

Manchester City Council
Information, Delivery & Support Team Planning
Manchester Town Hall
PO Box 532
Town Hall
Manchester
M60 2LA

Dear Sir/Madam

Application number: 135932/FO/2023

Proposal: *Instillation of Multi Use Games Area (MUGA) together with the installation of 5 meter high boundary treatment*

Location: *East Manchester Academy, Grey Mare Lane, Manchester, M11 3DS*

Following the recent letter dated 18 January 2023 stating the invalidity of our planning application, please find the relevant information requested below and attached.

1) Please provide a drainage strategy for the proposal

The existing Multi Use Game Pitch (MUGA) uses a drainage culvert located to the north of the site. Our proposal is to install land drainage beneath the proposed sports pitches which will carry any drainage to the same culvert. We have completed a desktop calculation and given the culverts length and depth it is more than adequate to accept the additional ground water. We have attached a proposed drainage plan for consideration.

2) Please provide a ground conditions report

We have had a ground condition survey undertaken which has been attached for consideration.

3) Please provide an operational management statement including details of community access and opening hours

Management of games pitches: The following principles will be applied when managing the use of the games pitches.

Sound

The use of the games pitches will be set to ensure that disturbance is kept to a minimum for local residents as outlined within the opening hours of operation. The impact for sound is provided within the acoustic report with relevant measures adhered to at all times.

Hours of Operation

Due to child safeguarding the school cannot allow community access during the school day, as such the below hours of operation would be proposed:

Hours of Operation			
	Monday – Friday	Saturday	Sunday
School Use	9.00 – 17.00	-	-
Community Use	No use due to neighboring properties	9.00 – 16:00 (daylight permitting)	09.00 – 16:00 (daylight permitting)

Any use outside of these times will not be permitted. Management of community bookings will be through Edu-Lettings.



4) Please provide a tree survey as to how the development would affect surrounding trees

There are no trees located within the proposed site, please see appended tree survey for information regarding other trees outside of the proposed development site.

5) Does the proposal affect an existing grass pitch?

The proposals do not affect an existing grass pitch, the school field is currently marked for one football pitch and a cricket pitch (football pitch forms part of main cricket field) to the south of the playing field. The existing pitches are unusable for the majority of the year due to poor ground drainage within this area. The school measured usable time last year which equated to two months of usage during the summer period. This is the reason why additional all weather pitches are being sought as the pitches will be better utilized increasing sport provision within the school.

6) Please provide an acoustic report detailing the noise on existing residential properties.

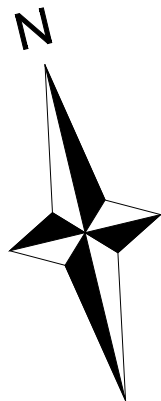
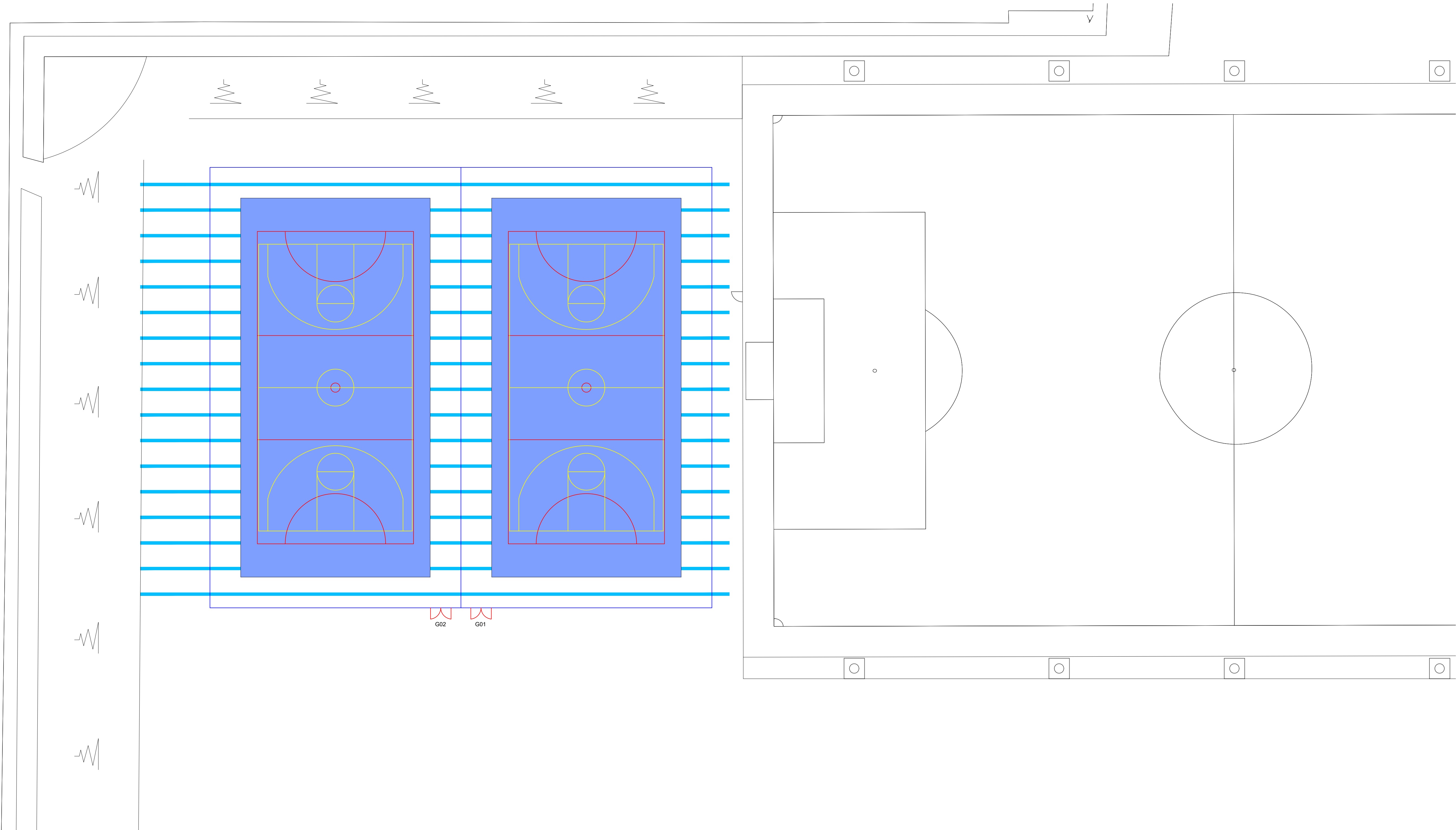
Full acoustic report attached, the findings of the acoustician are that noise mitigation measures such as installing an acoustic barrier to the boundary line are considered to be unnecessary for MUGA related use during the morning and afternoon period. With regard to the evening period, the hourly ambient sound pressure level reduces slightly by approximately 3 dB between 18:00 to 23:00 hours. In this instance, the generated sound pressure level from the MUGA is above the lowest hourly ambient sound pressure level by approximately 1 to 3 dB. Noise from the MUGA is therefore likely to be audible and distinct in character during the late evening period. Following the findings, it is proposed that an acoustic barrier be installed as per the acousticians recommendations.

7) Please can you confirm if any new lighting is proposed. If so, please provide location, scale and appearance and lighting report with lux levels.

No lighting is proposed.

Yours Faithfully

Joshua Martin BSc (Hons) MRICS
Director



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This drawing must not be scaled. The Contractor is to report all dimensional discrepancies & errors to the Contract Administrator prior to commencing construction.
It is essential that this drawing is read in conjunction with the specification and all works identified included for.

NOTES

LEGEND

Surface
Water

Rev	Date	Comments	By
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STATUS
PLANNING

Client
The East Manchester Academy, Beswick M11 3DS

Project Title
Increased Sport Provision

Drawing Title
Proposed Drainage Plan

Scale 1:200 @A1	Drawn by MMcD	Date Feb 2023
Job no. 2209-02	Drawing no. P06	Revision no. -

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Preliminary Risk Assessment

The East Manchester Academy

March 2023

Waterman Infrastructure & Environment Limited

2nd Floor, South Central, 11 Peter Street, Manchester, M2 5QR
www.watermangroup.com

Client Name: The East Manchester Academy
Document Reference: WIE19835-100-R-1-1-3-PRA
Project Number: WIE19835-100

Quality Assurance – Approval Status

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001: 2018)

Issue	Date	Prepared by	Checked by	Approved by
First	March 2023	Cameron Davidson Consultant	Rosa Diaz Principal Consultant	Richard Stockwell Regional Director



Comments

Disclaimer

This report has been prepared by Waterman Infrastructure & Environment Limited, with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporation of our General Terms and Condition of Business and taking account of the resources devoted to us by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at its own risk.

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Executive Summary

Objectives

Waterman Infrastructure & Environment Limited ("Waterman") was instructed by Lancaster Maloney Martin on behalf of The East Manchester Academy C/O Greater Manchester Education Trust to undertake a Preliminary Risk Assessment (PRA) in support of full planning application for a new open air multi-sport pitch surrounded by fences to form a new mixed-use leisure scheme on the Site.

Conclusions

The Preliminary Conceptual Site Model indicated that the highest risk estimated for potential pollutant linkages was Low.

Site Setting

Current Use	The Site comprises an open area of grass land associated with the Manchester Academy playing fields.
History	In summary, the entire Site was grass fields in the earliest available mapping. During the 1890's large amounts of residential development were built 75m North and 50m East and a Chapel is also present 50m to the northeast. By 1905 three residential developments occupied the Site and which remained until 1983. A new residential building was located on-site between 1994 and 2023. All infrastructure was then demolished and the Site use changed to incorporate the grounds of the sports playing field which is still present.
Geology	The geology underlying the Site is anticipated to comprise Made Ground in association with previous residential site uses. This is underlain by a significant thickness of Devensian Glacial Till. The solid geology is anticipated to be the Etruria Formation comprising a green, grey mottled mudstone, with lenticular sandstones and conglomerates.
Controlled Waters	The Site is underlain by a Secondary undifferentiated Aquifer associated with the Devensian Glacial Till Deposits. The bedrock beneath is classified as a Secondary Aquifer A. No potable groundwater abstraction is located within near influence of the Site. The nearest surface water is 1 km west of the Site and is understood to be the River Medlock, with the flow direction east to west.
Ground Gas and Vapour	There are no landfill sites recorded within influencing distance of the Site (500m). The Site is currently vacant with no current sources of vapour identified.

Recommendations

- A geotechnical investigation and assessment should be completed as needed to inform foundation, earthworks and pavement design. Sulphate and pH testing should also be incorporated into the geotechnical investigation, to inform the design of buried concrete against chemical attack. Given the former presence of housing on site and the likely presence of Made Ground, the opportunity should be taken to complete some limited soil sampling and chemical testing to confirm the absence of significant ground contamination;
- The Site is located in an area with Medium risk from Unexploded Ordnance, (UXO). Prior to undertaking intrusive works a detailed UXO Desk Study should be undertaken to determine the risk from UXO and any precautionary measure required during intrusive works;
- A copy of this report should be submitted in support of the planning application.

1. Introduction

Waterman Infrastructure & Environment Limited (“Waterman”) was instructed by Lancaster Maloney Martin to undertake a Preliminary Risk Assessment (PRA) of ground conditions in support of an installation of a multi-use games area. This will be taking place at the East Manchester Academy, Grey Mare Lane, Manchester M11 3DS, here in referred to as the Site.

1.1 Objectives

The PRA will produce a preliminary conceptual model for the Site, identifying potential pollutant linkages in relation to ground contamination. This will be achieved through a desk top review of the Site and surrounding area’s environmental setting, history, and current uses. The preliminary conceptual model will incorporate a critical review of the sources, pathways and receptors in accordance with Land Contamination Risk Management (LCRM) 2020.

The overall objectives for the Site are as follows:

- To meet regulatory requirements;
- To support a planning application for redevelopment of the Site;
- To assess if the Site is captured under Part 2A of the Environmental Protection Act (1990);
- To ensure the Site is suitable for redevelopment; and,
- To take voluntary action to manage the risks.

1.2 Planning Context

A planning application is being prepared for the Site in accordance with the proposed development details in the section below. The key objective of this report is to support a planning application for redevelopment of the site to a multi-use games area.

1.3 Proposed Development

The Site is currently soft landscaping and part of a sports field associated with the academy. The Proposed Development includes the installation of a multi-use games area with hardstanding covering the site.

1.4 Limitations and Constraints

The assessment was undertaken in accordance with the scope agreed between Waterman and Lancaster Maloney Martin, as documented in Waterman’s fee letter (WIE19835-100-230220-RD-Fee Proposal dated 20th February 2023), and with Waterman’s standard Terms of Appointment.

The information contained in this report is based on a review of available historical, geological and hydrogeological sources, consultation with the regulatory authorities and observations made during a Site walkover on 2nd March 2023.

Waterman has endeavoured to assess all information provided to them during this investigation but makes no guarantees or warranties as to the accuracy or completeness of this information.

The scope of this investigation does not include an assessment for the presence of asbestos containing materials within or below buildings or in the ground at the Site.

The conclusions resulting from this study are not necessarily indicative of future conditions or operating

practices at or adjacent to the Site.

2. Methodology

This PRA has been undertaken in general accordance with the 2020 LCRM Guidance. Land Contamination: Risk Management Guidance (LCRM: Environment Agency, 8 October 2020).

The report includes the following:

- Definition of overall Site objectives
- Collation of available current and historical information about the Site and the potential contaminants expected to be present;
- The findings of a Site walkover;
- Formulation of a Preliminary Conceptual Model;
- Qualitative risk assessment; and
- Record of findings and recommendations for further action.

3. Hazard Identification

3.1 Site Description and Reconnaissance

The Site is located within Manchester City, centred at National Grid Reference 386853 397934. The Site comprises a square parcel of land attached to a sports field and extends to approximately 0.3 hectares.

The Site is bound by Jobling St and Barmouth St located to the north and west respectively, with dwellings further north, a sport field to the south and an astroturf football pitch to the east. A Site Location Plan included in Appendix A. Figure 1 below presents the current site layout.

Figure 1: Current Site Layout



Source: Groundsure Report: Ref:WTM1-9392284 maps accessed on 05/03/2023

Waterman undertook a Site Walkover, in support of a planning application on 2nd March 2023 and a selection of photographs taken during the site inspection is presented as Appendix B. This Site at this time remained operational as a sports field for the Academy and no observations of potential contaminants were

made during this walkover which remain relevant to this application.

An area within the southern section of the Site is currently operated by Manchester Academy and is used for physical education and school activities. The Site is a grassed field observed to be in good condition, with no evidence of any potential hydrocarbon or other contaminant sources. The area is flat with no drainage observed. The remaining area of the Site is fenced off from public access. A 2m high green fence is present running along the west and north boundaries of the Site with a locked gate.

During the walkover the Site surface was free from fly-tipping and no visual or olfactory evidence of contamination was noted. No Japanese knotweed or any other invasive species were noted during the site walkover.

3.1.1 Site Surroundings

A summary of the current surrounding land uses, including relevant licences and consents, is shown in Table 1.

Table 1: Summary of surrounding land uses

Location	Description
North	Jobling Street – Residential dwellings
East	Barmouth Street and enclosed Football pitch and Education Centre
South	Sport fields
West	Further area of a field with children's playground beyond

4. Previous Environmental Assessments and Consultations

4.1 Previous Environmental Assessments

No previous environmental assessments of the Site have been provided for review.

4.2 Consultations

4.2.1 Environmental Health

Information has been requested from the Environmental Health Officer (EHO) but a response is currently pending.

4.2.2 Planning Department

A summary of planning applications, including relevant validation dates and decision, is shown in Table 2.

Table 2: Summary of surrounding land uses

Ref	Proposal	Validation	Decision	Issue date
CDN/22/0314	Gas Membrane	17/05/22	Approved	17/10/22
133054/FO/2022	2.4m fence perimeter	24/02/22	Approved	28/04/22
127228/FO/2020	Extension to existing building	02/06/20	Approved	27/08/20
111695/NMC/2016/N2	Non Material Amendment	29/03/16	Approved	22/04/16
110728/FO/2015/N2	2 Storey extension on sports block	11/12/15	Approved	05/02/16
109533/FO/2015/N2	Single story building to form workshop	18/08/15	Approved	13/10/15
108968/FO/2015/N2	Temp single storey changing facility	22/05/15	Approved	14/07/15
101765/FO/2013/N2	4 Storey extension on southern block	26/02/13	Approved	23/04/13

4.2.3 Building Control Department

Information has been requested from the local Building Control department and a response is currently pending.

5. Environmental Site Setting

5.1 History

In Summary, the Site was denoted as open land in the earliest available mapping. By 1905 the Site has been developed by several residential dwellings and Sarah Street. On record the Site did not change in anyway up until 1983 where the existing houses were removed. New residential development was located on the Site approximately in 2001 which was removed between 2012 and 2023. A detailed summary of the Site's and surrounding areas historical potential contamination sources as obtained from the Groundsure historical maps is included in Table 3.

Table 3: Pertinent Site History

Date (decade)	Feature	On-Site/distance off-site
OS Map Published by Lancashire and Furness, 1848, 1:10,560	The earliest available map indicates Site to be open fields with no features.	The Site surroundings are of similar nature bound by fields on all sides. A Tannery is denoted approximately 186m to the north. Several Brick Fields approximately 300m south. Bleach works 400m southeast of site.
OS Map Published by Lancashire and Furness, 1890- 1891, 1:10,560	There are no significant changes denoted.	Large residential development now surrounding site 75m on the North and 50m on the East and West associated with Wellington St and Albert St. A Chapel is also present northeast approximately 50m. A school appears approximately 100m south of Site. A reservoir is denoted approximately 420m east, associated with Whyaty Street.
OS Map Published by Lancashire and Furness, 1905- 1906, 1:10,560	Three residential dwellings covering the majority of Site with new road infrastructure, Jobling St, and Sarah St	. A Recreational ground developed to the west approximately 60m off the site. Reservoir was removed before these maps were produced. Residential development in all directions.
OS Map Published by Lancashire and Furness, 1983- 1988, 1:1,250	During this time the residential dwellings on site were demolished and removed.	There are no significant changes denoted.
OS Map Published by Lancashire and Furness, 1994- 1995, 1:1,250	New development located on site.	There are no significant changes denoted.
OS Map Published by Ordnance Survey Plan, 2023, 1:10,560	The residential dwellings are no longer present at this date and have been demolished and is now included in the grounds of a school and sports centre.	Education facility to the east now present, removing all other potential land uses to current date. Bordan St removed.

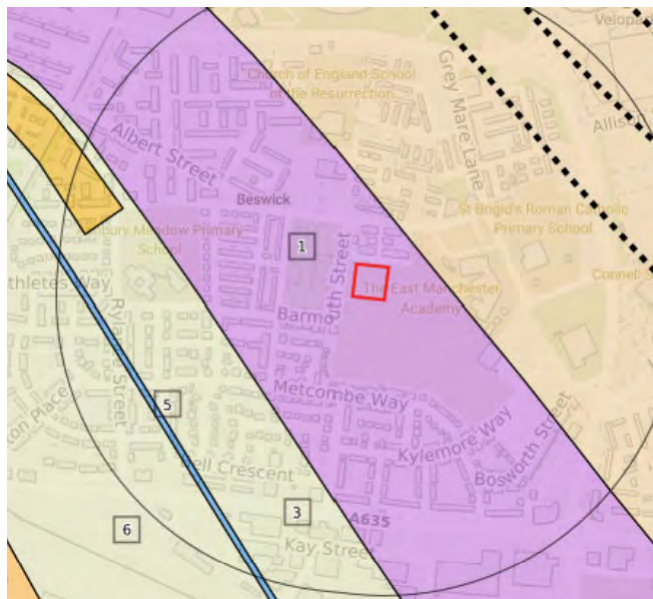
5.2 Unexploded Ordnance

Consultation with the Zetica on-line Unexploded Ordnance (UXO) Risk Map indicates the Site is within a moderate risk area with respect to UXO.

5.3 Geology

The geology beneath the Site has been established from the British Geological Survey (BGS) 1: 50,000 scale Geological Map, and the BGS Geoindex website (accessed online 09/03/2023) and is shown in Figure 3 below. As shown in Figure 2, the Site is anticipated to be underlain by Glacial Till Deposits overlying the Etruria Formation that comprises mudstone with Sandstone, which is sedimentary bedrock according to the British Geological Society (2022).

Figure 2: Site Geology



A summary of the geology is provided in Table 4.

Table 4: Site Geology

Stratum	Area Covered	Estimated Thickness	Typical Description
Made Ground	Unknown	Unknown	Unknown
Glacial Till Deposits, Devensian	Whole Site	Unknown	Clay, Sand and Gravel
Etruria Formation	Whole Site	>300m	Red, purple, brown, ochreous, green, grey and commonly mottled mudstone, with lenticular sandstones and conglomerates referred to as 'espleys'. Common pedogenic horizons, but coal seams are rare. Subordinate, lenticular sandstones and conglomerates commonly consist mostly of volcanic and lithic clasts.

There were historic buildings and structures at the Site that were at one point demolished to allow the current site surface to comprise the sport field. Given this past site use, Made Ground is likely to be present across most of the Site. The surface elevation is level, meaning a similar thickness of Made Ground is likely across the Site.

The BGS online borehole database and borehole records have been reviewed. The closest available borehole log is located 149m south of the Site, with a reference SJ89NE/842 showing 0.45m thickness of Made Ground overlying 1.05m thickness of Glacial Till Deposit. The final depth of the trial pit was 1.50m bgl, which does not reveal the Glacial Till Deposits thickness at the Site. The superficial deposits are likely to be underlain by Etruria Formation.

5.3.1 Ground Stability

The Groundsure Bedrock and Faults Map reveals that there are two linear features located 334m and 448m northeast of the Site interfered to be coal seam. There are no other structural, geomorphological or geochemical features on or near to the Site.

There is a negligible hazard for compressible deposits and ground dissolution for soluble rock. A very low hazard potential for shrinking or swelling clay, collapsible ground, landslide and running sand ground stability hazards at the Site.

The Site is located in a Coal Mining Report Area. A Coal Authority report has been commissioned for the Site, and is included in Appendix D and reported the following pertinent information:

- The Site lies within the potential zone of influence of recorded workings in 6 seam(s) of coal. The most recent underground working in the area was in 1958. These workings lie between 150 metres and 985 metres. Any ground movement due to this coal mining activity should have stopped.
- The property is not within a surface area that could be affected by present underground mining;
- The property is not in an area where the Coal Authority has received an application for and is currently considering whether to grant a licence to remove or work coal by underground methods;
- The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods;
- There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property;
- The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining;
- The Coal Authority is not aware of any damage notice or subsidence claim for the property or within 50m of the property since 31st October 1994.
- The Coal Authority has no record of a mine gas emission requiring action.
- The Site lies within an area where a notice of entitlement to withdraw support has been published. This notice was issued in 1955.

5.4 Radon

Information recovered from the Groundsure Report, BGS, and PHE show the Site is not in an area of high radon levels. Correspondingly, no radon protection measures will be required in the proposed development.

5.5 Ground Gas

There are a number of potential sources of ground gas associated with brownfield Site.

5.5.1 Made Ground

The Site, historically comprised terraced properties indicates the potential presence of Made Ground.

5.5.2 Landfills

There are no registered landfill or historical landfills within 500m of the Site but several historical waste sites.

Table 5: Summary of Licenced waste in the vicinity of the Site

Site Name (Reference)	Distance and Direction from Site	Status	Details of Content	Regulator / Information Source
Scrape Metal Yard (Historic Mapping)	186m N	Closed(1956)	Unknown	Environment Agency
Scrape Metal Yard (Historic Mapping)	257m N	Closed (1956)	Unknown	Environment Agency
Scrape Metal Yard (Historic Mapping)	435m S	Close (1948-1983)	Unknown	Environment Agency
Scrape Metal Yard (Historic Mapping)	456m S	Closed (1963)	Unknown	Environment Agency
Scrape Metal Yard (Historic Mapping)	457m S	Closed (1948,1953,1975,1983)	Unknown	Environment Agency
Waste management (096226/FO/2011/N2)	479m S	Closed (02/11/2011)	Unknown	Environment Agency

The potential for ground gas has been assessed as Low according to the Waterman Ground Gas Assessment Tool, with results reproduced in Appendix C.

During construction it is understood a multi-use sports area is to be developed with the understanding it will require hardstanding, covering all potential Made Ground on site.

Following assessment, the Site is considered a Low risk for ground gas. The design for the proposed multi use sports area includes hard standing to cover the entire Site reducing potential contaminant migration pathways.

5.5.3 Vapours

No historic land uses with the potential to result in ground contamination that could result in hydrocarbon vapour risks to the Site have been identified. The Groundsure dataset does not record any pollution incidents relating to oils or fuels within 500m of the Site.

It should be noted that the historical mapping indicates the Site was redeveloped between 1994-2023 and therefore it is assumed that remediation (if required) was undertaken to render the Site suitable for use at the time. The risk from potential vapours can therefore be considered to be Low.

5.6 Controlled Waters

5.6.1 Surface Waters

The nearest surface water is approximately 1000m west of the Site and is understood to be the River Medlock, with the flow direction east to west, however, it is unlikely to be in hydraulic continuity with the groundwater at the Site. The EA has classified the Ecological Potential of this surface water body under the Water Framework Directive with a General Quality Assessment (GQA) grade of River Quality E. River quality chemistry sampling from 2009 resulted in a River Quality Chemistry GQA Grade C - Fairly Good.

There are no recorded surface water discharge consents within a 500m radius of the Site.

5.6.2 Groundwater

The EA has classified the geological deposits on-site as having the following classification as shown in Table 6.

Table 6: Summary of Hydrogeological Properties of the Main Geological Strata

Stratum	EA Classification	Hydrogeological Significance
Till Glacial Deposits, Devensian	Secondary Undifferentiated	Contains insignificant quantities of vertically or laterally extensive groundwater
Manchester and East Cheshire Permo-Triassic Sandstone Aquifers	Secondary A Aquifer	May be important in supporting local abstractions or in providing baseflow to rivers and streams

The Site is not located within a groundwater Source Protection Zone.

Based on available information, it is anticipated that groundwater flow will be in an east to west flow direction towards the River Medlock.

There are no pollution incidents to groundwater within a 1km radius of the Site.

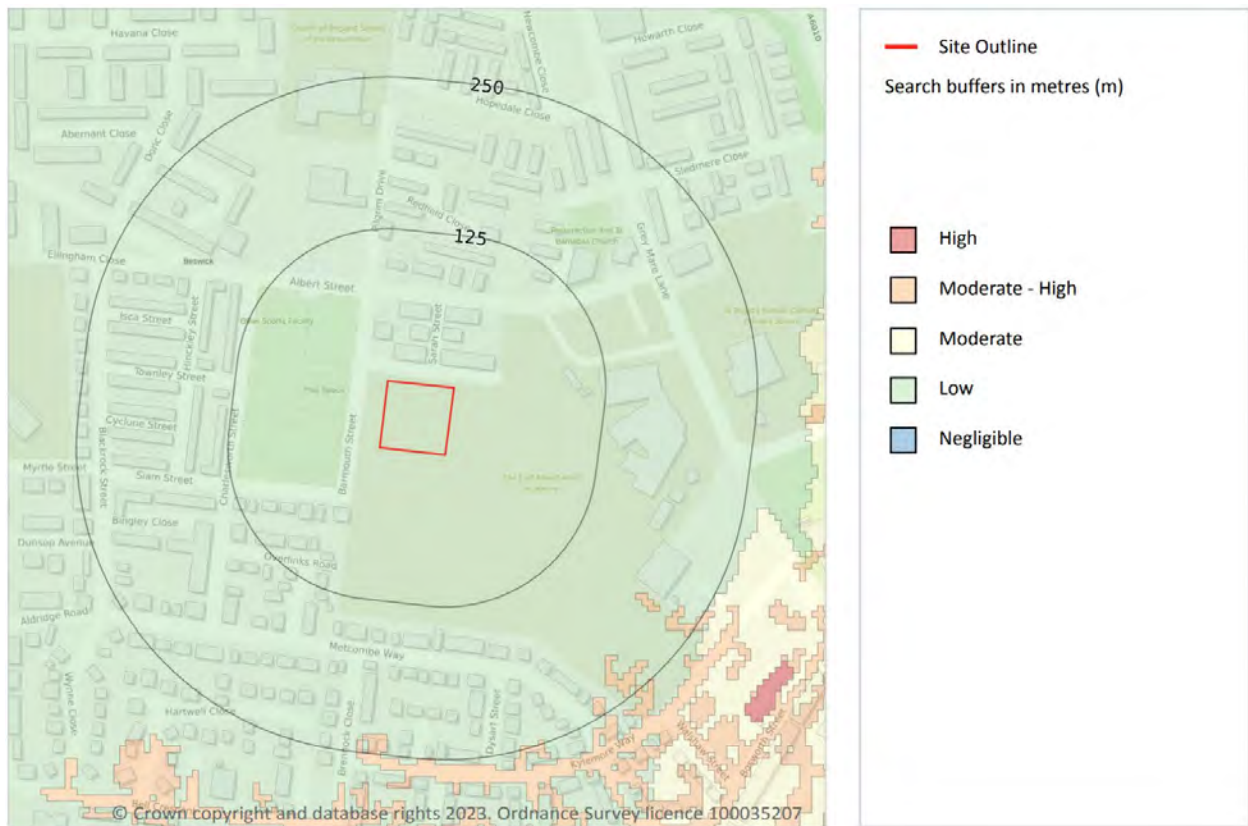
Overall, therefore, data suggests that the underlying ground water quality is likely to be of good quality.

5.6.3 Flood Risk

According to the EA's indicative flooding data and the Groundsure Report the Site is not located in an area at risk of flooding from rivers or seas.

The EA's indicative flooding data also states it will be in a Flood Zone 1, Site is at Low risk from surface water flooding. The risk of flooding is assessed as Low.

Figure 3: Flood Risk from Surface Water



Source: Groundsure Report: ref WTM11 9392284

6. Hazard Assessment and Preliminary Conceptual Model

The Preliminary Conceptual Model for the Site is presented in Table 8 below. The risk rating included in Table 8 has been assessed qualitatively using the criteria given in Appendix E and the potential receptors identified using the criteria given in Appendix F.

6.1 Contaminants of Concern

Contaminants of concern identified at the Site are summarised in Table 7.

Table 7: Contaminants of concern

Source	Associated Contaminants
On-Site (current)	
N/A	N/A
On-Site (historic)	
Dwellings	Metals, (PAHs), Asbestos, TPH
Off-site (historic)	
Disused brewery	TPH, PAHs, metals, asbestos
Foundry	Metals, PAHs, asbestos
Tannery	TPH, PAHs, metals, asbestos
Brick Works	Total Petroleum Hydrocarbons (TPH)

Table 8: Outline Conceptual Site Model

Source	Linkage	Receptor	Risk	Justification / Mitigation	Residual Risk
Contamination in soil and groundwater	Direct contact (ingestion, inhalation, dermal contact)	Future Site Users	Low/Medium	The proposed development will comprise an open air multi-sport pitch subrounded by fences and hardstanding limiting the potential for future Site users to come into contact with underlying soils. It is considered the risk from potential ground contamination is Low.	Low
Contamination in soil and groundwater	Direct contact (ingestion, inhalation, dermal) inhalation, dermal)	Construction workers	Low/ Medium	There is potential for Made Ground to be present which may pose a risk of ground contamination, however, the use of standard personal protective equipment will reduce the risk to construction workers. It is considered the residual risk from potential contamination is Low.	Low
Property					
Contamination in soil and groundwater	Direct contact	Site structures and services	Low	It is unlikely that previous residential site uses would be a potential source of significant contamination. No historic hazardous uses have occurred on site, or within the surrounding area.	Low
Adjacent Property					
Contamination in soil and groundwater	Soil leaching and lateral migration, direct contact	Dwellings North	Low	It is unlikely that potential contaminants originating on site could significantly impact off-site receptors.	Low
Ecological Systems					
Contamination in soil and groundwater.	Leaching from soil followed by lateral migration / surface run-off	River Medlock	Low	Significant widespread contamination is not anticipated at the Site based on the previous land-uses. Given the distance of greater than 500m to the sensitive receptor there is considered to be limited potential for migration of potential contaminants from the Site to the River Medlock. Consequently, the Site is considered to represent a Low risk to the River Medlock.	Low
Controlled Waters					
Contaminated soil and groundwater	Soil leaching and lateral migration	Glacial Till Deposits - Secondary B Undifferentiated Aquifer	Low Medium	There is potential for Made Ground to be present which may pose a risk of ground contamination of the subsurface. The proposed presence of hardstanding at the Site will limit rainwater infiltration and the potential mobilisation of contaminants.	Low
Contaminated soil and groundwater	Soil leaching and lateral migration	Etruria Formation – Secondary A Aquifer	Low	The potential risk to the underlying A Aquifer from the shallow soils is considered to be Low.	Low

7. Conclusions

A Preliminary Risk Assessment has been prepared in support of a planning application for the construction of a Multi use games area with perimeter soft landscaping, servicing and access. The Site currently comprises a grassed sports field.

Historically, the Site is shown to have been an open grass field in the earliest available mapping, with Bradford Grange neighbouring its southern border. A Methodists Chapel was also present on the early mapping of 1890 which later developed two streets running east-to-west and north-to-east which accommodate rows of high-density properties including the chapel and a school. By 1905, Three residential dwellings were denoted onsite with new road infrastructure. By 1983 the residential buildings on site were removed. Between 1994 and 1995, new development was located on site, and between 1995 and-2023 the Site underwent redevelopment to provide the current education facility as a sport field.

The geology underlying the Site is anticipated to comprise Made Ground underlain by Clay, Sand and Gravel of Glacial Till Deposits. These deposits are underlain by greater than 300m of Mudstone from the Etruria Formation.

The Site is underlain by a Secondary undifferentiated Aquifer and a Secondary A Aquifer associated with the Devensian Glacial Till Deposits and bedrock respectively. The aquifers represent a potentially sensitive receptor. However, the Site is not located within a Source Protection Zone and there are no potable groundwater abstractions within 500m of the Site. The nearest surface water receptor to the Site is the River Medlock approximately 1km west of the Site, but this is not considered to be in hydraulic conductivity with the water bodies below the Site.

The risk from ground gas at the Site is considered to be Low.

The Preliminary Conceptual Site Model indicates that the highest risk estimated for potential pollutant linkages was Low to Medium.

Potentially Unacceptable Risks

Potential contaminant linkages identified for the Site are as follows:

- The human health risk to construction workers from potential direct contact with Made Ground soils; and
- The potential leaching of contaminants in the Made Ground soils to underlying Secondary A Aquifer.

The recommendations of this report outline preliminary remedial and mitigation measures that require confirmation through additional works. However, once successfully implemented the risks are anticipated to be Low. Therefore, the NPPF requirement that on completion the Site can no longer be captured under the Part IIA regime is expected to be met.

8. Recommendations

The following actions are recommended to address the potentially unacceptable risks identified:

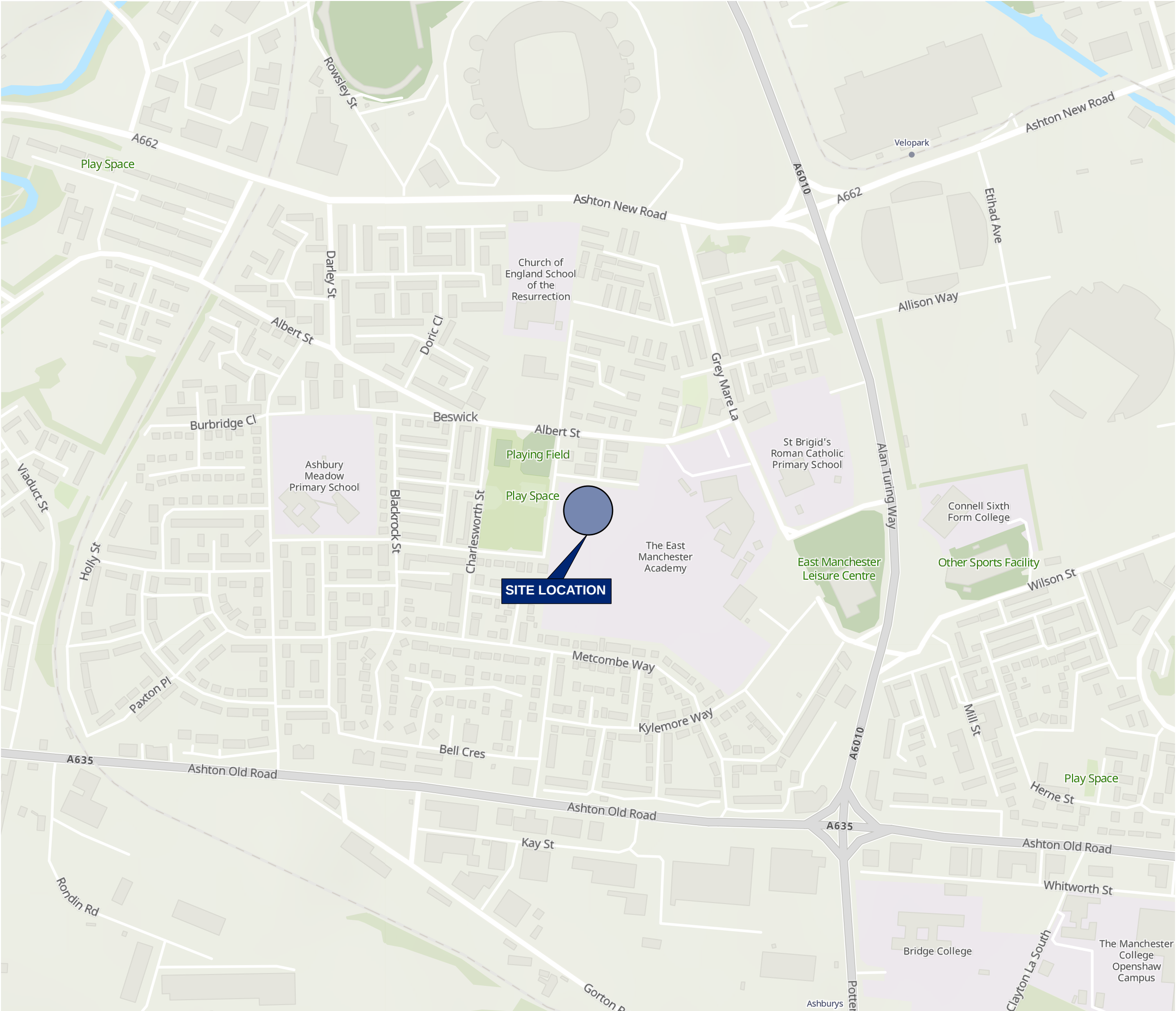
- A geotechnical investigation and assessment should be completed as needed to inform foundation, earthworks and pavement design. Sulphate and pH testing should also be incorporated into the geotechnical investigation, to inform the design of buried concrete against chemical attack. Given the former presence of housing on site and the likely presence of Made Ground, the opportunity should be taken to complete some limited soil sampling and chemical testing to confirm the absence of significant ground contamination.
- The Site is located in an area with Medium risk from Unexploded Ordnance, (UXO). Prior to undertaking intrusive works a detailed UXO Desk Study should be undertaken to determine the risk from UXO and any precautionary measure required during intrusive works; and
- A copy of this report should be submitted in support of the planning application.

APPENDICES

A. Site Plans

- Site Location Plan (Ref. WIE19835-100-GIS_PRA_A1A)
- Site Plan (Ref. WIE19835-100_PRA_A2A)

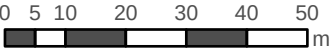
Appendices



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Project Details	WIE19385-100: 60 Grey Mare Ln, Beswick, Manchester
Figure Title	Figure A1: Site Location Plan
Figure Ref	WIE19835-100_GIS_PRA_A1A
Date	March 2023
File Location	\\s-blwief\Projects\WIE19835\100 - Ground Investigation\9_GIS\WIE19835-100_GIS_LQD\
	www.watermangroup.com

Site Boundary



Project Details	WIE19385-100: 60 Grey Mare Ln, Beswick, Manchester
Figure Title	Figure A2: Site Plan
Figure Ref	WIE19835-100_GIS_PRA_A2A
Date	March 2023
File Location	\\s-blwiel\Projects\WIE19835\100 - Ground Investigation\9_GIS\WIE19835-100_GIS_LQD\www.watermangroup.com

B. Site Photographs

Appendices

Preliminary Risk Assessment
Document Reference: WIE19835-100
WIE19835-100-R-1-1-3-PRA



Project Details	WIE19835-100: 60 Grey Mare Ln, Beswick Manchester
Figure Title	Figure B1: Site Photographs
Figure Ref	WIE19835-100_GR_PRA_B1A
Date	March 2023
File Location	N:\Projects\wie19835\100\graphics\pra\issued figures
www.watermangroup.com	

C. Ground Gas Risk Assessment

Appendices

Preliminary Risk Assessment
Document Reference: WIE19835-100
WIE19835-100-R-1-1-3-PRA

Table C.1:Waterman Ground Gas Risk Assessment Tool

Parameter	Select parameter	Assessment score	Impact on ground gas risk to completed development	Reasoning	Supporting guidance and reference
Is there an existing Ground Investigation report for the Site?	No	0	Refer to available online resources i.e. BGS online	Information from online resources such as the Groundsure/Landmark Environmental report and BGS datasets will provide a general understanding of the likely ground conditions at the Site.	
Is the Site within 20m of an area of former coal mining or landfilling?	No	0	Reduces risk	The absence of coal mining or landfills close to the Site removes a significant potential source of ground gas risk.	The Coal Authority: Risk Based Approach to Development Management; Guidance for Developers (2017) [Section 2.2, Page 7] CL:AIRE: Research Bulletin RB17 A Pragmatic Approach to Ground Gas Risk Assessment (November 2012) [Section 3, Page 3] EPG: Ground Gas Information Sheet 3 Screening approach for landfill gas migration around landfill sites (November 2018) [Page 2]
Is the Site in an area at risk of radon?	No	0	No impact on risk	The proposed development is unlikely to include any radon protective measures that could also mitigate ground gas risk.	Building Research Establishment: BRE 211 Radon - Guidance on protective measures for new buildings [Section 5 Page 6]
Primary soil type assessed	Made Ground with low organic content (i.e. bricks, demolition material, crushed concrete sub-base)	1	No increase in risk	Where organic matter is unlikely to comprise a significant component of Made Ground the methane generation potential is relatively low as material such as brick, glass, concrete and demolition waste (except wood) does not putrefy.	CL:AIRE: Research Bulletin RB17 A Pragmatic Approach to Ground Gas Risk Assessment (November 2012) [Section 3, Page 3] EPG: A pragmatic approach to ground gas risk assessment for the 21st Century (2011) [Page 2]
Secondary soil type assessed (if assessing multiple strata)	Chalk, Clay or Limestone	0	Reduces risk	Strata of this type do not contain material capable of ground gas generation, and do not represent a significant risk for methane generation.	CL:AIRE: Research Bulletin RB17 A Pragmatic Approach to Ground Gas Risk Assessment (November 2012) [Section 3, Page 3] EPG: A pragmatic approach to ground gas risk assessment for the 21st Century (2011) [Page 2]
Thickness of Made Ground (if present on-Site)	Under 5m (with average of less than 3m)	0	Reduces risk	Made Ground of this volume is not likely to have sufficient organic material present to generate significant volumes of methane, unless it has a significantly high organic content. Also Made Ground of this thickness is likely to be accurately characterised by trial pitting alone, which will determine the gas risk.	CL:AIRE: Research Bulletin RB17 A Pragmatic Approach to Ground Gas Risk Assessment (November 2012) [Section 3: Page 4]
Period since Made Ground emplaced (if present on-Site)	Not known	1	Does not reduce risk	Where no evidence exists to directly indicate the potential for gas generation, it may be possible to estimate this through historical maps.	CL:AIRE: Research Bulletin RB17 A Pragmatic Approach to Ground Gas Risk Assessment (November 2012) [Appendix A, Page 10]
Existing building type (if applicable)	New development proposed	0	Reduces risk only if appropriate protective measures are included where necessary	Construction of new buildings offers an opportunity to design gas protection directly into the structure , with more flexibility and reliability than retrofitting an existing structure. Requirement for gas protection is informed by ground conditions.	CIRIA: C665 Assessing Risks Posed by Hazardous Ground Gases to Buildings (2007) [Table 8.6, Page 90] British Standard: BS8485 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings (2015) [Table 86 Page 90]
Development type	Type B: Residential (flats) or public buildings such as hospitals, schools, leisure centres, hotels etc	1	Increases risk	Residential spaces are likely to include confined spaces where gases can accumulate to dangerous concentrations.	British Standard: BS8485 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings (2015) [Section 7, Page 21]
Ground floor slab construction details	Not known	0	Does not reduce risk	Does not reduce risk	CIRIA: C665 Assessing Risks Posed by Hazardous Ground Gases to Buildings (2007) [Table 8.6, Page 90] British Standard: BS8485 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings (2015) [Section 7.2, Page 23]
Development includes a basement?	No	1	Does not reduce risk	Where the development does not include a basement the majority of potential ground gas source material will likely remain beneath the Site.	British Standard: BS8485 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings (2015) [Annex A Page 36] CIEH: The Local Authority Guide to Ground Gas (September 2008) [Section 7 Page 101]
If a basement is present, is this structure in contact with groundwater-bearing strata?	No basement	0	Does not increase risk	Not Applicable	EPG: Dissolved methane monitoring for ground gas risk assessment (September 2018) [Page 1]
Presence of off-Site sources with potential pathway to Site?	No	0	Does not increase risk	Where no potential off-Site sources exist, or where there is no direct pathway for these gases to migrate to the Site no risk exists.	
Total Assessed Score		4			
In consideration of the above details the development is considered to be at		Low Risk	for ground gas issues.		
Based on the sensitivity of the end-use receptor		Total Organic Carbon content scrutinisation is recommended to more accurately investigate the potential for gas generation.			

D. Consultation Information

- Groundsure Technical Report
- Coal Authority Report

Appendices

Preliminary Risk Assessment
Document Reference: WIE19835-100
WIE19835-100-R-1-1-3-PRA



Site Details:

EAST MANCHESTER ACADEMY,
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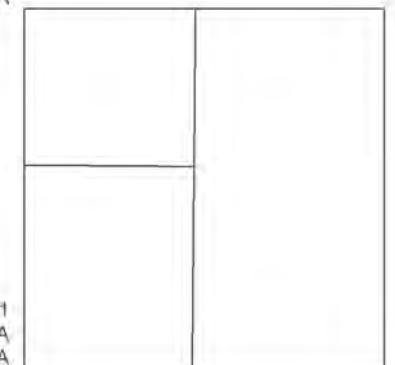
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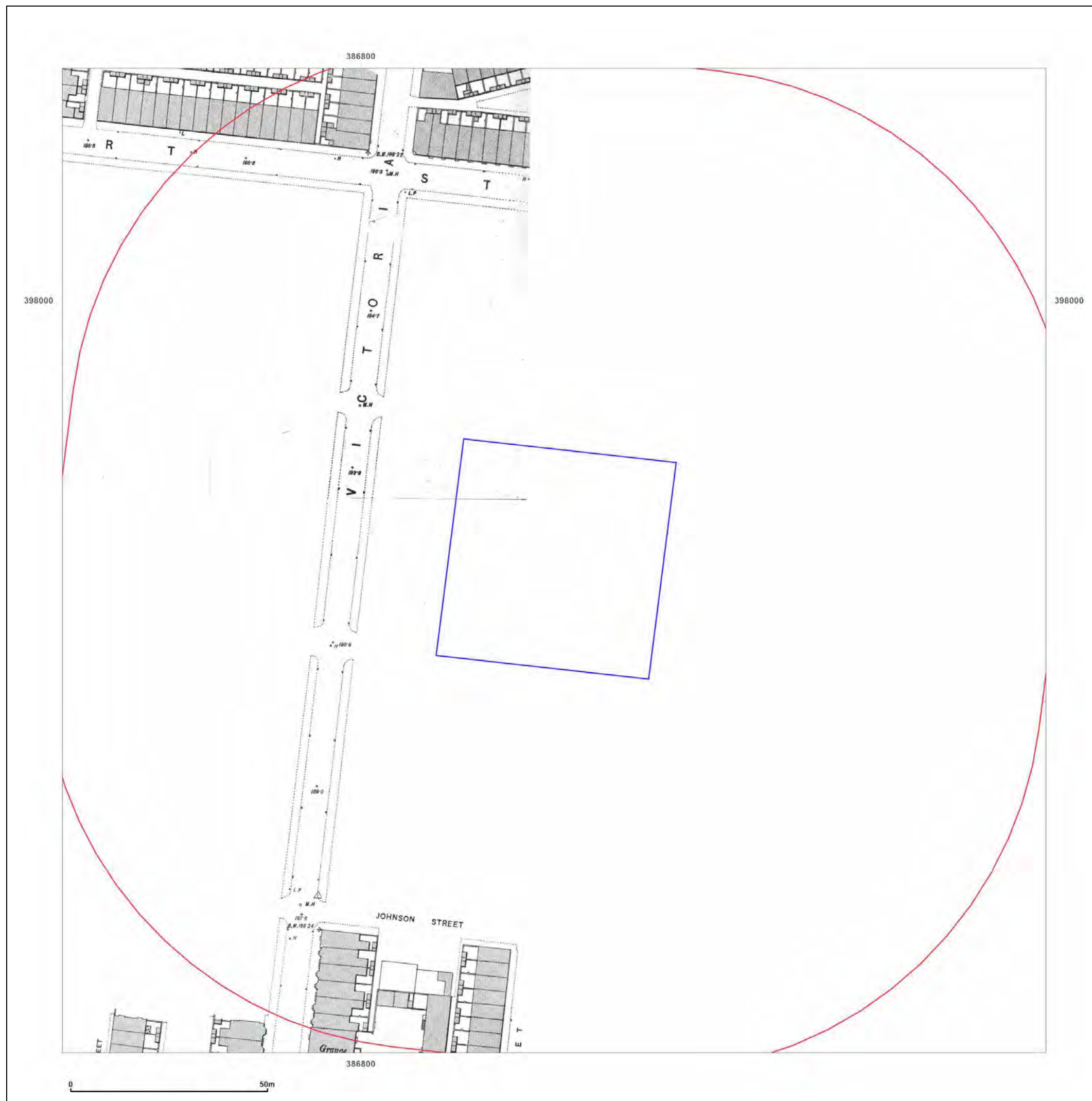


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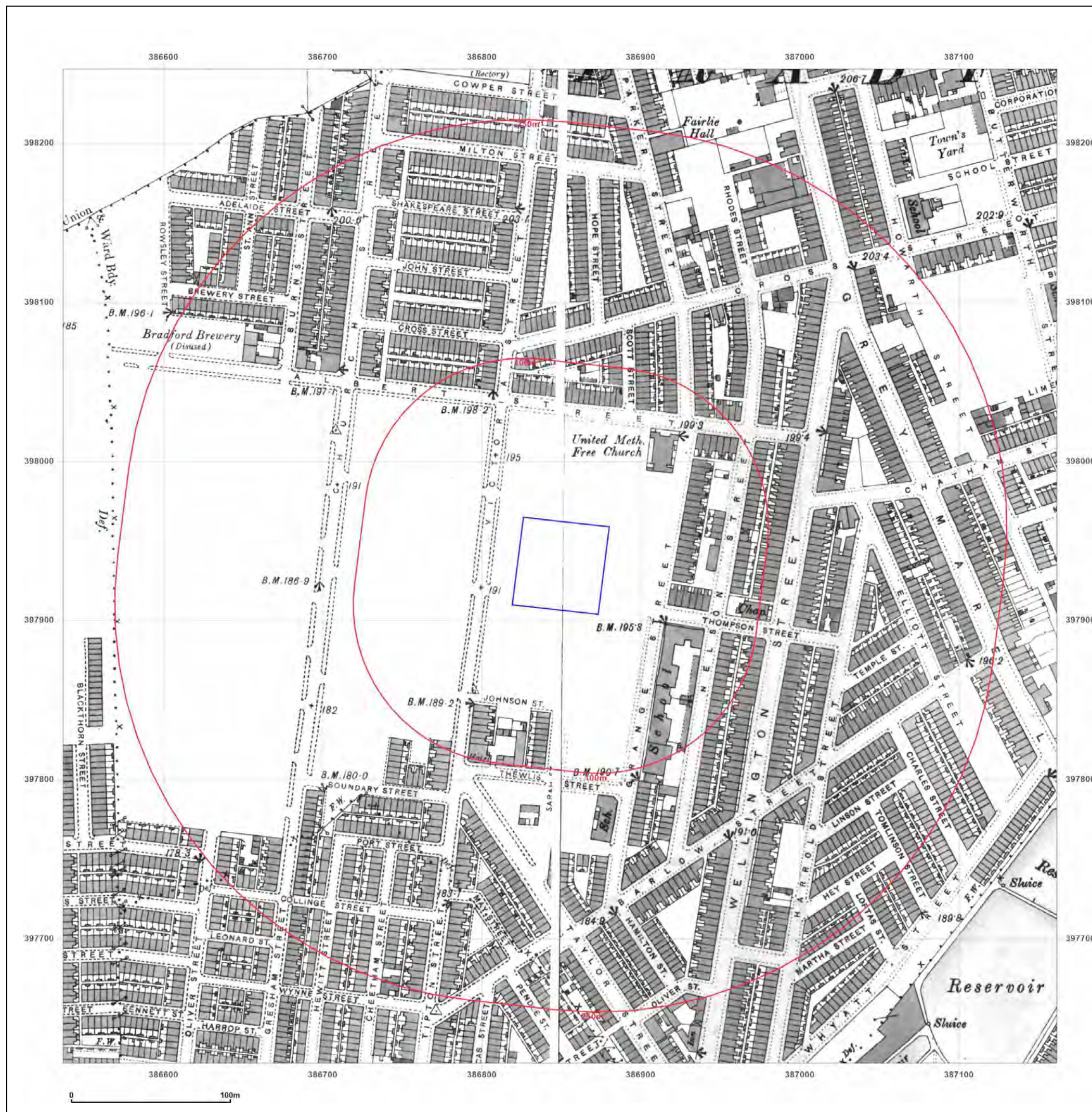
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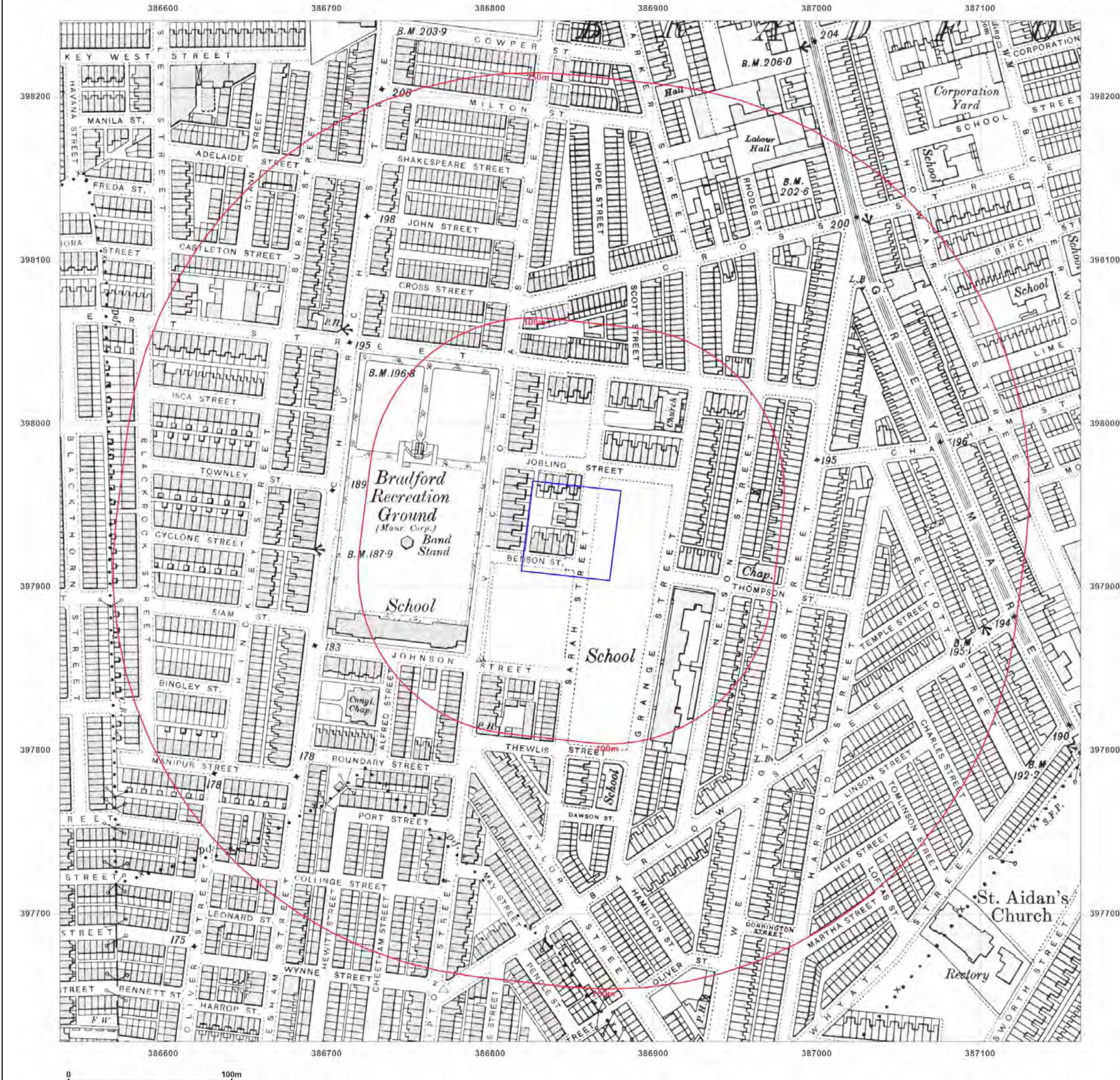
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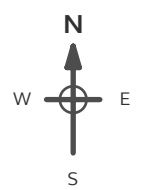
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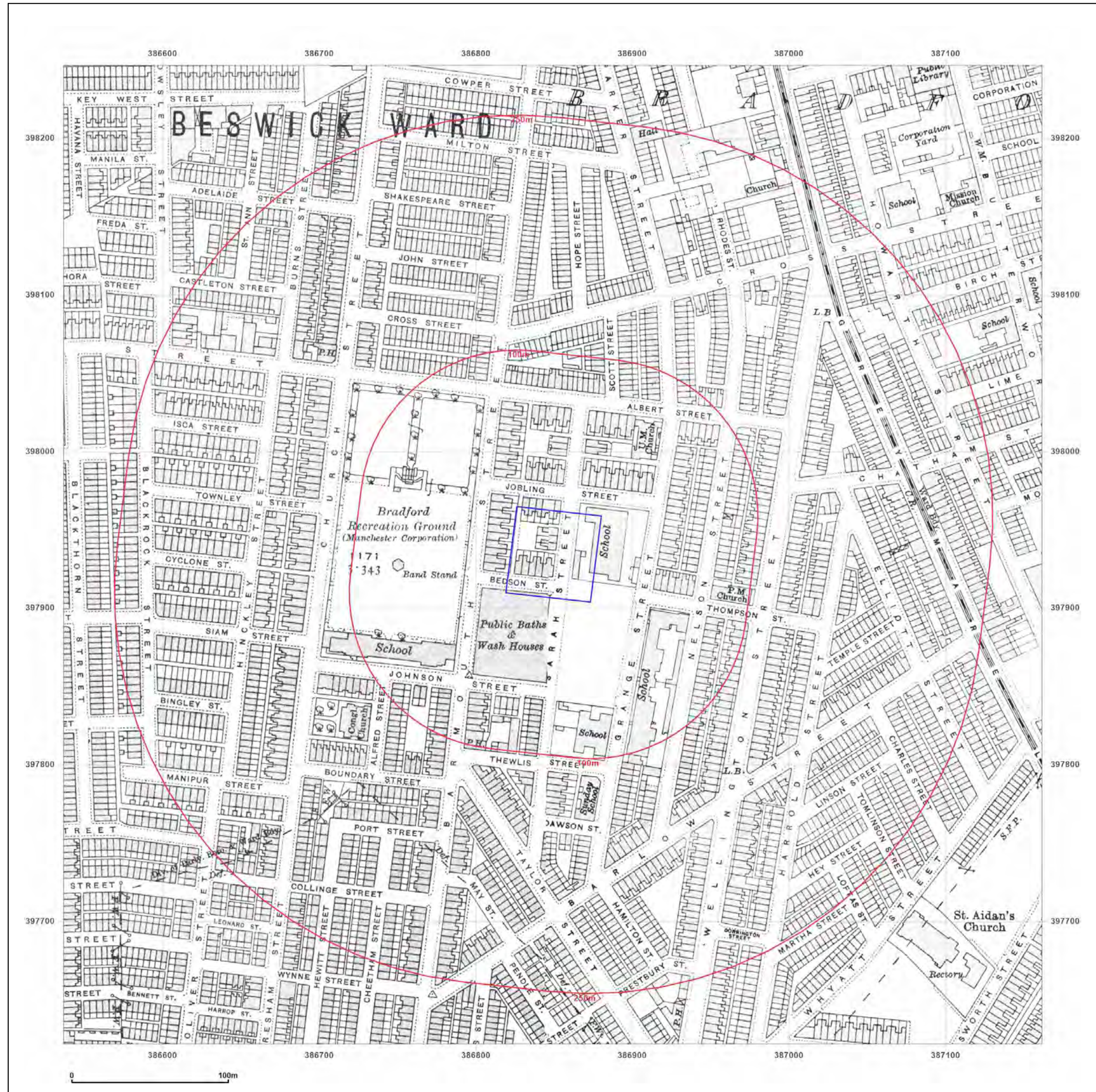
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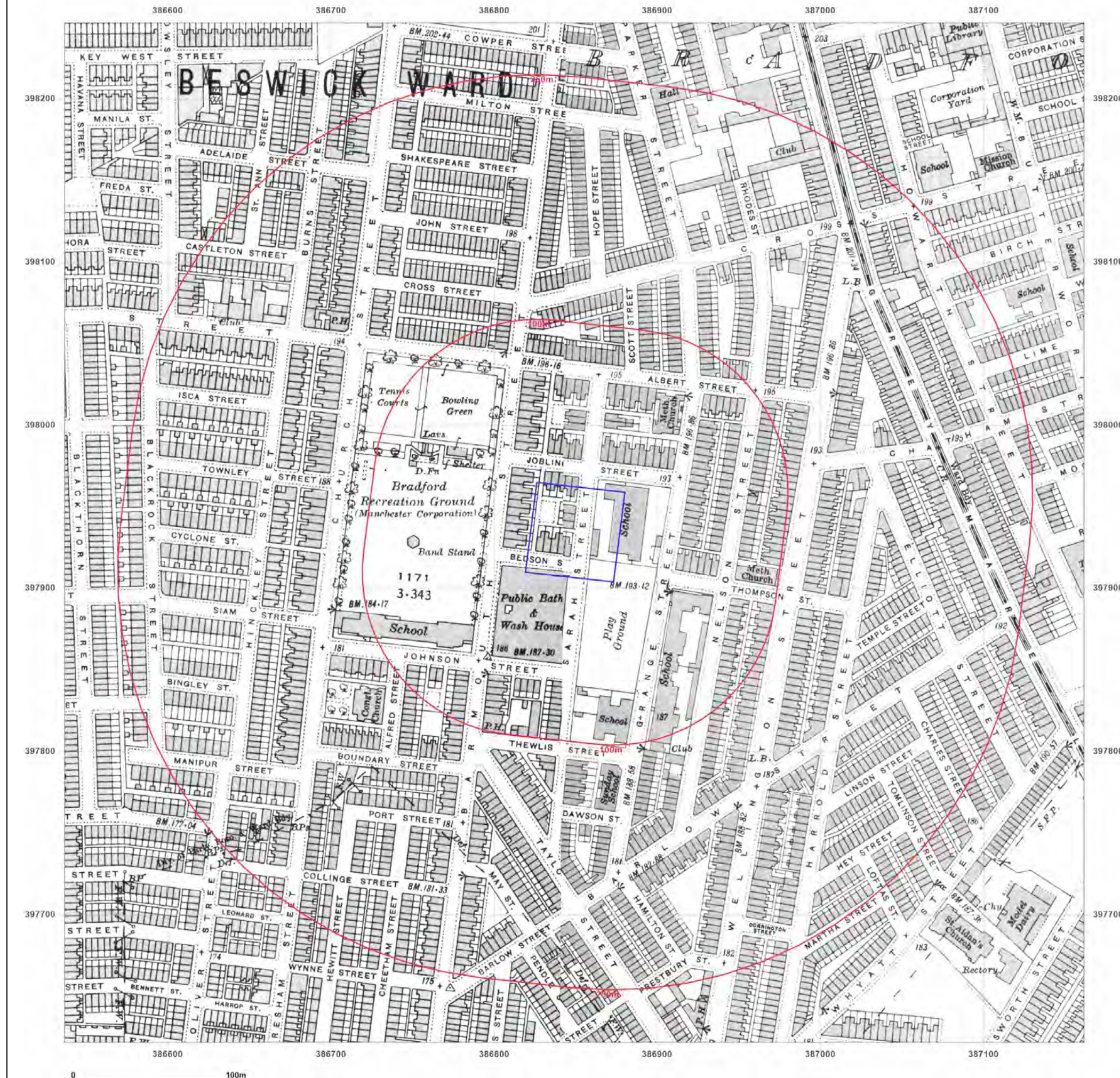
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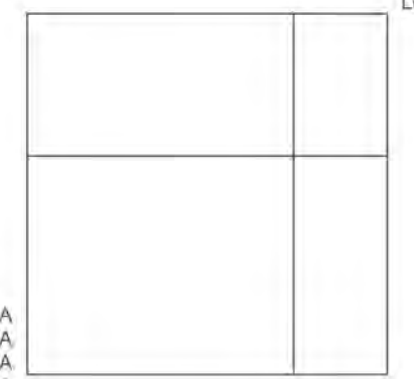
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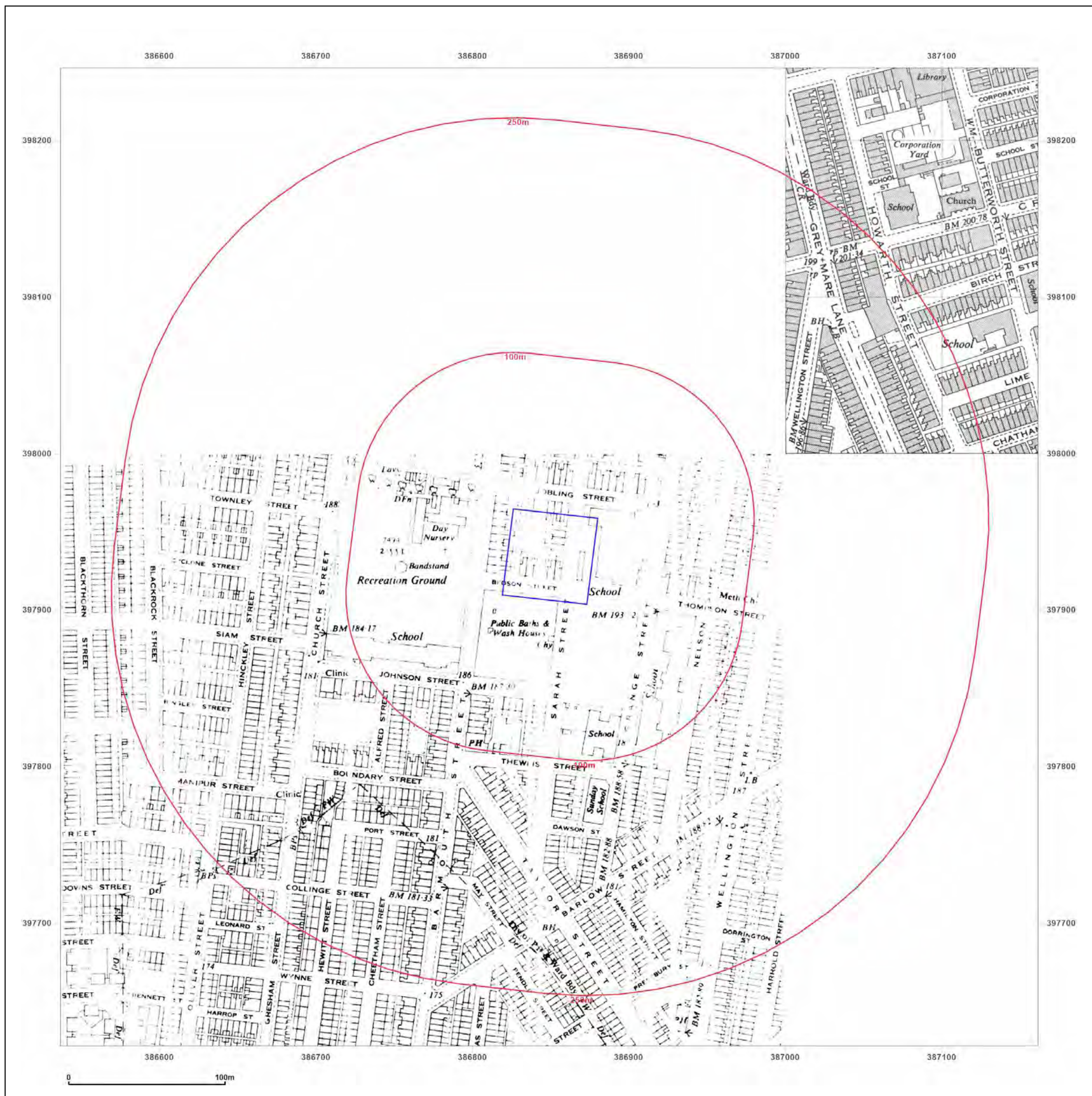


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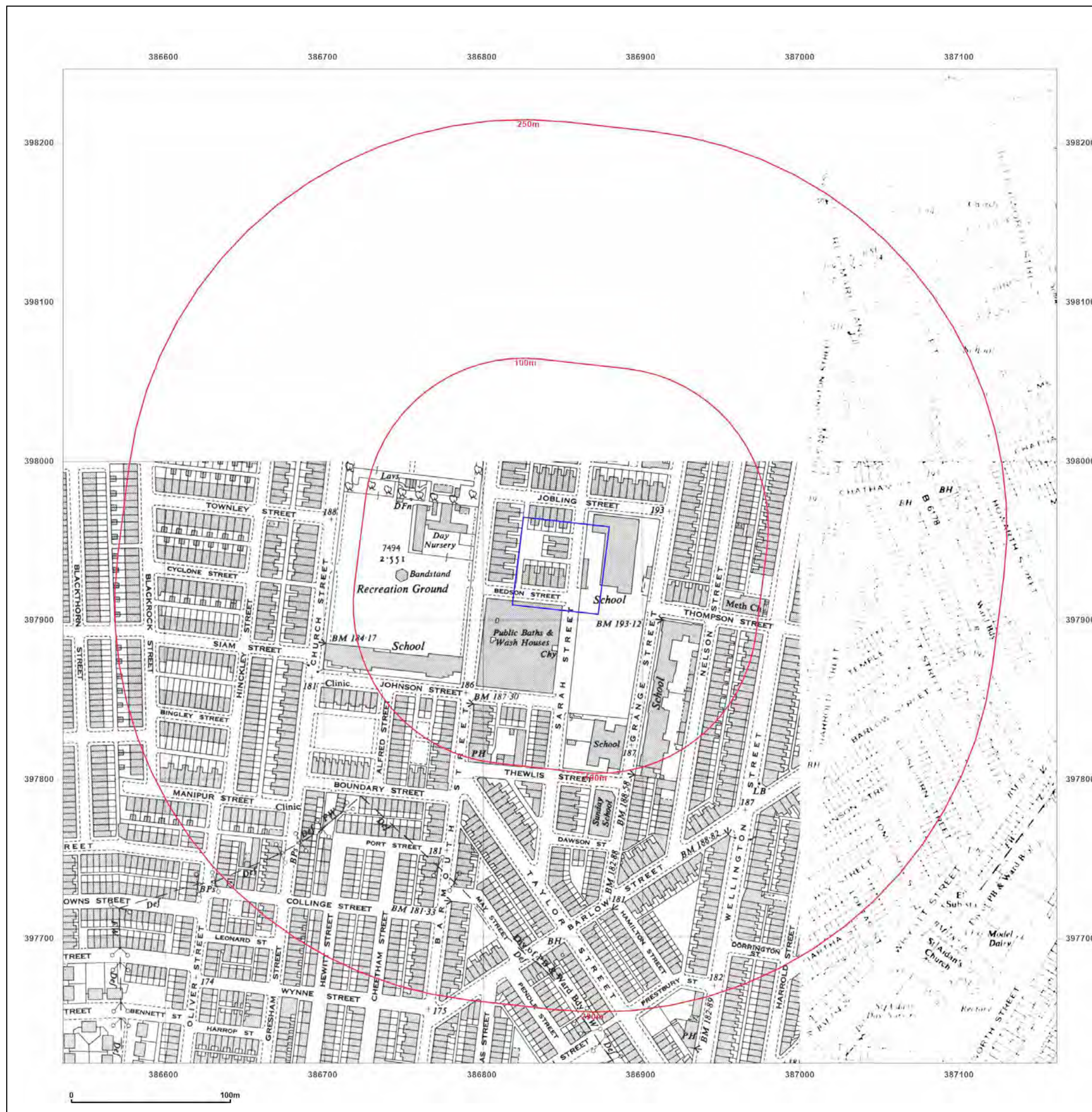


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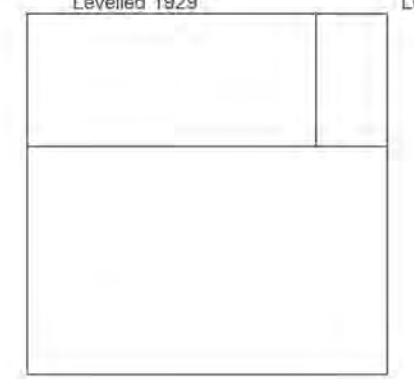
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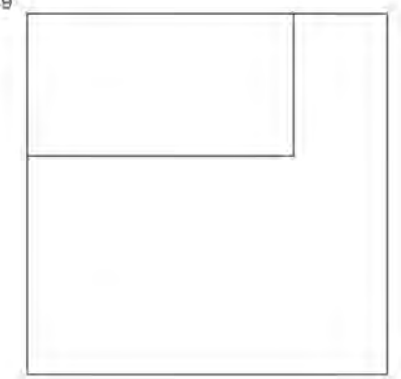
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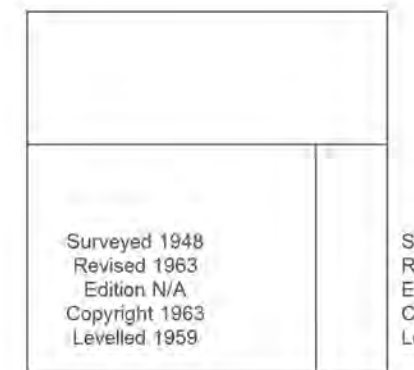
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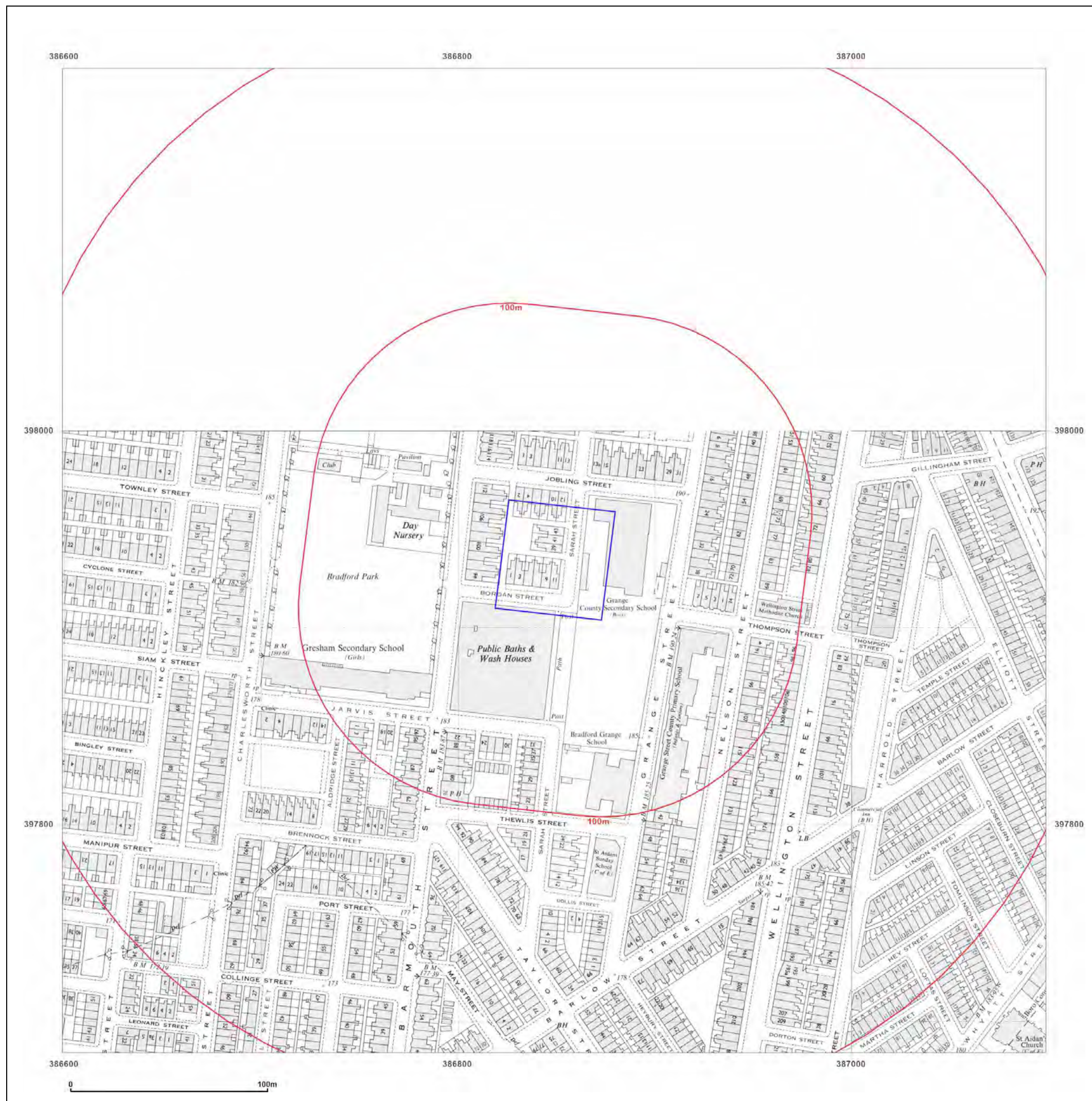


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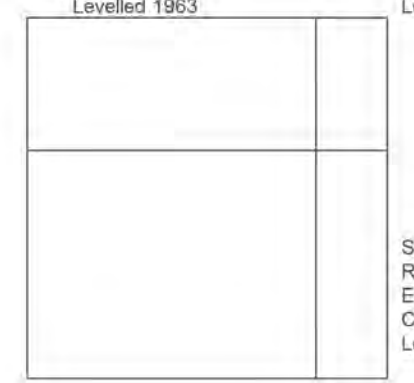
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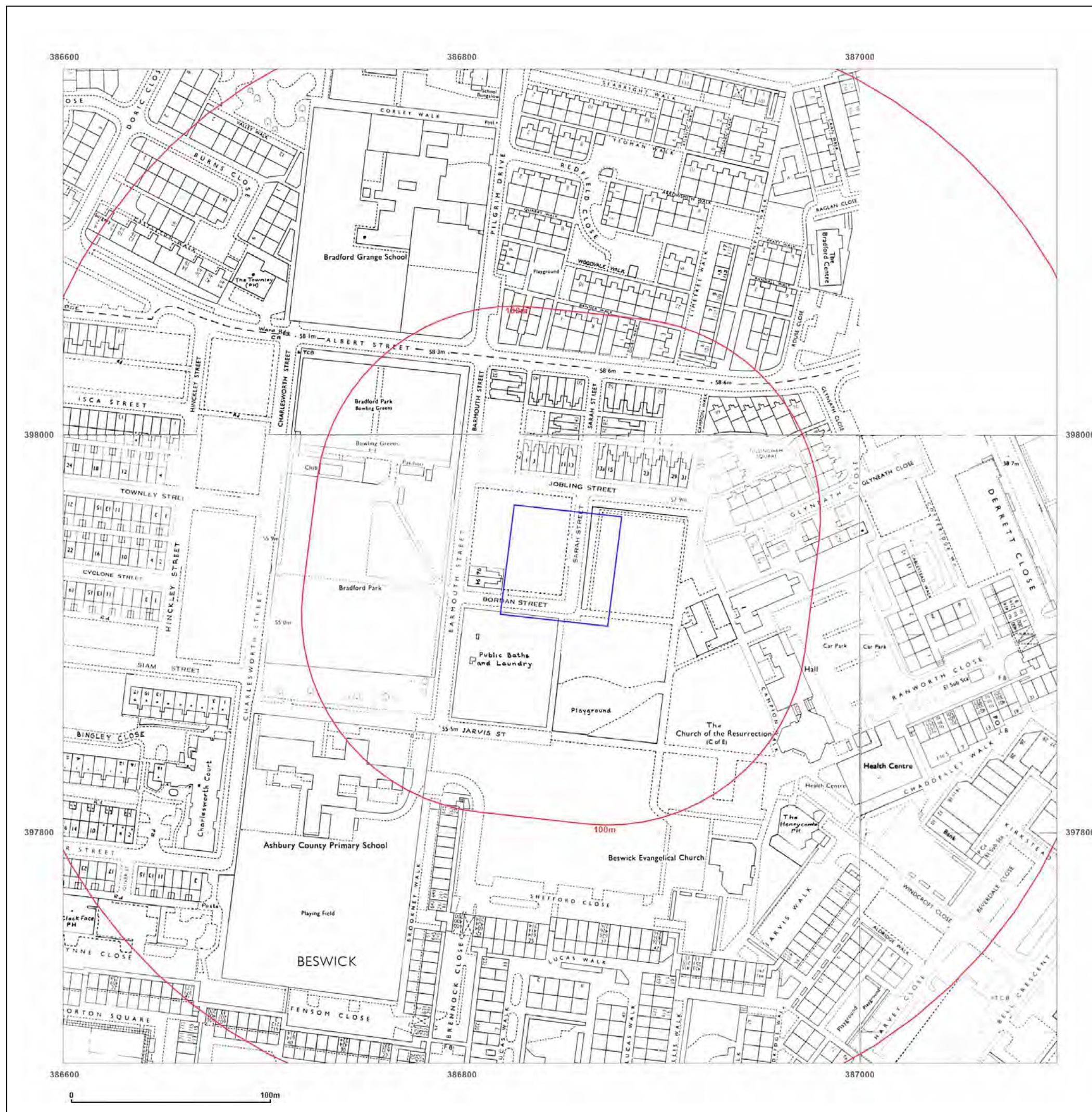
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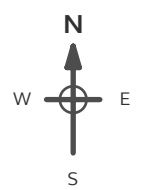
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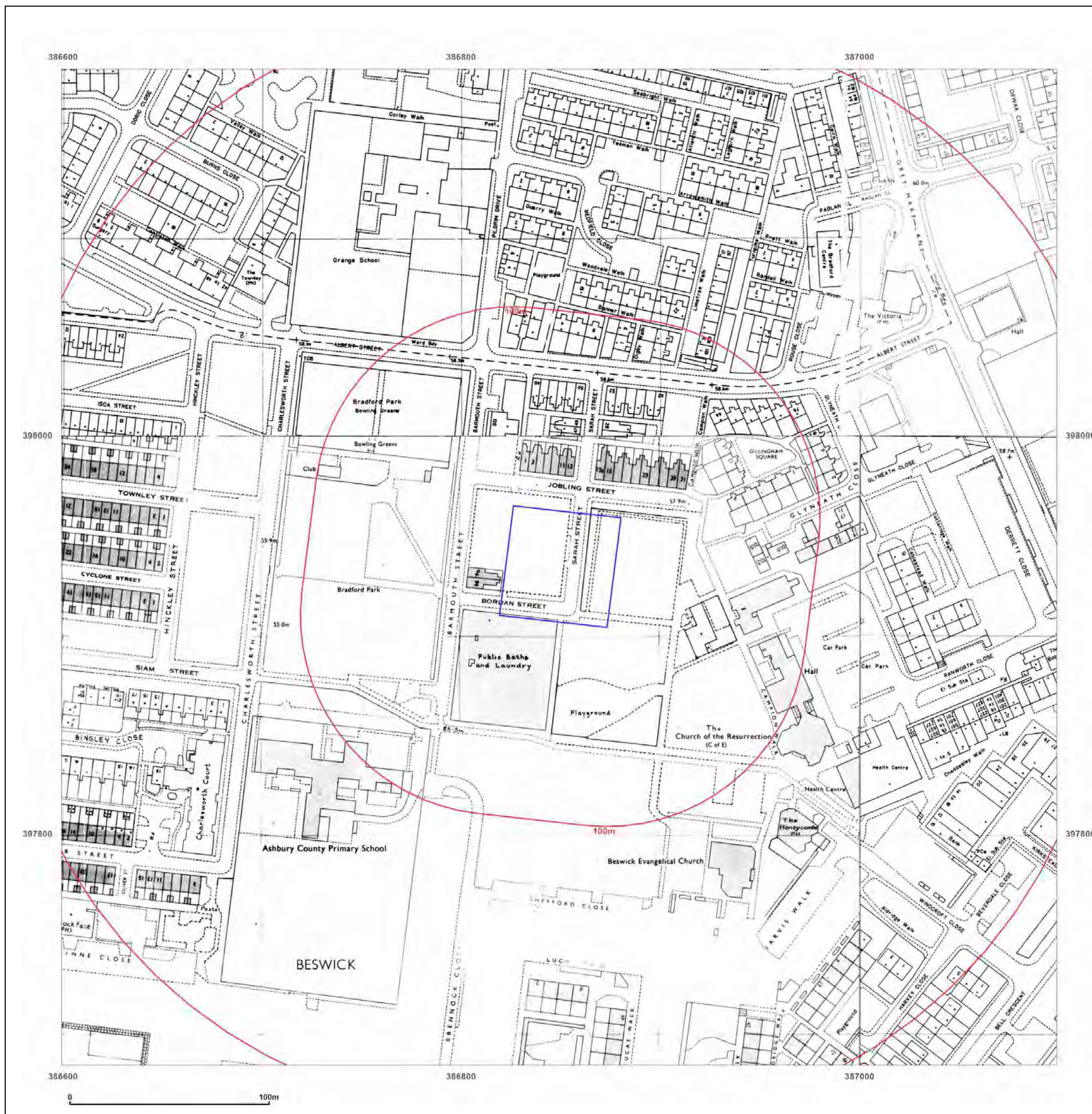


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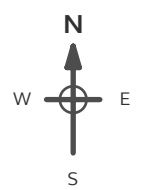
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Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: National Grid

Map date: 1992-1995

Scale: 1:1,250

Printed at: 1:2,000



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Revised 1995
Edition N/A
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Surveyed 1994
Revised 1994
Edition N/A
Copyright 1994
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Edition N/A
Copyright 1992
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Surveyed 1994
Revised 1994
Edition N/A
Copyright 1994
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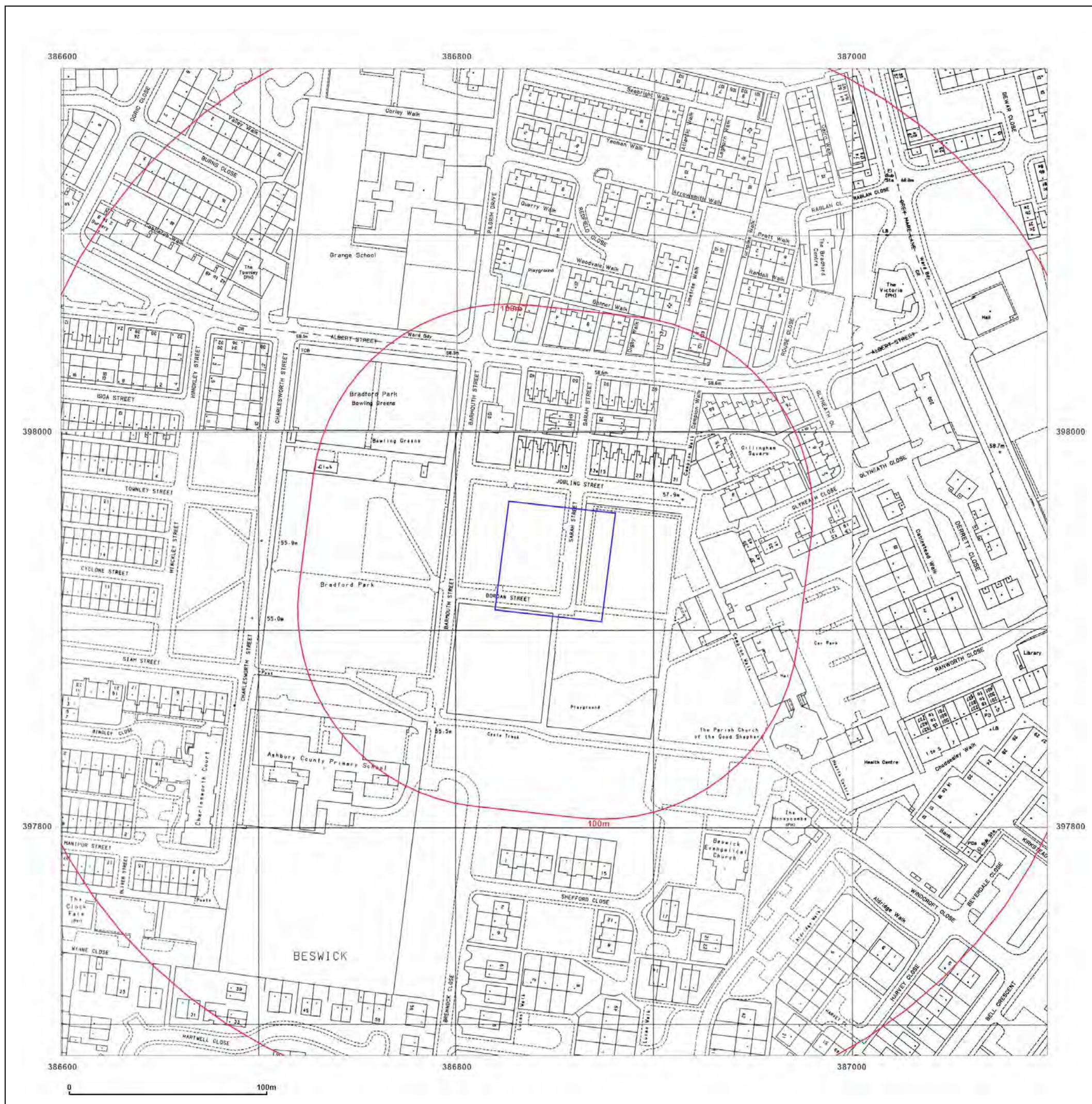
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MANCHESTER, M11 3DS

Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: National Grid

Map date: 1995

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
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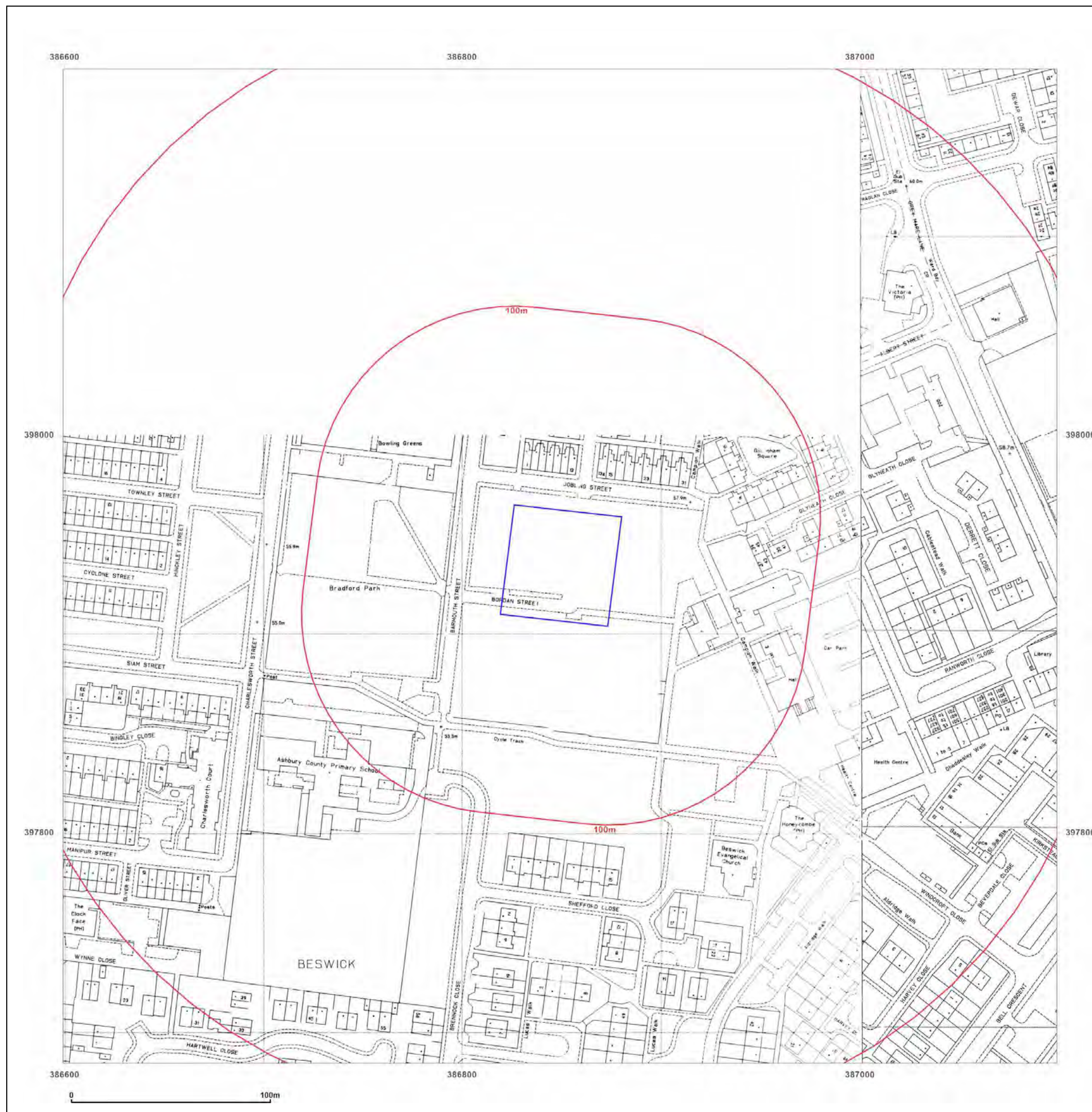


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Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: National Grid

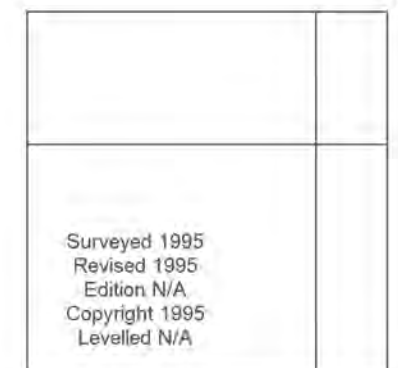
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Levelled N/A



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

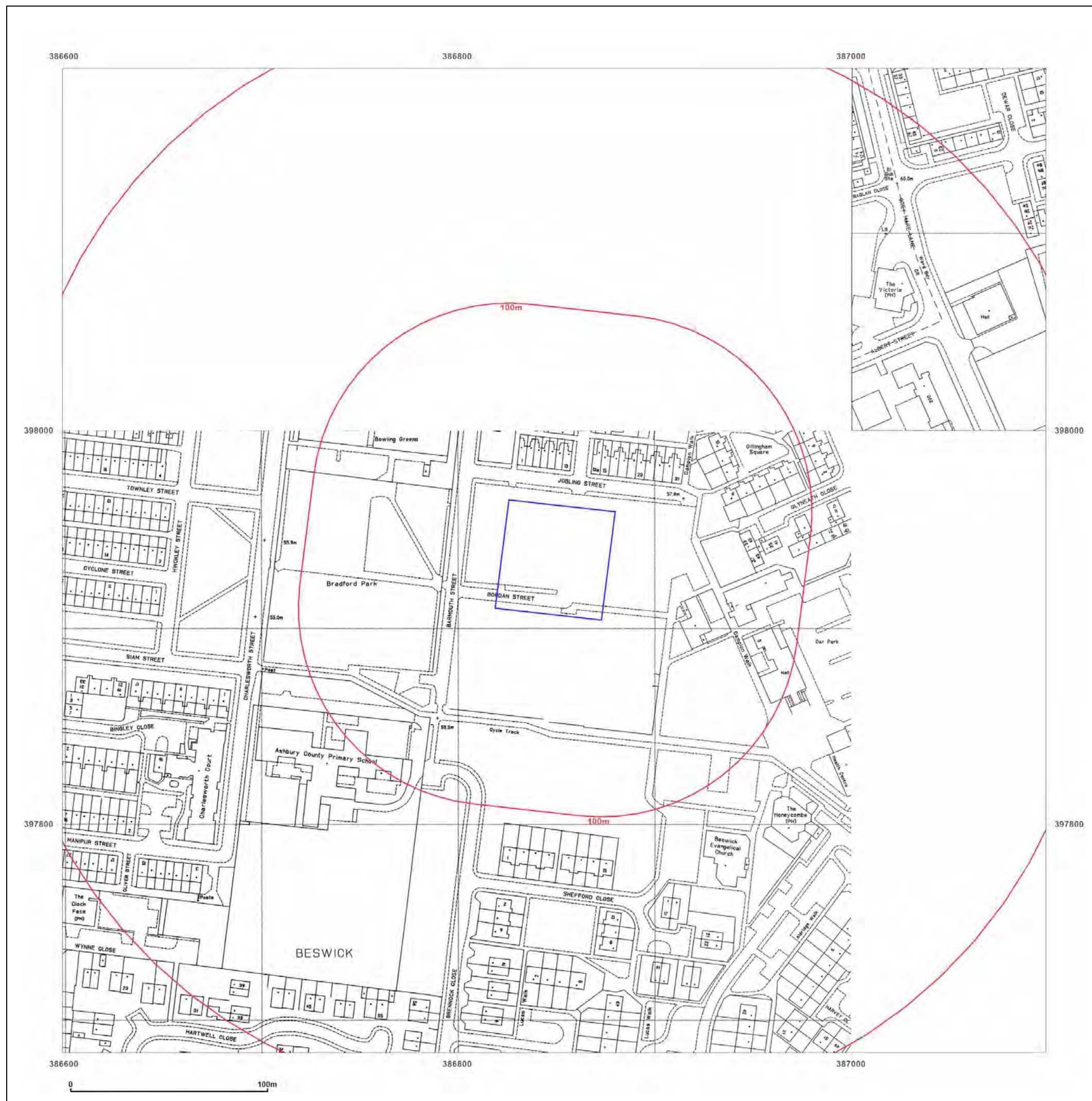


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Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: National Grid

Map date: 1995

Scale: 1:1,250

Printed at: 1:2,000



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

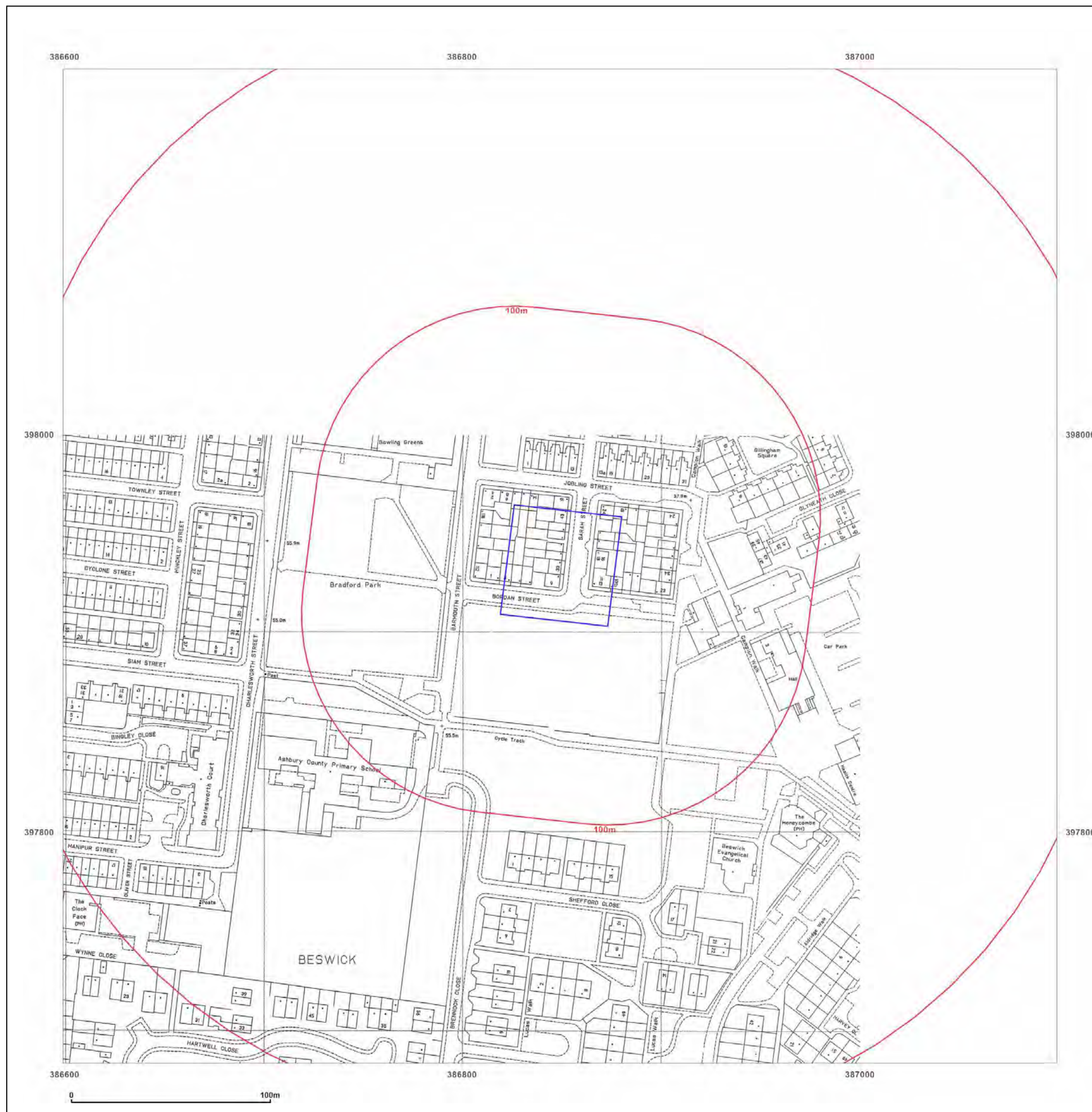


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Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: National Grid

Map date: 1992-1995

Scale: 1:1,250

Printed at: 1:2,000



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

Surveyed 1992
Revised 1992
Edition N/A
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Edition N/A
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Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: County Series

Map date: 1848

Scale: 1:10,560

Printed at: 1:10,560



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

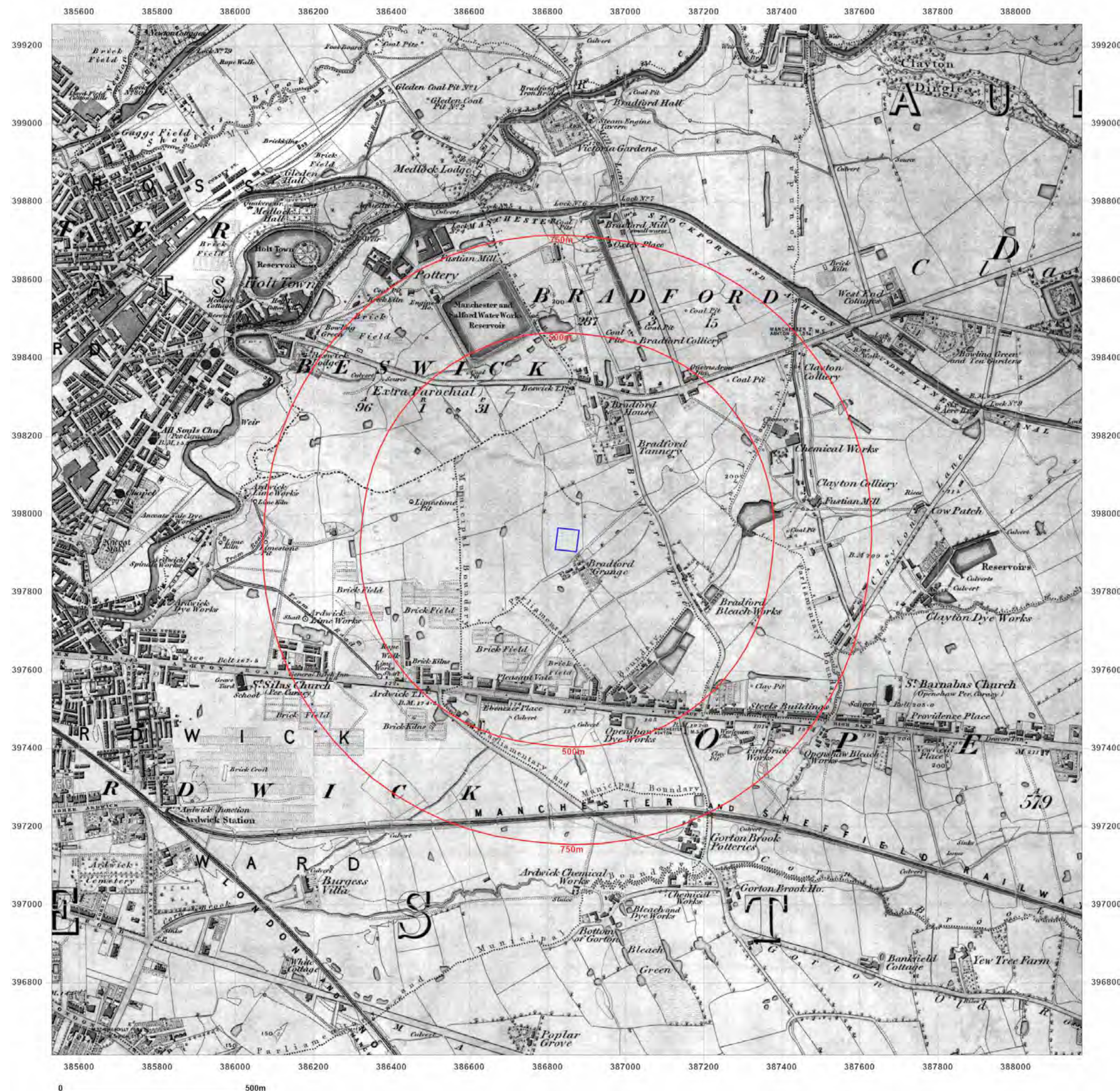


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MANCHESTER, M11 3DS

Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: County Series

Map date: 1890-1891

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1891
Revised 1891
Edition 1891
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Levelled N/A

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



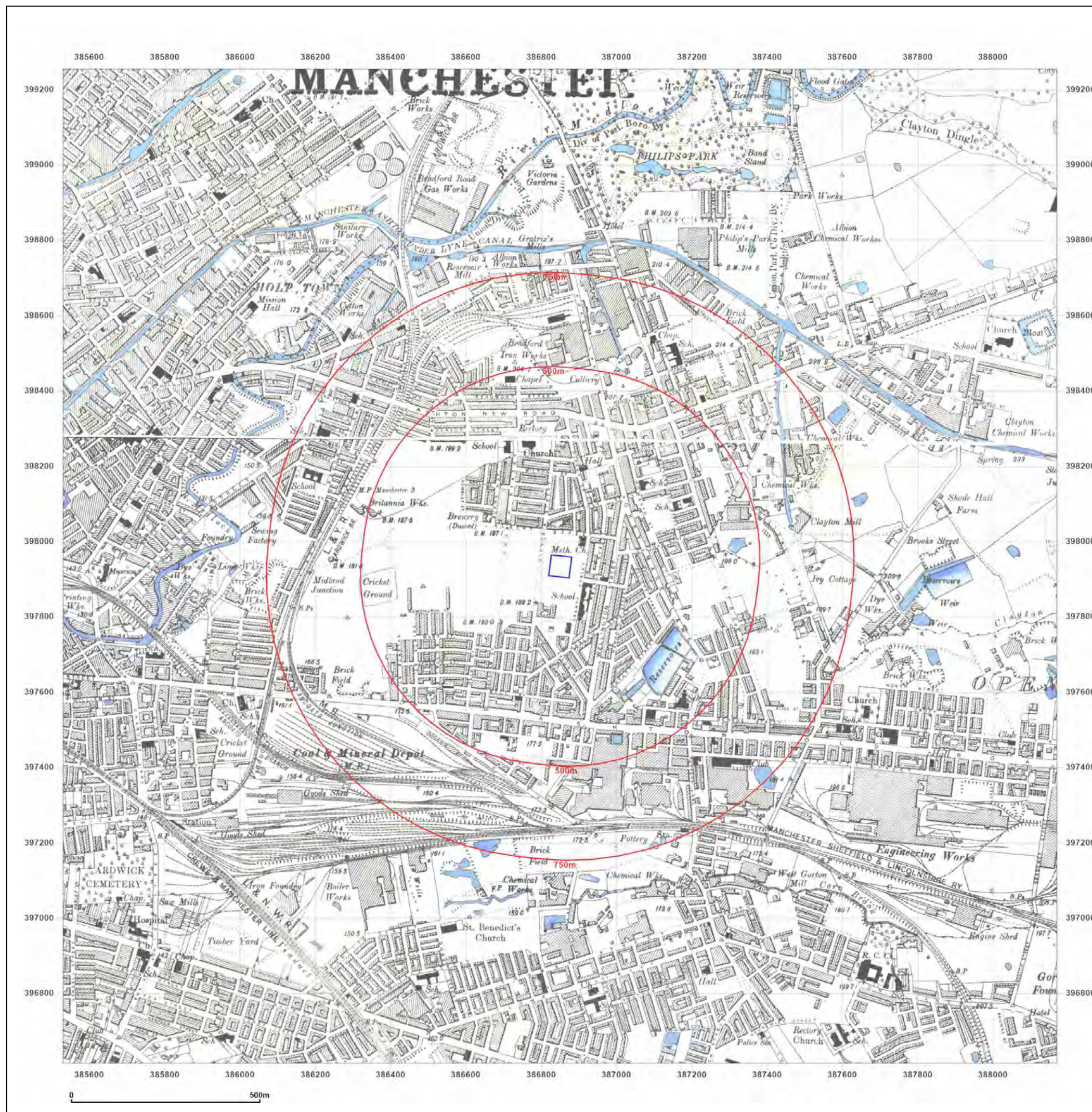
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Site Details:

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MANCHESTER, M11 3DS

Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: County Series

Map date: 1905-1906

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1906
Edition 1906
Copyright N/A
Levelled N/A

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



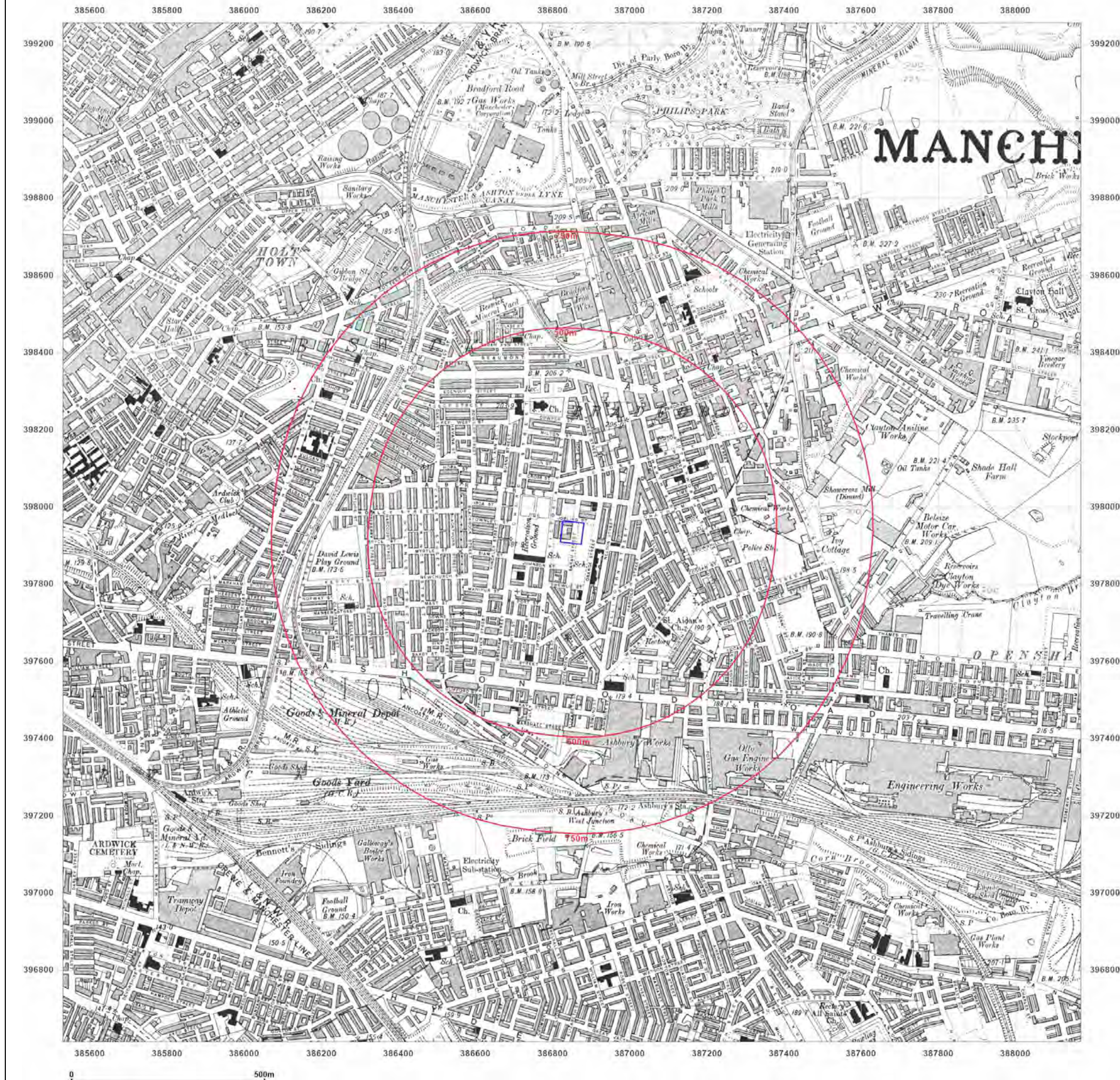
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MANCHESTER, M11 3DS

Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: County Series

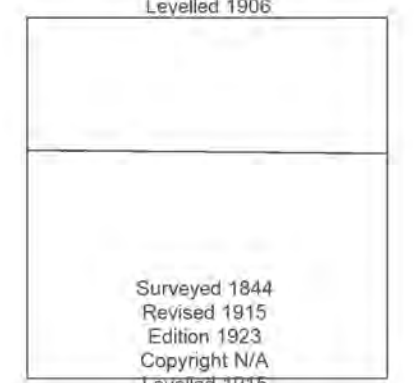
Map date: 1923

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1921
Edition 1923
Copyright N/A
Levelled 1906



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



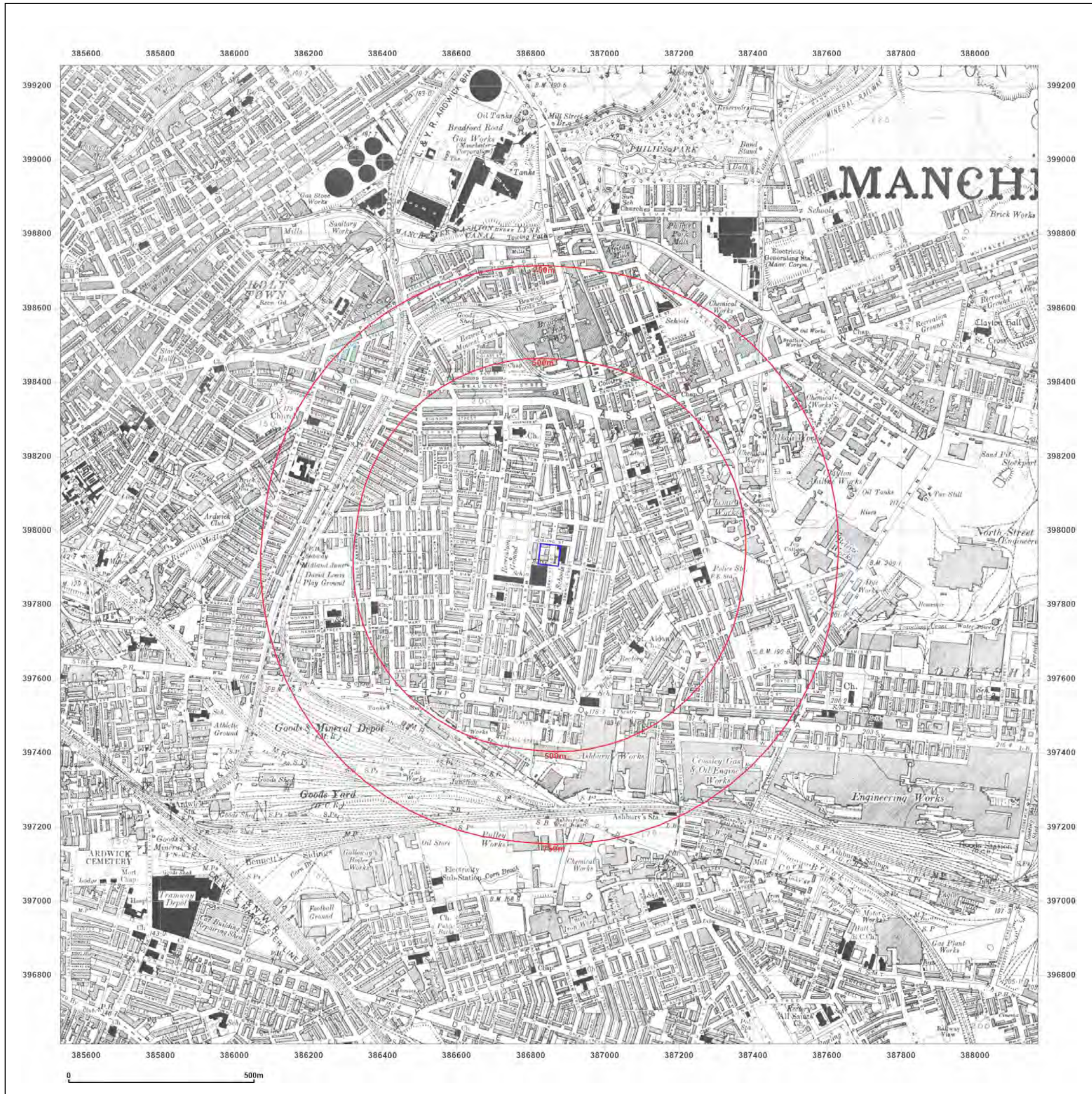
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Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

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



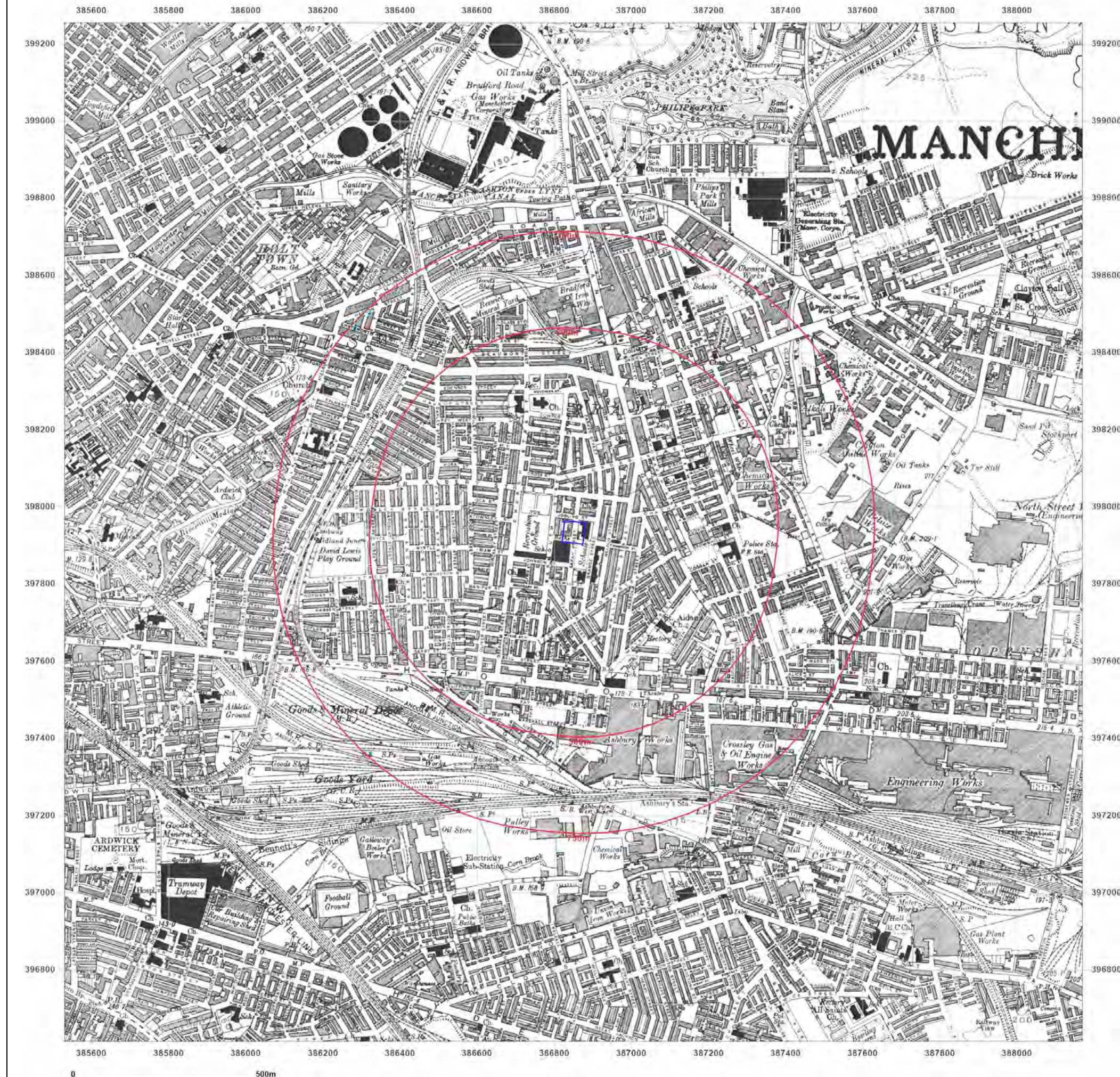
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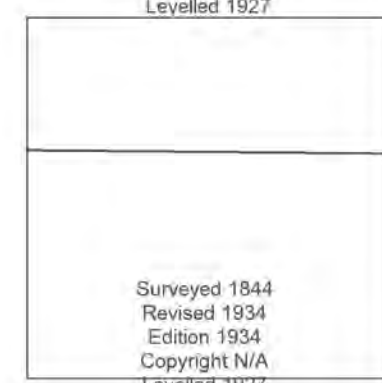
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MANCHESTER, M11 3DS

Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: County Series
Map date: 1933-1934
Scale: 1:10,560
Printed at: 1:10,560



Surveyed 1844
Revised 1933
Edition 1933
Copyright N/A
Levelled 1927



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



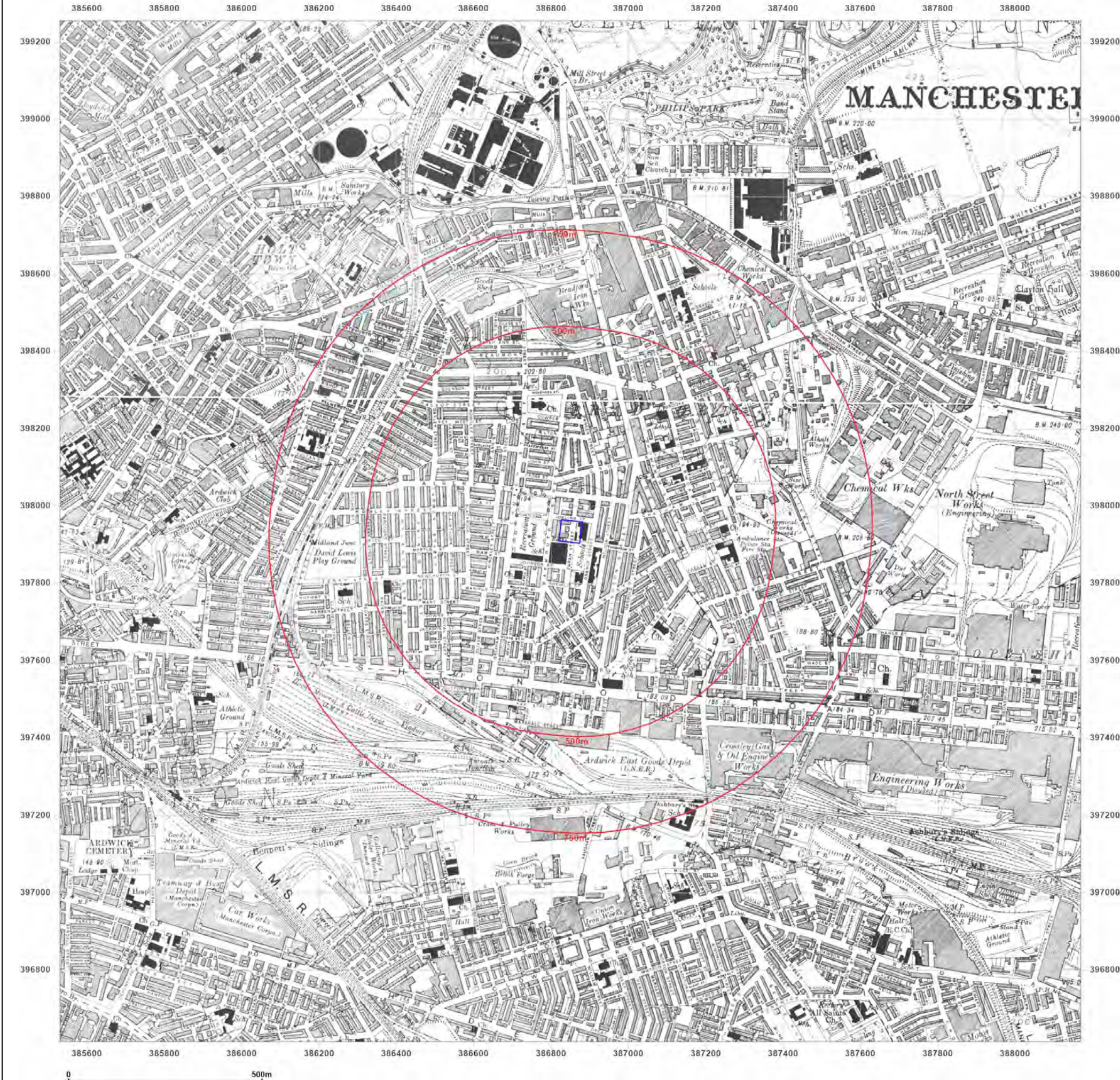
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Site Details:

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MANCHESTER, M11 3DS

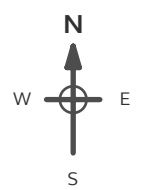
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Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

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



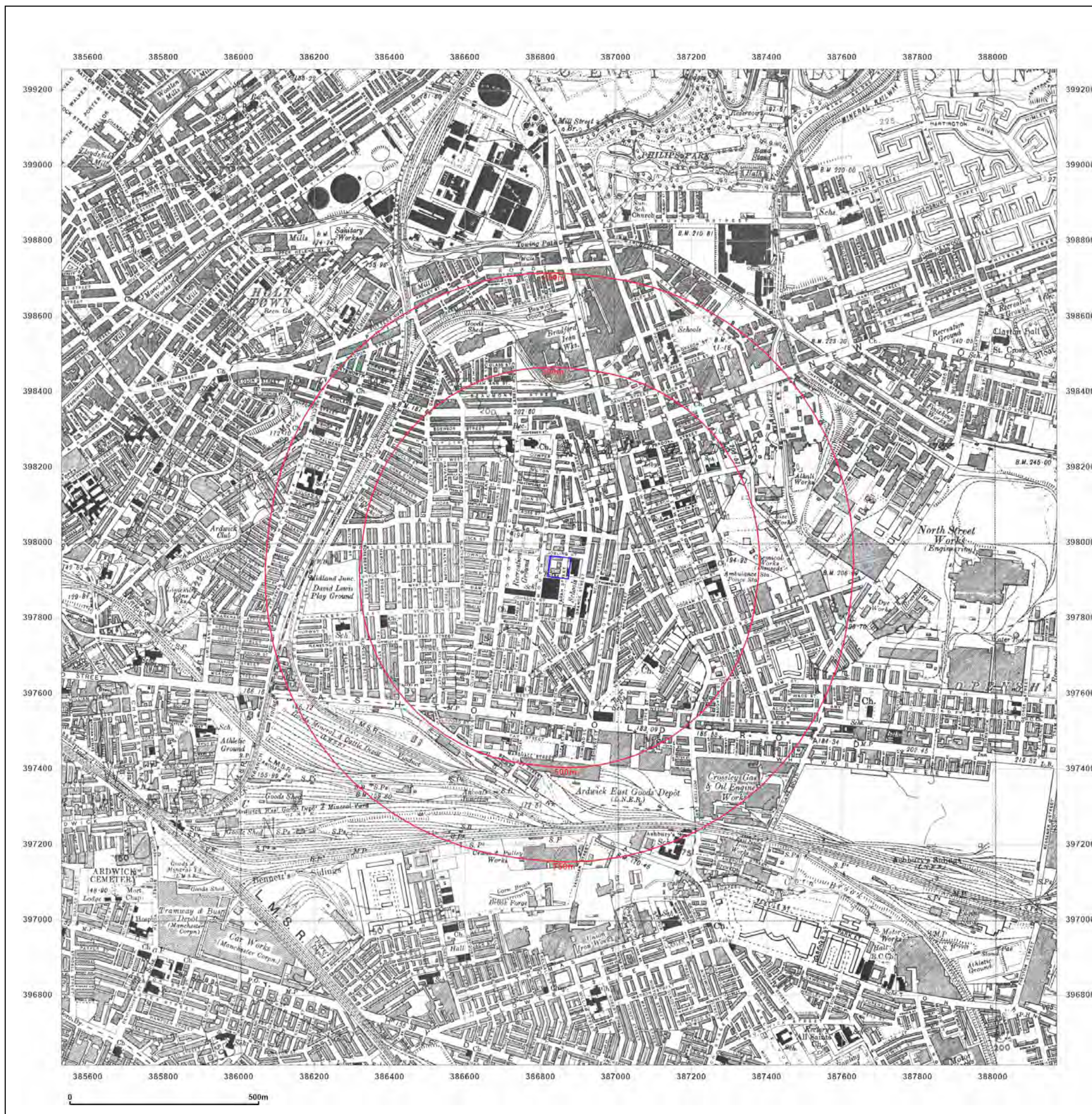
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Site Details:

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MANCHESTER, M11 3DS

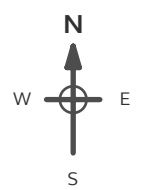
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Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: Provisional

Map date: 1956

Scale: 1:10,560

Printed at: 1:10,560



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



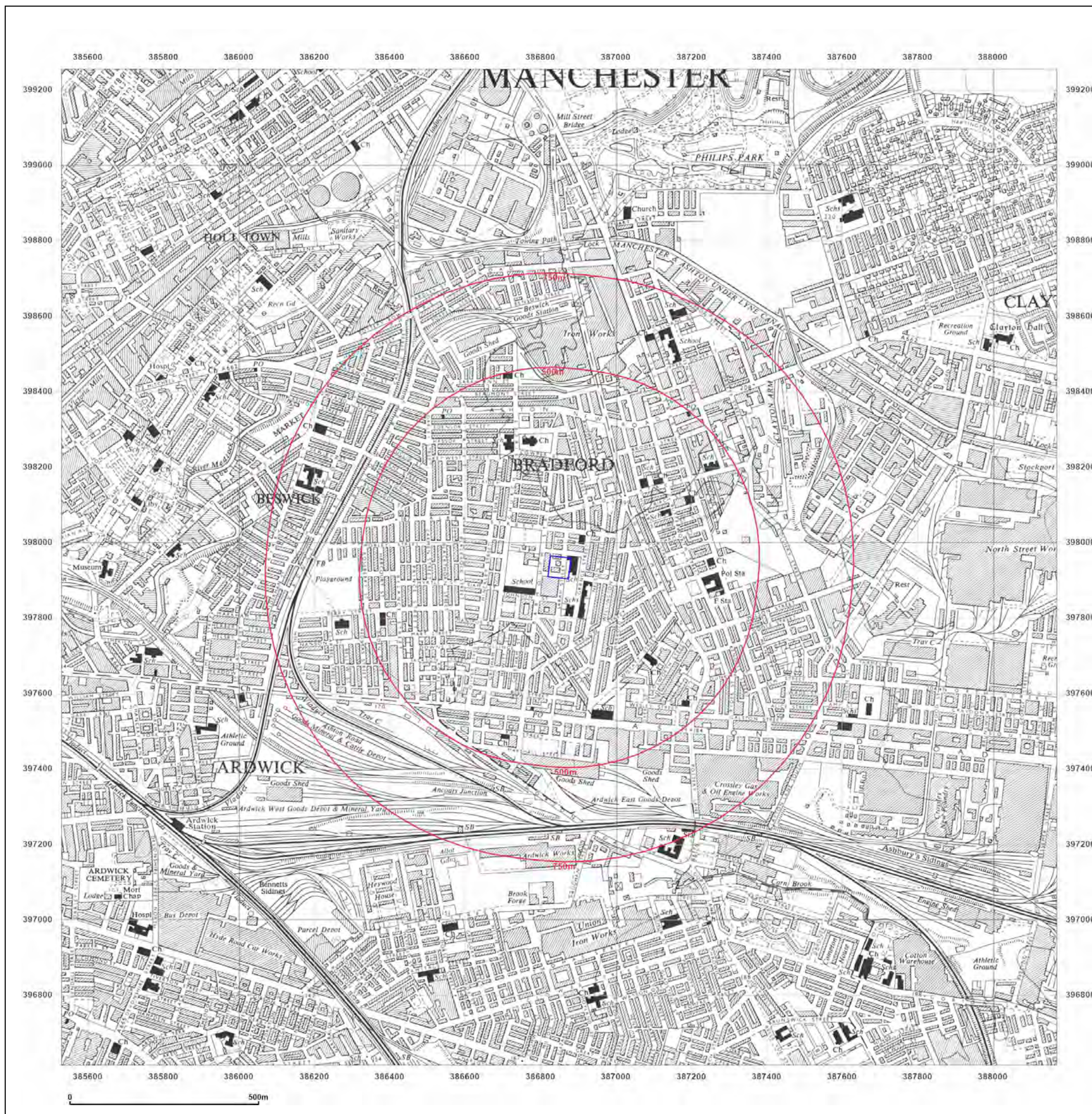
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Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: Provisional

Map date: 1968

Scale: 1:10,560

Printed at: 1:10,560



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



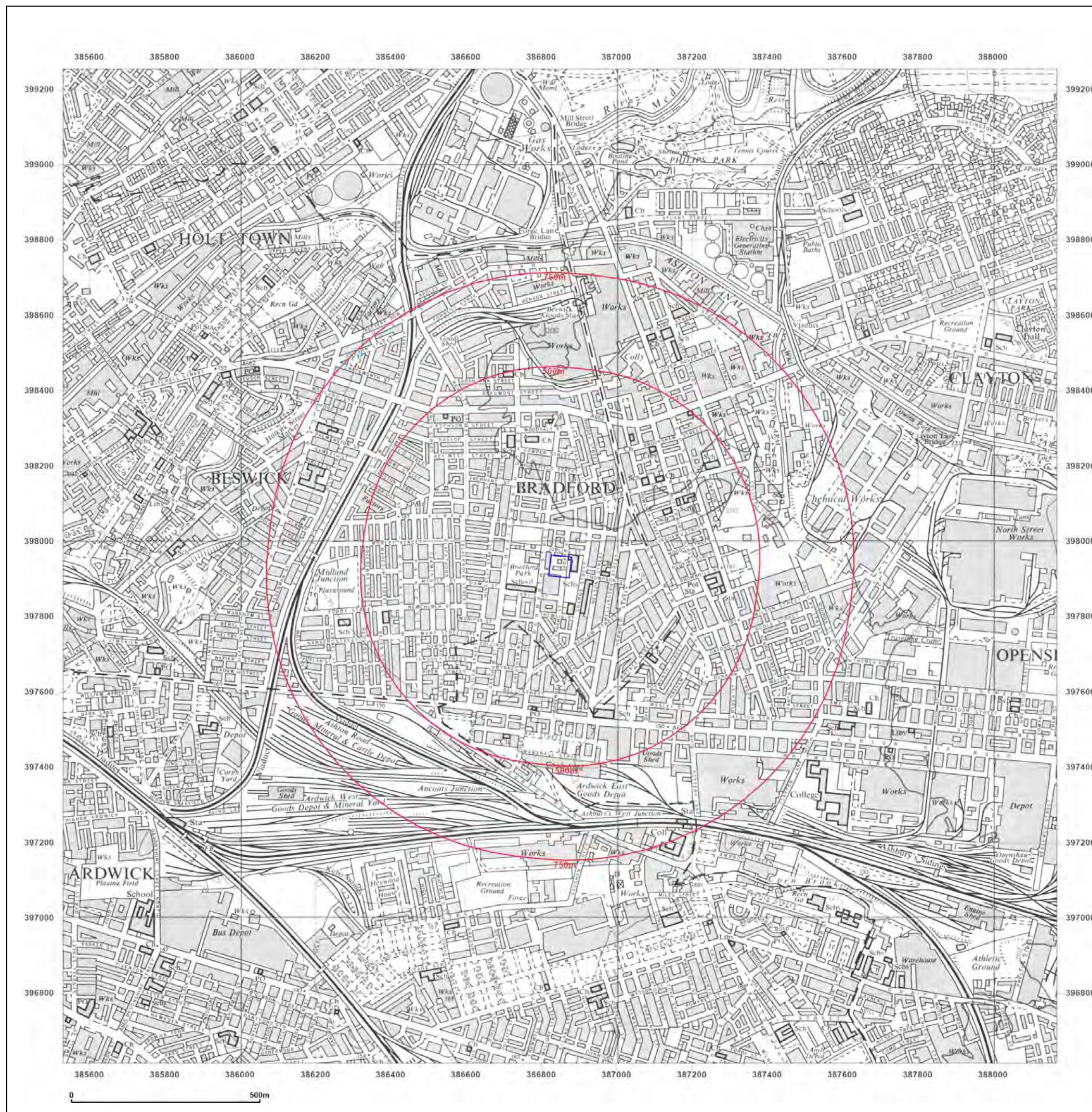
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Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: National Grid

Map date: 1981

Scale: 1:10,000

Printed at: 1:10,000



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

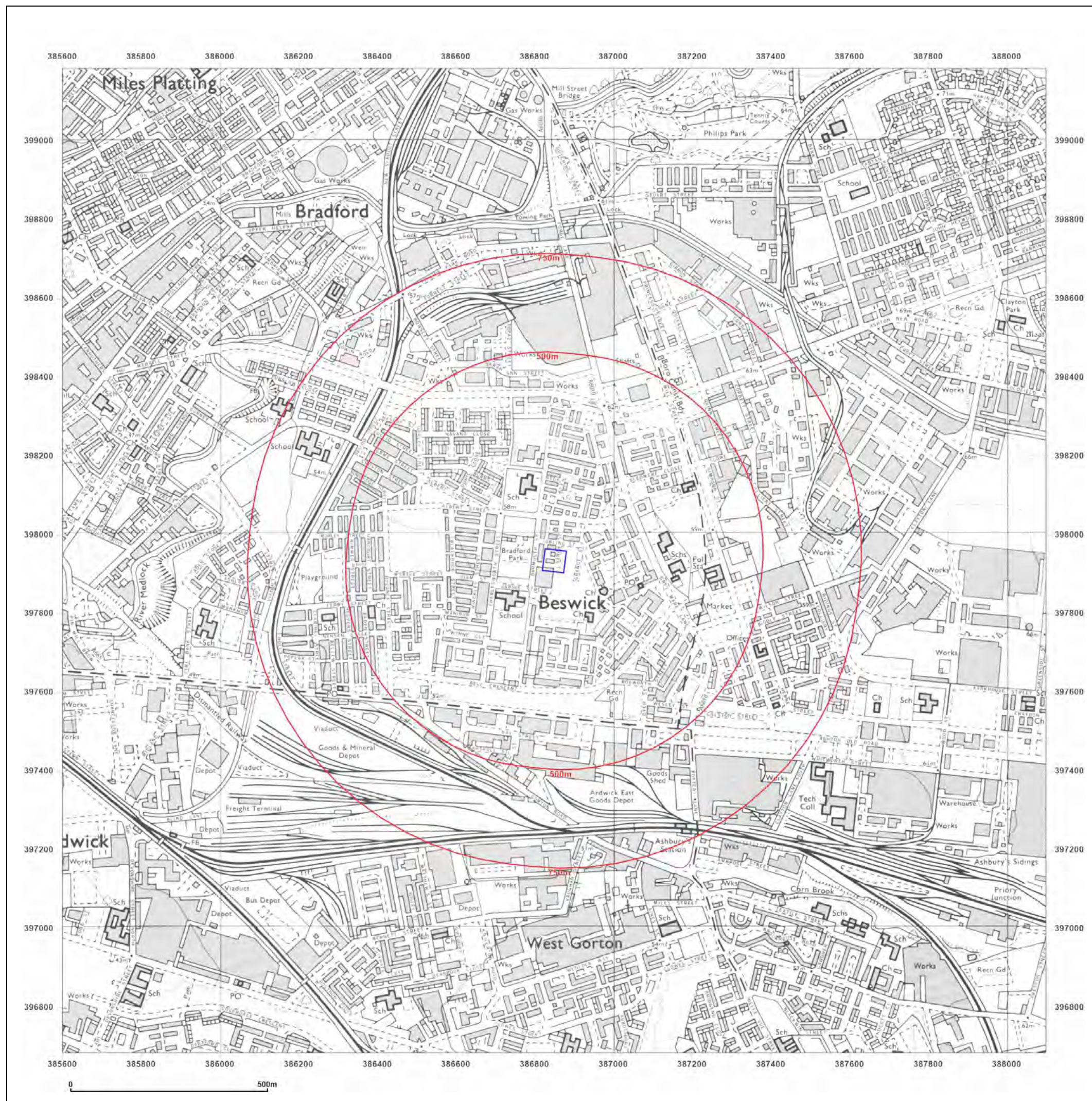


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Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: National Grid

Map date: 1985

Scale: 1:10,000

Printed at: 1:10,000



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

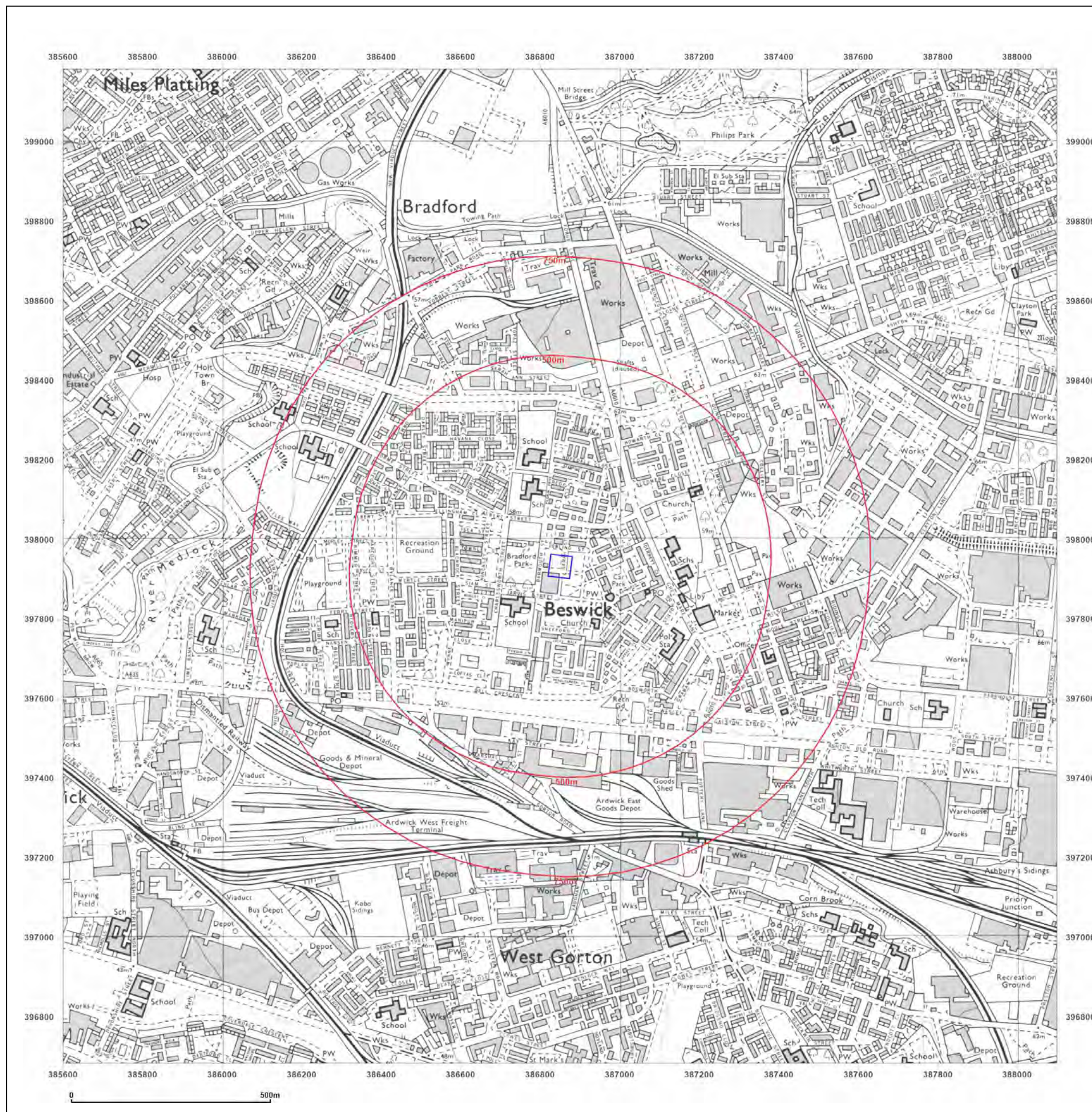


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MANCHESTER, M11 3DS

Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: National Grid

Map date: 1991

Scale: 1:10,000

Printed at: 1:10,000



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



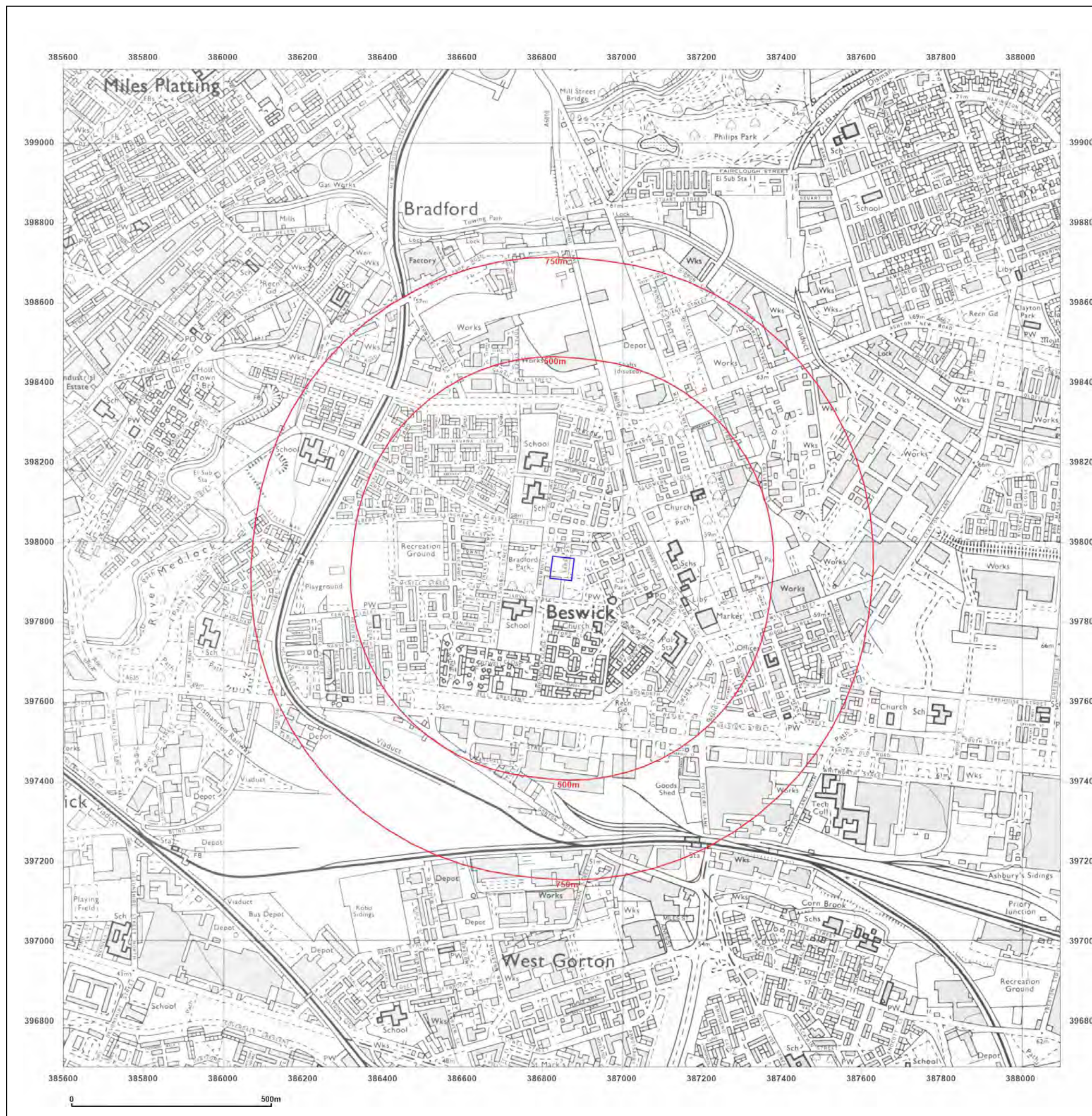
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MANCHESTER, M11 3DS

Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



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Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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GREY MARE LANE,
MANCHESTER, M11 3DS

Client Ref: WIE19835-100_REQ121566
Report Ref: WTM1-9392282
Grid Ref: 386849, 397934

Map Name: National Grid

Map date: 2023

Scale: 1:10,000

Printed at: 1:10,000

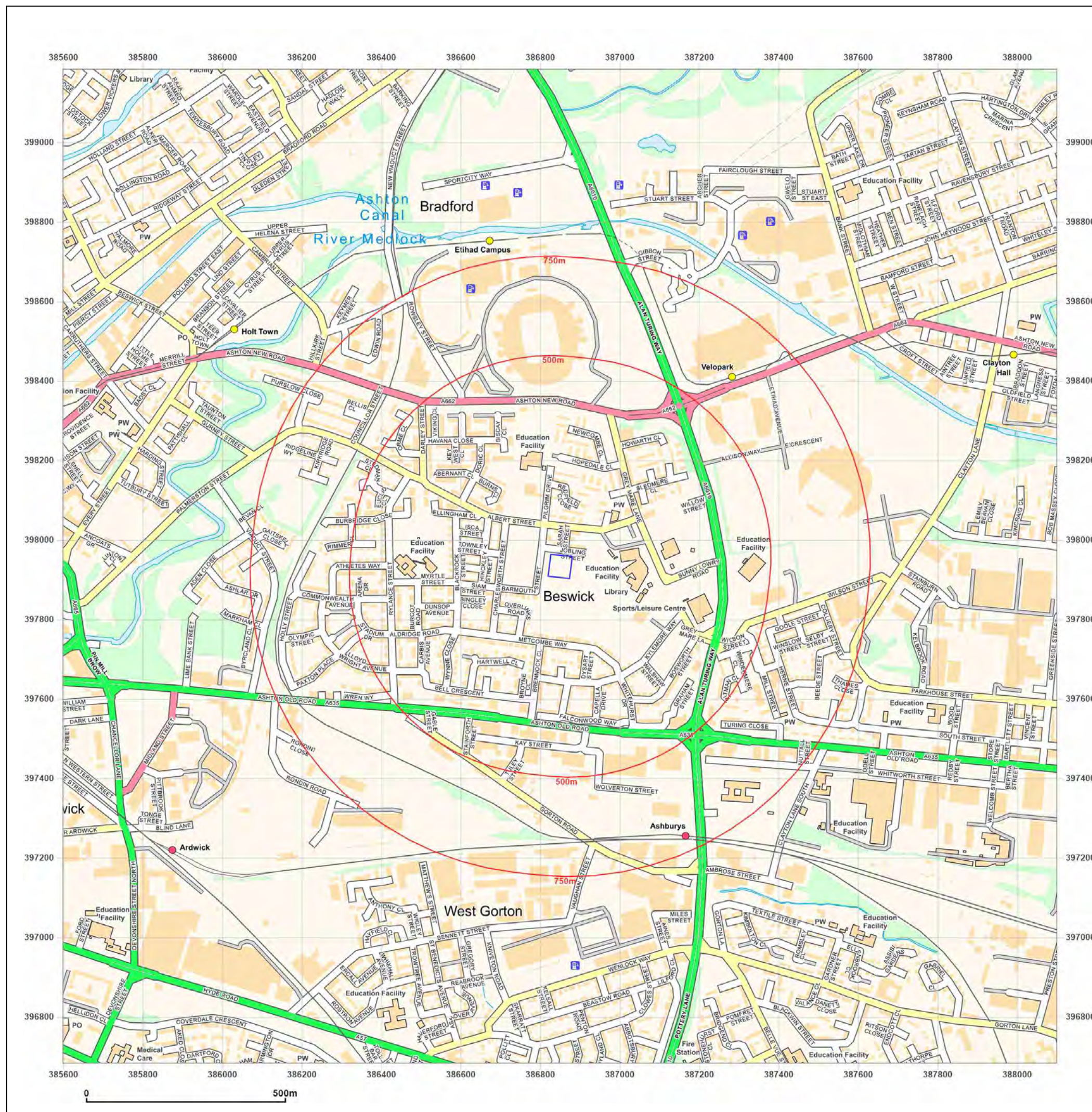


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EAST MANCHESTER ACADEMY, GREY MARE LANE, MANCHESTER, M11 3DS

Professional opinion

Inc. integrated mine entry interpretive assessment



Site plan



Search results

 1. Past underground coal mining Identified	page 4	 9. Coal mining subsidence claims Not identified
 2. Present underground coal mining Not identified		 10. Mine gas emissions Not identified
 3. Future underground coal mining Not identified		 11. Emergency Call Out incidents Not identified
 4. Shafts and adits (mine entries) Not identified		 12. Withdrawal of support Identified
 5. Coal mining geology Not identified		 13. Working facilities orders Not identified
 6. Past opencast coal mining Not identified		 14. Payments to copyhold owners Not identified
 7. Present opencast coal mining Not identified		 Cheshire Brine Not identified
 8. Future opencast coal mining Not identified		

Coal mining (CON29M) assessment

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



Coal mining

Coal Mining Subsidence Act 1991

If any coal mining subsidence damage has occurred, as determined by the appropriate persons/bodies, the property will benefit from the protection of the Coal Mining Subsidence Acts of 1991 and as amended 1994.

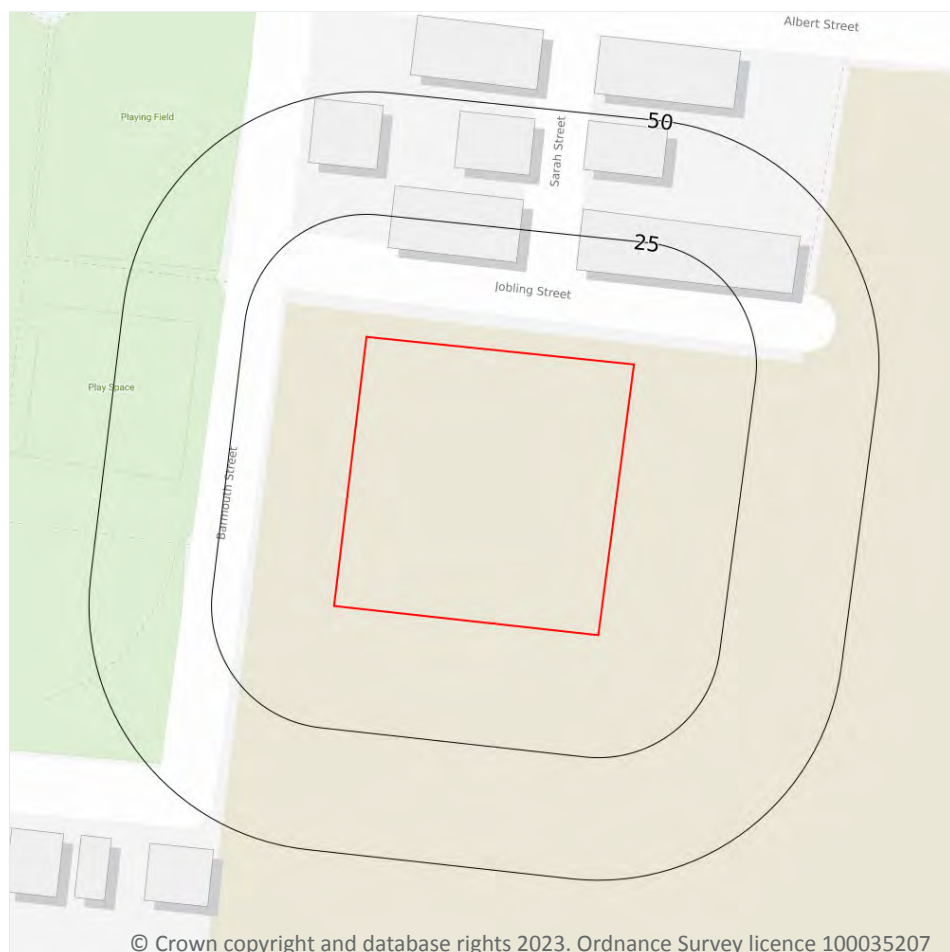
This Act, however, does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester. In this instance it would be prudent to have the property visually inspected for signs of mining related settlement or subsidence by a suitably qualified and experienced person, who could be sought through <https://www.ricsfirms.com/>.

The Coal Authority provide a call out service on 01623 646 333 to take remedial action concerning the movement or collapse of any coal entries or coal mining surface hazards. Further details can be found on www.groundstability.com.

CON29M reports are a requirement for conveyancing and are recommended throughout the official Coal Mining Reporting Area. This is the area within which it is deemed prudent to clarify the risk presented by coal mining, using the questions laid out in the Law Society's CON29M form. The need for a CON29M does not always translate to an identification of risk, and reports will often be assessed as free from risk or 'Passed' even though they are within the official Coal Mining Reporting Area.



Coal mining (CON29M)



- Site Outline
- Search buffers in metres (m)
- Mine entries
 - Adits
 - Shafts
 - Calculated 'zone of influence'
- Subsidence claims
 - Awaiting decision
 - Rejected
 - Admitted
 - Deferred
 - Settled
 - Withdrawn
- Probable shallow coal mine workings
- Coal outcrops
- Past shallow coal mine workings

Coal mining (CON29M)

The map above shows relevant, 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. Further details of any features shown indicating the location of Mine Entries or Subsidence Claims can be found in the relevant sections of this report (4 and 9 respectively).

Responses to the Law Society CON29M Coal Mining search enquiries are produced using official Coal Authority data and the expert interpretation of Groundsure. This report is prepared in accordance with The Law Society CON29M (2018) Guidance Notes. Additional interpretation and calculation of mine entry zones of influence has also been carried out by Groundsure using Coal Authority and British Geological Survey data.

Please read this report carefully, and in particular any sections flagged with an amber 'i'.



The Law Society

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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 lies within the potential zone of influence of recorded workings in 6 seam(s) of coal. The most recent underground working in the area was in 1958. These workings lie between 150 metres and 985 metres. Any ground movement due to this coal mining activity should have stopped.

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 lies within an area where a notice of entitlement to withdraw support has been published. This notice was issued in 1955.

(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.**

CON29M notes and guidance

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 by Groundsure Ltd. Groundsure Ltd have additionally provided information relating to the Cheshire Brine Compensation Area, and have compiled all information into this report.

Queries should be made of Groundsure Ltd on 01273 257 755, or via email: info@groundsure.com.

CON29M 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 Groundsure

The information provided in this report by Groundsure Ltd 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 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.

Additional mine entry assessment is based on and limited to the data supplied by the Coal Authority at the time of production. In order to determine whether a property is within the likely zone of influence of a disused coal mine entry the following is considered: the actual or plotted position of the mine entry, its known or assumed diameter and the thickness of superficial deposits above rockhead. Where these figures are not known, assumptions based on established estimations have been made.

CON29M 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 Groundsure and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure Ltd prior to any re-use.

The Law Society CON29M Coal Mining search enquiries are protected by copyright owned by The Law Society of 113 Chancery Lane, London WC2A 1PL.

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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.

Conveyancing Information Executive and our terms & conditions

IMPORTANT CONSUMER PROTECTION INFORMATION

This search has been produced by Groundsure Ltd, Nile House, Nile Street, Brighton, BN1 1HW. Tel: 01273 257 755. Email: info@groundsure.com. Groundsure adheres to the Conveyancing Information Executive Standards.

The Standards

- Conveyancing Information Executive Members shall act in a professional and honest manner at all times in line with the Conveyancing Information Executive Standards and carry out the delivery of the Search with integrity and due care and skill.
- Compliance with the Conveyancing Information Executive Standards will be a condition within the Conveyancing Information Executive Member's Terms and Conditions.
- Conveyancing Information Executive Members will promote the benefits of and deliver the Search to the agreed standards and in the best interests of the customer and associated parties.

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 Standards.

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

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
- liaise, at your request, with anyone acting formally on your behalf

Complaints should be sent to:

Operations Director, Groundsure Ltd, Nile House, Nile Street, Brighton, BN1 1HW. Tel: 01273 257 755. 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-jan-2020/>

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. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference>.

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

How we use your personal information for websites and email communications

When you visit one of our websites we may collect information from you such as your email address or IP address. This helps us to track unique visits and monitor patterns of customer website traffic, such as who visits and why they visit.

We use cookies and/or pixel tags on some pages of our website. A cookie is a small text file sent to your computer. A pixel tag is an invisible tag placed on certain pages of our website but not on your computer. Pixel tags usually work together with cookies to assist us to provide you with a more tailored service. This allows us to monitor and improve our email communications and website. Useful information about cookies, including how to remove them, can be found on our websites.

How we transfer your personal information to other countries

Where we transfer your personal information to countries that are outside of the UK and the European Union (EU) we will ensure that it is protected and that the transfer is lawful. We will do this by ensuring that the personal information is given adequate safeguards by using 'standard contractual clauses' which have been adopted or approved by the UK and the EU, or other solutions that are in line with the requirements of European data protection laws.

A copy of our security measures for personal information transfers can be obtained from 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.

How long we keep your personal information for

We will retain and process your personal information for as long as necessary to meet the purposes for which it was originally

collected. These periods of time are subject to legal, tax and regulatory requirements or to enable us to manage our business.

Your data protection rights

You have a number of rights under the data protection laws, namely:

- to access your data (by way of a subject access request);
 - 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.

What happens if you fail to provide your personal information to us

If you do not provide us with your personal information, we will not be able to provide you with a contract or assess future claims for the service you have requested.

Fraud prevention and detection

In order to prevent and detect fraud we may at any time:

- check your personal data against counter fraud systems
- use your information to search against various publicly available and third party resources
- use industry fraud tools including undertaking credit searches and to review your claims history
- share information about you with other organisations including but not limited to the police, the Insurance Fraud Bureau (IFB), other insurers and other interested parties.

If you provide false or inaccurate information and fraud is identified, the matter will be investigated and appropriate action taken. This may result in your case being referred to the Insurance Fraud Enforcement Department (IFED) or other police forces and fraud prevention agencies. You may face fines or criminal prosecution. In addition, Zurich may register your name on the Insurance Fraud Register, an industry-wide fraud database.

Claims history

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.

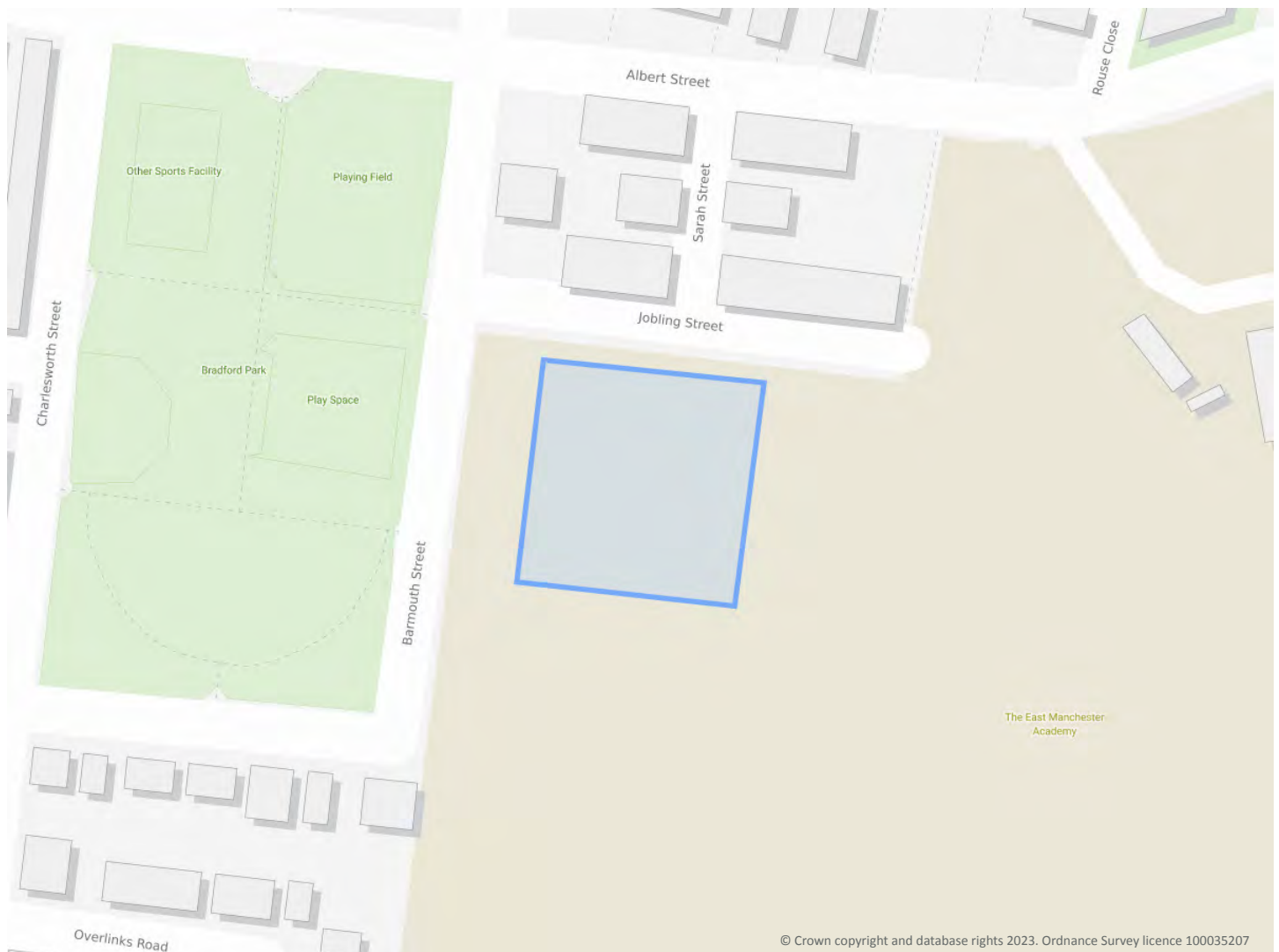
EAST MANCHESTER ACADEMY, GREY MARE LANE, MANCHESTER, M11 3DS

Order Details

Date: 02/03/2023
Your ref: WIE19835-100_REQ121566
Our Ref: WTM1-9392284

Site Details

Location: 386853 397934
Area: 0.3 ha
Authority: [Manchester City Council](#)



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Summary of findings

p. 2 **Aerial image**

p. 8

OS MasterMap site plan

p.12 groundsure.com/insightuserguide

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
13	1.1	Historical industrial land uses	0	0	3	94	-
17	1.2	Historical tanks	0	0	0	17	-
18	1.3	Historical energy features	0	0	5	7	-
19	1.4	Historical petrol stations	0	0	0	0	-
19	1.5	Historical garages	0	0	5	15	-
20	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
21	2.1	Historical industrial land uses	0	0	3	117	-
26	2.2	Historical tanks	0	0	0	19	-
27	2.3	Historical energy features	0	0	13	17	-
28	2.4	Historical petrol stations	0	0	0	0	-
28	2.5	Historical garages	0	0	6	29	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
31	3.1	Active or recent landfill	0	0	0	0	-
31	3.2	Historical landfill (BGS records)	0	0	0	0	-
32	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
32	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
32	3.5	Historical waste sites	0	0	1	8	-
34	3.6	Licensed waste sites	0	0	0	4	-
35	3.7	Waste exemptions	0	0	1	2	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
36	4.1	Recent industrial land uses	0	0	4	-	-
37	4.2	Current or recent petrol stations	0	0	0	1	-
37	4.3	Electricity cables	0	0	0	0	-
37	4.4	Gas pipelines	0	0	0	0	-
37	4.5	Sites determined as Contaminated Land	0	0	0	0	-



38	4.6	<u>Control of Major Accident Hazards (COMAH)</u>	0	0	0	1	-
38	4.7	Regulated explosive sites	0	0	0	0	-
38	4.8	Hazardous substance storage/usage	0	0	0	0	-
38	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
39	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
39	4.11	<u>Licensed pollutant release (Part A(2)/B)</u>	0	0	0	1	-
39	4.12	Radioactive Substance Authorisations	0	0	0	0	-
39	4.13	Licensed Discharges to controlled waters	0	0	0	0	-
40	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
40	4.15	<u>Pollutant release to public sewer</u>	0	0	0	2	-
40	4.16	<u>List 1 Dangerous Substances</u>	0	0	0	3	-
41	4.17	List 2 Dangerous Substances	0	0	0	0	-
41	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
41	4.19	Pollution inventory substances	0	0	0	0	-
41	4.20	Pollution inventory waste transfers	0	0	0	0	-
42	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
43	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
44	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
45	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
46	5.4	<u>Groundwater vulnerability- soluble rock risk</u>	Identified (within 0m)				
46	5.5	Groundwater vulnerability- local information	None (within 0m)				
47	5.6	<u>Groundwater abstractions</u>	0	0	0	0	28
54	5.7	<u>Surface water abstractions</u>	0	0	0	0	6
56	5.8	Potable abstractions	0	0	0	0	0
56	5.9	Source Protection Zones	0	0	0	0	-
57	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
58	6.1	Water Network (OS MasterMap)	0	0	0	-	-



58	6.2	Surface water features	0	0	0	-	-
59	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
59	6.4	<u>WFD Surface water bodies</u>	0	0	0	-	-
60	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
61	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
61	7.2	Historical Flood Events	0	0	0	-	-
61	7.3	Flood Defences	0	0	0	-	-
62	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
62	7.5	Flood Storage Areas	0	0	0	-	-
63	7.6	Flood Zone 2	None (within 50m)				
63	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
64	8.1	<u>Surface water flooding</u>	1 in 1000 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding					
66	9.1	<u>Groundwater flooding</u>	Low (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
67	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
68	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
68	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
68	10.4	Special Protection Areas (SPA)	0	0	0	0	0
68	10.5	National Nature Reserves (NNR)	0	0	0	0	0
69	10.6	<u>Local Nature Reserves (LNR)</u>	0	0	0	0	1
69	10.7	Designated Ancient Woodland	0	0	0	0	0
69	10.8	Biosphere Reserves	0	0	0	0	0
69	10.9	Forest Parks	0	0	0	0	0
70	10.10	Marine Conservation Zones	0	0	0	0	0
70	10.11	<u>Green Belt</u>	0	0	0	0	1
70	10.12	Proposed Ramsar sites	0	0	0	0	0



70	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
71	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
71	10.15	Nitrate Sensitive Areas	0	0	0	0	0
71	10.16	<u>Nitrate Vulnerable Zones</u>	0	0	0	0	1
72	10.17	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
73	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
74	11.1	World Heritage Sites	0	0	0	-	-
74	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
74	11.3	National Parks	0	0	0	-	-
74	11.4	Listed Buildings	0	0	0	-	-
75	11.5	Conservation Areas	0	0	0	-	-
75	11.6	Scheduled Ancient Monuments	0	0	0	-	-
75	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
76	12.1	<u>Agricultural Land Classification</u>	Urban (within 250m)				
77	12.2	Open Access Land	0	0	0	-	-
77	12.3	Tree Felling Licences	0	0	0	-	-
77	12.4	Environmental Stewardship Schemes	0	0	0	-	-
77	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
78	13.1	Priority Habitat Inventory	0	0	0	-	-
78	13.2	Habitat Networks	0	0	0	-	-
78	13.3	Open Mosaic Habitat	0	0	0	-	-
78	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
79	14.1	<u>10k Availability</u>	Identified (within 500m)				
80	14.2	<u>Artificial and made ground (10k)</u>	1	0	2	6	-
82	14.3	<u>Superficial geology (10k)</u>	1	0	0	0	-



83	14.4	Landslip (10k)	0	0	0	0	-
84	14.5	<u>Bedrock geology (10k)</u>	1	0	2	3	-
85	14.6	<u>Bedrock faults and other linear features (10k)</u>	0	0	0	2	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
86	15.1	<u>50k Availability</u>	Identified (within 500m)				
87	15.2	<u>Artificial and made ground (50k)</u>	0	0	1	2	-
88	15.3	Artificial ground permeability (50k)	0	0	-	-	-
89	15.4	<u>Superficial geology (50k)</u>	1	0	0	0	-
90	15.5	<u>Superficial permeability (50k)</u>	Identified (within 50m)				
90	15.6	Landslip (50k)	0	0	0	0	-
90	15.7	Landslip permeability (50k)	None (within 50m)				
91	15.8	<u>Bedrock geology (50k)</u>	1	0	2	3	-
92	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
92	15.10	<u>Bedrock faults and other linear features (50k)</u>	0	0	0	2	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
93	16.1	<u>BGS Boreholes</u>	0	9	54	-	-
Page	Section	Natural ground subsidence					
97	17.1	<u>Shrink swell clays</u>	Very low (within 50m)				
98	17.2	<u>Running sands</u>	Very low (within 50m)				
99	17.3	<u>Compressible deposits</u>	Negligible (within 50m)				
100	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
101	17.5	<u>Landslides</u>	Very low (within 50m)				
102	17.6	<u>Ground dissolution of soluble rocks</u>	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
104	18.1	Natural cavities	0	0	0	0	-
105	18.2	<u>BritPits</u>	0	0	0	5	-
106	18.3	<u>Surface ground workings</u>	0	0	1	-	-
106	18.4	<u>Underground workings</u>	0	0	0	5	2
107	18.5	Historical Mineral Planning Areas	0	0	0	0	-



<u>107</u>	<u>18.6</u>	<u>Non-coal mining</u>	1	0	1	0	0
<u>107</u>	<u>18.7</u>	<u>Mining cavities</u>	0	0	1	0	1
<u>108</u>	<u>18.8</u>	<u>JPB mining areas</u>	Identified (within 0m)				
<u>108</u>	<u>18.9</u>	<u>Coal mining</u>	Identified (within 0m)				
109	18.10	Brine areas	None (within 0m)				
109	18.11	Gypsum areas	None (within 0m)				
109	18.12	Tin mining	None (within 0m)				
109	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
<u>110</u>	<u>19.1</u>	<u>Radon</u>	Less than 1% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
<u>112</u>	<u>20.1</u>	<u>BGS Estimated Background Soil Chemistry</u>	1	1	-	-	-
<u>112</u>	<u>20.2</u>	<u>BGS Estimated Urban Soil Chemistry</u>	1	8	-	-	-
113	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
114	21.1	Underground railways (London)	0	0	0	-	-
114	21.2	Underground railways (Non-London)	0	0	0	-	-
114	21.3	Railway tunnels	0	0	0	-	-
114	21.4	Historical railway and tunnel features	0	0	0	-	-
114	21.5	Royal Mail tunnels	0	0	0	-	-
115	21.6	Historical railways	0	0	0	-	-
115	21.7	Railways	0	0	0	-	-
115	21.8	Crossrail 1	0	0	0	0	-
115	21.9	Crossrail 2	0	0	0	0	-
115	21.10	HS2	0	0	0	0	-



Recent aerial photograph



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Capture Date: 22/04/2019

Site Area: 0.3ha



Recent site history - 2015 aerial photograph

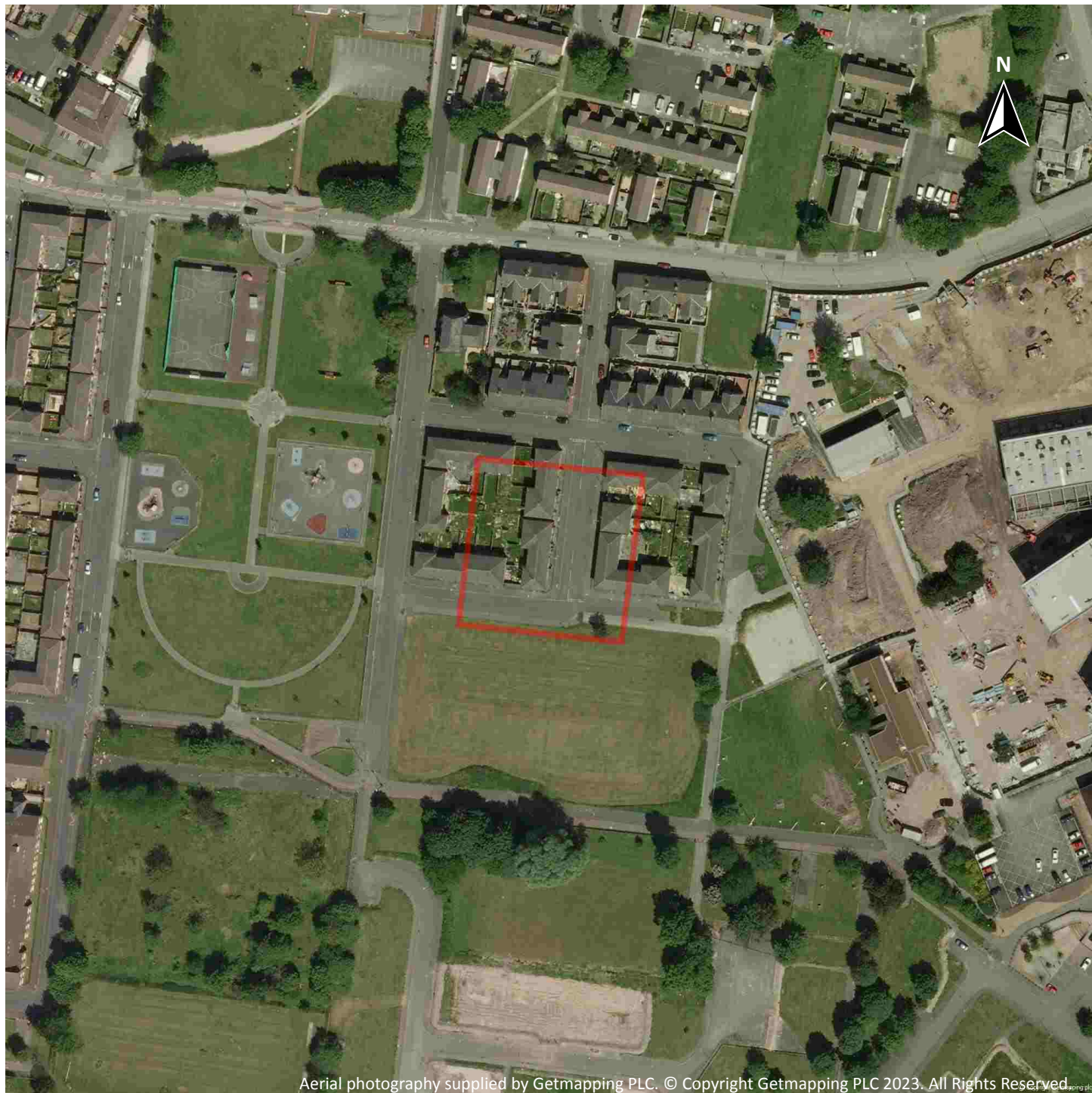


Capture Date: 11/06/2015

Site Area: 0.3ha



Recent site history - 2009 aerial photograph



Capture Date: 02/06/2009

Site Area: 0.3ha



Recent site history - 2000 aerial photograph



Capture Date: 19/06/2000

Site Area: 0.3ha



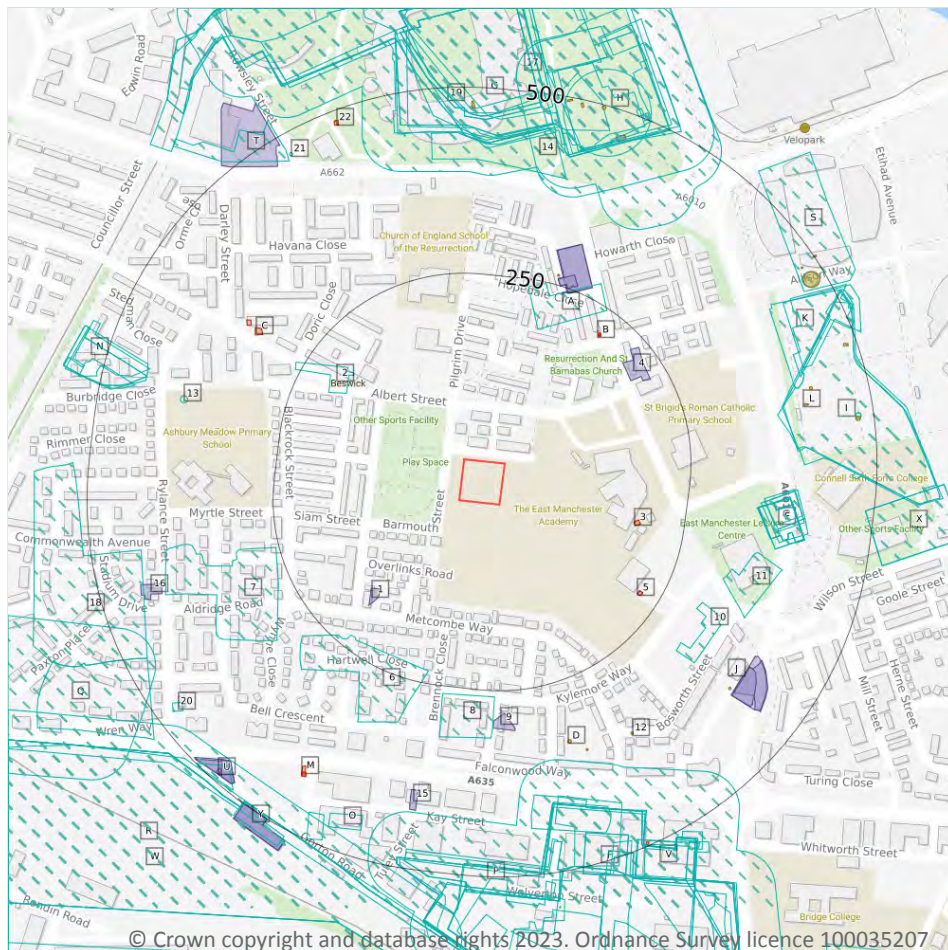
OS MasterMap site plan



Site Area: 0.3ha



1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

97

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

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
2	181m NW	Disused Brewery	1890	823239



ID	Location	Land use	Dates present	Group ID
A	186m N	Tannery	1851	842302
6	227m SW	Brick Works	1851	818775
7	254m W	Brick Field	1851	817946
8	258m S	Brick Field	1851	817945
10	299m SE	Police Station	1985 - 1991	919512
11	317m E	Bleach Works	1851	810797
E	345m E	Police Station	1938	858028
E	345m E	Fire Engine Station	1934	936566
E	345m E	Fire Engine Station	1915	956015
E	346m E	Police Station	1923	889996
E	346m E	Police Station	1905	914704
E	348m E	Police Station	1956	851180
F	350m S	Goods Depot	1956	976388
E	352m E	Police Station	1978	933294
E	353m E	Police Station	1968	964047
G	355m NE	Colliery	1968	890493
E	365m E	Police Station	1934	873063
E	365m E	Police Station	1915	929932
H	368m N	Colliery	1891	971185
E	371m E	Fire Station	1956 - 1968	883197
I	372m E	Chemical Works	1905	971581
13	380m W	Limestone Pit	1851	823447
I	380m E	Disused Chemical Works	1934 - 1938	866287
I	382m E	Chemical Works	1915 - 1923	857688
14	391m N	Unspecified Works	1978	830479
F	393m S	Dye Works	1851	833957
F	399m S	Railway Building	1968	955648
K	402m E	Wheel Works	1915 - 1923	949526



ID	Location	Land use	Dates present	Group ID
F	406m S	Unspecified Commercial/Industrial	1890	847846
F	408m S	Unspecified Works	1915	854297
F	408m S	Goods Depot	1934 - 1938	879320
F	408m S	Unspecified Works	1934	945327
F	409m S	Unspecified Works	1905	881529
F	412m S	Unspecified Works	1923	966597
K	414m E	Unspecified Works	1968	854915
G	419m N	Railway Sidings	1891	916978
G	421m N	Railway Sidings	1906	845027
G	421m N	Railway Sidings	1921 - 1923	872908
H	421m N	Colliery	1906 - 1923	878194
K	421m E	Unspecified Works	1985	871686
H	422m N	Unspecified Commercial/Industrial	1933 - 1938	879239
17	426m N	Iron Works	1956	988439
G	426m N	Iron Works	1921 - 1923	859582
G	430m N	Railway Sidings	1933 - 1938	923517
H	432m N	Unspecified Depot	1985 - 1991	983795
H	432m N	Unspecified Disused Shafts	1991	958517
18	432m W	Brick Field	1851	911690
G	433m N	Unspecified Works	1985	912707
19	433m N	Railway Sidings	1968	976581
H	436m N	Colliery	1851	887196
G	437m N	Railway Sidings	1956	930832
N	439m W	Unspecified Factory	1968	821376
N	440m W	Unspecified Works	1923	896789
N	441m W	Unspecified Works	1934 - 1938	847807
N	441m W	Unspecified Works	1915	951309
O	443m S	Unspecified Works	1915	830428



ID	Location	Land use	Dates present	Group ID
N	453m W	Unspecified Works	1890	961570
P	455m S	Goods Shed	1956 - 1968	858365
F	456m S	Goods Depot	1985	862145
F	456m S	Railway Building	1991	868033
G	457m N	Iron Works	1933 - 1938	850007
G	457m N	Iron Works	1891 - 1906	914404
P	458m S	Goods Depot	1978	906493
Q	459m SW	Brick Field	1890	964395
O	460m SW	Unspecified Works	1923	830429
20	460m SW	Brick Kilns	1851	827899
G	462m N	Unspecified Works	1968 - 1978	935747
G	462m N	Unspecified Works	1991	964432
R	462m SW	Goods, Mineral and Cattle Depot	1938	943935
S	464m NE	Unspecified Commercial/Industrial	1923	976598
T	465m NW	Unspecified Works	1978	830478
S	469m NE	Unspecified Tank	1923	825267
21	469m NW	Coal Pit	1851	808490
Q	470m SW	Lime Works	1851	806813
U	474m SW	Smithy	1915 - 1923	938857
I	475m E	Unspecified Tank	1934	825268
I	476m E	Unspecified Tanks	1915	815400
F	479m S	Railway Sidings	1915 - 1938	975205
V	486m SE	Goods Shed	1956	930318
W	487m S	Railway Sidings	1923	952334
V	487m SE	Goods Shed	1968 - 1978	925453
X	489m E	Unspecified Works	1985 - 1991	950101
X	489m E	Unspecified Works	1968	953001
R	495m SW	Railway Sidings	1985	983601



ID	Location	Land use	Dates present	Group ID
F	496m S	Railway Sidings	1956 - 1968	863500
V	496m SE	Goods Shed	1985	916254
F	496m S	Railway Sidings	1985 - 1991	924818
W	496m S	Railway Sidings	1978	875920
R	497m SW	Goods and Mineral Depot	1978	852697
R	497m SW	Railway Sidings	1956 - 1968	853106
R	497m SW	Goods and Mineral Depot	1985	892970
R	497m SW	Goods, Mineral and Cattle Depot	1956	954774
Y	497m SW	Railway Building	1978	893148
H	497m NE	Unspecified Disused Shafts	1985	877729
F	498m S	Railway Sidings	1890	867053
H	500m NE	Unspecified Shafts	1978	809312

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

17

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

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
A	262m N	Unspecified Tank	1893	115900
D	329m S	Unspecified Tank	1893	115875
D	348m S	Unspecified Tank	1893	115874
12	353m SE	Unspecified Tank	1893	115872
J	386m SE	Unspecified Tank	1893	115878
J	394m SE	Unspecified Tank	1893	115873



ID	Location	Land use	Dates present	Group ID
L	410m E	Tanks	1893	107037
L	422m E	Unspecified Tank	1922	115877
S	470m NE	Unspecified Tank	1893 - 1922	125313
G	472m N	Tank or Trough	1908	121467
I	475m E	Unspecified Tank	1893	115876
S	477m NE	Unspecified Tank	1893	115898
K	482m E	Unspecified Tank	1922	115903
H	489m N	Unspecified Tank	1949	116141
H	493m N	Unspecified Tank	1893	116140
H	494m N	Unspecified Tank	1949	116133
S	498m NE	Tanks	1893	107011

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

12

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

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
3	182m E	Electricity Substation	1977 - 1988	78992
B	212m NE	Electricity Substation	1980	70702
B	212m NE	Electricity Substation	1991	81745
B	213m NE	Electricity Substation	1994 - 1996	73117
5	220m SE	Electricity Substation	1977 - 1996	70932
C	318m NW	Electricity Substation	1949 - 1956	78984
C	338m NW	Electricity Substation	1979 - 1995	78935



ID	Location	Land use	Dates present	Group ID
M	412m SW	Electricity Substation	1984 - 1992	70966
M	420m SW	Electricity Substation	1995	81623
H	458m N	Electricity Substation	1949 - 1953	82552
22	480m N	Electricity Substation	1979 - 1995	66724
V	494m SE	Electricity Substation	1996	62174

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0
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Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	20
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Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
1	160m SW	Garages	1948	20524
4	203m NE	Garage	1953	20326
A	244m NE	Garage	1983	20860
A	244m NE	Garage	1956 - 1979	27080
A	250m N	Garage	1958	21217
9	280m S	Garages	1948	20525



ID	Location	Land use	Dates present	Group ID
15	393m S	Garage	1963	26886
J	399m SE	Garage	1963 - 1988	25750
J	400m SE	Garage	1977	21187
J	401m SE	Garage	1963	20848
16	415m W	Garages	1948 - 1963	24428
U	466m SW	Garage	1963	22017
U	466m SW	Garage	1963 - 1988	26126
T	467m NW	Garage	1983	24112
U	467m SW	Garage	1992 - 1995	27723
U	482m SW	Garage	1992	23026
U	483m SW	Garage	1983	21686
Y	499m SW	Wagon Repair Shed	1948 - 1963	26084
Y	499m SW	Wagon Repair Shed	1948 - 1975	26806
Y	499m SW	Wagon Repairing Shed	1983	24209

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

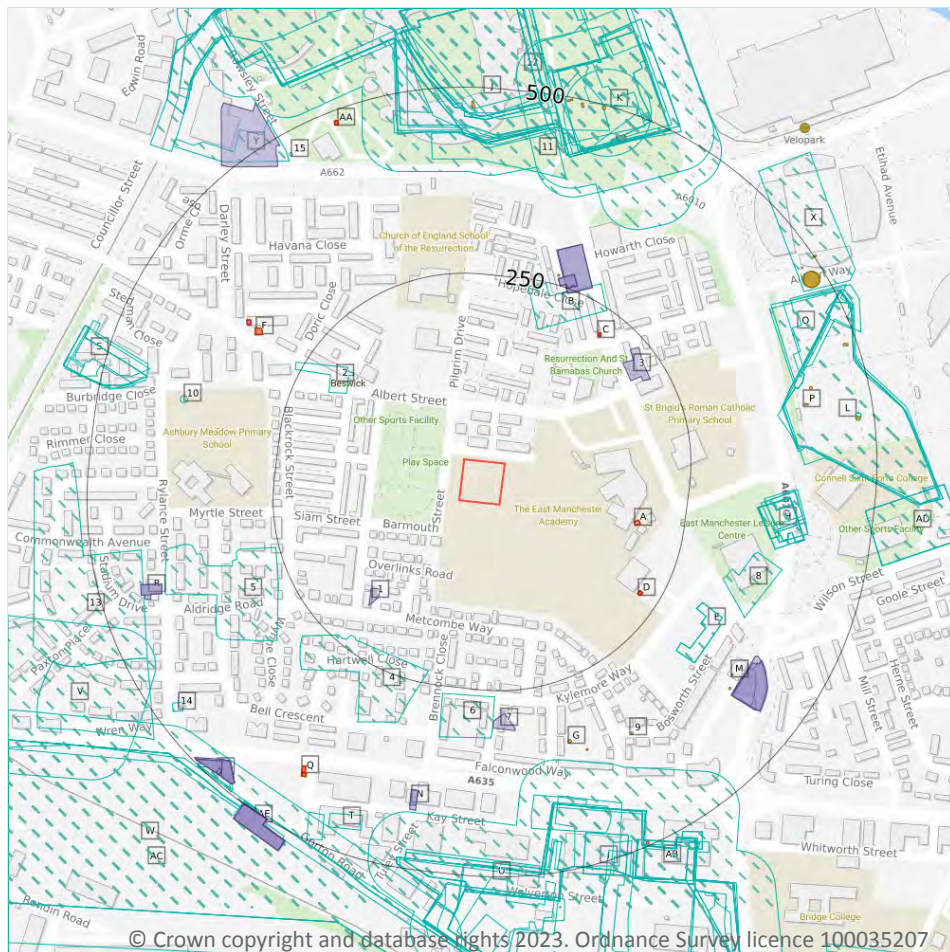
0

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

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



2 Past land use - un-grouped



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

2.1 Historical industrial land uses

Records within 500m

120

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

Features are displayed on the Past land use - un-grouped map on **page 21**

ID	Location	Land Use	Date	Group ID
2	181m NW	Disused Brewery	1890	823239
B	186m N	Tannery	1851	842302
4	227m SW	Brick Works	1851	818775



ID	Location	Land Use	Date	Group ID
5	254m W	Brick Field	1851	817946
6	258m S	Brick Field	1851	817945
E	299m SE	Police Station	1985	919512
E	299m SE	Police Station	1991	919512
8	317m E	Bleach Works	1851	810797
H	345m E	Police Station	1938	858028
H	345m E	Fire Engine Station	1934	936566
H	345m E	Fire Engine Station	1915	956015
H	346m E	Police Station	1905	914704
H	346m E	Police Station	1923	889996
H	348m E	Police Station	1956	851180
I	350m S	Goods Depot	1956	976388
H	352m E	Police Station	1978	933294
H	353m E	Police Station	1968	964047
J	355m NE	Colliery	1968	890493
H	365m E	Police Station	1934	873063
H	365m E	Police Station	1915	929932
K	368m N	Colliery	1891	971185
H	371m E	Fire Station	1956	883197
L	372m E	Chemical Works	1905	971581
H	376m E	Fire Station	1968	883197
10	380m W	Limestone Pit	1851	823447
L	380m E	Disused Chemical Works	1938	866287
L	380m E	Disused Chemical Works	1934	866287
L	382m E	Chemical Works	1923	857688
L	384m E	Chemical Works	1915	857688
11	391m N	Unspecified Works	1978	830479
I	393m S	Dye Works	1851	833957



ID	Location	Land Use	Date	Group ID
I	399m S	Railway Building	1968	955648
O	402m E	Wheel Works	1923	949526
O	405m E	Wheel Works	1915	949526
I	406m S	Unspecified Commercial/Industrial	1890	847846
I	408m S	Goods Depot	1938	879320
I	408m S	Goods Depot	1934	879320
I	408m S	Unspecified Works	1934	945327
I	408m S	Unspecified Works	1915	854297
I	409m S	Unspecified Works	1905	881529
I	412m S	Unspecified Works	1923	966597
O	414m E	Unspecified Works	1968	854915
J	419m N	Railway Sidings	1891	916978
J	421m N	Railway Sidings	1921	872908
J	421m N	Railway Sidings	1906	845027
K	421m N	Colliery	1921	878194
K	421m N	Colliery	1906	878194
K	421m N	Colliery	1923	878194
O	421m E	Unspecified Works	1985	871686
K	422m N	Unspecified Commercial/Industrial	1938	879239
K	422m N	Unspecified Commercial/Industrial	1933	879239
12	426m N	Iron Works	1956	988439
J	426m N	Iron Works	1923	859582
J	426m N	Railway Sidings	1923	872908
J	427m N	Iron Works	1921	859582
J	430m N	Railway Sidings	1938	923517
J	430m N	Railway Sidings	1933	923517
K	432m N	Unspecified Depot	1985	983795
K	432m N	Unspecified Depot	1991	983795



ID	Location	Land Use	Date	Group ID
K	432m N	Unspecified Disused Shafts	1991	958517
13	432m W	Brick Field	1851	911690
J	433m N	Unspecified Works	1985	912707
J	433m N	Railway Sidings	1968	976581
K	436m N	Colliery	1851	887196
J	437m N	Railway Sidings	1956	930832
S	439m W	Unspecified Factory	1968	821376
S	440m W	Unspecified Works	1923	896789
S	441m W	Unspecified Works	1938	847807
S	441m W	Unspecified Works	1934	847807
S	441m W	Unspecified Works	1915	951309
T	443m S	Unspecified Works	1915	830428
S	453m W	Unspecified Works	1890	961570
U	455m S	Goods Shed	1956	858365
I	456m S	Goods Depot	1985	862145
I	456m S	Railway Building	1991	868033
J	457m N	Iron Works	1906	914404
J	457m N	Iron Works	1891	914404
J	457m N	Iron Works	1938	850007
J	457m N	Iron Works	1933	850007
U	458m S	Goods Depot	1978	906493
U	458m S	Goods Shed	1968	858365
V	459m SW	Brick Field	1890	964395
T	460m SW	Unspecified Works	1923	830429
14	460m SW	Brick Kilns	1851	827899
J	462m N	Unspecified Works	1978	935747
J	462m N	Unspecified Works	1991	964432
J	462m N	Unspecified Works	1968	935747



ID	Location	Land Use	Date	Group ID
W	462m SW	Goods, Mineral and Cattle Depot	1938	943935
X	464m NE	Unspecified Commercial/Industrial	1923	976598
Y	465m NW	Unspecified Works	1978	830478
X	469m NE	Unspecified Tank	1923	825267
15	469m NW	Coal Pit	1851	808490
V	470m SW	Lime Works	1851	806813
Z	474m SW	Smithy	1915	938857
Z	475m SW	Smithy	1923	938857
L	475m E	Unspecified Tank	1934	825268
L	476m E	Unspecified Tanks	1915	815400
I	479m S	Railway Sidings	1915	975205
AB	486m SE	Goods Shed	1956	930318
AC	487m S	Railway Sidings	1923	952334
AB	487m SE	Goods Shed	1978	925453
AB	487m SE	Goods Shed	1968	925453
AD	489m E	Unspecified Works	1985	950101
AD	489m E	Unspecified Works	1991	950101
AD	489m E	Unspecified Works	1968	953001
W	495m SW	Railway Sidings	1985	983601
I	496m S	Railway Sidings	1956	863500
AB	496m SE	Goods Shed	1985	916254
I	496m S	Railway Sidings	1985	924818
I	496m S	Railway Sidings	1991	924818
I	496m S	Railway Sidings	1968	863500
AC	496m S	Railway Sidings	1978	875920
W	497m SW	Railway Sidings	1956	853106
W	497m SW	Goods, Mineral and Cattle Depot	1956	954774
W	497m SW	Goods and Mineral Depot	1985	892970



ID	Location	Land Use	Date	Group ID
W	497m SW	Goods and Mineral Depot	1978	852697
AE	497m SW	Railway Building	1978	893148
K	497m NE	Unspecified Disused Shafts	1985	877729
I	498m S	Railway Sidings	1890	867053
K	500m NE	Unspecified Shafts	1978	809312

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

19

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

Features are displayed on the Past land use - un-grouped map on **page 21**

ID	Location	Land Use	Date	Group ID
B	262m N	Unspecified Tank	1893	115900
G	329m S	Unspecified Tank	1893	115875
G	348m S	Unspecified Tank	1893	115874
9	353m SE	Unspecified Tank	1893	115872
M	386m SE	Unspecified Tank	1893	115878
M	394m SE	Unspecified Tank	1893	115873
P	410m E	Tanks	1893	107037
P	422m E	Unspecified Tank	1922	115877
X	470m NE	Unspecified Tank	1893	125313
X	470m NE	Unspecified Tank	1908	125313
X	470m NE	Unspecified Tank	1922	125313
J	472m N	Tank or Trough	1908	121467
L	475m E	Unspecified Tank	1893	115876
X	477m NE	Unspecified Tank	1893	115898
O	482m E	Unspecified Tank	1922	115903



ID	Location	Land Use	Date	Group ID
K	489m N	Unspecified Tank	1949	116141
K	493m N	Unspecified Tank	1893	116140
K	494m N	Unspecified Tank	1949	116133
X	498m NE	Tanks	1893	107011

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	30
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Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 21**

ID	Location	Land Use	Date	Group ID
A	182m E	Electricity Substation	1977	78992
A	182m E	Electricity Substation	1988	78992
C	212m NE	Electricity Substation	1980	70702
C	212m NE	Electricity Substation	1991	81745
C	213m NE	Electricity Substation	1996	73117
C	213m NE	Electricity Substation	1996	73117
C	213m NE	Electricity Substation	1995	73117
C	213m NE	Electricity Substation	1994	73117
D	220m SE	Electricity Substation	1988	70932
D	221m SE	Electricity Substation	1977	70932
D	221m SE	Electricity Substation	1994	70932
D	221m SE	Electricity Substation	1996	70932
D	221m SE	Electricity Substation	1995	70932
F	318m NW	Electricity Substation	1956	78984
F	318m NW	Electricity Substation	1949	78984
F	338m NW	Electricity Substation	1995	78935



ID	Location	Land Use	Date	Group ID
F	339m NW	Electricity Substation	1979	78935
F	339m NW	Electricity Substation	1983	78935
Q	412m SW	Electricity Substation	1984	70966
Q	412m SW	Electricity Substation	1988	70966
Q	412m SW	Electricity Substation	1992	70966
Q	420m SW	Electricity Substation	1995	81623
Q	420m SW	Electricity Substation	1995	81623
K	458m N	Electricity Substation	1949	82552
K	458m N	Electricity Substation	1953	82552
K	458m N	Electricity Substation	1949	82552
AA	480m N	Electricity Substation	1979	66724
AA	480m N	Electricity Substation	1983	66724
AA	480m N	Electricity Substation	1995	66724
AB	494m SE	Electricity Substation	1996	62174

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m

35

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

Features are displayed on the Past land use - un-grouped map on **page 21**



ID	Location	Land Use	Date	Group ID
1	160m SW	Garages	1948	20524
3	203m NE	Garage	1953	20326
B	244m NE	Garage	1983	20860
B	244m NE	Garage	1979	27080
B	250m N	Garage	1958	21217
B	250m N	Garage	1956	27080
7	280m S	Garages	1948	20525
N	393m S	Garage	1963	26886
N	394m S	Garage	1963	26886
M	399m SE	Garage	1988	25750
M	400m SE	Garage	1977	21187
M	401m SE	Garage	1963	20848
M	401m SE	Garage	1963	25750
R	415m W	Garages	1963	24428
R	415m W	Garages	1948	24428
Z	466m SW	Garage	1963	22017
Z	466m SW	Garage	1963	26126
Y	467m NW	Garage	1983	24112
Z	467m SW	Garage	1995	27723
Z	467m SW	Garage	1995	27723
Z	467m SW	Garage	1984	26126
Z	467m SW	Garage	1988	26126
Z	467m SW	Garage	1992	27723
Z	474m SW	Garage	1993	27723
Z	474m SW	Garage	1995	27723
Z	474m SW	Garage	1993	27723
Z	482m SW	Garage	1992	23026
Z	483m SW	Garage	1983	21686

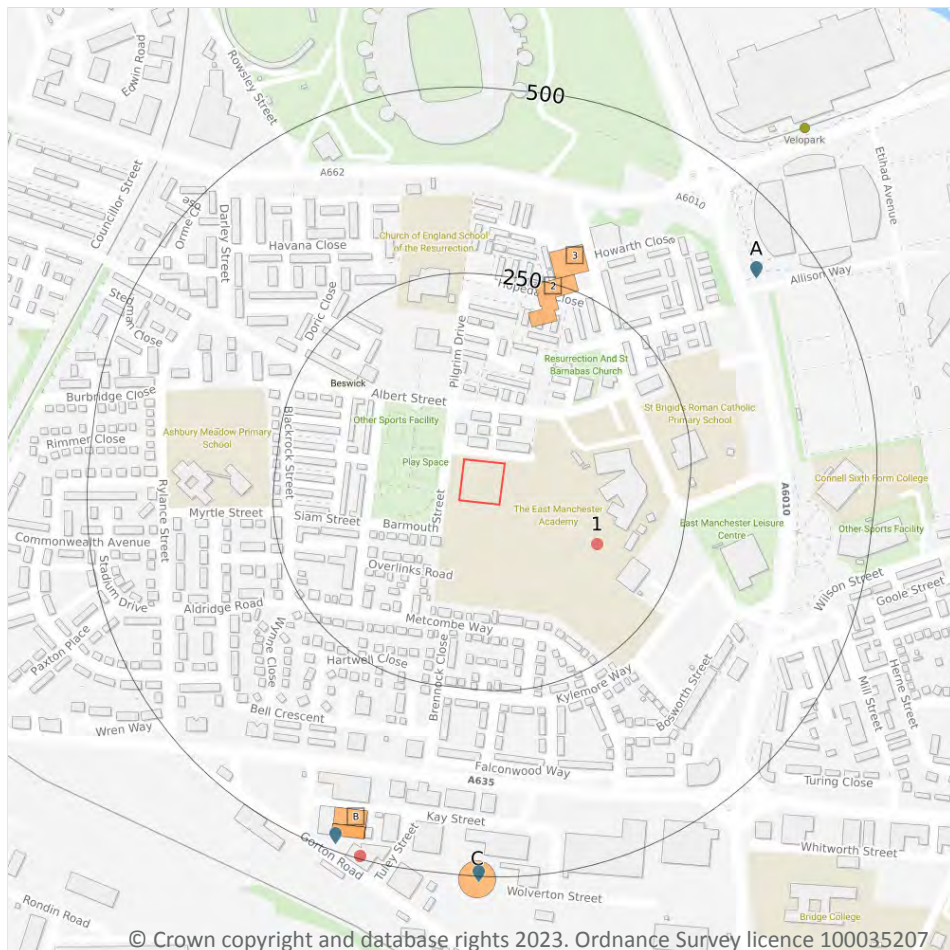


ID	Location	Land Use	Date	Group ID
Z	484m SW	Garage	1981	26126
AE	499m SW	Wagon Repair Shed	1963	26084
AE	499m SW	Wagon Repair Shed	1948	26084
AE	499m SW	Wagon Repair Shed	1975	26806
AE	499m SW	Wagon Repair Shed	1948	26806
AE	499m SW	Wagon Repair Shed	1953	26806
AE	499m SW	Wagon Repairing Shed	1983	24209

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical waste sites
- Licensed waste sites
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

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

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

3.2 Historical landfill (BGS records)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m

0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m

0

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

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

3.5 Historical waste sites

Records within 500m

9

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

Features are displayed on the Waste and landfill map on **page 31**

ID	Location	Address	Further Details	Date
2	186m N	Site Address: N/A	Type of Site: Scrap Metal Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1956
3	257m N	Site Address: N/A	Type of Site: Scrap Metal Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1956
B	435m S	Site Address: N/A	Type of Site: Scrap Metal Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1948

ID	Location	Address	Further Details	Date
B	456m S	Site Address: N/A	Type of Site: Scrap Metal Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1963
B	457m S	Site Address: N/A	Type of Site: Scrap Metal Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1975
B	457m S	Site Address: N/A	Type of Site: Scrap Metal Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1948
B	457m S	Site Address: N/A	Type of Site: Scrap Metal Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1953
B	457m S	Site Address: N/A	Type of Site: Scrap Metal Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1983
C	479m S	Site Address: Wolverton & Turley Street, Beswick Street, MANCHESTER, Greater Manchester, M11	Type of Site: Waste Management Facility Planning application reference: 096226/FO/2011/N2 Description: Scheme comprises provision of new waste management facility. An application (ref: 096226/FO/2011/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	02/11/201 1

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



3.6 Licensed waste sites

Records within 500m

4

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

Features are displayed on the Waste and landfill map on **page 31**

ID	Location	Details		
A	426m NE	Site Name: F W Singleton Ltd Site Address: Land/premises At, Score Street, Clayton, Manchester, M11 2SN Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FWS001 EPR reference: EA/EPR/JP3092CU/S002 Operator: F W Singleton Ltd Waste Management licence No: 53626 Annual Tonnage: 383333.272	Issue Date: 08/12/1995 Effective Date: - Modified: - Surrendered Date: May 23 2013 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered
A	426m NE	Site Name: F W Singleton Ltd Site Address: Land/premises At, Score Street, Clayton, Manchester, M11 2SN Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FWS001 EPR reference: EA/EPR/JP3092CU/S002 Operator: F W Singleton Ltd Waste Management licence No: 53626 Annual Tonnage: 383333	Issue Date: 08/12/1995 Effective Date: - Modified: - Surrendered Date: May 23 2013 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered
B	480m SW	Site Name: Breakers Yard, 8 Tuley Street Site Address: 8, Tuley Street, Gorton, Manchester, M11 2DY Correspondence Address: -	Type of Site: 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	Issue Date: 27/07/2011 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked



ID	Location	Details		
C	495m S	Site Name: Singleton's Scrap Metal Ltd Site Address: Singleton's Scrap Metal Ltd, Land Off Wolveton Street, Openshaw, Manchester, M11 2DU Correspondence Address: -	Type of Site: 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	Issue Date: 20/08/2012 Effective Date: - Modified: - Surrendered Date: Oct 24 2012 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered

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

3.7 Waste exemptions

Records within 500m	3
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Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

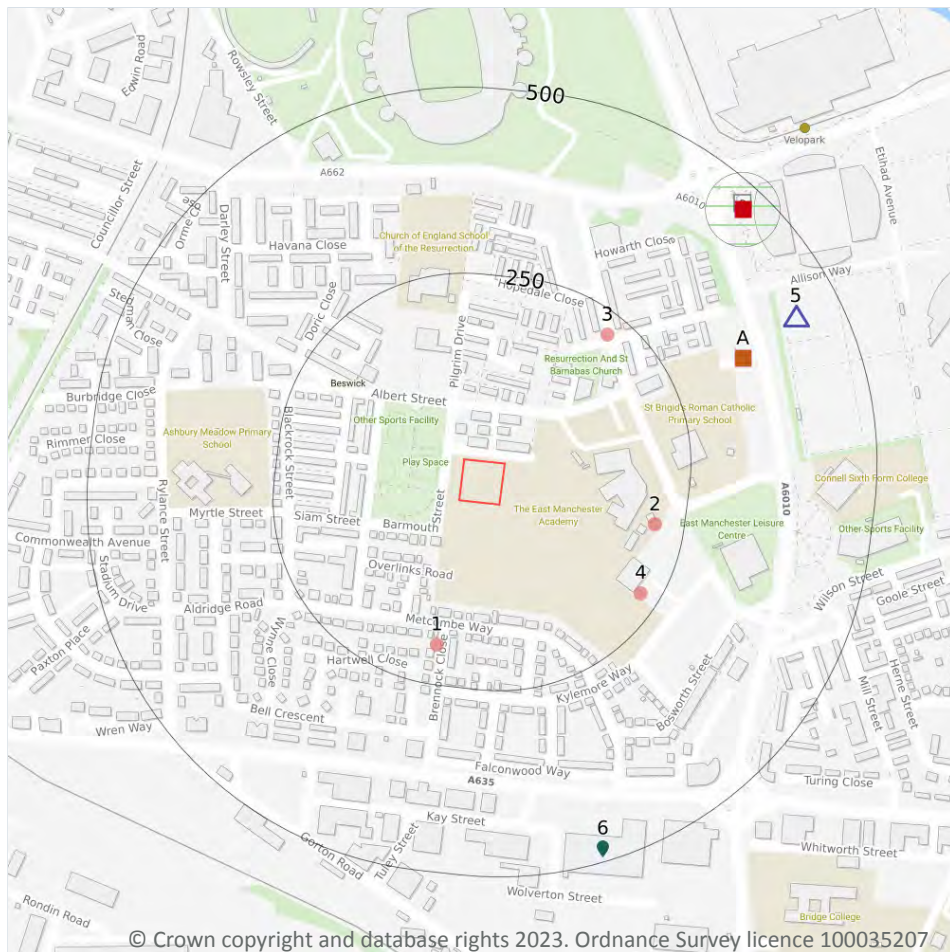
Features are displayed on the Waste and landfill map on **page 31**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	142m SE	East Manchester Academy Grey Mare Lane Manchester Manchester M11 3DS	EPR/SE5848N M/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction
B	497m S	southside railings, Gorton road, ardwick, manchester, m112dz	WEX088425	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	497m S	southside railings, Gorton road, ardwick, manchester, m112dz	WEX088425	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)

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



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- ▲ Current or recent petrol stations
- Control of Major Accident Hazards
- Licensed pollutant release (Part A(2)/B)
- Pollutant release to public sewer
- List 1 Dangerous Substances

4.1 Recent industrial land uses

Records within 250m

4

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 36**

ID	Location	Company	Address	Activity	Category
1	196m S	Electricity Sub Station	Greater Manchester, M11	Electrical Features	Infrastructure and Facilities
2	211m E	Electricity Sub Station	Greater Manchester, M11	Electrical Features	Infrastructure and Facilities
3	221m NE	Electricity Sub Station	Greater Manchester, M11	Electrical Features	Infrastructure and Facilities



ID	Location	Company	Address	Activity	Category
4	224m SE	Electricity Sub Station	Greater Manchester, M11	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	1
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Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 36**

ID	Location	Company	Address	LPG	Status
5	438m NE	ESSO	26-52, Grey Mare Lane, Bradford, Manchester, Greater Manchester, M11 3DG	Not Applicable	Obsolete

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0
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High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0
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High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0
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Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m

1

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

Features are displayed on the Current industrial land use map on **page 36**

ID	Location	Company	Address	Operational status	Tier
B	417m NE	Rhodia Ltd	Rhodia Ltd, Ashton New Road, Manchester, M11 4AT	Historical NIHHS Site	-

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m

0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m

0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m

0

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

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



4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

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

4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m

1

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

Features are displayed on the Current industrial land use map on **page 36**

ID	Location	Address	Details	
6	482m S	K2 Direct Mail Ltd, 21 Kay Street, Openshaw, M11 2DX	Process: Coating Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m

0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m

0

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

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



4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

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

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

4.15 Pollutant release to public sewer

Records within 500m

2

Discharges of Special Category Effluents to the public sewer.

Features are displayed on the Current industrial land use map on **page 36**

ID	Location	Address	Details	
A	349m NE	FH TOMKINS BUCKLE CO LTD, SCORE STREET, SCORE STREET, MANCHESTER, MANCHESTER, M11 2BW	Permission reference: BG2612 Local Authority: MANCHESTER CITY COUNCIL First received date: 01/07/2010	Last received date: 01/01/2018 Status: RECEIVED
A	349m NE	CLIFFORD WHATMOUGH LTD (DISSOLVED), SCORE STREET, SCORE STREET, MANCHESTER, MANCHESTER, M11 2BW	Permission reference: AW4917 Local Authority: MANCHESTER CITY COUNCIL First received date: 01/07/2010	Last received date: 01/01/2018 Status: RECEIVED

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

4.16 List 1 Dangerous Substances

Records within 500m

3

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

Features are displayed on the Current industrial land use map on **page 36**

ID	Location	Name	Status	Receiving Water	Authorised Substances
A	349m NE	F H Tomkins Buckle Co Ltd, Union Eyelet Works, Manchester	Not Active	Manchester Ship Canal	Cadmium
B	467m NE	Rhodia Industrial Specialities Ltd,	Active	Manchester Ship Canal	Cadmium
B	467m NE	Rhodia Industrial Specialities Ltd,	Active	Manchester Ship Canal	Cadmium



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

4.17 List 2 Dangerous Substances

Records within 500m

0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m

0

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

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

4.19 Pollution inventory substances

Records within 500m

0

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

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

4.20 Pollution inventory waste transfers

Records within 500m

0

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

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



4.21 Pollution inventory radioactive waste

Records within 500m

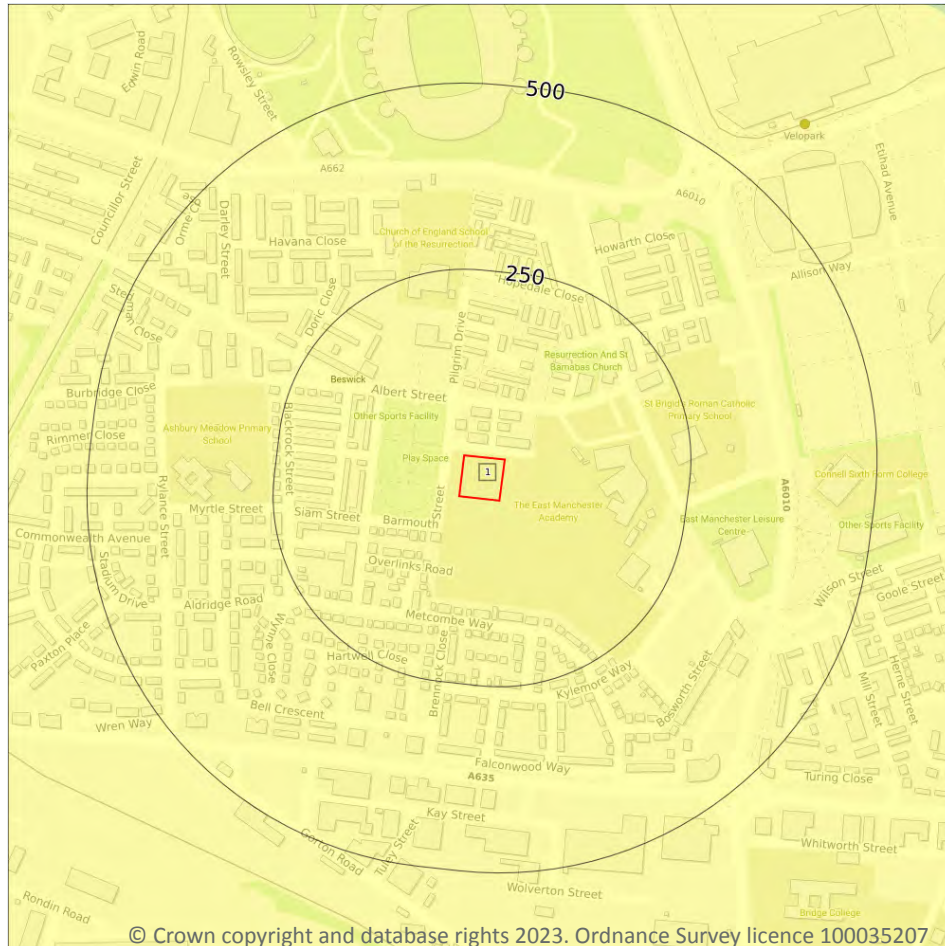
0

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

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



5 Hydrogeology - Superficial aquifer



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

5.1 Superficial aquifer

Records within 500m

1

Aquifer status of groundwater held within superficial geology.

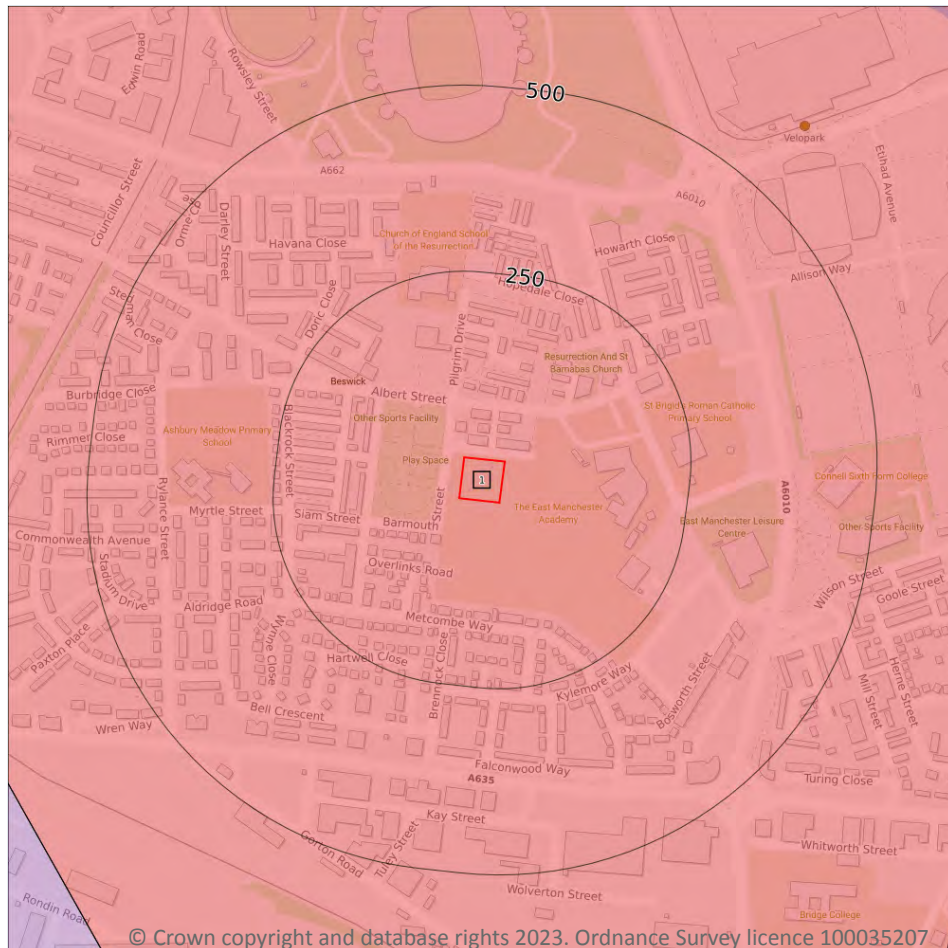
Features are displayed on the Hydrogeology map on **page 43**

ID	Location	Designation	Description
1	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

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



Bedrock aquifer



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

5.2 Bedrock aquifer

Records within 500m

1

Aquifer status of groundwater held within bedrock geology.

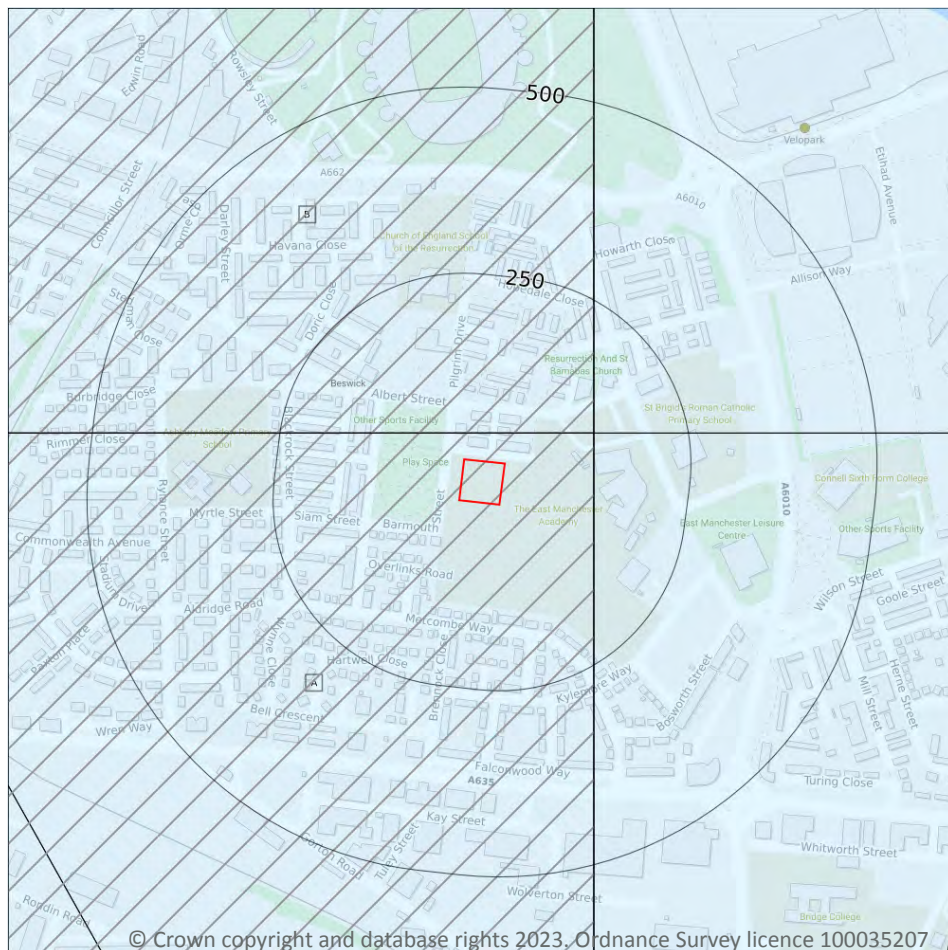
Features are displayed on the Bedrock aquifer map on **page 44**

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

2

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 45**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
A	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300-550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Medium	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
B	35m N	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300-550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Medium	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	1
------------------------	----------

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
A	Significant soluble rocks are likely to be present. Problems unlikely except with considerable surface or subsurface water flow.	4.0%

This data is sourced from the British Geological Survey and the Environment Agency.

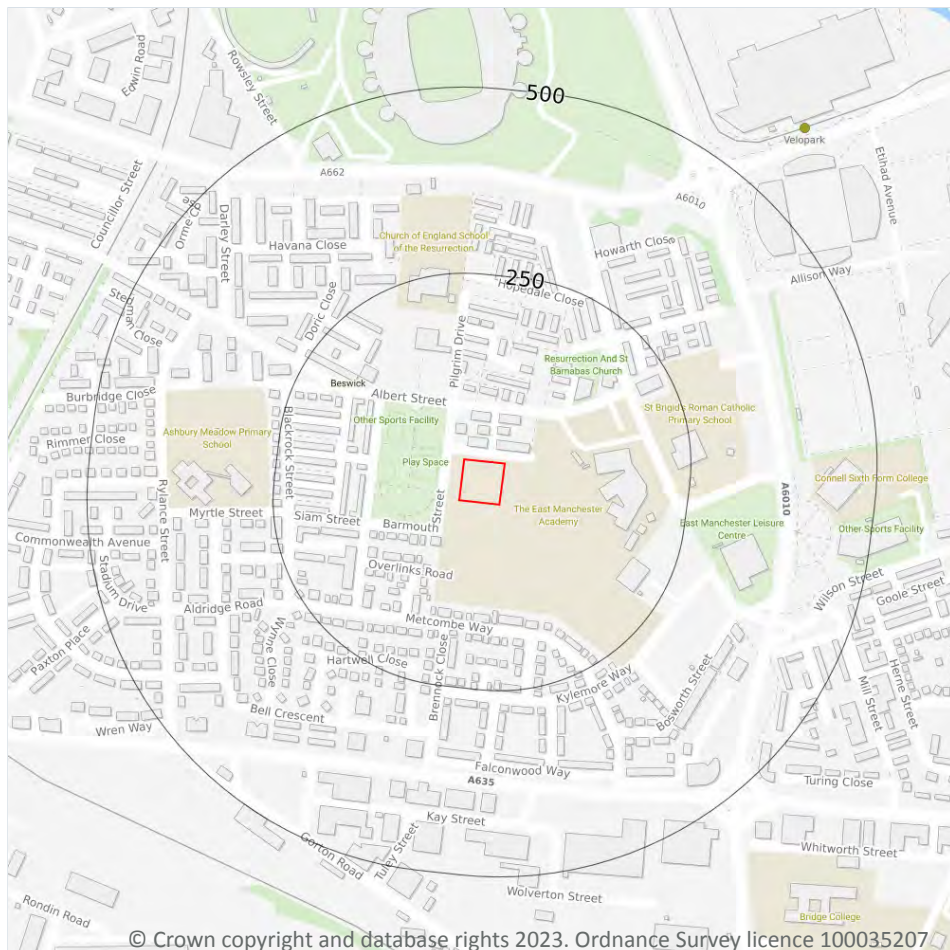
5.5 Groundwater vulnerability- local information

Records on site	0
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This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk.

This data is sourced from the British Geological Survey and the Environment Agency.

Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)
- Source Protection Zone 1
Inner catchment
- Source Protection Zone 2
Outer catchment
- Source Protection Zone 3
Total catchment
- Source Protection Zone 4
Zone of Special Interest
- Source Protection Zone 1c
Inner catchment - confined aquifer
- Source Protection Zone 2c
Outer catchment - confined aquifer
- Source Protection Zone 3c
Total catchment - confined aquifer
- Drinking water abstraction licences
Polygon features
- Drinking water abstraction licences
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m

28

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 47**

ID	Location	Details	
-	803m E	Status: Historical Licence No: NW/069/0006/005 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT OPENSHAW, WEST ASHTON Data Type: Point Name: MANCHESTER CITY FOOTBALL CLUB LIMITED Easting: 387681 Northing: 398032	Annual Volume (m ³): 266113 Max Daily Volume (m ³): 1000 Original Application No: - Original Start Date: 14/11/2012 Expiry Date: 31/03/2018 Issue No: 1 Version Start Date: 14/11/2012 Version End Date: -
-	803m E	Status: Historical Licence No: NW/069/0006/005 Details: Horticultural Watering Direct Source: Ground Water - North West Region Point: BOREHOLE AT OPENSHAW, WEST ASHTON Data Type: Point Name: MANCHESTER CITY FOOTBALL CLUB LIMITED Easting: 387681 Northing: 398032	Annual Volume (m ³): 266113 Max Daily Volume (m ³): 1000 Original Application No: - Original Start Date: 14/11/2012 Expiry Date: 31/03/2018 Issue No: 1 Version Start Date: 14/11/2012 Version End Date: -
-	803m E	Status: Historical Licence No: NW/069/0006/005 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT OPENSHAW, WEST ASHTON Data Type: Point Name: MANCHESTER CITY FOOTBALL CLUB LIMITED Easting: 387681 Northing: 398032	Annual Volume (m ³): 266113 Max Daily Volume (m ³): 1000 Original Application No: - Original Start Date: 14/11/2012 Expiry Date: 31/03/2018 Issue No: 1 Version Start Date: 14/11/2012 Version End Date: -
-	803m E	Status: Active Licence No: NW/069/0006/005/R01 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT OPENSHAW, WEST ASHTON Data Type: Point Name: MANCHESTER CITY FOOTBALL CLUB LIMITED Easting: 387681 Northing: 398032	Annual Volume (m ³): 221,650 Max Daily Volume (m ³): 1,000 Original Application No: NPS/WR/024168 Original Start Date: 01/04/2018 Expiry Date: 31/03/2024 Issue No: 1 Version Start Date: 01/04/2018 Version End Date: -
-	803m E	Status: Active Licence No: NW/069/0006/005/R01 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT OPENSHAW, WEST ASHTON Data Type: Point Name: MANCHESTER CITY FOOTBALL CLUB LIMITED Easting: 387681 Northing: 398032	Annual Volume (m ³): 221,650 Max Daily Volume (m ³): 1,000 Original Application No: NPS/WR/024168 Original Start Date: 01/04/2018 Expiry Date: 31/03/2024 Issue No: 1 Version Start Date: 01/04/2018 Version End Date: -



ID	Location	Details	
-	831m E	Status: Historical Licence No: 2569006026 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PREMISES, CLAYTON, MANCHESTER" Data Type: Point Name: CIBA SPECIALTY CHEMICALS PLC Easting: 387700 Northing: 398100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 24/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 25/07/2000 Version End Date: -
-	831m E	Status: Historical Licence No: 2569006026 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PREMISES, CLAYTON, MANCHESTER" Data Type: Point Name: CIBA SPECIALTY CHEMICALS PLC Easting: 387700 Northing: 398100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 24/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 25/07/2000 Version End Date: -
-	831m E	Status: Historical Licence No: 2569006026 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, CLAYTON, MANCHESTER Data Type: Point Name: CIBA SPECIALTY CHEMICALS PLC Easting: 387700 Northing: 398100	Annual Volume (m ³): 633962 Max Daily Volume (m ³): 2837 Original Application No: - Original Start Date: 24/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 25/07/2000 Version End Date: -
-	831m E	Status: Historical Licence No: 2569006026 Details: Process water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, CLAYTON, MANCHESTER Data Type: Point Name: CIBA SPECIALTY CHEMICALS PLC Easting: 387700 Northing: 398100	Annual Volume (m ³): 633962 Max Daily Volume (m ³): 2837 Original Application No: - Original Start Date: 24/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 25/07/2000 Version End Date: -

ID	Location	Details	
-	1063m NE	Status: Active Licence No: 2569006037 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: BOREHOLE 2 ON PREMISES AT CROFT STREET, CLAYTON, MANCHESTER Data Type: Point Name: Evonik Chemicals Ltd Easting: 387859 Northing: 398375	Annual Volume (m ³): 111,831.60 Max Daily Volume (m ³): 654.62 Original Application No: NPS/WR/035267 Original Start Date: 21/05/1985 Expiry Date: - Issue No: 104 Version Start Date: 19/04/2021 Version End Date: -
-	1065m NE	Status: Active Licence No: 2569006037 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: BOREHOLE 1 ON PREMISES AT CROFT STREET, CLAYTON, MANCHESTER Data Type: Point Name: Evonik Chemicals Ltd Easting: 387860 Northing: 398379	Annual Volume (m ³): 111,831.60 Max Daily Volume (m ³): 654.62 Original Application No: NPS/WR/035267 Original Start Date: 21/05/1985 Expiry Date: - Issue No: 104 Version Start Date: 19/04/2021 Version End Date: -
-	1110m NE	Status: Historical Licence No: 2569006037 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLES (2) ON PREMISES AT CROFT ST, CLAYTON, MANCHESTER" Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 387900 Northing: 398400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -
-	1110m NE	Status: Historical Licence No: 2569006037 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLES (2) ON PREMISES AT CROFT ST, CLAYTON, MANCHESTER Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 387900 Northing: 398400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -

ID	Location	Details	
-	1110m NE	Status: Historical Licence No: 2569006037 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLES X 2 ON PREMISES AT CROFT STREET CLAYTON MANCHESTER Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 387900 Northing: 398400	Annual Volume (m ³): 111832 Max Daily Volume (m ³): 654.624 Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -
-	1145m E	Status: Historical Licence No: 2569006036 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE ON PREMISES AT CLAYTON, MANCHESTER" Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 388000 Northing: 398200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -
-	1145m E	Status: Historical Licence No: 2569006036 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE ON PREMISES AT CLAYTON, MANCHESTER" Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 388000 Northing: 398200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -
-	1145m E	Status: Historical Licence No: 2569006036 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE ON PREMISES AT CLAYTON, MANCHESTER Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 388000 Northing: 398200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -

ID	Location	Details	
-	1145m E	Status: Historical Licence No: 2569006036 Details: Process water Direct Source: Ground Water - North West Region Point: BOREHOLE ON PREMISES AT CLAYTON, MANCHESTER Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 388000 Northing: 398200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -
-	1145m E	Status: Historical Licence No: 2569006036 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE ON PREMISES AT CLAYTON MANCHESTER Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 388000 Northing: 398200	Annual Volume (m ³): 372772 Max Daily Volume (m ³): 3600.5 Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -
-	1145m E	Status: Historical Licence No: 2569006036 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE ON PREMISES AT CLAYTON MANCHESTER Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 388000 Northing: 398200	Annual Volume (m ³): 372772 Max Daily Volume (m ³): 3600.5 Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -
-	1189m E	Status: Active Licence No: 2569006036 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: BOREHOLE ON PREMISES AT CLAYTON, MANCHESTER Data Type: Point Name: Evonik Chemicals Ltd Easting: 388027 Northing: 398277	Annual Volume (m ³): 372,772 Max Daily Volume (m ³): 3,600.50 Original Application No: NPS/WR/035265 Original Start Date: 21/05/1985 Expiry Date: - Issue No: 104 Version Start Date: 19/04/2021 Version End Date: -

ID	Location	Details	
-	1544m SW	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 Easting: 385729 Northing: 396778	Annual Volume (m ³): 2,049,840 Max Daily Volume (m ³): 8640 Original Application No: - Original Start Date: 17/01/2013 Expiry Date: 16/01/2037 Issue No: 2 Version Start Date: 11/06/2013 Version End Date: -
-	1544m SE	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 Easting: 388030 Northing: 396880	Annual Volume (m ³): 15000 Max Daily Volume (m ³): 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: -
-	1544m SE	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 Easting: 388030 Northing: 396880	Annual Volume (m ³): 7,500 Max Daily Volume (m ³): 72 Original Application No: NPS/WR/030760A Original Start Date: 19/06/2014 Expiry Date: 31/03/2027 Issue No: 2 Version Start Date: 21/12/2018 Version End Date: -
-	1621m W	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 Easting: 385240 Northing: 397540	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 08/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 08/02/1966 Version End Date: -

ID	Location	Details	
-	1621m W	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 Easting: 385240 Northing: 397540	Annual Volume (m ³): 331858 Max Daily Volume (m ³): 909.2 Original Application No: - Original Start Date: 08/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 08/02/1966 Version End Date: -
-	1846m N	Status: Historical Licence No: 2569005061 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT NORTON STREET, MILES PLATTING, MANCHESTER" Data Type: Point Name: HANSON QUARRY PRODUCTS EUROPE LTD Easting: 386550 Northing: 399790	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 08/02/2000 Expiry Date: - Issue No: 2 Version Start Date: 01/07/2000 Version End Date: -
-	1846m N	Status: Active Licence No: 2569005061 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT NORTON STREET, MILES PLATTING, MANCHESTER Data Type: Point Name: HANSON QUARRY PRODUCTS EUROPE LIMITED Easting: 386550 Northing: 399790	Annual Volume (m ³): 33,000 Max Daily Volume (m ³): 125 Original Application No: NPS/WR/011609 Original Start Date: 08/02/2000 Expiry Date: - Issue No: 3 Version Start Date: 13/08/2012 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

6

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 47**



ID	Location	Details	
-	844m NE	Status: Historical Licence No: 2569006996 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: ASHTON CANAL, MANCHESTER [VITACOM] Data Type: Point Name: BRITISH WATERWAYS Easting: 387600 Northing: 398400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 01/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1969 Version End Date: -
-	1019m NE	Status: Historical Licence No: 2569006997 Details: Process water Direct Source: "Surface, Non-Tidal - North West Region" Point: "ASHTON CANAL, MANCHESTER [CLAYTON ANALINE]" Data Type: Point Name: BRITISH WATERWAYS Easting: 387800 Northing: 398400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 01/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1969 Version End Date: -
-	1019m NE	Status: Historical Licence No: 2569006997 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: ASHTON CANAL, MANCHESTER [CLAYTON ANALINE] Data Type: Point Name: BRITISH WATERWAYS BOARD Easting: 387800 Northing: 398400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 01/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1969 Version End Date: -
-	1019m NE	Status: Active Licence No: 2569006997 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: ASHTON CANAL MANCHESTER CLAYTON ANALINE Data Type: Point Name: Canal and River Trust Easting: 387800 Northing: 398400	Annual Volume (m ³): 3,500,420 Max Daily Volume (m ³): 3,500,420 Original Application No: 1470 Original Start Date: 01/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1969 Version End Date: -



ID	Location	Details	
-	1266m E	Status: Historical Licence No: 2569006995 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "ASHTON CANAL, MANCHESTER" Data Type: Point Name: BRITISH WATERWAYS Easting: 388100 Northing: 398300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 01/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1969 Version End Date: -
-	1266m E	Status: Historical Licence No: 2569006995 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: ASHTON CANAL, MANCHESTER Data Type: Point Name: Canal and River Trust Easting: 388100 Northing: 398300	Annual Volume (m ³): 68,190 Max Daily Volume (m ³): 68,190 Original Application No: - Original Start Date: 01/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1969 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	0
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Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

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

5.9 Source Protection Zones

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m

0

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

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



6 Hydrology



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

6.1 Water Network (OS MasterMap)

Records within 250m

0

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

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

0

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



This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site

1

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

Features are displayed on the Hydrology map on **page 58**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River	Irwell / Manchester Ship Canal (Irk to confluence with Upper Mers	GB112069061452	Croal Irwell	Irwell

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

6.4 WFD Surface water bodies

Records identified

1

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on **page 58**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	3122m W	River	Irwell / Manchester Ship Canal (Irk to confluence with Upper Mers	GB112069061452	Moderate	Fail	Moderate	2019

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



6.5 WFD Groundwater bodies

Records on site

1

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

Features are displayed on the Hydrology map on **page 58**

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

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



7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m**0**

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

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

7.2 Historical Flood Events

Records within 250m**0**

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

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

7.3 Flood Defences

Records within 250m**0**

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

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



7.4 Areas Benefiting from Flood Defences

Records within 250m

0

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

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

7.5 Flood Storage Areas

Records within 250m

0

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

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



River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

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

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

7.7 Flood Zone 3

Records within 50m

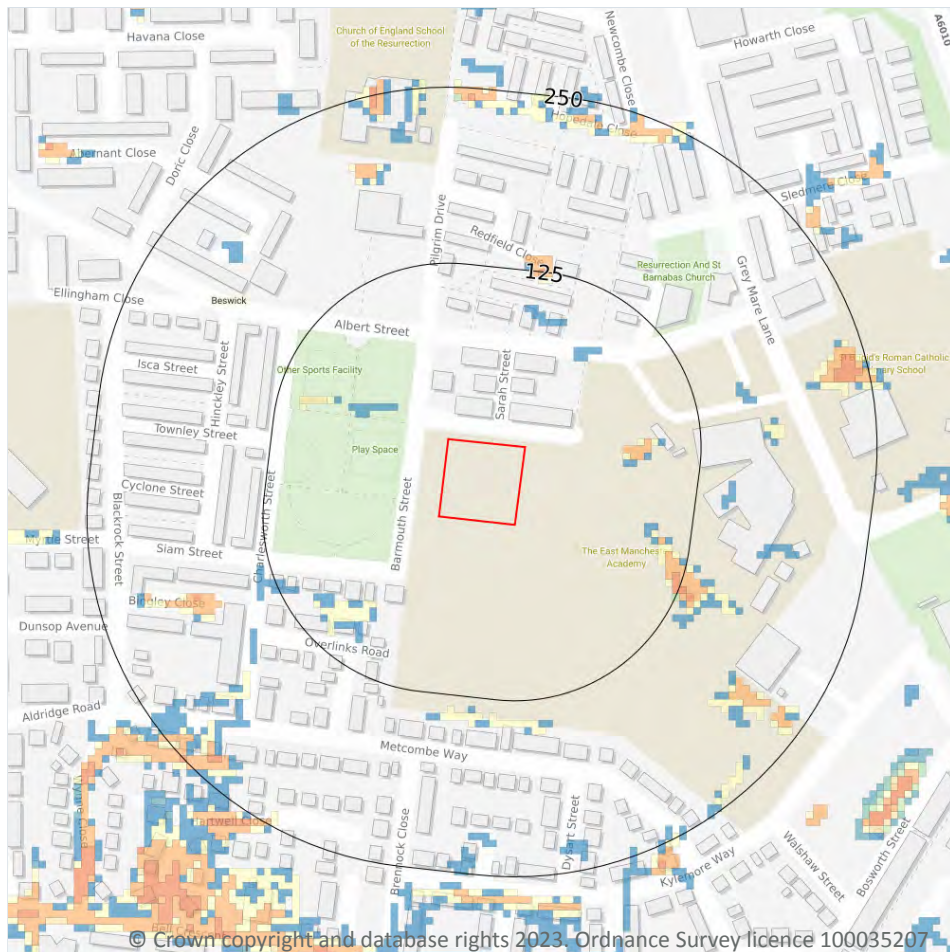
0

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

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



8 Surface water flooding



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

1 in 1000 year, 0.1m - 0.3m

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

Features are displayed on the Surface water flooding map on **page 64**

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

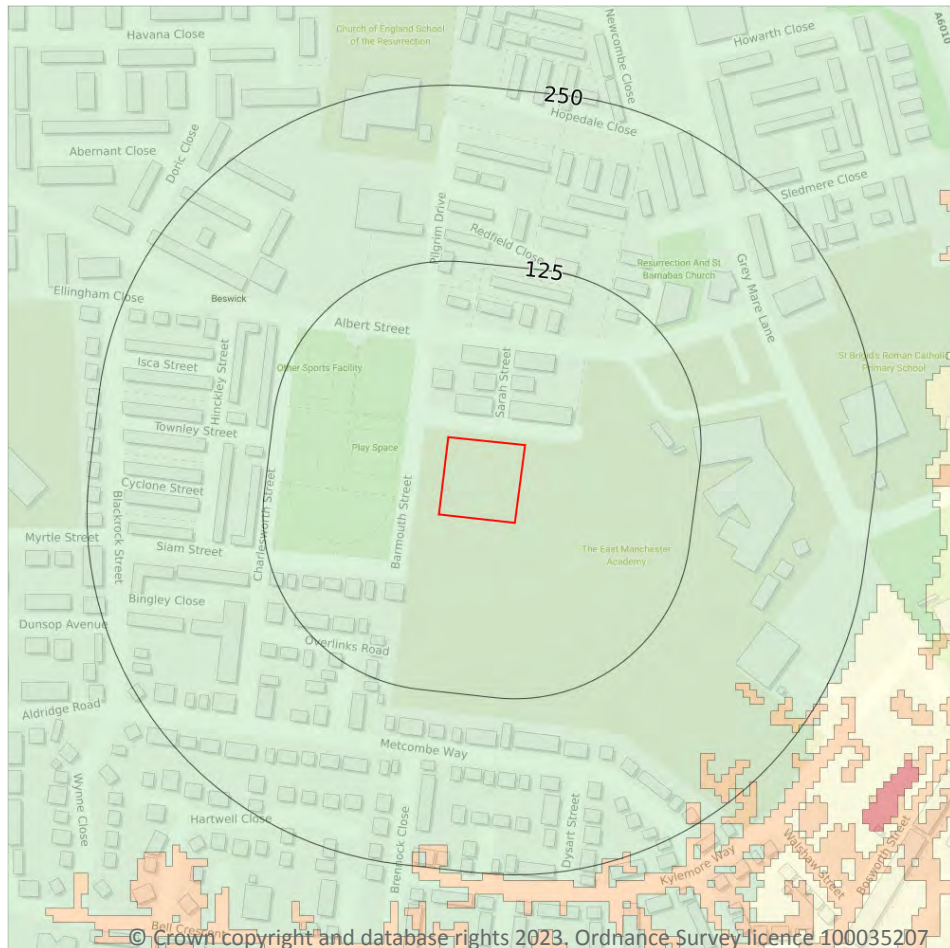
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.



9 Groundwater flooding



— Site Outline
Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

9.1 Groundwater flooding

Highest risk on site

Low

Highest risk within 50m

Low

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 66**

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



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

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m**0**

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m**0**

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m**0**

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m**0**

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

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



10.6 Local Nature Reserves (LNR)

Records within 2000m**1**

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

Features are displayed on the Environmental designations map on **page 67**

ID	Location	Name	Data source
A	1212m NE	Clayton Vale	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m**0**

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

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

10.8 Biosphere Reserves

Records within 2000m**0**

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

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

10.9 Forest Parks

Records within 2000m**0**

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.



10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

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

10.11 Green Belt

Records within 2000m

1

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

Features are displayed on the Environmental designations map on **page 67**

ID	Location	Name	Local Authority name
A	1516m NE	Merseyside and Greater Manchester	Manchester

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m**0**

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m**0**

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m**1**

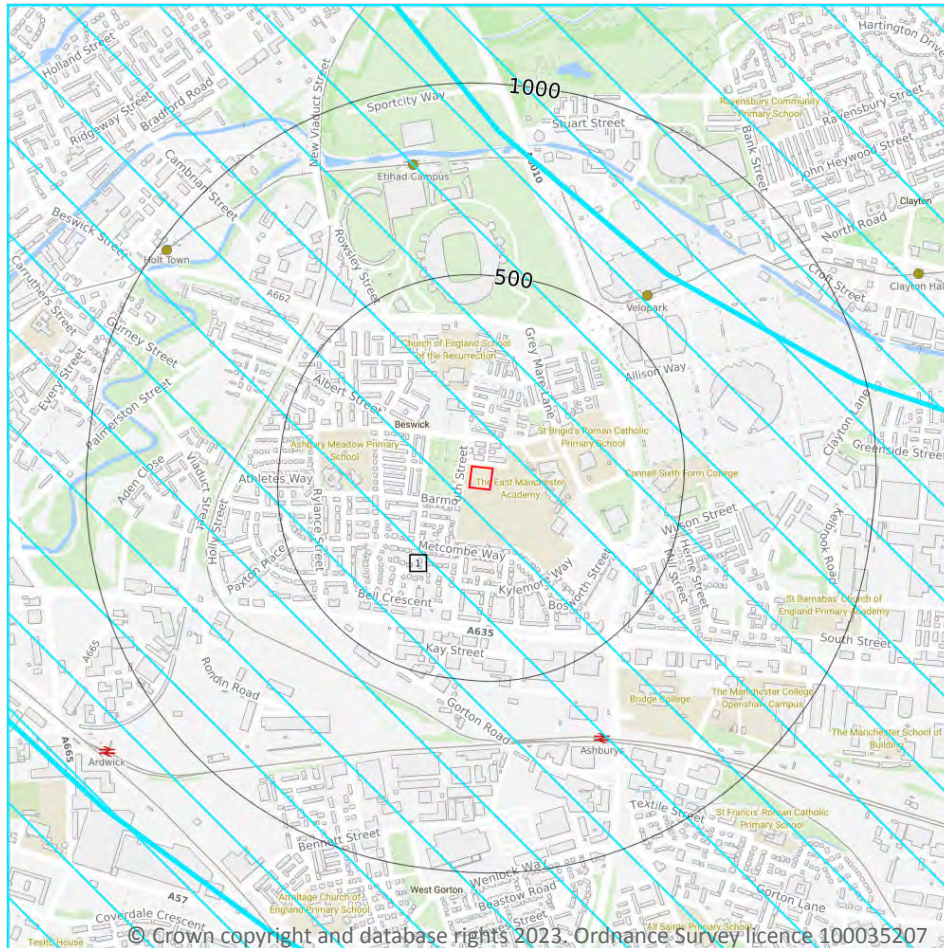
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
1803m NW	River Irk (Moston Brook to River Irwell) NVZ	Surface Water	638	Existing

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



SSSI Impact Zones and Units



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

10.17 SSSI Impact Risk Zones

Records on site

1

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

Features are displayed on the SSSI Impact Zones and Units map on **page 72**

ID	Location	Type of developments requiring consultation
1	On site	Infrastructure - Airports, helipads and other aviation proposals. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t). Combustion - General combustion processes >50mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	0
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Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

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



11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

0

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



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

11.5 Conservation Areas

Records within 250m

0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

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

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

11.7 Registered Parks and Gardens

Records within 250m

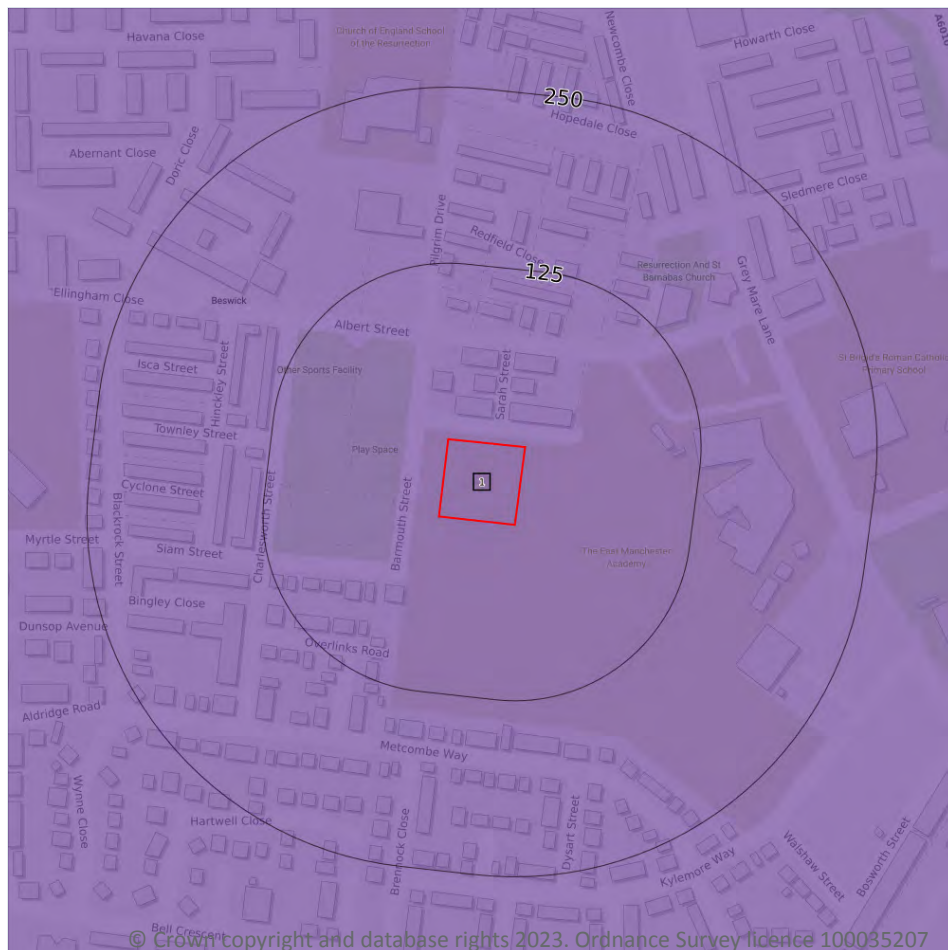
0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

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



12 Agricultural designations



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

12.1 Agricultural Land Classification

Records within 250m

1

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

Features are displayed on the Agricultural designations map on **page 76**

ID	Location	Classification	Description
1	On site	Urban	-

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m**0**

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

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

12.3 Tree Felling Licences

Records within 250m**0**

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m**0**

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

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m**0**

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

This data is sourced from Natural England.

13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m

0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

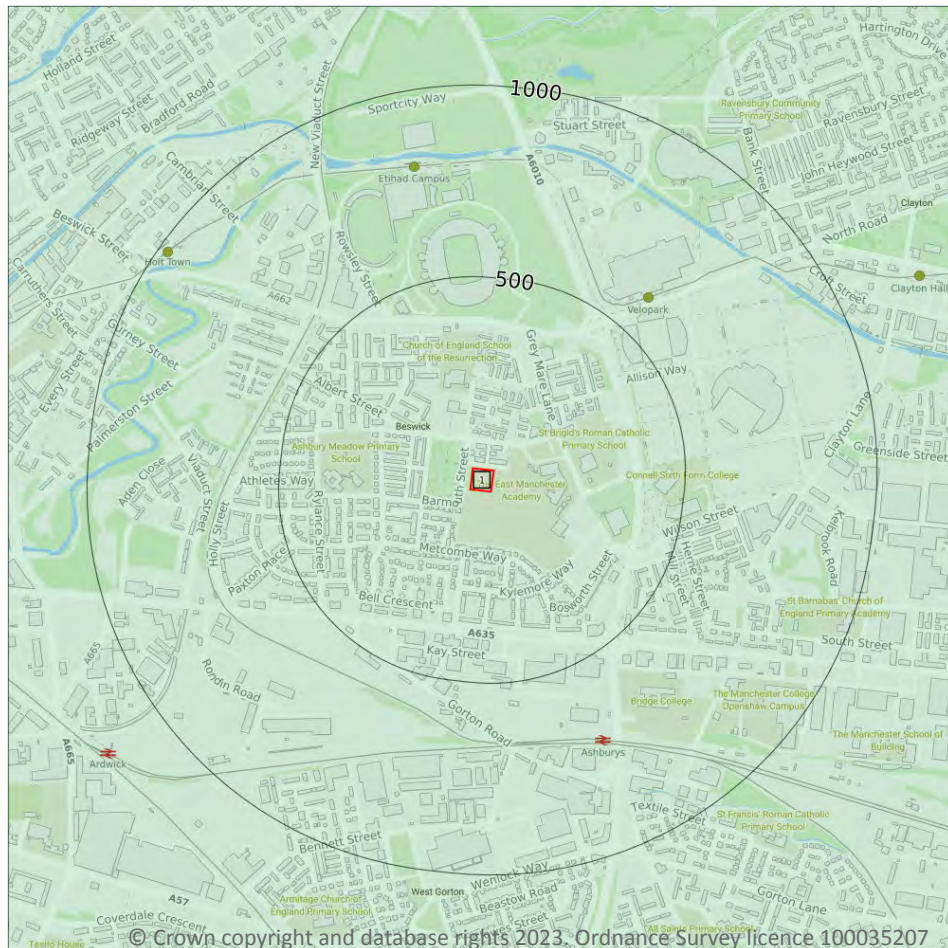
0

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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

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

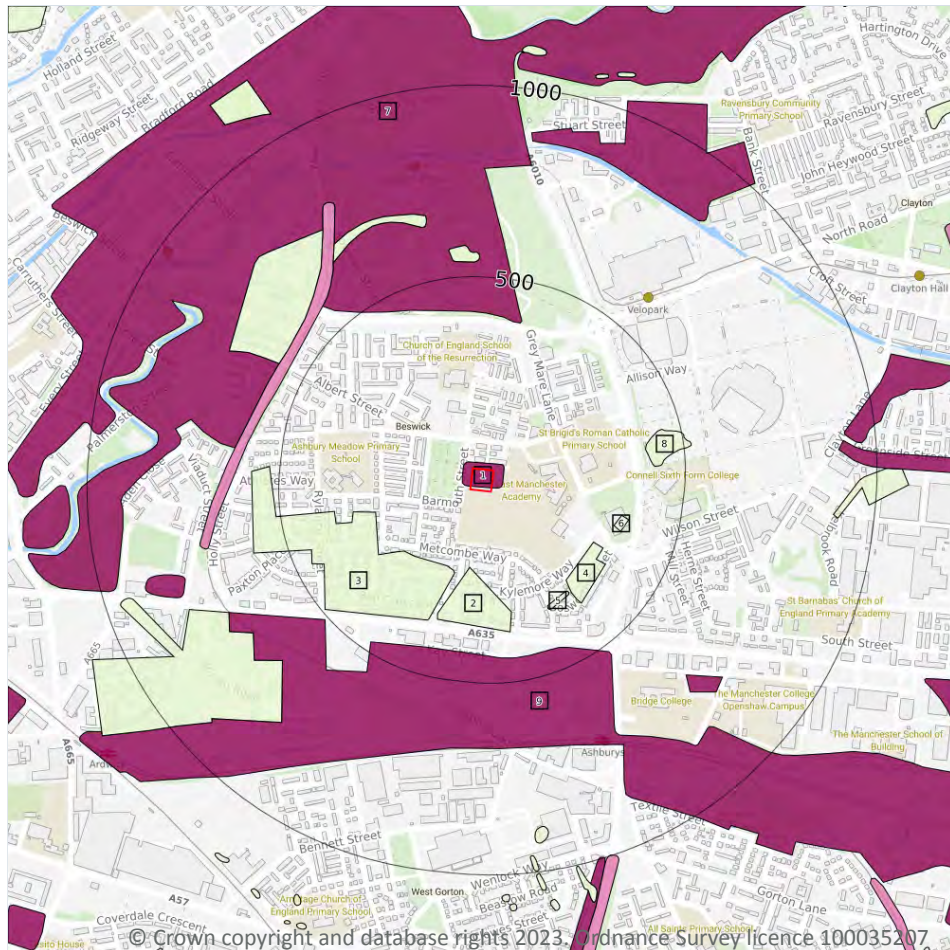
Features are displayed on the Geology 1:10,000 scale - Availability map on **page 79**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SJ89NE

This data is sourced from the British Geological Survey.



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



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

14.2 Artificial and made ground (10k)

Records within 500m

9

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

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 80**

ID	Location	LEX Code	Description	Rock description
1	On site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	202m S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
3	208m S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
4	294m SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit

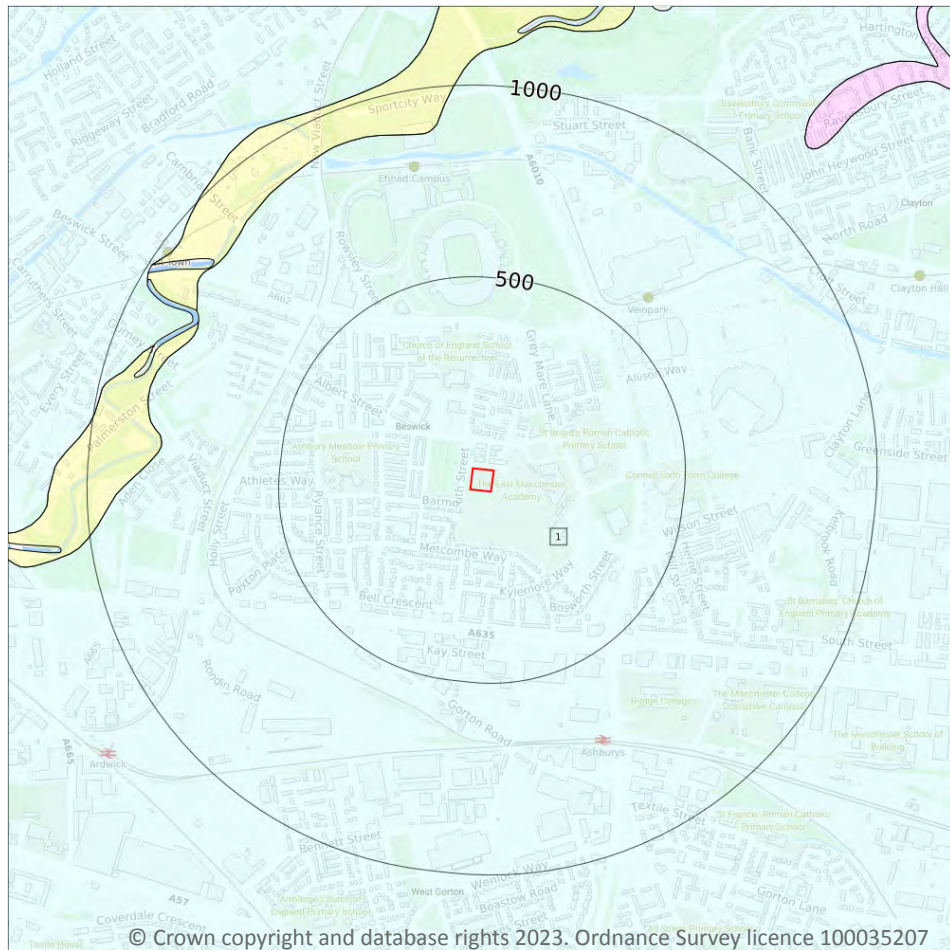


ID	Location	LEX Code	Description	Rock description
5	325m SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
6	333m E	WMGR-ARTDP	Infilled Ground	Artificial Deposit
7	391m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
8	400m E	WMGR-ARTDP	Infilled Ground	Artificial Deposit
9	423m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



- Site Outline
- Search buffers in metres (m)
- Landslip (10k)
- Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m

1

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 82**

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton

This data is sourced from the British Geological Survey.



14.4 Landslip (10k)

Records within 500m

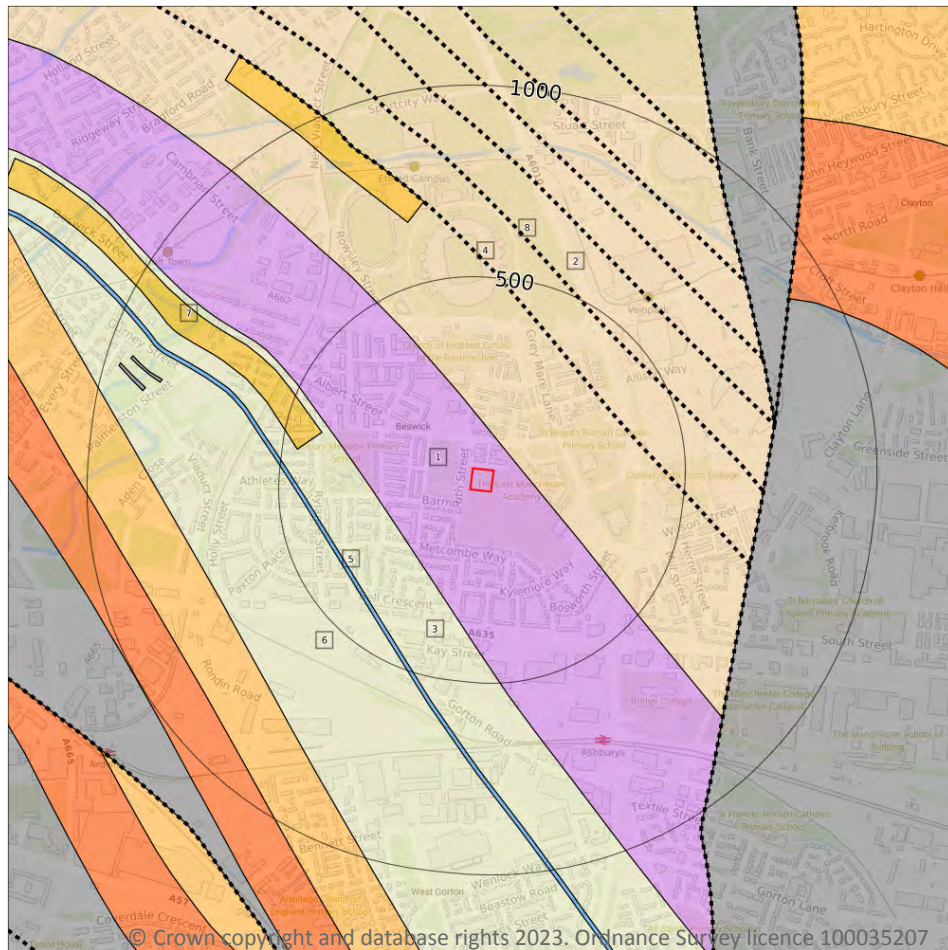
0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



— Site Outline
Search buffers in metres (m)
..... Bedrock faults and other linear features (10k)
Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m

6

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 84**

ID	Location	LEX Code	Description	Rock age
1	On site	ETM-STMD	Etruria Formation - Sandstone And Mudstone	Westphalian Age
2	57m NE	PUCM-MDSS	Pennine Upper Coal Measures Formation - Mudstone, Siltstone And Sandstone	Westphalian D Sub-age - Bolsavian Sub-age
3	214m SW	HA-MDSS	Halesowen Formation - Mudstone, Siltstone And Sandstone	Westphalian D Sub-age

ID	Location	LEX Code	Description	Rock age
5	378m SW	GML-LMST	Great Mine Limestone - Limestone	Westphalian D Sub-age
6	388m SW	HA-MDSS	Halesowen Formation - Mudstone, Siltstone And Sandstone	Westphalian D Sub-age
7	405m W	HTS-SDST	Holt Town Sandstone Bed - Sandstone	Westphalian D Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

2

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

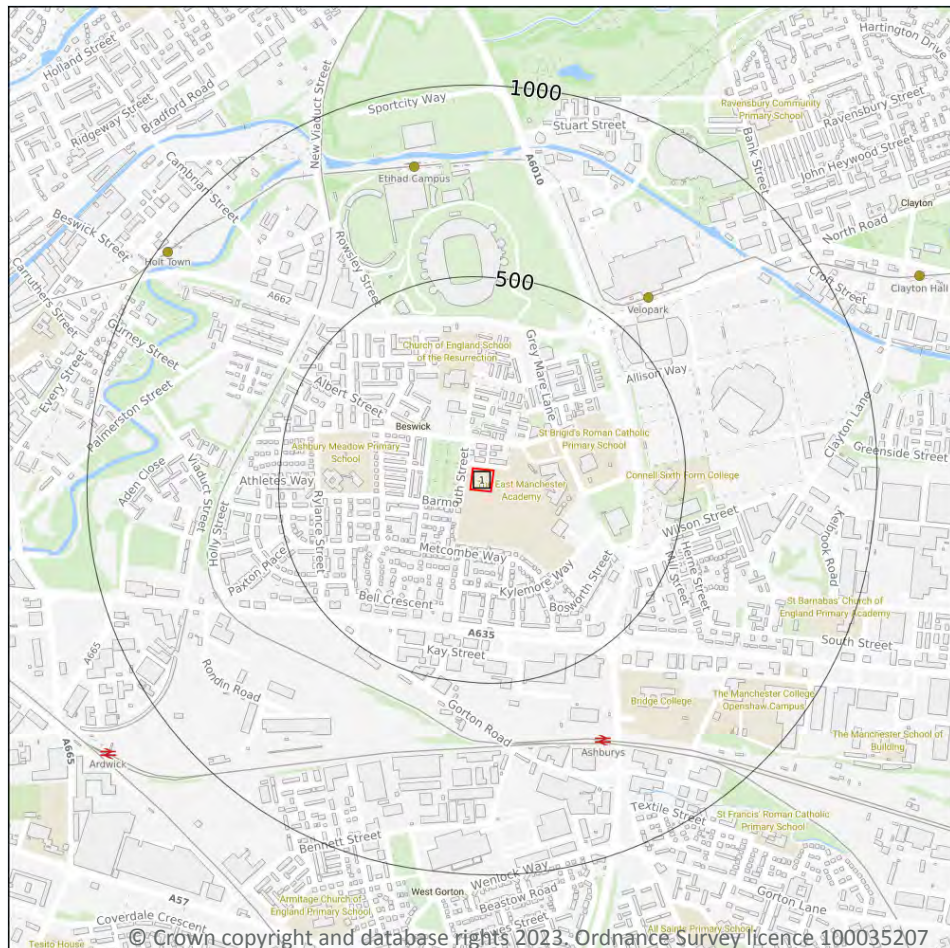
Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 84**

ID	Location	Category	Description
4	334m NE	ROCK	Coal seam, inferred
8	468m NE	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline
Search buffers in metres (m)

□ Geological map tile

15.1 50k Availability

Records within 500m

1

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

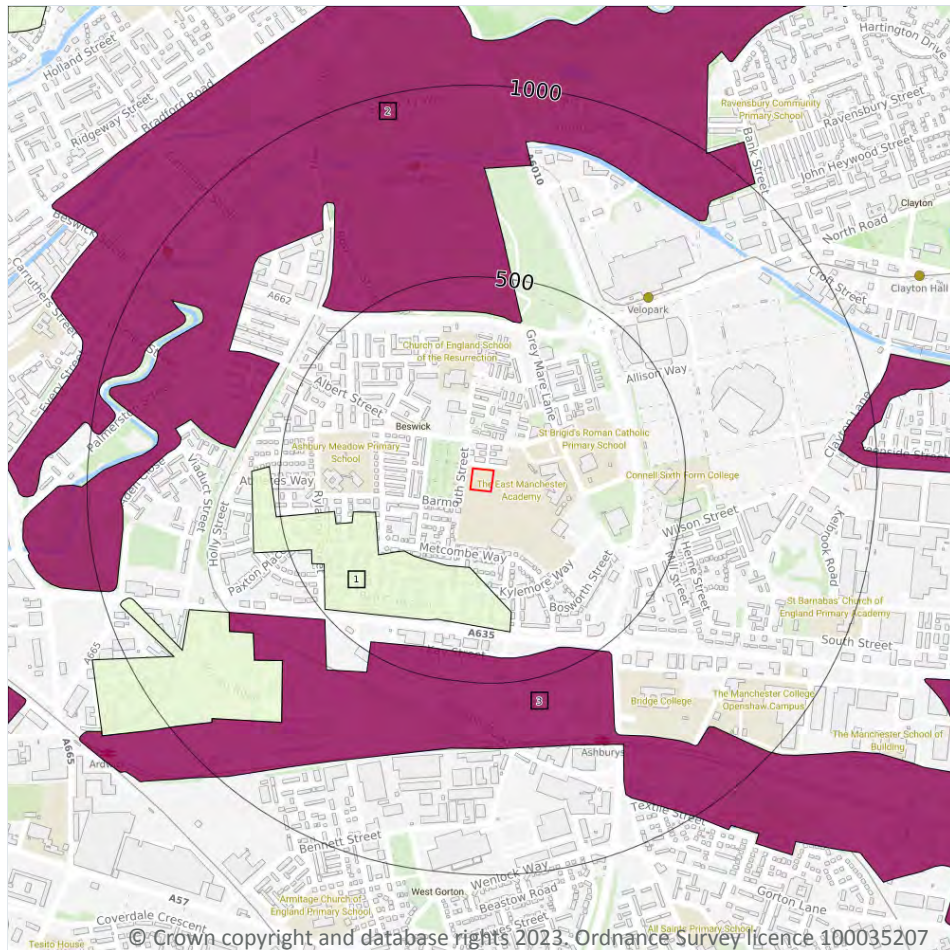
Features are displayed on the Geology 1:50,000 scale - Availability map on **page 86**

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

This data is sourced from the British Geological Survey.



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



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

15.2 Artificial and made ground (50k)

Records within 500m

3

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

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 87**

ID	Location	LEX Code	Description	Rock description
1	203m S	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
2	391m N	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	423m S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.



15.3 Artificial ground permeability (50k)

Records within 50m

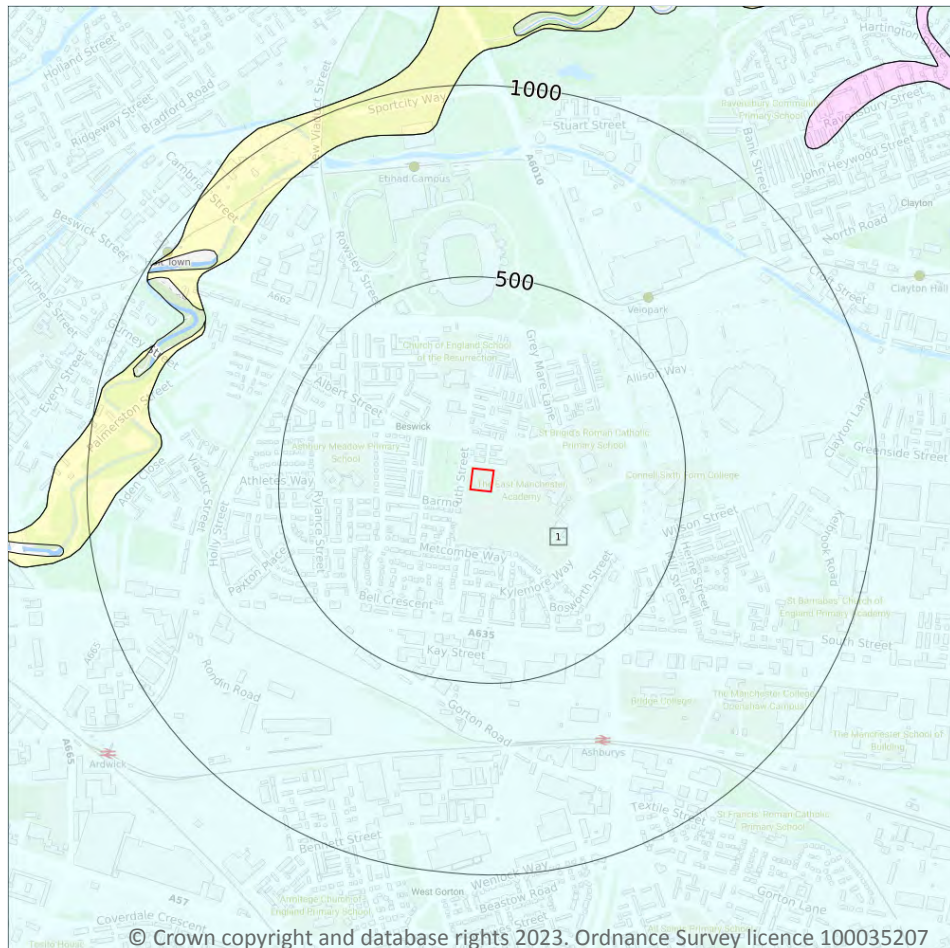
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 89**

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

This data is sourced from the British Geological Survey.



15.5 Superficial permeability (50k)

Records within 50m**1**

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

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m**0**

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

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

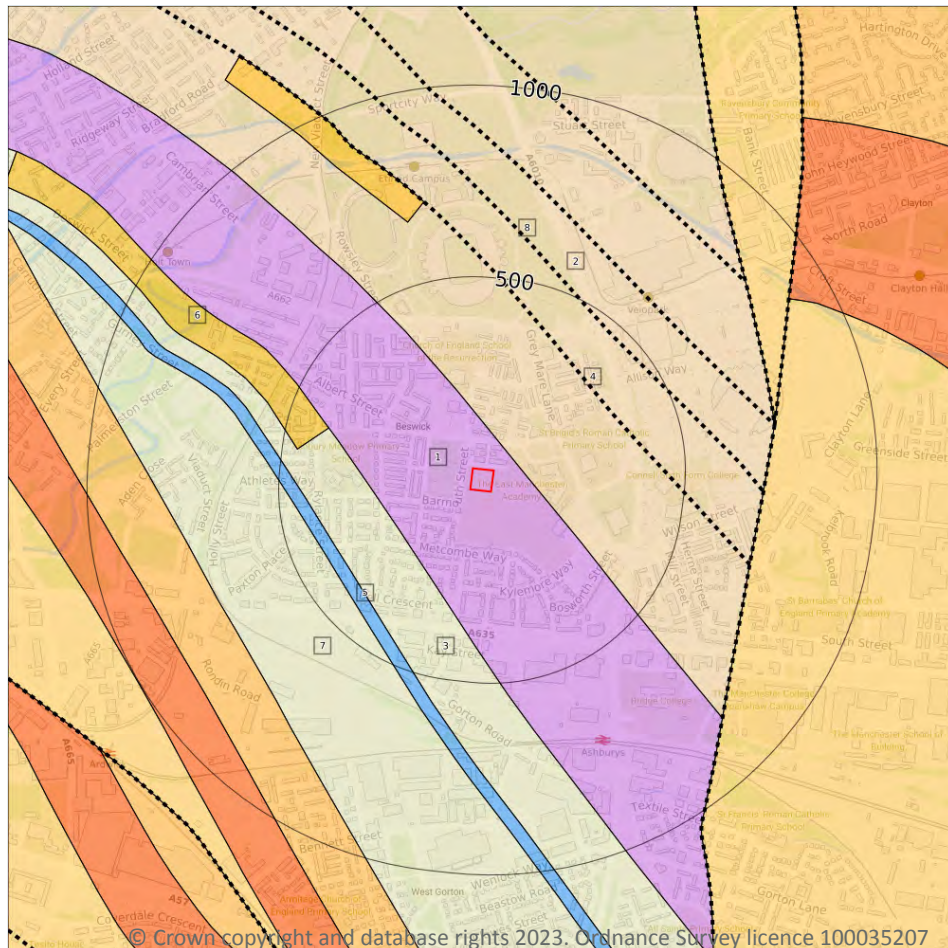
Records within 50m**0**

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

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

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

15.8 Bedrock geology (50k)

Records within 500m

6

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 91**

ID	Location	LEX Code	Description	Rock age
1	On site	ETM-STMD	ETRURIA FORMATION - SANDSTONE AND MUDSTONE	WESTPHALIAN
2	58m NE	PUCM-MDSS	PENNINE UPPER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
3	213m SW	HA-MDSS	HALESOWEN FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
5	377m SW	GML-LMST	GREAT MINE LIMESTONE - LIMESTONE	WESTPHALIAN
6	390m W	HTS-SDST	HOLT TOWN SANDSTONE BED - SANDSTONE	WESTPHALIAN
7	412m SW	HA-MDSS	HALESOWEN FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	1
---------------------------	----------

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

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

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	2
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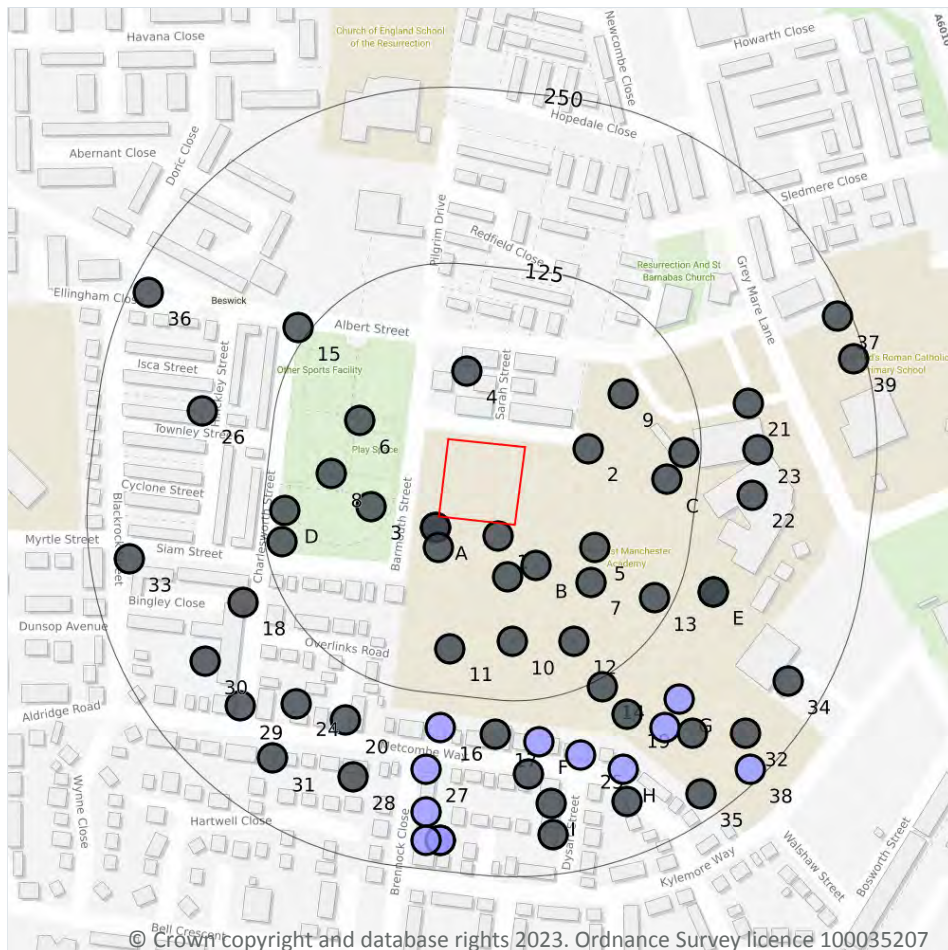
Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 91**

ID	Location	Category	Description
4	334m NE	ROCK	Coal seam, inferred
8	468m NE	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.

16 Boreholes



— Site Outline
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m

63

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on **page 93**

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	8m SW	386817 397902	BESWICK HOUSING REGENERATION TP H4/1	-	Y	N/A
A	8m SW	386817 397902	BESWICK HOUSING REGENERATION TP H4/3	-	Y	N/A
1	9m S	386861 397896	BESWICK HOUSING REGENERATION TP H4/6	-	Y	N/A



ID	Location	Grid reference	Name	Length	Confidential	Web link
A	22m SW	386819 397888	BESWICK HOUSING REGENERATION H4/2	-	Y	N/A
B	32m SE	386888 397875	BESWICK HOUSING REGENERATION TP H4/5	-	Y	N/A
B	37m S	386868 397867	BESWICK HOUSING REGENERATION TP H4/4	-	Y	N/A
2	45m E	386925 397958	BESWICK HOUSING REGENERATION TP I5/1	-	Y	N/A
3	49m W	386771 397917	BESWICK HOUSING REGENERATION WSPG4/3	-	Y	N/A
4	50m N	386839 398013	BESWICK HOUSING REGENERATION WSPH5/4	-	Y	N/A
5	59m SE	386930 397888	BESWICK HOUSING REGENERATION TP I4/1	-	Y	N/A
6	64m NW	386763 397978	BESWICK HOUSING REGENERATION WSPG5/2	-	Y	N/A
7	68m SE	386927 397863	BESWICK HOUSING REGENERATION TP I4/5	-	Y	N/A
8	79m W	386743 397940	BESWICK HOUSING REGENERATION TP G4/2	-	Y	N/A
9	79m NE	386950 397997	BESWICK HOUSING REGENERATION WSP I5	-	Y	N/A
10	83m S	386871 397821	BESWICK HOUSING REGENERATION TP H3/2	-	Y	N/A
11	92m S	386827 397816	BESWICK HOUSING REGENERATION TP H3/1	-	Y	N/A
12	93m SE	386915 397821	BESWICK HOUSING REGENERATION TP I3/1	-	Y	N/A
C	103m E	386981 397936	BESWICK HOUSING REGENERATION I4/3	-	Y	N/A
D	109m W	386710 397914	BESWICK HOUSING REGENERATION TP G4/4	-	Y	N/A
13	112m SE	386972 397852	BESWICK HOUSING REGENERATION TP I4/2	-	Y	N/A
D	113m W	386708 397892	BESWICK HOUSING REGENERATION G4/1	-	Y	N/A
C	113m E	386993 397955	BESWICK HOUSING REGENERATION TP I5/3	-	Y	N/A
14	130m SE	386935 397789	BESWICK HOUSING REGENERATION TP I3/2	-	Y	N/A
15	133m NW	386719 398044	BESWICK HOUSING REGENERATION G5/1	-	Y	N/A
16	149m S	386820 397760	WELLINGTON ST BESWICK TP 14	1.5	N	937259
E	149m SE	387014 397856	BESWICK HOUSING REGENERATION TP J3/5	-	Y	N/A
E	149m SE	387014 397856	BESWICK HOUSING REGENERATION TP J6/1	-	Y	N/A
17	150m S	386859 397755	BESWICK HOUSING REGENERATION H3/3	-	Y	N/A
18	152m SW	386680 397849	BESWICK HOUSING REGENERATION WSPF3/2	-	Y	N/A
F	155m S	386890 397750	WELLINGTON ST BESWICK TP 15	2.0	N	937260
19	157m SE	386953 397769	BESWICK HOUSING REGENERATION TP I3/3	-	Y	N/A



ID	Location	Grid reference	Name	Length	Confidential	Web link
20	159m SW	386753 397765	BESWICK HOUSING REGENERATION TP G3/2	-	Y	N/A
21	162m E	387039 397990	BESWICK HOUSING REGENERATION WSPJ5/3	-	Y	N/A
22	165m E	387042 397925	BESWICK HOUSING REGENERATION WSPJ4/2	-	Y	N/A
23	166m E	387046 397957	BESWICK HOUSING REGENERATION WSPJ5/4	-	Y	N/A
24	167m SW	386718 397777	BESWICK HOUSING REGENERATION TP G3/1	-	Y	N/A
G	170m SE	386990 397780	WELLINGTON ST BESWICK TP 20	2.9	N	937264
25	170m S	386920 397740	WELLINGTON ST BESWICK TP 16	2.0	N	937261
26	176m W	386651 397985	BESWICK HOUSING REGENERATION WSPF5/4	-	Y	N/A
F	177m S	386883 397727	BESWICK HOUSING REGENERATION WSPH2/4	-	Y	N/A
G	179m SE	386980 397760	WELLINGTON ST BESWICK TP 19	2.0	N	937263
27	180m S	386810 397730	WELLINGTON ST BESWICK TP 21	1.6	N	937265
H	190m SE	386950 397730	WELLINGTON ST BESWICK TP 17	2.4	N	937262
G	194m SE	386999 397756	BESWICK HOUSING REGENERATION TP J3/1	-	Y	N/A
28	195m SW	386758 397725	BESWICK HOUSING REGENERATION TP G3/4	-	Y	N/A
29	195m SW	386678 397775	BESWICK HOUSING REGENERATION TP F3/4	-	Y	N/A
30	195m SW	386653 397807	BESWICK HOUSING REGENERATION F3/3	-	Y	N/A
I	200m S	386899 397706	BESWICK HOUSING REGENERATION TP I2/4	-	Y	N/A
31	209m SW	386701 397738	BESWICK HOUSING REGENERATION G2/2	-	Y	N/A
J	210m S	386810 397700	WELLINGTON ST BESWICK TP 22	3.1	N	937266
H	212m SE	386953 397707	BESWICK HOUSING REGENERATION TP I2/3	-	Y	N/A
32	221m SE	387037 397756	BESWICK HOUSING REGENERATION TP J3/2	-	Y	N/A
I	221m S	386900 397684	BESWICK HOUSING REGENERATION TP I2/1	-	Y	N/A
33	222m W	386599 397880	BESWICK HOUSING REGENERATION WSPF4/4	-	Y	N/A
34	223m SE	387067 397793	BESWICK HOUSING REGENERATION J3/4	-	Y	N/A
J	228m S	386820 397680	WELLINGTON STREET SITE C TP 1A	2.8	N	937212
J	228m S	386820 397680	WELLINGTON STREET SITE C TP 1	2.2	N	937211
J	229m S	386810 397680	WELLINGTON STREET SITE C TP 2	3.0	N	937213
35	232m SE	387005 397713	BESWICK HOUSING REGENERATION TP J2/1	-	Y	N/A

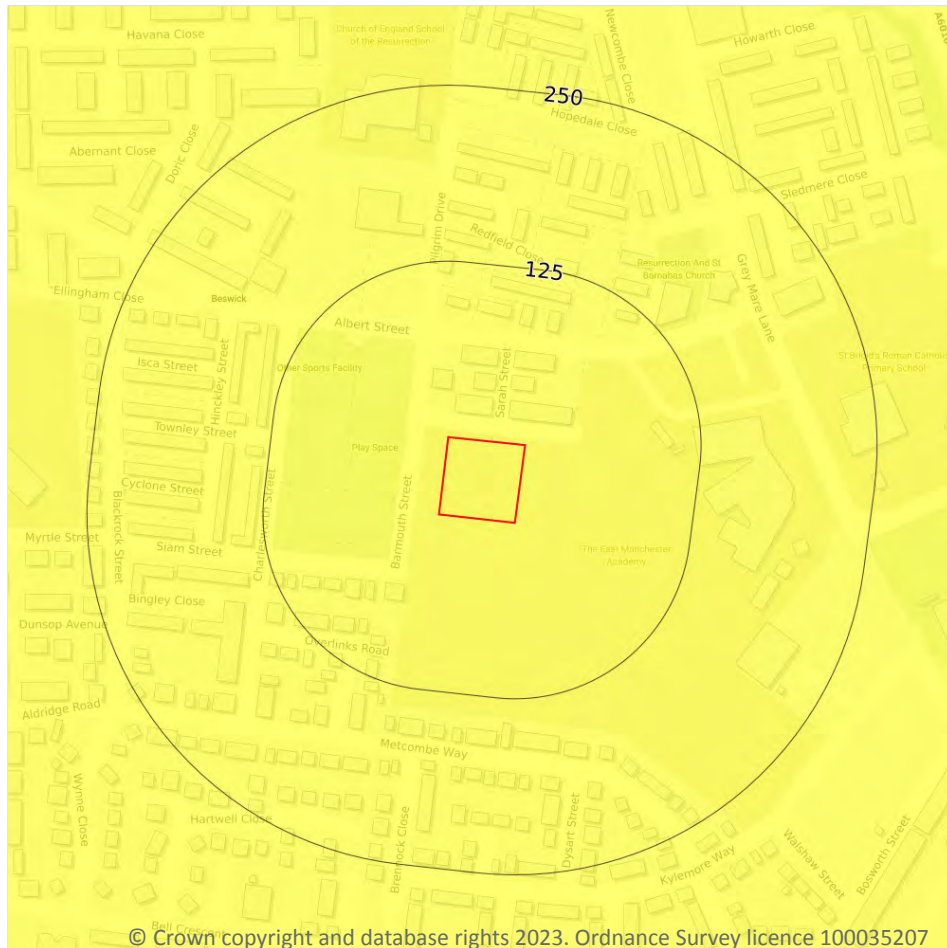


ID	Location	Grid reference	Name	Length	Confidential	Web link
36	237m NW	386613 398069	BESWICK HOUSING REGENERATION TP F6/1	-	Y	N/A
37	240m NE	387102 398052	BESWICK HOUSING REGENERATION TP K5/4	-	Y	N/A
38	241m SE	387040 397730	WELLINGTON STREET SITE C TP 18	1.0	N	937229
39	242m E	387114 398022	BESWICK HOUSING REGENERATION TP K5/3	-	Y	N/A

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



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

17.1 Shrink swell clays

Records within 50m

1

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

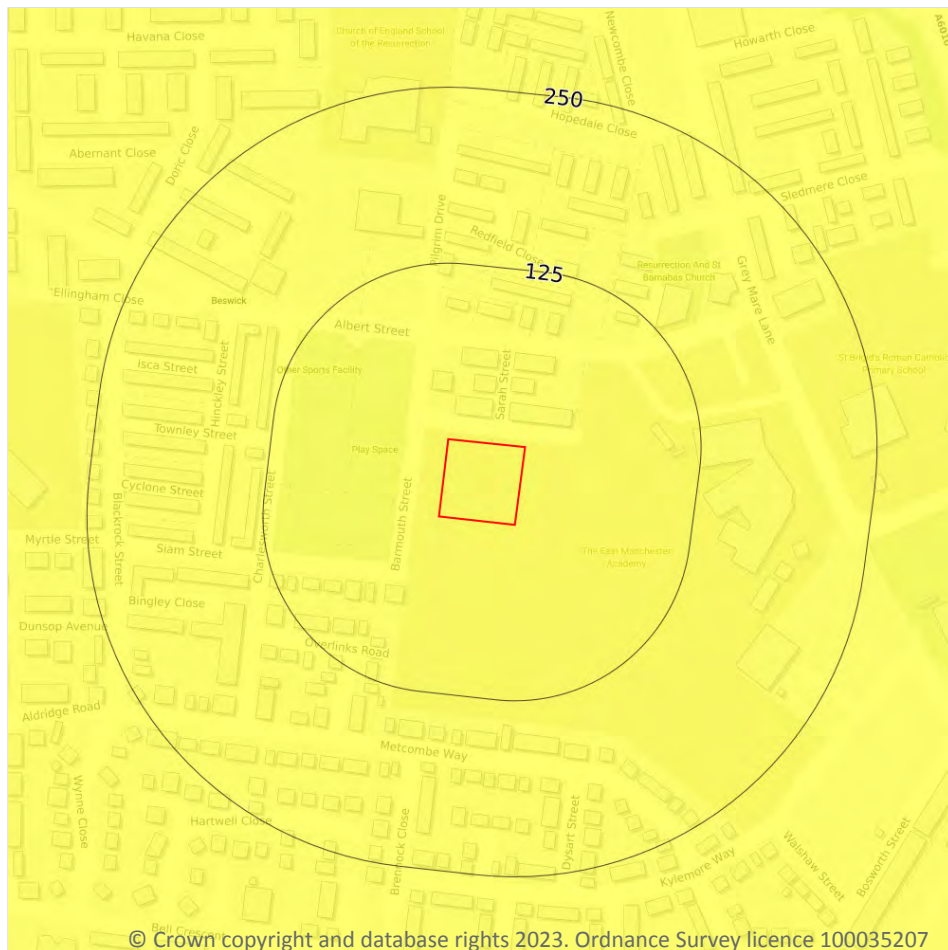
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 97**

Location	Hazard rating	Details
On site	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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

17.2 Running sands

Records within 50m

1

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

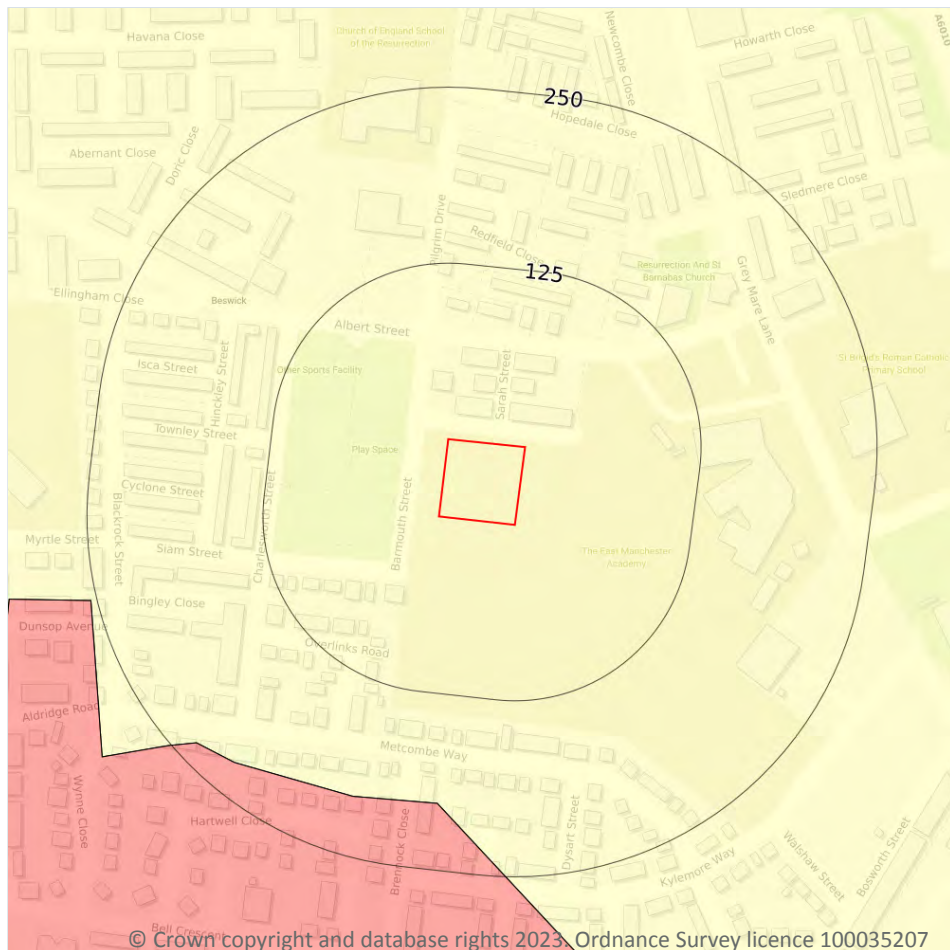
Features are displayed on the Natural ground subsidence - Running sands map on **page 98**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



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

17.3 Compressible deposits

Records within 50m

1

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

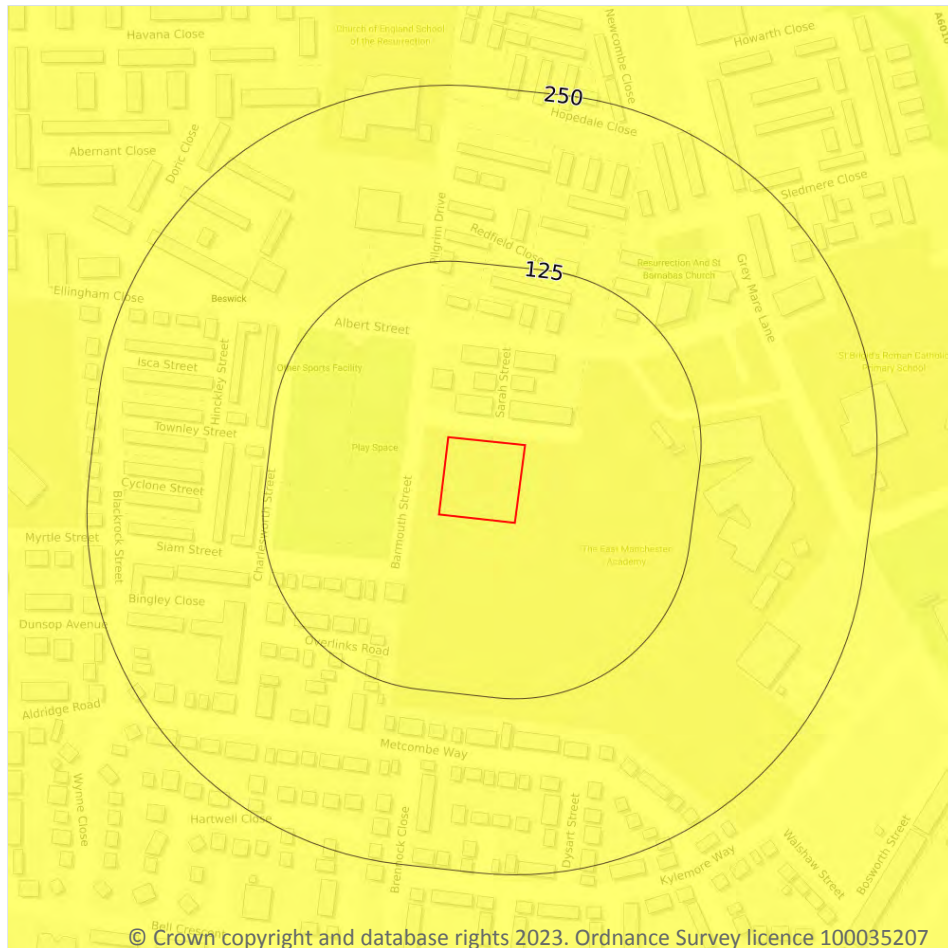
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 99**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



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

17.4 Collapsible deposits

Records within 50m

1

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

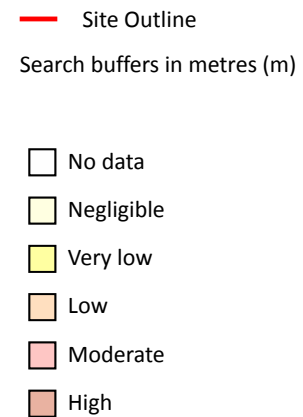
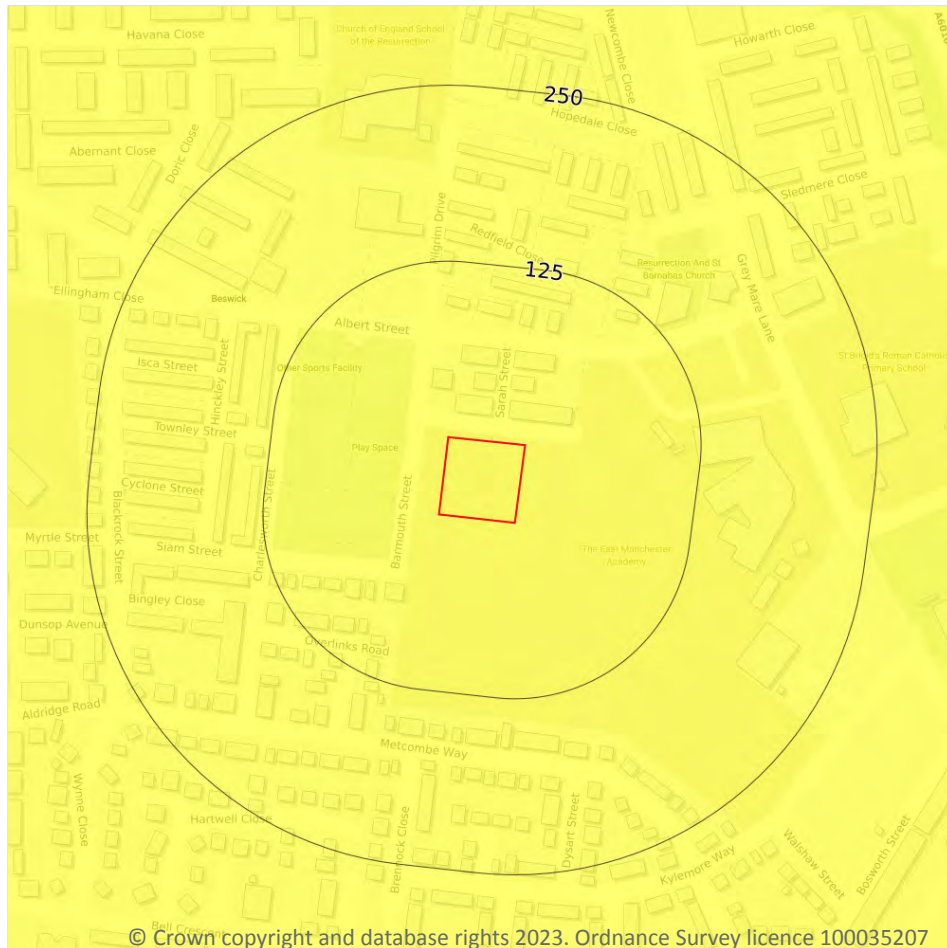
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 100**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



17.5 Landslides

Records within 50m

1

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

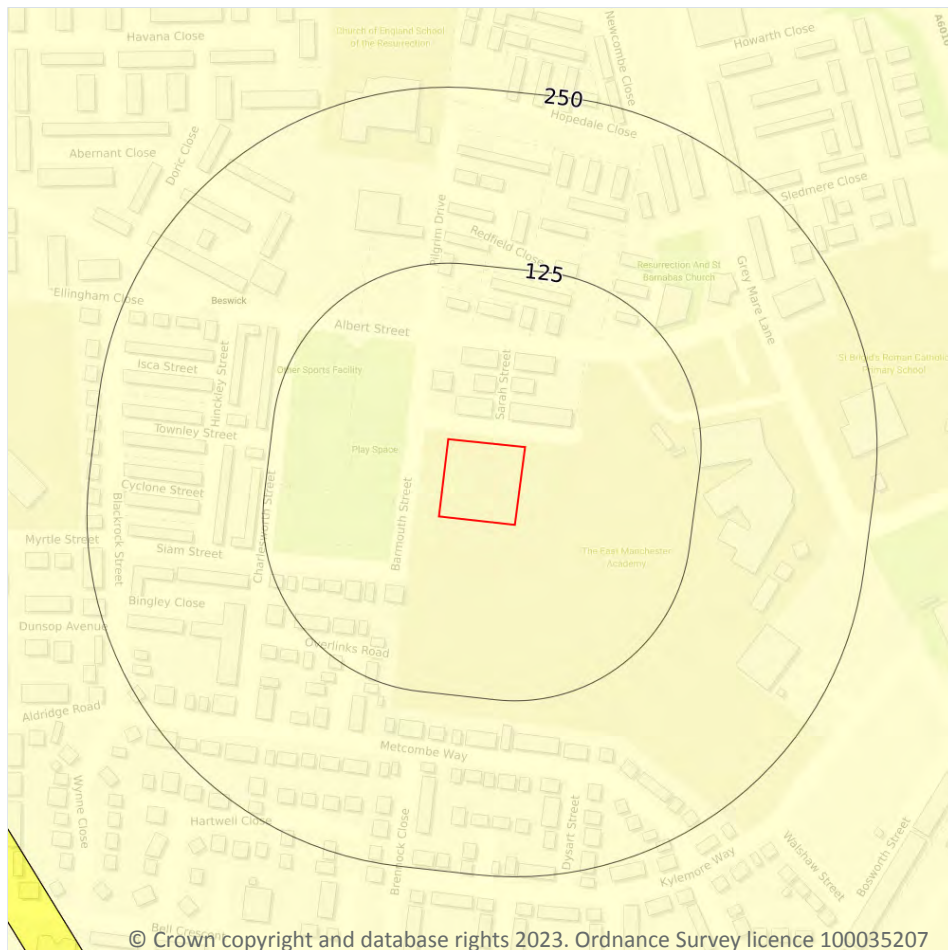
Features are displayed on the Natural ground subsidence - Landslides map on **page 101**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



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

17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

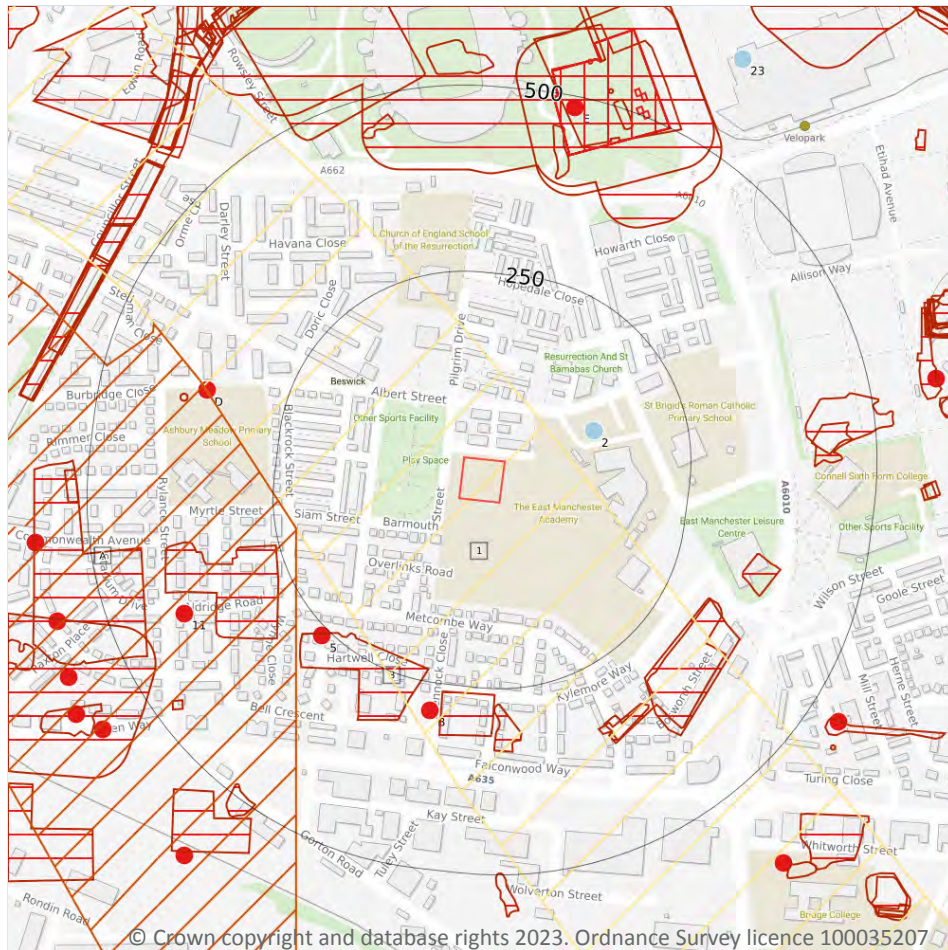
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 102**

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

This data is sourced from the British Geological Survey.



18 Mining, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities
- Non Coal Mining
 - Sporadic underground mining of restricted extent possible
 - Localised small scale underground mining possible
 - Small scale mining possible
 - Underground mining known or likely within or in close proximity
 - Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

18.2 BritPits

Records within 500m

5

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 104**

ID	Location	Details	Description
5	260m SW	Name: Beswick Brick Field Address: Beswick, MANCHESTER, Lancashire Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
B	287m S	Name: Beswick Brick Field Address: Beswick, MANCHESTER, Lancashire Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
D	357m W	Name: Ardwick Lime Works Pit Address: Ardwick, MANCHESTER, Lancashire Commodity: Limestone Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
11	400m SW	Name: Beswick Brick Field Address: Beswick, MANCHESTER, Lancashire Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority



ID	Location	Details	Description
E	485m N	Name: Bradford Colliery Address: Bradford, MANCHESTER, Lancashire Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	1
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Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining, ground workings and natural cavities map on **page 104**

ID	Location	Land Use	Year of mapping	Mapping scale
3	227m SW	Brick Works	1851	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	7
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Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

Features are displayed on the Mining, ground workings and natural cavities map on **page 104**

ID	Location	Land Use	Year of mapping	Mapping scale
E	421m N	Colliery	1921	1:10560
E	421m N	Colliery	1906	1:10560
E	421m N	Colliery	1923	1:10560
E	497m NE	Unspecified Disused Shafts	1985	1:10000
E	500m NE	Unspecified Shafts	1978	1:10000
E	519m NE	Unspecified Disused Shafts	1985	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
E	522m N	Unspecified Shafts	1978	1:10000

This data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

2

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 104**

ID	Location	Name	Commodity	Class	Likelihood
1	On site	Not available	Vein Mineral	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
A	223m W	Ardwick	Limestone - Ardwick	D	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m

2

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.



Features are displayed on the Mining, ground workings and natural cavities map on **page 104**

ID	Location	Mine Address	Mineral	Data source	Publisher
2	126m NE	Ardwick, Greater Manchester	Bath Stone, Cornstone, Limestone	CATALOGUE OF PLANS OF ABANDONED MINES (NON COAL)	-
23	628m NE	Manchester, Greater Manchester	Fireclay	'Underground Manchester - Secrets of the city revealed'	Willow Publishing

This data is sourced from Stantec UK Ltd.

18.8 JPB mining areas

Records on site	1
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Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

Location	Details
On site	In addition to being located inside an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property which may supplement this information. Please note, the plans held by JPB may also relate to non-mining records. Further details and a quote for services (if appropriate) can be obtained by emailing this report to enquiries.gs@jpb.co.uk .

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	1
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Areas which could be affected by past, current or future coal mining.

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

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0
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The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

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

18.11 Gypsum areas

Records on site	0
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Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0
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Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

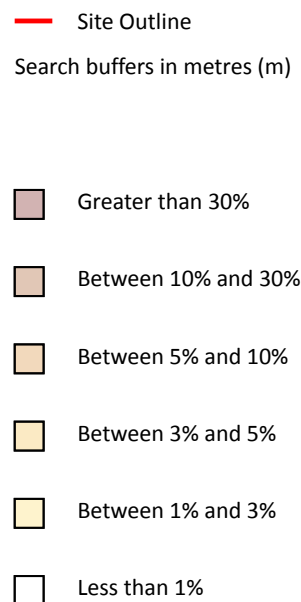
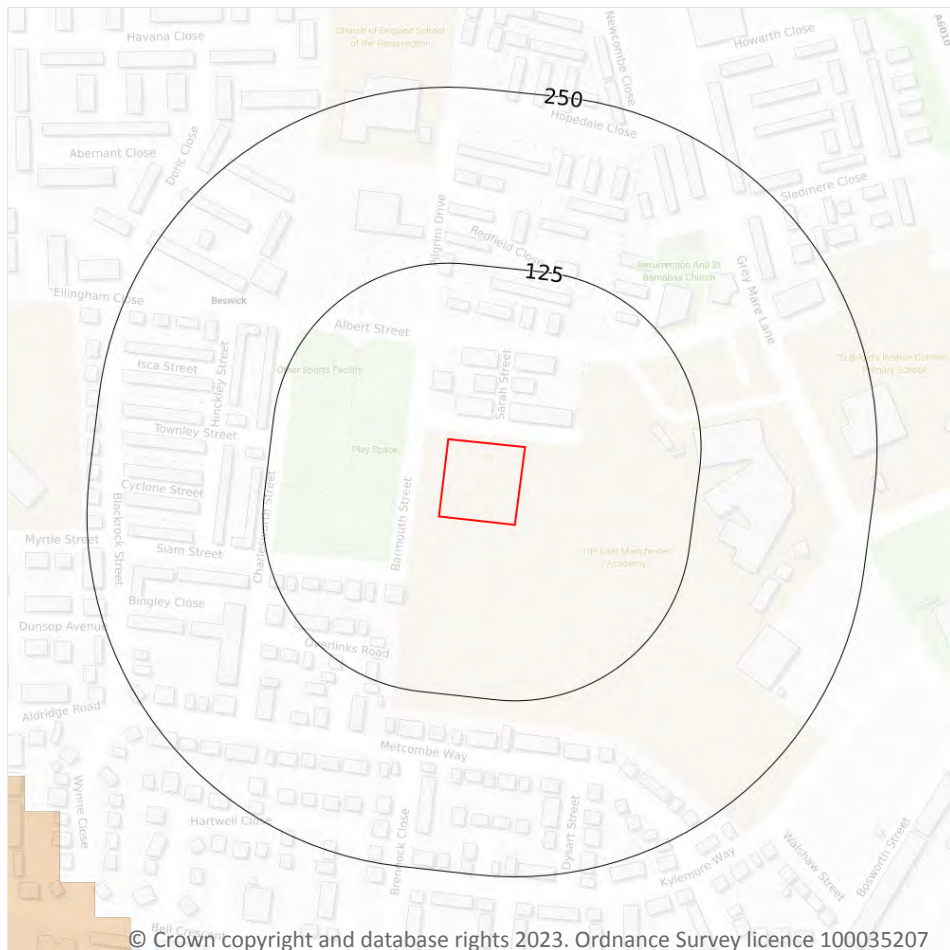
18.13 Clay mining

Records on site	0
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Generalised areas that may be affected by kaolin and ball clay extraction.

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

19 Radon



19.1 Radon

Records on site

1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on **page 110**

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None



This data is sourced from the British Geological Survey and UK Health Security Agency.



20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

2

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	200 - 300 mg/kg	120 - 240 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
35m N	15 - 25 mg/kg	No data	200 - 300 mg/kg	120 - 240 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

9

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
On site	18	3.2	41	28	0.3	69	12	23	3
4m SE	18	3.2	40	27	0.3	63	11	23	2
19m SW	17	3	84	58	0.3	67	38	21	4
20m NE	19	3.3	51	35	0.3	70	22	24	11
22m SW	18	3.2	80	55	0.3	62	37	22	4
27m SE	19	3.3	42	29	0.3	67	23	25	3



Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
35m N	16	2.8	43	30	0.3	74	12	22	3
44m NW	15	2.6	95	65	0.3	75	38	20	5
45m NE	18	3.2	52	36	0.3	72	22	24	11

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects

21.1 Underground railways (London)

Records within 250m	0
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Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0
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Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0
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Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	0
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Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0
---------------------	---

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



This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0
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Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	0
---------------------	---

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

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0
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The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	0
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Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	0
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HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 Ltd.



Data providers

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

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: <https://www.groundsure.com/terms-and-conditions-jan-2020/>.



E. Regulatory Context

The National Planning Policy Framework (NPPF) 2019 sets out Government planning policy for England and how this is expected to be applied to development. Paragraph 118 of Section 11 – Making effective use of land and paragraphs 170, 178, 179 and 183 of Section 15 – Conserving and enhancing the natural environment of the NPPF relate to contaminated land matters and state the following:

118. Planning policies and decisions should:

c) give substantial weight to the value of using suitable brownfield land within settlements for homes and other identified needs, and support appropriate opportunities to remediate despoiled, degraded, derelict, contaminated or unstable land;

170. Planning policies and decisions should contribute to and enhance the natural and local environment by:

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

178. Planning policies and decisions should ensure that:

a) a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation);

b) after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and

c) adequate site investigation information, prepared by a competent person, is available to inform these assessments.

179. Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner.

183. The focus of planning policies and decisions should be on whether proposed development is an acceptable use of land, rather than the control of processes or emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities.

In order to assess the contamination status of the Site, with respect to the proposed end use, it is necessary to assess whether the Site could potentially be classified as “Contaminated Land”, as defined in Part IIA of the Environmental Protection Act 1990 and Contaminated Land Statutory Guidance 2012. This is assessed by the identification and assessment of potential pollutant linkages.

Appendices

Preliminary Risk Assessment

Document Reference: WIE19835-100

WIE19835-100-R-1-1-3-PRA

The linkage between the potential sources and potential receptors identified needs to be established and evaluated.

To fall within this definition, it is necessary that, as a result of the condition of the land, substances may be present in, on or under the land such that:

- a) significant harm is being caused or there is a significant possibility of such harm being caused; or
- b) significant pollution of controlled waters is being caused, or there is significant possibility of such pollution being caused.

It should be noted that DEFRA has advised (Ref. Section 4, DEFRA Contaminated Land Statutory Guidance 2012) Local Authorities that land should not be designated as “Contaminated Land” where:

- a) the relevant substance(s) are already present in controlled waters;
- b) entry into controlled waters of the substance(s) from land has ceased; and
- c) it is not likely that that further entry will take place.

These exclusions do not necessarily preclude regulatory action under the Environmental Permitting (England and Wales) Regulations 2016, which make it a criminal offence to cause or knowingly permit a water discharge of any poisonous, noxious or polluting matter to controlled waters. In England and Wales, under The Water Resources Act 1991 (Amendment) (England and Wales) Regulations 2009, a works notice may be served by the regulator requiring appropriate investigation and clean-up.

Appendices

F. Risk Rating Matrix

Table F.1: Risk rating for contaminated land qualitative risk assessment

Level of Severity	Likelihood		
	Most Likely	Reasonably Foreseeable	Unlikely
Acute harm or severe chronic harm. Direct pollution of sensitive water receptors or serious pollution of other water bodies.	High	Medium	Low
Harm from long-term exposure. Slight pollution of sensitive receptors or pollution of other water bodies.	Medium	Medium	Low
No significant harm in either short or long term. No pollution of water that is likely to affect sensitive receptors. No more than slight pollution of other water bodies.	Low	Low	Low

Appendices

G. Environmental Receptors

The Contaminated Land Statutory Guidance has a four category system that considers harm to human health, controlled waters, flora and fauna, property, livestock and crops. The Categories are broadly defined as follows:

- 1) Contaminated Land – similar to land where it is known that significant harm has been caused or significant harm is being caused
- 2) Contaminated Land – no significant harm being caused but there is a significant possibility for significant harm to be caused in the future
- 3) Not Contaminated Land – there may be harm being caused but no significant possibility for significant harm to be caused in the future
- 4) Not Contaminated Land – no pollutant linkage, normal levels of contaminants and no significant harm being caused and no significant possibility for significant harm to be caused in the future.

Table G.1: Significant pollution to controlled waters

Pollution of controlled waters

Under Section 78A(9) of Part 2A the term “pollution of controlled waters means the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter. The term “controlled waters” in relation to England has the same meaning as in Part 3 of the Water Resources Act 1991, except that “ground waters” does not include water contained in underground strata but above the saturation zones. (Paragraph 4.36).

Given that the Part 2A regime seeks to identify and deal with significant pollution (rather than lesser levels of pollution), the local authority should seek to focus on pollution which: (i) may be harmful to human health or the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems; (ii) which may result in damage to material property; or (iii) which may impair or interfere with amenities and other legitimate uses of the environment. (Paragraph 4.37).

Significant pollution of controlled waters

Paragraph 4.38 states that “The following types of pollution should be considered to constitute significant pollution of controlled waters:

- (a) Pollution equivalent to “environmental damage” to surface water or groundwater as defined by The Environmental Damage (Prevention and Remediation) Regulations 2009, but which cannot be dealt with under those Regulations.
- (b) Inputs resulting in deterioration of the quality of water abstracted, or intended to be used in the future, for human consumption such that additional treatment would be required to enable that use.
- (c) A breach of a statutory surface water Environment Quality Standard, either directly or via a groundwater pathway.
- (d) Input of a substance into groundwater resulting in a significant and sustained upward trend in concentration of contaminants (as defined in Article 2(3) of the Groundwater Daughter Directive (2006/118/EC)5”.

Paragraph 4.39 states that “In some circumstances, the local authority may consider that the following types of pollution may constitute significant pollution: (a) significant concentrations⁶ of hazardous substances or non-hazardous pollutants in groundwater; or (b) significant concentrations of priority hazardous substances, priority substances or other specific polluting substances in surface water; at an appropriate, risk based compliance point. The local authority should only conclude that pollution is significant if it considers that treating the land as contaminated land would be in accordance with the broad objectives of the regime as described in Section 1 (of the Contaminated Land Statutory Guidance). This would normally mean that the authority should conclude that less serious forms of pollution are not significant. In such cases the authority should consult the Environment Agency”.

The following types of circumstance should not be considered to be contaminated land on water pollution

Appendices

Significant pollution of controlled waters

grounds:

- (a) The fact that substances are merely entering water and none of the conditions for considering that significant pollution is being caused set out in paragraphs 4.38 and 4.39 above are being met.
- (b) The fact that land is causing a discharge that is not discernible at a location immediately downstream or down-gradient of the land (when compared to upstream or up-gradient concentrations).
- (c) Substances entering water in compliance with a discharge authorised under the Environmental Permitting Regulations.

Significant pollution of controlled waters is being caused

In deciding whether significant pollution of controlled waters is being caused, the local authority should consider that this test is only met where it is satisfied that the substances in question are continuing to enter controlled waters; or that they have already entered the waters and are likely to do so again in such a manner that past and likely future entry in effect constitutes ongoing pollution. For these purposes, the local authority should:

- (a) Regard substances as having entered controlled waters where they are dissolved or suspended in those waters, or (if they are immiscible with water) they have direct contact with those waters on or beneath the surface of the water.
- (b) Take the term “continuing to enter” to mean any measurable entry of the substance(s) into controlled waters additional to any which has already occurred.
- (c) Take the term “likely to do so again” to mean more likely than not to occur again.

Land should not be determined as contaminated land on grounds that significant pollution of controlled waters is being caused where: (a) the relevant substance(s) are already present in controlled waters; (b) entry into controlled waters of the substance(s) from land has ceased; and (c) it is not likely that further entry will take place.

Significant Possibility of Significant Pollution of Controlled Waters

In deciding whether or not a significant possibility of significant pollution of controlled waters exists, the local authority should first understand the possibility of significant pollution of controlled waters posed by the land, and the levels of certainty/uncertainty attached to that understanding, before it goes on to decide whether or not that possibility is significant. The term “possibility of significant pollution of controlled waters” means the estimated likelihood that significant pollution of controlled waters might occur. In assessing the possibility of significant pollution of controlled waters from land, the local authority should act in accordance with the advice on risk assessment in Section 3 and the guidance in this sub-section.

In deciding whether the possibility of significant pollution of controlled waters is significant the local authority should bear in mind that Part 2A makes the decision a positive legal test. In other words, for particular land to meet the test the authority needs reasonably to believe that there is a significant possibility of such pollution, rather than to demonstrate that there is not.

Before making its decision on whether a given possibility of significant pollution of controlled waters is significant, the local authority should consider:

- (a) The estimated likelihood that the potential significant pollution of controlled waters would become manifest; the strength of evidence underlying the estimate; and the level of uncertainty underlying the estimate.
- (b) The estimated impact of the potential significant pollution if it did occur. This should include consideration of whether the pollution would be likely to cause a breach of European water legislation, or make a major contribution to such a breach.
- (c) The estimated timescale over which the significant pollution might become manifest.
- (d) The authority’s initial estimate of whether remediation is feasible, and if so what it would involve and the extent to which it might provide a solution to the problem; how long it would take; what benefit it would be likely to bring; and whether the benefits would outweigh the costs and any impacts on local society or the environment from taking action.

Reproduced from DEFRA (2012) Contaminated Land Statutory Guidance pursuant to section 78YA of the Environmental Protection Act 1990 as amended by Section 57 of the Environment Act 1995.

Appendices

Preliminary Risk Assessment
Document Reference: WIE19835-100
WIE19835-100-R-1-1-3-PRA

Table G.2: Significant harm to human health, ecological systems and property

Relevant types of receptor	Significant harm	Significant possibility of significant harm
Human beings	The following health effects should always be considered to constitute significant harm to human health: death; life threatening diseases (eg cancers); other diseases likely to have serious impacts on health; serious injury; birth defects; and impairment of reproductive functions. Other health effects may be considered by the local authority to constitute significant harm. For example, a wide range of conditions may or may not constitute significant harm (alone or in combination) including: physical injury; gastrointestinal disturbances; respiratory tract effects; cardiovascular effects; central nervous system effects; skin ailments; effects on organs such as the liver or kidneys; or a wide range of other health impacts. In deciding whether or not a particular form of harm is significant harm, the local authority should consider the seriousness of the harm in question: including the impact on the health, and quality of life, of any person suffering the harm; and the scale of the harm. The authority should only conclude that harm is significant if it considers that treating the land as contaminated land would be in accordance with the broad objectives of the regime as described in Section 1 of the Contaminated Land Statutory Guidance.	The risk posed by one or more relevant contaminant linkage(s) relating to the land comprises: (a) The estimated likelihood that significant harm might occur to an identified receptor, taking account of the current use of the land in question. (b) The estimated impact if the significant harm did occur – i.e. the nature of the harm, the seriousness of the harm to any person who might suffer it, and (where relevant) the extent of the harm in terms of how many people might suffer it. In estimating the likelihood that a specific form of significant harm might occur the local authority should, among other things, consider: (a) The estimated probability that the significant harm might occur: (i) if the land continues to be used as it is currently being used; and (ii) where relevant, if the land were to be used in a different way (or ways) in the future having regard to the guidance on “current use” in Section 3 of the Contaminated Land Statutory Guidance. (b) The strength of evidence underlying the risk estimate. It should also consider the key assumptions on which the estimate of likelihood is based, and the level of uncertainty underlying the estimate.
Any ecological system, or living organism forming part of such a system, within a location which is: a site of special scientific interest (under section 28 of the Wildlife and Countryside Act (WCA) 1981 (as amended))	The following types of harm should be considered to be significant harm: harm which results in an irreversible adverse change, or in some other substantial adverse change, in the functioning of the ecological system within any	Conditions would exist for considering that a significant possibility of significant harm exists to a relevant ecological receptor where the local authority considers that:

Appendices

Relevant types of receptor	Significant harm	Significant possibility of significant harm
and Part 4 of the Natural Environment and Rural Communities Act 2006 (as amended)); - a national nature reserve (under Section 35 of the WCA 1981 (as amended)); - a marine nature reserve (under Section 36 of the WCA 1981 (as amended)); - an area of special protection for birds (under Section 3 of the WCA 1981 (as amended)); - a "European site" within the meaning of regulation 8 of the Conservation of Habitats and Species Regulations 2010 (as amended); - any habitat or site afforded policy protection under Section 15 of The National Planning Policy Framework (NPPF) on conserving and enhancing the natural environment (i.e. possible Special Areas of Conservation, potential Special Protection Areas and listed or proposed Ramsar sites); or - any nature reserve established under Section 21 of the National Parks and Access to the Countryside Act 1949.	substantial part of that location; or harm which significantly affects any species of special interest within that location and which endangers the long-term maintenance of the population of that species at that location. In the case of European sites, harm should also be considered to be significant harm if it endangers the favourable conservation status of natural habitats at such locations or species typically found there. In deciding what constitutes such harm, the local authority should have regard to the advice of Natural England and to the requirements of the Conservation of Habitats and Species Regulations 2010 (as amended).	- significant harm of that description is more likely than not to result from the contaminant linkage in question; or - there is a reasonable possibility of significant harm of that description being caused, and if that harm were to occur, it would result in such a degree of damage to features of special interest at the location in question that they would be beyond any practicable possibility of restoration. Any assessment made for these purposes should take into account relevant information for that type of contaminant linkage, particularly in relation to the ecotoxicological effects of the contaminant.
Property in the form of: - crops, including timber - produce grown domestically, or on allotments, for consumption - livestock - other owned or domesticated animals; - wild animals which are the subject of shooting or fishing rights.	For crops, a substantial diminution in yield or other substantial loss in their value resulting from death, disease or other physical damage. For domestic pets, death, serious disease or serious physical damage. For other property in this category, a substantial loss in its value resulting from death, disease or other serious physical damage. The local authority should regard a substantial loss in value as occurring only when a substantial proportion of the animals or crops are dead or otherwise no longer fit for their intended purpose. Food should be regarded as being no longer fit for purpose when it fails to comply with the provisions of the Food Safety Act 1990. Where a diminution in yield or	Conditions would exist for considering that a significant possibility of significant harm exists to the relevant types of receptor where the local authority considers that significant harm is more likely than not to result from the contaminant linkage in question, taking into account relevant information for that type of contaminant linkage, particularly in relation to the ecotoxicological effects of the contaminant.

Appendices

Relevant types of receptor	Significant harm	Significant possibility of significant harm
	loss in value is caused by a pollutant linkage, a 20% diminution or loss should be regarded as a benchmark for what constitutes a substantial diminution or loss. In the Guidance states that this description of significant harm is referred to as an "animal or crop effect".	
Property in the form of buildings. For this purpose 'building' means any structure or erection and any part of a building, including any part below ground level, but does not include plant or machinery comprised in a building, or buried services such as sewers, water pipes or electricity cables.	Structural failure, substantial damage or substantial interference with any right of occupation. The local authority should regard substantial damage or substantial interference as occurring when any part of the building ceases to be capable of being used for the purpose for which it is or was intended. In the case of a scheduled Ancient Monument, substantial damage should be regarded as occurring when the damage significantly impairs the historic, architectural, traditional, artistic or archaeological interest by reason of which the monument was scheduled. The Guidance states that this description of significant harm is referred to as a 'building effect'.	Conditions would exist for considering that a significant possibility of significant harm exists to the relevant types of receptor where the local authority considers that significant harm is more likely than not to result from the contaminant linkage in question during the expected economic life of the building (or in the case of a scheduled Ancient Monument the foreseeable future), taking into account relevant information for that type of contaminant linkage.

Reproduced from DEFRA (2012) Contaminated Land Statutory Guidance pursuant to section 78YA of the Environmental Protection Act 1990 as amended by Section 57 of the Environment Act 1995

Appendices

Our vision

“Engineering a better environment for people and the planet”

Our mission

“To solve complex problems for the benefit of clients, communities and the climate”

Our values

People orientated

Individually and collectively, people are our business. We strive to create environments for everyone to flourish and thrive.

Flexible

Pragmatic by nature and dedicated to getting the job done to the highest possible standard.

Professional

Operating at pace with integrity to deliver technical and robust solutions.

Environmentally aware

We understand our responsibility to the environment, it shapes our decision making and informs our practice.

Innovative

Our forensic questioning provides the ability to deliver appropriate innovations at every stage on every project.

Relationship focused

We value individuality and the benefits of working collaboratively to achieve positive outcomes for all.



**The East Manchester Academy
Proposed MUGA**

Noise Assessment Report

Project: Proposed MUGA, The East Manchester Academy, Beswick

Client: The East Manchester Academy

Project Reference: RSA418/2023

Report Date: 15 May 2023

Document History

Version	Date	Comments	Initials
1	15 May 2023	Issue for planning	RS / LT

Authorised by	Ryan Swales, BSc, MIOA Director & Principal Consultant
Signature	

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1. Introduction

- 1.1 RS Acoustic Engineering Ltd have been appointed by Lancaster Maloney Martin on behalf of The East Manchester Academy to undertake a noise impact assessment with regard to a proposed multi-use games area (MUGA) at The East Manchester Academy, Grey Mare Lane, Beswick, Manchester, M11.
- 1.2 The proposals are to create a new MUGA directly adjacent to the large existing MUGA, west of the school buildings. Two small playing courts will be positioned in the north west corner of the site, on the existing sports/playing field. The MUGA will be used for activities such as five-a-side football, basketball, netball and tennis.
- 1.3 The dominant source of noise at the site is a combination of road traffic on the surrounding local road network and intermittent operational noise associated with the school premises.
- 1.4 The nearest noise sensitive receptors are a row of terraced dwellings along Jobling Street to the North.
- 1.5 There will be no fixed building services plant or equipment associated with the new pitches.
- 1.6 Sample noise measurements conducted at similar venues have been used to provide an indication of the resulting sound level at neighbouring dwellings.
- 1.7 This assessment is based on the results of an environmental noise survey undertaken at the site by RS Acoustic Engineering. Continuous sound level monitoring was conducted over a number of days in order to establish the typical acoustic environment during the daytime, evening and night-time period.
- 1.8 The survey and assessment was conducted by Mr Ryan Swales (BSc(Hons), MIOA), Principal Acoustic Consultant and Member of the Institute of Acoustics.
- 1.9 This report presents the results of the noise survey, predicted sound levels at neighbouring dwellings, anticipated impact and recommendations regarding noise mitigation measures.

2. Assessment Guidance & Criteria

National Planning Policy Framework

- 2.1 The latest Planning Policies are included in the National Planning Policy Framework (NPPF) published by the Department for Communities and Local Government (first published March 2012) and updated in July 2021.
- 2.2 The planning policies which relate specifically to noise were updated in July 2021 and are presented in paragraphs 174, 185 and 187 of the document:

174. Planning policies and decisions should contribute to and enhance the natural and local environment by:

(e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.

185. Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

(a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;

(b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

187. Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or ‘agent of change’) should be required to provide suitable mitigation before the development has been completed.

Noise Policy Statement for England

- 2.3 The terms ‘significant adverse’ and ‘adverse’ in the NPPF above, are references to the Noise Policy Statement for England (NPSE), published by DEFRA in March 2010.
- 2.4 The first aim of the NPSE is to *Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.*
- 2.5 The second aim is to *Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.*
- 2.6 The third aim is to *Where possible, contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.*

- 2.7 Further to the above, the Governments Planning Practice Guidance document updated in July 2019 states:

Noise needs to be considered when development may create additional noise, or would be sensitive to the prevailing acoustic environment (including any anticipated changes to that environment from activities that are permitted but not yet commenced). When preparing plans, or taking decisions about new development, there may also be opportunities to make improvements to the acoustic environment. Good acoustic design needs to be considered early in the planning process to ensure that the most appropriate and cost-effective solutions are identified from the outset.

- 2.8 In addition, the guidance indicates that, whilst noise can override other planning concerns, it is important to look at noise in the context of the wider characteristics of a development proposal, its likely users and its surroundings, as these can have an important effect as to whether or not noise is likely to pose a concern.

World Health Organisation: Guidelines for community noise (1999)

- 2.9 This historical document provides guidelines for community noise in specific environments, suggesting noise levels at which adverse health and annoyance effects are likely. The relevant noise criteria are presented in Table 2.1.

Table 2.1 - Guideline values for community noise in specific environments

Specific environment	Critical health effect(s)	L_{Aeq} (dB)	Time base (hours)	$L_{Amax,fast}$ (dB)
Outdoor living area	Serious annoyance, daytime and evening	55	16	--
	Moderate annoyance, daytime and evening	50	16	--
Dwelling indoors	Speech intelligibility and moderate annoyance, daytime and evening	35	16	---

- 2.10 According to the WHO guidance, moderate annoyance is caused by noise levels exceeding 50 dB $L_{Aeq,T}$ dB externally and 35 dB $L_{Aeq,T}$ internally.

British Standard 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound

- 2.11 BS 4142 (amended June 2019) describes methods for rating and assessing sound of an industrial and/or commercial nature, such as sound from manufacturing processes and fixed mechanical plant/machinery.

- 2.12 Within Section 1 (Scope), the document states the following:

The standard is not intended to be applied to the rating and assessment of sound from:

a). recreational activities, including all forms of motorsport;

The standard also states: *The standard is not intended to be applied to the derivation of indoor sound levels arising from sound levels outside, or the assessment of indoor sound levels.*

- 2.13 Whilst a comparison with the background sound levels could be undertaken, it is not possible to determine the impact on noise-sensitive properties (dwellings) or the likelihood of complaints from this particular noise source. It is therefore not appropriate to use this standard for the assessment pitch related noise and activity.

3. Environmental Noise Survey

Survey methodology

- 3.1 A baseline noise survey has been conducted over several days in order to establish the prevailing acoustic environment during the daytime, evening and night-time period.
- 3.2 Continuous sound level monitoring was conducted over 54.5 hours near to the school's northern boundary line, directly adjacent to Jobling Street. Measurements were performed from 10:15 hours on Wednesday 29th through to 17:00 hours on Friday 31st March 2023.
- 3.3 The measurement position was considered to be the most secure with regard to leaving the equipment unattended for an extended period and was appropriate for determining the prevailing ambient and background noise climate at the nearest neighbouring dwellings.
- 3.4 A measurement interval of 15-minutes was used during the survey and measurements were considered to be subject to free-field conditions (away from reflective surfaces). Octave-band and A-weighted broadband sound pressure levels were recorded during the survey.
- 3.5 The existing MUGA and external sports facilities are used daily on a relatively frequent basis and therefore make up part of the existing acoustic environment in the local area. The large MUGA is also used for community use in the evening from 18:00 to 22:00 hours. The pitches are used on an hourly basis and during the survey the occupant numbers were approximately 50 to 80 per hour from 18:00 hours onward.
- 3.6 The site location, surrounding area and survey measurement position are shown in Figure 3.1. The existing and proposed site layouts are shown in Appendix A.

Figure 3.1 - Site location and survey measurement position (source: Google Maps)



Survey equipment

- 3.7 The survey was conducted using the following Class 1-specification equipment:
- Brüel & Kjaer 2250-Light data logging sound level meter, microphone type 4189 and pre-amplifier type ZC0032.
 - CEL-120/1 Acoustic calibrator.
- 3.8 Calibration of the sound level meter and microphone used for the measurements are traceable to UKAS accredited laboratories (calibration certificates are presented in Appendix B).
- 3.9 The calibration of both sound level meter and microphone was checked using a 1 kHz tone at 94 dB prior to and following the survey. Calibration drift was less than 0.1 dB.

Weather conditions

- 3.10 The weather conditions during the survey were generally dry and fine with cloud cover ranging from light to thick. Wind speeds measured on site were between 0.6 and 2.8 m/s⁻¹.
- 3.11 The air temperature during the survey ranged between 9°C and 16°C. The weather conditions overall were considered suitable to obtain representative measurements.

Subjective observations of the acoustic environment

- 3.12 A number of site visits were conducted during the daytime and evening period in order to observe the local acoustic environment.
- 3.13 The dominant source of noise at the site is a combination of road traffic on Albert Street, Barmouth Street, Metcombe Way and Grey Mare Lane. Distant road traffic on Alan Turing Way (A6010) to the east also contributes to the prevailing ambient noise at the site.
- 3.14 Noise from the existing sports pitches, playing fields and general school operations also notably contributes to the existing ambient noise climate in the local area.
- 3.15 There was no audible building services (plant) noise at the site boundary or near to neighbouring dwellings.
- 3.16 Other noted noise sources include high altitude aircraft, park related activity to the west, passing pedestrians and intermittent domestic activity at neighbouring dwellings.

Results summary

- 3.17 Table 3.1 overleaf presents a summary of the measured ambient L_{Aeq} sound pressure levels from the continuous monitoring position. Measured values have been rounded to the nearest whole number.
- 3.18 $L_{Aeq,T}$ is the A-weighted equivalent continuous sound pressure level over a period of time, T. Representative of the 'average' sound pressure level over a given period (used to describe the ambient sound level).
- 3.19 Sound pressure level measurements are taken with an A-weighting (denoted by a subscript 'A', e.g. L_{Aeq}) to approximate the frequency response of the human ear.

Table 3.1 - Summary of continuously measured ambient L_{Aeq} sound pressure levels

Date	Period	Duration, T (hours)	Average $L_{Aeq,T}$ dB	Lowest $L_{Aeq,15min}$ dB	Highest $L_{Aeq,15min}$ dB
Wednesday 29/03/2023	Daytime (10:15-23:00)	12.75	55	50	59
	Night-time (23:00-07:00)	8	48	43	53
Thursday 30/03/2023	Daytime (07:00-23:00)	16	56	47	63
	Night-time (23:00-07:00)	8	47	44	53
Friday 31/03/2023	Daytime (07:00-17:00)	10	54	50	63

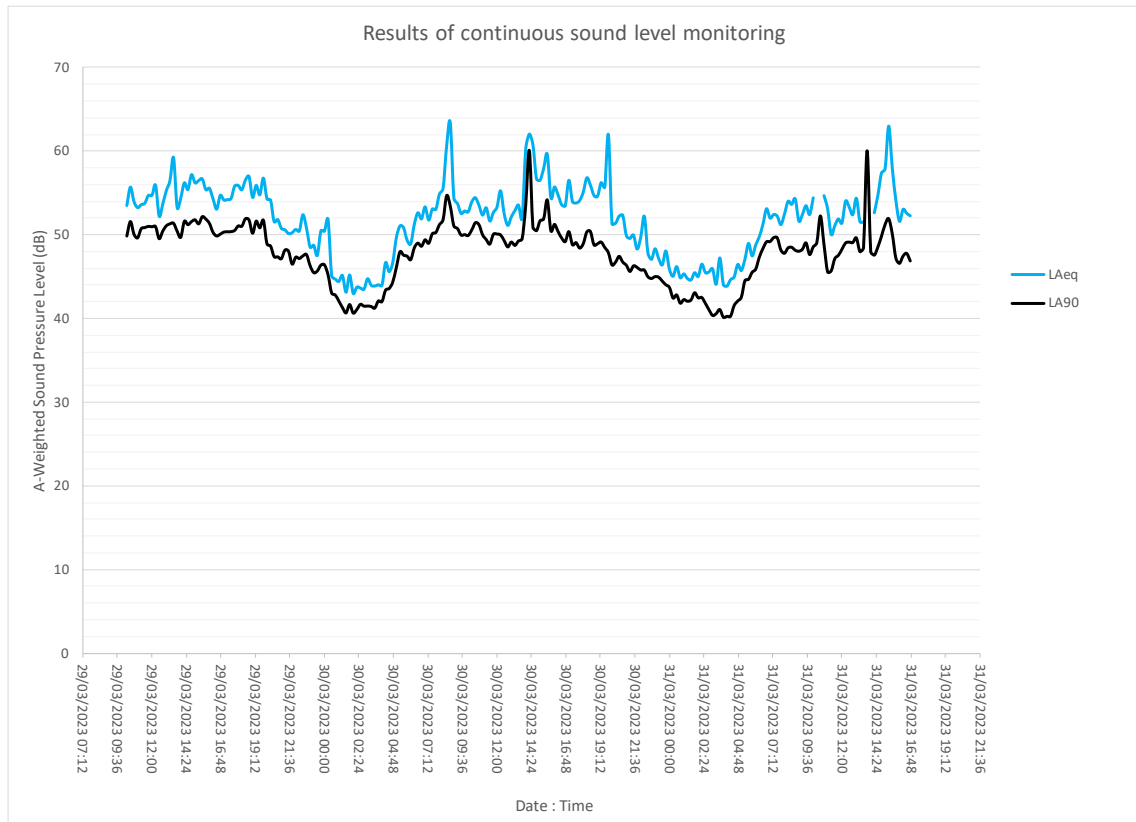
- 3.20 The average ambient sound pressure level ranged between 54 to 56 dB $L_{Aeq,T}$ during the daytime and 47 to 48 dB $L_{Aeq,T}$ during the night-time.
- 3.21 In terms of fifteen-minute sound pressure levels, the measured values ranged between 47 to 63 dB $L_{Aeq,15min}$ during the daytime and 43 to 53 dB $L_{Aeq,15min}$ during the night-time.
- 3.22 In terms of hourly ambient sound pressure levels, the measured values were 49 to 60 dB $L_{Aeq,60min}$ during the daytime and 43 to 51 dB $L_{Aeq,60min}$ during the night-time.
- 3.23 Table 3.2 presents a summary of the measured background L_{A90} sound pressure levels from the continuous monitoring position. Measured values have been rounded to the nearest whole number.

Table 3.2 - Summary of continuously measured background L_{A90} sound pressure levels

Date	Period	Duration, T (hours)	Typical ¹ $L_{A90,15min}$ dB	Lowest $L_{A90,15min}$ dB	Highest $L_{A90,15min}$ dB
Wednesday 29/03/2023	Daytime (10:15-23:00)	12.75	50	46	52
	Night-time (23:00-07:00)	8	41	41	49
Thursday 30/03/2023	Daytime (07:00-23:00)	16	49	45	60
	Night-time (23:00-07:00)	8	42	40	49
Friday 31/03/2023	Daytime (07:00-17:00)	10	48	46	60
¹ The most commonly occurring background sound level (from a statistical analysis)					

- 3.24 With regard to the maximum L_{AFmax} sound pressure levels, during the daytime period the measured maximum sound pressure level ranged between 58 to 84 dB $L_{AFmax,15min}$ and the average sound pressure level was 70 to 71 dB $L_{AFmax,15min}$.
- 3.25 The results of the continuous monitoring are presented graphically in Figure 3.2. Additional tabulated survey data is presented in Appendix C.

Figure 3.2 - Graph showing results of continuous sound level monitoring

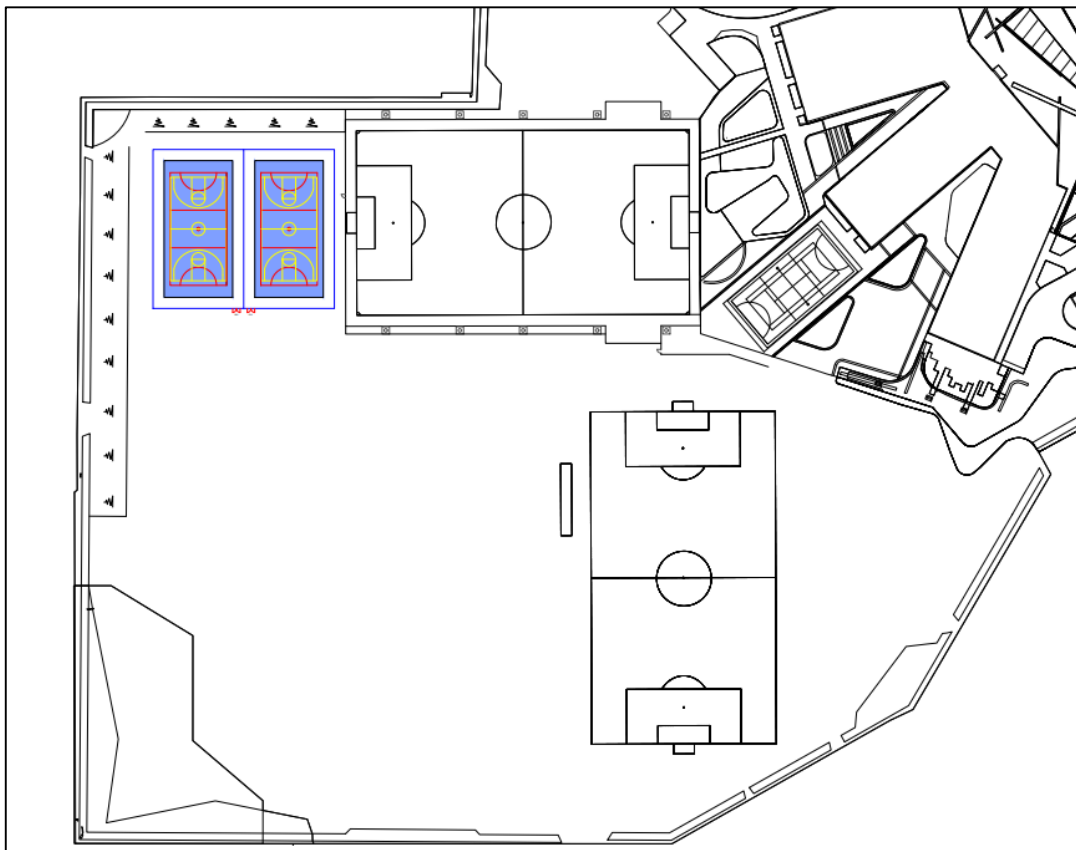


4. Assessment & Discussion

Nearest noise-sensitive receptors and separation distance

- 4.1 The nearest noise-sensitive properties to the proposed courts are a row of terraced dwellings along Jobling Street to the north of the playing fields and existing MUGA.
- 4.2 The shortest distance between the dwellings on Jobling Street (to the property frontages) and the northern edge of the court is approximately 25 metres. The separation distance between the dwellings and the mid-point (centre) of the courts is approximately 50 metres.
- 4.3 There are also a number of dwellings located to the south west of the site along Barmouth Street, however the separation distance is notably greater at approximately 85 to 90 metres to the court mid-point.
- 4.4 Figure 4.1 shows the positioning of the proposed sports courts in relation to the existing MUGA, outdoor sports facilities and existing school buildings.

Figure 4.1 - Proposed pitch layout



Existing ambient sound levels

- 4.5 The average ambient sound pressure level ranged between 54 to 56 dB $L_{Aeq,T}$ during the daytime period (07:00 to 23:00 hours).
- 4.6 In terms of hourly ambient sound pressure levels, the measured values were 49 to 60 dB $L_{Aeq,60min}$ during the daytime period.
- 4.7 Between 07:00 and 18:00 hours (approximate school hours), the hourly ambient sound pressure levels were 52 to 60 dB $L_{Aeq,60min}$ and the fifteen-minute ambient sound pressure levels were 50 to 63 dB $L_{Aeq,15min}$.

- 4.8 Between 18:00 and 23:00 hours, the hourly ambient sound pressure levels were 49 to 58 dB $L_{Aeq,60min}$ and the fifteen-minute ambient sound pressure levels were 47 to 62 dB $L_{Aeq,15min}$.

Resulting sound levels from proposed MUGA

- 4.9 It is anticipated that the courts will typically be used for five-a-side football, basketball, tennis and netball matches/training.
- 4.10 For this assessment, it is considered appropriate to use previously measured sound levels from similar venues, with a number of football matches and basketball training taking place over 60 minute periods.
- 4.11 Previous sample measurements indicate equivalent continuous sound pressure levels ranging between 56 to 58 dB $L_{Aeq,60min}$ at a distance of approximately 25 metres from the pitch centre-point. The microphone was positioned at the pitch edge near to the halfway line.
- 4.12 The main sources of noise associated with a football or basketball game are the participant's voices, intermittent whistles and ball impact. It should be noted that the resulting sound level does not necessarily increase with an increase in the number of participants, since not every participant will make noise simultaneously.
- 4.13 Adopting standard acoustic principles for determining the attenuation of sound over distance for a point source (i.e. 6 dB of attenuation per doubling of distance), it is reasonable to assume that sound attenuation of approximately 6 dB will be achieved over a separation distance of 50 metres.
- $20 \log (25 \text{ metres}/50 \text{ metres}) = -6 \text{ dB}$
- 4.14 Sound attenuation due to ground and atmospheric absorption is considered negligible at this separation distance.
- 4.15 Taking into consideration the potential sound level generated and the separation distance involved, the resulting sound pressure level at the nearest dwelling is approximately 50 to 52 dB $L_{Aeq,60min}$.
- $56 \text{ dB } L_{Aeq,60min} - 6 \text{ dB (distance)} = 50 \text{ dB } L_{Aeq,60min}$
 - $58 \text{ dB } L_{Aeq,60min} - 6 \text{ dB (distance)} = 52 \text{ dB } L_{Aeq,60min}$
- 4.16 The average ambient sound pressure level ranged between 54 to 56 dB $L_{Aeq,T}$ over the full daytime period. However, a more robust approach is to compare the 'hourly' ambient sound pressure levels, which will be lower than those averaged over the full daytime period. Matches and training sessions are also expected to take place over a duration of approximately one hour.
- 4.17 Between 07:00 and 18:00 hours (school hours), the hourly ambient sound pressure levels were 52 to 60 dB $L_{Aeq,60min}$.
- 4.18 The MUGA generated sound pressure level is therefore below, or of a similar magnitude, to the lowest hourly ambient sound pressure level between 07:00 and 18:00 hours. The increase in the current ambient sound level would therefore be marginal.
- 4.19 On this basis, intermittent noise from the MUGA is expected to have a low to negligible impact at the nearest dwellings. Noise related disturbance and annoyance is considered unlikely.
- 4.20 Noise mitigation measures such as installing an acoustic barrier to the boundary line are considered to be unnecessary for MUGA related use during the morning and afternoon period.

Resulting sound levels during the evening period

- 4.21 With regard to the evening period, the hourly ambient sound pressure level reduces slightly by approximately 3 dB between 18:00 to 23:00 hours (to circa 49 dB $L_{Aeq,60min}$).
- 4.22 In this instance, the generated sound pressure level from the MUGA is above the lowest hourly ambient sound pressure level by approximately 1 to 3 dB. The addition of this noise source could also potentially increase the lowest ambient sound level by approximately 4 to 5 dB (i.e. the total ambient sound level would be circa 53 to 54 dB $L_{Aeq,60min}$ as opposed to 49 dB $L_{Aeq,60min}$).
- 4.23 Noise from the MUGA is therefore likely to be audible and distinct in character during the late evening period.
- 4.24 In addition, during the warmer months when windows are likely to be open to provide room cooling and ventilation to front habitable rooms, the resulting ambient sound level could cause low to moderate annoyance for the occupants of the dwellings on Jobling Street.
- 4.25 On this basis, it is therefore recommended that an appropriate noise barrier be installed between the MUGA and the dwellings should the intention be to provide the MUGA for community related use during the evening hours.

Potential noise mitigation measures

- 4.26 One potential mitigation option is to install a timber noise barrier adjacent to the northern boundary line as shown in Figure 4.2.

Figure 4.2 - Potential noise barrier location



- 4.27 There is currently a section of solid timber fencing approximately 2 metres in height along Jobling Street that could be replaced or merged with the new timber barrier as appropriate. The timber fencing currently changes to a metal mesh fence of a similar height as shown below in Figure 4.3.

Figure 4.3 - Photograph showing existing timber and metal mesh fencing



- 4.28 It is estimated that the timber barrier would need to be approximately 4 metres high to be effective.
- 4.29 Indicative calculations have been undertaken in order to determine the potential sound attenuation achievable from an effective barrier along the boundary.
- 4.30 A barrier height of 4 metres and a receptor height of 4 metres above ground (i.e. first floor bedroom window) have been assumed for the calculation. The source height is assumed to be approximately 1.65 metres above ground (to represent a tall person standing).
- 4.31 Table 4.1 presents a results summary for the barrier calculation. Octave-band sound level data has been used in the calculation since barrier attenuation is frequency dependent.

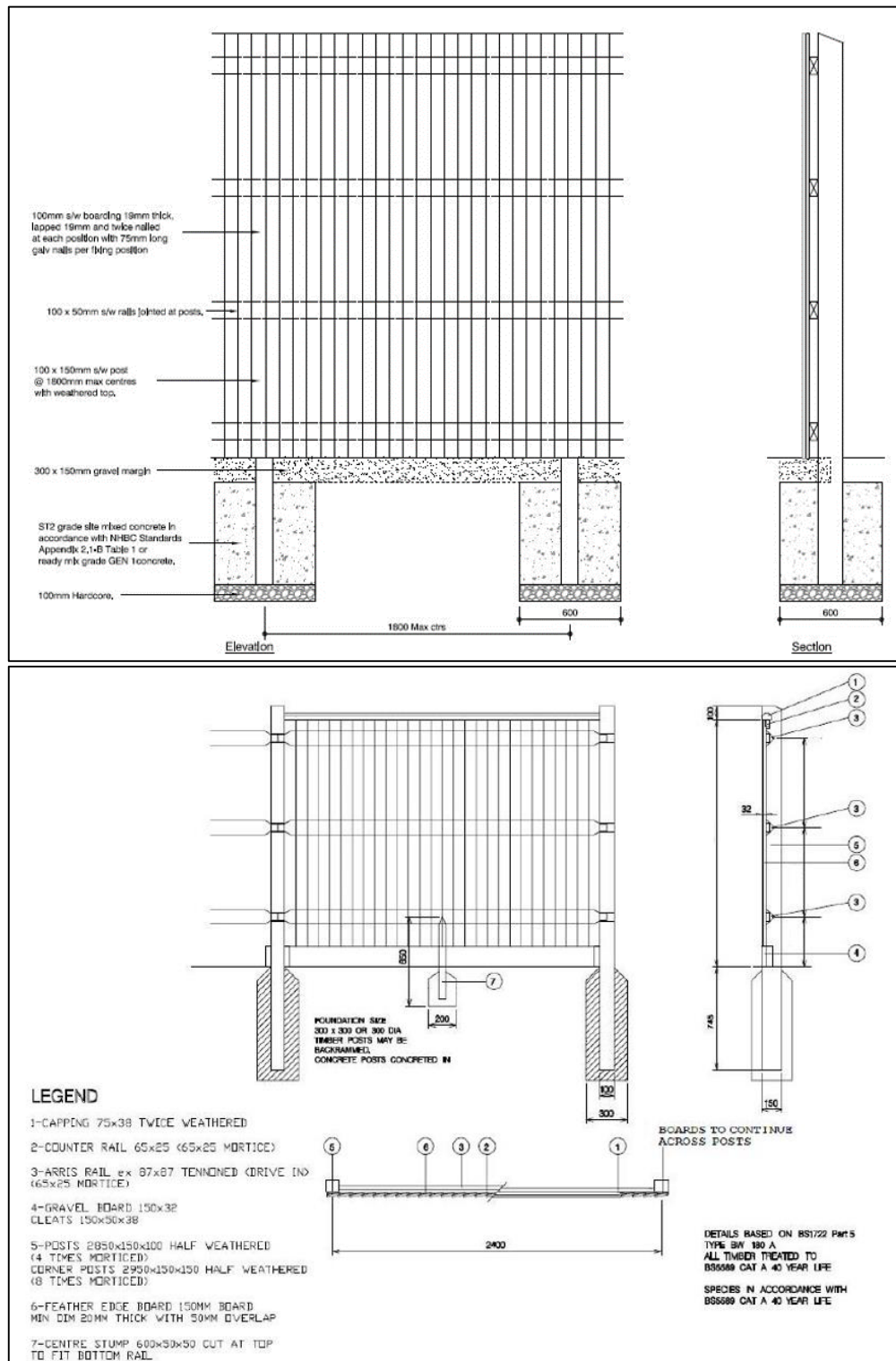
Table 4.1 - Predicted sound attenuation with a 4 metre high noise barrier

Frequency (Hz)	63	125	250	500	1000	2000	4000	L _{Aeq} dB
Male raised voice at 1 metre dB	56	56	68	81	74	65	61	80
Barrier attenuation dB	5	5	6	6	8	9	12	---
Resulting sound level L _{eq} dB	51	51	62	75	66	56	49	73

- 4.32 The barrier calculation indicates sound attenuation of approximately 7 dB L_{Aeq,T}.
- 4.33 The calculation above assumes that the noise source is positioned at the approximate mid-point of the court.
- 4.34 When the calculations are repeated for the noise source positioned near to the northern edge of the court (and therefore close to the barrier), the level of sound attenuation provided by the barrier increases to approximately 12 dB.
- 4.35 Similarly, if the receptor position is considered to be the ground floor window, as opposed to the first floor window, the level of sound attenuation increases from 7 to 12 dB to approximately 12 to 15 dB.
- 4.36 Where the barrier is expected to provide sound attenuation of approximately 7 to 12 dB (i.e. at first floor windows), the resulting source sound level would reduce to approximately 38 to 45 dB L_{Aeq,60min}.

- 4.37 In this instance, the resulting sound level would be approximately 4 to 11 dB below the lowest hourly ambient sound pressure level during the late evening period (49 dB $L_{Aeq,60min}$).
- 4.38 On this basis, intermittent noise from the new MUGA would have a negligible impact at the nearest dwellings. Noise related disturbance and annoyance is considered unlikely.
- 4.39 The barrier should be imperforate, sealed at the base, sealed between panels (no gaps) and have a mass per unit area of at least 12.5 kg/m². Hit and miss fencing, slatted fencing, waney lap fencing and foliage do not make effective noise barriers.
- 4.40 The timber barrier will also provide a degree of visual privacy between the MUGA and the windows to the front elevations along Jobling Street.
- 4.41 Further guidance regarding the barrier height and construction can be provided once the finished site level is known and the court location finalised. For guidance, example acoustic timber fence construction details are provided overleaf in Figure 4.4.
- 4.42 Alternative constructions may be acceptable, subject to the approval of the local authority and/or project acoustician.

Figure 4.4 - Example acoustic fence construction details



5. Conclusion

- 5.1 Continuous sound level monitoring has been conducted over a number of days in order to establish the existing acoustic environment during the daytime and late evening period at the nearest dwellings.
- 5.2 During the daytime, the average ambient sound pressure level ranged between 54 to 56 dB $L_{Aeq,T}$ and in terms of hourly ambient sound pressure levels, the measured values were 49 to 60 dB $L_{Aeq,60min}$.
- 5.3 An assessment of hourly ambient sound pressure levels has been undertaken, since this is considered to be a more robust approach than comparing the source sound levels with the average ambient sound levels over the full daytime period.
- 5.4 The predicted sound pressure level generated by the MUGA is below, or of a similar magnitude, to the lowest hourly ambient sound pressure level between 07:00 and 18:00 hours. The increase in the current ambient sound level would therefore be marginal.
- 5.5 During typical school hours, intermittent noise from the MUGA is expected to have a low to negligible impact at the nearest dwellings. Noise related disturbance and annoyance is considered unlikely.
- 5.6 Noise mitigation measures such as installing an acoustic barrier to the boundary line are considered to be unnecessary for MUGA related use during the morning and afternoon period.
- 5.7 With regard to the evening period, the hourly ambient sound pressure level reduces slightly by approximately 3 dB between 18:00 to 23:00 hours (to circa 49 dB $L_{Aeq,60min}$).
- 5.8 In this instance, the generated sound pressure level from the MUGA is above the lowest hourly ambient sound pressure level by approximately 1 to 3 dB. Noise from the MUGA is therefore likely to be audible and distinct in character during the late evening period.
- 5.9 It is therefore recommended that an appropriate noise barrier be installed between the MUGA and the dwellings on Jobling Street, should the intention be to provide the MUGA for community related use during the evening hours.

Appendix A

Existing and proposed site plans

Figure A.1 - Location plan

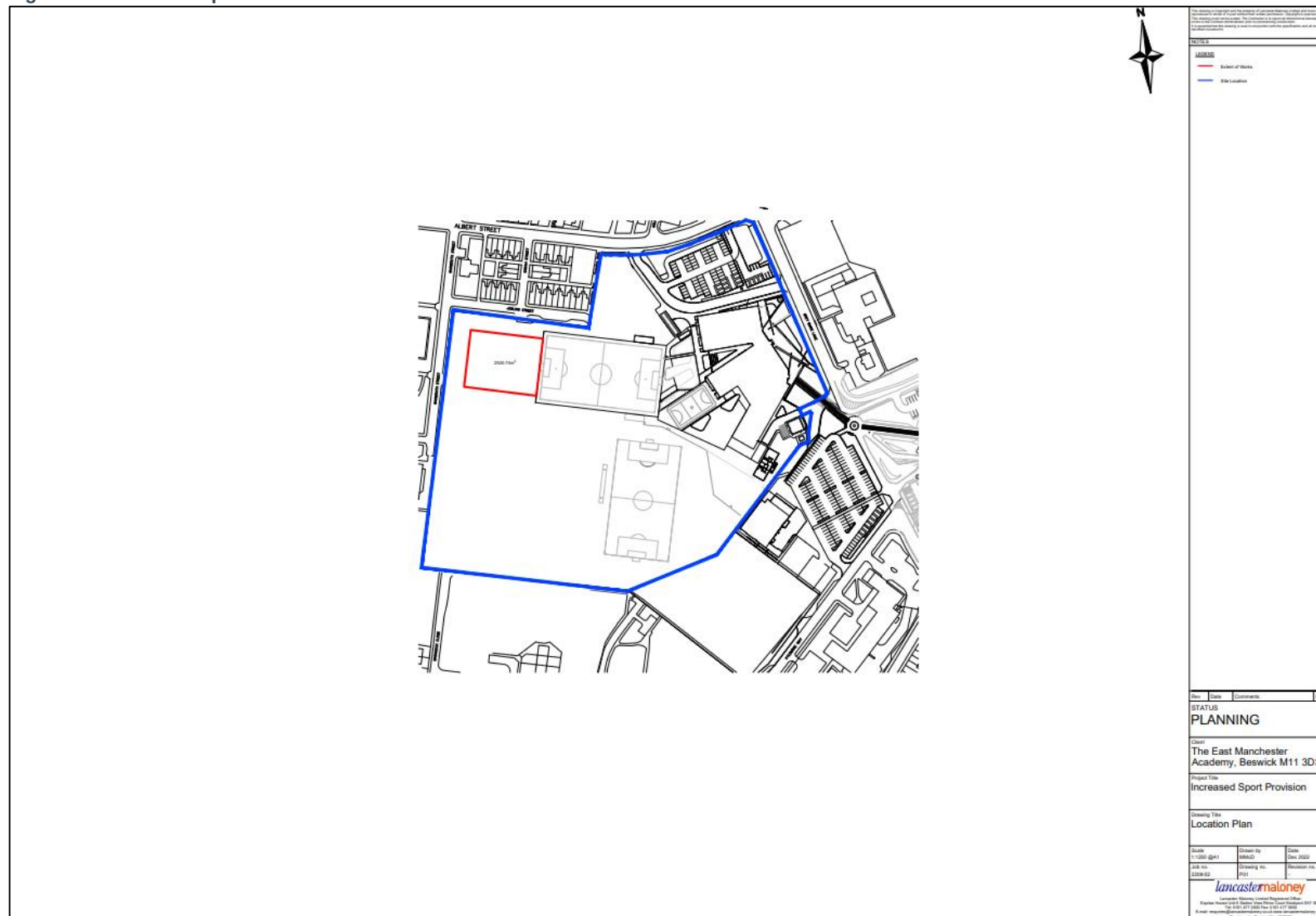


Figure A.2 - Existing site plan

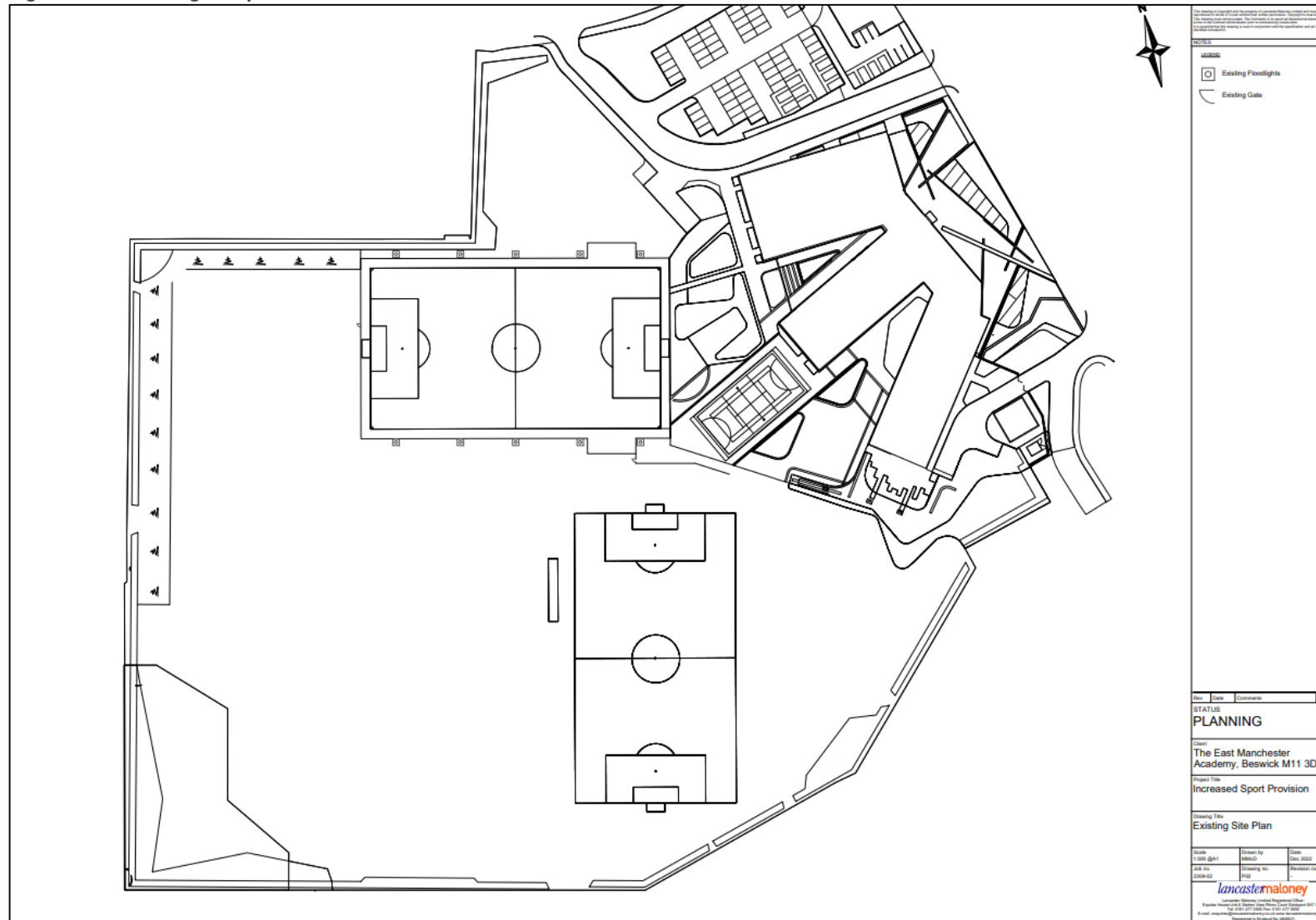


Figure A.3 - Proposed site plan

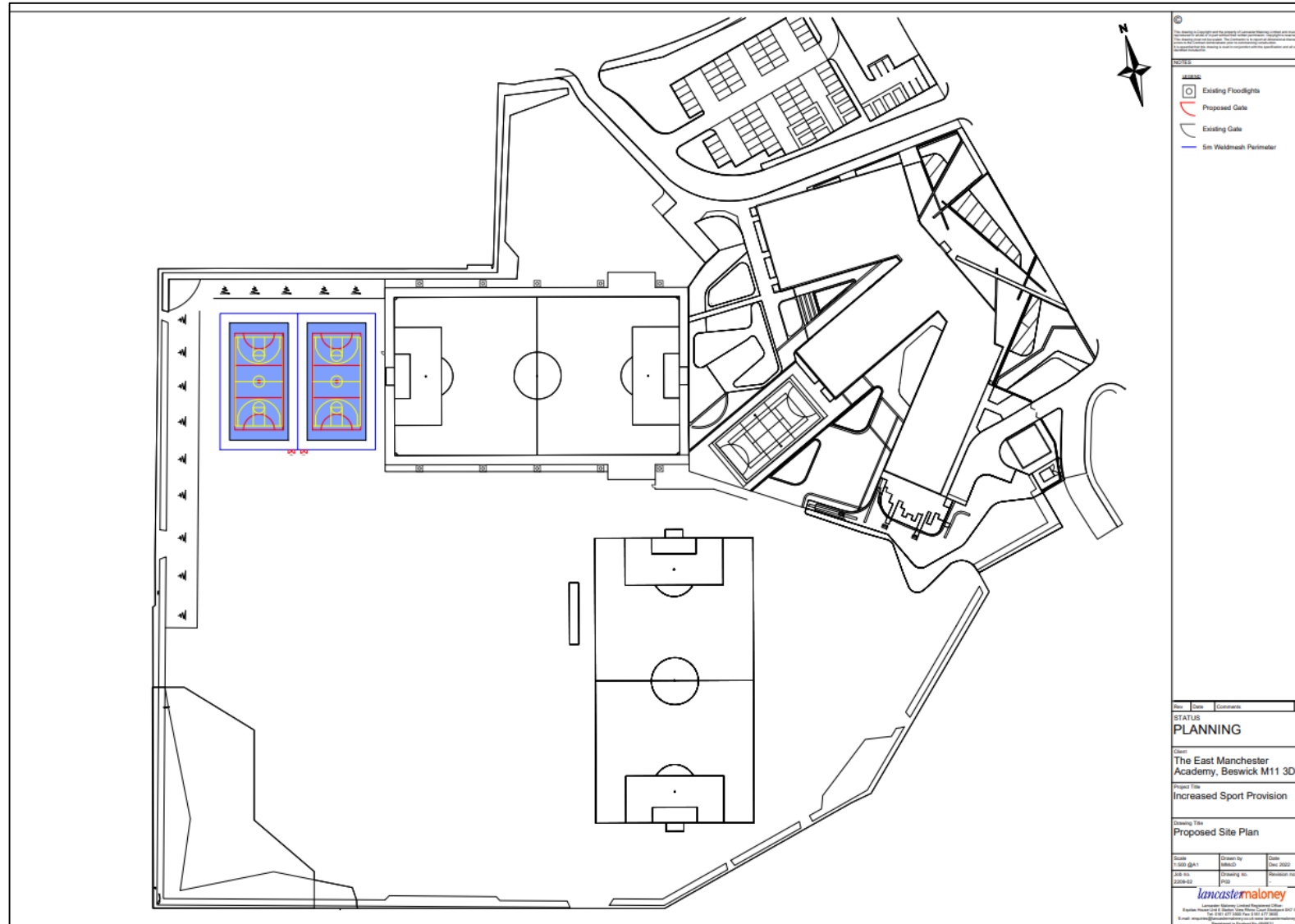


Figure A.4 - Line marking layout

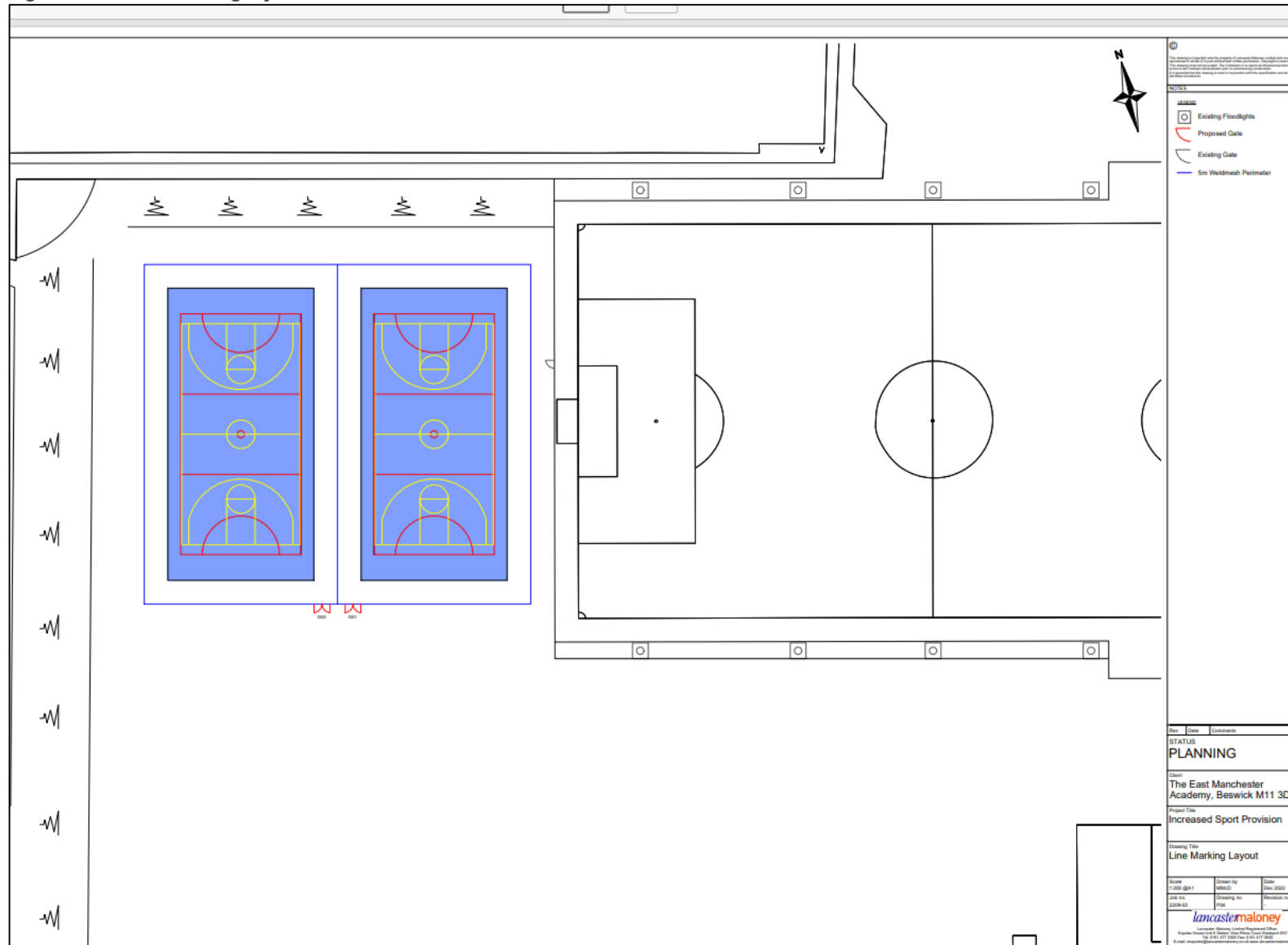
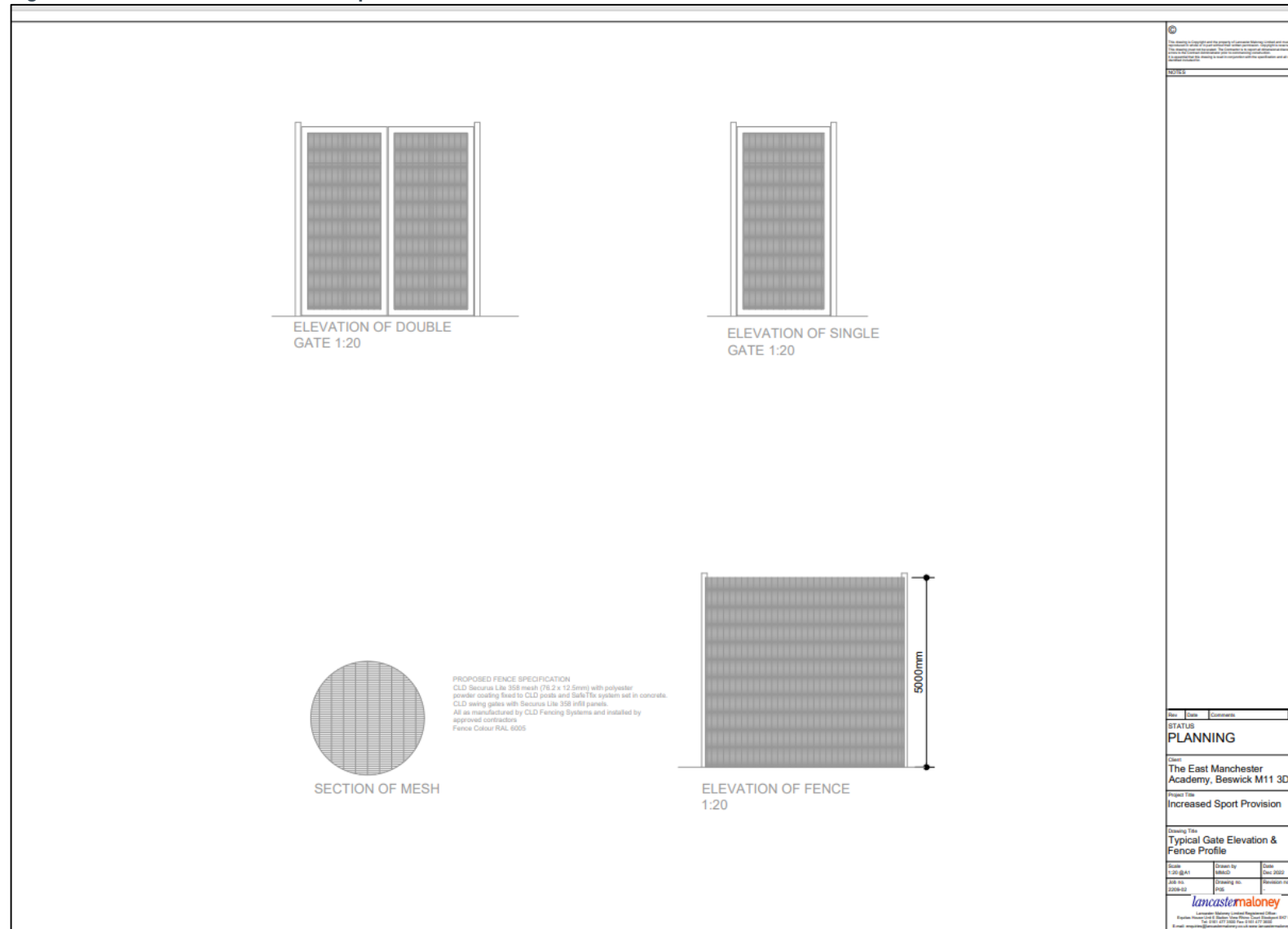
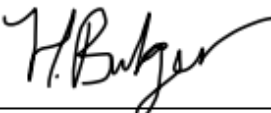


Figure A.5 - Gate elevation and fence profile



Appendix B

Equipment calibration certificates

Certificate of Calibration Issued by University of Salford (Acoustics Calibration Laboratory) UKAS ACCREDITED CALIBRATION LABORATORY NO. 0801		 0801 	
Page 1 of 3 APPROVED SIGNATORIES Claire Lomax [] Harry Bulger [x] Gary Phillips [] Daniel Wong-McSweeney [] 			
acoustic calibration laboratory The University of Salford, Salford, Greater Manchester, M5 4WT, UK http://www.acoustics.salford.ac.uk t 0161 295 3030/0161 295 3319 f 0161 295 4456 e c.lomax1@salford.ac.uk			
Certificate Number: 06067/1 Date of Issue: 25 January 2023			
PERIODIC TEST OF A SOUND LEVEL METER to IEC 61672-3:2006			
FOR:	RS Acoustic Engineering Ltd 76 Marple Road Stockport Cheshire SK2 5QH		
FOR THE ATTENTION OF:	Ryan Swales		
DATE RECEIVED:	10 January 2023		
PERIODIC TEST DATE:	25 January 2023		
LOCATION OF CALIBRATION:	Acoustic Calibration Laboratory, Newton G31, University of Salford		
TEST PROCEDURE:	CTP12 (Laboratory Manual)		
Sound Level Meter Details-			
Manufacturer	B&K		
Model	2250L		
Serial number	2638934		
Class	1		
Hardware version: 2.0	Sound Level Meter Software: BZ7130 Version 3.1		
Associated Items:-			
Type	Manufacturer	Model	Serial Number
Microphone	B&K	4189	2643196
Preamplifier	B&K	ZC 0032	8938
Test Engineer (initial):	GP	Name:	Gary Phillips
<i>Results in this certificate relate only to instruments tested.</i> This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to the units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full except with the prior written approval of the issuing laboratory.			

Certificate of Calibration

Issued by University of Salford (Acoustics Calibration Laboratory)
UKAS ACCREDITED CALIBRATION LABORATORY NO. 0801

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Certificate Number: 06067/1

Date of Issue: 25 January 2023

Procedures from IEC 61672-3: 2006 and TPS 49 Edition 2 June 2009 were used to perform the periodic tests.

The manufacturer's instruction manual was marked as follows: B&K 2250-L with mic 4950 BE 1774-11 June 2007 From hardware version 2.0.

Adjustment data used to adjust the sound levels indicated in response to the application of an electrostatic actuator to sound levels equivalent to those that would be indicated in response to plane, progressive sound waves were obtained from the manufacturer's instruction manual referred to in this certificate.

The sound level meter calibration check frequency is 1000 Hz, the reference sound pressure level is 94 dB. As this instrument only has a single range, this range is the reference level range.

The environmental conditions in the laboratory at the start of the test were:

Static pressure 102.702 kPa $\pm$ 0.013 kPa; air temperature 22.0 °C $\pm$ 0.3 °C; relative humidity 40.1 % $\pm$ 2.6 %.

The initial response of the instrument to application of the suitable laboratory sound calibrator was 93.8 dB (C). The instrument was then adjusted to indicate 94.0 dB (C).

This indication was obtained from the calibration certificate of the calibrator and information in the manufacturer's instruction manual specified in this certificate, when the instrument is configured as follows; Transd. Used 4189 (2643196), Sound Field Correction: Free-field, Windscreen Correction: None. The instrument was calibrated without a windscreen. Consult manufacturer's instructions if using a windscreen.

With the microphone installed the level of self-generated noise was:

A: 16.5 dB

With the microphone replaced by an electrical input device with a similar capacitance to the supplied microphone, the levels of self-generated noise were:

A: 13.1 dB

B: 12.3 dB

C: 13.9 dB

Z: 19.1 dB

The environmental conditions in the laboratory at the end of the test were:

Static pressure 102.458 kPa $\pm$ 0.013 kPa; air temperature 22.7 °C $\pm$ 0.3 °C; relative humidity 39.9 % $\pm$ 2.6 %.

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to the units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full except with the prior written approval of the issuing laboratory.

Certificate of Calibration

Issued by University of Salford (Acoustics Calibration Laboratory)
UKAS ACCREDITED CALIBRATION LABORATORY NO. 0801

Page 3 of 3

Certificate Number: 06067/1

Date of Issue: 25 January 2023

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2006, for the environmental conditions under which the tests were performed. As public evidence was available, from an independent testing organization responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2:2003, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2002, the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1:2002.

The microphone corrections applied as specified in 12.6 of IEC 61672-3:2006 were obtained from a frequency response measured by this Laboratory using the electrostatic actuator method. This response in isolation is not covered by our UKAS accreditation.

Instruments used in the verification procedure were traceable to *National Standards*. The electrostatic actuator method was employed in the acoustical tests of a frequency weighting.

The uncertainty evaluation has been carried out in accordance with UKAS requirements. All measurement results are retained at the acoustic calibration laboratory for at least four years.

-----END OF CERTIFICATE-----

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to the units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full except with the prior written approval of the issuing laboratory.

Appendix C

Tabulated survey results

Start Date & Time	LAFmax,15min dB	LAeq,15min dB	LA90,15min dB
29/03/2023 10:15	64.11	53.51	49.82
29/03/2023 10:30	73.98	55.71	51.56
29/03/2023 10:45	67.33	53.97	50.03
29/03/2023 11:00	73.87	53.26	49.6
29/03/2023 11:15	68.29	53.61	50.7
29/03/2023 11:30	69.61	53.78	50.83
29/03/2023 11:45	70.25	54.72	50.98
29/03/2023 12:00	71.88	54.73	50.93
29/03/2023 12:15	82.94	55.94	50.95
29/03/2023 12:30	65.77	52.24	49.5
29/03/2023 12:45	68.77	53.68	50.41
29/03/2023 13:00	73.82	55.3	51.05
29/03/2023 13:15	72.19	56.48	51.28
29/03/2023 13:30	78.65	59.24	51.35
29/03/2023 13:45	66.38	53.26	50.4
29/03/2023 14:00	69.48	54.39	49.67
29/03/2023 14:15	71.99	56.22	51.58
29/03/2023 14:30	75.95	55.42	51.18
29/03/2023 14:45	75.62	57.2	51.55
29/03/2023 15:00	74.29	56.22	51.76
29/03/2023 15:15	74.98	56.5	51.28
29/03/2023 15:30	73.2	56.69	52.14
29/03/2023 15:45	70.25	55.4	51.85
29/03/2023 16:00	74.94	55.56	51.33
29/03/2023 16:15	70.3	54.3	50.25
29/03/2023 16:30	67.2	53.07	49.83
29/03/2023 16:45	76.49	54.73	50.04
29/03/2023 17:00	71.56	54.17	50.3
29/03/2023 17:15	72.82	54.22	50.33
29/03/2023 17:30	70.04	54.34	50.35
29/03/2023 17:45	76.83	55.82	50.49
29/03/2023 18:00	70.09	55.91	51.03
29/03/2023 18:15	70.72	55.39	51
29/03/2023 18:30	68.41	56.56	51.89
29/03/2023 18:45	71.9	56.98	51.75
29/03/2023 19:00	72.47	54.48	50.15
29/03/2023 19:15	71.21	55.93	51.61
29/03/2023 19:30	72.69	54.79	50.8
29/03/2023 19:45	75.72	56.79	51.71
29/03/2023 20:00	70.08	54.31	48.88
29/03/2023 20:15	73.18	54.15	48.63
29/03/2023 20:30	66.28	51.57	47.35
29/03/2023 20:45	67.76	51.83	47.33
29/03/2023 21:00	67.93	50.78	47.1

Start Date & Time	L _{AFmax,15min} dB	L _{Aeq,15min} dB	L _{A90,15min} dB
29/03/2023 21:15	64.23	50.6	48.14
29/03/2023 21:30	70.26	50.15	48
29/03/2023 21:45	65.1	50.25	46.46
29/03/2023 22:00	67.65	50.65	47.29
29/03/2023 22:15	67.2	50.46	47.13
29/03/2023 22:30	71.37	52.41	47.44
29/03/2023 22:45	69.63	50.8	47.6
29/03/2023 23:00	63.19	48.52	46.27
29/03/2023 23:15	69.55	48.75	45.44
29/03/2023 23:30	62.54	47.53	45.63
29/03/2023 23:45	77.1	50.47	46.33
30/03/2023 00:00	70.09	50.43	46.36
30/03/2023 00:15	66.79	51.82	45.16
30/03/2023 00:30	68.39	45.09	42.99
30/03/2023 00:45	61.2	44.7	42.76
30/03/2023 01:00	59.33	44.41	42.03
30/03/2023 01:15	63.33	45.13	41.25
30/03/2023 01:30	57.05	43.12	40.61
30/03/2023 01:45	63.35	45.19	41.62
30/03/2023 02:00	56.57	42.98	40.59
30/03/2023 02:15	58.78	43.73	41.02
30/03/2023 02:30	56.87	43.63	41.64
30/03/2023 02:45	56.51	43.49	41.42
30/03/2023 03:00	58.35	44.74	41.44
30/03/2023 03:15	53.71	43.96	41.38
30/03/2023 03:30	58.85	43.87	41.19
30/03/2023 03:45	57.55	44.02	42.05
30/03/2023 04:00	54.36	43.94	41.97
30/03/2023 04:15	68.33	46.67	43.34
30/03/2023 04:30	57.37	45.58	43.54
30/03/2023 04:45	66.92	46.68	44.31
30/03/2023 05:00	65.51	49.66	46.06
30/03/2023 05:15	61.36	51.06	47.93
30/03/2023 05:30	68.18	50.86	47.53
30/03/2023 05:45	66.58	49.35	47.41
30/03/2023 06:00	59.45	48.92	46.99
30/03/2023 06:15	65.83	51.26	48.41
30/03/2023 06:30	68.11	52.64	48.97
30/03/2023 06:45	67.18	51.91	48.6
30/03/2023 07:00	71.65	53.35	49.37
30/03/2023 07:15	64.74	51.76	48.95
30/03/2023 07:30	67.72	53.09	50.09
30/03/2023 07:45	67.53	53.06	50.25
30/03/2023 08:00	67.18	54.91	51.19
30/03/2023 08:15	69.17	55.56	51.77

Start Date & Time	L _{AFmax,15min} dB	L _{Aeq,15min} dB	L _{A90,15min} dB
30/03/2023 08:30	71.69	60.67	54.66
30/03/2023 08:45	77.56	63.44	53.41
30/03/2023 09:00	73.35	54.41	51.03
30/03/2023 09:15	67.75	53.76	50.73
30/03/2023 09:30	68.39	52.56	49.94
30/03/2023 09:45	65.17	52.86	49.99
30/03/2023 10:00	65.77	52.75	49.89
30/03/2023 10:15	71	53.95	50.56
30/03/2023 10:30	68.67	54.44	51.42
30/03/2023 10:45	66.3	53.52	51.17
30/03/2023 11:00	66.65	52.36	49.97
30/03/2023 11:15	73.74	53.24	49.4
30/03/2023 11:30	65.66	51.65	48.86
30/03/2023 11:45	65.96	52.68	50.03
30/03/2023 12:00	69.11	53.31	50.06
30/03/2023 12:15	79.21	55.27	49.95
30/03/2023 12:30	66.95	52.52	49.27
30/03/2023 12:45	64.75	51.13	48.52
30/03/2023 13:00	66.4	52.16	49.1
30/03/2023 13:15	70.12	52.9	48.7
30/03/2023 13:30	73.61	53.56	49.24
30/03/2023 13:45	73.79	51.97	49.49
30/03/2023 14:00	71.57	60.26	53.53
30/03/2023 14:15	69.65	62.06	60.07
30/03/2023 14:30	77.12	60.78	50.9
30/03/2023 14:45	83.37	56.7	50.46
30/03/2023 15:00	71.39	56.54	51.66
30/03/2023 15:15	73.97	57.96	51.88
30/03/2023 15:30	93.2	59.66	54.15
30/03/2023 15:45	71.69	54.44	50.45
30/03/2023 16:00	71.63	55.72	51.22
30/03/2023 16:15	70.92	54.77	50.36
30/03/2023 16:30	66.89	53.6	49.58
30/03/2023 16:45	71.45	53.49	49.16
30/03/2023 17:00	79.46	56.53	50.35
30/03/2023 17:15	69.43	53.98	48.78
30/03/2023 17:30	71.95	53.81	49.03
30/03/2023 17:45	73.72	54.1	48.38
30/03/2023 18:00	73.62	55.1	48.89
30/03/2023 18:15	74.78	56.83	50.31
30/03/2023 18:30	72.71	55.95	50.37
30/03/2023 18:45	73.13	54.71	48.76
30/03/2023 19:00	72.66	54.63	48.9
30/03/2023 19:15	75.52	56.26	49.1
30/03/2023 19:30	71.98	55.71	48.45

Start Date & Time	L _{AF} max,15min dB	L _{Aeq} ,15min dB	L _{A90} ,15min dB
30/03/2023 19:45	83.02	62	47.83
30/03/2023 20:00	71.54	51.33	46.37
30/03/2023 20:15	67.59	51.38	46.7
30/03/2023 20:30	68.18	52.24	47.39
30/03/2023 20:45	72.21	52.33	46.7
30/03/2023 21:00	69.04	49.9	46.32
30/03/2023 21:15	63.84	49.57	45.58
30/03/2023 21:30	65.23	49.96	46.25
30/03/2023 21:45	60.51	48.29	46.06
30/03/2023 22:00	67.61	49.7	45.75
30/03/2023 22:15	67.52	52.23	45.74
30/03/2023 22:30	58.18	47.82	44.94
30/03/2023 22:45	60.74	47.06	44.74
30/03/2023 23:00	69.72	48.33	44.96
30/03/2023 23:15	60.27	47.15	44.89
30/03/2023 23:30	58.36	46.4	44.42
30/03/2023 23:45	70.72	48.07	43.98
31/03/2023 00:00	58.86	45.85	43.66
31/03/2023 00:15	58.27	45.03	42.39
31/03/2023 00:30	61.03	46.2	42.77
31/03/2023 00:45	64.28	44.85	41.78
31/03/2023 01:00	57.75	45.32	42.21
31/03/2023 01:15	57.1	44.76	42.01
31/03/2023 01:30	55.86	44.6	42.17
31/03/2023 01:45	60.83	45.46	43.03
31/03/2023 02:00	60	45.01	42.42
31/03/2023 02:15	64.2	46.48	42.46
31/03/2023 02:30	55.21	45.47	41.75
31/03/2023 02:45	59.26	45.56	40.98
31/03/2023 03:00	64.65	45.92	40.31
31/03/2023 03:15	56.82	44.08	40.53
31/03/2023 03:30	64.87	47.23	41.02
31/03/2023 03:45	59.76	44.03	40.09
31/03/2023 04:00	72.81	43.85	40.21
31/03/2023 04:15	60.64	44.63	40.22
31/03/2023 04:30	59.52	44.95	41.5
31/03/2023 04:45	63.68	46.45	42.04
31/03/2023 05:00	54.72	45.72	42.49
31/03/2023 05:15	59.12	47.07	44.48
31/03/2023 05:30	68.14	48.97	44.63
31/03/2023 05:45	59.23	47.47	45.48
31/03/2023 06:00	65.09	48.79	45.86
31/03/2023 06:15	65.41	49.78	47.29
31/03/2023 06:30	65.27	51.25	48.32
31/03/2023 06:45	76.35	53.12	49.13

Start Date & Time	L _{AFmax,15min} dB	L _{Aeq,15min} dB	L _{A90,15min} dB
31/03/2023 07:00	63.67	52	49.16
31/03/2023 07:15	67.84	52.43	49.63
31/03/2023 07:30	64.63	52.23	49.6
31/03/2023 07:45	65.58	51.22	48.15
31/03/2023 08:00	66.72	52.48	47.76
31/03/2023 08:15	74.7	54.01	48.4
31/03/2023 08:30	67.35	53.64	48.47
31/03/2023 08:45	67.75	54.3	48.12
31/03/2023 09:00	69.05	51.65	48
31/03/2023 09:15	69.24	52.44	48.24
31/03/2023 09:30	66.6	53.49	49
31/03/2023 09:45	69.62	52.43	47.6
31/03/2023 10:00	71.33	54.43	48.53
31/03/2023 10:15	Helicopter landing on school fields		
31/03/2023 10:30	Helicopter landing on school fields		
31/03/2023 10:45	72	54.69	48.78
31/03/2023 11:00	77.47	53.12	45.53
31/03/2023 11:15	66.6	50.04	45.64
31/03/2023 11:30	64.68	51.09	47.11
31/03/2023 11:45	72.79	51.9	47.51
31/03/2023 12:00	64.7	51.42	48.24
31/03/2023 12:15	71.84	54.02	48.99
31/03/2023 12:30	67.79	53.33	49.09
31/03/2023 12:45	67.25	52.41	49.04
31/03/2023 13:00	70.92	54.38	49.6
31/03/2023 13:15	65.83	51.58	47.94
31/03/2023 13:30	68.69	51.54	48.44
31/03/2023 13:45	Helicopter take-off from school fields		
31/03/2023 14:00	Helicopter take-off from school fields		
31/03/2023 14:15	68.82	52.64	47.53
31/03/2023 14:30	72.27	54.75	48.52
31/03/2023 14:45	84.11	57.42	49.81
31/03/2023 15:00	72.84	57.9	51.2
31/03/2023 15:15	80.15	63.02	51.9
31/03/2023 15:30	74.61	58	50.07
31/03/2023 15:45	71.3	54.12	47.16
31/03/2023 16:00	71.64	51.62	46.55
31/03/2023 16:15	73.25	53.05	47.42
31/03/2023 16:30	69.03	52.58	47.74
31/03/2023 16:45	69.72	52.28	46.84

Appendix D

Assessment terminology

Assessment terminology

Term	Description
dB (decibel)	The scale on which sound pressure level is expressed. It is defined as 20 times the logarithm of the ratio between the root-mean-square pressure of the sound field and a reference pressure ($2 \times 10^{-5} \text{Pa}$).
dB(A)	The most widely used weighting mechanism that best corresponds to the response of the human ear is the 'A'-weighting scale. This is widely used for environmental noise measurement, and the levels are denoted as dB(A) or L_{Aeq} , L_{A90} etc, according to the parameter being measured.
Acoustic environment	Sound from all sources as modified by the environment.
Ambient sound level	The totally encompassing sound in a given situation at a given time; it is usually composed of sound from many sources, near and far.
Equivalent continuous sound level - $L_{Aeq,T}$	The A-weighted equivalent continuous sound pressure level over a period of time, T. Representative of the 'average' sound pressure level over a given period (commonly used to describe the 'ambient' sound level).
Maximum sound level - $L_{AFmax,T}$	The A-weighted 'maximum' sound pressure level that occurred during a given period, T (commonly used for the assessment of intermittent loud noises).
Background sound level - $L_{A90,T}$	The sound pressure level that is exceeded for 90% of the measurement time interval, T. $L_{A90,T}$ is often used to describe the 'background' sound level.
Rating level $L_{Ar,T}$	Specific sound level plus any adjustment for the characteristic features of the sound.
Habitable room	Any room used or intended to be used for sleeping, cooking, living or eating purposes (enclosed spaces such as bath or toilet facilities, service rooms, corridors, laundries, hallways, utility rooms or similar spaces are excluded from this definition).
R_w	The weighted sound reduction index expressed in dB. A single number quantity for airborne sound insulation rating.
Free-field level	A sound field determined at a point away from reflective surfaces other than the ground with no significant contributions due to sound from other significant reflective surfaces. Generally as measured outside and away from buildings (>3.5metres).