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THE DEAN TRUST

Dean Trust Academy, Ardwick, Manchester

Phase I Desk Study Assessment Report

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DRAWINGS

Drawing Number	Rev	Title
M4246/01	-	Site Location Plan

APPENDICES

Appendix	Title
Photographs	Site Walkover Photographs
Appendix A	BSL Methodology and Guidance
Appendix B	Historical Maps
Appendix C	BGS Boreholes
Appendix D	Mining Search Report
Appendix E	Environmental Database Search

1.0 INTRODUCTION

1.1 Context

This report describes a Phase I Desk Study Assessment carried out by Brownfield Solutions Limited (BSL) for The Dean Trust on a site off Stockport Road, Longsight.

This report has been completed in general accordance with the following guidance:

- CLR11 Model Procedures for the Management of Land Contamination.
- BS 10175:2011+A2:2017 Investigation of Potentially Contaminated Sites.
- BS5930: 2015 Code of Practice for Ground Investigations.
- BS EN 1997-2:2007 Eurocode 7 Geotechnical design. Ground investigation and testing plus UK National Annex.

1.2 Objectives and Scope

The objectives of this assessment were to determine the environmental setting and ground conditions of the site, highlighting potential areas of concern that may govern the redevelopment.

The scope of works comprises a Desk Study and site walk-over, with a review of the site, surroundings, historical uses and environmental setting in order to develop a preliminary Conceptual Site Model (CSM). A summary of previous investigations carried out at the site has also been undertaken.

1.3 Proposed Development

The proposed development is indicated to comprise a new two storey extension with undercroft car parking, a single storey dining extension, and removal of earth bunds for construction of new surface level car park and hard play areas.

1.4 Previous Reports

This report should be read in conjunction with the following reports:

Phase 1 Desk Study	• Atkins Dean Trust Ardwick High School (Revised Scheme) Phase 1: Geo-Environmental Assessment (5130327/DTAHS-RS/002) issued August 2015.
Phase 2 / Site Investigation	• Atkins Manchester Schools Basic Needs Programme: Daisy Mill Ground Investigation Report (GTG20140378/5130327/19/Rev 0) issued December 2014. • Geotechnics Limited Factual Report on Ground Investigation issued December 2014. • Atkins Dean Trust Ardwick High School (Revised Scheme) Ground Investigation Report – Contaminated Land Risk Assessment (5130327/09/CLRA/Rev 0) issued August 2015. • Atkins Manchester Schools Programme: Dean Trust Ardwick Remediation Strategy (5119532_1) issued June 2015. • ESG Factual Report (LO/R5141/001/NB) issued October 2015. • ESG Detailed Quantitative Risk Assessment Report (R5141b) issued October 2015. • Solmek Phase 2 Site Investigation Report (S160937/SI) issued November 2016.
Remediation / Validation	• Atkins Manchester Schools Programme: Dean Trust Ardwick Remediation Strategy (5119532_1) issued June 2015. • ESG Remediation Strategy (R5141/2) issued October 2015. • ESG Remediation Verification Report (R5141/3) issued December 2016.

Other	• ESG Materials Management Plan Dean Trust Ardwick 2016 (R5141/MMP) issued December 2015. • Zetica Site Safe UXO Desk Study (P5220-15-R1-A) issued April 2015.
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1.5 Limitations

This desk study assessment has been prepared in accordance with the relevant legislative framework, guidance and risk assessment methodology as outlined in Appendix A.

The findings and opinions conveyed via this desk study are based on information obtained from a number of sources as detailed within this report, BSL have assumed this information is correct and reliable. Nevertheless, BSL cannot and does not guarantee the authenticity or reliability of the information it has relied upon.

There may be other conditions prevailing on the site which are outside the scope of work and have not been highlighted by this assessment and therefore have not been taken into account by this report. Responsibility cannot be accepted for such site conditions not revealed by the assessment.

This report has been prepared for the sole use and reliance of the Client, The Dean Trust.. No other third parties may rely upon or reproduce the contents of this report without the written permission of Brownfield Solutions Ltd (BSL). If any unauthorised third party comes into possession of this report, they rely on it at their own risk and BSL do not owe them any Duty of Care.

Any recommendations made in this report should be confirmed with the Regulatory Authorities prior to implementation to ensure compliance.

This assessment has been based on the proposed planning layouts provided. Any subsequent change to the planning layout may have an impact on the validity of recommendations made within this report. Furthermore, new information, changed practices or new legislation may necessitate revised interpretation of the report after the date of its submission.

The site plans enclosed in this report should not be scaled off. Any site boundary line depicted on plans does not imply legal ownership of land.

Notwithstanding site observations concerning the presence or otherwise of archaeological issues, asbestos-containing materials (ACM) or invasive weeds (e.g. Japanese knotweed), this report does not constitute a formal survey of these potential issues.

2.0 THE SITE

2.1 Location

The site is located off Stockport Road, Ardwick, M13 0LF. It is situated approximately 2.7 Km south-east of Manchester City Centre, centred on National Grid Reference 386240, 396308 as shown on the Site Location Plan, Drawing No. M4246/01.

2.2 Site Description

A walkover survey was carried out on the site on the 28th June 2019. The main site features and potential issues identified during this survey are detailed below. A selection of photographs from the site walkover is presented to the rear of this report.

Feature	Description
Site Area	The site covers approximately 3.68 hectares.
Site Access	Pedestrian access to the site is gained off Stockport Road to the west of the site. Vehicular access is gained off Langport Avenue to the north of the site.
Current Land Use and Site Features	The site comprises The Dean Trust Academy, a secondary school built and opened in 2015. The school building is an irregular shape two to three storey which is situated in the north-western corner of the site. The southern half of the site comprises a Multi-Use Games Area (MUGA), hard surfaced sports courts are present centrally in the east of the site and a grass sports field is present in the north-east of the site. A hard play area is located within a semi-enclosed courtyard between two wings of the school building and a large area of car parking is present centrally in the north half of the site. A large mound is present in the north-eastern of the site approximately 3m (H) x 45m (L) x 20m (W). A smaller mound is present to the south of the playground which was approximately 1.5m (H) x 25m (L) x 20m (W). Areas of note were surrounded by soft landscaping with an area of paviers around a bike shed present in the east of the site adjacent to the western side of the car park.
Potential Sources of Gross Contamination	No significant sources of contamination were noted during the site walkover. Car parking was present in the east of the site but given the age and quality of surfacing any spillages and leakages are considered unlikely.
Vegetation	There are sporadic mature/semi-mature trees in the northeast of the site.
Topography	The site is generally flat, however, as noted above two mounds are present at the site.
Site Boundaries	The site is enclosed by palisade fencing to the north, east, south and west.
Surrounding Area	The site is set within residential area, bordered by Langport Avenue to the north with St Luke's C of E Primary School and a park beyond. The east of the site is bound by Cochrane Avenue and South Street with residential properties beyond. The south of the site is bound by a religious building and residential properties. The west of the site is bound by Stockport Road with residential properties beyond.

3.0 ENVIRONMENTAL SETTING

3.1 Historical Setting

Information has been obtained from historical Ordnance Survey Maps with the pertinent issues that may have affected the site, or its environs summarised below.

Notable features within 100m of the site boundary have been presented. Any features that have potentially been infilled will be considered up to 250m from the site boundary.

Feature	Distance	Years Present	Description
Ponds	On-site	1848	The earliest mapping of 1848 shows the northern part of the site to consist of open fields with four ponds present in one of the fields. By the subsequent mapping of 1890 these had potentially been infilled and built over with residential properties.
Depots	On-site	1891 – 1908 1976 – 2002	Manchester Carriage & Tramway Company Depot is present in the centre of the site from at least 1891 until 1908 denoted with sidings. However, by the mapping of 1922 it had been replaced. By 1976 another depot was erected adjacent to the Daisy Bank works and was present until the mapping of 2002; however, it no longer appears on the map of 2010.
Brewery	On-site	1891 – 1908	The Longsight Brewery is present along the northern boundary of the site from the mapping of 1891 to 1908, by 1922 it appears to have been replaced with a different, unlabelled, building.
Works	On-site	1922 – 2010	Daisy Bank works replace the old Carriage & Tramway Depot by the mapping of 1922. A mineral water works and the Thornville works are also present on the mapping of 1922. By 1933 the Thornville works were demolished and replaced by an enlarged Daisy Bank works. By 1976 the eastern part of the Daisy Bank works had been demolished and replaced with a depot. The Daisy Bank works last appears on the mapping of 2010; however, by 2014 it had been demolished and replaced with the education facility that currently occupies the site.
Laundry	On-site	1922 only	No longer present by 1933 mapping.
Wash House / Laundry	On-site	1933 - 1976	A wash house is present on-site by 1933 mapping and denoted with a chimney by 1949 mapping. The area was demolished and replaced with a laundry by 1976 mapping which was no longer present by 1991 mapping.
Electricity Substations	On-site	1949 – 1976 1992 – Present	An electricity substation is present on-site from the mapping of 1949 until 1976. By 1992 this original substation appears to have been demolished and replaced with a new substation closer to South Street which is still present on-site today.
School	On-site	2014 – Present	By the mapping of 2014 an education facility had been built on-site, this is the school that currently occupies the site today.
Warehouse / Garage	0m SE	1949 – Present	A small warehouse is present directly adjacent to the SE corner of the site from the mapping of 1949 until 1976. By 1991, however it is no longer labelled. Although, unlabelled the building still exists on present-day online mapping as 'Sinclair Autos', a small garage.
Mineral Water Works / Raven Flour Mills	20m NW	1922 – 1960	Mineral water works located approximately 20m NW of the site on the opposite side of Ducie Street on the mapping of 1922. By 1933 these works had been converted into a flour mill that remained until the mapping of 1960. By the mapping of 1976 this had been demolished and replaced with a playing field for a new C of E primary school.
Electricity Substation	20m N	1976 – Present	On the far side of Langport Avenue an electrical substation is present from the mapping of 1976.
Mineral Water Works	40m SW	1933 – 1960	Located approximately 40m SW of the site, the mineral waterworks are present between the mapping of 1933 and 1960; however, by the mapping of 1976 they had been demolished and replaced with residential properties.

Shield Works	50m SW	1922 – 1960	Located approximately 50m SW of the site, the Shield works are present between the mapping of 1922 and 1960; however, by the mapping of 1976 they had been demolished and replaced with residential properties.
Garage	70m SE	1976 – Present	A garage is present on mapping by 1976. The original building seems to have been replaced by 1991 with the building that is still present today. This new building appears to have originally been used as a petrol filling station; however, by today it's use has changed to that of a hand car wash. An auto centre and detailing centre also appear to be located on the same plot by present day.
Joinery Works	80m SW	1933 – 1960	Located approximately 80m SW of the site, the joinery works are present between the mapping of 1933 and 1960; however, by the mapping of 1976 they had been demolished and replaced with residential properties.

In summary, the map evidence indicates that the site consisted of open fields with ponds in the north, and a small row of residential terraces in the south. By 1890 these ponds had potentially been infilled and the whole site had been developed into residences and Daisy Mill. Industrial works replaced the depot by 1922, with various industries including Manchester Carriage & Tramway Company Depot, Brewery, Laundry and wash house occupying the site then until at least 2010. By 2014 the last of the works had been demolished and replaced with the education facility that continues to occupy the site today.

The majority of the site is surrounded by residential developments and small-scale industry. The majority of this industry was shut down between the mapping of 1960 and 1976, to be replaced with residential properties. The significant sources of off-site contamination include the garages to the south-east of the site.

The Historical Maps are presented in Appendix B.

3.2 Published Geology

The following publications of the British Geological Survey (BGS) were examined in respect of the geology underlying the site:

- 1:50,000 Scale Geological Map Sheet 85 Manchester. Solid and Drift Edition.
- British Geological Survey (BGS) Geology of Britain Map Viewer.
- Environmental Data Report.

Made Ground

BGS mapping does not display any made ground deposits on site, however based on the historical mapping and the development that has taken place, made ground deposits are highly likely to be present.

Superficial Deposits

The site is indicated to be underlain by glacial till. This stratum typically comprises firm to stiff boulder clay with sand and gravel.

Solid Geology

The majority of the solid geology underlying the superficial deposits is indicated to be part of the Chester Sandstone Formation, which typically comprises a fine to coarse sandstone with rounded gravel, cobbles, pebbles and boulders. The Sherwood Sandstone Group is this formation's parent unit.

The northern part of the site is indicated to be underlain by the Manchester Marls Formation described as red marl (calcareous mudstone and siltstone) with thin beds of fossiliferous marine limestone and dolomite.

The site is shown to lie atop the East Manchester Fault, a north-west to south-east trending fault that downthrows to the north-east. However, any movements associated with this fault should now have stopped.

The Ardwick Fault, another north-west to south-east trending fault that downthrows to the north-east is present approximately 250m north-east of the site. The two faults converge approximately 0.8km south-east of the site.

An official CON29M Coal Mining Search identified no evidence of coal seams or coal mining on or within the vicinity of the site.

3.3 BGS Boreholes

There are two BGS borehole records within the site boundaries which generally show similar ground conditions. Clay was encountered from ground level to between 3.1m and 12.2m bgl, overlying sand and gravel to depths of between 18.3m to 19.1m bgl. This overlies sandstone to depths between 40.5m and 50.5m bgl, mudstones are then encountered to the base of the boreholes at 52.1m and 85.3m bgl.

A summary of the ground conditions is presented in the table below.

Borehole Record	Depth Range (m)	Superficial Deposits	Bedrock
SJ89NE129	0.00 – 3.05	Soil and Clay	-
	3.05 – 5.18	Grey Sand	-
	5.18 – 18.59	Grey Sand and Boulders	-
	18.59 – 19.05	Sand and Gravel	-
	19.05 – 51.82	-	Red Sandstone
	51.82 – 53.34	-	Red Marl
	53.34 – 57.00	-	Red Marl and Sandstone
	57.00 – 59.44	-	Red Sandstone
	59.44 – 63.40	-	Sandy Red Marl
	63.40 – 67.97	-	Red Marl
	67.97 – 68.89	-	Red Marl and Clay
	68.89 – 74.37	-	Red Marl
	74.37 – 75.59	-	Very Soft Marl
	75.59 – 85.34	-	Dark Red Marl
SJ89NE131	0.00 – 12.19	Clay	-
	12.19 – 18.29	Gravel	-
	18.29 – 37.49	-	Fine Rock
	37.49 – 40.54	-	Rough Rock
	40.54 – 44.81	-	Clay
	44.81 – 47.55	-	Red Raddle
	47.55 – 52.12	-	Clay

The BGS Borehole Logs are presented in Appendix C.

3.4 Mining and Mineral Extraction

The site lies in an area where the Law Society and Coal Authority recommends a mining search be undertaken as the site could be affected by past or current coal mining.

Therefore, a mining search was carried out, which is presented in Appendix D, the main findings of which are presented below.

Highlighted Evidence	Issue	Details
Past Underground Mining	No	
Present Underground Mining	No	
Future Underground Mining	No	
Mine Entries	No	
Past, present and future opencast coal mining	No	
Coal mining subsidence	No	
Mine gas	No	
Withdrawal of support	No	
Information from the Cheshire Brine Subsidence Compensation Board	No	

3.5 Hydrogeology

The superficial deposits beneath the site are classified by the Environment Agency as a Secondary Aquifer (Undifferentiated). The classification is assigned where it is not possible to attribute either category A or B to the aquifer. In general, these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the superficial deposits.

The bedrock underlying the site is mostly classified as a Principal Aquifer. This is Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers.

The northernmost part of the site underlain by the Manchester Marls Formation is classified as a Secondary (B) Aquifer. These are predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.

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

The nearest active groundwater abstraction licence is located 525m north-west of the site and is used as a heat pump.

There are no potable water abstraction licences identified within 2000m of the site.

The soils have been assigned a Soil Vulnerability Category of HU (High). This is a worst case classification for urban areas and restored mineral workings. These soils are assumed to be highly permeable in the absence of site specific information.

Reference to the BGS Onshore Geoindex reveals there are two water wells located on-site, with a further two located to the north of the site, all of which appear to have been used for historical commercial purposes and not potable drinking water supply. These are summarised in the table below:

Well Ref	Distance from Site	Available Details	Current Status
SJ89/113	On-site	Mineral Water Works Longsight E 386160 N 396330 52.10m depth dated 1887 within the Sherwood Sandstone Group.	Historical mapping indicated the works was present until at least 1980 but had disappeared by 1991 and this well is not considered to be a receptor.

Well Ref	Distance from Site	Available Details	Current Status
SJ89/114	On-site	Daisy Works Longsight E 386300 N 396230 85.30m depth dated 1924 within multiple Aquifers.	Historical mapping indicates the works was disused between 2010 and 2014 and this well is not considered to be a receptor.
SJ89/111	200m NW	British Vinegars Ltd Longsight E 386010 N 396500 99.50m depth dated 1890 within the Sherwood Sandstone Group.	Historical mapping indicates the works was disused between 2010 and 2014 and this well is not considered to be a receptor.
SJ89/112	320m NW	Swan Brewery Manchester E 385990 N 396620 100.60m depth dated 1918 within the other Secondary Aquifer (Undifferentiated)	Historical mapping indicates the brewery to have been active until at least 1933, however by 1949 it is labelled disused, and so is not considered to be a receptor.

3.6 Hydrology

The nearest watercourse is the River Medlock located 1409m to the north-west of the site.

There are no surface water features within 250m of the site.

Chemical River Quality data indicates the River Medlock to have received a Chemical Quality Grade C in 2009.

There are no surface water abstraction licences within 2000m of the site.

There are no active licenced discharge consents within 500m of the site.

Information obtained from the Environment Agency (EA) Risk of Flooding from Rivers and the Sea (RoFRaS) database indicates that the risk of flooding across the site is very low (less than 1 in 1000 chance of flooding in any given year).

The site is not indicated to lie within an EA designated flood plain.

No further consideration of flood risk is undertaken in this report. Specialist flood risk advice should be sought with regards to drainage and flooding.

3.7 Environmental Searches

An Environmental Search has been conducted which utilises British Geological Survey and Environment Agency databases. The full report can be found in Appendix E, although a summary of the more relevant findings is presented below.

Entry	On-site	0 – 249m	250 – 500m	Details
Authorised Industrial Processes (IPC/IPPC/LAPPC)	0	0	0	
Pollution Incidents	0	0	6	The closest record was in 2002 and was 361m SE of the site, it is recorded as specific waste materials related to vehicles and vehicle parts. It had a Category 3 impact (minor) to land.
Landfill Sites	0	0	0	

Entry	On-site	0 – 249m	250 – 500m	Details
Waste Treatment	0	6	14	The nearest recorded waste site is located 143m north-east of the site. It is identified as a scrap yard from the historical mapping of 1991.
Control of Major Accident Hazard (COMAH) Sites	0	0	0	
Consents issued under planning (Hazardous Substances) Act 1990	0	0	0	
Radioactive Substances	0	0	0	
Fuel Station Entries	0	0	0	
Other Current industrial land uses	2	7	13	There is an electricity substation identified on-site, along with Daisy Works. However, Daisy Works is no longer present on-site, as it was demolished during construction of the academy that currently occupies the site.
National Grid Services	0	0	0	

3.8 Radon

Information from the environmental database report indicates the property is not in a radon affected area, as less than 1% of properties are above the Action Level. Therefore, no radon protective measures are necessary in accordance with BRE Report 211 'Radon – Guidance on protective measures for new dwellings' 2015 Edition.

3.9 UXO Risk

In accordance with CIRIA Report C681, BSL have reviewed a specialist SiteSafe UXO Desk Study provided by Zetica.

There is no indication of former military use from the desk study. The desk study indicates there is no evidence the site was bombed and no other significant sources of UXO have been identified on-site; therefore, it is considered to be in an area where the bomb risk is low.

As the site is very low or low bomb risk, no further consideration of UXO is required.

4.0 PREVIOUS REPORTS

4.1 Overview

A number of reports have been issued for the site as detailed in Section 1.4. A number of these reports have been made available to BSL for review as part of the Phase 1 Desk Study Assessment Report, details of the reports provided to BSL are recorded below:

Phase 1 Desk Study	Atkins Dean Trust Ardwick High School (Revised Scheme) Phase 1: Geo-Environmental Assessment (5130327/DTAHS-RS/002) issued August 2015.	Available
Phase 2 / Site Investigation	- Atkins Manchester Schools Basic Needs Programme: Daisy Mill Ground Investigation Report (GTG20140378/5130327/19/Rev 0) issued December 2014. - Geotechnics Limited Factual Report on Ground Investigation issued December 2014. - Atkins Dean Trust Ardwick High School (Revised Scheme) Ground Investigation Report – Contaminated Land Risk Assessment (5130327/09/CLRA/Rev 0) issued August 2015. - Atkins Manchester Schools Programme: Dean Trust Ardwick Remediation Strategy (5119532_1) issued June 2015. - ESG Factual Report (LO/R5141/001/NB) issued October 2015. - ESG Detailed Quantitative Risk Assessment Report (R5141b) issued October 2015. - Solmek Phase 2 Site Investigation Report (S160937/SI) issued November 2016.	Available Not Available Available Available Not Available Not Available Available
Remediation / Validation	- Atkins Manchester Schools Programme: Dean Trust Ardwick Remediation Strategy (5119532_1) issued June 2015. - ESG Remediation Strategy (R5141/2) issued October 2015. - ESG Remediation Verification Report (R5141/3) issued December 2016.	Available Not Available Available
Other	- ESG Materials Management Plan Dean Trust Ardwick 2016 (R5141/MMP) issued December 2015. - Zetica Site Safe UXO Desk Study (P5220-15-R1-A) issued April 2015.	Available Available

4.2 Atkins Phase 1: Geo-Environmental Assessment (2015)

A summary of the relevant points from the Phase 1 Geo-Environmental Assessment Report (ref. 5130327/DTAHS-RS/002, dated August 2015) completed by Atkins is presented below:

- The site is currently of mixed use: the north-east of the site is currently in use as a primary school and the south of the site is occupied by the mill building and associated car parking (which is currently only partly in use as an IT data centre). The remainder of the site is open space, used as a public footway and dog walking/play area. The area of open space is across the footprint of a previous mill complex, similar to the existing buildings in the south of the site. No tanks or oil storage areas were seen on site. It is known that, historically, the mill used oil for heating, but no tanks were visible. A pipe, of suitable diameter and construction, for oil transmission was noted that entered the heating plant, but it is unknown whether this is connected to a tank or if it is used in any form currently.
- In 1848, the site comprised predominantly fields, with the southern portion occupied by buildings under the name of “Longsight Terrace” and “Longsight Hall”. By 1893, the site was occupied by numerous buildings and associated roads (most likely residential streets) and the centre of the site was occupied by a “Carriage and Tramway Company’s Depot” with a brewery present on the north-western boundary. The large “Daisy Works” building was present by 1934 and an electricity substation appeared by 1950. “Longsight School” (the present day “Richmond Park Primary School”) appeared in the north-eastern part of the site by 1976, and the site took on its current layout by 1991.

- The site is underlain by Devensian Till. The Chester Pebble Beds Formation is present across the majority of the site area with the Manchester Marls Formation limited to the northern extent of the site.
- A Coal Authority Mining Report states that the site is located in an area affected by coal mining and is in the likely zone of influence from workings in one seam of coal, at 370 m bgl.
- The closest significant surface water feature to the site is the River Medlock 780 m to the west, flowing east to north-west.
- The bedrock beneath the majority of the site (Chester Pebble Beds Formation) is classified predominantly as a Principal aquifer, and the bedrock beneath the north-eastern corner of the site (Manchester Marls Formation) is classified as a Secondary 'B' aquifer. There is a point on the south-eastern boundary of the site that is also classified as a Secondary 'B' aquifer, and this relates to where the adjacent Manchester Marls Formation Bedrock meets the site boundary.
- The risks posed to receptors by the identified potential sources of historical contamination are considered to be moderate/low from on-site sources and moderate/low from off-site sources with respect to potential ground gas risks; and moderate from on-site sources and moderate from off-site sources for potential health risks to users of the redeveloped site via dermal, dust inhalation and ingestion pathways. Risks to surface water receptors were deemed low to very low, but risks to controlled waters receptors were considered moderate/low from on-site sources and moderate from off-site sources, in relation to the proposed development works.

4.3 Atkins Ground Investigation Report (2014)

A summary of the relevant points from the Ground Investigation Report (ref. GTG20140378/5130327/19/Rev 0, dated December 2014) completed by Atkins is presented below:

- 7No. cable percussive boreholes (BH1 to BH6) to a maximum depth of 21.45m bgl.
- 8No. window samples boreholes (WS01 to WS08) to depths of between 0.30m and 6.45m bgl.
- 4No. trial pits (TP01 to TP04) to depths of between 2.30m and 2.90m bgl.
- Ground conditions encountered included topsoil up 0.60m in thickness, granular made ground to depths of between 0.30m and 3.60m bgl, cohesive made ground to depths of between 1.00m and 4.80m bgl. Made ground was underlain by glacial till to between 17.60m and 20.32m bgl underlain by weathered sandstone/mudstone to a maximum proven depth of 21.45m bgl. Peat was recorded in BH03 at a depth of 2.50 to 2.90m bgl.
- Groundwater strikes were encountered in exploratory holes BH02A, BH03, BH05, WS01, WS02 and WS05 and WS02 at depths ranging between 0.90m and 19.70m bgl.
- 12No. undrained triaxial tests were undertaken in the Glacial Till and results ranging from 118kPa to 457kPa were recorded at depths of between 3.00m and 16.50m bgl.
- 12No. bulk density tests in the Glacial Till recorded results ranging between 2.06Mg/m³ and 2.29Mg/m³.
- Undrained shear strength in the Glacial Till ranged between 25kPa and 457kPa with an average of 163kPa.
- The Design Sulphate Class for the site is DS-1 and the ACEC Class is AC-1.

4.4 Atkins Contaminated Land Risk Assessment (2015)

A summary of the relevant points from the Ground Investigation Report – Contaminated Land Risk Assessment report (ref. 5130327/09/CLRA/Rev 0.0, dated August 2015) completed by Atkins is presented below:

- 47No. soil samples analysed for a range of determinands including heavy metals, PAHs, TPH CWG, BTEX, PCBs, phenols, moisture content, sulphate, soil organic matter, cyanide and pH.
- 13No. soil samples analysed for asbestos ID.
- 16No. soil samples analysed for soil leachate analysis (2:1 dilution).
- 16No. groundwater samples analysed for metals, PAHs, TPH CWG, BTEX, sulphate cyanide and pH.
- 5No. soil samples analysed for WAC Analysis.
- Visual and olfactory evidence of contamination was identified within the made ground across much of the site noted to be ash and localised tarmacadam fragments. Hydrocarbon odours were noted in BH01 at 0.30-1.00m bgl, BH06 3.40-4.80m bgl.

- Soil Vapour Headspace Monitoring revealed elevated readings in BH01 at 0.50m bgl (37.0ppm), BH02A at 3.50m bgl (201.0m bgl) and 3.40m bgl (28.3ppm).
- The combined soil sample analysis results for the Sub-Surface and ASL site investigations were compared against relevant assessment criteria including CLEA derived GACs resulted in the following exceedances:

Contaminant	Max Concentration	Number of samples	Screening Value
Lead	508	42 (8)	310
Benzo(a)anthracene	30.67	47 (9)	9.04
Benzo(a)pyrene	33.43	47 (20)	1.04
Indeno(123cd)pyrene	19.85	47 (5)	10.3
Dibenzo(ah)anthracene	4.35	47 (9)	1.03
Benzo(b)fluoranthene	36	47 (9)	10.3
TPH Aro. >C10-C12	1993.4	47 (1)	1080
TPH Aro. >C12-C16	7030	47 (1)	2040
TPH Aro. >C16-C21	17721	47 (1)	1330
TPH Aro. >C21-C35	15179	47 (1)	1300

NB: Number in brackets represents the number of results above guideline values.

- In addition to the above the following samples recorded asbestos:

Location	Depth (m)	Asbestos ID	Asbestos Level	Asbestos Level (%)
TP01	1.00-1.20	Chrysotile free fibres	Quantifiable	<0.001
TP01	1.90-2.00	Chrysotile free fibres	Quantifiable	<0.001
TP02	0.50	Chrysotile free fibres	Quantifiable	0.002
WS03A	0.50	Chrysotile free fibres	Trace	-
WS05	0.25	Chrysotile free fibres	Trace	-
WS05	0.90	Chrysotile free fibres	Quantifiable	0.031
BH06	1.00	Amosite free fibres	Quantifiable	<0.001
BH06	2.00	Chrysotile free fibres	Quantifiable	<0.001
BH06	3.40	Chrysotile free fibres	Trace	-
BH06	4.00	Chrysotile free fibres	Quantifiable	0.005
BH01	0.50	Chrysotile free fibres	Quantifiable	<0.001
BH02	1.20-1.65	Chrysotile cement present and Free Fibres in soil	Quantifiable	0.573
BH02A	0.70	Chrysotile free fibres	Quantifiable	0.055
BH02A	2.90	Chrysotile free fibres	Quantifiable	<0.001
BH02A	3.50	Chrysotile free fibres	Trace	-

- Elevated concentrations of antimony, chromium, copy, iron, manganese, zinc, naphthalene, anthracene, fluoranthene, benzo(a)pyrene, Σ (benzo(b)fluoranthene + benzo(k)fluoranthene), Σ (benzo(ghi)perylene + indeno(123cd)pyrene), Σ (benzo(b)fluoranthene + benzo(k)fluoranthene + benzo(ghi)perylene + indeno(123-cd)pyrene) were recorded in leachate samples taken from across the site.
- Elevated concentrations of cadmium, copper, selenium, zinc, fluoranthene, benzo(a)pyrene, TPH Ali. >C16-C21, TPH Ali. >C21-C35, Total TPH Ali. C12-C35, TPH Aro. >C21-35, Total TPH Aro. C12-C35, TPH and sulphate were recorded in a number of sample locations across the site in the first monitoring visit. The second visit recorded elevated heavy metals.
- Despite some of the exceedances for TPHs, PAHs and heavy metals it is considered that the distances from site to the surface water receptors in the vicinity of the site, is that there is not a sufficient pathway to exist and that the distance would allow attenuation to result in insignificant concentrations at the receptor. And therefore present a low potential risk.
- In terms of risks to the aquifer beneath the site, it is located below a clay stratum considered to be that of the unproductive Glacial Till. This identified water is considered to be perched and not reflective of the groundwater within the underlying Principal Aquifer within the underlying Principal Aquifer (Chester Pebble Beds) or Secondary B Aquifer (Manchester Marls) within the bedrock.
- Gas monitoring recorded elevated carbon dioxide concentrations in BH02A and BH03 in the northern half of the site. A peak flow of 10.5l/hr was recorded in BH03. Given this, this area of the site was classified as CS2 and gas protection measures were recommended.

- A moderate risk was considered to exist to human health from the made ground, however, the implementation of an environmental cover system was considered to reduce the risk to moderate/low.
- A moderate/low risk was considered to exist to human health and property as a results of ground gas, however, the implementation of gas protection measures was considered to reduce the risk to low.
- A very low risk was considered to exist to surface water receptors and a low risk was suggested for the risk of contaminated made ground to the Principal and Secondary 'B' Aquifers.

4.5 Solmek Phase 2 Site Investigation Report (2016)

A summary of the relevant points from the Phase 2 Site Investigation Report (ref. S160937/SI, dated November 2016) completed by Solmek Ltd is presented below:

- 4No. window sample boreholes (BH1 to BH4) drilled to a depth of 5.00m bgl.
- 3No. ground gas and water monitoring installations installed within BH2, BH3 and BH4.
- Made ground was generally encountered as dark brown clayey slightly gravelly sandy topsoil, proven to max 0.50mbgl (BH4) underlain by blackish brown slightly sandy to sandy slightly gravelly clay with brick fragments, proven to a max 1.80mbgl (BH2). Within BH1 to BH3 the above stratum was underlain by stiff consistency dark brown slightly sandy slightly gravelly clay with rare brick fragments proven to max 3.00mbgl (BH2).
- Natural deposits were generally proven as stiff consistency dark brown slightly sandy to sandy slightly gravelly high strength clay of intermediate to high plasticity to a depth of 5.00mbgl.
- Groundwater was not encountered within any of the exploratory borehole positions.
- 3No. samples of made ground were tested for metals, semi-metals, non-metals, inorganic determinants and Asbestos identification screening.
- 2No. samples were tested for PAHs and TPH CWG.
- All metals, inorganic and organic determinands were found to be below the relevant thresholds.
- Slightly alkaline pH conditions in made ground, with soluble sulphates below the BRE Special Digest One threshold value of 500mg/l.
- No positive identification of asbestos was made in the samples screened.

4.6 Atkins Remediation Strategy (2015)

A summary of the relevant points from the Remediation Strategy Report (ref. 5119532_1, dated June 2015) completed by Atkins is presented below:

- Assessment of gas monitoring data, outlined above, suggest the concentrations of soils gases across the site to be representative of a Characteristic Situation 2 (CS2) in accordance with CIRIA C665 (Ref 18).
- Sites falling within CS2 are recommended to implement the following protection methods into buildings constructed in the area:
 - a. Reinforced concrete cast in situ floor slab (suspended, non-suspended or raft) with at least 1200g DPM.
 - b. Beam and block or precast concrete slab and minimum 2000 g DPM/reinforced gas membrane.
 - c. Possibly underfloor venting or pressurisation in combination with a) and b) depending on use.
 - All joints and `penetrations are to be sealed.
- An environmental cover system is required to break the barrier between the contaminated site soils and the end-user. The cover system should comprise a minimum 150mm compacted clay or subsoil. Above the compacted layer will be a 450mm of a lower layer compacted alleviated subsoil and a minimum of 300mm of topsoil.
- Topsoil shall be imported from a topsoil supplier and tested at a rate of 1 sample per 500m³ per source of material. All soils shall be free of asbestos and other deleterious and or contaminated materials.
- Where site won topsoil is proposed for reuse on site for landscaping purposes, it shall be tested to BS 3882 2007 to ensure it is suitable. Any materials failing to meet the specification shall be removed to a segregation area and isolated from other stockpiles. The material will then be disposed of off-site to the appropriate licensed facilities.

4.7 ESG Remediation Verification Report (2016)

A summary of the relevant points from the Remediation Verification Report (ref. R5141/3, dated December 2016) completed by ESG is presented below:

- The amosite asbestos contamination within the existing Made Ground soils could pose a potential risk to site users within areas of soft landscaping and grass pitches. The Remediation Strategy required that these areas should comprise the installation of a clean cover system, incorporating a minimum of 300mm imported and validated 'clean' soils as agreed between LO'R and Manchester City Council. The clean cover soils should be underlain by a geotextile marker layer to clearly delineate the underlying potentially contaminated soils with the clean imported soils.
- The clean cover system should incorporate a minimum of 150mm of topsoil at the upper limit of the system, conforming to the requirements of the acceptance criteria and the British Standard BS 3882:2015 Specification for Topsoil (multipurpose topsoil). This will ensure that conditions within the cover system are suitable for healthy plant growth.
- A slight design change to the above specification of clean cover in the grassed football pitch was proposed by LO'R during the works and this was agreed by MCC (see Appendix D). The amended clean cover system in the grassed pitch area comprised 100 mm of porous / permeable granular imported sub-base, with only a single (not two as originally specified) geotextile membrane placed between the topsoil and porous granular drainage layer, and 200 mm of topsoil. Multitrack 1000 geotextile membrane was used in the grassed pitch areas and Terram 1000 in the soft landscaping areas.
- Approximately 6850 tonnes (3500m³) of topsoil was imported to site in total (1020 tonnes from the Sandbach site, and 5830 tonnes from the Freeland/Astley/Leigh Lane site).
- Following review of the chemical results of the analysis of 35 samples (20 from Freeland Astley/Leigh Lane and 15 from Sandbach) of topsoil samples from the above sources (provided by the groundwork's contractor supplier), visual observations made during the validation visits carried out by ESG in July and August 2016 and subsequent independent chemical laboratory analysis undertaken by ESG on a total of four topsoil samples collected in July and August September 2016, it has been confirmed that the imported / placed topsoil conformed to the requirements of the acceptance criteria detailed in Table 4 below, and in general confirm to the British Standard 3882: 2015 Specification for Topsoil (multipurpose topsoil).
- 26No. hand dug depth validation pits were undertaken revealing topsoil depths of between 190mm and 500mm.
- Validation of the gas membrane installation was undertaken by MEC Environmental Ltd. 3 visits were undertaken and the gas membrane installation was reported to be good quality. A completion certificate was also provided by PAGeoContracting to certify that the works had been completed in accordance with their specification of works and method statement and that any variations have been agreed and recorded.

4.8 ESG Materials Management Plan (2016)

A summary of the relevant points from the Material Management Plan (ref. R5141/MMP, dated December 2015) completed by ESG is presented below:

- The MMP relates to a series of earthworks required to ready the site for development. These included stripping and stockpiling of topsoil material for disposal off-site as waste; a required "cut and fill" operation to lower site levels in the area of the building footprint and raise levels in the southern and north-eastern portions of the site; proof digging beneath the proposed building footprint to enable the processing of obstructions for reuse and the removal of unsuitable materials; replacement and recompaction of materials to create a suitable development platform; and demolition, breaking out and removal from site of buildings, foundations and hardstanding associated with the former Richmond Park Primary School and Daisy Mill Works.
- In summary the MMP scope included:
 - i) Excavation and stockpiling of topsoil materials from across the site for removal off-site under waste management legislation and protocols.
 - ii) Excavation of Made Ground under the building footprint to facilitate the removal and processing of concrete, brick, tile and other obstructions.

- iii) Replacement and compaction of excavated and processed materials within areas of building footprint to achieve development platform.
 - iv) Stockpiling of excess materials in designated areas to be used as fill and achieve planning based final site levels.
 - v) Reuse of stockpiled materials as fill to achieve final site levels.
- Approximately 5,850m³ of topsoil material and 20,050m³ of Made Ground material were to be excavated to allow for the construction of the building foundations, drainage, services, etc.
- The made ground was to be processed by removing obstructions of concrete, brick and tile, which was crushed for use as granular fill. Additional materials such as wood, plastic, metal and other unsuitable materials (estimated at 850m³) was segregated and removed from the site as waste. The processed made ground and granular fill will then be re-compacted in 150 mm layers within the building footprint area to create a suitable development platform.
- Excess made ground materials will be located in two separate stockpiles comprising approximately 7,600m³ (stockpile SP2) and 7,900m³ (stockpile SP3). Following demolition, breaking out and removal of the existing Daisy Mill and Richmond Park buildings, foundations and hardstanding, the two stockpiles of Made Ground were to be used to fill these areas and achieve final site levels.

4.9 Zetica UXO Desk Study (2015)

A summary of the relevant points from the Sitesafe UXO Desk Study (ref. P5220-15-R1-A, dated April 2015) completed by Zetica is presented below:

- There is no evidence that the Site was bombed and no other significant sources of UXO have been identified on the Site. It is considered that the Site has a low UXO hazard level.

5.0 DESK STUDY SUMMARY AND RISK ASSESSMENT

5.1 Introduction

The risk posed by any contaminants in soil or groundwater will depend on the nature and level of the source, the probability of exposure occurring, the potential pollution pathway and the likely effects on the receptors.

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

The following sections discuss the identified potential on-site and off-site sources, and any pollution that could impact receptors via the pathways associated with the proposed development. Pollution linkages are assessed which may represent a risk to human health and/or controlled water receptors from the information gained from the desk study searches. The assessment has been carried out on a qualitative basis and aims to produce a complete and comprehensive Preliminary Conceptual Site Model.

Three potential impacts exist for any given site and all three need to be considered in the qualitative risk assessment, these are:

-
- On-site impacts.
 - The site impacting its surroundings.
 - Off-site sources impacting the subject site.
-

5.2 Potential Contaminative Sources

On-Site

From the information obtained during the desk study the following sources have been identified by the desk study which may affect the redevelopment of the site for an educational end use:

-
- Made ground associated with the former site uses.
 - Depots.
 - Daisy Mill - hosiery and underclothing manufacturer / textile mill
 - Works.
 - Wash House/Laundries.
 - Brewery.
 - Electricity substation.
 - Former pond.
-

Off-Site

The following off-site sources have been identified by the desk study which may affect the redevelopment of the site

-
- Warehouse/garage (0m SE).
 - Electricity substation (20m N).
 - Mineral Water Works/Raven Flour Mills (20m NW).
 - Mineral Water Works (40m SW).
 - Shield Works (50m SW).
 - Garage (70m SE).
 - Joinery Works (80m SW).
-

Associated Contaminants

The contaminants commonly associated with the potential sources of contamination identified are tabulated below:

Contaminative Sources	Department of the Environment Industry Profile	Commonly Associated Contaminants
On Site		
Made Ground	-	Heavy metals, sulphates and PAHs. Hazardous gas (principally carbon dioxide and methane).
Infilled Ponds	-	Heavy metals, sulphates and PAHs. Hazardous gas (principally carbon dioxide and methane).
Depots	-	Heavy metals/metalloids, TPH, PAHs, VOCs, Asbestos
Mills, clothing factories	Textile and Dye Manufacturing	Heavy metals/metalloids, inorganic compounds, solvents, TPH, pesticides, PAHs.
Works	-	Heavy metals/metalloids, TPH, PAHs, VOCs, Asbestos, Cyanide & Cyanide Compounds, SVOCs, Phenols, TBT, PCBs.
Wash House	-	Heavy metals, sulphates and PAHs. If powered by gas or oil, there may historically have been fuel storage tanks. Asbestos may have been used within the building as insulation and lagging or as roofing and cladding.
Laundries	-	Chlorinated Solvents, heavy metals, PAHs and TPH associated with possible boilers.
Brewery	-	Heavy metals, PAHs and TPH associated with possible boilers. Asbestos associated with lagged pipework.
Electricity Substation	Electrical Works	Polychlorinated biphenyls (PCBs).
Off Site		
Warehouses	-	Heavy metals/metalloids, TPH, PAHs, VOCs, Asbestos.
Garage	-	Heavy metals/metalloids, TPH, PAHs, VOCs, asbestos, SVOCs.
Electricity Substation	Electrical Works	Polychlorinated biphenyls (PCBs).
Flour Mill	-	Heavy metals, PAHs and TPH associated with possible boilers.
Works	-	Heavy metals/metalloids, TPH, PAHs, VOCs, Asbestos, Cyanide & Cyanide Compounds, SVOCs, Phenols, TBT, PCBs.

5.3 Pathways

A pathway is defined as a medium by which a contaminant comes into contact with, or otherwise impacts a receptor.

At this stage the potential contaminants identified above are considered to present potential risks to site end users and controlled waters through the following pathways:

Potential Pathways	
Pathways in respect to Human Health	• Ingestion of contaminated soils. • Dermal contact with contamination. • Inhalation of dusts. • Inhalation of gases or vapours in both indoor and outdoor air.
Pathways in respect to Controlled Waters – Surface water	• Surface run-off /over land flow. • Drainage discharge. • Base flow from groundwater.

Potential Pathways	
Pathways in respect to Controlled Waters – Groundwater	- Leaching of mobile contamination into groundwater via the unsaturated zone. - Migration of perched groundwater in any permeable soils or along existing or proposed service runs. - Migration into the saturated zone and flow through the Secondary A Aquifer and the Principal Aquifer underlying the site.
Pathways in respect to Property/structures/water pipes	- Direct contact with substances deleterious to building materials and potable water supply pipelines. - Migration of ground gases (methane) into confined spaces (explosion and damage to property).

5.4 Receptors

The identified receptors are listed below:

- Commercial (educational) end users (human health).
- Structures/Property/water pipes.
- Nearest watercourse. River Medlock (Controlled waters).
- Superficial Aquifer. Secondary Undifferentiated Aquifer / Glacial Till (Controlled waters).
- Bedrock Aquifer. Principle Aquifer / Chester Pebble Beds Formation (Controlled waters).
- Construction workers.

There are no viable surface water receptors within close proximity to the site (500m) given this, surface water receptors are not considered further in this report.

5.5 Preliminary Conceptual Site Model

The information obtained in the previous sections has been used to compile a Preliminary CSM. The identified potential contaminants and receptors have been assessed in the table below as to whether a plausible source-pathway-receptor pollutant linkage for the proposed end use of the site exists. The risk classification has been estimated in accordance with information in the BSL Guidance and Methodology in Appendix A.

The Preliminary CSM's are presented in the tables overleaf, any assessed risk above moderate will possibly require further action:

Human Health						
Potential Source	Potential Pathway	Potential Receptor	Likelihood	Severity	Level of Risk	Justification
On site Made Ground Metals, PAHs, asbestos, TPH	Root uptake, ingestion, direct contact, inhalation of dusts	End-users	Likely	Moderate	Moderate	Widespread contamination (heavy metal, PAH, TPH and asbestos) was recorded in the made ground during the site investigation undertaken by Atkins in 2014. The proposed development includes a new two storey extension with undercroft parking and a single storey extension. Given this, the development areas of the site will include for the presence of hardstanding / building footprint which will break the pathway to the site end user, the risk in these areas is low. However, additional works includes for the removal of earth bunds for construction of new surface level car park and hard play areas, should new areas of soft landscaping be introduced in these areas then a moderate risk remains to the end-user and mitigate measures will be required.
On site Made Ground Metals and organic contamination	Migration into/chemical attack of water supply pipelines	Water Pipelines / End users	Likely	Moderate	Moderate	Heavy metal, PAH, VOC and TPH contamination was recorded during the previous site investigation by Atkins in 2014. Contaminants within the soil/groundwater could potentially attack the clean potable water supply pipe, contaminants should be assessed in accordance with the relevant guidance to determine the correct pipe material and level of precautions required.
On site Mill / Brewery / Works / Depots Metals, PAHs, Asbestos, TPH etc.	Root uptake, ingestion, direct contact, inhalation of dusts	End-users	Likely	Moderate	Moderate	Widespread contamination (heavy metal, PAH, TPH and asbestos) was recorded in the made ground during the site investigation undertaken by Atkins in 2014. The proposed development includes a new two storey extension with undercroft parking and a single storey extension. Given this, the development areas of the site will include for the presence of hardstanding / building footprint which will break the pathway to the site end user, the risk in these areas is low. However, additional works includes for the removal of earth bunds for construction of new surface level car park and hard play areas, should new areas of soft landscaping be introduced in these areas then a moderate risk remains to the end-user and mitigate measures will be required.
On site Electricity Substation PCBs	Root uptake, ingestion, direct contact, inhalation of dusts	End-users	Low Likelihood	Moderate	Low	The mobility of this contaminant is low and any volumes present are likely to be small. The substation present onsite was upgraded during the recent redevelopment of the site, therefore unlikely to contain any PCBs. In addition, the proposed development will be covered in hardstanding which will break the pathway to site end users. The risk is considered to be low.

Human Health						
Potential Source	Potential Pathway	Potential Receptor	Likelihood	Severity	Level of Risk	Justification
Made Ground / Infilled Ponds Ground Gas (carbon dioxide and methane)	Migration into confined spaces, inhalation and asphyxiation/explosion	End-users / property / structures	Unlikely	Severe	Moderate / Low	Significant depths of made ground was encountered across the site during previous site investigations identified up to 4.80m in thickness with limited evidence of degradable/putrescible material which is considered to be of low gas generation potential. Localised peat was recorded associated with a former infilled pond recorded in the centre of the site on historical mapping. The Atkins investigation recorded elevated carbon dioxide and flow rates in the centre of the site during monitoring visits. In line with the remediation strategy, gas protection measures in line with CS2 were implemented at the site. A small single storey extension is proposed for the north of the site, the two nearest exploratory holes with installations from the Atkins investigation did not reveal elevated gas levels, and we therefore consider the risk as moderate/low. However, this will need confirmation with the Local Authority as it may be prudent to include for gas protection measures within the extension in line with those in place across the existing structures.
Off site Warehouse / Garage / Works / Mills / Electricity Substation PCBs, Metals, PAHs, TPH etc.	Ingestion, direct contact, inhalation of dusts	End-users	Unlikely	Moderate	Low	Offsite sources of contamination are not considered to be greater in significance than those recorded historically at the site. In addition to this, the underlying ground conditions are anticipated to be low permeability glacial till. Given this, lateral migration of contamination onto the site is considered unlikely and therefore the risk is considered to be low.

Controlled Waters						
Potential Source	Potential Pathway	Potential Receptor	Likelihood	Severity	Level of Risk	Justification
Made Ground / Brewery / Works / Depots PAHs, Metals, TPH	Leaching through unsaturated zone / Migration through saturated zone	Secondary Undifferentiated Aquifer (Groundwater)	Low Likelihood	Medium	Moderate/low	Glacial Till is recorded beneath the made ground across the entirety of the site which will break the pathway from the potentially contaminated site soils to the Secondary Undifferentiated Aquifer. Evidence of significant mobile contamination was not recorded during the site investigation by Atkins in 2014. Any contamination recorded within the groundwater was considered to be perched and not reflective of the underlying Aquifers and no remediation was required. In line with the above, the risk to the Secondary Undifferentiated Aquifer is considered to be low.
	Migration through saturated zone	Principal Aquifer (Groundwater)	Unlikely	Medium	Low	There are no potable water groundwater abstraction licences or Source Protection Zones near the site. Glacial Till is recorded beneath the made ground across the entirety of the site which will break the pathway from the potentially contaminated site soils to the Secondary Undifferentiated Aquifer. Evidence of significant mobile contamination was not recorded during the site investigation by Atkins in 2014. Any contamination recorded within the groundwater was considered to be perched and not reflective of the underlying Aquifers and no remediation was required. In line with the above, the risk to the Principal Aquifer is considered to be low.

Human Health Risk – Summary

Based on the preliminary CSM and the current use of the site, the overall risk from land contamination at the site is considered to be **moderate** for a redeveloped site due to the presence of heavy metal, PAH, TPH and asbestos contamination within the made ground across the site. This would need to be confirmed by appropriate intrusive investigation, testing and assessment.

A potential on-site gas source has been identified associated with the made ground associated with previous developments and infilled ponds present in the centre of the site. The preliminary CSM considers the sources to be a Moderate / Low risk to site end users and property.

In accordance with CIRIA C665 and as set out in Appendix A of this report, the gas generation potential is considered to be low. The sensitivity of the development is moderate on account of the proposed commercial development.

In line with the Remediation Strategy by Atkins, gas protection measures in line with CS2 were implemented at the site. A small single storey extension is proposed for the north of the site, the two nearest exploratory holes with installations from their investigation did not reveal elevated gas levels. On that basis we consider the risk to be moderate / low. However, this will need confirmation with the Local Authority as it may be prudent to include for gas protection measures within the extension in line with those in place across the existing structures.

Controlled Waters Risk - Summary

Based on the preliminary CSM, BSL believes the overall risk to controlled waters at the site is **low** for the following reasons:

-
- No significant mobile contamination is anticipated on site.
 - The nearest watercourse is over 250m away, which provides considerable distance for attenuation and contaminant degradation.
 - The site is underlain by in excess of 10m of low permeability clays which will inhibit lateral and vertical contaminant migration.
 - The site does not lie within 500m of an SPZ.
 - There are no potable (sensitive) water abstractions within 2000m.
 - Historical groundwater sampling indicated the elevated contaminants were indicative of a perched water body and not reflective of the underlying aquifers.
-

The above assessed level of risk will need to be confirmed by intrusive investigation and risk assessment.

6.0 PRELIMINARY GEOTECHNICAL ASSESSMENT

6.1 Hazard Identification

Potential geotechnical hazards based on the expected ground conditions are listed below:

- Made ground of unknown nature; if placed in a non-engineered manner may cause excessive settlement of foundations, highways and infrastructure.
- Low strength, compressible ground (peat and soft organic clays); may cause excessive settlement of foundations, highways and infrastructure.
- Buried obstructions such as old found foundations, cobbles made ground etc. leading to difficulty in excavation or deep foundation emplacement (e.g. piles).
- Attack of buried concrete by aggressive ground conditions; the site may contain unknown made ground and potentially sulphate bearing soils. The coal measures are known to be high in naturally occurring sulphates.
- Shrink / swell of clay; settlement / heave of foundations when located within the influence of trees and vegetation.

6.2 Foundations

The proposed development is indicated to comprise a new two storey extension and undercroft car parking, a single storey dining extension, and a removal of earth bunds for construction of new surface level car park and hard play areas.

Foundations within the new build comprised a strip and pad foundation over engineered or virgin ground typically at depths of 600mm. Square pads were designed as 1300mm to 2500mm square with strips being 400mm deep and either 400mm or 600mm in diameter.

6.3 Soakaways

Given the site is underlain by low permeability clays, it is unlikely that soakaway drainage will be suitable for the site.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Environmental

The site consisted of open fields with ponds in the north, and a small row of residential terraces in the south. By 1890 these ponds had likely been infilled and the whole site had been developed into residences and Daisy Mill. Industrial works replaced the depot by 1922, with various industries including Manchester Carriage & Tramway Company Depot, Brewery, Laundry and wash house occupying the site then until at least 2010. By 2014 the last of the works had been demolished and replaced with the education facility that continues to occupy the site today.

Widespread contamination (heavy metal, PAH, TPH and asbestos) was recorded in the made ground during the site investigation undertaken by Atkins in 2014. The proposed development includes a new two storey extension with undercroft parking and a single storey extension. Given this, the development areas of the site will include for the presence of hardstanding / building footprint which will break the pathway to the site end user, the risk in these areas is low. However, additional works includes for the removal of earth bunds for construction of new surface level car park and hard play areas, should new areas of soft landscaping be introduced in these areas then a moderate risk remains to the end-user and mitigate measures will be required.

Significant depths of made ground was encountered across the site during previous site investigations identified up to 4.80m in thickness with limited evidence of degradable/putrescible material which is considered to be of low gas generation potential. Localised peat was recorded associated with a former infilled pond recorded in the centre of the site on historical mapping. The Atkins investigation recorded elevated carbon dioxide and flow rates in the centre of the site during monitoring visits. In line with the remediation strategy, gas protection measures in line with CS2 were implemented at the site.

A small single storey extension is proposed for the north of the site, the two nearest exploratory holes did not reveal elevated gas levels. On that basis we consider the risk to be moderate / low. However, this will need confirmation with the Local Authority as it may be prudent to include for gas protection measures within the extension in line with those in place across the existing structures.

The risk to controlled waters is considered to be low due to the presence of a significant depth of low permeability glacial till underlying the site.

The risk from off site sources of contamination is considered to be low due to the presence of a significant depth of low permeability glacial till underlying the site.

7.2 Geotechnical

The proposed development is indicated to comprise a new two storey extension and undercroft car parking, a single storey dining extension, and a removal of earth bunds for construction of new surface level car park and hard play areas. Intrusive investigations will be required to confirm the most suitable foundation solution and to obtain parameters for concrete classification, floor slab and highways design.

Existing foundations comprise pad and strip foundations at a depth of 600mm.

7.3 Further Work

To confirm the risks to the identified receptors and confirm the ground conditions in respect to the identified geotechnical and geo-environmental risks, an appropriate intrusive investigation will need to be undertaken.

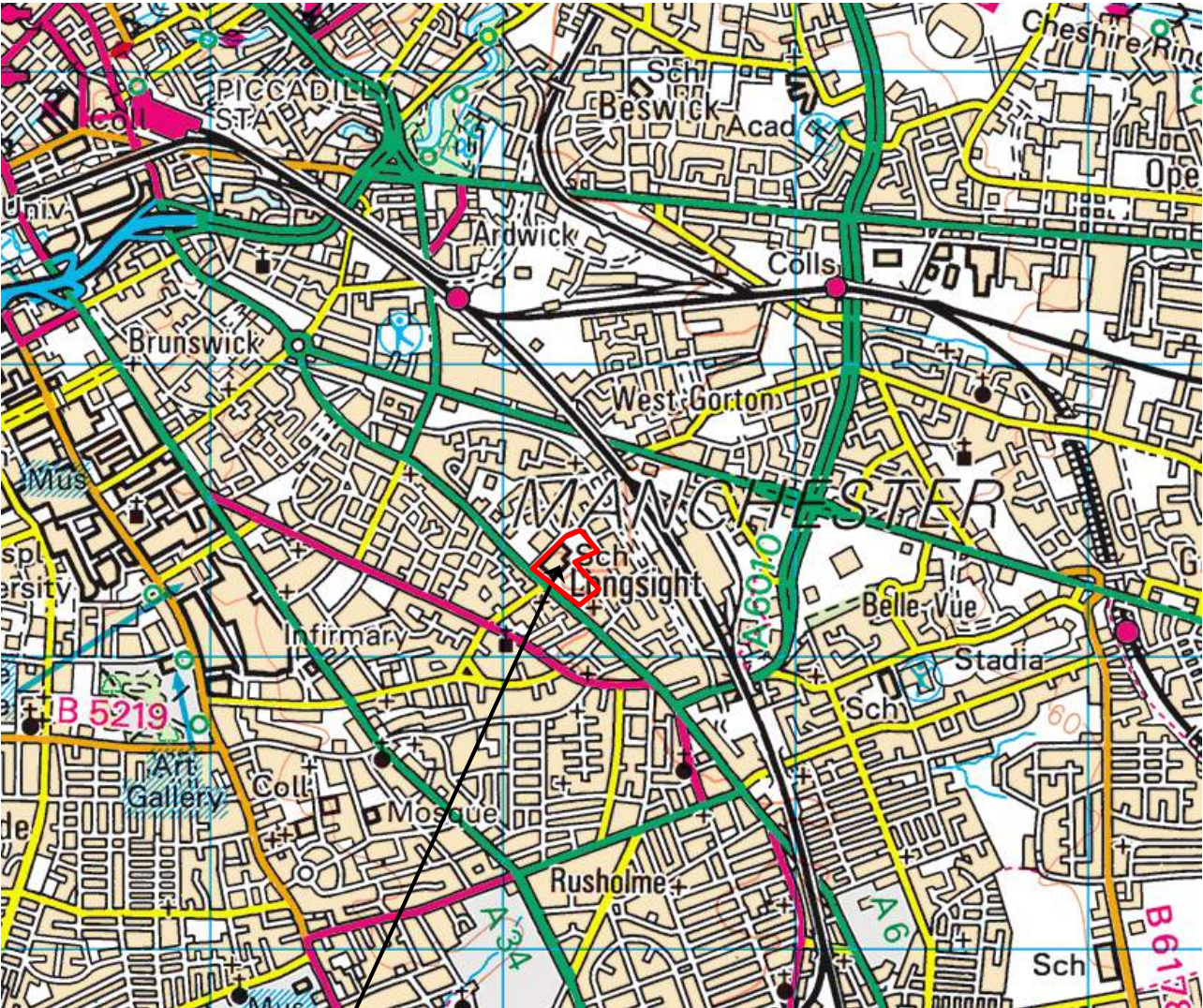
Therefore, to allow future development of the site the following further works are recommended, although this list is not exhaustive and should be read in conjunction with any planning conditions that are applicable to the site.

-
- Topographical survey / service trace.
 - Intrusive site investigations comprising:
 - Windowless sampling.
 - Installation of standpipes in boreholes to allow gas concentrations and groundwater levels to be monitored.
 - Geotechnical testing of soils.
 - Contamination analyses of soil and waste classification.
 - Assessment and recommendations based on the above, including requirements for further work, if necessary.
-

8.0 REFERENCES

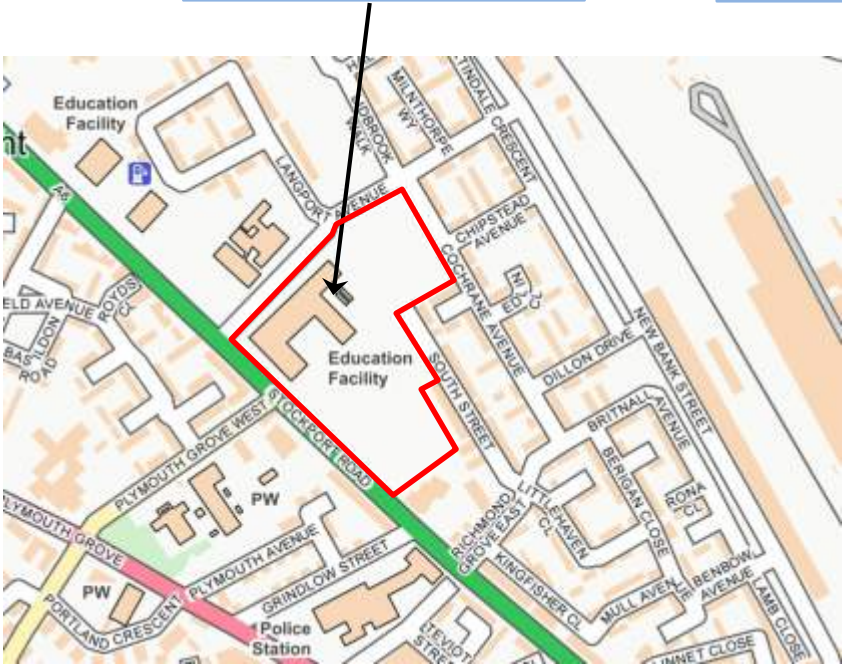
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- BRE Report BR211, Scivyer, C. 'Radon – Guidance on protective measures for new buildings' 2015 Edition.
- CIRIA C665 'Assessing Risks Posed by Hazardous Ground Gases to Buildings'. 2007.
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- CL:AIRE RB17 'A Pragmatic Approach to Ground Gas Risk Assessment'. 2012.
- DEFRA and the Environment Agency, CLR Report No 11 'Model Procedures for the Management of Contaminated Land'. 2004.
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- Health and Safety Executive (HSE). Control of Asbestos Regulations (CAR). 2012.
- National Planning Policy Framework (NPPF). July 2018.
- National Planning Policy Framework - Technical Guidance. March 2012.
- NHBC. Boyle and Witherington. 'Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present.' Report No. 10627-R01(04). 2007.
- Water Framework Directive, 2000.

DRAWINGS



SITE LOCATION

NEAREST POSTCODE: M13 0LF



REV	DATE	DESCRIPTION	BY	CKD
BROWNFIELD SOLUTIONS LTD 1001 WILMINGTON ROAD, WILMINGTON, WILMSHIRE, B98 9ST				
CLIENT MARSTON & GRUNDY LLP CONSULTING ENGINEERS				
PROJECT TITLE DEAN TRUST ACADEMY				
DRAWING TITLE SITE LOCATION PLAN				
DRAWING No. M4246/01	REVISION -	SCALE NTS	DATE 03/07/19	
DRAWN BY GRP		CHECKED BY DMG		

PHOTOGRAPHS



PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 4

Photo Descriptions

PHOTO NO.	DESCRIPTION
1	View northwards at bike store / proposed first floor extension with undercroft car parking.
2	View north-eastwards at the large bund in the north-eastern corner of the site.
3	View southwards at a small bund to the south of the playground.
4	View westwards along with northern boundary of the site / area of proposed dining extension.

REV	DATE	DESCRIPTION	BY	CKD



CLIENT THE DEAN TRUST		
PROJECT TITLE DEAN TRUST ACADEMY, ARDWICK, MANCHESTER		
TITLE SITE PHOTOGRAPHS		
Associated Document Ref No. GP/M4246/8660	PAGE 1 of 1	DATE 19/07/19
COMPLIED BY NS	CHECKED BY DMG	

APPENDIX A

BSL Methodology and Guidance

BSL Desk Study Methodology and Guidance

This Appendix provides information on the approaches, methods and guidance used by Brownfield Solutions Ltd in the preparation of this report.

The term 'geo-environmental' is used to describe aspects relating to ground-related environmental issues (such as potential soils and groundwater contamination). The term 'geotechnical' is used to describe aspects relating to the physical nature of the site (such as foundation requirements). It should be noted that this is an integrated investigation and these two main aspects are related, unless otherwise specified within the report.

Desk Studies are written in broad agreement with BS 10175:2011+A1:2013. The first stage of a two-staged investigation and assessment of a site is the Preliminary Investigation (BS 10175:2011+A1:2013), often referred to as a Phase 1 Desk Study Assessment, comprising a desk study and walk-over survey, which culminates in the Preliminary Risk Assessment. A preliminary conceptual site model (CSM) is developed. From this are identified any geotechnical and geo-environmental hazards and the qualitative degree of risk associated with them.

From the geo-environmental perspective, the hazard Identification process uses professional judgement to evaluate all the hazards in terms of possible contaminant linkages (of source-pathway-receptor). Possible contaminant linkages are potentially unacceptable risks in terms of the current contaminated land regime legal framework and require either remediation or further assessment. These are normally addressed via intrusive ground investigation and generic risk assessment.

The second stage is the Ground Investigation, Generic Risk Assessment and Geotechnical Interpretation. This represents the further assessment mentioned above. The Ground Investigation comprises field work and laboratory testing based on the findings of the Preliminary Risk Assessment, to reduce uncertainty in the geotechnical and geo-environmental hazard identification. This may include the initial, main and supplementary Investigations described in BS 10175:2011+A1:2013.

Legislative Background

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

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

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

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

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

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

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

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

Relevant Guidance Documents

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

- DETR Circular 02/2000, Contaminated Land: Implementation of Part IIA of the Environmental Protection Act 1990.
- CLR11 – Model Procedures.
- Brownfields – Managing the development of previously developed land – A client's guide, CIRIA 2002.
- DEFRA and Environment Agency publications CLR7 – 10, supported by the TOX guides and SGV guides, dated March 2002.
- Environment Agency technical advice to third parties on Pollution of Controlled Waters for Part IIA of the EPA1990, May 2002.
- Contamination and Environmental Matters - Their implications for Property Professionals (2nd Edition RICS Nov 2003).
- BS 10175:2011+A2:2017.

Relevant Legislative Documents

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

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

Contaminated Land Risk Assessment

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

Hazard Identification ➡ Hazard Assessment ➡ Risk Estimation ➡ Risk Evaluation

CLR11 outlines the framework to be followed for risk assessment in the UK. The framework is designed to be consistent with UK legislation and policies including planning. The starting point of the risk assessment is to identify the context of the problem and the objectives of the process. Under CLR11, three tiers of risk assessment exist - Preliminary, Generic Quantitative and Detailed Quantitative.

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

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

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

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

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

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

- **Severe:** Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. A short-term risk to a particular ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);
Examples – High concentrations of contaminant on surface of recreation area, major spillage of contaminants from site into controlled waters, explosion causing building to collapse;
 - **Medium:** Chronic damage to human health ('significant harm' as defined in DETR 2000). Pollution of sensitive water resources. A significant change in a particular ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);
Examples - Concentrations of contaminants exceed the generic assessment criteria, leaching of contaminants from a site to a Principal or Secondary Aquifer, death of species within a designated nature reserve;
 - **Mild:** Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000). Damage to sensitive buildings, structures, services or the environment;
Examples – Pollution of non-classified groundwater or damage to buildings rendering it unsafe to occupy.
 - **Minor:** harm, not necessarily significant harm, which may result in financial loss or expenditure to resolve. Non-permanent health effects to human health (easily prevented by use of personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.
-

Examples – Presence of contaminants at such concentrations PPE is required during site work, loss of plants in landscaping scheme or discolouration of concrete.

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

		Consequences			
		Severe	Medium	Mild	Minor
Probability	Highly likely	Very high	High	Moderate	Moderate/low
	Likely	High	Moderate	Moderate/low	Low
	Low likelihood	Moderate	Moderate/low	Low	Very low
	Unlikely	Moderate/low	Low	Very Low	Very low
	No Linkage	No risk			

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

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

Some linkages may be identified which constitutes a theoretical connection between a source and a receptor, but professional judgement shows them not to be possible for some reason. These are labelled 'no linkage' in the summary table and no further action is required.

Ground Gas Guidance

Redevelopment on brownfield sites is an ever-increasing occurrence, including those sites where a potential ground gas issue is present.

BS8485:2015+A1:2019 and CIRIA C665 is the current guidance which gives up-to-date advice on all aspects of ground gas. It outlines good practice in investigation, the collection of relevant data and monitoring programmes in a risk-based approach to gas contaminated land. Two semi-quantitative methods are set out for the assessment of risk:

- 1 For low rise housing with a ventilated under floor void at minimum 150 mm (Boyle and Witherington);
- 2 For all other development types (Wilson and Card).

Both methods use the concept of Gas Screening Values (GSVs) to identify levels of risk. The mitigation and management of potentially unacceptable risk is described with reference to both passive and active systems of gas. Source removal is also discussed as an option.

CIRIA C665 and the advice it contains has been prepared to be generally consistent with CLR11 *Model Procedures for the management of land contamination* (Defra and Environment Agency, 2004a). The aim of CIRIA C665 is a consistent approach to decision making, particularly relating to the scope of protective design measures on a site-specific basis.

Legislative Framework

CIRIA C665 provides technical guidance however also recognises the context into which the guidance has to be employed. Government policy is based upon a “suitable for use approach”, which is relevant to both the current and proposed future use of land. When considering the current use of land, Part IIA of the Environment Protection Act 1990 provides the regulatory regime. The presence of hazardous ground gases could provide the “source” in a “pollutant linkage” which could lead the regulator to determine that considerable harm or there is a significant possibility of such harm being caused. Under such circumstances, the regulator would determine the land to be “contaminated land” under the provisions of the Act, setting out the process of remediation as described in the DETR Circular 02/2000 *Statutory guidance on contaminated land* (DETR, 2000a).

Frequency and Duration of Monitoring

The monitoring period for a specific site covers the “worst case” scenario. A “worst case” scenario will occur during falling atmospheric pressure and, in particular, weather conditions such as rainfall, frost and dry weather.

The benefits of the additional information and whether it is likely to change the scope of gas protection should be considered, as are the consequences of failing to characterise adequately pollutant linkages. Investigations concerned with soil gas are required to provide monitoring data sufficient to allow prediction of worst case conditions enabling the confident assessment of risk and subsequent design of appropriate gas protection schemes. Monitoring programmes should not be an academic exercise in data collection.

Below are matrices that will aid in determining an appropriate number of gas monitoring visits and the length of monitoring period.

Typical/idealised periods of monitoring

		Generation of Potential Source				
		Very Low	Low	Moderate	High	Very High
Sensitivity of Development	Low (Commercial)	1 month	2 months	3 months	6 months	12 months
	Moderate (Flats)	2 months	3 months	6 months	12 months	24 months
	High (Residential with Gardens)	3 months	6 months	6 months	12 months	24 months

Typical/idealised frequency of monitoring

		Generation of Potential Source				
		Very Low	Low	Moderate	High	Very High
Sensitivity of Development	Low (Commercial)	4	6	6	12	12
	Moderate (Flats)	6	6	9	12	24
	High (Residential with Gardens)	6	9	12	24	24

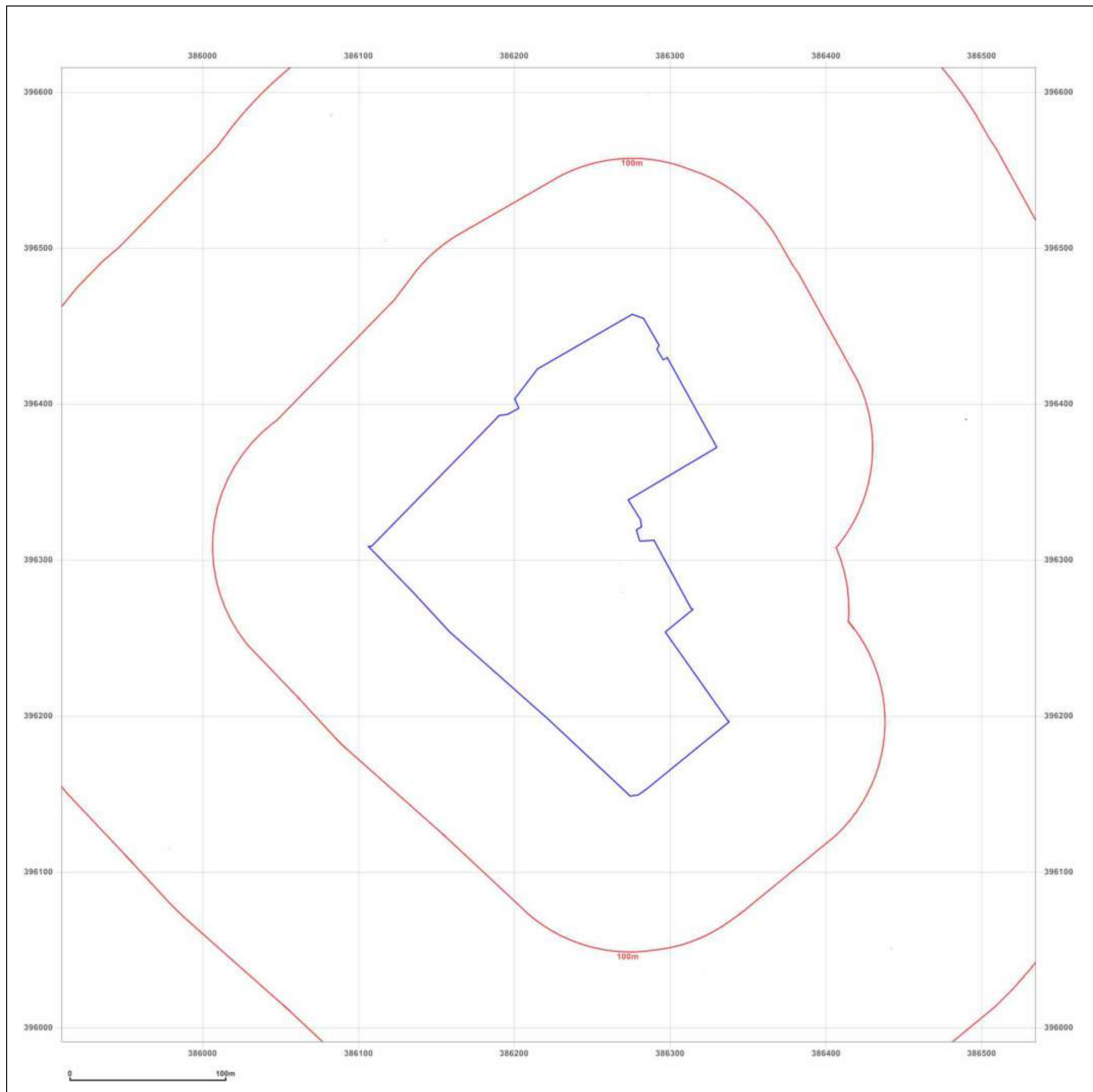
Note

- 1 NHBC guidance also recommends this period of monitoring (Boyle and Witherington, 2007).
- 2 There is no industry consent over “high”, “medium” or “low” generation potential of source.
- 3 At least two sets of readings should be at low and falling atmospheric pressure (but not restricted to periods below <1000 mb) known as worst case conditions. Historical data can be used as part of the data set (Table 5.5b).

It is recommended that newly installed monitoring wells are left for 24 hours to allow the soil gas to reach equilibrium. It should be recognised, however, that some soil gas regimes could take considerably longer (up to seven days). Interpretation of any initial readings should take this equilibrium process into account.

APPENDIX B

Historical Maps



Site Details:

345 DEAN TRUST ARDWICK,
STOCKPORT ROAD,
MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: County Series

Map date: 1881

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1881
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Site Details:

345 DEAN TRUST ARDWICK,
STOCKPORT ROAD,
MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: County Series Town Plan

Map date: 1891

Scale: 1:500

Printed at: 1:1,000



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Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: County Series Town Plan

Map date: 1891

Scale: 1:500

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Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: County Series

Map date: 1908

Scale: 1:2,500

Printed at: 1:2,500



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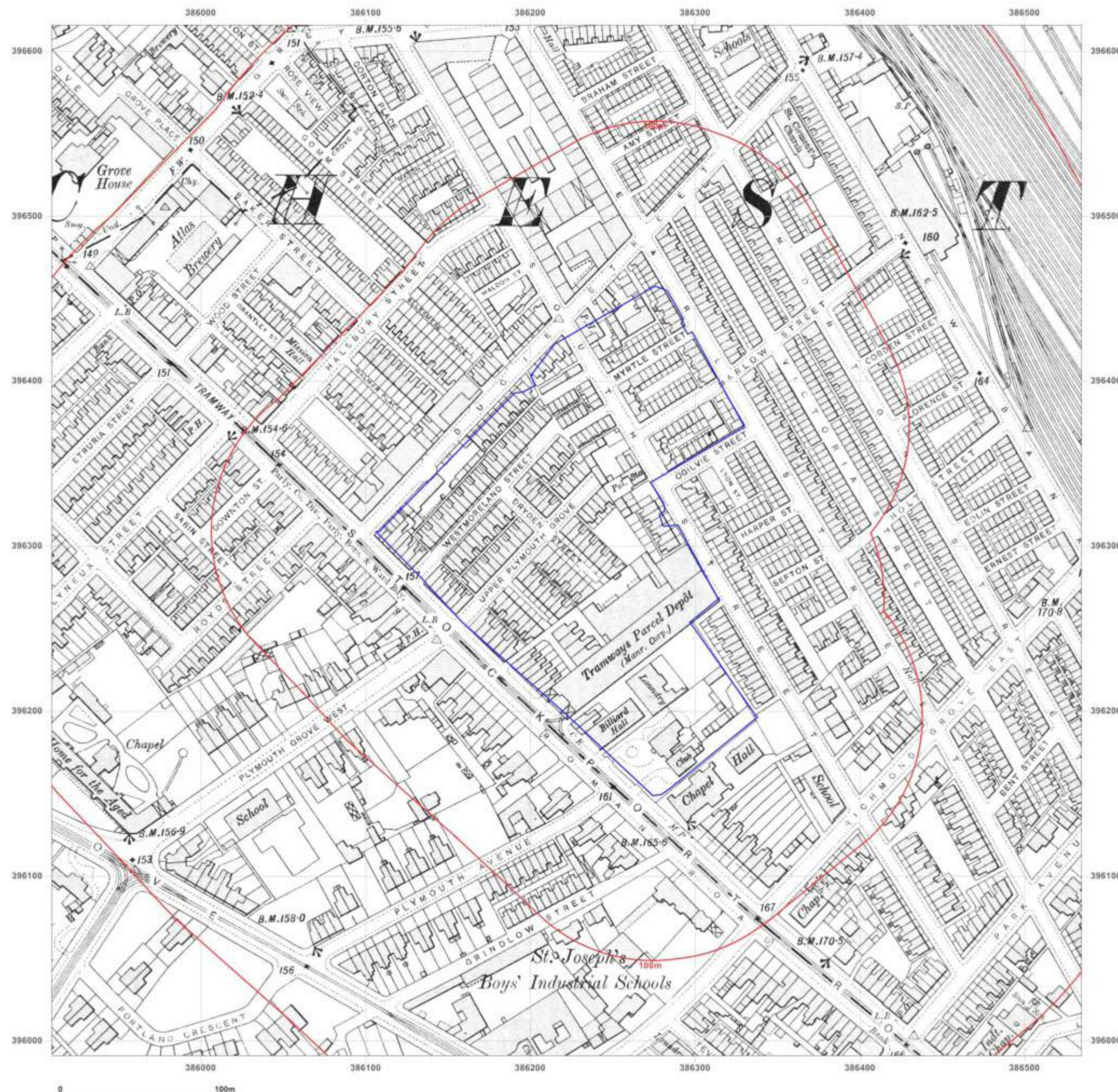


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Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: County Series

Map date: 1922

Scale: 1:2,500

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Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: County Series

Map date: 1933

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Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: National Grid

Map date: 1951

Scale: 1:2,500

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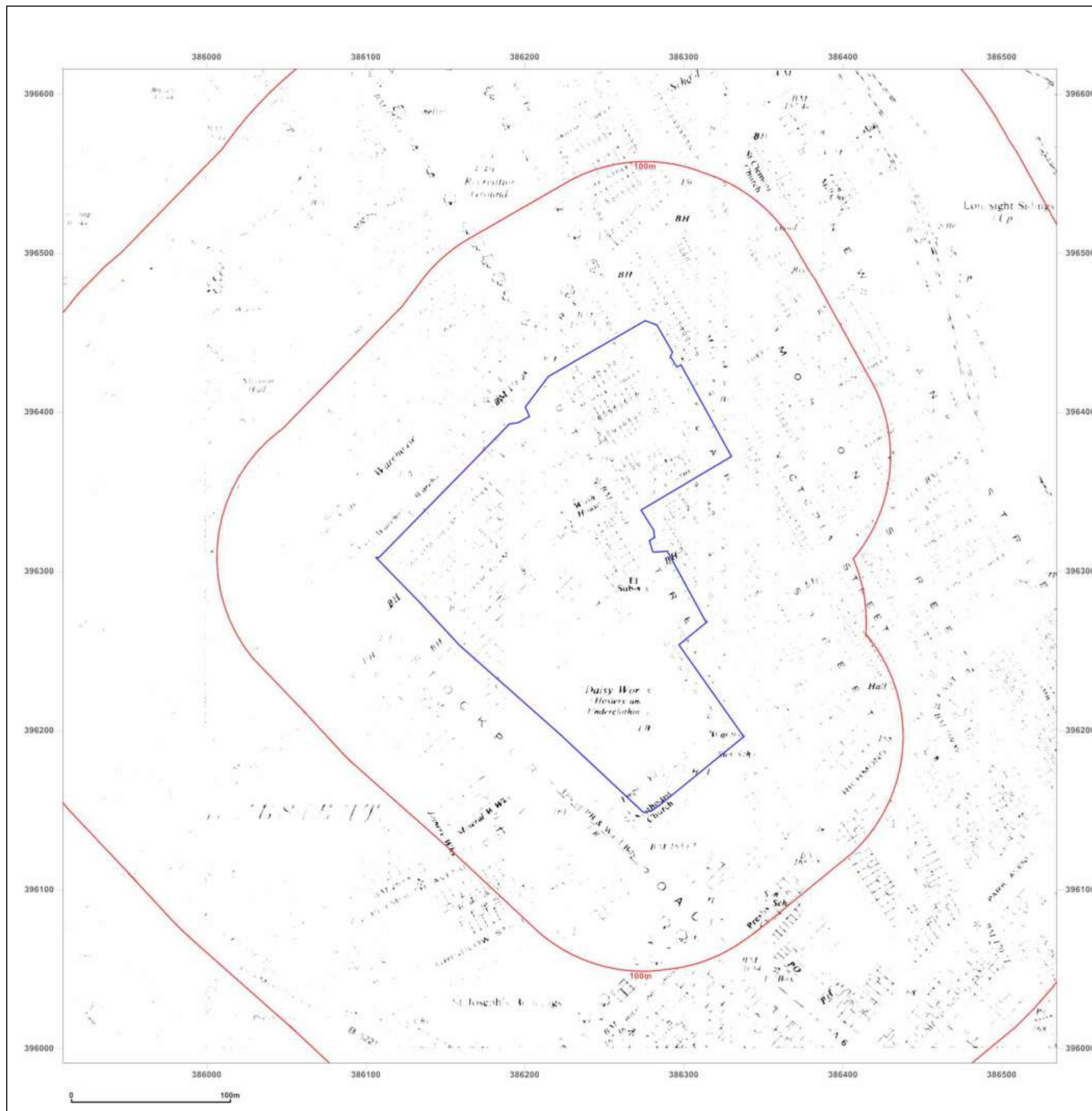


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Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: National Grid

Map date: 1960-1961

Scale: 1:2,500

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Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: National Grid

Map date: 1976

Scale: 1:1,250

Printed at: 1:2,000



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Revised 1975
Edition N/A
Copyright 1976
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Revised 1975
Edition N/A
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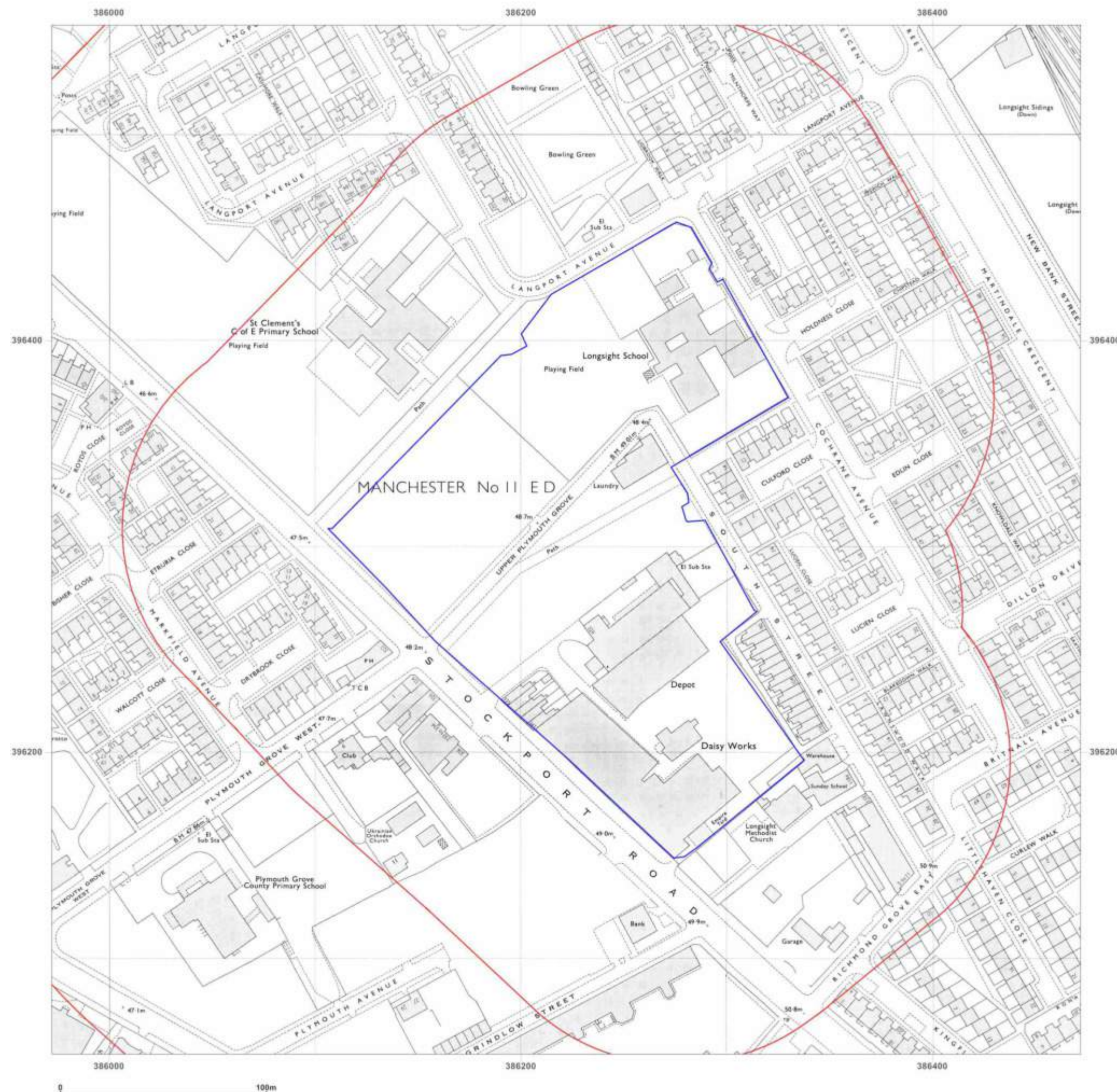


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Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: National Grid

Map date: 1991-1992

Scale: 1:1,250

Printed at: 1:2,000



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

Surveyed 1964
Revised 1991
Edition N/A
Copyright 1991
Levelled 1964

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1991
Levelled 1968

Surveyed 1964
Revised 1991
Edition N/A
Copyright 1991
Levelled 1964

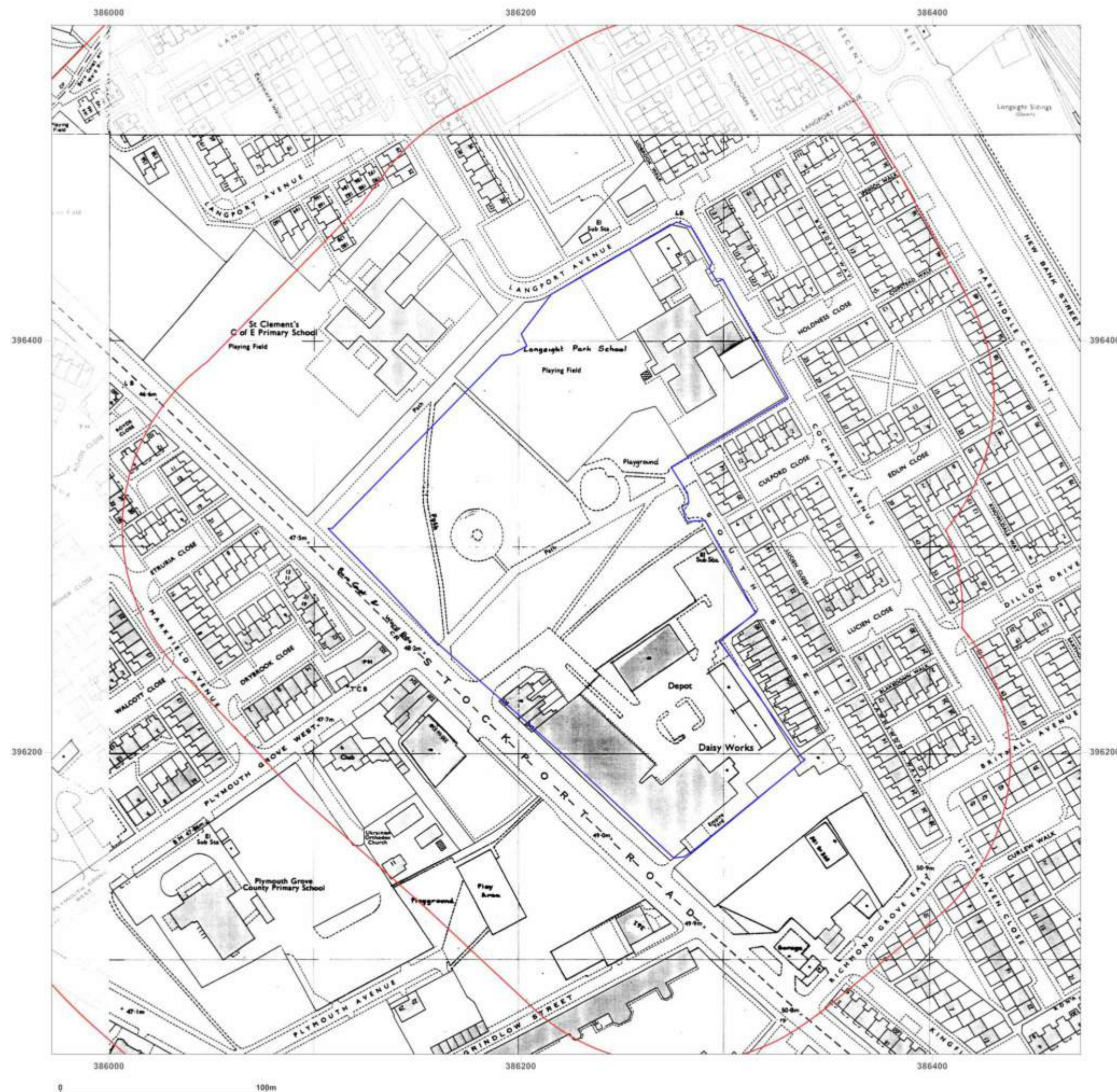


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Site Details:

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MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: National Grid

Map date: 1991-1993

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1993
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Levelled N/A

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

Surveyed 1963
Revised 1991
Edition N/A
Copyright 1991
Levelled 1963

Surveyed 1964
Revised 1991
Edition N/A
Copyright 1991
Levelled 1964

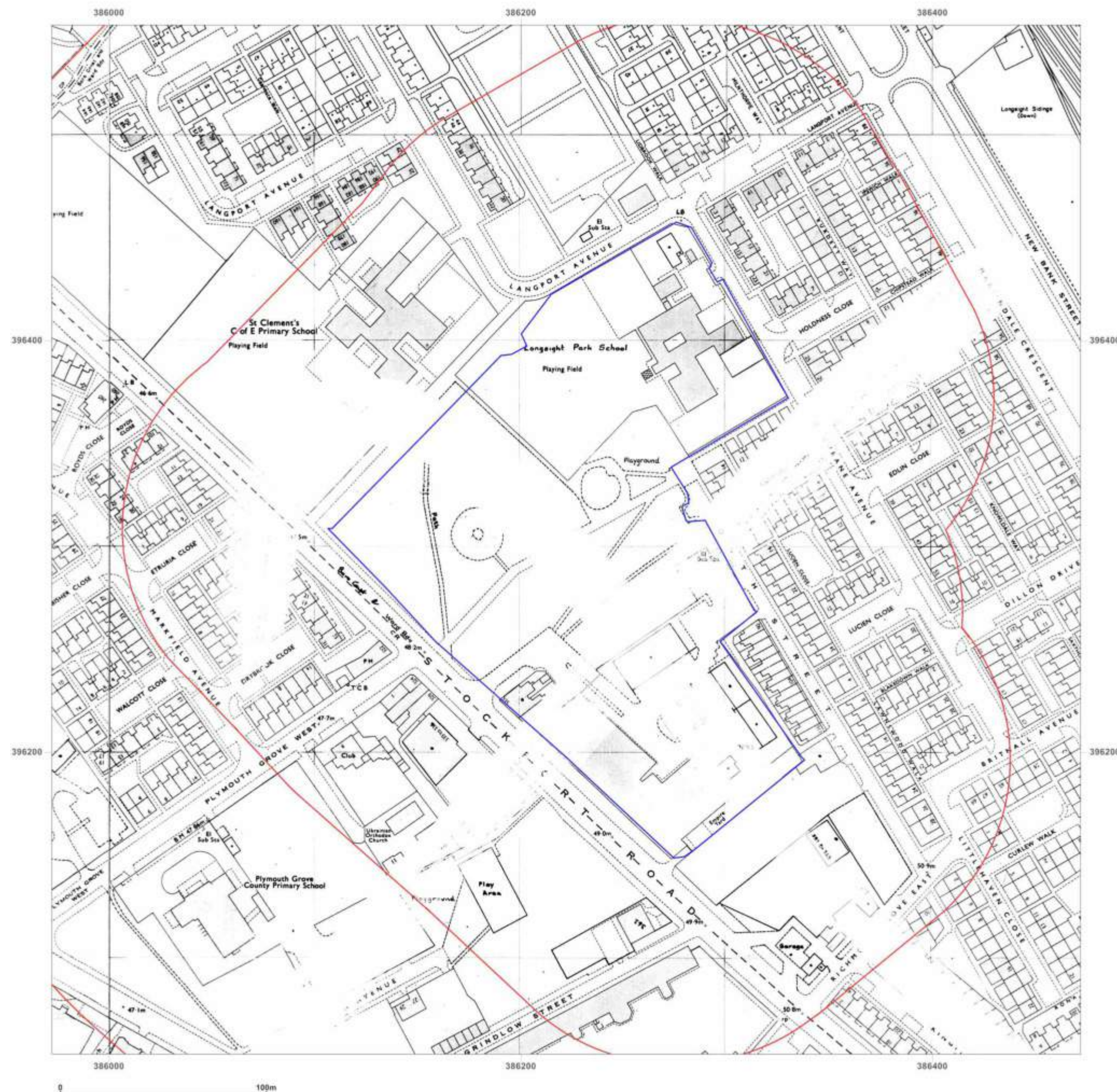


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Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: National Grid

Map date: 1992-1993

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1993
Revised 1993
Edition N/A
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Surveyed 1993
Revised 1993
Edition N/A
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Revised 1992
Edition N/A
Copyright 1992
Levelled N/A

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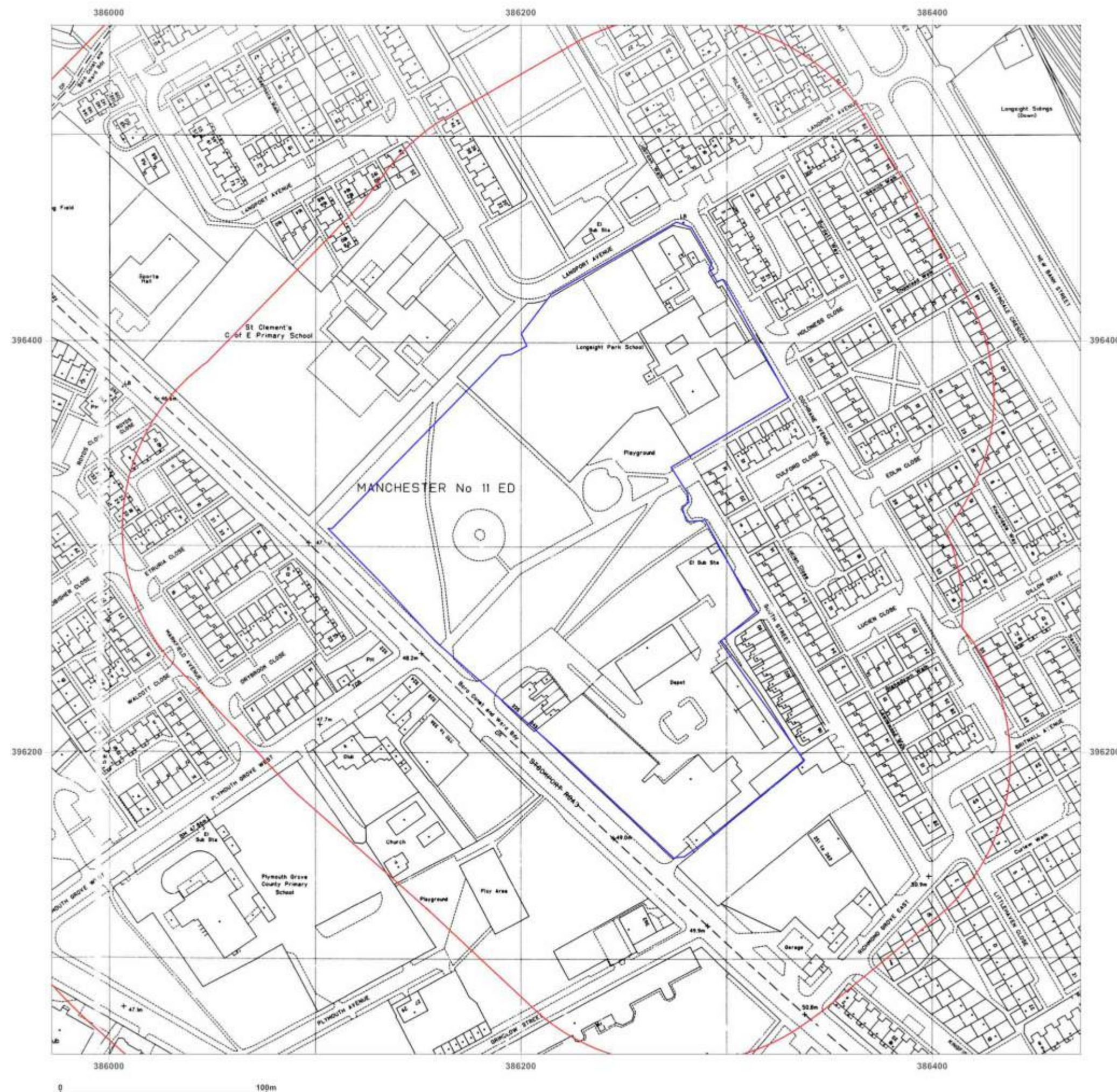


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MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: County Series

Map date: 1848-1849

Scale: 1:10,560

Printed at: 1:10,560



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

Surveyed 1845
Revised 1849
Edition 1849
Copyright N/A
Levelled N/A

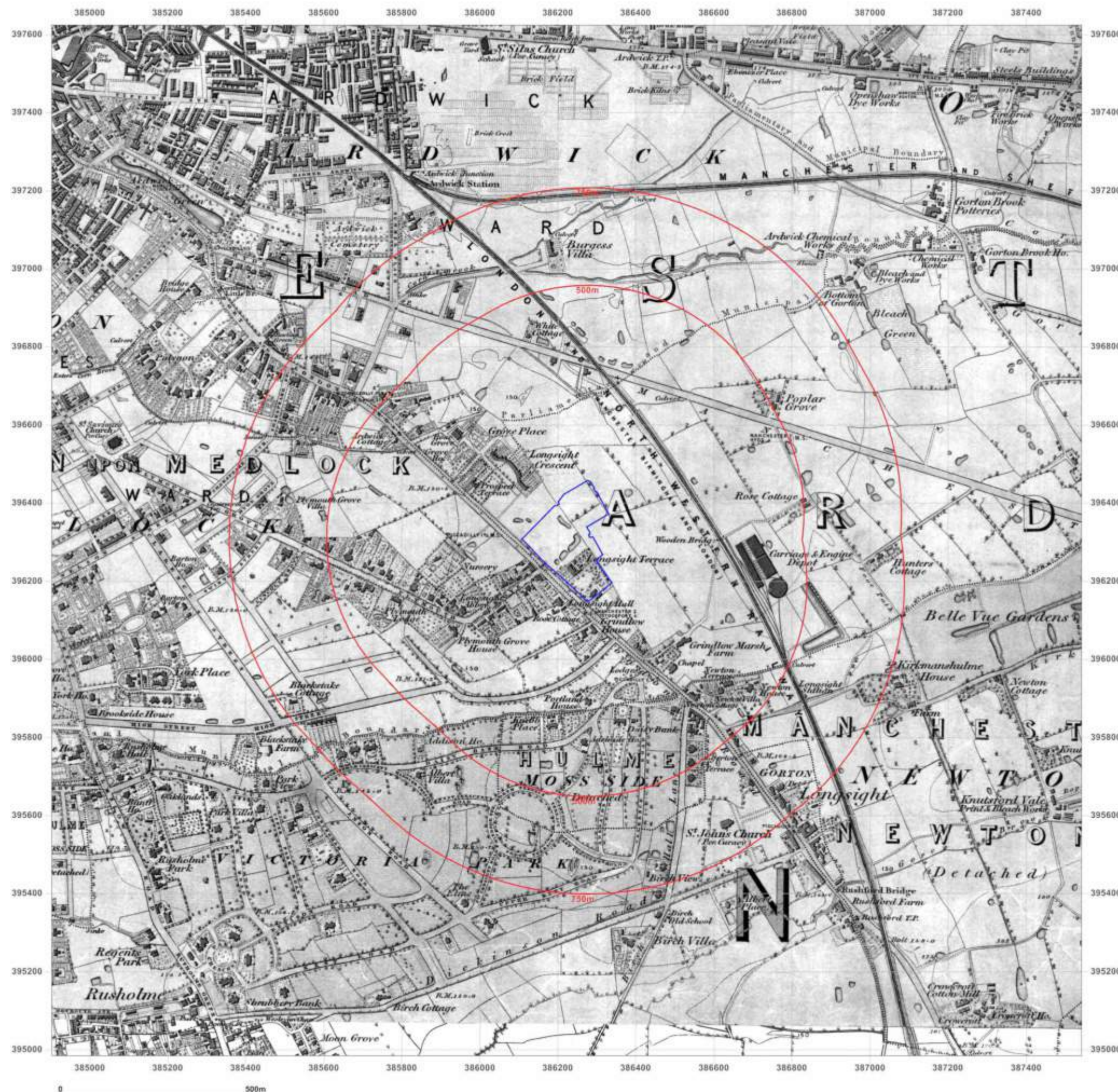


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STOCKPORT ROAD,
MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: County Series

Map date: 1890-1892

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1890
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Edition 1890
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Surveyed 1892
Revised 1892
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MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: County Series

Map date: 1905

Scale: 1:10,560

Printed at: 1:10,560



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

Surveyed 1892
Revised 1905
Edition 1905
Copyright N/A
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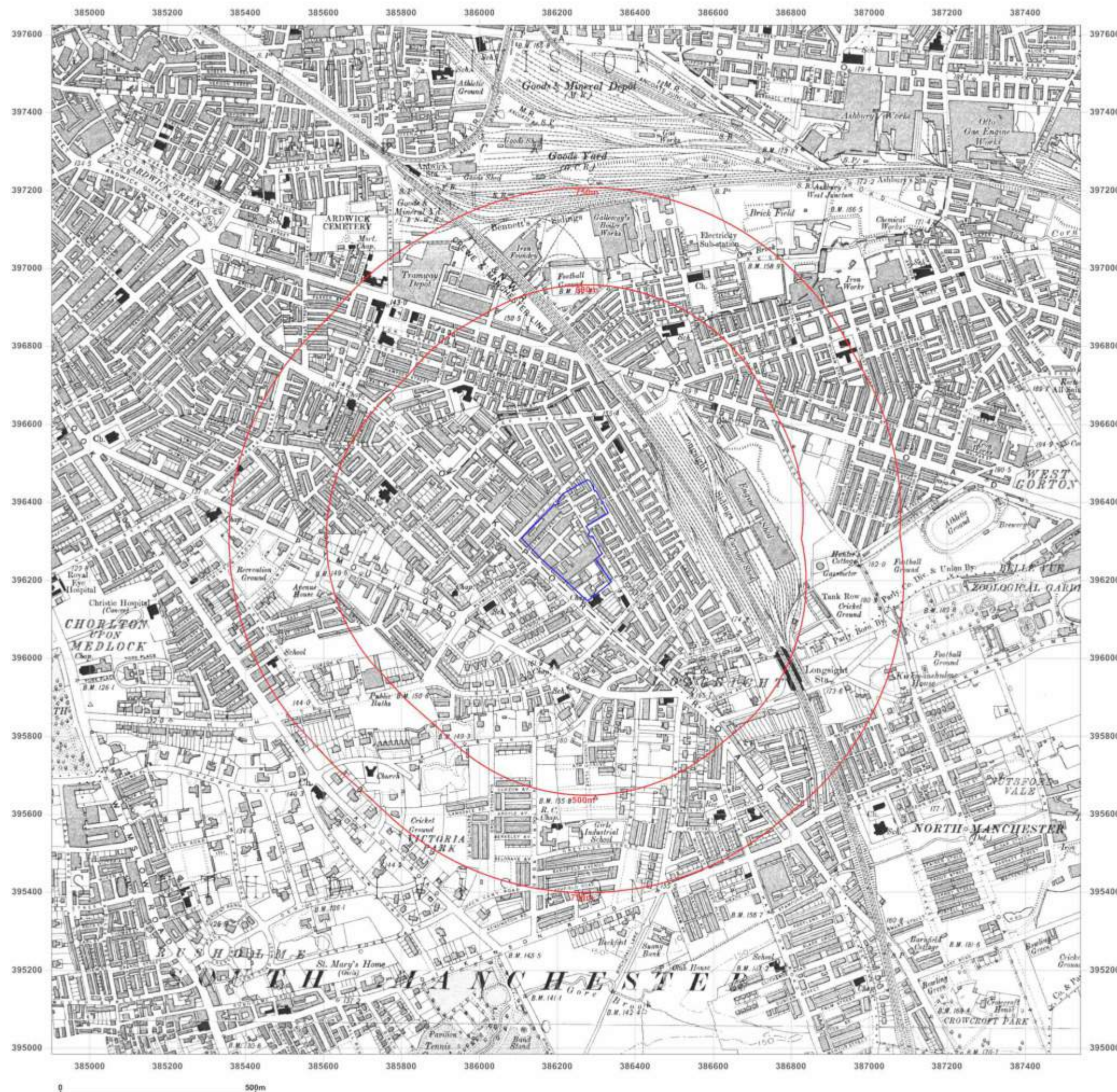


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Site Details:

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MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: County Series

Map date: 1923

Scale: 1:10,560

Printed at: 1:10,560



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

Surveyed 1844
Revised 1916
Edition 1923
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Levelled 1915



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Site Details:

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MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: County Series

Map date: 1923

Scale: 1:10,560

Printed at: 1:10,560



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

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

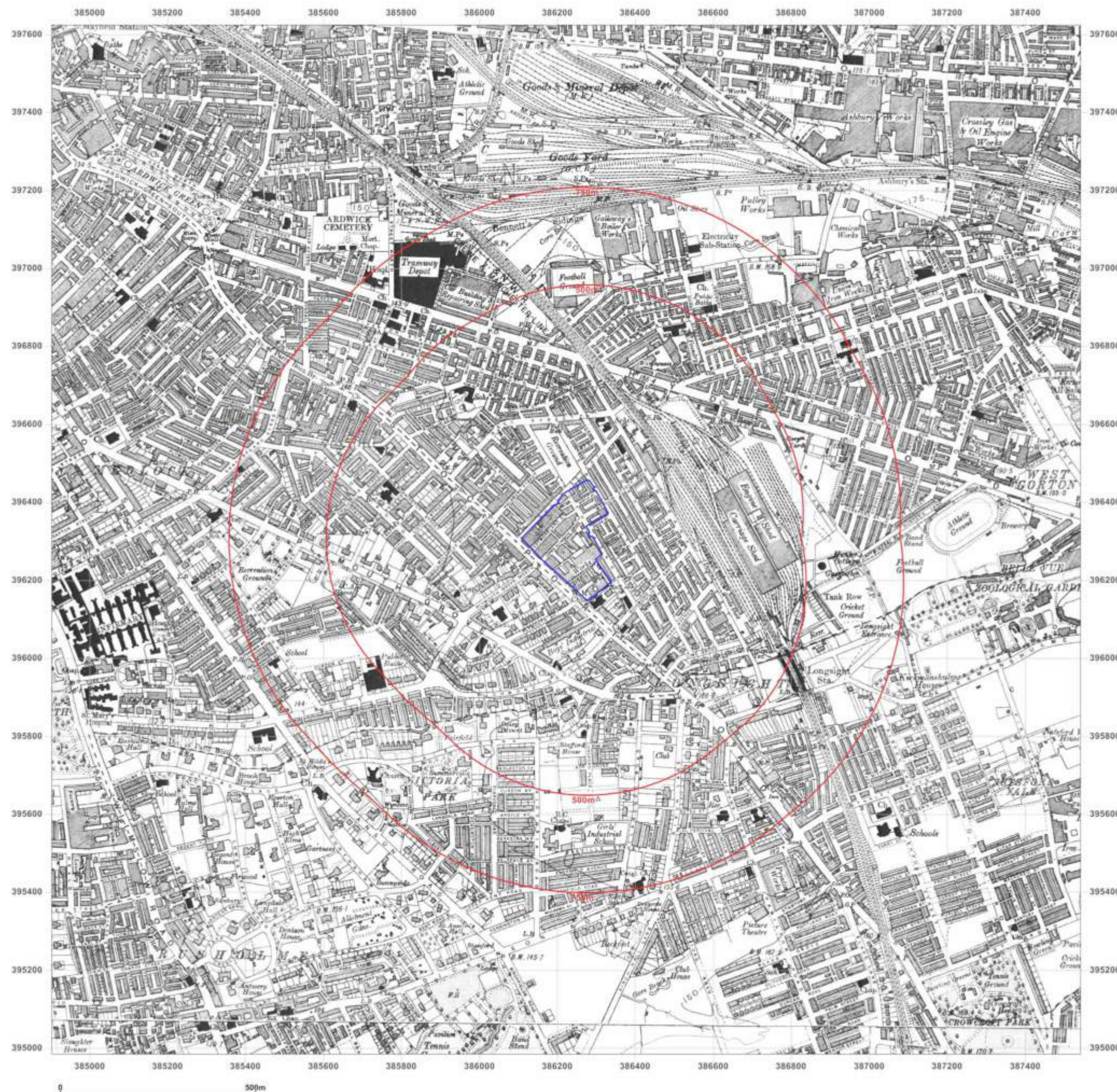


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Site Details:

345 DEAN TRUST ARDWICK,
STOCKPORT ROAD,
MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: County Series

Map date: 1934

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1934
Edition 1934
Copyright N/A
Levelled 1927

Surveyed 1844
Revised 1934
Edition 1934
Copyright N/A
Levelled 1927

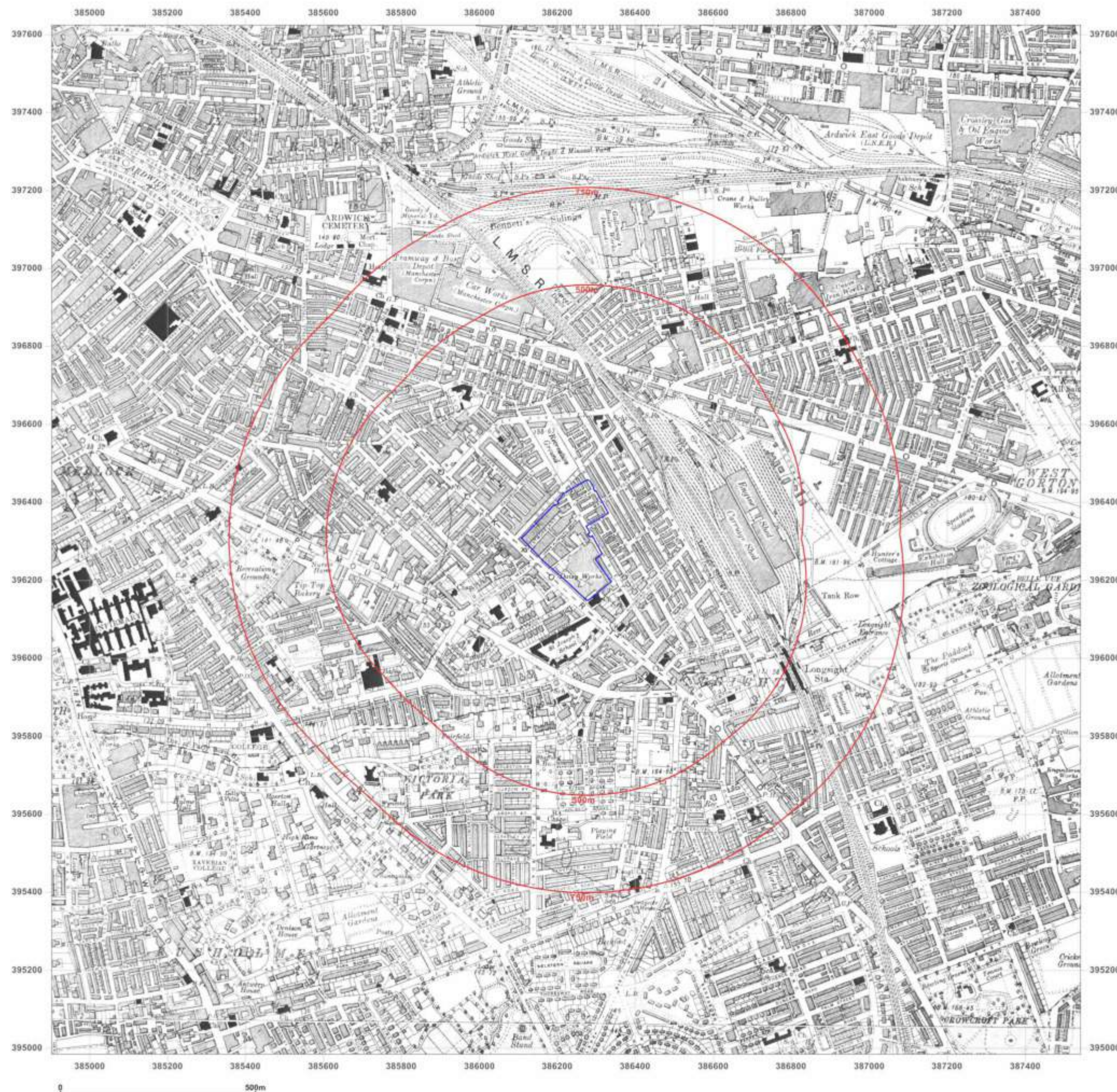


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Site Details:

345 DEAN TRUST ARDWICK,
STOCKPORT ROAD,
MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



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

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

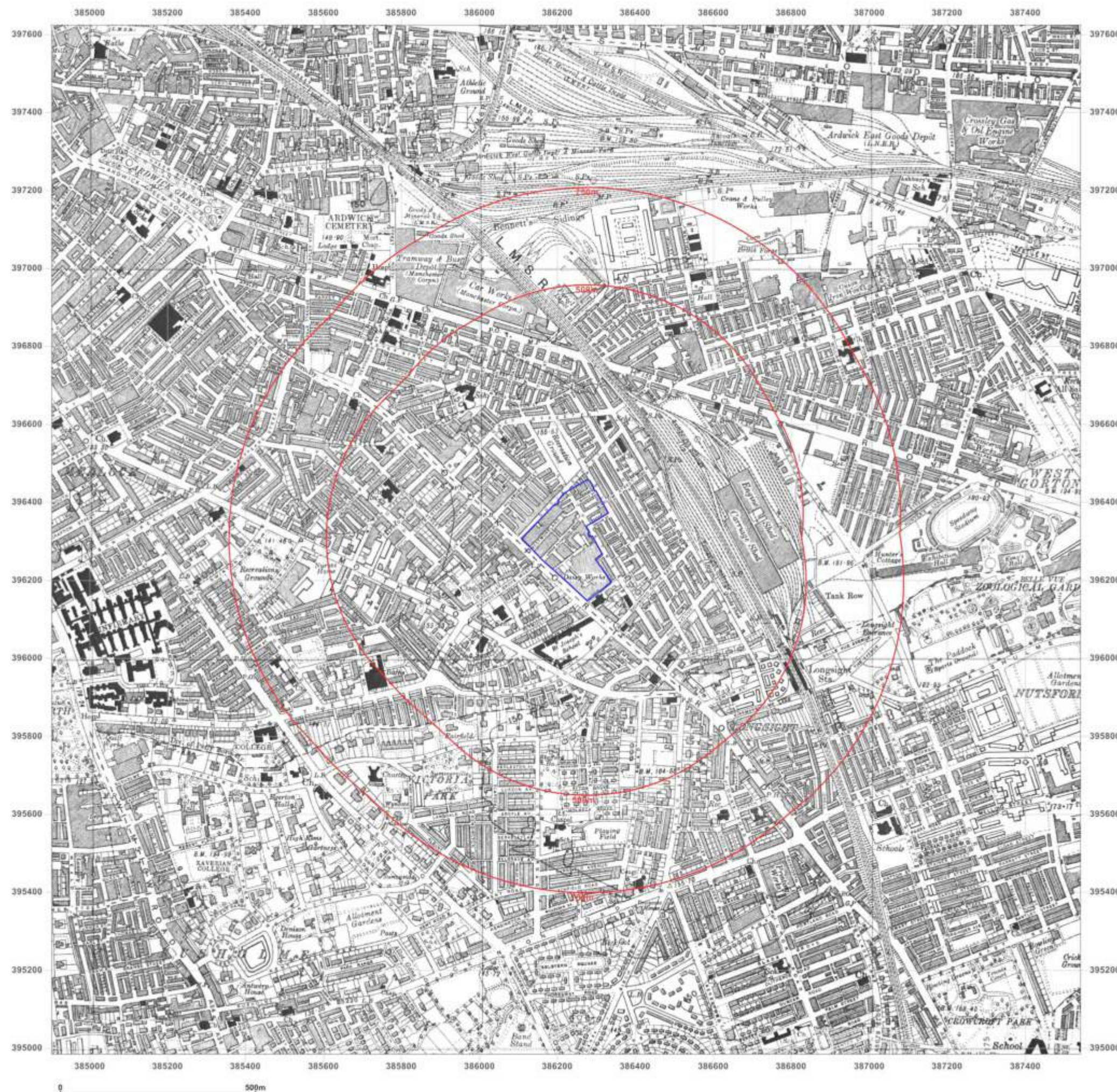


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Site Details:

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MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: Provisional

Map date: 1955-1956

Scale: 1:10,560

Printed at: 1:10,560



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

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

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

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Revised 1955
Edition N/A
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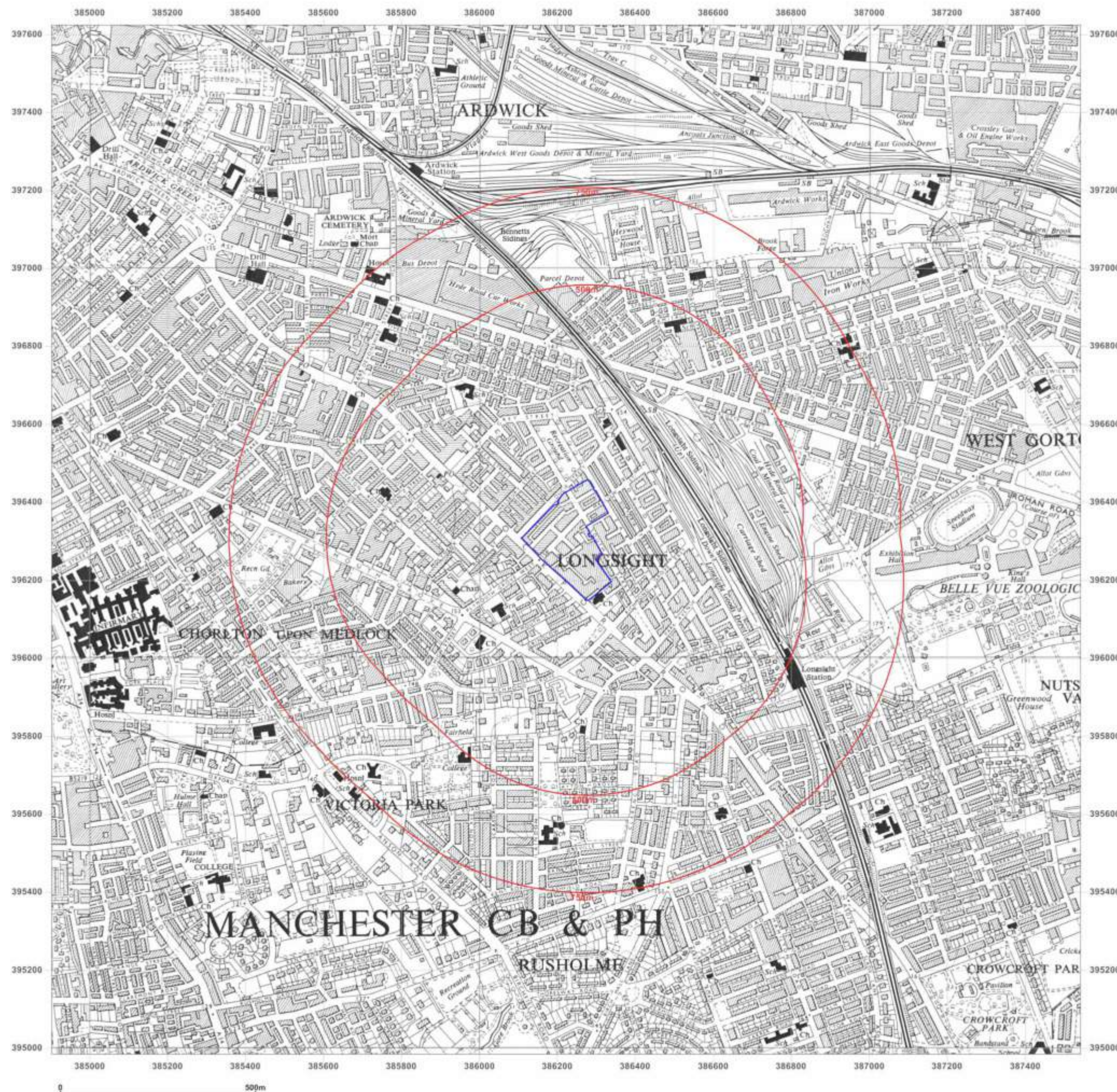


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Site Details:

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STOCKPORT ROAD,
MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: Provisional

Map date: 1965-1968

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1968 Revised 1968 Edition N/A Copyright 1968 Levelled N/A	Surveyed 1965 Revised 1965 Edition N/A Copyright 1965 Levelled N/A
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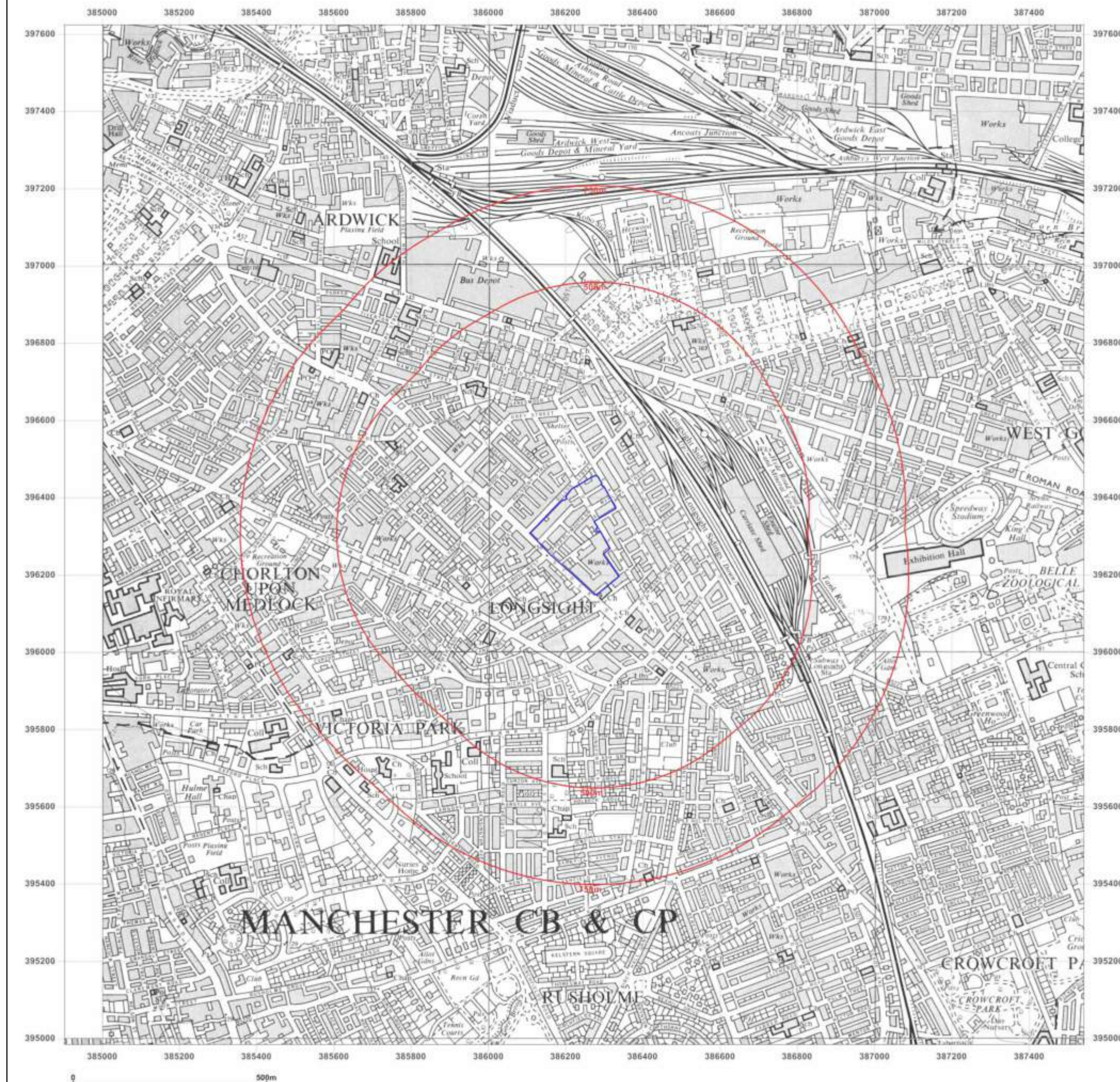


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Site Details:

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STOCKPORT ROAD,
MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: National Grid

Map date: 1980-1981

Scale: 1:10,000

Printed at: 1:10,000



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

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

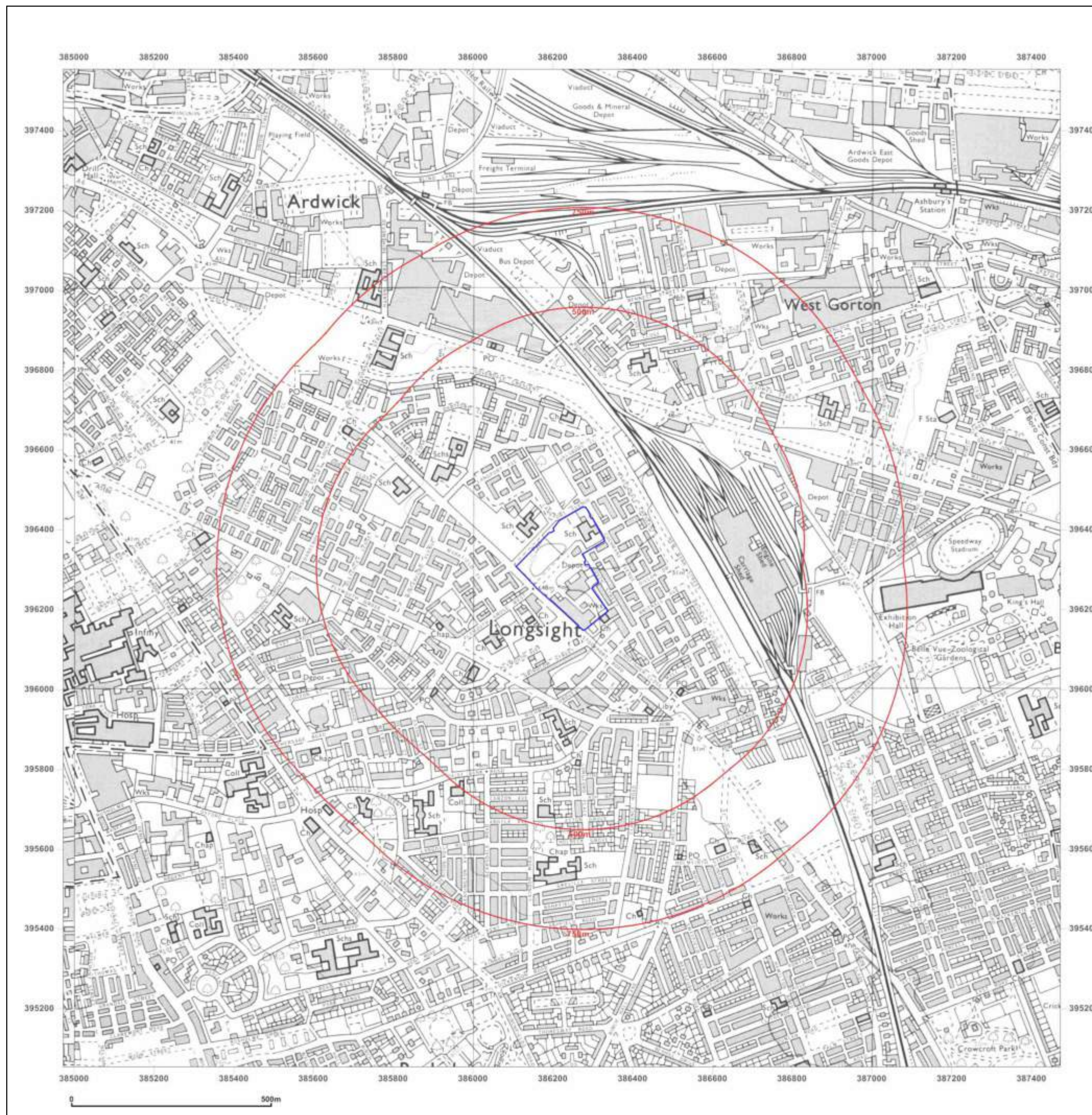


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MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: National Grid

Map date: 1985

Scale: 1:10,000

Printed at: 1:10,000



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

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

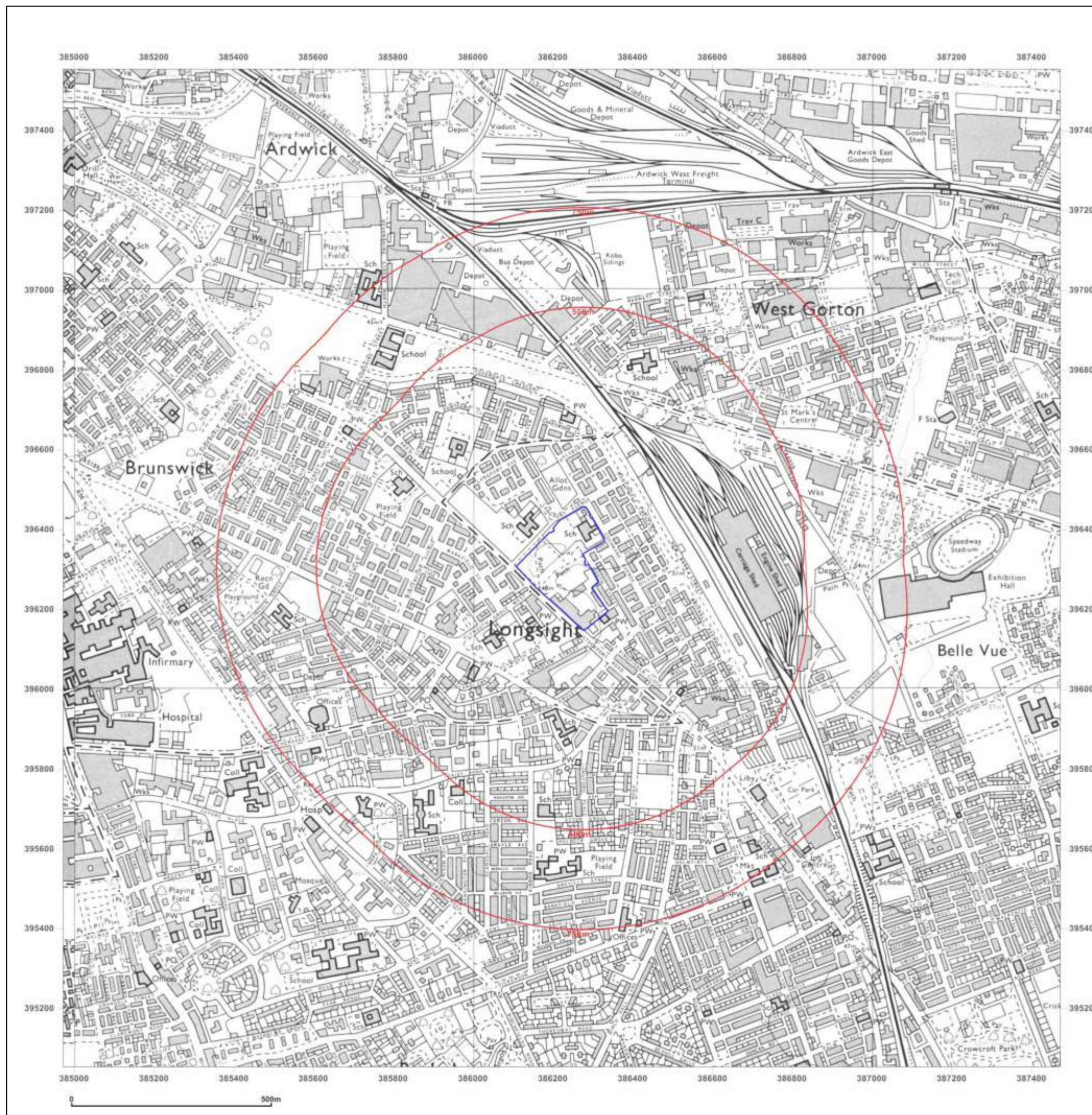


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MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: National Grid

Map date: 1988-1991

Scale: 1:10,000

Printed at: 1:10,000



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

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

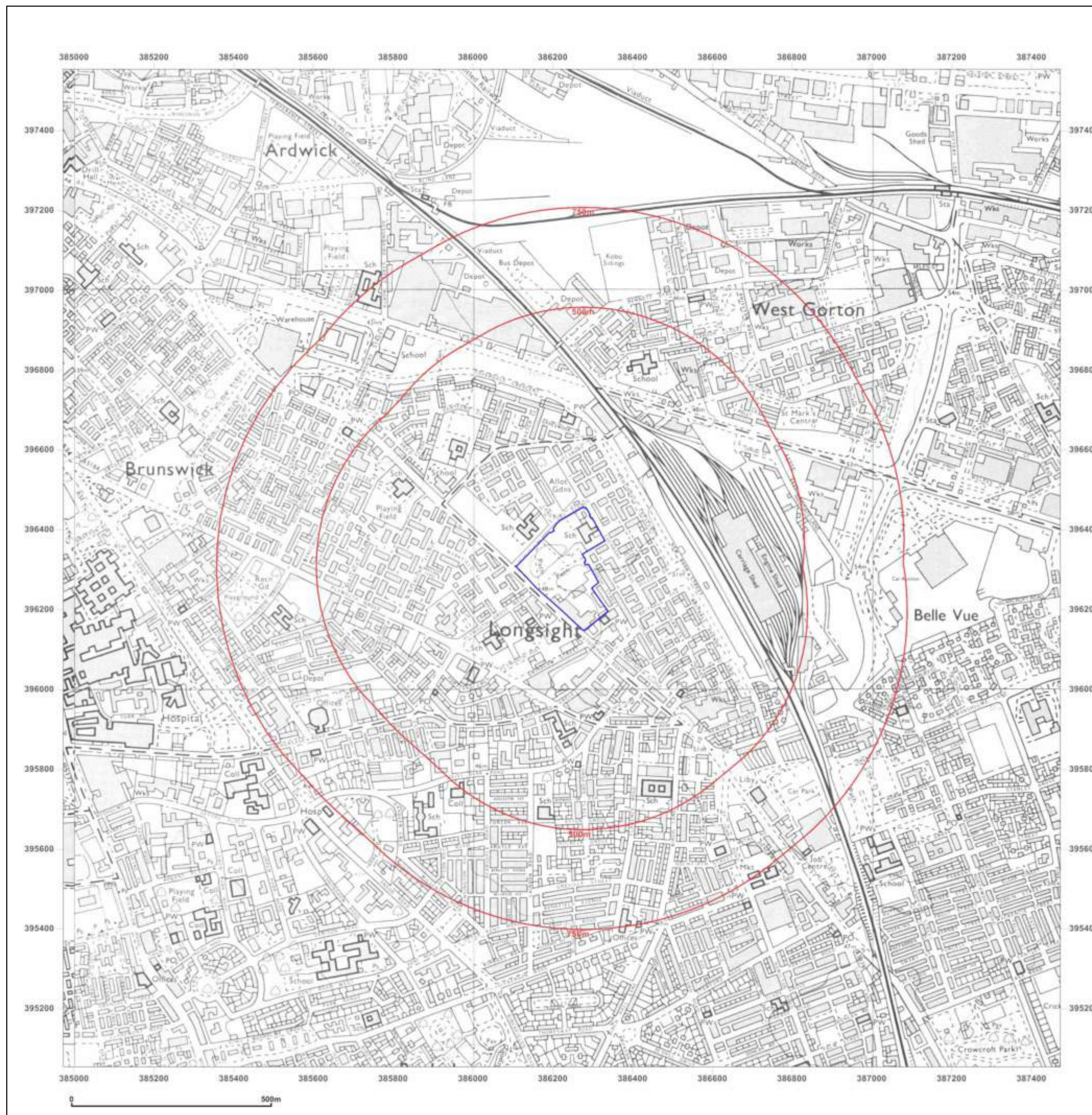


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Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000



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Site Details:

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MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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MANCHESTER, M13 0LF

Client Ref: 97_M4246
Report Ref: BRO-6129980
Grid Ref: 386222, 396303

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000

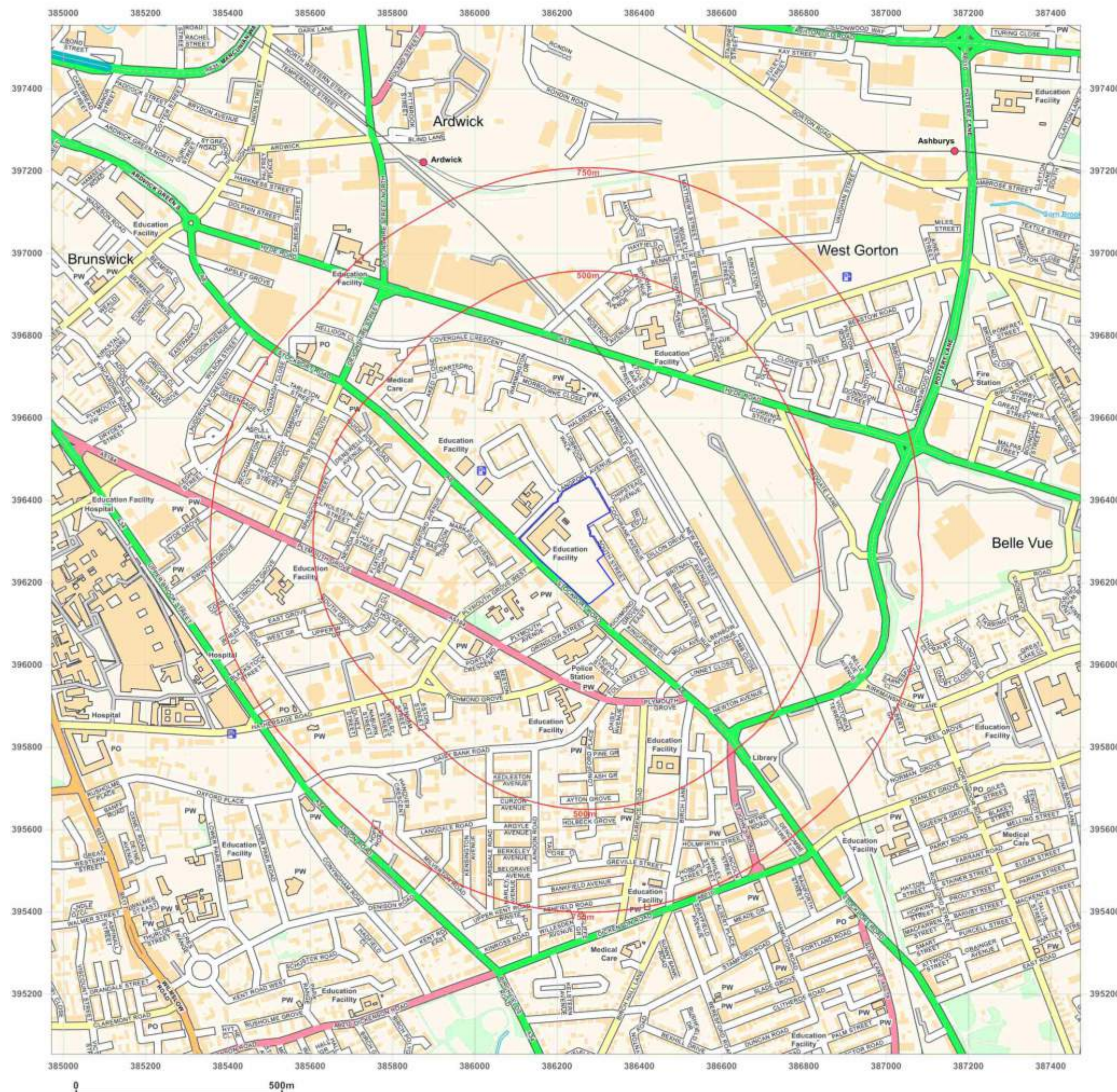


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APPENDIX C

BGS Boreholes

SECTION OF Coing

W. H.
at

Daisy Lake, Stockport Road.

at Formelle Lake, Longright
horsey Manchester

S189NE129

Maps: One-inch 85 Six-inch 102
Height above O.D. 160 Latitude Longitude
Communicated by James W. Huddell Ltd. Date of Sinking 27th Sept. 1923
Made by Dip of Strata

Water level: 0 ft.

M/c 110

	Thickness		Depth from Surface	
Soil relay <u>55/0456</u>	<u>3.03</u>	<u>10</u>	<u>3.03</u>	<u>10</u>
Grey sand	<u>2.13</u>	<u>7</u>	<u>5.18</u>	<u>17</u>
Grey mud shales.	<u>13.41</u>	<u>44</u>	<u>18.59</u>	<u>61</u>
Sand & gravel amorphous	<u>0.46</u>	<u>16</u>	<u>19.05</u>	<u>62</u>
Red sandstone	<u>32.77</u>	<u>107</u>	<u>51.82</u>	<u>170</u>
Red mud	<u>1.52</u>	<u>5</u>	<u>53.34</u>	<u>175</u>
Reddish red mud & sandstone.	<u>3.66</u>	<u>12</u>	<u>57.00</u>	<u>187</u>
Red sandstone	<u>2.44</u>	<u>8</u>	<u>59.44</u>	<u>195</u>
Reddish red mud	<u>3.96</u>	<u>13</u>	<u>63.40</u>	<u>208</u>
Red mud	<u>4.57</u>	<u>15</u>	<u>67.97</u>	<u>223</u>
M.M. Red mud & fine sand	<u>0.78</u>	<u>3</u>	<u>68.75</u>	<u>226</u>
Red mud 1 ft. down line	<u>5.49</u>	<u>18</u>	<u>74.24</u>	<u>244</u>
Very soft mud	<u>1.22</u>	<u>4</u>	<u>75.46</u>	<u>248</u>
Dark red mud	<u>9.75</u>	<u>32</u>	<u>85.21</u>	<u>280</u>

No. 62.

(19)

SECTION OF Borehole

at Slack & Co, Municipal Water Works,
Duncie St. Longsight, Manchester.

Maps: One-inch 85 Six-inch 1016 ^W County 131
Height above O.D. 160 Latitude Longitude
Communicated by J. H. H. H. H. Ltd. Date of sinking Nov. 1897
Made by Dip of Strata

Water level 60 ft. Plentiful supply.

M/c 112

Clay
Gravel
Fine rock
Rough rock
Clay
Red saddle
Clay

Thickness.			Depth from Surface.		
Feet	inches		Feet	inches	
12	19	40	12	19	40
6	10	20	18	29	60
19	20	63	37	49	123
3	05	10	40	54	133
4	27	14	44	81	147
2	74	9	47	05	156
4	57	15	52	12	171

APPENDIX D

Mining Search Report

345 DEAN TRUST ARDWICK, STOCKPORT ROAD, MANCHESTER, M13 0LF

Professional opinion

Site plan



Search results



1. Past underground coal mining
Not identified



2. Present underground coal mining
Not identified



3. Future underground coal mining
Not identified



4. Shafts and adits (mine entries)
Not identified



5. Coal mining geology
Not identified



6. Past opencast coal mining
Not identified



7. Present opencast coal mining
Not identified



8. Future opencast coal mining
Not identified



9. Coal mining subsidence claims
Not identified



10. Mine gas emissions
Not identified



11. Emergency Call Out incidents
Not identified



12. Withdrawal of support
Not identified



13. Working facilities orders
Not identified



14. Payments to copyhold owners
Not identified



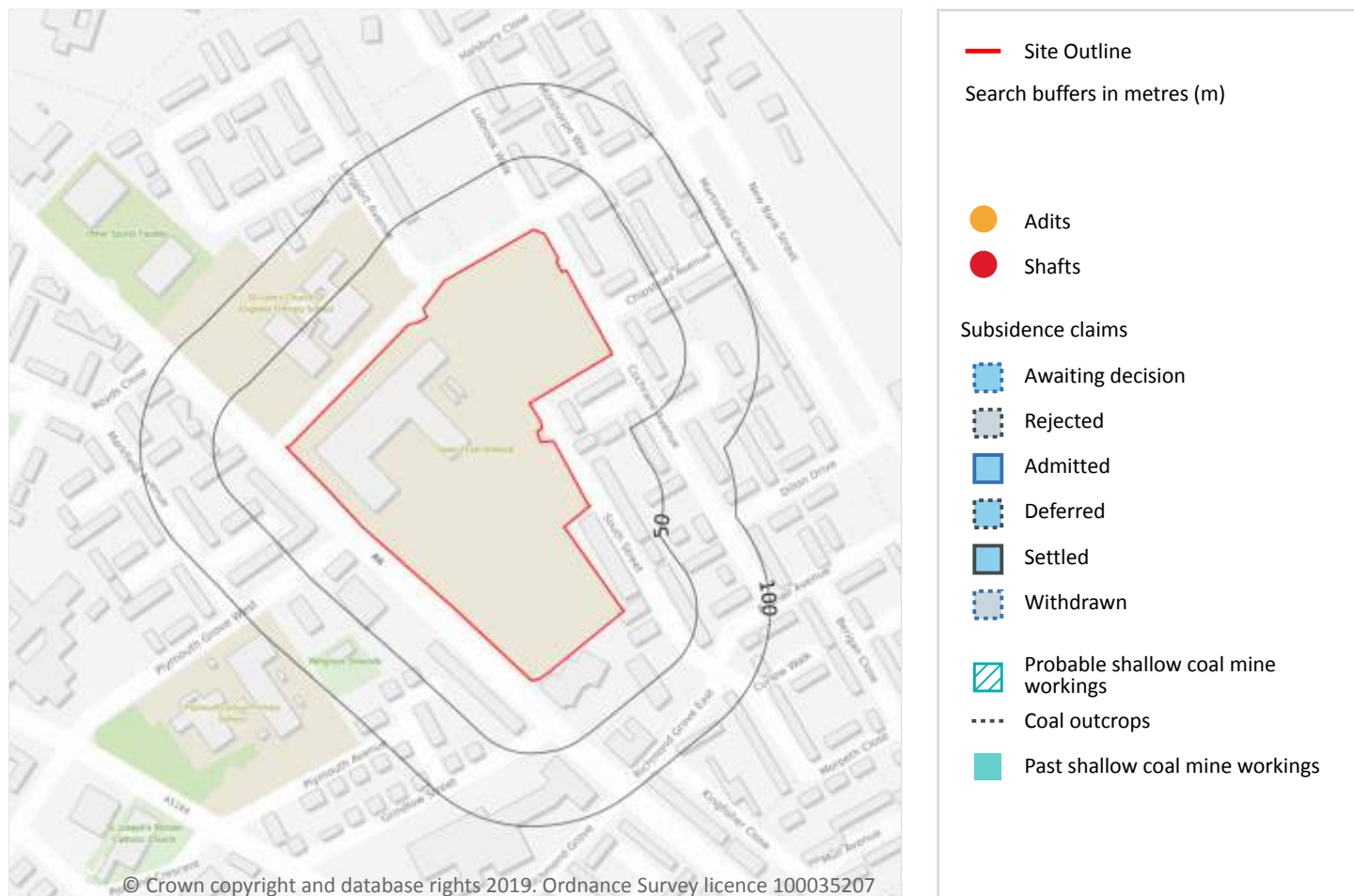
Cheshire Brine
Not identified

Findings and recommendations

We consider the property to be acceptably free from coal mining related risk. No further action is required with regards to past coal mining.

This report provides an overall assessment on risk to property from coal mining hazards alongside responses to The Law Society CON29M Coal Mining search enquiries. The CON29M questions and format are used here with permission of The Law Society, and the report is prepared in accordance with The Law Society CON29M (2018) Guidance Notes. The overall assessment and individual question responses have been produced using official Coal Authority data and the expert interpretation of Groundsure and Mining Searches UK.

Search results



The map above shows any relevant and mappable hazards identified that could constitute a risk to the property. It does not necessarily show all features or potential issues identified in this report. Please read this report carefully, and in particular any sections flagged below with an amber 'i'.

Further details of any features indicating the location of Mine Entries or Subsidence Claims if shown can be found in the relevant sections following this map (4 and 9 respectively) and using the IDs displayed as reference.

The following are responses to The Law Society CON29M Coal Mining search enquiries, which are used here with their permission. All responses have been produced using official Coal Authority data and the expert interpretation of Groundsure and Mining Searches UK. This report is prepared in accordance with The Law Society CON29M (2018) Guidance Notes.

1. Past underground coal mining



Is the property within the zone of likely physical influence on the surface of past underground coal workings?

- **The property does not lie within the potential zone of influence of any recorded underground coal workings.**

2. Present underground coal mining



Is the property within the zone of likely physical influence on the surface of present underground coal workings?

- **The property does not lie within the boundary of an underground site from which coal is being removed by underground methods.**

3. Future underground coal mining



(a) Is the property within any geographical area for which the Coal Authority is determining whether to grant a licence to remove coal by underground methods?

- **The property does not lie within the boundary of an underground site for which the Coal Authority is determining whether to grant a licence to remove coal by underground methods.**

(b) Is the property within any geographical area for which a licence to remove coal by underground methods has been granted?

- **The property does not lie within the boundary of an underground site for which a licence to remove coal by underground methods has been granted.**

(c) Is the property within the zone of likely physical influence on the surface of planned future underground coal workings?

- **The property does not lie within the zone of likely physical influence on the surface of planned future underground workings.**

(d) Has any notice of proposals relating to underground coal mining operations been given under section 46 of the Coal Mining Subsidence Act 1991?

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

4. Shafts and adits (mine entries)



Are there any shafts and adits or other entries to underground coal mine workings within the property or within 20 metres of the boundary of the property?

- **No coal mine entries are recorded to lie within 20 metres of the property.**

5. Coal mining geology



Is there any record of any fault or other line of weakness due to coal mining at the surface within the boundary of the property that has made the property unstable?

- **No damage arising from geological faults or other lines of weakness activated by coal mining are recorded within the property.**

6. Past opencast coal mining



Is the property situated within the geographical boundary of an opencast site from which coal has been removed in the past by opencast methods?

- **The property does not lie within the boundary of an opencast site from which coal was removed by opencast methods.**

7. Present opencast coal mining



Is the property within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods?

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

8. Future opencast coal mining



(a) Is the property within 800 metres of the boundary of an opencast site for which the Coal Authority are determining whether to grant a licence to remove coal by opencast methods?

- **The property does not lie within 800 metres of the boundary of an opencast site for which the Coal Authority are determining whether to grant a licence to remove coal by opencast methods.**

(b) Is the property within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted?

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

9. Coal mining subsidence claims



(a) Has any damage notice or claim for alleged coal mining subsidence damage to the property been given, made or pursued since 31st October 1994?

- We have no evidence of a damage notice or subsidence claim for the property or within 50m of the property since 31st October 1994.

(b) In respect of any such notice or claim has the responsible person given notice agreeing that there is a remedial obligation or otherwise accepted that a claim would lie against them?

- Not applicable.

(c) In respect of any such notice or acceptance has the remedial obligation or claim been discharged?

- Not applicable.

(d) Does any current "Stop Notice" delaying the start of remedial works or repairs affect the property?

- There are no current Stop Notices delaying the start of remedial works or repairs to the property.

(e) Has any request been made under Section 33 of the 1991 Act to execute preventive works before coal is worked, which would prevent the occurrence or reduce the extent of subsidence damage to any buildings, structures or works and, if yes, has any person withheld consent or failed to comply with any such request to execute preventive works?

- There is no record of a request that has been made to carry out preventive works before coal is worked under Section 33 of the Coal Mining Subsidence Act 1991.

NB. Records of damage notices or subsidence claims before 31st October 1994 are excluded from The Coal Authority data from which this search is compiled.

10. Mine gas emissions



Does the Coal Authority have record of any mine gas emission within the boundary of the property being reported that subsequently required action by the Authority to mitigate the effects of the mine gas emission?

- No mine gas emissions are recorded within the boundary of the property.

11. Emergency Surface Hazard Call Out incidents



Have the Coal Authority carried out any work on or within the boundaries of the property following a report of an alleged hazard related to coal mining under the Authority's Emergency Surface Hazard Call Out procedures?

- No Emergency Surface Hazard Call Out procedures are recorded against the property.

12. Withdrawal of support



(a) Does the land lie within a geographical area in respect of which a notice of entitlement to withdraw support has been published?

- The property does not lie in an area where the right to withdraw support has been granted.

(b) Does the land lie within a geographical area in respect of which a revocation notice has been given under section 41 of the Coal Industry Act 1994?

- The property does not lie within a geographical area in which a revocation notice has been given under section 41 of the Coal Industry Act 1994.

13. Working facilities orders



Is the property within a geographical area subject to an order in respect of the working of coal under the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof?

- The property is not in an area where a court order has been issued.

14. Payments to owners of former copyhold land



(a) Has any relevant notice, which may affect the property, been given?

- The property does not lie within former copyholder land.

(b) If yes, has any notice of retained interests in coal and coal mines been given?

- No notices of retained interests in coal and coal mines been given.

(c) If yes, has any acceptance notice or rejection notice been served?

- No acceptance or rejection notices have been served.

(d) If any such acceptance notice has been served, has any compensation been paid to a claimant?

- No compensation has been paid to a claimant.

Notes and guidance

These enquiries are The Law Society CON29M (2018) Coal Mining search enquiries and are used with permission of The Law Society. The Law Society CON29M Coal Mining search enquiries are protected by copyright owned by The Law Society of 113 Chancery Lane, London WC2A 1PL. The Law Society has no responsibility for information provided in response to CON29M (2018) Coal Mining search enquiries within this report or otherwise.

This report is prepared in accordance with The Law Society Guidance Notes 2018; under which all replies to these enquiries are made. Groundsure's Terms and Conditions are applicable at the time the report was produced.

Property owners have the benefit of statutory protection (under the Coal Mining Subsidence Act 1991). This contains provision for the making good, to the reasonable satisfaction of the owner, of physical damage from disused coal mine workings including disused coal mine entries. A leaflet setting out the rights and obligations of either the Coal Authority or other responsible persons under the 1991 Act can be obtained by telephoning 0345 762 6848. Further information can be found on their website: www.groundstability.com.

The Coal Authority, regardless of responsibility and in conjunction with other public bodies, provide an emergency call out facility in coalfield areas to assess the public safety implications of mining features (including disused mine entries).

The Coal Authority emergency telephone number at all times is 01623 646333.

Responses to The Law Society CON29M (2018) Coal Mining Search enquiries and associated findings and recommendations relating to coal mining risk have been provided to Groundsure Ltd by Cornwall Mining Searches Limited T/A Mining Searches UK. Groundsure Ltd have additionally provided information relating to the Cheshire Brine Compensation Area, and have compiled all information into this report.

Any queries relating to coal mining risk should be made of Cornwall Mining Searches Limited T/A Mining Searches UK on 01209218861, or via email: search@miningsearchesuk.com.

All other queries should be made of Groundsure Ltd on 0844 415 9000, or via email: info@groundsure.com.

Report limitations

This CON29M (2018) Coal Mining Report has been carried out with reference to all available official Coal Authority licensed data, an extensive collection of abandoned mine plans, maps and records. From this material, we have endeavoured to provide as accurate a report as possible. Any and all analysis and interpretation of licensed Coal Authority data in this report is made by Cornwall Mining Services Limited T/A Mining Searches UK.

The information provided in this report by Groundsure Ltd / Cornwall Mining Services Limited T/A Mining Searches UK has been compiled in response to The Law Society CON29M (2018) Coal Mining search enquiries. The scope of the assessment is limited to interpretation of past, present and future extraction of coal, and does not consider the impact from non-coal mining hazards and/or natural ground stability hazards. The Law Society's Guidance Notes 2018 recommends separate enquiries to the appropriate sources are made with regard to other minerals.

The Report is created by a remote investigation and reviews only information provided by the client (address and site location boundaries) and from the databases of publicly available and/or licensable information that enable a desk-based assessment of the Site. The Report does not include a Site Investigation, nor does Groundsure Ltd / Cornwall Mining Services Limited T/A Mining Searches UK make additional specific information requests of the regulatory authorities for any relevant information they may hold.

This report is concerned solely with the Site searched and should not be used in connection with nearby properties, as only known coal mining features that could potentially have a direct influence upon the Site searched are considered relevant; other features present in the general area may have been omitted for ease of reference.

This report is confidential to the client, the client's legal advisor and the client's Mortgage lender, as defined in the Groundsure terms & conditions, and as such may be used by them for conveyancing or related purposes. Groundsure has no liability toward any person or organisation not party to commissioning this report. This report or any part of it is not permitted to be reproduced, copied, altered or in any other way distributed by any other person or organisation.

Report licensing

This report contains Data provided by the Coal Authority. Any and all analysis and interpretation of Coal Authority Data in this report is made by Cornwall Mining Services Limited T/A Mining Searches UK and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure Ltd / Cornwall Mining Services Limited T/A Mining Searches UK prior to any re-use.

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This report may contain public sector information licensed under the Open Government Licence v3.0.

This report may contain plans and records held by the Coal Authority and made publicly available at the time of inspection which may include British Geological Survey and Ordnance Survey data.

Search Code and Groundsure terms and conditions

IMPORTANT CONSUMER PROTECTION INFORMATION

This search has been produced by Groundsure Ltd, Sovereign House, Church Street, Brighton, BN1 1UJ. Tel: 08444 159 000. Email: info@groundsure.com which is registered with the Property Codes Compliance Board (PCCB) as a subscriber to the Search Code. The PCCB independently monitors how registered search firms maintain compliance with the Code.

The Search Code

- provides protection for homebuyers, sellers, estate agents, conveyancers and mortgage lenders who rely on the information included in property search reports undertaken by subscribers on residential and commercial property within the United Kingdom
- sets out minimum standards which firms compiling and selling search reports have to meet
- promotes the best practice and quality standards within the industry for the benefit of consumers and property professionals
- enables consumers and property professionals to have confidence in firms which subscribe to the code, their products and services

By giving you this information, the search firm is confirming that they keep to the principles of the Code. This provides important protection for you.

The Code's core principles

Firms which subscribe to the Search Code will:

- display the Search Code logo prominently on their search reports
- act with integrity and carry out work with due skill, care and diligence
- at all times maintain adequate and appropriate insurance to protect consumers
- conduct business in an honest, fair and professional manner
- handle complaints speedily and fairly
- ensure that products and services comply with industry registration rules and standards and relevant laws
- monitor their compliance with the Code

Complaints Advice

If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure. If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award up to £5,000 to you if the Ombudsman finds that you have suffered actual financial loss and/or aggravation, distress or inconvenience as a result of your search provider failing to keep to the Code.

Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPOs or to the PCCB.

TPO's Contact Details:

The Property Ombudsman scheme, Milford House, 43-55 Milford Street, Salisbury, Wiltshire SP1 2BP. Tel: 01722 333306 Fax: 01722 332296 Email: admin@tpos.co.uk Web: <https://www.tpos.co.uk/>

You can get more information about the PCCB from <https://pccb.org.uk/>.

PLEASE ASK YOUR SEARCH PROVIDER IF YOU WOULD LIKE A COPY OF THE SEARCH CODE

COMPLAINTS PROCEDURE: If you want to make a complaint, we will:

- acknowledge it within 5 working days of receipt
- normally deal with it fully and provide a final response, in writing, within 20 working days of receipt
- keep you informed by letter, telephone or e-mail, as you prefer, if we need more time
- provide a final response, in writing, at the latest within 40 working days of receipt
- liaise, at your request, with anyone acting formally on your behalf

Complaints should be sent to:

Operations Director, Groundsure Ltd, Sovereign House, Church Street, Brighton, BN1 1UJ. Tel: 08444 159 000. Email:

info@groundsure.com If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs): Tel: 01722 333306, E-mail: admin@tpos.co.uk We will co-operate fully with the Ombudsman during an investigation and comply with their final decision.

Groundsure's Terms and Conditions can be viewed online at this link: <https://www.groundsure.com/terms-and-conditions-feb11-2019>

Important consumer protection information

All of the advice and reports that Groundsure produces are covered by a comprehensive Remediation Contribution policy to ensure customers are protected, see <https://www.groundsure.com/remediation> for full details.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information in your report.

Coal Mining Report Insurance Policy



Coal Mining Report Insurance Policy

The Schedule

Policy Number: The Reference contained in the **Coal Mining Search Report**

Premium: £1.40 inclusive of Insurance Premium Tax at 12%

Property: The property which is the subject of the **Coal Mining Search Report**

Limit of Indemnity: £100,000 increasing by 10% compound per annum on each anniversary of and for the first 10 years following the **Commencement Date**

Commencement Date: The date of the **Coal Mining Search Report**

You/Your:

1. A purchaser of the **Property**
2. A lender providing a **Mortgage** in connection with a purchase of the **Property**
3. A lender providing a **Mortgage** by way of a re-mortgage of the **Property**

Definitions

Where a word is defined below or in the schedule it shall carry the same meaning wherever it appears in bold text in this policy

Insured Use: The continued use of the **Property** as a single house or flat or a single commercial premises

Market Value: The value as determined by a surveyor appointed by agreement between **You** and **Us** or (in default of agreement) the President for the time being of the Royal Institution of Chartered Surveyors

Mortgage: A mortgage or charge secured on the **Property** by an institutional mortgage lender

Coal Mining Search Report: The coal mining search report attached to this policy

Search: An official search comprising a search in form CON29M (2018) being mining searches relating to coal and brine in the area in which the **Property** is situated

We/Our/Us:

Zurich Insurance plc. A public limited company incorporated in Ireland. Registration No. 13460. Registered Office: Zurich House, Ballsbridge Park, Dublin 4, Ireland. UK Branch registered in England and Wales Registration No. BR7985. UK Branch Head Office: The Zurich Centre, 3000 Parkway, Whiteley, Fareham, Hampshire PO15 7JZ.

Zurich Insurance plc is authorised by the Central Bank of Ireland and authorised and subject to limited regulation by the Financial Conduct Authority. Details about the extent of our authorisation by the Financial Conduct Authority are available from us on request. Our FCA Firm Reference Number is 203093.

Communications may be monitored or recorded to improve our service and for security and regulatory purposes.

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Your Policy

This is a legal document and should be kept in a safe place.

This policy is an agreement between **You** and **Us** and cover is provided subject to the payment of the **Premium**.

You must read this policy and its conditions, exclusions, schedule and any endorsements as one contract. Please read all of them to make sure that they provide the cover **You** require. If they do not, please contact **Us** or **Your** insurance adviser who arranged the policy for **You**.

When **You** take out and make changes to the cover provided by this policy, **You** must take reasonable care to ensure that **You** accurately answer any questions which **We** ask of **You** and that any information **You** give **Us** is accurate. If **You** are taking out this policy for purposes which are mainly related to **Your** trade, business or profession, **You** must also let **Us** know about all facts which are material to **Our** decision to provide **You** with insurance. Failure to meet these obligations could result in this policy being invalidated, a claim not being paid, or an additional premium being charged.

Fair presentation of the risk

a) At inception of this policy and also whenever changes are made to it at **Your** request **You** must:

- i) where **You** have taken out this policy for purposes which are wholly or mainly related to **Your** trade, business or profession, disclose to **Us** all material facts in a clear and accessible manner and not misrepresent any material facts, and
- ii) where **You** have taken out this policy for purposes which are wholly or mainly unrelated to **Your** trade, business or profession, take reasonable care not to misrepresent any material facts.

b) If **You** do not comply with clause a) of this condition **We** may:

- i) avoid this policy which means that **We** will treat it as if it had never existed and refuse all claims where any non-disclosure or misrepresentation by **You** is proven by **Us** to be deliberate or reckless in which case **We** will not return the premium paid by **You**; and
- ii) recover from **You** any amount **We** have already paid for any claims including costs or expenses **We** have incurred.

c) If **You** do not comply with clause a) of this condition and the non-disclosure or misrepresentation is not deliberate or reckless this policy may be affected in one or more of the following ways depending on what **We** would have done if **We** had known about the facts which **You** failed to disclose or misrepresented:

- i) if **We** would not have provided **You** with any cover **We** will have the option to:
 1. avoid the policy which means that **We** will treat it as if it had never existed and repay the premium paid; and
 2. recover from **You** any amount **We** have already paid for any claims including costs or expenses **We** have incurred
- ii) if **We** would have applied different terms to the cover **We** will have the option to treat this policy as if those different terms apply. **We** may recover any payments made by **Us** on claims which have already been paid to the extent that such claims would not have been payable had such additional terms been applied
- iii) if **We** would have charged **You** a higher premium for providing the cover **We** will charge **You** the additional premium which **You** must pay in full.

d) If any insured person, other than **You**, is responsible for a misrepresentation or failure to make a fair presentation of the risk, **We** will invoke the remedies available to **Us** under this condition as against that particular person as if a separate insurance contract had been issued to them leaving the remainder of the policy unaffected.

NB: For the purposes of the duty of disclosure stated in paragraphs a) i) and ii) above the content of the **Coal Mining Search Report** will be deemed to satisfy **Your** disclosure obligations.

Cover

1. **You** are in the process of purchasing the **Property** relying on the **Coal Mining Search Report** and/or
2. **You** (being a lender) have agreed to provide a **Mortgage** in connection with **Your** borrower's purchase or re-mortgage of the **Property** relying on the **Coal Mining Search Report**.

We will pay the following losses sustained by **You** arising out of the **Property** being affected by any matter which would have been revealed by a **Search** had one been carried out on the date of the **Coal Mining Search Report** but which was not revealed by the **Coal Mining Search Report**:

1. any reduction in **Market Value** of the **Property** calculated at the date **You** become aware of the matter(s) and/or loss in connection with a **Mortgage** as a result of such reduction.
2. all other costs and expenses including out of court settlement costs incurred by **Us** or by **You** with **Our** prior written agreement.

Waiver of Breach of Policy Condition

We will not exercise **Our** right to avoid **Our** liability to **You** in respect of loss where **You** have inadvertently breached any term or condition of the policy provided that such breach does not prejudice **Our** rights and remedies under the policy or otherwise directly or indirectly result in or increase the amount of any loss.

Protection for Mortgagees and Successors in Title

We will not avoid **Our** liability to make a payment to **You** solely because another person breaches the terms and conditions of this policy, provided such breach was not committed on **Your** behalf or with **Your** agreement, and **We** will invoke the remedies available to **Us** under the Policy as against that other person as if a separate insurance contract had been issued to them leaving the remainder of the policy unaffected.

Joint Insured

Any party insured under this policy standing in the relation of parent company, subsidiary company, associated company, branch office or joint venture partner to each other will be deemed to be joint insured for the purposes of this policy and jointly liable and responsible for any breach of any terms and conditions of this policy. If there is any inconsistency between this clause and any other term of this policy, this clause shall prevail.

Exclusions

We will not pay for any:

1. amount in excess of the **Limit of Indemnity**.
2. loss which would be recoverable under a household buildings insurance policy.
3. loss arising from any matter that **You** were aware of at the **Commencement Date**.
4. loss if the **Property** is used for any purpose other than the **Insured Use**.

Claims Conditions and How to Claim

1. **You** must:

- i) give **Us** written notice as soon as possible of any potential or actual claim or any circumstances likely to result in a claim. Please provide the policy number, **Your** name, the full address of the **Property** and a brief description of the incident that has occurred. Notifications should be sent to: Speciality Lines Claims Team, Zurich Insurance, 8th Floor, 70 Mark Lane, London, EC3R 7NQ. Email: claims@uk.zurich.com, Enquiry line: telephone 0207 648 3523
- ii) pass all court documents and/or other communications to **Us** as soon as possible after receipt
- iii) not deal with, make any admission of liability or attempt to settle a claim without **Our** prior written agreement.
- iv) agree to and carry out at **Our** expense all things necessary to minimise any loss.
- v) provide all information and assistance that **We** may require to help defend and settle the claim.

2. **We** are entitled to:

- i) decide how to settle or defend a claim and may carry out proceedings in the name of any person insured under this policy, including proceedings for recovering any claim.
- ii) pay to **You** at any time, an amount equal to the **Limit of Indemnity** or any lower amount for which the claim can be settled, after deduction of any sum already paid. **We** may then give up control of and have no further liability in connection with the claim.

3. If **We** admit liability for a claim but there is a dispute as to the amount to be paid the dispute will be referred to an arbitrator. The arbitrator will be appointed jointly by **You** and **Us** in accordance with the law at the time. **You** may not take any legal action against **Us** over the dispute before the arbitrator has reached a decision.

4. If **You** or anyone acting on **Your** behalf:

- a) makes a fraudulent or exaggerated claim under this policy; or
- b) uses fraudulent means or devices including the submission of false or forged documents in support of a claim whether or not the claim is itself genuine; or
- c) makes a false statement in support of a claim whether or not the claim is itself genuine; or
- d) submits a claim under this policy for loss or damage which **You** or anyone acting on **Your** behalf or in connivance with **You** deliberately caused; or
- e) realises after submitting what **You** reasonably believed was a genuine claim under this policy and then fails to tell **Us** that **You** have not suffered any loss or damage; or
- f) suppresses information which **You** know would otherwise enable **Us** to refuse to pay a claim under this policy

We will be entitled to refuse to pay the whole of the claim and recover any sums that **We** have already paid in respect of the claim.

If any fraud is perpetrated by or on behalf of an insured person and not on behalf of **You** this condition should be read as if it applies only to that insured person's claim and references to this policy should be read as if they were references to the cover effected for that person alone and not to the policy as a whole.

5. If any claim is covered by any other insurance, **We** will not pay for more than **Our** share of that claim.

6. The most **We** will pay for any loss (or all losses in the aggregate), including costs and expenses agreed by **Us** is the **Limit of Indemnity**. Once **We** have paid a loss or losses equal to the amount of the **Limit of Indemnity**, **We** will have no further liability under this policy.

General Conditions

1. Neither **You** (nor anyone acting on **Your** behalf) must disclose the existence of this policy to any other party except **Your** legal and other professional advisers, prospective purchasers, lessees and tenants of the **Property**, their respective mortgagees, legal and other professional advisers.

2. In the UK the law allows both **You** and **Us** to choose the law applicable to the contract. This contract will be subject to the relevant law of England and Wales, Scotland, Northern Ireland, the Isle of Man or the Channel Islands depending upon the **Property** address stated in the Schedule. If there is any dispute as to which law applies it will be English law. The parties agree to submit to the exclusive jurisdiction of the English courts.

3. Notwithstanding any other terms of this policy **We** will be deemed not to provide cover nor will **We** make any payment or provide any service or benefit to **You** or any other party to the extent that such cover, payment, service, benefit and/or any business or activity of **Yours** would violate any applicable trade or economic sanctions law or regulation.

Cancellation Clause

If **You** have taken out this policy for purposes which are wholly or mainly unrelated to **Your** trade, business or profession, **You** may cancel this policy within 14 days of receiving the policy by writing to **Us** and in such event **We** may, at **Our** discretion, charge **You** for the time that **You** have been on cover. Any refund will be made to the party who paid the premium. If **You** do cancel, **You** may be in breach of the terms of **Your** mortgage or the terms of the contract for the sale of **Your** property. If **You** are in doubt, **You** may wish to seek legal advice prior to cancellation.

Fair Processing and Complaints Procedure

Our Complaints Procedure

Our commitment to customer service

We are committed to providing a high level of customer service. If you feel we have not delivered this, we would welcome the opportunity to put things right for you.

Who to contact in the first instance

Many concerns can be resolved straight away. Therefore in the first instance, please get in touch with your usual contact at Zurich or your broker or insurance intermediary, as they will generally be able to provide you with a prompt response to your satisfaction.

Contact details will be provided on correspondence that we or our representatives have sent you.

Many complaints can be resolved within a few days of receipt

If we can resolve your complaint to your satisfaction within the first few days of receipt, we will do so. Otherwise, we will keep you updated with progress and will provide you with our decision as quickly as possible.

Next steps if you are still unhappy

If you are not happy with the outcome of your complaint, you may be able to ask the Financial Ombudsman Service to review your case.

We will let you know if we believe the ombudsman service can consider your complaint when we provide you with our decision. The service they provide is free and impartial, but you would need to contact them within 6 months of the date of our decision.

More information about the ombudsman and the type of complaints they can review is available via their website www.financial-ombudsman.org.uk.

You can also contact them as follows:

Post: Financial Ombudsman Service, Exchange Tower, London, E14 9SR

Telephone: 08000 234567 (free on mobile phones and landlines)

Email: complaint.info@financial-ombudsman.org.uk

If the Financial Ombudsman Service is unable to consider your complaint, you may wish to obtain advice from the Citizens Advice Bureau or seek legal advice.

The Financial Services Compensation Scheme (FSCS)

We are covered by the Financial Services Compensation Scheme (FSCS) which means that you may be entitled to compensation if we are unable to meet our obligations to you. Further information is available on www.fscs.org.uk or by contacting the FSCS directly on 0800 678 1100.

How we use your information**Who controls your personal information**

This notice tells you how Zurich Insurance plc ('Zurich'), as data controller, will deal with your personal information. Where Zurich introduces you to a company outside the group, that company will tell you how your personal information will be used.

You can ask for further information about our use of your personal information or complain about its use in the first instance, by contacting our Data Protection Officer at: Zurich Insurance Group, Tri-centre 1, Newbridge Square, Swindon, SN1 1HN or by emailing the Data Protection Officer at GBZ.General.Data.Protection@uk.zurich.com.

If you have any concerns regarding our processing of your personal information, or are not satisfied with our handling of any request by you in relation to your rights, you also have the right to make a complaint to the Information Commissioner's Office. Their address is: First Contact Team, Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, SK9 5AF.

What personal information we collect about you

We will collect and process the personal information that you give us by phone, e-mail, filling in forms, including on our website, and when you report a problem with our website. We also collect personal information from your appointed agent such as your trustee, broker, intermediary or financial adviser in order to provide you with the services you have requested and from other sources, such as credit reference agencies and other insurance companies, for verification purposes. We will also collect information you have volunteered to be in the public domain and other industry-wide sources. We will only collect personal information that we require to fulfil our contractual or legal requirements unless you consent to provide additional information. The type of personal information we will collect includes; basic personal information (i.e. name, address and date of birth), occupation and financial details, health and family information, claims and convictions information and where you have requested other individuals be included in the arrangement, personal information about those individuals.

If you give us personal information on other individuals, this will be used to provide you with a quotation and/or contract of insurance and/or provision of financial services. You agree you have their permission to do so. Except where you are managing the contract on another's behalf, please ensure that the individual knows how their personal information will be used by Zurich. More information about this can be found in the 'How we use your personal information' section.

How we use your personal information

We and our selected third parties will only collect and use your personal information (i) where the processing is necessary in connection with providing you with a quotation and/or contract of insurance and/or provision of financial services that you have requested; (ii) to meet our legal or regulatory obligations; or (iii) for our 'legitimate interests'. It is in our legitimate interests to collect your personal information as it provides us with the information that we need to provide our services to you more effectively

including providing you with information about our products and services. We will always ensure that we keep the amount of information collected and the extent of any processing to the absolute minimum to meet this legitimate interest. Examples of the purposes for which we will collect and use your personal information are:

1. to provide you with a quotation and/or contract of insurance;
2. to identify you when you contact us;
3. to deal with administration and assess claims;
4. to make and receive payments;
5. to obtain feedback on the service we provide to you;
6. to administer our site and for internal operations including troubleshooting, data analysis, testing, research, statistical and survey purposes;
7. for fraud prevention and detection purposes.

We will contact you to obtain consent prior to processing your personal information for any other purpose, including for the purposes of targeted marketing unless we already have consent to do so.

Who we share your personal information with

Where necessary, we will share the personal information you gave us for the purposes of providing you with the goods and services you requested with the types of organisations described below:

associated companies including reinsurers, suppliers and service providers;
introducers and professional advisers;
regulatory and legal bodies;
survey and research organisations;
credit reference agencies;
healthcare professionals, social and welfare organisations; and
other insurance companies

Or, in order to meet our legal or regulatory requirements, with the types of organisations described below:

regulatory and legal bodies;
central government or local councils;
law enforcement bodies, including investigators;
credit reference agencies; and
other insurance companies

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 - to have your data rectified if it is inaccurate or incomplete;
 - in certain circumstances, to have your data deleted or removed;
 - in certain circumstances, to restrict the processing of your data;
 - a right of data portability, namely to obtain and reuse your data for your own purposes across different services;
 - to object to direct marketing;
 - not to be subject to automated decision making (including profiling), where it produces a legal effect or a similarly significant effect on you;
 - to claim compensation for damages caused by a breach of the data protection legislation.
- if we are processing your personal information with your consent, you have the right to withdraw your consent at any time.

We will, for the purposes of providing you with a contract of insurance, processing claims, reinsurance and targeted marketing, process your personal information by means of automated decision making and profiling where we have a legitimate interest or you have consented to this.

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- use industry fraud tools including undertaking credit searches and to review your claims history
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We may pass information relating to claims or potential claims to any relevant database. We and other insurers may search these databases when you apply for insurance, when claims or potential claims are notified to us or at time of renewal to validate your claims history or that of any other person or property likely to be involved in the policy or claim.

This helps to check information provided and prevent fraudulent claims.

APPENDIX E

Environmental Database Report



Brownfield Solutions Ltd
William Smith House, 173-183, WITTON
STREET,
NORTHWICH, CW9 5LP

Groundsure BRO-6129979
Reference:

Your Reference: 97_M4246

Report Date 27 Jun 2019

Report Delivery Email - pdf
Method:

Enviro Insight

Address: 345 DEAN TRUST ARDWICK, STOCKPORT ROAD, MANCHESTER, M13 0LF

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 159 000 quoting the above Groundsure reference number.

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Address: 345 DEAN TRUST ARDWICK, STOCKPORT ROAD, MANCHESTER, M13 0LF

Date: 27 Jun 2019

Reference: BRO-6129979

Client: Brownfield Solutions Ltd

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 11-Jun-2015

Grid Reference: 386240,396308

Site Size: 3.6810ha

Report Reference: BRO-6129979

Client Reference: 97_M4246

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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	9	6	29	156
1.2 Additional Information – Historical Tank Database	0	0	4	39
1.3 Additional Information – Historical Energy Features Database	6	4	13	46
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	4	8	30
1.6 Historical military sites	0	0	0	1
1.7 Potentially Infilled Land	2	0	2	13
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	1	3
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	0
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	6
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	0	0	4
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	6	14	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	5	17	18

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	2	7	13	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	1	2
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	1	8
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	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	0	1	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

0-500m

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

Section 7: Flooding

7.1 Environment Agency Zone 2 floodplains within 250m of the study site	None 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	Potential at Surface					
7.8 BGS confidence rating for the Groundwater Flooding susceptibility areas	Moderate					

Section 8: Designated Environmentally Sensitive Sites

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

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

Section 9: Natural Hazards

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

Section 10: Mining

10.1 Coal mining areas within 75m of the study site	Identified
10.2 Non-Coal Mining areas within 50m of the study site boundary	None identified
10.3 Brine affected areas within 75m of the study site	None identified

Using this report

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

1. Historical Industrial Sites

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

2. Environmental Permits, Incidents and Registers

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

3. Landfills and Other Waste Sites

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

4. Current Land Uses

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

5. Geology

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

6. Hydrogeology and Hydrology

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

7. Flooding

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

8. Designated Environmentally Sensitive Sites

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

9. Natural Hazards

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

10. Mining

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

11. Contacts

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

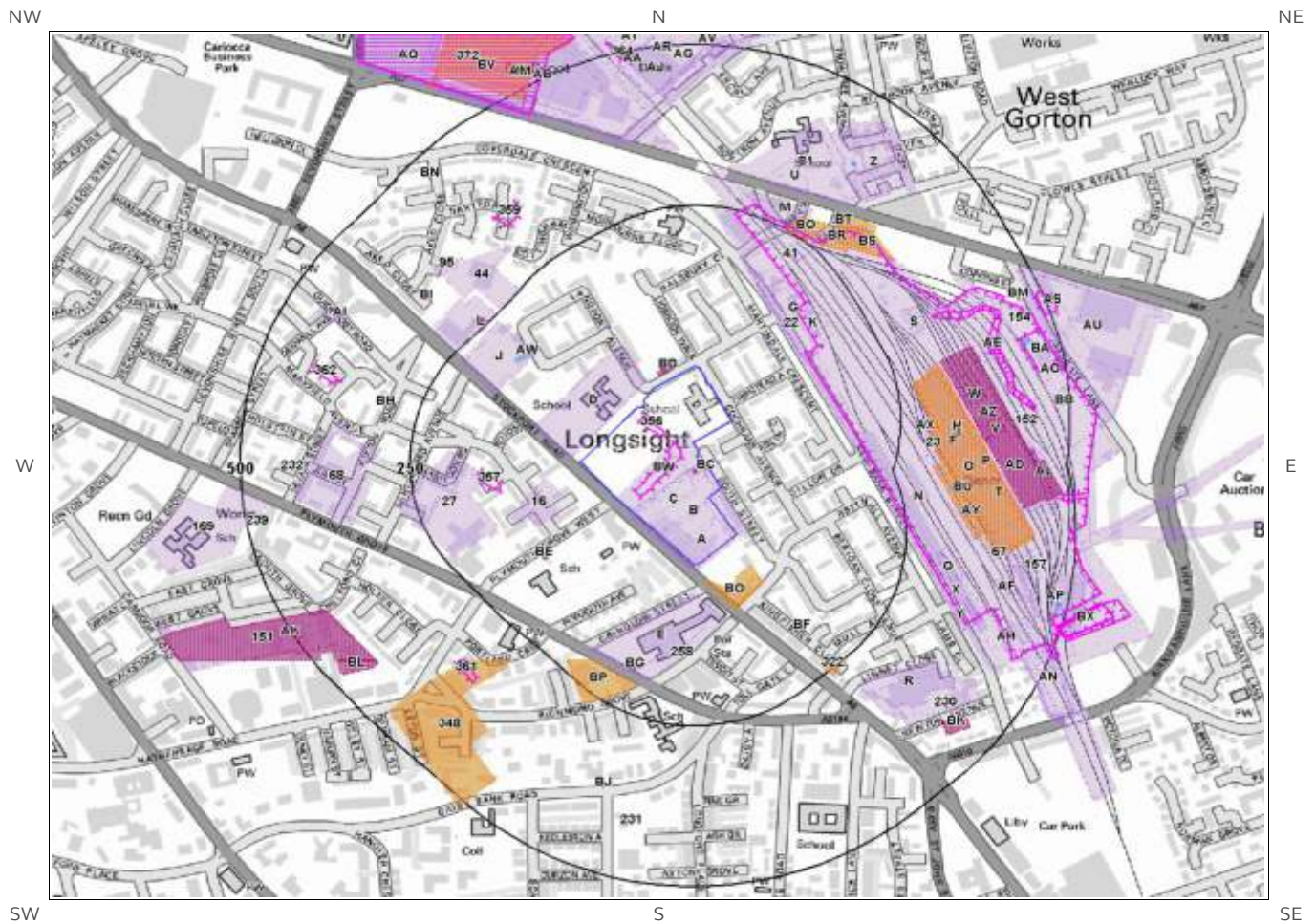
Note: Maps

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

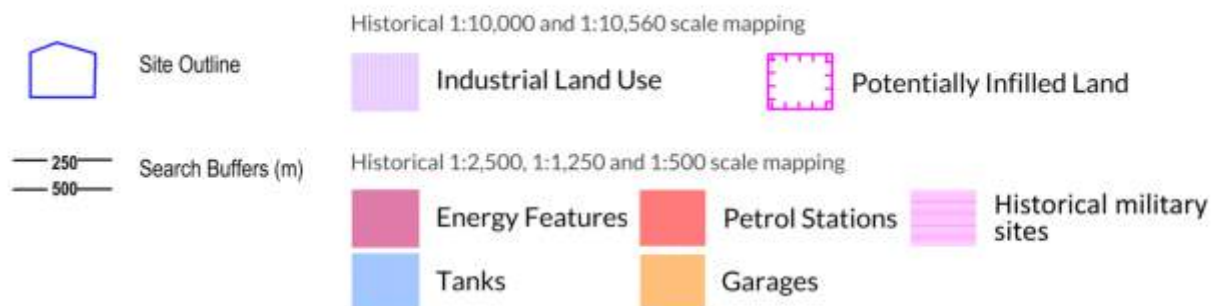
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

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

1. Historical Land Use



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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: 200

ID	Distance [m]	Direction	Use	Date
1BW	0	On Site	Unspecified Depot	1978
2B	0	On Site	Unspecified Works	1978
3A	0	On Site	Unspecified Works	1915
4A	0	On Site	Unspecified Works	1923
5B	0	On Site	Unspecified Works	1934
6B	0	On Site	Unspecified Works	1938
7B	0	On Site	Unspecified Works	1968
8C	0	On Site	Unspecified Works	1915
9C	0	On Site	Unspecified Works	1923
10D	13	NW	Unspecified Works	1915
11D	15	NW	Unspecified Works	1905
12D	15	NW	Unspecified Works	1934
13D	15	NW	Unspecified Commercial/Industrial	1923
14E	43	S	Industrial School	1915
15E	47	S	Industrial Schools	1923
16	54	SW	Unspecified Works	1915
17F	137	NE	Railway Sidings	1934
18G	137	NE	Unspecified Commercial/Industrial	1934
19F	137	NE	Railway Sidings	1915
20F	137	NE	Railway Sidings	1938
21I	138	NE	Railway Sidings	1905
22	139	NE	Railway Buildings	1890
23	139	NE	Railway Sidings	1890
24G	139	NE	Railway Buildings	1905
25G	141	NE	Unspecified Commercial/Industrial	1923
26F	141	NE	Railway Sidings	1923
27	145	W	Nursery	1851
28H	145	NE	Railway Sidings	1968
29H	145	NE	Coal and Mineral Yard	1956
30H	145	NE	Railway Sidings	1956
31I	159	NE	Railway Sidings	1978
32H	159	NE	Railway Sidings	1985

33H	159	NE	Railway Sidings	1991
34G	162	NE	Railway Building	1890
35J	162	NW	Brewery	1923
36J	168	NW	Brewery	1915
37K	171	NE	Railway Building	1890
38G	174	NE	Railway Building	1978
39K	184	NE	Railway Building	1985
40K	184	NE	Railway Building	1991
41	215	NE	Railway Building	1923
42L	246	NW	Smithy	1923
43L	247	NW	Unspecified Works	1968
44	247	NW	Brewery	1923
45L	253	NW	Smithy	1915
46M	255	NE	Unspecified Works	1985
47M	255	NE	Unspecified Works	1991
48N	265	E	Railway Building	1985
49N	265	E	Railway Building	1991
50O	268	E	Carriage Shed	1915
51O	268	E	Carriage Shed	1934
52O	268	E	Carriage Shed	1923
53O	268	E	Carriage Shed	1938
54O	276	E	Carriage Shed	1978
55O	276	E	Carriage Shed	1968
56O	276	E	Carriage Shed	1956
57T	284	E	Carriage and Engine Works	1851
58P	292	E	Carriage Shed	1991
59P	292	E	Carriage Shed	1985
60Q	294	E	Goods Shed	1934
61Q	294	E	Goods Shed	1923
62Q	294	E	Goods Shed	1938
63Q	294	E	Goods Shed	1915
64R	294	SE	Unspecified Works	1978
65R	295	SE	Unspecified Works	1968
66Q	297	E	Railway Building	1905
67	298	E	Railway Sidings	1851
68	298	W	Unspecified Works	1968
69Q	299	E	Railway Building	1890
70Q	299	E	Goods Depot	1956
71S	300	NE	Railway Building	1923
72S	301	NE	Railway Building	1934
73S	301	NE	Railway Building	1905
74Q	302	E	Railway Building	1968
75U	303	N	Unspecified Workhouse	1923
76BU	304	E	Carriage Shed	1905
77T	305	E	Engine Sheds	1890

78U	305	N	Unspecified Warehouses	1915
79S	309	NE	Railway Building	1968
80S	309	NE	Railway Building	1956
81	310	N	Unspecified Works	1968
82V	313	E	Engine Shed	1915
83V	313	E	Engine Shed	1934
84V	313	E	Engine Shed	1938
85V	316	E	Engine Shed	1923
86V	316	E	Engine Shed	1905
87R	317	SE	Unspecified Works	1991
88R	317	SE	Unspecified Works	1985
89X	328	E	Railway Building	1968
90W	332	E	Railway Building	1968
91AB	334	N	Car Works	1956
92W	335	E	Railway Buildings	1956
93AE	338	NE	Unspecified Ground Workings	1905
94X	343	E	Railway Building	1985
95	344	NW	Brewery	1915
96Y	348	E	Railway Building	1934
97Y	350	E	Railway Building	1915
98Y	350	E	Railway Building	1915
99Y	350	E	Railway Building	1934
100Y	351	E	Railway Building	1905
101Y	352	E	Railway Building	1890
102Y	352	E	Railway Building	1968
103Y	352	E	Railway Building	1956
104Z	353	NE	Unspecified Foundry	1923
105AM	354	N	Unspecified Depot	1991
106Z	355	NE	Unspecified Foundry	1915
107Z	356	NE	Unspecified Works	1968
108AC	358	N	Unspecified Depot	1985
109AA	362	N	Railway Sidings	1938
110AA	362	N	Railway Sidings	1915
111AA	362	N	Railway Sidings	1934
112AB	372	N	Bus Depot	1968
113AD	373	E	Engine Shed	1968
114AC	375	N	Unspecified Commercial/Industrial	1978
115AD	376	E	Engine Shed	1956
116AE	376	E	Railway Building	1978
117AE	377	E	Railway Building	1968
118V	378	E	Railway Building	1890
119AO	388	E	Unspecified Commercial/Industrial	1978
120Z	396	NE	Unspecified Works	1985
121Z	396	NE	Unspecified Works	1991

122AD	396	E	Engine Shed	1991
123AD	396	E	Engine Shed	1985
124AF	397	E	Railway Building	1915
125AF	397	E	Railway Building	1934
126AF	400	E	Railway Building	1978
127AF	400	E	Railway Buildings	1956
128AF	401	E	Railway Building	1968
129AF	403	E	Railway Building	1923
130AI	407	NW	Fire Station	1968
131AG	412	N	Unspecified Depot	1985
132AG	412	N	Unspecified Depot	1991
133AH	415	E	Railway Building	1934
134AH	416	E	Railway Building	1978
135AH	416	E	Railway Building	1915
136AF	419	E	Railway Building	1934
137AF	419	E	Railway Building	1915
138AJ	420	N	Parcel Depot	1938
139AR	422	N	Railway Sidings	1905
140AI	422	NW	Fire Engine Station	1934
141AI	422	NW	Fire Station	1938
142AI	422	NW	Fire Engine Station	1915
143AG	424	N	Unspecified Depot	1978
144AG	424	N	Unspecified Depot	1968
145AJ	424	N	Parcel Depot	1934
146AF	426	E	Railway Building	1923
147AB	426	NW	Car Works	1938
148AB	426	NW	Car Works	1934
149AK	427	SW	Unspecified Depot	1985
150AK	427	SW	Unspecified Depot	1991
151	430	SW	Unspecified Depot	1978
152	430	E	Railway Building	1923
153AG	430	N	Parcel Depot	1956
154	432	NE	Unspecified Works	1968
155AH	433	E	Railway Building	1985
156AK	434	SW	Unspecified Depot	1968
157	435	E	Railway Building	1890
158AL	439	E	Engine Shed	1978
159AL	441	E	Railway Building	1968
160BA	444	E	Coal and Mineral Yard	1968
161AM	449	NW	Timber Yard	1890
162AA	455	N	Railway Sidings	1890
163AN	456	SE	Railway Station	1915
164AN	457	SE	Railway Stations	1905
165AL	458	E	Railway Buildings	1991
166AL	458	E	Railway Buildings	1985
167AN	460	SE	Railway Station	1890

168AN	462	SE	Railway Station	1923
169	464	W	Unspecified Works	1968
170AO	467	E	Railway Building	1985
171AO	467	E	Railway Building	1991
172BV	469	NW	Car Building and Repairing Shed	1923
173AN	469	E	Railway Station	1938
174AN	469	E	Railway Station	1934
175AN	473	E	Railway Station	1956
176AP	474	E	Railway Building	1915
177AP	474	E	Railway Building	1934
178AG	474	N	Railway Building	1938
179AP	475	E	Railway Building	1905
180AN	476	E	Railway Station	1968
181AQ	477	NW	Tramway Depot	1915
182AQ	477	NW	Tramways and Bus Depot	1938
183AQ	477	NW	Tramways and Bus Depot	1934
184AV	477	N	Railway Buildings	1934
185AR	479	N	Railway Sidings	1923
186AP	479	E	Railway Building	1923
187AS	479	NE	Corporation Yard	1915
188AP	481	E	Railway Building	1978
189AS	482	NE	Corporation Yard	1923
190AP	483	E	Railway Buildings	1968
191AT	485	N	Bus Depot	1991
192AT	485	N	Bus Depot	1985
193AU	485	NE	Unspecified Depot	1978
194AT	486	N	Bus Depot	1978
195AU	487	NE	Unspecified Works	1968
196AM	490	NW	Car Building and Repairing Shed	1915
197	495	N	Railway Sidings	1985
198AU	496	NE	Unspecified Works	1991
199AU	496	NE	Unspecified Works	1985
200AV	500	N	Railway Building	1938

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:

43

ID	Distance (m)	Direction	Use	Date
----	--------------	-----------	-----	------

201AW	170	NW	Tanks	1960
202AW	170	NW	Tanks	1949
203AW	170	NW	Tanks	1949
204J	175	NW	Tanks	1949
205AX	284	E	Unspecified Tank	1960
206AX	284	E	Unspecified Tank	1949
207AX	285	E	Unspecified Tank	1949
208AY	343	E	Unspecified Tank	1991
209AY	344	E	Unspecified Tank	1988
210AY	344	E	Unspecified Tank	1981
211AY	345	E	Unspecified Tank	1994
212V	358	E	Gas Works	1949
213V	358	E	Gas Works	1949
214AZ	375	E	Unspecified Tank	1949
215I	377	E	Gasometer	1933
216I	378	E	Gasometer	1893
217I	378	E	Gasometer	1908
218I	378	E	Gasometer	1922
219AZ	381	E	Unspecified Tank	1949
220V	381	E	Unspecified Tank	1960
221V	381	E	Gasometer	1949
222I	384	E	Tanks	1988
223I	385	E	Tanks	1981
224Z	386	NE	Unspecified Tank	1979
225Z	386	NE	Unspecified Tank	1957
226Z	387	NE	Unspecified Tank	1960
227Z	387	NE	Unspecified Tank	1983
228Z	387	NE	Unspecified Tank	1988
229I	394	E	Unspecified Tank	1949
230	401	SE	Tanks	1950
231	410	S	Unspecified Tank	1933
232	423	W	Unspecified Tank	1933
233BA	445	E	Tanks	1949
234BA	446	E	Tanks	1949
235BA	450	E	Tanks	1949
236AP	482	E	Unspecified Tank	1949
237AP	482	E	Unspecified Tank	1960
238AP	482	E	Unspecified Tank	1949
239	483	W	Unspecified Tank	1976
240BB	489	E	Unspecified Tank	1933
241BB	495	E	Unspecified Tank	1949
242BB	495	E	Unspecified Tank	1960
243BB	495	E	Unspecified Tank	1949

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:

69

ID	Distance (m)	Direction	Use	Date
244BC	0	On Site	Electricity Substation	1991
245BC	0	On Site	Electricity Substation	1991
246BC	0	On Site	Electricity Substation	1976
247BC	0	On Site	Electricity Substation	1949
248BC	0	On Site	Electricity Substation	1999
249BC	0	On Site	Electricity Substation	1949
250BD	13	NW	Electricity Substation	1999
251BD	13	NW	Electricity Substation	1976
252BD	14	NW	Electricity Substation	1991
253BD	14	NW	Electricity Substation	1991
254BE	135	SW	Electricity Substation	1976
255BE	136	SW	Electricity Substation	1999
256BE	138	SW	Electricity Substation	1991
257BE	138	SW	Electricity Substation	1991
258	139	S	Electricity Substation	1999
259BF	171	SE	Electricity Substation	1999
260BF	172	SE	Electricity Substation	1991
261BF	172	SE	Electricity Substation	1991
262BF	173	SE	Electricity Transformer	1976
263BG	177	SW	Electricity Substation	1992
264BG	177	SW	Electricity Substation	1991
265BG	177	SW	Electricity Substation	1979
266BG	178	SW	Electricity Substation	1995
267L	254	NW	Electricity Substation	1976
268L	254	NW	Electricity Substation	1953
269L	254	NW	Electricity Substation	1948
270L	254	NW	Electricity Substation	1949
271Q	286	E	Electricity Substation	1994
272BH	297	W	Electricity Substation	1991
273BH	297	W	Electricity Substation	1991
274BH	298	W	Electricity Transformer	1976
275V	322	E	Power Depot	1949
276BI	338	NW	Electricity Substation	1995
277BI	338	NW	Electricity Substation	1997
278BI	338	NW	Electricity Substation	1997
279BI	338	NW	Electricity Substation	1993
280BI	338	NW	Electricity Substation	1992

281BI	338	NW	Electricity Substation	1993
282V	358	E	Gas Works	1949
283V	358	E	Gas Works	1949
284BJ	367	S	Electricity Transformer	1991
285BJ	367	S	Electricity Transformer	1979
286BJ	367	S	Electricity Transformer	1992
287BJ	367	S	Electricity Transformer	1972
288BJ	368	S	Electricity Substation	1995
289I	377	E	Gasometer	1933
290I	378	E	Gasometer	1908
291I	378	E	Gasometer	1922
292I	378	E	Gasometer	1893
293AZ	381	E	Gasometer	1949
294BK	419	SE	Electricity Substation	1950
295BK	420	SE	Electricity Substation	1979
296BL	429	SW	Electricity Mains Depot	1950
297AK	429	SW	Electricity Mains Depot	1949
298BL	430	SW	Electricity Mains Depot	1950
299BL	430	SW	Electricity Mains Depot	1967
300AK	430	SW	Electricity Mains Depot	1976
301AK	430	SW	Electricity Mains Depot	1949
302BK	431	SE	Electricity Substation	1983
303BK	432	SE	Electricity Substation	1993
304BK	432	SE	Electricity Substation	1996
305BK	432	SE	Electricity Substation	1993
306BM	461	NE	Electricity Substation	1988
307BM	461	NE	Electricity Substation	1983
308BM	461	NE	Electricity Substation	1993
309BM	461	NE	Electricity Substation	1979
310BN	462	NW	Electricity Substation	1995
311BN	462	NW	Electricity Substation	1997
312BN	462	NW	Electricity Substation	1997

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:

42

ID	Distance (m)	Direction	Use	Date
313BO	29	SE	Garage	1991
314BO	29	SE	Garage	1991
315BO	48	SE	Garage	1999
316BO	50	SE	Garage	1976
317BP	203	SW	Garage	1995
318BP	204	SW	Garage	1991
319BP	204	SW	Garage	1992
320BP	204	SW	Garage	1979
321BP	205	SW	Garage	1972
322	232	SE	Garage	1972
323BQ	250	NE	Garage	1991
324BQ	250	NE	Garage	1993
325BQ	251	NE	Garage	1995
326BQ	251	NE	Garage	1997
327BQ	251	NE	Garage	1994
328BQ	251	NE	Garage	1994
329BR	259	NE	Garage	1991
330BR	259	NE	Garage	1976
331O	273	E	Carriage Shed	1933
332O	273	E	Carriage Shed	1922
333O	274	E	Carriage Shed	1988
334O	275	E	Carriage Shed	1960
335O	275	E	Carriage Shed	1949
336O	275	E	Carriage Shed	1981
337O	275	E	Carriage Shed	1949
338BR	277	NE	Garage	1994
339BR	277	NE	Garage	1994
340BR	277	NE	Garage	1995
341BR	277	NE	Garage	1997
342BR	277	NE	Garage	1993
343BR	285	NE	Garage	1961
344BR	286	NE	Garage	1960
345BS	287	NE	Garage	1979
346BS	287	NE	Garage	1993
347BS	290	NE	Garage	1957
348	295	SW	Garage	1991
349BT	299	NE	Garage	1948
350BT	306	NE	Garage	1949
351BU	307	E	Carriage Shed	1908

352BU	307	E	Carriage Shed	1893
353AM	485	NW	Car Building and Repairing Shed	1922
354BV	486	NW	Car Building and Repairing Shed	1908

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:

1

ID	Distance (m)	Direction	Site Name	Date of operation	Activities
37 2	461	NW	Manchester	circa WWI	National Shell Factory 4.5in shell -

1.7 Potentially Infilled Land

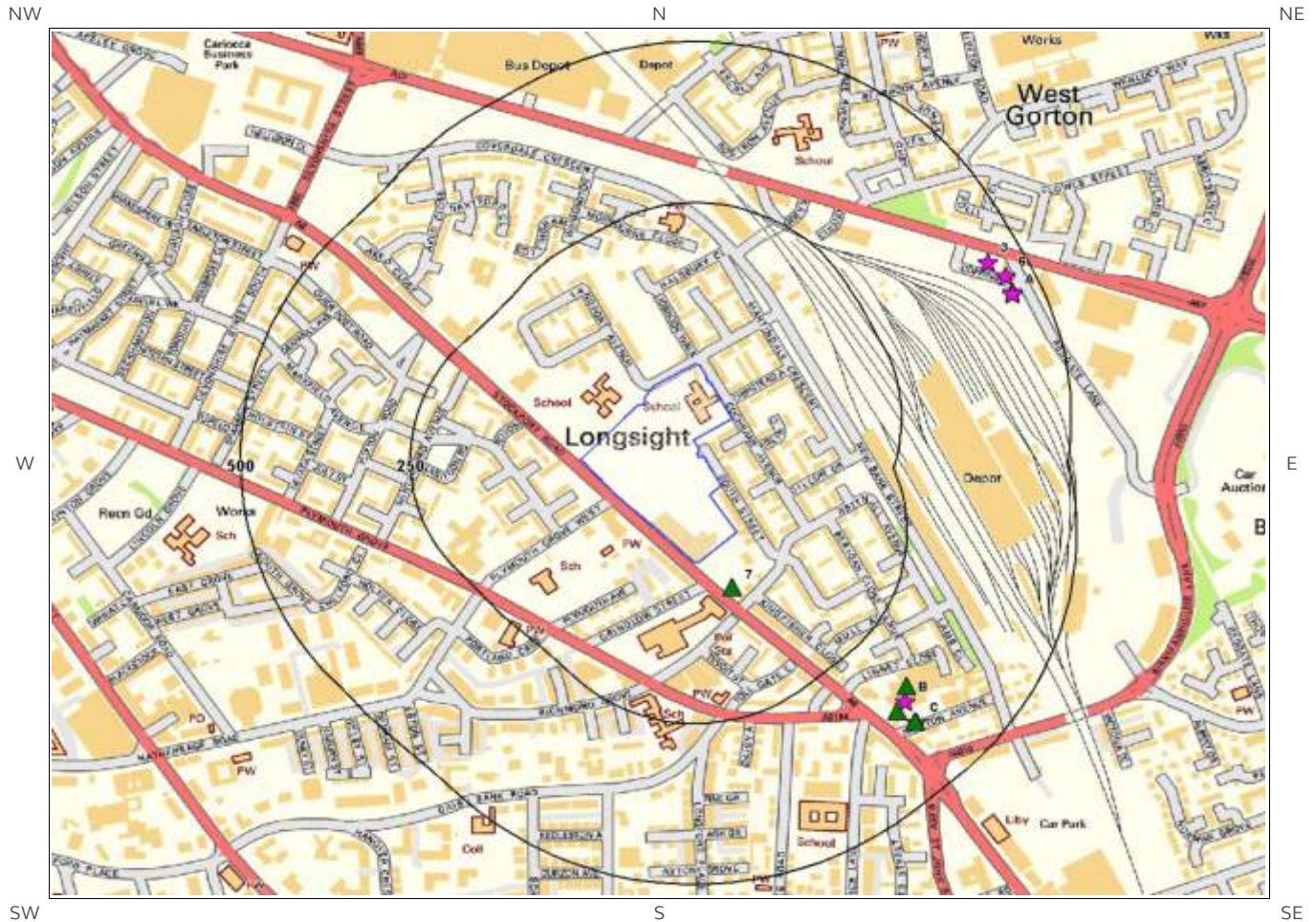
Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site:

17

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

ID	Distance(m)	Direction	Use	Date
355BW	0	On Site	Ponds	1851
356	0	On Site	Pond	1851
357	123	W	Pond	1851
358H	145	NE	Coal and Mineral Yard	1956
359	332	NW	Pond	1851
360AE	338	NE	Unspecified Ground Workings	1905
361	340	SW	Pond	1851
362	379	W	Pond	1851
363BA	444	E	Coal and Mineral Yard	1968
364	483	N	Pond	1851
365AS	489	NE	Pond	1851
366BX	494	E	Reservoir	1923
367BX	494	E	Reservoir	1934
368BX	494	E	Reservoir	1938
369BX	494	E	Reservoir	1915
370BX	496	E	Pond	1905
371BX	498	E	Pond	1890

2. Environmental Permits, Incidents and Registers Map



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- | | | | | | |
|---|--------------------|---|-------------------------------|---|--|
|  | Site Outline |  | Recorded Pollution Incident |  | RAS 3 & 4 Authorisations |
|  | Search Buffers (m) |  | Dangerous Substances (List 1) |  | Part A(1) Authorised Processes and Historic IPC Authorisations |
| | |  | Dangerous Substances (List 2) |  | Part A(2) and Part B Authorised Processes |
| | |  | Water Industry Referrals |  | COMAH / NIHS Sites |
| | |  | Licensed Discharge Consents |  | Sites Determined as Contaminated Land |
| | |  | Red List Discharge Consents |  | 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:

4

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

ID	Distance (m)	Direction	NGR	Details
7	64	SE	386330 396107	Address: Mercury Filling Station, 353 Stockport Road, Longsight, M13 0LF Process: Unloading of Petrol into Storage at Service Stations Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
8B	347	SE	386586 395954	Address: GB Auto's, Unit 10-11 Longsight Industrial Estate, Newton Avenue, M12 4EY Process: Waste Oil Burner <0.4 MW Status: New Legislation Applies Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
9B	367	SE	386573 395915	Address: Bismi Petroleum, 441 Stockport Road, Longsight, M12 4JB Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
10C	396	SE	386599 395899	Address: Kingfisher Serv Stn, Stockport Rd, M12 4JB Process: Petrol Vapour Recovery Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

0

Database searched and no data found.

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:

6

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

ID	Distance (m)	Direction	NGR	Details
1B	361	SE	386584.0 395933.0	Incident Date: 20-May-2002 Incident Identification: 79964.0 Pollutant: Specific Waste Materials Pollutant Description: Vehicles and Vehicle Parts Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
2C	396	SE	386600.0 395900.0	Incident Date: 11-Aug-2002 Incident Identification: 99251.0 Pollutant: Oils and Fuel Pollutant Description: Petrol Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
3	446	NE	386705.0 396615.0	Incident Date: 18-Sep-2001 Incident Identification: 31355.0 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
4A	455	NE	386741.0 396566.0	Incident Date: 07-Nov-2002 Incident Identification: 119393.0 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
5A	456	NE	386741.0 396569.0	Incident Date: 12-Oct-2001 Incident Identification: 36193.0 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
6	459	NE	386732.0 396594.0	Incident Date: 11-Nov-2002 Incident Identification: 120028.0 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) 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.

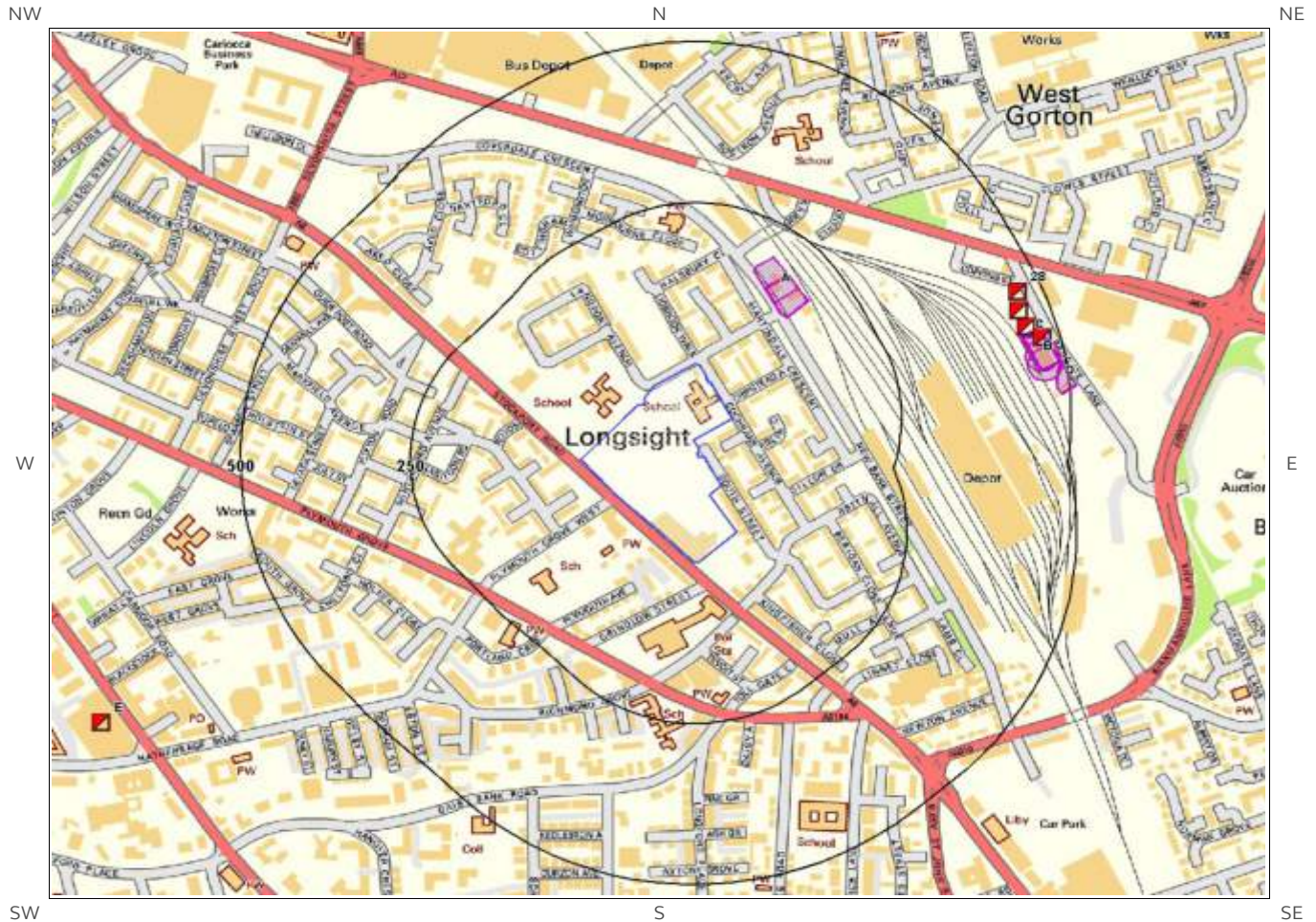
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

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

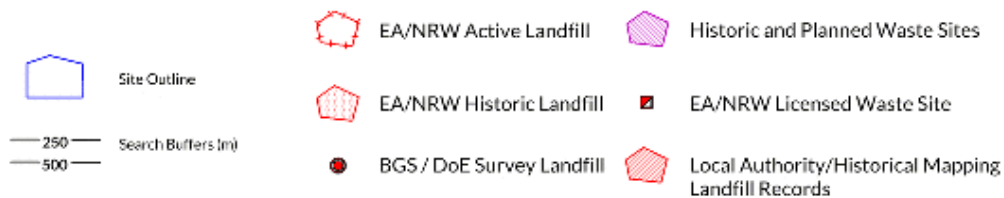
0

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
Not shown	1319	SE	Site Address: Pink Bank Lane, East Road, Longsight, Greater Manchester Waste Licence: Yes Site Reference: F010, RD/RES/024/80 Waste Type: Inert, Commercial, Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 25-Feb-1980 Licence Surrendered: 30-Apr-1991 Licence Holder Address: - Operator: - Licence Holder: Greater Manchester Waste Disposal Authority First Recorded: 16-Feb-1981 Last Recorded: 01-May-1981
Not shown	1405	N	Site Address: Palmerston Street Landfill, Great Ancoats Street, River Medlock, Ardwick, Manchester, Greater Manchester Waste Licence: Yes Site Reference: RD/LIC/440/86, F046 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 20-Aug-1986 Licence Surrendered: 21-Jul-1988 Licence Holder Address: Clarence House, Mellor Road, Cheadle Hulme, Stockport Operator: - Licence Holder: Peter Birse Limited First Recorded: 01-Sep-1986 Last Recorded: 31-Dec-1987
Not shown	1443	E	Site Address: Mount Road Plant Site, Annie Leigh Playing Fields, Greater Manchester Waste Licence: - Site Reference: F024 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1457	NE	Site Address: Preston Street, Gorton, Greater Manchester Waste Licence: - Site Reference: F057 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1985 Last Recorded: 31-Dec-1994

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

0

Database searched and no data found.

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

0

Database searched and no data found.

3.2 Other Waste Sites

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

20

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		
1A	143	NE	386401 396576	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1991	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
2A	144	NE	386411 396561	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1993	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
3A	148	NE	386403 396573	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1995	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
4A	148	NE	386403 396573	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1994	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
5A	148	NE	386403 396573	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1994	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
6A	148	NE	386403 396573	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1997	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
7C	442	E	386770 396506	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1983	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

ID	Distance (m)	Direction	NGR	Details		
8B	443	E	386786 396470	Type of Site: Waste Transfer Unit Site Address: Redgate Lane, Gorton, MANCHESTER, Greater Manchester, M12 4R	Planning Application Reference: 63640 Date: -	Further Details: Scheme comprises construction of two single storey buildings to be used as a waste transfer unit. Project also includes sewer systems, service engineering, enabling works and landscaping. Construction - block, internal partitions, steel cladding wallsinsitu concrete floor; steel cladding roof; fire doors; pad foundations; steel frame; bathroom, fire alarm system fittings. An application (ref: 63640) for Detailed Planning permission was submitted to Manchester C.C. Tender details have not yet been released. Detailed plans approved. Data Source: Historic Planning Application Data Type: Point
9B	443	E	386790 396455	Type of Site: Waste Transfer Station Site Address: Redgate Holdings Limited, 2 Redgate Lane, Gorton, MANCHESTER, Greater Manchester, M12 4RY	Planning Application Reference: 092808/FO/2010/N2 Date: 14/06/2011	Further Details: Scheme comprises installation of 7m high waste separation plant and associated works. An application (ref: 092808/FO/2010/N2) for detailed planning permission was granted by Manchester C.C. A detailed planning application has been granted. Data Source: Historic Planning Application Data Type: Point
10B	444	E	386784 396473	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1980	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
11C	445	E	386772 396506	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1988	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
12C	445	E	386773 396505	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1993	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
13B	446	E	386784 396473	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1991	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
14B	446	E	386784 396473	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1991	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
15B	446	E	386784 396473	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1980	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
16B	446	E	386784 396473	Type of Site: Scrap Yard	Planning Application Reference: N/A	Further Details: N/A Data Source: Historic Mapping

ID	Distance (m)	Direction	NGR	Details		
				Site Address: N/A	Date: 1988	Data Type: Polygon
17B	446	E	386785 396473	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1994	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
18D	482	E	386822 396434	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1991	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
19D	482	E	386822 396434	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1980	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
20D	483	E	386823 396434	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1994	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

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

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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	
25C	453	E	386751 396540	Site Address: Land/premises At, Redgate Lane, Gorton, Manchester, M12 4RY Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RHL003 EPR reference: EA/EPR/BP3893LP/V005 Operator: Redgate Holdings Limited Waste Management licence No: 50110 Annual Tonnage: 74999.0	Issue Date: 18/03/2003 Effective Date: 08/12/2006 Modified: 13/10/2010 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Redgate Holdings Limited Correspondence Address: -
26C	456	E	386763 396516	Site Address: U2, Redgate Lane, Off Hyde Road, Gorton, Manchester, M12 4RY Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RHL003 EPR reference: - Operator: Redgate Holdings Limited Waste Management licence No: 50110 Annual Tonnage: 74999.0	Issue Date: 18/03/2003 Effective Date: 08/12/2006 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Redgate Holdings Limited Correspondence Address: U2, Redgate Lane, Off Hyde Road, Gorton, Manchester, M12 4RY
27C	456	E	386763 396516	Site Address: Redgate Lane, West Gorton, Manchester, M12 4RY Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KAV001 EPR reference: -	Issue Date: 18/03/2003 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Kavanagh And Mannion

ID	Distance (m)	Direction	NGR	Details	
				Operator: Kavanagh And Mannion (manchester) Ltd Waste Management licence No: 50110 Annual Tonnage: 74999.0	Correspondence Address: Redgate Lane, West Gorton, Manchester, M12 4RY
28	464	NE	386750 396570	Site Address: Copping Street, Gorton, Manchester, M12 4RY Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BV 001 EPR reference: EA/EPR/YP3098CK/A001 Operator: Lockett Helen Waste Management licence No: 50129 Annual Tonnage: 24999.0	Issue Date: 08/09/2003 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked Site Name: Belle Vue Skip Hire Correspondence Address: -
29B	475	E	386787 396499	Site Address: Land/premises At, Redgate Lane, Gorton, Manchester, M12 4RY Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RHL003 EPR reference: EA/EPR/BP3893LP/V005 Operator: Redgate Holdings Limited Waste Management licence No: 50110 Annual Tonnage: 74999.0	Issue Date: 18/03/2003 Effective Date: 08/12/2006 Modified: 13/10/2010 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Redgate Holdings Limited Correspondence Address: -
30E	816	SW	385400 395900	Site Address: - Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CMH001 EPR reference: - Operator: Central Manchester Area Health Authority Waste Management licence No: 53906 Annual Tonnage: 417.0	Issue Date: 18/04/1990 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Manchester Royal Infirmary Correspondence Address: Facilities Directorate, Gate 9, Oxford Road, Manchester, M13 9WL
31E	816	SW	385400 395900	Site Address: Manchester Royal Infirmary, Oxford Road, Manchester, M13 9WL Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CMH001 EPR reference: EA/EPR/PP3391CE/S002 Operator: Central Manchester University Hospitals N H S Foundation Trust Waste Management licence No: 53906 Annual Tonnage: 110088.0	Issue Date: 18/04/1990 Effective Date: - Modified: - Surrendered Date: Aug 24 2012 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Central Manchester University Hospitals N H S Foundation Trust Correspondence Address: -
32E	816	SW	385400 395900	Site Address: Manchester Royal Infirmary, Oxford Road, Manchester, M13 9WL Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CMH001 EPR reference: EA/EPR/PP3391CE/A001 Operator: Central Manchester & Manchester Childrens University Hospital Nhs Trust Waste Management licence No: 53906 Annual Tonnage: 417.0	Issue Date: 18/04/1990 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Central Manchester & Manchester Childrens University Hospital Nhs Trust Correspondence Address: -
Not shown	823	N	386046 397248	Site Address: West Goods Yard, Rondin Road, Ardwick, Manchester, M12 6JT Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes	Issue Date: 07/04/2011 Effective Date: - Modified: 02/12/2013 Surrendered Date: - Expiry Date: -

ID	Distance (m)	Direction	NGR	Details
				Environmental Permitting Regulations (Waste) Licence Number: BIR103 EPR reference: EA/EPR/PP3291EE/V002 Operator: Birch Skip Hire Ltd Waste Management licence No: 102091 Annual Tonnage: 49999.0 Cancelled Date: - Status: Revoked Site Name: Birch Skip Hire Correspondence Address: -
Not shown	830	NE	386683 397182	Site Address: Vaughan Industrial Estate, Unit 10, Vaughan Street, West Gorton, Manchester, M12 5BT Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CMR001 EPR reference: EA/EPR/ZP3098CT/A001 Operator: Concorde Metals Recycling Ltd Waste Management licence No: 50030 Annual Tonnage: 0.0 Issue Date: 29/08/2003 Effective Date: - Modified: - Surrendered Date: Dec 6 2011 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Concorde Metals Recycling Correspondence Address: -
Not shown	887	N	386314 397344	Site Address: Rondin House, Rondin Road, Ardwick, Manchester, M12 6BF Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MCG003 EPR reference: EA/EPR/CP3294CX/V004 Operator: P Mc Guinness & Co Ltd Waste Management licence No: 50363 Annual Tonnage: 74999.0 Issue Date: 21/12/2004 Effective Date: - Modified: 24/08/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: P Mc Guinness & Co Ltd Correspondence Address: -
Not shown	909	N	386237 397366	Site Address: 22, Rondin Road, Ardwick, Manchester, M12 6BF Type: 75kte Metal Recycling Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIM002 EPR reference: EA/EPR/EB3803ME/T001 Operator: Sims Group U K Ltd Waste Management licence No: 104965 Annual Tonnage: 74999.0 Issue Date: 08/10/2013 Effective Date: 23/01/2017 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Sims Group U K Limited Correspondence Address: -
Not shown	909	N	386237 397366	Site Address: 22, Rondin Road, Ardwick, Manchester, M12 6BF Type: 75kte Metal Recycling Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIM002 EPR reference: EA/EPR/EB3803ME/T001 Operator: Sims Group U K Limited Waste Management licence No: 104965 Annual Tonnage: 74999.0 Issue Date: 08/10/2013 Effective Date: 23/01/2017 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Sims Group U K Limited Correspondence Address: -
Not shown	909	N	386237 397366	Site Address: 22, Rondin Road, Ardwick, Manchester, M12 6BF Type: 75kte Metal Recycling Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: OES001 EPR reference: EA/EPR/MB3832AC/A001 Operator: One51 E S Metals (North) Limited Waste Management licence No: 104965 Annual Tonnage: 74999.0 Issue Date: 08/10/2013 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Howarth Metals Correspondence Address: -
Not shown	945	N	386200 397400	Site Address: Rondin House, Rondin Road, Ardwick, Manchester, M12 6BF Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations Issue Date: 21/12/2004 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: -

ID	Distance (m)	Direction	NGR	Details	
				(Waste) Licence Number: MCG003 EPR reference: - Operator: P Mc Guinness & Company Ltd Waste Management licence No: 50363 Annual Tonnage: 0.0	Status: Issued Site Name: P Mc Guinness & Co Ltd Correspondence Address: Pearl Environmental, 13, Middleton Road, Reddish, Stockport, SK5 6SG
Not shown	965	NE	387000 397100	Site Address: Ashbury Yard, Bessemer Street, Gorton, Manchester, M11 2NW Type: 75kte HCl Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LAF073 EPR reference: EA/EPR/LP3498NN/T001 Operator: Lafarge S P V Limited Waste Management licence No: 104076 Annual Tonnage: 74999.0	Issue Date: 30/04/2012 Effective Date: 09/11/2012 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Ashbury Yard Correspondence Address: -
Not shown	965	NE	387000 397100	Site Address: Ashbury Yard, Bessemer Street, Gorton, Manchester, M11 2NW Type: 75kte HCl Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: HCL004 EPR reference: EA/EPR/FB3407CX/T001 Operator: Breedon Southern Limited Waste Management licence No: 104076 Annual Tonnage: 74999.0	Issue Date: 30/04/2012 Effective Date: 14/10/2017 Modified: 21/12/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Ashbury Aggs Depot Correspondence Address: -
Not shown	965	NE	387000 397100	Site Address: Ashbury Yard, Bessemer Street, Gorton, Manchester, M11 2NW Type: 75kte HCl Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LAF073 EPR reference: EA/EPR/LP3498NN/V002 Operator: Hope Cement Limited Waste Management licence No: 104076 Annual Tonnage: 74999.0	Issue Date: 30/04/2012 Effective Date: 09/11/2012 Modified: 21/12/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Ashbury Yard Correspondence Address: -
Not shown	965	NE	387000 397100	Site Address: Ashbury Yard, Bessemer Street, Gorton, Manchester, M11 2NW Type: 75kte HCl Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LAR021 EPR reference: EA/EPR/GB3230AN/A001 Operator: Lafarge Aggregates Limited Waste Management licence No: 104076 Annual Tonnage: 74999.0	Issue Date: 30/04/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Ashbury Yard Correspondence Address: -
Not shown	988	NE	386816 397287	Site Address: Southside Railway Sidings, Gorton Road, Gorton, Manchester, M11 2DZ Type: Metal Recycling Site (Vehicle Dismantler) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: UCS002 EPR reference: EA/EPR/HB3534AU/T001 Operator: U C S (Manchester) Limited Waste Management licence No: 50464 Annual Tonnage: 2500.0	Issue Date: 19/12/2006 Effective Date: 14/06/2012 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Universal Car Spares Limited Correspondence Address: -
Not shown	988	NE	386816 397287	Site Address: Southside Railway Sidings, Gorton Road, Gorton, Manchester, M11 2DZ Type: Metal Recycling Site (Vehicle Dismantler) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: AHM002	Issue Date: 19/12/2006 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Universal Car Spares

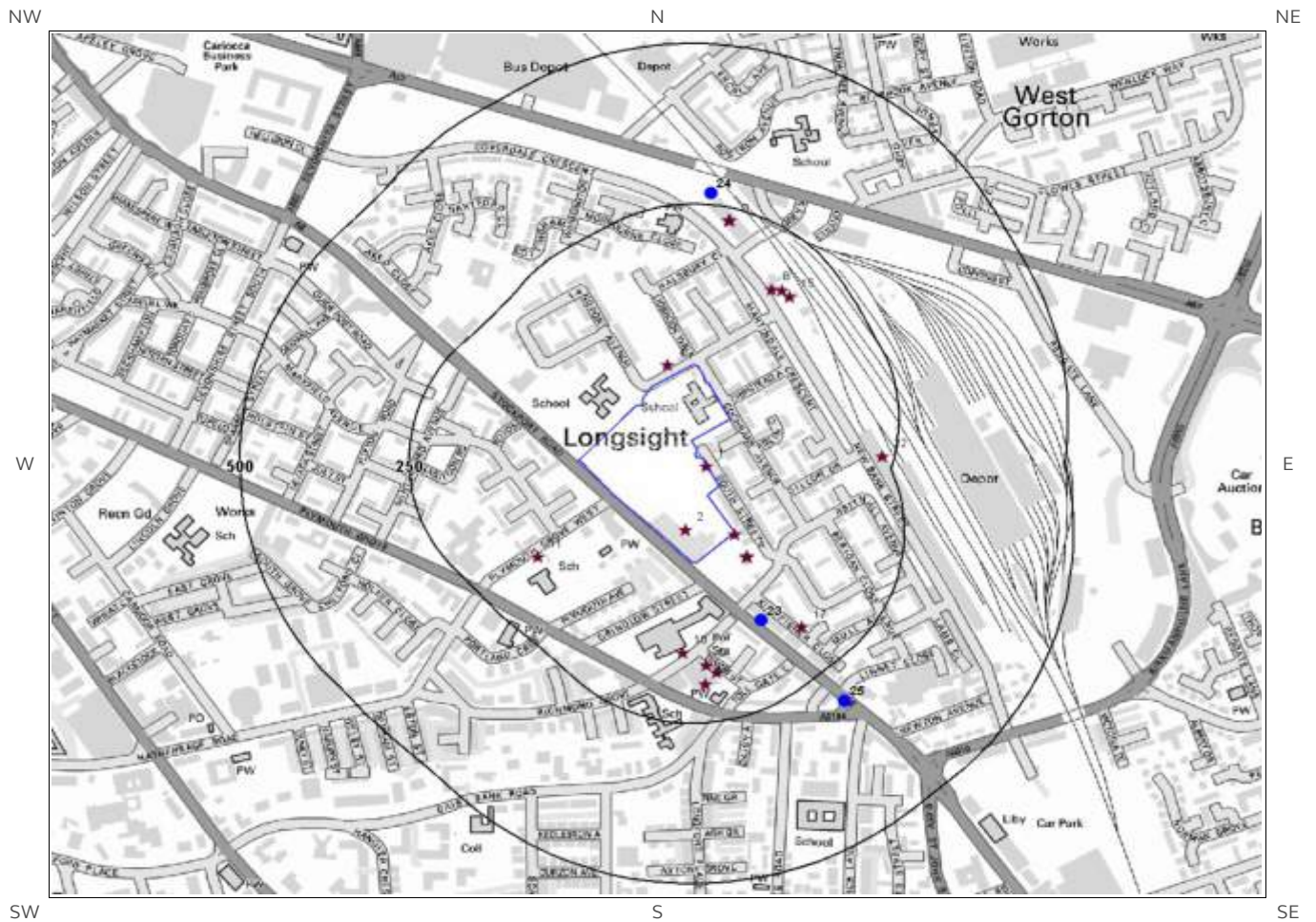
ID	Distance (m)	Direction	NGR	Details	
				EPR reference: EA/EPR/YP3494CK/A001 Operator: Tufail Ahmed And Mohammad Ahmed Waste Management licence No: 50464 Annual Tonnage: 2500.0	Correspondence Address: -
Not shown	998	NE	386785 397317	Site Address: Land/premises At, Gorton Road, Ardwick, Manchester, M11 2DZ Type: ELV Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: TDX002 EPR reference: EA/EPR/MP3594CJ/A001 Operator: T D X Ltd Waste Management licence No: 50264 Annual Tonnage: 2500.0	Issue Date: 28/02/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Southside Railway Sidings Correspondence Address: -
Not shown	1010	NE	386750 397350	Site Address: Land/premises At, Gorton Road, Gorton, Manchester, M11 2DZ Type: ELV Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: AUT005 EPR reference: EA/EPR/UP3594CX/A001 Operator: Auto Salvage Holtown Ltd Waste Management licence No: 50275 Annual Tonnage: 2500.0	Issue Date: 14/05/2004 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Auto Salvage Holtown Ltd Correspondence Address: -
Not shown	1025	NE	386681 397399	Site Address: Iwaste Ltd, Gorton Road, Gorton, Manchester, M11 2DZ Type: Vehicle Depollution Facility <5000 tps Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: IWA002 EPR reference: EA/EPR/KB3238RL/A001 Operator: Iwaste Ltd Waste Management licence No: 104595 Annual Tonnage: 4999.0	Issue Date: 25/10/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Iwaste Ltd Correspondence Address: -
Not shown	1045	N	386200 397500	Site Address: - Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ACA001 EPR reference: - Operator: Cash Anthony Waste Management licence No: 53760 Annual Tonnage: 6250.0	Issue Date: 16/12/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Birch Plant & Waste Services Ltd Correspondence Address: -
Not shown	1045	N	386200 397500	Site Address: Unit 12, Rondin Road, Ardwick, Manchester, M12 6BF Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BIR071 EPR reference: EA/EPR/CP3097LW/V002 Operator: Birch Skip Hire Ltd. Waste Management licence No: 53760 Annual Tonnage: 6250.0	Issue Date: 16/12/1993 Effective Date: 01/05/2008 Modified: 15/10/2008 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked Site Name: Birch Skip Hire Correspondence Address: -
Not shown	1045	N	386200 397500	Site Address: Unit 12, Rondin Road, Ardwick, Manchester, M12 6BF Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BIR071 EPR reference: -	Issue Date: 16/12/1993 Effective Date: 01/05/2008 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Birch Skip Hire

ID	Distance (m)	Direction	NGR	Details	
				Operator: Birch Skip Hire Ltd. Waste Management licence No: 53760 Annual Tonnage: 6250.0	Correspondence Address: Unit 12, Rondin Close, Off Ashton Old Road, Manchester, M12 6LL
Not shown	1045	N	386200 397500	Site Address: Unit 12, Rondin Road, Ardwick, Manchester, M12 6BF Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BIR071 EPR reference: EA/EPR/CP3097LW/V002 Operator: Birch Skip Hire Ltd Waste Management licence No: 53760 Annual Tonnage: 6250.0	Issue Date: 16/12/1993 Effective Date: 01/05/2008 Modified: 15/10/2008 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked Site Name: Birch Skip Hire Correspondence Address: -
Not shown	1070	N	386652 397459	Site Address: 8, Tuley Street, Gorton, Manchester, M11 2DY Type: Vehicle Depollution Facility <5000 tps Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ANY032 EPR reference: EA/EPR/AB3133RU/A001 Operator: Anyaeriuba Emmanuel Waste Management licence No: 102972 Annual Tonnage: 4999.0	Issue Date: 27/07/2011 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Breakers Yard, 8 Tuley Street Correspondence Address: -
Not shown	1089	N	386160 397540	Site Address: Units 15, Rondin Close, Ardwick, Manchester, M12 6BF Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MCG002 EPR reference: EA/EPR/RP3098CB/A001 Operator: P Mc Guinness & Co Ltd Waste Management licence No: 50105 Annual Tonnage: 4999.0	Issue Date: 09/08/2002 Effective Date: - Modified: 21/12/2004 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: P Mc Guinness & Co Transfer Station Correspondence Address: -
Not shown	1091	N	385960 397502	Site Address: Operational Depot, Hooper Street, Manchester, M12 6LA Type: Inert & Excavation WTS with treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MAN114 EPR reference: EA/EPR/DB3839DD/A001 Operator: Manchester City Council Waste Management licence No: 103692 Annual Tonnage: 249999.0	Issue Date: 15/12/2011 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Hooper Street Depot Correspondence Address: -
Not shown	1091	N	386370 397545	Site Address: Ashton Old Road Recycling Depot, Ashton Old Road, Manchester, M11 2XX Type: Treatment of waste to produce soil <75,000 tpy Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WMA012 EPR reference: EA/EPR/GB3930AM/A001 Operator: W Maher & Sons Ltd Waste Management licence No: 104212 Annual Tonnage: 74999.0	Issue Date: 11/05/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Ashton Old Road Recycling Depot Correspondence Address: -
Not shown	1103	NE	386845 397404	Site Address: Singleton's Scrap Metal, Land Of Wolveton Street, Manchester, M11 2DU Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes	Issue Date: 17/09/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: -

ID	Distance (m)	Direction	NGR	Details
				Environmental Permitting Regulations (Waste) Licence Number: FWS010 EPR reference: EA/EPR/JB3731RJ/A001 Operator: F W Singleton Ltd Waste Management licence No: 104515 Annual Tonnage: 74999.0 Status: Issued Site Name: Singleton's Scrap Metal Correspondence Address: -
Not shown	1107	NE	386845 397409	Site Address: Singleton's Scrap Metal Ltd, Land Off Wolveton Street, Openshaw, Manchester, M11 2DU Type: Vehicle Depollution Facility <5000 tps Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FWS011 EPR reference: EA/EPR/KB3534RB/S002 Operator: F W Singleton Limited Waste Management licence No: 104629 Annual Tonnage: 0.0 Issue Date: 20/08/2012 Effective Date: - Modified: - Surrendered Date: Oct 24 2012 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Singleton's Scrap Metal Ltd Correspondence Address: -
Not shown	1188	NE	387286 397091	Site Address: 21, Textile Street, West Gorton, Manchester, M12 5DJ Type: ELV Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BIR004 EPR reference: EA/EPR/SP3194CD/A001 Operator: Birch Lane Garage Limited Waste Management licence No: 50242 Annual Tonnage: 2500.0 Issue Date: 16/07/2004 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Birch Lane Garage Ltd Correspondence Address: -
Not shown	1370	SE	387594 395651	Site Address: Unit 11, Nutsford Vale, Longsight, Manchester, M12 5QJ Type: Vehicle Depollution Facility <5000 tps Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: URO001 EPR reference: EA/EPR/BB3005LQ/A001 Operator: Ventaj Urosh Waste Management licence No: 401031 Annual Tonnage: 4999.0 Issue Date: 12/01/2015 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: King Autos Correspondence Address: -
Not shown	1421	NW	385300 397510	Site Address: Temperance Street, Ardwick, Manchester, M12 6HS Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PML001 EPR reference: EA/EPR/AP3992CN/A001 Operator: Pye Metals Ltd Waste Management licence No: 53583 Annual Tonnage: 1733.0 Issue Date: 11/10/1996 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Pye Metals Ltd Correspondence Address: -
Not shown	1461	NW	385235 397506	Site Address: Hoyle Trading Estate, Hoyle Street, Manchester, M12 6HL Type: Treatment of waste to produce soil <75,000 tpy Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: DEL043 EPR reference: EA/EPR/CB3601KL/A001 Operator: E Delaney Demolition Ltd Waste Management licence No: 402157 Annual Tonnage: 74999.0 Issue Date: 26/02/2015 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Aggregate Recycling Yard Correspondence Address: -
Not shown	1480	NW	385200 397500	Site Address: 2, Hoyle Street, Ardwick, Manchester, M12 6HG Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations Issue Date: 11/10/1996 Effective Date: - Modified: - Surrendered Date: - Expiry Date: -

ID	Distance (m)	Direction	NGR	Details	
				(Waste) Licence Number: ADO001 EPR reference: EA/EPR/AP3092CD/A001 Operator: Donnelly Mr. A. Waste Management licence No: 53582 Annual Tonnage: 310.0	Cancelled Date: - Status: Suspended Site Name: Ardwick Auto Spares Correspondence Address: -
Not shown	1480	NW	385296 397583	Site Address: Hoyle Street, Hoyle Trading Estate, Manchester, M12 6JL Type: Inert & excavation Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CIT060 EPR reference: EA/EPR/CB3905MR/A001 Operator: City Excavations Ltd Waste Management licence No: 402399 Annual Tonnage: 75000.0	Issue Date: 01/06/2015 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: City Excavations Aggregate Yard Correspondence Address: -

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:

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0	On Site	Electricity Sub Station	386295 396300	Greater Manchester, M12	Electrical Features	Infrastructure and Facilities
2	0	On Site	Daisy Works	386264 396201	Greater Manchester, M13	Unspecified Works Or Factories	Industrial Features
3	2	SE	Sinclair Autos	386337 396193	116a, South Street, Longsight, Manchester, Greater Manchester, M12 4DT	Vehicle Repair, Testing and Servicing	Repair and Servicing
4	19	NW	Electricity Sub Station	386237 396457	Greater Manchester, M12	Electrical Features	Infrastructure and Facilities
5A	40	SE	Brantingham Auto Centre Ltd	386354 396158	351, Stockport Road, Manchester, Greater Manchester, M13 0LF	Vehicle Repair, Testing and Servicing	Repair and Servicing
6A	40	SE	Elliotts	386354 396158	351, Stockport Road, Manchester, Greater Manchester, M13 0LF	Vehicle Hire and Rental	Hire Services
7A	40	SE	Central Auto Clean	386354 396158	351, Stockport Road, Manchester, Greater Manchester, M13 0LF	Vehicle Cleaning Services	Personal, Consumer and Other Services
8A	40	SE	Kar & Car	386354 396158	351, Stockport Road, Manchester, Greater Manchester, M13 0LF	Vehicle Repair, Testing and Servicing	Repair and Servicing
9A	40	SE	Manchester Autoz Ltd	386354 396158	351, Stockport Road, Manchester, Greater Manchester, M13 0LF	Secondhand Vehicles	Motoring
10	141	S	Electricity Sub Station	386259 396009	Greater Manchester, M13	Electrical Features	Infrastructure and Facilities
11	147	SW	Electricity Sub Station	386046 396159	Greater Manchester, M13	Electrical Features	Infrastructure and Facilities
12C	161	S	Warehouse	386294 395989	Greater Manchester, M13	Container and Storage	Transport, Storage and Delivery
13B	162	NE	T Naughton Ltd	386390 396575	Yard C, New Bank Street, Manchester, Greater Manchester, M12 4TN	Distribution and Haulage	Transport, Storage and Delivery
14B	172	NE	Scrap Yard	386407 396574	Greater Manchester, M12	Scrap Metal Merchants	Recycling Services
15	173	NE	Manchester Breakdown Services	386417 396563	The Compound, New Bank Street, Manchester, Greater Manchester, M12 4TN	Vehicle Breakdown and Recovery Services	Personal, Consumer and Other Services
16C	174	S	Servis	386309	Richmond House 11,	Plate Makers, Print	IT, Advertising, Marketing

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
			Filmsetting Ltd	395978	Richmond Grove, Manchester, Greater Manchester, M13 0LN	Finishers and Type Setters	and Media Services
17	176	SE	Electricity Sub Station	386435 396049	Greater Manchester, M12	Electrical Features	Infrastructure and Facilities
18	189	S	Dimensions Knitwear Ltd	386292 395960	13-15, Richmond Grove, Manchester, Greater Manchester, M13 0LN	Textiles, Fabrics, Silk and Machinery	Industrial Products
19D	231	N	Britannia Knitwear	386329 396681	Unit 1-6 Viva Centre, Coverdale Crescent, Manchester, Greater Manchester, M12 4AP	Clothing, Components and Accessories	Consumer Products
20D	231	N	Ardwick M O T Centre	386328 396682	Unit 6 Viva Centre, Coverdale Crescent, Manchester, Greater Manchester, M12 4AP	Vehicle Repair, Testing and Servicing	Repair and Servicing
21D	231	N	Auto Car Centre	386328 396682	Unit 6 Viva Centre, Coverdale Crescent, Manchester, Greater Manchester, M12 4AP	Vehicle Repair, Testing and Servicing	Repair and Servicing
22	231	E	Orion Travel	386553 396315	The Compound, New Bank Street, Manchester, Greater Manchester, M12 4TN	Vehicle Hire and Rental	Hire Services

4.2 Petrol and Fuel Sites

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

3

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

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
23	130	SE	386375 396059	UNBRANDED	353 Stockport Road, Longsight, Manchester, Greater Manchester, M13 0LF	Not Applicable	Obsolete
24	269	N	386302 396725	OBSOLETE	225-255 Hyde Road, Manchester, Greater Manchester, M12 5AZ	Not Applicable	Obsolete
25	305	SE	386498 395934	HARVEST ENERGY	441 Stockport Road, Manchester, Greater Manchester, M12 4JB	No	Open

4.3 National Grid High Voltage Underground Electricity Transmission Cables

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

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

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

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

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

0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

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

5.2 Superficial Ground and Drift Geology

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

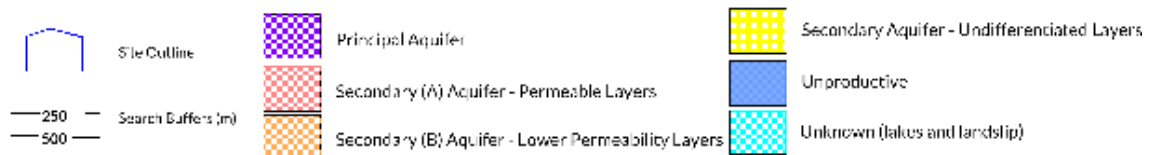
Lex Code	Description	Rock Type
TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

5.3 Bedrock and Solid Geology

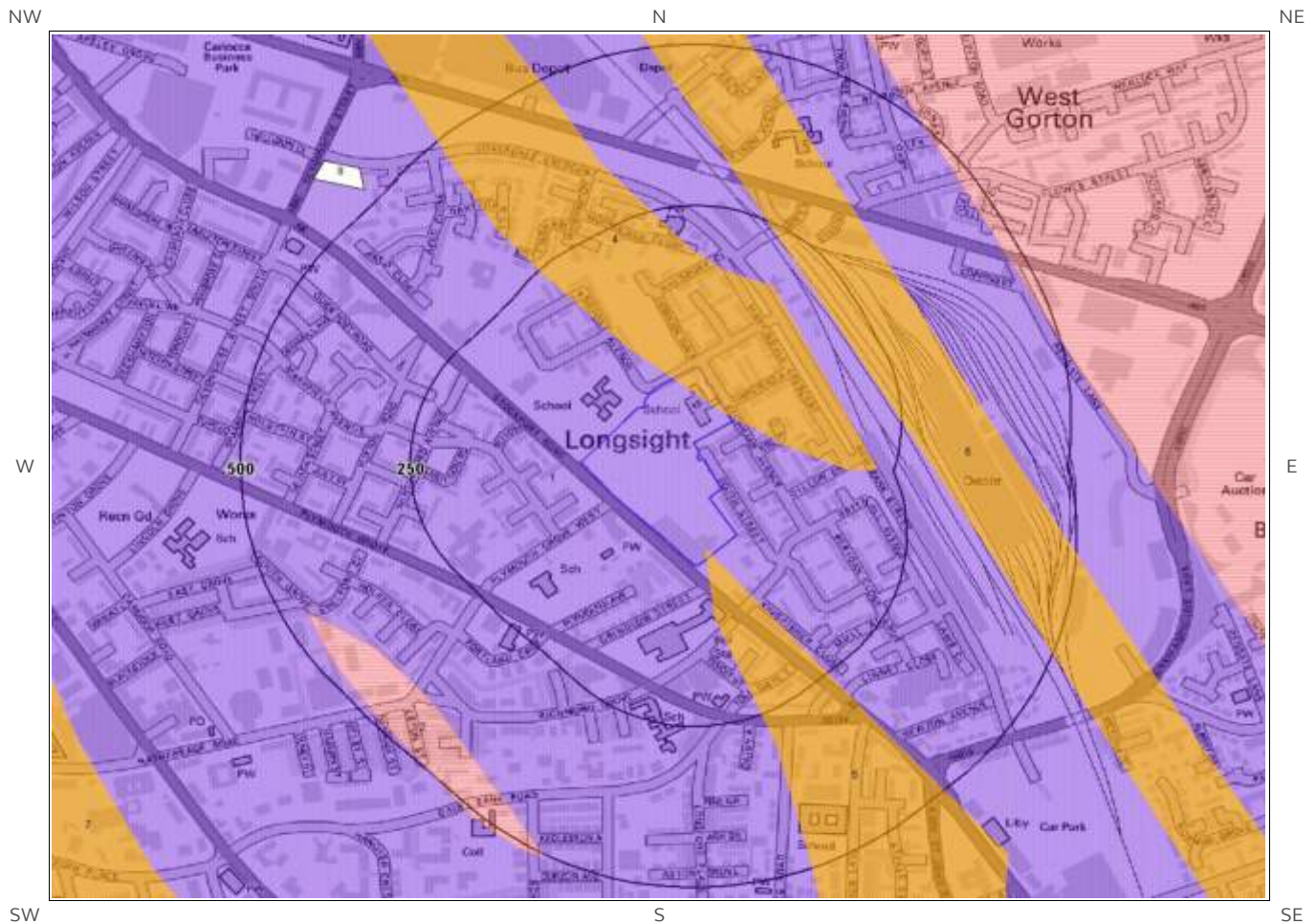
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
CHES-SDST	CHESTER FORMATION	SANDSTONE
MM-MDST	MANCHESTER MARLS FORMATION	MUDSTONE
MM-MDST	MANCHESTER MARLS FORMATION	MUDSTONE

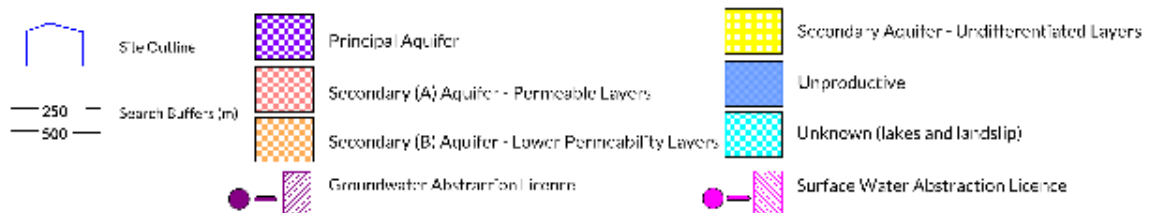
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)



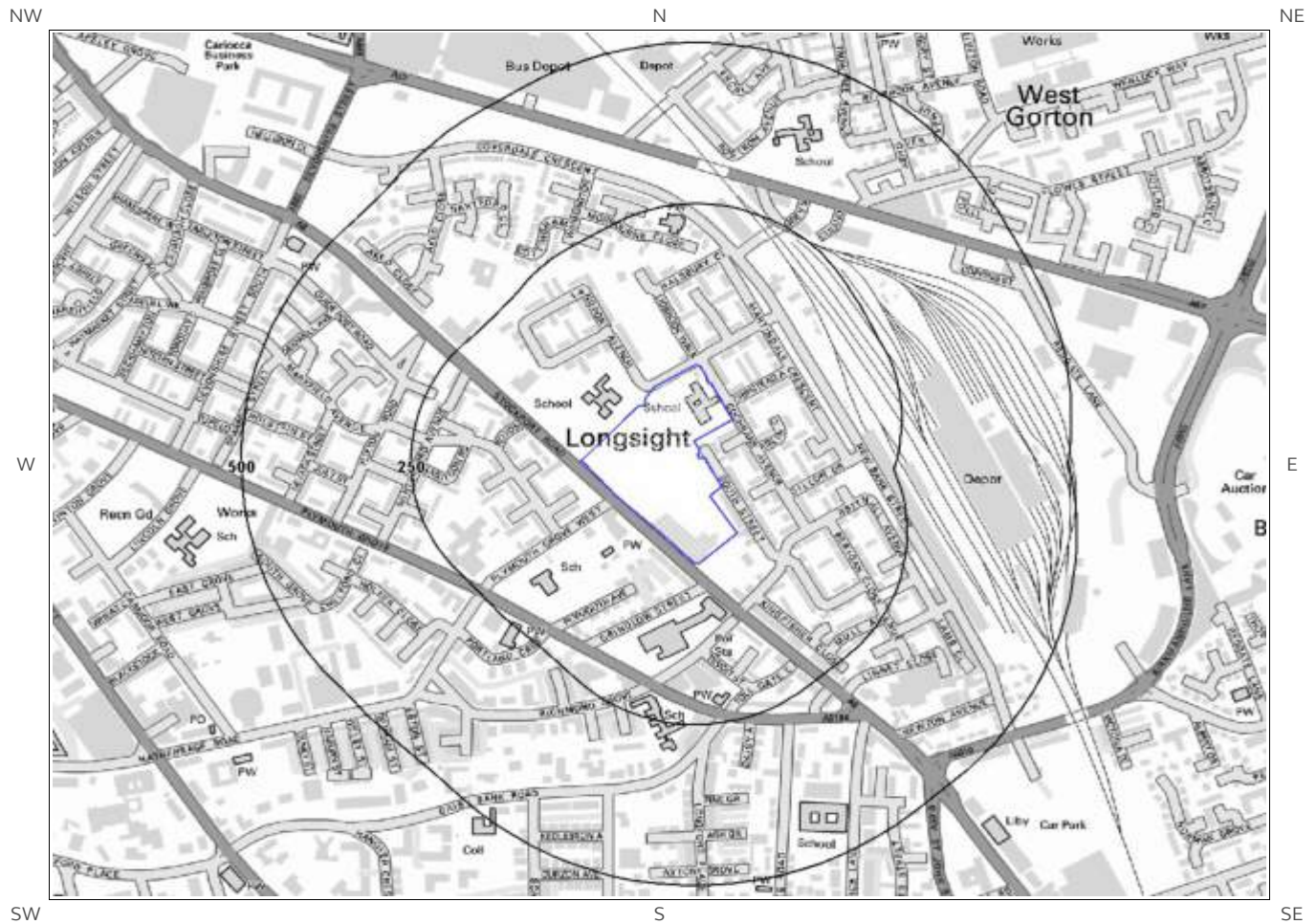
6b. Aquifer Within Bedrock Geology and Abstraction Licences



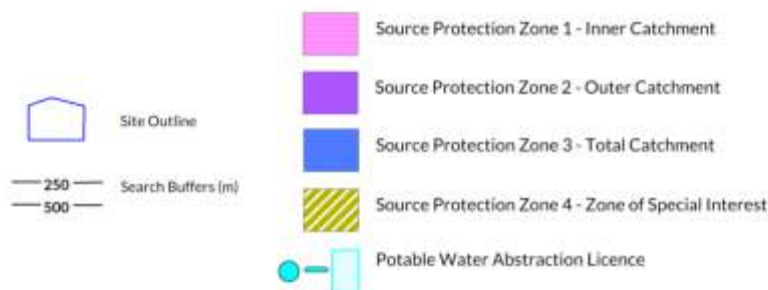
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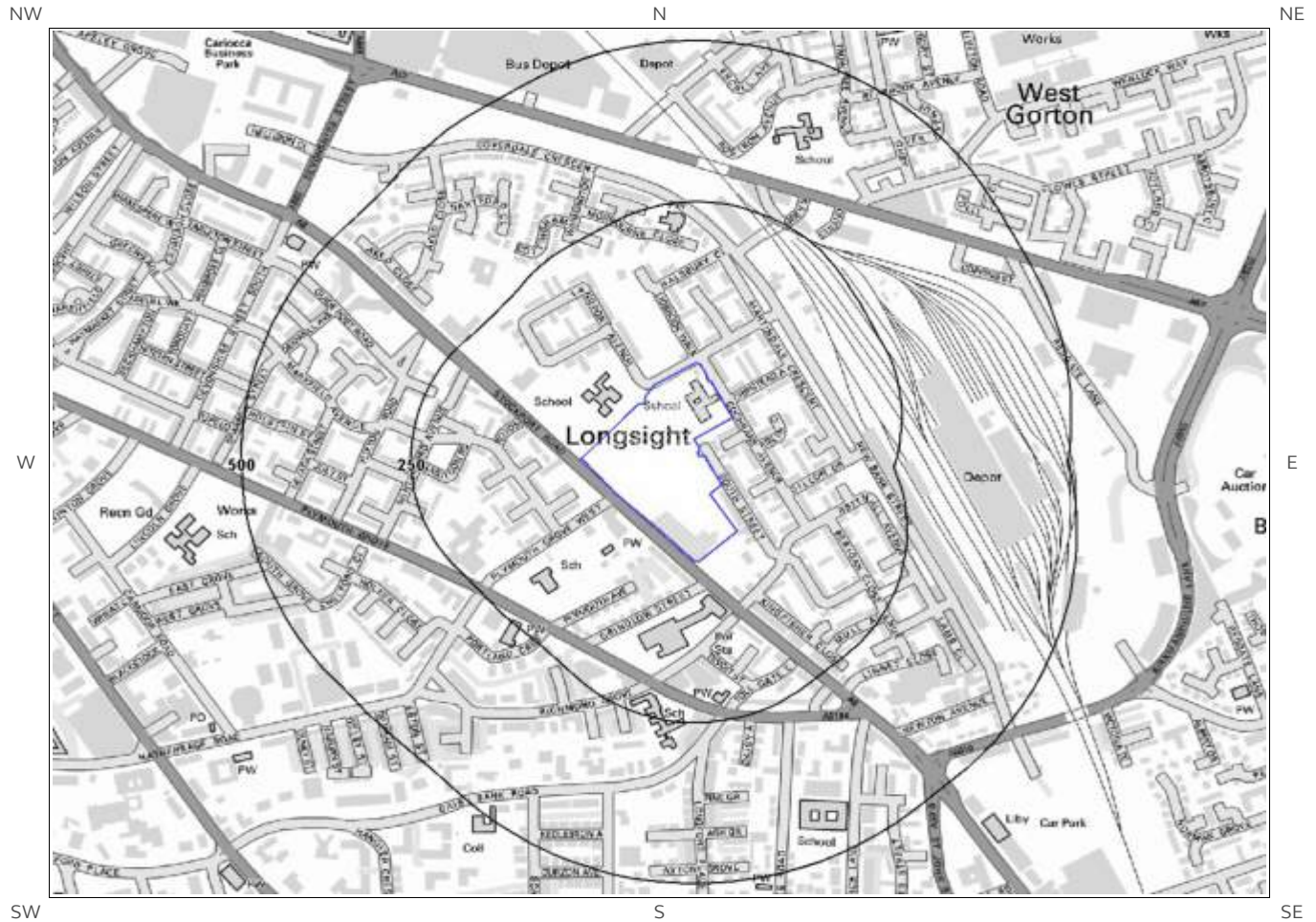
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences



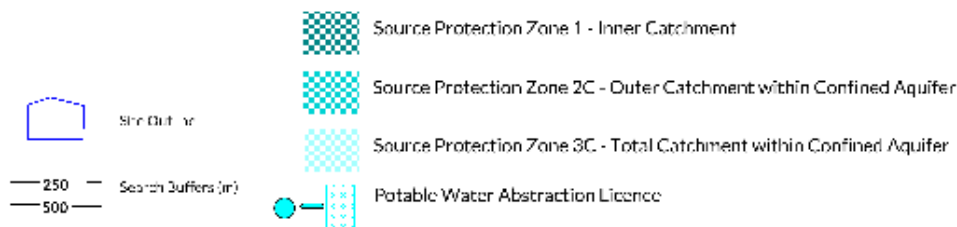
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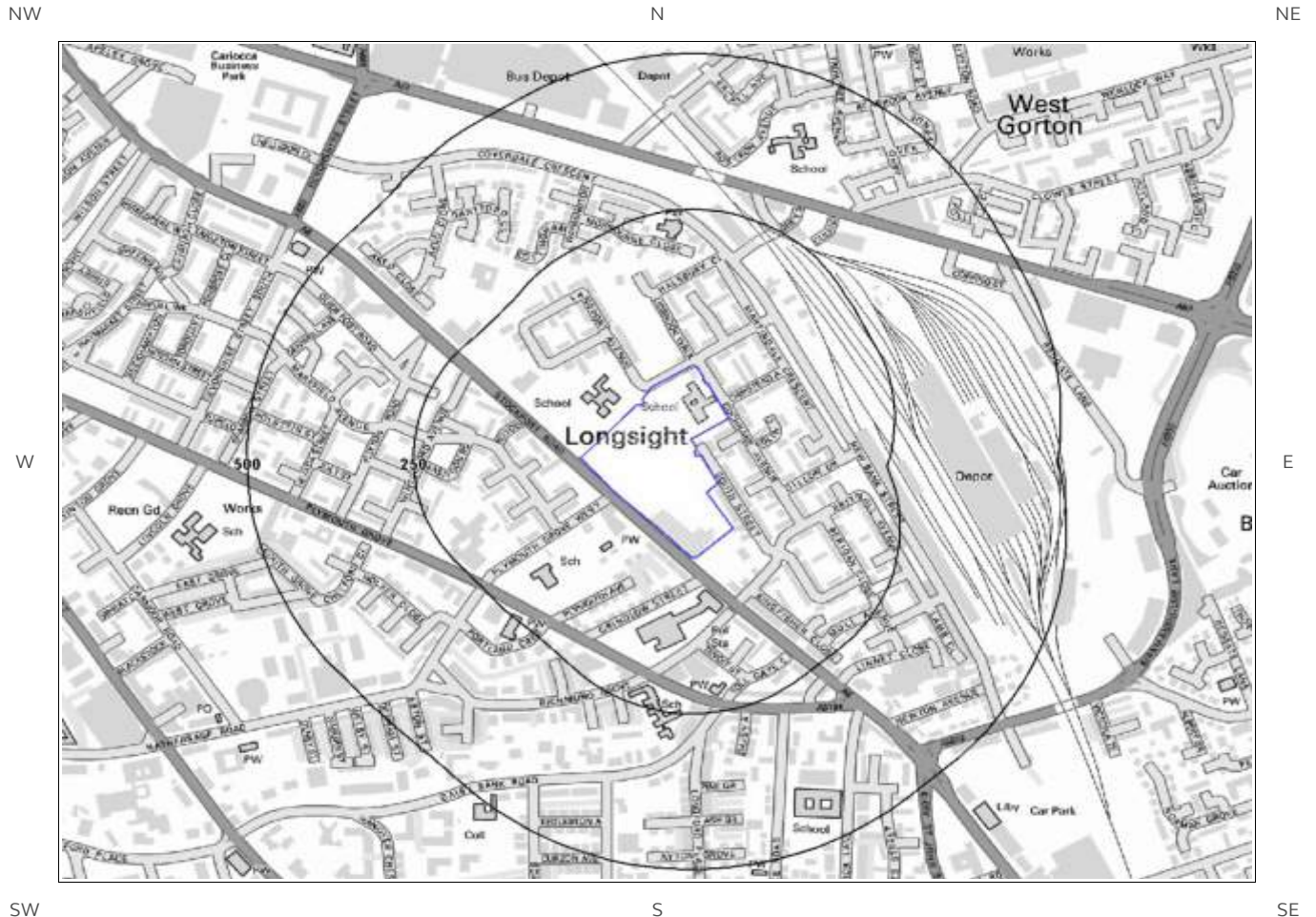
6d. Hydrogeology – Source Protection Zones within confined aquifer



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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 (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
1	0	On Site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
4	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
5	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
6	208	NE	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers
2	415	SW	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	478	NE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.3 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
8	525	NW	385729 396778	Status: Historical Licence No: NW/069/0004/005 Details: Heat Pump Direct Source: Ground Water - North West Region Point: AREA OF ABSTRACTION - LOWER CARBONIFEROUS LIMESTONE Data Type: Poly4 Name: G T Energy UK Limited Annual Volume (m³): 2.04984 Max Daily Volume (m³): 8640 Original Application No: - Original Start Date: 17/01/2013 Expiry Date: 16/01/2037 Issue No: 2 Version Start Date: 11/06/2013 Version End Date:
Not shown	1289	E	387590 395890	Status: Historical Licence No: 2569006042 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: PERMO-TRIASSIC SANDSTONE AT BELLE VUE LEISURE CENTRE Data Type: Point Name: CLIVE BACK Annual Volume (m³): 15000 Max Daily Volume (m³): 276 Original Application No: - Original Start Date: 11/07/2002 Expiry Date: 31/03/2014 Issue No: 3 Version Start Date: 04/02/2009 Version End Date:
Not shown	1290	E	387591 395891	Status: Historical Licence No: 2569006042 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: PERMO-TRIASSIC SANDSTONE AT BELLE VUE LEISURE CENTRE Data Type: Point Name: CLIVE BACK Annual Volume (m³): 10000 Max Daily Volume (m³): 276 Original Application No: - Original Start Date: 11/07/2002 Expiry Date: 31/03/2014 Issue No: 4 Version Start Date: 29/02/2012 Version End Date:
Not shown	1290	E	387591 395891	Status: Historical Licence No: NW/069/0006/006 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: PERMO-TRIASSIC SANDSTONE AT BELLE VUE LEISURE CENTRE Data Type: Point Name: The Chief Operating Officer of the Eastlands Trust Annual Volume (m³): 8000 Max Daily Volume (m³): 276 Original Application No: - Original Start Date: 16/05/2014 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 16/05/2014 Version End Date:
Not shown	1483	NW	385240 397540	Status: Historical Licence No: 2569006001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, BROADIE ST, ARDWICK, MANCHESTER Data Type: Point Name: MOSELEY RUBBER CO LTD Annual Volume (m³): 331858 Max Daily Volume (m³): 909.2 Original Application No: - Original Start Date: 08/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 08/02/1966 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1483	NW	385240 397540	Status: Historical Licence No: 2569006001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PREMISES, BROADIE ST, ARDWICK, MANCHESTER" Data Type: Point Name: MOSELEY RUBBER CO LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 08/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 08/02/1966 Version End Date:
Not shown	1615	E	387950 396100	Status: Historical Licence No: 2569006043 Details: Dust Suppression Direct Source: Ground Water - North West Region Point: PERMO-TRIASSIC SANDSTONE AT BELLE VUE, MANCHESTER Data Type: Point Name: G R A LIMITED	Annual Volume (m³): 4000 Max Daily Volume (m³): 22 Original Application No: - Original Start Date: 20/06/2003 Expiry Date: 31/03/2014 Issue No: 2 Version Start Date: 01/04/2008 Version End Date:
Not shown	1774	E	388030 396880	Status: Historical Licence No: 2569006044 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PRESTON STREET, GORTON, MANCHESTER Data Type: Point Name: CEMEX UK MATERIALS LTD	Annual Volume (m³): 15000 Max Daily Volume (m³): 115 Original Application No: - Original Start Date: 23/10/2003 Expiry Date: 31/03/2014 Issue No: 3 Version Start Date: 15/10/2007 Version End Date:
Not shown	1774	E	388030 396880	Status: Active Licence No: NW/069/0004/012 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PRESTON STREET, MANCHESTER Data Type: Point Name: Cemex UK Materials Limited	Annual Volume (m³): 7500 Max Daily Volume (m³): 72 Original Application No: - Original Start Date: 19/06/2014 Expiry Date: 31/03/2027 Issue No: 2 Version Start Date: 21/12/2018 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site

None identified

Database searched and no data found.

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	Major Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
471	NE	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.

6.9 River Quality

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

Identified

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (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	1409	NW	385714 397750	River Name: Medlock Reach: Lords Bk. To Irwell End/Start of Stretch: Sample Point NGR	B	B	B	C	C

6.10 Ordnance Survey MasterMap Water Network

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

Database searched and no data found.

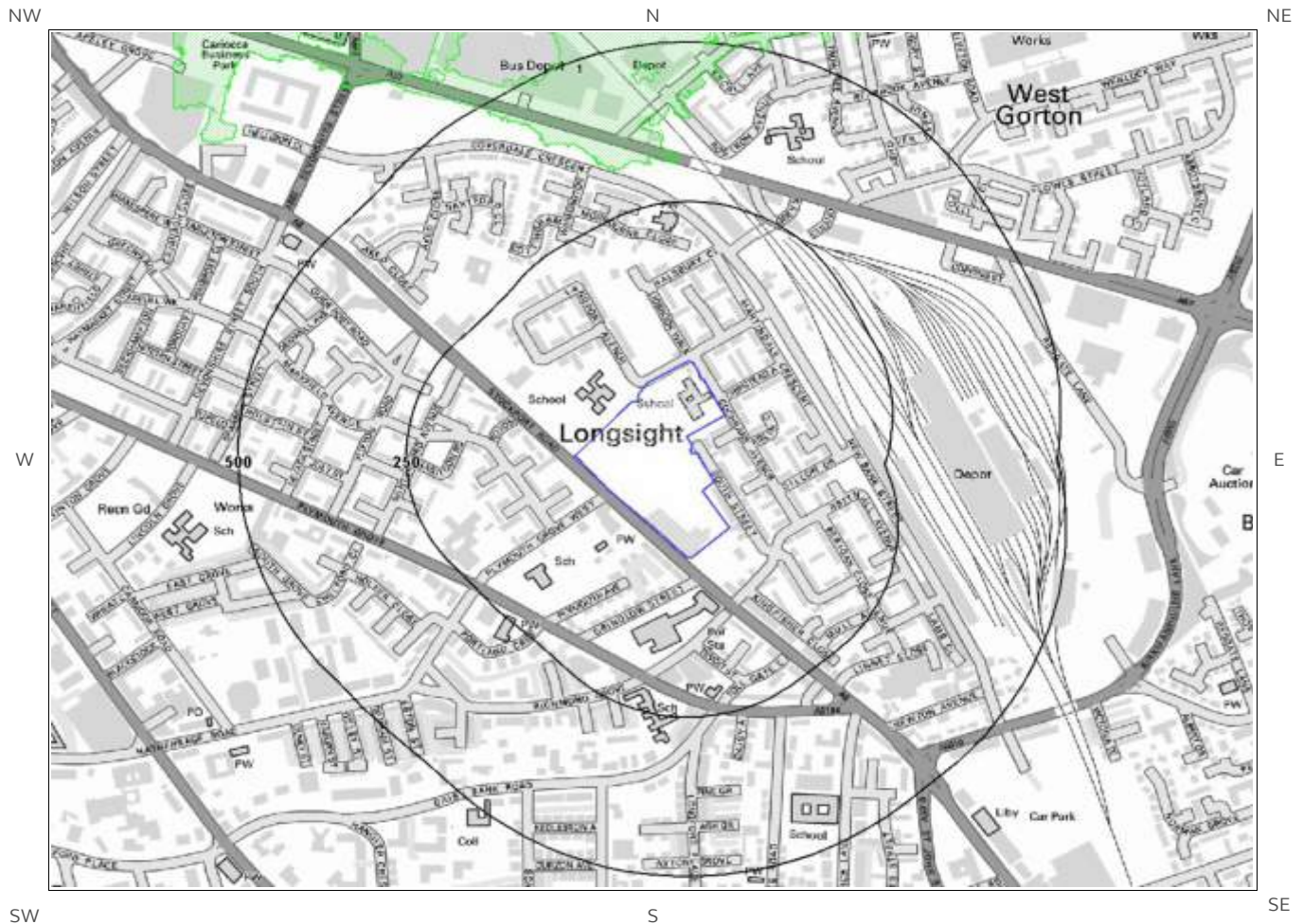
6.11 Surface Water Features

Surface water features within 250m of the study site

None identified

Database searched and no data found.

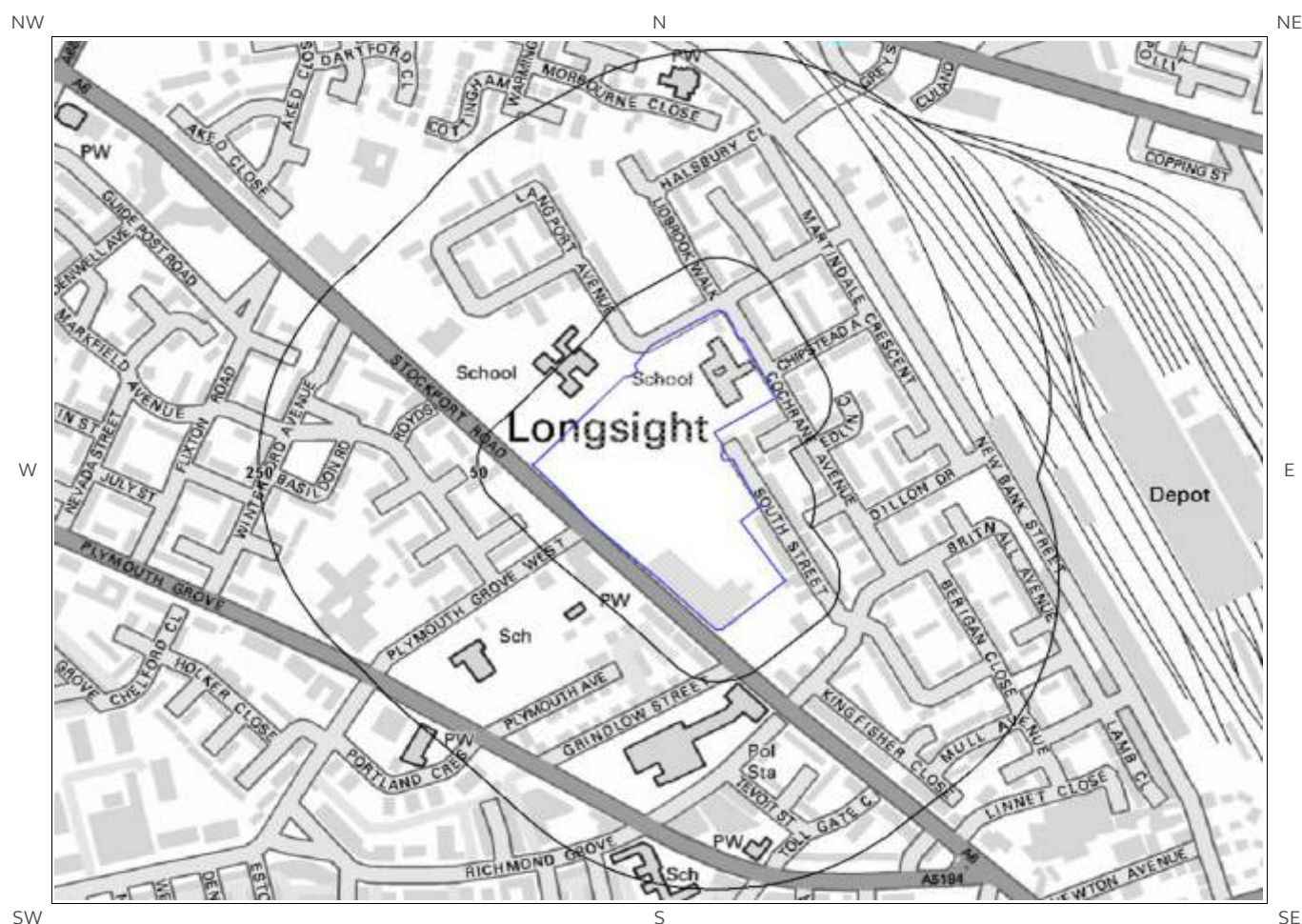
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



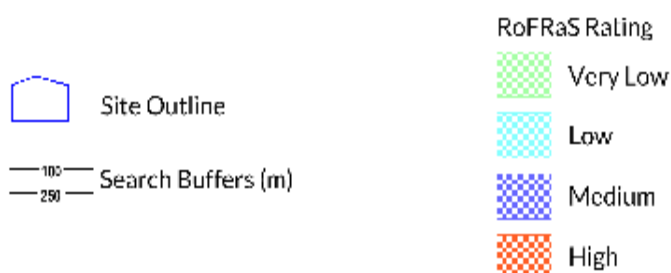
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7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m None 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:

Database searched and no data found.

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.

Database searched and no data found.

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

Identified

Clearwater Flooding or Superficial Deposits Flooding

Superficial Deposits Flooding

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

7.7.2 Highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

7.8 Groundwater Flooding Confidence Areas

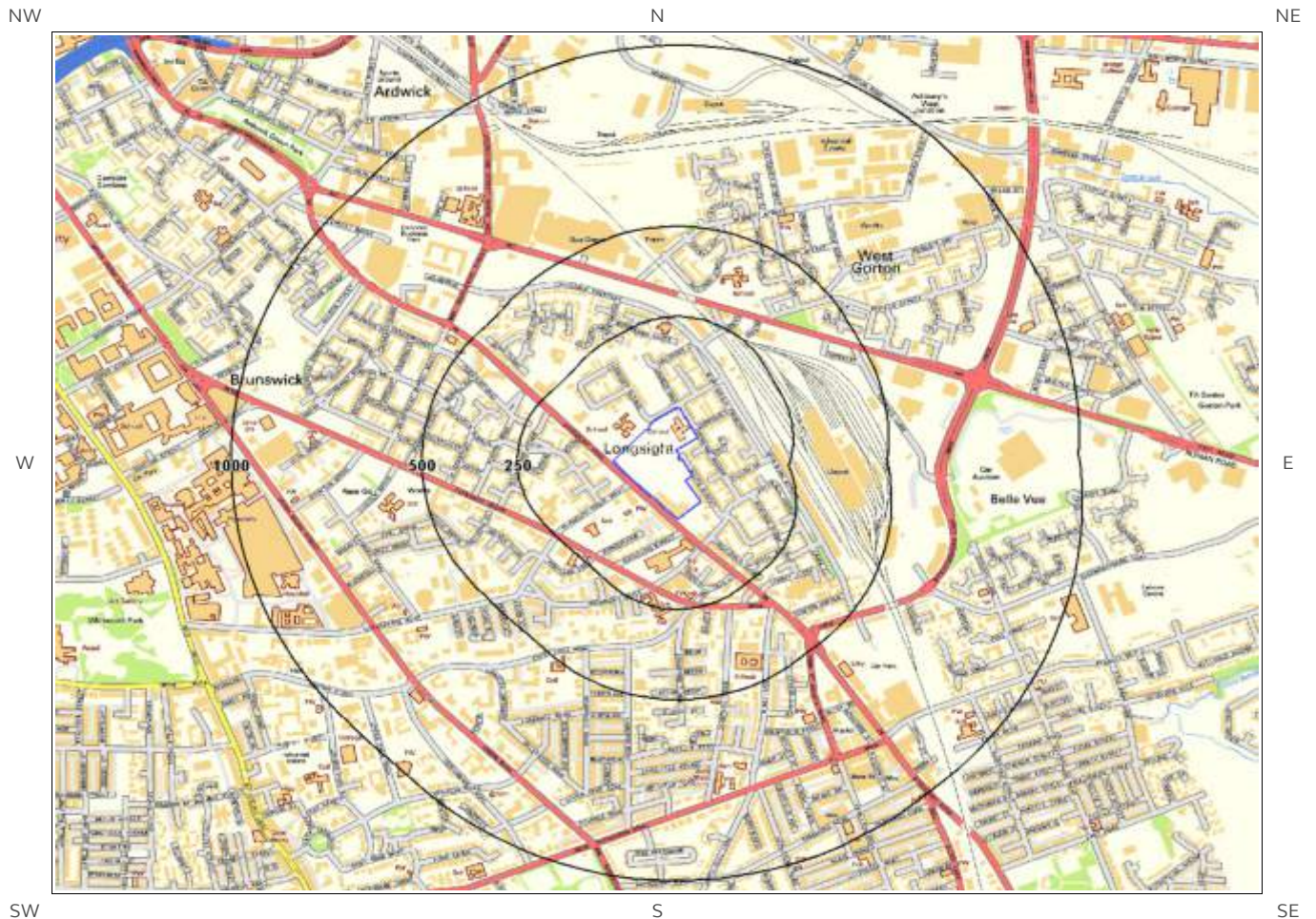
British Geological Survey confidence rating in this result

Moderate

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

None identified

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

Maximum Shrink-Swell** hazard rating identified on the study site Very Low

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

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

9.1.2 Landslides

Maximum Landslide* hazard rating identified on the study site Very Low

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

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

9.1.3 Soluble Rocks

Maximum Soluble Rocks* hazard rating identified on the study site Negligible

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

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

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

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site

Negligible

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

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

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site

Very Low

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

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

9.1.6 Running Sand

Maximum Running Sand** hazard rating identified on the study site

Very Low

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

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

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

9.2 Radon

9.2.1 Radon Affected Areas

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

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

9.2.2 Radon Protection

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

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site

Identified

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

Distance (m)	Direction	Details
0	On Site	The site lies in or in proximity to the coal mining reporting area as defined by the Coal Authority

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.

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