

PHASE I ENVIRONMENTAL REPORT

TMC NORTHENDEN CAMPUS, WYTHENSHAW

REC REFERENCE: 108393P1R0

REPORT PREPARED FOR: THE MANCHESTER COLLEGE

OCTOBER 2019





QUALITY ASSURANCE

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EXECUTIVE SUMMARY

Site Address	TMC Northenden Campus, Sale Road, Wythenshawe, M23 0DD.
Grid Reference	381981,390319
Site Area	7.37 hectares
Current Site Use	College campus grounds.
Proposed Use	This report is required to provide information to potential purchasers for a possible disposal of the Northenden Campus.
Environmental Setting	▶ The site is underlain by superficial deposits of Glaciofluvial Sheet Deposits (sand and gravel) (Secondary A aquifer); this is underlain by bedrock of the Tarporley Siltstone Formation (Secondary B aquifer); ▶ The site is not located within a Groundwater Source Protection Zone (SPZ); and ▶ The site has a very low Risk of Flooding from Rivers and the Sea (RoFRaS).
Site History	The site was open space until circa 1935 when it a school had been constructed and large-scale development of residential properties had begun in the surrounding area. The road network also expanded around this time to accommodate the areas growth. By 2010 the school had been demolished and replaced with a college. Since, the site has remained largely unchanged.
Radon	The site is not situated within a radon affected area as less than 1% of properties are above the action level. No radon protective measures are necessary.
Conceptual Site Model (CSM)	Contaminant Sources - On Site ▶ Made ground associated with historic and current developments; and ▶ Electricity substations at western edge of site. Contaminant Sources - Off Site ▶ No off site sources with the potential to pose a risk to on-site receptors have been identified. Potential Pathways ▶ Migration of mobile contaminants off site via services, sewers and manmade conduits; ▶ Direct contact, ingestion and inhalation of contaminants on site; ▶ Migration of mobile contaminants into groundwater and transport into surface waters; ▶ Migration of hazardous gases; and, ▶ Uptake of toxins/phytotoxins by plants. Human Receptors ▶ Future site users; and ▶ Adjacent Residents. Controlled Waters ▶ Groundwater within the underlying superficial (secondary A aquifer).
Conclusions	Overall, the preliminary risk classification of the site in relation to future potential developments is considered to be Low / Moderate. The risk to human health from potential on site sources is considered to be Low / Moderate and risks from potential off site sources is considered to be negligible. The risk posed to groundwater aquifers from direct leaching of heavy metals and hydrocarbons is considered to be Low.
Recommendations	It is recommended that a limited intrusive site investigation is undertaken to obtain samples from areas of previous development. This will also establish geotechnical properties for foundation design for any potential developments in the future.



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1.0 INTRODUCTION

1.1 Background

Resource and Environmental Consultants Ltd (REC) has been commissioned by The Manchester College (TMC) herein referred to as 'the Client', to undertake a Phase I Environmental Report at TMC Northenden Campus, Wythenshawe, M23 0DD 'the site'.

1.2 Purpose of Report

It is understood that the report is required to provide information to potential purchasers for a possible disposal of the Northenden Campus.

1.3 Objectives

The objectives of the desk-based study are to:

- ▶ Undertake a site walkover to identify any current areas of potential environmental concern in order to establish the source, pathway, receptor conceptual site model (CSM);
- ▶ Review historical plans, geology, hydrogeology, site sensitivity, flood-plain issues, mining records and any local authority information available in order to complete a Phase I Desk Study in line with Environment Agency (EA) document Model Procedures for the Management of Contaminated Land (Contaminated Land Report 11);
- ▶ Assess the implications of potential environmental risks, liabilities, and development constraints associated with the site in relation to the future use of the site and in relation to potential off-site receptors; and
- ▶ Provide preliminary recommendations on potential development issues.

1.4 Sources of Information

Background information was sought from the following sources:

- ▶ Groundsure database search (report GS-6404758 and GS-6404759, dated 17/10/19), provided in Appendix V;
- ▶ Historical mapping dated 1849 to 2019. A selection of historical map excerpts are reproduced in Section 3.1 and provided in full within Appendix V;
- ▶ Online planning records held by Manchester City Council;
- ▶ Radon: Guidance on protective measures for new buildings (BRE Document BR 211, 2015) and HPA Indicative Radon Atlas for England and Wales); and,
- ▶ British Geological Survey Online Mapping (<http://www.bgs.ac.uk>).

1.5 Limitations and Confidentiality

The full limitations of this report are presented in Appendix I. REC has prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from REC.



2.0 SITE SETTING

2.1 Site Details

Key details are summarised in Table 2.1 below. A site location plan (108393-001) is provided within Appendix III. All acronyms used within this report are defined in the Glossary presented in Appendix II.

Table 2.1 Site Summary

Site Address	TMC Northenden Campus, Sale Road, Wythenshawe, M23 0DD.
National Grid Reference	381981,390319
Site Area	7.37 hectares

2.2 Site Description

A site walkover was undertaken on 21st October 2019 and the following description comprises the layout and features based on observations at the time. Selected photographs from the walkover are presented in Appendix IV. Access is gained via Moss Hey Drive via an approximately 7m wide gate with two pedestrian gates located either side.

The site consists of an active college campus with a large building in the north utilised as office and teaching facilities. A residential building with an associated garage is located in the north west with various storage tanks located adjacent. An unidentified brick structure is present in the west by the entrance gate which is likely a utilities box but was not labelled at the time of the walkover. The west of the site is predominantly used as a car park. The surface is made up of asphalt and various landscaping trees of between 4m and 8m in height are located throughout. The south east of the site is used as playing fields bounded by metal fencing. A basketball court is also located in the south east.

Drainage and electricity / gas services are located throughout supplying the buildings and lighting for car parking. All buildings are in good condition and the site is predominantly flat. The site is bounded in all directions by residential properties.

Polychlorinated Biphenyls (PCBs)

To the left of the entrance are two electricity substations labelled Moss Hey Drive and Arden City College.

Waste Storage

Various storage tanks and a skip were located adjacent to the residential building in the north west of the site.

2.3 Surrounding Area

The site is bordered in all directions by residential properties. Sale Road is located southwest and Princess Parkway is situated east.

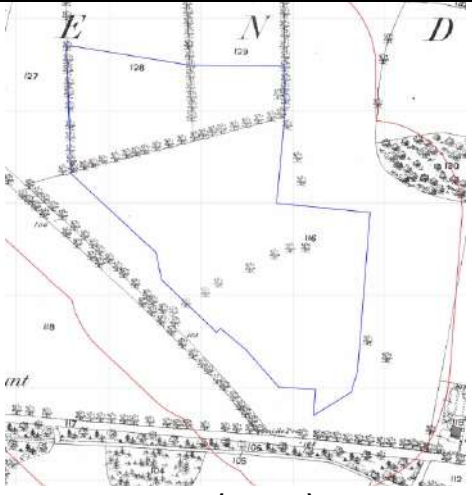
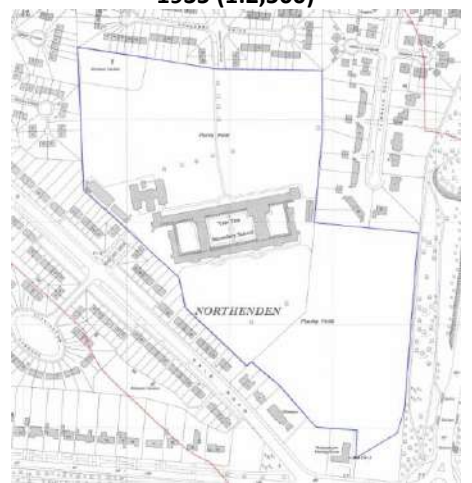


3.0 SITE HISTORY

3.1 Historical Maps

A review of historical maps pertinent to the site is summarised in Table 3.1 below.

Table 3.1 Historical Map Summary

Map Edition	Historical Land Use	Historical map excerpt
1874 (1:2,500)	In 1874 the site was open land with hedgerows. All surrounding land was also open space.	 1874 (1:2,500)
1935 – 1956 (1:2,500) (1:10,560) (1:2,250)	By 1935, the surrounding area had been heavily developed with residential properties. A school had been built in the centre of the site with associated playing fields. The road network began expanding to accommodate this growth around 1938. The school was then expanded with new buildings being constructed in the west of the site by 1956. By this time the school had been labelled as “Yew Tree School”.	 1935 (1:2,500)  1956 (1:1,250)



Map Edition	Historical Land Use	Historical map excerpt
1977 (1:1,250)	The school was further developed by 1977 with the addition of extra buildings and a tennis court in the north. The road network has continued to expand, with the road directly east being converted into a dual carriageway.	 1977 (1:1,250)
2010 (1:10,000)	By 2010 the school and its associated structures had been demolished and replaced with a building in the north east of the site labelled as "College".	 2010 (1:10,000)

3.2 Historical Database

A review of potentially contaminative land uses identified on historical Ordnance Survey maps within a 250m radius of the site is summarised below in Table 3.2.

Table 3.2 Summary of Potentially Contaminative Historical Land Uses

Surrounding Feature	Distance (m)	Dates	Direction
Cuttings	31-34	1955-1966	E
Nurseries	183-228	1938-1955	NW
Unspecified Tanks	130-233	1898-1935	N
Electricity Substation	146-200	1956-1992	E
Garage	110-118	1956-1959	SE

3.3 Planning History

REC has undertaken a review of online planning records held by Manchester City Council and found 4.no planning applications relating to the site. The latest planning application was for the installation of 2no. non-illuminated fascia signs and 2no. non-illuminated banner signs and was approved on 09.02.2018. Another application for information signs was approved in February 2017.



The college applied for planning in June 2009 for elevational alterations to the existing buildings; the creation of two all weather pitches; the erection of a bin store; the creation of hard standing to form a loading bay area; and the installation of two louvres to the north. In November 2007, a planning application was put forward relating to the installation of a temporary building for 2 years for a gym facility. Both these applications were approved.



4.0 ENVIRONMENTAL SETTING

4.1 Geology & Hydrogeology

The British Geological Survey (BGS) GeoIndex indicates superficial deposits of glaciofluvial sheet deposits are present on site, underlain by bedrock of the Tarporley Siltstone Formation as detailed in Table 4.1.

Table 4.1 Summary of Geological Information

Classification	Strata	Description	Aquifer Classification	Permeability	Sensitivity
Superficial Deposits	Glaciofluvial Sheet Deposits - Devensian	Sand and Gravel	Secondary A	Moderate	Medium
Bedrock	Tarporley Siltstone Formation	Siltstone, Mudstone and Sandstone	Secondary B	Low	Low

The closest publicly available borehole records (SJ89SW494; and SJ89SW495) lie on the south east boundary of the site and indicates deposits are present to approximately 15m bgl.

The data search report indicates that there are no historical or active groundwater abstraction licenses within 1km of the site; the closest active license is located 1.65km north. The site does not lie within a Groundwater Source Protection Zone (SPZ).

The surface soils on site are categorised as being minor aquifer/high leaching potential. These soils are assumed to be highly permeable in the absence of site-specific information.

4.2 Hydrology

The nearest surface water feature is an inland river located 205m south west. The river itself is not named however its catchment area is the River Mersey. In 2009 the River Mersey was given a Grade 'E' for biological quality which describes the water quality in terms of 83 groups of macroinvertebrates, some of which are pollution sensitive. The River was graded 'C' in terms of chemical quality which is based on the General Quality Assessment Headline Indicators scheme (GQAH). The results are graded from A ('Very Good') to F ('Bad').

The site is not located within any Environment Agency Floodplain Zones and is in an area with a "Very Low" (less than 1 in 1000) risk of flooding from rivers and the sea (RoFRaS) in any given year. The nearest flood zone is a Zone 2 (Fluvial / Tidal Models) is located 234m east.



4.3 Geotechnical Data

Qualitative geotechnical data presented within the Groundsure Report is summarised in Table 4.2 below.

Table 4.2 Summary of Data Search Geotechnical Information

Hazard	Designation	Comments
Shrink-Swell Clay	Negligible	Ground conditions predominantly non-plastic. No special actions required.
Landslides	Very Low	Slope instability problems are unlikely to be present. No special actions required.
Ground Dissolution	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions.
Compressible Ground	Negligible	No indicators for compressible deposits identified. No special actions required.
Collapsible Deposits	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.
Running Sand	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.

4.4 Mining and Ground Workings

The site is not located within a Coal Mining Reporting Area as defined by the Coal Authority. No special actions are required in regards to mining and ground workings.

4.5 Railways and Tunnels

The nearest active railway line is located approximately 2km south west of the site. A review of available data found no historical or active tunnels are located within 250m of the site.

4.6 Radon Risk Potential

The site is not situated within a radon affected area as less than 1% of properties are above the action level. No radon protective measures are necessary.

4.7 Industrial Land Uses

Available records identify the following potentially contaminative current industrial land uses within 200m of the site.

Table 4.3 Industrial Land Uses

Category	Activity	Distance (m)	Direction
Electrical Features	Electricity Substation	155	E
Repair and Servicing	Vehicle Repair, Testing and Servicing	225	N

The data search report indicates that there are no petrol and fuel sites; high voltage underground electricity transmission cables; or pressure gas transmission pipelines within 500m.

4.8 Sensitive Land Uses

The following sensitive land uses have been identified within 2km:

- ▶ 3no. records of Local Nature Reserves; the closest being Wythenshawe Park located 42m south; and
- ▶ 4no. records of Green Belt Land, the closest being the Liverpool, Manchester and West Yorks Greenbelt located 153m north.



4.9 Site Sensitivity Assessment

The site is considered to be located within a **Low to Moderate** sensitivity setting for the following reasons:

- ▶ The underlying superficial deposits are classified as secondary A; and
- ▶ The site is located within close proximity to residential properties.



5.0 CONSULTATIONS

5.1 Contaminated Land Officer

A request for information pertaining to the site was sent to the Contaminated Land Team at Manchester City Council. At the time of writing, no response has been received.

5.2 Landfill Sites and Waste Treatment Sites

A review of data from the environmental search indicates that there are 2no. historic Environmental Agency licenced waste sites within 1km. The closest was located 478m north on Princess Road / Yew Tree Road, Greater Manchester. The waste type disposed at this landfill is unknown and it was last recorded in December 1994.

On review of available records, 1no. Environment Agency licensed waste site (The Old Railway Station) is located within 1.5km, accepting household, commercial and industrial wastes. It is currently registered to Davidson's Skip Hire Ltd and its annual tonnage of waste is 3,250.

5.3 Regulatory Database

Information in Table 5.1 below has been obtained from a commercially available environmental database and includes records not otherwise detailed in this report.

Table 5.1 Summary of Data Search Regulatory Data

Activity	0 - 249m	250 - 500m	Details
Records of Licensed Discharge Consents	0	2	The nearest licensed discharge consent is located 272m north east and is related to sewage discharges to the River Mersey. Its most recent effective date was 01.04.1994 and was revoked on 30.03.2004.
Records of National Incidents Recording System (NIRS), List 2 (Pollution Incidents)	0	2	The closest water pollution incident occurred on 02.04.2002 253m north of the site. The pollutant was household waste and caused a Category 3 (Minor) impact to water.



6.0 CONCEPTUAL SITE MODEL (CSM)

In accordance with Environment Agency, CLR 11 (2004) and BSI 10175 (Code of Practice for Investigation of Potentially Contaminated Land), REC has developed an initial CSM to identify potential contamination sources, migration pathways and receptors within the study area.

6.1 Contaminant Sources

On Site

- ▶ Made ground associated with historic and current developments; and
- ▶ Electricity substations at western edge of site.

Off Site

No off site sources with the potential to pose a risk to on-site receptors have been identified.

6.2 Potential Pathways

Should unrecorded contamination sources be present then receptors may be potentially at risk from the identified potential sources of contamination via the following pathways:

- ▶ Migration of mobile contaminants off site via services, sewers and manmade conduits;
- ▶ Direct contact, ingestion and inhalation of contaminants on site;
- ▶ Migration of mobile contaminants into groundwater and transport into surface waters;
- ▶ Migration of hazardous gases; and,
- ▶ Uptake of toxins/phytotoxins by plants.

6.3 Potential Receptors

Human Receptors

- ▶ Future site users; and
- ▶ Adjacent Residents.

Construction workers are not considered to be a plausible receptor as exposure will be managed through the use of appropriate PPE and hygienic working practices, as required under HSE/ CDM regulations. Furthermore, exposure is likely to be for a short duration.

Controlled Waters

- ▶ Groundwater within the underlying superficial (secondary A aquifer).

Bedrock is at considerable depth and the nearest surface water feature is 205m from the site and as such both have been discounted as controlled waters receptors.

6.4 Risk Assessment

CIRIA 552: Contaminated Land Risk Assessment 'A Guide to Good Practice', 2001 provides guidance on the approach to risk assessment. For any potential contaminant linkage consideration is given to:

- ▶ The potential severity of the risk; and
- ▶ The likelihood of the risk occurring.

Severity is assessed with consideration to the receptor and magnitude of impact. Table 6.1 overleaf provides details of each category.



Table 6.1 Severity Categories

Category	Description
Minor	Requirement for protective equipment during site works to mitigate health effects. Damage to non-sensitive ecosystems or species.
Mild	Pollution of non-sensitive water resources.
Medium	Chronic (long-term) risk to human health; Pollution of sensitive controlled waters (surface waters or aquifers)
Severe	Acute (short term) risks to human health; Major pollution of controlled waters (watercourses or groundwater)

The probability of a risk occurring considers the plausibility and sustainability of the contaminant linkage. Table 6.2 provides details of each category.

Table 6.2 Probability Categories

Category	Description
Unlikely	Contaminant linkage may be present, but the circumstances under which harm would occur are improbable.
Low Likelihood	Contaminant linkage may be present, and there is a possibility of the risk occurring, although there is no certainty that it will do so.
Likely	Contaminant linkage may be present, and it is probable that the risk will occur over the long term.
High Likelihood	Contaminant linkage may be present, and risk is almost certain to occur in long term, or there is evidence of harm to the receptor.

Table 6.3 compares the probability against the severity to provide an overall risk rating for each contaminant linkage.

Table 6.3 Comparison of Probability and Severity

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

Typical consequences for each category of risk rating and likely required actions are provided in Table 6.4 overleaf.



Table 6.4 Typical Risk Category Consequences and Actions

Risk Category	Typical Consequence and Actions
Very Low Risk	Harm is unlikely to occur and be any worse than mild.
Low Risk	Harm could occur and at worst would normally be mild. Limited further investigation may be required to clarify the risk. Remediation works are unlikely to be required and would be limited.
Low /Moderate Risk	Harm could occur, but it is unlikely that it would be severe. Limited further investigation may be required to clarify the risk. If required, remediation works are likely to be limited.
Moderate Risk	Harm could occur, but there is a low likelihood that it would be severe. Harm is likely to be mild. Some remediation works may be required in the short-term or long-term.
High Risk	Harm is likely to occur, and is likely to be severe, unless appropriate remediation or mitigation measures are completed. Remedial works may be required in the short-term and are likely to be required over the long-term.
Very High Risk	Severe harm might already be occurring, or a high likelihood that severe harm will occur unless immediate remediation or mitigation measures are completed.

It should be noted that the identification of potential contaminant linkages does not indicate that they are significant.

6.5 Conceptual Site Model

A CSM has been created using the above information and is provided on the following page.



Table 6.5 Conceptual Site Model

Source	Contaminant	Migration Pathway	Potential Receptors	Probability	Severity	Overall Risk Rating	Active / Inactive
On-Site							
Made Ground associated with past and current development.	Heavy Metals	Ingestion, inhalation or dermal contact with soils	Future site users	Low likelihood	Mild	Low	Potentially Active in localised areas - Further targeted investigation required.
		Leaching to groundwater and lateral migration within groundwater	Groundwater aquifer	Low likelihood	Mild	Low	
	Total Petroleum Hydrocarbons and Polycyclic Aromatic Hydrocarbons	Ingestion, inhalation or dermal contact with soils	Future site users	Low likelihood	Mild	Low	
		Leaching to groundwater and lateral migration within groundwater	Groundwater aquifer	Low likelihood	Mild	Low	
	Asbestos fibres	Inhalation of fibres	Future site users	Low likelihood	Medium	Low / Moderate	
	Ground gases	Migration of gases into buildings and subsequent inhalation.	Future site users	Low likelihood	Mild	Low	
Electricity Substation	PCB's	Lateral and vertical migration	Future site users	Low Likelihood	Mild	Low	Potentially Active in localised areas - Further targeted investigation required.
		Leaching to groundwater and lateral migration within groundwater	Groundwater aquifer	Unlikely	Mild	Very Low	



7.0 CONCLUSIONS & RECOMMENDATIONS

Overall, the preliminary risk classification of the site in relation to future potential developments is considered to be **Low / Moderate**.

The risk to human health from potential **on site** sources is considered to be **Low / Moderate** and risks from potential off site sources is considered to be **negligible**.

The risk posed to groundwater aquifers from direct leaching of heavy metals and hydrocarbons is considered to be **Low**.

It is recommended that a limited intrusive site investigation is undertaken to obtain samples from areas of previous development. This will also establish geotechnical properties for foundation design for any potential developments in the future.



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TMC Northenden Campus
The Manchester College
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108393p1r0

APPENDIX I

LIMITATIONS



1. This report and its findings should be considered in relation to the terms of reference and objectives agreed between REC Ltd and the Client.
2. For the work, reliance has been placed on publicly available data obtained from the sources identified. The information is not necessarily exhaustive and further information relevant to the site may be available from other sources. When using the information it has been assumed it is correct. No attempt has been made to verify the information.
3. This report has been produced in accordance with current UK policy and legislative requirements for land and groundwater contamination which are enforced by the local authority and the Environment Agency. Liabilities associated with land contamination are complex and requires advice from legal professionals.
4. During the site walkover reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not be made known or accessible.
5. Access considerations, the presence of services and the activities being carried out on the site limited the locations where sampling locations could be installed and the techniques that could be used.
6. Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities.
7. Where mention has been made to the identification of Japanese Knotweed and other invasive plant species and asbestos or asbestos-containing materials this is for indicative purposes only and do not constitute or replace full and proper surveys.
8. The executive summary, conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the report in full.
9. REC cannot be held responsible for any use of the report or its contents for any purpose other than that for which it was prepared. The copyright in this report and other plans and documents prepared by REC is owned by them and no such plans or documents may be reproduced, published or adapted without written consent. Complete copies of this may, however, be made and distributed by the client as is expected in dealing with matters related to its commission. Should the client pass copies of the report to other parties for information, the whole report should be copied, but no professional liability or warranties shall be extended to other parties by REC in this connection without their explicit written agreement there to by REC.
10. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.



APPENDIX II

GLOSSARY



TERMS

AST	Above Ground Storage Tank
BGS	British Geological Survey
BSI	British Standards Institute
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CIEH	Chartered Institute of Environmental Health
CIRIA	Construction Industry Research Association
CLEA	Contaminated Land Exposure Assessment
CSM	Conceptual Site Model
DNAPL	Dense Non-Aqueous Phase Liquid (chlorinated solvents, PCB)
DWS	Drinking Water Standard
EA	Environment Agency
EQS	Environmental Quality Standard
GAC	General Assessment Criteria
GL	Ground Level
GSV	Gas Screening Value
HCV	Health Criteria Value
ICSM	Initial Conceptual Site Model
LNAPL	Light Non-Aqueous Phase Liquid (petrol, diesel, kerosene)
ND	Not Detected
LMRL	Lower Method Reporting Limit
NR	Not Recorded
PAH	Poly Aromatic Hydrocarbon
PCB	Poly-Chlorinated Biphenyl
PID	Photo Ionisation Detector
QA	Quality Assurance
SGV	Soil Guideline Value
SPH	Separate Phase Hydrocarbon
Sp.TPH (CWG)	Total Petroleum Hydrocarbon (Criteria Working Group)
SPT	Standard Penetration Test
SVOC	Semi Volatile Organic Compound
UST	Underground Storage Tank
VCCs	Vibro Concrete Columns
VOC	Volatile Organic Compound
WTE	Water Table Elevation



APPENDIX III

DRAWINGS



	REC Ltd Osprey House, Pacific Quay, Broadway, Manchester, M50 2UE T: +44 161 868 1300 recld.co.uk	Job Title: Phase 1 Environmental Report TMC Northenden Campus Wythenshawe	Client: The Manchester College	Job No: 108393	Notes: NOT TO SCALE	Drawing Title: 1CO108393-001 Site Location Plan
				Drawn By: NB		
				Approved by: ML		



APPENDIX IV
PHOTOGRAPHS

APPENDIX IV PHOTOGRAPHS



Photograph 1 – Playing fields in south east



Photograph 2 – Electricity substation located in the west of the site, adjacent to the sites entrance



Photograph 3 – Gravelled area with storage containers and skip for waste disposal located in north west



Photograph 4 – Entrance to the site with asphalt road and speedbumps approaching the main college building



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APPENDIX V
GROUNDSURE REPORT

APPENDIX V **GROUNDSURE REPORT**



Resource & Environmental Consultants Ltd REC
GROUND FLOOR SUITE B, 217 OSPREY
HOUSE, BROADWAY,
SALFORD, M50 2UE

Groundsure
Reference: GS-6404758

Your Reference: REF_108393_PO_007600

Report Date 17 Oct 2019

Report Delivery Method: Email - pdf

Enviro Insight

Address: CITY COLLEGE MANCHESTER, ARDEN CENTRE, SALE ROAD, MANCHESTER, M23 0DD

Dear Sir/ Madam,

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

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

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Address: CITY COLLEGE MANCHESTER, ARDEN CENTRE, SALE ROAD, MANCHESTER, M23 0DD
Date: 17 Oct 2019
Reference: GS-6404758
Client: Resource & Environmental Consultants Ltd REC

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 11-Jun-2015
Grid Reference: 381981,390319
Site Size: 7.3662ha

Report Reference: GS-6404758
Client Reference: REF_108393_PO_007600

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Overview of Findings

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

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	0	2	2	23
1.2 Additional Information – Historical Tank Database	0	0	6	0
1.3 Additional Information – Historical Energy Features Database	0	0	8	23
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	4	0
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	0	2	0	21
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	0
2.1.8 Records of Licensed Discharge Consents	0	0	0	2
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	2
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	1	1	2
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	2
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	1	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	0	0	4

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	0	6	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	0	0	9
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	2	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	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	2	0	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	No	No	Yes	No
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	0	0	4	26	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Environment 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	None identified					
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	Very Low					
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	Not Prone					
7.8 BGS confidence rating for the Groundwater Flooding susceptibility areas	Not Applicable					

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	1	0	0	0	2
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	0	0	0	0	0	0
8.14 Records of Green Belt land	0	0	1	0	1	2

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	None 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.

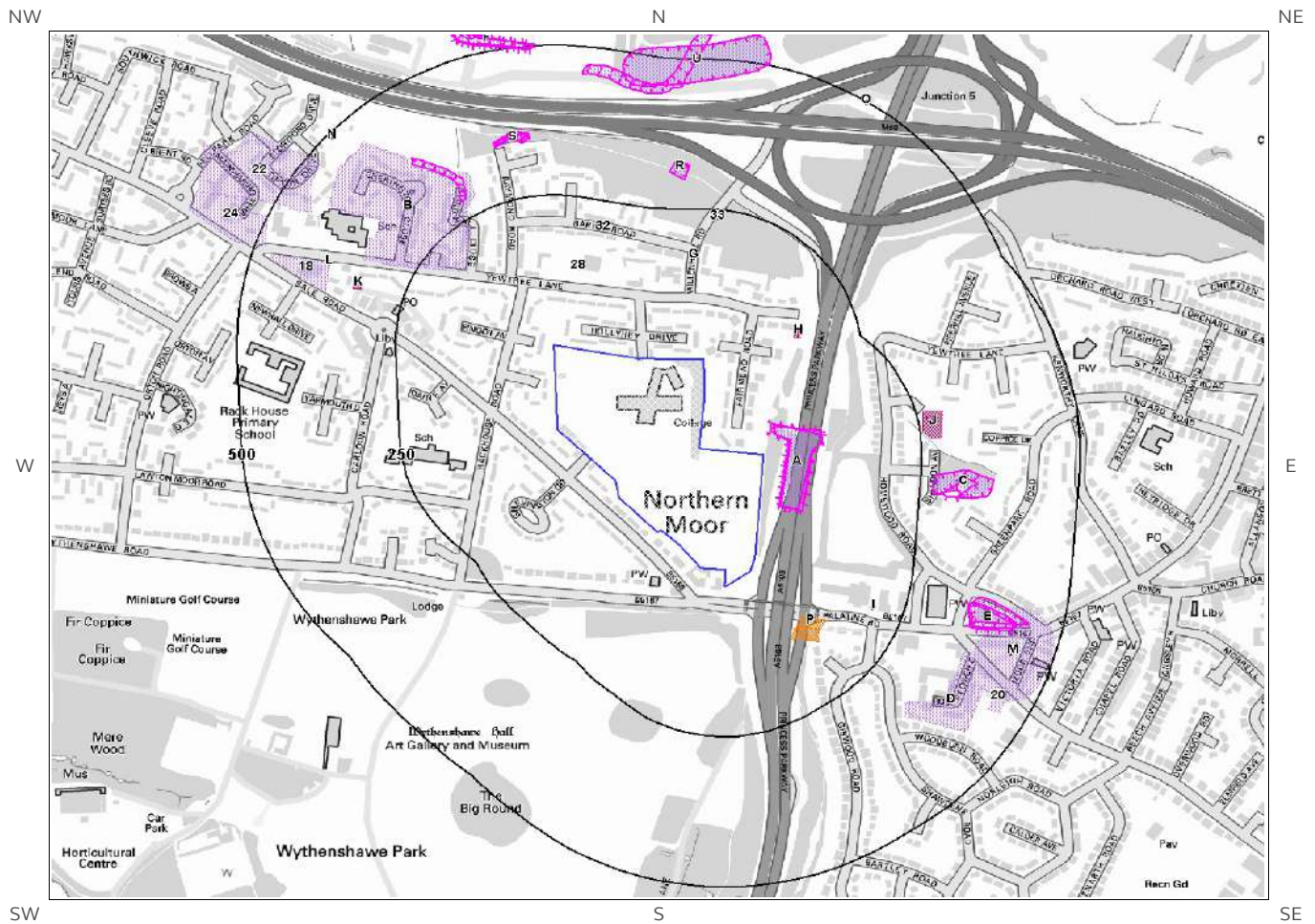
Note: Maps

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).

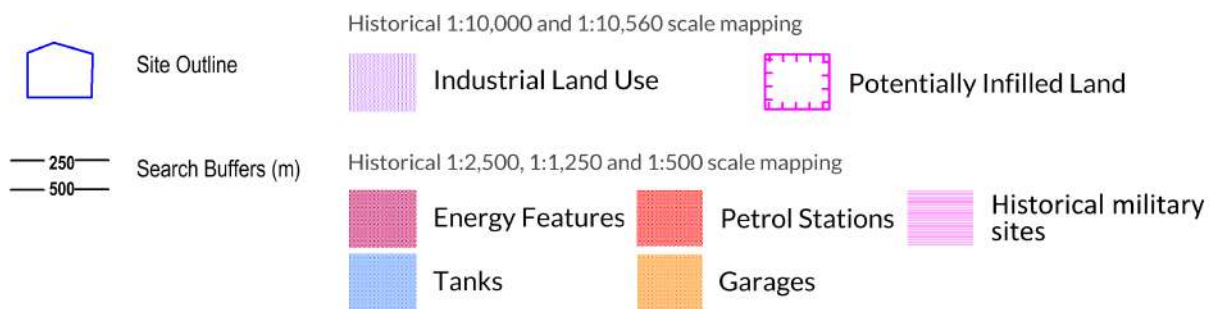
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

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



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1. Historical Industrial Sites

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

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

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

ID	Distance [m]	Direction	Use	Date
1A	31	E	Cuttings	1966
2A	34	E	Cuttings	1955
3B	183	NW	Nursery	1955
4B	228	NW	Nurseries	1938
5C	271	E	Unspecified Pit	1988
6C	271	E	Unspecified Pit	1978
7C	271	E	Unspecified Pit	1966
8Q	280	NW	Unspecified Ground Workings	1978
9R	299	N	Unspecified Pit	1978
10D	327	SE	Nursery	1938
11D	330	SE	Nursery	1954
12D	330	SE	Nursery	1967
13E	345	E	Unspecified Pit	1938
14E	348	E	Unspecified Pit	1955
15E	348	E	Unspecified Pit	1966
16E	350	E	Cuttings	1978
17E	350	E	Cuttings	1988
18	371	W	Nursery	1966
19M	376	E	Police Station	1897
20	434	SE	Smithy	1897
21T	438	N	Slag Heap	1966
22	442	NW	Nursery	1938
23U	448	N	Unspecified Heap	1978
24	483	W	Nursery	1955
25F	494	N	Unspecified Ground Workings	1966
26F	494	N	Unspecified Ground Workings	1978
27F	495	N	Unspecified Ground Workings	1988

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:

6

ID	Distance (m)	Direction	Use	Date
28	130	N	Unspecified Tank	1922
29G	167	N	Unspecified Tank	1935
30G	175	N	Unspecified Tank	1910
31G	176	N	Unspecified Tank	1898
32	201	N	Unspecified Tank	1907
33	233	N	Unspecified Tank	1907

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:

31

ID	Distance (m)	Direction	Use	Date
34H	146	E	Electricity Substation	1956
35H	146	E	Electricity Substation	1992
36H	146	E	Electricity Substation	1992
37H	151	E	Electricity Substation	1975
38H	152	E	Electricity Substation	1956
39I	199	E	Electricity Substation	1992
40I	199	E	Electricity Substation	1992
41I	200	E	Electricity Substation	1975
42J	253	E	Electricity Substation	1975
43J	254	E	Electricity Substation	1992
44J	264	E	Electricity Substation	1992
45K	318	W	Electricity Substation	1982
46K	318	W	Electricity Substation	1992
47K	318	W	Electricity Substation	1992
48K	319	W	Electricity Substation	1956
49K	319	W	Electricity Substation	1987
50K	319	W	Electricity Substation	1956
51L	377	W	Gas Governor	1992
52L	377	W	Gas Governor	1992
53L	378	W	Gas Governor	1987

54M	431	E	Electricity Substation	1989
55M	431	E	Electricity Substation	1992
56M	431	E	Electricity Substation	1992
57N	489	NW	Electricity Substation	1982
58N	489	NW	Electricity Substation	1992
59N	489	NW	Electricity Substation	1992
60N	489	NW	Electricity Substation	1987
61O	495	NE	Electricity Substation	1956
62O	495	NE	Electricity Substation	1992
63O	495	NE	Electricity Substation	1978
64O	495	NE	Electricity Substation	1956

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: 4

ID	Distance (m)	Direction	Use	Date
65P	110	SE	Garage	1956
66P	110	SE	Garage	1956
67P	117	SE	Garage	1959
68P	118	SE	Garage	1959

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

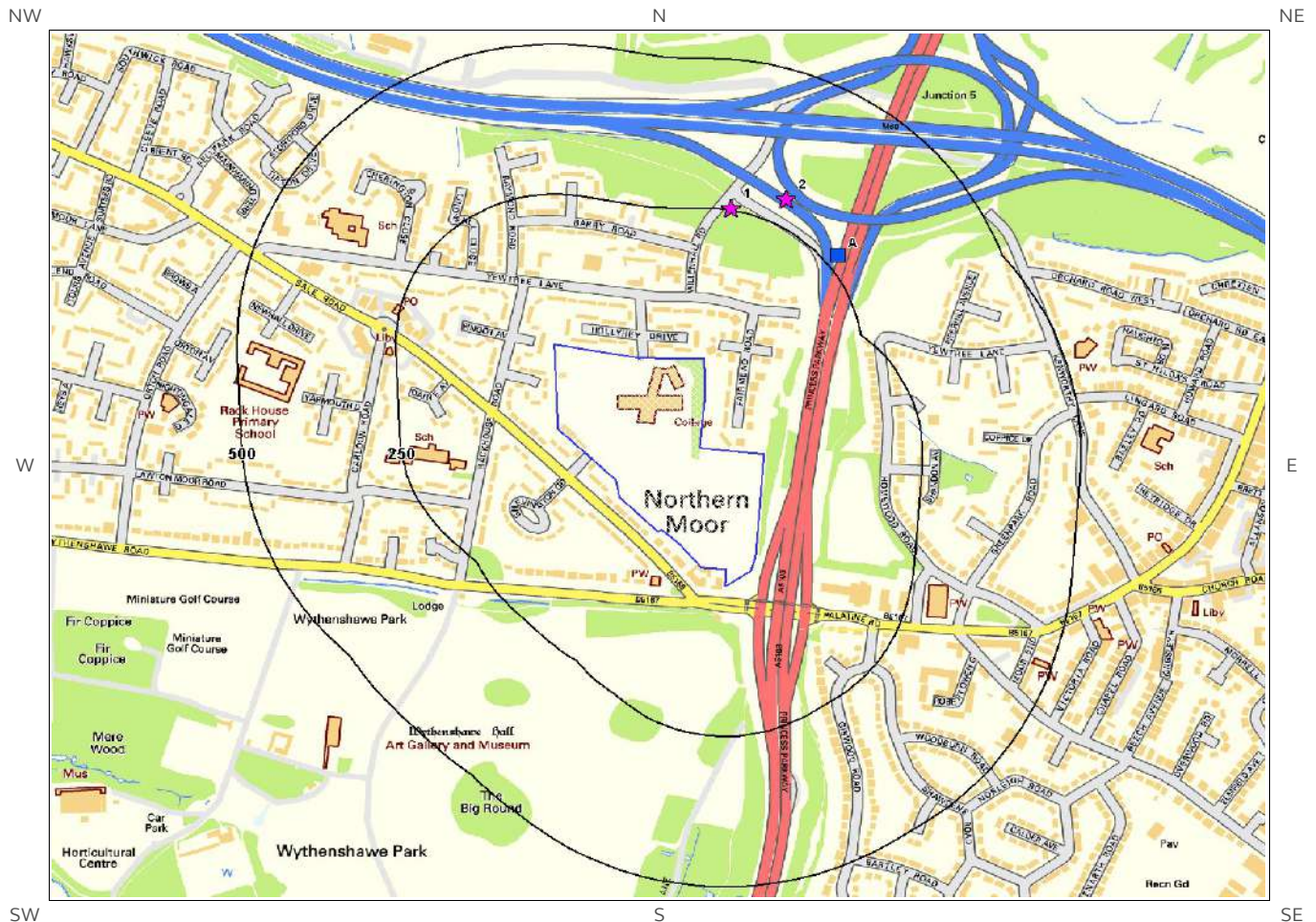
Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site:

23

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

ID	Distance(m)	Direction	Use	Date
69A	31	E	Cuttings	1966
70A	34	E	Cuttings	1955
71C	271	E	Unspecified Pit	1966
72C	271	E	Unspecified Pit	1988
73C	271	E	Unspecified Pit	1978
74Q	280	NW	Unspecified Ground Workings	1978
75C	285	E	Ponds	1938
76R	299	N	Unspecified Pit	1978
77S	341	N	Ponds	1916
78S	341	N	Ponds	1905
79S	341	N	Ponds	1923
80S	341	N	Ponds	1955
81S	343	N	Pond	1897
82E	345	E	Unspecified Pit	1938
83E	348	E	Unspecified Pit	1966
84E	348	E	Unspecified Pit	1955
85E	350	E	Cuttings	1978
86E	350	E	Cuttings	1988
87T	438	N	Slag Heap	1966
88U	448	N	Unspecified Heap	1978
89F	494	N	Unspecified Ground Workings	1966
90F	494	N	Unspecified Ground Workings	1978
91F	495	N	Unspecified Ground Workings	1988

2. Environmental Permits, Incidents and Registers Map



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- | | | |
|---|---|--|
|  Site Outline |  Recorded Pollution Incident |  RAS 3 & 4 Authorisations |
|  Dangerous Substances (List 1) |  Dangerous Substances (List 2) |  Part A(1) Authorised Processes and Historic IPC Authorisations |
|  Water Industry Referrals |  Licenced Discharge Consents |  Part A(2) and Part B Authorised Processes |
|  Red List Discharge Consents |  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:

0

Database searched and no data found.

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

2

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

ID	Distance (m)	Direction	NGR	Details
3A	272	NE	382400 390620	Address: MANHOLE 10 E.INTERCEPTOR Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016942049 Permit Version: 1 Receiving Water: RIVER MERSEY Status: REVOKED - UNSPECIFIED Issue date: Effective Date: Revocation Date: 31/03/1991
4A	272	NE	382400 390620	Address: MANHOLE 10 E.INTERCEPTOR Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016942049 Permit Version: 2 Receiving Water: RIVER MERSEY Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: Effective Date: 01-Apr-1991 Revocation Date: 30/03/2004

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:

2

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
1	253	N	382230.0 390698.0	Incident Date: 02-Apr-2002 Incident Identification: 68169.0 Pollutant: Specific Waste Materials Pollutant Description: Household Waste Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
2	295	NE	382318.0 390714.0	Incident Date: 20-May-2002 Incident Identification: 79951.0 Pollutant: Contaminated Water Pollutant Description: Landfill Leachate Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

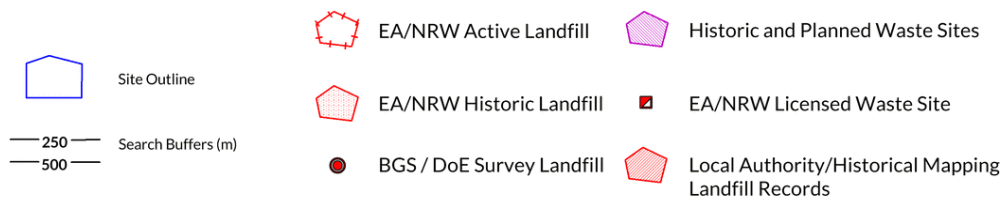
0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



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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:

4

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
2	478	N		Site Address: Princess Road - Yew Tree Road, Greater Manchester Waste Licence: - Site Reference: F051 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1948 Last Recorded: 31-Dec-1994
3	684	NE		Site Address: Former Northenden Sewage Works, Princess Parkway, Greater Manchester Waste Licence: - Site Reference: F052 Waste Type: Inert, Industrial, Commercial, Household, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Manchester City Council First Recorded: 31-Dec-1950 Last Recorded: 31-Dec-1965
Not shown	1436	SE		Site Address: Longley Lane, Northenden, Greater Manchester Waste Licence: - Site Reference: F053 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1448	N		Site Address: Landfill site at Barlow Hall Farm, Willenhall Road, Charlton-Cum-Hardy Waste Licence: Yes Site Reference: F025, RD/RES/001/85, RD/RES/001/77 Waste Type: Inert, Industrial, Commercial, Household, Special Licence Issue: 20-Feb-1986 Licence Surrendered: 30-Jan-1991 Licence Holder Address: - Operator: - Licence Holder: Greater Manchester Waste Disposal Authority First Recorded: 06-Jul-1978 Last Recorded: 02-Jun-1986

ID	Distance (m)	Direction	NGR	Details
Environmental Permitting Regulations (Waste) Reference: -				

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:

2

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

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
Not shown	1465	N	381633 391958	Refuse Tip	1991 mapping	Polygon
Not shown	1465	N	381633 391958	Refuse Tip	1991 mapping	Polygon

3.2 Other Waste Sites

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

1

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
1	460	SE	382704 389894	Type of Site: Recycling Centre Site Address: GMW Depot, 15 Longley Lane, Wythenshawe, MANCHESTER, Greater Manchester, M22 4JL Planning Application Reference: 073854/VO/2004/S2 Date: 14/03/2005 Further Details: Scheme comprises a materials recycling centre of excellence. Works include concrete hardstanding, cover for green waste areas and access improvements. Construction - kerbing, reinforced concrete surfacing, road drainage, road signage, white lining site works. An application (ref: 063199/VO/SOUTH2/01) for outline planning permission was granted by Manchester C.C. Please note addition of mechanical and electrical sub contractor.

ID	Distance (m)	Direction	NGR	Details
Data Source: Historic Planning Application Data Type: Point				

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

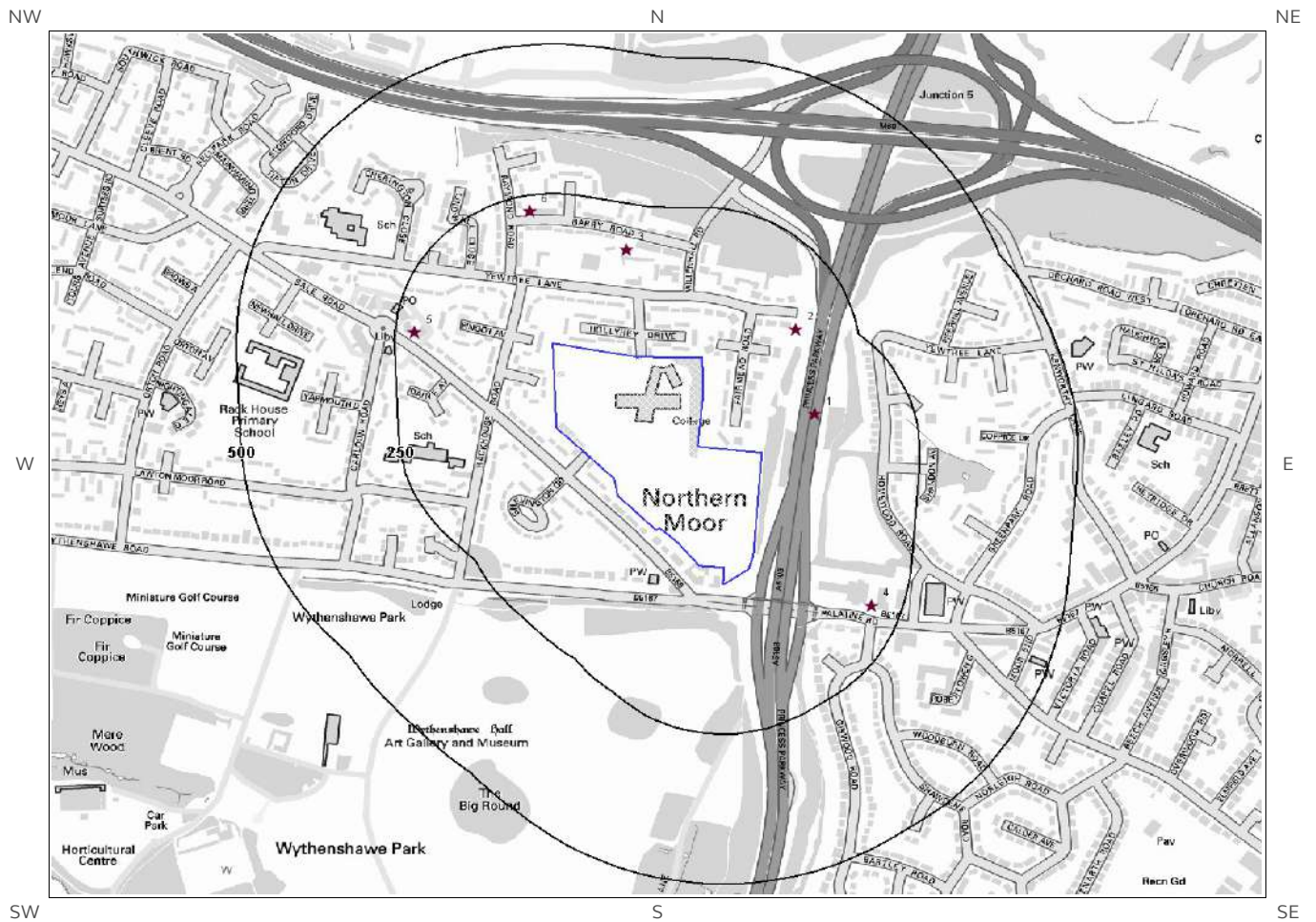
4

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	1380	SE	383250 389130	Site Address: The Old Railway Station, Longley Lane, Sharston Ind Est, Manchester, M22 4SS Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PPO005 EPR reference: EA/EPR/AB3205FD/T001 Operator: P P O' Connor Limited Waste Management licence No: 53457 Annual Tonnage: 3250.0 Issue Date: 16/02/1998 Effective Date: 27/06/2013 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: The Old Railway Station Correspondence Address: -
Not shown	1480	SE	383413 389163	Site Address: The Old Railway Station, Longley Lane, Sharston Ind Est, Manchester, M22 4SS Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MOH005 EPR reference: EA/EPR/UP3390VZ/T001 Operator: M O' Halloran & Son (Plant Hire) Ltd Waste Management licence No: 53457 Annual Tonnage: 3250.0 Issue Date: 16/02/1998 Effective Date: 21/03/2011 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: The Old Railway Station Correspondence Address: -
Not shown	1480	SE	383413 389163	Site Address: The Old Railway Station, Longley Lane, Sharston Ind Area, Manchester, Lancs, M22 4SS Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: REC249 EPR reference: GP3093SD/T001 Operator: The Recycling Hutch Ltd Waste Management licence No: 53457 Annual Tonnage: 3250.0 Issue Date: 16/02/1998 Effective Date: 16/04/2010 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: The Recycling Hutch Correspondence Address: -
Not shown	1480	SE	383413 389163	Site Address: The Old Railway Station, Longley Lane, Sharston Ind Area, Manchester, M22 4SS Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: DSH001 EPR reference: - Issue Date: 16/02/1998 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Davidson's Skip Hire Ltd Correspondence Address: The Old Railway

ID	Distance (m)	Direction	NGR	Details
			Operator: Davidson's Skip Hire Ltd Waste Management licence No: 53457 Annual Tonnage: 3250.0	Station, Longley Lane, Sharston Ind Area, Manchester, M22 4SS

4. Current Land Use Map



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4. Current Land Uses

4.1 Current Industrial Data

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

6

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	106	NE	Gantry	382367 390355	Greater Manchester, M22	Travelling Cranes and Gantries	Industrial Features
2	155	E	Electricity Sub Station	382337 390496	Greater Manchester, M23	Electrical Features	Infrastructure and Facilities
3	175	N	Fix Computers	382069 390629	46, Barry Road, Manchester, Greater Manchester, M23 0FA	Electrical Equipment Repair and Servicing	Repair and Servicing
4	203	E	Electricity Sub Station	382457 390035	Greater Manchester, M22	Electrical Features	Infrastructure and Facilities
5	219	W	Click Chemist	381734 390491	100b, Sale Road, Manchester, Greater Manchester, M23 0BX	Ambulance and Medical Transportation Services	Health Support Services
6	225	N	Ace Alarms	381916 390692	3, Barry Road, Manchester, Greater Manchester, M23 0FH	Vehicle Repair, Testing and Servicing	Repair and Servicing

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

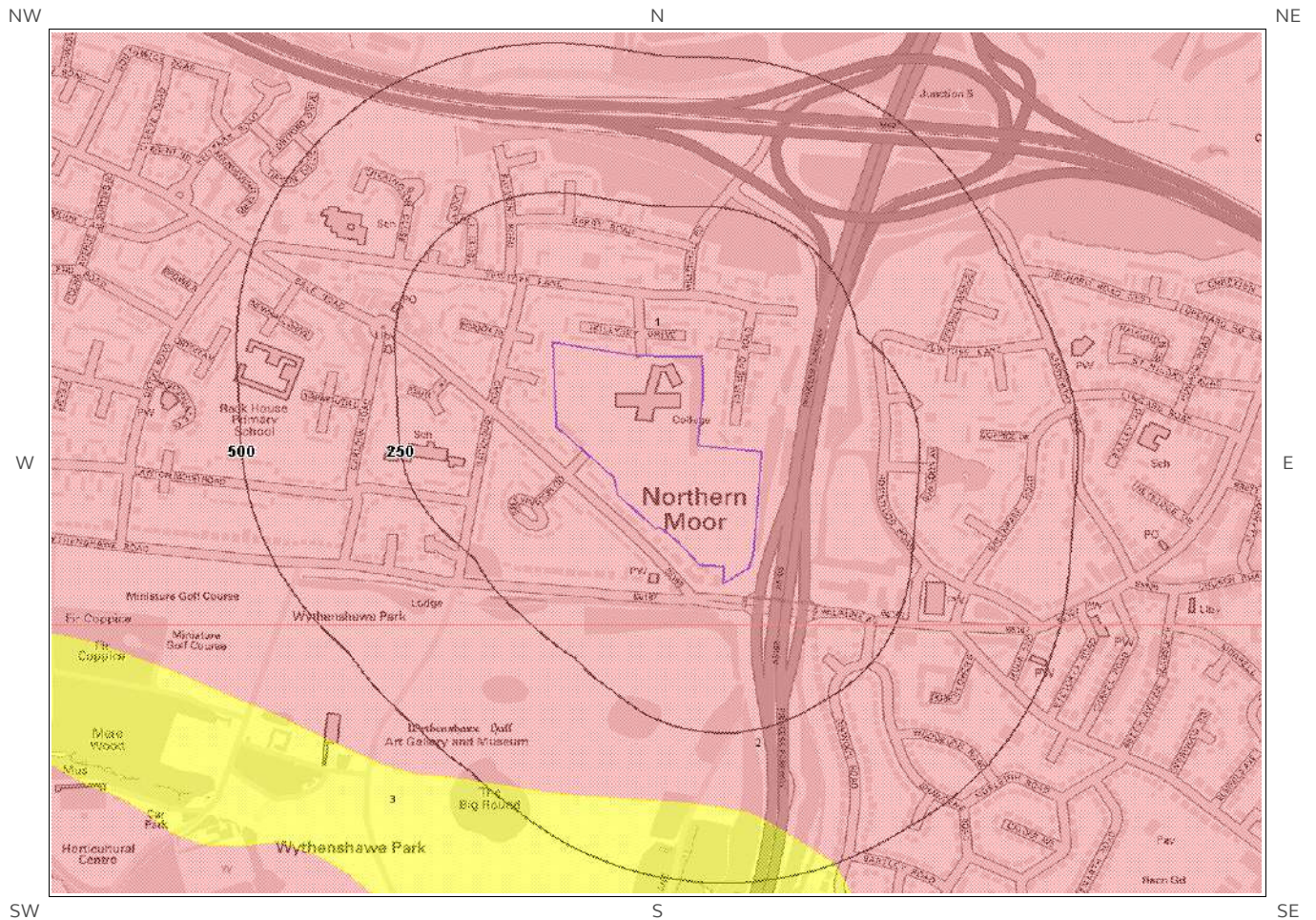
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
TPSF-SIMS	TARPORLEY SILTSTONE FORMATION	SILTSTONE, MUDSTONE AND SANDSTONE

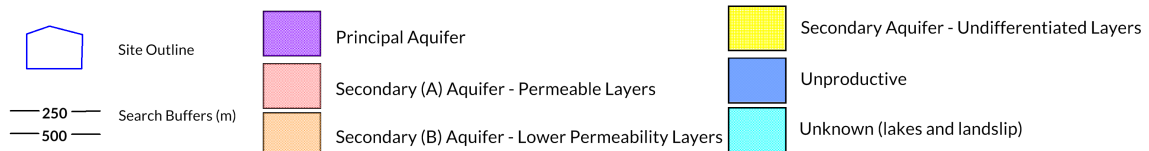
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



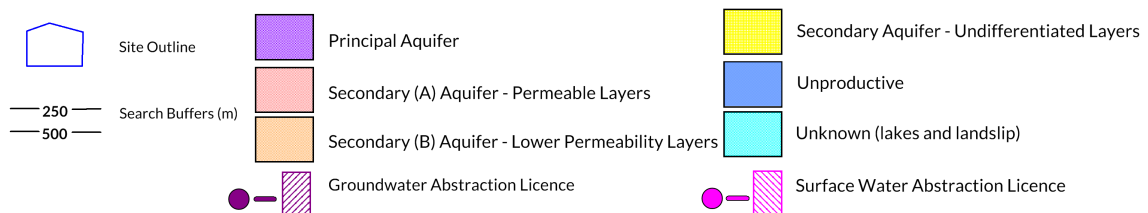
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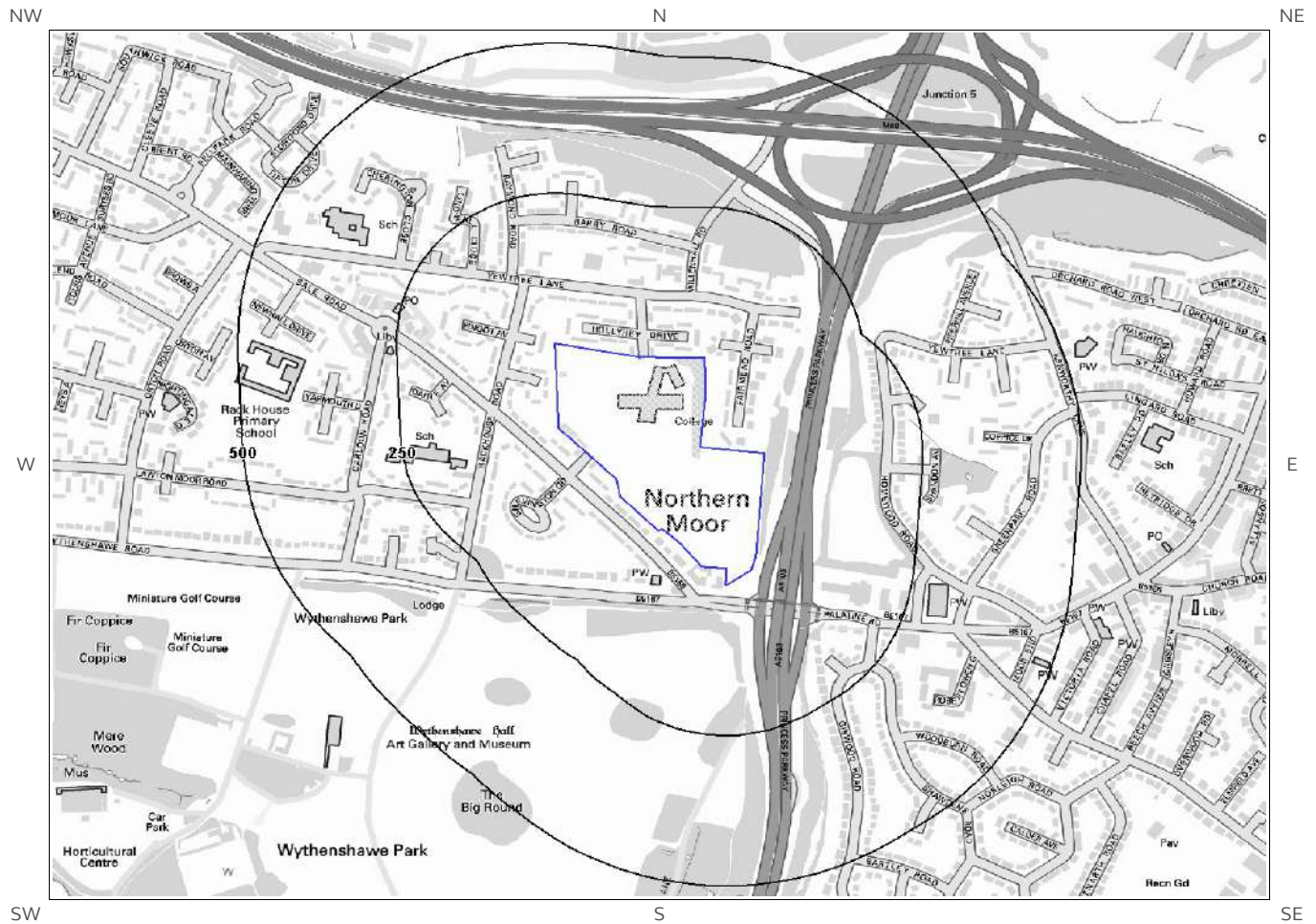
6b. Aquifer Within Bedrock Geology and Abstraction Licences



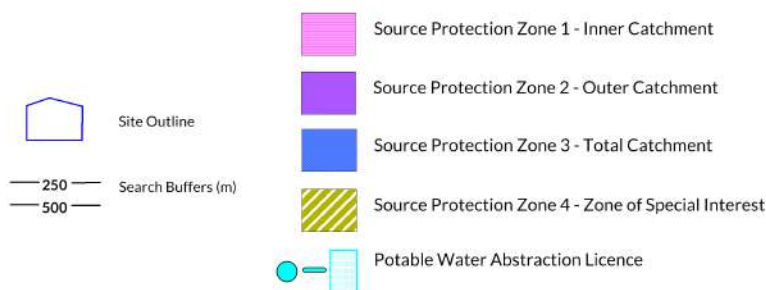
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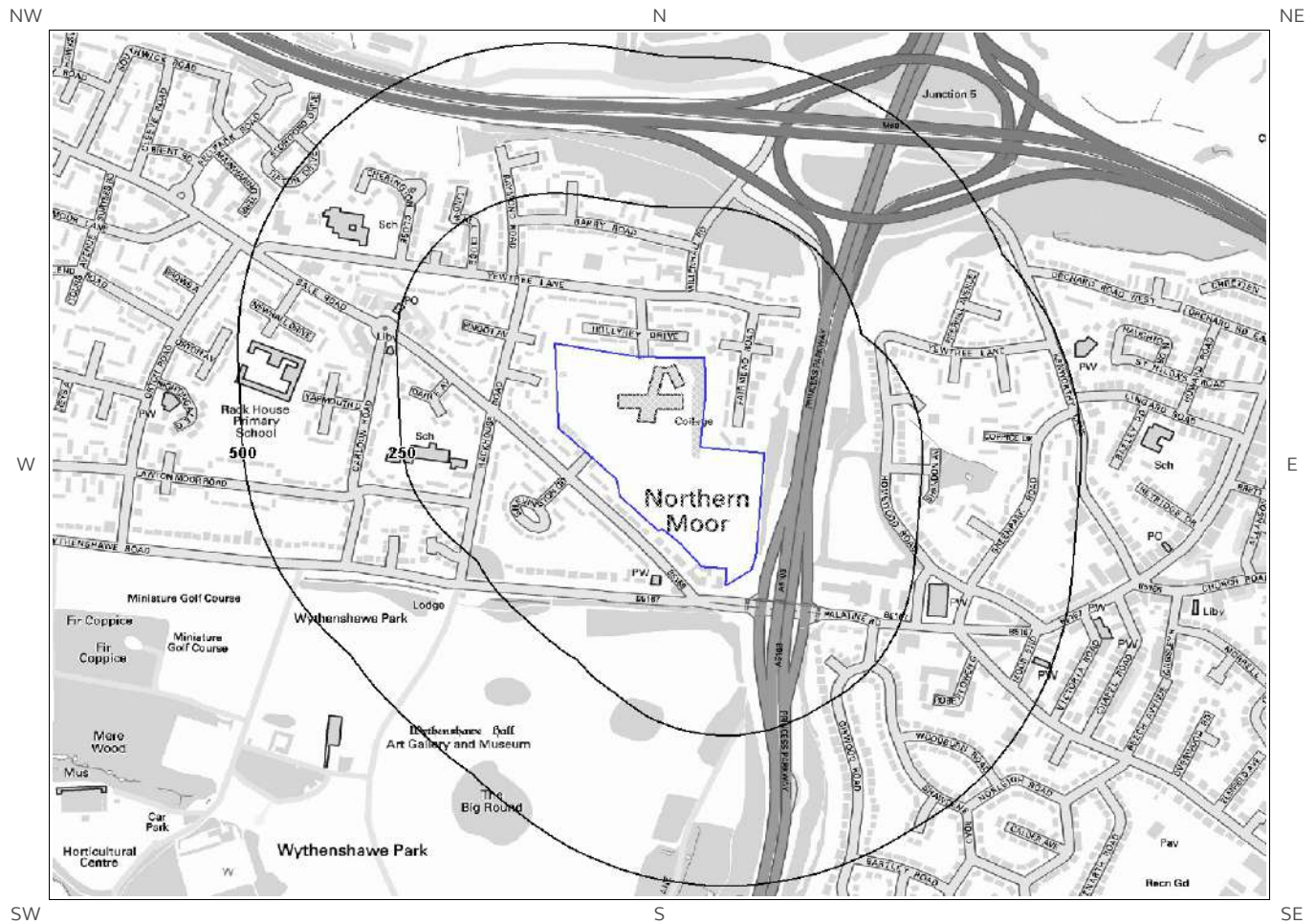
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences



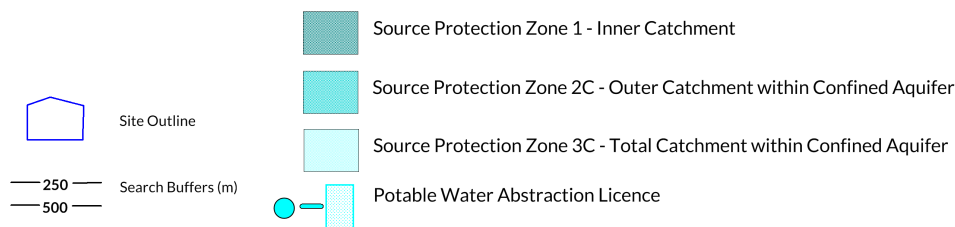
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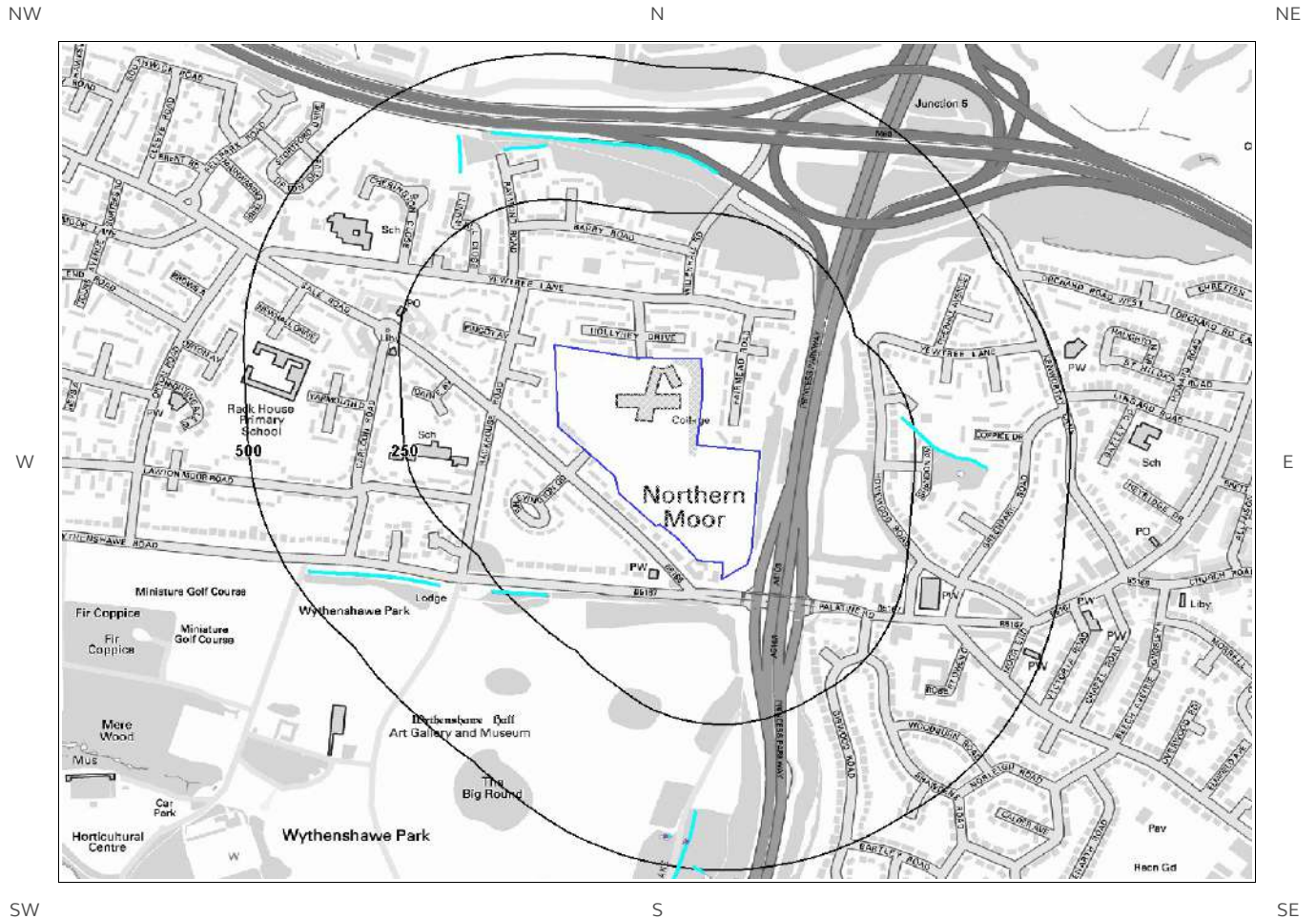
6d. Hydrogeology – Source Protection Zones within confined aquifer



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6e. Hydrology – Watercourse Network and River Quality



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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
2	70	S	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
3	371	S	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

6.2 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
3	0	On Site	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers
4	70	S	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers

6.3 Groundwater Abstraction Licences

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
Not shown	1652	N	382230 392100	Status: Active Licence No: 2569015015 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT CHORLTON-CUM-HARDY GOLF CLUB Data Type: Point Name: CHORLTON CUM HARDY GOLF CO LTD Annual Volume (m³): 8,500 Max Daily Volume (m³): 70 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 01/04/2008 Version End Date:
Not shown	1676	E	383950 390470	Status: Active Licence No: 2569015006 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT DIDSBUY GOLF CLUB NORTHENDEN WYTHENSHAW Data Type: Point Name: DIDSBUY GOLF CLUB LTD Annual Volume (m³): 9,092 Max Daily Volume (m³): 68 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 01/04/2008 Version End Date:
Not shown	1676	E	383950 390470	Status: Historical Licence No: 2569015006 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: "BOREHOLE AT DIDSBUY GOLF CLUB, NORTHENDEN, WYTHENSHAW," Data Type: Point Name: DIDSBUY GOLF CLUB LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 24/12/1992 Version End Date:
Not shown	1676	E	383950 390470	Status: Historical Licence No: 2569015006 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT DIDSBUY GOLF CLUB, NORTHENDEN, WYTHENSHAW, Data Type: Point Name: DIDSBUY GOLF CLUB LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 24/12/1992 Version End Date:
Not shown	1827	SE	383610 388860	Status: Historical Licence No: 2569014037 Details: Laundry Use Direct Source: Ground Water - North West Region Point: UNDERGROUND STRATA: BOREHOLE AT SHARSTON, MANCHESTER Data Type: Point Name: MR KHALID SALEEM Annual Volume (m³): 20,975 Max Daily Volume (m³): 81 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 15/11/2002 Version End Date:
Not shown	1827	SE	383610 388860	Status: Historical Licence No: 2569014037 Details: Laundry Use Direct Source: Ground Water - North West Region Point: "UNDERGROUND STRATA: BOREHOLE AT SHARSTON, MANCHESTER" Data Type: Point Name: MR KHALID SALEEM Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 15/11/2002 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1828	NW	380600 391700	Status: Historical Licence No: 2569015003 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: WELL AT NURSERY, RUTLAND LANE, SALE, CHESHIRE Data Type: Point Name: RILEY Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 25/01/1966 Version End Date:
Not shown	1968	NW	380600 391900	Status: Historical Licence No: 2569015002 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: WELL AT PREMISES, 5 RUTLAND LANE, SALE, CHESHIRE Data Type: Point Name: ASTBURY Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 28/01/1966 Version End Date:
Not shown	1968	NW	380600 391900	Status: Historical Licence No: 2569015002 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "WELL AT PREMISES, 5 RUTLAND LANE, SALE, CHESHIRE" Data Type: Point Name: ASTBURY Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 28/01/1966 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	734	NE	382650 391020	Status: Historical Licence No: 2569015016 Details: General Washing/Process Washing Direct Source: Surface, Non-Tidal - North West Region Point: RIVER MERSEY AT TRAFFORD, MANCHESTER Data Type: Point Name: AMEC / ALFRED MCALPINE JV Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 28/11/2003 Expiry Date: 31/12/2006 Issue No: 1 Version Start Date: 28/11/2003 Version End Date:
Not shown	734	NE	382650 391020	Status: Historical Licence No: 2569015016 Details: Dust suppression Direct Source: Surface, Non-Tidal - North West Region Point: RIVER MERSEY AT TRAFFORD, MANCHESTER Data Type: Point Name: AMEC / ALFRED MCALPINE JV Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 28/11/2003 Expiry Date: 31/12/2006 Issue No: 1 Version Start Date: 28/11/2003 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

None identified

Database searched and no data found.

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	Minor 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.
70	S	Minor 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.
76	SW	Minor Aquifer/High Leaching Potential	H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater.

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:

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

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

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
Not shown	784	NE	382640 391090	River Name: Mersey Reach: Stockport Stw To Princess Parkway End/Start of Stretch: End of Stretch NGR	E	E	E	E	E

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAH). 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):

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
Not shown	784	NE	382640 391090	River Name: Mersey Reach: Princess Parkway To Carrington End/Start of Stretch: Start of Stretch NGR	D	D	D	D	C

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	205 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.1
6	205 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.1
2	235 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
7	235 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
3	319 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	319 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
4	329 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.0
9	329 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.0
5	334 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	334 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
6	342 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	342 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
7	350 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
12	350 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
8	354 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	354 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
9	402 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	402 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
10	448 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	448 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
11	450 S	-	Lake, loch or reservoir.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.5
Not shown	450 S	-	Lake, loch or reservoir.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.5
12	454 S	-	Lake, loch or reservoir.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
13	454 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
14	454 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	454 S	-	Lake, loch or reservoir.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	454 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	454 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
15	495 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	495 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface 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

Identified

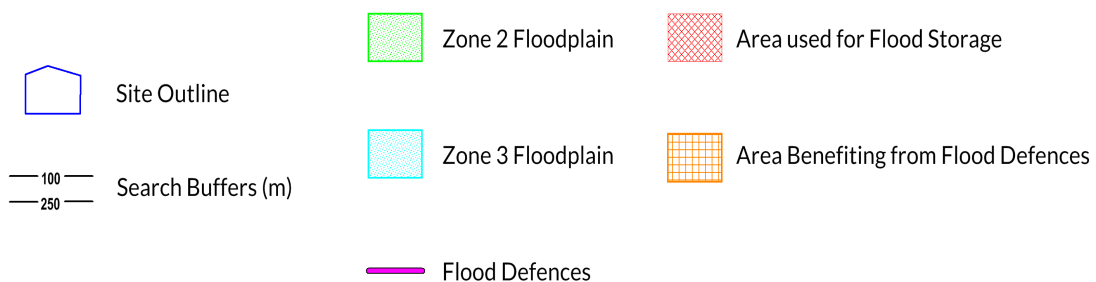
The following surface water records are not represented on mapping:

Distance (m)	Direction
235	E

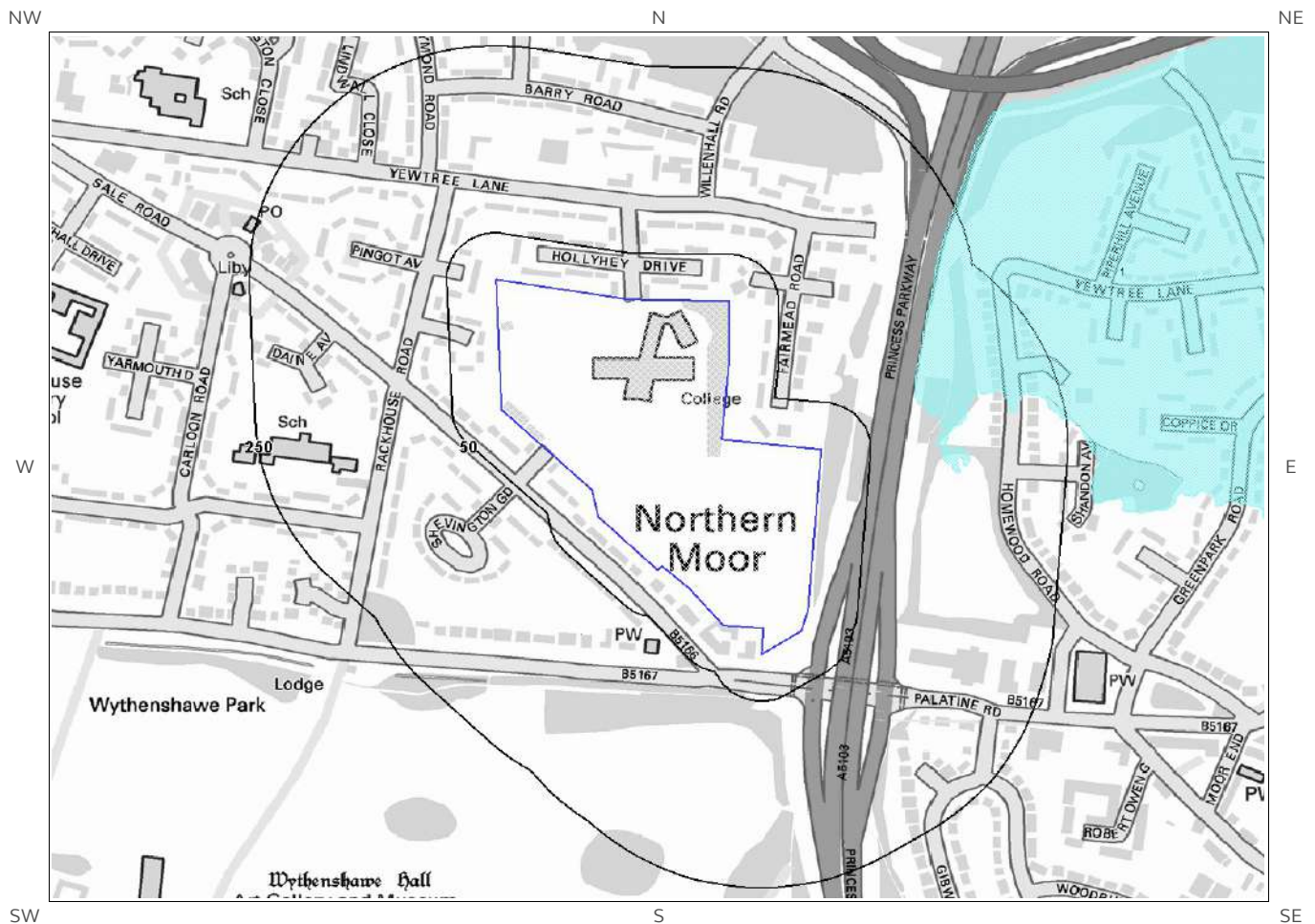
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



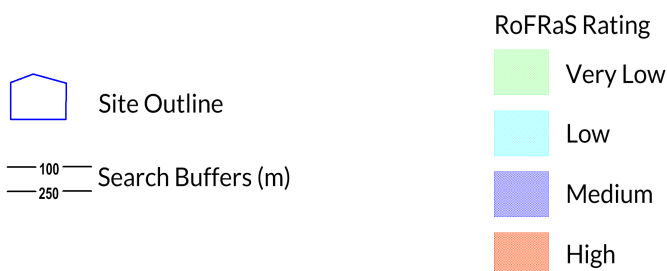
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7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

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	234	E	09-Sep-2019	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m None 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.

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

Highest risk of flooding onsite Very Low

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

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

7.4 Flood Defences

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

None identified

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

Not Prone

The area is not considered to be prone to groundwater flooding based on rock type.

7.8 Groundwater Flooding Confidence Areas

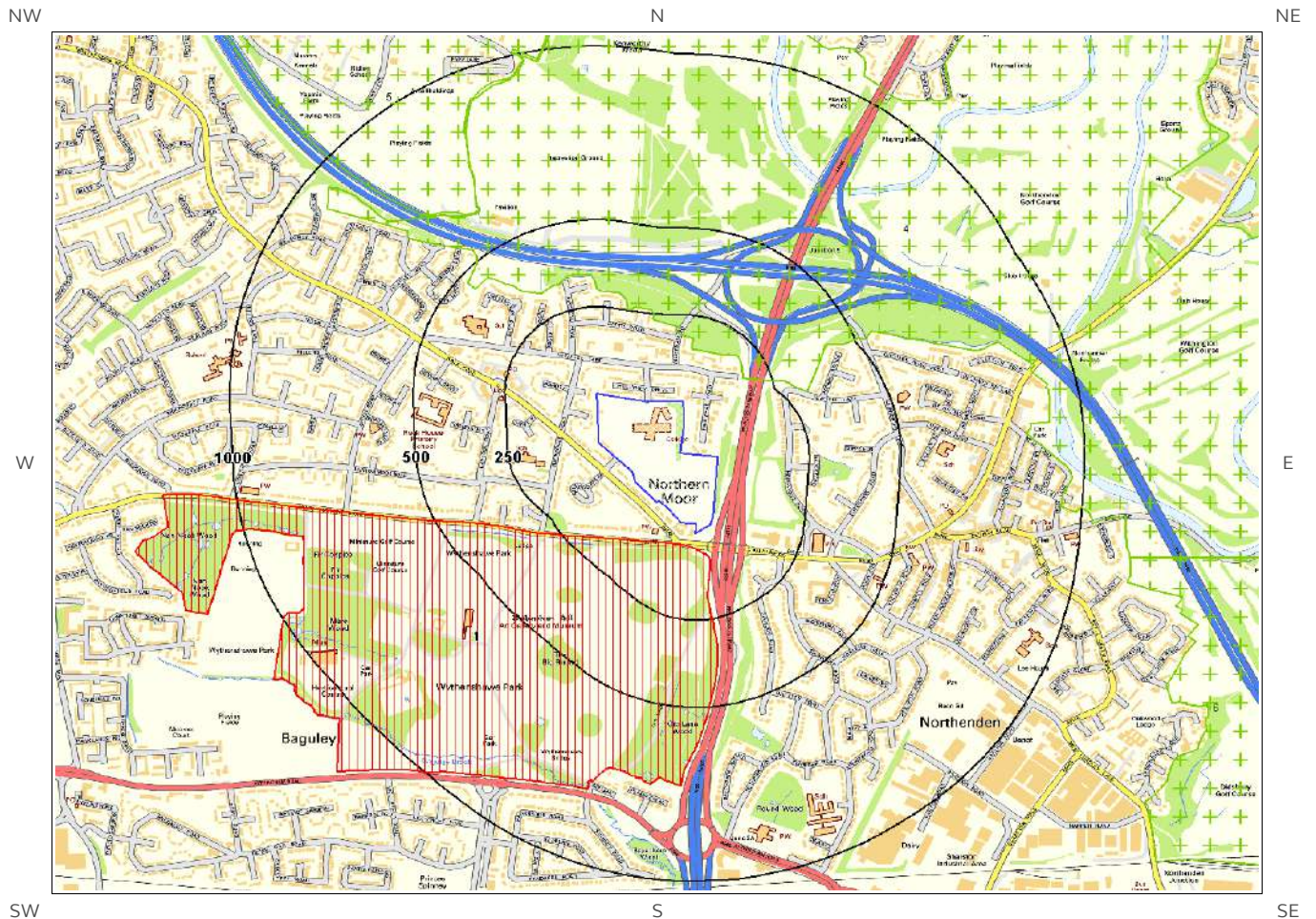
British Geological Survey confidence rating in this result

Not Applicable

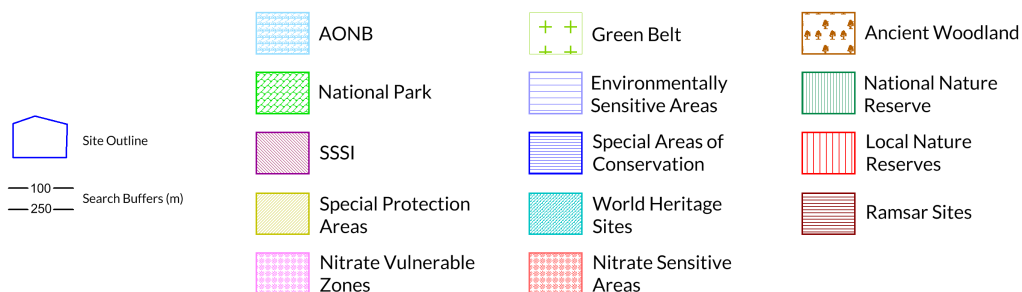
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

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

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

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:

3

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
1	42	S	Wythenshawe Park	Natural England
Not shown	1169	N	Chorlton Water Park	Natural England
Not shown	1617	E	Stenner Woods and Milgate Fields, Didsbury	Natural England

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

4

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ID	Distance	Direction	Green Belt Name	Local Authority Name
4	153	N	Liverpool, Manchester and West Yorks Greenbelt	Manchester District (B)
5	616	NW	Liverpool, Manchester and West Yorks Greenbelt	Trafford District (B)
6	1143	E	Liverpool, Manchester and West Yorks Greenbelt	Manchester District (B)
Not shown	1923	SE	Liverpool, Manchester and West Yorks Greenbelt	Stockport District (B)

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

None identified

Database searched and no data found.

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



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Keyworth, Nottingham NG12 5GG
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BGS Geological Hazards Reports and general geological enquiries:
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DX 716176 Mansfield 5
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Adanac Drive, Southampton
SO16 0AS
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Authority: Manchester City Council
Phone: 0161 234 5000
Web: <http://www.manchester.gov.uk/>
Address: , Manchester, M60 2LA

Gemapping PLC
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Hampshire RG27 8NW
Tel: 01252 845444



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Grid Ref: 382118, 390271

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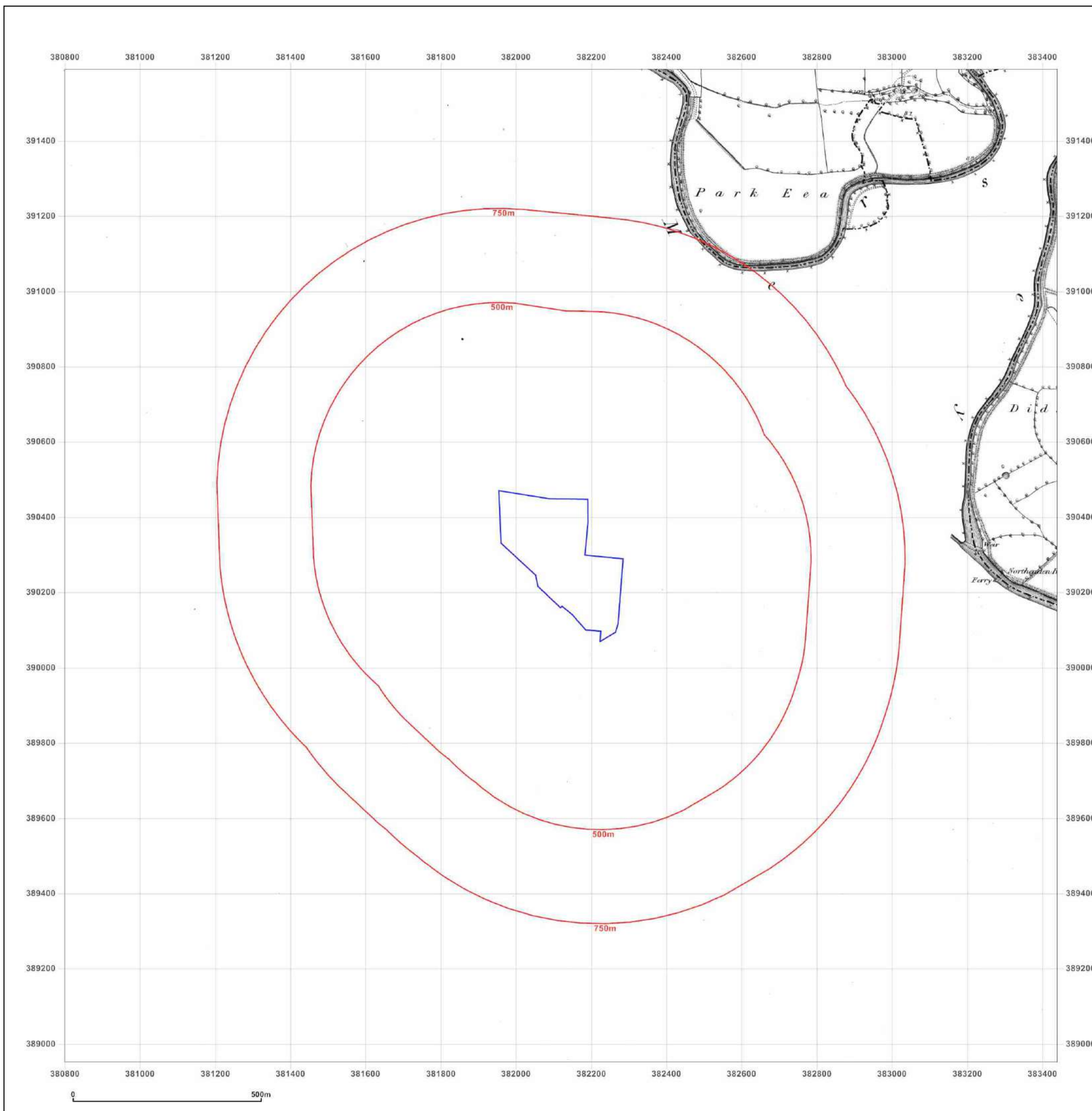


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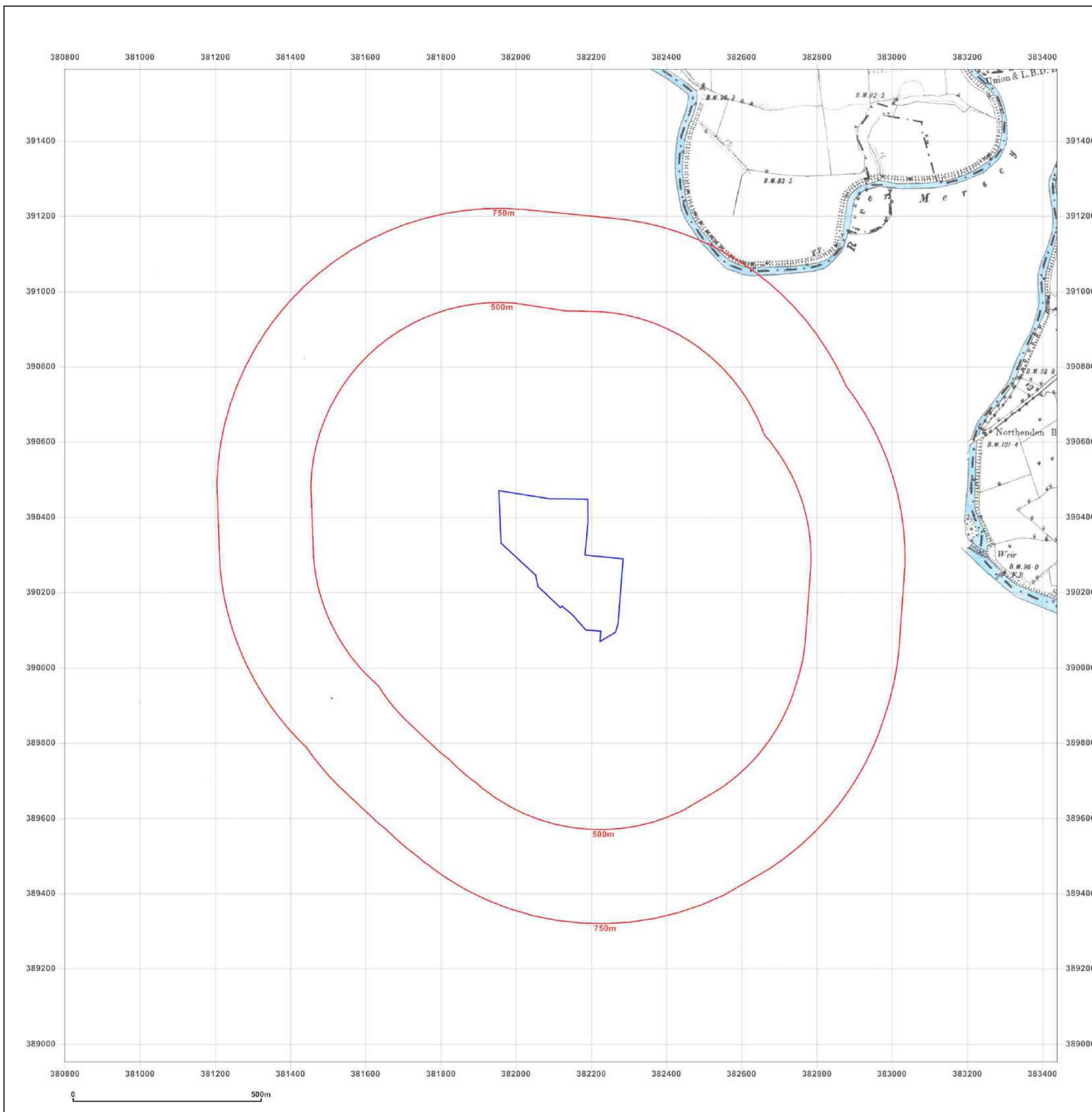


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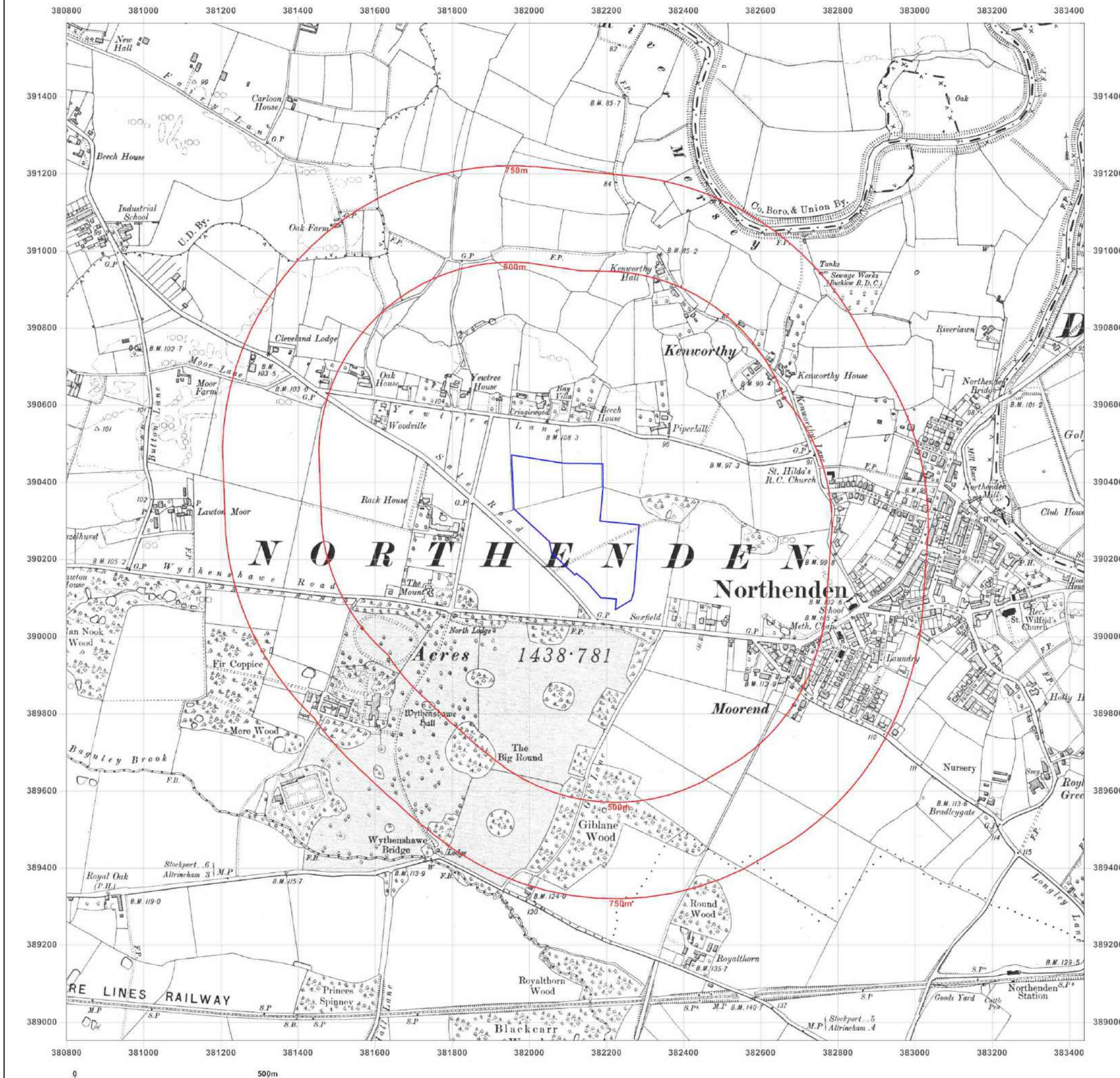


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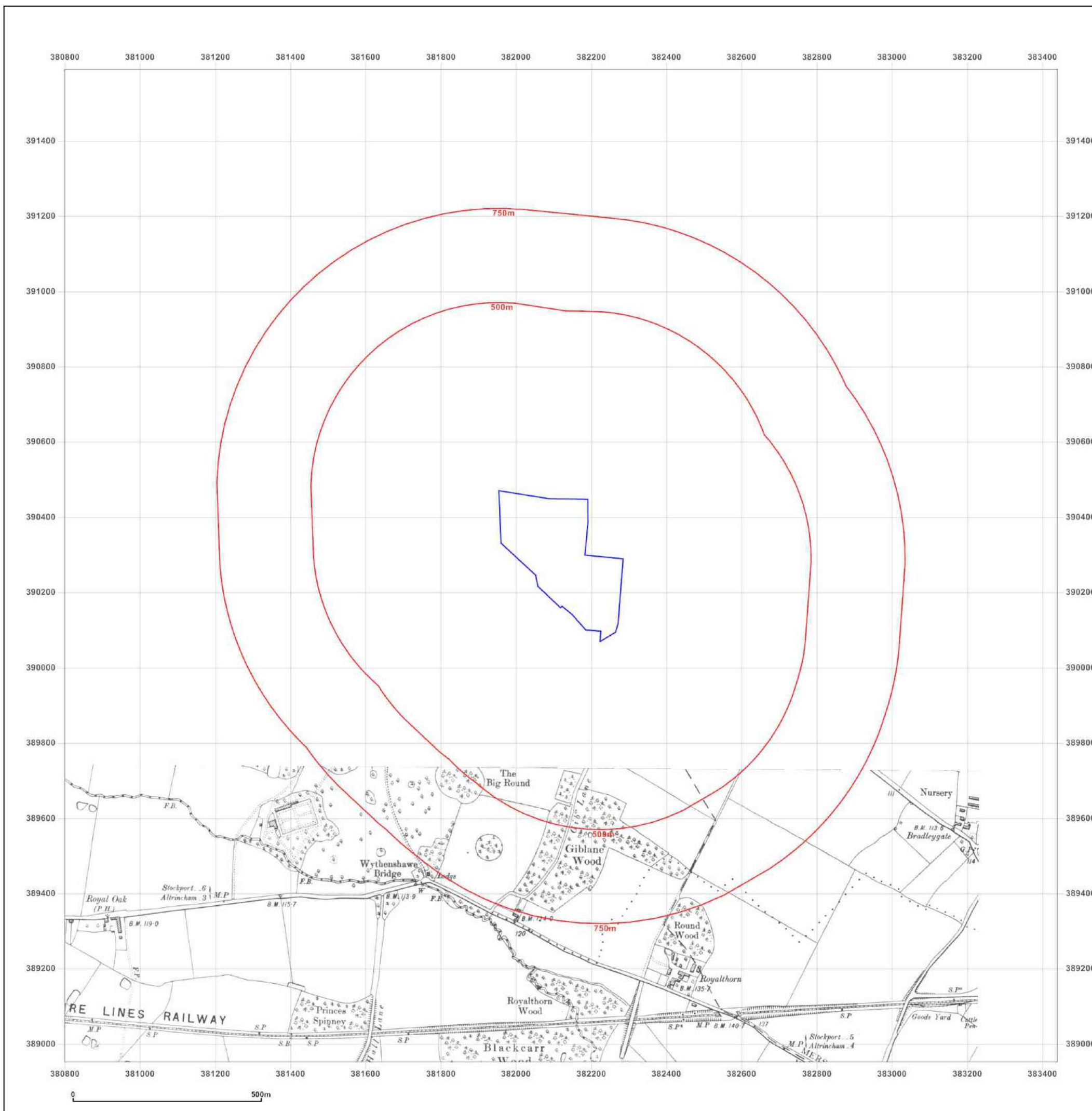


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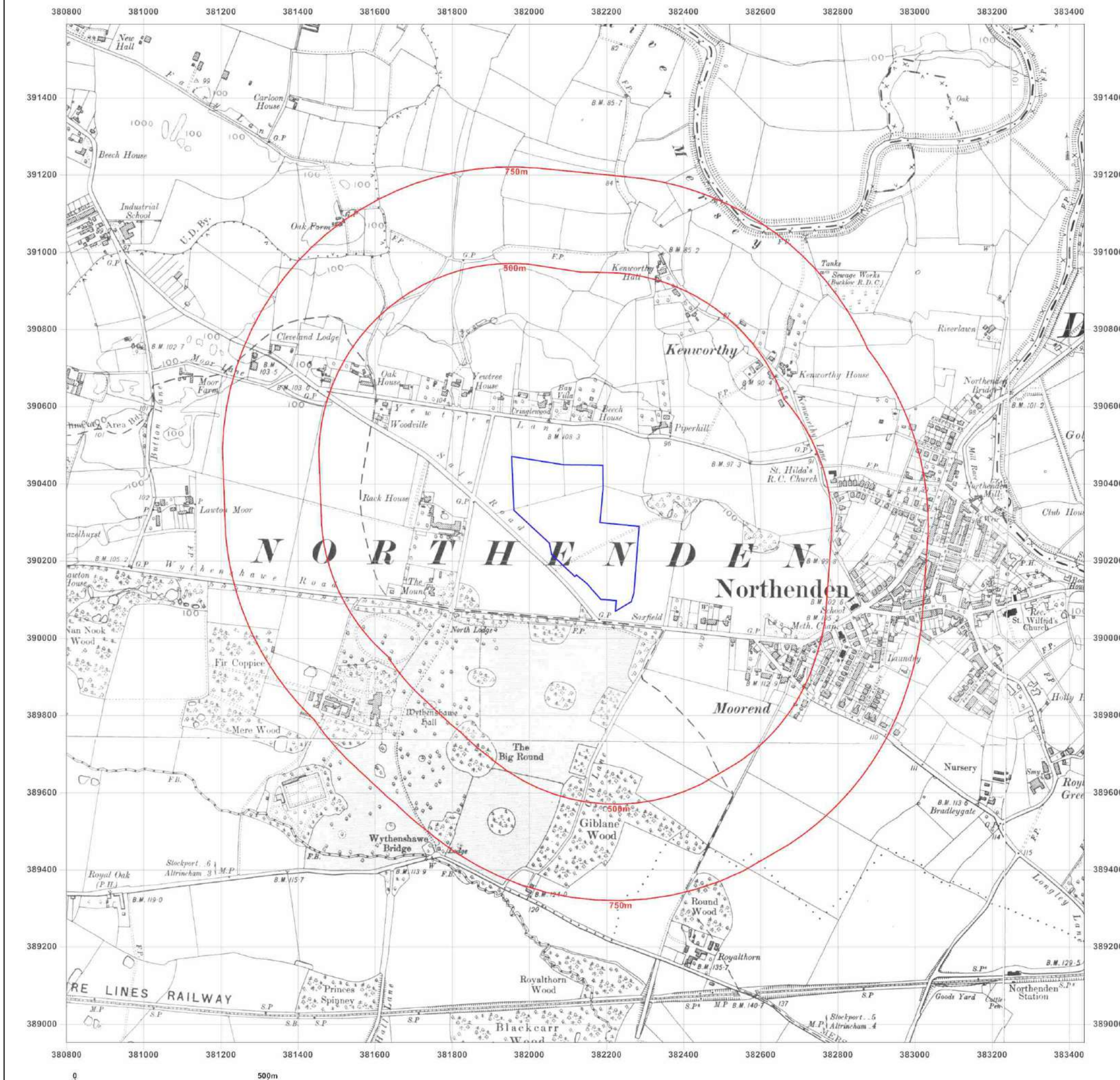


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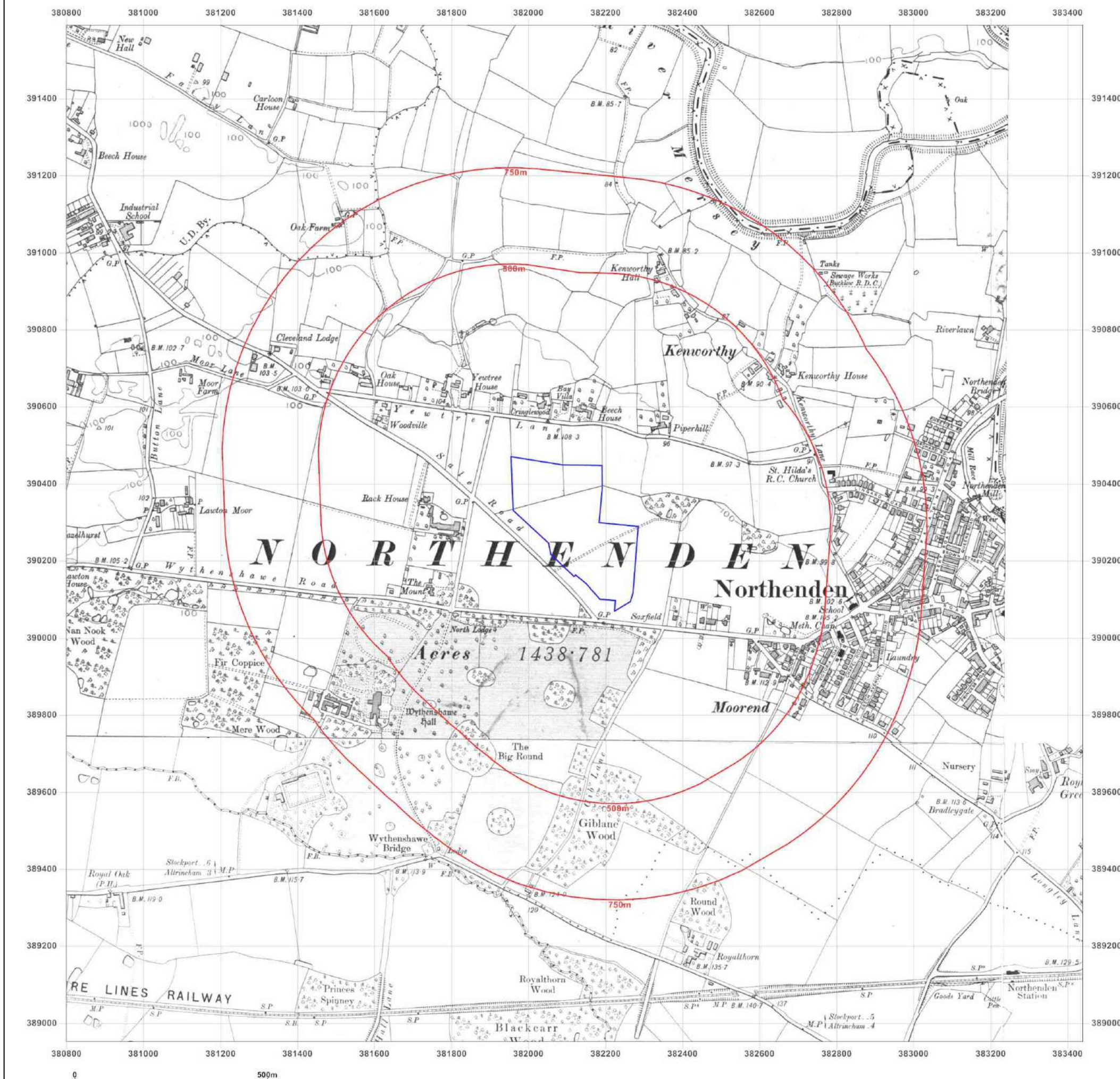


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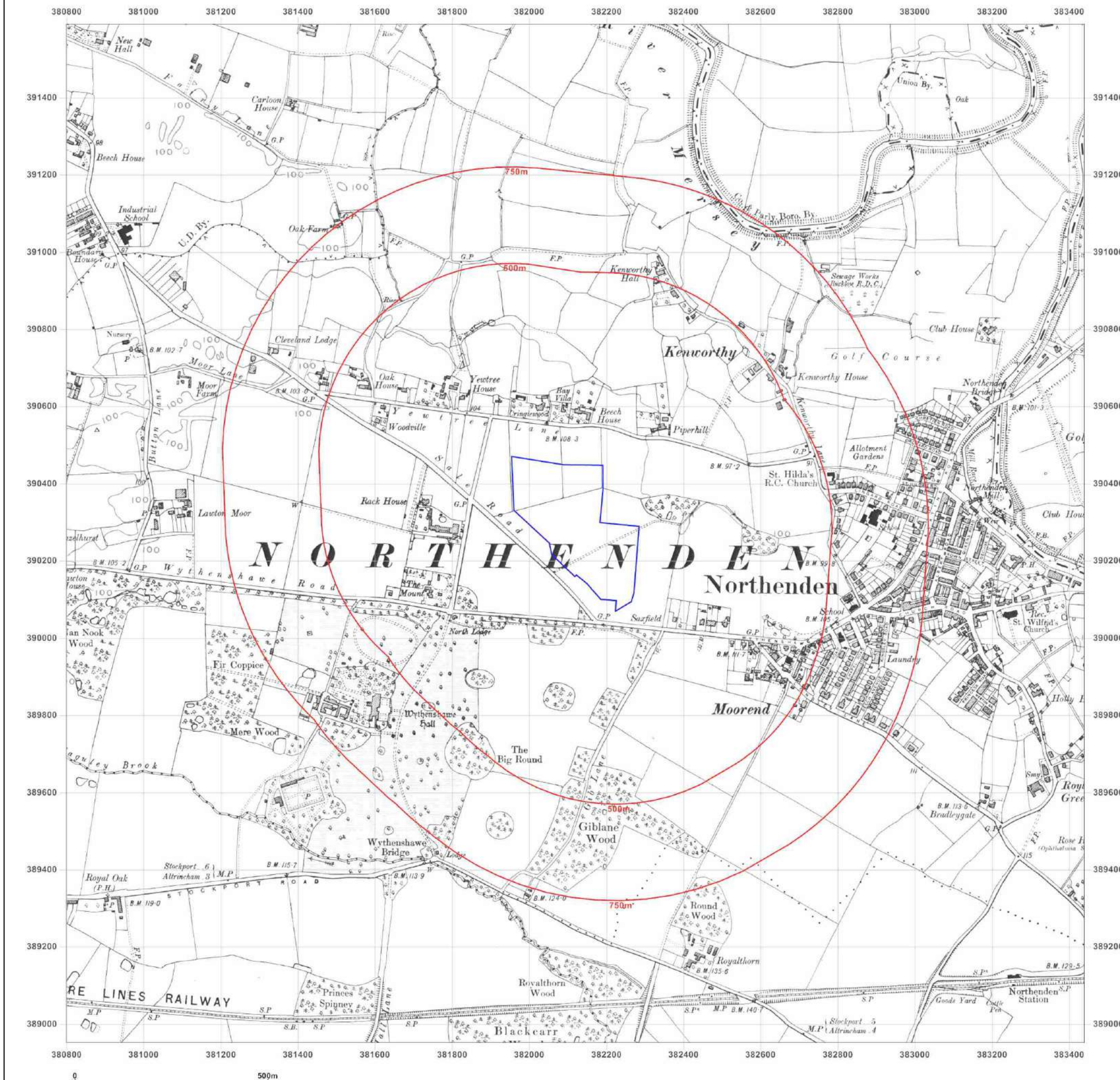


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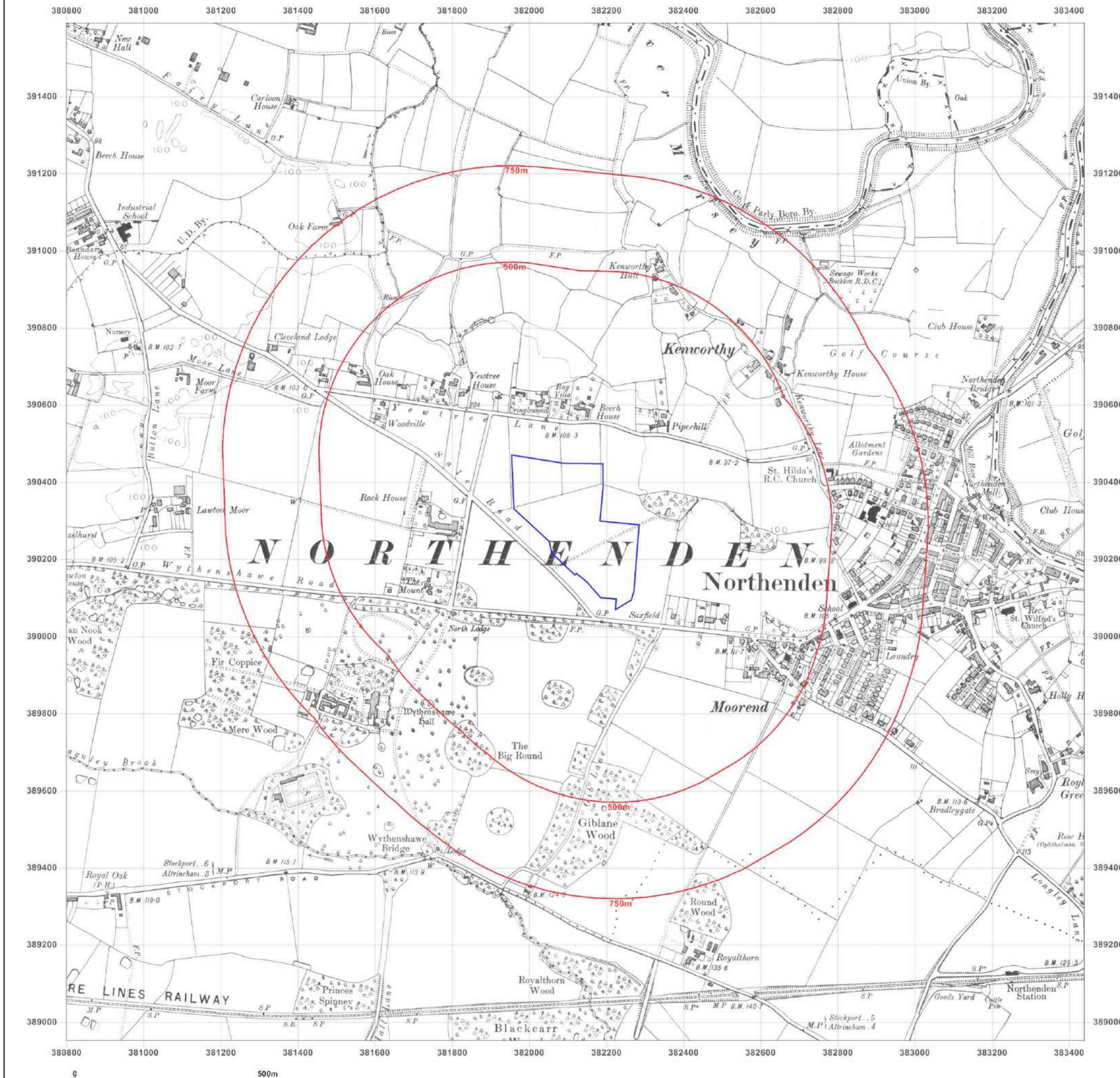


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Revised 1938
Edition 1938
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Revised 1938
Edition 1938
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Site Details:

CITY COLLEGE MANCHESTER,
ARDEN CENTRE, SALE ROAD,
MANCHESTER, M23 0DD

Client Ref: REF_108393_PO_007600
Report Ref: GS-6404759
Grid Ref: 382118, 390271

Map Name: Provisional

Map date: 1954-1955

Scale: 1:10,560

Printed at: 1:10,560



Surveyed N/A
Revised 1955
Edition N/A
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Surveyed 1949
Revised 1954
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CITY COLLEGE MANCHESTER,
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MANCHESTER, M23 0DD

Client Ref: REF_108393_PO_007600
Report Ref: GS-6404759
Grid Ref: 382118, 390271

Map Name: Provisional

Map date: 1966-1967

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1966
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