

MCFC Project Taverna

Phase 1 Geo Environmental Report

0165-CAL-ZZ-ZZ-RP-G-3000

For: Manchester City Football Club

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It should be noted that some of the aspects considered in this study may be subject to change with time. Therefore, if the development is delayed or postponed, consideration may need to be given to reviewing such issues to confirm that no changes have taken place, either at the site or within relevant legislation.

Further consultations with statutory bodies are likely as the scheme progresses. It should be noted that even where responses have been received from Regulators, these could be subject to change at a later date.

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1.0 INTRODUCTION

This Phase 1 Geo-Environmental Investigation report has been prepared at the request of Manchester City Football Club, "the client". Instructions to proceed were received in November 2025. Phase 1 desk study work was undertaken in January 2026.

1.1 Site Location and Description

This report pertains to a c. 0.63 Ha site located to the east of the Etihad Stadium, Etihad Campus, Manchester, c. 3km northeast of Manchester City Centre, at the approximate post code M11 3FF. The National Ordnance Survey Grid Reference for the centre of the site is 386925E, 398736N.

The site currently comprises an open area of hardstanding with Loverose Street crossing the site in the southwest. The site is partly disused, and has been temporarily used as a site compound area for the adjacent north stand development. The site is bound by a Metrolink cutting to the north with the Ashton Canal and the Co-op Live arena beyond, Alan Turing Way to the east, Gibbon Street to the south and Loverose street to the west. Access to the site is via Gibbon Street from Alan Turing Way. An aerial photo of the site is included below, and a site location plan is contained in Appendix 2.



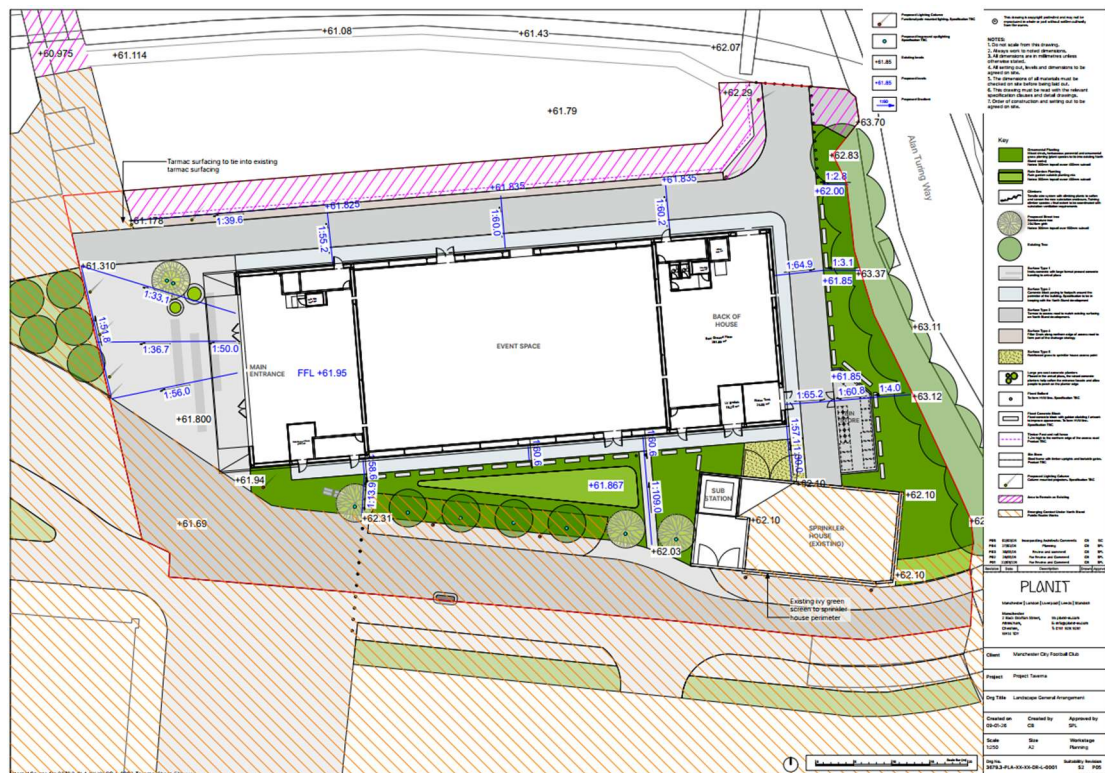
Figure 1: Aerial Image of the site dated April 2023

Proposed Development

This Phase 1 Geo-Environmental Investigation is to be used for submission to the Local Authority as part of a planning application. It is the client's intention to develop the site into an immersive events space.

It should be noted that this report has been undertaken based on the red line boundary shown on the proposed development plan below, however, the boundary included within the Groundsure report is that of a slightly larger site area as the Groundsure report was obtained prior to receiving a proposed development plan.

The proposed development plan is included in Appendix 2 and an extract as Figure 2 below.



In later sections of this report, references are made to “the site” which describes the site in question which is part of the Eastlands site. The Eastlands site is an area earmarked for redevelopment and has a vast industrial history and has been subjected to multiple stages of investigation and remediation. Figure 3, below, shows a site location plan defining the boundaries of the Eastlands site and “the site”.

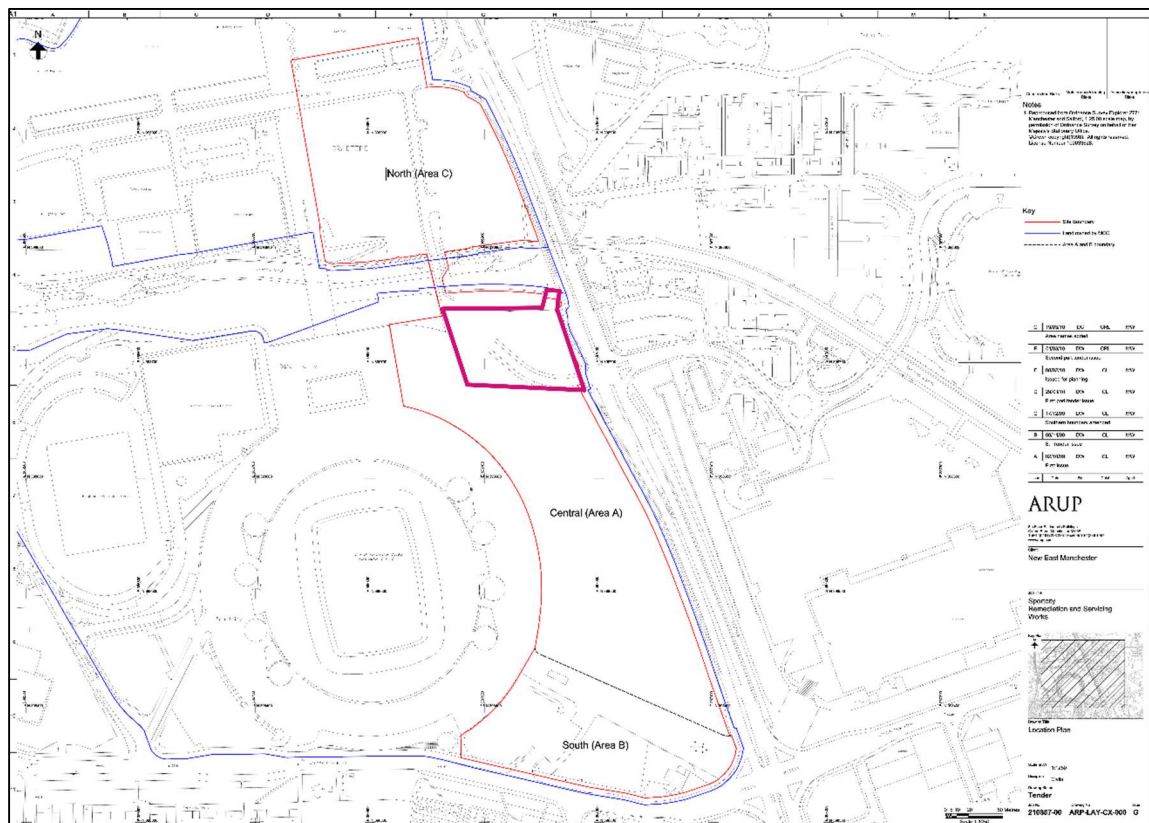


Figure 3: Site location plan showing "the site" boundary in magenta, the Eastlands site boundary in red and land under Manchester City Council ownership in blue.

1.2 Brief

The brief was to carry out a Phase 1 Geo-Environmental Investigation for the site based upon the proposed development outlined in Section 1.0. The site area is shown on the site location plan contained in Appendix 2.

The investigation was to include the following:

- Assess the probable ground conditions and contaminated land conditions on and below the site based on existing and historical site uses and relevant off-site activities, including a site walkover.
- Identify sources of contamination that may be present at the site using current contaminated land guidance and develop a conceptual site model for potential human health, ground gas and controlled waters receptors.

- c) Undertake a Preliminary Risk Assessment which will determine the requirement for further environmental (contaminated land) investigation and assessment.

- d) Design, on the basis of the anticipated ground conditions, appropriate ground investigation works and discuss potential development issues (i.e. sub-surface features – obstructions, infilling, compressible ground, faulting, mineral extraction, mining and land instability).

A report was to be provided to summarise findings and to provide recommendations.

The limitations of this investigation work and report are included in Appendix 1.

2.0 SCOPE OF INVESTIGATION WORKS

2.1 Walkover Survey

The site was visited on 12th January 2026 in cloudy weather conditions. Photographs were taken of the site during the walkover survey and are contained in Appendix 3.

2.2 Documentation

A combined Enviro + Geo Insight report (Ref GS-BUT-D17-T8M-YDM) was obtained from Groundsure, an environmental database company, which provides a list of recorded past and present activities at or adjacent to the site which could have an impact on the levels of contamination in the soils and groundwater at the site. As part of the desk study works, the below documents were obtained and examined. Unless otherwise stated, the documents are contained within the Groundsure Enviro + Geo Insight Report in Appendix 4:

a) Groundsure maps, all dated 2026 as follows:

- Historical Land Use map:
- Environmental Permits, Incidents and Registers map:
- Landfill and other Waste Sites map:
- Current Land Use map:
- Hydrogeology and Hydrology maps:
- Environment Agency / Natural Resources Wales flood maps:
- Designated Environmentally Sensitive Sites map:
- Geological maps and Ground Working map:
- Mining, Extraction & Natural Cavities map:
- Natural Ground Subsidence maps:
- Borehole Records map: and

- Railways and Tunnels map.
- b) Aerial photographs of the site dated April 2023, October 2022, June 2015, June 2009 and June 2000.
- c) Historical Ordnance Survey maps dated between 1848 and 2025, at scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.
- d) The following sources were obtained and examined from the British Geological Survey (BGS). All items were copied under licence: [C18/01] British Geological Survey ©UKRI. All rights reserved:
- The BGS 1:50,000 bedrock and superficial geological map (Sheet ref 85 dated 2011);
 - The BGS 1:10,560 solid and drift geological map (Sheet ref SJ89, dated 1976); and
 - BGS Boreholes Ref: SJ89NE216, SJ89NE1450, SJ89NE1492 and SJ89NE1493.
- e) The BGS Geological Memoir – The Geology of Manchester and the South-east Lancashire coalfield. Dated 1931.
- f) A UXO risk map has been obtained from Zetica and is contained in Appendix 7.
- g) A Historical aerial image of the site was purchased under license from Britain from Above (Ref: EPW009630, dated 1938).
- h) Coal Authority Consultants Mining Report reference 51003546900001. The report is contained within Appendix 9.

- i) Reports and drawings from previous investigation works were provided by Arup/the client. The following reports and drawings were reviewed during the Phase 1 desk study works:
- 'Manchester Stadium Enabling Works Health & Safety File'. Dated April 2000:
 - 'Site Investigation Plan and Geotechnical Plot Boundaries'. Dated March 1999:
 - 'Monitoring of Multi-Strand Ground Anchors at the City Of Manchester Stadium'. Dated 2002:
 - 'Piling in Coal Measures at the City of Manchester Stadium for the Commonwealth Games. Dated 2002:
 - 'Drilling and Grouting Location Plan' (Alfred McAlpine Civil Engineering). Dated September 2000:
 - 'Outline Remediation Strategy ISSUE 2'. Dated March 2010:
 - 'Environmental Statement'. Dated February 2010:
 - 'Remediation Validation Report' (Buckingham Group Contracting). Dated April 2011:
 - 'Area A Mine Stabilisation Works Validation Report' (BWB Consulting Ltd). Dated March 2011: and
 - 'Master Mine Stabilisation Works Validation Report' (BWB Consulting Ltd). Dated March 2011.
- k) The Manchester City Council planning portal has been reviewed, and the following documents associated with planning application ref: have been reviewed for the investigation:
- Buro Happold 'Geoenvironmental Review. Dated September 2013;
 - Buro Happold 'Geotechnical Review'. Dated August 2013; and
 - 'PL1313-GA-000 / SITEWIDE MASTERPLAN'. Dated November 2013.

3.0 FINDINGS

3.1 Walkover Survey

The walkover survey was carried out on 12th January 2026 during cloudy weather conditions. During the walkover survey the following features were noted.

The site currently comprises an area of hardstanding, with Gibbon Street running along the southern boundary. The ground underfoot was noted to be gravel and asphalt across the site. The southern region of the site is currently in use as a site storage area for active construction works at the Etihad Stadium.



Figure 4: General site photographs facing west (left) and east (right)

Established trees with heights of c. 3.00m and a 30° vegetated slope is present on the eastern boundary of the site sloping upwards towards Alan Turing Way. The mound was noted to comprise topsoil with c. 5% anthropogenic constituents from visual inspection.



Figure 5: Vegetated mound on trees on the eastern site boundary

The topography of the site is generally flat at c. 62.00m AOD. The site slopes upwards on the eastern boundary to c. 63.50m AOD on Alan Turing Way.

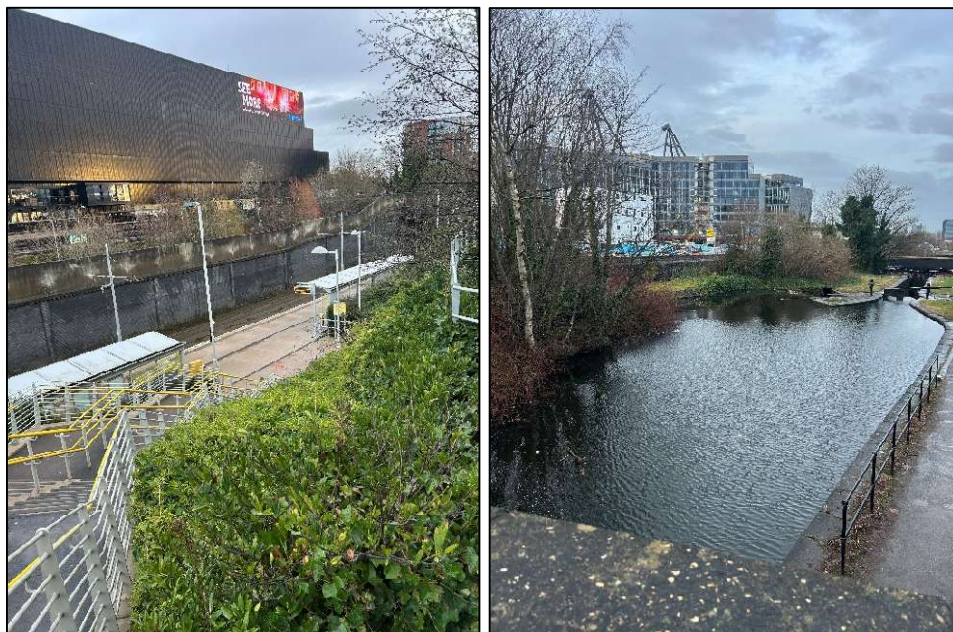


Figure 6: Metrolink cutting (left) and Ashton Canal (right) to the north of the site showing the former colliery arm junction

A LiDAR contour plan illustrating the site topography is included below as Figure 7:

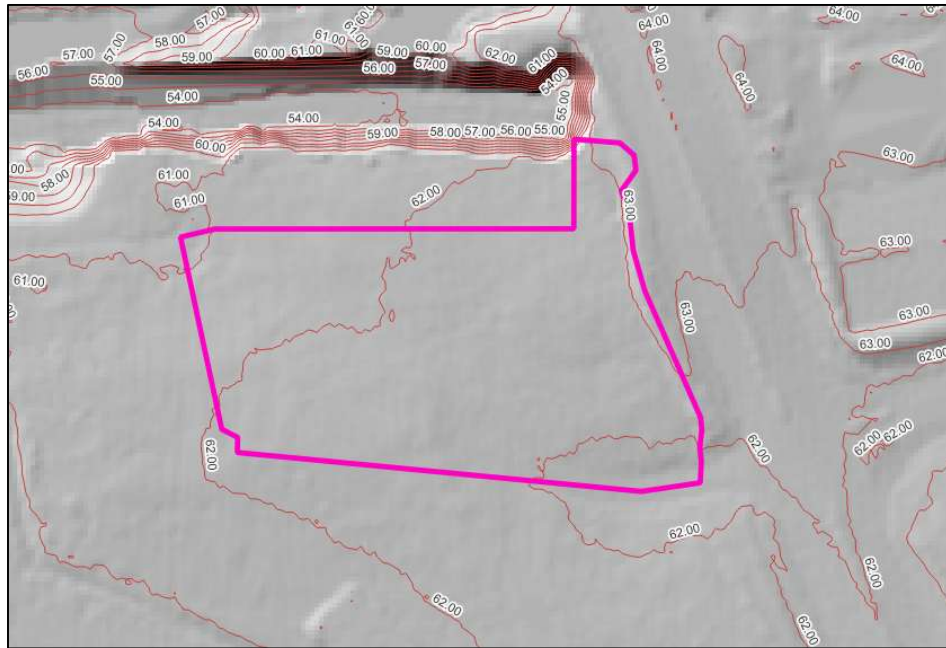


Figure 7: LiDAR contour plan showing elevation changes across the site and the Metrolink cutting

The southern site section is currently in use as a storage area / site compound for construction works at the adjacent Etihad stadium. Stockpiles of gravel and Made Ground soil were noted in this area as well as a skip and plant.



Figure 8: Photographs showing the site compound facing north (left) and southeast (right)

Service coverings pertaining to gas, electricity, drainage and telecoms were noted the immediate west, south and east of the site.



Figure 9: Gas covering to the west of the site (left) and drainage covering to the south of the site

Contamination

A group of c. 20 No. 1.50m³ capacity tanks are present within the site compound area in the southeastern site section underlain by a concrete slab. The purpose of and material stored within these tanks are unknown but no spillages or leakages were identified. The exact composition of the stockpiled soils in this area is unknown and could contain elevated concentrations of contaminants so cannot be discounted as a potentially contaminative source.



Figure 10: Tanks in the southeastern site section

3.2 Site History

The site development history has been researched by reference to historical maps, street plans, aerial photographs. The historical maps are included in Appendix 4 to this report and the principal observations, which are divided into on-site history and off-site history, are summarised below:

On-Site History

Date	Site Feature
1848 – 1891	On the earliest historical map, the site is occupied by Bradford Mill a smallwares mill in the east and 2 No. coal pits in the west separated by the Ashton canal running north to the south through the centre of the site. A row of terraced houses is present in the southwest of the site.
1891 – 1932	Bradford Iron works occupies the western site section from 1891, and Phillips Park Road appears crossing the site from east to west. Unspecified works are recorded occupying the site section east of the canal arm. The canal arm was narrowed through the site from 1893. A chimney is present in the southwestern section from 1891, no longer recorded from 1931, with a second chimney recorded in the southeastern section from 1931. From 1908, a small railway is present in the western site section, and the canal arm is labelled 'Colliery Arm' associated with Bradford Colliery c. 250m south of the site. The residential properties in the south of the site
1932 – 1992	Bradford Iron Works extends into the eastern site section from 1932 following demolition of the unspecified buildings and further extends to the northern section from 1948. The chimney in the southeastern section is no longer present from 1958 and the railway in the western section is absent from 1979.
1992 – 2010	The site is vacant from 1992 associated with the widescale demolition, earthworks and remediation carried out on site and the surrounding Eastlands area in preparation for the construction of the City of Manchester Stadium. Philips Park Road no longer crosses the site from 2010.
2010 – 2015	Further site investigation, earthworks and remediation was carried out on site from 2010 to 2011 in preparation for future redevelopment of the site. Existing contaminated soils and groundwater as well as infill material from the colliery arm were removed and replaced with engineered fill and a capping layer composed of site won soils and imported 6F2.
2015 - present	The site was then left in its present day state except for a period from 2021 to 2024 when the site was used as a site compound for the construction of the Co-op Live Arena.



Figure 11: Extracts of the OS historical maps dated 1893, 1953, 1983 and 1995 from left to right, top to bottom.

A historical aerial image of the site dated 1938 has been obtained from Britain From Above. This shows Braford Colliery in the foreground and Bradford Iron works in the background:

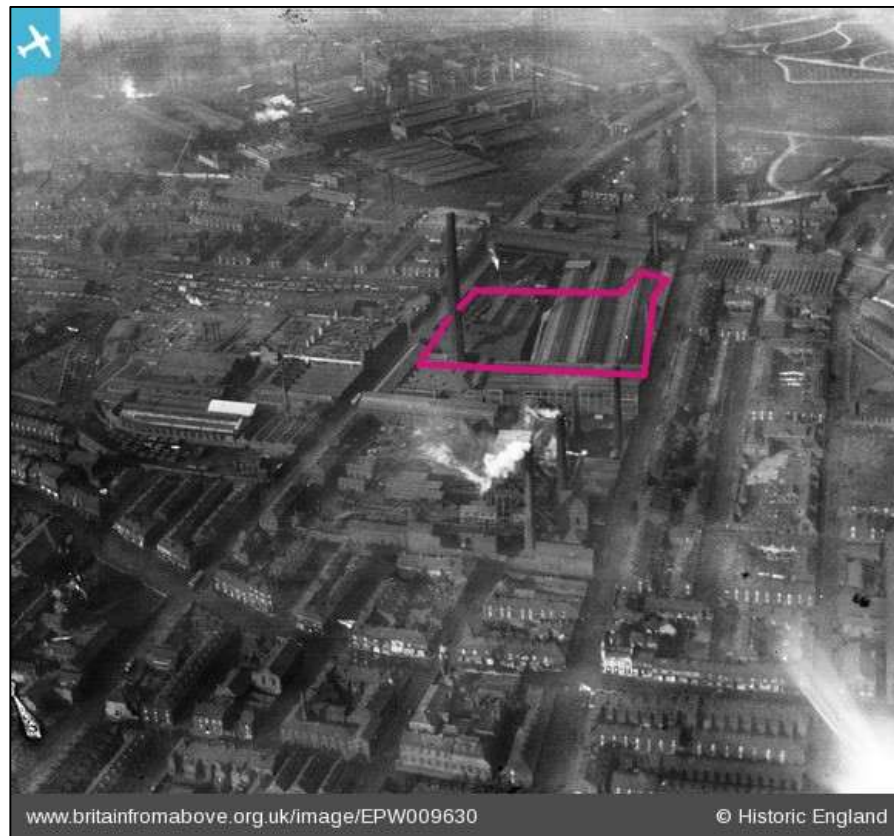


Figure 12: Historical aerial image of the site and the surrounding area from Britain from Above, dated 1938. The site boundary is shown in magenta.

Off-Site History

Date	Feature	Distance (m)	Direction
1891 – 1922	A cotton mill is present to the south of the site from 1892 to 1922.	5m	S
1891 – 1992	Bradford Iron Works is present immediately to the south of the site from 1891, later extending onto the site. The works are absent from 1992.	5m	N
1848 - 1891	A coal pit is recorded to the north of the site on the earliest historical map, no longer recorded from 1891.	10m	N
1891 – 1932	A cotton mill is present to the east of the site beyond Alan Turing Way (formerly Mill Street).	25m	E
1891 - 1992	Railway sidings are recorded to the south and southwest of the site from 1891 associated with Bradford Colliery. The sidings are no longer present from 1992.	30m	S & SW
1891 - 2024	A gas works is present c. 31m northwest of the site from 1891 to 1985 when most of the site was demolished, the gasometer remained in place until 2024.	31m	NW
1890 – 1985	A lead mill is located to the west of the site from 1890 to 1985.	90m	W
1891 – 1979	A goods station is present 90m to the southwest of the site from 1891 to 1979.	90m	SW

1908 – 1956	A chimney is present 95m northwest and northwest of the site from 1908 to 1956 associated with the lead mill and cotton mill respectively.	95m	NW & NE
1700s - 1968	Bradford colliery is recorded from as early as the mid-1700s to 1968 when operations ceased and the colliery was closed.	130m	S
1891 – 1949	A rubber works is present 150m east of the site from 1891, replaced by Bradford Iron Works from 1949.	150m	E
1908 – 1932	2 No. chimneys are recorded 200m south of the site associated with Bradford Colliery.	200m	S

Given the industrial nature of the area, numerous other mills, dye works, brick fields, engineering works, factories and works are located between 200m and 500m of the site however have not been summarised above.

3.3 Geology

3.3.1 BGS Geological Map

The BGS 1:50,000 Bedrock and Superficial Geological Maps of the area (Sheet No: 85, dated 2011) indicate that the site is underlain by superficial deposits of **Glacial Till** which typically comprises a heterogenous mixture of clays, sands and gravels. The superficial deposits are underlain by bedrock of the **Pennine Upper Coal Measures** which typically comprises interbedded grey mudstone, siltstone and pale grey sandstone, commonly with coal seams, but with no mudstones containing marine fossils.

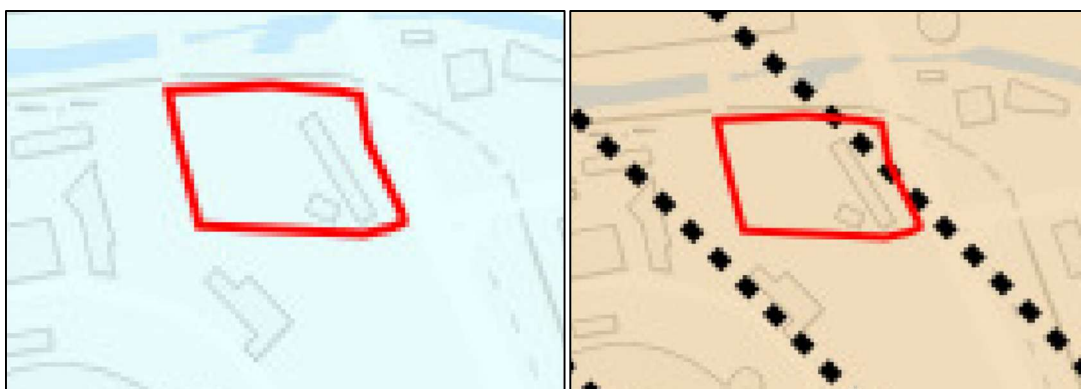


Figure 13: Extracts of the BGS 1:50,000 Superficial (left) and Bedrock (right) Geological Maps. Light blue = Glacial Till, Beige = Pennine Upper Coal Measures

The BGS geological maps record **Made Ground** to the north and the west of the site anticipated to be associated with the earthworks and construction associated with the construction of the Etihad Stadium as well as various historical industrial activities.

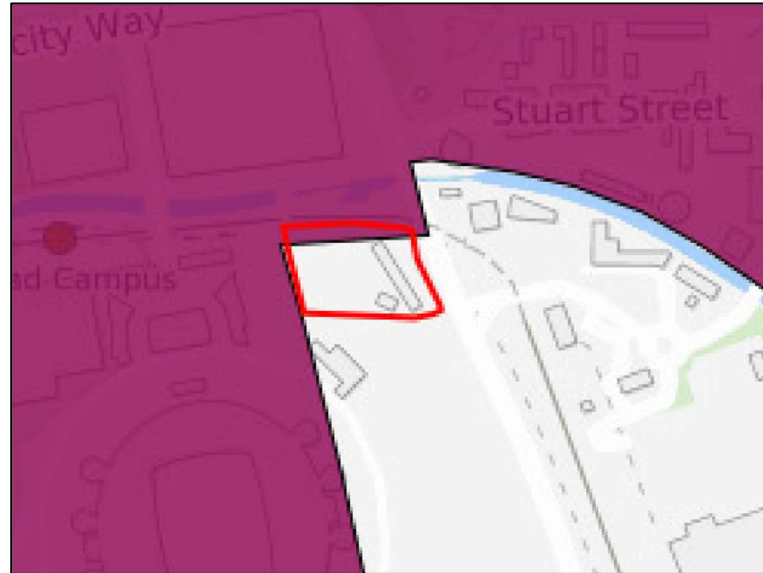


Figure 14: Extract showing the location of the Made Ground (Dark purple)

The solid geological map indicates a bedrock fault c. 500m east of the site, downthrowing to the east. The bedrock dip beneath the site is recorded at 15° to the southwest. There is 1 No. coal seam crossing the site in the southwest (Bradford Three Quarter Seam), the subcrop for the Bradford Four Foot seam is located c. 10.00m to the northeast dipping southwest beneath the site.

3.3.2 BGS Borehole Logs

There was 1 No. available BGS borehole on site (SJ89NE1597). This borehole assumed to have targeted a mine shaft (Ref: 386398-012) in the northern region of the site, the ground conditions are summarised below:

- **Made Ground** of undisclosed composition to a depth of 51.00m bgl (10.80m AOD), underlain by:
- **Pennine Upper Coal Measures** comprising moderately strong, silty mudstone to a depth of at least 54.00m bgl (7.80m AOD).

There are numerous BGS boreholes available in close proximity to the site associated with the multiple phases of ground investigation carried out for the construction of the Etihad stadium and Eastlands redevelopment. These records summarise the ground conditions prior to the completion of any earthworks or remediation on site.

BGS Borehole Reference: SJ89NE216

This borehole is located approximately c. 2m north of the site and was excavated to a depth of 65.25m bgl (-3.50 m AOD) in October 1991 and recorded the following pertinent information:

- **Made Ground** comprising concrete and cohesive engineered fill to a depth of 1.50m bgl (60.25m AOD), underlain by:
- **Glacial Till** comprising stiff boulder clay to a depth of 15.15m bgl (46.60m AOD), underlain by:
- **Pennine Upper Coal Measures** comprising very weak to moderately strong, highly weathered mid-grey mudstone with occasional voids and thin bands of sandstone, coal and seatearth.
-

BGS Borehole Reference: SJ89NE1492 and SJ89NE1493

These boreholes are located c. 2m and 38m south of the site respectively and were both excavated to a depth of 4.50m bgl (56.40m to 56.10m AOD) in October 1998. The logs recorded the following pertinent information:

- **Made Ground** of variable composition but primarily comprising black, slightly clayey, very sandy, fine to coarse, subrounded and subangular gravel of ash and clinker to a depth of between 2.30m and 3.10m bgl, underlain by:
- **Glacial Till** comprising soft to stiff, brown mottled bluish grey sandy clay with occasional fine to coarse rounded and subrounded gravel to a depth of at least 4.50m bgl (56.40m to 56.10 m AOD).

3.3.3 BGS Geohazards

Data Type	Details
Ground Stability Data	<ul style="list-style-type: none"> • The Potential for Shrinking or Swelling Clay Ground Stability Hazards is regarded as very low. • The Potential for Running Sand Ground Stability Hazards is regarded as very low. • The Potential for Compressible Ground Stability Hazards is regarded as negligible. • The Potential for Collapsible Ground Stability Hazards is regarded as very low. • The Potential for Landslide Ground Stability Hazards is regarded as very low. • The Potential for Dissolution Ground Stability Hazards is regarded as negligible.

3.3.4 BGS Estimated Soil Chemistry

The BGS have estimated that the superficial deposits across the site to naturally comprise the following determinands:

- Arsenic: 15 - 25mg/kg
- Cadmium: 1.8mg/kg
- Chromium: 60mg/kg – 90mg/kg
- Nickel: 30mg/kg – 45mg/kg
- Lead: 100 – 200mg/kg
- Bioaccessible Lead: 60mg/kg – 120mg/kg

The BGS have estimated soil chemistry on site based on topsoil samples tested from within the site area. The soils are estimated to comprise the following determinands.

3.3.5 BGS Measured Soil Chemistry (Topsoil)

- Arsenic: 20mg/kg
- Cadmium: 1.2mg/kg
- Chromium: 136mg/kg
- Copper: 112.7mg/kg
- Nickel: 40.2mg/kg
- Tin: 28.8mg/kg

3.4 Mining

3.4.1 Coal Mining

The site lies within a Mining Remediation Authority (MRA) Coal Mining Development High Risk Area. A subcrop (Thin Coal “C”) is recorded in the southwestern site section on the BGS 1:50,000 geological map. 2 No. subcrops are located to the northeast (the Bradford Three Quarter Seam and Bradford Four Foot Seam) and 2 No. subcrops to the southwest of the site (Thin Coal “A” and Thin Coal “B”). The bedrock dip is to the southwest therefore the Bradford Three Quarter Seam and Bradford Four Foot Seam are likely to be present beneath the site. 2 No. mine entries are also recorded c. 16.00m and 18.00mm to the north of the site. The coal seams are shown as black, dashed lines on the extract below.



Figure 15: Extract of the 1:10,560 solid geological map showing the location of the outcropping coal seams (dark, dashed line) The approximate site boundary is shown in magenta.

Due to the site being located in a Development High Risk Area, a separate Coal Mining Risk Assessment has been undertaken (IGE Consulting Ref: 4490-02).

3.4.2 Non-Coal Mining

The Groundsure Enviro + Geo Insight report indicates that extraction of seatearth has been carried out on site historically, this is likely to be associated with underlying coal workings.

3.4.3 Salt Mining / Brine Extraction

The site does not lie within the Cheshire Brine Subsidence Compensation Board Compensation District.

3.4.4 Historical Surface Excavations

4 No. fireclay pits are recorded c. 10.00m north of the site on geological maps until the construction of Bradford Mill. Due to extensive historical mining carried out on site, there may be unrecorded shafts or pits present on site that have not been identified or treated during intrusive investigation works.

The site was subject to earthworks and remediation in the late 1990s and early 2010s which concerned the removal of unsuitable Made Ground on site and replacement with a suitable engineered fill along with a capping layer of 6F2.

3.4.5 Mineral Safeguarding

Where mineral resources are present the mineral planning authority may designate areas as Mineral Safeguarding Areas (MSA) and Mineral Consultation Areas (MCA). These are aimed to safeguard mineral resource areas from unnecessary sterilization by non-mineral development. The BGS Mineral Resources maps designate the areas of potential mineral resources and where active / lapsed planning permission was granted for mineral extraction.

The BGS Mineral Resources Map indicates that the site lies within a primary opencast coal resource area with associated fireclay and brick clay. However, the mining remediation authority have not recorded any open cast mining on site of within 500m of the site.

The Greater Manchester Joint Minerals Development Plan indicates that the site does not lie within a mineral safeguarding area.

3.5 Hydrology and Hydrogeology

Environmental data relevant to the site and its immediately surrounding area has been obtained from sources available in the public domain. In addition, an environmental report was obtained from Groundsure. The Enviro + Geo Insight report and associated maps that have been inspected are presented in Appendix 5 and the principal observations in relation to waters and flooding can be summarised as follows:

Data Type	Details
Flooding	<ul style="list-style-type: none"> With respect to rivers and seas, the site lies within Flood Zone 1. Localised areas of the site, primarily in the northeastern site section, are recorded to be susceptible to surface water flooding, the highest risk pertaining to a 1 in 30 year event with a floodwater depth of 0.1m to 0.3m. A BGS groundwater flooding susceptibility area has also been identified on site, however, the risk is deemed to be low.
Surface Water Features	<ul style="list-style-type: none"> There are no surface water features located on site. The Ashton Canal is located 18m north of the site orientated east to west whilst the River Medlock is culverted c. 222m northwest of the site.
Surface Water Abstractions	<ul style="list-style-type: none"> There are no licensed surface water abstractions located on site. There are 6 No. licensed surface water abstractions located within 2km of the site, all of which are historical. The nearest license is located 677m southeast and pertains to the abstraction of water from the Ashton Canal for the purposes of general cooling.
Superficial Aquifer	<ul style="list-style-type: none"> The site is underlain by superficial deposits classified as a Secondary Undifferentiated Aquifer – <i>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</i>
Bedrock Aquifer	<ul style="list-style-type: none"> The underlying bedrock is classified as a Secondary A Aquifer - <i>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.</i>
Groundwater Abstractions	<ul style="list-style-type: none"> There are no recorded groundwater abstraction licenses located on site. There are 25 No. groundwater abstraction licenses located within 2km of the site, however only 4 No. are active. The nearest active groundwater abstraction is located 925 east of the site and relates to the abstraction of groundwater from a borehole at Croft Street, Clayton, Manchester for non-evaporative cooling.
Source Protection Zones	<ul style="list-style-type: none"> There are no recorded Source Protection Zones recorded on site or within 500m of the site.
Nitrate Vulnerable Zones	<ul style="list-style-type: none"> There are no Nitrate Vulnerable Zones recorded on site or within 500m of the site.
Licensed Discharge Consents	<ul style="list-style-type: none"> There are no recorded licensed discharge consents to controlled waters located on site. There are 3 No. licensed discharge consents to controlled water located within 500m of the site, all of which have been revoked. All pertain to sewer discharges.

Pollution Incidents to Controlled Waters	<ul style="list-style-type: none"> There are no recorded pollution incidents to controlled waters located on site. There is 1 No. pollution incident recorded within 500m of the site. This incident took place in May 2003 and is located 384m east of the site recorded as inorganic chemicals/products (Acids). This incident recorded a Category 3 (minor) impact on controlled waters.
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3.6 Hazardous Installations, Landfill and Waste

The following information relating to hazardous installations, landfill and waste obtained from the Groundsure Enviro + Geo Insight report, published information and the walkover survey can be summarised as follows:

Data Type	Details
Environment Agency Recorded Active Landfill Sites	<ul style="list-style-type: none"> There are no Environment Agency recorded landfill sites located on site or within 500m of the site.
Environment Agency Recorded Historical Landfill Sites	<ul style="list-style-type: none"> There are no Environment Agency recorded historical landfill sites located on site. There are 4 No. Environmental Agency recorded historical landfill sites within 500m of the site. The nearest is located 36m north of the site off Bradford Road, Bradford, Manchester associated with inert waste last recorded in December 1983. A further 3 No. historical landfills are recorded further than 250m from the site.
BGS Recorded Historical Landfill Sites	<ul style="list-style-type: none"> There are no BGS recorded landfill sites located on site or within 500m of the site.
Local Authority Recorded Landfill Sites	<ul style="list-style-type: none"> There are no Local Authority recorded landfill sites located on site or within 500m of the site.
Local Authority Pollution Prevention and Control (Part A(2) and Part B Activities and Enforcements)	<ul style="list-style-type: none"> There are no Local Authority Part A2 or Part B Activities or Enforcements located on site. There are 3 No. Local Authority Part A2 or Part B Activities located within 500m of the site. Only 1 No. permit is active pertaining to a Part B permit for unloading of petrol into storage c. 173m east of the site.
Registered Radioactive Substances	<ul style="list-style-type: none"> There are no Registered Radioactive Substances recorded on site or within 500m of the site.
Registered Waste Treatment, Transfer or Disposal Sites	<ul style="list-style-type: none"> There are no waste exemptions recorded on site. There are 3 No. waste exemptions recorded within 500m of the site, the nearest is located 188m northwest and is categorised as the treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising. There are no historical waste sites recorded on site. There are 6 No. historical waste sites recorded within 500m of the site, the nearest of which is located 167m southeast of the site described on historical mapping as a scrap yard. There are no licensed waste sites recorded on site or within 500m of the site.
Industrial Land Use	<ul style="list-style-type: none"> There are no current industrial land uses recorded on site. There are 7 No. recent industrial uses recorded within 500m of the site, the nearest is an electricity substation 31m east of the site. There is a single petrol / fuel station recorded within 500m of the site, located 194m east. There are 16 No. historic industrial site uses recorded on site pertaining to a smallwares mill, various unspecified works, a colliery, railway sidings and iron works There are an additional 235 No. historic industrial land uses recorded within 500m of the site, pertaining to cuttings, collieries, coal pits, unspecified pits, unspecified works, gas works, goods stations, unspecified tanks, unspecified ground workings, refuse heaps, unspecified quarries, mills and railway sidings.

Dangerous Substances	<ul style="list-style-type: none">• There are no recorded discharges of dangerous substances on site.• There are 2 No. discharges of dangerous substances recorded 446m southeast of the site recorded as the discharge of Cadmium into the Manchester Ship Canal at Rhodia Industrial Specialists Ltd.
Hazardous Building Materials	<ul style="list-style-type: none">• No hazardous building materials are anticipated on site.

3.7 Radon

A site-specific radon map is included in the Groundsure Enviro + Geo Insight report which finds that the site lies within an area where less than 1% of homes are above the Action Level and consequently, no radon protection measures are required.

3.8 Previous Ground Investigation and Remediation

Since the widescale closure of industrial activity and demolition of historical buildings on site and the surrounding area in the late 1980s and early 1990s, there have been a number of ground investigation programmes carried out with subsequent remediation and earthworks. These activities were undertaken initially as a phased investigation and earthworks programme in preparation for the construction of the stadium followed by subsequent investigation, remediation and earthworks to prepare the Eastlands site and surrounding Manchester City Council owned land site for future development.

Some information regarding the findings of previous investigations has been obtained from the Manchester City Council Planning Portal and some reports were provided directly from Arup Consulting Ltd. The majority of the information provided by Arup related to summary reports or validation reports rather than detailed ground investigation reports and exploratory hole logs. Therefore, only a summary of the ground conditions and the enabling works and remedial works undertaken was available.

The pertinent investigation and remediation information from available sources is summarised below:

3.8.1 Pre - 2003

The initial stage of ground investigations and enabling works were undertaken in the 1990s following the demolition of the historical buildings on site. The purpose of this investigation was for the construction of the City of Manchester Stadium (now the Etihad Stadium) in preparation for the 2002 Commonwealth games. Further ground investigation was undertaken by soil mechanics between 2000 and 2003 covering the area south of the Ashton Canal east of the Etihad Stadium.

The initial investigation in the early 1990s found elevated contaminant concentrations and below ground obstructions as well as a lack of information on the shallow coal seams and workings across the site.

Ground Conditions

The ground conditions across the site of the proposed stadium and surrounding Eastlands site were summarised as follows:

- **Made Ground** comprised both cohesive and granular fill of varying strength and density to depths of between 2.00m to 5.30m bgl, underlain by:
- **Glacial Till** comprising firm to stiff, brown, slightly gravelly, slightly sandy clay with occasional sand lenses to depths of between 7.00m and 20.00m bgl, underlain by:
- **Pennine Upper Coal Measures** comprising very weak to moderately strong, grey mudstone with coal seams, voids and occasional bands of sandstone, mudstone and Seatearth to a depth of at least 85.00m bgl.

The Made Ground was identified to comprise a mixture of demolition rubble, ash, colliery spoil, refuse and reworked natural material with frequent concrete obstructions within trial pits. The maximum depth of Made Ground across the site

was not established due to the difficulties in excavating through concrete obstructions. The base of the Glacial Till was also not encountered in all exploratory holes undertaken. Bedrock of the Pennine Upper Coal Measures was encountered between 15.00m and 21.00m and was noted to be highly weathered at the contact comprising very stiff clay, often fissured with occasional lithorelicts of mudstone and siltstone.

Chemical Laboratory Testing and Subsequent Remedial Works

As part of the investigation works, c. 200 soil samples were taken for the purposes of chemical laboratory testing and classification. The results of this testing indicated elevated concentrations of heavy metals and PAHs based on a commercial end-use scenario. The remediation works required the removal of contaminated soil across the site. The details of contamination remediation across “the site” is unclear as detailed ground investigation and remediation reports are currently unavailable.

Although some remediation and enabling works were undertaken during this period, further remediation works were undertaken at a later date as part of the Eastlands redevelopment scheme, this information is more readily available and is summarised below.

Coal Mining Remediation

The ground investigation works indicated the presence of shallow coal workings beneath the site area. Remediation works were to involve the treatment of underground workings by drilling and grouting. This was primarily undertaken beneath the footprint of the stadium, however, it is understood that some treatment was also undertaken immediately north of the site as part of the Metrolink development and to the east as part of the Alan Turing Way development. Treatment of numerous mine shafts including 2 No. mine shafts located immediately north of the site was also undertaken.

The mine workings stabilisation works and mine entry treatment works were validated during a later phase of mine workings stabilisation as detailed in Section 3.8.2 below.

3.8.2 (2008 – 2010)

As part of a wider redevelopment objective for the Eastlands site, further ground investigation was undertaken from 2008 to 2010 targeting the site and the surrounding area.

The investigation established the following ground conditions:

- **Made Ground** to depths of between 1.00m and 7.00m bgl, underlain by:
- **Glacial Till** to depths of between 14.00m and 21.00m bgl, underlain by:
- **Pennine Upper Coal Measures.**

The accurate nature and composition of these deposits were not described in the available reports and no exploratory hole logs were available for review.

This investigation identified contaminated hotspots of Made Ground across the wider site as well as the colliery spoil in the infilled canal.

Remediation

Remediation works involved the treatment of 3 No. contaminated Made Ground hotspots across the wider site, it is unclear which hotspots, if any were treated on “the site”. The Made Ground within the historical infilled canal arm which crossed ‘the site’ was regarded as a hotspot. The unsuitable material was removed and replaced with suitable material. The material removed was treated by chemical oxidation. Glacial Till deposits below the base of the canal were also excavated and treated as these deposits were noted to contained elevated concentrations of contaminants.

The BWB verification report concluded that the remedial works outlined in the remedial strategy has been successfully carried out and validated.

Coal Mining Investigation

The remediation works also included the treatment of shallow mine works across the high risk areas across the site, as well as validation of historical mine stabilisation works.

Workings of the Bradford Three Quarter Seam were targeted and pressure grouted north of the site and on eastern the site section to a depth of ten times seam thickness below rockhead. The mine entries to the north of the site were also treated and validated, 1 No. of the mine entries was treated by pressure grouting and capped while the second mine entry was investigated and validated.

3.9 Services

A 2.1m diameter Works Six Sewer runs north to south on the eastern site boundary and is located at a depth of 21m bgl $\pm$ 2m with a lateral location factor of safety of $\pm$ 4m. There are also low voltage electricity, drainage and water services crossing the centre of site from west to east, therefore full service plans should be acquired before carrying out intrusive works. A service location plan is included below:

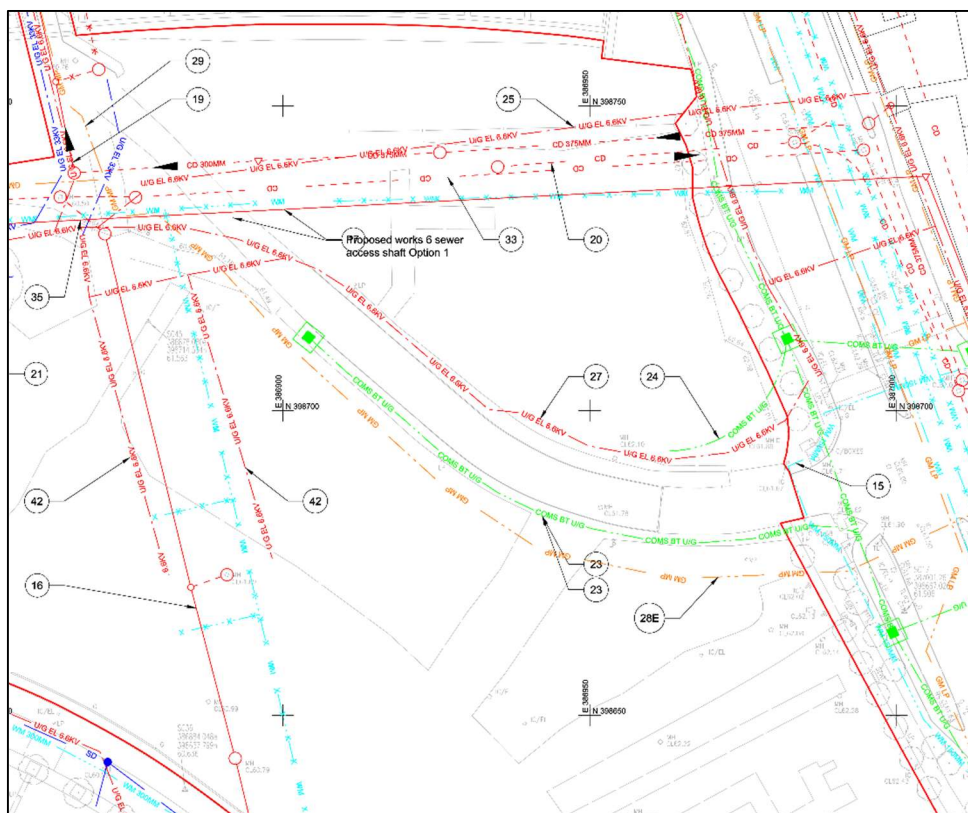


Figure 16: Locations of underground services across the site and in the surrounding area. The Work Six Sewer is indicated as a solid red line.

3.10 Unexploded Ordnance (UXO)

The Zetica UXO risk map indicates that the site lies in an area of moderate UXO risk. Therefore, it is recommended to obtain a Stage 1 Preliminary Risk Assessment prior to any intrusive works. The Preliminary Risk Assessment may recommend a Detailed Risk Assessment is undertaken.

3.11 Animal Burial Sites

The Animal Health and Veterinary Laboratories Agency (AHVLA) no longer routinely respond to consultations relating to records of animal burial sites. Based upon a review of the site history it is considered unlikely that the site has been subject to recorded animal burials.

3.12 Archaeology

We do not anticipate that the site will be affected by archaeological issues, however consultation with the county archaeologist is recommended.

4.0 CONCLUSIONS

4.1 General

The site and the surrounding area is brownfield, owing to an extensive industrial history. The site has been subjected to multiple rounds of ground investigation and remediation leaving the below anticipated ground conditions.

4.2 Ground Conditions and Geotechnical Hazard Identification

The anticipated typical ground conditions across the site are as follows:

- **Made Ground** comprising sandy GRAVEL (6F2) to a depth of c. 0.30m bgl, underlain by:
- Variable **Made Ground** to depths of c. 2.00m to 3.00m bgl, potentially deeper in areas, underlain by:
- **Glacial Till** comprising firm to stiff, soft in places, brown, slightly gravelly, slightly sandy CLAY with bands of sand to a depth of between c. 13m to 17m bgl, underlain by:
- **Pennine Upper Coal Measures** comprising mudstone with bands of siltstone, sandstone, coal and seatearth.

4.2.1 Geotechnical Hazard Identification

Potential geotechnical hazards based on the expected ground conditions that may require further consideration at the site are outlined below:

Factors	Remarks	Considerations	Hazard
Made Ground	Made Ground is present on site to depths of at least 3.00m bgl in places. The Made Ground was noted to be variable in composition.	Made Ground may settle variably, have highly inconsistent bearing capacity and may suffer significant movements that may be problematic for foundations, externals and infrastructure elements without treatment. The presence of Made Ground may be problematic for foundations as there may be loose / soft spots within the Made Ground and it may not be suitable to utilise traditional foundations.	Low to Moderate

Aggressive Ground and Groundwater	While the risk posed from the natural strata is anticipated to be very low, given the presence of known Made Ground there is potential for aggressive ground conditions to be present on-site.	Acidic ground / groundwater and sulfate may attack the concrete and steel used in foundations and react with aggregates. The oxidation of pyrite and other sulfides can also occur due to geotechnical activities. This can lead to the generation of high concentrations of sulfate and low pH that attacks construction materials and may lead to the precipitation of gypsum resulting in the heave of foundations and floor slabs. Pyrite oxidation can also be triggered by mixing susceptible materials with lime or cement resulting in high pH that can lead to the expansion of some sulfates that cause heave of stabilised soils.	Low to Moderate
Shrink and Swell Clays	Established trees are present along the eastern site boundary. Moderate to high plasticity and low to moderate volume change potential Glacial Till deposits are present beneath the site.	Some types of ground (e.g., clay soils) can change volume due to changes in moisture content that may be induced by weather variations (e.g., drought), vegetation (e.g., growth or removal of trees) or man-made activities (e.g., changes to local drainage). This shrink / swell behaviour typically causes ground movement to a depth of approx. 3m potentially damaging building foundations, externals, pipes or services by differential movements.	Low to Moderate
Obstructions	Although significant enabling works and remedial works have been undertaken, the presence remaining obstructions cannot be discounted, however, the risk is deemed low.	May act as obstructions to excavations and / or the chosen solution or act as 'hard spots' within the ground if left in-situ.	Low
Soft Spots	Soft spots may be present across the site associated with localised excavations i.e., previous site investigation and historical canal.	Soft spots may cause differential settlement of foundations therefore there will be a requirement for localised deepening of foundations where soft spots are present.	Low

4.3 Sources of Contamination and Probable Contaminants

Based on the desk study information the following potentially contaminative sources have been identified:

Potentially Contaminative Source	Associated Determinands	Remarks
On-Site Made Ground	Unknown, anticipated to be metals, semi-metals, PAHs, TPH, asbestos. Ground Gas – carbon dioxide, methane, hydrogen sulfide, VOCs	Made Ground has been confirmed on site by previous ground investigation and remediation works. Significant hotspots of contaminated Made Ground are likely to have been removed during previous remediation but the presence of localised contaminative hotspots and slightly elevated concentrations of determinands cannot be discounted.
On-Site Historical Industrial Land Use	Anticipated to be metals, semi-metals, PAHs, TPH and Asbestos	Industrial activity has been present on site from 1848 to 1992 most notably including mills and iron works. Therefore, there is a possibility that there are elevated concentrations of metals, TPH, PAH and VOCs across the site. It is unknown whether asbestos was used in the on-site buildings, however its presence cannot be

	Ground Gas – VOCs	discounted. Site wide remediation has been undertaken in multiple stages since the closure and demolition of industrial buildings. Although contaminative hotspots have been removed, the presence of residual contamination cannot be entirely discounted.
On-site Historical Infilled Canal	Anticipated to be metals, semi-metals, PAHs, TPH and VOCs	A colliery arm of the Ashton Canal was present on historical maps from 1848 to 1992. During ground investigation following the infilling of the canal, elevated contaminant concentrations were recorded in the infill material. Contaminated Made Ground and underlying Glacial Till was removed from the canal arm and replaced with chemically and geotechnically suitable material, however, the presence of some residual contamination cannot be discounted.
On-Site Historical shallow coal workings	Ground Gas – carbon dioxide, methane, hydrogen sulfide, VOCs	<p>The site has been worked at shallow depth from as early as the 1600s, associated with Bradford Colliery. During previous ground investigation, voids and shallow coal seams were identified across the site. The workings have been subjected to previous stabilisation work. However, the risk associated with mine gas remains.</p> <p>During previous ground gas monitoring visits, elevated concentrations of carbon dioxide (up to 12%) were recorded in the northern site section, possibly associated with historical workings. However, this was completed prior to the 2008 - 2010 remediation works, so the ground gas regime is likely to have changed.</p>
Off-site Historical Industrial Land Use	<p>Anticipated to be metals, semi-metals, PAHs, TPH and Asbestos</p> <p>Ground Gas – VOCs</p>	Industrial activity has been present in the immediate surroundings from 1848 to 1992 including mills, iron works, collieries, dye works and gasworks among others. Therefore, there is a possibility that there are elevated concentrations of metals, TPH, PAH and VOCs across the site. It is unknown whether asbestos was used in the on-site buildings, however its presence cannot be discounted. However, the surrounding area has been subjected to remedial works in-line with the on site remedial works which reduced the risk.

It should be noted that potentially contaminative unrecorded historical activities may have occurred (e.g. the use or deposition of Made Ground from off-site during historical on-site developments) and in this event, further contaminative sources may be present.

4.3.1 Unknowns

Following the desk study, the areas of uncertainty are summarised as follows:

- Exact depth and nature of Made Ground;
- Exact depth to bedrock; and
- Presence and depth of groundwater.

4.4 Identified Pathways of Contamination

Human Health		Ground Gas		Controlled Waters	
A	Ingestion of dust and soil	A	Migration through fractures and fissures in bedrock	A	Vertical migration through coarse Made Ground and coarse soils
B	Dermal contact with dust and soil	B	Preferential migration along foundations & service ducts	B	Lateral migration along low permeability natural soils & pooling at relative low points
C	Inhalation (dust)	C	Migration within groundwater	C	Vertical migration along future foundations and pooling at base
D	Inhalation (vapours)	D	Ingress through cavity walls & floors	D	Migration through porous bedrock
E	Inhalation and oral backgrounds	E	Inhalation	E	Overland flow

4.5 Identified Receptors of Contamination

Human health receptors include the following:

- End users (commercial land use scenario);
- Construction workers; and
- The general public and adjacent site users.

Controlled waters receptors include the following:

- Groundwater contained within the underlying Secondary Undifferentiated Aquifer and Secondary A Aquifer; and
- Surface water – off-site Ashton Canal (15m north).

Other receptors include the following:

- Subsurface plastic (e.g. potable plastic water pipe); and
- Building fabric (e.g. concrete foundations, etc).

4.6 Conceptual Site Model

4.6.1 Conceptual Model for Human Health Risk Assessment

A site conceptual model in the form of a linkage table for the purposes of a preliminary risk assessment for the human health of site occupants has been produced as a result of the probable contaminants, pathways and receptors identified above. A diagram of the site conceptual model is included in Appendix 2.

Conceptual Model for Human Health Assessment					
Sources of Contamination	Pathway	Receptor	Hazard (severity)	Likelihood	Risk
On-site Made Ground On-site Historical Industrial Land Use (1848 – 1992) On-site Historical Infilled Canal (1848 – 1992) Off-site Historical Industrial Land Use	A B C D E	End users General public	Effect on human health (Medium)	<p>Unlikely: The site is brownfield with an extensive industrial history, therefore, significant contaminative sources have been identified on site.</p> <p>Chemical laboratory testing completed as part of the ground investigations undertaken in the 1990s prior to any remediation indicated elevated concentrations of Heavy Metals and PAHs across the site. Hotspots of contamination were targeted and delineated as part of subsequent ground investigations. The site was then subjected to remediation works whereby identified contaminative hotspots were remediated by source removal including the Made Ground within the former canal arm crossing the site. The material was then replaced with suitable Made Ground. This considerably reduces the risk; however, residual contamination cannot be entirely discounted.</p> <p>The area surrounding the site has a significant industrial history including Bradford Iron works, Bradford Colliery, dye works, cotton mills, a travelling crane and railway sidings. These activities are likely to have contributed to elevated contaminant concentrations on site and within the surrounding area. However, the risk is reduced due widespread remedial measures carried out for the stadium and wider Eastlands site.</p> <p>Ingestion, dermal and inhalation pathways will be reduced across the entire site given the presence of hardstanding i.e. roads and buildings. As there are no private gardens or areas of soft landscaping included in the proposed development, the pathways are significantly reduced if not negated.</p>	Low
		Construction workers		<p>Low likelihood: Construction workers will be at increased risk due to their acute interaction with soils and contaminated soils have been identified on site. As widespread remedial works have previously been uncertain, the risk is reduced, however the presence of residual contamination cannot be discounted. The appropriate use of PPE, Good Practice and Health and Safety Measures will also significantly reduce the risk.</p>	

	D	End users and general public		Unlikely: VOCs may be present within the Made Ground associated with historical site uses as well as current use of the site for storage, however, if localised contaminative hotspots of VOCs are present, given their relative mobility and volatility VOCs are unlikely to remain at significant concentrations.	Low
		Construction workers		Unlikely: Construction workers at increased risk if any disturbance of soil occurs as this may generate a temporary increase in the release of soil vapours and potential sources of VOCs have been identified within the Made Ground on site. However, the risk remains low due to the widespread removal of hydrocarbon hotspots and relative volatility of VOCs.	Low

4.6.2 Conceptual Model for Ground Gas Risk Assessment

A conceptual model in the form of a linkage table for the purposes of a preliminary risk assessment for ground gas has been produced as a result of the probable contaminants, pathways and targets identified above as follows:

Conceptual Model for Ground Gas Risk Assessment					
Source	Pathway	Receptor	Hazard (severity)	Likelihood	Risk
On-site Made Ground	A B C D	Human occupants Site Workers Building and Structures	Effect on human health (Mild to Severe*) Damage to building (Mild)	<p>Unlikely: Made Ground deposits are anticipated on site to a maximum depth of c. 3.00m bgl. As any unsuitable material has previously been removed the Made Ground is unlikely to contain significant organic rich or putrescible material. Consequently, the Made Ground is anticipated to be a low ground gas generation source.</p>	Low
On-site Historical shafts and workings On-site coal seam	E			<p>Low Likelihood: Underground coal workings are recorded on site with 2 No. mine entries identified in close proximity to the site. The shallow workings have previously been treated by drill and grout, however, this is not deemed to be adequate remedial measures for mine gas emissions.</p> <p>A detailed mine gas risk assessment is presented included in the Coal Mining Risk Assessment. However, the risk is deemed to be moderate.</p>	

*Due to the risk of explosion.

4.6.3 Conceptual Model for Controlled Waters Risk Assessment

A site conceptual model in the form of a linkage table for the purposes of a preliminary risk assessment for pollution of waters has been produced as a result of the probable contaminants, pathways and targets identified above as follows:

Conceptual Model for Controlled Waters Risk Assessment					
Source	Pathway	Receptor	Hazard (severity)	Likelihood of Occurrence	Risk
On site Made Ground On site Historical Industrial Land Use (1848 – 1992) On site Historical Infilled Canal (1848 – 1992)	A	Groundwater within the Secondary Undifferentiated and Secondary A Aquifers	Effects to controlled waters (Mild)	Low Likelihood: Sources of contamination have been identified on site associated with historical industrial activity and the infilled canal. Localised hotspots of elevated contaminant concentrations in both the Made Ground soils and perched water within the Made Ground were identified prior to remediation works. Remediation works have previously been undertaken including removal of unsuitable material and contaminative hotspots. Therefore, any significant contamination (i.e. at a concentration high enough to cause a contaminant plume) have previously been removed during remediation therefore the risk is reduced. Additionally, the presence of significant deposits of cohesive Glacial Till (c. 15m) will negate any vertical migration into the underlying aquifers.	Low
	C				
	D				
	B	Surface water courses (Ashton Canal)	Effects to controlled waters: (Mild)	Low Likelihood: Lateral migration of potential contaminants may be facilitated by the presence of cohesive Glacial Till deposits. However, given the previous remediation of the site which included remediation of the soils and groundwater, no significant contamination is anticipated to remain, however, residual contamination cannot be discounted. Furthermore, the southwest sloping topography of the site any lateral migration is likely to be away from the Ashton Canal and the majority of contaminants of concern (Metals and PAHs) are of low solubility and mobility further reducing the lateral migration risk. The presence of a 7.5m retaining wall to the north of the site along the Metrolink cutting as well as the canal walls beyond further reduces the risk of lateral migration	Low
	E				
	E	Surface water courses (Ashton Canal)	Effects to controlled waters: (Mild)	Unlikely: Although the Ashton Canal is located ac. 15m north of the site, overland flow is considered very low risk as the topography of the site will preferentially facilitate overland flow away from the canal. Additionally, a 7.5m tall concrete retaining wall as well as the canal walls are present between the site and the canal which will negate overland flow.	Very Low

4.7 Preliminary Risk Assessment Summary

Human Health

Based on the human health conceptual model the risk to human health is deemed low to end users and low to moderate to construction workers. Although the risk to construction workers is increased due to their acute interaction with site soils, it is envisaged that with appropriate PPE and site management, risks to construction workers can be mitigated therefore the risk becomes low.

Ground Gas

Ground gas sources have been identified on site and elevated concentrations of carbon dioxide and methane were recorded during previous ground gas monitoring prior to site remediation. The ground gas risk is deemed to be low to moderate therefore ground gas monitoring is recommended, due to the low sensitivity of the proposed end use it is recommended to undertake a minimum of 4 No. visits over 2 months. A detailed mine gas risk assessment will be undertaken within the coal mining risk assessment.

If any organic rich Made Ground deposits are identified or if previously unrecorded potential ground gas sources are recorded during the ground investigation works e.g., unrecorded historical mine entries, then ground gas monitoring may be required. The length and frequency of the ground gas monitoring regime and the sampling method, initial results and alterations to the conceptual model are subject to the findings of the ground investigation works and development constraints (i.e. development timescales and liaison with the local authority).

Controlled Waters

Although sensitive receptors have been identified on-site and in close proximity (Secondary Undifferentiated, Secondary A Aquifers and the Ashton Canal) no

significant contaminative linkages exist, therefore the risk to controlled waters is deemed very low to low.

If unrecorded contaminative sources are noted, the above conceptual models may require re-assessment.

4.8 Scope of Phase 2 Intrusive Geo-Environmental Ground Investigation

As a result of the preliminary risk assessment, a Phase 2 intrusive geo-environmental ground investigation should be carried out to quantify the identified risks. This intrusive ground investigation works should include the collection of appropriate samples – solid and / or water, if deemed necessary, across the site for appropriate chemical testing as detailed above.

Furthermore, to determine the geotechnical and geological properties of the underlying ground conditions, appropriate intrusive works and associated testing should be undertaken. The rationale and aims for these Phase 2 environmental, geotechnical and geological investigative works are detailed below.

In order to provide adequate assessment in terms of both environmental and geotechnical site parameters, ground investigation works will be required on a spatial basis and targeting the historical buildings and historical infilled canal.

The proposed initial ground investigation works should comprise a programme of dynamic sampling boreholes and mechanically excavated trial pits.

The rationale for the exploratory holes is discussed below:

- To allow the collection of samples from the Made Ground and natural deposits for chemical laboratory testing (solid samples) for an appropriate suite of determinands and to determine the suitable concrete classification in associated with relevant guidance e.g. BRE Special Digest 1;

- To determine the extent, composition and depth of any Made Ground deposits;
- To determine the nature, thickness and extent of superficial deposits;
- Enable geotechnical testing, including density testing (SPTs), hand shear vane (HSV) testing and undrained shear strengths of the underlying Made Ground and natural deposits for the purposes of sub-structure design; and
- To allow installation of ground gas and groundwater monitoring wells.

Based on the findings of the initial ground investigation works, further works may be required for detailed design including California Bearing Ratio determinations, testing for earthworks information and deep ground investigation to inform pile design.

5.0 RECOMMENDATIONS

- As a result of the information gathered and the risks identified in this report, there is a low to moderate risk to human health on the basis that feasible contaminative linkages have been identified for end users and construction workers in localised areas. The risk to controlled waters is deemed very low to low given the lack of significant contaminative linkages.
- A low to moderate ground gas risk has been identified therefore it is recommended to undertake 4 No. monitoring visits over 2 months. On the basis that the site lies within an area where between less than 1% of homes are above the action level no radon protection measures are necessary.
- Due to geotechnical requirements, ground investigation works should be undertaken in order to determine the ground conditions with a greater degree of certainty and allow design of the proposed development, drainage, services and immediate external areas to be undertaken. It is therefore recommended that exploratory holes are constructed where access is permitted across the site. The use of soakaways is unlikely to be suitable given the presence of low-permeability shallow Glacial Till across the site.
- From the results of the Phase 2 ground investigation work – if this report identifies a potential risk and / or a requirement for further detailed site-specific assessment, a Phase 3 environmental investigation report and / or a Remedial Strategy (informing on potential remediation solutions) may be required.
- The nature and extent of the proposed targeted chemical and environmental testing should be confirmed, if time / commercial constraints allow, with the relevant Local Authority Environmental Health Officer and the Environment

Agency prior to undertaking works on-site. Proceeding without agreement between regulatory authorities may result in further assessment being required.

- It should be noted that, if any visual or olfactory evidence of contamination is encountered during remediation or construction work, then the Local Authority Environmental Health Officer and Environment Agency should be contacted immediately in order to agree any necessary remediation measures.
- Given the presence of services on-site, full service plans should be obtained prior to any intrusive ground investigation works.
- Due to the presence of established trees beyond then eastern site boundary and the presence of shallow cohesive deposits, an arboricultural survey is recommended.



APPENDIX 1

LIMITATIONS OF INVESTIGATION WORK AND REPORT AND CONTAMINATED LAND LEGISLATIVE FRAMEWORK



LIMITATIONS OF REPORT

This consultancy report was compiled and carried out by IGE Consulting Limited ('IGE') for the client, as defined in the main report (the 'client'), on the basis of a defined programme and scope of works and the terms of a contract between IGE and the client. IGE undertook this with all reasonable skill and care, taking into account the limits of the scope of works required by the client, the prevailing site conditions, the time scale involved and the resources, including financial and manpower resources, agreed between IGE and the client. IGE cannot accept responsibility to any parties whatsoever, following the issue of this report, for any matters arising which may be considered outwith the agreed scope of works.

Unless otherwise agreed this report has been prepared exclusively for the use and reliance of the client in accordance with generally accepted consulting practices. This report may not be relied upon, or transferred to, by any other party without the written agreement of its author. If a third party relies on this report, it does so wholly at its own and sole risk and IGE disclaims any liability to such parties.

It is IGE's understanding that this report is to be used for the purpose described in the 'Brief' section of this report. That purpose was a significant factor in determining the scope and the services to be provided. Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of, or reliance upon the report in those circumstances by the client without IGE's review and advice shall be at the client's sole and own risk.

The information contained in this report is protected by disclosure under Part 3 of the Environmental Information Regulations 2004 pursuant to the provisions of Regulation 12(5) without the consent in writing of a Director of IGE.

This report is a function of the date it was written and should be read in light of any subsequent changes in legislation, statutory requirements and industry practices. Ground conditions can also change over time and further investigations or assessment should be made if there is any significant delay in acting on the findings of this report. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of IGE. In the absence of such written advice of IGE, reliance on the report in the future shall be at the client's own and sole risk. Should IGE be requested to review the report in the future, IGE shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between IGE and the client.

The observations and conclusions described in this report are based solely upon the scope of works agreed between the client and IGE. IGE has not performed any observations, investigations, studies or testing not specifically set out or mentioned within this report. IGE is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the agreed scope of works. For the avoidance of doubt, this report is strictly limited to the nature of contamination contained within the ground and groundwater at the site. The report does not cover environmental aspects such as air or noise pollution and ground vibrations and the like. In addition, ecological matters relating to wildlife, flora and fauna have not been investigated as part of this report. In particular, the site has not been inspected for the presence or otherwise of invasive species (e.g. Japanese Knotweed). It is recommended that the client appoints a specialist in this subject to carry out a detailed inspection / survey of the site if its presence is suspected. Where mention has been made to the suspected presence asbestos or asbestos-containing materials this is for indicative purposes only and does not constitute or replace full and proper surveys.

Throughout the report the term 'geotechnical' is used to describe aspects relating to the physical nature of the site (such as foundation requirements) and the term 'geo-environmental' is used to describe aspects relating to ground-related environmental issues (such as potential contamination). However, it should be appreciated that this is an integrated investigation and these two main aspects are inter-related. The geo-environmental sections are written in broad agreement with BS 10175:2011+A2 2017.

LIMITATIONS OF INVESTIGATION WORK

Desk Study References

This report is based upon IGE's observations of existing physical conditions at the site gained from a walkover survey of the site together with IGE's interpretation of information including documentation, obtained from third parties and from the client on the history and usage of the site. Reliance has been placed on this publicly available data obtained from the sources identified in the main report. When using the information, it has been assumed that it is correct. The findings and recommendations contained in this report are based in part upon information provided by third parties, and whilst IGE have no reason to doubt the accuracy and that it has been provided in full from those it was requested from, the items relied on have not been verified. No responsibility can be accepted for errors within third party items presented in this report. IGE did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services. IGE is not liable for any inaccurate information or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to IGE and including the doing of any independent investigation of the information provided to IGE except when otherwise provided in the terms of the contract between the client and IGE.

Historical Mapping

Historical Ordnance Survey maps do not provide a comprehensive description of a site history. They provide details of the site from a date prior to the publication of the map (i.e. a snapshot in time). The period between map editions can be substantial (i.e. several decades). Not all map series are available for every date range in many areas of the UK and therefore there will be gaps in this mapped record for some sites. Potentially contaminative land uses could have been present and removed during such periods and may therefore not form a part of this particular record. In addition, there will be potentially contaminative land uses which are not identified on the map records such as small scale storage / use of hazardous materials, illegal / unlicensed waste disposal activities etc. Different map series identify different features utilising different symbols which can result in features that remain on-site being removed from maps. Some features are also not mapped for security reasons (e.g. airfields and other military installations). These areas are mostly shown as blank areas on historical maps.

Site Walkover

During the site walkover reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not been made known or accessible.

Flooding

Flooding in this report is defined as flooding caused by the sea, ditches, rivers, streams, ponds, lakes, reservoirs and the like. It does not extend to flooding caused by surcharged piped drainage systems and investigations into flooding of this nature are excluded from this report.

Extent of Contamination Studies

Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities. The conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the reporting in full. The conclusions resulting from this study are not necessarily indicative of future conditions or operating practices at or adjacent to the site.

Intrusive Investigation

Where field investigations have been carried out these have been restricted to a level of detail required to achieve the stated objectives of the work. Ground conditions can also be variable and as investigation excavations only allow examination of the ground at discrete locations, the potential exists for ground conditions to be encountered which are different to those considered in this report. The explored extent of the site area depends on the soil and groundwater conditions, together with the position of any current structures and underground facilities and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters, based on an understanding of the available operational and historical information, and it should not be inferred that other chemical species are not present.

The groundwater conditions entered on the exploratory hole records are those observed at the time of investigation. The normal speed of investigation usually does not permit the recording of an equilibrium water level for any one water strike. Moreover,

groundwater levels are subject to seasonal variation or changes in local drainage conditions and higher groundwater levels may occur at other times of the year than were recorded during this investigation.

Exploratory Holes

Where exploratory holes have been carried out as part of this investigation, the spacing has been determined to provide a reasonable indication of the general ground conditions across the site, but the number has ultimately been limited by commercial constraints. The findings of the exploratory holes relate specifically to the exploratory hole locations and are no absolute guarantee of the ground conditions between such locations. Due allowance should be made for the possibility of variation in conditions between exploratory hole locations.

Extent of Contamination Testing

The extent of contaminated land testing carried out on samples obtained from the site has been determined in accordance with the latest legal guidance issued by the government to provide, with reasonable certainty, the probable general levels of contamination present on site that could pose a significant hazard to human health or waters. The extent of site investigation works including chemical testing has also been limited by reasonable commercial constraints. Although extensive testing of samples has been carried out, the volume of samples taken for testing are a minute fraction of the total volume of soils and groundwater present on site. Therefore, there is a residual risk that undetected pockets of contamination may be present on site, situated between testing locations.

When investigating or developing potentially contaminated land it is important to recognise that sub-surface conditions may vary spatially and temporally. The absence of certain ground, ground gas, contamination or groundwater conditions at the positions tested is not a guarantee that such conditions do not exist anywhere across the site. Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities. The conclusions resulting from this study are not necessarily indicative of future conditions or operating practices at or adjacent to the site.

Extent of Geo-Environmental Studies

This report is strictly limited to the nature of contamination contained within the ground and groundwater at the site. The report does not cover environmental aspects such as air or noise pollution and ground vibrations and the like. In addition, ecological matters relating to wildlife, flora and fauna have not been investigated as part of this report. In particular, the site has not been inspected for the presence or otherwise of invasive species e.g. Japanese Knotweed. It is recommended that the Client appoints a specialist in this subject to carry out a detailed inspection / survey of the site if its presence is suspected. Where mention has been made to the identification asbestos or asbestos-containing materials this is for indicative purposes only and does not constitute or replace a full and proper survey. If an Unexploded Ordnance (UXO) report has been obtained within the report, it has been so on the basis of Health and Safety concerns and no assessment has been made other than transcribing the recommendations of the sub-contractor contained within the report. In terms of a potential contaminative source, unless ordnance has been manufactured / stored on site, UXOs will only be determined as a contaminative source following a positive identification on site.

PLANNING CONTEXT

The National Planning Policy Framework (NPPF, 2025) states that the purpose of the planning system is to contribute to the achievement of sustainable development. In order to do this the planning system has three overarching objectives, one of which directly relates to the potential for pollution and contaminated land:

- ***'environmental objective - to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy'.***

In accordance with this environmental objective, Paragraph 125 clarifies that 'making effective use of land' includes to:

- ***'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'.***

In accordance with this environmental objective, Paragraph 187 clarifies that 'conserving and enhancing the natural environment includes:

- ***'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'; and***
- ***'remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate'.***

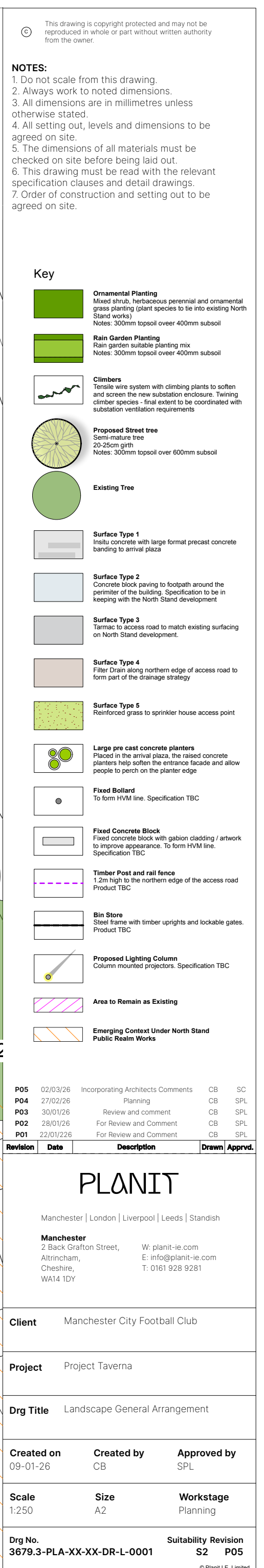
Paragraph 196 of the NPPF states that planning policies and decisions for developments should also ensure that:

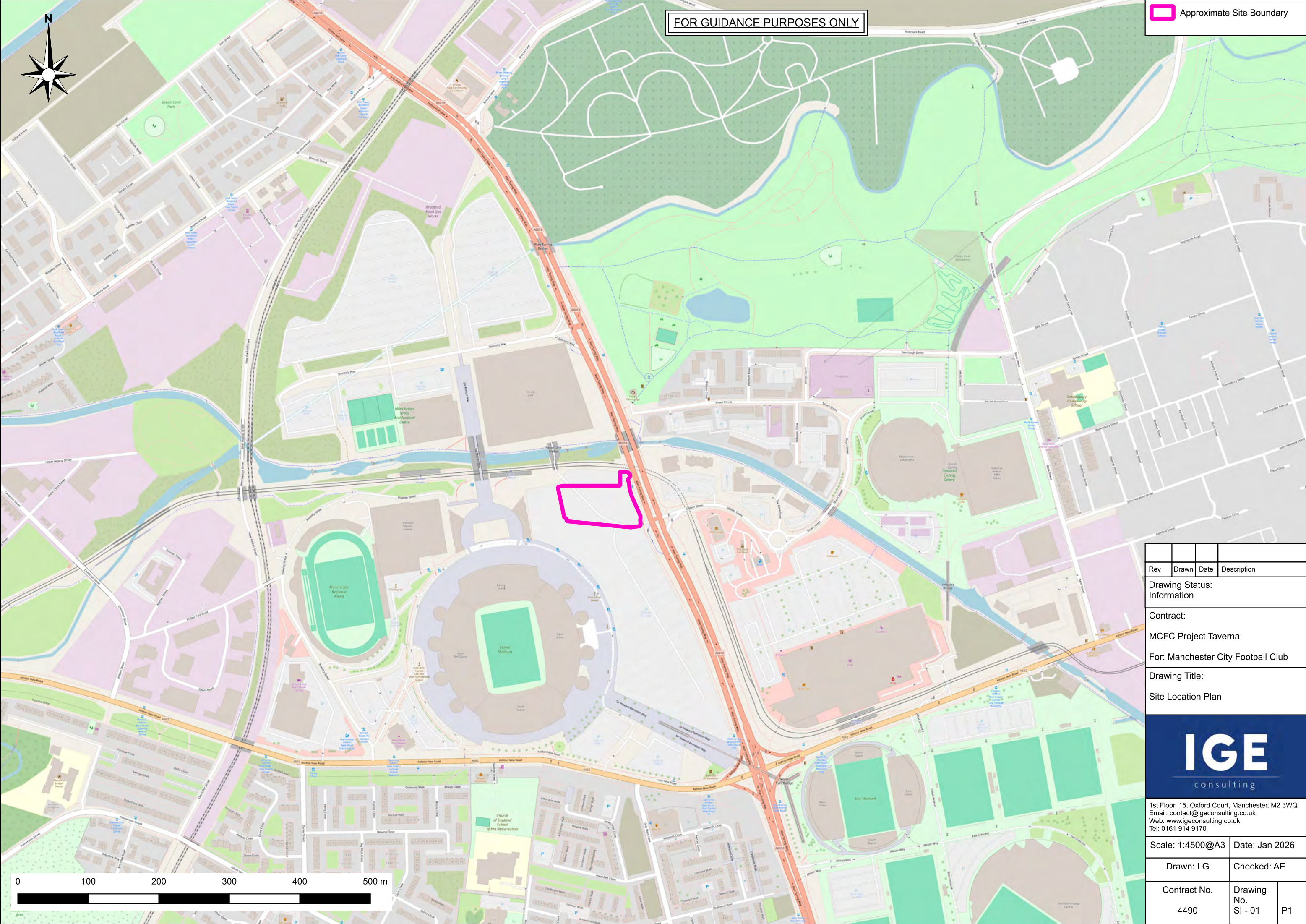
- *'a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation)'; and,*
- *'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*
- *'adequate site investigation information, prepared by a competent person, is available to inform these assessments'.*

This report has been prepared and authorised by staff that are competent as defined in the NPPF.

APPENDIX 2

FIGURES AND DRAWINGS





FOR GUIDANCE PURPOSES ONLY

 Approximate Site Boundary

Rev	Drawn	Date	Description
-----	-------	------	-------------

Drawing Status:
Information

Contract:

MCFC Project Taverna
For: Manchester City Football Club

Drawing Title:

Site Location Plan

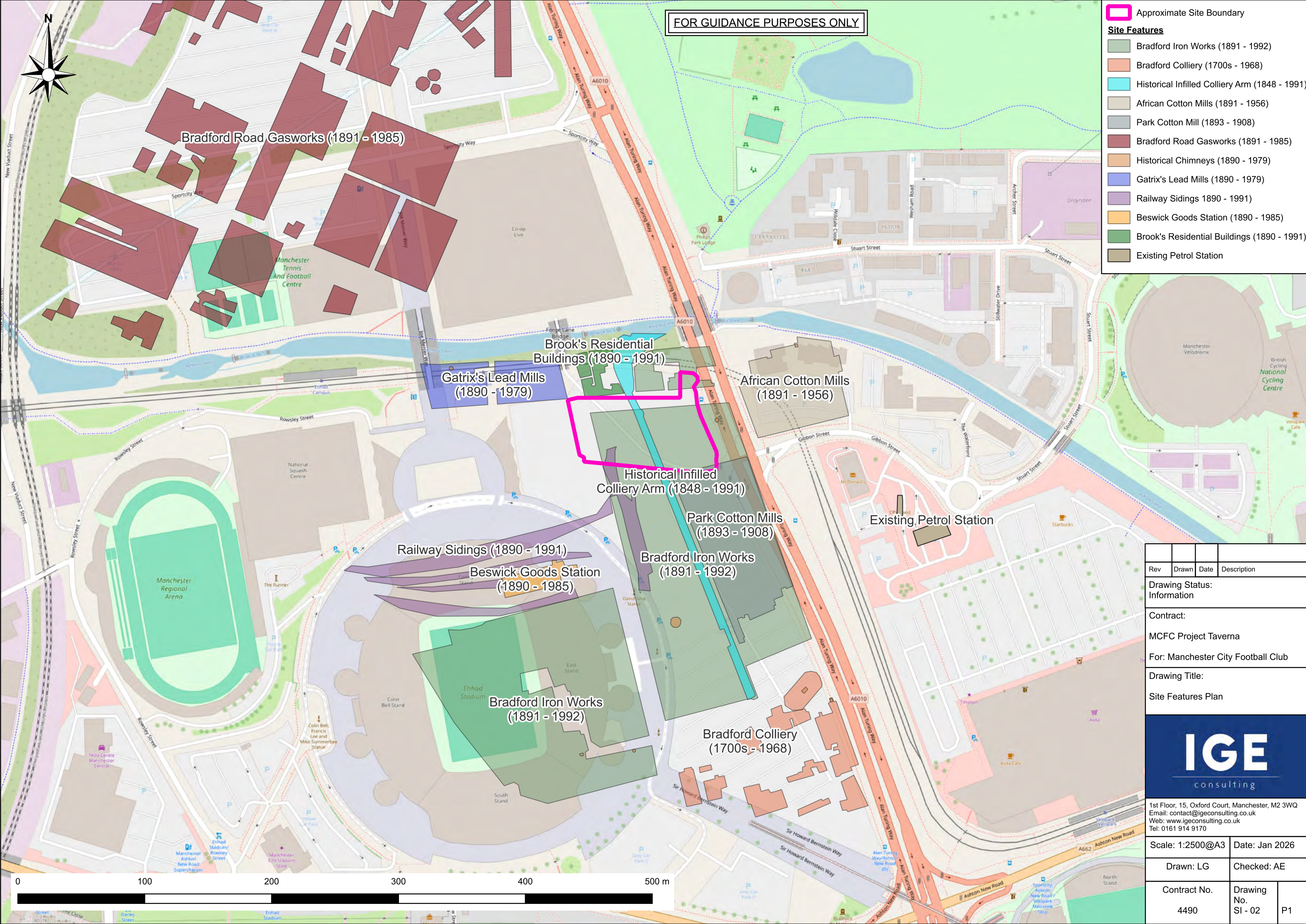


1st Floor, 15, Oxford Court, Manchester, M2 3WQ
Email: contact@igeconsulting.co.uk
Web: www.igeconsulting.co.uk
Tel: 0161 914 9170

Scale: 1:4500@A3 Date: Jan 2026

Drawn: LG Checked: AE

Contract No.	Drawing No.	
4490	SI - 01	P1



FOR GUIDANCE PURPOSES ONLY

- Approximate Site Boundary**
- Site Features**
- Bradford Iron Works (1891 - 1992)
 - Bradford Colliery (1700s - 1968)
 - Historical Infilled Colliery Arm (1848 - 1991)
 - African Cotton Mills (1891 - 1956)
 - Park Cotton Mill (1893 - 1908)
 - Bradford Road Gasworks (1891 - 1985)
 - Historical Chimneys (1890 - 1979)
 - Gatrix's Lead Mills (1890 - 1979)
 - Railway Sidings 1890 - 1991)
 - Beswick Goods Station (1890 - 1985)
 - Brook's Residential Buildings (1890 - 1991)
 - Existing Petrol Station

Rev	Drawn	Date	Description

Drawing Status:
Information

Contract:
MCFC Project Taverna

For: Manchester City Football Club

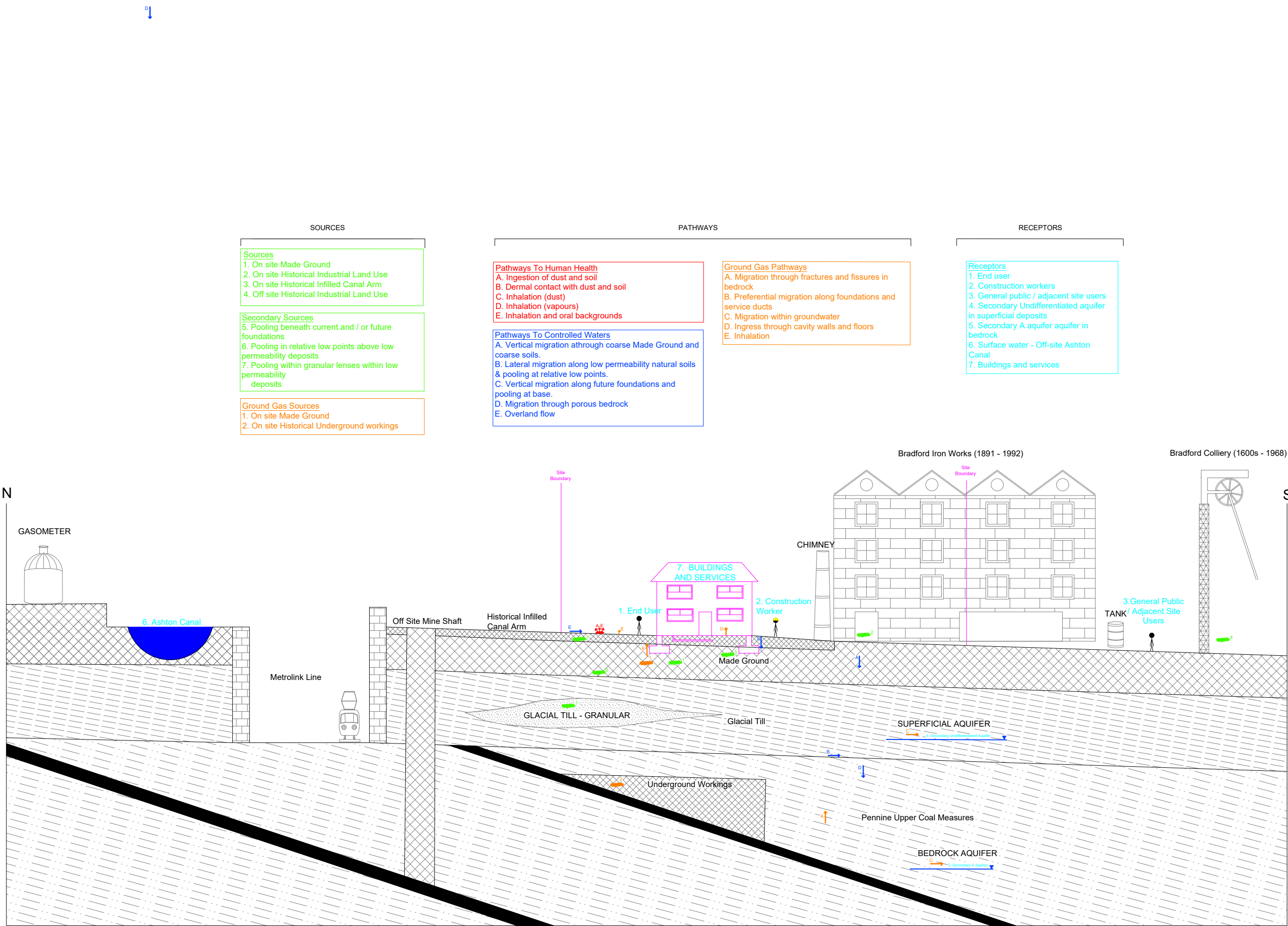
Drawing Title:
Site Features Plan

1st Floor, 15, Oxford Court, Manchester, M2 3WQ
Email: contact@igeconsulting.co.uk
Web: www.igeconsulting.co.uk
Tel: 0161 914 9170

Scale: 1:2500@A3	Date: Jan 2026
Drawn: LG	Checked: AE
Contract No. 4490	Drawing No. SI - 02 P1

Notes

- 1
- This drawings is indicative and not to scale.
- 2
- This drawing is to be read in conjunction with all relevant Architects and Service Engineers drawings.



Rev	Drawn	Date	Description
Drawing Status			
INFORMATION			
Contract			
MCFC PROJECT TAVERNA			
FOR: MANCHESTER CITY FOOTBALL CLUB			
Drawing Title			
CONCEPTUAL SITE MODEL			
IGE consulting			
1st Floor, 15, Oxford Court, Manchester, M2 3WQ email: contact@igeconsulting.co.uk web: www.igeconsulting.co.uk			
Scale		Date	
NTS		JAN 2026	
Drawn		Checked	
LG		AE	
Contract No.		Drawing No.	
4490		SI-03 P1	

APPENDIX 3

WALKOVER SURVEY PHOTOGRAPHS AND PHOTOGRAPH LOCATION PLAN

SITE WALKOVER PHOTOGRAPHS – 12th January 2026



Figure 1 – Present site condition with the Etihad stadium in the background facing west



Figure 2 – Present site condition with the Metrolink cutting, Ashton Canal and Co-op Live arena in the background facing northwest



Figure 3 – Vegetated bank on the eastern site boundary facing southwest



Figure 4 – Ashton Canal with the former Colliery arm junction and lock in the background



Figure 5 – Site condition facing northeast showing ground underfoot comprising 6F2 and Asphalt



Figure 6 - Southern site section showing site use as a storage area for adjacent construction works

SITE WALKOVER PHOTOGRAPHS – 12th January 2026



Figure 7 – Metrolink cutting to the north of the site facing north east with the Co-op Live arena in the background



Figure 8 – Southern site section currently in use as a storage / stockpiling area facing north



Figure 9 – Industrial land use in the southern site section



Figure 10 – Southern site section facing northwest



Figure 11 – Wider Eastlands site south of the site currently in use as storage and temporary parking



Figure 12 – Sewer covering to the west of the site

SITE WALKOVER PHOTOGRAPHS – 12th January 2026



Figure 13 – Gas main coverings west of the site

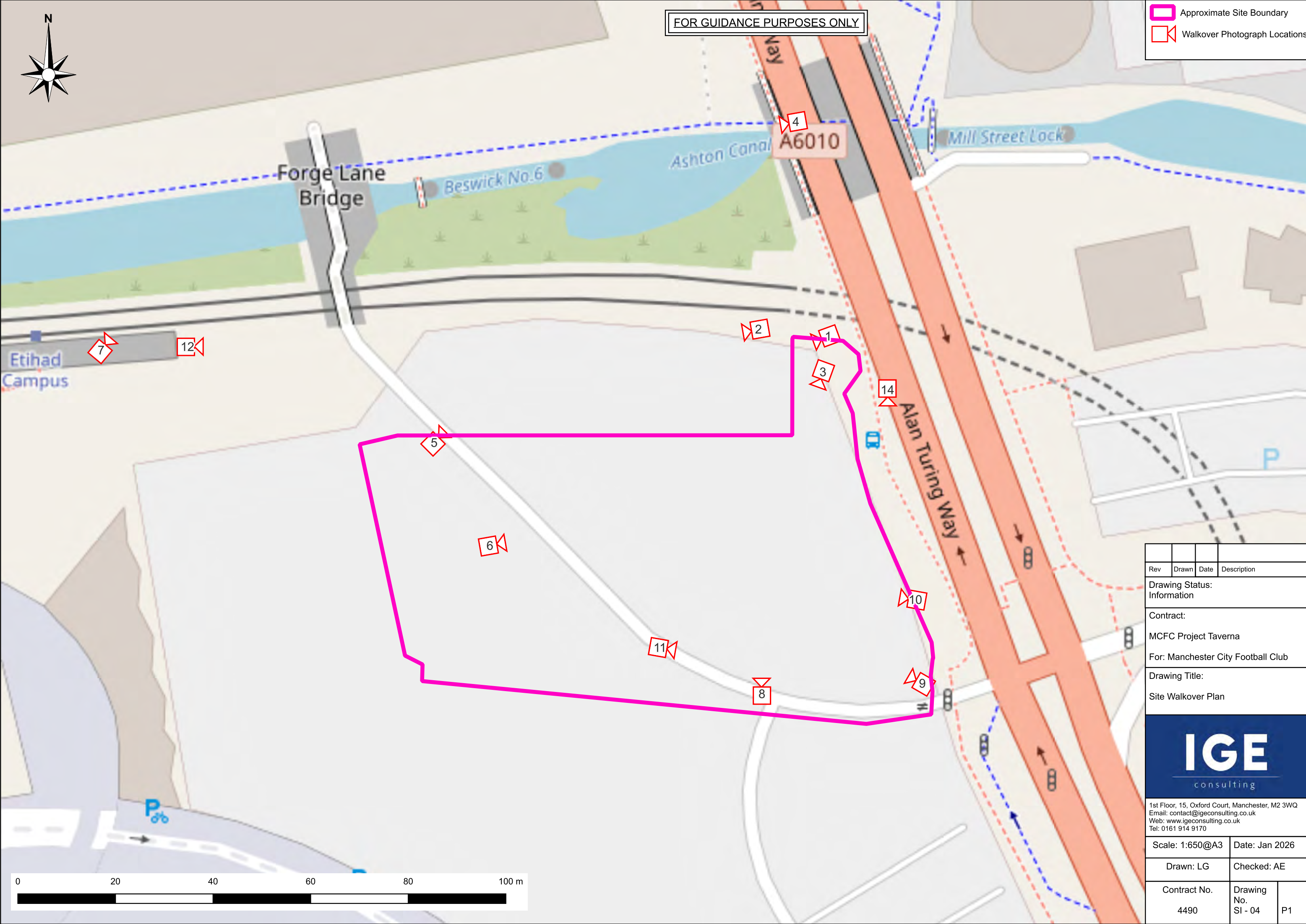


Figure 14 – Sewer covering to the east of the site



FOR GUIDANCE PURPOSES ONLY

- Approximate Site Boundary
- Walkover Photograph Locations



Rev	Drawn	Date	Description
Drawing Status: Information			
Contract: MCFC Project Taverna			
For: Manchester City Football Club			
Drawing Title: Site Walkover Plan			
<div>IGE consulting</div> <div>1st Floor, 15, Oxford Court, Manchester, M2 3WQ Email: contact@igeconsulting.co.uk Web: www.igeconsulting.co.uk Tel: 0161 914 9170</div>			
Scale: 1:650@A3		Date: Jan 2026	
Drawn: LG		Checked: AE	
Contract No.	Drawing No.		
4490	SI - 04	P1	

APPENDIX 4

HISTORICAL ORDNANCE SURVEY MAPS

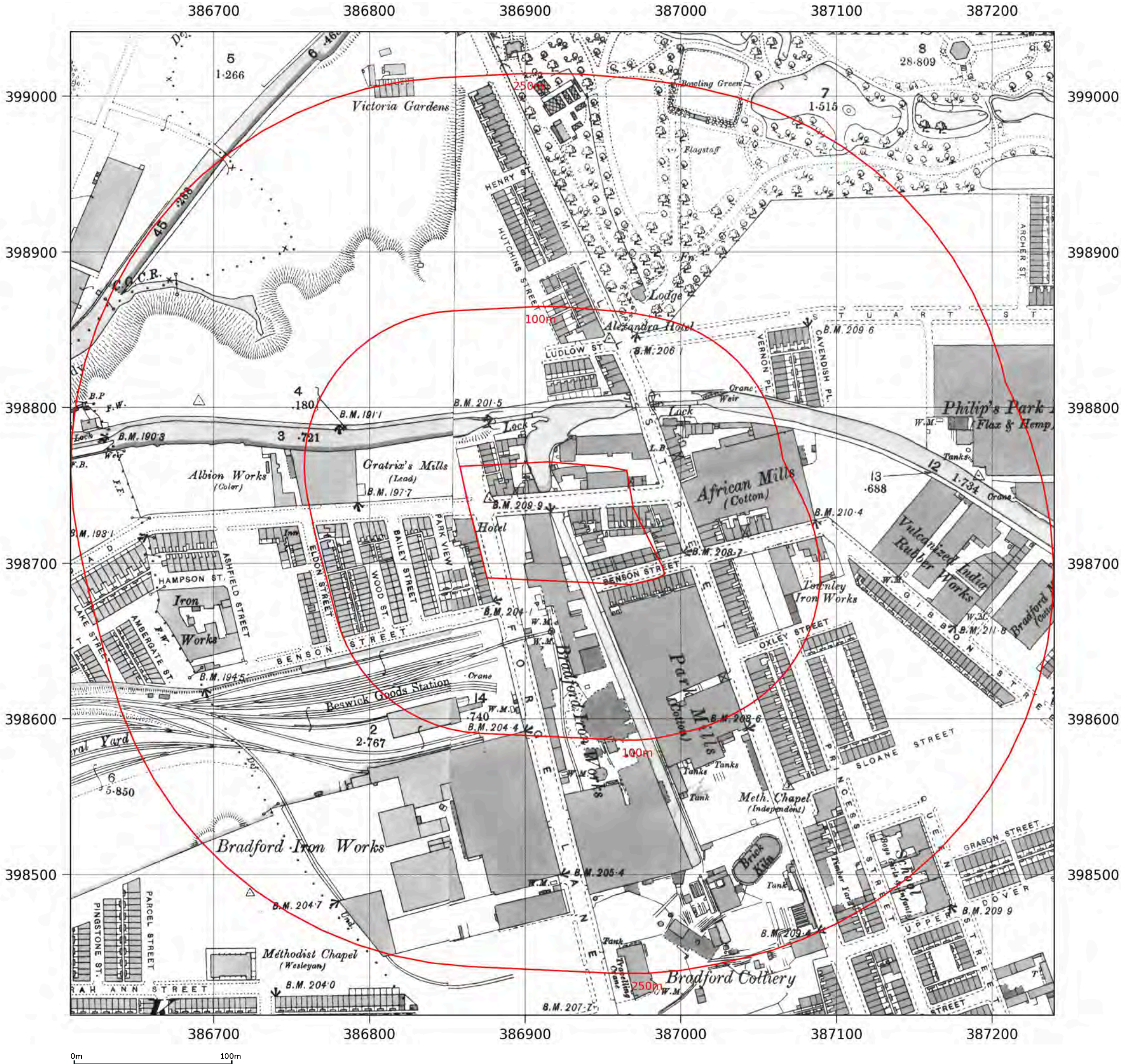
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Client ref: 4490/LG
Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: County Series
Map date: 1893
Scale: 1:2,500
Printed at: 1:2,500



Date: 1893 Surveyed: 1893 Revised: 1893	Date: 1893 Surveyed: 1893 Revised: 1893
---	---

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info@groundsure.com
01273 257 755



Site details:	MCFC Entertainment
Client ref:	4490/LG
Report ref:	GS-RGU-MSH-7VL-P1N
Grid ref:	386921.48, 398725.28
Production date:	5 January 2026

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

Date: 1908
Surveyed: 1908
Revised: 1908

Date: 1908
Surveyed: 1908
Revised: 1908

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Site details:	MCFC Entertainment
Client ref:	4490/LG
Report ref:	GS-RGU-MSH-7VL-P1N
Grid ref:	386921.48, 398725.28
Production date:	5 January 2026

Map name:	County Series
Map date:	1931-1932
Scale:	1:2,500
Printed at:	1:2,500



Date: 1931 Surveyed: 1931 Revised: 1931	Date: 1932 Surveyed: 1932 Revised: 1932
---	---

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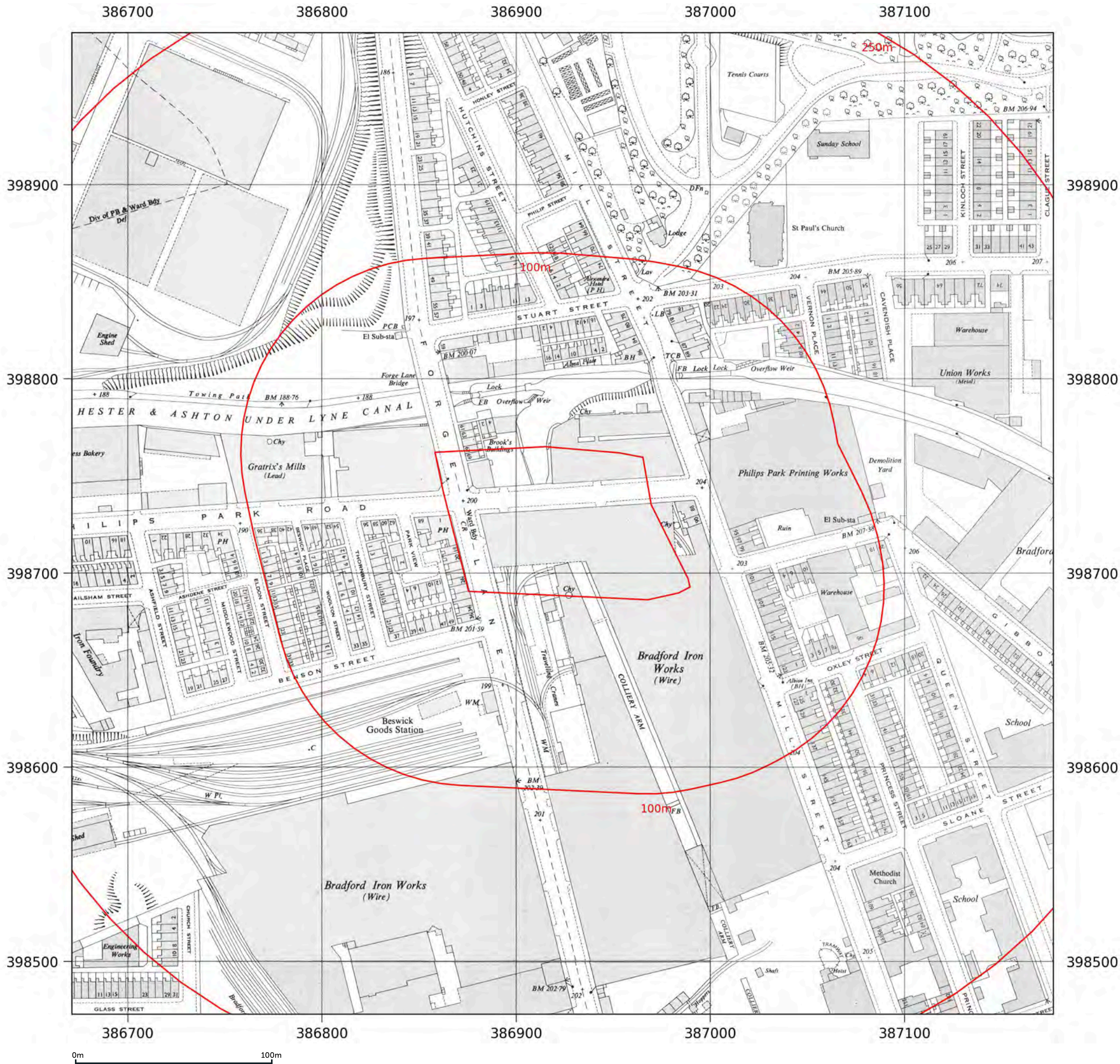
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Client ref: 4490/LG
Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: National Grid
Map date: 1948-1949
Scale: 1:1,250
Printed at: 1:2,000



Date: 1948 Surveyed: 1948 Revised: 1948 Levelled: 1929	Date: 1949 Surveyed: 1949 Revised: 1949 Levelled: 1949
Date: 1949 Surveyed: 1949 Revised: 1949 Levelled: 1929	Date: 1949 Surveyed: 1949 Revised: 1949 Levelled: 1949

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Site details: MCFC Entertainment
Client ref: 4490/LG
Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

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



Date: 1949 Surveyed: 1949 Revised: 1949 Levelled: 1929	Date: 1951
	Date: 1949 Surveyed: 1949 Revised: 1949 Levelled: 1949

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Site details:

Client ref:

Report ref:

Grid ref:

Production date:

MCFC Entertainment

4490/LG

GS-RGU-MSH-7VL-P1N

386921.48, 398725.28

5 January 2026

Map name:

Map date:

Scale:

Printed at:

National Grid

1951

1:2,500

1:2,500

Date: 1951

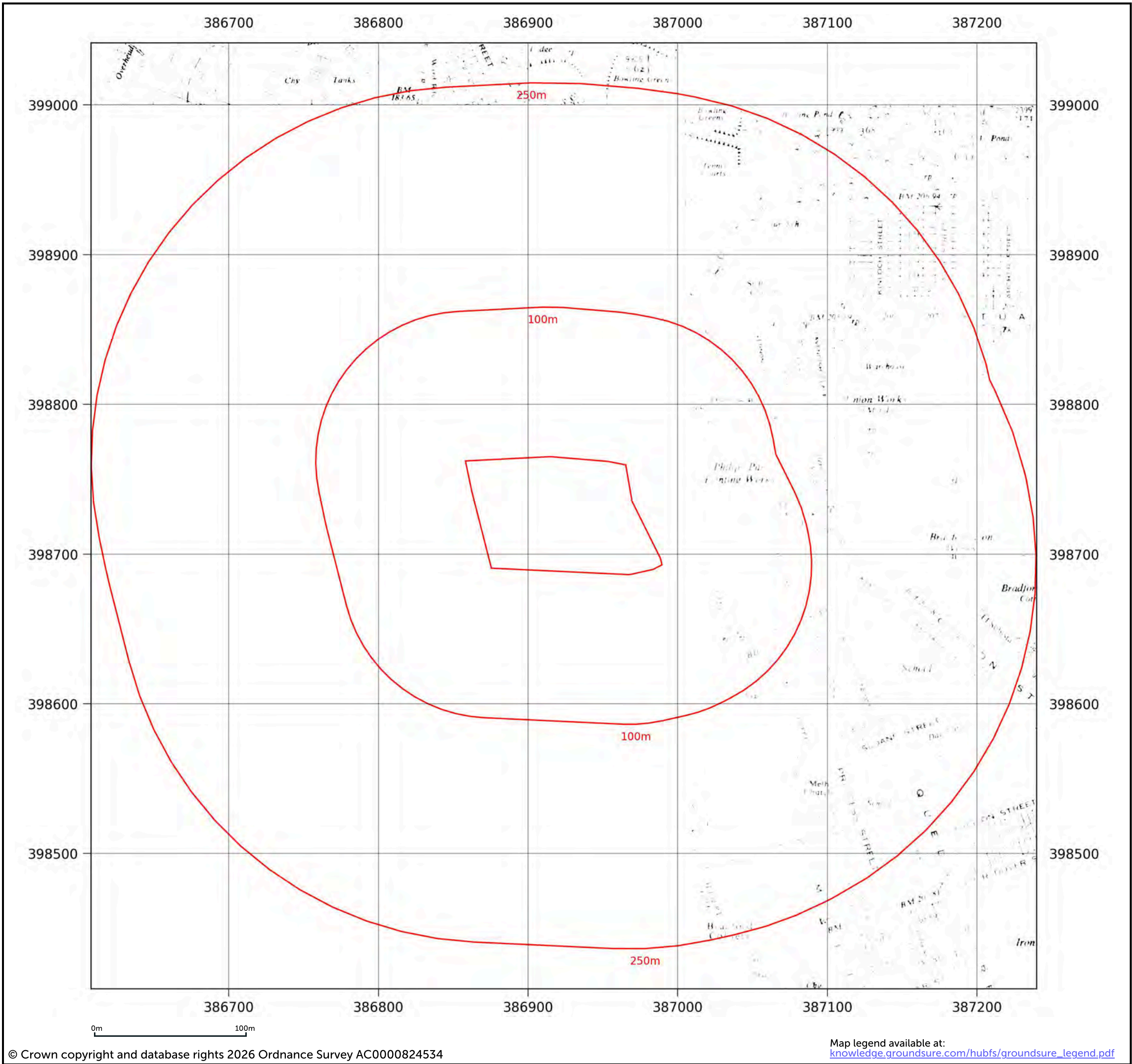
Date: 1951

N

W

E

S



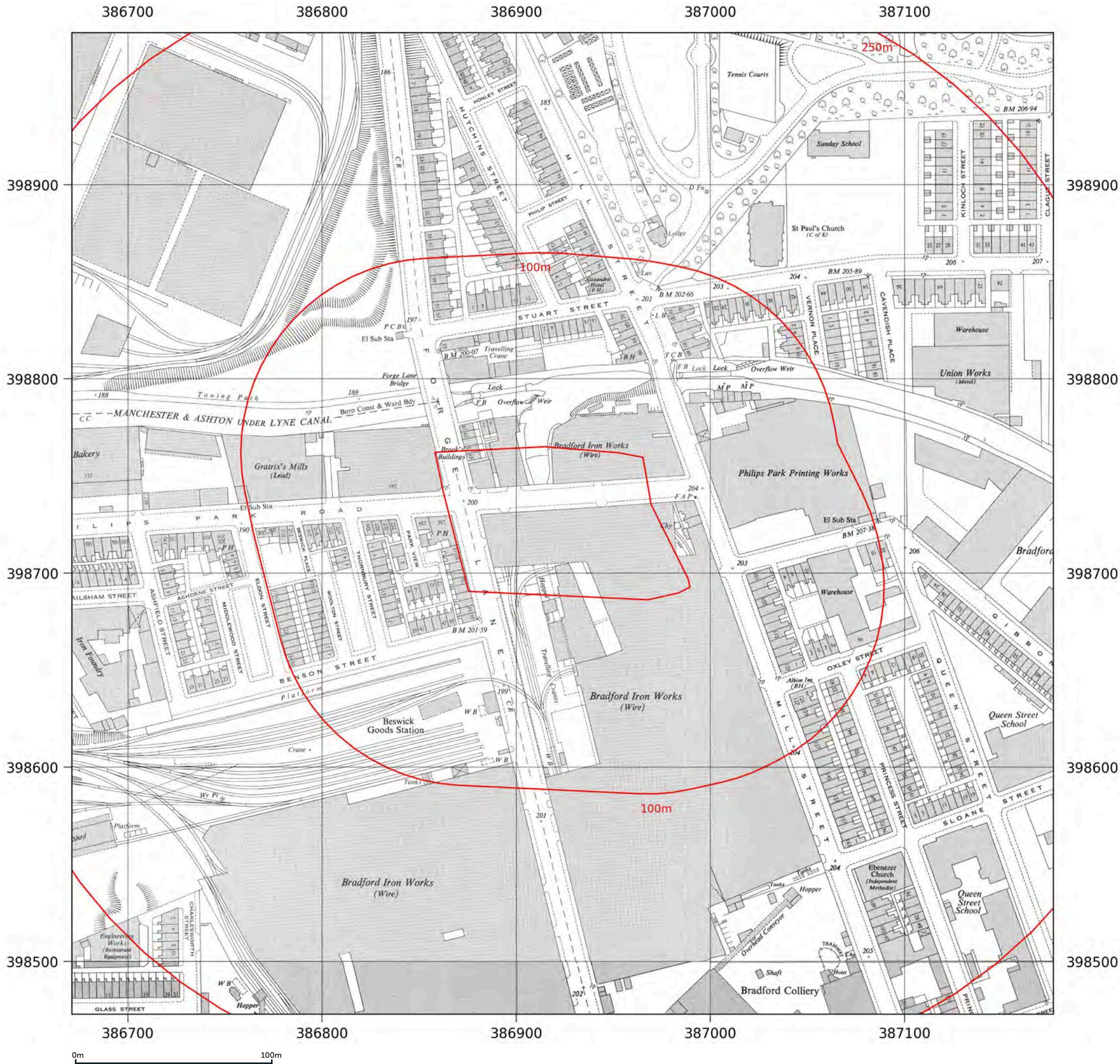
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Client ref: 4490/LG
Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: National Grid
Map date: 1953-1956
Scale: 1:1,250
Printed at: 1:2,000



Date: 1955 Surveyed: 1955 Revised: 1955 Levelled: 1949	Date: 1953 Surveyed: 1948 Revised: 1953 Levelled: 1949
Date: 1956 Surveyed: 1956 Revised: 1956 Levelled: 1929	Date: 1953 Surveyed: 1949 Revised: 1953 Levelled: 1949

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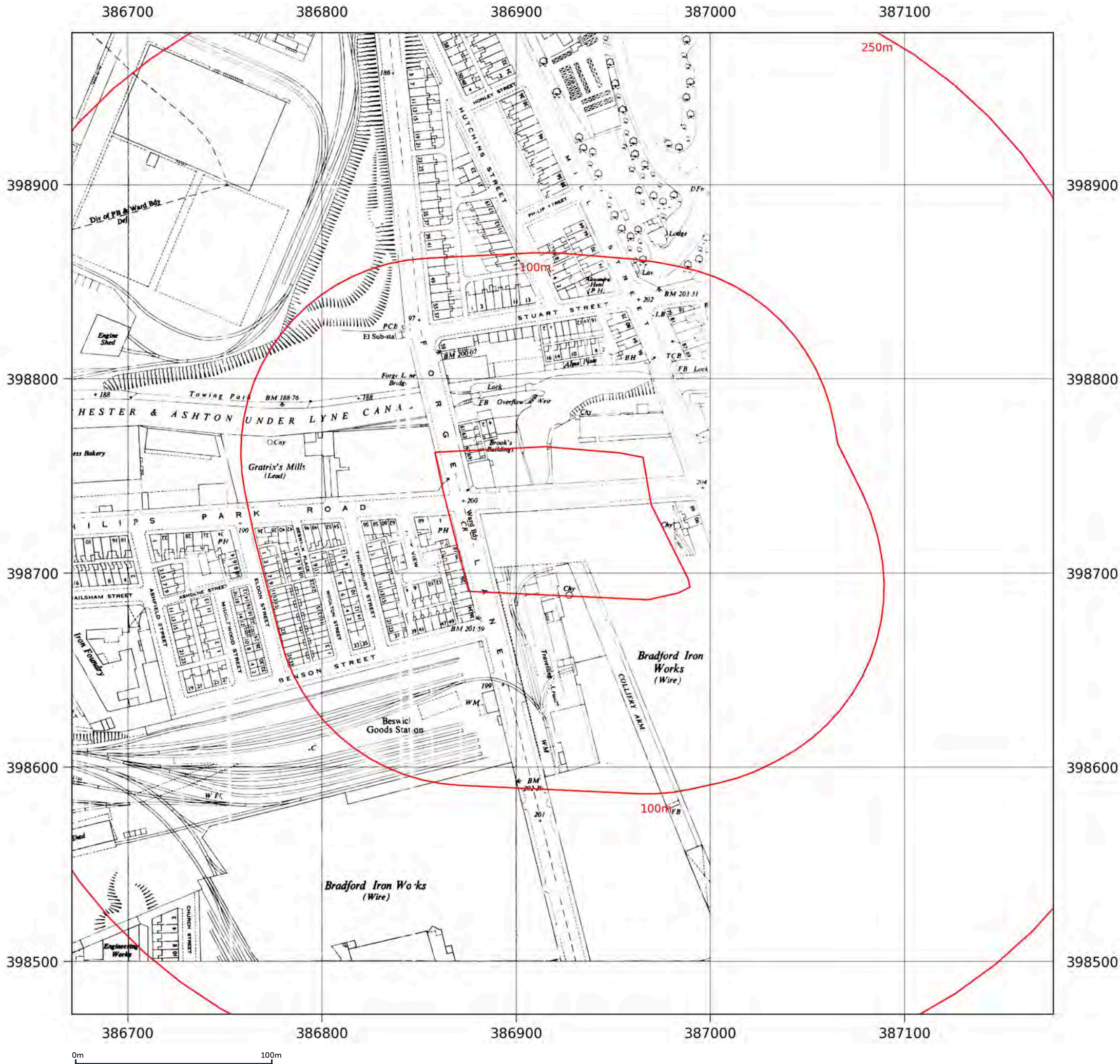
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Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: National Grid
Map date: 1956
Scale: 1:1,250
Printed at: 1:2,000



Date: 1956

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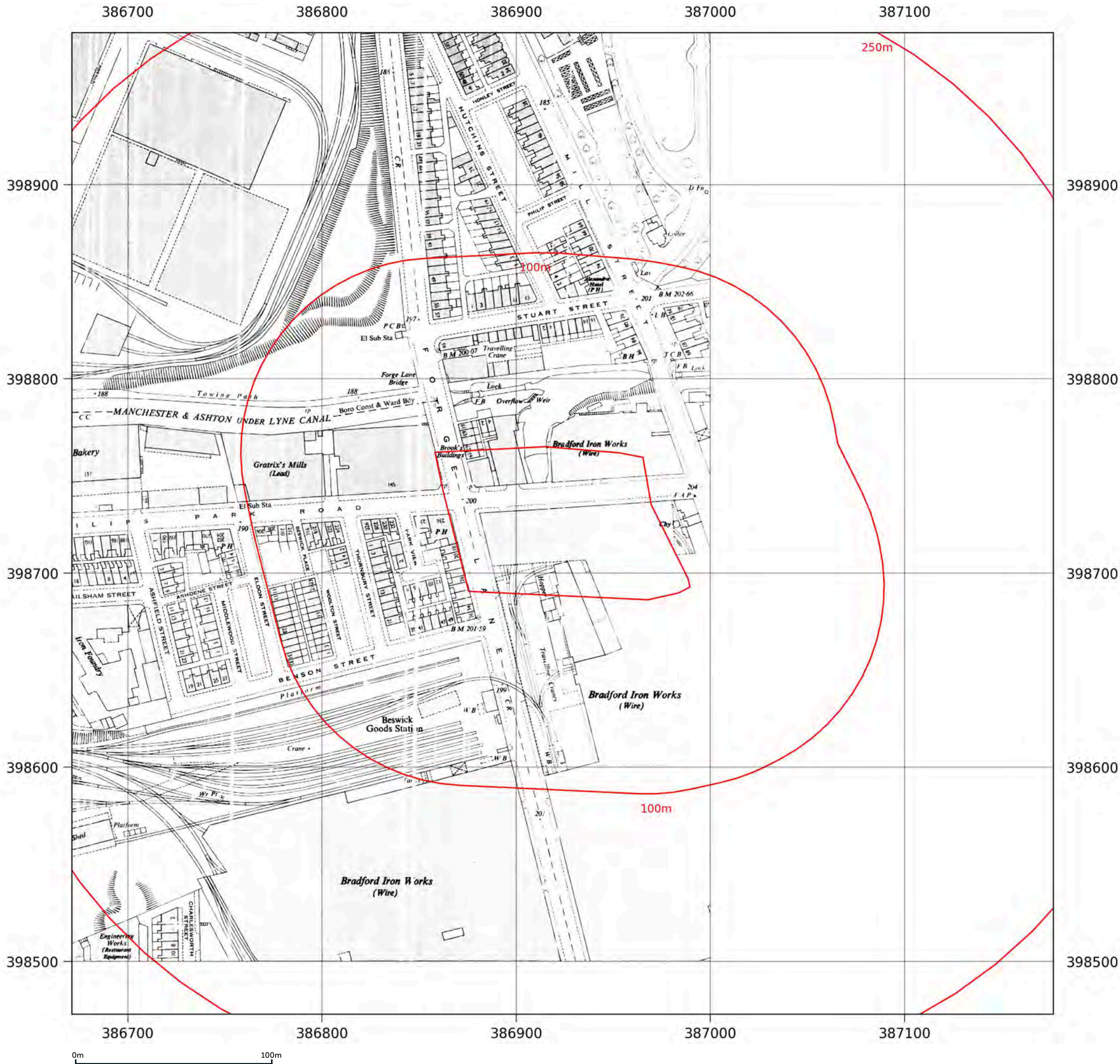
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Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: National Grid
Map date: 1956
Scale: 1:1,250
Printed at: 1:2,000



Date: 1956

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Site details:
Client ref:
Report ref:
Grid ref:
Production date:

MCFC Entertainment
4490/LG
GS-RGU-MSH-7VL-P1N
386921.48, 398725.28
5 January 2026

Map name:
Map date:
Scale:
Printed at:

National Grid
1958
1:2,500
1:2,500

Date: 1958
Surveyed: 1958
Revised: 1958
Edition: 1958
Levelled: 1949

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Site details: MCFC Entertainment
Client ref: 4490/LG
Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: National Grid
Map date: 1977-1979
Scale: 1:1,250
Printed at: 1:2,000



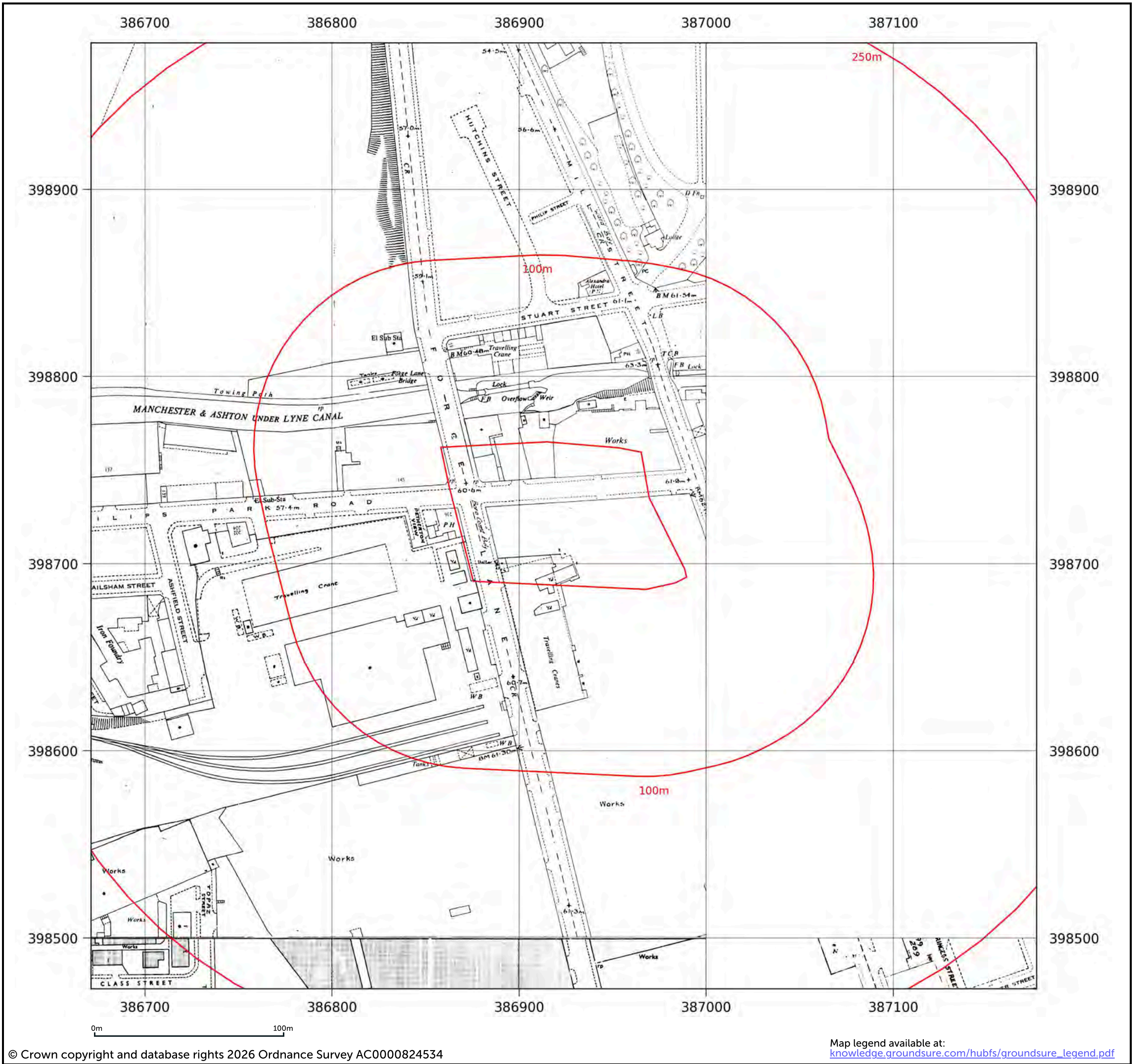
Date: 1979
Copyright: 1979
Levelled: 1964

Date: 1978 Date: 1977

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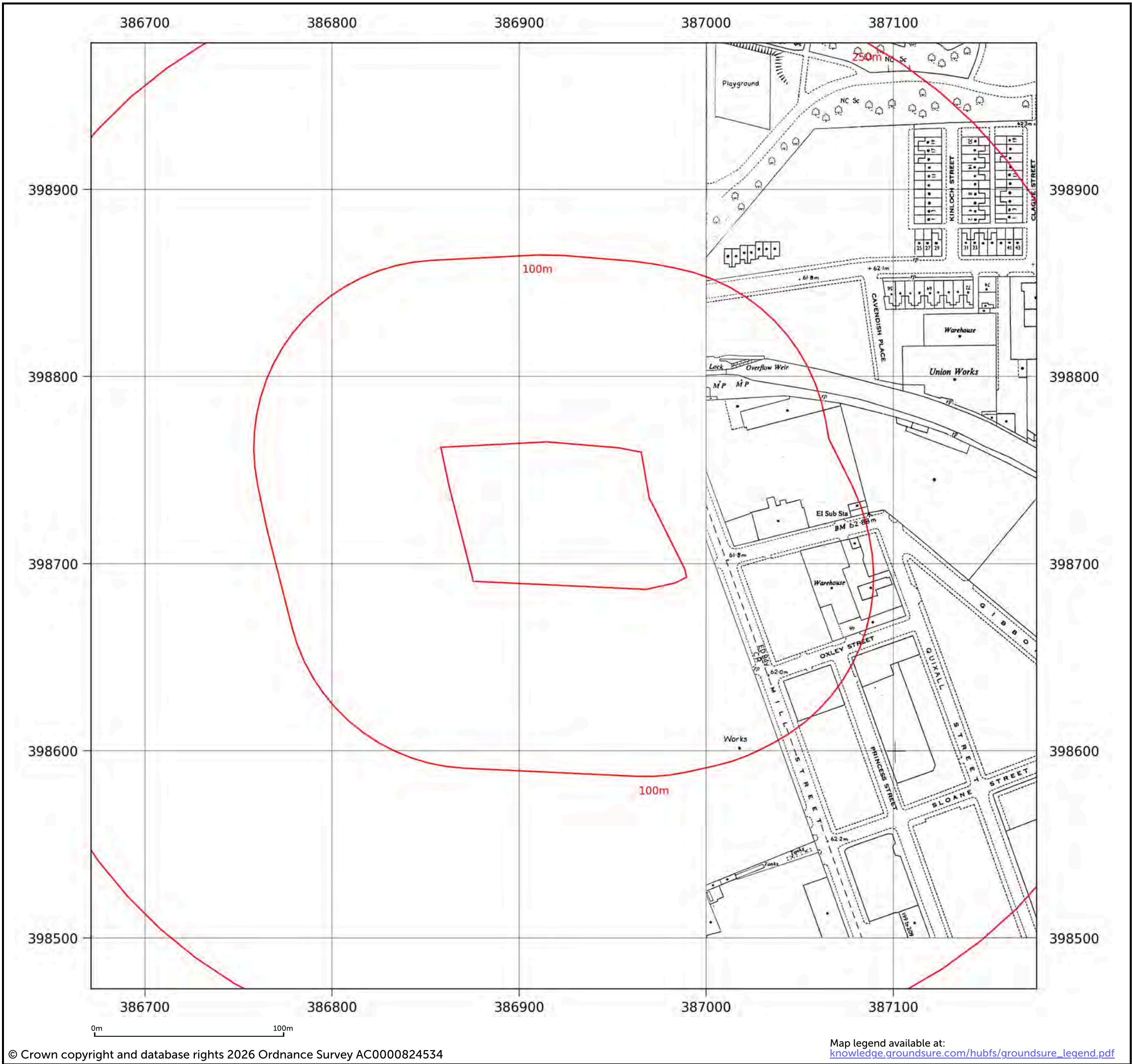
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Client ref:	4490/LG
Report ref:	GS-RGU-MSH-7VL-P1N
Grid ref:	386921.48, 398725.28
Production date:	5 January 2026

Map name:	National Grid
Map date:	1985
Scale:	1:1,250
Printed at:	1:2,000



Date: 1985
Surveyed: 1964
Revised: 1985
Copyright: 1985
Levelled: 1964

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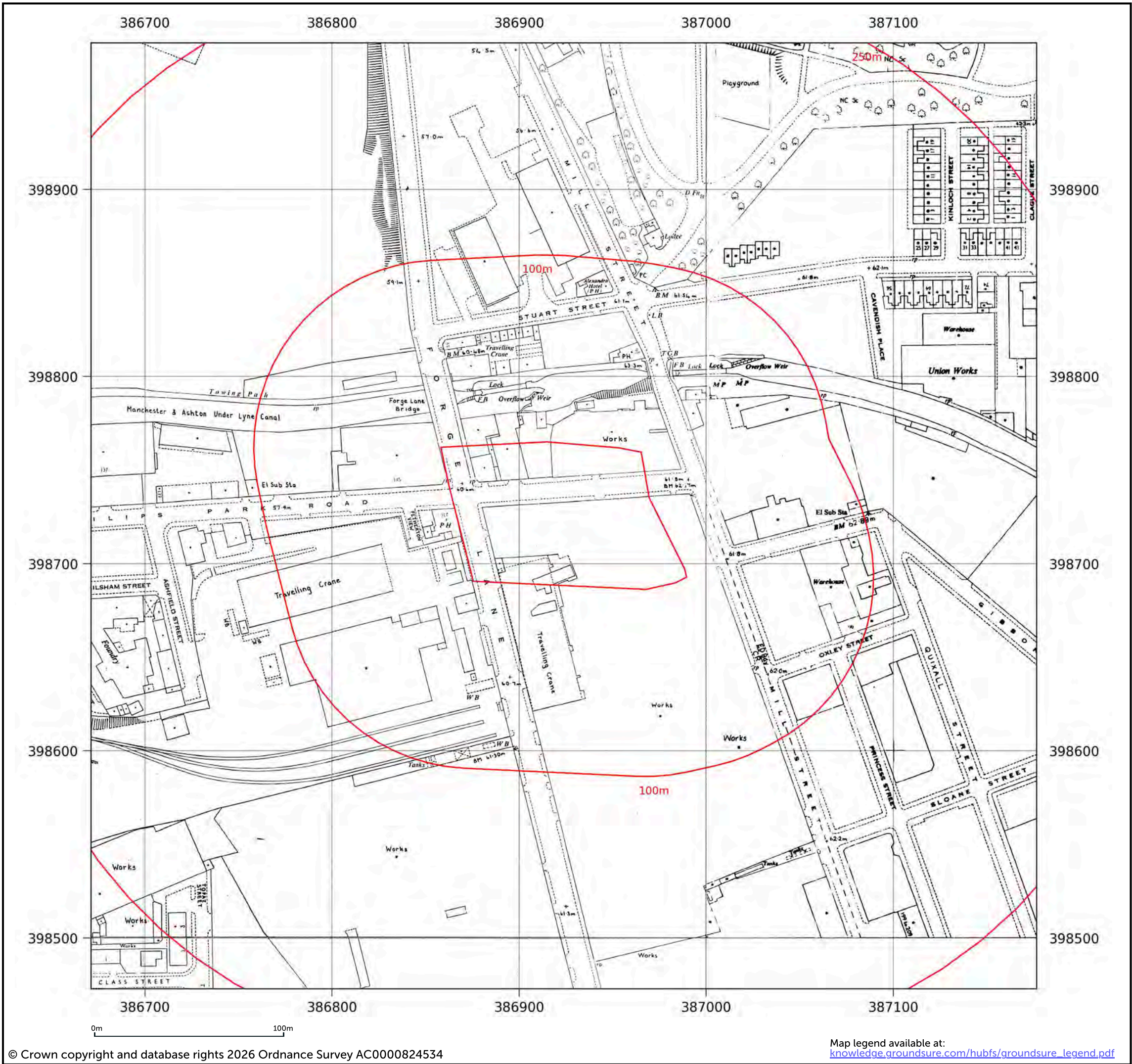
Site details: MCFC Entertainment
Client ref: 4490/LG
Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: National Grid
Map date: 1983-1987
Scale: 1:1,250
Printed at: 1:2,000



Date: 1987 Surveyed: 1966 Revised: 1987 Copyright: 1987 Levelled: 1966	Date: 1985
Date: 1983 Surveyed: 1963 Revised: 1983 Copyright: 1983 Levelled: 1963	

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Client ref: 4490/LG
Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: National Grid
Map date: 1989-1992
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Printed at: 1:2,000

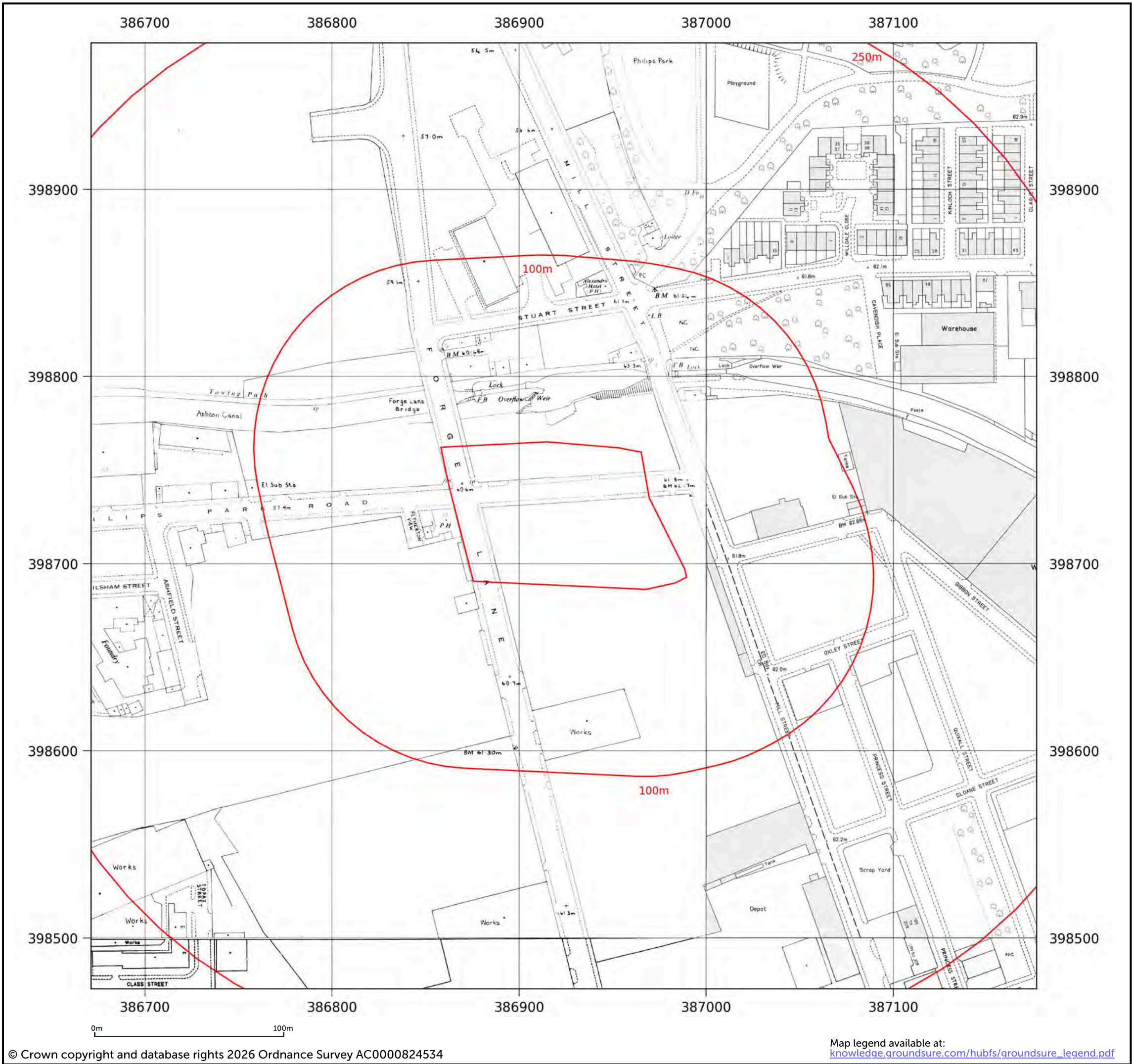


Date: 1991
Surveyed: 1991
Revised: 1991
Copyright: 1991

Date: 1989
Surveyed: 1949
Revised: 1988
Copyright: 1989
Levelled: 1964

Date: 1991
Surveyed: 1964
Revised: 1991
Copyright: 1991
Levelled: 1964

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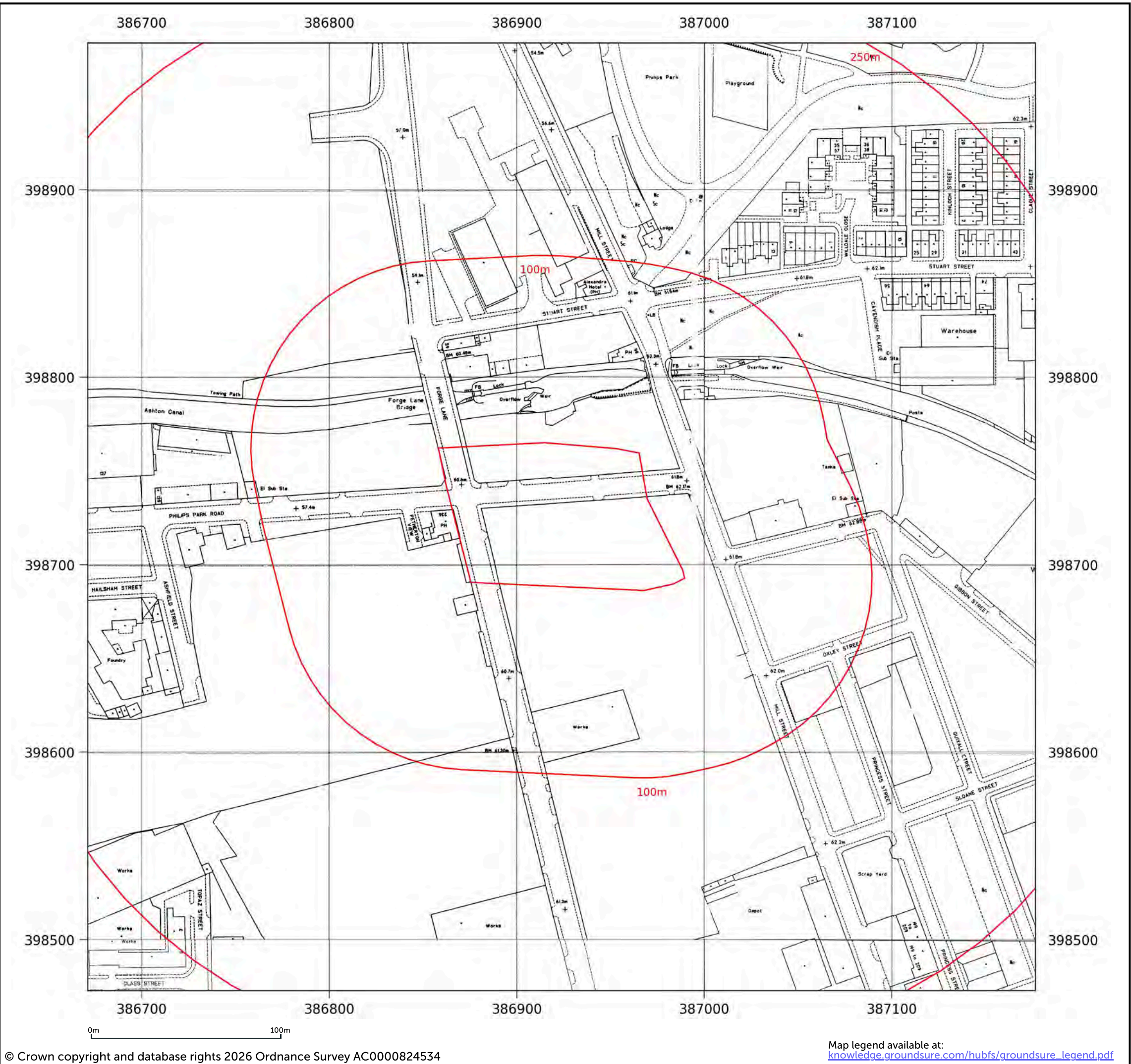
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Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: National Grid
Map date: 1992-1995
Scale: 1:1,250
Printed at: 1:2,000



Date: 1992
Copyright: 1992
Date: 1992
Copyright: 1992
Date: 1995
Copyright: 1992
Date: 1992
Copyright: 1992

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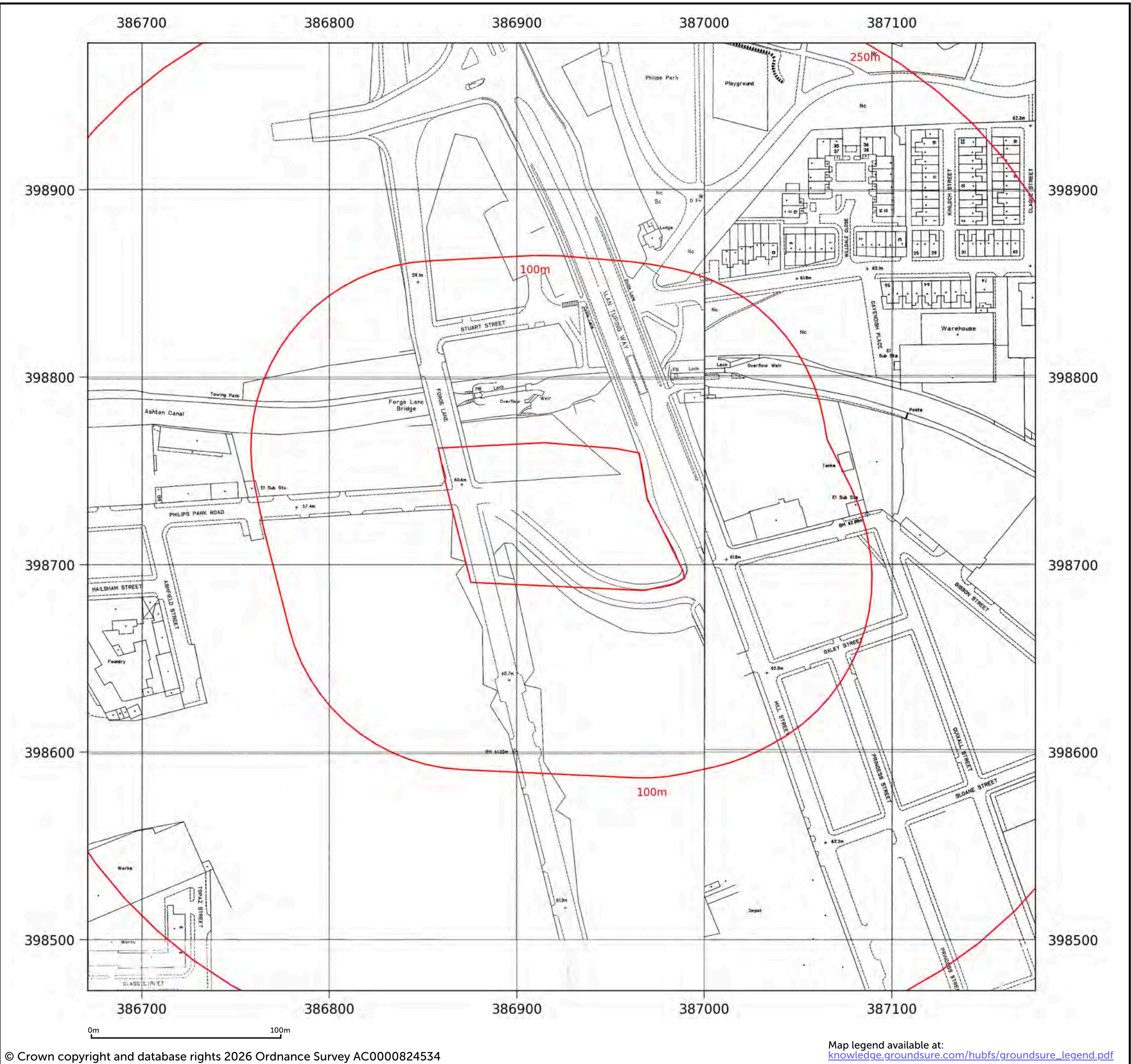
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Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: National Grid
Map date: 1994-1995
Scale: 1:1,250
Printed at: 1:2,000



Date: 1995
Surveyed: 1995
Revised: 1995
Copyright: 1995
Date: 1994
Surveyed: 1994
Revised: 1994
Copyright: 1994
Date: 1995
Copyright: 1995
Date: 1994
Copyright: 1994

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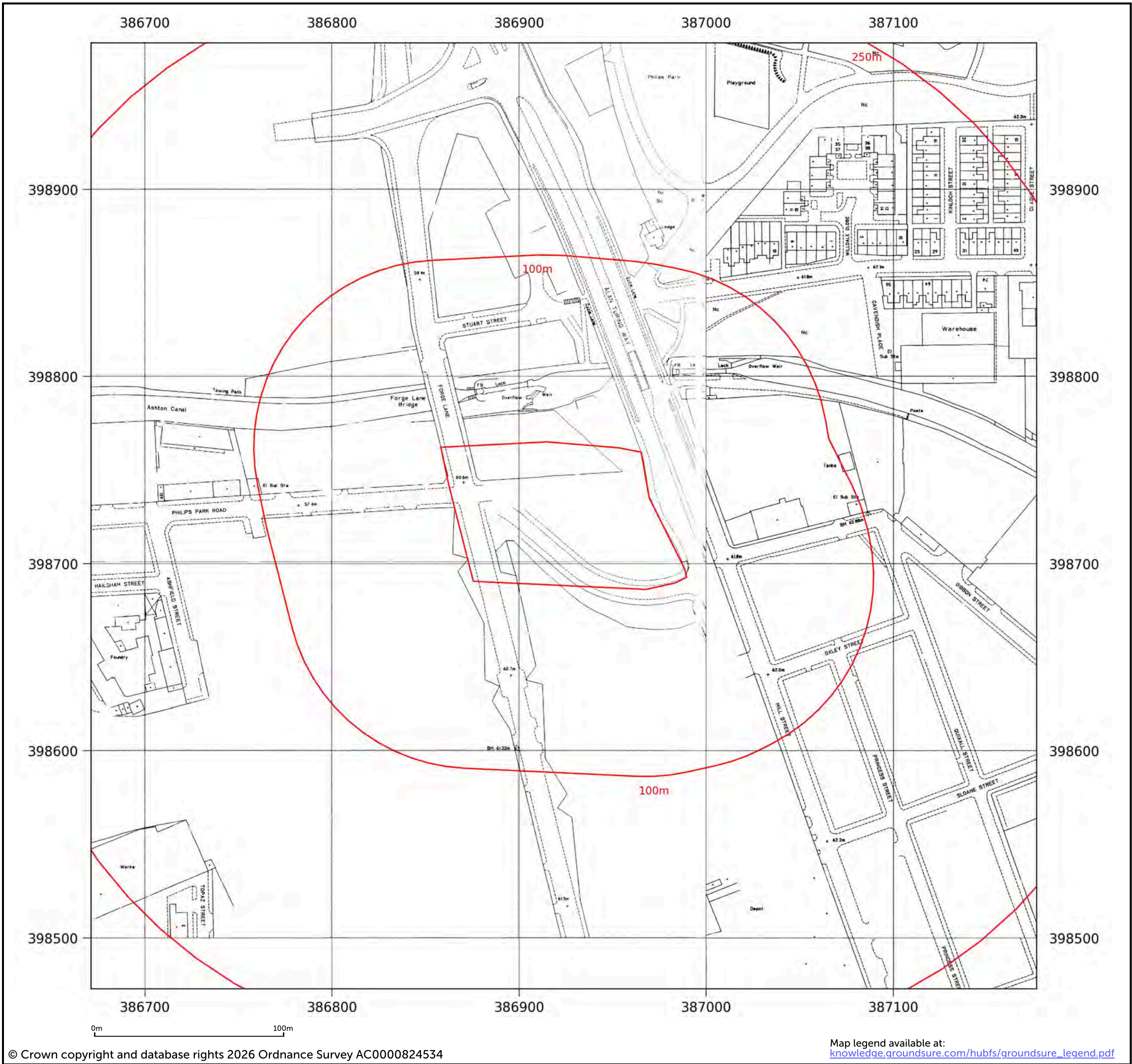
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Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: National Grid
Map date: 1994-1995
Scale: 1:1,250
Printed at: 1:2,000



Date: 1995
Copyright: 1995
Date: 1994
Copyright: 1994
Date: 1994
Surveyed: 1994
Revised: 1994
Copyright: 1994

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info@groundsure.com
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Site details:

MCFC Entertainment

Client ref:

4490/LG

Report ref:

GS-RGU-MSH-7VL-P1N

Grid ref:

386921.48, 398725.28

Production date:

5 January 2026

Map name:

National Grid

Map date:

1995

Scale:

1:1,250

Printed at:

1:2,000

N

W

E

S

Date: 1995

Copyright: 1995

Date: 1995

Surveyed: 1995

Revised: 1995

Copyright: 1995

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Site details:	MCFC Entertainment
Client ref:	4490/LG
Report ref:	GS-RGU-MSH-7VL-P1N
Grid ref:	386921.48, 398725.28
Production date:	5 January 2026

Map name:	National Grid
Map date:	1995
Scale:	1:1,250
Printed at:	1:2,000



Date: 1995 Surveyed: 1995 Revised: 1995 Copyright: 1995
Date: 1995 Copyright: 1995

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Site details:	MCFC Entertainment
Client ref:	4490/LG
Report ref:	GS-RGU-MSH-7VL-P1N
Grid ref:	386921.48, 398725.28
Production date:	5 January 2026

Map name:	LandLine
Map date:	2003
Scale:	1:1,250
Printed at:	1:1,250



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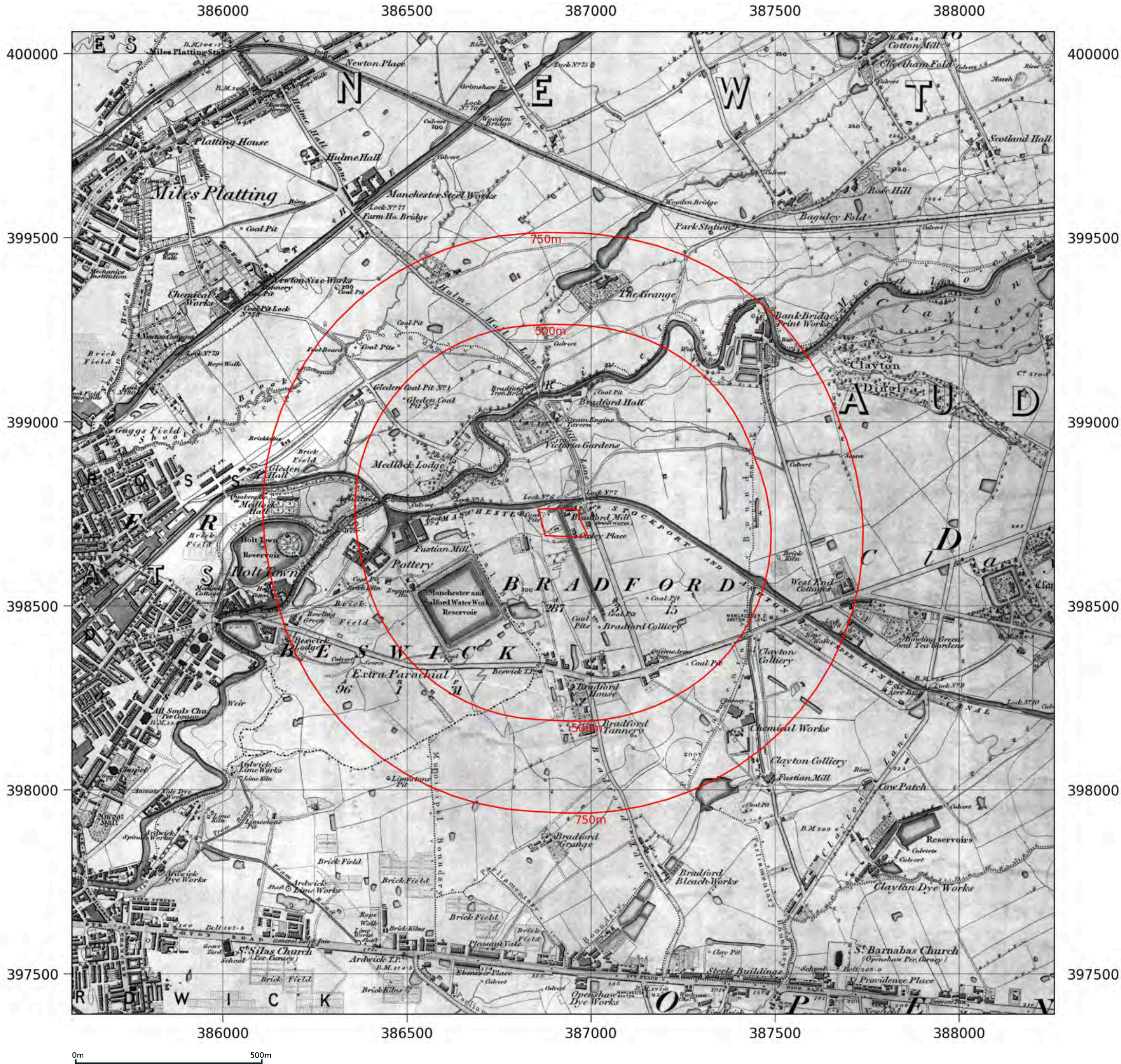
Site details:	MCFC Entertainment
Client ref:	4490/LG
Report ref:	GS-RGU-MSH-7VL-P1N
Grid ref:	386921.48, 398725.28
Production date:	5 January 2026

Map name:	County Series
Map date:	1848
Scale:	1:10,560
Printed at:	1:10,560



Date: 1848
Surveyed: 1845
Edition: 1848

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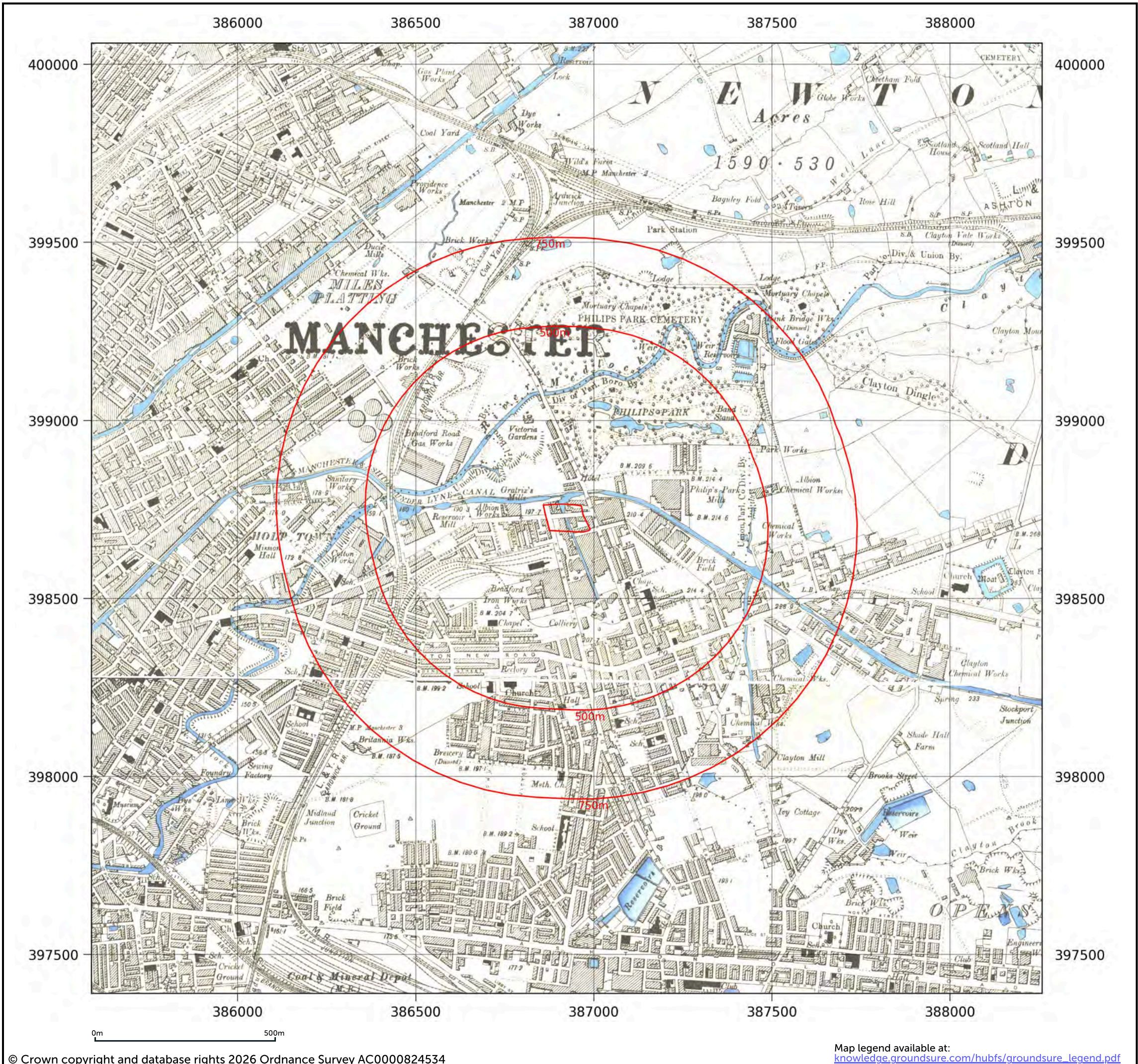
Site details:	MCFC Entertainment
Client ref:	4490/LG
Report ref:	GS-RGU-MSH-7VL-P1N
Grid ref:	386921.48, 398725.28
Production date:	5 January 2026

Map name:	County Series
Map date:	1890-1891
Scale:	1:10,560
Printed at:	1:10,560



Date: 1891 Surveyed: 1891 Revised: 1891
Date: 1890 Surveyed: 1890 Revised: 1890

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Site details: MCFC Entertainment
Client ref: 4490/LG
Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: County Series
Map date: 1905-1906
Scale: 1:10,560
Printed at: 1:10,560



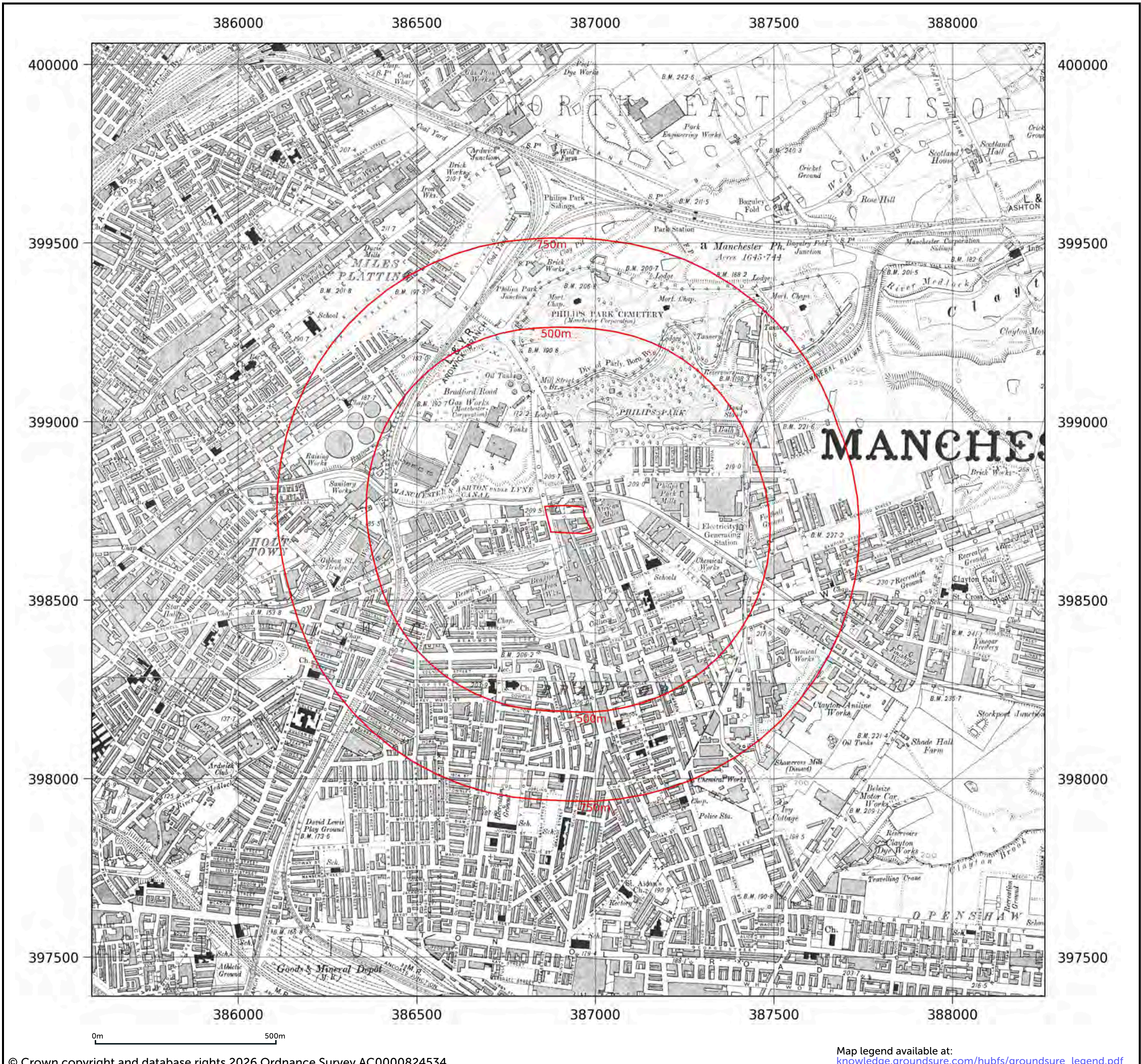
Date: 1906
Surveyed: 1844
Revised: 1906

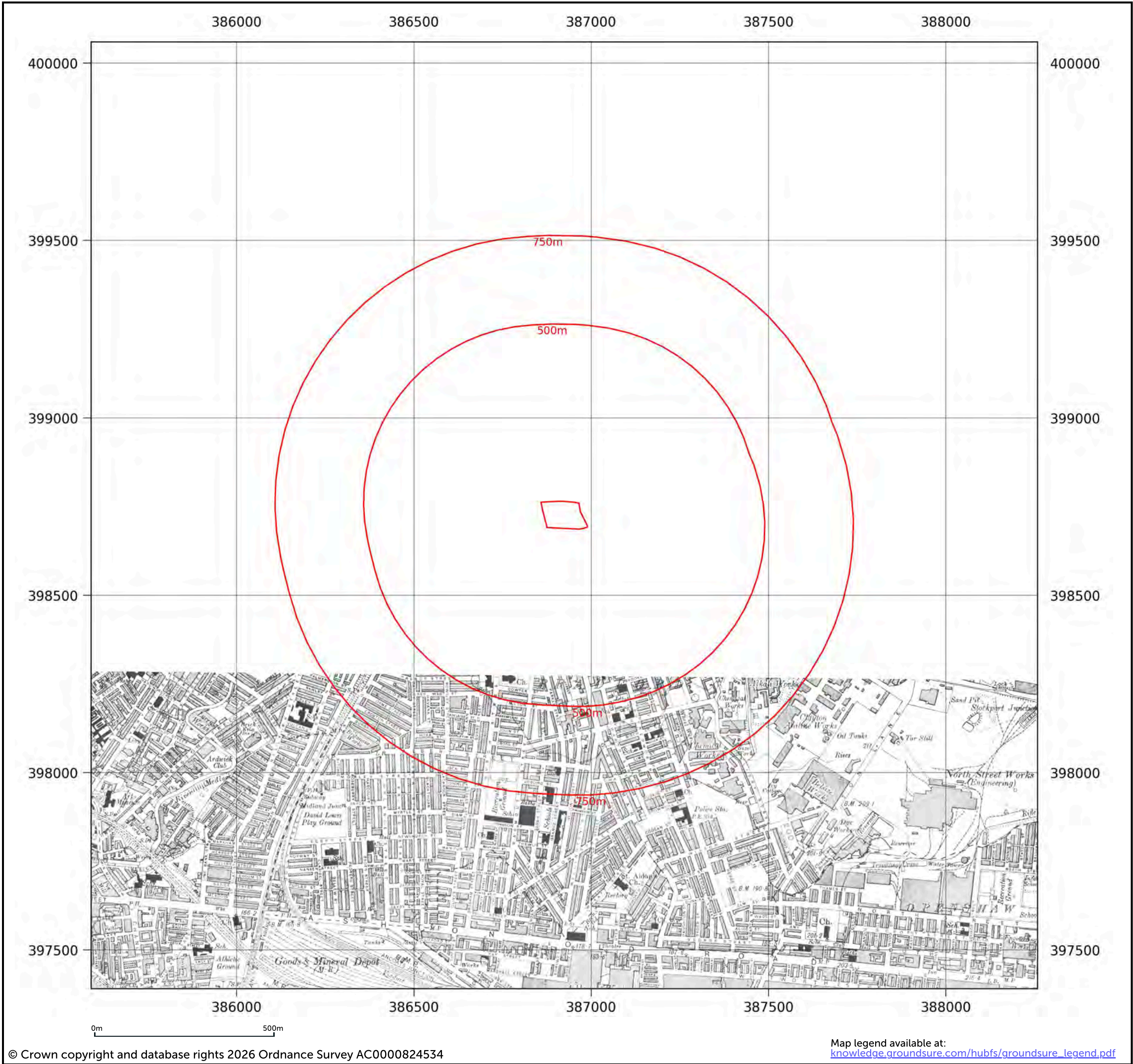
Date: 1905
Surveyed: 1844
Revised: 1905

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Site details:	MCFC Entertainment
Client ref:	4490/LG
Report ref:	GS-RGU-MSH-7VL-P1N
Grid ref:	386921.48, 398725.28
Production date:	5 January 2026

Map name:	County Series
Map date:	1915
Scale:	1:10,560
Printed at:	1:10,560

Date: 1915
Surveyed: 1844
Revised: 1915

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Site details:

Client ref:

Report ref:

Grid ref:

Production date:

MCFC Entertainment

4490/LG

GS-RGU-MSH-7VL-P1N

386921.48, 398725.28

5 January 2026

Map name:

Map date:

Scale:

Printed at:

County Series

1921

1:10,560

1:10,560

Date: 1921

Surveyed: 1844

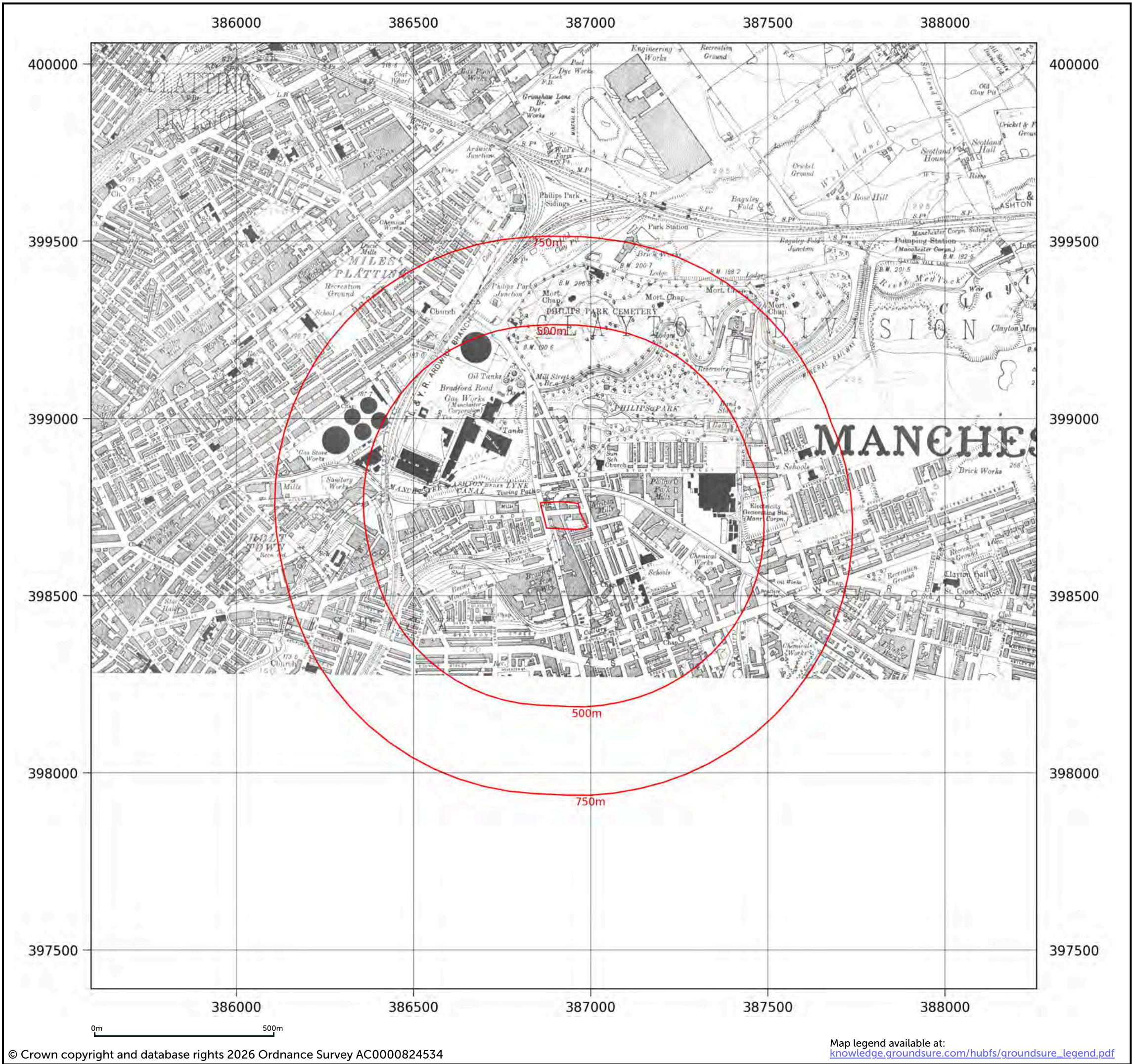
Revised: 1921

W

E

N

S



Site details:

Client ref:

Report ref:

Grid ref:

Production date:

MCFC Entertainment

4490/LG

GS-RGU-MSH-7VL-P1N

386921.48, 398725.28

5 January 2026

Map name:

Map date:

Scale:

Printed at:

County Series

1923

1:10,560

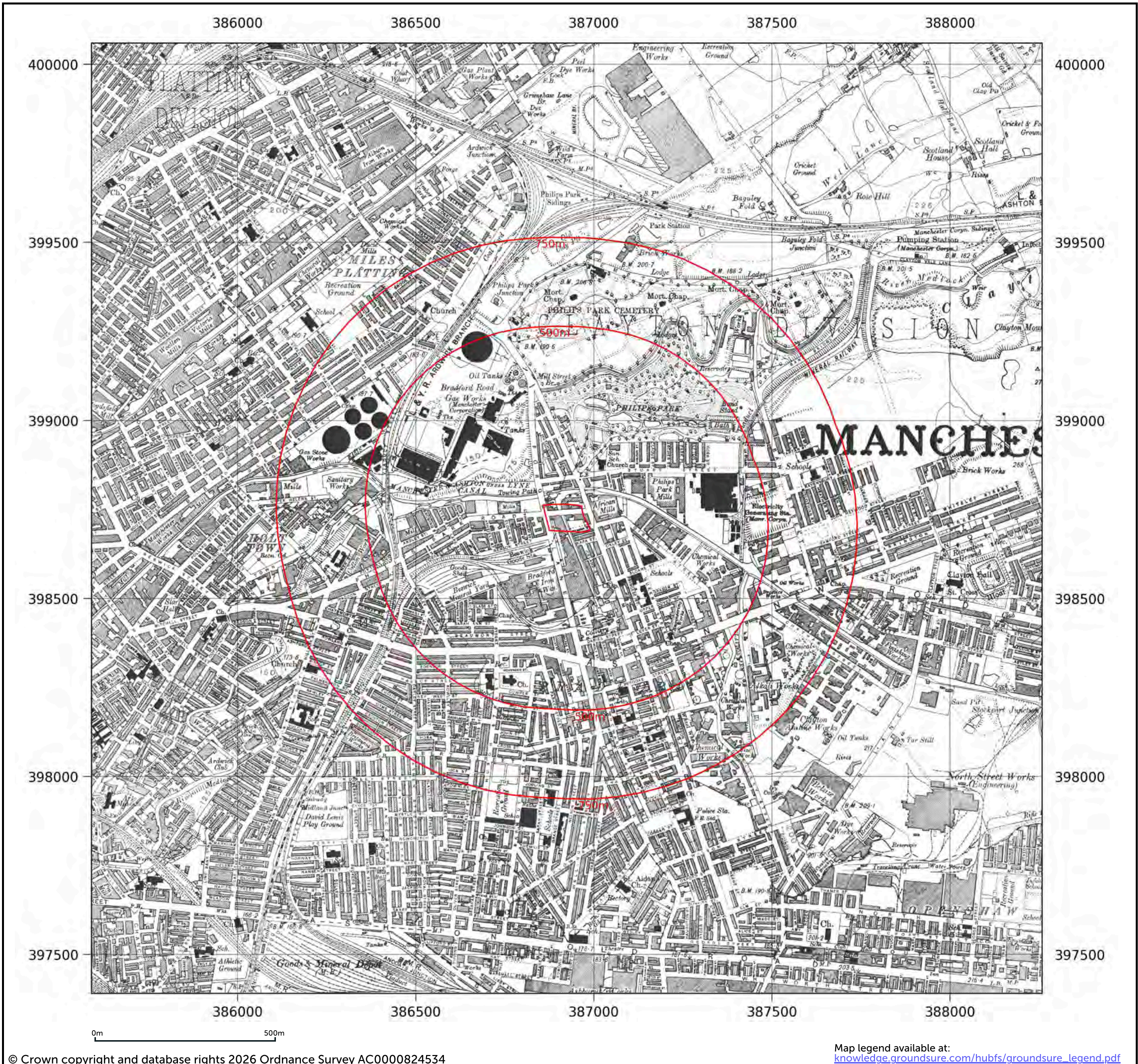
1:10,560

Date: 1923

Surveyed: 1844

Revised: 1923

North arrow



Site details:

Client ref:

Report ref:

Grid ref:

Production date:

MCFC Entertainment

4490/LG

GS-RGU-MSH-7VL-P1N

386921.48, 398725.28

5 January 2026

Map name:

Map date:

Scale:

Printed at:

County Series

1933-1934

1:10,560

1:10,560

Date: 1933

Surveyed: 1844

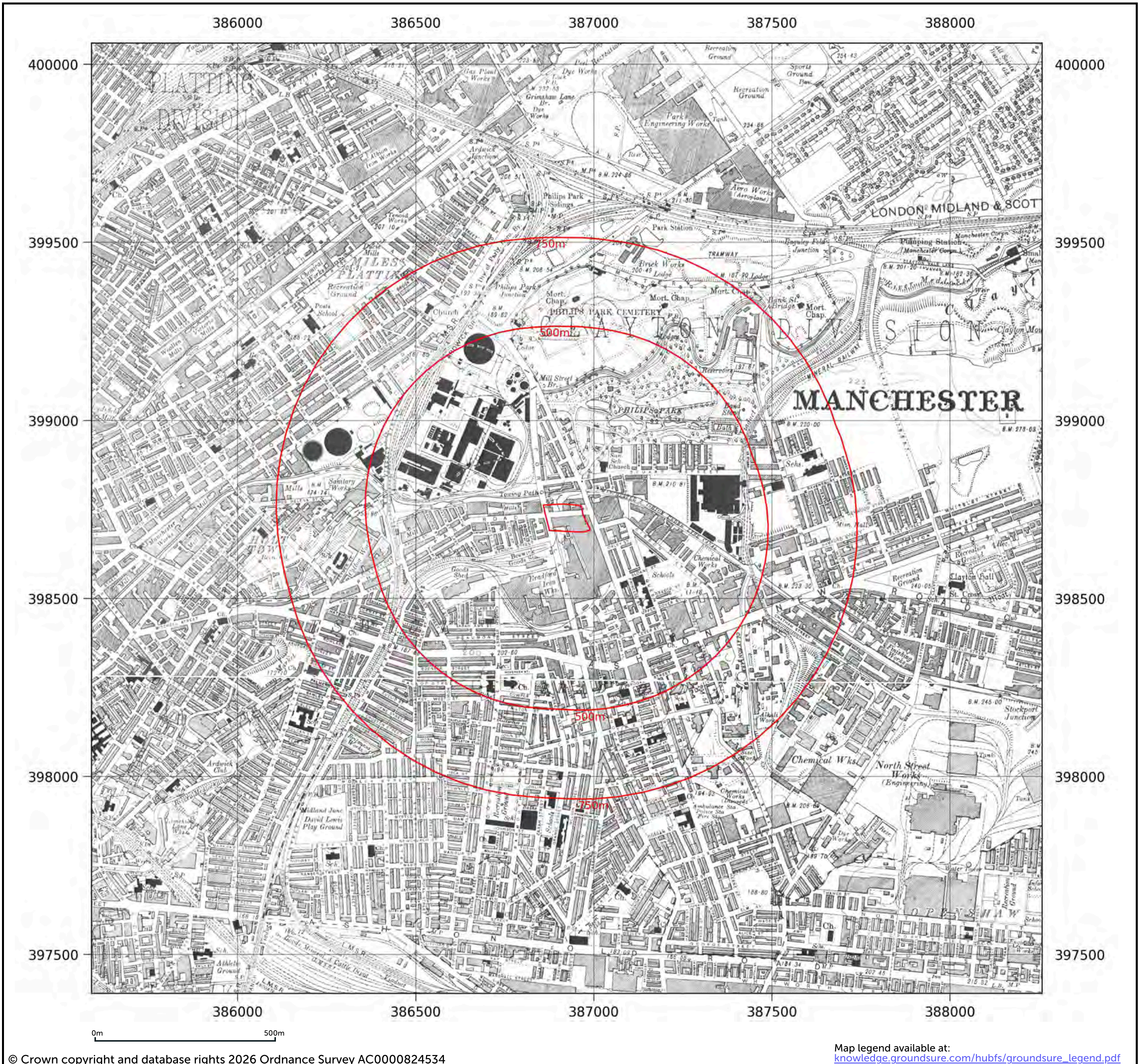
Revised: 1933

Date: 1934

Surveyed: 1844

Revised: 1934

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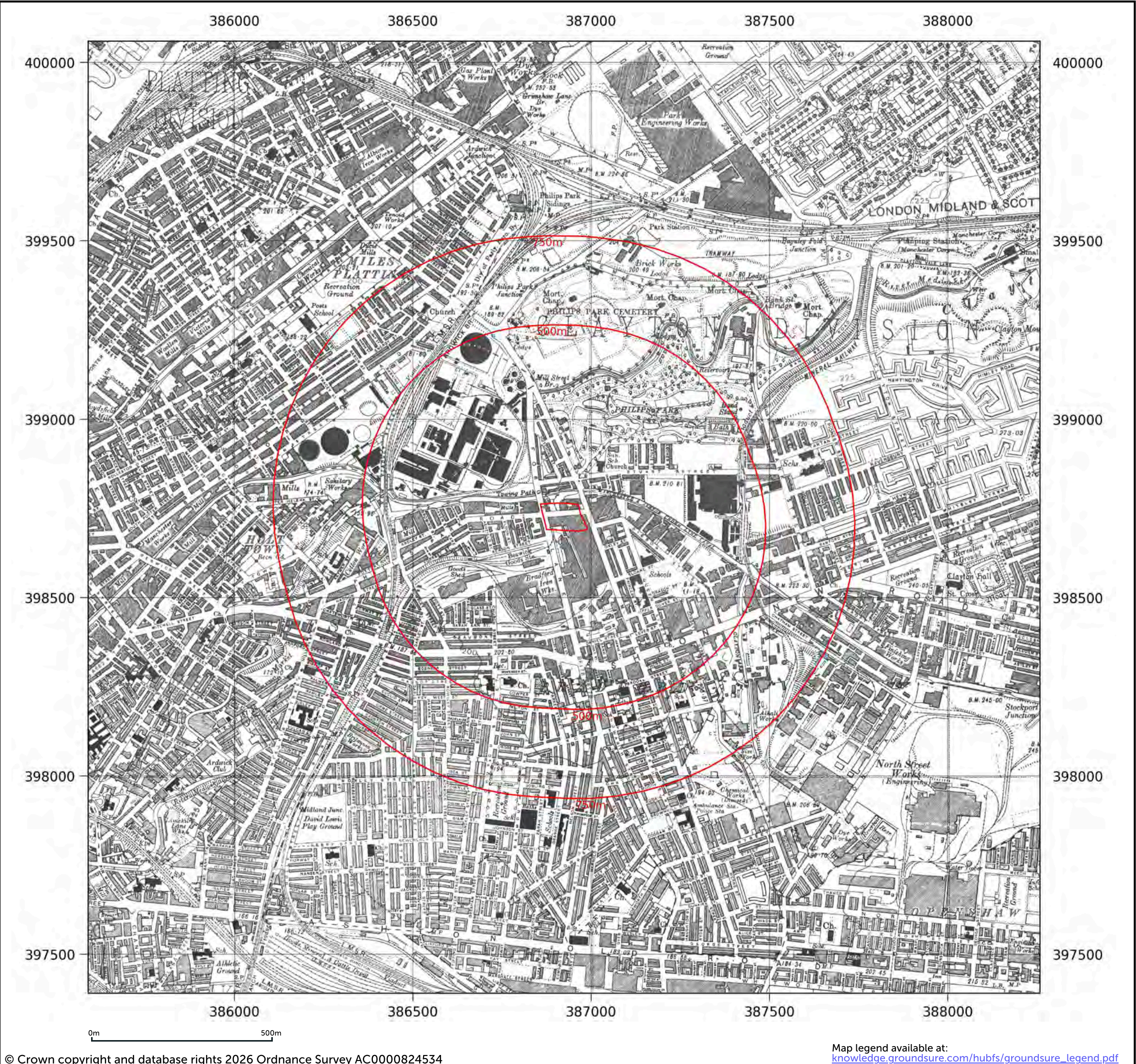
Site details:	MCFC Entertainment
Client ref:	4490/LG
Report ref:	GS-RGU-MSH-7VL-P1N
Grid ref:	386921.48, 398725.28
Production date:	5 January 2026

Map name:	County Series
Map date:	1938
Scale:	1:10,560
Printed at:	1:10,560

Date: 1938
Surveyed: 1844
Revised: 1938

Date: 1938
Surveyed: 1844
Revised: 1938

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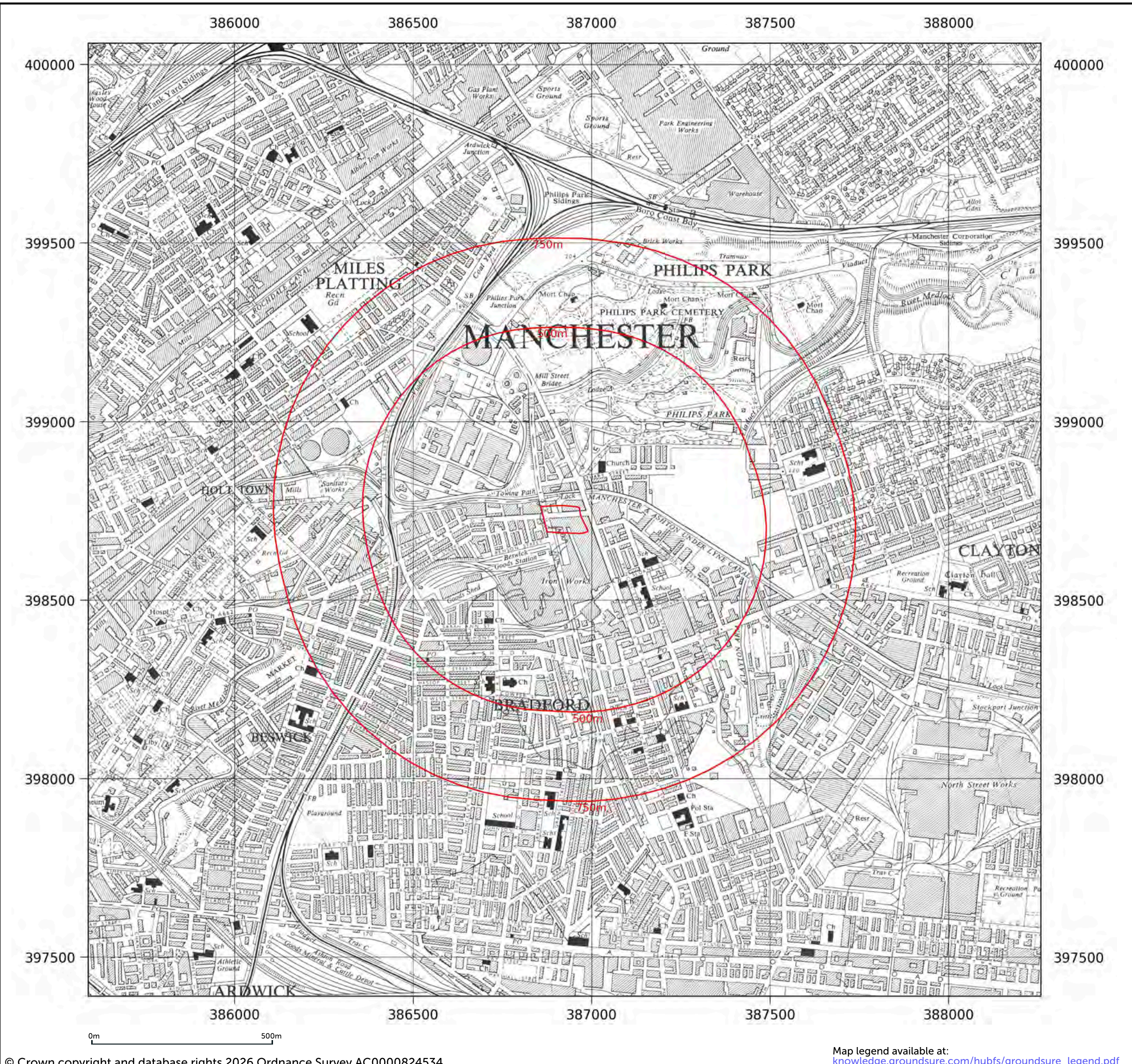
Site details:	MCFC Entertainment
Client ref:	4490/LG
Report ref:	GS-RGU-MSH-7VL-P1N
Grid ref:	386921.48, 398725.28
Production date:	5 January 2026

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



Date: 1956 Surveyed: 1956 Revised: 1956
Date: 1956 Surveyed: 1956 Revised: 1956

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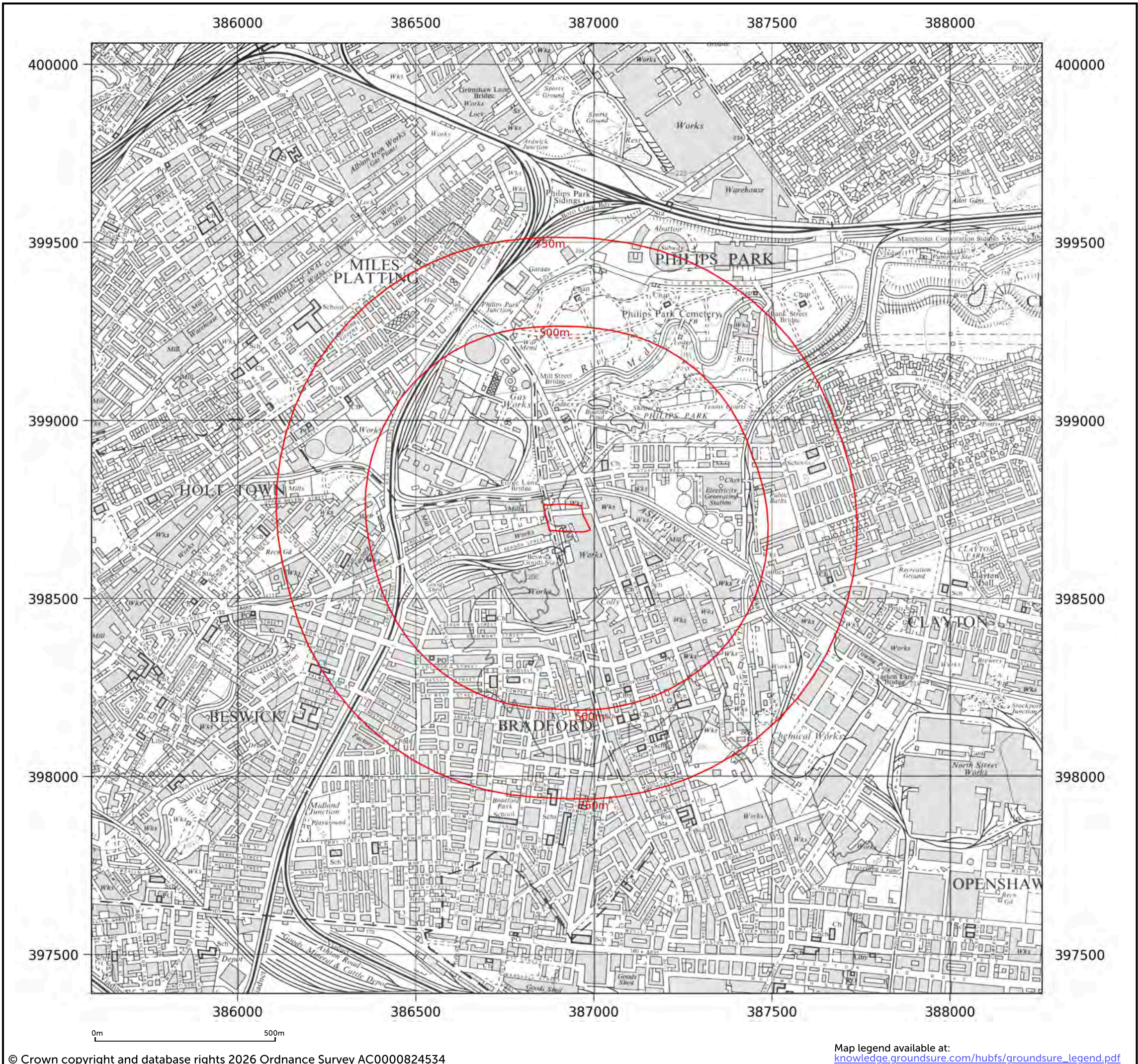
Site details:	MCFC Entertainment
Client ref:	4490/LG
Report ref:	GS-RGU-MSH-7VL-P1N
Grid ref:	386921.48, 398725.28
Production date:	5 January 2026

Map name:	Provisional
Map date:	1966-1968
Scale:	1:10,560
Printed at:	1:10,560

Date: 1966
Surveyed: 1966
Revised: 1966

Date: 1968
Surveyed: 1968
Revised: 1968

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Site details:

MCFC Entertainment

Client ref:

4490/LG

Report ref:

GS-RGU-MSH-7VL-P1N

Grid ref:

386921.48, 398725.28

Production date:

5 January 2026

Map name:

National Grid

Map date:

1981

Scale:

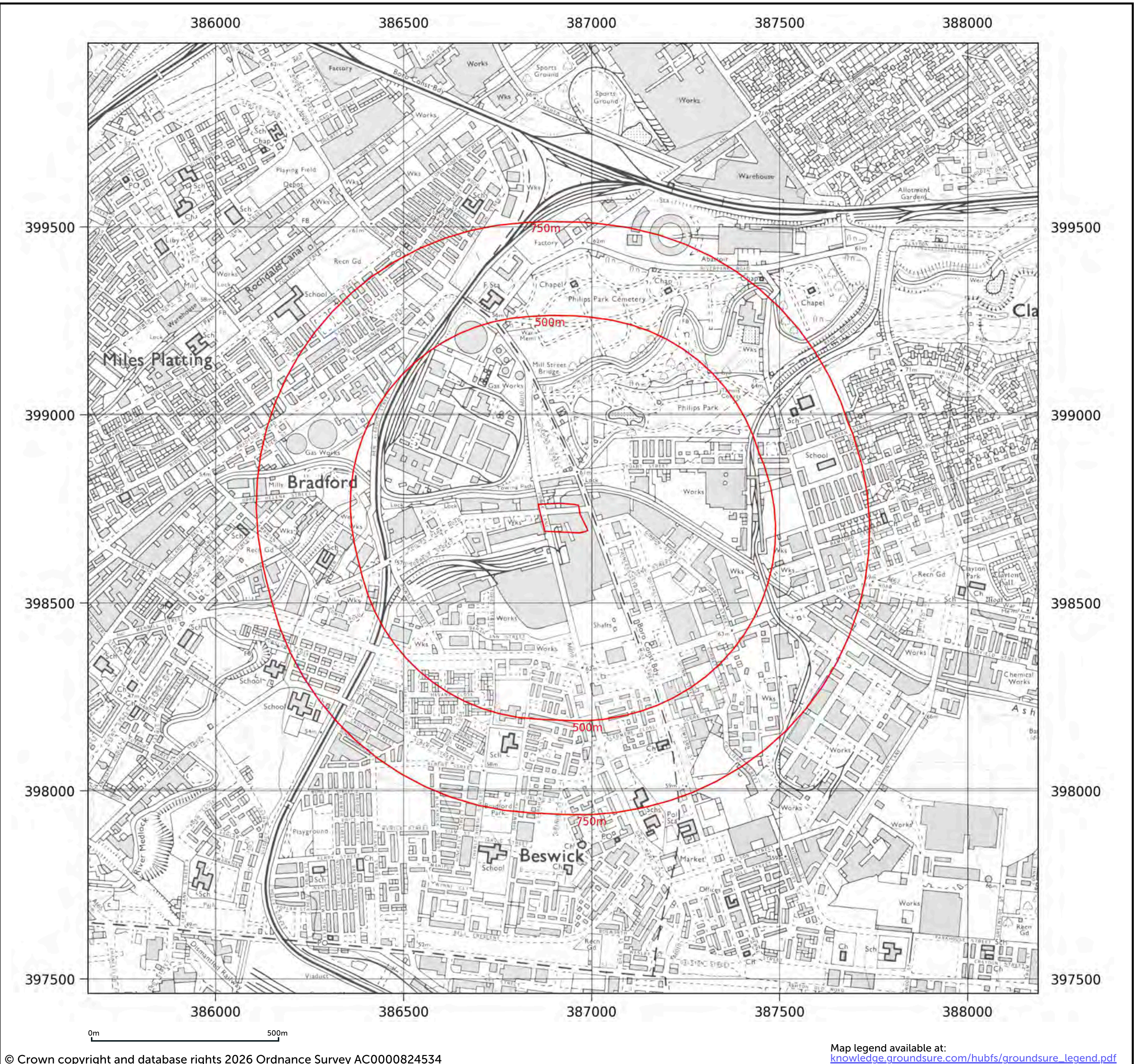
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Printed at:

1:10,000

Date: 1981
Surveyed: 1976
Revised: 1980
Copyright: 1981
Levelled: 1976

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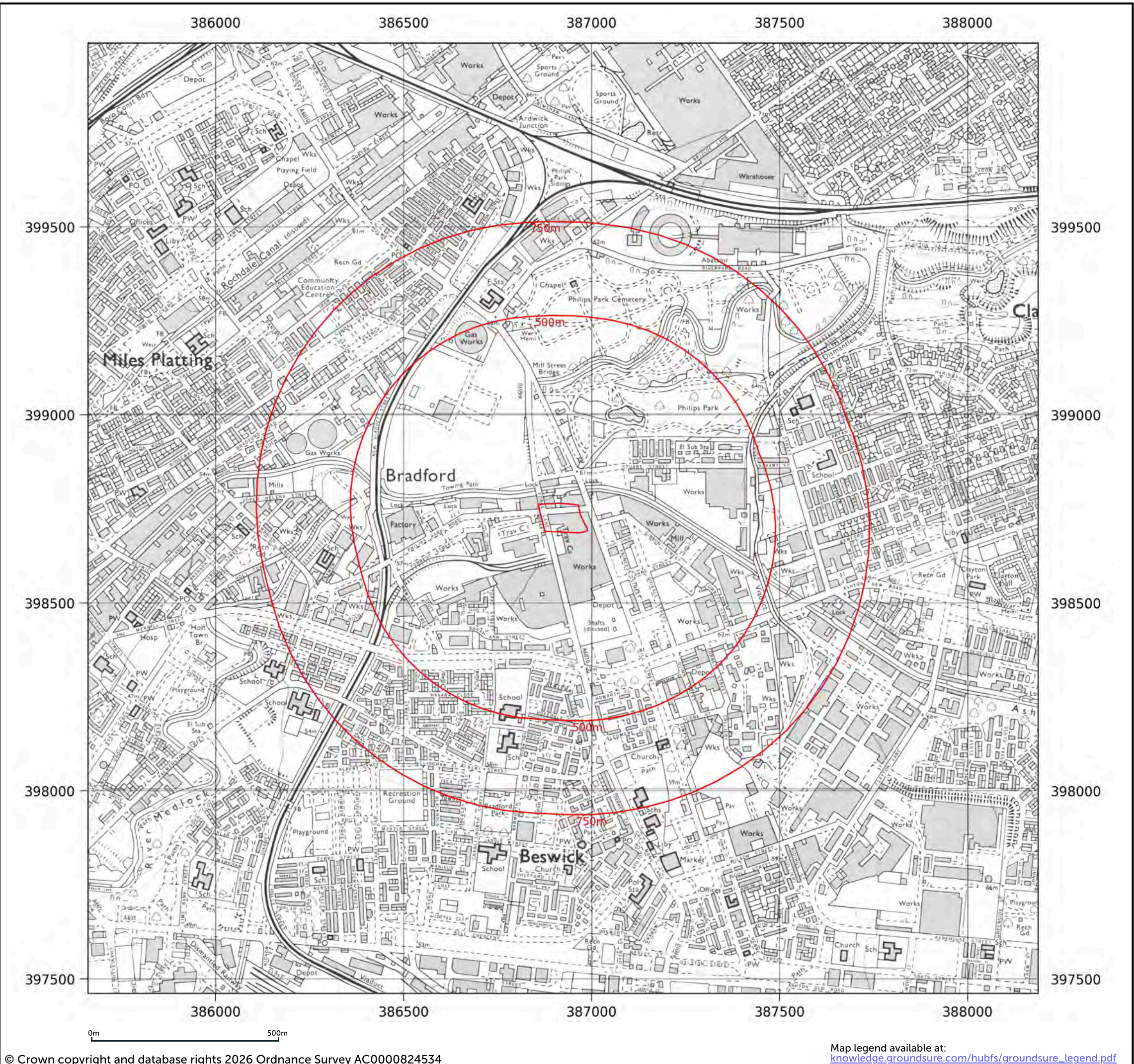
Site details: MCFC Entertainment
Client ref: 4490/LG
Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: National Grid
Map date: 1985
Scale: 1:10,000
Printed at: 1:10,000



Date: 1985
Surveyed: 1985
Revised: 1985

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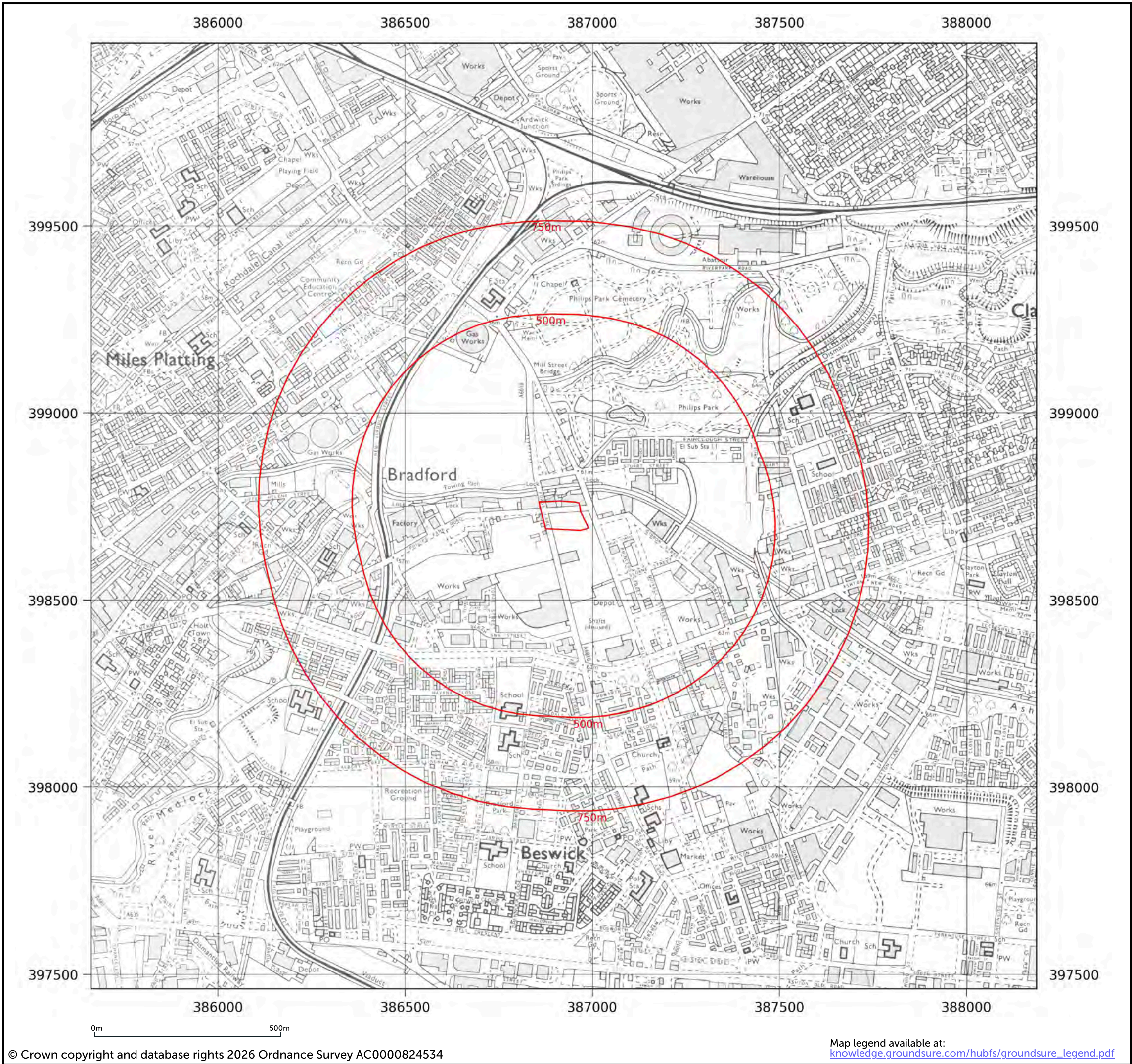
Site details: MCFC Entertainment
Client ref: 4490/LG
Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: National Grid
Map date: 1991
Scale: 1:10,000
Printed at: 1:10,000



Date: 1991
Surveyed: 1985
Revised: 1991

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Site details:	MCFC Entertainment
Client ref:	4490/LG
Report ref:	GS-RGU-MSH-7VL-P1N
Grid ref:	386921.48, 398725.28
Production date:	5 January 2026

Map name:	National Grid
Map date:	2001
Scale:	1:10,000
Printed at:	1:10,000



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Site details: MCFC Entertainment
Client ref: 4490/LG
Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

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



Date: 2010

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Site details:	MCFC Entertainment
Client ref:	4490/LG
Report ref:	GS-RGU-MSH-7VL-P1N
Grid ref:	386921.48, 398725.28
Production date:	5 January 2026

Map name:	National Grid
Map date:	2015
Scale:	1:10,000
Printed at:	1:10,000



Date: 2015

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Map legend available at:
knowledge.groundsure.com/hubfs/groundsure_legend.pdf



Site details: MCFC Entertainment
Client ref: 4490/LG
Report ref: GS-RGU-MSH-7VL-P1N
Grid ref: 386921.48, 398725.28
Production date: 5 January 2026

Map name: National Grid
Map date: 2025
Scale: 1:10,000
Printed at: 1:10,000



Date: 2025

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APPENDIX 5

GROUNDSURE COMBINED ENVIRO + GEO INSIGHT REPORT

MCFC Entertainment

Order Details

Date: 05/01/2026
Your ref: 4490/LG
Our Ref: GS-BUT-D17-T8M-YDM

Site Details

Location: 386921 398725
Area: 0.82 ha
Authority: [Manchester City Council](#) ↗



[Summary of findings](#)

[p. 2 >](#)

[Aerial image](#)

[p. 9 >](#)

[OS MasterMap site plan](#)

[p.14 >](#)

[Insight User Guide](#) ↗

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Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	16	17	65	153	-
25 >	1.2 >	Historical tanks >	0	3	27	134	-
31 >	1.3 >	Historical energy features >	0	2	15	30	-
33	1.4	Historical petrol stations	0	0	0	0	-
33 >	1.5 >	Historical garages >	0	0	0	6	-
34	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
35 >	2.1 >	Historical industrial land uses >	21	21	96	218	-
48 >	2.2 >	Historical tanks >	0	3	39	189	-
57 >	2.3 >	Historical energy features >	0	2	28	51	-
60	2.4	Historical petrol stations	0	0	0	0	-
60 >	2.5 >	Historical garages >	0	0	0	6	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
62	3.1	Active or recent landfill	0	0	0	0	-
62	3.2	Historical landfill (BGS records)	0	0	0	0	-
63	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
63 >	3.4 >	Historical landfill (EA/NRW records) >	0	1	0	3	-
64 >	3.5 >	Historical waste sites >	0	0	1	5	-
65	3.6	Licensed waste sites	0	0	0	0	-
65 >	3.7 >	Waste exemptions >	0	0	3	0	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
66 >	4.1 >	Recent industrial land uses >	0	1	6	-	-
67	4.2	National Geographic Database (NGD) - Current or recent tanks	0	0	0	-	-
67 >	4.3 >	Current or recent petrol stations >	0	0	1	0	-
67	4.4	Electricity cables	0	0	0	0	-
68	4.5	Gas pipelines	0	0	0	0	-



68	4.6	Sites determined as Contaminated Land	0	0	0	0	-
68 >	4.7 >	Control of Major Accident Hazards (COMAH) >	0	0	0	3	-
68	4.8	Regulated explosive sites	0	0	0	0	-
69 >	4.9 >	Hazardous substance storage/usage >	0	0	0	2	-
69	4.10	Historical licensed industrial activities (IPC)	0	0	0	0	-
69	4.11	Licensed industrial activities (Part A(1))	0	0	0	0	-
70 >	4.12 >	Licensed pollutant release (Part A(2)/B) >	0	0	1	2	-
70	4.13	Radioactive Substance Authorisations	0	0	0	0	-
70 >	4.14 >	Licensed Discharges to controlled waters >	0	0	1	2	-
71	4.15	Pollutant release to surface waters (Red List)	0	0	0	0	-
71	4.16	Pollutant release to public sewer	0	0	0	0	-
71 >	4.17 >	List 1 Dangerous Substances >	0	0	0	2	-
72	4.18	List 2 Dangerous Substances	0	0	0	0	-
72 >	4.19 >	Pollution Incidents (EA/NRW) >	0	0	0	1	-
72	4.20	Pollution inventory substances	0	0	0	0	-
73	4.21	Pollution inventory waste transfers	0	0	0	0	-
73	4.22	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
74 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
75 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
76 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
77 >	5.4 >	Groundwater vulnerability- soluble rock risk >	Identified (within 0m)				
77	5.5	Groundwater vulnerability- local information	None (within 0m)				
78 >	5.6 >	Groundwater abstractions >	0	0	0	0	25
85 >	5.7 >	Surface water abstractions >	0	0	0	0	6
87	5.8	Potable abstractions	0	0	0	0	0
87	5.9	Source Protection Zones	0	0	0	0	-
87	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m



88 >	6.1 >	Water Network (OS MasterMap) >	0	6	3	-	-
89 >	6.2 >	Surface water features >	0	3	2	-	-
90 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
90 >	6.4 >	WFD Surface water bodies >	0	1	1	-	-
91 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
92	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
92	7.2	Historical Flood Events	0	0	0	-	-
92	7.3	Flood Defences	0	0	0	-	-
93	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
93	7.5	Flood Storage Areas	0	0	0	-	-
94	7.6	Flood Zone 2	None (within 50m)				
94	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
95 >	8.1 >	Surface water flooding >	1 in 30 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding >					
97 >	9.1 >	Groundwater flooding >	Low (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
98	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
99	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
99	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
99	10.4	Special Protection Areas (SPA)	0	0	0	0	0
99	10.5	National Nature Reserves (NNR)	0	0	0	0	0
100 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	1
100	10.7	Designated Ancient Woodland	0	0	0	0	0
100	10.8	Biosphere Reserves	0	0	0	0	0
100	10.9	Forest Parks	0	0	0	0	0
101	10.10	Marine Conservation Zones	0	0	0	0	0
101 >	10.11 >	Green Belt >	0	0	0	0	1



101	10.12	Proposed Ramsar sites	0	0	0	0	0
101	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
102	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
102	10.15	Nitrate Sensitive Areas	0	0	0	0	0
102 >	10.16 >	Nitrate Vulnerable Zones >	0	0	0	0	1
103 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
104	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
105	11.1	World Heritage Sites	0	0	0	-	-
106	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
106	11.3	National Parks	0	0	0	-	-
106 >	11.4 >	Listed Buildings >	0	4	0	-	-
107	11.5	Conservation Areas	0	0	0	-	-
107	11.6	Scheduled Ancient Monuments	0	0	0	-	-
107 >	11.7 >	Registered Parks and Gardens >	0	0	1	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
108 >	12.1 >	Agricultural Land Classification >	Urban (within 250m)				
109	12.2	Open Access Land	0	0	0	-	-
109	12.3	Tree Felling Licences	0	0	0	-	-
109	12.4	Environmental Stewardship Schemes	0	0	0	-	-
109	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
110 >	13.1 >	Priority Habitat Inventory >	0	0	3	-	-
111	13.2	Habitat Networks	0	0	0	-	-
111 >	13.3 >	Open Mosaic Habitat >	0	2	0	-	-
111	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
112 >	14.1 >	10k Availability >	Identified (within 500m)				
113 >	14.2 >	Artificial and made ground (10k) >	1	0	3	5	-

115 >	14.3 >	Superficial geology (10k) >	1	0	1	1	-
116	14.4	Landslip (10k)	0	0	0	0	-
117 >	14.5 >	Bedrock geology (10k) >	1	0	1	2	-
118 >	14.6 >	Bedrock faults and other linear features (10k) >	1	1	3	2	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
119 >	15.1 >	50k Availability >	Identified (within 500m)				
120 >	15.2 >	Artificial and made ground (50k) >	1	0	0	0	-
121 >	15.3 >	Artificial ground permeability (50k) >	1	0	-	-	-
122 >	15.4 >	Superficial geology (50k) >	1	0	1	0	-
123 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
123	15.6	Landslip (50k)	0	0	0	0	-
123	15.7	Landslip permeability (50k)	None (within 50m)				
124 >	15.8 >	Bedrock geology (50k) >	1	0	1	2	-
125 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
125 >	15.10 >	Bedrock faults and other linear features (50k) >	1	1	3	1	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
126 >	16.1 >	BGS Boreholes >	3	15	228	-	-
Page	Section	Natural ground subsidence >					
138 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
139 >	17.2 >	Running sands >	Very low (within 50m)				
140 >	17.3 >	Compressible deposits >	Very low (within 50m)				
142 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
143 >	17.5 >	Landslides >	Very low (within 50m)				
144 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
146 >	18.1 >	BritPits >	0	0	1	0	-
147 >	18.2 >	Surface ground workings >	8	6	31	-	-
149 >	18.3 >	Underground workings >	0	0	4	3	0
149 >	18.4 >	Underground mining extents >	0	0	1	0	-



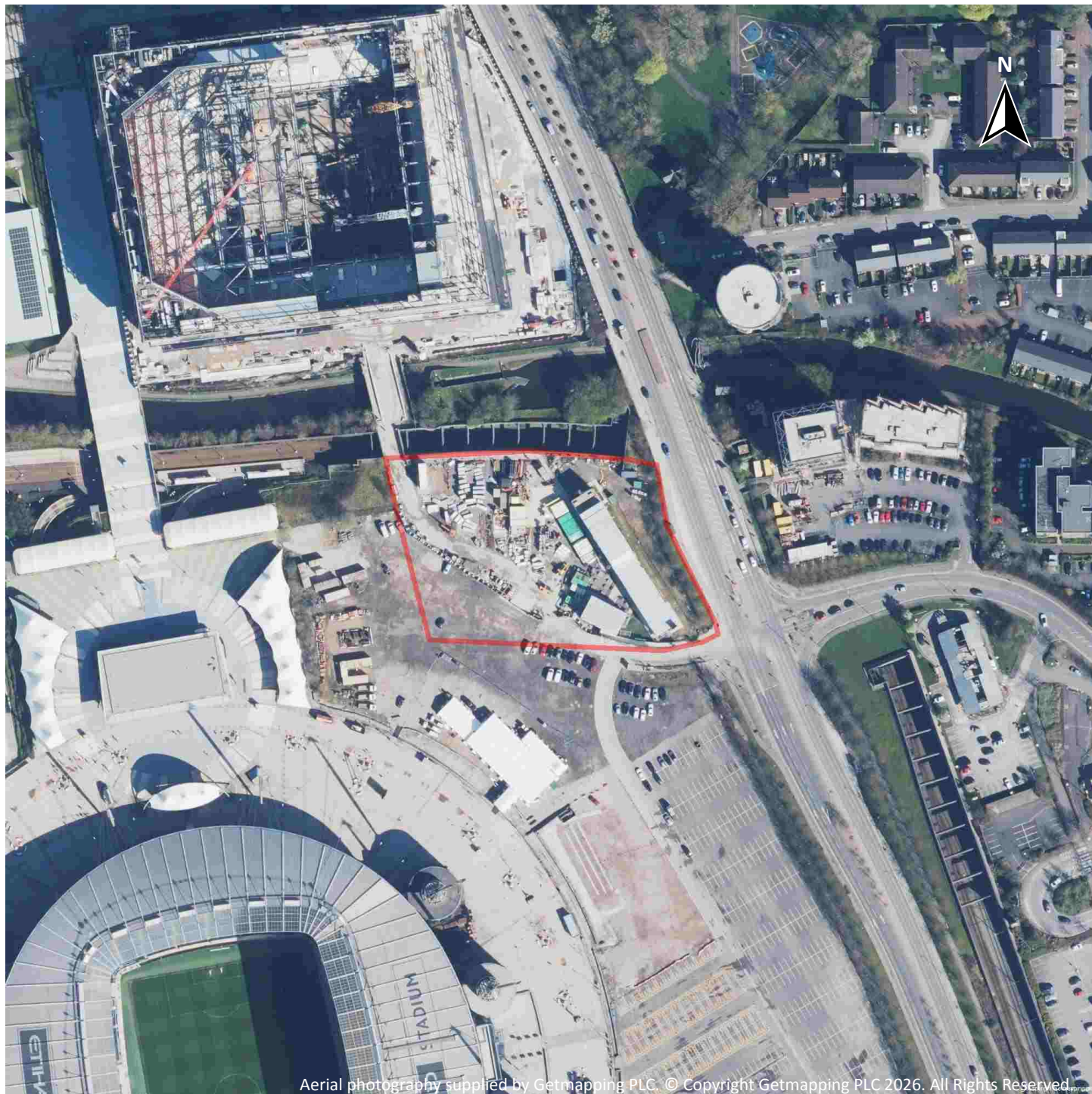
150	18.5	Historical Mineral Planning Areas	0	0	0	0	-
150 >	18.6 >	Non-coal mining >	0	0	0	1	4
151 >	18.7 >	JPB mining areas >	Identified (within 0m)				
151	18.8	The Coal Authority non-coal mining	0	0	0	0	-
151 >	18.9 >	Researched mining >	0	0	0	2	-
152 >	18.10 >	Mining record office plans >	0	0	1	0	-
152	18.11	BGS mine plans	0	0	0	0	-
152 >	18.12 >	Coal mining >	Identified (within 0m)				
152	18.13	Brine areas	None (within 0m)				
153	18.14	Gypsum areas	None (within 0m)				
153	18.15	Tin mining	None (within 0m)				
153	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes >	On site	0-50m	50-250m	250-500m	500-2000m
154	19.1	Natural cavities	0	0	0	0	-
155 >	19.2 >	Mining cavities >	0	0	0	1	1
155	19.3	Reported recent incidents	0	0	0	0	-
155	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
156 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
158 >	21.1 >	BGS Estimated Background Soil Chemistry >	1	1	-	-	-
158 >	21.2 >	BGS Estimated Urban Soil Chemistry >	4	4	-	-	-
159 >	21.3 >	BGS Measured Urban Soil Chemistry >	1	0	-	-	-
Page	Section	Railway infrastructure and projects >	On site	0-50m	50-250m	250-500m	500-2000m
160	22.1	Underground railways (London)	0	0	0	-	-
160	22.2	Underground railways (Non-London)	0	0	0	-	-
161 >	22.3 >	Railway tunnels >	0	1	0	-	-
161 >	22.4 >	Historical railway and tunnel features >	13	17	48	-	-
164	22.5	Royal Mail tunnels	0	0	0	-	-



164 >	22.6 >	Historical railways >	0	0	1	-	-
165 >	22.7 >	Railways >	0	7	8	-	-
165	22.8	Crossrail 2	0	0	0	0	-
166	22.9	HS2	0	0	0	0	-



Recent aerial photograph



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Capture Date: 07/04/2023

Site Area: 0.82ha



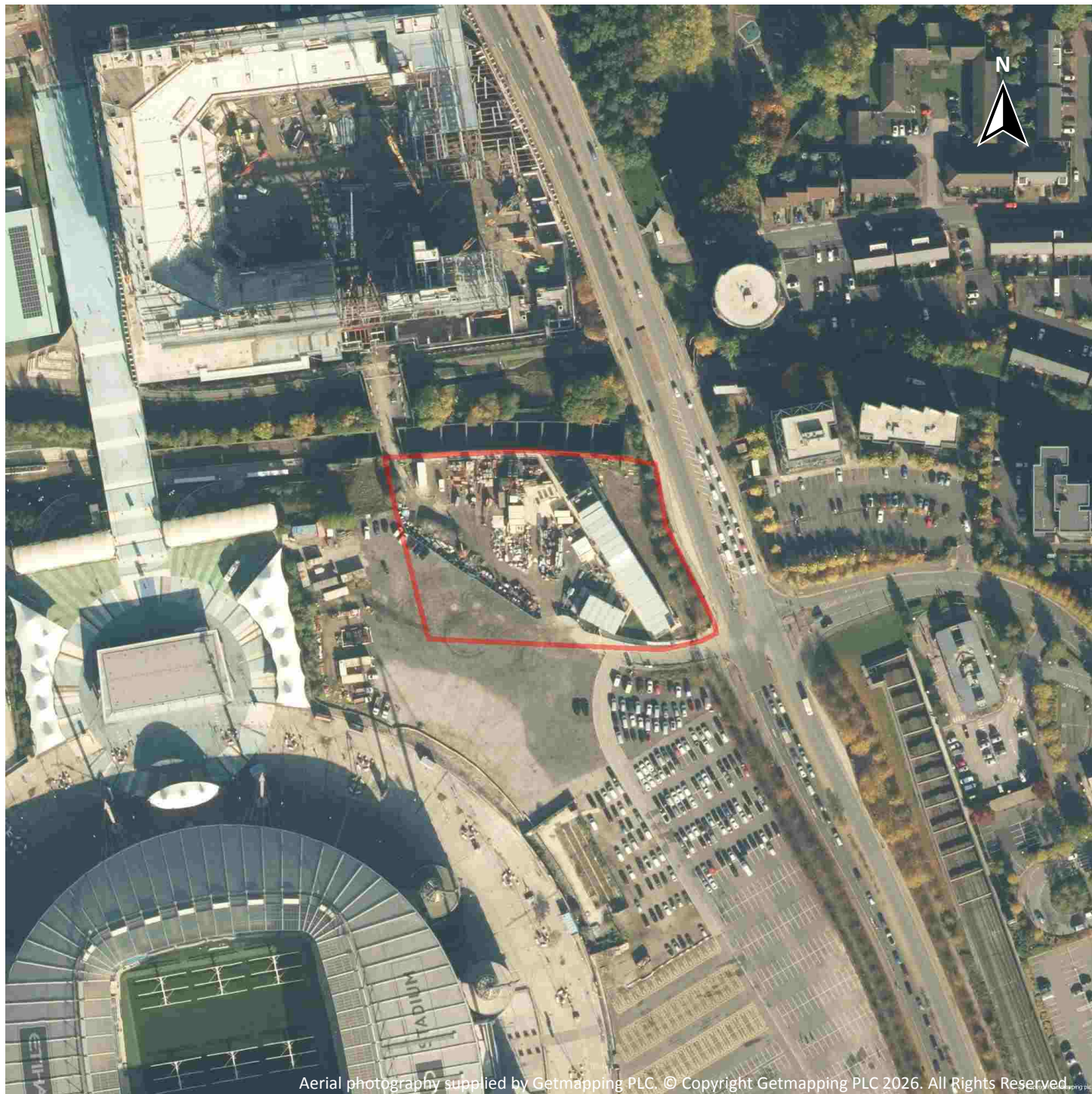
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01273 257 755

Date: 5 January 2026

Recent site history - 2022 aerial photograph



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Capture Date: 18/10/2022

Site Area: 0.82ha



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Recent site history - 2015 aerial photograph



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Capture Date: 11/06/2015

Site Area: 0.82ha



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Date: 5 January 2026

Recent site history - 2009 aerial photograph



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Capture Date: 02/06/2009

Site Area: 0.82ha



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01273 257 755

Date: 5 January 2026

Recent site history - 2000 aerial photograph



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Capture Date: 19/06/2000

Site Area: 0.82ha



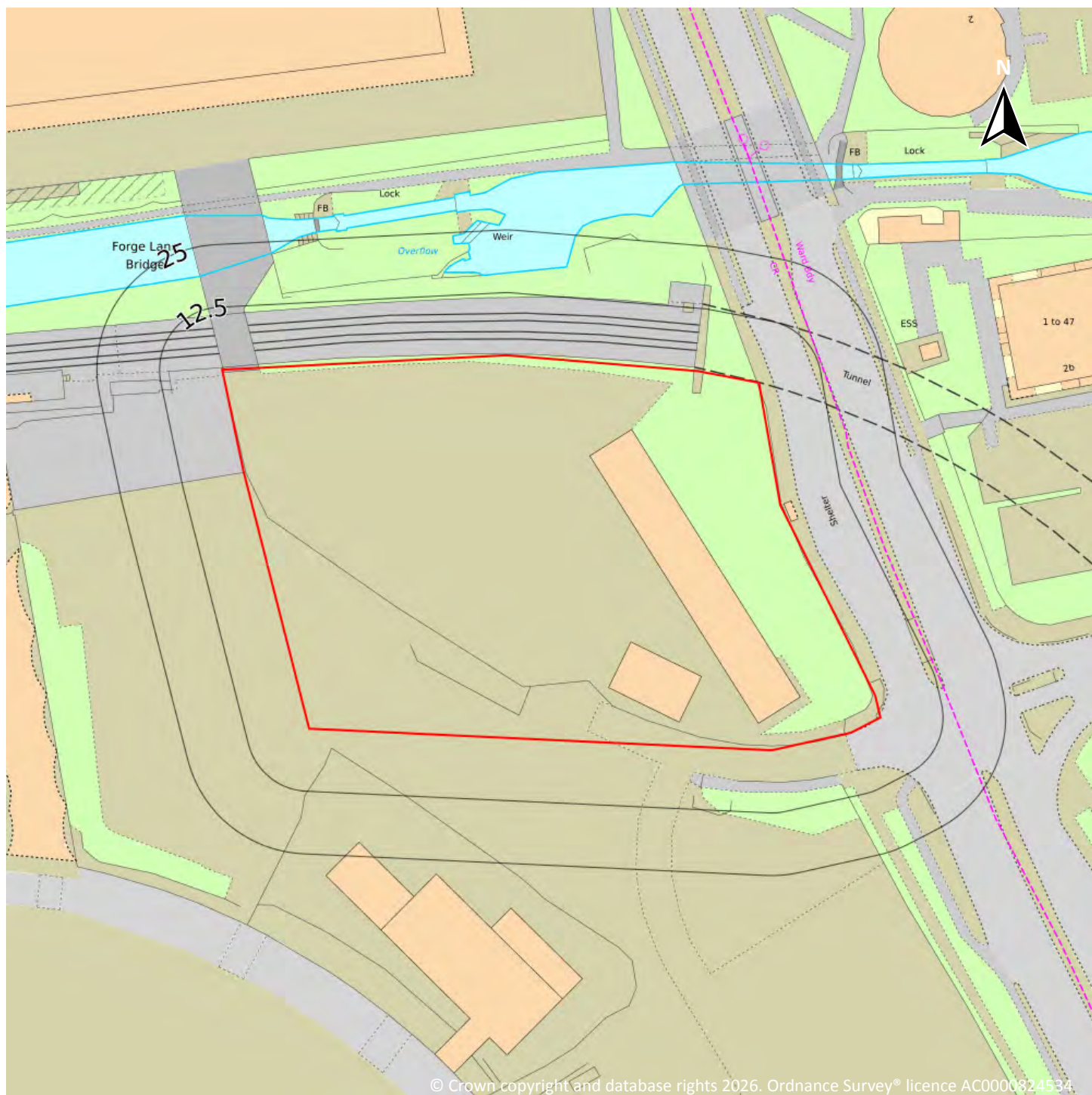
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01273 257 755

Date: 5 January 2026

OS MasterMap site plan



Site Area: 0.82ha



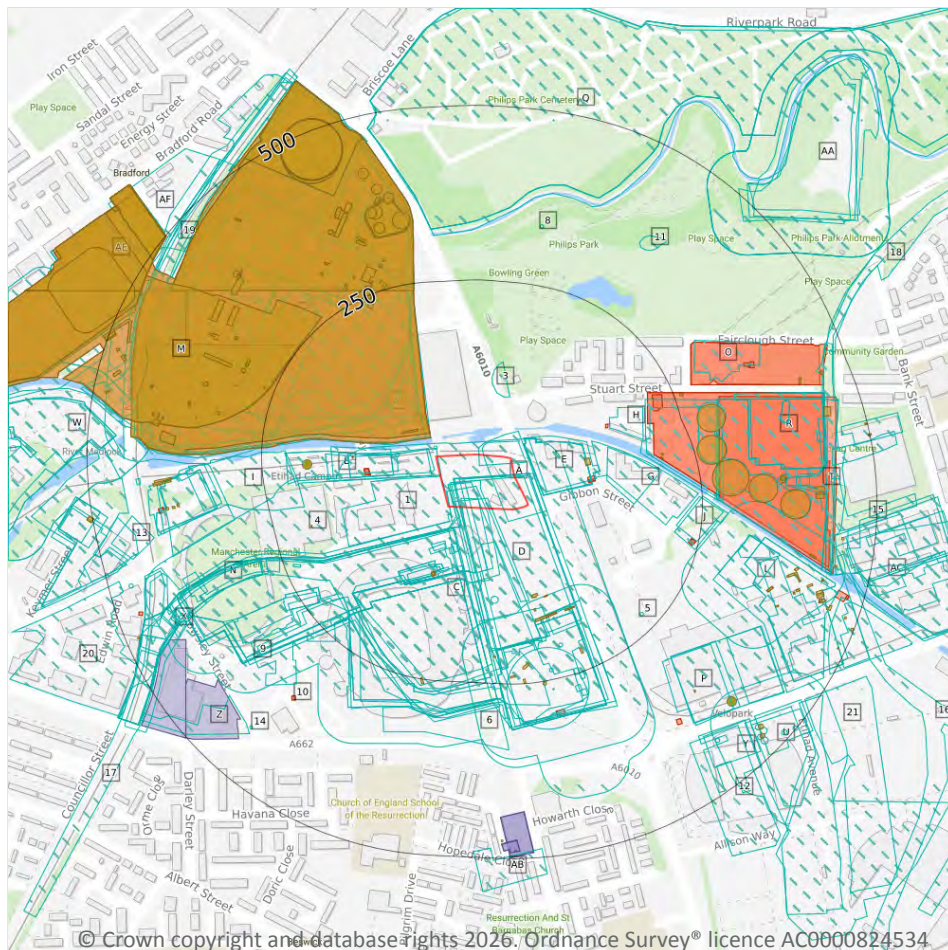
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Date: 5 January 2026

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

251

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 15](#) >

ID	Location	Land use	Dates present	Group ID
1	On site	Unspecified Works	1968 - 1981	935457



ID	Location	Land use	Dates present	Group ID
A	On site	Smallwares Mill	1848	817633
A	On site	Unspecified Works	1968	835505
B	On site	Unspecified Works	1891	835410
C	On site	Colliery	1968	864185
C	On site	Railway Sidings	1933 - 1938	864917
C	On site	Railway Sidings	1981	892909
C	On site	Railway Sidings	1921 - 1923	892926
C	On site	Railway Sidings	1956	956843
C	On site	Railway Sidings	1906	987283
D	On site	Unspecified Works	1968	880957
D	On site	Iron Works	1956	884679
D	On site	Unspecified Works	1985	892380
D	On site	Unspecified Commercial/Industrial	1891 - 1981	923876
D	On site	Unspecified Commercial/Industrial	1933 - 1938	951587
D	On site	Unspecified Commercial/Industrial	1923	962107
B	6m W	Unspecified Mills	1938	952585
B	10m N	Coal Pits	1848	817124
B	11m W	Unspecified Mills	1923	954214
E	24m E	Unspecified Commercial/Industrial	1933	822336
E	24m E	Unspecified Mills	1921	891938
E	25m E	Unspecified Mills	1906	880521
E	25m E	Unspecified Mills	1923	919056
C	30m S	Unspecified Works	1968	861471
C	30m S	Railway Sidings	1968	939747
F	30m N	Unspecified Commercial/Industrial	1956	892151
F	31m NW	Railway Sidings	1933 - 1938	866254
F	31m NW	Unspecified Commercial/Industrial	1933 - 1938	931170
F	31m NW	Gas Works	1906 - 1921	1008628



ID	Location	Land use	Dates present	Group ID
E	32m NE	Unspecified Works	1968	874083
C	33m S	Railway Sidings	1891	941022
C	34m S	Mineral Yard	1906 - 1921	970266
C	49m S	Railway Building	1968	854555
C	52m S	Goods Station	1956 - 1968	957582
B	53m W	Coal Pits	1848	817121
C	53m S	Goods Station	1956	810452
B	56m W	Unspecified Mill	1968	826189
C	56m S	Railway Building	1938	854272
C	59m S	Railway Buildings	1923	810698
2	62m NW	Unspecified Ground Workings	1906 - 1923	936930
F	64m NW	Gas Works	1923	932342
B	64m W	Unspecified Mills	1921	893653
B	64m W	Unspecified Mills	1933	960813
C	80m S	Goods Station	1933 - 1938	920073
C	80m S	Goods Station	1921	924987
C	85m S	Goods Station	1923	960129
3	85m N	Refuse Heap	1848	809437
C	86m S	Railway Building	1891	854553
F	89m NW	Railway Sidings	1956 - 1968	899298
C	90m S	Unspecified Works	1985	989431
C	91m S	Unspecified Works	1968 - 1981	936564
C	91m S	Unspecified Works	1991	1001381
F	102m NW	Unspecified Commercial/Industrial	1968 - 1981	886162
G	102m E	Unspecified Works	1985 - 1991	879603
C	103m S	Iron Works	1933 - 1938	866751
C	103m S	Iron Works	1891 - 1906	885817
C	103m S	Iron Works	1921 - 1923	955558



ID	Location	Land use	Dates present	Group ID
F	108m NW	Railway Sidings	1981	898695
G	118m E	Unspecified Works	1968	893668
D	125m S	Unspecified Tank	1923	850369
D	130m S	Colliery	1891	966606
D	146m S	Colliery	1848	976178
H	148m E	Unspecified Works	1968	835412
D	154m SE	Unspecified Depot	1985 - 1991	911073
D	165m S	Colliery	1906 - 1921	945178
D	165m S	Colliery	1923	994752
G	177m NE	Unspecified Mills	1906 - 1923	870584
G	185m E	Unspecified Mills	1891	907148
D	189m S	Coal Pits	1848	817125
C	193m SW	Unspecified Works	1985 - 1991	860232
C	198m SW	Railway Building	1968	854556
I	200m W	Fustian Mills	1848	833162
C	200m SW	Mineral Yard	1923	968024
D	202m S	Coal Pit	1848	832402
D	203m S	Unspecified Disused Shafts	1991	918798
J	214m E	Unspecified Mill	1985	999024
J	215m E	Unspecified Mill	1968	884306
C	219m SW	Railway Building	1938	855075
C	219m SW	Goods Shed	1933 - 1968	863668
F	223m W	Railway Sidings	1906 - 1921	886040
5	224m SE	Coal Pit	1848	832403
K	225m N	Unspecified Pit	1906 - 1923	1005573
C	225m SW	Goods Shed	1921 - 1923	1005649
C	228m W	Railway Building	1923	854271
F	228m W	Gas Works	1891	918655



ID	Location	Land use	Dates present	Group ID
D	234m S	Coal Pits	1848	817126
K	238m NW	Unspecified Tanks	1921	902905
K	238m NW	Unspecified Tank	1933 - 1938	930922
K	239m NW	Unspecified Tanks	1923	860378
L	242m E	Brick Field	1891	806791
F	242m W	Railway Sidings	1923	965613
D	243m S	Unspecified Shafts	1981	839040
K	245m NW	Unspecified Tank	1933 - 1938	877903
K	245m NW	Unspecified Tanks	1906 - 1923	913923
K	246m N	Gas Work	1968 - 1981	937130
K	249m NW	Unspecified Tanks	1968 - 1981	999782
K	249m NW	Unspecified Tank	1933 - 1938	891842
K	249m NW	Unspecified Tanks	1906 - 1923	894875
D	251m S	Unspecified Disused Shafts	1985	860278
N	252m W	Cuttings	1933 - 1956	934597
G	256m E	Unspecified Tanks	1968	819363
D	266m S	Unspecified Shafts	1981	839039
G	270m E	Unspecified Commercial/Industrial	1933 - 1938	874010
G	270m E	Electricity Generating Station	1906 - 1923	948947
N	271m W	Cuttings	1985	869419
D	275m S	Unspecified Disused Shafts	1985	998418
N	278m W	Cuttings	1968 - 1981	922099
6	280m S	Unspecified Works	1981	835504
K	280m N	Gasometer	1923	812164
N	281m W	Cuttings	1906 - 1921	897688
N	282m W	Cuttings	1923	1008258
L	286m E	Chemical Works	1906 - 1933	897911
L	290m E	Unspecified Ground Workings	1906	815050



ID	Location	Land use	Dates present	Group ID
O	290m NE	Electric Substation	1985 - 1991	899640
F	290m W	Railway Sidings	1891	977689
P	296m SE	Engineering Works	1921 - 1923	875548
P	298m SE	Unspecified Works	1968	931191
P	299m SE	Unspecified Works	1985 - 1991	964791
I	301m W	Unspecified Factory	1985 - 1991	971126
L	308m E	Unspecified Pit	1938	829612
I	314m W	Unspecified Mill	1968	925789
K	315m N	Unspecified Tanks	1923	819226
Q	316m N	Cemetery	1891 - 1938	978841
L	322m E	Unspecified Works	1981	949944
L	322m E	Unspecified Works	1985 - 1991	984760
I	322m W	Unspecified Mill	1933 - 1938	960004
I	322m W	Unspecified Mill	1891	961187
R	323m E	Electric Generating Station	1968	817357
R	323m E	Unspecified Works	1981	967146
I	324m W	Unspecified Mill	1923	976257
S	324m NW	Refuse Heap	1891	809156
K	325m N	Oil Tanks	1906 - 1921	955675
K	325m N	Unspecified Tank	1933 - 1938	980266
7	326m N	Cemetery	1991	986066
Q	326m N	Cemetery	1956 - 1981	908004
Q	326m N	Cemetery	1985	911386
K	326m N	Unspecified Tank	1933 - 1938	860074
K	326m N	Oil Tanks	1906 - 1921	949592
K	326m N	Oil Tanks	1923	977453
K	327m N	Unspecified Tanks	1956	819227
R	328m E	Unspecified Works	1985	938800



ID	Location	Land use	Dates present	Group ID
K	330m N	Gasometer	1968 - 1981	867986
8	332m N	Coal Pit	1848	832400
K	337m NW	Gasometer	1968 - 1981	964274
9	340m SW	Railway Building	1891	854554
L	342m E	Unspecified Works	1968	931578
P	342m SE	Unspecified Works	1968	942182
K	350m N	Oil Tanks	1906 - 1921	872783
K	350m N	Unspecified Tank	1933 - 1938	924301
K	350m N	Unspecified Pit	1906	828748
11	354m NE	Unspecified Heap	1906 - 1938	978301
G	359m E	Unspecified Tank	1933 - 1938	946871
K	363m N	Oil Tanks	1906 - 1921	950558
K	363m N	Unspecified Tank	1933 - 1938	972574
N	365m W	Engine House	1848	822777
G	366m E	Unspecified Tank	1968	902911
G	371m E	Railway Sidings	1921 - 1923	920236
T	371m E	Mineral Railway Sidings	1906	967015
F	371m NW	Unspecified Tanks	1921 - 1923	972040
K	378m N	Gasometer	1968 - 1981	971214
R	381m E	Unspecified Tanks	1981	819362
R	381m E	Chimneys	1968	856211
K	384m N	Refuse Heap	1906	809155
G	386m E	Mineral Railway Sidings	1933 - 1938	876297
U	392m SE	Unspecified Commercial/Industrial	1905 - 1906	862017
V	393m N	Gas Works	1985 - 1991	946402
W	409m W	Sanitary Works	1933	969226
W	409m W	Sanitary Works	1921	1006250
X	409m SW	Cuttings	1991	880803



ID	Location	Land use	Dates present	Group ID
X	411m SW	Cuttings	1891	951670
Y	412m SE	Unspecified Works	1968	835415
12	413m SE	Unspecified Commercial/Industrial	1923	899759
Z	414m SW	Unspecified Works	1981	835503
X	416m SW	Cuttings	1968	938378
Y	416m SE	Unspecified Depot	1985	821178
X	417m SW	Cuttings	1956	985403
13	419m W	Pottery	1848	812050
X	421m SW	Cuttings	1923	865850
X	421m SW	Cuttings	1906	889386
X	421m SW	Cuttings	1938	955968
X	421m W	Cuttings	1956	918351
14	422m SW	Coal Pit	1848	832404
V	425m N	Gasometer	1991	942847
I	426m W	Railway Building	1923	854266
V	427m NW	Unspecified Tank	1933 - 1938	898484
V	427m NW	Gasometer	1921	939856
V	429m NW	Gasometer	1923	866419
Y	430m SE	Coal Pit	1848	832397
AA	430m NE	Tanneries	1906	833958
AA	430m NE	Unspecified Disused Works	1891	848687
AA	430m NE	Unspecified Works	1921	918678
AA	430m NE	Unspecified Commercial/Industrial	1933 - 1938	996915
V	431m N	Unspecified Tank	1956 - 1981	919451
V	431m N	Gasometer	1985	863086
AC	435m E	Oil Works	1921 - 1923	1009323
15	436m E	Unspecified Ground Workings	1923	814770
T	440m E	Unspecified Heap	1923	842834



ID	Location	Land use	Dates present	Group ID
Y	441m SE	Unspecified Commercial/Industrial	1923	997840
Y	444m SE	Unspecified Works	1968	835408
X	445m W	Cotton Works	1891 - 1938	960472
AC	445m E	Brick Kiln	1848	825986
X	445m SW	Cuttings	1921	958485
X	445m SW	Cuttings	1933	1009060
W	447m W	Sanitary Works	1956	986893
16	449m E	Steel Works	1956	852897
Y	449m SE	Unspecified Commercial/Industrial	1891	977406
Y	454m SE	Unspecified Tank	1906	850015
AC	457m E	Chemical Works	1891	834346
X	459m SW	Railway Building	1923	854265
W	459m W	Sanitary Works	1891 - 1906	861208
W	459m W	Sanitary Works	1938	977469
AC	460m E	Unspecified Works	1981	919082
AC	460m E	Unspecified Works	1985 - 1991	981974
T	460m E	Chemicals Works	1891	811461
W	463m W	Sanitary Works	1923	952734
Y	463m SE	Unspecified Tank	1891	850018
X	464m W	Unspecified Works	1968	835406
X	465m W	Coal Pit	1848	832398
17	466m SW	Cuttings	1956	876406
Y	466m SE	Unspecified Tank	1891 - 1906	987691
L	466m E	Unspecified Works	1921 - 1923	898301
AC	473m E	Unspecified Commercial/Industrial	1933	822418
L	475m E	Unspecified Works	1968	913832
18	475m E	Railway Sidings	1956 - 1968	999358
AA	476m NE	Unspecified Works	1923	862064



ID	Location	Land use	Dates present	Group ID
X	478m W	Unspecified Works	1985 - 1991	874812
19	480m NW	Coal Pit	1848	832382
AD	480m NW	Unspecified Tank	1891	992656
U	481m SE	Chemical Works	1923	966383
20	481m W	Brick Field	1848	806763
AD	484m NW	Raising Works	1906	856962
AD	484m NW	Unspecified Commercial/Industrial	1933 - 1938	882756
AD	484m NW	Unspecified Commercial/Industrial	1891	925169
AD	484m NW	Gas Stove Works	1921 - 1923	965127
21	485m SE	Unspecified Works	1985 - 1991	944795
X	485m W	Unspecified Factory	1968	857110
AD	485m NW	Gasometer	1923	812169
AD	485m NW	Unspecified Tank	1906 - 1921	950505
AA	486m NE	Unspecified Commercial/Industrial	1956	923887
AB	486m S	Tannery	1848	826386
AC	487m E	Unspecified Works	1968	939864
Y	487m SE	Unspecified Tank	1906	850017
X	487m W	Unspecified Works	1981	876391
AF	491m NW	Brick Works	1891	818424
AA	491m NE	Unspecified Works	1991	991015
Y	495m SE	Unspecified Tank	1906	850016
AD	496m W	Gas Works	1985 - 1991	934414
AC	497m E	Unspecified Works	1985	982308
AF	497m NW	Unspecified Works	1968	835249
AA	498m NE	Print Works	1848	816929
AC	500m E	Unspecified Works	1991	968010

This data is sourced from Ordnance Survey® / Groundsure.



1.2 Historical tanks

Records within 500m
164

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 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 15 >](#)

ID	Location	Land use	Dates present	Group ID
F	28m N	Gas Works	1908 - 1922	129144
F	34m N	Gas Works	1948 - 1949	145718
B	45m NW	Tanks	1979	108902
C	95m S	Tanks	1979 - 1987	144723
C	95m S	Tanks	1955	127104
E	99m NE	Tanks	1989 - 1994	152361
B	119m W	Unspecified Tank	1891	115276
D	125m S	Tanks	1893	108701
D	130m S	Tanks	1893	108702
D	145m S	Unspecified Tank	1893	115270
D	157m S	Unspecified Tank	1989	115265
D	157m S	Tanks	1953 - 1985	148845
D	158m S	Tanks	1953 - 1985	153827
4	196m W	Tanks	1891	108704
G	202m E	Tanks	1893	109335
G	204m E	Tanks	1893	109334
D	210m S	Unspecified Tank	1893	115273
D	218m S	Unspecified Tank	1893	115271
D	221m S	Tanks	1893	108703
K	231m NW	Tanks	1948	126855
D	238m S	Unspecified Tank	1893	115272



ID	Location	Land use	Dates present	Group ID
K	238m NW	Tanks	1922 - 1931	127012
K	240m N	Gas Works	1968 - 1970	144054
K	243m NW	Tanks	1908 - 1931	149213
D	243m S	Unspecified Tank	1949	115268
K	245m NW	Unspecified Tank	1955	115740
K	245m NW	Tanks	1948	145838
K	246m NW	Tanks	1948 - 1958	140254
C	247m S	Tank or Trough	1908	112946
K	248m N	Tanks	1949	108493
F	251m NW	Gas Works	1891	136888
D	251m S	Unspecified Tank	1949	115269
M	252m NW	Gas Works	1893	137050
K	253m N	Tanks	1949	108904
G	254m E	Unspecified Tank	1953	116990
F	255m NW	Unspecified Tank	1891	116013
K	255m N	Unspecified Tank	1968	114708
H	258m E	Unspecified Tank	1949 - 1953	145666
F	264m W	Unspecified Tank	1891	116014
K	264m N	Tanks	1949	108903
G	267m E	Unspecified Tank	1953	116991
K	267m N	Tanks	1949	108905
G	270m NE	Unspecified Tank	1953	116989
K	270m NW	Tanks	1922 - 1931	126268
K	281m NW	Unspecified Tank	1931	115736
K	282m N	Unspecified Tank	1908 - 1922	151586
K	289m N	Unspecified Tank	1931	115737
F	299m NW	Tanks	1948	109003
F	299m NW	Unspecified Tank	1931	116004



ID	Location	Land use	Dates present	Group ID
F	300m NW	Unspecified Tank	1948	116007
F	303m W	Unspecified Tank	1891	116012
K	307m NW	Unspecified Tank	1968 - 1970	146065
K	315m NW	Unspecified Tank	1968 - 1970	140590
F	316m W	Unspecified Tank	1948	116006
G	318m E	Unspecified Tank	1953	116992
K	318m N	Tanks	1908 - 1931	135309
F	320m NW	Unspecified Tank	1948	136883
K	323m N	Tanks	1949	108906
K	323m N	Oil Tanks	1922 - 1931	134072
K	325m N	Oil Tanks	1908	131087
K	329m N	Unspecified Tank	1949 - 1970	144122
K	330m N	Unspecified Tank	1949	115738
F	330m NW	Unspecified Tank	1979	137393
F	331m NW	Unspecified Tank	1948 - 1955	154092
F	342m W	Unspecified Tank	1979	147609
F	342m W	Unspecified Tank	1955 - 1958	143474
K	344m NW	Tanks	1968	140532
F	344m NW	Unspecified Tank	1891	134368
K	344m NW	Tanks	1970	126847
F	347m W	Unspecified Tank	1891	116015
F	347m NW	Tanks	1948	109004
K	351m N	Unspecified Tank	1968 - 1970	144782
K	352m NW	Unspecified Tank	1970	115741
K	353m N	Unspecified Tank	1949	139415
F	355m NW	Tanks	1931	108999
P	356m SE	Tank or Trough	1893	113080
F	359m W	Tanks	1948	109002



ID	Location	Land use	Dates present	Group ID
G	362m E	Unspecified Tank	1953	116993
G	363m E	Tanks	1932	109337
L	363m E	Unspecified Tank	1949 - 1953	127650
L	363m E	Unspecified Tank	1949	134031
G	364m E	Unspecified Tank	1949	135125
F	369m NW	Tanks	1922 - 1931	150117
K	369m N	Unspecified Tank	1949	115739
K	369m NW	Tanks	1970	156220
F	369m NW	Tanks	1948	109005
K	370m N	Tanks	1970	135734
K	371m N	Tanks	1949	108907
F	374m W	Tanks	1931 - 1948	150781
I	375m W	Unspecified Tank	1931	115264
I	380m W	Tanks	1948 - 1955	126574
F	380m NW	Unspecified Tank	1949	116008
I	381m W	Tank or Trough	1908	112945
I	381m W	Tanks	1931	127102
L	383m E	Unspecified Tank	1949 - 1953	133014
L	384m E	Unspecified Tank	1949	116994
K	385m N	Unspecified Tank	1968 - 1970	149399
L	386m E	Unspecified Tank	1949 - 1953	145698
I	390m W	Unspecified Tank	1908	115260
L	393m E	Unspecified Tank	1949 - 1953	153007
L	393m E	Unspecified Tank	1949	144173
F	394m W	Tanks	1979	109000
F	399m W	Overhead Tanks	1948	126092
L	400m E	Unspecified Tank	1932	116988
F	401m W	Tanks	1955 - 1979	154788



ID	Location	Land use	Dates present	Group ID
V	401m N	Gas Works	1984	127334
L	403m E	Unspecified Tank	1949	133187
F	408m W	Tanks	1979	109001
L	410m E	Unspecified Tank	1908 - 1932	144306
K	411m N	Unspecified Tank	1968 - 1970	153672
G	413m E	Unspecified Tank	1949	149800
G	414m E	Unspecified Tank	1949	143367
L	416m E	Unspecified Tank	1949 - 1953	132498
F	417m W	Unspecified Tank	1948	116019
R	424m NE	Unspecified Tank	1949	155534
V	426m N	Unspecified Tank	1931	132195
V	426m N	Gasometer	1922	152602
V	430m N	Gas Holder	1995	130637
V	430m N	Gas Holder	1984	137148
V	431m N	Unspecified Tank	1970	129993
V	431m N	Gasometer	1949	130378
V	431m N	Gasometer	1968	147785
L	431m E	Tanks	1949 - 1953	141290
L	432m E	Tanks	1932	153017
L	435m E	Unspecified Tank	1949	151910
L	435m E	Unspecified Tank	1953	126991
L	435m E	Unspecified Tank	1949	146888
S	438m NW	Unspecified Tank	1968 - 1970	147066
L	438m E	Tanks	1932 - 1949	138627
L	438m E	Unspecified Tank	1953	116987
T	442m E	Tanks	1949	136728
L	448m E	Unspecified Tank	1932	116996
L	452m E	Unspecified Tank	1932	117003



ID	Location	Land use	Dates present	Group ID
L	453m E	Tanks	1949 - 1953	152996
Y	457m SE	Unspecified Tank	1908	116980
R	458m NE	Tanks	1953	109332
M	465m W	Tanks	1948	109006
M	467m W	Unspecified Tank	1948	116016
Y	468m SE	Unspecified Tank	1908	116981
M	469m W	Tanks	1922 - 1931	143487
AB	473m S	Unspecified Tank	1893	115339
M	476m W	Unspecified Tank	1948	116018
M	478m W	Tanks	1948	109007
M	479m W	Unspecified Tank	1908 - 1922	155838
X	479m SW	Unspecified Tank	1979	115267
L	481m E	Unspecified Tank	1908	117000
AD	481m NW	Gas Works	1979	127994
AE	486m NW	Gas Holder Station	1994 - 1995	149486
AE	486m NW	Gas Holder Station	1991	151598
AD	488m NW	Gasometers	1893 - 1922	143424
L	488m SE	Unspecified Tank	1908	116999
AF	489m NW	Gas Works	1949	144247
M	491m W	Tanks	1908	127359
AF	494m NW	Gas Works	1952	133566
AF	494m NW	Gas Works	1948	144593
AF	494m NW	Gas Works	1968 - 1970	151080
AF	495m NW	Gas Works	1984	134635
L	496m E	Unspecified Tank	1908	116998
T	497m E	Unspecified Tank	1949	127176
T	497m E	Unspecified Tank	1953	136016
T	497m E	Unspecified Tank	1949	142608



ID	Location	Land use	Dates present	Group ID
T	498m E	Unspecified Tank	1949 - 1953	133218
X	499m W	Tanks	1992	108699
X	499m W	Unspecified Tank	1989	115256

This data is sourced from Ordnance Survey® / Groundsure.

1.3 Historical energy features

Records within 500m

47

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 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 15 >](#)

ID	Location	Land use	Dates present	Group ID
F	28m N	Gas Works	1908 - 1922	76691
F	34m N	Gas Works	1948 - 1949	80506
B	56m N	Electricity Substation	1979	66275
B	61m N	Electricity Substation	1948 - 1955	70720
E	92m E	Electricity Substation	1949 - 1985	69521
E	93m E	Electricity Substation	1989 - 1994	72594
B	97m W	Electricity Sub-Station	1979 - 1991	86312
B	98m W	Electricity Substation	1955	90189
B	99m W	Electricity Substation	1995	75115
H	142m E	Electricity Substation	1989 - 1994	80143
G	194m E	Electricity Generating Station	1949	79823
G	194m E	Electricity Generating Station	1949	69315
H	215m E	Electricity Substation	1994	66272
J	236m E	Electricity Substation	1949 - 1953	88322
J	236m E	Electricity Substation	1989	78275



ID	Location	Land use	Dates present	Group ID
J	238m E	Electricity Substation	1985	90392
K	240m N	Gas Works	1968 - 1970	79725
F	251m NW	Gas Works	1891	73835
M	252m NW	Gas Works	1893	91077
G	275m E	Electricity Generating Station	1908 - 1922	78218
O	278m E	Electricity Substation	1994	86748
O	279m E	Electricity Transformer Station	1985	67853
D	295m S	Electricity Substation	1949 - 1953	88217
10	348m SW	Electricity Substation	1979 - 1995	74937
O	358m E	Electricity Substation	1989	90729
O	364m E	Electricity Substation	1985	74022
P	374m SE	Electricity Substation	1991 - 1996	79694
I	397m W	Electricity Substation	1992	89489
I	398m W	Electricity Substation	1989	82233
I	398m W	Electricity Substation	1955 - 1986	87051
V	401m N	Gas Works	1984	76951
V	426m N	Gasometer	1922	85377
V	430m N	Gas Holder	1995	81167
V	430m N	Gas Holder	1984	69354
V	431m N	Gasometer	1949	79625
V	431m N	Gasometer	1968	92505
L	459m E	Electricity Substation	1985	90253
X	463m W	Electricity Substation	1979 - 1992	77087
L	474m E	Electricity Substation	1989	85440
AD	481m NW	Gas Works	1979	77974
AE	486m NW	Gas Holder Station	1994 - 1995	77874
AE	486m NW	Gas Holder Station	1991	86109
AD	488m NW	Gasometers	1893 - 1922	70507



ID	Location	Land use	Dates present	Group ID
AF	489m NW	Gas Works	1949	82665
AF	494m NW	Gas Works	1948	70663
AF	494m NW	Gas Works	1952 - 1970	78862
AF	495m NW	Gas Works	1984	83012

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 un-grouped 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	6
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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 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 15 >](#)

ID	Location	Land use	Dates present	Group ID
Z	413m SW	Garage	1983	27933
X	421m SW	Garage	1986	25230
AB	433m S	Garage	1979	25219
AB	433m S	Garage	1983	27680
AB	473m S	Garage	1956	27090
AB	474m S	Garage	1958	23199

This data is sourced from Ordnance Survey® / Groundsure.



1.6 Historical military land

Records within 500m

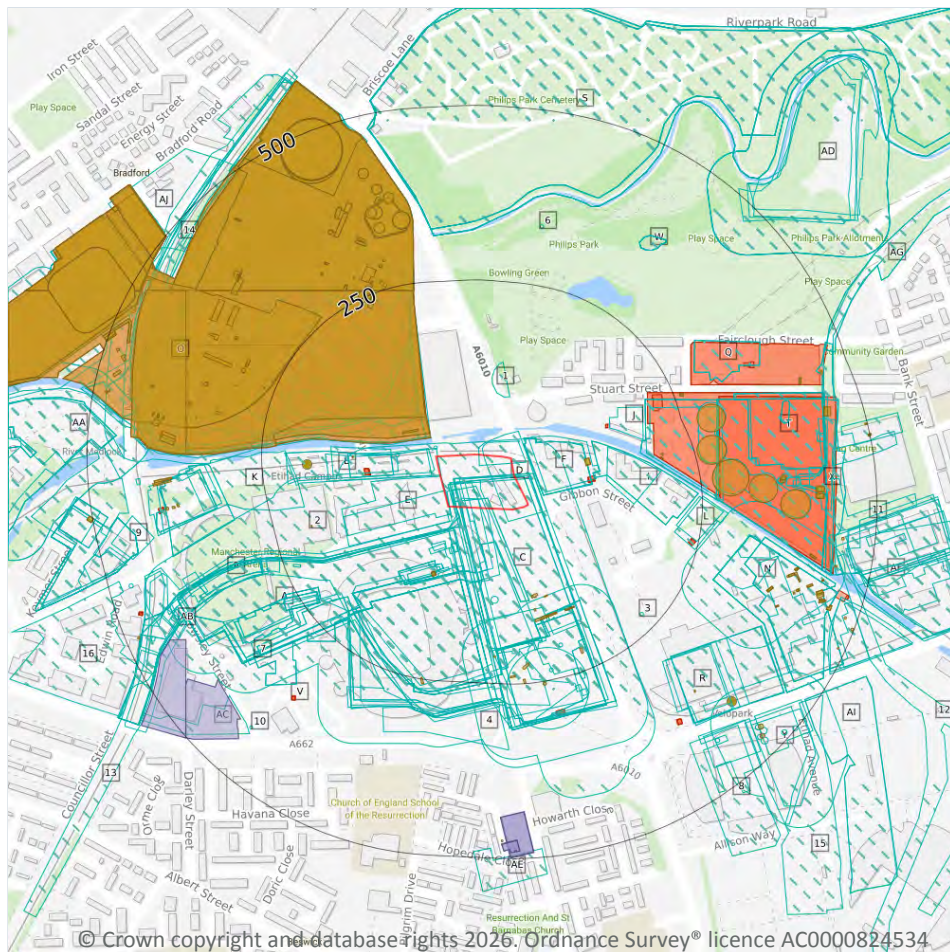
0

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

356

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 35](#) >

ID	Location	Land Use	Date	Group ID
A	On site	Railway Sidings	1921	892926
A	On site	Railway Sidings	1906	987283
A	On site	Railway Sidings	1938	864917



ID	Location	Land Use	Date	Group ID
A	On site	Railway Sidings	1933	864917
A	On site	Colliery	1968	864185
A	On site	Railway Sidings	1956	956843
A	On site	Railway Sidings	1981	892909
A	On site	Railway Sidings	1923	892926
B	On site	Unspecified Works	1891	835410
C	On site	Unspecified Commercial/Industrial	1891	923876
C	On site	Unspecified Commercial/Industrial	1938	951587
C	On site	Unspecified Commercial/Industrial	1933	951587
C	On site	Iron Works	1956	884679
C	On site	Unspecified Works	1985	892380
C	On site	Unspecified Commercial/Industrial	1981	923876
C	On site	Unspecified Works	1968	880957
C	On site	Unspecified Commercial/Industrial	1923	962107
D	On site	Smallwares Mill	1848	817633
D	On site	Unspecified Works	1968	835505
E	On site	Unspecified Works	1981	935457
E	On site	Unspecified Works	1968	935457
B	6m W	Unspecified Mills	1938	952585
B	10m N	Coal Pits	1848	817124
B	11m W	Unspecified Mills	1923	954214
F	24m E	Unspecified Mills	1921	891938
F	24m E	Unspecified Commercial/Industrial	1933	822336
F	25m E	Unspecified Mills	1906	880521
F	25m E	Unspecified Mills	1923	919056
A	30m S	Unspecified Works	1968	861471
A	30m S	Railway Sidings	1968	939747
G	30m N	Unspecified Commercial/Industrial	1956	892151



ID	Location	Land Use	Date	Group ID
G	31m NW	Gas Works	1921	1008628
G	31m NW	Gas Works	1906	1008628
G	31m NW	Unspecified Commercial/Industrial	1938	931170
G	31m NW	Railway Sidings	1938	866254
G	31m NW	Railway Sidings	1933	866254
G	31m NW	Unspecified Commercial/Industrial	1933	931170
F	32m NE	Unspecified Works	1968	874083
A	33m S	Railway Sidings	1891	941022
A	34m S	Mineral Yard	1921	970266
A	34m S	Mineral Yard	1906	970266
A	49m S	Railway Building	1968	854555
A	52m S	Goods Station	1956	957582
A	52m S	Goods Station	1968	957582
B	53m W	Coal Pits	1848	817121
A	53m S	Goods Station	1956	810452
B	56m W	Unspecified Mill	1968	826189
A	56m S	Railway Building	1938	854272
A	59m S	Railway Buildings	1923	810698
H	62m NW	Unspecified Ground Workings	1921	936930
H	62m NW	Unspecified Ground Workings	1906	936930
H	62m NW	Unspecified Ground Workings	1923	936930
G	64m NW	Gas Works	1923	932342
B	64m W	Unspecified Mills	1921	893653
B	64m W	Unspecified Mills	1933	960813
A	80m S	Goods Station	1921	924987
A	80m S	Goods Station	1938	920073
A	80m S	Goods Station	1933	920073
A	85m S	Goods Station	1923	960129



ID	Location	Land Use	Date	Group ID
1	85m N	Refuse Heap	1848	809437
A	86m S	Railway Building	1891	854553
G	89m NW	Railway Sidings	1956	899298
A	90m S	Unspecified Works	1985	989431
A	91m S	Unspecified Works	1981	936564
A	91m S	Unspecified Works	1991	1001381
A	91m S	Unspecified Works	1968	936564
G	102m NW	Unspecified Commercial/Industrial	1968	886162
G	102m NW	Railway Sidings	1968	899298
I	102m E	Unspecified Works	1985	879603
I	102m E	Unspecified Works	1991	879603
A	103m S	Iron Works	1921	955558
A	103m S	Iron Works	1906	885817
A	103m S	Iron Works	1891	885817
A	103m S	Iron Works	1938	866751
A	103m S	Iron Works	1933	866751
A	103m S	Iron Works	1923	955558
G	108m NW	Railway Sidings	1981	898695
G	111m NW	Unspecified Commercial/Industrial	1981	886162
I	118m E	Unspecified Works	1968	893668
C	125m S	Unspecified Tank	1923	850369
C	130m S	Colliery	1891	966606
C	146m S	Colliery	1848	976178
J	148m E	Unspecified Works	1968	835412
C	154m SE	Unspecified Depot	1985	911073
C	154m SE	Unspecified Depot	1991	911073
C	165m S	Colliery	1921	945178
C	165m S	Colliery	1906	945178



ID	Location	Land Use	Date	Group ID
C	165m S	Colliery	1923	994752
I	177m NE	Unspecified Mills	1921	870584
I	177m NE	Unspecified Mills	1906	870584
I	177m NE	Unspecified Mills	1923	870584
I	185m E	Unspecified Mills	1891	907148
C	189m S	Coal Pits	1848	817125
A	193m SW	Unspecified Works	1985	860232
A	193m SW	Unspecified Works	1991	860232
A	198m SW	Railway Building	1968	854556
K	200m W	Fustian Mills	1848	833162
A	200m SW	Mineral Yard	1923	968024
C	202m S	Coal Pit	1848	832402
C	203m S	Unspecified Disused Shafts	1991	918798
L	214m E	Unspecified Mill	1985	999024
L	215m E	Unspecified Mill	1968	884306
A	219m SW	Railway Building	1938	855075
A	219m SW	Goods Shed	1956	863668
A	219m SW	Goods Shed	1968	863668
G	223m W	Railway Sidings	1921	886040
3	224m SE	Coal Pit	1848	832403
A	224m SW	Goods Shed	1938	863668
A	224m SW	Goods Shed	1933	863668
M	225m N	Unspecified Pit	1921	1005573
M	225m N	Unspecified Pit	1906	1005573
M	225m N	Unspecified Pit	1923	1005573
A	225m SW	Goods Shed	1921	1005649
A	228m W	Railway Building	1923	854271
A	228m SW	Goods Shed	1923	1005649



ID	Location	Land Use	Date	Group ID
G	228m W	Gas Works	1891	918655
C	234m S	Coal Pits	1848	817126
M	238m NW	Unspecified Tanks	1921	902905
M	238m NW	Unspecified Tank	1938	930922
M	238m NW	Unspecified Tank	1933	930922
M	239m NW	Unspecified Tanks	1923	860378
N	242m E	Brick Field	1891	806791
G	242m W	Railway Sidings	1923	965613
C	243m S	Unspecified Shafts	1981	839040
G	245m NW	Railway Sidings	1906	886040
M	245m NW	Unspecified Tanks	1921	913923
M	245m NW	Unspecified Tanks	1906	913923
M	245m NW	Unspecified Tank	1938	877903
M	245m NW	Unspecified Tank	1933	877903
M	245m NW	Unspecified Tanks	1923	913923
M	246m N	Gas Work	1981	937130
M	246m N	Gas Work	1968	937130
M	249m NW	Unspecified Tanks	1968	999782
M	249m NW	Unspecified Tanks	1921	894875
M	249m NW	Unspecified Tanks	1906	894875
M	249m NW	Unspecified Tank	1938	891842
M	249m NW	Unspecified Tank	1933	891842
M	249m NW	Unspecified Tanks	1923	894875
C	251m S	Unspecified Disused Shafts	1985	860278
M	251m NW	Unspecified Tanks	1981	999782
P	252m W	Cuttings	1956	934597
I	256m E	Unspecified Tanks	1968	819363
C	266m S	Unspecified Shafts	1981	839039



ID	Location	Land Use	Date	Group ID
I	270m E	Electricity Generating Station	1921	948947
I	270m E	Electricity Generating Station	1906	948947
I	270m E	Unspecified Commercial/Industrial	1938	874010
I	270m E	Unspecified Commercial/Industrial	1933	874010
I	270m E	Electricity Generating Station	1923	948947
P	271m W	Cuttings	1985	869419
C	275m S	Unspecified Disused Shafts	1985	998418
P	278m W	Cuttings	1981	922099
P	278m W	Cuttings	1968	922099
4	280m S	Unspecified Works	1981	835504
M	280m N	Gasometer	1923	812164
P	281m W	Cuttings	1938	934597
P	281m W	Cuttings	1933	934597
P	281m W	Cuttings	1921	897688
P	282m W	Cuttings	1923	1008258
P	282m W	Cuttings	1906	897688
N	286m E	Chemical Works	1921	897911
N	286m E	Chemical Works	1906	897911
N	286m E	Chemical Works	1933	897911
N	286m E	Chemical Works	1923	897911
N	290m E	Unspecified Ground Workings	1906	815050
Q	290m NE	Electric Substation	1985	899640
Q	290m NE	Electric Substation	1991	899640
G	290m W	Railway Sidings	1891	977689
R	296m SE	Engineering Works	1923	875548
R	297m SE	Engineering Works	1921	875548
R	298m SE	Unspecified Works	1968	931191
R	299m SE	Unspecified Works	1985	964791



ID	Location	Land Use	Date	Group ID
R	299m SE	Unspecified Works	1991	964791
K	301m W	Unspecified Factory	1985	971126
K	301m W	Unspecified Factory	1991	971126
N	308m E	Unspecified Pit	1938	829612
K	314m W	Unspecified Mill	1968	925789
M	315m N	Unspecified Tanks	1923	819226
S	316m N	Cemetery	1923	978841
S	316m N	Cemetery	1938	978841
S	316m N	Cemetery	1933	978841
S	316m N	Cemetery	1921	978841
S	316m N	Cemetery	1906	978841
S	316m N	Cemetery	1891	978841
N	322m E	Unspecified Works	1985	984760
N	322m E	Unspecified Works	1981	949944
N	322m E	Unspecified Works	1991	984760
K	322m W	Unspecified Mill	1891	961187
K	322m W	Unspecified Mill	1938	960004
K	322m W	Unspecified Mill	1933	960004
T	323m E	Unspecified Works	1981	967146
T	323m E	Electric Generating Station	1968	817357
K	324m W	Unspecified Mill	1923	976257
U	324m NW	Refuse Heap	1891	809156
M	325m N	Oil Tanks	1921	955675
M	325m N	Oil Tanks	1906	955675
M	325m N	Unspecified Tank	1938	980266
M	325m N	Unspecified Tank	1933	980266
S	326m N	Cemetery	1991	986066
S	326m N	Cemetery	1956	908004



ID	Location	Land Use	Date	Group ID
S	326m N	Cemetery	1985	911386
S	326m N	Cemetery	1981	908004
S	326m N	Cemetery	1968	908004
M	326m N	Oil Tanks	1921	949592
M	326m N	Oil Tanks	1906	949592
M	326m N	Unspecified Tank	1938	860074
M	326m N	Unspecified Tank	1933	860074
M	326m N	Oil Tanks	1923	977453
M	327m N	Unspecified Tanks	1956	819227
T	328m E	Unspecified Works	1985	938800
M	330m N	Gasometer	1968	867986
6	332m N	Coal Pit	1848	832400
M	334m N	Gasometer	1981	867986
M	337m NW	Gasometer	1981	964274
M	337m NW	Gasometer	1968	964274
7	340m SW	Railway Building	1891	854554
N	342m E	Unspecified Works	1968	931578
R	342m SE	Unspecified Works	1968	942182
M	350m N	Oil Tanks	1921	872783
M	350m N	Oil Tanks	1906	872783
M	350m N	Unspecified Tank	1938	924301
M	350m N	Unspecified Tank	1933	924301
M	350m N	Unspecified Pit	1906	828748
W	354m NE	Unspecified Heap	1938	978301
W	354m NE	Unspecified Heap	1933	978301
W	354m NE	Unspecified Heap	1921	978301
W	354m NE	Unspecified Heap	1906	978301
W	354m NE	Unspecified Heap	1923	978301



ID	Location	Land Use	Date	Group ID
I	359m E	Unspecified Tank	1938	946871
I	360m E	Unspecified Tank	1933	946871
M	363m N	Oil Tanks	1921	950558
M	363m N	Oil Tanks	1906	950558
M	363m N	Unspecified Tank	1938	972574
M	363m N	Unspecified Tank	1933	972574
P	365m W	Engine House	1848	822777
I	366m E	Unspecified Tank	1968	902911
I	371m E	Railway Sidings	1921	920236
X	371m E	Mineral Railway Sidings	1906	967015
G	371m NW	Unspecified Tanks	1921	972040
G	373m NW	Unspecified Tanks	1923	972040
M	378m N	Gasometer	1981	971214
M	378m N	Gasometer	1968	971214
I	381m E	Railway Sidings	1923	920236
T	381m E	Unspecified Tanks	1981	819362
T	381m E	Chimneys	1968	856211
M	384m N	Refuse Heap	1906	809155
I	386m E	Mineral Railway Sidings	1938	876297
I	386m E	Mineral Railway Sidings	1933	876297
Y	392m SE	Unspecified Commercial/Industrial	1906	862017
Z	393m N	Gas Works	1991	946402
Z	395m N	Gas Works	1985	946402
AA	409m W	Sanitary Works	1933	969226
AA	409m W	Sanitary Works	1921	1006250
AB	409m SW	Cuttings	1991	880803
AB	411m SW	Cuttings	1891	951670
Y	412m SE	Unspecified Works	1968	835415



ID	Location	Land Use	Date	Group ID
8	413m SE	Unspecified Commercial/Industrial	1923	899759
AC	414m SW	Unspecified Works	1981	835503
AB	416m SW	Cuttings	1968	938378
Y	416m SE	Unspecified Depot	1985	821178
AB	417m SW	Cuttings	1956	985403
9	419m W	Pottery	1848	812050
AB	421m SW	Cuttings	1923	865850
AB	421m SW	Cuttings	1938	955968
AB	421m SW	Cuttings	1906	889386
AB	421m W	Cuttings	1956	918351
10	422m SW	Coal Pit	1848	832404
Z	425m N	Gasometer	1991	942847
K	426m W	Railway Building	1923	854266
Z	427m NW	Gasometer	1921	939856
Z	427m NW	Unspecified Tank	1938	898484
Z	427m NW	Unspecified Tank	1933	898484
Z	429m NW	Gasometer	1923	866419
Y	430m SE	Coal Pit	1848	832397
AD	430m NE	Unspecified Commercial/Industrial	1938	996915
AD	430m NE	Unspecified Commercial/Industrial	1933	996915
AD	430m NE	Unspecified Works	1921	918678
AD	430m NE	Tanneries	1906	833958
AD	430m NE	Unspecified Disused Works	1891	848687
Z	431m N	Unspecified Tank	1956	919451
Z	431m N	Unspecified Tank	1981	919451
Z	431m N	Unspecified Tank	1968	919451
Z	431m N	Gasometer	1985	863086
AF	435m E	Oil Works	1923	1009323



ID	Location	Land Use	Date	Group ID
11	436m E	Unspecified Ground Workings	1923	814770
X	440m E	Unspecified Heap	1923	842834
Y	441m SE	Unspecified Commercial/Industrial	1923	997840
Y	444m SE	Unspecified Works	1968	835408
AB	445m W	Cotton Works	1921	960472
AB	445m W	Cotton Works	1906	960472
AB	445m W	Cotton Works	1891	960472
AB	445m W	Cotton Works	1938	960472
AB	445m W	Cotton Works	1933	960472
AB	445m W	Cotton Works	1923	960472
AF	445m E	Brick Kiln	1848	825986
AB	445m SW	Cuttings	1933	1009060
AB	445m SW	Cuttings	1921	958485
AA	447m W	Sanitary Works	1956	986893
12	449m E	Steel Works	1956	852897
Y	449m SE	Unspecified Commercial/Industrial	1891	977406
Y	454m SE	Unspecified Tank	1906	850015
AF	457m E	Chemical Works	1891	834346
AB	459m SW	Railway Building	1923	854265
AA	459m W	Sanitary Works	1906	861208
AA	459m W	Sanitary Works	1891	861208
AA	459m W	Sanitary Works	1938	977469
AF	460m E	Unspecified Works	1981	919082
AF	460m E	Unspecified Works	1985	981974
X	460m E	Chemicals Works	1891	811461
AF	461m E	Unspecified Works	1991	981974
AA	463m W	Sanitary Works	1923	952734
Y	463m SE	Unspecified Tank	1891	850018



ID	Location	Land Use	Date	Group ID
AB	464m W	Unspecified Works	1968	835406
AB	465m W	Coal Pit	1848	832398
13	466m SW	Cuttings	1956	876406
Y	466m SE	Unspecified Tank	1906	987691
N	466m E	Unspecified Works	1923	898301
N	467m E	Unspecified Works	1921	898301
AF	473m E	Unspecified Commercial/Industrial	1933	822418
Y	473m SE	Unspecified Tank	1891	987691
N	475m E	Unspecified Works	1968	913832
AG	475m E	Railway Sidings	1956	999358
AG	475m E	Railway Sidings	1968	999358
AD	476m NE	Unspecified Works	1923	862064
AB	478m W	Unspecified Works	1985	874812
AB	478m W	Unspecified Works	1991	874812
14	480m NW	Coal Pit	1848	832382
AH	480m NW	Unspecified Tank	1891	992656
15	481m SE	Chemical Works	1923	966383
16	481m W	Brick Field	1848	806763
AH	484m NW	Gas Stove Works	1921	965127
AH	484m NW	Raising Works	1906	856962
AH	484m NW	Unspecified Commercial/Industrial	1891	925169
AH	484m NW	Unspecified Commercial/Industrial	1938	882756
AH	484m NW	Unspecified Commercial/Industrial	1933	882756
AH	484m NW	Gas Stove Works	1923	965127
AI	485m SE	Unspecified Works	1985	944795
AI	485m SE	Unspecified Works	1991	944795
AB	485m W	Unspecified Factory	1968	857110
AH	485m NW	Unspecified Tank	1921	950505



ID	Location	Land Use	Date	Group ID
AH	485m NW	Unspecified Tank	1906	950505
AH	485m NW	Gasometer	1923	812169
AD	486m NE	Unspecified Commercial/Industrial	1956	923887
AE	486m S	Tannery	1848	826386
AF	487m E	Unspecified Works	1968	939864
Y	487m SE	Unspecified Tank	1906	850017
AF	487m E	Oil Works	1921	1009323
AB	487m W	Unspecified Works	1981	876391
AF	488m E	Unspecified Works	1981	919082
AJ	491m NW	Brick Works	1891	818424
AD	491m NE	Unspecified Works	1991	991015
Y	495m SE	Unspecified Tank	1906	850016
AH	496m W	Gas Works	1985	934414
AF	497m E	Unspecified Works	1985	982308
AJ	497m NW	Unspecified Works	1968	835249
AD	498m NE	Print Works	1848	816929
AF	500m E	Unspecified Works	1991	968010

This data is sourced from Ordnance Survey® / Groundsure.

2.2 Historical tanks

Records within 500m

231

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 35 >](#)

ID	Location	Land Use	Date	Group ID
G	28m N	Gas Works	1908	129144
G	34m N	Gas Works	1948	145718
B	45m NW	Tanks	1979	108902



ID	Location	Land Use	Date	Group ID
G	58m N	Gas Works	1922	129144
A	95m S	Tanks	1979	144723
A	95m S	Tanks	1987	144723
A	95m S	Tanks	1955	127104
F	99m NE	Tanks	1989	152361
F	99m NE	Tanks	1994	152361
B	119m W	Unspecified Tank	1891	115276
C	125m S	Tanks	1893	108701
C	130m S	Tanks	1893	108702
C	145m S	Unspecified Tank	1893	115270
C	157m S	Unspecified Tank	1989	115265
C	157m S	Tanks	1953	148845
C	157m S	Tanks	1985	148845
C	158m S	Tanks	1985	153827
C	158m S	Tanks	1953	153827
2	196m W	Tanks	1891	108704
I	202m E	Tanks	1893	109335
I	204m E	Tanks	1893	109334
C	210m S	Unspecified Tank	1893	115273
C	218m S	Unspecified Tank	1893	115271
C	221m S	Tanks	1893	108703
M	231m NW	Tanks	1948	126855
C	238m S	Unspecified Tank	1893	115272
M	238m NW	Tanks	1922	127012
M	238m NW	Tanks	1931	127012
M	240m N	Gas Works	1949	145718
M	240m N	Gas Works	1970	144054
M	240m N	Gas Works	1968	144054



ID	Location	Land Use	Date	Group ID
M	243m NW	Tanks	1908	149213
M	243m NW	Tanks	1922	149213
M	243m NW	Tanks	1931	149213
C	243m S	Unspecified Tank	1949	115268
M	245m NW	Tanks	1948	145838
M	245m NW	Unspecified Tank	1955	115740
M	246m NW	Tanks	1958	140254
A	247m S	Tank or Trough	1908	112946
M	248m N	Tanks	1949	108493
M	248m NW	Tanks	1948	140254
M	248m NW	Tanks	1955	140254
G	251m NW	Gas Works	1891	136888
C	251m S	Unspecified Tank	1949	115269
O	252m NW	Gas Works	1893	137050
M	253m N	Tanks	1949	108904
I	254m E	Unspecified Tank	1953	116990
G	255m NW	Unspecified Tank	1891	116013
M	255m N	Tanks	1949	140254
M	255m N	Unspecified Tank	1968	114708
J	258m E	Unspecified Tank	1949	145666
J	258m E	Unspecified Tank	1953	145666
J	258m E	Unspecified Tank	1949	145666
G	264m W	Unspecified Tank	1891	116014
M	264m N	Tanks	1949	108903
I	267m E	Unspecified Tank	1953	116991
M	267m N	Tanks	1949	108905
I	270m NE	Unspecified Tank	1953	116989
M	270m NW	Tanks	1922	126268



ID	Location	Land Use	Date	Group ID
M	270m NW	Tanks	1931	126268
M	281m NW	Unspecified Tank	1931	115736
M	282m N	Unspecified Tank	1908	151586
M	282m N	Unspecified Tank	1922	151586
M	289m N	Unspecified Tank	1931	115737
G	299m NW	Tanks	1948	109003
G	299m NW	Unspecified Tank	1931	116004
G	300m NW	Unspecified Tank	1948	116007
G	303m W	Unspecified Tank	1891	116012
M	307m NW	Unspecified Tank	1970	146065
M	307m NW	Unspecified Tank	1968	146065
M	315m NW	Unspecified Tank	1970	140590
M	315m NW	Unspecified Tank	1968	140590
G	316m W	Unspecified Tank	1948	116006
I	318m E	Unspecified Tank	1953	116992
M	318m N	Tanks	1908	135309
M	318m N	Tanks	1922	135309
M	318m N	Tanks	1931	135309
G	320m NW	Unspecified Tank	1948	136883
M	323m N	Tanks	1949	108906
M	323m N	Oil Tanks	1922	134072
M	323m N	Oil Tanks	1931	134072
M	325m N	Oil Tanks	1908	131087
M	329m N	Unspecified Tank	1949	144122
M	329m N	Unspecified Tank	1970	144122
M	330m N	Unspecified Tank	1949	115738
M	330m N	Unspecified Tank	1968	144122
G	330m NW	Unspecified Tank	1979	137393



ID	Location	Land Use	Date	Group ID
G	331m NW	Unspecified Tank	1948	154092
G	331m NW	Unspecified Tank	1955	154092
G	342m W	Unspecified Tank	1979	147609
G	342m W	Unspecified Tank	1958	143474
G	343m W	Unspecified Tank	1955	143474
M	344m NW	Tanks	1968	140532
G	344m NW	Unspecified Tank	1891	134368
M	344m NW	Tanks	1970	126847
G	347m W	Unspecified Tank	1891	116015
G	347m NW	Tanks	1948	109004
M	351m N	Unspecified Tank	1970	144782
M	351m N	Unspecified Tank	1968	144782
M	352m NW	Unspecified Tank	1970	115741
M	353m N	Unspecified Tank	1949	139415
G	355m NW	Tanks	1931	108999
R	356m SE	Tank or Trough	1893	113080
G	358m W	Gas Works	1948	145718
G	359m W	Tanks	1948	109002
I	362m E	Unspecified Tank	1953	116993
I	363m E	Tanks	1932	109337
N	363m E	Unspecified Tank	1953	127650
N	363m E	Unspecified Tank	1949	127650
N	363m E	Unspecified Tank	1949	134031
I	364m E	Unspecified Tank	1949	135125
I	365m E	Unspecified Tank	1949	135125
G	369m NW	Tanks	1922	150117
M	369m N	Unspecified Tank	1949	115739
M	369m NW	Tanks	1970	156220



ID	Location	Land Use	Date	Group ID
G	369m NW	Tanks	1948	109005
M	370m N	Tanks	1970	135734
M	371m N	Tanks	1949	108907
G	374m W	Tanks	1948	150781
G	374m W	Tanks	1931	150781
K	375m W	Unspecified Tank	1931	115264
G	379m NW	Tanks	1931	150117
K	380m W	Tanks	1948	126574
K	380m W	Tanks	1955	126574
G	380m NW	Unspecified Tank	1949	116008
K	381m W	Tank or Trough	1908	112945
K	381m W	Tanks	1931	127102
N	383m E	Unspecified Tank	1953	133014
N	383m E	Unspecified Tank	1949	133014
N	383m E	Unspecified Tank	1949	133014
N	384m E	Unspecified Tank	1949	116994
M	385m N	Unspecified Tank	1970	149399
M	385m N	Unspecified Tank	1968	149399
N	386m E	Unspecified Tank	1953	145698
N	386m E	Unspecified Tank	1949	145698
K	390m W	Unspecified Tank	1908	115260
N	393m E	Unspecified Tank	1949	153007
N	393m E	Unspecified Tank	1953	153007
N	393m E	Unspecified Tank	1949	153007
N	393m E	Unspecified Tank	1949	144173
G	394m W	Tanks	1979	109000
N	395m E	Unspecified Tank	1953	153007
N	395m E	Unspecified Tank	1949	153007



ID	Location	Land Use	Date	Group ID
G	399m W	Overhead Tanks	1948	126092
N	400m E	Unspecified Tank	1932	116988
G	401m W	Tanks	1979	154788
G	401m W	Tanks	1955	154788
G	401m W	Tanks	1958	154788
Z	401m N	Gas Works	1984	127334
N	403m E	Unspecified Tank	1949	133187
N	403m E	Unspecified Tank	1949	133187
G	408m W	Tanks	1979	109001
N	410m E	Unspecified Tank	1908	144306
N	410m E	Unspecified Tank	1922	144306
N	410m E	Unspecified Tank	1932	144306
M	411m N	Unspecified Tank	1970	153672
M	411m N	Unspecified Tank	1968	153672
I	413m E	Unspecified Tank	1949	149800
I	414m E	Unspecified Tank	1949	149800
I	414m E	Unspecified Tank	1949	143367
I	414m E	Unspecified Tank	1949	143367
N	416m E	Unspecified Tank	1953	132498
N	416m E	Unspecified Tank	1949	132498
G	417m W	Unspecified Tank	1948	116019
T	424m NE	Unspecified Tank	1949	155534
T	425m NE	Unspecified Tank	1949	155534
Z	426m N	Gasometer	1922	152602
Z	426m N	Unspecified Tank	1931	132195
Z	430m N	Gas Holder	1995	130637
Z	430m N	Gas Holder	1995	130637
Z	430m N	Gas Holder	1984	137148



ID	Location	Land Use	Date	Group ID
Z	431m N	Gasometer	1949	130378
Z	431m N	Unspecified Tank	1970	129993
Z	431m N	Gasometer	1968	147785
N	431m E	Tanks	1949	141290
N	432m E	Tanks	1953	141290
N	432m E	Tanks	1949	141290
N	432m E	Tanks	1932	153017
N	435m E	Unspecified Tank	1949	151910
N	435m E	Unspecified Tank	1953	126991
N	435m E	Unspecified Tank	1949	146888
U	438m NW	Unspecified Tank	1970	147066
N	438m E	Tanks	1949	138627
U	438m NW	Unspecified Tank	1968	147066
N	438m E	Tanks	1949	138627
N	438m E	Unspecified Tank	1953	116987
N	439m E	Tanks	1932	138627
X	442m E	Tanks	1949	136728
X	443m E	Tanks	1949	136728
N	448m E	Unspecified Tank	1932	116996
N	452m E	Unspecified Tank	1932	117003
N	453m E	Tanks	1953	152996
N	453m E	Tanks	1949	152996
Y	457m SE	Unspecified Tank	1908	116980
T	458m NE	Tanks	1953	109332
O	465m W	Tanks	1948	109006
O	467m W	Unspecified Tank	1948	116016
Y	468m SE	Unspecified Tank	1908	116981
O	469m W	Tanks	1922	143487



ID	Location	Land Use	Date	Group ID
O	469m W	Tanks	1931	143487
AE	473m S	Unspecified Tank	1893	115339
O	476m W	Unspecified Tank	1948	116018
O	478m W	Tanks	1948	109007
O	479m W	Unspecified Tank	1908	155838
O	479m W	Unspecified Tank	1922	155838
AB	479m SW	Unspecified Tank	1979	115267
N	481m E	Unspecified Tank	1908	117000
AH	481m NW	Gas Works	1979	127994
AH	486m NW	Gas Holder Station	1995	149486
AH	486m NW	Gas Holder Station	1994	149486
AH	487m NW	Gas Holder Station	1991	151598
AH	488m NW	Gasometers	1893	143424
AH	488m NW	Gasometers	1908	143424
AH	488m NW	Gasometers	1922	143424
N	488m SE	Unspecified Tank	1908	116999
AJ	489m NW	Gas Works	1949	144247
O	491m W	Tanks	1908	127359
AJ	494m NW	Gas Works	1968	151080
AJ	494m NW	Gas Works	1952	133566
AJ	494m NW	Gas Works	1948	144593
AJ	494m NW	Gas Works	1970	151080
AJ	495m NW	Gas Works	1984	134635
N	496m E	Unspecified Tank	1908	116998
X	497m E	Unspecified Tank	1953	136016
X	497m E	Unspecified Tank	1949	127176
X	497m E	Unspecified Tank	1949	142608
X	498m E	Unspecified Tank	1953	133218



ID	Location	Land Use	Date	Group ID
X	498m E	Unspecified Tank	1949	133218
X	498m E	Unspecified Tank	1949	133218
AB	499m W	Tanks	1992	108699
AB	499m W	Unspecified Tank	1989	115256

This data is sourced from Ordnance Survey® / Groundsure.

2.3 Historical energy features

Records within 500m	81
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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 35 >](#)

ID	Location	Land Use	Date	Group ID
G	28m N	Gas Works	1908	76691
G	34m N	Gas Works	1948	80506
B	56m N	Electricity Substation	1979	66275
G	58m N	Gas Works	1922	76691
B	61m N	Electricity Substation	1948	70720
B	61m N	Electricity Substation	1955	70720
F	92m E	Electricity Substation	1953	69521
F	92m E	Electricity Substation	1949	69521
F	92m E	Electricity Substation	1949	69521
F	93m E	Electricity Substation	1989	72594
F	93m E	Electricity Substation	1985	69521
F	93m E	Electricity Substation	1994	72594
B	97m W	Electricity Sub-Station	1979	86312
B	97m W	Electricity Sub-Station	1987	86312
B	97m W	Electricity Sub-Station	1991	86312
B	98m W	Electricity Substation	1955	90189



ID	Location	Land Use	Date	Group ID
B	99m W	Electricity Substation	1995	75115
J	142m E	Electricity Substation	1989	80143
J	143m E	Electricity Substation	1994	80143
I	194m E	Electricity Generating Station	1949	79823
I	194m E	Electricity Generating Station	1949	69315
J	215m E	Electricity Substation	1994	66272
L	236m E	Electricity Substation	1949	88322
L	236m E	Electricity Substation	1989	78275
L	236m E	Electricity Substation	1953	88322
L	236m E	Electricity Substation	1949	88322
L	238m E	Electricity Substation	1985	90392
M	240m N	Gas Works	1949	80506
M	240m N	Gas Works	1970	79725
M	240m N	Gas Works	1968	79725
G	251m NW	Gas Works	1891	73835
O	252m NW	Gas Works	1893	91077
I	275m E	Electricity Generating Station	1908	78218
I	275m E	Electricity Generating Station	1922	78218
Q	278m E	Electricity Substation	1994	86748
Q	279m E	Electricity Transformer Station	1985	67853
C	295m S	Electricity Substation	1953	88217
C	295m S	Electricity Substation	1949	88217
C	295m S	Electricity Substation	1949	88217
V	348m SW	Electricity Substation	1995	74937
V	349m SW	Electricity Substation	1979	74937
V	350m SW	Electricity Substation	1983	74937
G	358m W	Gas Works	1948	80506
Q	358m E	Electricity Substation	1989	90729



ID	Location	Land Use	Date	Group ID
Q	364m E	Electricity Substation	1985	74022
R	374m SE	Electricity Substation	1991	79694
R	375m SE	Electricity Substation	1996	79694
R	375m SE	Electricity Substation	1996	79694
R	375m SE	Electricity Substation	1995	79694
R	375m SE	Electricity Substation	1994	79694
K	397m W	Electricity Substation	1992	89489
K	398m W	Electricity Substation	1989	82233
K	398m W	Electricity Substation	1979	87051
K	398m W	Electricity Substation	1986	87051
K	398m W	Electricity Substation	1955	87051
Z	401m N	Gas Works	1984	76951
Z	426m N	Gasometer	1922	85377
Z	430m N	Gas Holder	1995	81167
Z	430m N	Gas Holder	1995	81167
Z	430m N	Gas Holder	1984	69354
Z	431m N	Gasometer	1949	79625
Z	431m N	Gasometer	1968	92505
N	459m E	Electricity Substation	1985	90253
AB	463m W	Electricity Substation	1979	77087
AB	463m W	Electricity Substation	1986	77087
AB	463m W	Electricity Substation	1989	77087
AB	464m W	Electricity Substation	1992	77087
N	474m E	Electricity Substation	1989	85440
AH	481m NW	Gas Works	1979	77974
AH	486m NW	Gas Holder Station	1995	77874
AH	486m NW	Gas Holder Station	1994	77874
AH	487m NW	Gas Holder Station	1991	86109



ID	Location	Land Use	Date	Group ID
AH	488m NW	Gasometers	1893	70507
AH	488m NW	Gasometers	1908	70507
AH	488m NW	Gasometers	1922	70507
AJ	489m NW	Gas Works	1949	82665
AJ	494m NW	Gas Works	1968	78862
AJ	494m NW	Gas Works	1952	78862
AJ	494m NW	Gas Works	1948	70663
AJ	494m NW	Gas Works	1970	78862
AJ	495m NW	Gas Works	1984	83012

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

6

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 35 >](#)

ID	Location	Land Use	Date	Group ID
AC	413m SW	Garage	1983	27933
AB	421m SW	Garage	1986	25230
AE	433m S	Garage	1979	25219
AE	433m S	Garage	1983	27680

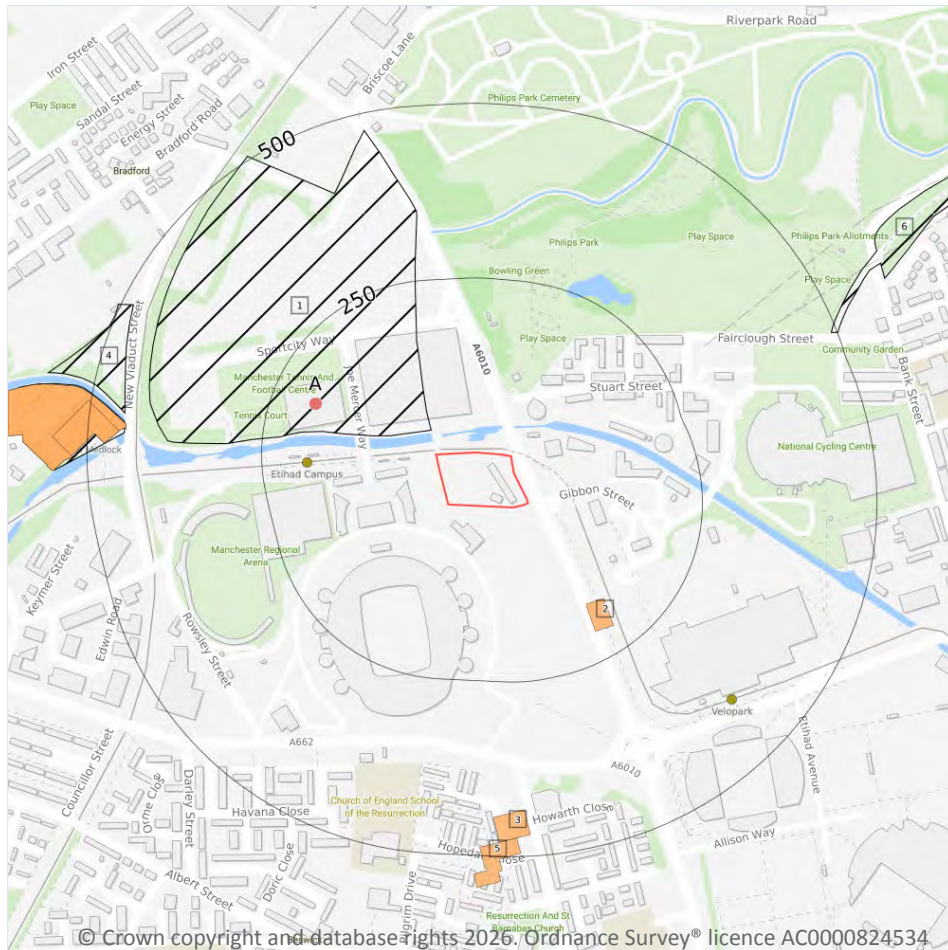


ID	Location	Land Use	Date	Group ID
AE	473m S	Garage	1956	27090
AE	474m S	Garage	1958	23199

This data is sourced from Ordnance Survey® / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (EA/NRW)
- Historical 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

4

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.

Features are displayed on the Waste and landfill map on [page 62 >](#)

ID	Location	Details		
1	36m N	Site Address: Bradford Road Works, Bradeley Hall Road, Haslington, Crewe, Cheshire Licence Holder Address: Welman House, Altrincham, Cheshire	Waste Licence: Yes Site Reference: RD/LIC/180/79, GDO F058, 0381 Waste Type: Inert, Industrial, Special Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 07/12/1979 Licence Surrender: 14/12/1983	Operator: - Licence Holder: North West Gas First Recorded 07/12/1979 Last Recorded: 01/12/1983
B	448m W	Site Address: Bradford Road - Cambrian Street Depot, Greater Manchester Licence Holder Address: -	Waste Licence: Yes Site Reference: F044, RD/LIC/381/84 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 10/10/1985 Licence Surrender: 09/03/1993	Operator: - Licence Holder: Regional Surveyore (North West Gas) First Recorded 31/12/1985 Last Recorded: 31/12/1990
4	450m W	Site Address: New Viaduct Street, Greater Manchester Licence Holder Address: -	Waste Licence: - Site Reference: F045 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded - Last Recorded: -



ID	Location	Details		
6	492m E	Site Address: Clayton Vale Power Station, Bank Bridge Road, Manchester Licence Holder Address: Europa House, Birdhall Lane, Cheadle Heath, Stockport	Waste Licence: Yes Site Reference: RD/LIC/045/76,GDO F001 Waste Type: Inert, Industrial, Commercial, Household, Special, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 01/01/1974 Licence Surrender: -	Operator: - Licence Holder: Central Electricity Generating Board First Recorded 31/12/1965 Last Recorded: 31/12/1968

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

3.5 Historical waste sites

Records within 500m	6
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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 62 >](#)

ID	Location	Address	Further Details	Date
2	167m SE	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1989
3	433m 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	1956
B	446m W	Site Address: N/A	Type of Site: Corporation Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1948
B	446m W	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1955



ID	Location	Address	Further Details	Date
B	455m W	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1958
5	473m 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	1956

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

3.6 Licensed waste sites

Records within 500m	0
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Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

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.

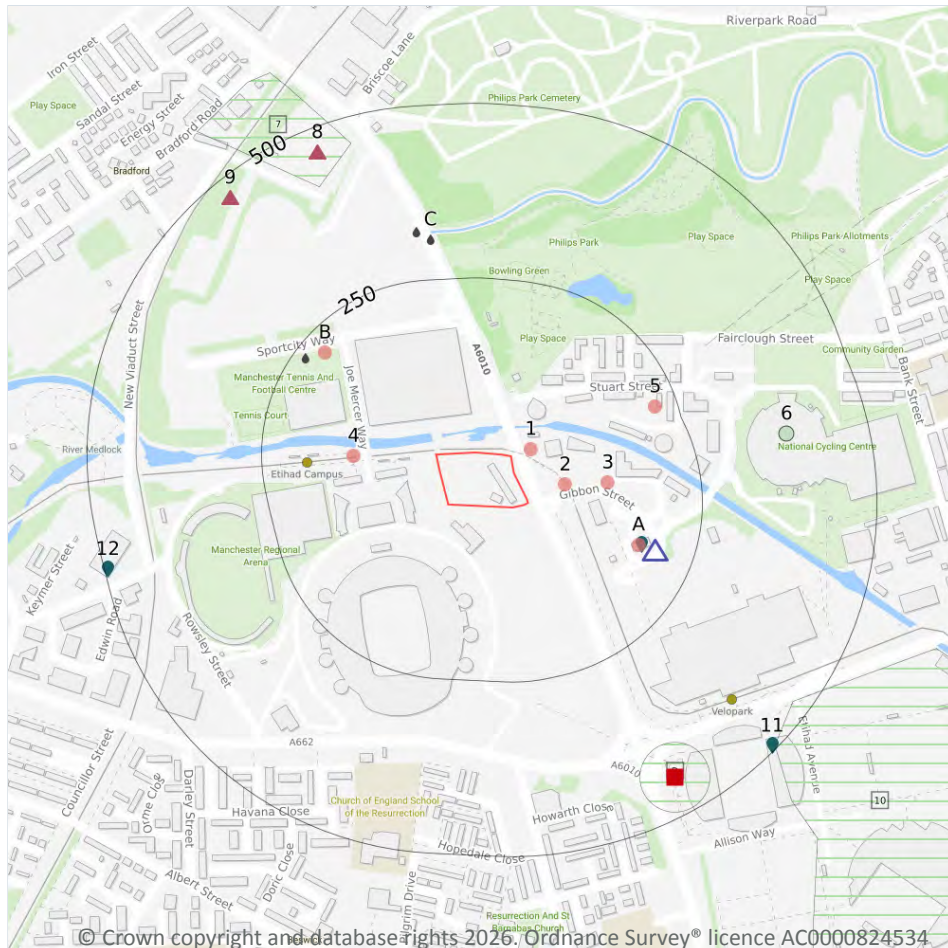
Features are displayed on the Waste and landfill map on [page 62 >](#)

ID	Location	Site	Reference	Category	Sub-Category	Description
A	188m NW	Bam Project Office, Cfg Campus, Off Gibbon Street / Alan Turing Way, Manchester, M11 3du	WEX253830	Treating waste exemption	Not on a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	188m NW	Bam Project Office, Cfg Campus, Off Gibbon Street / Alan Turing Way, Manchester, M11 3du	WEX253830	Using waste exemption	Not on a farm	Use of mulch
A	188m NW	-	WEX269478	Using waste exemption	Not on a farm	Use of waste in construction

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
- ▲ Hazardous substance storage/usage
- Licensed pollutant release (Part A(2)/B)
- Licensed Discharges to controlled waters
- List 1 Dangerous Substances
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

7

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 66](#) >

ID	Location	Company	Address	Activity	Category
1	31m E	Electricity Sub Station	Greater Manchester, M11	Electrical Features	Infrastructure and Facilities
2	59m E	Electricity Sub Station	Greater Manchester, M11	Electrical Features	Infrastructure and Facilities
3	118m E	Electricity Sub Station	Greater Manchester, M11	Electrical Features	Infrastructure and Facilities



ID	Location	Company	Address	Activity	Category
4	118m W	Etihad Campus (Manchester Metrolink)	Greater Manchester, M11	Tram, Metro and Light Railway Stations and Stops	Public Transport, Stations and Infrastructure
A	169m E	Asda Eastlands Automat	Alan Turing Way, Bradford, Manchester, Greater Manchester, M11 4BD	Petrol and Fuel Stations	Road and Rail
B	216m NW	Electricity Sub Station	Greater Manchester, M11	Electrical Features	Infrastructure and Facilities
5	219m E	Electricity Sub Station	Greater Manchester, M11	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey®.

4.2 National Geographic Database (NGD) - Current or recent tanks

Records within 250m

0

Current or recent tanks identified from the Ordnance Survey® NGD.

This data is sourced from Ordnance Survey®.

4.3 Current or recent petrol stations

Records within 500m

1

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on [page 66 >](#)

ID	Location	Company	Address	LPG	Status
A	194m E	ASDA	Alan Turing Way, Bradford, Manchester, Greater Manchester, M11 4BD	No	Open

This data is sourced from Experian.

4.4 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.



4.5 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.6 Sites determined as Contaminated Land

Records within 500m

0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.7 Control of Major Accident Hazards (COMAH)

Records within 500m

3

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 66](#) >

ID	Location	Company	Address	Operational status	Tier
D	396m SE	Rhodia Ltd	Rhodia Ltd, Ashton New Road, Manchester, M11 4AT	Historical NIHHS Site	-
7	418m NW	British Gas	British Gas, Bradford Road Holder Station, Bradford Road, Miles Platting, M10 7BL	Historical COMAH Site	-
10	474m SE	Ciba Speciality Chemicals	Ciba Speciality Chemicals, Ashton New Road, Clayton, M11 4AP	Historical COMAH Site	-

This data is sourced from the Health and Safety Executive.

4.8 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.



4.9 Hazardous substance storage/usage

Records within 500m

2

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.

Features are displayed on the Current industrial land use map on [page 66](#) >

ID	Location	Details	
8	465m N	Application reference number: 000001/HSC/NORTH2/92 Application status: Historical Consent Application date: 01/10/1992 Address: National Grid Gas PLC, Bradford Road Holder Station (East), Bradford Road, Miles Platting, Manchester, Greater Manchester, England, M40 7BN	Details: Storage of low pressure gas. Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
9	472m NW	Application reference number: 059226/HSC/NORTH2/00 Application status: Historical Consent Application date: 11/07/2000 Address: Land Bounded By Alan Turing Way & New Viaduct Street, Bradford	Details: Continuation Of Hazardous Substances Consent For Storage Of Gas Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified

This data is sourced from Local Authority records.

4.10 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.

4.11 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.



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

Records within 500m

3

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 66](#) >

ID	Location	Address	Details	
A	173m E	Asda Eastlands, Ashton New Road, Bradford, M11 4BD	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
11	493m SE	Frances Shaw And Co, Corbett Street, Clayton, M11 4BB	Process: Rubber Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
12	495m W	J And F Brooks Ltd, Philips Park Road, Beswick, M11 3EJ	Process: Timber Manufacture Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified

This data is sourced from Local Authority records.

4.13 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.

4.14 Licensed Discharges to controlled waters

Records within 500m

3

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

Features are displayed on the Current industrial land use map on [page 66](#) >



ID	Location	Address	Details	
B	233m NW	BRADFORD RD GAS WORKS, OPPOSITE ELM STREET, BRADFORD, MANCHESTER, GREATER MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982626 Permit Version: 1 Receiving Water: RIVER MEDLOCK	Status: CONSENT REVOKED - DISCHARGE CEASED (WRA 91, SCHED 10 & 6) Issue date: - Effective Date: 30/09/1994 Revocation Date: 02/10/1998
C	308m N	MILL ST AT PARK INN, MANCHESTER, GREATER MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0100 Permit Version: 1 Receiving Water: RIVER MEDLOCK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/01/1995 Revocation Date: 18/07/1995
C	319m N	MILL ST/FORGE LANE, MANCHESTER, GREATER MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0099 Permit Version: 1 Receiving Water: RIVER MEDLOCK	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01/01/1995 Revocation Date: 26/08/1999

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

4.15 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.

4.16 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

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

4.17 List 1 Dangerous Substances

Records within 500m

2

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 66 >](#)



ID	Location	Name	Status	Receiving Water	Authorised Substances
D	446m SE	Rhodia Industrial Specialities Ltd,	Active	Manchester Ship Canal	Cadmium
D	446m SE	Rhodia Industrial Specialities Ltd,	Active	Manchester Ship Canal	Cadmium

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

4.18 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.

4.19 Pollution Incidents (EA/NRW)

Records within 500m

1

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

Features are displayed on the Current industrial land use map on [page 66 >](#)

ID	Location	Details	
6	384m E	Incident Date: 07/05/2003 Incident Identification: 173905 Pollutant: Inorganic Chemicals/Products Pollutant Description: Acids	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.20 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.



4.21 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.

4.22 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 74 >](#)

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.



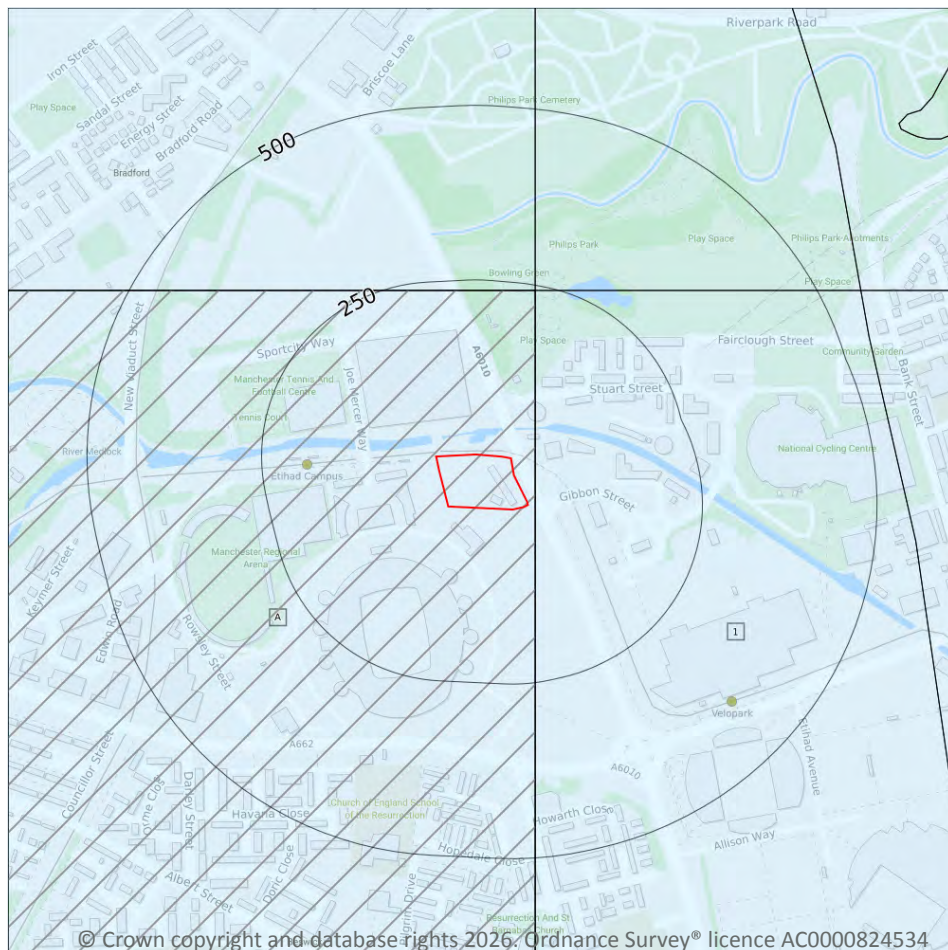
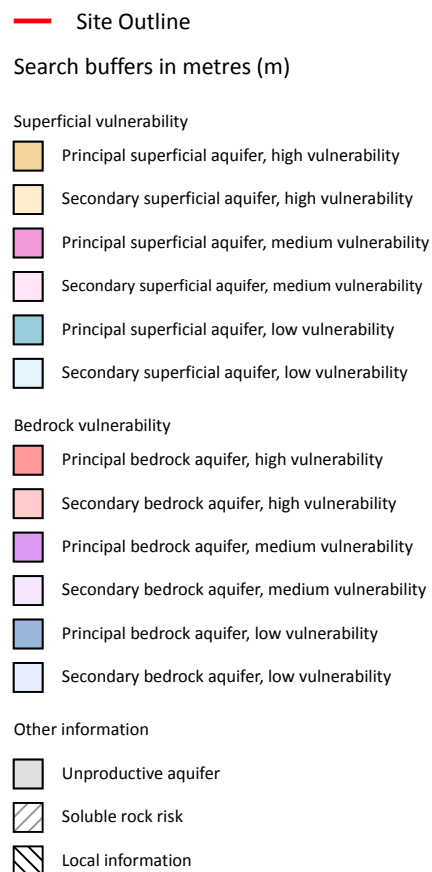
— Site Outline

Search buffers in metres (m)

Principal
Secondary A
Secondary B
Secondary Undifferentiated
Unproductive

75

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 76](#) >



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
1	11m E	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.	1.0%

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

5.5 Groundwater vulnerability- local information

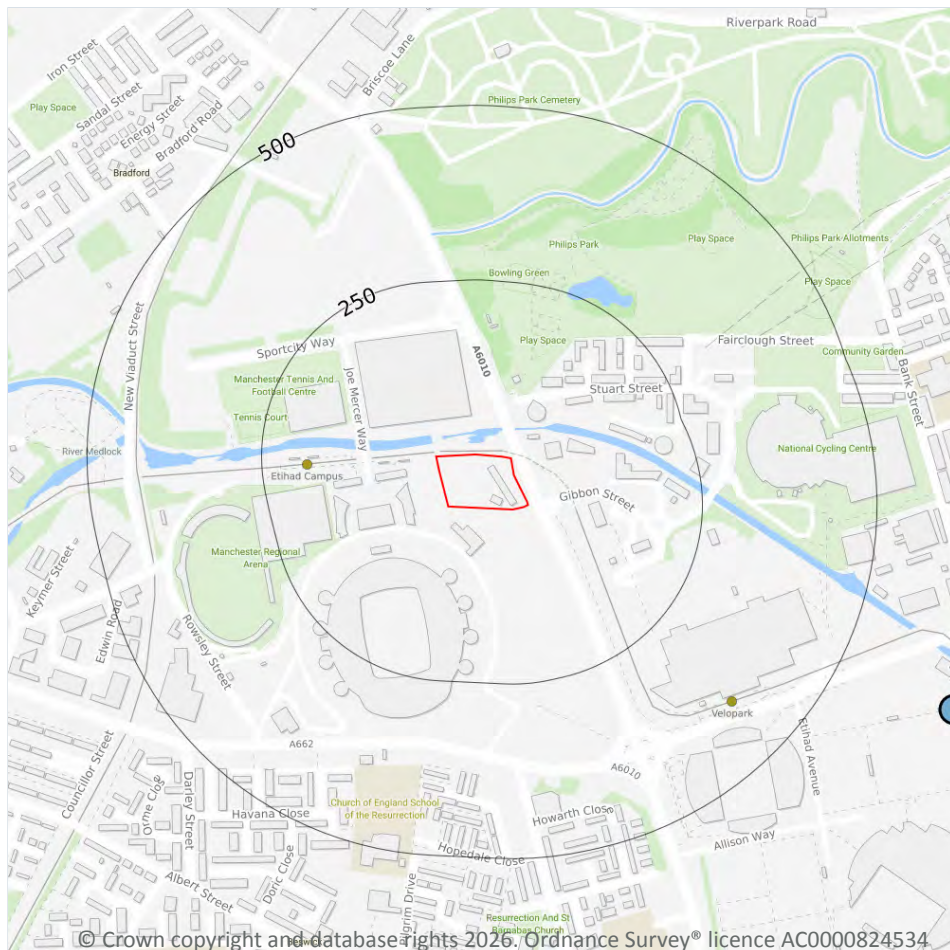
Records on site	0
------------------------	----------

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

25

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 78 >](#)

ID	Location	Details	
-	925m SE	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: -
-	925m SE	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: -
-	925m SE	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: -
-	925m SE	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	
-	925m E	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): 111831.6 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: -
-	926m E	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): 111831.6 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: -
-	956m E	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: -
-	956m E	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	
-	956m E	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: -
-	957m SE	Status: Historical 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): 221650 Max Daily Volume (m ³): 1000 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: -
-	957m SE	Status: Historical 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): 221650 Max Daily Volume (m ³): 1000 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: -
-	957m SE	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: -



ID	Location	Details	
-	957m SE	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: -
-	957m SE	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: -
-	1073m 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): 33000 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: -
-	1073m 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: -



ID	Location	Details	
-	1118m 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): 372772 Max Daily Volume (m ³): 3600.5 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: -
-	1124m SE	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: -
-	1124m SE	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: -
-	1124m SE	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	
-	1124m SE	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: -
-	1124m SE	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: -
-	1124m SE	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: -
-	2000m SW	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	
-	2000m SW	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: -

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 78 >](#)

ID	Location	Details	
1	677m SE	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: -
-	862m E	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: -



ID	Location	Details	
-	862m E	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: -
-	862m E	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: Canal and River Trust Easting: 387800 Northing: 398400	Annual Volume (m ³): 3500420 Max Daily Volume (m ³): 3500420 Original Application No: 1470 Original Start Date: 01/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1969 Version End Date: -
-	1178m 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: -
-	1178m 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): 68190 Max Daily Volume (m ³): 68190 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

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

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

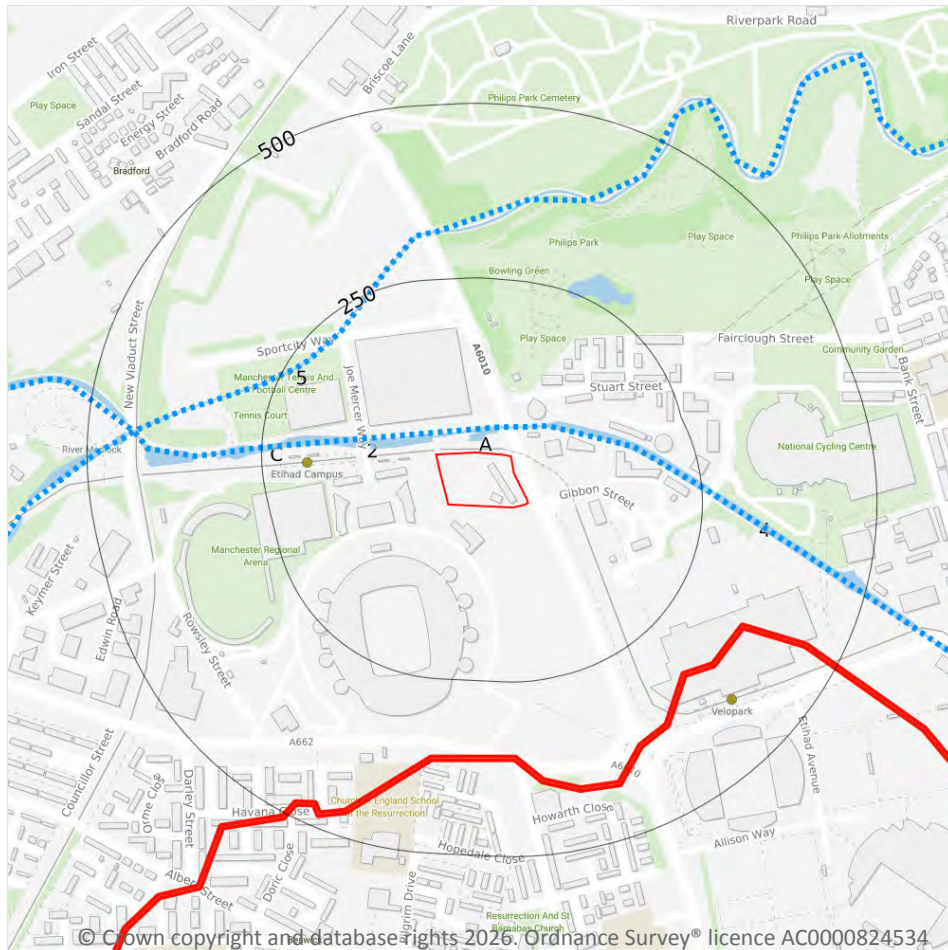
0

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

9

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

Features are displayed on the Hydrology map on [page 88 >](#)

ID	Location	Type of water feature	Ground level	Permanence	Name
A	18m N	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
2	26m N	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ashton Canal
A	28m N	Lock or flight of locks. An enclosure in a canal or navigable river with gates and sluices at either end.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ashton Canal
A	31m N	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ashton Canal
A	31m N	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ashton Canal
A	47m NE	Lock or flight of locks. An enclosure in a canal or navigable river with gates and sluices at either end.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ashton Canal
4	63m NE	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ashton Canal
5	222m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	River Medlock
C	229m W	Lock or flight of locks. An enclosure in a canal or navigable river with gates and sluices at either end.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ashton Canal

This data is sourced from the Ordnance Survey®.

6.2 Surface water features

Records within 250m

5

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.

Features are displayed on the Hydrology map on [page 88 >](#)

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 88 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River	Medlock (Lumb Brook to Irwell)	GB112069061152	Roch Irk Medlock	Irwell

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

6.4 WFD Surface water bodies

Records identified

2

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 88 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
B	31m N	Canal	Ashton Canal and Peak Forest Canal, lower section	GB71210219 ↗	Moderate	Fail	Moderate	2019
A	222m NW	River	Medlock (Lumb Brook to Irwell)	GB112069061152 ↗	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
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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 88](#) >

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
B	On site	Manchester and East Cheshire Permo-Triassic Sandstone Aquifers	GB41201G101100 ↗	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

1 in 30 year, 0.1m - 0.3m

Highest risk within 50m

1 in 30 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 95 >](#)

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

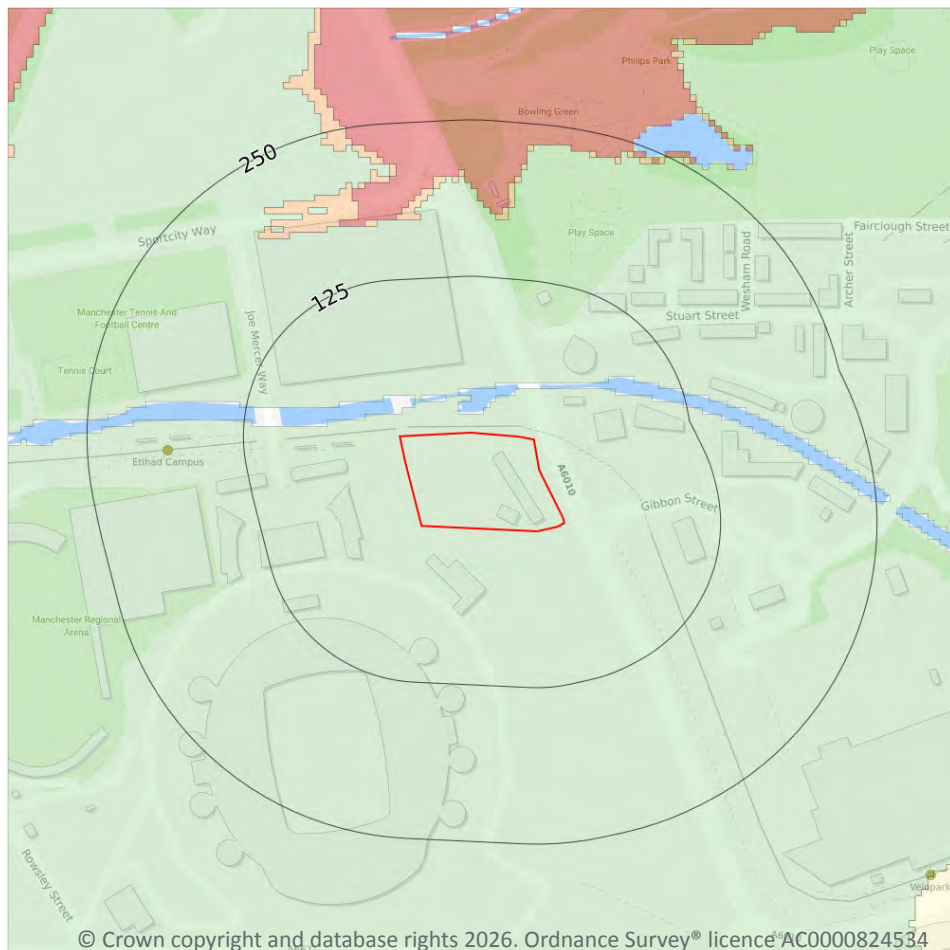
a site. The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Between 0.1m and 0.3m
1 in 250 year	Between 0.1m and 0.3m
1 in 100 year	Between 0.1m and 0.3m
1 in 30 year	Between 0.1m and 0.3m

This data is sourced from Ambiantal 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

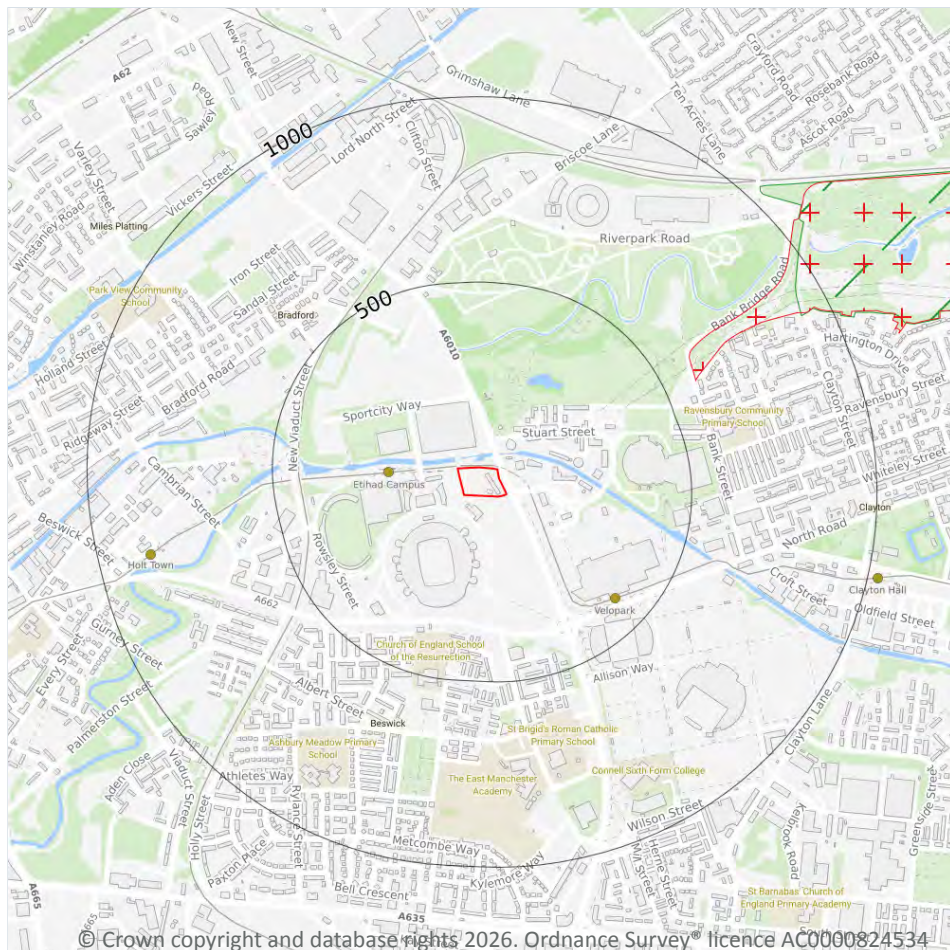
Low

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 97](#) >

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 98](#) >

ID	Location	Name	Data source
A	586m 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 98](#) >

ID	Location	Name	Local Authority name
A	920m NE	Merseyside and Greater Manchester Green Belt	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

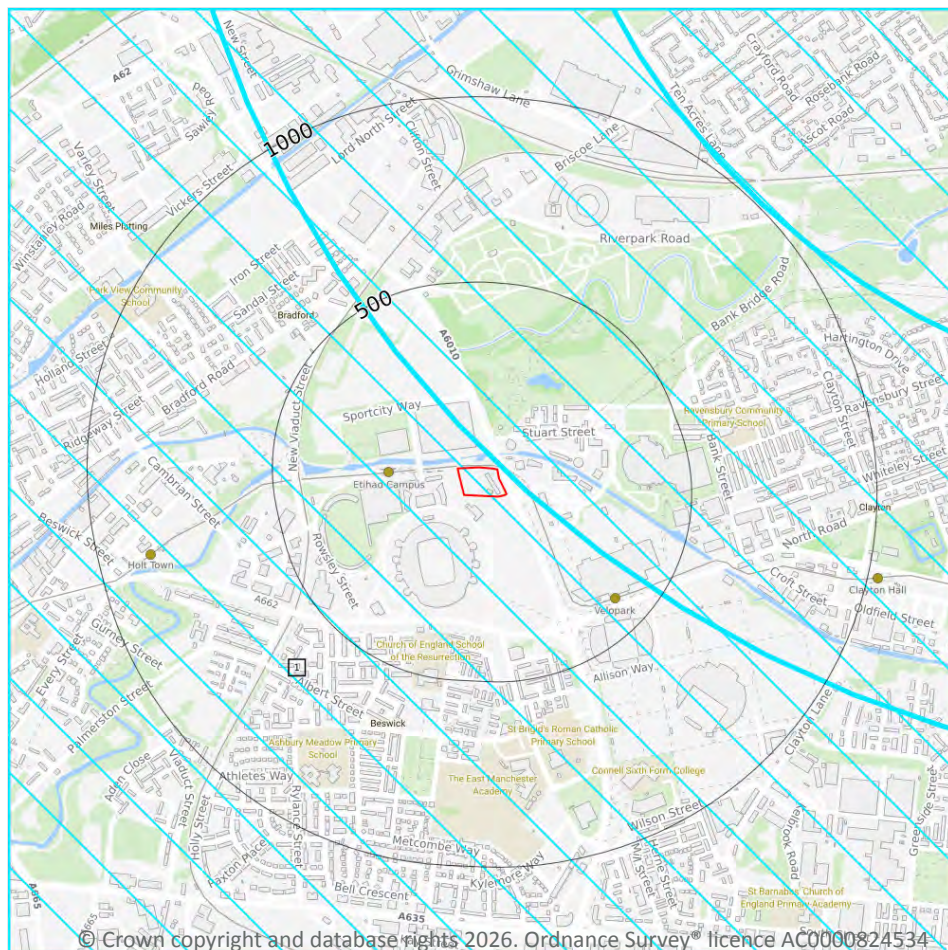
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
1350m 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 103](#) >

ID	Location	Type of developments requiring consultation
1	On site	https://irz.geodata.org.uk/IRZ/step2.html?irzcode=0300000430000&notes=&location=387670,439176%20(IRZ%20polygon%20centre)

This data is sourced from Natural England.



10.18 SSSI Units

Records within 2000m

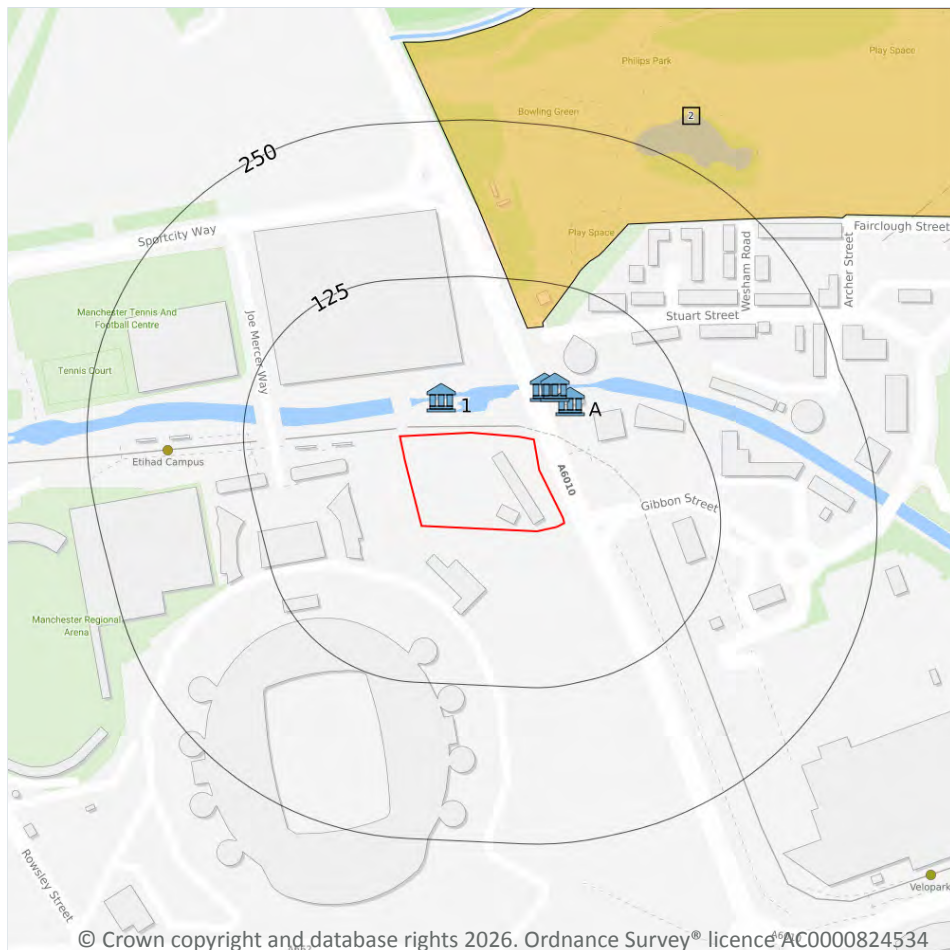
0

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



- Site Outline
- Search buffers in metres (m)
- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

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

4

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.

Features are displayed on the Visual and cultural designations map on [page 105 >](#)

ID	Location	Name	Grade	Reference Number	Listed date
1	29m N	Ashton Canal Lock Number 6 Immediately East Of Forge Lane	II	1207666	06/06/1994
A	42m NE	Ashton Canal Lock Keepers Cottage On South Side Of Lock Number 7 Of Ashton Canal	II	1283049	11/04/1991
A	43m N	Ashton Canal Bridge Number 9 Over Ashton Canal (Mill Street Bridge) At West End Of Lock Number 7	II	1279613	11/04/1991
A	45m N	Ashton Canal Lock Number 7 With Roving Bridge Immediately East Of Mill Street Bridge	II	1197831	11/04/1991



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

1

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.

Features are displayed on the Visual and cultural designations map on [page 105 >](#)

ID	Location	Name	Grade
2	87m N	Philips Park	II

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 108](#) >

ID	Location	Classification	Description
1	On site	Urban	Non-agricultural/no quality assigned

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



- Site Outline
- Search buffers in metres (m)
- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders
- Habitat Networks
- Primary Habitat
- Restorable Habitat
- Associated Habitats
- Habitat Restoration-Creation
- Network Enhancement Zone 1
- Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m

3

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

Features are displayed on the Habitat designations map on [page 110 >](#)

ID	Location	Main Habitat	Other habitats
3	91m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	232m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
5	239m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

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

2

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.

Features are displayed on the Habitat designations map on [page 110 >](#)

ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
1	16m N	NLUD Ref: 421501010	Low	National Land Use Database - Previously Developed Land	UK Perspectives Aerial Photography	-
2	35m N	NLUD Ref: 421501010	Low	National Land Use Database - Previously Developed Land	UK Perspectives Aerial Photography	-

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

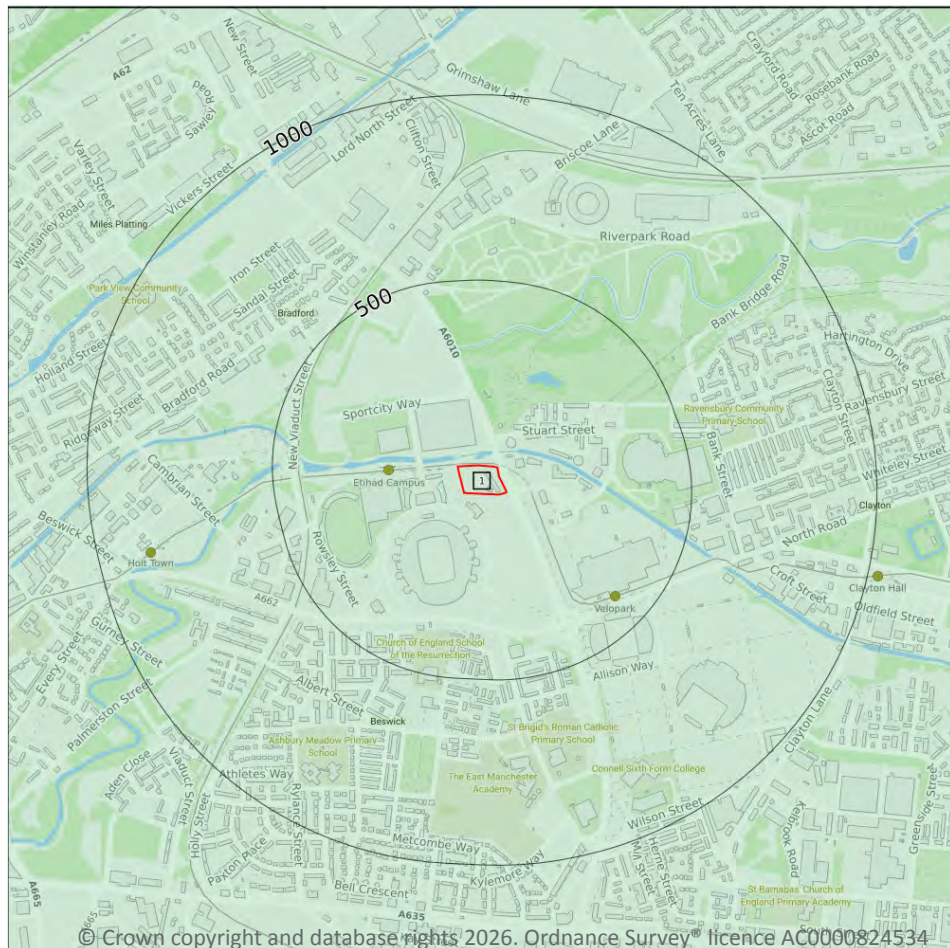
0

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

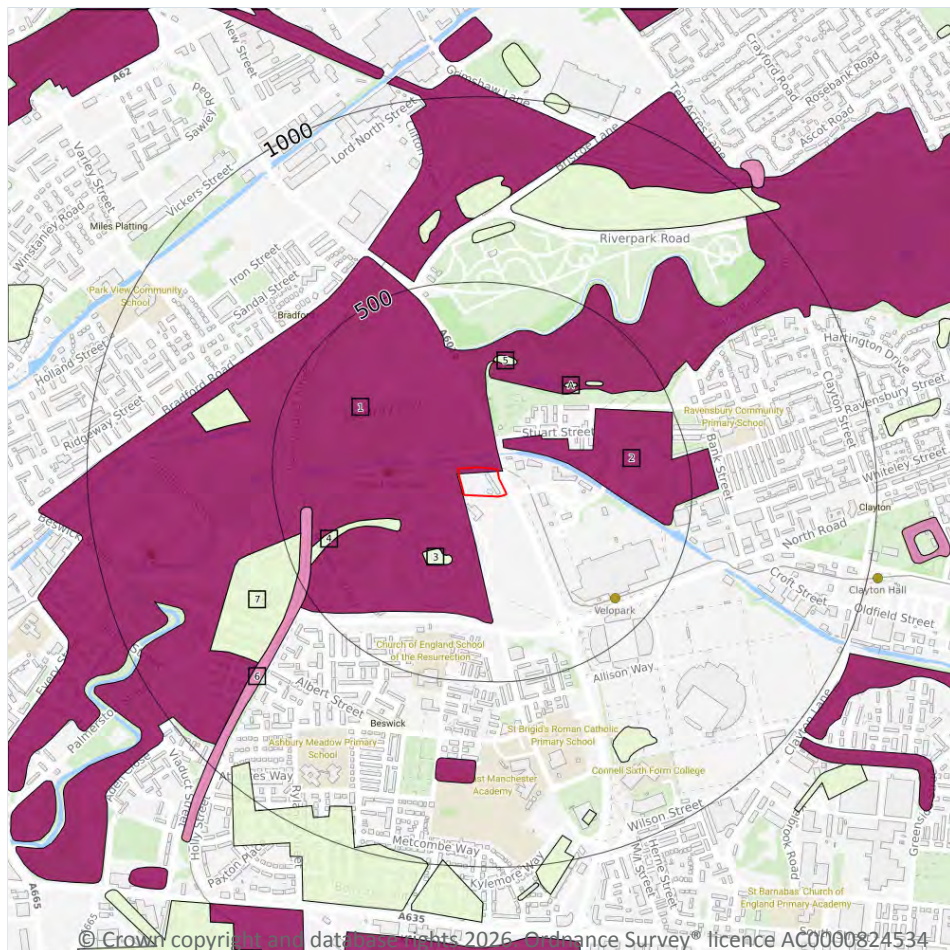
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme. Features are displayed on the Geology 1:10,000 scale - Availability map on [page 112](#) >

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 113](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
2	61m N	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
3	160m SW	WMGR-ARTDP	Infilled Ground	Artificial deposit
4	186m W	WMGR-ARTDP	Infilled Ground	Artificial deposit

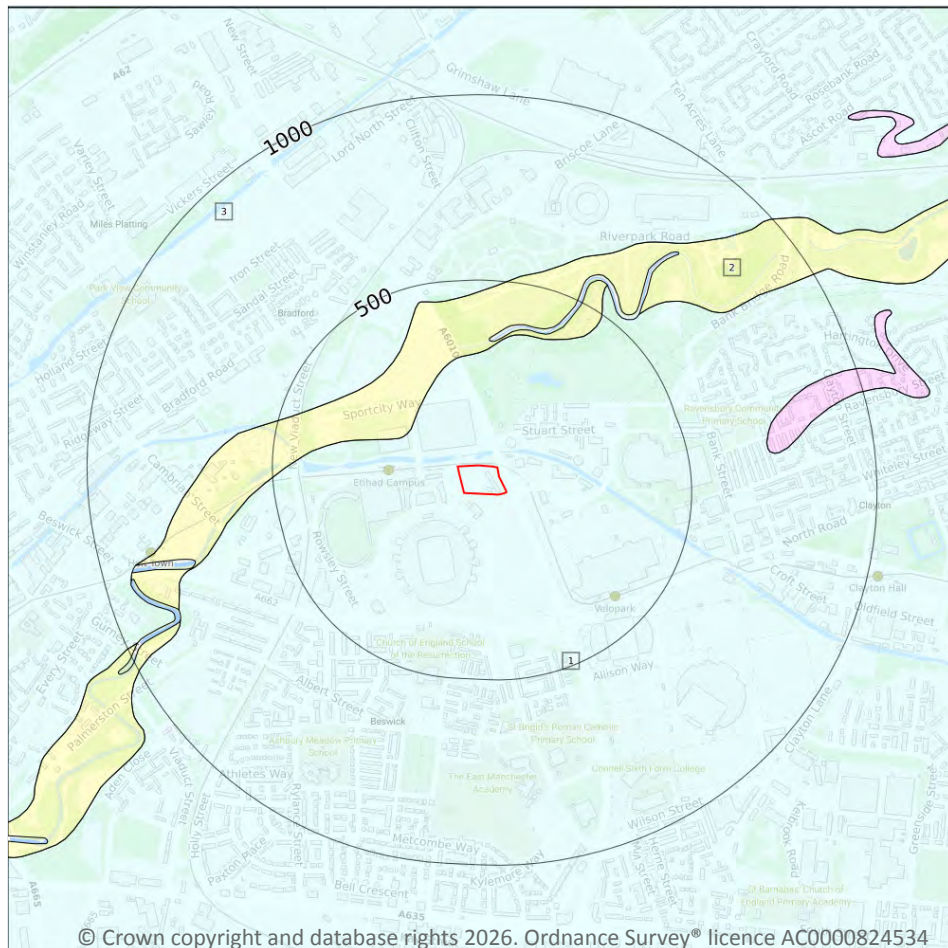


ID	Location	LEX Code	Description	Rock description
5	282m N	WMGR-ARTDP	Infilled Ground	Artificial deposit
A	289m NE	WMGR-ARTDP	Infilled Ground	Artificial deposit
A	331m NE	WMGR-ARTDP	Infilled Ground	Artificial deposit
6	408m W	WGR-VOID	Worked Ground (Undivided)	Void
7	453m W	WMGR-ARTDP	Infilled Ground	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

3

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 115](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	Till, Devensian-Diamicton	Diamicton
2	161m NW	ALV-XCZSV	Alluvium-Clay, Silt, Sand And Gravel	Clay, silt, sand and gravel
3	321m NW	TILLD-DMTN	Till, Devensian-Diamicton	Diamicton



This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

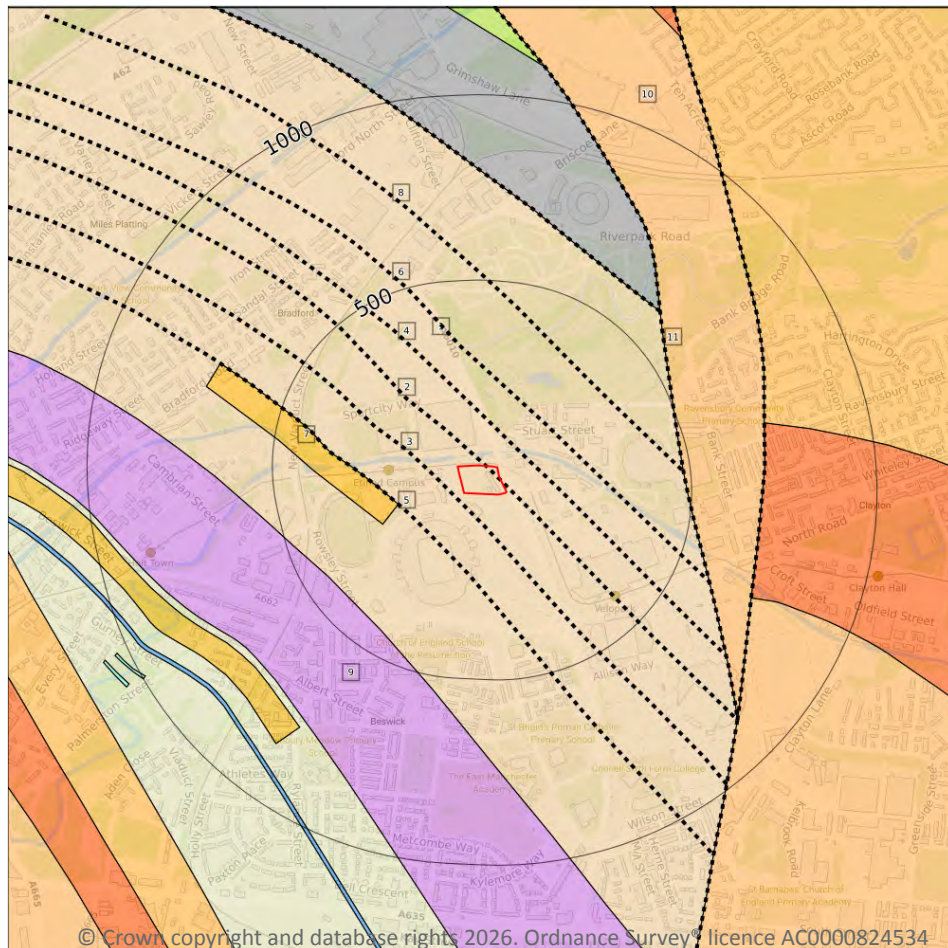
0

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

4

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 117](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	PUCM-MDSS	Pennine Upper Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
7	180m W	OPS-SDST	Openshaw Sandstone-Sandstone	Westphalian
9	420m SW	ETM-STMD	Etruria Formation-Sandstone And Mudstone	Westphalian



ID	Location	LEX Code	Description	Rock age
10	480m E	CHES-PESST	Chester Formation-Pebbly (Gravelly) Sandstone	Olenekian

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

7

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 117](#) >

ID	Location	Category	Description
2	On site	ROCK	Coal seam, inferred
3	24m SW	ROCK	Coal seam, inferred
4	73m NE	ROCK	Coal seam, inferred
5	144m SW	ROCK	Coal seam, inferred
6	174m NE	ROCK	Coal seam, inferred
8	341m NE	ROCK	Coal seam, inferred
11	480m E	FAULT	Fault, inferred, displacement unknown

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.

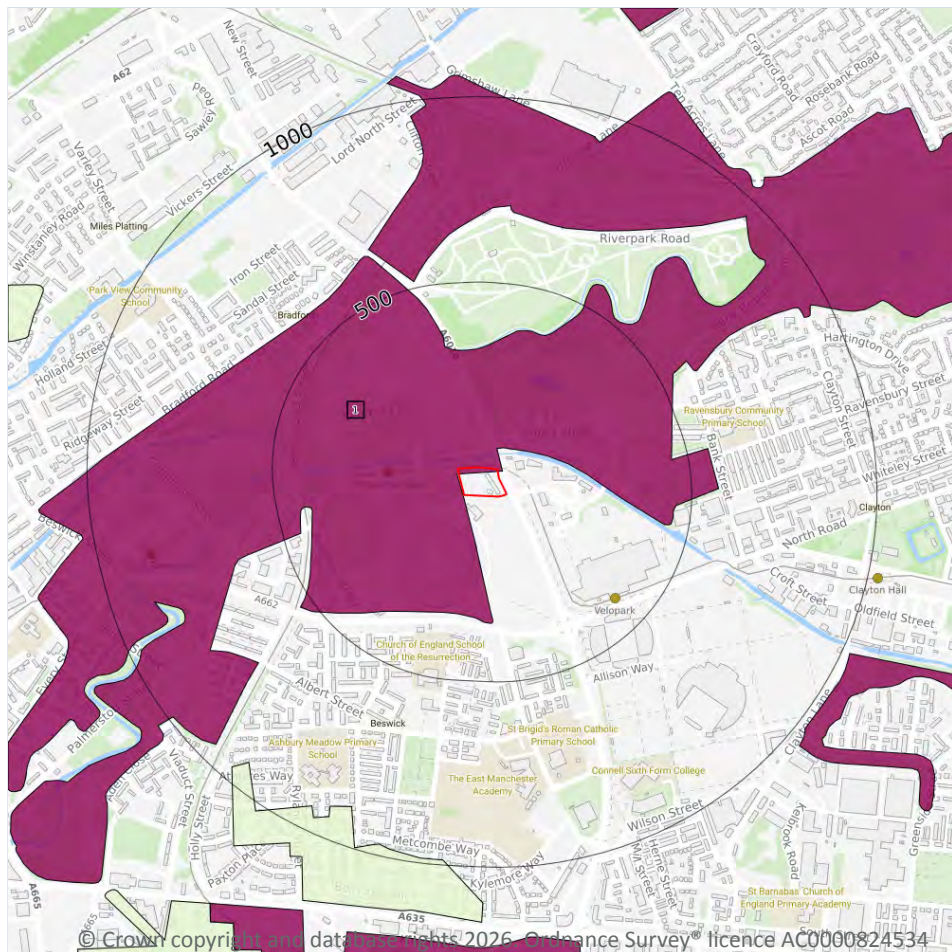
Features are displayed on the Geology 1:50,000 scale - Availability map on [page 119](#) >

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

1

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 120](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	MGR-ARTDP	Made Ground	Artificial deposit

This data is sourced from the British Geological Survey.



15.3 Artificial ground 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 artificial deposits (the zone between the land surface and the water table).

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

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

2

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 122](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	Till, Devensian	Diamicton
2	162m NW	ALV-XCZSV	Alluvium	Clay, silt, sand and gravel

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

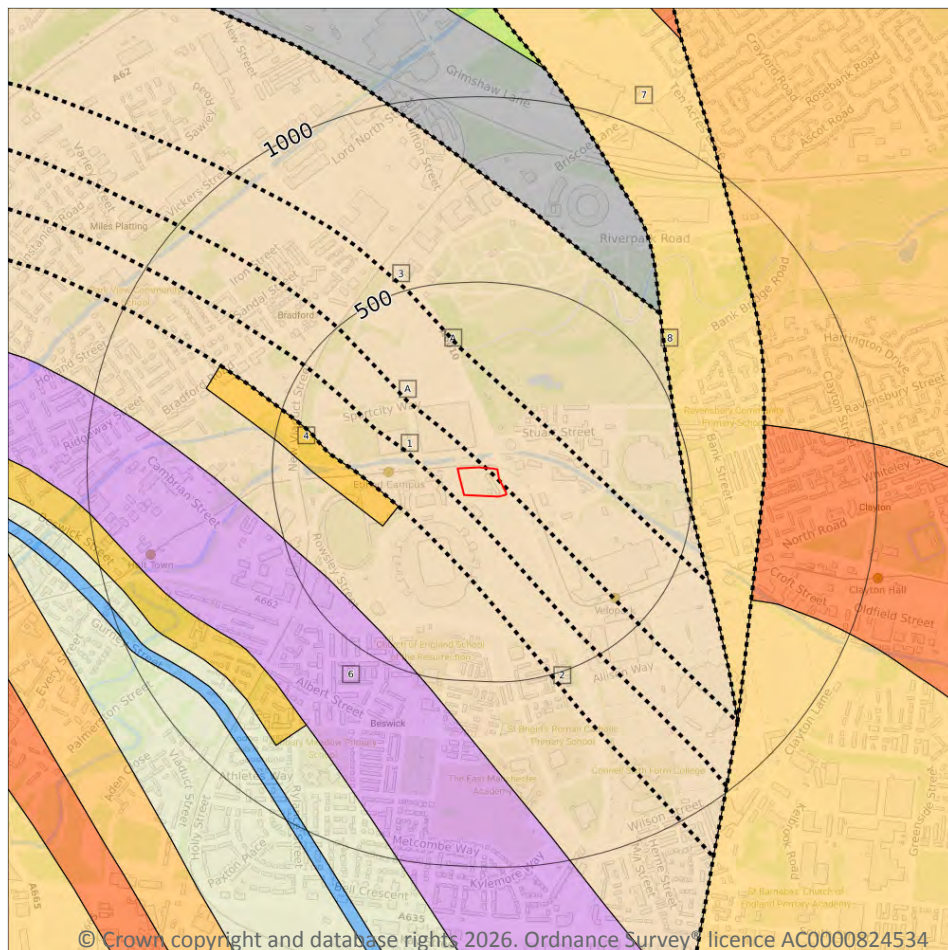
0

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

4

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 124](#) >

ID	Location	LEX Code	Description	Rock age
A	On site	PUCM-MDSS	Pennine Upper Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
4	180m W	OPS-SDST	Openshaw Sandstone-Sandstone	Westphalian
6	419m SW	ETM-STMD	Etruria Formation-Sandstone and mudstone	Westphalian



ID	Location	LEX Code	Description	Rock age
7	481m E	CHES-SDST	Chester Formation-Sandstone	Olenekian

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	6
----------------------------	----------

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.

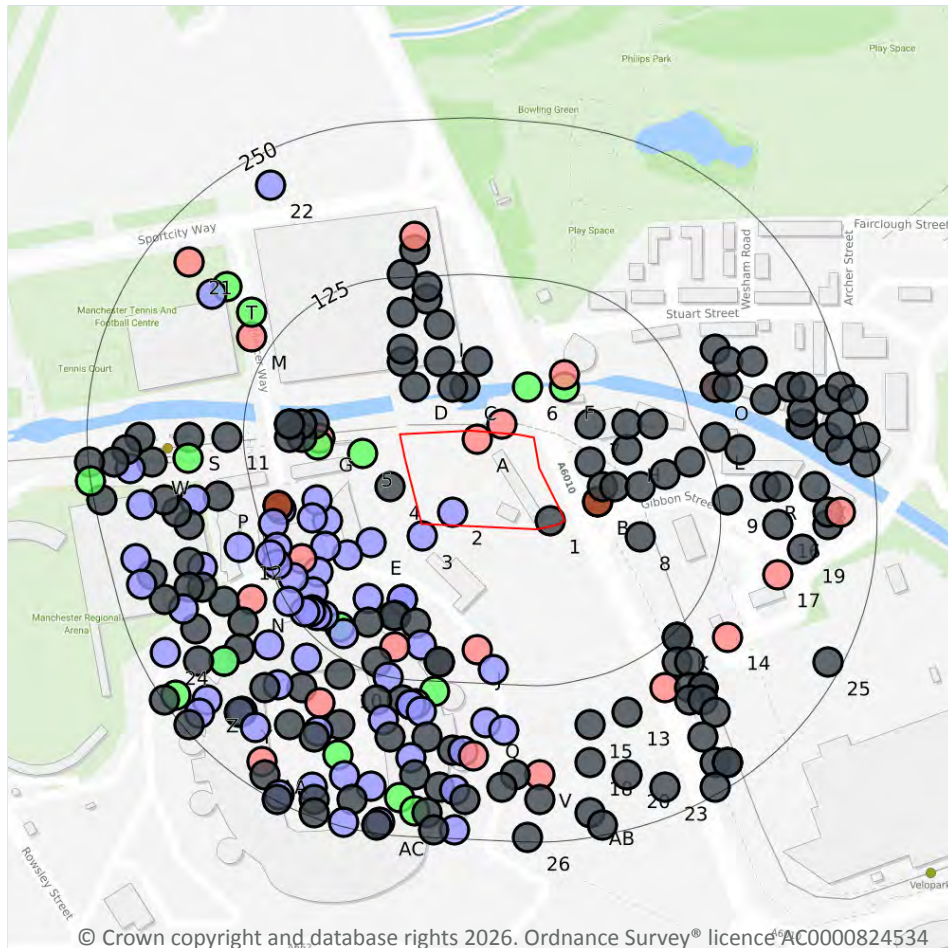
Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 124 >](#)

ID	Location	Category	Description
A	On site	ROCK	Coal seam, inferred
1	24m SW	ROCK	Coal seam, inferred
2	144m SW	ROCK	Coal seam, inferred
3	174m NE	ROCK	Coal seam, inferred
5	180m W	ROCK	Coal seam, inferred
8	481m E	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres

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

246

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 126 >](#)

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	On site	386978 398693	MANCHESTER STADIUM PHASE1 A02	-	Y	N/A
2	On site	386900 398700	MANCHESTER STADIUM PHASE1 TPA29	4.5	N	12700769 ↗



ID	Location	Grid reference	Name	Length	Confidential	Web link
A	On site	386920 398758	MANCHESTER STADIUM PHASE1 SH1	54.0	N	<u>12701004</u> ↗
A	7m N	386940 398770	EASTLANDS R10	65.25	N	<u>936633</u> ↗
3	10m S	386876 398681	MANCHESTER STADIUM PHASE1 TPA25	4.5	N	<u>12700768</u> ↗
4	17m W	386850 398720	EASTLANDS PLOT 23 R1/23	-	Y	N/A
B	30m E	387016 398708	BORING AT AFRICA MILLS	-1.0	N	<u>936547</u> ↗
5	33m W	386828 398747	MANCHESTER STADIUM PHASE1 A38	14.9	N	<u>12700637</u> ↗
C	35m N	386910 398800	EASTLANDS PLOT 29 BH1/29	-	Y	N/A
C	36m N	386900 398800	EASTLANDS PLOT 29 TH2/29	-	Y	N/A
D	37m N	386870 398800	EASTLANDS PLOT 29 TH1/29	-	Y	N/A
B	38m NE	387010 398740	MANCHESTER METROLINK-ADDITIONAL WORKS TPA8	-	Y	N/A
B	38m NE	387020 398720	EASTLANDS PLOT 38 TH 2/38	-	Y	N/A
6	39m N	386960 398800	INTERMEDIATE RING ROAD MC3	13.4	N	<u>936930</u> ↗
E	43m W	386835 398676	MANCHESTER STADIUM PHASE1 TPA24	4.5	N	<u>12700766</u> ↗
7	46m E	387010 398770	EASTLANDS PLOT 38 TH 1/38	-	Y	N/A
B	47m NE	387030 398720	MANCHESTER METROLINK-ADDITIONAL WORKS TPA9	-	Y	N/A
F	47m NE	386990 398800	INTERMEDIATE RING ROAD MC1	16.1	N	<u>936928</u> ↗
C	55m N	386920 398820	EASTLANDS PLOT 29 TH3/29	-	Y	N/A
C	56m N	386890 398820	EASTLANDS PLOT 26 TH1/26	-	Y	N/A
F	56m NE	386990 398810	INTERMEDIATE RING ROAD MC2	30.36	N	<u>936929</u> ↗
D	58m N	386860 398820	EASTLANDS PLOT 26 BH2/26	-	Y	N/A
8	62m E	387050 398680	MANCHESTER METROLINK-ADDITIONAL WORKS TPA10	-	Y	N/A
E	63m S	386860 398630	MANCHESTER STADIUM PHASE1 TPA31	3.0	N	<u>12700770</u> ↗
E	63m S	386860 398630	MANCHESTER STADIUM PHASE1 TPA31	3.0	N	<u>12700772</u> ↗



ID	Location	Grid reference	Name	Length	Confidential	Web link
G	64m W	386794 398759	MANCHESTER STADIUM PHASE1 SHF1	85.0	N	12700972 ↗
E	64m W	386816 398666	MANCHESTER STADIUM PHASE1 TPA23	1.8	N	12700764 ↗
B	66m E	387050 398720	EASTLANDS PLOT 38 2/38	-	Y	N/A
G	66m W	386793 398754	MANCHESTER STADIUM PHASE1 SHF2	18.0	N	12700999 ↗
D	68m N	386860 398830	EASTLANDS PLOT 26 TH2/26	-	Y	N/A
G	69m W	386790 398770	MANCHESTER METROLINK-ADDITIONAL WORKS TPA7	-	Y	N/A
H	70m NE	387040 398750	EASTLANDS PLOT 38 TH 3/38	-	Y	N/A
E	73m W	386800 398693	MANCHESTER STADIUM PHASE1 TPA120	3.0	N	12700950 ↗
E	73m SW	386833 398631	MANCHESTER STADIUM PHASE1 TPA32	3.0	N	12700775 ↗
H	75m E	387040 398770	EASTLANDS PLOT 38 1/38	-	Y	N/A
E	76m W	386792 398710	MANCHESTER STADIUM PHASE1 TPA08	4.5	N	12700741 ↗
E	76m S	386855 398617	ETIHAD STADIUM WSNS4	-	Y	N/A
E	77m S	386853 398617	ETIHAD STADIUM WSNS4A	-	Y	N/A
G	78m W	386780 398760	MANCHESTER METROLINK-ADDITIONAL WORKS TPA6	-	Y	N/A
E	79m W	386799 398673	MANCHESTER STADIUM PHASE1 TPA119	3.3	N	12700949 ↗
G	79m W	386780 398770	MANCHESTER METROLINK-ADDITIONAL WORKS TPA5	-	Y	N/A
E	80m S	386871 398611	ETIHAD STADIUM BHNS8E	-	Y	N/A
E	84m W	386788 398695	MANCHESTER STADIUM PHASE1 TPA121	3.3	N	12700951 ↗
I	86m N	386890 398850	EASTLANDS PLOT 26 TH3/26	-	Y	N/A
B	88m E	387070 398730	EASTLANDS PLOT 38 TH 5/38	-	Y	N/A
G	88m W	386770 398760	MANCHESTER METROLINK-ADDITIONAL WORKS TPA2	-	Y	N/A



ID	Location	Grid reference	Name	Length	Confidential	Web link
G	89m W	386770 398770	MANCHESTER METROLINK-ADDITIONAL WORKS TPA3	-	Y	N/A
G	89m W	386770 398770	MANCHESTER METROLINK-ADDITIONAL WORKS TPA4	-	Y	N/A
E	89m SW	386833 398612	ETIHAD STADIUM BHNS7	-	Y	N/A
E	91m SW	386793 398652	MANCHESTER STADIUM PHASE1 TPA118	3.0	N	12700948 ↗
H	95m E	387060 398770	EASTLANDS PLOT 38 TH 4/38	-	Y	N/A
E	97m S	386875 398594	MANCHESTER STADIUM PHASE1 TPA49	4.5	N	12700799 ↗
I	98m N	386860 398860	EASTLANDS PLOT 26 TH4/26	-	Y	N/A
J	98m S	386920 398590	EASTLANDS R11	65.0	N	936634 ↗
E	99m W	386780 398663	MANCHESTER STADIUM PHASE 1 A05	35.1	N	12700549 ↗
E	101m S	386854 398592	MANCHESTER STADIUM PHASE 1 A06	37.1	N	12700559 ↗
E	102m SW	386789 398636	MANCHESTER STADIUM PHASE1 TPA117	3.0	N	12700947 ↗
E	105m SW	386810 398608	MANCHESTER STADIUM PHASE1 A33C	15.52	N	12700632 ↗
E	106m W	386763 398702	MANCHESTER STADIUM PHASE1 TPA09	3.3	N	12700743 ↗
I	107m N	386880 398870	EASTLANDS PLOT 26 BH1/26	-	Y	N/A
E	107m W	386761 398705	BORING AT BENSON STREET	-1.0	N	936546 ↗
E	108m SW	386813 398603	MANCHESTER STADIUM PHASE1 TPA48	1.2	N	12700798 ↗
E	108m SW	386797 398617	MANCHESTER STADIUM PHASE1 TPA111A	2.0	N	12700895 ↗
E	110m S	386890 398580	EASTLANDS PLOTS 35C,35D & 36 TH1/35	-	Y	N/A
E	110m S	386890 398580	EASTLANDS PLOTS 35C,35D & 36 BH1/35	-	Y	N/A
B	110m NE	387090 398740	EASTLANDS PLOT 38 TH 6/38	-	Y	N/A
E	111m SW	386773 398648	MANCHESTER STADIUM PHASE1 TPA116	3.0	N	12700946 ↗
E	111m SW	386788 398622	ETIHAD STADIUM WSNS3	-	Y	N/A



ID	Location	Grid reference	Name	Length	Confidential	Web link
E	111m SW	386792 398617	MANCHESTER STADIUM PHASE1 A33A	2.0	N	12700630 ↗
E	113m SW	386787 398620	MANCHESTER STADIUM PHASE1 A33	1.4	N	12700629 ↗
J	114m S	386933 398574	MANCHESTER STADIUM PHASE1 TPA58	2.6	N	12700812 ↗
E	115m W	386757 398691	MANCHESTER STADIUM PHASE1 TPA123	3.0	N	12700953 ↗
E	116m S	386840 398580	EASTLANDS PLOTS 35C,35D & 36 TH2/35	-	Y	N/A
E	117m W	386760 398672	MANCHESTER STADIUM PHASE1 TPA22A	3.2	N	12700763 ↗
I	117m N	386880 398880	EASTLANDS PLOT 26 TH5/26	-	Y	N/A
E	117m SW	386782 398620	MANCHESTER STADIUM PHASE1 A33B	2.0	N	12700631 ↗
E	120m W	386760 398658	MANCHESTER STADIUM PHASE1 TPA22	2.4	N	12700761 ↗
E	123m W	386755 398666	MANCHESTER STADIUM PHASE1 TPA122	3.0	N	12700952 ↗
E	123m SW	386769 398629	MANCHESTER STADIUM PHASE1 TPA33	4.5	N	12700776 ↗
E	125m S	386849 398568	MANCHESTER STADIUM PHASE1 TPA59	3.5	N	12700813 ↗
I	128m N	386860 398890	EASTLANDS PLOT 26 TH6/26	-	Y	N/A
K	130m SE	387080 398600	MANCHESTER METRO PHASE 3 EXTENSION TO COMMONWEALTH WEALTH GAMES STADIUM TP J23	-	Y	N/A
K	130m SE	387080 398600	MANCHESTER METROLINK-ADDITIONAL WORKS TPA11	-	Y	N/A
9	132m E	387120 398710	EASTLANDS PLOT 38 TH 8/38	-	Y	N/A
E	133m S	386886 398557	MANCHESTER STADIUM PHASE1 PHA03	24.0	N	12700737 ↗
L	137m NE	387110 398760	EASTLANDS PLOT 38 3/38	-	Y	N/A
10	137m SW	386810 398570	EASTLANDS PLOTS 35C,35D & 36 TH3/35	-	Y	N/A
11	138m W	386720 398760	MANCHESTER METROLINK-ADDITIONAL WORKS TPA1	-	Y	N/A



ID	Location	Grid reference	Name	Length	Confidential	Web link
E	141m SW	386784 398583	MANCHESTER STADIUM PHASE1 TPA47	4.5	N	12700797 ↗
E	141m S	386860 398550	EASTLANDS PLOTS 35C,35D & 36 TH8/35	-	Y	N/A
M	142m NW	386740 398840	LOWER MEDLOCK UCSO 519	30.05	N	937043 ↗
E	144m S	386871 398547	MANCHESTER STADIUM PHASE1 A31B	17.3	N	12700628 ↗
K	145m SE	387080 398580	MANCHESTER METRO PHASE 3 EXTENSION TO COMMONWEALTH WEALTH GAMES STADIUM BHJ8	-	Y	N/A
E	145m S	386867 398546	MANCHESTER STADIUM PHASE1 A31	1.4	N	12700625 ↗
E	145m S	386867 398546	MANCHESTER STADIUM PHASE1 A31	1.4	N	12700626 ↗
E	145m S	386840 398550	EASTLANDS PLOTS 35C,35D & 36 BH2/35	-	Y	N/A
12	146m W	386730 398672	MANCHESTER STADIUM PHASE1 TPA124	3.0	N	12700954 ↗
I	147m N	386870 398910	EASTLANDS PLOT 26 TH7/26	-	Y	N/A
N	148m SW	386740 398630	EASTLANDS R9	65.0	N	936632 ↗
E	149m S	386875 398541	MANCHESTER STADIUM PHASE1 A31A	1.5	N	12700627 ↗
O	150m E	387110 398800	EASTLANDS R1/69	65.0	N	936658 ↗
O	150m E	387110 398800	EASTLANDS PLOT 69 BHR1/69	-	Y	N/A
K	151m SE	387090 398580	MANCHESTER METRO PHASE 3 EXTENSION TO COMMONWEALTH WEALTH GAMES STADIUM TP J22	-	Y	N/A
L	151m E	387130 398750	EASTLANDS PLOT 38 TH 7/38	-	Y	N/A
P	152m W	386713 398713	MANCHESTER STADIUM PHASE 1 A04	-	Y	N/A
M	153m NW	386740 398860	LOWER MEDLOCK UCSO 519A	15.0	N	937044 ↗
K	155m SE	387070 398560	EASTLANDS R8	63.0	N	936631 ↗
N	156m SW	386753 398594	MANCHESTER STADIUM PHASE1 TPA46	3.1	N	12700795 ↗
Q	156m S	386927 398532	MANCHESTER STADIUM PHASE1 TPGG	3.2	N	12701000 ↗
I	157m N	386870 398920	EASTLANDS R5	65.0	N	936628 ↗



ID	Location	Grid reference	Name	Length	Confidential	Web link
E	160m S	386845 398534	MANCHESTER STADIUM PHASE1 TPA60	1.7	N	12700814 ↗
O	160m E	387120 398800	EASTLANDS PLOT 69 TH3/69	-	Y	N/A
13	160m S	387040 398540	EASTLANDS PLOT 35B TH15	-	Y	N/A
14	160m SE	387120 398600	EASTLANDS R2	65.0	N	936625 ↗
O	161m NE	387110 398830	EASTLANDS PLOT 69 TH1/69	-	Y	N/A
Q	161m S	386941 398526	MANCHESTER STADIUM PHASE1 TPA56	3.7	N	12700800 ↗
15	162m S	387010 398530	EASTLANDS PLOT 35B TH14	-	Y	N/A
E	162m SW	386780 398560	EASTLANDS PLOTS 35C,35D & 36 TH4/35	-	Y	N/A
N	163m SW	386733 398612	ETIHAD STADIUM WSNS2	-	Y	N/A
R	163m E	387150 398720	EASTLANDS PLOT 38 4/38	-	Y	N/A
E	164m SW	386794 398548	MANCHESTER STADIUM PHASE1 A10	53.7	N	12700578 ↗
O	166m E	387120 398820	EASTLANDS PLOT 69 BH1/69	-	Y	N/A
K	167m SE	387090 398560	MANCHESTER METRO PHASE 3 EXTENSION TO COMMONWEALTH WEALTH GAMES STADIUM BHJ8T1	-	Y	N/A
S	168m W	386690 398760	EASTLANDS PLOT 19 TH 1/19	-	Y	N/A
N	169m W	386718 398629	ETIHAD STADIUM BHNS4	-	Y	N/A
E	170m S	386880 398520	EASTLANDS PLOTS 35C,35D & 36 TH9/35	-	Y	N/A
S	170m W	386689 398743	MANCHESTER STADIUM PHASE1 PHA05	21.0	N	12700739 ↗
16	171m E	387160 398690	EASTLANDS PLOT 38 TH 10/38	-	Y	N/A
P	171m W	386694 398710	MANCHESTER STADIUM PHASE1 TPA10	4.5	N	12700744 ↗
E	172m SW	386761 398562	MANCHESTER STADIUM PHASE1 TPA107	3.5	N	12700887 ↗
E	173m S	386850 398520	EASTLANDS PLOTS 35C,35D & 36 TH10/35	-	Y	N/A
R	173m E	387160 398720	EASTLANDS PLOT 38 TH 9/38	-	Y	N/A
K	173m SE	387100 398560	MANCHESTER METRO PHASE 3 EXTENSION TO COMMONWEALTH WEALTH GAMES STADIUM TP J21	-	Y	N/A



ID	Location	Grid reference	Name	Length	Confidential	Web link
K	173m SE	387100 398560	MANCHESTER METRO PHASE 3 EXTENSION TO COMMONWEALTH WEALTH GAMES STADIUM BHJ8T2	-	Y	N/A
K	173m SE	387100 398560	MANCHESTER METRO PHASE 3 EXTENSION TO COMMONWEALTH WEALTH GAMES STADIUM BHJ8T3	-	Y	N/A
E	173m S	386810 398530	EASTLANDS PLOTS 35C,35D & 36 TH7/35	-	Y	N/A
K	175m SE	387090 398550	EASTLANDS PLOTS 41 - 44 TH1/41	-	Y	N/A
17	176m E	387160 398650	EASTLANDS R1	65.0	N	936624 ↗
N	176m SW	386730 398591	ETIHAD STADIUM BHNS3	-	Y	N/A
N	179m W	386700 398656	MANCHESTER STADIUM PHASE1 TPA21	4.5	N	12700760 ↗
E	179m S	386900 398510	EASTLANDS PLOTS 35C,35D & 36 TH23/35	-	Y	N/A
E	180m S	386909 398509	MANCHESTER STADIUM PHASE1 TPA76	3.2	N	12700834 ↗
P	180m W	386690 398690	EASTLANDS PLOT 14 TH 2/14	-	Y	N/A
K	181m SE	387100 398550	MANCHESTER METRO PHASE 3 EXTENSION TO COMMONWEALTH WEALTH GAMES STADIUM BHJ8T4	-	Y	N/A
E	181m SW	386750 398560	EASTLANDS PLOTS 35C,35D & 36 TH5/35	-	Y	N/A
T	182m NW	386720 398880	LOWER MEDLOCK UCSO 518	20.27	N	937042 ↗
N	183m W	386700 398640	EASTLANDS PLOT 14 TH 6/14	-	Y	N/A
E	183m S	386917 398505	MANCHESTER STADIUM PHASE1 A07	30.4	N	12700560 ↗
O	185m E	387140 398820	EASTLANDS PLOT 69 TH2/69	-	Y	N/A
E	185m SW	386793 398525	MANCHESTER STADIUM PHASE1 TPA61	4.5	N	12700815 ↗
U	186m NE	387150 398790	EASTLANDS PLOT 69 TH4/69	-	Y	N/A
E	187m S	386867 398504	MANCHESTER STADIUM PHASE1 TPA75	4.5	N	12700833 ↗
P	187m W	386680 398700	EASTLANDS PLOT 14 1/14	-	Y	N/A
T	187m NW	386708 398874	MANCHESTER CORP. BRADFORD GAS WORKS	6.1	N	936479 ↗
N	187m W	386690 398660	EASTLANDS PLOT 14 TH 4/14	-	Y	N/A



ID	Location	Grid reference	Name	Length	Confidential	Web link
E	191m SW	386790 398520	EASTLANDS PLOTS 35C,35D & 36 BH3/35	-	Y	N/A
18	191m S	387010 398500	EASTLANDS PLOT 35B TH11	-	Y	N/A
19	192m E	387180 398670	EASTLANDS PLOT 38 5/38	-	Y	N/A
N	192m SW	386718 398581	MANCHESTER STADIUM PHASE1 A30	1.5	N	12700623 ↗
N	192m SW	386718 398581	MANCHESTER STADIUM PHASE1 A34	12.56	N	12700633 ↗
E	192m SW	386770 398530	EASTLANDS PLOTS 35C,35D & 36 TH6/35	-	Y	N/A
N	192m W	386690 398640	EASTLANDS PLOT 14 2/14	-	Y	N/A
K	195m SE	387110 398540	MANCHESTER METRO PHASE 3 EXTENSION TO COMMONWEALTH WEALTH GAMES STADIUM TP J20	-	Y	N/A
P	195m W	386670 398710	EASTLANDS PLOT 14 TH 1/14	-	Y	N/A
E	196m S	386809 398506	MANCHESTER STADIUM PHASE1 A30A	18.18	N	12700624 ↗
V	196m S	386970 398490	EASTLANDS R4	65.0	N	936627 ↗
V	197m S	386950 398490	EASTLANDS PLOT 35B TH10	-	Y	N/A
N	199m SW	386695 398607	ETIHAD STADIUM BHNS1E	-	Y	N/A
W	199m W	386660 398740	EASTLANDS PLOT 19 TH 2/19	-	Y	N/A
E	201m S	386870 398490	EASTLANDS PLOTS 35C,35D & 36 TH20/35	-	Y	N/A
N	202m W	386685 398623	MANCHESTER STADIUM PHASE1 TPA34	4.5	N	12700778 ↗
X	202m E	387190 398720	EASTLANDS PLOT 38 TH 11/38	-	Y	N/A
U	205m E	387180 398770	EASTLANDS PLOT 59 TH2	-	Y	N/A
U	205m E	387180 398770	EASTLANDS PLOT 59 BH4	-	Y	N/A
K	205m SE	387100 398520	EASTLANDS PLOTS 41 - 44 TH2/41	-	Y	N/A
V	207m S	386940 398480	EASTLANDS PLOT 35B BH1	-	Y	N/A
Y	207m SW	386732 398541	MANCHESTER STADIUM PHASE1 TPST1	1.3	N	12700964 ↗
20	208m S	387040 398490	EASTLANDS PLOT 35B TH12	-	Y	N/A
W	208m W	386650 398760	EASTLANDS PLOT 19 R1/19	-	Y	N/A
U	208m NE	387170 398800	EASTLANDS PLOT 59 BH3	-	Y	N/A



ID	Location	Grid reference	Name	Length	Confidential	Web link
U	209m NE	387180 398780	EASTLANDS PLOT 59 BHR1	-	Y	N/A
N	209m SW	386697 398581	ETIHAD STADIUM WSNS1	-	Y	N/A
Y	209m SW	386730 398540	EASTLANDS PLOT 1 - 10 TH 13/1	-	Y	N/A
E	210m S	386890 398480	EASTLANDS PLOTS 35C,35D & 36 BH6/35	-	Y	N/A
Y	210m SW	386743 398528	MANCHESTER STADIUM PHASE1 TPA62	2.5	N	12700816 ↗
X	211m E	387200 398690	EASTLANDS PLOT 38 TH 12/38	-	Y	N/A
X	211m E	387200 398700	EASTLANDS PLOT 38 R1/38	-	Y	N/A
E	211m S	386814 398489	MANCHESTER STADIUM PHASE1 TPA74	3.2	N	12700832 ↗
E	211m S	386902 398478	MANCHESTER STADIUM PHASE1 TPA82	2.5	N	12700835 ↗
P	213m W	386652 398706	MANCHESTER STADIUM PHASE1 TPA11	4.5	N	12700745 ↗
E	213m S	386835 398481	MANCHESTER STADIUM PHASE1 TPA106	4.5	N	12700885 ↗
N	214m W	386670 398630	EASTLANDS PLOT 14 TH 5/14	-	Y	N/A
V	216m S	386970 398470	EASTLANDS PLOT 35B TH9	-	Y	N/A
W	217m W	386643 398735	MANCHESTER STADIUM PHASE1 TPA12	4.5	N	12700747 ↗
U	217m NE	387180 398800	EASTLANDS PLOT 59 TH1	-	Y	N/A
21	217m NW	386690 398900	LOWER MEDLOCK UCSO 517	30.14	N	937041 ↗
W	219m W	386640 398750	EASTLANDS PLOT 19 1/19	-	Y	N/A
E	219m S	386910 398470	EASTLANDS PLOTS 35C,35D & 36 TH24/35	-	Y	N/A
N	219m W	386660 398650	EASTLANDS PLOT 14 TH 3/14	-	Y	N/A
E	219m S	386858 398472	MANCHESTER STADIUM PHASE1 A23	15.3	N	12700616 ↗
X	221m E	387210 398700	EASTLANDS PLOT 38 R1/38	65.7	N	936657 ↗
U	221m E	387200 398760	EASTLANDS PLOT 59 TH3	-	Y	N/A
Z	222m SW	386704 398550	MANCHESTER STADIUM PHASE1 TPA45	4.5	N	12700794 ↗
22	224m NW	386755 398961	MANCHESTER CORP. BRADFORD GAS WORKS	4.57	N	936480 ↗



ID	Location	Grid reference	Name	Length	Confidential	Web link
23	227m S	387070 398480	EASTLANDS PLOT 35B TH13	-	Y	N/A
E	227m S	386820 398470	EASTLANDS PLOTS 35C,35D & 36 TH16/35	-	Y	N/A
K	227m SE	387110 398500	EASTLANDS PLOTS 41 - 44 BH1/41	-	Y	N/A
U	228m E	387210 398750	EASTLANDS PLOT 59 TH7	-	Y	N/A
E	228m SW	386788 398480	MANCHESTER STADIUM PHASE1 TPA73	4.5	N	12700831 ↗
N	228m W	386647 398663	MANCHESTER STADIUM PHASE1 TPA18	4.2	N	12700755 ↗
AA	229m SW	386748 398501	MANCHESTER STADIUM PHASE1 A14	41.2	N	12700589 ↗
N	229m W	386652 398642	MANCHESTER STADIUM PHASE1 TPA19	4.5	N	12700757 ↗
24	229m SW	386671 398588	MANCHESTER STADIUM PHASE1 TPA35	4.5	N	12700779 ↗
W	229m W	386630 398740	EASTLANDS PLOT 19 TH 3/19	-	Y	N/A
E	230m S	386870 398461	MANCHESTER STADIUM PHASE1 PHA04	18.0	N	12700738 ↗
E	230m S	386880 398460	EASTLANDS PLOTS 35C,35D & 36 TH21/35	-	Y	N/A
AB	230m S	387010 398460	EASTLANDS PLOT 35B TH8	-	Y	N/A
U	231m NE	387200 398790	EASTLANDS PLOT 59 TH4	-	Y	N/A
K	233m SE	387120 398500	MANCHESTER METRO PHASE 3 EXTENSION TO COMMONWEALTH WEALTH GAMES STADIUM TP J19	-	Y	N/A
K	233m SE	387120 398500	MANCHESTER METROLINK-ADDITIONAL WORKS TPA12	-	Y	N/A
U	233m E	387210 398770	EASTLANDS PLOT 59 TH6	-	Y	N/A
Z	233m SW	386698 398539	MANCHESTER STADIUM PHASE1 TPST2	2.0	N	12700965 ↗
E	237m S	386790 398470	EASTLANDS PLOTS 35C,35D & 36 BH4/35	-	Y	N/A
AA	237m SW	386750 398490	EASTLANDS PLOTS 35C,35D & 36 TH11/35	-	Y	N/A
25	239m SE	387200 398580	EASTLANDS PLOTS 48 & 51 BH1/48	-	Y	N/A
Z	239m SW	386679 398554	MANCHESTER STADIUM PHASE1 PHA01	19.0	N	12700638 ↗

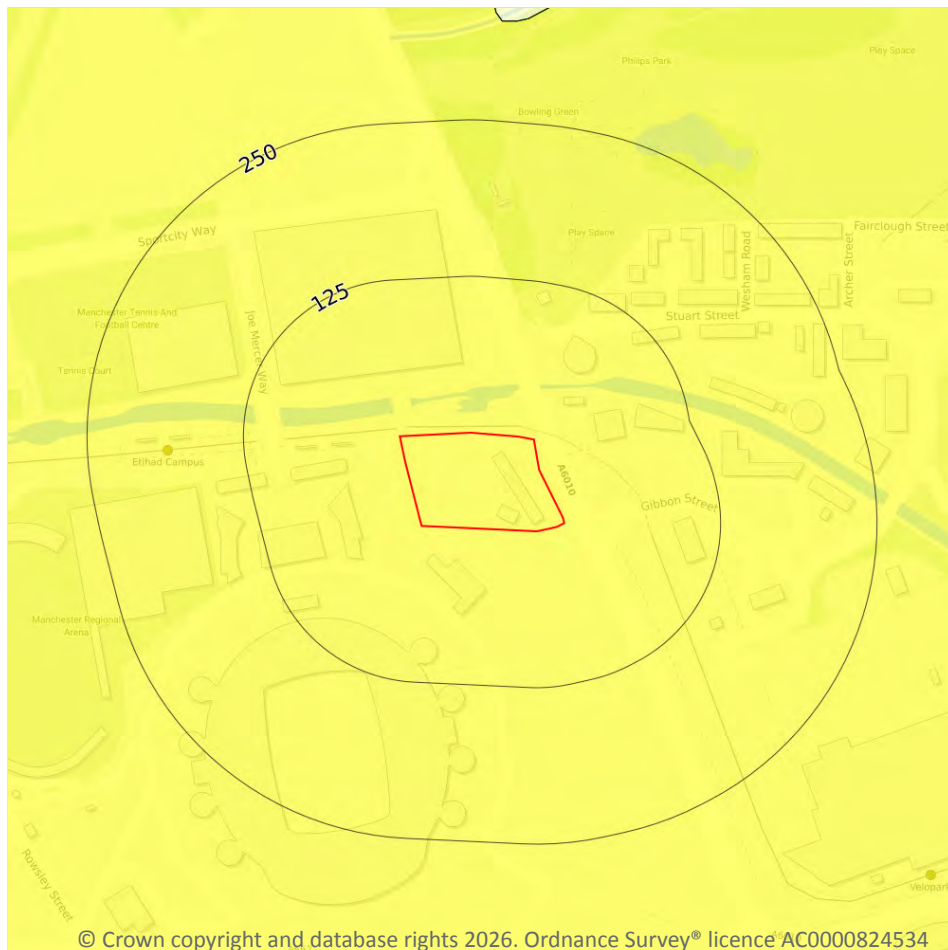


ID	Location	Grid reference	Name	Length	Confidential	Web link
AC	241m S	386842 398452	MANCHESTER STADIUM PHASE1 TPA84	2.2	N	12700851 ↗
AB	242m S	387020 398450	EASTLANDS PLOT 35B BH2	-	Y	N/A
E	243m S	386902 398446	MANCHESTER STADIUM PHASE1 TPA83	4.8	N	12700836 ↗
AC	243m S	386840 398450	EASTLANDS PLOTS 35C,35D & 36 BH5/35	-	Y	N/A
W	244m W	386620 398710	EASTLANDS PLOT 18 TH 1/18	-	Y	N/A
E	244m S	386885 398446	ETIHAD STADIUM BHSS6	-	Y	N/A
U	244m NE	387210 398800	EASTLANDS PLOT 59 TH5	-	Y	N/A
K	245m SE	387110 398480	EASTLANDS PLOTS 41 - 44 TH3/41	-	Y	N/A
AA	245m SW	386762 398474	MANCHESTER STADIUM PHASE1 TPA72	3.3	N	12700830 ↗
U	245m E	387230 398740	EASTLANDS PLOT 59 TH8	-	Y	N/A
Z	245m SW	386690 398530	EASTLANDS PLOT 1 - 10 TH 12/1	-	Y	N/A
E	246m S	386790 398460	EASTLANDS PLOTS 35C,35D & 36 TH13/35	-	Y	N/A
26	246m S	386960 398440	EASTLANDS PLOT 35B TH3	-	Y	N/A
E	247m S	386813 398452	MANCHESTER STADIUM PHASE1 TPA85	2.4	N	12700852 ↗
Z	249m SW	386670 398550	EASTLANDS PLOT 1 - 10 R2/1	-	Y	N/A
AA	249m SW	386760 398470	EASTLANDS PLOTS 35C,35D & 36 TH12/35	-	Y	N/A
W	249m W	386610 398740	MANCHESTER METROLINK-EAST OF ARDWICK VOL 1 BH22	-	Y	N/A
U	250m E	387220 398790	EASTLANDS PLOT 59 BH2	-	Y	N/A
U	250m E	387230 398760	EASTLANDS PLOT 59 TH10	-	Y	N/A
W	250m W	386611 398725	MANCHESTER STADIUM PHASE1 A37	13.1	N	12700636 ↗

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).

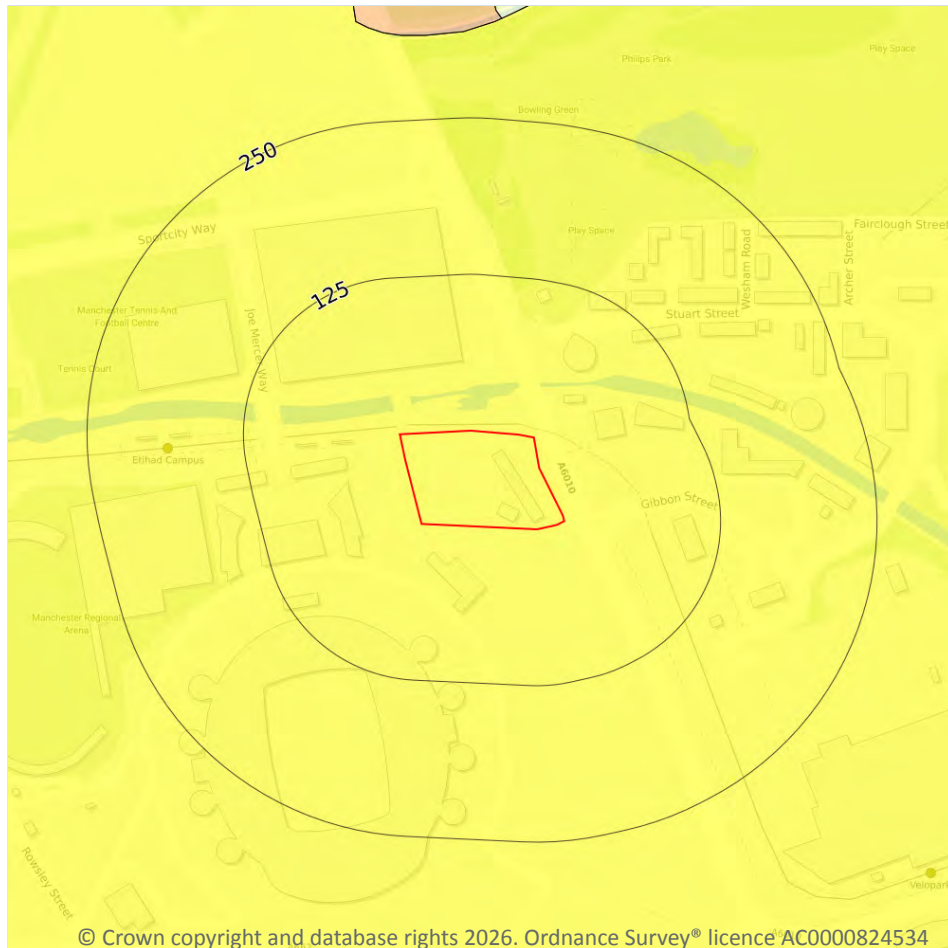
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 138](#) >

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.

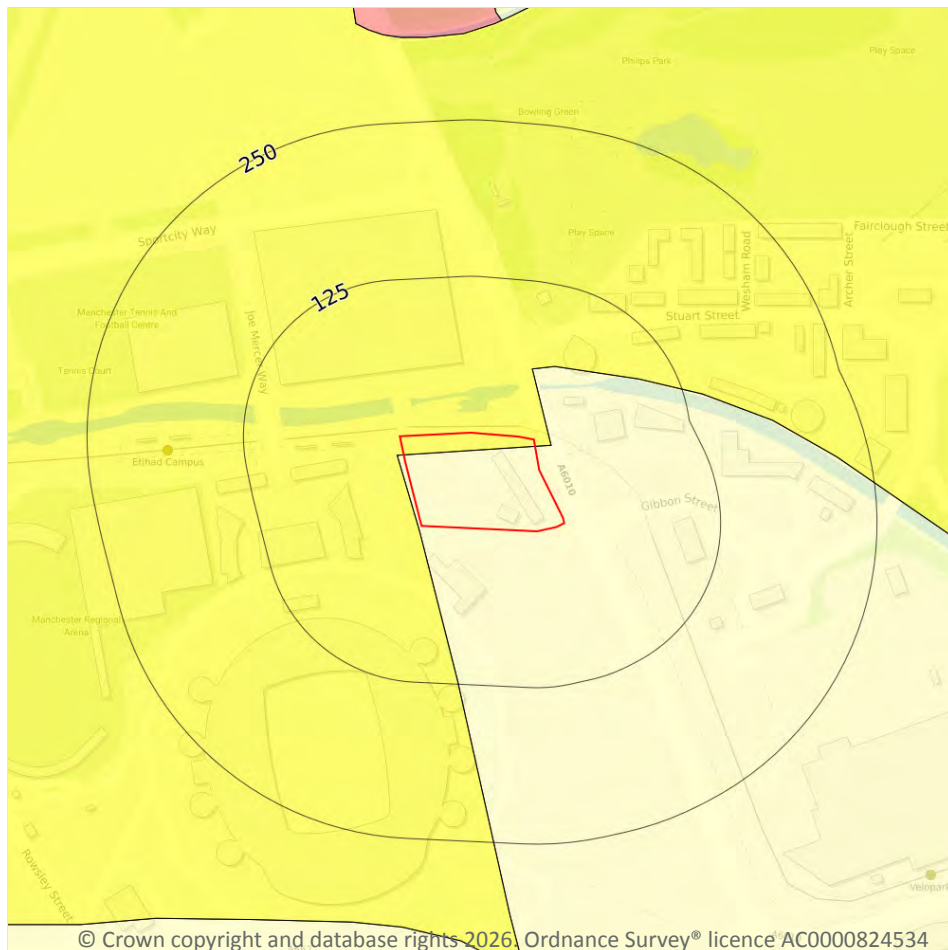
Features are displayed on the Natural ground subsidence - Running sands map on [page 139 >](#)

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

2

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 140](#) >

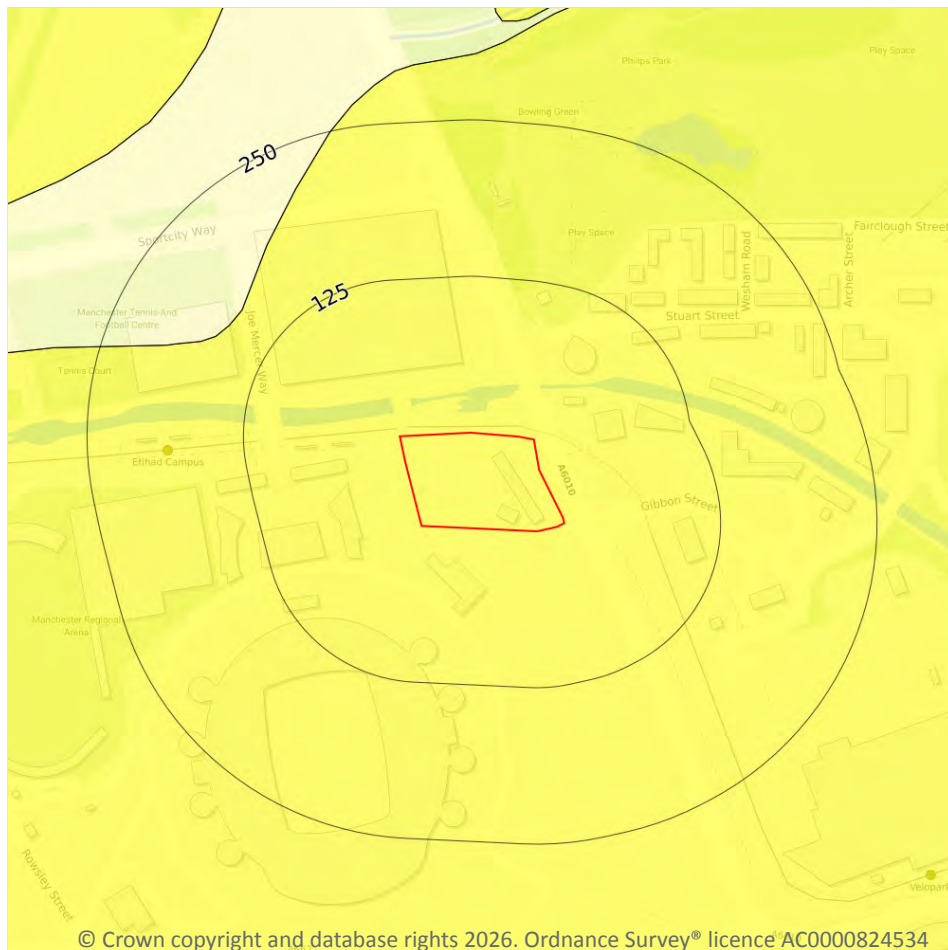
Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
On site	Very low	Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.



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.

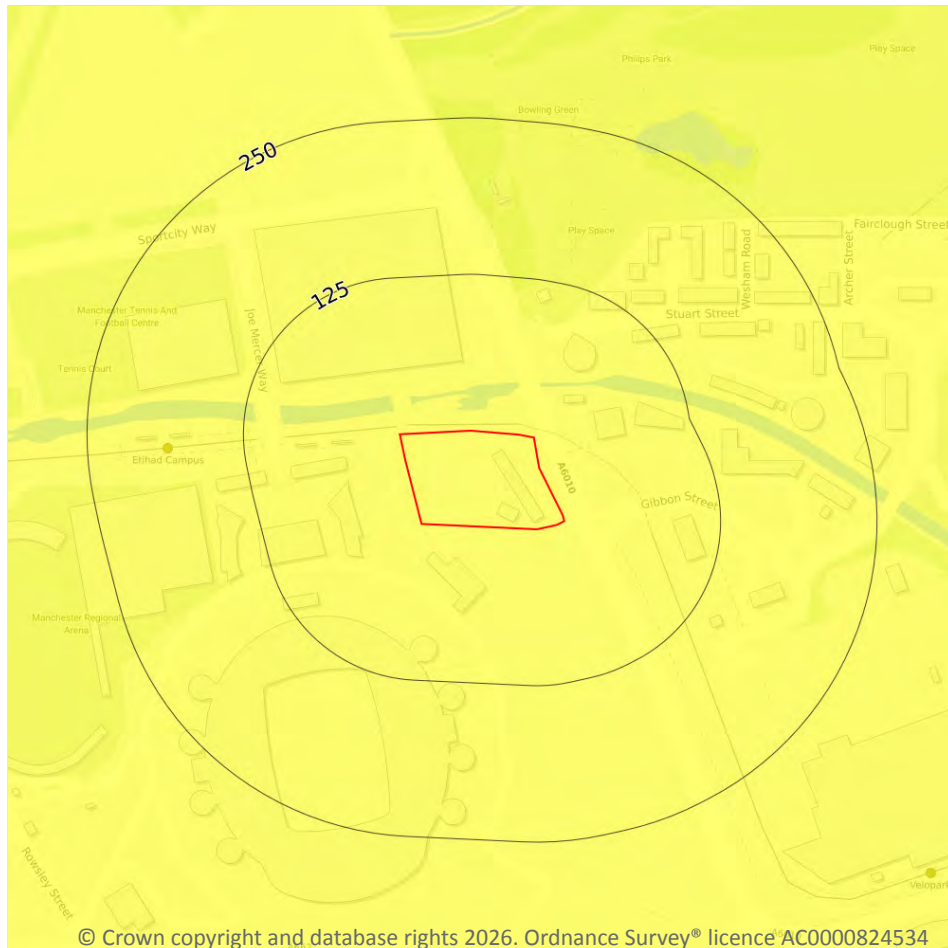
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 142 >](#)

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



— Site Outline
Search buffers in metres (m)

- ☐ No data
- ☐ Negligible
- ☐ Very low
- ☐ Low
- ☐ Moderate
- ☐ High

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.

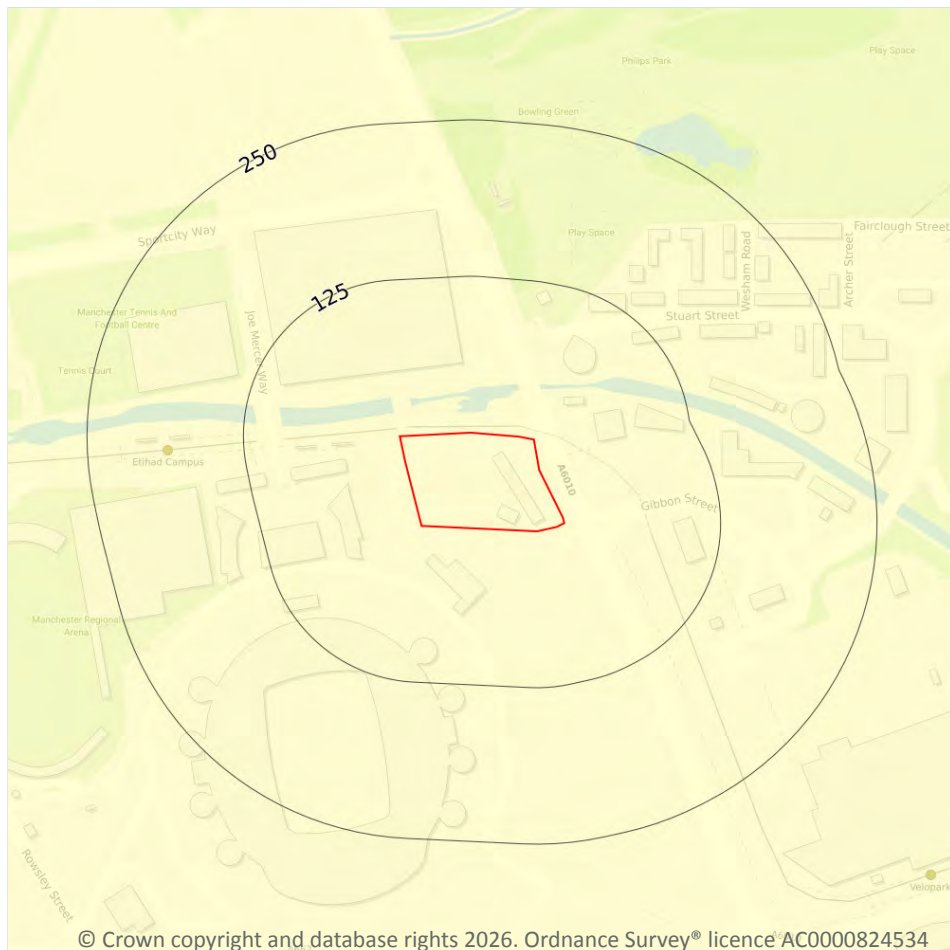
Features are displayed on the Natural ground subsidence - Landslides map on [page 143 >](#)

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 144](#) >

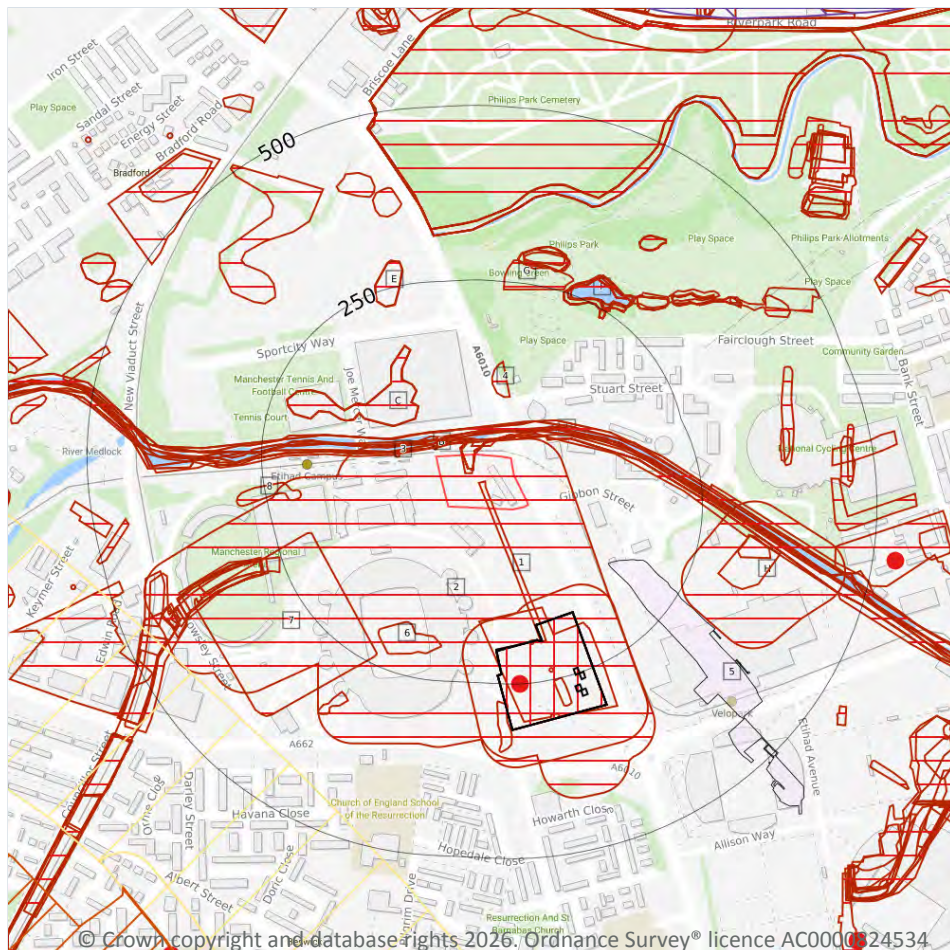
Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.



This data is sourced from the British Geological Survey.



18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- ▨ Surface ground workings
- ▨ Underground workings
- ▨ Underground mining extents
- ▨ Historical mineral planning areas
- ▨ TCA non-coal mining
- 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 BritPits

Records within 500m

1

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 and ground workings map on [page 146](#) >

ID	Location	Details	Description
D	250m S	Name: Bradford Colliery Address: Bradford, MANCHESTER, Lancashire Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit, drift or incline. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun' Ee' - Scots). May also be locally termed 'Quarry' or 'Underground Quarry' when referring to sites extracting building stone (e.g. in Dorset and Wiltshire). The location given is that of the mine entrance and may be approximate for older sites shown on contemporaneous mapping by the Geological Survey used as the source document. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	45
----------------------------	-----------

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 and ground workings map on [page 146](#) >

ID	Location	Land Use	Year of mapping	Mapping scale
1	On site	Canal	1891	1:10560
2	On site	Colliery	1968	1:10560
A	On site	Canal	1938	1:10560
A	On site	Canal	1933	1:10560
A	On site	Canal	1921	1:10560
A	On site	Canal	1906	1:10560
A	On site	Canal	1891	1:10560
A	On site	Canal	1923	1:10560
B	10m N	Coal Pits	1848	1:10560
A	12m N	Canal	1991	1:10000
B	18m N	Canal	1968	1:10560
B	18m N	Canal	1956	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
A	21m N	Canal	1985	1:10000
A	21m N	Canal	1981	1:10000
3	53m W	Coal Pits	1848	1:10560
C	62m NW	Unspecified Ground Workings	1923	1:10560
C	62m NW	Unspecified Ground Workings	1921	1:10560
C	62m NW	Unspecified Ground Workings	1906	1:10560
4	85m N	Refuse Heap	1848	1:10560
D	130m S	Colliery	1891	1:10560
D	146m S	Colliery	1848	1:10560
D	165m S	Colliery	1923	1:10560
D	165m S	Colliery	1921	1:10560
D	165m S	Colliery	1906	1:10560
6	175m S	Pond	1848	1:10560
D	189m S	Coal Pits	1848	1:10560
7	190m SW	Reservoir	1848	1:10560
8	200m W	Pond	1848	1:10560
E	225m N	Unspecified Pit	1923	1:10560
E	225m N	Unspecified Pit	1921	1:10560
E	225m N	Unspecified Pit	1906	1:10560
D	234m S	Coal Pits	1848	1:10560
F	236m N	Pond	1938	1:10560
F	236m N	Pond	1933	1:10560
F	236m N	Pond	1921	1:10560
F	236m N	Pond	1906	1:10560
F	236m N	Pond	1891	1:10560
F	236m N	Pond	1923	1:10560
G	239m N	Pond	1968	1:10560
H	242m E	Brick Field	1891	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
F	243m N	Ponds	1956	1:10560
F	245m N	Pond	1968	1:10560
F	245m N	Pond	1981	1:10000
F	245m N	Pond	1985	1:10000
F	245m N	Pond	1991	1:10000

This is data is sourced from Ordnance Survey®/Groundsure.

18.3 Underground workings

Records within 1000m

7

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 and ground workings map on [page 146 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
D	165m S	Colliery	1921	1:10560
D	165m S	Colliery	1906	1:10560
D	165m S	Colliery	1923	1:10560
D	243m S	Unspecified Shafts	1981	1:10000
D	251m S	Unspecified Disused Shafts	1985	1:10000
D	266m S	Unspecified Shafts	1981	1:10000
D	275m S	Unspecified Disused Shafts	1985	1:10000

This is data is sourced from Ordnance Survey®/Groundsure.

18.4 Underground mining extents

Records within 500m

1

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

Features are displayed on the Mining and ground workings map on [page 146 >](#)



ID	Location	Mineral	Mineral type
5	142m SE		Fireclay

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0
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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	5
-----------------------------	----------

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 and ground workings map on [page 146 >](#)

ID	Location	Name	Commodity	Class	Likelihood
13	425m SW	Not available	Vein Mineral	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
AI	667m SW	Not available	Building stone (zone of influence)	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
29	712m SW	Not available	Building stone (zone of influence)	NA	Zone of influence only
AI	717m SW	Ardwick	Limestone - Ardwick/Vein Mineral	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
30	719m SW	Ardwick	Limestone - Ardwick	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.



This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site

1

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.

18.8 The Coal Authority non-coal mining

Records within 500m

0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. 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 prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m

2

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

Location	Mineral type
316m SE	Unspecified
440m SE	Unspecified

This data is sourced from Groundsure.



18.10 Mining record office plans

Records within 500m

1

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

Location	Mineral
----------	---------

69m SE

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m

0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site

1

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.

18.13 Brine areas

Records on site

0

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.



18.14 Gypsum areas

Records on site	0
-----------------	---

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0
-----------------	---

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0
-----------------	---

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 Ground cavities and sinkholes



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- Mining cavities
- Reported recent incidents
- Historical incidents

19.1 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.

19.2 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 Ground cavities and sinkholes map on [page 154 >](#)

ID	Location	Mine Address	Mineral
1	286m SE	Manchester, Greater Manchester	Fireclay
-	687m S	Ardwick, Greater Manchester	Bath Stone, Cornstone, Limestone

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

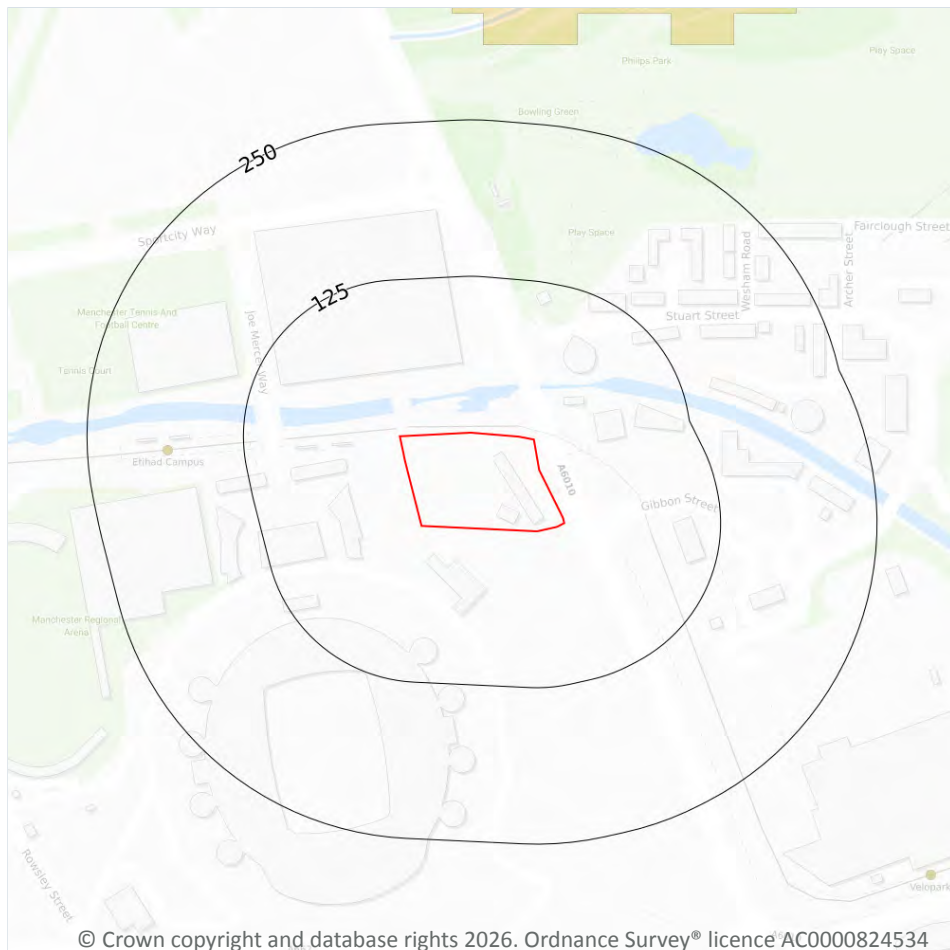
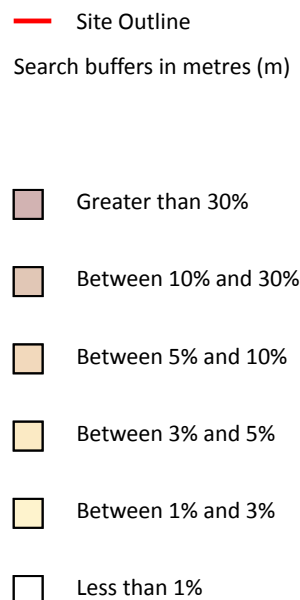
This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey® maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey® mapping will necessarily be present within this dataset.

This data is sourced from Groundsure.



20 Radon



20.1 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 156 >](#)

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.



21 Soil chemistry

21.1 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	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
11m E	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

8

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	20	3.5	41	28	0.3	131	23	39	3
On site	20	3.5	54	37	0.3	135	23	40	9
On site	20	3.5	63	43	0.3	125	25	38	7
On site	20	3.5	66	45	0.3	129	25	39	6
11m E	21	3.7	80	55	0.3	107	27	35	6
12m E	23	4	79	54	0.3	109	31	37	6



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	22	3.8	70	48	0.3	118	24	38	4
36m N	21	3.7	55	38	0.3	124	24	38	8

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m

1

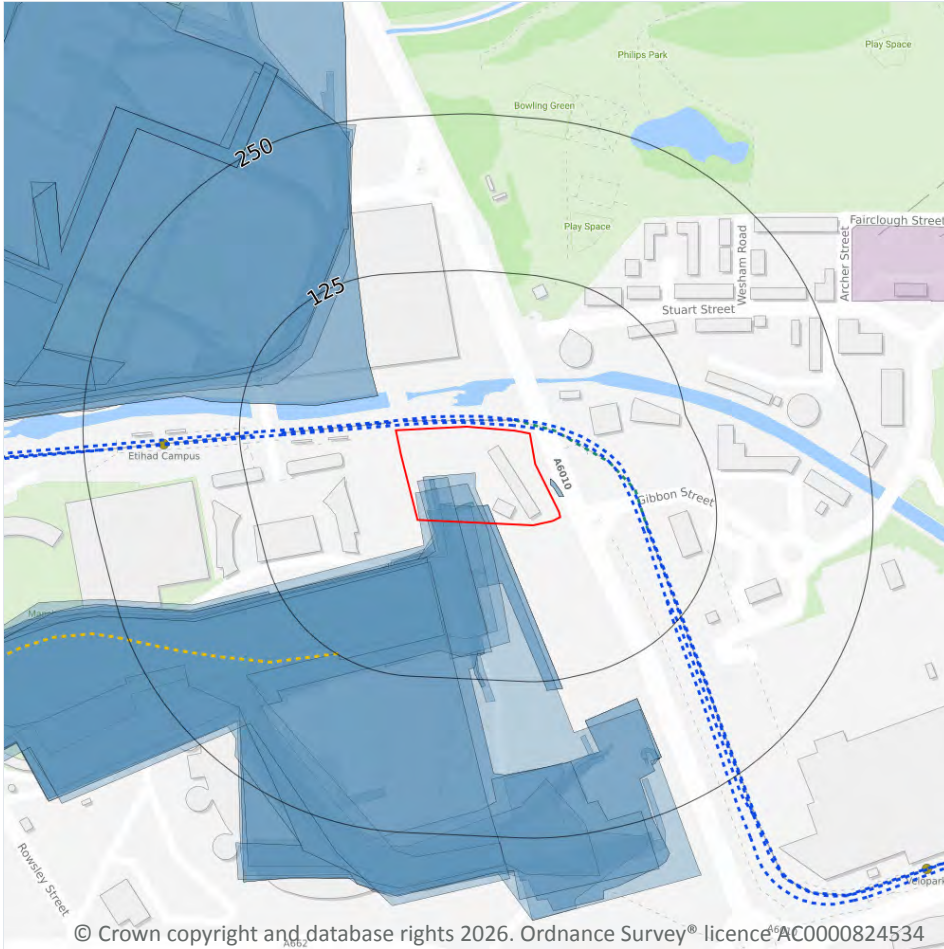
The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

Location	Arsenic (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Lead (mg/kg)	Tin (mg/kg)	Sample Type
On site	20.0	1.2	136.0	112.7	40.2	307.9	28.8	Topsoil

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

22.1 Underground railways (London)

Records within 250m

0

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.

22.2 Underground railways (Non-London)

Records within 250m

0

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.

22.3 Railway tunnels

Records within 250m

1

Railway tunnels taken from contemporary Ordnance Survey® mapping.

Features are displayed on the Railway infrastructure and projects map on [page 160 >](#)

Location	Type
7m N	Railway Tunnel

This data is sourced from the Ordnance Survey®.

22.4 Historical railway and tunnel features

Records within 250m

78

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.

Features are displayed on the Railway infrastructure and projects map on [page 160 >](#)

Location	Land Use	Year of mapping	Mapping scale
On site	Railway Sidings	1938	10560
On site	Railway Sidings	1933	10560
On site	Railway Sidings	1921	10560
On site	Railway Sidings	1906	10560
On site	Railway Sidings	1956	10560
On site	Railway Sidings	1981	10000
On site	Railway Sidings	1923	10560
On site	Railway Sidings	1948	1250
On site	Railway Sidings	1955	1250
On site	Railway Sidings	1958	2500
On site	Railway Sidings	1908	2500
On site	Railway Sidings	1922	2500
On site	Railway Sidings	1932	2500



Location	Land Use	Year of mapping	Mapping scale
4m NE	Railway Sidings	1948	1250
4m NE	Railway Sidings	1955	1250
23m S	Railway	1905	-
24m S	Railway	1922	-
24m S	Railway	1932	-
25m S	Railway	1893	-
25m S	Railway Sidings	1893	2500
30m S	Railway Sidings	1968	10560
31m NW	Railway Sidings	1938	10560
31m NW	Railway Sidings	1933	10560
33m S	Railway Sidings	1891	10560
38m S	Railway Sidings	1932	2500
41m S	Railway Sidings	1893	2500
41m S	Railway Sidings	1908	2500
41m S	Railway Sidings	1922	2500
42m SW	Railways	1922	-
45m SW	Railway Sidings	1922	2500
50m SW	Railway Sidings	1893	2500
52m SW	Railway Sidings	1908	2500
52m SW	Railway Sidings	1931	2500
52m SW	Railway	1891	-
64m S	Railway Sidings	1979	1250
64m S	Railway Sidings	1987	1250
72m S	Railway Sidings	1893	2500
72m S	Railway Sidings	1908	2500
72m S	Railway Sidings	1922	2500
72m S	Railway Sidings	1932	2500
89m NW	Railway Sidings	1956	10560



Location	Land Use	Year of mapping	Mapping scale
100m NW	Railway Sidings	1931	2500
102m NW	Railway Sidings	1968	10560
104m S	Railway Sidings	1893	2500
104m S	Railway Sidings	1908	2500
104m S	Railway Sidings	1922	2500
104m S	Railway Sidings	1932	2500
106m NW	Railway Sidings	1948	1250
106m NW	Railway Sidings	1958	2500
106m NW	Railway Sidings	1955	1250
108m NW	Railway Sidings	1981	10000
113m SW	Railway Sidings	1891	500
148m SW	Railway Sidings	1891	500
150m NW	Railway Sidings	1955	1250
173m S	Railway Sidings	1908	2500
184m S	Railway Sidings	1949	1250
189m S	Railway	1922	-
190m S	Railway Sidings	1949	1250
191m S	Railway Sidings	1922	2500
196m S	Tramway Sidings	1953	1250
196m S	Tramway Sidings	1949	1250
197m S	Railway Sidings	1949	1250
198m S	Railway Sidings	1922	2500
204m S	Tramway Sidings	1949	1250
204m S	Tramway Sidings	1953	1250
206m N	Railway Sidings	1955	1250
207m SE	Tramway Sidings	1953	1250
207m SE	Tramway Sidings	1949	1250
216m S	Railway Sidings	1908	2500



Location	Land Use	Year of mapping	Mapping scale
219m SW	Railway Sidings	1956	1250
220m W	Tramway Sidings	1922	2500
223m W	Railway Sidings	1921	10560
223m W	Tramway Sidings	1931	2500
242m W	Railway Sidings	1923	10560
243m N	Railway Sidings	1970	2500
243m N	Railway Sidings	1949	2500
243m N	Railway Sidings	1968	1250
245m NW	Railway Sidings	1906	10560

This data is sourced from Ordnance Survey®/Groundsure.

22.5 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.

22.6 Historical railways

Records within 250m

1

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

Features are displayed on the Railway infrastructure and projects map on [page 160 >](#)

Location	Description
124m SW	Razed

This data is sourced from OpenStreetMap.



22.7 Railways

Records within 250m

15

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

Features are displayed on the Railway infrastructure and projects map on [page 160](#) >

Location	Name	Type
3m N		light_rail
4m N		light_rail
5m N	Not given	Multi Track
7m NW	Not given	Multi Track
8m N		light_rail
9m N		light_rail
23m W	Not given	Multi Track
68m E		light_rail
70m E	Not given	Multi Track
72m E		light_rail
90m W		light_rail
105m SE		light_rail
108m W		light_rail
115m W	Not given	Multi Track
238m W	Not given	Multi Track

This data is sourced from Ordnance Survey® and OpenStreetMap.

22.8 Crossrail 2

Records within 500m

0

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.



22.9 HS2

Records within 500m

0

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> ↗.

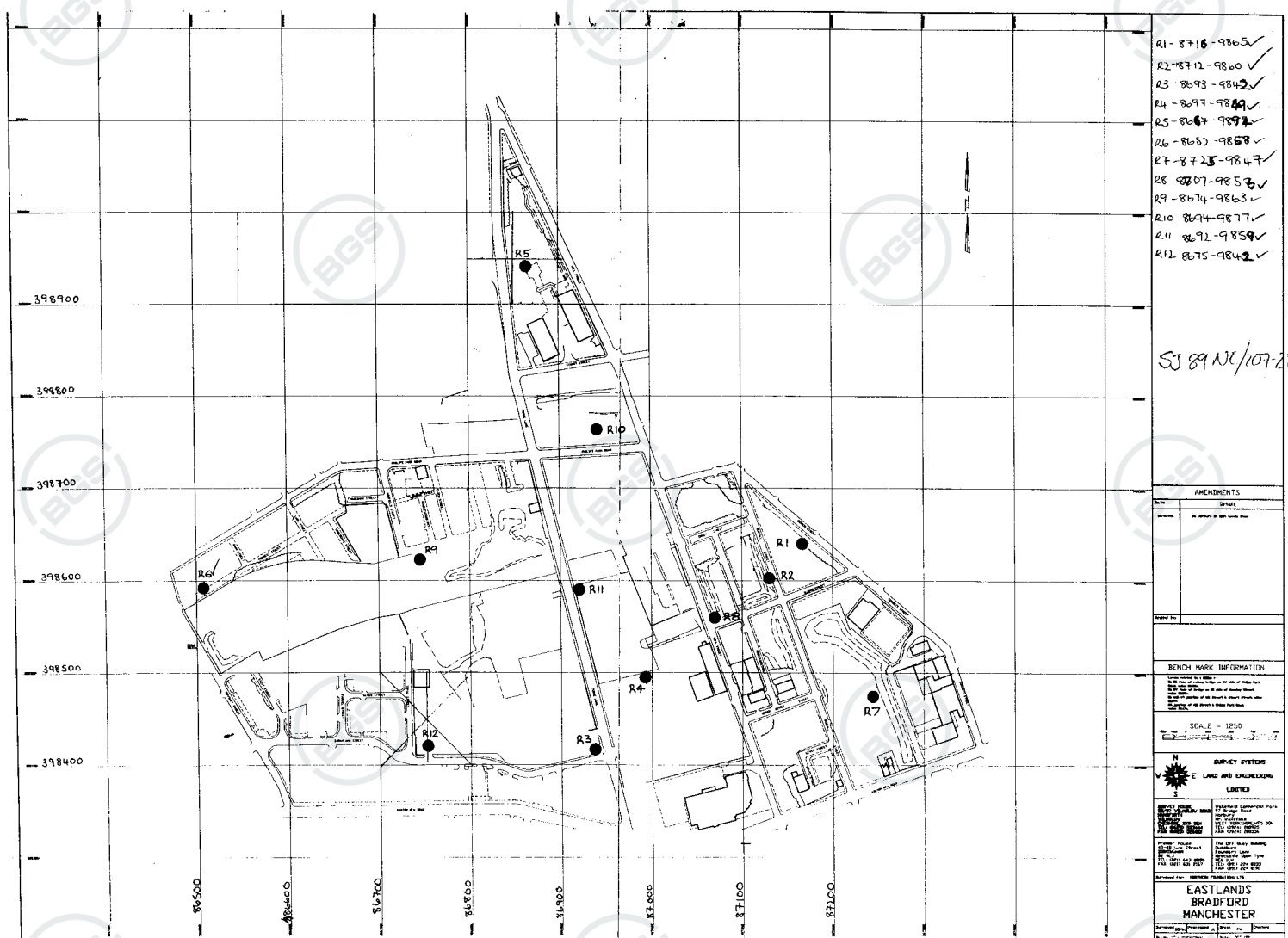
Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-and-conditions-april-2023/ ↗.



APPENDIX 6

BGS BOREHOLE LOGS







Borehole Log SJ89NE 216 8694-9877

Site EASTLANDS Job No. S.I. 5400
Client Manchester City Council Date Oct. 1991
Borehole No. R10 sheet 1 Diameter 75 mm core
Grid Ref. Method Rotary
Ground Level 61.75 m a.s.d. Scale 1:100

Description	Depth m	Legend	O.D. level m	Samples and in situ tests			TCR %	RQD %	I _s (30) MN/m ²	
				Depth, m	Type	Dip				
Concrete	0.60									
Fill - brick rubble, clay	1.50									
Clay - glacial boulder clay / till - stiff										
	15.15		46.60	15.00						
Mudstone - brown & mid-grey - highly or completely weathered - very weak	17.00				C 1		34	38	0.01	
Remarks Continued on sheet 2 Water - flush ; coreline						Key U - undisturbed B - bulk D - disturbed S - SPT: SC - Solid Cone C - Core W - Water				

Northern Foundations

Borehole Log

SJ89NE 216

Site EASTLANDS
Client Manchester City Council
Borehole No. R 10 sheet 2
Grid Ref.
Ground Level

Job No. S.I. 5400
Date Oct. 1991
Diameter 75 mm core
Method Rotary
Scale 1 : 100

Description	Depth m	Legend	O.D. level m	Samples and in situ tests			TCR %	RQD %	Is (30) MN/m ²	
				Depth, m	Type	Dip				
Continued from sheet 1	17.00									
Mudstone - as sheet 1	17.50			17.50	C 1					
Mudstone - dark grey, shaley - moderately weathered & fractured - very weak	18.45		43.30						0.03	
Coal - highly fragmented	19.25		42.50		C 2		98	12		
Seatearth - with plant fossils - weak	19.65								0.11	
Mudstone - light to mid-grey - some plant fossils - occasional ironstone nodules - mod. weathered & fractured - weak	21.30			20.00					0.12	
Mudstone - mid-grey - with occasional thin (up to 300mm) bands of fine grained sandstone - fresh - moderately fractured, some oxidation on fracture planes - initially moderately weak, improving with depth to becoming moderately strong				22.70	C 3	21°	100	21	0.32	
				23.75	C 4		100	31		
				25.80	C 5		98	47	0.30	
				31.80	C 6		100	41		
	32.00				C 7		87	19	0.73	
	34.00			33.35	C 8		50	65	0.43	
Mudstone - dark grey - mod. weathered & fractured - moderately weak										
Remarks Coal : 18.45 - 19.25 Water - flush, coreline										

Key U - undisturbed
B - bulk
D - disturbed
S - SPT: SC - Solid Cone
C - Core
W - Water

Northern Foundations

Borehole Log

SJ89NE 216

Site EASTLANDS
Client Manchester City Council
Borehole No. R10 sheet 3
Grid Ref.
Ground Level

Job No. S.I. 5400
Date Oct. 1991
Diameter 75 mm core
Method Rotary
Scale 1 : 100

Description	Depth m	Legend	O.D. level m	Samples and in situ tests			TCR %	RQD %	I _s (10) MN/m ²	
				Depth, m	Type	Dip				
Continued from sheet 2	34.00									
Mudstone - as sheet 2 - some oxidation on front planes	34.55		27.20						0.43	
Void	36.15		25.60		C 8		50	65		
Seatearth - some plant fossils - weak	36.35			36.35					0.18	
Mudstone - light or mid-grey with occasional thin bands dark grey or black - occasional very thin (20-100mm) bands of sandstone - occasional ironstone nodules, some plant fossils - fresh or slightly weathered - moderately fractured - initially moderately weak, becoming moderately strong					C 9		100	55	0.22	
				39.35						
					C 10		99	61		
				40.35						
					C 11		98	16	0.43	
				43.55						
					C 12		98	44		
				46.30						
					C 13	16°	100	63	1.28	
				49.00						
					C 14		100	35		
				50.35						
Continued on sheet 4	51.00				C 15		100	68		
Remarks Void : 34.55 - 36.15 m. Water flush ; coreline						Key U - undisturbed B - bulk D - disturbed S - SPT. SC - Solid Cone C - Core W - Water				

Northern Foundations

Borehole Log

SJ89NE 216

Site EASTLANDS
Client Manchester City Council
Borehole No. R 10 sheet 4
Grid Ref.
Ground Level

Job No. S.I. 5400
Date Oct. 1991
Diameter 75 mm core
Method Rotary
Scale 1 : 100

Description	Depth m	Legend	O.D. level m	Samples and in situ tests			TCR %	RQD %	I _s (70) MN/m ²	
				Depth, m	Type	Dip				
Continued from sheet 3	51.00									
Mudstone - as sheet 1 - moderately strong				52.00	C 15		100	68		
					C 16		98	58	0.70	
	54.95		6.80							
Coal - highly fragmented	55.20		6.55	57.00						
Mudstone - mid-grey - occasional thin bands of sandstone - fresh - slightly fractured - moderately strong				58.00	C 17	16°	92	77		1.30
	59.05									
Sandstone - lt. gr., fine grain - strong	59.35				C 18		96	57	3.70	
Mudstone - mid-grey - fresh - moderately fractured - some oxidation at base - some ironstone nodules - moderately strong				61.00	C 19		100	36	1.24	
	63.25			63.25						
Mudstone - dark grey - sl. weathered, highly fractured	64.00		-2.25		C 20		40	0		
Mudstone breccia - contused - traces of coal - loose - collapsed workings	65.10		-3.35							
Seatearth	65.25		-3.50							
Remarks Coal : 54.95 - 55.20 Collapsed workings : 64.00 - 65.10 , very poor recovery Water flush ; coreline . Re-drill - water at 19m						Key U - undisturbed B - bulk D - disturbed S - SPT: SC - Solid Cone C - Core W - Water				

Northern Foundations



Norwest Holst Soil Engineering Ltd.

BOREHOLE LOG - CABLE PERCUSSION

Hole ID.
A38
Header

Contract No.	F11212	Method	Cable Percussion	Coordinates	86828.8 E
Project	Manchester Stadium S.I. Phase 1				98747.6 N
Client	Manchester City Council	Drilling Rig	Edeco	Ground Level	59.70m AOD
		Driller	ID	Orientation	Vertical
Consultant	Ove Arup and Partners	Logged by	MF	Date Started	25/11/1998
				Date Completed	30/11/1998

PROGRESS						DRILLING DETAILS			
Date	Time	Hole depth	Casing depth	Water depth	Remarks	Hardbore from depth	Hardbore to depth	Chiselling hours	Remarks
25/11/1998	1800	9.60	0.00	Dry		13.50	13.80	0.75	
26/11/1998	0800	9.60	0.00	Dry		14.20	14.60	1.00	
26/11/1998	1800	14.90	3.00	Dry					

CASING				WATER STRIKES							
Hole diam.	Max depth of hole at dia.	Casing diameter	Max depth of casing of dia.	Date	Time	Strike at depth	Rise to depth	Time taken to rise	Flow	Casing depth at strike time	Casing depth to seal flow
150	14.90	150	3.00								

GENERAL NOTES		SPT DETAILS		
1. Borehole complete at 14.90m. 2. 19mm casagrande piezometer installed at 7.90m. Sand filter from 5.00m to 8.00m.		Depth	Type	Incremental blow count/penetration in mm
		0.50	S	N=1 (1,0,0,1,0,0)
		1.50	S	N=12 (1,1,2,3,3,4)
		3.10	S	N=17 (2,3,4,4,4,5)
		4.20	S	N=28 (3,3,5,6,7,10)
		5.30	S	N=26 (3,4,4,6,8,8)
		6.40	S	N=18 (1,2,3,4,5,6)
		7.60	S	N=20 (2,2,4,4,5,7)
		9.10	S	N=17 (2,2,3,4,5,5)
		10.60	S	N=22 (2,3,3,5,6,8)
		12.10	S	N=38 (3,5,6,10,11,11)
		13.50	S	34/75mm* (4, 30 NP)
		13.90	S	67/150mm (8,14,26,41)
		14.60	S	50/70mm (14,28,50/70)

* Seating blows only.

NB All depths in metres, all diameters in millimetres,
water strike rise time in minutes, chiselling time in hours.

Form	ARIAL CP HEADER
Version	1.00
Revised	01/10/1998



Norwest Holst Soil Engineering Ltd.

BOREHOLE LOG - CABLE PERCUSSION

Hole ID.
A38
Sheet 1 of 2

Contract No.	F11212	Method	Cable Percussion	Coordinates	86828.8 E
Project	Manchester Stadium S.I. Phase 1 Drilling Rig		Edeco		98747.6 N
Client	Manchester City Council	Driller	ID	Ground Level	59.70m AOD
Consultant	Ove Arup and Partners	Logged by	MF	Orientation	Vertical
				Date Started	25/11/1998
				Date Completed	30/11/1998

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling	SPT N & (U blows)	SPT type & depth	Install- ation
MADE GROUND: Brown sandy clay with some fine to coarse angular to subrounded gravel including housebricks.		0.30	59.40	D 0.50 - 0.95	S1	S 0.50 0.95	
MADE GROUND: Greyish green mottled black slightly sandy clay with occasional fine to coarse angular to subrounded gravel including housebricks.				B 1.00 - 1.50			
		1.60	58.10	D 1.50 - 1.95	S12	S 1.50 1.95	
Firm to stiff, brown mottled grey thinly laminated fissured slightly sandy CLAY with some to occasional fine to coarse angular to subrounded gravel.				D 2.20			
—from 2.50m to 3.00m stiff				U 2.50 - 3.00	(26)		
				D 3.10	S17	S 3.10	
				D 3.10 - 3.55		3.55	
				U 3.60 - 4.10	(46)		
		4.00	55.70	D 4.20	S28	S 4.20	
				D 4.20 - 4.65		4.65	
				U 4.70 - 5.20			
				D 5.30	S26	S 5.30	
				D 5.40 - 5.75		5.75	
				U 5.80 - 6.30			
				D 6.40	S18	S 6.40	
				D 6.40 - 6.85		6.85	
				U 7.00 - 7.50	(34)		
				D 7.60	S20	S 7.60	
				D 7.60 - 8.05		8.05	
				U 8.50 - 9.00	(28)		
				D 9.10	S17	S 9.10	
				D 9.10 - 9.55		9.55	
				U 10.00 - 10.50	(34)		

NB All depths in metres, all diameters in millimetres.
See header sheet for details of drilling, progress and water strikes. See legend sheet for key to symbols.

Form ARIAL CP LOG
Version 1.00
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Norwest Holst Soil Engineering Ltd.

BOREHOLE LOG - CABLE PERCUSSION

Hole ID.
A38
Sheet 2 of 2

Contract No.	F11212	Method	Cable Percussion	Coordinates	86828.8 E
Project	Manchester Stadium S.I. Phase 1	Drilling Rig	Edeco		98747.6 N
		Driller	ID	Ground Level	59.70m AOD
Client	Manchester City Council	Logged by	MF	Orientation	Vertical
				Date Started	25/11/1998
Consultant	Ove Arup and Partners			Date Completed	30/11/1998

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling	SPT N & (U blows)	SPT type & depth	Install- ation
Stiff brown sandy CLAY with some to much fine to coarse angular to subrounded gravel.				U 10.00 - 10.50 (34)			
				D 10.60	S22	S 10.60	
				D 10.60 - 11.05		11.05	
				U 11.50 - 12.00 (29)			
				D 12.10	S38	S 12.10	
—from 12.10m becomes very stiff				D 12.10 - 12.55		12.55	
				U 13.00 - 13.50 (48)			
				B 13.50 - 13.80	S34/75mm*	S 13.50	
				D 13.50 - 13.57		13.58	
		13.80	45.90	D 13.90 - 14.20	S67/150mm	S 13.90	
				D 14.30		14.20	
				D 14.60 - 14.82	S50/70mm	S 14.60	
						14.82	
		14.90	44.80				
Cable Percussion boring complete at 14.90 m.							

NB All depths in metres, all diameters in millimetres.
See header sheet for details of drilling, progress and water strikes. See legend sheet for key to symbols.

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Norwest Holst Soil Engineering Ltd.

TRIAL PIT LOG

Hole ID.
TPA25
Sheet 1 of 1

Contract No.	F11212	Method	Machine Excavated	Coordinates	86876.0 E
Project	Manchester Stadium S.I. Phase 1	Equipment	JCB JS130		98681.6 N
Client	Manchester City Council	Logged by	JTM	Ground Level	60.60m AOD
Consultant	Ove Arup and Partners			Date Started	21/11/1998
				Date Completed	23/11/1998

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling	Notes
MADE GROUND: Light grey and white fine to coarse angular and subangular limestone gravel.		0.10	60.50	D 0.20	0.20m PID 0.8ppm
		0.40	60.20	CD 0.20	
MADE GROUND: Brown fine to coarse subrounded and subangular gravel with some clay and occasional fine to coarse sand.		0.70	59.90	CJ 0.20	0.50m PID 0.7ppm
				D 0.50	
MADE GROUND: Red brown cobbles of brick with some fine to coarse sand and occasional medium and coarse angular gravel of brick.				CD 0.50	0.80m PID 0.6ppm
				CJ 0.50	
MADE GROUND: Grey mottled black soft to firm clay with some fine to coarse subrounded and subangular gravel with occasional wood, metal, plastic and cobbles of brick rare boulder of concrete.		1.80	58.80	B 0.70 - 1.80	
				D 0.80	
				CD 0.80	
				CJ 0.80	
MADE GROUND: Reinforced concrete.		2.30	58.30		
Soft to firm brown CLAY.				D 2.40	2.40m PID <0.1ppm
— from 2.50m becoming friable brown mottled blue grey CLAY with occasional fine to coarse subrounded and subangular gravel				CD 2.40	
— from 3.00m becomes stiff to very stiff				CJ 2.40	2.60m PID <0.1ppm
				B 2.50 - 3.50	
				D 2.60	
				CD 2.60	
				CJ 2.60	
				B 3.50 - 4.50	
				D 4.00	
		4.50	56.10	D 4.50	
Trial pit complete at 4.50 m.					

Stability	Stable
Shoring	None
Groundwater	Dry
Remarks	1. No visual or olfactory evidence of heavy contamination. 2. Pocket penetrometer at 3.00m = 171, 147, 147. At 196, 208, 196. 3. See photographs in Section E.

Sketch Plan of Trial Pit

Hand Vane Test Readings

Depth	HV Peak	HV Remoulded	Remarks

REMARKS - All depths in metres, all soil strengths in KPa.
See legend sheet for key to symbols and abbreviations.
All bearings given relate to magnetic north

Form ARIAL TP LOG
Version 2.00
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Norwest Holst Soil Engineering Ltd.

TRIAL PIT LOG

Hole ID.
TPA29
Sheet 1 of 1

Contract No.	F11212	Method	Machine Excavated	Coordinates	86900.0 E
Project	Manchester Stadium S.I. Phase 1	Equipment	JCB JS130		98700.1 N
				Ground Level	60.90m AOD
Client	Manchester City Council	Logged by	JTM	Date Started	13/11/1998
				Date Completed	13/11/1998
Consultant	Ove Arup and Partners				

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling	Notes
MADE GROUND: Reinforced concrete.		0.50	60.40	B 0.50 - 1.50 D 0.60 CD 0.60 CJ 0.60	0.50m PID <0.1ppm
MADE GROUND: Black slightly clayey very sandy fine to coarse subrounded and subangular gravel of ash and clinker with and occasional cobbles of brick and boulders of sandstone.		1.50	59.40	B 1.60 - 2.60 D 1.70 CD 1.70 CJ 1.70	1.40m PID <0.1ppm
MADE GROUND: Orange, brown and red sandy silt with occasional fine and medium gravel of brick (Possible Dryworks waste).		3.10	57.80	B 3.10 - 4.10 D 3.20 CD 3.20 CJ 3.20	2.30m PID <0.1ppm
Firm to stiff brown mottled blueish grey sandy CLAY with occasional fine to coarse rounded and subrounded gravel.		4.50	56.40	D 4.50	
Trial pit complete at 4.50 m.					

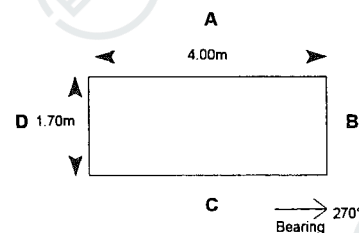
Stability Some spalling between 0.5 and 1.5m

Shoring None

Groundwater None Encountered

Remarks
1. Pipe installed to base of pit to allow static cone testing.
2. Wall at either end of pit (see sketch for details).
3. See photographs in Section E.

Sketch Plan of Trial Pit



Hand Vane Test Readings

Depth	HV Peak	HV Remoulded	Remarks

REMARKS - All depths in metres, all soil strengths in KPa.
See legend sheet for key to symbols and abbreviations.
All bearings given relate to magnetic north

Form ARIAL TP LOG
Version 2.00
Revised 01/10/1998

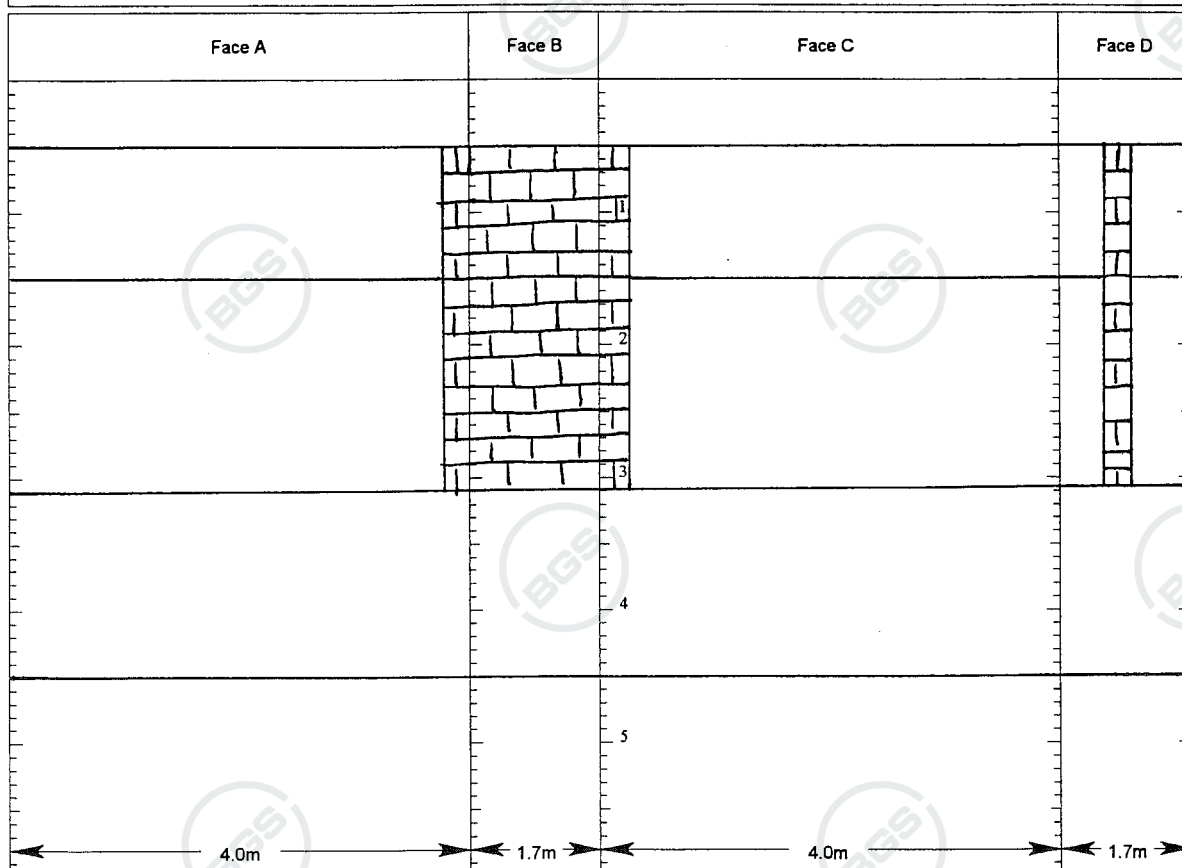


Norwest Holst Soil Engineering Ltd.

TRIAL PIT SKETCH

Trial Pit No.
TPA29
SKETCH

Contract No.	F11212	Method	Machine Excavated	Coordinates	86900.0 E
Project	Manchester Stadium S.I. Phase 1	Equipment	JCB JS130		98700.1 N
		Logged by	JTM	Ground Level	60.90m AOD
Client	Manchester City Council			Date Started	13/11/1998
Consultant	Ove Arup and Partners			Date Completed	13/11/1998



See main log for strata descriptions and sampling details.

NB Sketch is not to scale.

REMARKS - All depths in metres, all soil strengths in KPa.
See legend sheet for key to symbols and abbreviations.
All bearings given relate to magnetic north.

Form	ARIAL TP SKETCH
Version	1.00
Revised	01/10/1998

APPENDIX 7

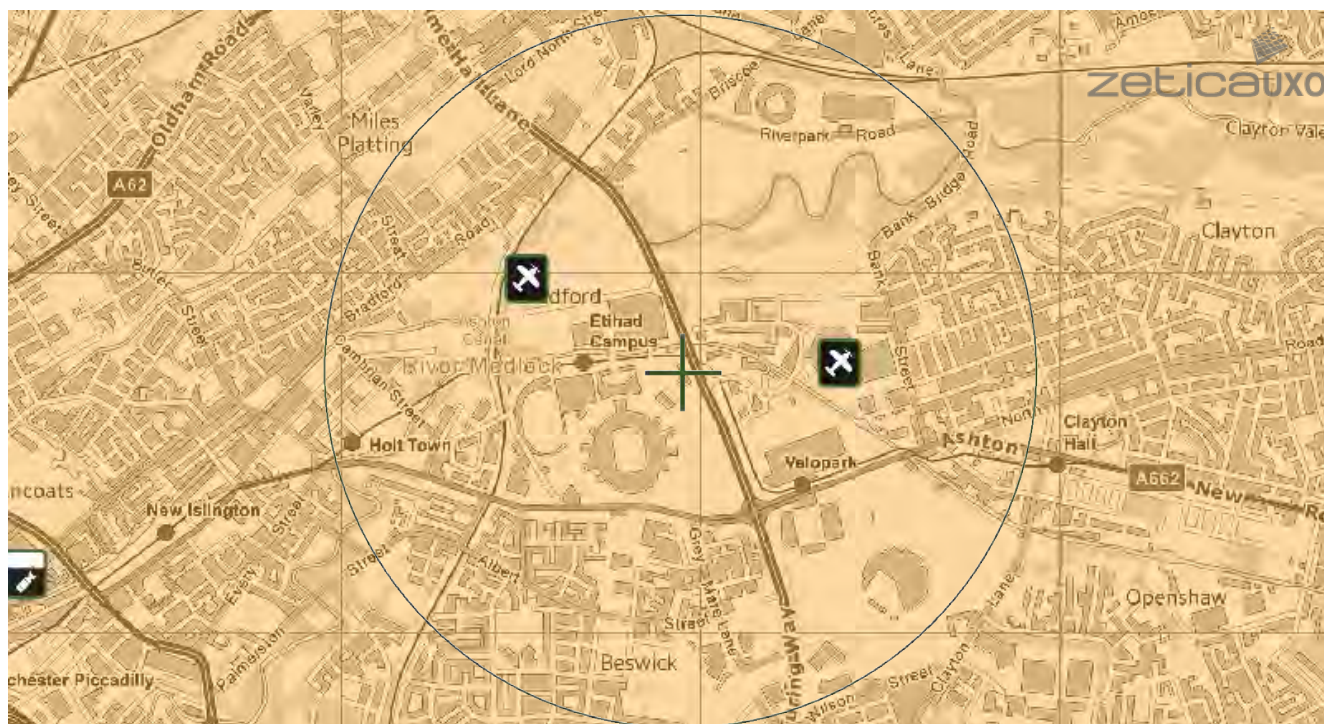
ZETICA UXO RISK MAP

UNEXPLODED BOMB RISK MAP



SITE LOCATION

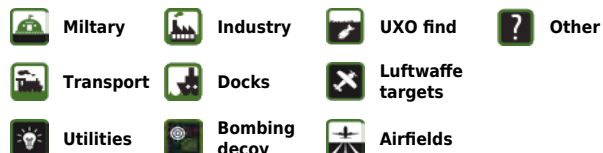
Map Centre: 386916,398732



This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

- High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- Low:** Areas indicated as having 15 bombs per 1000acre or less.



How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

We typically recommend that a detailed UXO desk study and risk assessment is undertaken for sites in an area with a moderate or high bombing density. Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then [additional detailed research](#) is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm that there is a low potential for UXO to be present on your site, then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

If you are unsure whether other sources of UXO may be present, you can request one of our [pre-desk study assessments \(PDSA\)](#) by emailing a site boundary and location to pdsa@zetica.com.

You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

If I have any questions, who do I contact?

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The information in this UXB risk map is derived from a range of sources and should be used with the [accompanying notes on our website](#).

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