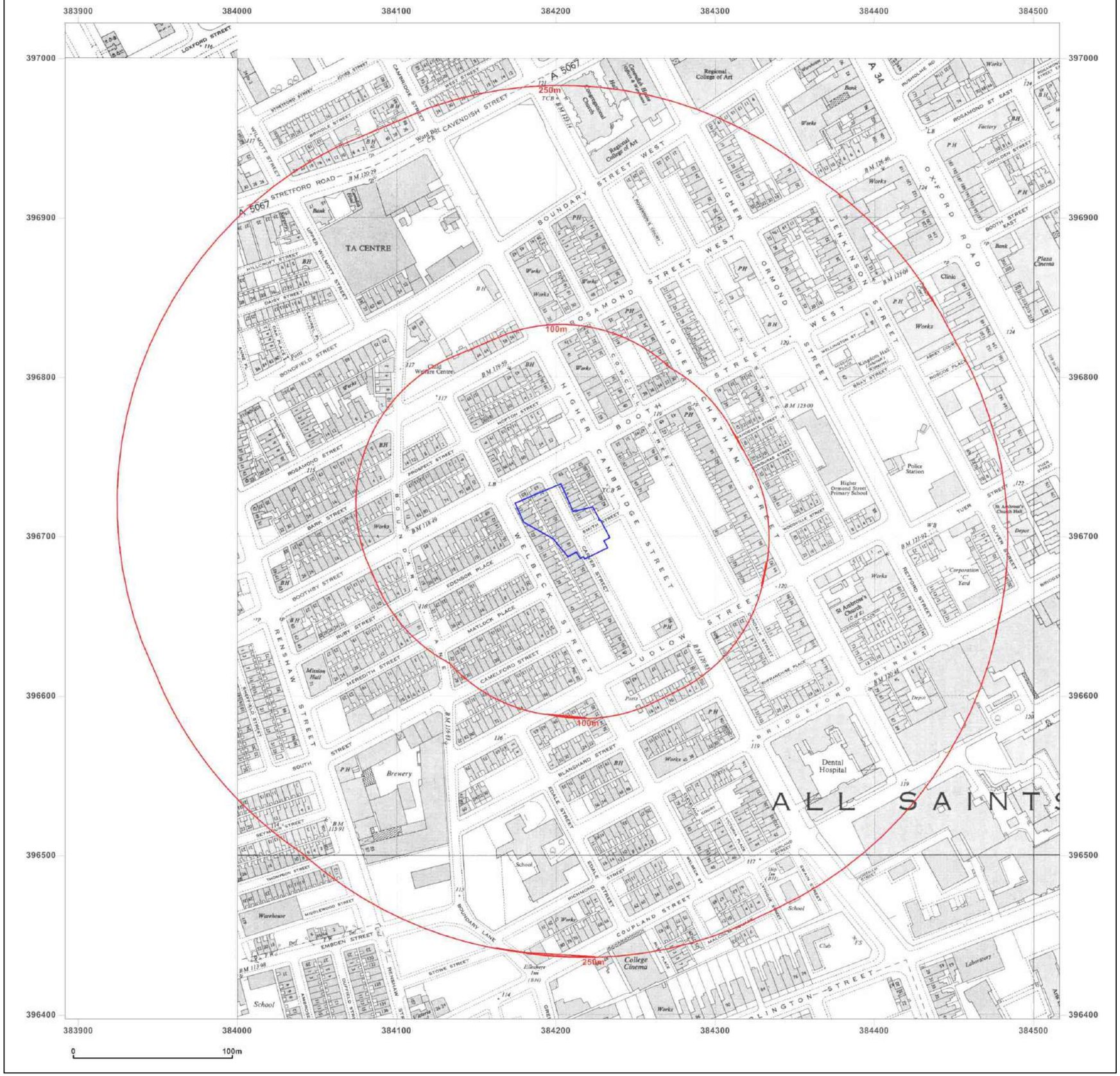
Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid

Map date: **1957-1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1953
Revised 1953
Edition N/A
Copyright 1957
Levelled 1927

Surveyed 1961
Revised 1961
Edition N/A
Copyright 1963
Levelled 1958

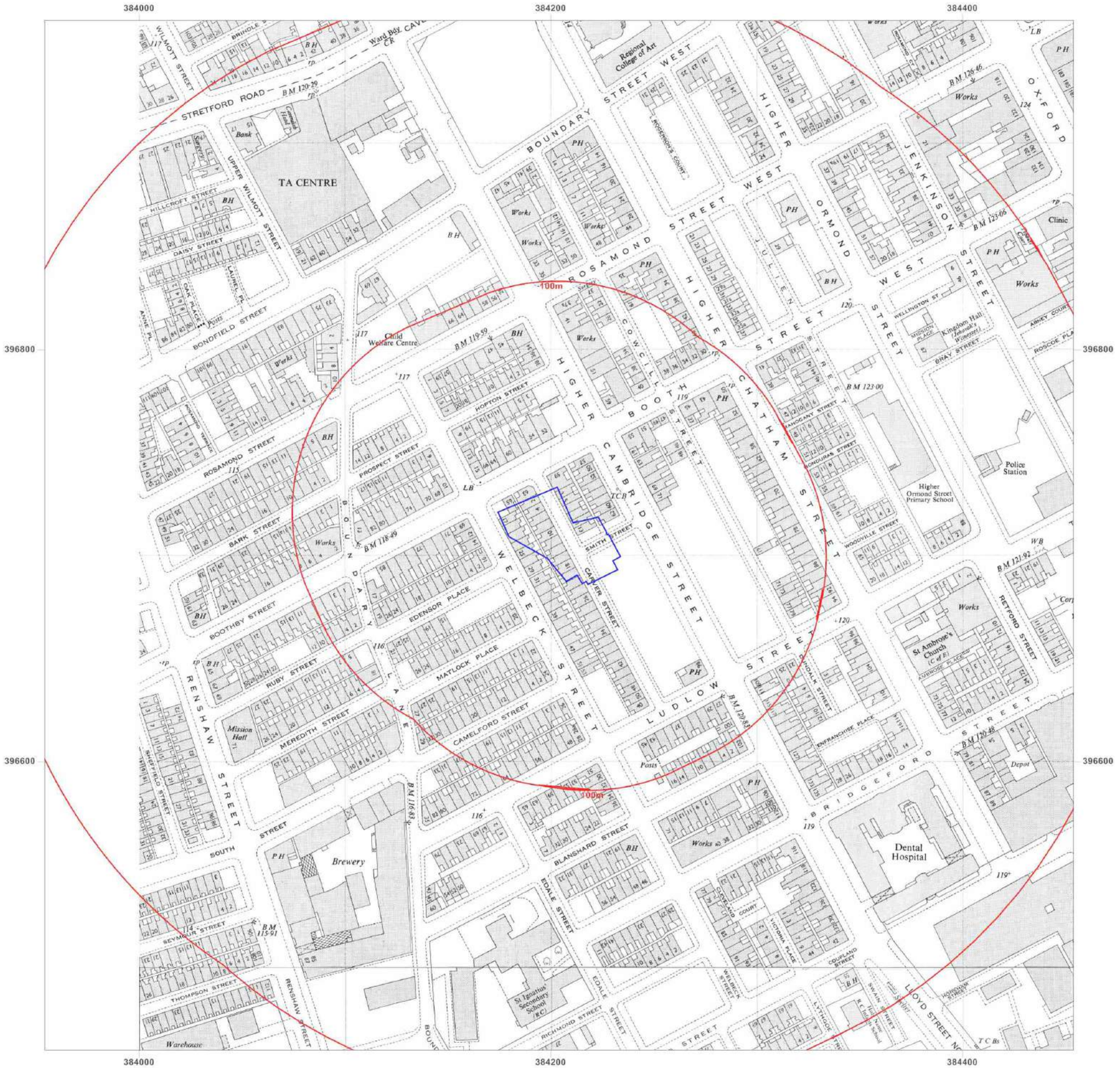
Powered by

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid

Map date: **1961-1963**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed 1948
Revised 1948
Edition N/A
Copyright 1961
Levelled 1958

Surveyed 1949
Revised 1963
Edition N/A
Copyright 1964
Levelled 1958

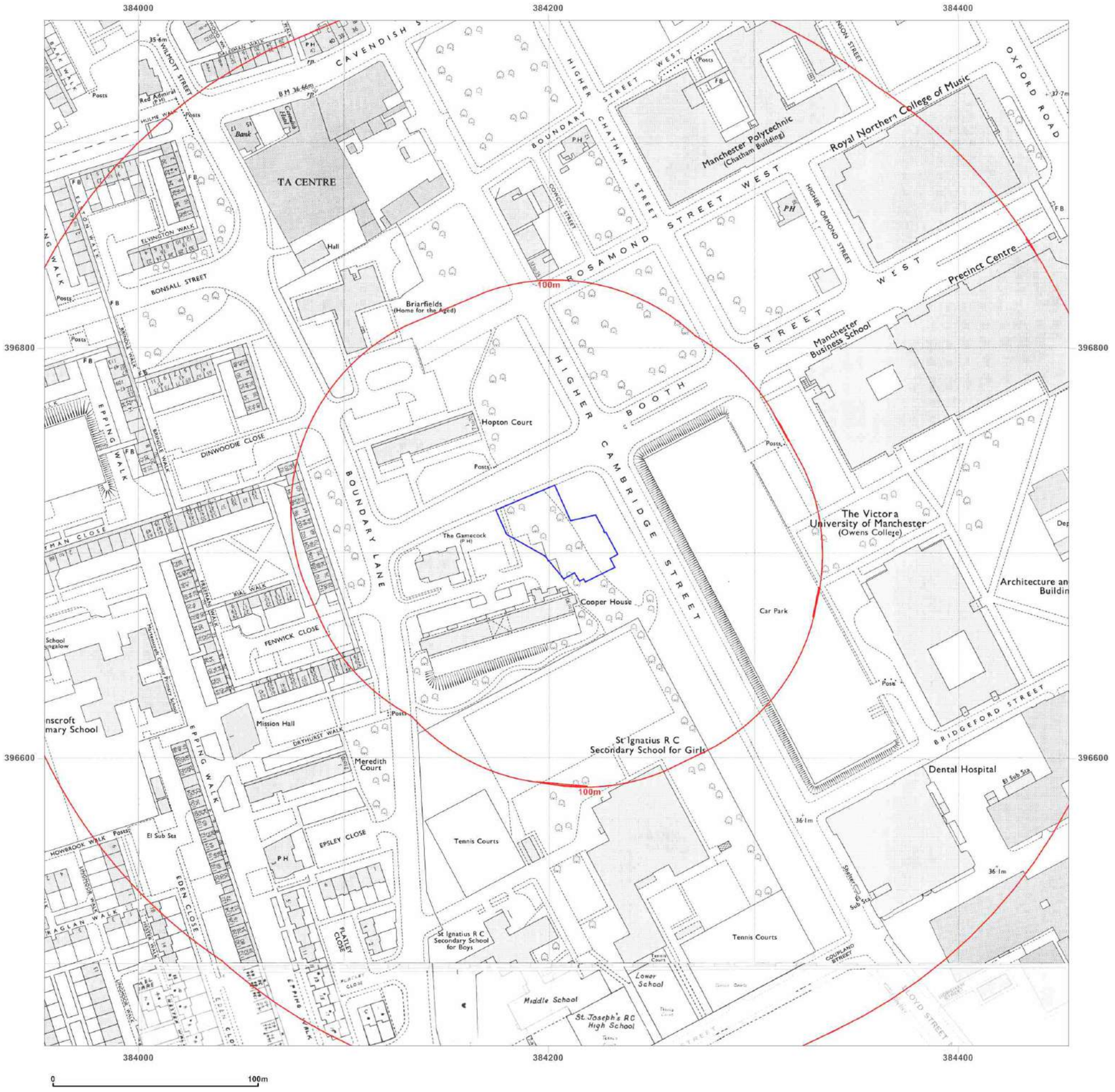
Powered by

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid
Map date: **1973-1978**
Scale: 1:1,250
Printed at: 1:2,000

N
W E
S

Surveyed 1948 Revised 1972 Edition N/A Copyright 1973 Levelled 1958	Surveyed 1948 Revised 1975 Edition N/A Copyright 1976 Levelled 1958
Surveyed 1949 Revised 1977 Edition N/A Copyright 1978 Levelled 1958	Surveyed N/A Revised N/A Edition N/A Copyright 1977 Levelled 1963

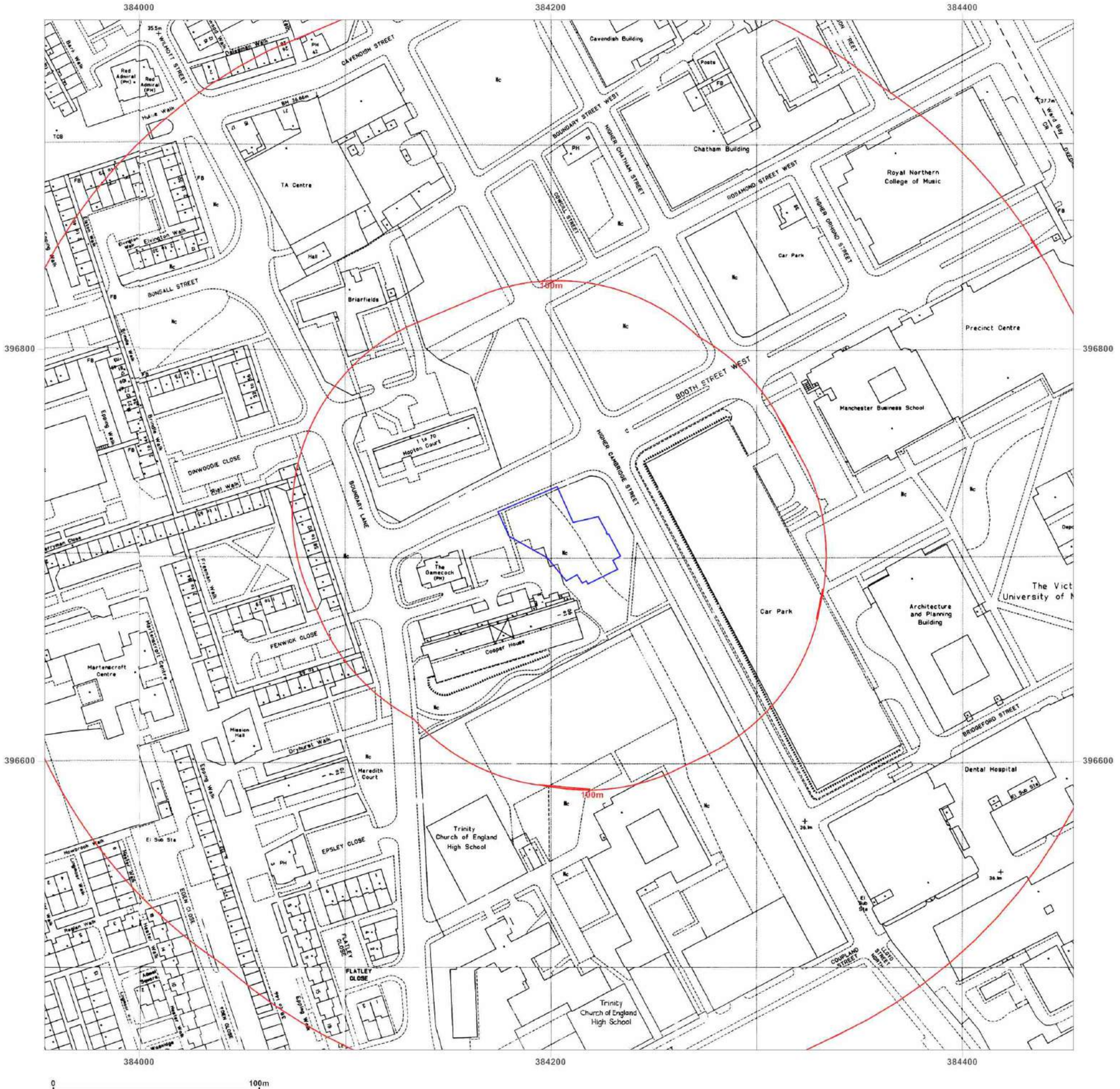
Powered by

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid

Map date: **1990-1992**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

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

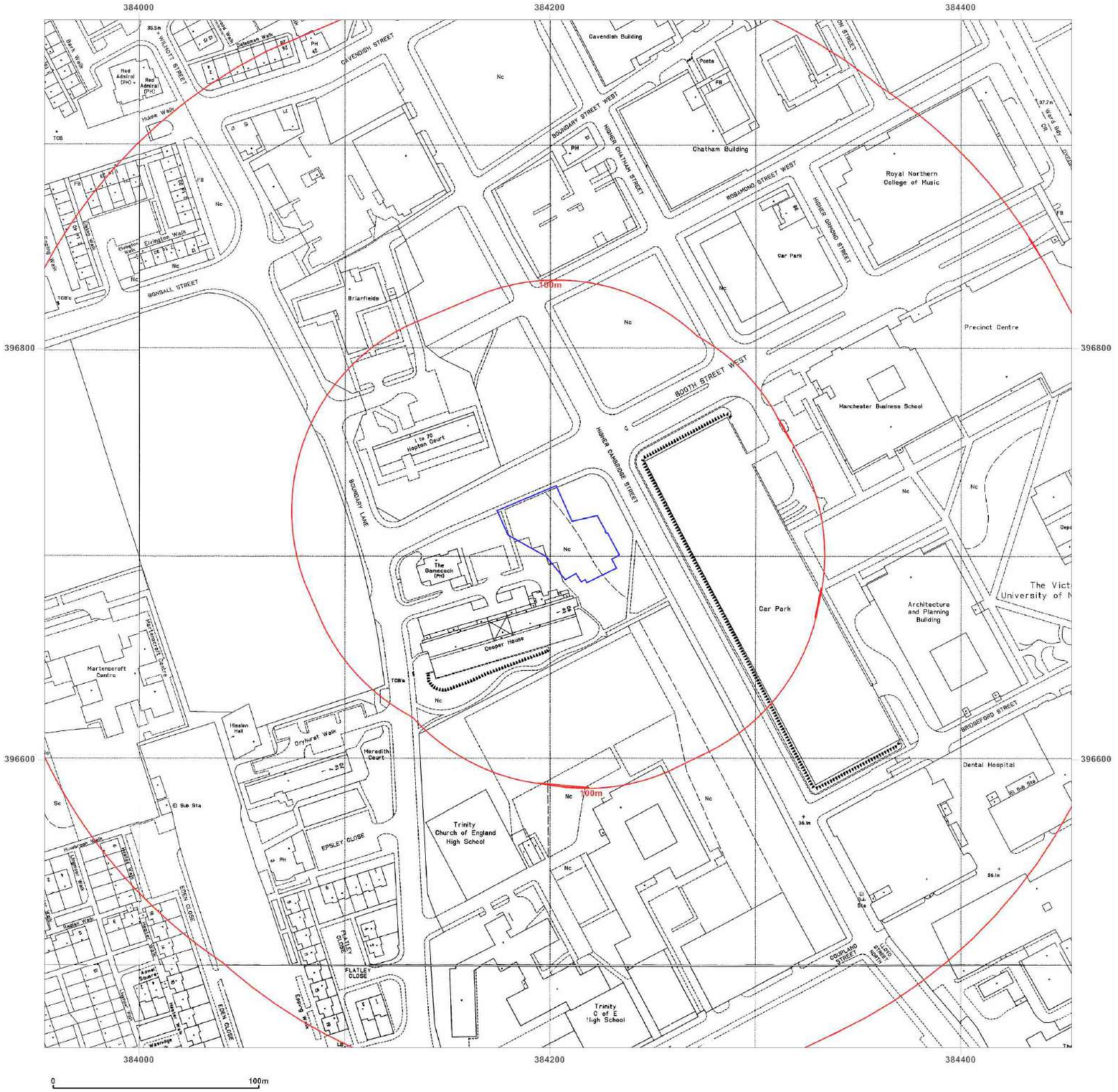
Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid

Map date: **1993-1995**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

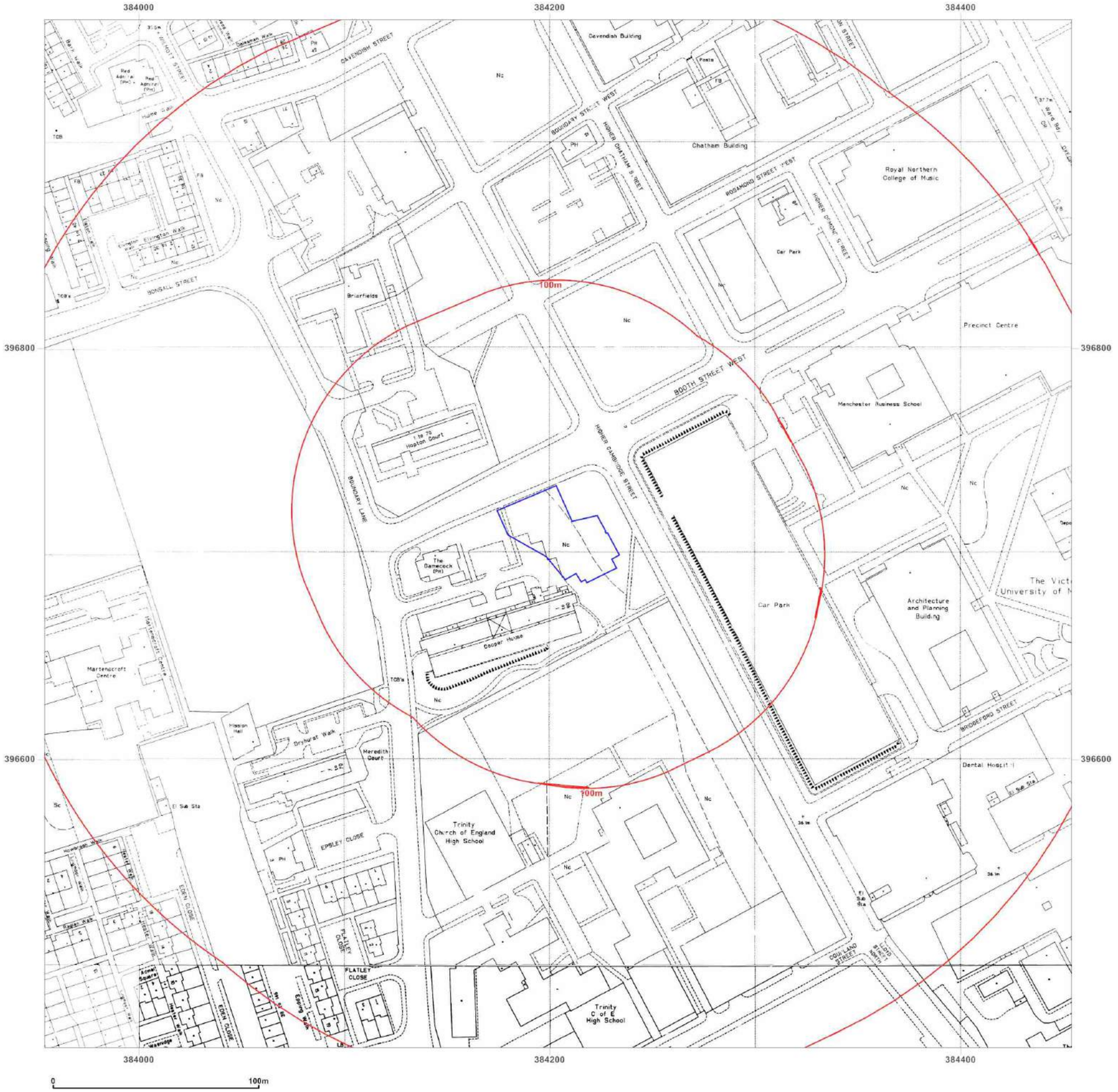
Surveyed 1995 Revised 1995 Edition N/A Copyright 1995 Levelled N/A	Surveyed 1995 Revised 1995 Edition N/A Copyright 1995 Levelled N/A
Surveyed 1995 Revised 1995 Edition N/A Copyright 1995 Levelled N/A	Surveyed 1993 Revised 1993 Edition N/A Copyright 1993 Levelled N/A

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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



Groundsure INSIGHTS

Site Details:

BOUNDARY MEDICAL PRACTICE, 63 THE BOUNDARY MEDICAL PRACTICE, BOOTH STREET WEST, MANCHESTER, M15 6PR

Client Ref: 8651G
Report Ref: GS-5833362
Grid Ref: 384204, 396710

Map Name: National Grid

Map date: **1992-1995**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed 1995 Revised 1995 Edition N/A Copyright 1995 Levelled N/A	Surveyed 1995 Revised 1995 Edition N/A Copyright 1995 Levelled N/A
Surveyed N/A Revised N/A Edition N/A Copyright 1995 Levelled N/A	Surveyed 1992 Revised 1992 Edition N/A Copyright 1992 Levelled N/A

Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 20 February 2019

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

APPENDIX 04

Qualitative Risk Assessment Guidance

Qualitative Risk Assessment Guidance

The Preliminary Contamination Risk Assessment methodology within the Phase 1 Desk Study Report is undertaken with reference to the following CIRIA guidance.

- Contaminated Land Risk Assessment - A Guide to Good Practice CIRIA C552:2001.

In practical terms, risk evaluation is undertaken in order to ascertain if potential risks are considered to be acceptable via classification following factors.

- The magnitude of the potential **consequences** (severity) of the risk occurring.
- The magnitude of the **probability** (likelihood) of the risks occurring.
- The potential consequences of contamination risks occurring at the Site should be classified in accordance with the following table which is adapted from Table 6.3 in the CIRIA guidance.

Table 1 Classification of Consequence

Classification	Definition
Severe	Short term (acute) risk to human health likely to result in 'significant harm' as defined by the *Environment Protection Act 1990*, Part IIA. Short term risk of (significant) pollution of sensitive water resource or ecosystem. Catastrophic damage to building/property. Short term risk to a particular ecosystem, or organism forming part of such an ecosystem.
Medium	Chronic damage to human health (significant harm). Pollution of sensitive water resources. A significant change in a particular ecosystem, or an organism forming part of such an ecosystem.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings/structures/services or the environment.
Minor	Harm, although not necessarily significant harm, which may results in a financial loss, or expenditure to resolve. Non-permanent, easily preventable effects to human health. Easily repairable damage to buildings, structures and services.

The probability or likelihood of a risk occurring is then classified in accordance with Table 6.4 in the CIRIA Guidance which is also reproduced in Table 2 below.

Table 2 Classification of Probability

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

These classifications are then compared to indicate the risk to each pollution linkage. For each likelihood scenario, it will be assumed that a pollution linkage exists between the source and any potential receptors. The classification is not applied if no active pollution linkage is perceived to exist.

Upon classification of both the consequences and probability, the two can be compared in Table 6.5 within the guidance, in order to produce a risk category rating. The risk categories range from 'Very High Risk' to 'Very Low Risk' and should be determined for each potential pollutant linkage as oppose to each receptor or hazard as indicated above.

The matrix table is reproduced in Table 3 below.

Table 3 Consequence Vs Probability Matrix

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High Likelihood**	Very High Risk	High Risk	Moderate Risk	Moderate / Low Risk
	Likely	High Risk	Moderate Risk	Moderate / Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate / Low Risk	Low Risk	Very Low Risk	Very Low Risk

The outcome of the Consequence vs Probability matrix should be compared to the risk definitions and likely actions required in Table 4 (Table 6.6 in CIRIA C552).

The outcome will then determine the overall risk category for the site and should form the basis for any proposed investigation work and remedial actions to be determined. The assessment is based on a qualitative approach at the initial Phase 1 Desk Study, and should be updated following the results of any subsequent ground investigation results.

Table 4 Definitions of Classified Risks and Likely Required Actions

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