

Phase 1: Preliminary Risk Assessment

5 March 2018

Macdonald Manchester Hotel, London Road, Manchester March 2018

Macdonald Hotels and Resorts Limited

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1. Introduction

- 1.1 Phlorum Ltd has been commissioned by Macdonald Hotels and Resorts Limited to undertake a Phase 1 Preliminary Risk Assessment (PRA), land contamination desk study assessment, of the proposed redevelopment of the site on London Road, Manchester. The site is accessible via London Road from the west and Berry Street from the east, at National Grid Reference SJ 84857 97649.
- 1.2 The site is currently a hotel. It is understood that the proposed development plans include the construction of a ground floor extension to enlarge the existing reception area, construction of a terrace to use as an external seating area and remodelling of the existing main entrance with the addition of a new porte-cochère entrance.
- 1.3 Contamination assessments are undertaken in three phases. The results of this Phase 1 (PRA) should provide sufficient information to enable a Phase 2 intrusive site investigation and risk assessment to be effectively undertaken, if necessary. The Phase 2 can sometimes be done in stages. Depending on the results of the Phase 2, a risk management and site remediation (Phase 3) could then subsequently be undertaken, if necessary.
- 1.4 This report involved the following:
 - a site visit of the site undertaken by Phlorum, on 24th January 2018;
 - review of data from the Environment Agency (EA), local authority and British Geological Survey (BGS) for the site;
 - review of geological and hydro-geological maps of the site; and
 - Enviro-Insight and Geo-Insight reports produced by GroundSure were also obtained. A copy of the GroundSure data is shown in Appendix A.
- 1.5 This report outlines the findings of the Phase 1 contaminated land desk study assessment. This report is based on the end use of the site being a hotel.

2. Site Sensitivity

- 2.1 The aim of this section is to review the main potential receptors and pathways for any contaminants on site. The main source of information was obtained from the GroundSure reports for the site.

Site Location and Adjacent Land Uses

- 2.2 The site is located between London Road and Berry Street in Manchester.
- 2.3 The site is close to a number of residential apartments as well as an NCP car park. There is an elevated railway line 70m north of site and beyond this Manchester Piccadilly railway station is located approximately 120m north of the site.

Geology

- 2.4 The report is based on the BGS data provided via the Geology of Britain Viewer¹. The bedrock beneath the site is comprised of Chester Formation – Sandstone.
- 2.5 The permeability of the bedrock on site is recorded as high for maximum and moderate for minimum permeability, the flow type is mixed.
- 2.6 There are four geological faults recorded within 500m of the site, these are located:
- 201m southwest of site;
 - 267m northeast of site;
 - 270m northeast of site; and
 - 394m south of site.
- 2.7 There are six records of superficial deposits within 500m of the site. The closest of which is on-site and is described as; Till, Devensian – Diamicton.
- 2.8 There is one record of made ground associated with worked ground within 500m of the site, which is located;
- On site; Lex Code: MGR;ARTDP; Description: Made Ground (Undivided); Rock Description: Artificial Deposit.
- 2.9 There are no records of landslip within 500m of the site.

¹ Accessed at <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> on 4th May 2017.

Hydrogeology

Groundwater Resources

- 2.10 The Groundwater Vulnerability Map provided by GroundSure is based on Environment Agency Data which indicates that the bedrock on site is designated as Principal. This is described as: Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers.
- 2.1 The aquifer within the superficial deposits is designated as a Secondary (Undifferentiated) Aquifer, which is; "assigned where it is not possible to attribute either category A or B to a rock type. In general, these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type".
- 2.2 There are no records of Source Protection Zones (SPZ) within 500m of the study site.
- 2.3 There are no Source Protection Zones within the Confined Aquifer within 500m of the study site.

Ground Water Abstractions

- 2.4 There are forty-five Groundwater Abstraction Licences within 2km of the study site, of these, the two closest abstractions to the site are listed below:
- 376m east of the site at NGR 385240 397540; Status: Historical; License No:2569006001; Details: General cooling (Existing licenses 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; Original Application No: 6; Original Start Date: 8/2/1966; Issue No: 100; Version Start Date: 8/2/1996; and
 - 376m east of the site at NGR 385240 397540; Status: Historical; Licence No: 2569006001; Details: General Cooling (Existing Licenses 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; Original Application No: 0006; Original Start Date: 8/2/1966; Issue No: 100; Version Start Date: 8/2/1996.

Surface Water Abstractions

- 2.5 There are no surface water abstraction licenses within 2km of the study site.

Potable Water Abstraction Licences

- 2.6 There are eleven Potable Water Abstraction Licences within 2km of the study site. Two of the closest to site are;

- 1,837m northwest of site at NGR 383820 399190; Status: Historical; License No: 2569004023; Details: Drinking, Cooking, Sanitary, Washing, (Small garden) – Commercial/Industrial/Public Services; Direct Source: Ground Water – North West Region; Point: Borehole Number 2 at Premises Strangeways Manchester; Data Type: Point; Name: Interbrew UK Ltd; Original Application No: CW0023R; Original Start Date: 18/2/1966; Issue No:102; and
- 1,835m northwest of site at NGR 383830 3992200; Status: Historical; License No: 2569004023; Details: Drinking, Cooking, Sanitary, Washing, (Small garden) – Commercial/Industrial/Public Services; Direct Source: Ground Water – North West Region; Point: Borehole Number 2 at Premises Strangeways Manchester; Data Type: Point; Name: Interbrew UK Ltd; Original Application No: CW0023R; Original Start Date: 18/2/1966; Issue No:102;

Water Discharges Consents

- 2.7 There are seventeen records of Licensed Discharge Consent within 500m of the study site. The two which are closest to site are;
- 110m southeast of site at NGR 384940 397510; Address: Mancunian Way Sliproad CSO, Manchester, Greater Manchester; Effluent Type: Sewage Discharges – Sewer Storm Overflow – Water Company; Permit Number: 016982729; Permit Version 2; Receiving Water: River Medlock; Status: Modified – (WRA 91 SCHED 10 – AS AMENDED BY ENV ACT 1995); Effective Date: 30-Nov-1999; and
 - 306m southwest of site at NGR 384580 397440; Address: Mount St/ Rutland St, Manchester, Greater Manchester; Effluent Type: Sewage Discharges – Sewer Storm Overflow – Water Company; Permit Number:01MAN0287; Permit Version: 1; Receiving Water: River Medlock; Status: Post NRA Legislation Where Issue Date > 31-Aug-89 (Historic Only); Effective Date: 01-Jan-1995.

Groundwater Vulnerability and Soil Leaching Potential

- 2.8 There is one instance where the EA gives information on groundwater vulnerability and soil leaching potential within 500m of the study site, which is:
- on site; Classification: Major aquifer/ high leaching potential; Soil Vulnerability Category: HU; Description: Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

River Quality

- 2.9 There are five records of chemical quality data available within 2km of the study site. This data is based on the General Assessment Headline Indicators Scheme (GQAH) and in England, each sample is measured for ammonia and dissolved oxygen. The two closest records to site are:

- 16m north of the site at NGR 384830 398140; River Name: Rochdale Canal; Reach: Ashton Canal to Knott mill; End/Start of Stretch: Start of Stretch NGR; Chemical Quality Grade in 2009: A; and
- 531m north of the site at NGR 384850 398200; River Name: Rochdale Canal; Reach: Empress processing to Ashton canal; End/Start of Stretch: End of stretch NGR. Chemical Quality Grade in 2009: A.

2.10 There are nine Detailed River Network entries within 500m of the study site. The two which are closest to the study site are;

- 57m south of the site; River Name: River Medlock; River Type: Primary River; Main River Status: Currently Undefined; and
- 58m south of the site; River Name: River Medlock; River Type: Culvert; Main River Status: Currently Undefined.

2.11 There are three surface water features within 250m of the study site, which are;

- 52m south of the site;
- 123m east of the site; and
- 207m east of the site.

Pollution Incidents

2.12 There are no records of historic IPC authorisations within 500m of the study site.

2.13 There are no records of Part A(1) and IPPC Authorised Activities within 500m of the study site.

2.14 There are no records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site.

2.15 There are no records of List 1 Dangerous Substances Inventory Sites within 500m of the study site.

2.16 There are no records of List 2 Dangerous Substance Inventory Sites within 500m of the study site.

2.17 There are three records of Part A(2) and Part B Activities and Enforcements within 500m of the study site, these are;

- 403m east of the site at NGR 385264 397526; Address: Tj Stafford Ltd, Hoyle street, Ardwick, M12 6HG; Process: Other mineral processes; Status: Historical Permit; Permit Type: Part B; No enforcements notified;
- 466m south of the site at NGR 385322 397492; Address: Ardwick Spares, 2 Hoyle street, Ardwick, M12 6HG; Process: Non-ferrous metal foundry processes; Status: Historical Permit; Permit Type: Part B; No enforcements notified; and

- 475m northeast of the site at NGR 385161 398032; Address: Central taxi spares limited, Chapeltown Street, Ancoats, M1 2NN; Process: Waste Oil Processes; Status: Historical Permit; Permit Type: Part B; No enforcements notified.
- 2.18 There are six records of Licence 3 or 4 Radioactive Substances Authorisations (RAS), on the Environmental Permits, Incidents and Registers Map, the two closest to site are;
- 358m west of site at NGR 384500 397500. Address: UMIST, Po Box 88, Sackville Street, Manchester, M60 1QD; Operator: UMIST; Type: Disposal of radioactive waste (was Rsa60 section 6); Permission Number: AC8878; Dates: Date of approval: 31/3/1991; Effective from: 31/3/1991; Update: 2015-01-01; Status: Revoked/cancelled; and
 - 358m west of site at NGR 384500 397500. Address: UMIST, Po Box 88, Sackville Street, Manchester, M60 1QD; Operator: UMIST; Type: Disposal of radioactive waste (was Rsa60 section 6); Permission Number: AG4009; Dates: Date of approval: 13/11/1997; Effective from: 11/12/1997; Update: 2015-01-01; Status: superseded by variation.
- 2.19 There are seventeen records of Licensed Discharge Consent within 500m of the study site; the two closest to site are;
- 110m south-east of site at NGR 384940 397510; Address: Mancunian Way sliproad cso, Manchester, Greater Manchester; Effluent Type: Sewage discharges – sewer storm overflow – water company; Permit number: 016982729; Permit version: 2; Receiving water: River Medlock; Status: Modified – (WRA 91 Sched 10 – As amended by env act 1995); Effective date: 30-nov-1999; and
 - 306m south-west of site at NGR 384540 397440; Address: Mount st/ Rutland St, Manchester, Greater Manchester; Effluent Type: Sewage discharges – sewer storm overflow – water company; Permit number: 01MAN0287; Permit version: 1; Receiving water: River Medlock; Status: Post NRA Legislation where issue date >31-Aug-89 (Historic only); Effective date: 01-Jan-1995.
- 2.20 There are no records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site.
- 2.21 There are no records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site.
- 2.22 There are no records of Control of Major Accident Hazards Regulations (COMAH) & The Notification of Installations Handling Hazardous Substances (NIHHS) sites within 500m of the study site.
- 2.23 There are six records of National Incidents Recording System, List 2 within 500m of the study site, the two closest to site are;

- 102m south-east of site at NGR 384937 397518; Incident Date: 17 Jan 2003; Incident Identification: 131596; Pollutant: Contaminated water; Pollutant Description: Urban run-off; Water Impact: Category 3 (Minor); Land Impact: Category 4 (No Impact); Air Impact: Category 4 (No Impact); and
 - 147m north-east of site at NGR 384956 397773; Incident Date: 08-Mar-2001; Incident Identification: 96; Pollutant: oils and fuel; Pollutant Description: Diesel; Water Impact: Category 4 (No impact); Land Impact: Category 3 (Minor); Air Impact: Category 4 (No Impact).
- 2.24 There are no records of National Incidents Recording System, List 1 within 500m of the study site.
- 2.25 There are no records of sites determined as Contaminated Land under Part 2A of the Environmental Protection Act 1990 within 500m of the study site.

Mineral Deposits and Mining

- 2.26 There are no Historical Mining areas within 1km of the study site boundary.
- 2.27 There is one record of Coal Mining areas within 1km of the study site boundary which is;
- On site; Details: The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.
- 2.28 There are JPB Mining areas within 1km of the study site boundary, further details of which and a quote for services can be obtained by emailing this report to enquiries.gs@jpb.co.uk.
- 2.29 Information provided by the BGS shows there are no records of Non-Coal Mining areas within 1km of the study site boundary.
- 2.30 There is one record of Non-Coal Mining Cavities within 1km of the study site boundary which is;
- 492m south of site at NGR 384900 397100; Address: Greater Manchester; Superficial Deposits: Glacial Till; Bedrock Deposits: Bunter Sandstone, Manchester Marls, Collyhurst Sandstone; Extracted Mineral: Firestone, freestone, hearthstone, honestone, ragstone, sandstone, scythestone, silver sand, whetstone.
- 2.31 There are no records of natural cavities within 1km of the study site boundary (this data is based on the Peter Brett Associates Natural Cavities Database).
- 2.32 There are no Brine Extraction areas within 1km of the study site boundary.
- 2.33 There are no Gypsum Extraction areas within 1km of the study site boundary.
- 2.34 There are no Tin Mining areas within 1km of the study site boundary.
- 2.35 There are no Clay Mining areas within 1km of the study site boundary.

3. Published Records

- 3.1 The aim of this section is to review the published records of sensitive areas, potential hazardous activities on, under or around the site. The main source of information was the GroundSure reports for the site.

Current Industrial Data

- 3.2 There are no records of petrol or fuel sites within 500m of the study site.
- 3.3 There are no records of National Grid High Voltage Underground Electricity Transmission Cables within the study site, or within 500m from the study site.
- 3.4 There are no records of National Grid High Pressure Gas Transmission Pipelines within the study site, or within 500m from the study site.

Landfill and Waste Sites

- 3.5 There are no records from Environment Agency landfill data within 1km of the study site.
- 3.6 There is one record of Environment Agency historic landfill sites within 1.5km of the study site, which is;
- 821m east of the site; Site Address: Palmerston Street Landfill, Great Ancoats Street, River Medlock, Ardwick, Manchester, Greater Manchester; Waste License: Yes; Site Reference: RD/LIC/440/86,F046; Waste Type: Inert, Industrial; Environmental Permitting Regulations (Waste Reference): -; License Issue: 20-Aug-1986; License Surrendered: 21-Jul-1988; License Holder Address: Clarence House, Mellor Road, Cheadle Hulme, Stockport; Operator: -; License Holder: Peter Birse Limited; First Recorded: 01-Sep-1986; Last Recorded: 31-Dec-1987.
- 3.7 There are no records of BGS/DoE non-operational landfill sites within 1.5km of the study site.
- 3.8 There are no records of Landfills from Local Authority and Historical Mapping Records within 1.5km of the study.
- 3.9 There are four records of waste treatment, transfer or disposal sites within 500m of the study site, the two closest to site are:
- 262m east of site at NGR 385198 397591; Type of site: Scrap Yard; Site Address: N/A; Planning application reference: N/A; Date: 1994; Further details: N/A; Data source: Historic mapping; Data type: Polygon; and
 - 263m east of site at NGR 385199 397592; Type of site: Scrap yard; Site address: N/A; Planning application reference: N/A; Date: 1991; Further details: N/A; Data source: Historic mapping; Data type: Polygon.

3.10 There are nineteen records of Environment Agency licensed waste sites within 1.5km of the study site. The two closest records to the study site are:

- 345m east of the site at NGR 385200 397500; Site Address: 2 Hoyle Street, Ardwick, Manchester, M12 6HG; Type: Metal recycling site (mixed MRS's); Size: <25,000 tonnes; Environmental Permitting Regulations (Waste) Licence Number: ADO001; Operator: Donnelly Mr. A; Waste Management Licence No: 53582; Annual tonnage: 310.0 Issue Date: 11/10/1996; Status: suspended; Site Name: Ardwick Auto Spares; Correspondence address: 2 Hoyle street, Ardwick, Manchester, M12; and
- 378m east of the site at NGR 385235 397506; Site Address: Hoyle Trading Estate, Hoyle, Street, Manchester, M12 6HL; Type: Treatment of waste to produce soil <75000 tpy; Size: <25,000 tonnes; Environmental Permitting Regulations (Waste) Licence Number: DEL043; EPR reference: EA/EPR/CB3601KL/A001; Operator: E Delaney Demolition Ltd; Waste Management Licence No: 402157; Annual Tonnage: 74999.0; Issue Date: 26/02/2015; Status: Issued; Site Name: Aggregate Recycling Yard; Correspondence address: Hoyle Trading Estate, Hoyle Street, Manchester, M12.

Sensitive Land Uses

3.11 There are twenty-two listed records of potentially contaminative industrial sites within 250m of the study site, the five closest to site are:

- 22m south-east of site at NGR 384879 397574; Company: Electricity sub station; Address: M1; Activity: Electrical features; Category: Infrastructure and facilities;
- 31m south of site at NGR 384835 397561; Company: Gantry; Address: M1; Activity Travelling cranes and gantries; Category: Industrial Features;
- 66m south of site at NGR 384882 397528; Company: Pumping House; Activity: Water pumping stations; Category: Industrial features;
- 102m west of site at NGR 384738 397674; Company: Depot; Address: M1; Activity: Container and storage; Category: Transport, storage and delivery; and
- 102m east of site at NGR 384969 397598; Address: 58 Baring Street, Manchester, M1 2PY; Activity: Clothing, components and Accessories; Category Consumer products.

3.12 There are sixty-two records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site, with one of these recorded within 250m, which is located;

- 240m east of site; Use: Ponds; Date: 1890.

Natural Hazardous Findings

- 3.13 The maximum Shrink-Swell hazard rating identified on the study site is Very Low. Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
- 3.14 The maximum Landslide hazard rating identified on the study site is Very Low. Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.
- 3.15 The maximum Soluble Rocks hazard rating identified on the study site is Negligible. Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.
- 3.16 The maximum Compressible Ground hazard rating identified on the study site is Very Low. Very low potential for compressible deposits to be present. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
- 3.17 The maximum Collapsible Rocks hazard rating identified on the study site is Very Low. Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
- 3.18 The maximum Running Sand hazard rating identified on the study site is Very Low. Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

Radon

- 3.19 The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level. No radon protective measures are necessary under publication BR211 by the Building Research Establishment.

Sensitive Land Uses

- 3.20 There are two records of the following Designated Environmentally Sensitive Sites within 2km of the study site:
- Nitrate Sensitive Areas; 859m north-west of site and 1,619m north-west of site.

Borehole Records

- 3.21 There are forty-four records of boreholes within 250m of the site boundary according to BGS Borehole Records. The three closest records to the study site are;
- 7m west of the site at NGR 384839 397592; BGS Reference: SJ89NW14; Drilled Length 6.71; Borehole Name: Manchester corp. L sewer; Record: #1: scans.bgs.ac.uk/sobi_scans/boreholes/1042156;
 - 21m west of the site at NGR 384818 397660; BGS Reference: SJ89NW18; Drilled Length 10.06; Borehole Name: Manchester Corp. Corner of Travis street; Record: #2: scans.bgs.ac.uk/sobi_scans/boreholes/1042160; and
 - 31m north of the site at NGR 384850 397700; BGS Reference: SJ89NW871; Drilled Length -1.0; Borehole Name: National Express Coach Station 3.

4. Historic Records

- 4.1 This section is based on historic maps of the area dating back to 1848. The maps are included in Appendix B. All measurements are approximate.

MAP DATE	THE SITE	THE SURROUNDING AREA
1848[∞]	Buildings on site	Within 750m Area is heavily developed already with industrial and residential properties covering most of the area. London Road train station is located approximately 100m north of site, while the river Medlock runs approximately 50m south of site, east to west. There are a number of industrial sites within 500m of site including; two dye works and a cotton mill.
1851[±]	As 1848	Within 100m Chemical works approximately 70m west of site and beyond this lies Jackson Street Mills (cotton).
1889[*]	As previous	Within 250m London Road station appears to have been developed further, with many more railway lines including a viaduct which runs westward from the station. There is a tramway along Fairfield Street and London road. Approximately 100m southwest of site lies Ardwick Bridge Chemical Works (Disused). Mayfield Works (dye and print) is situated 250m east of site and just south of the works are Mayfield baths, Ardwick Tannery and a water meter works.
1891[÷]	As previous	Within 100m At this scale it is possible to see that one of the buildings adjacent to site is the Red Lion Pub. Hanover cotton mill is located less than 100m south-east of site and has engine houses and boiler houses attached at either end of the building. There are a number of warehouses located south of site and a coal yard approximately 50m north of site.

1894 [∞]	As 1848	Within 750m Similar to previous. However, more railway line has been developed and a station or shed constructed approximately 500m northeast of site. There is also a printworks by this new railway line.
1896 [∞]	Dataset incomplete	Within 750m Dataset incomplete.
1906 [∞]	As previous	Within 750m Similar to above. The new station/shed mentioned previously is now labelled as Ancoats Goods Station. There is now a clothing factory 500m north of site.
1908 *	Similar to previous	Within 250m Manchester Nut and Bolt works located approximately 100m west of site, which is just north of Cotton mills. 100m south of site is Medlock Works (Cotton). Iron foundry 250m west of site. Ice works approximately 120m south-east of site.
1922 *	As Previous	Within 250m Similar to previous however a number of buildings 100m north-east of site have been demolished and replaced with Mayfield Station.
1923 [∞]	As previous	Within 750m Similar to previous.
1932 *	As Previous.	Within 250m Similar to above, cloth finishing works has been set up within 100m west of the site. Engineering works 30m north of site.
1934 [∞]	As previous	Within 750m Similar to previous.
1938 [∞]	As previous.	Within 750m Similar to previous.

1948⁺	A few of the on-site buildings are no longer present.	Within 250m Cloth finishing works is now disused. Some buildings immediately east of the site have been demolished. Area of Hanover mills redeveloped substantially with the buildings now housing a stationary works, 2 x printing works, motor repair works and a braid and elastic factory. Mayfield Station has been redeveloped.
1950[*]	Similar to previous. Few more buildings demolished on site.	Within 250m Similar to 1948.
1954⁺	A few more buildings demolished on site.	Within 250m Similar to previous. The disused cloth works west of site is now a warehouse.
1955[*]	Similar to previous.	Within 750m Similar to previous.
1956[∞]	Similar to previous	Within 750m Similar to previous.

1964⁺	A large number of on-site buildings have been demolished. The pub remains.	Within 250m Similar to previous, however a car park has been built on the spare land approximately 15m north-east of site on Travis Street. London Road station now known as Piccadilly Station. The warehouse to the west of site has been demolished as have a number of buildings approximately 70m south-west of site and 40m west of site. Manchester Nut and Bolt works has also been demolished.
1965[*]	Similar to previous	Within 250m Similar to previous.
1968[*] _∞	Two more buildings demolished on-site.	Within 250m Similar to above. Mancunian way developed less than 100m south of site. Former cloth works land has been redeveloped on, and so to has the land which used to home the Nut and Bolt works.
1970[*]	Similar to previous	Within 250m Similar to previous.
1972[§]	Similar to previous	Within 750m Data incomplete
1974⁺	Similar to above	Within 250m College of Science and Technology land footprint size has noticeably increased, with the college now owning a number of buildings between 100m and 250m west of site, including; Chemical engineering building, Barnes Wallis building and the Mathematics and Social Science Building.
1977⁺	Site redeveloped. New large building called Victory House on site.	Within 250m Buildings immediately north of site have been demolished and the land developed on. Building developed immediately south of site.
1981[§]	Site developed further	Within 750m TV studios developed 500m south-west of site, otherwise largely similar to previous.

1985[§]	Similar to previous	Within 750m Similar to previous.
1986⁺	Similar to previous	Within 250m Similar to previous.
1991[§]	Similar to previous	Within 750m Similar to previous. A number of buildings immediately west of site now demolished.
1992⁺	Similar to previous	Within 250m Similar to 1991, all of the buildings immediately west of site on London road have now been demolished.
1994[§]	Similar to previous	Within 750m Dataset incomplete, however Mancunian Way has been redesigned south of site.
1995^{*+}	Similar to previous	Within 250m Similar to 1994.
2002[§]	Similar to previous	Within 750m Similar to 1995.
2010[§]	Similar to previous	Within 750 Similar to previous.
2014[§]	Similar to previous	Within 750m A petrol station has been built adjacent site to the east in the former car park area. The goods station approximately 100m north-east of site on Fairfield Street has been demolished.
* 1:2,500; + 1:1,250; ± 1:1,056; § 1: 10,000; ∞ 1:10,560; ÷ 1:500		

5. Site Walkover

- 5.1 A member of Phlorum staff conducted a site walkover of the internal and external areas of the site on 24th January 2018 in order to assess any contamination issues.
- 5.2 This is not an asbestos survey and a further demolition / refurbishment asbestos survey is recommended prior to any demolition or prior to the commencement of any development.
- 5.3 The photos of the site taken during the walkover are included as Appendix D and observations in the text are included as Target Notes on Figure 1 in Appendix E.
- 5.4 The site comprises of one building, which is currently used as a hotel. The hotel extends up to the eighth floor, and has three separate ground floor buildings, which are unattached at ground level. These buildings are attached only by the 1st floor from above. Each ground floor building is intersected by roads.
- 5.5 The current building on site was built during the 1970's and was formerly referred to as "Victory House". The interior of the ground floor, is modernised and has no signs of wear and tear or staining. The ground floor has the reception, a bar area with associated seating, a seated television area and other various other seating areas, lifts, toilets and a stairwell. The electricity and gas units are based at the southern extent of the building and accessed from outside. The entrance to the building is on the western side, and in front of this is a taxi drop off/pick up point, where vehicles can drive up to the entrance to the building without blocking road access.
- 5.6 The bar area is not fitted to also be a cooking area, and is fairly typical, with fridges and beer taps. There is also a coffee machine. The barrels for the beer taps are housed in a separate building and connected via a tubing system. The building which houses the beer barrels is in the adjacent building to site to the south. In this off-site adjacent building there are a number of rooms including a wine store and the beer barrel store.
- 5.7 In the beer barrel store, the ceiling, floor and walls do have some slight staining, however it is expected that these stains are very likely the result of its current use; containing beer under high pressures. The stains are likely the result of spillages occasionally occurring when disconnected old barrels and reconnecting new ones. There are also a number of CO2 gas cylinders stored in the corner of this room, which is used for the beer dispense system.
- 5.8 The delivery area for the hotel is in front of the southern off-site building, and to the rear of this building is where all hotel waste is transferred to. No waste materials are kept at the on-site building. The waste is stored in a secured area, which is bunded by tall walls. These walls are within 10m of the River Medlock, however, the site is approximately 50m away from the river.

- 5.9 North of site is the Spa building also owned by the Macdonald Manchester Hotel. This off-site building is adjacent to the area which is to be developed and the ground floor houses the gym and changing room areas.
- 5.10 Outside of the building the exterior walls do have some staining on them, which is to be expected as the hotel is situated on a busy road with high volumes of passing traffic and therefore is exposed to high amounts of car fumes on a daily basis. Both the green walls and white pillars have visible grey staining.
- 5.11 Due to the high volumes of traffic, the off-site roads which surround the site are typically in quite poor condition with fairly large potholes and surface water drainage issues. It must however be noted that on the day of the survey the weather was particularly wet.
- 5.12 The on-site pathways are in ok condition, with a few relatively localised places where the concrete had broken. There are however numerous access grids and control boxes for utilities on and in close proximity to the site, so it is possible that some of the damaged pathways can be attributed to the maintenance of these services previously.
- 5.13 At the base of the building there was also some localised cracks where cement/concrete had eroded.
- 5.14 There is a railway bridge which runs as close as 25m from the northern extent of site.
- 5.15 No off-site potential sources of contamination were observed, within close proximity of the site.
- 5.16 No olfactory sources of contamination were observed during the survey.

Summary

- 5.17 The site was visited on 24th January 2018, and the internal and external areas of the site were surveyed for evidence of contamination.
- 5.18 The on-site building, despite being relatively old, has been modernized and the interior appears to be in very good condition. No signs of age or damage. With the floor, walls and ceiling all in good condition.
- 5.19 The exterior of the on-site building, has some small indicators of age, with discolouration to the outer of the building including on the exterior walls and on the pillars.
- 5.20 The surrounding roads have some damage such as potholes, due to the large amount of traffic which use them daily. While the pathways did have some damage, this was fairly localised, and could be attributed to work occurring on the large number of utility grids which have been installed around the building.
- 5.21 No waste is kept on site, and the chemicals which are used for the bar e.g. the CO₂, is also kept off-site along with the large quantities of beer.
- 5.22 There were no significant sources of potential contamination observed at the site.

- 5.23 An asbestos refurbishment and demolition survey is recommended to assess the presence of asbestos in the existing buildings on-site prior to any demolition or prior to the commencement of any development.

6. Contamination Risk Assessment

General

- 6.1 Based on the previous information reviewed and obtained for this report an initial qualitative risk assessment can be undertaken. This assessment is based on the development of an appropriate conceptual model in accordance with current UK guidelines set out within Contaminated Land (England) Regulations 2006, as amended, Section 57 of the Environmental Protection Act 1990 and other guidance (e.g. BS10175:2011+A1:2017, the National Planning Policy Framework).
- 6.2 For environmental risk to be present there must be three conditions simultaneously coexisting, namely:
- A source is a contaminant or potential pollutant which has the potential to cause harm, or to cause pollution of controlled waters.
 - A receptor (e.g. end-user, off-site water abstraction) which can be harmed by the site conditions.
 - A plausible pathway is a route or means of connecting the source and receptor such that the harm could actually occur.
- 6.3 The relationship between a contaminant source and receptor, by means of a pathway, is termed a "pollutant linkage". A "pollutant linkage" is only considered to exist if all three elements of the linkage are present (i.e. source, pathway and receptor). Where one of these conditions is absent, there is, by definition, no risk. The risk is itself considered in terms of its significance and this is qualitatively assessed on the basis of magnitude of harm that may occur and likelihood of that harm occurring.

Risk Assessment and Conceptual Model

- 6.4 The qualitative risk assessment is included in Appendix C and a diagram of the conceptual model is shown in Appendix F.

Potential Sources of Contamination

- 6.5 The site comprises of one building, a hotel. The following potential sources of contamination have been identified from the desk study and site walkover of external areas:
- Potential historic off-site contamination sources and contamination sources that predate the historical maps; and

- Potential for Asbestos in the building.

Potential Pathways

- 6.6 The site lies over a Principal Aquifer for the solid geology. Normally the higher the organic matter and clay content within soil, the greater the adsorption of organic compounds and the lower their mobility. However, other properties of the soil, such as water and organic content will also influence the migration potential of contaminants.
- 6.7 The following potential pathways have been identified in the context of the current site condition:
- Leaching of localised mobile inorganic and organic contamination into surface and ground water;
 - Refurbishment of existing buildings could, if not managed correctly, release asbestos fibres;
 - Migration of volatile contaminants through the ground; and
 - Chemical attack.

Potential Receptors

- 6.1 The risk of contamination exposure to any future ground workers can generally be mitigated via the use of appropriate Health & Safety Risk Assessments and PPE. The following potential receptors have been identified:
- Construction workers;
 - Current site users;
 - Future site users;
 - Neighbouring site users; and
 - Ground/surface water.

7. Conclusions

- 7.1 The geological records indicate that the geology below the site is Sandstone Chester Formation, and Diamicton, Clay, Silt, Sand and Gravel as superficial deposits.
- 7.2 The superficial deposits at the site are classed as Secondary, whilst the bedrock is a Principal Aquifer.
- 7.3 The site is not with a Radon Protection Area as less than 1% of the properties are above the action level.
- 7.4 The main potential contamination source on the site is from its potential to contain asbestos.
- 7.5 No mining mapping data has been provided so further details may need to be provided as per 2.27 & 2.28.
- 7.6 Identified receptors include future users of the site, the principal aquifer beneath the site and other nearby businesses.
- 7.7 The current use of the site as a hotel and historic use of the site as an office block are considered to be **Low** risk as a potential contamination source to current site users, off-site users, future users and construction workers and a **Low** risk to water bodies and physical structures. The risk is considered to be mainly from the underground services and drains, with limited chemical seepage through the hardstanding surface covering across the site.
- 7.8 The future use of the site as an extension to the hotel has a **Low** contamination risk, as the hotels processes do not cause any significant contamination risks.
- 7.9 The potential risks to the current or proposed future users of the site from any off-site contamination sources, either current or historical, are considered to be **Moderate**, due to the historical uses in the near vicinity including; printing works, engineering works, nut and bolt works, cotton mills and a cloth finishing works.
- 7.10 The **Very High** risk by Asbestos inhalation is very likely to be reduced by further surveying and best practice management of the construction and refurbishment process.
- 7.11 On the basis of the above we consider the risk of contamination at the site is **Moderate**. However, to confirm this we recommend a refurbishment / demolition asbestos survey and an initial minor site investigation, involving a rig/excavator and analysis of soil samples, to be carried out prior to the commencement of any development.

7.12 In accordance with NPPF (National Planning Policy Framework), Phlorum consider that sufficient information on the potential contaminative status of the site is available in this Preliminary Risk Assessment report to allow the validation of any future planning application by the Local Planning Authority and for conditional planning approval to be granted. Such conditional approval will likely include standard prescriptive conditions requiring an initial minor site investigation, involving a rig/excavator and analysis of soil samples, and a refurbishment / demolition asbestos survey to be completed to the satisfaction of the Local Planning Authority prior to the commencement of any development.

8. References

- Environment Agency (2004) Model Procedures for the Management of Land Contamination; Contaminated Land Report 11.
- BRE Report BR211 (2015) Radon: Protective measures for new buildings.
- BS 10175:2011+A2:2017 Investigation of potentially contaminated sites. Code of practice.



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APPENDIX A

GroundSure Reports



phlorum

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Groundsure
Reference:

GS-4655727

Your Reference: JobRef_7759_PO_3599

Report Date

12 Jan 2018

Report Delivery Method: Email - pdf

Enviro Insight

Address: MACDONALD MANCHESTER HOTEL, 91 MACDONALD MANCHESTER HOTEL, LONDON
ROAD, MANCHESTER, M1 2PG

Dear Sir/ Madam,

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

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

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Address: MACDONALD MANCHESTER HOTEL, 91 MACDONALD MANCHESTER HOTEL, LONDON ROAD, MANCHESTER, M1 2PG

Date: 12 Jan 2018

Reference: GS-4655727

Client: phlorum

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 11-Jun-2015

Grid Reference: 384857,397625

Site Size: 0.16ha

Report Reference: GS-4655727

Client Reference: JobRef_7759_PO_3599

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Overview of Findings

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

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	0	8	120	112
1.2 Additional Information – Historical Tank Database	0	0	60	65
1.3 Additional Information – Historical Energy Features Database	0	0	28	19
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	1	13	63
1.6 Potentially Infilled Land	0	0	1	61

Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	3
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	6
2.1.8 Records of Licensed Discharge Consents	0	0	1	16
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	3	3
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	0	1	0
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	4	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	4	1	14

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	2	20	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology						
5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	Yes					
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	Yes					
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.						

Section 6: Hydrogeology and Hydrology	0-500m					
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes					
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes					
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	4	4	37
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	11
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	0	0	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site?	No	No	No	Yes	Yes	No
6.10 Detailed River Network entries within 500m of the site	0	0	2	7	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	Yes					
7.2 Are there any Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Yes					
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low					
7.4 Are there any Flood Defences within 250m of the study site?	No					
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No					
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No					
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Limited potential					
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low					

Section 8: Designated Environmentally Sensitive Sites

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

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

Section 9: Natural Hazards

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

Section 10: Mining

10.1 Are there any coal mining areas within 75m of the study site?	Yes
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	No
10.3 Are there any brine affected areas within 75m of the study site?	No

Using this report

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

1. Historical Industrial Sites

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

2. Environmental Permits, Incidents and Registers

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

3. Landfills and Other Waste Sites

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

4. Current Land Uses

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

5. Geology

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

6. Hydrogeology and Hydrology

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

7. Flooding

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

8. Designated Environmentally Sensitive Sites

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

9. Natural Hazards

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

10. Mining

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

11. Contacts

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

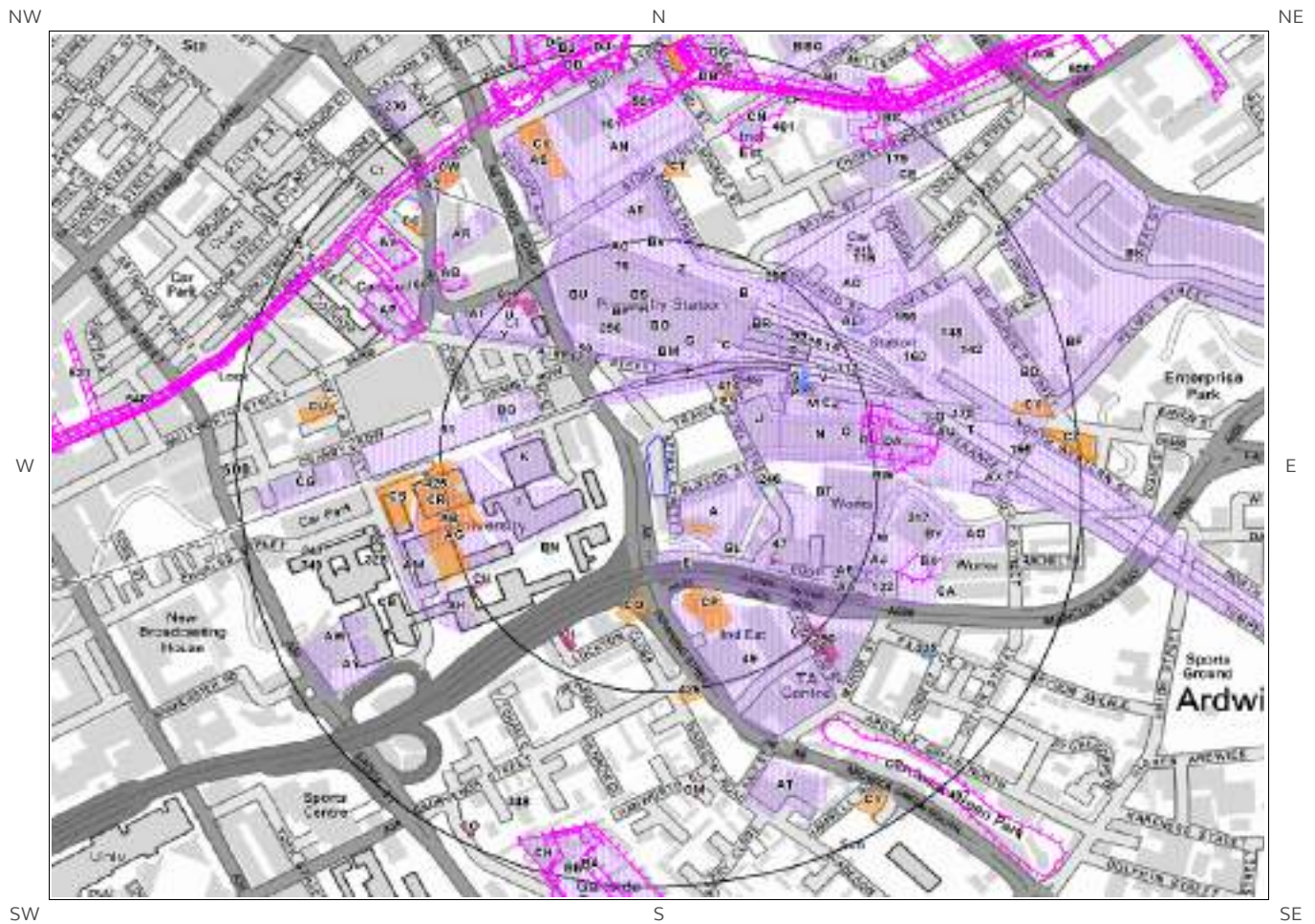
Note: Maps

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

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

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

1. Historical Land Use



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1. Historical Industrial Sites

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

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

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 240

ID	Distance [m]	Direction	Use	Date
1A	8	S	Unspecified Mill	1915
2A	8	S	Unspecified Mill	1934
3A	8	S	Unspecified Mills	1890
4A	8	S	Unspecified Mills	1938
5A	10	E	Cotton Mill	1851
6A	12	S	Unspecified Mill	1923
7B	49	N	Railway Sidings	1890
8B	49	N	Railway Sidings	1905
9C	54	N	Railway Sidings	1988
10C	54	N	Railway Sidings	1985
11C	54	N	Railway Sidings	1978
12C	54	N	Railway Sidings	1994
13C	54	N	Railway Sidings	1971
14	57	N	Railway Sidings	1923
15D	58	N	Railway Sidings	1934
16D	58	N	Railway Sidings	1938
17D	58	N	Railway Sidings	1915
18BV	59	N	Railway Sidings	1956
19E	68	S	Unspecified Works	1915
20E	69	S	Unspecified Works	1923
21F	70	N	Railway Building	1971
22F	70	N	Railway Building	1994
23F	70	N	Railway Building	1978
24F	70	N	Railway Building	1988
25F	70	N	Railway Building	1985
26G	83	NE	Railway Stations	1938
27G	83	NE	Railway Stations	1934
28G	83	NE	Railway Stations	1915
29N	85	NE	Railway Station	1923
30H	88	N	Railway Station	1890
31H	88	N	Railway Station	1905
32H	88	N	Railway Station	1923
33I	90	W	Unspecified Mills	1923
34J	92	NE	Railway Station	1956

35I	94	W	Unspecified Mills	1915
36I	94	W	Unspecified Mills	1938
37I	94	W	Unspecified Mills	1934
38J	96	E	Railway Station	1988
39J	96	E	Railway Station	1994
40H	101	N	Railway Station	1988
41H	101	N	Railway Station	1985
42H	101	N	Railway Station	1978
43H	101	N	Railway Station	1994
44H	101	N	Railway Station	1971
45H	102	N	Railway Station	1956
46K	112	W	Unspecified Works	1923
47	113	SE	Dye Works	1851
48K	113	W	Unspecified Works	1915
49	117	S	Unspecified Commercial/Industrial	1923
50	123	NW	Railway Buildings	1923
51	131	W	Unspecified Commercial/Industrial	1923
52AE	133	E	Unspecified Commercial/Industrial	1956
53X	133	E	Unspecified Works	1968
54L	135	SE	Unspecified Works	1915
55L	135	SE	Unspecified Works	1923
56AU	137	E	Railway Sidings	1956
57O	138	E	Goods Station	1978
58M	139	NE	Railway Building	1934
59M	139	NE	Railway Building	1938
60N	139	E	Railway Station	1956
61O	141	E	Railway Station	1968
62M	144	NE	Railway Building	1915
63Q	148	E	Railway Sidings	1968
64P	152	E	Railway Building	1968
65M	152	E	Railway Building	1956
66P	153	E	Railway Building	1978
67Q	153	E	Railway Sidings	1978
68R	158	E	Goods Station	1991
69R	158	E	Goods Station	1985
70CJ	160	E	Police Station	1851
71S	163	NE	Railway Building	1915
72S	163	NE	Railway Building	1938
73S	163	NE	Railway Building	1934
74S	165	NE	Railway Building	1923
75	167	N	Railway Sidings	1851
76	171	N	Railway Station	1851
77S	172	NE	Railway Building	1956
78T	172	E	Railway Sidings	1991

79T	172	E	Railway Sidings	1985
80U	177	NW	Fire Station	1988
81U	177	NW	Fire Station	1985
82U	177	NW	Fire Station	1971
83U	177	NW	Fire Station	1956
84U	177	NW	Fire Station	1978
85U	177	NW	Fire Station	1994
86Y	178	NW	Fire Engine Station	1923
87U	178	NW	Fire Station	1934
88U	178	NW	Fire Station	1938
89D	179	NE	Railway Station	1978
90D	179	NE	Railway Station	1968
91V	181	NE	Railway Building	1968
92V	181	NE	Railway Building	1978
93D	182	NE	Railway Buildings	1923
94W	183	E	Unspecified Works	1915
95W	183	E	Unspecified Works	1923
96BR	183	NE	Railway Building	1923
97X	183	E	Unspecified Works	1978
98Y	183	NW	Fire Engine Station	1915
99	203	NE	Railway Building	1956
100AA	205	SE	Unspecified Works	1915
101Z	205	N	Railway Building	1934
102Z	205	N	Railway Building	1938
103W	206	E	Unspecified Works	1991
104W	206	E	Unspecified Works	1985
105AB	206	W	Unspecified Works	1923
106Z	206	N	Railway Building	1905
107Z	206	N	Railway Building	1915
108Z	206	N	Railway Building	1923
109AA	207	SE	Unspecified Works	1923
110AG	207	W	Unspecified Works	1915
111AB	223	W	Iron Works	1890
112W	228	E	Dye Works	1851
113	233	NE	Railway Building	1923
114AC	235	N	Railway Building	1938
115AC	235	N	Railway Building	1934
116	236	NE	Unspecified Depot	1991
117AC	236	N	Railway Building	1905
118AC	236	N	Railway Building	1915
119AC	236	N	Railway Building	1923
120AD	238	NE	Goods Yard	1934
121AD	238	NE	Goods Yard	1938
122AD	240	NE	Goods Yard	1915
123AD	241	NE	Goods Yard	1923
124AE	242	E	Unspecified Tank	1915

125AE	243	E	Unspecified Tank	1923
126AF	246	N	Grain Store	1915
127AF	246	N	Railway Building	1938
128AF	246	N	Grain Store	1923
129AG	251	W	Railway Sidings	1923
130AH	252	NW	Police Station	1938
131AH	252	NW	Police Station	1934
132	252	SE	Unspecified Station	1991
133AI	253	NW	Police Station	1915
134AI	253	NW	Police Station	1923
135AG	253	W	Railway Sidings	1915
136AL	262	NE	Railway Building	1923
137AJ	264	E	Unspecified Tank	1915
138AK	264	SW	Unspecified Works	1915
139AJ	264	E	Unspecified Tank	1923
140AK	265	SW	Unspecified Works	1923
141AL	267	NE	Smithy	1915
142	269	NE	Unspecified Depot	1985
143AI	270	NW	Police Station	1971
144AI	270	NW	Police Station	1988
145AI	270	NW	Police Station	1978
146AI	270	NW	Police Station	1985
147AI	270	NW	Police Station	1994
148	279	NE	Goods Yard	1968
149AM	290	W	Unspecified Works	1923
150AM	291	W	Unspecified Works	1915
151AN	299	N	Goods Station	1905
152AN	299	N	Goods Station	1890
153AN	299	N	Goods Station	1923
154AO	299	NW	Unspecified Ground Workings	1934
155AO	299	NW	Unspecified Ground Workings	1938
156	306	NE	Smithy	1923
157AN	307	N	Goods Station	1938
158AN	307	N	Goods Station	1934
159AN	307	N	Goods Station	1915
160	307	NW	Unspecified Works	1923
161	314	N	Unspecified Commercial/Industrial	1956
162AP	315	NW	Unspecified Wharf	1890
163	316	E	Railway Building	1923
164AP	324	NW	Ice Works	1915
165AS	330	N	Railway Building	1890
166AR	332	NW	Unspecified Mill	1915
167AQ	334	E	Brewery	1915
168AQ	336	E	Brewery	1923

169AR	336	NW	Unspecified Mill	1923
170AS	338	N	Goods Shed	1905
171AS	338	N	Goods Shed	1923
172AS	338	N	Goods Shed	1934
173AS	338	N	Goods Shed	1915
174AS	338	N	Goods Shed	1938
175	340	E	Railway Buildings	1923
176CG	354	W	Unspecified Commercial/Industrial	1923
177AT	359	S	Tyre Works	1915
178AT	362	S	Tyre Works	1923
179	368	NE	Unspecified Works	1968
180AU	368	E	Railway Building	1923
181AV	369	NW	Unspecified Wharf	1915
182AV	370	NW	Unspecified Wharf	1923
183AW	383	SW	Unspecified Works	1915
184AW	383	SW	Unspecified Works	1923
185CN	384	N	Unspecified Ground Workings	1851
186AY	389	SW	Unspecified Mills	1923
187AX	389	E	Railway Building	1923
188AX	393	E	Railway Building	1923
189AY	393	SW	Unspecified Mills	1938
190AY	393	SW	Unspecified Mills	1915
191AY	393	SW	Unspecified Mills	1934
192AY	393	SW	Unspecified Mills	1890
193AZ	406	NW	Unspecified Works	1915
194AZ	406	NW	Unspecified Works	1923
195	423	E	Railway Building	1923
196BA	425	S	Cemetery	1851
197BA	429	S	Cemetery	1956
198BC	430	NE	Unspecified Works	1923
199BB	437	S	Cemetery	1890
200BB	437	S	Cemetery	1905
201BB	437	S	Cemetery	1915
202BB	437	S	Cemetery	1934
203BB	437	S	Cemetery	1938
204BB	437	S	Cemetery	1923
205BC	444	NE	Unspecified Works	1968
206	447	N	Unspecified Warehouse	1923
207BD	448	E	Chimney	1991
208BD	448	E	Chimney	1985
209BE	450	N	Unspecified Wharf	1934
210BE	450	N	Unspecified Wharf	1915
211BE	450	N	Unspecified Wharf	1938
212BF	461	E	Unspecified Depot	1985

213BF	461	E	Unspecified Depot	1991
214DG	466	N	Unspecified Wharf	1923
215BG	467	N	Clothing Foundry	1905
216BG	467	N	Unspecified Disused Foundry	1890
217BH	473	N	Clothing Factory	1915
218BH	473	N	Clothing Factory	1938
219BH	473	N	Clothing Factory	1934
220BI	474	N	Unspecified Works	1915
221BI	475	N	Unspecified Workshop	1923
222BJ	476	N	Unspecified Warehouses	1934
223BJ	476	N	Unspecified Warehouses	1915
224BJ	476	N	Unspecified Warehouses	1938
225BK	483	NE	Railway Sidings	1890
226DC	485	N	Unspecified Wharf	1956
227BK	486	NE	Railway Sidings	1938
228BK	486	NE	Railway Sidings	1905
229BK	486	NE	Railway Sidings	1934
230BK	486	NE	Railway Sidings	1915
231BK	486	NE	Railway Sidings	1923
232BK	490	NE	Goods Station	1956
233BF	490	E	Unspecified Depot	1978
234BF	490	E	Unspecified Depot	1968
235BH	494	N	Clothing Factory	1923
236	497	NW	Infirmery	1923
237BJ	498	N	Unspecified Wharf	1905
238BJ	498	N	Unspecified Wharf	1890
239BJ	498	N	Unspecified Wharf	1923
240	499	N	Unspecified Mills	1923

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary:

125

ID	Distance (m)	Direction	Use	Date
241E	89	S	Unspecified Tank	1908
242BM	103	N	Unspecified Tank	1891
243BL	104	SE	Unspecified Tank	1889
244BL	104	SE	Unspecified Tank	1889
245BM	106	N	Unspecified Tank	1891
246	110	E	Tanks	1908

247G	127	N	Unspecified Tank	1891
248G	130	N	Unspecified Tank	1891
249G	131	N	Unspecified Tank	1891
250G	133	N	Unspecified Tank	1891
251BO	135	N	Unspecified Tank	1891
252H	138	N	Unspecified Tank	1891
253BN	140	SW	Unspecified Tank	1955
254BN	140	SW	Unspecified Tank	1952
255BO	142	N	Unspecified Tank	1891
256	143	NW	Unspecified Tank	1891
257H	145	N	Unspecified Tank	1891
258H	151	N	Unspecified Tank	1891
259H	154	N	Unspecified Tank	1891
260BP	160	N	Unspecified Tank	1891
261BP	162	N	Unspecified Tank	1891
262BP	163	N	Unspecified Tank	1891
263H	168	N	Unspecified Tank	1891
264BP	170	N	Unspecified Tank	1891
265BQ	173	W	Unspecified Tank	1891
266BQ	174	W	Unspecified Tank	1955
267BQ	174	W	Unspecified Tank	1955
268BQ	174	W	Unspecified Tank	1952
269S	174	NE	Unspecified Tank	1932
270S	174	NE	Unspecified Tank	1922
271S	174	NE	Unspecified Tank	1908
272BP	176	N	Unspecified Tank	1891
273S	176	NE	Unspecified Tank	1891
274BS	176	N	Unspecified Tank	1891
275BR	178	NE	Unspecified Tank	1950
276V	178	NE	Unspecified Tank	1889
277V	178	NE	Unspecified Tank	1889
278BR	179	NE	Unspecified Tank	1948
279BR	179	NE	Unspecified Tank	1952
280BR	179	NE	Unspecified Tank	1955
281V	182	NE	Unspecified Tank	1948
282V	183	NE	Unspecified Tank	1948
283BT	185	E	Unspecified Tank	1889
284BS	188	N	Unspecified Tank	1891
285BR	192	NE	Unspecified Tank	1950
286BR	192	NE	Unspecified Tank	1948
287BR	192	NE	Unspecified Tank	1952
288BR	193	NE	Unspecified Tank	1955
289BR	193	NE	Unspecified Tank	1955
290BS	193	N	Unspecified Tank	1891
291BT	194	E	Unspecified Tank	1889
292BT	194	E	Unspecified Tank	1889

293BU	199	NW	Unspecified Tank	1891
294BU	202	NW	Unspecified Tank	1891
295AH	214	NW	Gas Meter Testing Station	1948
296R	237	E	Tanks	1891
297AE	241	E	Unspecified Tank	1932
298	243	NE	Unspecified Tank	1889
299AE	243	E	Unspecified Tank	1908
300AE	243	E	Unspecified Tank	1922
301BV	251	N	Unspecified Tank	1950
302BV	251	N	Unspecified Tank	1965
303BV	251	N	Unspecified Tank	1965
304BV	251	N	Unspecified Tank	1948
305BV	251	N	Unspecified Tank	1952
306BV	251	N	Unspecified Tank	1964
307BV	252	N	Unspecified Tank	1955
308BW	256	E	Unspecified Tank	1889
309BW	256	E	Unspecified Tank	1889
310AL	266	NE	Unspecified Tank	1891
311AL	268	NE	Unspecified Tank	1889
312AL	274	NE	Unspecified Tank	1948
313AL	274	NE	Unspecified Tank	1948
314AK	286	SW	Unspecified Tank	1889
315AK	286	SW	Unspecified Tank	1908
316AK	286	SW	Unspecified Tank	1889
317	301	E	Unspecified Tank	1889
318BX	323	E	Unspecified Tank	1994
319BX	323	E	Unspecified Tank	1995
320BX	323	E	Unspecified Tank	1998
321BY	324	E	Unspecified Tank	1889
322BY	324	E	Unspecified Tank	1889
323BX	324	E	Unspecified Tank	1977
324BX	324	E	Tanks	1986
325BX	325	E	Unspecified Tank	1985
326BX	325	E	Unspecified Tank	1991
327BZ	341	W	Unspecified Tank	1891
328	347	W	Unspecified Tank	1891
329BZ	349	W	Unspecified Tank	1891
330CA	351	E	Unspecified Tank	1998
331CA	351	E	Unspecified Tank	1995
332BZ	351	W	Unspecified Tank	1891
333CA	351	E	Unspecified Tank	1986
334CB	352	SW	Unspecified Tank	1891
335	361	SE	Unspecified Tank	1995
336CB	369	SW	Tanks	1891
337CC	400	NW	Unspecified Tank	1891
338CC	419	NW	Unspecified Tank	1891

339AW	419	SW	Tanks	1968
340AW	419	SW	Tanks	1962
341AW	419	SW	Tanks	1969
342AW	420	SW	Unspecified Tank	1955
343AW	420	SW	Unspecified Tank	1955
344AW	420	SW	Unspecified Tank	1953
345AW	420	SW	Unspecified Tank	1950
346AW	420	SW	Unspecified Tank	1948
347	421	W	Unspecified Tank	1891
348	425	SW	Unspecified Tank	1954
349	425	W	Unspecified Tank	1891
350CD	441	SE	Unspecified Tank	1932
351CE	445	NE	Unspecified Tank	1908
352CD	446	SE	Unspecified Tank	1889
353CD	446	SE	Unspecified Tank	1922
354CD	446	SE	Unspecified Tank	1908
355CD	446	SE	Unspecified Tank	1889
356CE	446	NE	Unspecified Tank	1889
357CF	455	N	Unspecified Tank	1889
358CF	455	N	Unspecified Tank	1889
359CF	455	N	Unspecified Tank	1908
360CG	456	W	Unspecified Tank	1891
361CH	479	S	Unspecified Tank	1954
362CH	479	S	Unspecified Tank	1948
363CH	479	S	Unspecified Tank	1955
364CH	479	S	Unspecified Tank	1955
365CH	480	S	Unspecified Tank	1950

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary:

47

ID	Distance (m)	Direction	Use	Date
366L	148	SE	Electricity Substation	1950
367L	149	SE	Electricity Substation	1952
368L	149	SE	Electricity Substation	1948
369L	149	SE	Electricity Substation	1955
370L	149	SE	Electricity Substation	1955
371CI	198	SW	Electricity Substation	1968
372CI	198	SW	Electricity Substation	1970
373CI	198	SW	Electricity Substation	1970

374CI	198	SW	Electricity Substation	1970
375CI	200	SW	Electricity Substation	1998
376CI	200	SW	Electricity Substation	1984
377CJ	208	E	Electricity Substation	1977
378CJ	209	E	Electricity Substation	1994
379CJ	209	E	Electricity Substation	1985
380CJ	209	E	Electricity Substation	1991
381AH	214	NW	Gas Meter Testing Station	1948
382CK	224	SW	Electricity Substation	1968
383CK	225	SW	Electricity Substation	1970
384CK	225	SW	Electricity Substation	1970
385CK	225	SW	Electricity Substation	1970
386CK	225	SW	Electricity Substation	1998
387CK	225	SW	Electricity Substation	1984
388CL	236	SE	Electricity Substation	1953
389CL	236	SE	Electricity Substation	1948
390	238	SE	Electricity Substation	1948
391CL	248	SE	Electricity Substation	1998
392CL	248	SE	Electricity Substation	1995
393CL	249	SE	Electricity Substation	1986
394CM	380	S	Electricity Substation	1984
395CM	381	S	Electricity Substation	1968
396CM	381	S	Electricity Substation	1970
397CM	381	S	Electricity Substation	1970
398CM	381	S	Electricity Substation	1970
399CM	383	S	Electricity Substation	1998
400CN	416	N	Electricity Substation	1992
401	417	N	Electricity Substation	1997
402CO	475	SW	Electricity Substation	1968
403CO	475	SW	Electricity Substation	1950
404CO	475	SW	Electricity Substation	1955
405CO	475	SW	Electricity Substation	1955
406CO	475	SW	Electricity Substation	1970
407CO	475	SW	Electricity Substation	1970
408CO	475	SW	Electricity Substation	1948
409CO	475	SW	Electricity Substation	1954
410CO	475	SW	Electricity Substation	1970
411CO	476	SW	Electricity Substation	1984
412CO	477	SW	Electricity Substation	1998

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary:

0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary:

77

ID	Distance (m)	Direction	Use	Date
413A	40	SE	Motor Repair Works	1948
414	93	NE	Garage	1948
415CQ	121	S	Garage	1954
416CP	122	S	Garage	1968
417CP	123	S	Garage	1970
418CP	123	S	Garage	1970
419CP	123	S	Garage	1970
420CP	128	S	Coach Works	1932
421CQ	133	S	Garage	1954
422AB	209	W	Motor Engineering Works	1955
423CR	222	W	Motor Engineering Works	1948
424CR	222	W	Motor Engineering Works	1952
425	237	W	Motor Engineering Works	1950
426	242	S	Garage	1984
427CS	276	W	Garage	1955
428CS	289	W	Garage	1952
429CT	332	N	Garage	1971
430CT	332	N	Garage	1971
431CT	332	N	Garage	1960
432CT	332	N	Garage	1965
433CT	332	N	Garage	1967
434CT	332	N	Garage	1953
435CT	332	N	Garage	1953
436CT	332	N	Garage	1953
437CV	348	N	Garage	1990
438CU	383	W	Garage	1955
439CU	383	W	Garage	1968
440CU	383	W	Garage	1950
441CU	384	W	Garage	1965
442CU	384	W	Garage	1965
443CU	384	W	Garage	1948

444CU	384	W	Garage	1964
445CU	384	W	Garage	1985
446CU	384	W	Garage	1990
447CU	384	W	Garage	1990
448CC	384	NW	Garage	1968
449CC	385	NW	Garage	1984
450CV	386	N	Garage	1971
451CV	387	N	Garage	1971
452CC	400	NW	Garage	1965
453CC	400	NW	Garage	1952
454CC	400	NW	Garage	1948
455CC	400	NW	Garage	1964
456CC	400	NW	Garage	1971
457CC	400	NW	Garage	1955
458AZ	407	NW	Garage	1948
459AZ	407	NW	Garage	1971
460CW	409	NW	Garage	1971
461CW	409	NW	Garage	1948
462CW	409	NW	Garage	1971
463CX	425	E	Garage	1977
464CX	425	E	Garage	1963
465CX	426	E	Garage	1991
466CX	426	E	Garage	1985
467CX	427	E	Garage	1965
468CX	427	E	Garage	1968
469CX	427	E	Garage	1965
470CY	449	SE	Garage	1960
471CY	449	SE	Garage	1965
472CY	449	SE	Garage	1965
473CY	450	SE	Garage	1953
474BE	457	N	Garage	1953
475BE	457	N	Garage	1953
476BE	457	N	Garage	1953
477BE	457	N	Garage	1965
478BE	457	N	Garage	1967
479BE	458	N	Garage	1971
480CZ	461	E	Garage	1994
481CZ	461	E	Garage	1977
482CZ	462	E	Garage	1991
483CZ	462	E	Garage	1985
484CZ	471	E	Garage	1968
485CZ	480	E	Garage	1963
486BE	481	N	Garage	1960
487BE	481	N	Garage	1971
488CZ	488	E	Garage	1965
489CZ	488	E	Garage	1965

1.6 Potentially Infilled Land

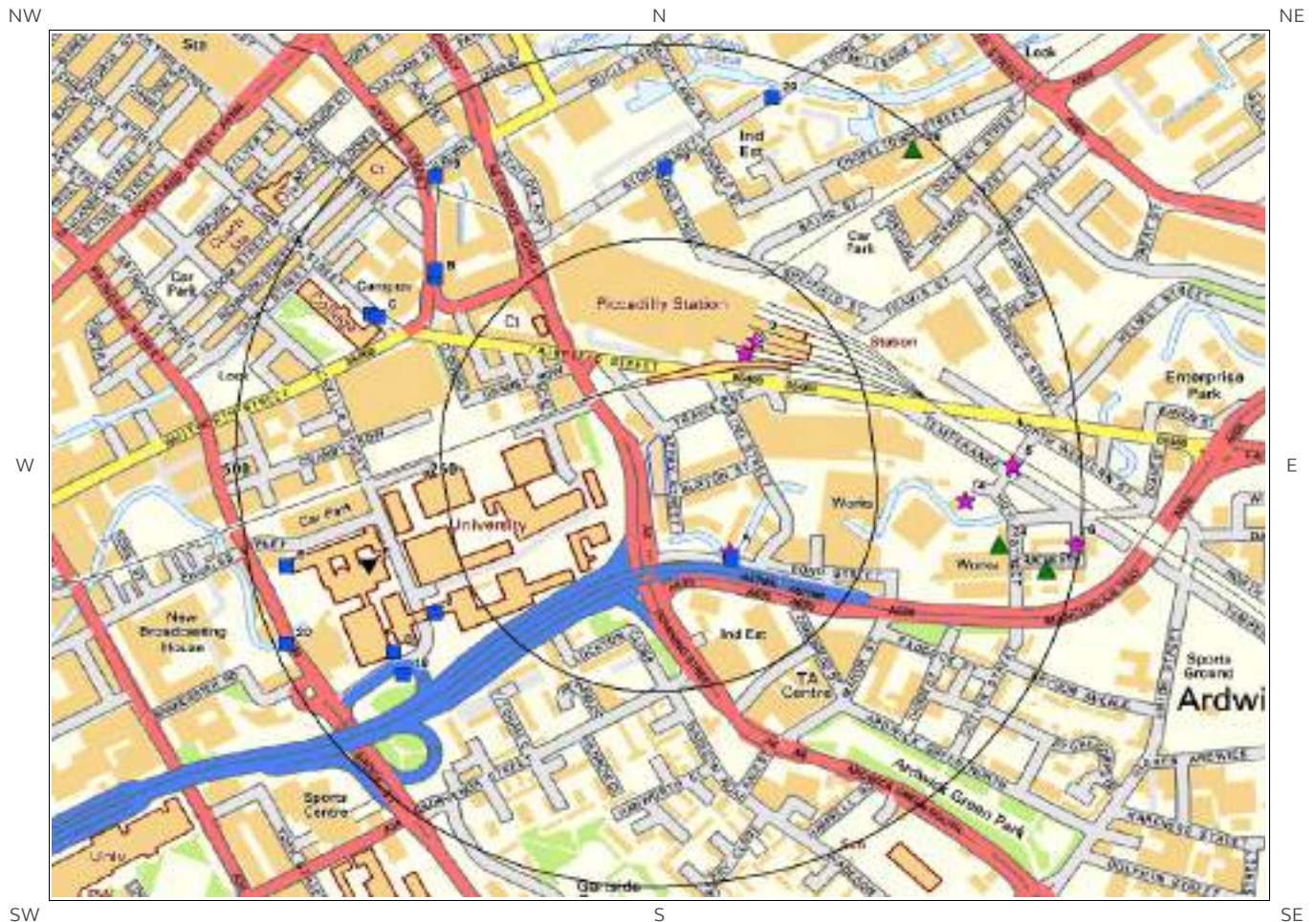
Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 62

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

ID	Distance(m)	Direction	Use	Date
490DA	240	E	Ponds	1890
491DA	252	E	Ponds	1851
492BX	296	E	Pond	1851
493AO	299	NW	Unspecified Ground Workings	1934
494AO	299	NW	Unspecified Ground Workings	1938
495AV	308	NW	Ponds	1890
496AP	315	NW	Unspecified Wharf	1890
497	348	SE	Pond	1851
498AV	369	NW	Unspecified Wharf	1915
499AV	370	NW	Unspecified Wharf	1923
500CN	384	N	Unspecified Ground Workings	1851
501	398	N	Pond	1905
502DB	406	N	Canal	1915
503DB	406	N	Canal	1934
504DB	406	N	Canal	1938
505DB	406	N	Water Body	1890
506	406	N	Canal	1923
507BA	425	S	Cemetery	1851
508BB	429	S	Cemetery	1956
509BB	437	S	Cemetery	1923
510BB	437	S	Cemetery	1938
511BB	437	S	Cemetery	1915
512BB	437	S	Cemetery	1905
513BB	437	S	Cemetery	1890
514BB	437	S	Cemetery	1934
515DD	442	N	Water Body	1905
516	443	NW	Canal	1956
517BJ	443	NW	Canal	1890
518DB	444	N	Water Body	1905
519DC	450	NW	Canal	1938
520DD	450	NW	Canal	1934
521DC	450	NW	Canal	1915
522BE	450	N	Unspecified Wharf	1934
523BE	450	N	Unspecified Wharf	1915
524BE	450	N	Unspecified Wharf	1938
525	451	NE	Canal	1991

526DE	454	N	Canal	1978
527DE	454	N	Canal	1988
528DE	454	N	Canal	1971
529DE	454	N	Canal	1994
530DE	454	N	Canal	1985
531	462	NW	Canal	1896
532DF	463	NW	Canal	1923
533DF	463	NW	Canal	1916
534DF	463	NW	Canal	1932
535DF	463	NW	Canal	1905
536DF	463	NW	Canal	1938
537DG	466	N	Unspecified Wharf	1923
538DH	467	N	Canal	1956
539DH	467	N	Canal	1968
540DI	474	N	Canal	1985
541DI	474	N	Canal	1978
542DJ	475	N	Canal	1971
543DJ	475	N	Canal	1994
544DJ	475	N	Canal	1985
545DJ	475	N	Canal	1978
546DJ	475	N	Canal	1988
547DC	485	N	Unspecified Wharf	1956
548	494	W	Canal	1988
549BJ	498	N	Unspecified Wharf	1890
550BJ	498	N	Unspecified Wharf	1905
551BJ	498	N	Unspecified Wharf	1923

2. Environmental Permits, Incidents and Registers Map



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

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

3

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

ID	Distance (m)	Direction	NGR	Details
24	403	E	385264 397526	Address: Tj Stafford Ltd, Hoyle Street, Ardwick, M12 6HG Process: Other mineral processes Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
25	466	E	385322 397492	Address: Ardwick Spares, 2 Hoyle Street, Ardwick, M12 6HG Process: Non-ferrous Metal Foundry Processes Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
26	475	NE	385161 398032	Address: Central Taxi Spares Ltd, Chapletown Street, Ancoats, M1 2NN Process: Waste oil Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

6

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

ID	Distance (m)	Direction	NGR	Address	Operator	Type	Permissio n Number	Dates	Status
33F	358	W	384500 397500	Umist, Po Box 88, Sackville Street, Manchester, M60 1QD	Umist	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AC8878	Date of Approval: 31/3/1991 Effective from: 31/3/1991 Last date of update: 2015-01-01	Revoked/cancelled
34F	358	W	384500 397500	Umist, Po Box 88, Sackville Street, Manchester, M60 1QD	Umist	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AG4009	Date of Approval: 13/11/1997 Effective from: 11/12/1997 Last date of update: 2015-01-01	Superseded By Variation
35F	358	W	384500 397500	Umist, Po Box 88, Sackville Street, Manchester, M60 1QD	Umist	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	AC8886	Date of Approval: 6/3/2001 Effective from: 6/3/2001 Last date of update: 2015-01-01	Revoked/cancelled

ID	Distance (m)	Direction	NGR	Address	Operator	Type	Permission Number	Dates	Status
36F	358	W	384500 397500	Umist, Po Box 88, Sackville Street, Manchester, M60 1QD	Umist	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AG4009	Date of Approval:9/4/2002 Effective from:6/5/2002 Last date of update:2015-01- 01	Revoked/ca nclled
37F	358	W	384500 397500	Umist, Po Box 88, Sackville Street, Manchester, M60 1QD	Umist	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AG4009	Date of Approval:16/1/199 5 Effective from:16/2/1995 Last date of update:2015-01- 01	Superseded By Variation
38F	358	W	384500 397500	Umist, Po Box 88, Sackville Street, Manchester, M60 1QD	Umist	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AG4009	Date of Approval:30/1/199 7 Effective from:25/2/1997 Last date of update:2015-01- 01	Superseded By Variation

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

17

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

ID	Distance (m)	Direction	NGR	Details
7A	110	SE	384940 397510	Address: MANCUNIAN WAY SLIPROAD CSO, MANCHESTER, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982729 Permit Version: 2 Receiving Water: RIVER MEDLOCK Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: - Effective Date: 30-Nov-1999 Revocation Date: -
8	306	SW	384580 397440	Address: MOUNT ST/RUTLAND ST, MANCHESTER, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0287 Permit Version: 1 Receiving Water: RIVER MEDLOCK Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01-Jan-1995 Revocation Date: -
9B	337	NW	384580 397870	Address: MINSHULL ST/WHITWORTH ST, MANCHESTER, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0355 Permit Version: 1 Receiving Water: - Status: SURRENDERED UNDER EPR 2010 Issue date: - Effective Date: 01-Jan-1995 Revocation Date: 18/07/2014

ID	Distance (m)	Direction	NGR	Details
10	341	N	384860 398010	Address: STORE STREET, ANCOATS, MANCHESTER, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0371 Permit Version: 1 Receiving Water: - Status: SURRENDERED UNDER EPR 2010 Issue date: - Effective Date: 01-Jan-1995 Revocation Date: 05/12/2014
11B	343	NW	384580 397880	Address: AYTOUN ST, MANCHESTER, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0318 Permit Version: 1 Receiving Water: SHOOTERS BROOK Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: - Effective Date: 01-Jan-1995 Revocation Date: 01/01/1995
12B	343	NW	384580 397880	Address: AYTOUN ST, MANCHESTER, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982630 Permit Version: 1 Receiving Water: SHOOTERS BROOK Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 30-Sep-1994 Revocation Date: -
13C	368	NW	384510 397820	Address: CHORLTON STREET CSO, CHORLTON STREET, MANCHESTER, GREATER MANCHESTER, M1 3HW Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0162 Permit Version: 1 Receiving Water: DUKES TUNNEL Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01-Jan-1995 Revocation Date: 02/09/2010
14C	368	NW	384510 397820	Address: CHORLTON STREET CSO, CHORLTON STREET, MANCHESTER, GREATER MANCHESTER, M1 3HW Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0162 Permit Version: 2 Receiving Water: DUKES TUNNEL Status: VARIED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03-Sep-2010 Revocation Date: 04/02/2016
15D	374	SW	384530 397390	Address: MOUNT STREET/GREEK STREET CSO, OFF MANCUNIAN WAY, MANCHESTER, GREATER MANCHESTER, M1 7DN Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0187 Permit Version: 2 Receiving Water: RIVER MEDLOCK Status: VARIED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03-Sep-2010 Revocation Date: 04/02/2016
16D	374	SW	384530 397390	Address: MOUNT STREET/GREEK STREET CSO, OFF MANCUNIAN WAY, MANCHESTER, GREATER MANCHESTER, M1 7DN Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0187 Permit Version: 1 Receiving Water: RIVER MEDLOCK Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01-Jan-1995 Revocation Date: 02/09/2010
17C	376	NW	384502 397823	Address: CHORLTON STREET CSO, CHORLTON STREET, MANCHESTER, GREATER MANCHESTER, M1 3HW Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0162 Permit Version: 3 Receiving Water: DUKES TUNNEL Status: VARIED UNDER EPR 2010 Issue date: 05/02/2016 Effective Date: 05-Feb-2016 Revocation Date: -

ID	Distance (m)	Direction	NGR	Details
18	381	SW	384541 397361	Address: MOUNT STREET/GREEK STREET CSO, OFF MANCUNIAN WAY, MANCHESTER, GREATER MANCHESTER, M1 7DN Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0187 Permit Version: 3 Receiving Water: RIVER MEDLOCK Status: VARIED UNDER EPR 2010 Issue date: 05/02/2016 Effective Date: 05-Feb-2016 Revocation Date: -
19	428	NW	384580 398000	Address: AYTOUN ST/AUBURN ST, MANCHESTER, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0370 Permit Version: 1 Receiving Water: - Status: SURRENDERED UNDER EPR 2010 Issue date: - Effective Date: 01-Jan-1995 Revocation Date: 27/03/2015
20	453	N	384990 398100	Address: STORE STREET, ANCOATS, MANCHESTER, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982994 Permit Version: 1 Receiving Water: RIVER MEDLOCK Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 23-Jun-1995 Revocation Date: -
21E	455	W	384400 397500	Address: 112-116 PRINCESS STREET, MANCHESTER, GREATER MANCHESTER Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016991403 Permit Version: 1 Receiving Water: RIVER MEDLOCK Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 24-Apr-1989 Revocation Date: 31/03/1992
22E	455	W	384400 397500	Address: 112-116 PRINCESS STREET, MANCHESTER, GREATER MANCHESTER Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016991403 Permit Version: 2 Receiving Water: RIVER MEDLOCK Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01-Apr-1992 Revocation Date: 10/02/1993
23	485	SW	384400 397400	Address: BBC VEHICLE MAINTENANCE BASE SWO, PRITCHARD STREET, MANCHESTER, GREATER MANCHESTER Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016991346 Permit Version: 1 Receiving Water: RIVER MEDLOCK Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 22-Sep-1994 Revocation Date: 22/09/1994

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

6

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

ID	Distance (m)	Direction	NGR	Details
1A	102	SE	384937 397518	Incident Date: 17-Jan-2003 Incident Identification: 131596 Pollutant: Contaminated Water Pollutant Description: Urban Run-Off Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2	147	NE	384956 397773	Incident Date: 08-Mar-2001 Incident Identification: 96 Pollutant: Oils and Fuel Pollutant Description: Diesel Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
3	169	NE	384970 397790	Incident Date: 30-May-2001 Incident Identification: 6998 Pollutant: Oils and Fuel Pollutant Description: Diesel Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
4	357	E	385224 397584	Incident Date: 31-Jul-2001 Incident Identification: 20628 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
5	416	E	385282 397629	Incident Date: 30-May-2001 Incident Identification: 7029 Pollutant: Oils and Fuel Pollutant Description: Diesel Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
6	495	E	385358 397528	Incident Date: 13-Oct-2001 Incident Identification: 36400 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

Database searched and no data found.

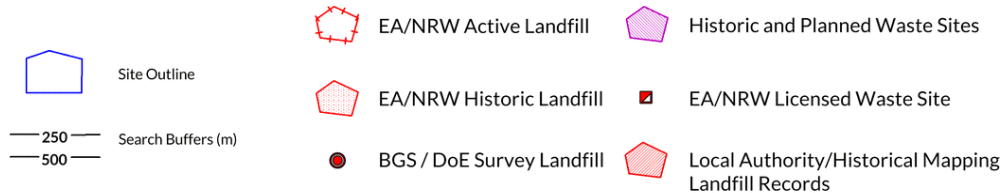
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

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

0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

1

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

ID	Distance (m)	Direction	NGR	Details
Not shown	821	E	Site Address: Palmerston Street Landfill, Great Ancoats Street, River Medlock, Ardwick, Manchester, Greater Manchester Waste Licence: Yes Site Reference: RD/LIC/440/86, F046 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 20-Aug-1986 Licence Surrendered: 21-Jul-1988 Licence Holder Address: Clarence House, Mellor Road, Cheadle Hulme, Stockport Operator: - Licence Holder: Peter Birse Limited First Recorded: 01-Sep-1986 Last Recorded: 31-Dec-1987

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

0

Database searched and no data found.

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

0

Database searched and no data found.

3.2 Other Waste Sites

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

4

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
1A	262	E	385198 397591	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1994	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
2A	263	E	385199 397592	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1991	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
3B	372	NE	385177 397897	Type of Site: Scrap Metal Works Site Address: N/A	Planning Application Reference: N/A Date: 1948	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
4B	372	NE	385177 397897	Type of Site: Scrap Metal Works Site Address: N/A	Planning Application Reference: N/A Date: 1948	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

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

19

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

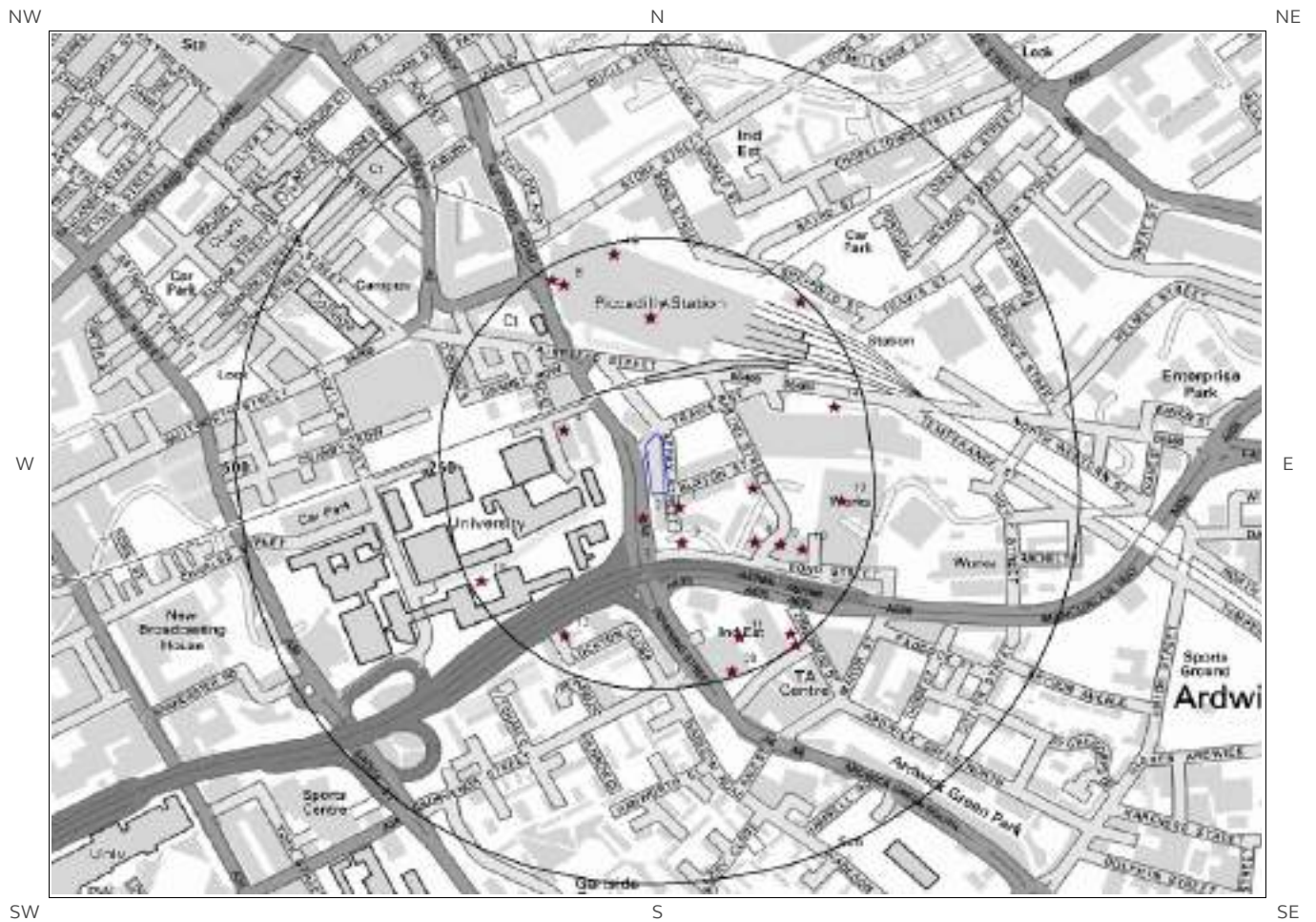
ID	Distance (m)	Direction	NGR	Details	
6	345	E	385200 397500	Site Address: 2, Hoyle Street, Ardwick, Manchester, M12 6HG Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ADO001 EPR reference: EA/EPR/AP3092CD/A001 Operator: Donnelly Mr. A. Waste Management licence No: 53582 Annual Tonnage: 310.0	Issue Date: 11/10/1996 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Suspended Site Name: Ardwick Auto Spares Correspondence Address: 2, Hoyle Street, Ardwick, Manchester, M12
7	378	E	385235 397506	Site Address: Hoyle Trading Estate, Hoyle Street, Manchester, M12 6HL Type: Treatment of waste to produce soil <75,000 tpy Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: DEL043 EPR reference: EA/EPR/CB3601KL/A001 Operator: E Delaney Demolition Ltd Waste Management licence No: 402157 Annual Tonnage: 74999.0	Issue Date: 26/02/2015 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Aggregate Recycling Yard Correspondence Address: Hoyle Trading Estate, Hoyle Street, Manchester, M12

ID	Distance (m)	Direction	NGR	Details	
8	429	E	385296 397583	Site Address: Hoyle Street, Hoyle Trading Estate, Manchester, M12 6JL Type: Inert & excavation Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CIT060 EPR reference: EA/EPR/CB3905MR/A001 Operator: City Excavations Ltd Waste Management licence No: 402399 Annual Tonnage: 75000.0	Issue Date: 01/06/2015 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: City Excavations Aggregate Yard Correspondence Address: Hoyle Street, Hoyle Trading Estate, Manchester, M12
9	440	E	385300 397510	Site Address: Temperance Street, Ardwick, Manchester, M12 6HS Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PML001 EPR reference: EA/EPR/AP3992CN/A001 Operator: Pye Metals Ltd Waste Management licence No: 53583 Annual Tonnage: 1733.33	Issue Date: 11/10/1996 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Pye Metals Ltd Correspondence Address: Temperance Street, Ardwick, Manchester, M12
Not shown	876	W	383998 397374	Site Address: Little Ireland Phase B, Great Marlborough Street, Manchester, M1 5NN Type: Mobile Plant Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: TER003 EPR reference: - Operator: Terra Vac (uk) Ltd Waste Management licence No: 50191 Annual Tonnage: 0.0	Issue Date: 17/06/2002 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Terra Vac (uk) Ltd Correspondence Address: Unit 7a, Whitwood Enterprise Park, Castleford, WF10 5PX
Not shown	1176	N	384771 398842	Site Address: - Type: ELV Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KER003 EPR reference: EA/EPR/TP3494CL/S002 Operator: Brendan J Kershaw & Winston Brown Waste Management licence No: 50328 Annual Tonnage: 0.0	Issue Date: 10/08/2004 Effective Date: - Modified: - Surrendered Date: 06/07/2010 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: French Parts Uk Correspondence Address: -
Not shown	1199	E	386052 397406	Site Address: Operational Depot, Hooper Street, Manchester, Lancs, M12 6LA Type: Inert & Excavation WTS with treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MAN114 EPR reference: EA/EPR/DB3839DD/A001 Operator: Manchester City Council Waste Management licence No: 103692 Annual Tonnage: 249999.0	Issue Date: 15/12/2011 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Hooper Street Depot Correspondence Address: Operational Depot, Hooper Street, Manchester, Lancs, M12
Not shown	1228	E	386046 397248	Site Address: West Goods Yard, Rondin Road, Ardwick, Manchester, M12 6JT Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BIR103 EPR reference: EA/EPR/PP3291EE/V002 Operator: Birch Skip Hire Ltd Waste Management licence No: 102091 Annual Tonnage: 49999.0	Issue Date: 07/04/2011 Effective Date: - Modified: 02/12/2013 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked Site Name: Birch Skip Hire Correspondence Address: West Goods Yard, Rondin Road, Ardwick, Manchester, M12

ID	Distance (m)	Direction	NGR	Details	
Not shown	1294	E	386160 397540	Site Address: Units 15, Rondin Close, Ardwick, Manchester, M12 6BF Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MCG002 EPR reference: EA/EPR/RP3098CB/A001 Operator: P Mc Guinness & Co Ltd Waste Management licence No: 50105 Annual Tonnage: 4999.0	Issue Date: 09/08/2002 Effective Date: - Modified: 21/12/2004 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: P Mc Guinness & Co Transfer Station Correspondence Address: Units 15, Rondin Close, Ardwick, Manchester, M12
Not shown	1336	E	386200 397500	Site Address: Unit 12, Rondin Road, Ardwick, Manchester, M12 6BF Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BIR071 EPR reference: EA/EPR/CP3097LW/V002 Operator: Birch Skip Hire Ltd Waste Management licence No: 53760 Annual Tonnage: 6250.0	Issue Date: 16/12/1993 Effective Date: 01/05/2008 Modified: 15/10/2008 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked Site Name: Birch Skip Hire Correspondence Address: Unit 12, Rondin Road, Ardwick, Manchester, M12
Not shown	1336	E	386200 397500	Site Address: Unit 12, Rondin Road, Ardwick, Manchester, M12 6BF Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BIR071 EPR reference: EA/EPR/CP3097LW/V002 Operator: Birch Skip Hire Ltd. Waste Management licence No: 53760 Annual Tonnage: 6250.0	Issue Date: 16/12/1993 Effective Date: 01/05/2008 Modified: 15/10/2008 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked Site Name: Birch Skip Hire Correspondence Address: Unit 12, Rondin Road, Ardwick, Manchester, M12
Not shown	1336	E	386200 397500	Site Address: Unit 12, Rondin Road, Ardwick, Manchester, M12 6BF Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BIR071 EPR reference: - Operator: Birch Skip Hire Ltd. Waste Management licence No: 53760 Annual Tonnage: 6250.0	Issue Date: 16/12/1993 Effective Date: 01/05/2008 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Birch Skip Hire Correspondence Address: Unit 12, Rondin Close, Off Ashton Old Road, Manchester, M12 6LL
Not shown	1336	E	386200 397500	Site Address: - Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ACA001 EPR reference: - Operator: Cash Anthony Waste Management licence No: 53760 Annual Tonnage: 6250.0	Issue Date: 16/12/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Birch Plant & Waste Services Ltd Correspondence Address: -
Not shown	1346	E	386200 397400	Site Address: Rondin House, Rondin Road, Ardwick, Manchester, M12 6BF Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MCG003 EPR reference: - Operator: P Mc Guinness & Company Ltd Waste Management licence No: 50363 Annual Tonnage: 0.0	Issue Date: 21/12/2004 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: P Mc Guinness & Co Ltd Correspondence Address: Pearl Environmental, 13, Middleton Road, Reddish, Stockport, SK5 6SG

ID	Distance (m)	Direction	NGR	Details	
Not shown	1388	E	386237 397366	Site Address: 22, Rondin Road, Ardwick, Manchester, M12 6BF Type: 75kte Metal Recycling Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: OES001 EPR reference: EA/EPR/MB3832AC/A001 Operator: One51 E S Metals (North) Limited Waste Management licence No: 104965 Annual Tonnage: 74999.0	Issue Date: 08/10/2013 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Howarth Metals Correspondence Address: 22, Rondin Road, Ardwick, Manchester, M12
Not shown	1388	E	386237 397366	Site Address: 22, Rondin Road, Ardwick, Manchester, M12 6BF Type: 75kte Metal Recycling Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIM002 EPR reference: EA/EPR/EB3803ME/T001 Operator: Sims Group U K Limited Waste Management licence No: 104965 Annual Tonnage: 74999.0	Issue Date: 08/10/2013 Effective Date: 23/01/2017 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Sims Group U K Limited Correspondence Address: 22, Rondin Road, Ardwick, Manchester, M12
Not shown	1468	E	386314 397344	Site Address: Rondin House, Rondin Road, Ardwick, Manchester, M12 6BF Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MCG003 EPR reference: EA/EPR/CP3294CX/V004 Operator: P Mc Guinness & Co Ltd Waste Management licence No: 50363 Annual Tonnage: 74999.0	Issue Date: 21/12/2004 Effective Date: - Modified: 24/08/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: P Mc Guinness & Co Ltd Correspondence Address: Rondin House, Rondin Road, Ardwick, Manchester, M12
Not shown	1477	NE	386000 398600	Site Address: - Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ME001 EPR reference: - Operator: Murray Mills Conservation Ltd Waste Management licence No: 50069 Annual Tonnage: 0.0	Issue Date: 16/05/2001 Effective Date: 07/10/2004 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Lumns Lane, Clifton Junction, Swinton Correspondence Address: Central House, 299, Grimshaw Lane, Middleton, Manchester, M40 2AT
Not shown	1477	NE	386000 398600	Site Address: - Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ME001 EPR reference: EA/EPR/VP3098CU/T002 Operator: Murray Mills Conservation Ltd Waste Management licence No: 50069 Annual Tonnage: 24999.0	Issue Date: 16/05/2001 Effective Date: 07/10/2004 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Lumns Lane, Clifton Junction, Swinton Correspondence Address: -

4. Current Land Use Map



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4. Current Land Uses

4.1 Current Industrial Data

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

22

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	22	SE	Electricity Sub Station	384879 397574	M1	Electrical Features	Infrastructure and Facilities
2	31	S	Gantry	384835 397561	M1	Travelling Cranes and Gantries	Industrial Features
3	66	S	Pumping House	384882 397528	M1	Water Pumping Stations	Industrial Features
4	102	W	Depot	384738 397674	M1	Container and Storage	Transport, Storage and Delivery
5	102	E	Cozy Knitwear	384969 397598	58, Baring Street, Manchester, M1 2PY	Clothing, Components and Accessories	Consumer Products
6	122	SE	Works	384971 397529	M1	Unspecified Works Or Factories	Industrial Features
7A	149	N	Manchester Piccadilly Rail Station	384844 397818	M1	Railway Stations, Junctions and Halts	Public Transport, Stations and Infrastructure
8A	150	N	Sixt	384845 397819	Manchester Piccadilly Station, Boad Street, Manchester, M1 2RP	Vehicle Hire and Rental	Hire Services
9	151	SE	Factory	385003 397526	M12	Unspecified Works Or Factories	Industrial Features
10	177	SE	F & B Hosiery	385028 397520	10, Nether Street, Manchester, M12 6HY	Lingerie and Hosiery	Consumer Products
11	205	SE	Calumet Photographic	384953 397407	Unit 4 Downing Street Industrial Estate, Charlton Place, Ardwick, Manchester, M12 6HH	Photographic and Optical Equipment	Household, Office, Leisure and Garden
12	209	SW	Electricity Sub Station	384740 397410	M1	Electrical Features	Infrastructure and Facilities
13	210	E	Works	385077 397583	M1	Unspecified Works Or Factories	Industrial Features
14	213	E	Electricity Sub Station	385068 397704	M1	Electrical Features	Infrastructure and Facilities
15B	222	NW	Europcar	384738 397860	Manchester Piccadilly Station, Station Approach, City Centre, Manchester, M1 2PB	Vehicle Hire and Rental	Hire Services
16C	233	SE	Downing Street Industrial Estate	385015 397412	M12	Business Parks and Industrial Estates	Industrial Features

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
17B	234	NW	Piccadilly (Manchester Metrolink)	384725 397866	M1	Tram, Metro and Light Railway Stations and Stops	Public Transport, Stations and Infrastructure
18	236	SW	Electricity Sub Station	384638 397480	M1	Electrical Features	Infrastructure and Facilities
19	237	N	Hertz Car Hire	384800 397900	Piccadilly Railway Station, Boad Street, Manchester, M1 2RP	Vehicle Hire and Rental	Hire Services
20	242	S	Speedy Hire Plc	384943 397363	Unit 1-3 Downing Street Industrial Estate, Charlton Place, Ardwick, Manchester, M12 6HH	Construction and Tool Hire	Hire Services
21	243	NE	Aline Services Ltd	385026 397838	Unit 8, Sheffield Street, Manchester, M1 2ND	Distribution and Haulage	Transport, Storage and Delivery
22C	249	SE	Electricity Sub Station	385021 397397	M12	Electrical Features	Infrastructure and Facilities

4.2 Petrol and Fuel Sites

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

0

Database searched and no data found.

4.3 National Grid High Voltage Underground Electricity Transmission Cables

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

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

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

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

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

0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

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

Lex Code	Description	Rock Type
MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

5.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

5.3 Bedrock and Solid Geology

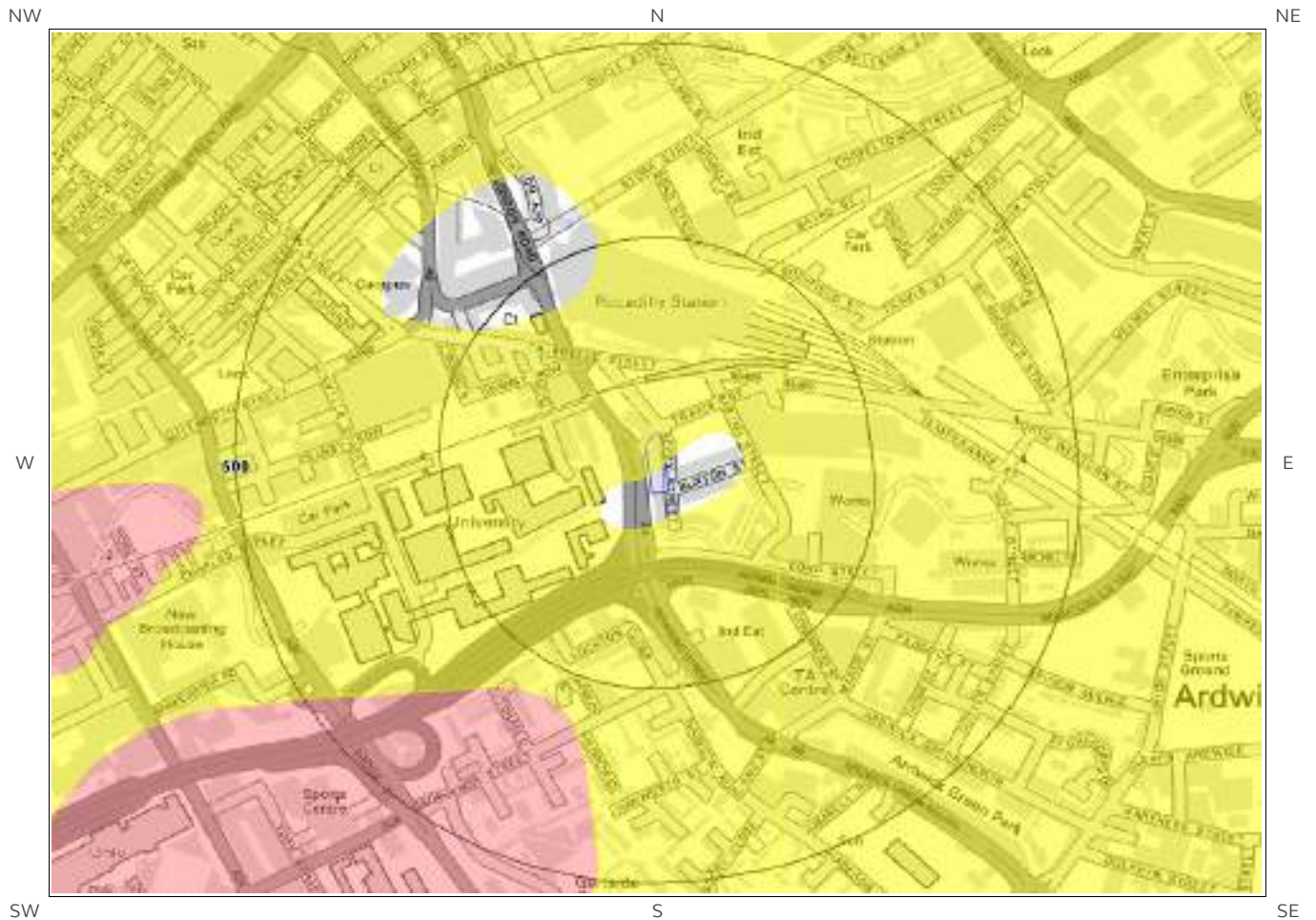
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
CHES-SDST	CHESTER FORMATION	SANDSTONE

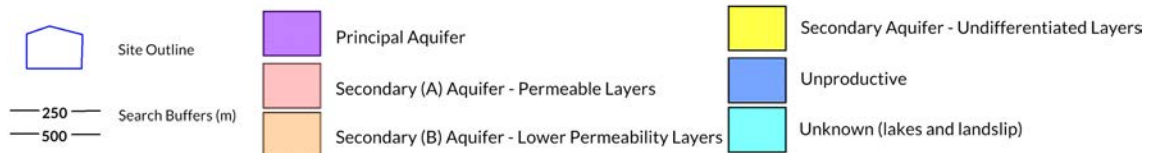
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



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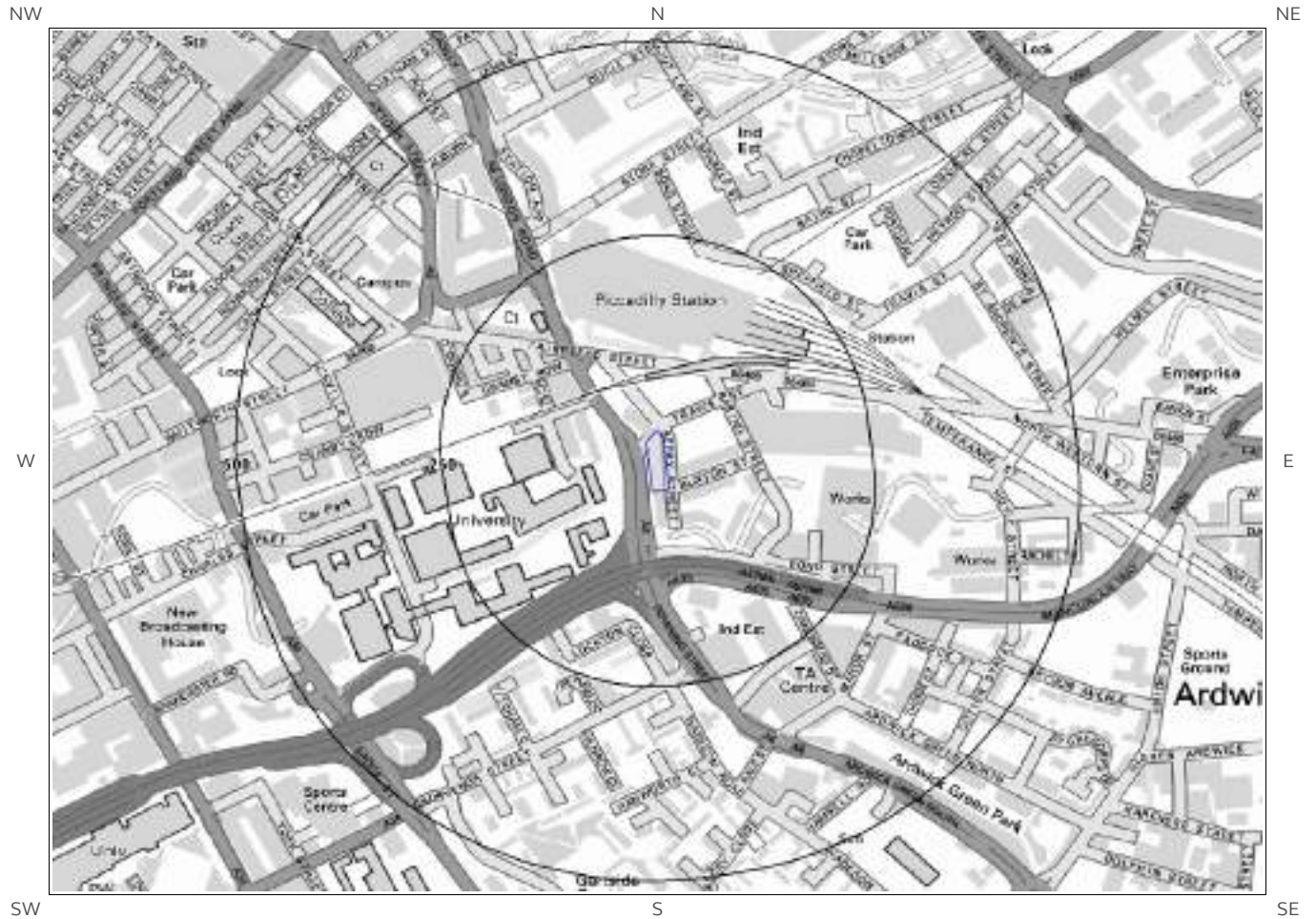
6b. Aquifer Within Bedrock Geology and Abstraction Licenses



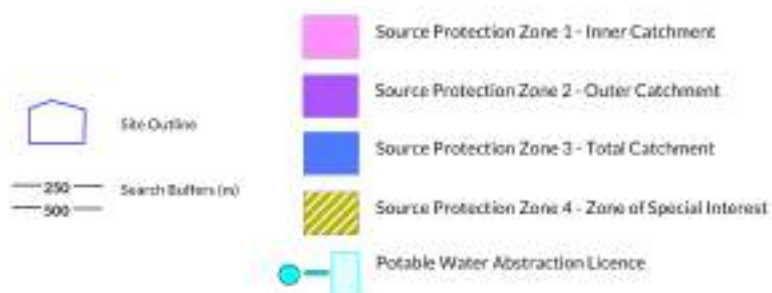
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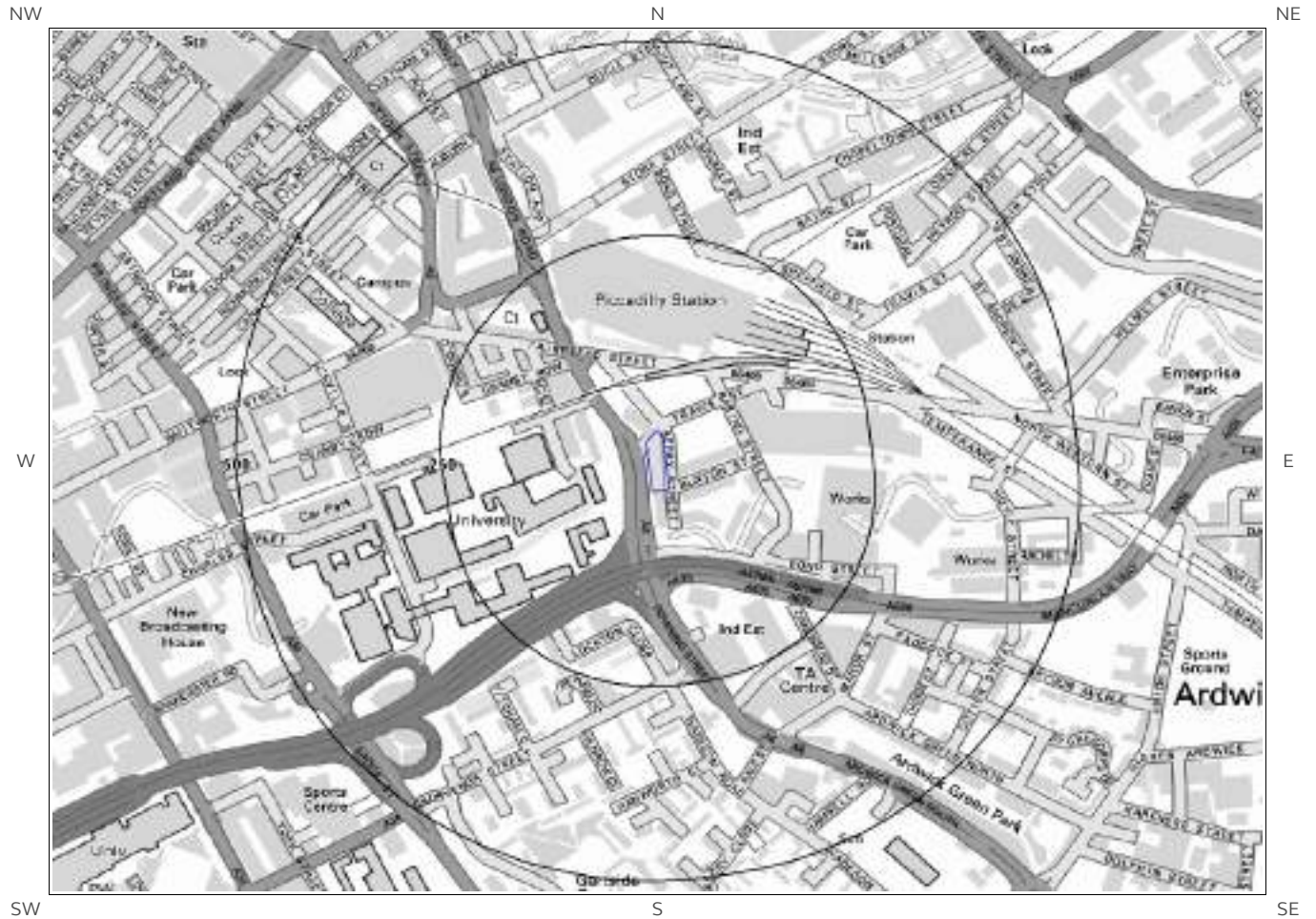
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



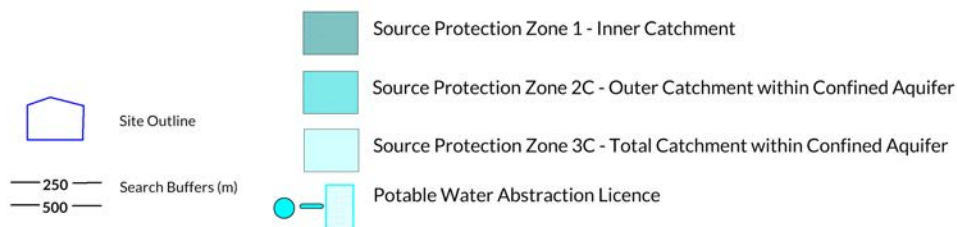
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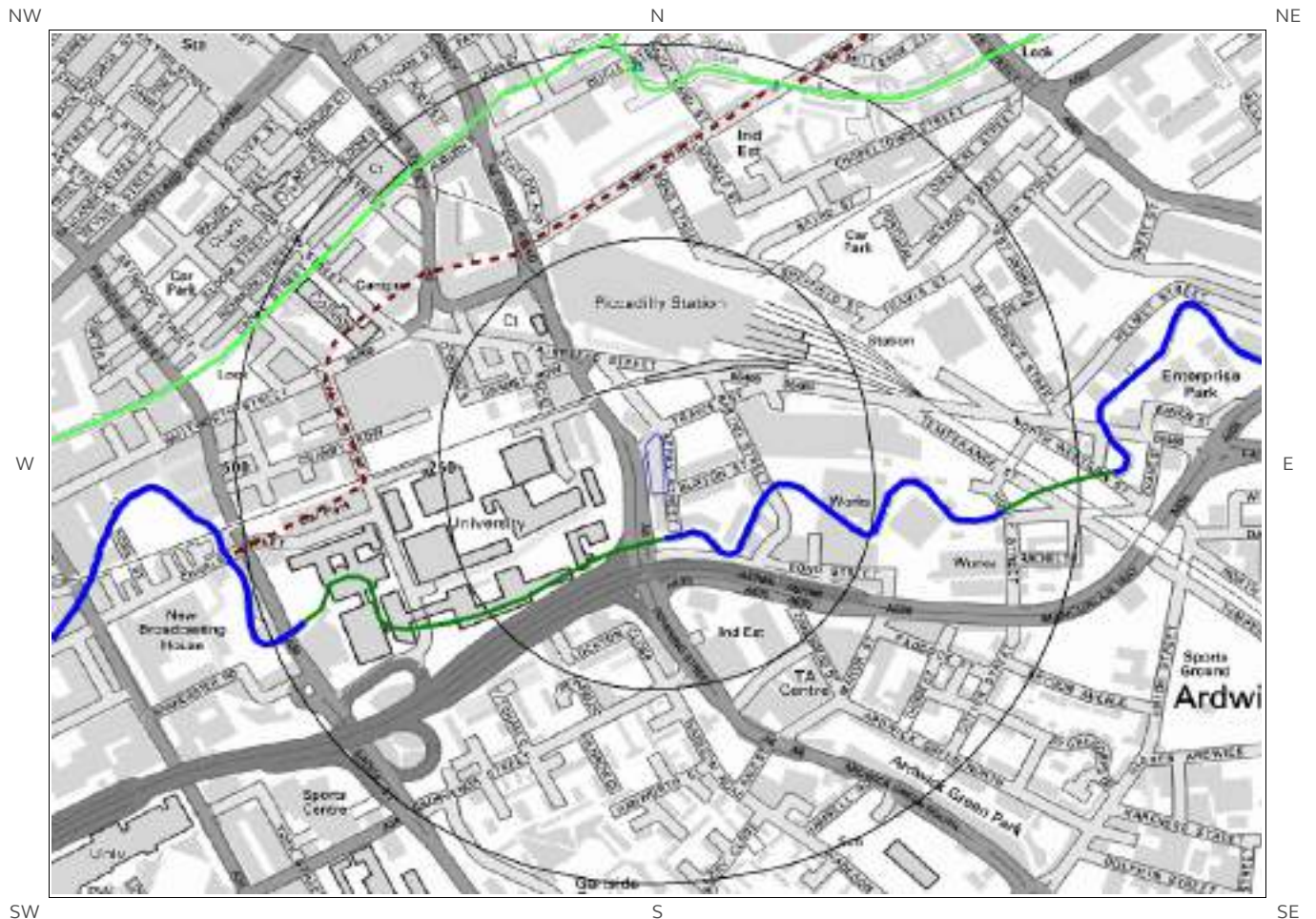
6d. Hydrogeology – Source Protection Zones within confined aquifer



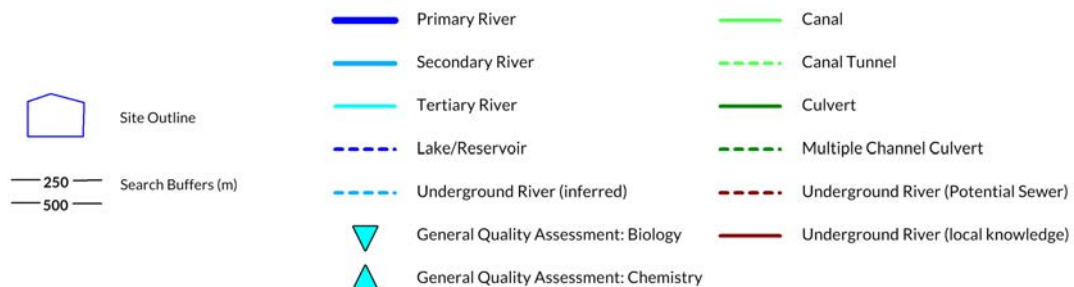
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6e. Hydrology – Detailed River Network and River Quality



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6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? **Yes**

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
3	0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
4	133	E	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
1	291	SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? **Yes**

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
2	133	E	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site?

Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
6A	376	E	385240 397540	Status: Historical Licence No: 2569006001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "borehole At Premises, Broadie St, Ardwick, Manchester" Data Type: Point Name: MOSELEY RUBBER CO LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 6 Original Start Date: 8/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 8/2/1966 Version End Date:
7A	376	E	385240 397540	Status: Historical Licence No: 2569006001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: Borehole At Premises, Broadie St, Ardwick, Manchester Data Type: Point Name: MOSELEY RUBBER CO LTD Annual Volume (m³): 331858 Max Daily Volume (m³): 909.2 Original Application No: 0006 Original Start Date: 8/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 8/2/1966 Version End Date:
8B	467	W	384378 397733	Status: Historical Licence No: NW/069/0006/001 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: Boreholes At Origin Developments, Manchester Data Type: Point Name: West Contracting Annual Volume (m³): 139128 Max Daily Volume (m³): 1010 Original Application No: 7623 Original Start Date: 19/1/2009 Expiry Date: 31/3/2015 Issue No: 1 Version Start Date: 19/1/2009 Version End Date:
9B	467	W	384378 397733	Status: Historical Licence No: NW0690006001 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: Boreholes At Origin Developments, Manchester Data Type: Point Name: West Contracting Annual Volume (m³): 139128 Max Daily Volume (m³): 1010 Original Application No: 7623 Original Start Date: 19/1/2009 Expiry Date: 31/3/2015 Issue No: 1 Version Start Date: 19/1/2009 Version End Date:
Not shown	815	NW	384100 398000	Status: Historical Licence No: 2569007069 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: Borehole At George St, Manchester Data Type: Point Name: BRITISH TELECOMMUNICATIONS PLC Annual Volume (m³): 1100 Max Daily Volume (m³): 860 Original Application No: 2332 Original Start Date: 1/4/1984 Expiry Date: - Issue No: 100 Version Start Date: 1/4/2007 Version End Date:
Not shown	815	NW	384100 398000	Status: Historical Licence No: 2569007069 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "borehole At George St, Manchester" Data Type: Point Name: BRITISH TELECOM Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 2332 Original Start Date: 27/1/1971 Expiry Date: - Issue No: 100 Version Start Date: 27/1/1971 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
12C	832	SW	384180 397091	Status: Active Licence No: NW/069/0006/003 Details: Heat Pump Direct Source: Ground Water - North West Region Point: Borehole 1 At Lower Chatham Street Data Type: Point Name: Manchester Metropolitan University	Annual Volume (m³): 283240 Max Daily Volume (m³): 1532 Original Application No: NPS/WR/015264 Original Start Date: 4/4/2014 Expiry Date: 31/3/2027 Issue No: 2 Version Start Date: 4/4/2014 Version End Date:
13C	832	SW	384180 397091	Status: Active Licence No: NW/069/0006/003 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: Borehole 1 At Lower Chatham Street Data Type: Point Name: Manchester Metropolitan University	Annual Volume (m³): 283240 Max Daily Volume (m³): 1532 Original Application No: NPS/WR/015264 Original Start Date: 4/4/2014 Expiry Date: 31/3/2027 Issue No: 2 Version Start Date: 4/4/2014 Version End Date:
Not shown	1186	SE	385729 396778	Status: Active Licence No: NW/069/0004/005 Details: Heat Pump Direct Source: Ground Water - North West Region Point: Area Of Abstraction - Lower Carboniferous Limestone Data Type: Region Name: G T Energy UK Limited	Annual Volume (m³): 2049840 Max Daily Volume (m³): 8640 Original Application No: NPS/WR/013554 Original Start Date: 17/1/2013 Expiry Date: 16/1/2037 Issue No: 2 Version Start Date: 11/6/2013 Version End Date:
Not shown	1411	SW	383715 396746	Status: Active Licence No: NW/069/0004/003 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: Borehole At Manchester Metropolitan University Data Type: Point Name: Manchester Metropolitan University	Annual Volume (m³): 274115 Max Daily Volume (m³): 751 Original Application No: NPS/WR/008077 Original Start Date: 20/9/2013 Expiry Date: 31/3/2027 Issue No: 1 Version Start Date: 1/1/2015 Version End Date:
Not shown	1411	SW	383715 396746	Status: Active Licence No: NW/069/0004/003 Details: Heat Pump Direct Source: Ground Water - North West Region Point: Borehole At Manchester Metropolitan University Data Type: Point Name: Manchester Metropolitan University	Annual Volume (m³): 274115 Max Daily Volume (m³): 751 Original Application No: NPS/WR/008077 Original Start Date: 20/9/2013 Expiry Date: 31/3/2027 Issue No: 1 Version Start Date: 1/1/2015 Version End Date:
Not shown	1545	NW	383700 398700	Status: Active Licence No: 2569007070 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: Borehole At Dial House Chapel Street Salford Data Type: Point Name: BRITISH TELECOMMUNICATIONS PLC	Annual Volume (m³): 45 Max Daily Volume (m³): 30 Original Application No: 2333 Original Start Date: 27/1/1971 Expiry Date: - Issue No: 101 Version Start Date: 1/4/2007 Version End Date:
Not shown	1545	NW	383700 398700	Status: Historical Licence No: 2569007070 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: Borehole At Dial House, Chapel St, Salford Data Type: Point Name: BRITISH TELECOMMUNICATIONS PLC	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 2333 Original Start Date: 27/1/1971 Expiry Date: - Issue No: 101 Version Start Date: 1/4/1984 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1545	NW	383700 398700	Status: Historical Licence No: 2569007070 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: "borehole At Dial House, Chapel St, Salford" Data Type: Point Name: BRITISH TELECOM Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 2333 Original Start Date: 27/1/1971 Expiry Date: - Issue No: 100 Version Start Date: 27/1/1971 Version End Date:
Not shown	1634	W	383335 398310	Status: Historical Licence No: 2569007089 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: 2 Boreholes At Gartside Street Manchester Data Type: Line Name: HER MAJESTY'S COURT SERVICE Annual Volume (m³): 200000 Max Daily Volume (m³): 1179 Original Application No: 7546 Original Start Date: 26/1/2005 Expiry Date: 31/3/2011 Issue No: 2 Version Start Date: 10/7/2008 Version End Date:
Not shown	1837	NW	383820 399190	Status: Historical Licence No: 2569004023 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "borehole (no 2) At Premises, Strangeways, Manchester" Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 9/8/2000 Version End Date:
Not shown	1837	NW	383820 399190	Status: Historical Licence No: 2569004023 Details: Process Water Direct Source: Ground Water - North West Region Point: Borehole Number 2 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): 500000 Max Daily Volume (m³): 2500 Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:
Not shown	1837	NW	383820 399190	Status: Historical Licence No: 2569004023 Details: Process water Direct Source: Ground Water - North West Region Point: Borehole Number 2 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:
Not shown	1837	NW	383820 399190	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole Number 2 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1837	NW	383820 399190	Status: Historical Licence No: 2569004023 Details: Process water Direct Source: Ground Water - North West Region Point: "borehole (no 2) At Premises, Strangeways, Manchester" Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 9/8/2000 Version End Date:
Not shown	1837	NW	383820 399190	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole Number 2 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): 500000 Max Daily Volume (m³): 2500 Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:
Not shown	1837	NW	383820 399190	Status: Historical Licence No: 2569004023 Details: Process water Direct Source: Ground Water - North West Region Point: Borehole (no 2) At Premises, Strangeways, Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:
Not shown	1837	NW	383820 399190	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole (no 2) At Premises, Strangeways, Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:
Not shown	1857	NW	383830 399220	Status: Historical Licence No: 2569004023 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "borehole (no 3) At Premises, Strangeways, Manchester" Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 9/8/2000 Version End Date:
Not shown	1857	NW	383830 399220	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole Number 3 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): 500000 Max Daily Volume (m³): 2500 Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1857	NW	383830 399220	Status: Historical Licence No: 2569004023 Details: Process Water Direct Source: Ground Water - North West Region Point: Borehole Number 3 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD	Annual Volume (m³): 500000 Max Daily Volume (m³): 2500 Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:
Not shown	1857	NW	383830 399220	Status: Historical Licence No: 2569004023 Details: Process water Direct Source: Ground Water - North West Region Point: Borehole Number 3 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:
Not shown	1857	NW	383830 399220	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole Number 3 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:
Not shown	1857	NW	383830 399220	Status: Historical Licence No: 2569004023 Details: Process water Direct Source: Ground Water - North West Region Point: "borehole (no 3) At Premises, Strangeways, Manchester" Data Type: Point Name: INTERBREW UK LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 9/8/2000 Version End Date:
Not shown	1857	NW	383830 399220	Status: Historical Licence No: 2569004023 Details: Process water Direct Source: Ground Water - North West Region Point: Borehole (no 3) At Premises, Strangeways, Manchester Data Type: Point Name: INTERBREW UK LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:
Not shown	1857	NW	383830 399220	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole (no 3) At Premises, Strangeways, Manchester Data Type: Point Name: INTERBREW UK LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1871	NW	383850 399250	Status: Historical Licence No: 2569004023 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "borehole (no 1) At Premises, Strangeways, Manchester" Data Type: Point Name: INTERBREW UK LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 9/8/2000 Version End Date:
Not shown	1871	NW	383850 399250	Status: Historical Licence No: 2569004023 Details: Process Water Direct Source: Ground Water - North West Region Point: Borehole Number 1 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD	Annual Volume (m³): 500000 Max Daily Volume (m³): 2500 Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:
Not shown	1871	NW	383850 399250	Status: Historical Licence No: 2569004023 Details: Process water Direct Source: Ground Water - North West Region Point: "borehole (no 1) At Premises, Strangeways, Manchester" Data Type: Point Name: INTERBREW UK LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 9/8/2000 Version End Date:
Not shown	1871	NW	383850 399250	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole Number 1 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD	Annual Volume (m³): 500000 Max Daily Volume (m³): 2500 Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:
Not shown	1871	NW	383850 399250	Status: Historical Licence No: 2569004023 Details: Process water Direct Source: Ground Water - North West Region Point: Borehole (no 1) At Premises, Strangeways, Manchester Data Type: Point Name: INTERBREW UK LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:
Not shown	1871	NW	383850 399250	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole (no 1) At Premises, Strangeways, Manchester Data Type: Point Name: INTERBREW UK LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 1/1/2004 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1936	SW	383900 395900	Status: Historical Licence No: 2569007007 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: Borehole At Premises, Moss Side, Manchester Data Type: Point Name: SCOTTISH COURAGE BREWING LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 0389 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/12/2003 Version End Date:
Not shown	1936	SW	383900 395900	Status: Historical Licence No: 2569007007 Details: Process water Direct Source: Ground Water - North West Region Point: Borehole At Premises, Moss Side, Manchester Data Type: Point Name: SCOTTISH COURAGE BREWING LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 0389 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/12/2003 Version End Date:
Not shown	1936	SW	383900 395900	Status: Historical Licence No: 2569007007 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: Borehole At Premises Moss Side Manchester Data Type: Point Name: Heineken UK Ltd	Annual Volume (m³): 227000 Max Daily Volume (m³): 900 Original Application No: NPS/WR/002641 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 23/11/2009 Version End Date:
Not shown	1936	SW	383900 395900	Status: Historical Licence No: 2569007007 Details: Process water Direct Source: Ground Water - North West Region Point: "borehole At Premises, Moss Side, Manchester" Data Type: Point Name: SCOTTISH COURAGE BREWING LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 389 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/8/1995 Version End Date:
Not shown	1936	SW	383900 395900	Status: Historical Licence No: 2569007007 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: "borehole At Premises, Moss Side, Manchester" Data Type: Point Name: SCOTTISH COURAGE BREWING LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 389 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/8/1995 Version End Date:
Not shown	1936	SW	383900 395900	Status: Historical Licence No: 2569007007 Details: Process Water Direct Source: Ground Water - North West Region Point: Borehole At Premises Moss Side Manchester Data Type: Point Name: Heineken UK Ltd	Annual Volume (m³): 227000 Max Daily Volume (m³): 900 Original Application No: NPS/WR/002641 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 102 Version Start Date: 23/11/2009 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1946	SW	383865 395909	Status: Active Licence No: 2569007007 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: Borehole At Premises Moss Side Manchester Data Type: Point Name: Heineken UK Ltd Annual Volume (m³): 227000 Max Daily Volume (m³): 900 Original Application No: NPS/WR/015793 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 103 Version Start Date: 8/5/2014 Version End Date:
Not shown	1946	SW	383865 395909	Status: Active Licence No: 2569007007 Details: Process Water Direct Source: Ground Water - North West Region Point: Borehole At Premises Moss Side Manchester Data Type: Point Name: Heineken UK Ltd Annual Volume (m³): 227000 Max Daily Volume (m³): 900 Original Application No: NPS/WR/015793 Original Start Date: 15/2/1966 Expiry Date: - Issue No: 103 Version Start Date: 8/5/2014 Version End Date:

6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site?

No

Database searched and no data found.

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site?

Yes

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (6c):

ID	Distance (m)	Direction	NGR	Details
Not shown	1837	NW	383820 399190	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole Number 2 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1837	NW	383820 399190	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole Number 2 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): 500000 Max Daily Volume (m³): 2500 Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:
Not shown	1837	NW	383820 399190	Status: Historical Licence No: 2569004023 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "borehole (no 2) At Premises, Strangeways, Manchester" Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:
Not shown	1837	NW	383820 399190	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole (no 2) At Premises, Strangeways, Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:
Not shown	1857	NW	383830 399220	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole Number 3 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): 500000 Max Daily Volume (m³): 2500 Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:
Not shown	1857	NW	383830 399220	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole Number 3 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:
Not shown	1857	NW	383830 399220	Status: Historical Licence No: 2569004023 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "borehole (no 3) At Premises, Strangeways, Manchester" Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1857	NW	383830 399220	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole (no 3) At Premises, Strangeways, Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:
Not shown	1871	NW	383850 399250	Status: Historical Licence No: 2569004023 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "borehole (no 1) At Premises, Strangeways, Manchester" Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:
Not shown	1871	NW	383850 399250	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole (no 1) At Premises, Strangeways, Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:
Not shown	1871	NW	383850 399250	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: Borehole Number 1 At Premises Strangeways Manchester Data Type: Point Name: INTERBREW UK LTD Annual Volume (m³): 500000 Max Daily Volume (m³): 2500 Original Application No: CW0023R Original Start Date: 18/2/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site?

No

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site? No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site? Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Major Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

6.9 River Quality

Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site? Yes

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

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

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

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
16	471	N	384830 398140	River Name: Rochdale Canal Reach: Ashton Canal To Knott Mill End/Start of Stretch: Start of Stretch NGR	A	A	A	A	A
Not shown	531	N	384850 398200	River Name: Rochdale Canal Reach: Empress Processing To Ashton Canal End/Start of Stretch: End of Stretch NGR	A	A	A	A	A
Not shown	787	N	384950 398450	River Name: Rochdale Canal Reach: Empress Processing To Ashton Canal End/Start of Stretch: Start of Stretch NGR	A	A	A	A	A
Not shown	787	N	384950 398450	River Name: Rochdale Canal Reach: Qsl At Summit To Empress Processing End/Start of Stretch: End of Stretch NGR	A	A	A	A	A
Not shown	859	E	385714 397750	River Name: Medlock Reach: Lords Bk. To Irwell End/Start of Stretch: Sample Point NGR	B	B	B	C	C

6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site? Yes

The following Detailed River Network records are represented on the Hydrology Map (6e):

ID	Distance (m)	Direction	Details	
1	57	S	River Name: River Medlock Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
2	58	S	River Name: River Medlock Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
3	284	NW	River Name: Shooters Brook Downstream Welsh River Name: - Alternative Name: -	River Type: Underground River (Potential Sewer) Main River Status: Currently Undefined
4	406	E	River Name: River Medlock Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
5	441	N	River Name: Ashton Canal Welsh River Name: - Alternative Name: -	River Type: Canal Main River Status: Currently Undefined
6	449	NW	River Name: Rochdale Canal Welsh River Name: - Alternative Name: -	River Type: Canal Main River Status: Currently Undefined
7	455	W	River Name: River Medlock Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
8	458	N	River Name: Shooters Brook Downstream Welsh River Name: - Alternative Name: -	River Type: Underground River (inferred) Main River Status: Currently Undefined
9	475	N	River Name: Shooters Brook Downstream Welsh River Name: - Alternative Name: -	River Type: Underground River (Potential Sewer) Main River Status: Currently Undefined

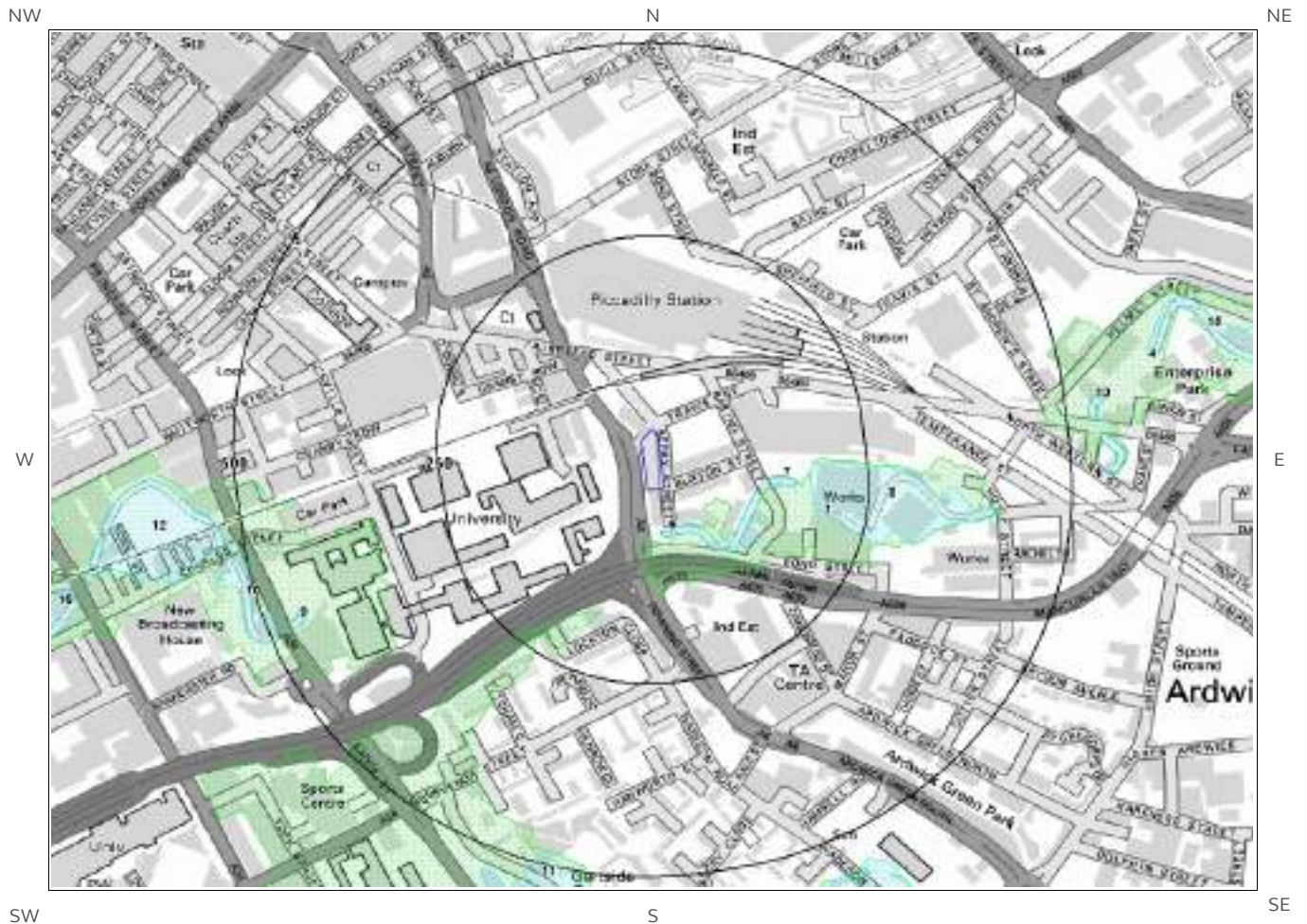
6.11 Surface Water Features

Are there any surface water features within 250m of the study site? Yes

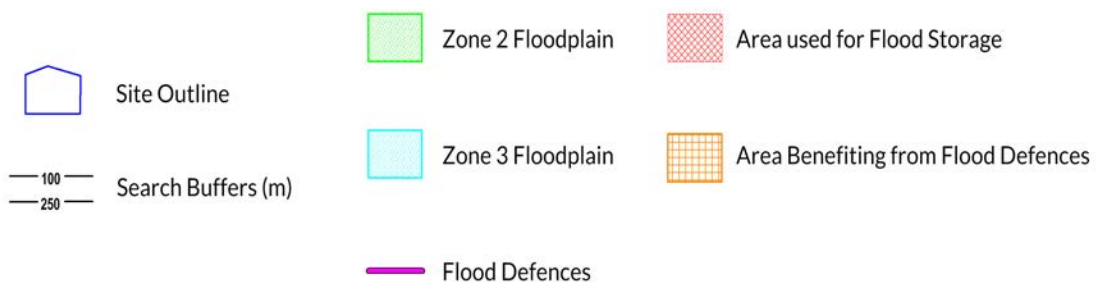
The following surface water records are not represented on mapping:

Distance (m)	Direction
52	S
123	E
207	E

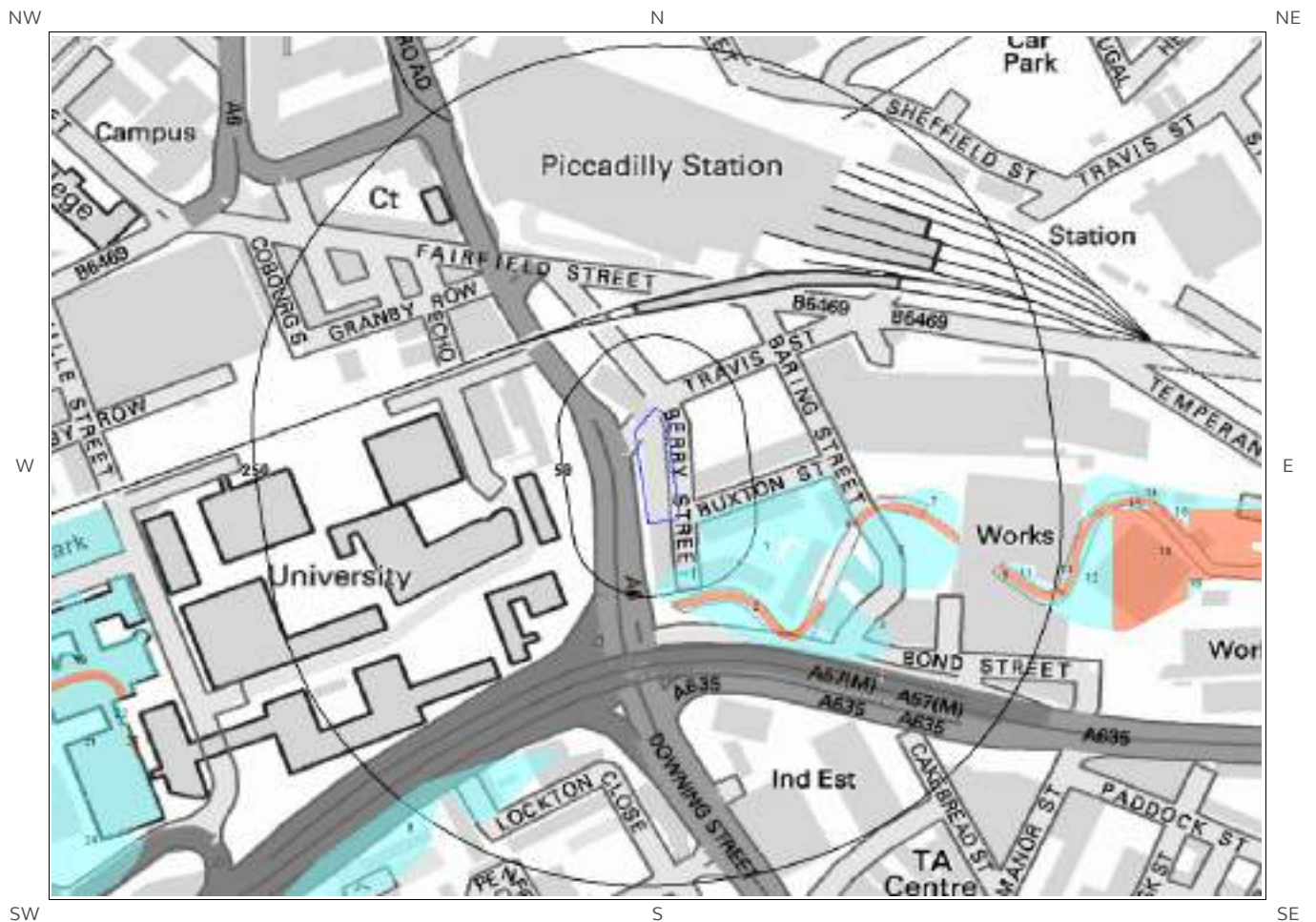
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



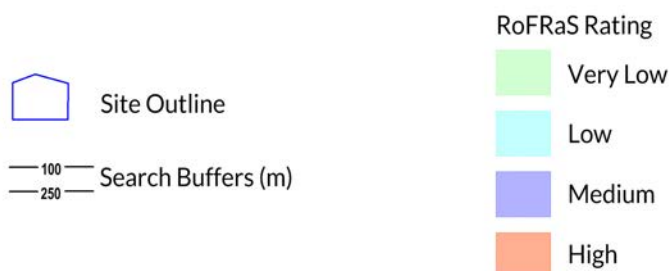
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7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 2 floodplain? Yes

Environment Agency/Natural Resources Wales Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

ID	Distance (m)	Direction	Update	Type
1	52	S	24-Nov-2017	Zone 2 - (Fluvial /Tidal Models)
2	168	S	24-Nov-2017	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 3 floodplain? Yes

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

ID	Distance (m)	Direction	Update	Type
1	52	S	24-Nov-2017	Zone 3 - (Fluvial Models)
2	55	S	24-Nov-2017	Zone 3 - (Fluvial Models)
	126	E	24-Nov-2017	Zone 3 - (Fluvial Models)
	179	E	24-Nov-2017	Zone 3 - (Fluvial Models)

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

What is the highest risk of flooding onsite?

Very Low

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

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

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

ID	Distance (m)	Direction	RoFRaS flood Risk
1	11.0	E	Low

7.4 Flood Defences

Are there any Flood Defences within 250m of the study site?

No

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site?

No

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site?

No

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding?

Clearwater Flooding

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

7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Limited potential

Where limited potential for groundwater flooding to occur is indicated, this means that although given the geological conditions there may be a groundwater flooding hazard, unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area, you need take no further action in relation to groundwater flooding hazard.

7.8 Groundwater Flooding Confidence Areas

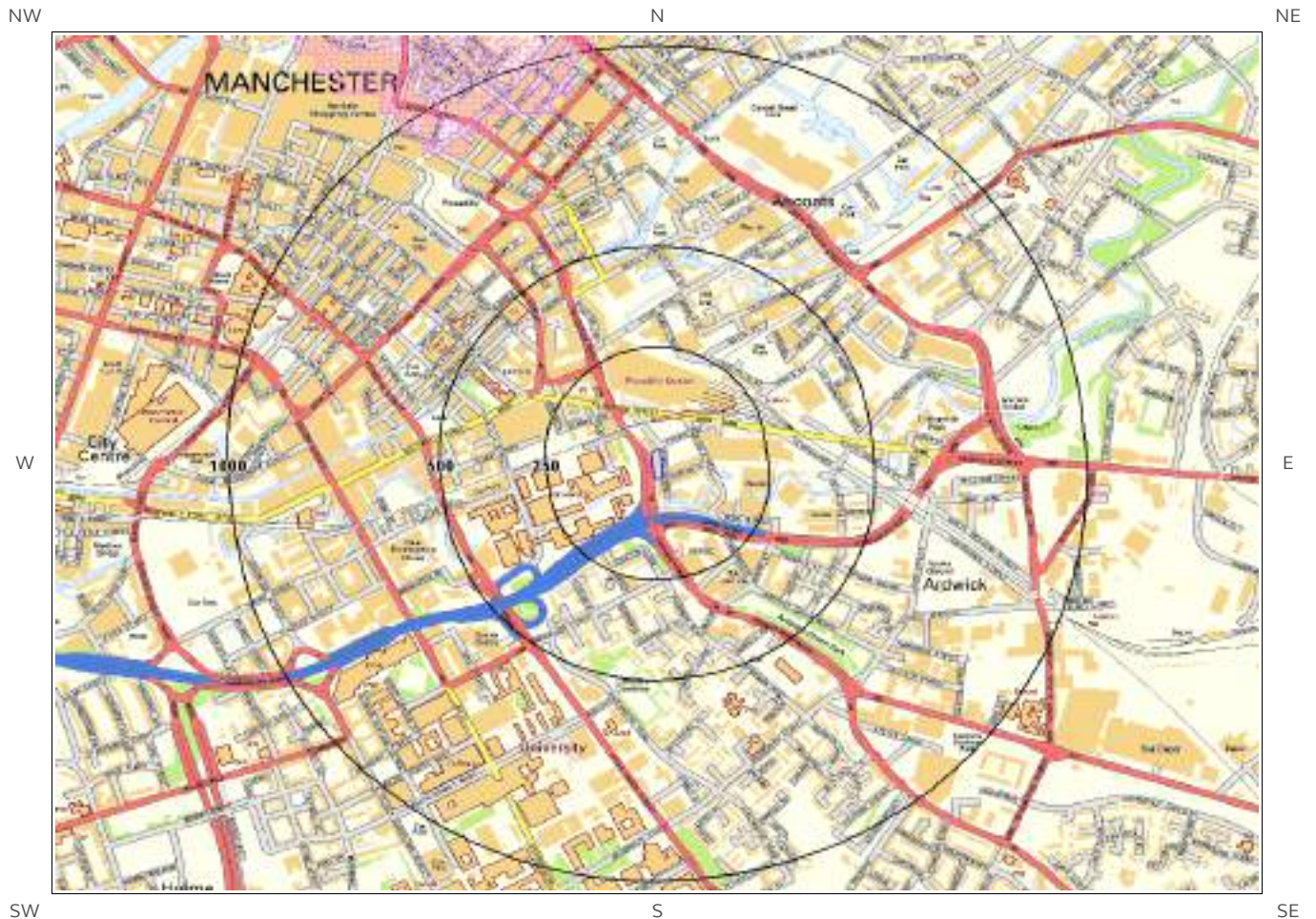
What is the British Geological Survey confidence rating in this result?

Low

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

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

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site? Yes

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

Database searched and no data found.

0

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

Database searched and no data found.

0

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

Database searched and no data found.

0

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

Database searched and no data found.

0

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

Database searched and no data found.

0

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

Database searched and no data found.

0

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

Database searched and no data found.

0

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

2

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

ID	Distance (m)	Direction	NVZ Name	Data Source
1	859	NW	Existing	DEFRA
Not shown	1619	NW	Existing	DEFRA

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

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

What is the maximum Shrink-Swell* hazard rating identified on the study site? Very Low

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

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

9.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Very Low

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

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

9.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? Negligible

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

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

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

9.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site?

Very Low

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

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

9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site?

Very Low

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

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

9.1.6 Running Sand

What is the maximum Running Sand** hazard rating identified on the study site?

Very Low

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

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

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

9.2 Radon

9.2.1 Radon Affected Areas

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

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

9.2.2 Radon Protection

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

10. Mining

10.1 Coal Mining

Are there any coal mining areas within 75m of the study site?

Yes

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

Distance (m)	Direction	Details
0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary?

No

Database searched and no data found.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site?

No

Guidance: No Guidance Required.

Contact Details

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

British Geological Survey Enquiries
Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:
Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency
National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 03708 506 506
Web: www.environment-agency.gov.uk
Email: enquiries@environment-agency.gov.uk

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

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

Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

Local Authority
Authority: Manchester City Council
Phone: 0161 234 5000
Web: <http://www.manchester.gov.uk/>
Address: Town Hall, Albert Square, Manchester, M60 2LA

Gemapping PLC
Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
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<https://www.groundsure.com/terms-and-conditions-sept-2016>

phlorum

Regus, Adamson House, Wilmslow Road,
Manchester, M20 2yy

Groundsure
Reference:

GS-4655728

Your Reference:

JobRef_7759_PO_3599

Report Date

12 Jan 2018

Report Delivery
Method:

Email - pdf

Geo Insight

Address: MACDONALD MANCHESTER HOTEL, 91 MACDONALD MANCHESTER HOTEL, LONDON
ROAD, MANCHESTER, M1 2PG

Dear Sir/ Madam,

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

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

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Address: MACDONALD MANCHESTER HOTEL, 91 MACDONALD
MANCHESTER HOTEL, LONDON ROAD, MANCHESTER, M1 2PG

Date: 12 Jan 2018

Reference: GS-4655728

Client: phlorum

NW N NE



SW S SE

Aerial Photograph Capture date: 11-Jun-2015
Grid Reference: 384857,397625
Site Size: 0.16ha

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Overview of Findings

The Groundsure Geo Insight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 and 1:10,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Non-coal mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

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

Section 1: Geology 1:10,000 Scale

1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	Yes
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	Yes
	1.2.2 Are there any records of landslide within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and linear features	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale?	Yes

Section 2: Geology 1:50,000 Scale

2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	Yes
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	Yes
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslide within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features

2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.

2.3.2 Are there any records relating to permeability of bedrock ground within the study site boundary?

Yes

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

Yes

Section 3: Radon

3. Radon

3.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

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

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	0	0	1	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
4.3 Current Ground Workings	0	0	0	0	0

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	0
5.2 Coal Mining	1	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	1	0	1	2	4
5.4 Non-Coal Mining*	0	0	0	0	0
5.5 Non-Coal Mining Cavities	0	0	0	1	0
5.5 Natural Cavities	0	0	0	0	0

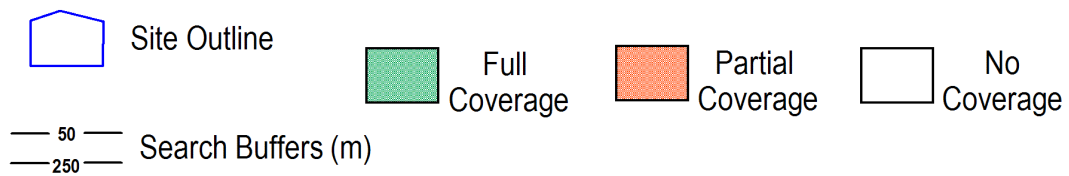
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Very Low				
6.2 Landslides	Very Low				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	Very Low				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Very Low				
Section 7: Borehole Records	On-site	0-50m	51-250		
7 BGS Recorded Boreholes	0	6	38		
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
8 Records of Background Soil Chemistry	2	0	0		
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	0	2	93	Not Searched	
9.3 Historical Railways	0	0	8	Not Searched	
9.4 Active Railways	0	0	88	Not Searched	
9.5 Railway Projects	0	0	2	2	

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

The following information represents the availability of the key components of the 1:10,000 scale geological data.

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	No coverage
2	133.0	Some deposits are mapped	Full	Full	Some deposits are mapped

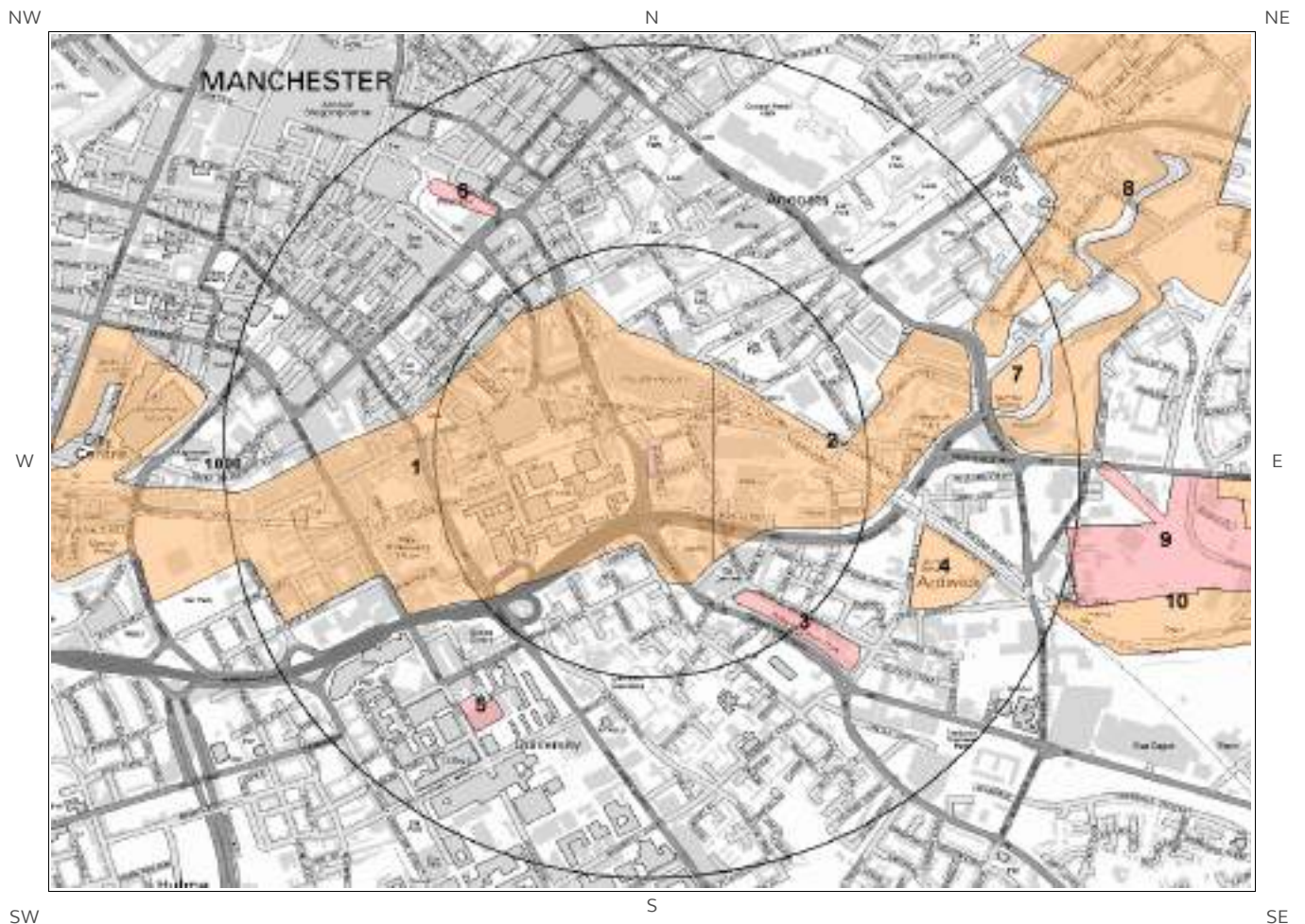
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not all themes are mapped or available on every map sheet. Therefore a coverage layer showing the availability of the four themes is presented above.

The definitions of coverage are as follows:

Geology	Full Coverage	Partial Coverage	No Coverage
Bedrock	The whole tile has been mapped	Some but not all the tile has been mapped	No coverage
Superficial	The whole tile has been mapped	Some but not all of the tile has been mapped	No coverage
Artificial	Some deposits are mapped on this tile	-	No deposits are mapped
Mass Movement	Some deposits are mapped on this tile	-	No coverage

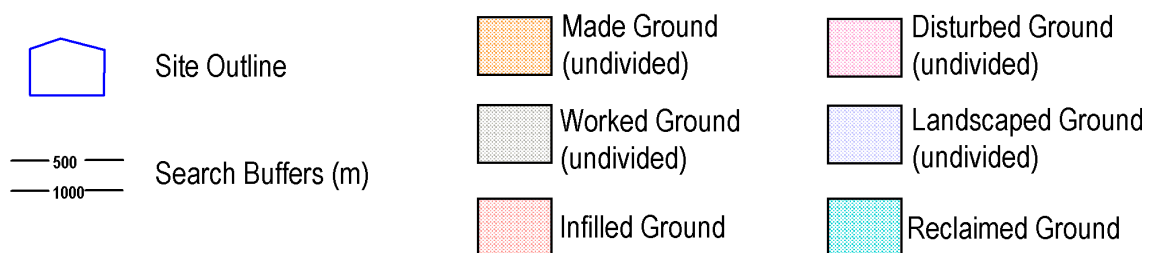
1 Geology (1:10,000 scale).

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



Artificial Ground Legend

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1. Geology 1:10,000 scale

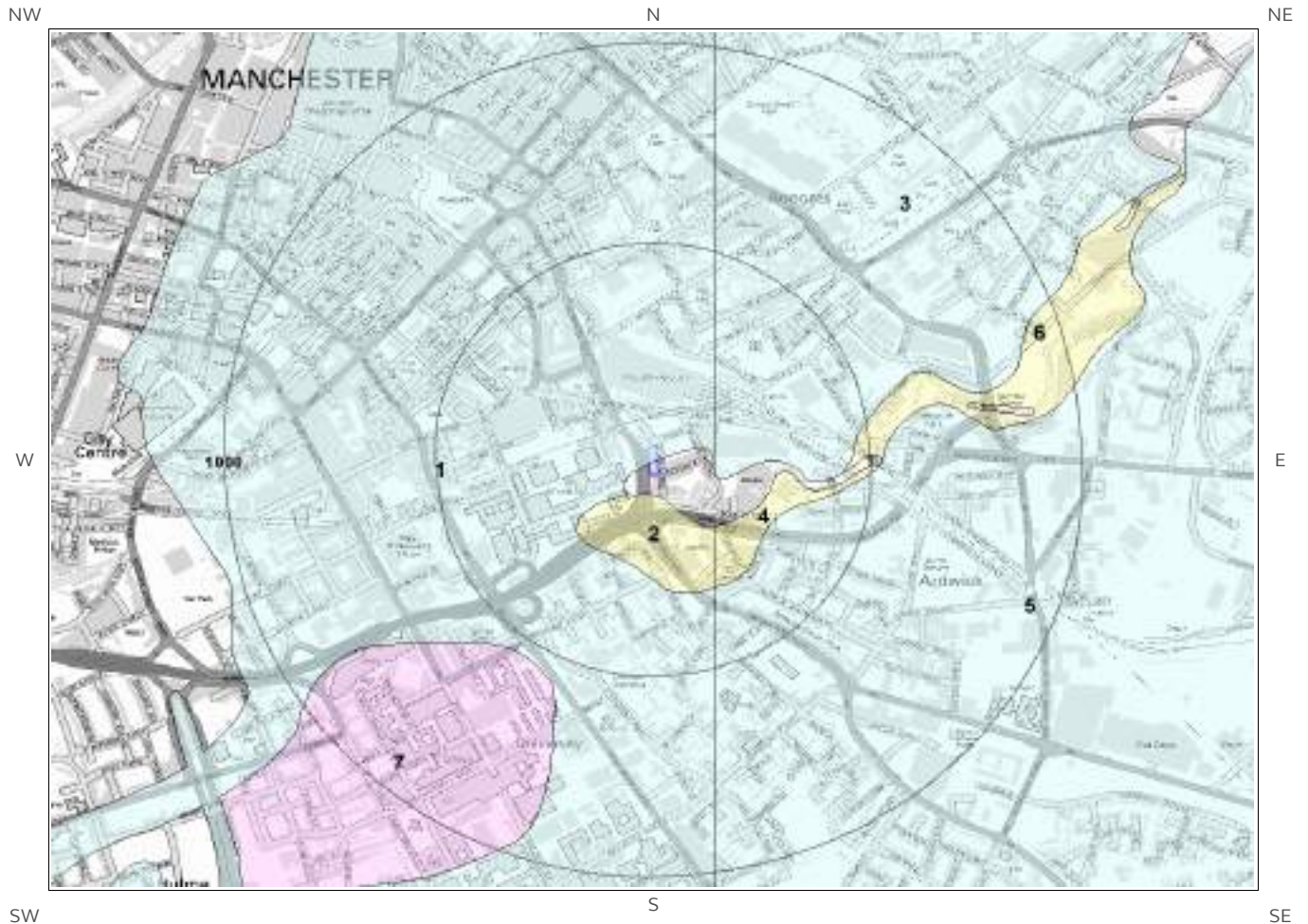
1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? Yes

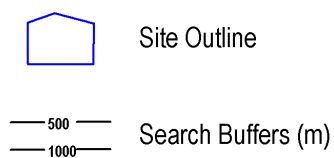
ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	133.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	350.0	SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit

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



Artificial Ground Legend

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1.2 Superficial Deposits and Landslips

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
2	44.0	S	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
3	133.0	E	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
4	184.0	SE	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
5	287.0	SE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
6	433.0	E	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel

1.2.2 Landslip

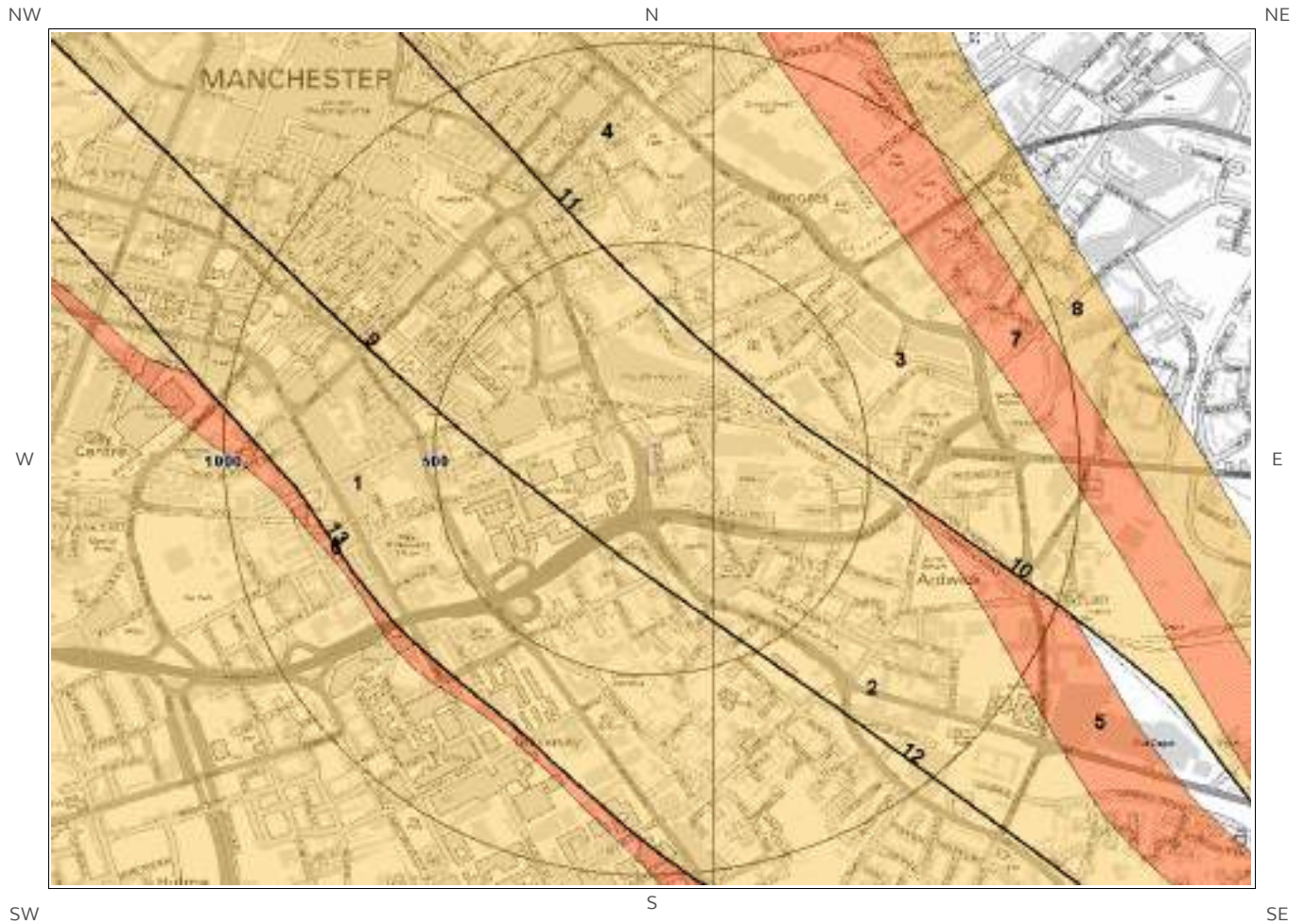
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale

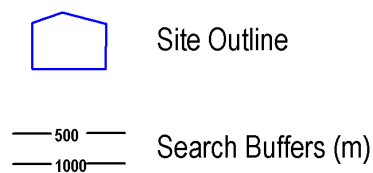
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3 Bedrock and linear features map (1:10,000 scale)



Bedrock and linear features Legend

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1.3 Bedrock and linear features

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary at 1:10,000 scale.

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
2	133.0	E	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
3	267.0	NE	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
4	270.0	NE	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch

1.3.2 Linear features

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

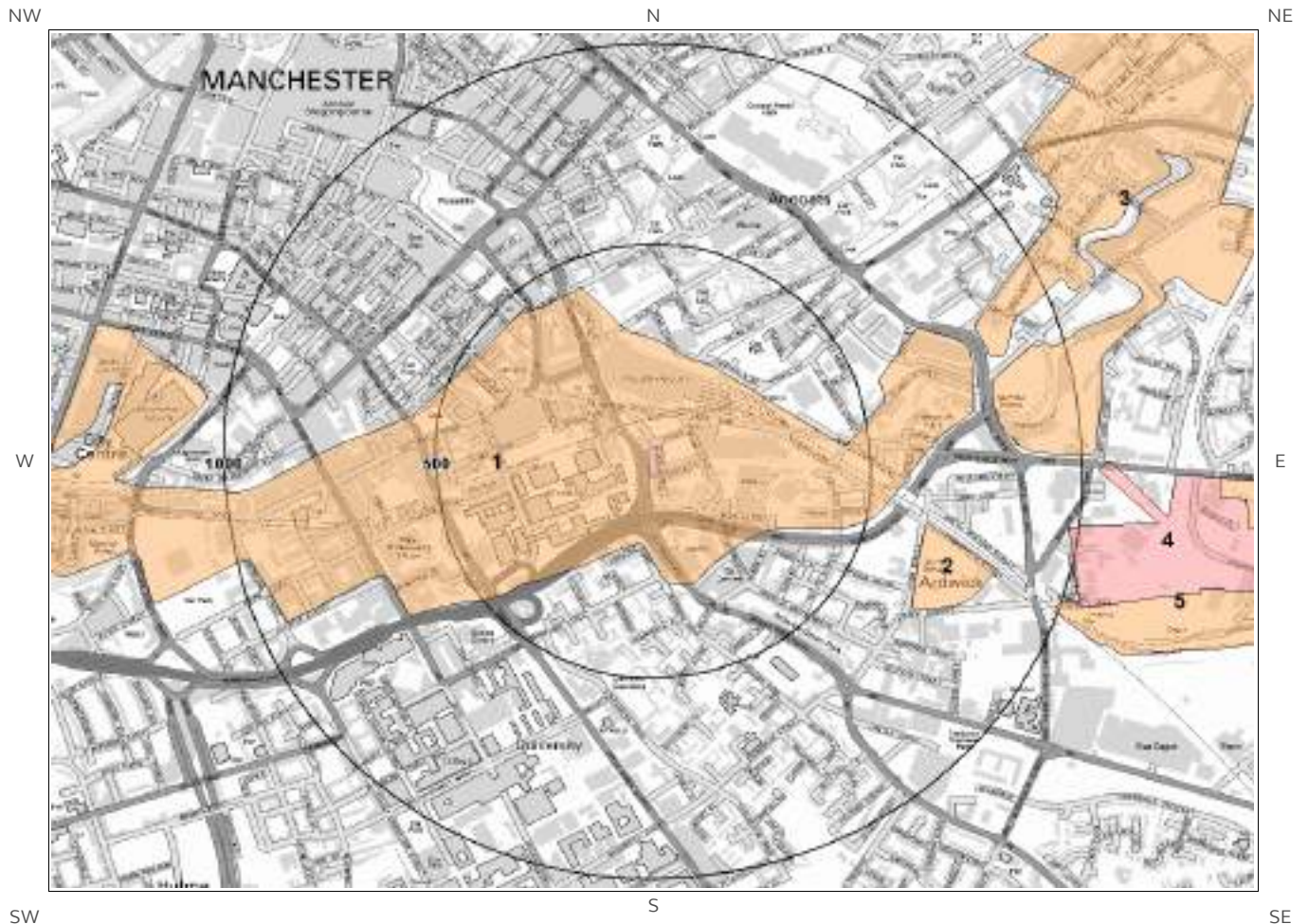
ID	Distance (m)	Direction	Category Description	Feature Description
9	201.0	SW	FAULT	Normal fault, inferred; crossmarks on downthrow side
10	267.0	NE	FAULT	Normal fault, inferred; crossmarks on downthrow side
11	270.0	NE	FAULT	Normal fault, inferred; crossmarks on downthrow side
12	394.0	S	FAULT	Normal fault, inferred; crossmarks on downthrow side

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of great Britain at 1:10,000 scale.

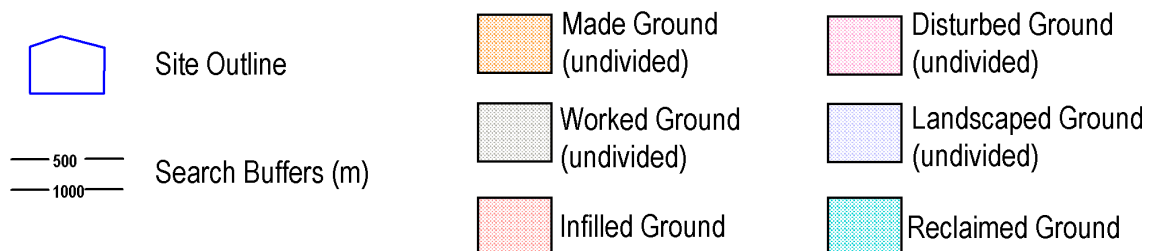
This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



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2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 085

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

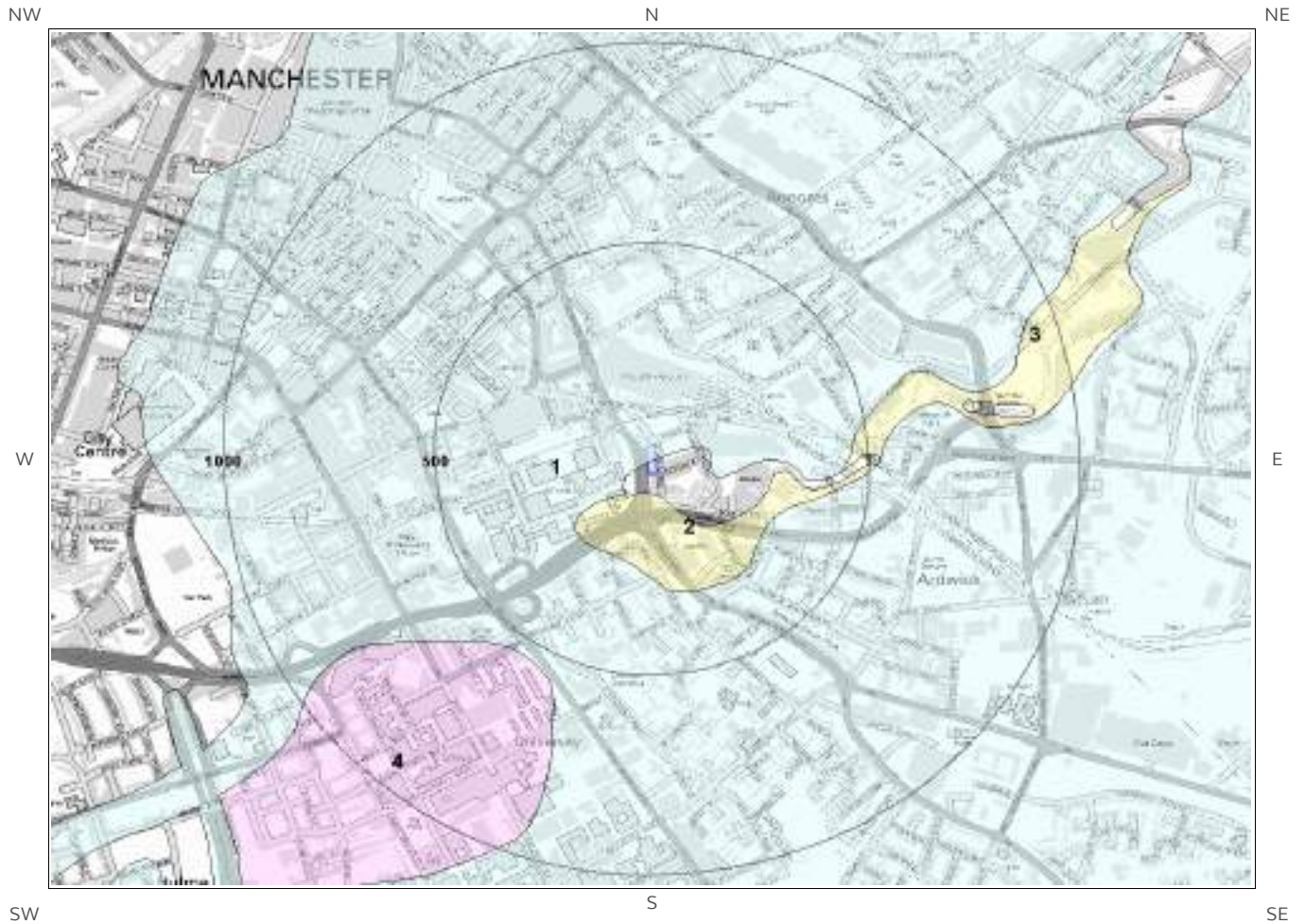
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

2.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	Very High	Low

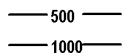
2.2 Superficial Deposits and Landslips map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
2	44.0	S	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
3	433.0	E	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

2.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	High	Low
44.0	S	Intergranular	High	Very Low

2.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

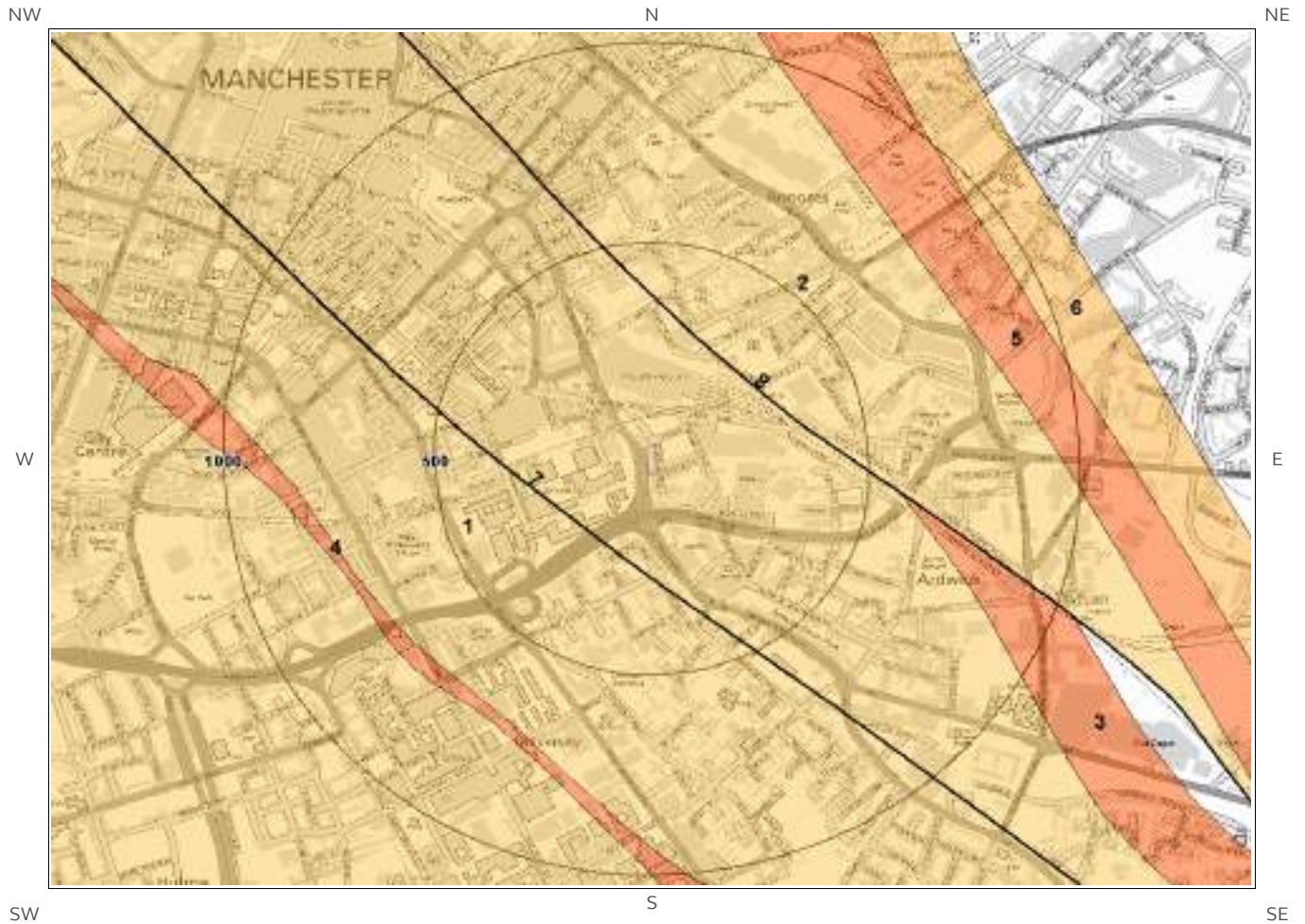
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site boundary? No

Database searched and no data found.

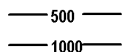
2.3 Bedrock and linear features map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 085

2.3.1 Bedrock/Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary:

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	CHES-SDST	CHESTER FORMATION - SANDSTONE	OLENEKIAN
2	267.0	NE	CHES-SDST	CHESTER FORMATION - SANDSTONE	OLENEKIAN

2.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site boundary? Yes

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	High	Moderate

2.3.3 Linear features

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

ID	Distance	Direction	Category Description	Feature Description
7	201.0	SW	FAULT	Fault, inferred
8	267.0	NE	FAULT	Fault, inferred

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nation wide coverage.

3 Radon Data

3.1 Radon Affected Areas

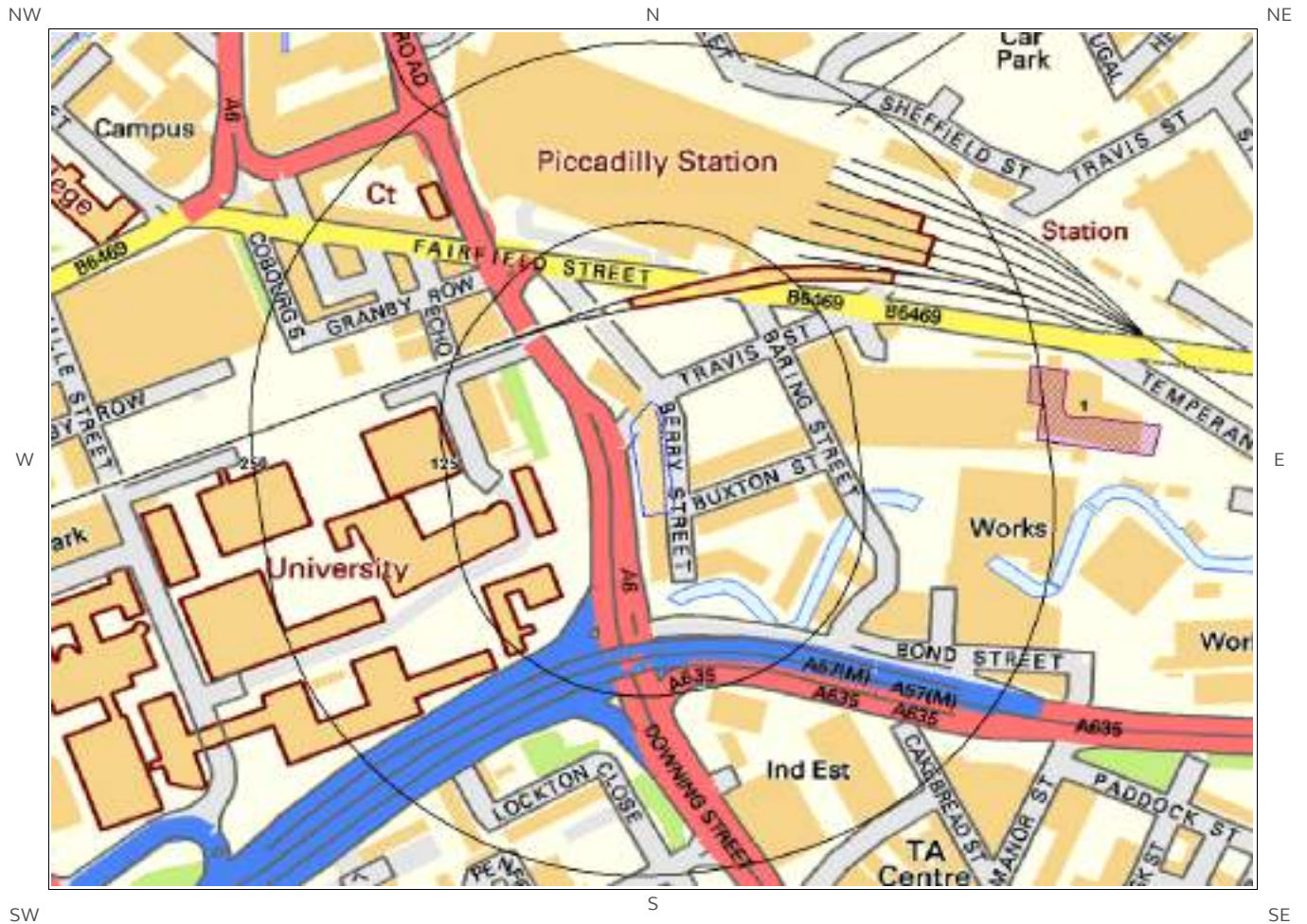
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

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

3.2 Radon Protection

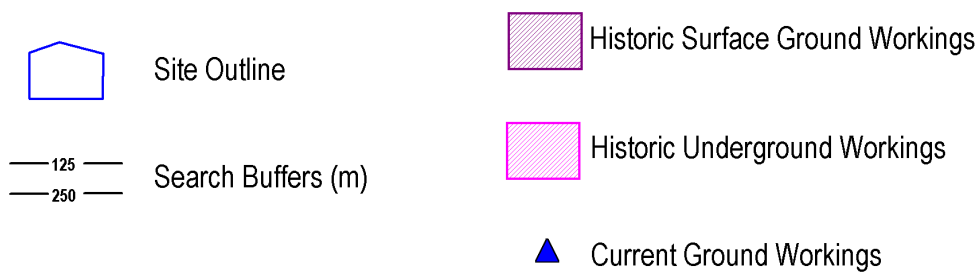
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 Ground Workings map



Ground Workings Legend

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4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Use	Date
1	240.0	E	385116 397663	Ponds	1890

4.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? No

Database searched and no data found.

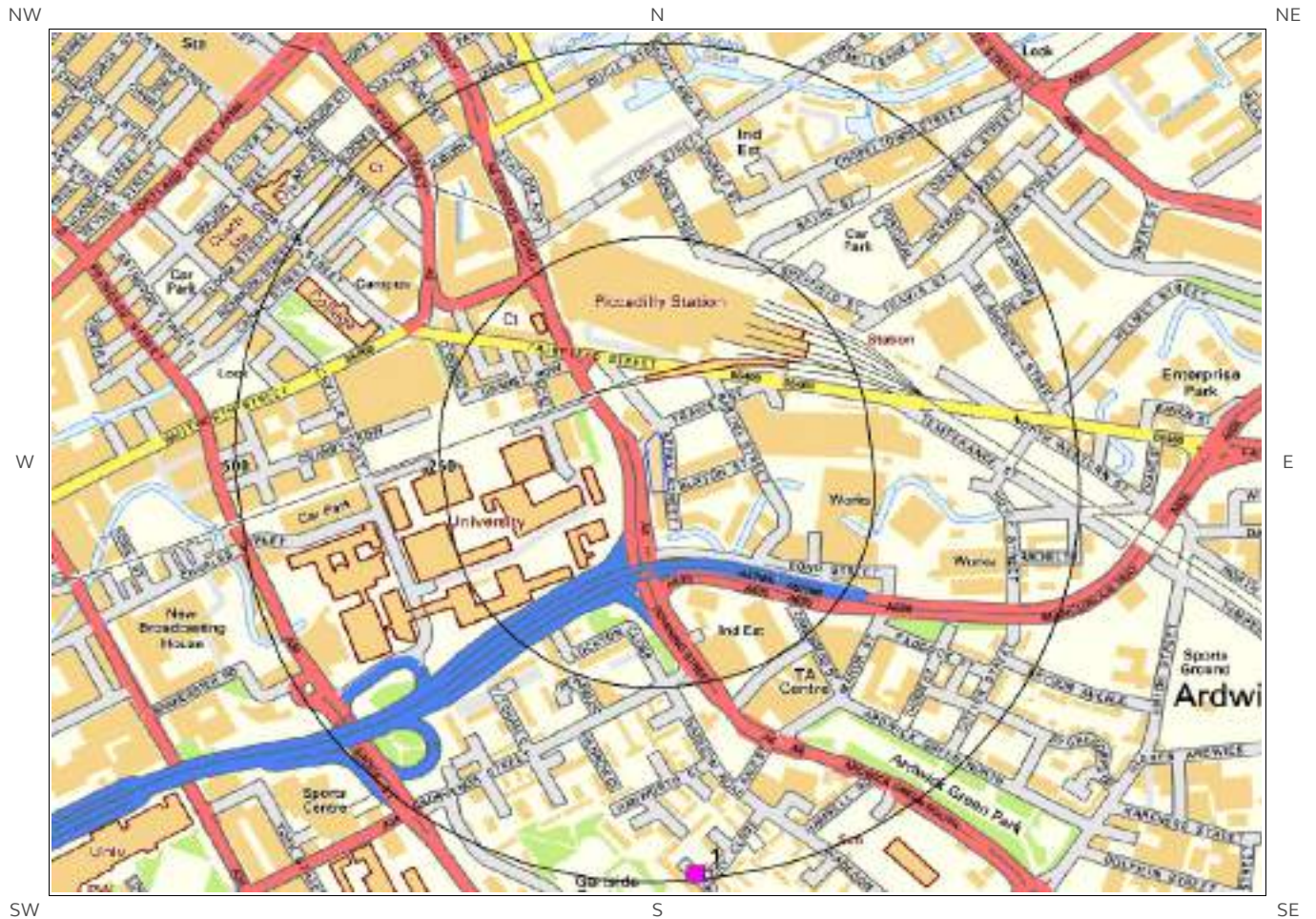
4.3 Current Ground Workings

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

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

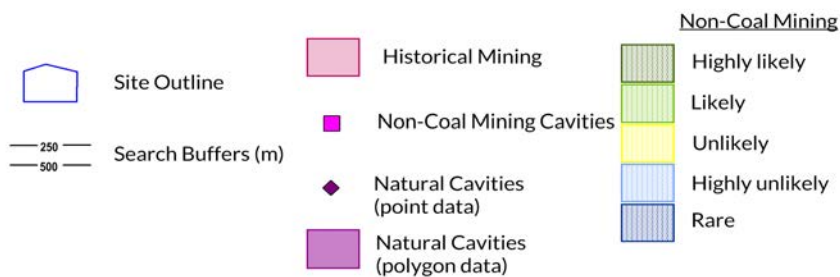
Database searched and no data found.

5 Mining, Extraction & Natural Cavities map



Mining, Extraction and Natural Cavities Legend

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5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

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

Database searched and no data found.

5.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? Yes

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

Distance (m)	Direction	Details
0.0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

5.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? Yes

The following information provided by JPB is not represented on mapping: In addition to being located inside an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property which may supplement this information. Further details and a quote for services can be obtained by emailing this report to enquiries.gs@jpb.co.uk.

5.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled “Review of mining instability in Great Britain, 1990” PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? Yes

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

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
1	492.0	S	384900 397100	Manchester, Greater Manchester	Glacial Till	Bunter Sandstone, Manchester Marls, Collyhurst Sandstone	Firestone, Freestone, Hearthstone, Honestone, Ragstone, Sandstone, Scythestone, Silver Sand, Whetstone

5.6 Natural Cavities

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

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level..

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

Database searched and no data found.

5.10 Clay Mining

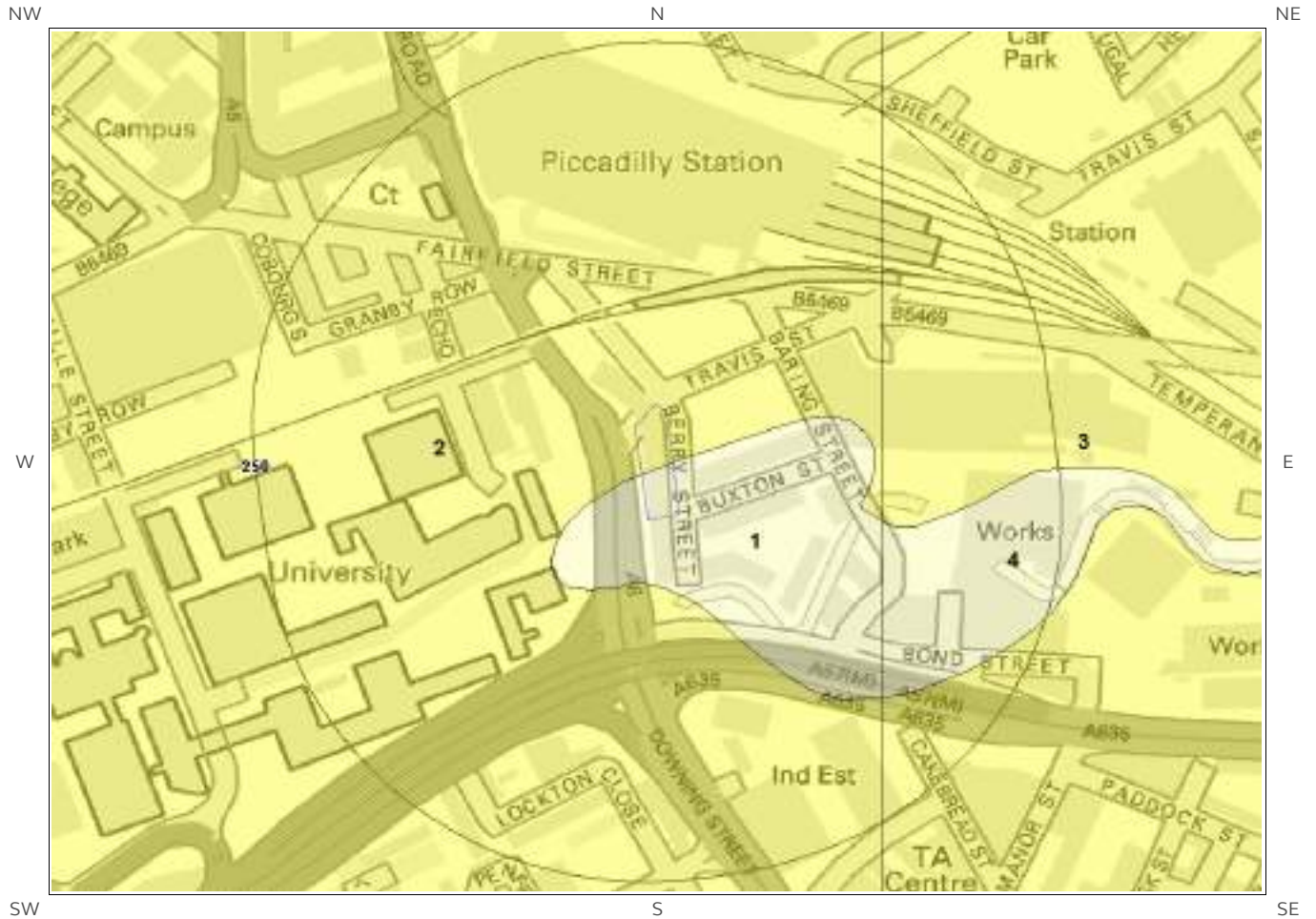
This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

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

Database searched and no data found.

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map

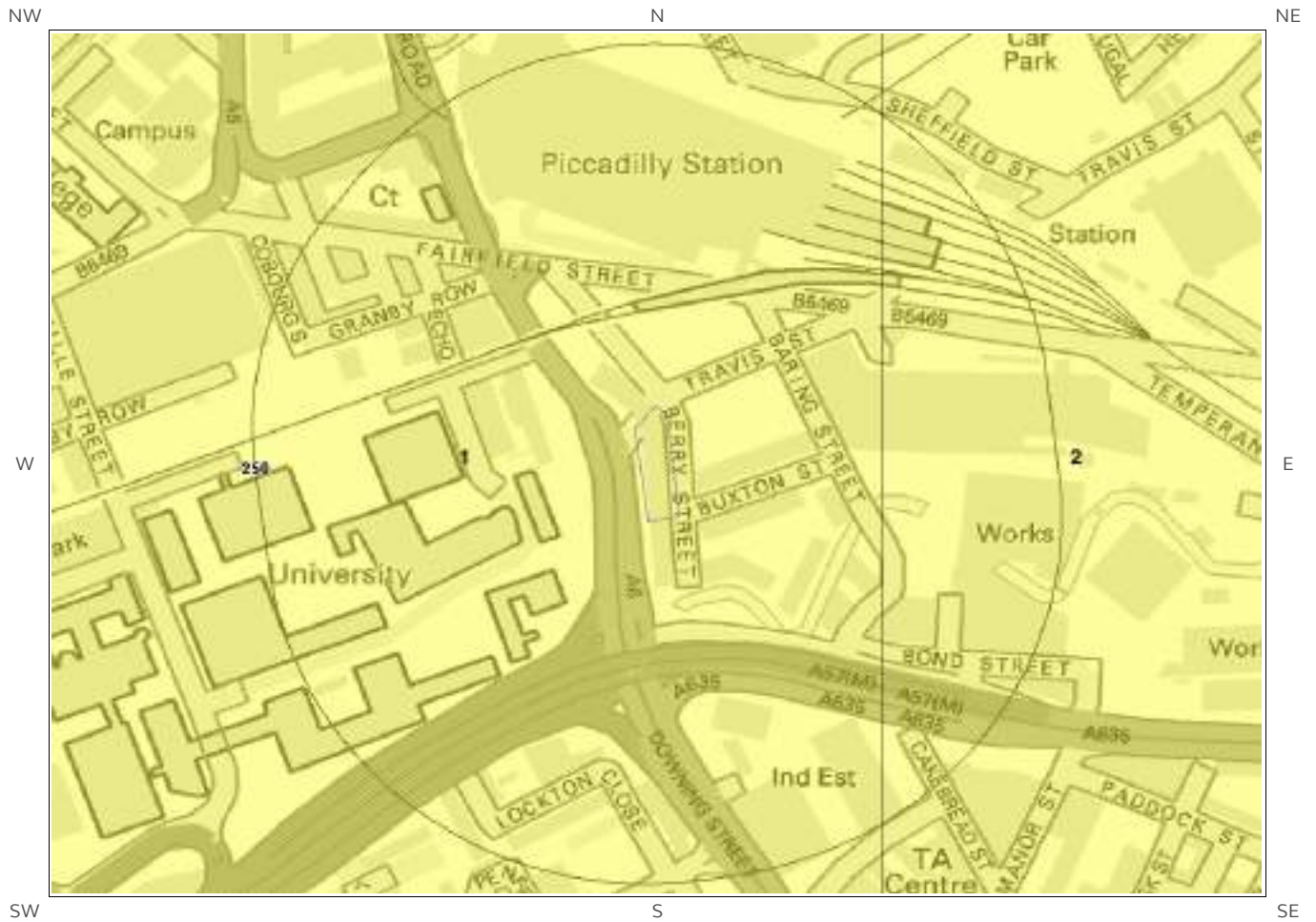


Shrink Swell Clay Legend

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6.2 Landslides map

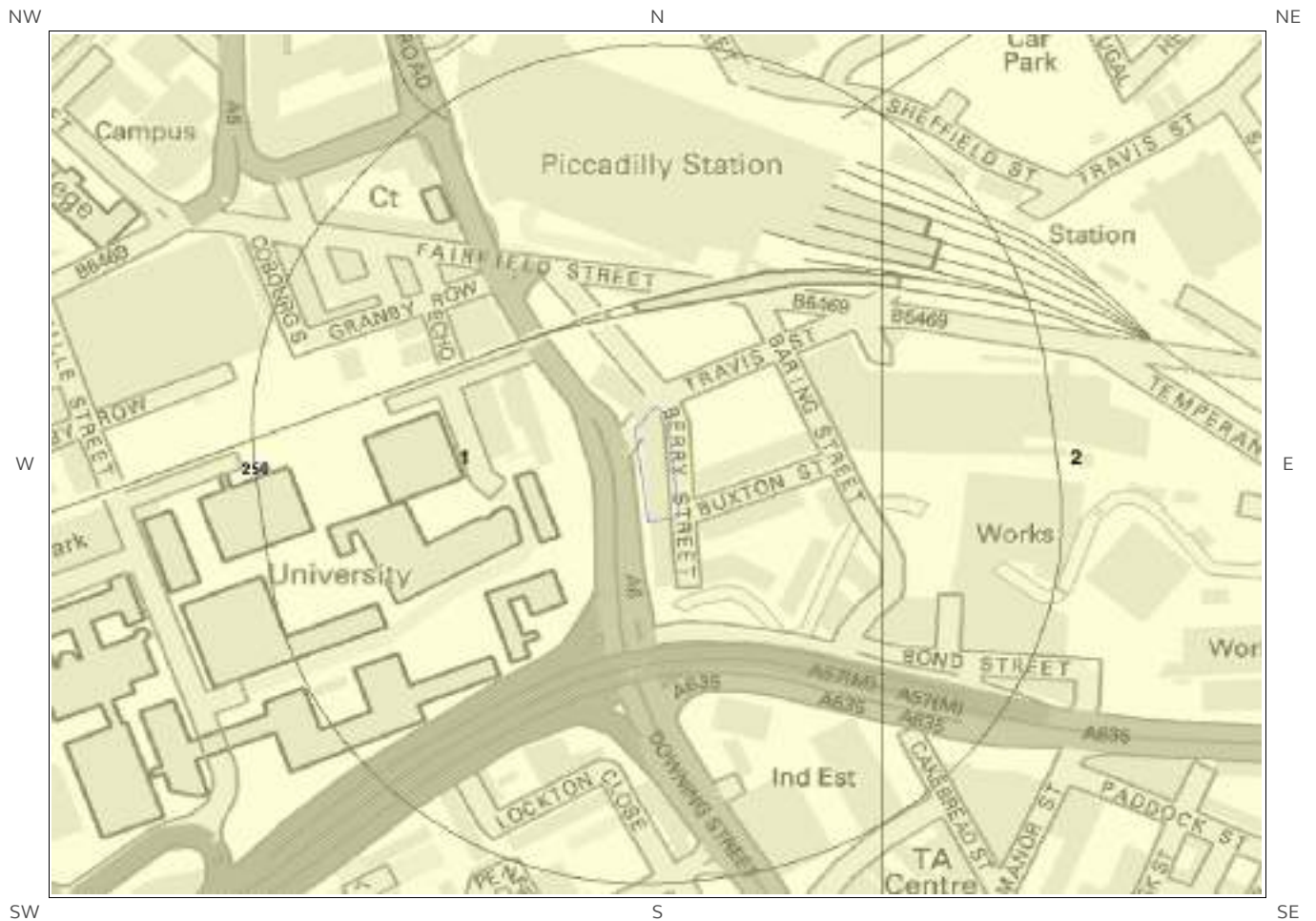


Landslides Legend

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6.3 Ground Dissolution of Soluble Rocks map

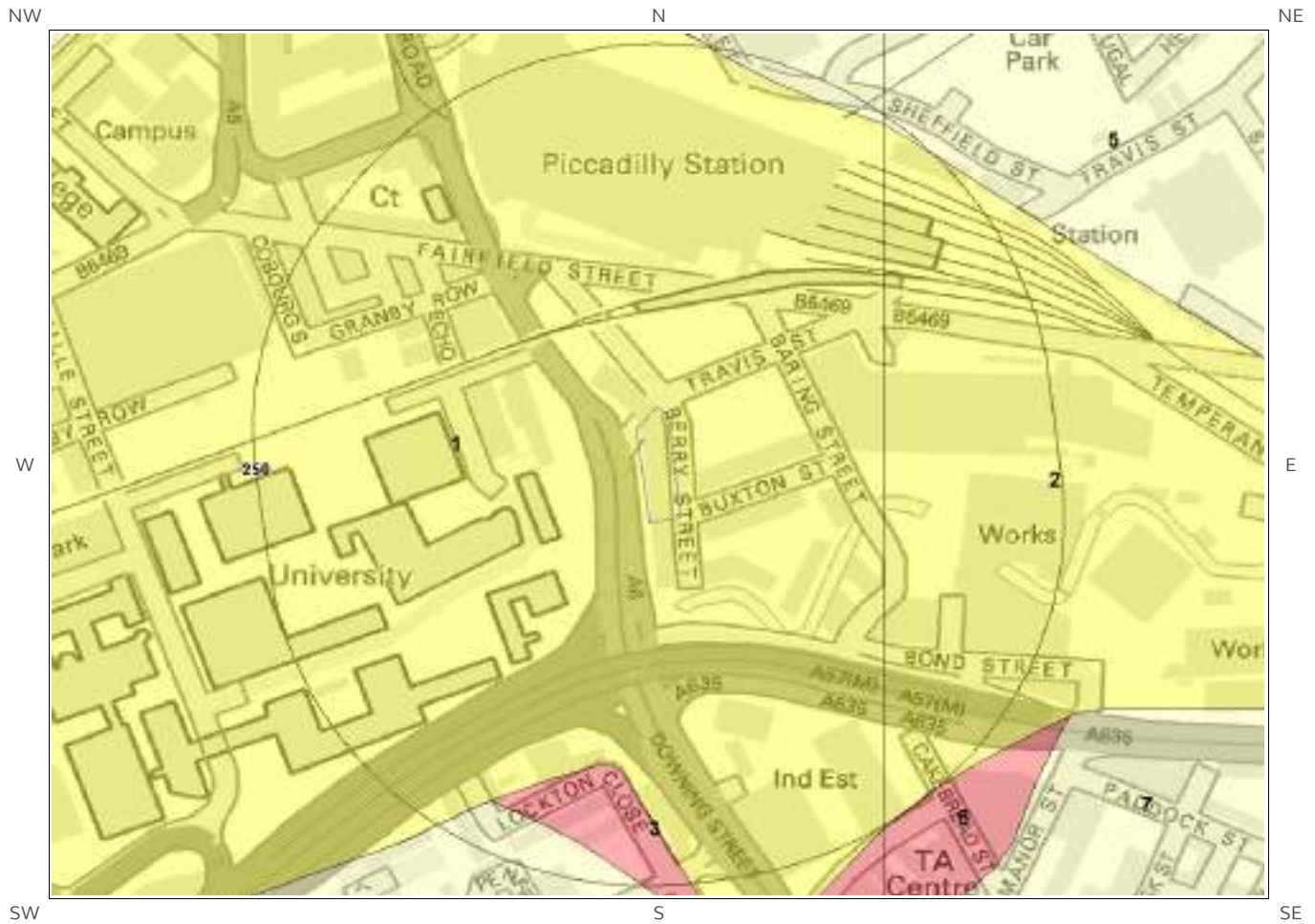


Ground Dissolution
Soluble Rocks Legend

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6.4 Compressible Deposits map

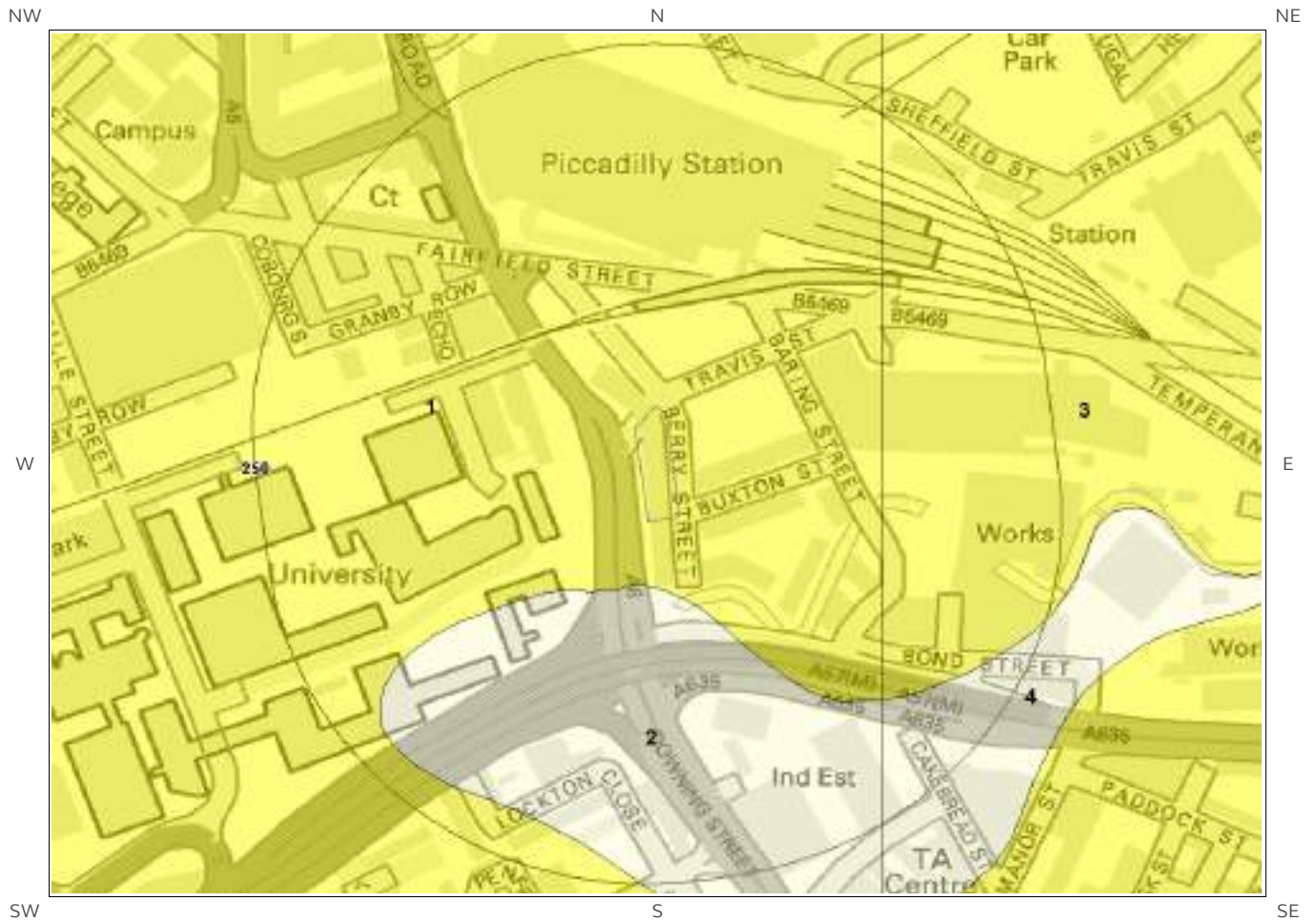


Compressible Deposits Legend

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6.5 Collapsible Deposits map

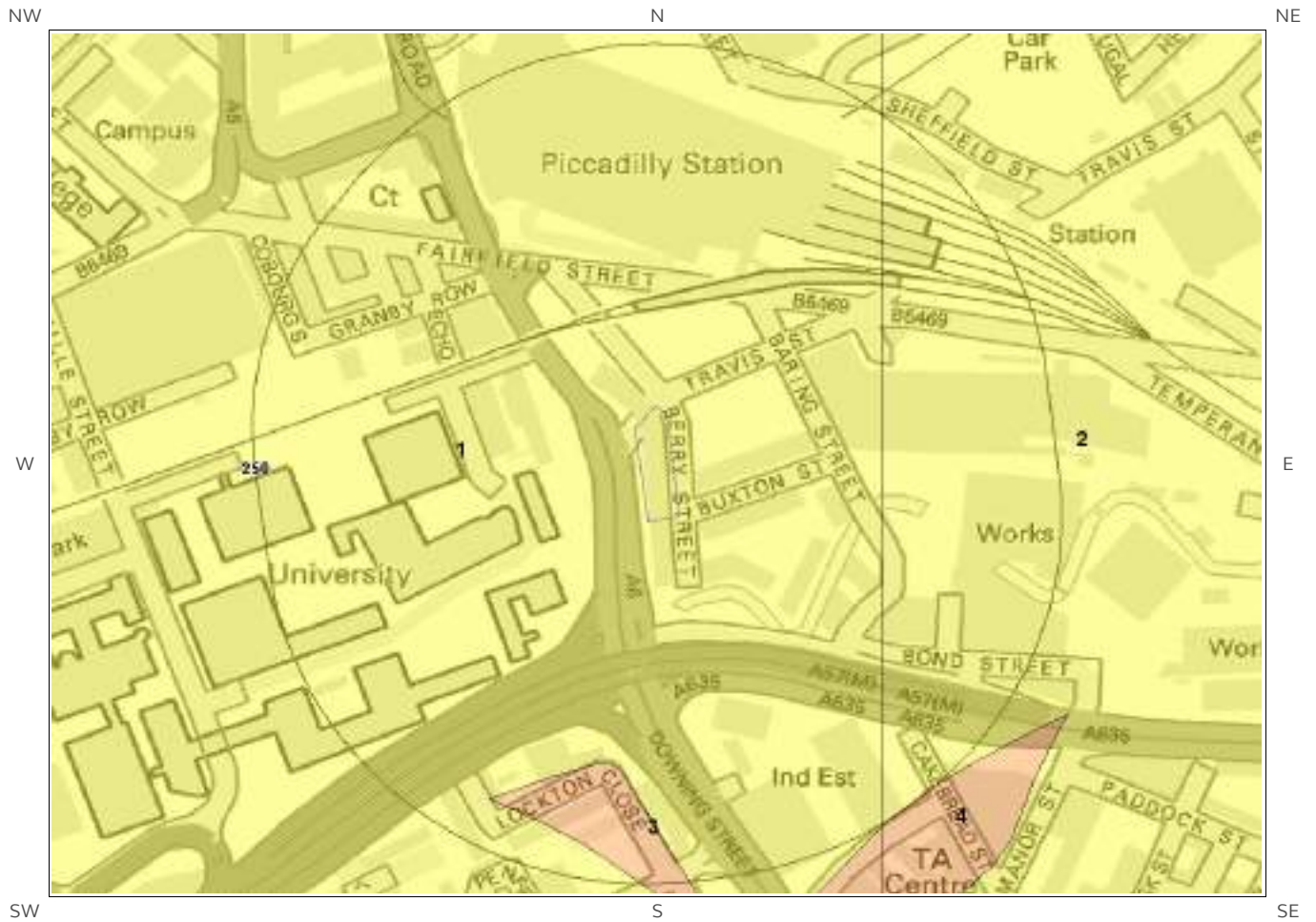


Collapsible Deposits Legend

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6.6 Running Sand map



Running Sand Legend

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6 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site* boundary? **Very Low**

6.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.
2	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

* This includes an automatically generated 50m buffer zone around the site

6.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

6.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for compressible deposits to be present. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

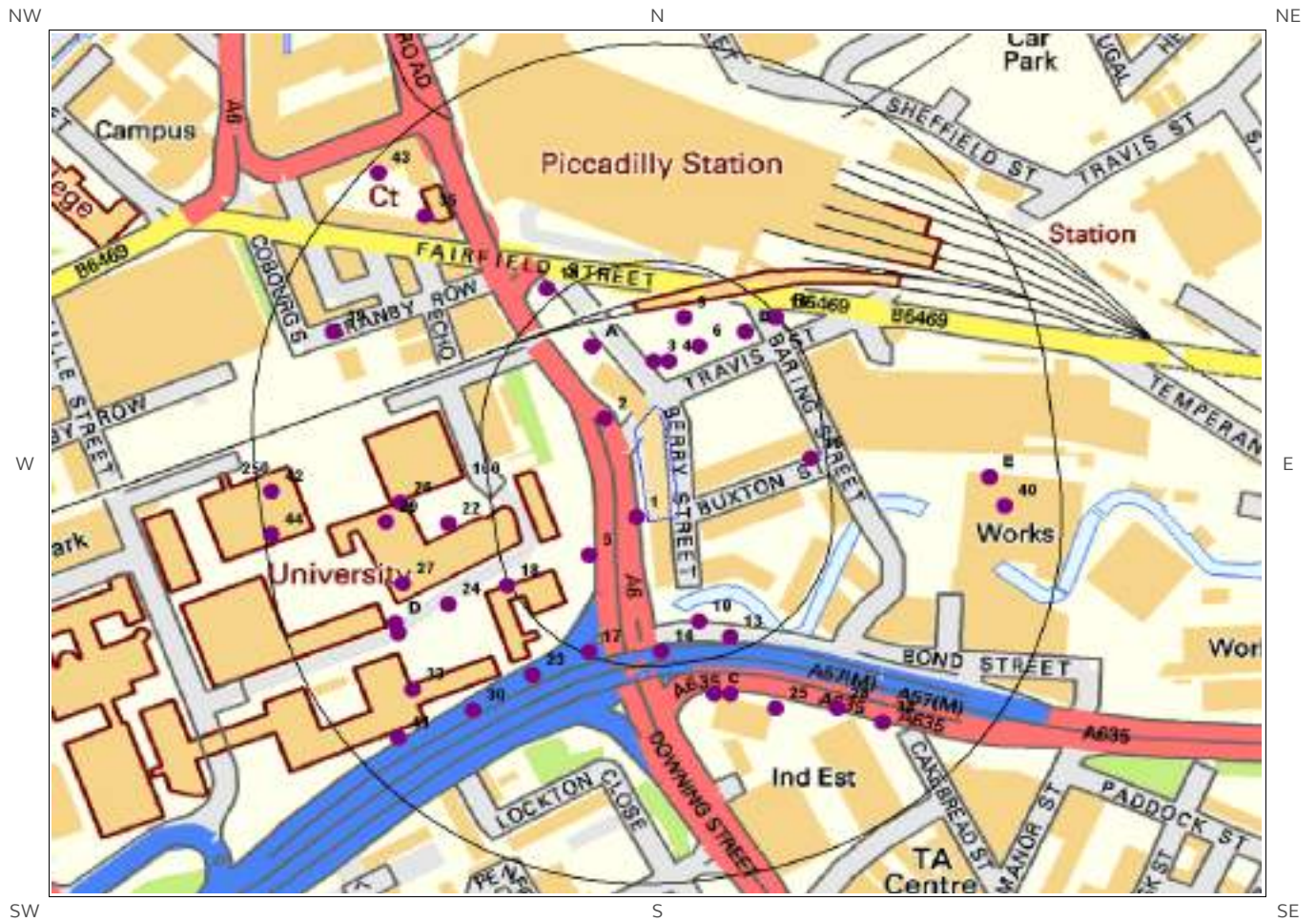
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
2	44.0	S	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

6.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

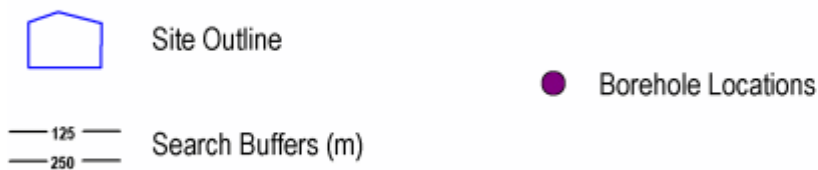
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

7 Borehole Records map



Borehole Records Legend

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7 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

44

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	7.0	W	384839 397592	SJ89NW14	6.71	MANCHESTER CORP. L SEWER
2	21.0	W	384818 397660	SJ89NW18	10.06	MANCHESTER CORP. CORNER OF TRAVIS STREET
3	31.0	N	384850 397700	SJ89NW871	-1.0	NATIONAL EXPRESS COACH STATION 3
4	32.0	N	384860 397700	SJ89NW865	-1.0	NATIONAL EXPRESS COACH STATION TP 2
5	45.0	SW	384808 397566	SJ89NW17	6.71	MANCHESTER CORP. CORNER OF JACKSON STREET
6	50.0	NE	384880 397710	SJ89NW3280	-1.0	FAIRFIELD STREET MANCHESTER OB
7A	58.0	NW	384810 397710	SJ89NW870	-1.0	NATIONAL EXPRESS COACH STATION 2
8A	58.0	NW	384810 397710	SJ89NW864	-1.0	NATIONAL EXPRESS COACH STATION TP 1
9	64.0	N	384870 397730	SJ89NW866	-1.0	NATIONAL EXPRESS COACH STATION TP 3
10	74.0	S	384880 397520	SJ89NW2030	-1.0	LOWER MEDLOCK UCSO'S C/1 SITE 0308 525
11B	76.0	NE	384910 397720	SJ89NW872	-1.0	NATIONAL EXPRESS COACH STATION 4
12B	76.0	NE	384910 397720	SJ89NW867	-1.0	NATIONAL EXPRESS COACH STATION TP 4
13	89.0	S	384900 397510	SJ89NW2027	-1.0	LOWER MEDLOCK UCSO'S C/1 SITE 0308 520
14	90.0	S	384855 397500	SJ89NW333	6.1	MANCUNIAN WAY 12
15	90.0	E	384953 397633	SJ89NW15	7.62	MANCHESTER CORP. L SEWER
16	98.0	NE	384930 397730	SJ89NW868	-1.0	NATIONAL EXPRESS COACH STATION TP 5
17	98.0	SW	384808 397499	SJ89NW4212	5.94	MANCHESTER COLLEGE OF SCIENCE & TECHNOLOGY RIVER MEDLOCK CULVERT E
18	103.0	SW	384754 397545	SJ89NW4205	3.66	MANCHESTER COLLEGE OF SCIENCE & TECHNOLOGY RIVER MEDLOCK CULVERT 3
19	108.0	NW	384780 397750	SJ89NW869	-1.0	NATIONAL EXPRESS COACH STATION 1

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
20C	125.0	S	384890 397470	SJ89NW2026	-1.0	LOWER MEDLOCK UCSO'S C/1 SITE 0308 227
21C	127.0	S	384900 397470	SJ89NW2028	-1.0	LOWER MEDLOCK UCSO'S C/1 SITE 0308 522
22	130.0	W	384716 397588	SJ89NW4204	2.13	MANCHESTER COLLEGE OF SCIENCE & TECHNOLOGY RIVER MEDLOCK CULVERT 2
23	130.0	SW	384771 397483	SJ89NW4211	7.16	MANCHESTER COLLEGE OF SCIENCE & TECHNOLOGY RIVER MEDLOCK CULVERT D
24	143.0	SW	384716 397532	SJ89NW4206	3.66	MANCHESTER COLLEGE OF SCIENCE & TECHNOLOGY RIVER MEDLOCK CULVERT 4
25	147.0	SE	384930 397460	SJ89NW2029	-1.0	LOWER MEDLOCK UCSO'S C/1 SITE 0308 523
26	159.0	W	384684 397602	SJ89NW249	68.88	BOYD DAWKINS, JACKSON STREET MILL
27	166.0	W	384686 397546	SJ89NW13	5.49	MANCHESTER CORP. L SEWER
28	168.0	SE	384970 397460	SJ89NW2031	-1.0	LOWER MEDLOCK UCSO'S C/1 SITE 0308 525A
29	170.0	W	384675 397589	SJ89NW4203	3.05	MANCHESTER COLLEGE OF SCIENCE & TECHNOLOGY RIVER MEDLOCK CULVERT 1
30	174.0	SW	384732 397459	SJ89NW4210	7.93	MANCHESTER COLLEGE OF SCIENCE & TECHNOLOGY RIVER MEDLOCK CULVERT C
31D	180.0	SW	384681 397519	SJ89NW12	6.1	MANCHESTER CORP. L SEWER
32D	181.0	SW	384683 397512	SJ89NW4207	3.35	MANCHESTER COLLEGE OF SCIENCE & TECHNOLOGY RIVER MEDLOCK CULVERT 5
33	193.0	SW	384692 397473	SJ89NW11	7.62	MANCHESTER CORP. SOUTH OF LONDON ROAD STATION
34	195.0	SE	385000 397450	SJ89NE911	-1.0	LOWER MEDLOCK ECISO'S C/1 SITE 0308 525B
35	200.0	NW	384700 397800	SJ89NW1154	-1.0	LONDON ROAD FIRE STATION MANCHESTER 1
36E	204.0	E	385070 397620	SJ89NE1389	53.04	HOYLE MAYFIELD PRINT WORKS
37E	204.0	E	385070 397620	SJ89NE1390	73.15	HOYLE MAYFIELD PRINT WORKS
38E	204.0	E	385070 397620	SJ89NE1388	160.27	HOYLE MAYFIELD PRINT WORKS
39	209.0	W	384640 397720	SJ89NW3618	-1.0	GRANBY ROW / WHITWORTH STREET 1A
40	213.0	E	385080 397600	SJ89NE1391	108.64	HOYLE MAYFIELD PRINT WORKS

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
41	222.0	SW	384683 397440	SJ89NW4209	5.94	MANCHESTER COLLEGE OF SCIENCE & TECHNOLOGY RIVER MEDLOCK CULVERT B
42	241.0	W	384600 397610	SJ89NW3643	7.62	MANCHESTER COLLEGE X
43	242.0	NW	384670 397830	SJ89NW1156	-1.0	LONDON ROAD FIRE STATION MANCHESTER 3
44	246.0	W	384600 397580	SJ89NW3636	15.24	MANCHESTER COLLEGE A

The borehole records are available using the hyperlinks below: Please note that if the donor of the borehole record has requested the information be held as commercial-in-confidence, the additional data will be held separately by the BGS and a formal request must be made for its release.

#1: scans.bgs.ac.uk/sobi_scans/boreholes/1042156
 #2: scans.bgs.ac.uk/sobi_scans/boreholes/1042160
 #5: scans.bgs.ac.uk/sobi_scans/boreholes/1042159
 #6: scans.bgs.ac.uk/sobi_scans/boreholes/1045474
 #14: scans.bgs.ac.uk/sobi_scans/boreholes/1042499
 #15: scans.bgs.ac.uk/sobi_scans/boreholes/1042157
 #17: scans.bgs.ac.uk/sobi_scans/boreholes/19952937
 #18: scans.bgs.ac.uk/sobi_scans/boreholes/19952929
 #22: scans.bgs.ac.uk/sobi_scans/boreholes/19952928
 #23: scans.bgs.ac.uk/sobi_scans/boreholes/19952936
 #24: scans.bgs.ac.uk/sobi_scans/boreholes/19952930
 #26: scans.bgs.ac.uk/sobi_scans/boreholes/1042403
 #27: scans.bgs.ac.uk/sobi_scans/boreholes/1042155
 #29: scans.bgs.ac.uk/sobi_scans/boreholes/19952918
 #30: scans.bgs.ac.uk/sobi_scans/boreholes/19952935
 #31D: scans.bgs.ac.uk/sobi_scans/boreholes/1042154
 #32D: scans.bgs.ac.uk/sobi_scans/boreholes/19952931
 #33: scans.bgs.ac.uk/sobi_scans/boreholes/1042153
 #36E: scans.bgs.ac.uk/sobi_scans/boreholes/937806
 #37E: scans.bgs.ac.uk/sobi_scans/boreholes/937807
 #38E: scans.bgs.ac.uk/sobi_scans/boreholes/937805
 #40: scans.bgs.ac.uk/sobi_scans/boreholes/937808
 #41: scans.bgs.ac.uk/sobi_scans/boreholes/19952934
 #42: scans.bgs.ac.uk/sobi_scans/boreholes/1045837
 #44: scans.bgs.ac.uk/sobi_scans/boreholes/1045830

8 Estimated Background Soil Chemistry

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

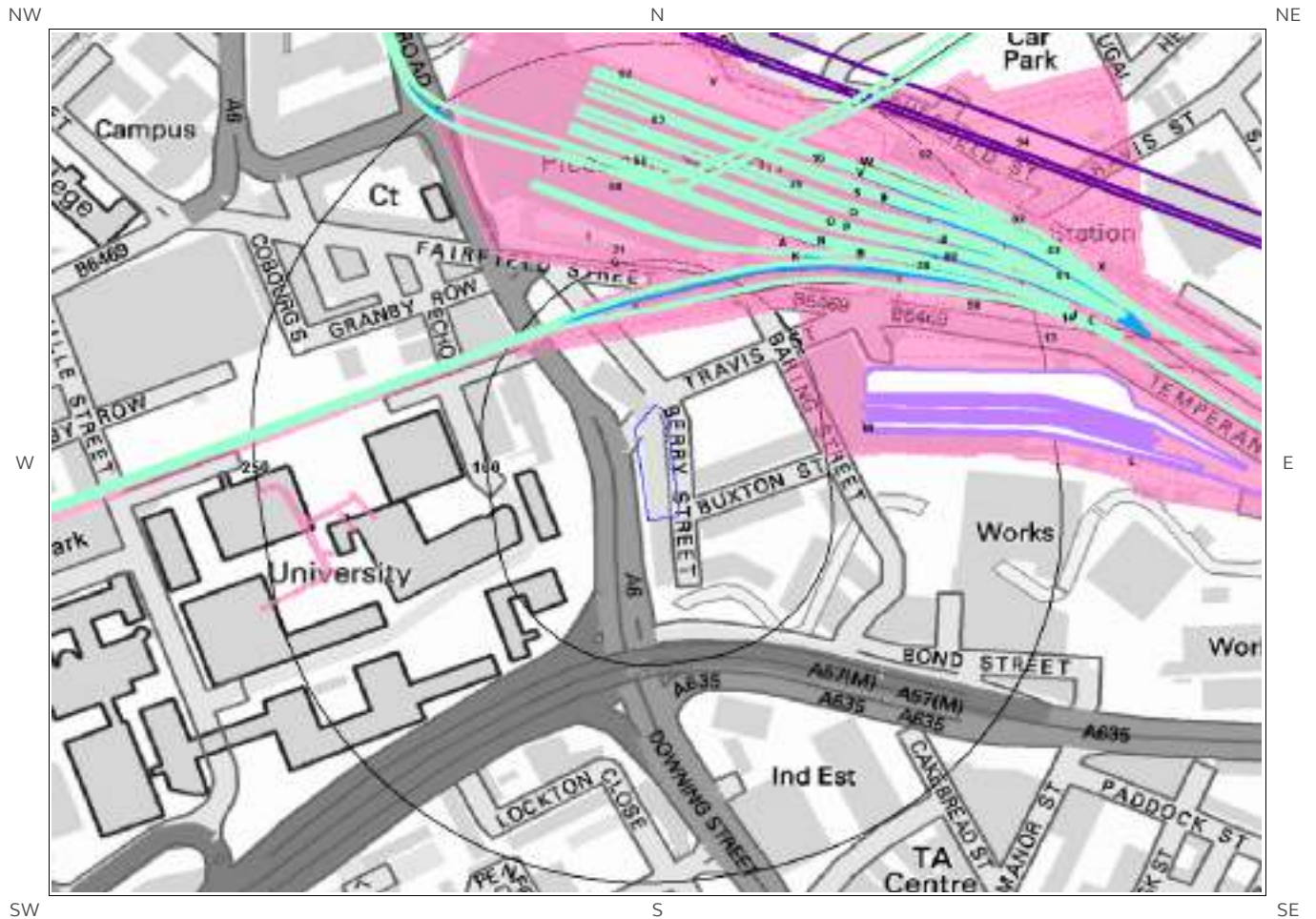
2

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geo Insight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	RuralSoil	25 - 35 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	<15 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg

*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels map



Railways and Tunnels Legend

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9 Railways and Tunnels

9.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels map.

9.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? No

Have any historical railway or tunnel features been identified within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Details	Date
1	49	N	384834 397906	Railway Sidings	1905
2D	49	N	384834 397906	Railway Sidings	1890
19D	53	N	384842 397903	Railway Sidings	1889
20D	53	N	384842 397903	Railway Sidings	1922
21D	53	N	384842 397903	Railway Sidings	1908
22D	53	N	384842 397903	Railway Sidings	1932

ID	Distance (m)	Direction	NGR	Details	Date
3A	54	N	384958 397790	Railway Sidings	1971
4A	54	N	384958 397790	Railway Sidings	1985
5A	54	N	384958 397790	Railway Sidings	1994
6A	54	N	384958 397790	Railway Sidings	1978
7A	54	N	384958 397790	Railway Sidings	1988
8	57	N	385121 397744	Railway Sidings	1923
9	58	N	385072 397799	Railway Sidings	1934
10B	58	N	385072 397799	Railway Sidings	1938
11B	58	N	385072 397799	Railway Sidings	1915
12U	59	N	384834 397924	Railway Sidings	1956
23E	61	N	384968 397858	Railway Sidings	1955
24E	61	N	384968 397858	Railway Sidings	1955
25	62	N	n/a	Railway	1889
26F	88	N	384763 397775	Railway Sidings	1908
27F	88	N	384763 397775	Railway Sidings	1889
28G	89	N	384819 397765	Railway Sidings	1922
29G	89	N	384819 397765	Railway Sidings	1932
30I	90	N	384828 397790	Railway Sidings	1891
31	98	N	384823 397775	Railway Sidings	1950
32H	99	N	384851 397775	Railway Sidings	1955
33H	99	N	384851 397775	Railway Sidings	1955
34I	106	N	384805 397777	Railway Sidings	1955
35I	106	N	384805 397777	Railway Sidings	1955
36O	110	N	384986 397800	Railway Sidings	1984
37J	110	N	385196 397710	Railway Sidings	1968
38K	110	N	384939 397769	Railway Sidings	1964
39K	110	N	384939 397769	Railway Sidings	1971
40K	110	N	384940 397770	Railway Sidings	1995
41L	116	E	385400 397536	Railway Sidings	1932

ID	Distance (m)	Direction	NGR	Details	Date
42L	116	E	385400 397536	Railway Sidings	1922
43	118	NE	385196 397710	Railway Sidings	1965
44M	120	E	384991 397651	Railway Sidings	1984
45M	121	E	384991 397650	Railway Sidings	1950
46M	121	E	384992 397649	Railway Sidings	1952
47M	121	E	384992 397649	Railway Sidings	1971
48M	121	E	384992 397649	Railway Sidings	1964
49M	121	E	384992 397649	Railway Sidings	1948
50	124	N	384826 397818	Railway Sidings	1891
13	137	E	385401 397558	Railway Sidings	1956
51	138	E	385250 397697	Railway Sidings	1948
52N	138	NE	384960 397781	Railway Sidings	1964
53N	138	NE	384960 397781	Railway Sidings	1971
54	144	N	384840 397835	Railway Sidings	1891
55O	147	NE	384975 397792	Railway Sidings	1950
56P	147	NE	384975 397792	Railway Sidings	1952
57P	147	NE	384975 397792	Railway Sidings	1948
14	148	E	385106 397768	Railway Sidings	1968
58	151	NE	385066 397728	Railway Sidings	1891
15J	153	E	385269 397661	Railway Sidings	1978
59P	158	NE	384978 397787	Railway Sidings	1995
60P	160	NE	384978 397789	Railway Sidings	1964
61P	160	NE	384978 397789	Railway Sidings	1971
16	167	N	385320 397607	Railway Sidings	1851
62	169	NE	385105 397792	Railway Sidings	1948
17C	172	E	385269 397661	Railway Sidings	1991
18C	172	E	385269 397661	Railway Sidings	1985
63	172	N	384848 397863	Railway Sidings	1891
64Q	172	NE	384980 397800	Railway Sidings	1995

ID	Distance (m)	Direction	NGR	Details	Date
65Q	174	NE	384980 397801	Railway Sidings	1971
66Q	174	NE	384980 397801	Railway Sidings	1964
67R	175	W	384629 397571	Railway Sidings	1889
68R	175	W	384629 397571	Railway Sidings	1889
69R	175	W	384629 397571	Tramway Sidings	1891
70S	187	NE	384983 397814	Railway Sidings	1950
71S	187	NE	384983 397814	Railway Sidings	1948
72S	187	NE	384983 397814	Railway Sidings	1952
73S	187	NE	384983 397815	Railway Sidings	1995
74S	189	NE	384983 397816	Railway Sidings	1971
75S	189	NE	384983 397816	Railway Sidings	1964
76T	190	W	384650 397589	Railway Sidings	1889
77T	191	W	384649 397589	Tramway Sidings	1891
78	192	NE	385026 397763	Railway Sidings	1891
79U	194	NE	384850 397906	Railway Sidings	1948
80U	194	NE	384850 397906	Railway Sidings	1952
81U	195	NE	384850 397907	Railway Sidings	1950
82	199	N	384825 397899	Railway Sidings	1891
83V	200	NE	384985 397827	Railway Sidings	1995
84V	201	NE	384985 397828	Railway Sidings	1971
85V	201	NE	384985 397828	Railway Sidings	1964
86Y	206	N	384850 397914	Railway Sidings	1964
87	206	W	384629 397571	Railway Sidings	1908
88	207	NE	385045 397769	Railway Sidings	1891
89W	210	NE	384989 397834	Railway Sidings	1995
90W	211	NE	384989 397836	Railway Sidings	1971
91X	228	NE	385293 397669	Railway Sidings	1977
92	230	NE	385037 397837	Railway Sidings	1963
93X	230	NE	385289 397673	Railway Sidings	1985

ID	Distance (m)	Direction	NGR	Details	Date
94	231	NE	385080 397831	Railway Sidings	1891
95Y	241	N	384847 397920	Railway Sidings	1891

Any records that have been identified are represented on the Railways and Tunnels map.

9.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? No

Have any historical railway lines been identified within 250m of the study site boundary? Yes

Distance (m)	Direction	Status
126	E	Disused
128	E	Disused
129	E	Abandoned
130	E	Abandoned
130	E	Abandoned
130	E	Disused
132	E	Abandoned
132	E	Abandoned

Multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels map.

9.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? No

Have any active railway lines been identified within 250m of the study site boundary? Yes

Distance (m)	Direction	Name	Type
66	N	Not given	Rail
66	N	Not given	Rail
66	N	Not given	Rail
66	N	Not given	Rail
72	NW	Not given	Rail
72	NW	Not given	Rail
73	N	Not given	Multi Track
73	N	Not given	Multi Track
77	N	Not given	Rail
77	N	Not given	Rail
77	N	Not given	Rail

Distance (m)	Direction	Name	Type
77	N	Not given	Rail
80	NW	Not given	Rail
80	NW	Not given	Rail
86	NW	Not given	Rail
86	NW	Not given	Rail
89	NW	Not given	Rail
89	NW	Not given	Rail
114	N	Not given	Rail
114	N	Not given	Rail
116	N	Not given	Rail
116	N	Not given	Rail
122	NE	Not given	Rail
122	NE	Not given	Rail
140	N	Not given	Rail
140	NE	Not given	Multi Track
140	NE	Not given	Multi Track
140	N	Not given	Rail
144	N	Not given	Rail
144	N	Not given	Rail
150	N	Not given	Tram
150	NE	Not given	Multi Track
150	NE	Not given	Multi Track
150	N	Not given	Tram
153	N	Not given	Tram
153	N	Not given	Tram
156	N	Not given	Rail
156	N	Not given	Rail
158	N	Not given	Tram
158	N	Not given	Tram
160	N	Not given	Rail
160	N	Not given	Rail
164	NE	Not given	Multi Track
164	NE	Not given	Multi Track
170	N	Not given	Rail
170	N	Not given	Rail
175	N	Not given	Rail
175	N	Not given	Rail
177	N	Not given	Rail
177	NE	Not given	Multi Track
177	NE	Not given	Multi Track
177	N	Not given	Rail
179	NE	Not given	Rail
179	NE	Not given	Rail
185	N	Not given	Rail
185	N	Not given	Rail
190	N	Hope Valley Line	Rail
190	N	Hope Valley Line	Rail
192	NE	Not given	Multi Track
192	NE	Not given	Multi Track
198	N	Not given	Rail
198	N	Not given	Rail
202	N	Not given	Rail
202	N	Not given	Rail

Distance (m)	Direction	Name	Type
203	NE	Not given	Multi Track
203	NE	Not given	Multi Track
207	NE	Not given	Rail
207	NE	Not given	Multi Track
207	NE	Not given	Multi Track
207	NE	Not given	Rail
218	NE	Not given	Rail
218	NE	Not given	Rail
228	NE	Not given	Rail
228	NE	Not given	Rail
229	NW	Not given	Tram
229	NW	Not given	Tram
230	NE	Not given	Rail
230	NE	Not given	Rail
235	NE	Not given	Tram
235	NE	Not given	Tram
236	NE	Not given	Tram
236	NE	Not given	Tram
239	NW	Not given	Multi Track
239	NW	Not given	Multi Track
242	NW	Not given	Tram
242	NW	Not given	Tram
245	E	Not given	Rail
245	E	Not given	Rail

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels map.

9.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1 .

Is the study site within 5km of the route of the High Speed 2 rail project? Yes

Is the study site within 500m of the route of the Crossrail 1 rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail 1 Report.

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

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Web: www.bgs.ac.uk



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APPENDIX B

Historic Maps

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MANCHESTER, M1 2PG

Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: 1056 Scale Town Plan

Map date: 1851

Scale: 1:1,056

Printed at: 1:1,056



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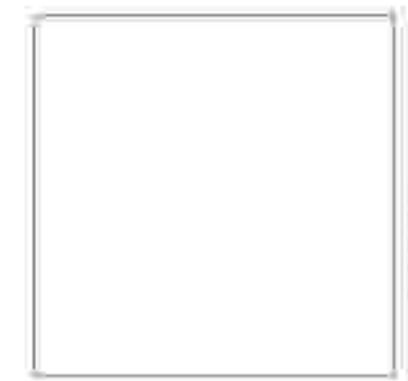
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Grid Ref: 384853, 397629

Map Name: County Series

Map date: 1889

Scale: 1:2,500

Printed at: 1:2,500



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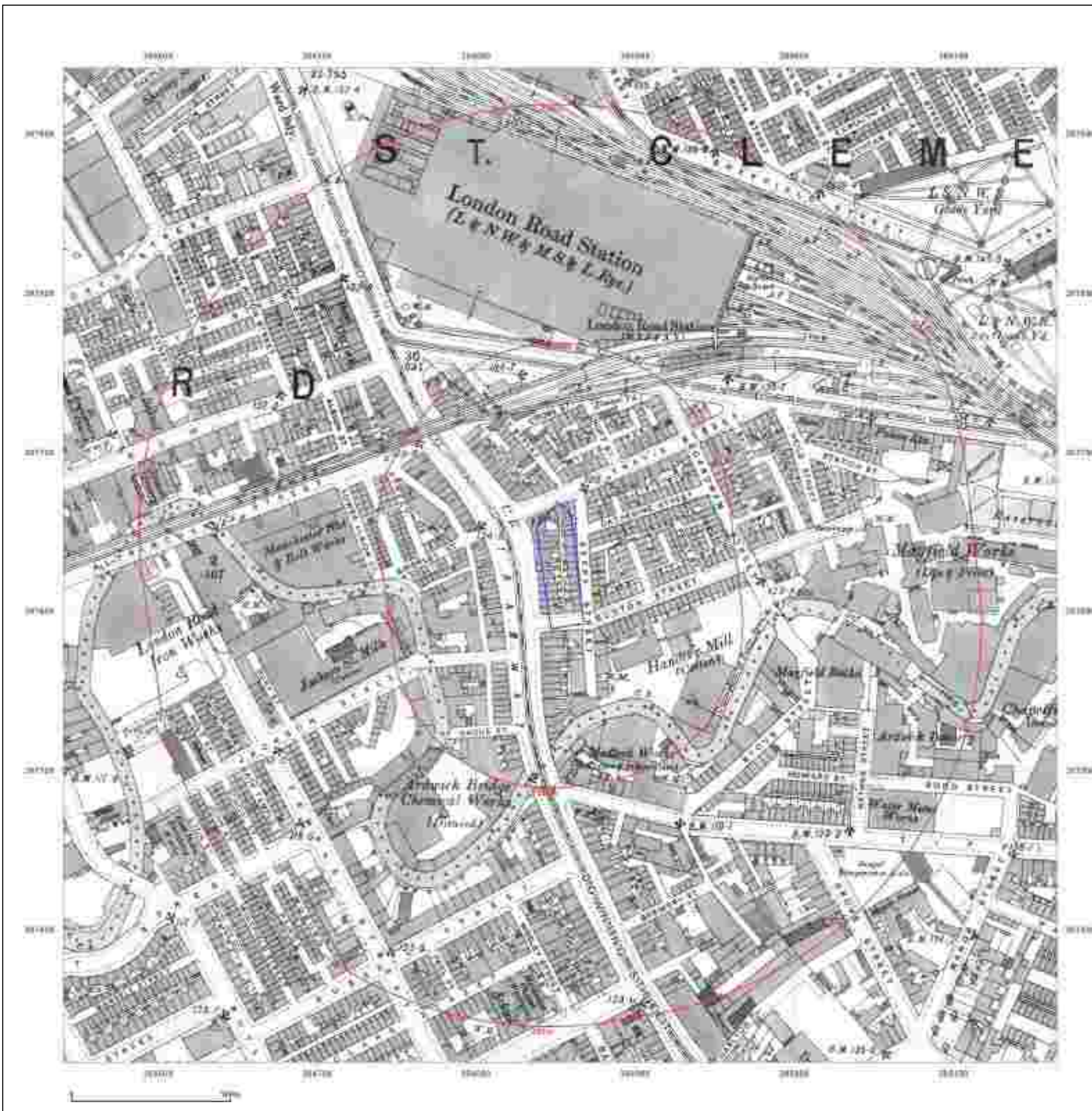


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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: County Series Town Plan

Map date: 1891

Scale: 1:500

Printed at: 1:1,000



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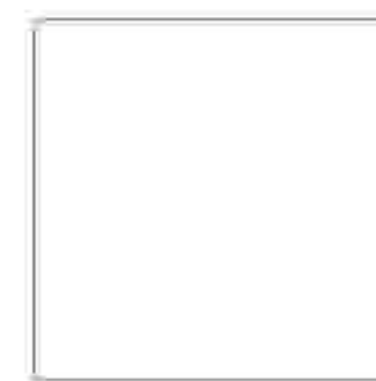
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Grid Ref: 384853, 397629

Map Name: County Series

Map date: 1908

Scale: 1:2,500

Printed at: 1:2,500



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Revised 1908
Edin: 1908
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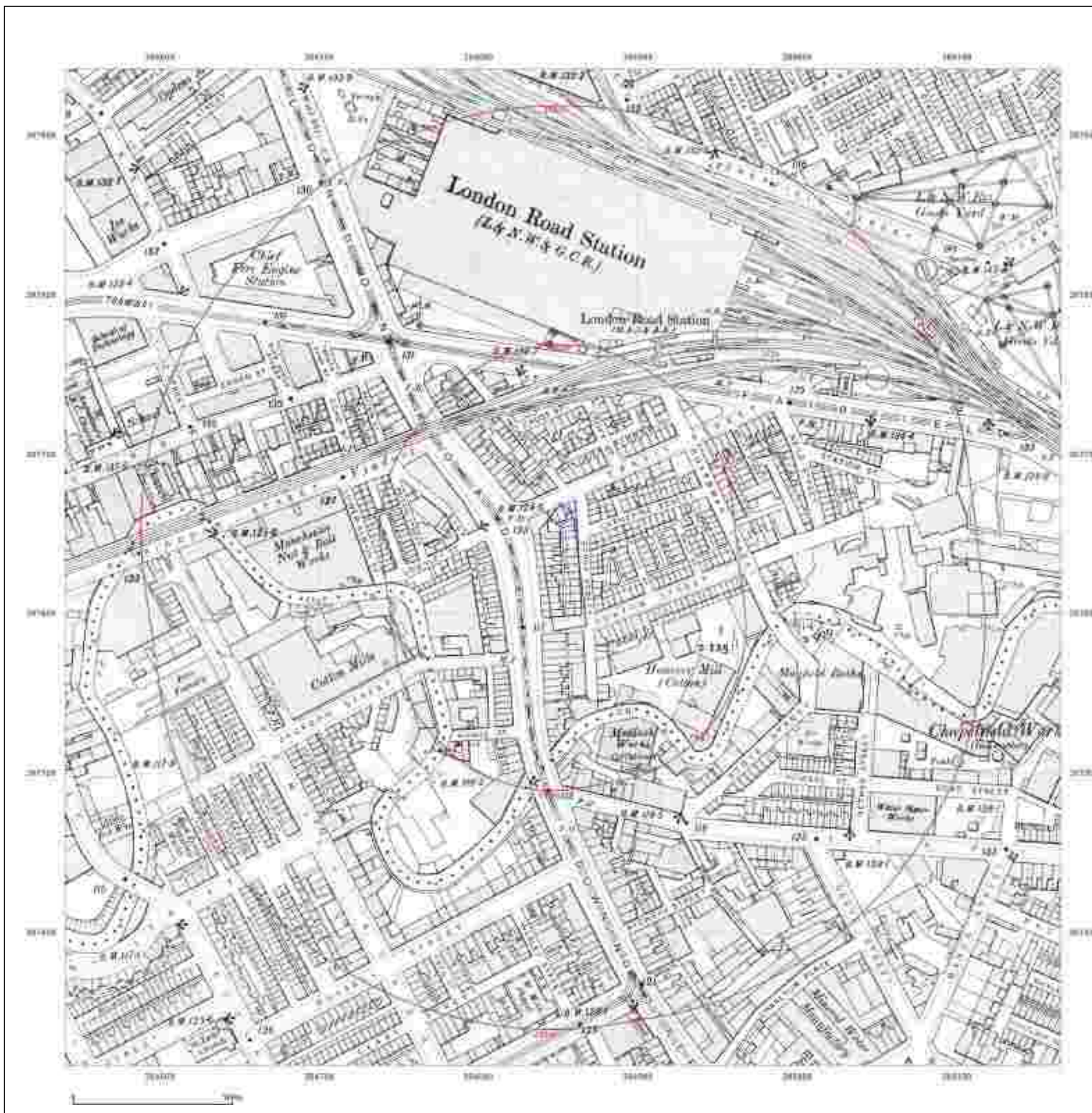


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Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: County Series

Map date: 1922

Scale: 1:2,500

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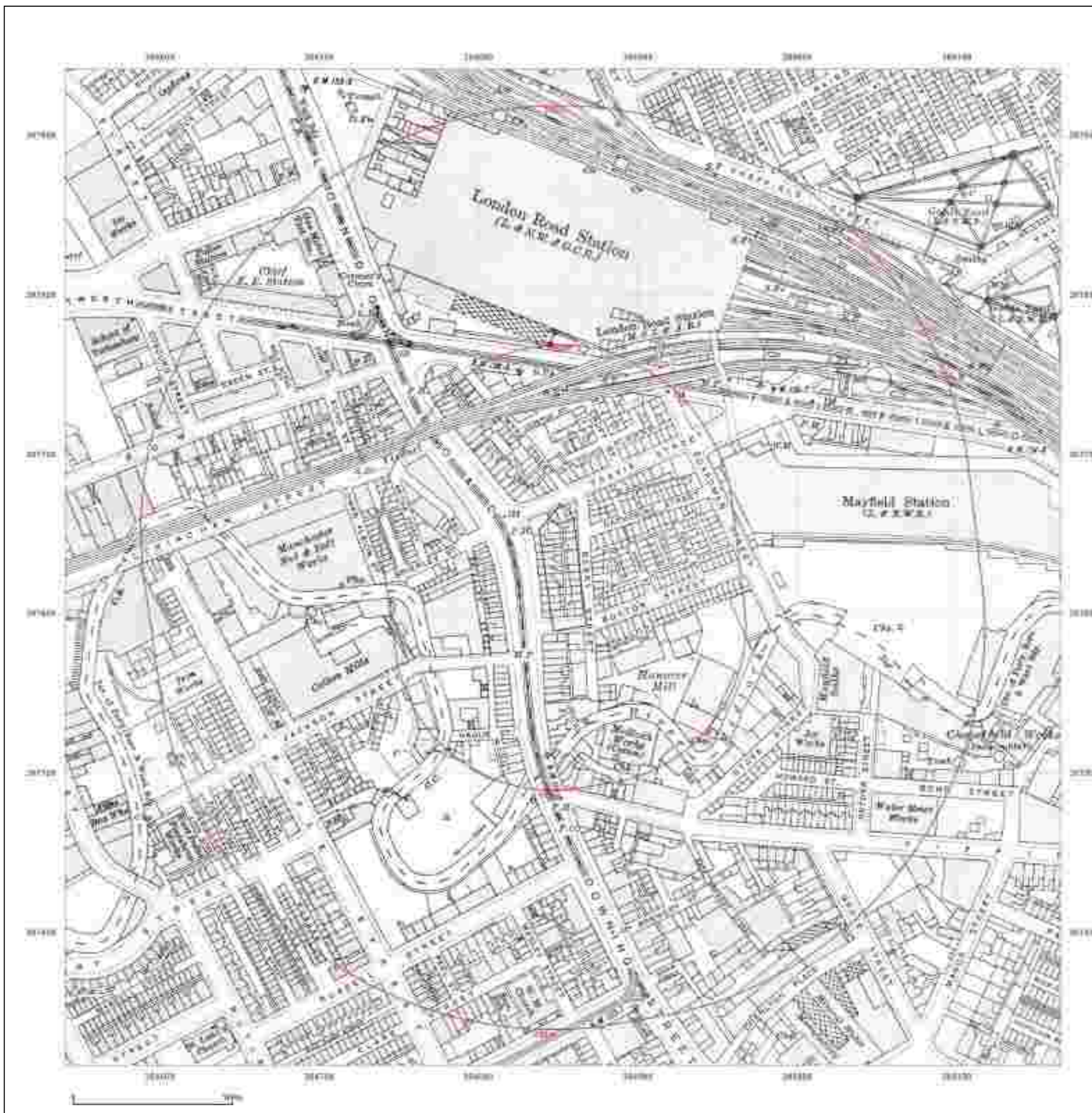


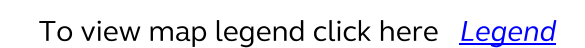
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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 1948

Scale: 1:1,250

Printed at: 1:2,000



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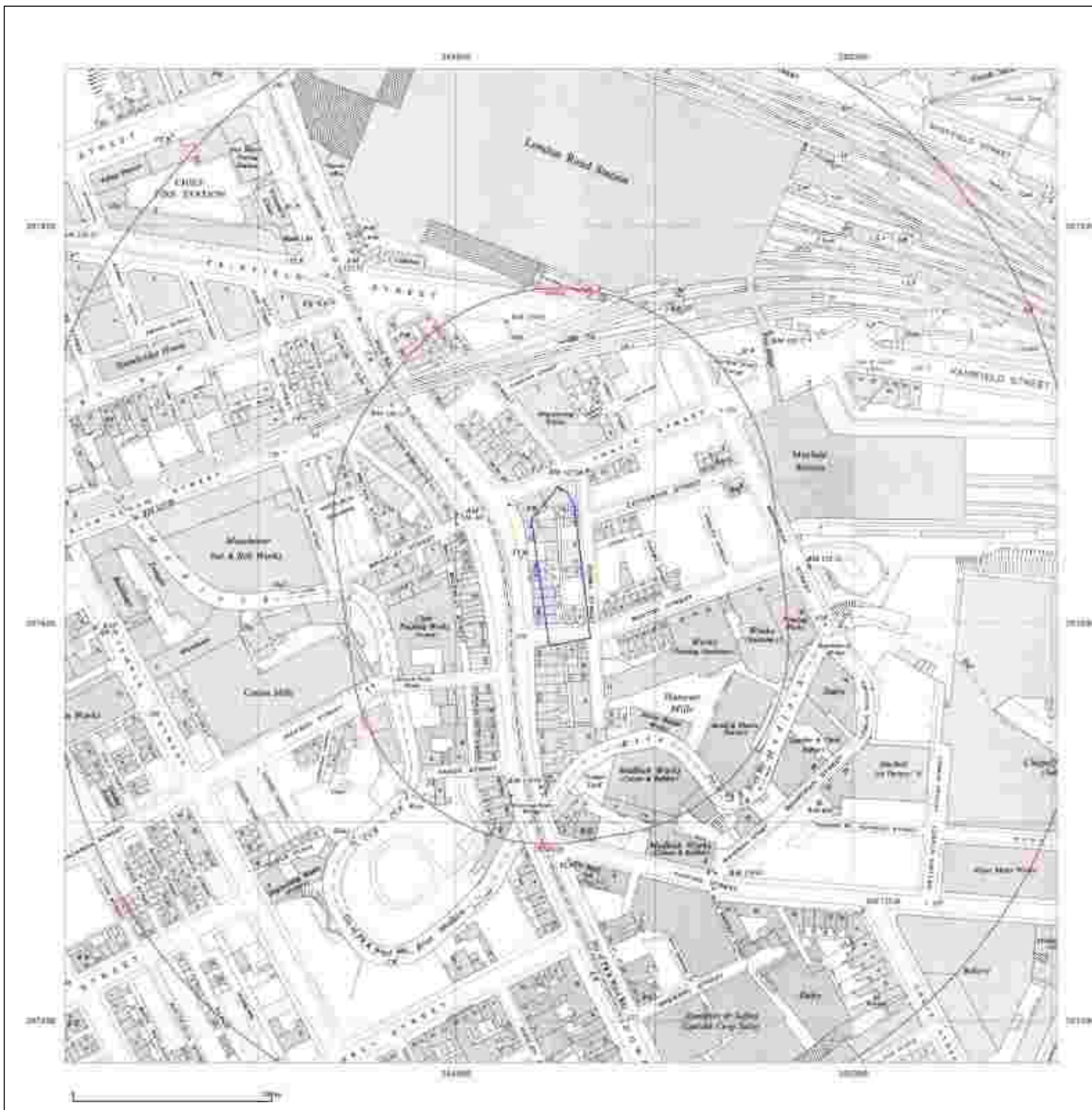


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Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 1948-1950

Scale: 1:2,500

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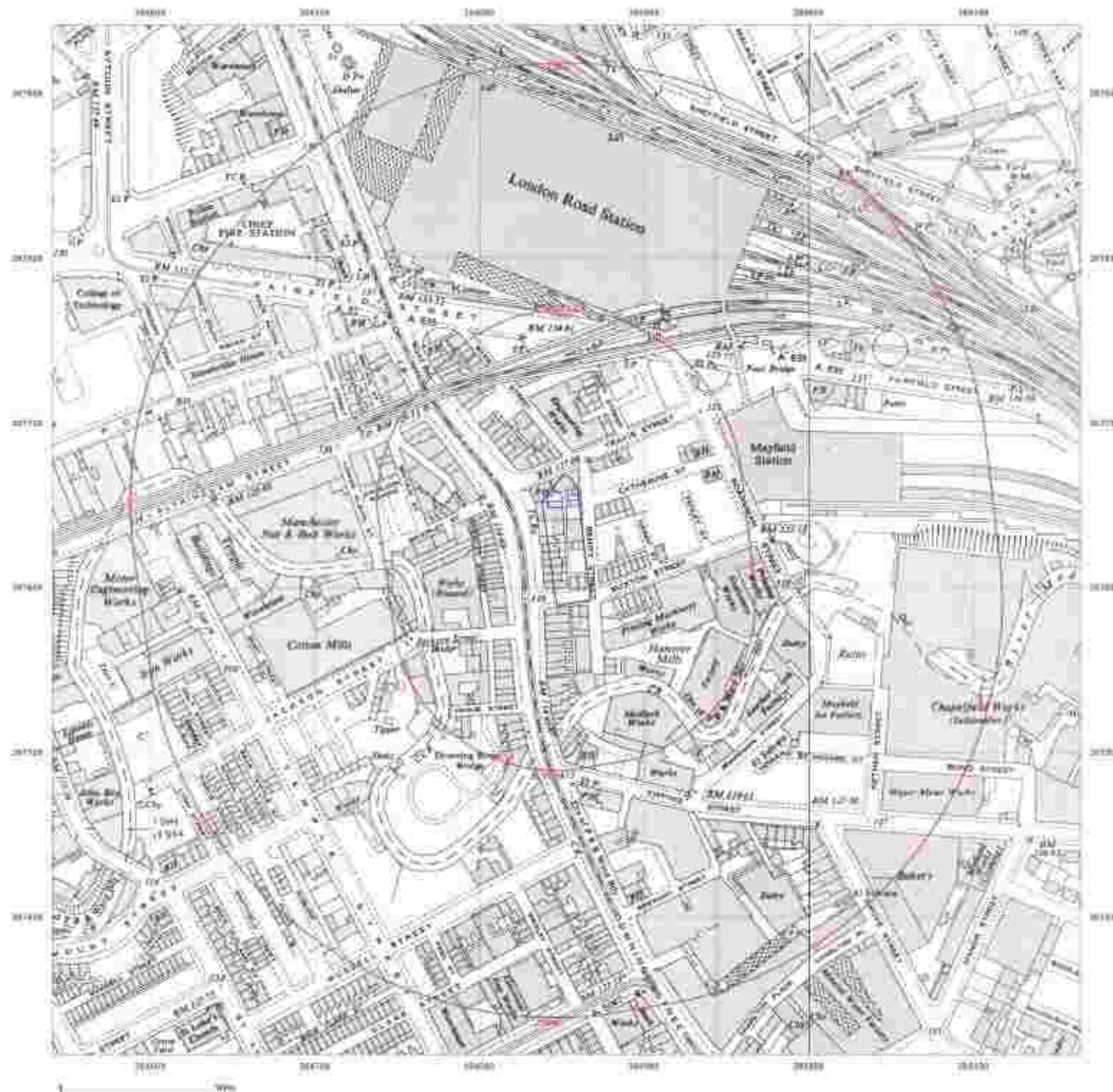


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Map Name: National Grid

Map date: 1952-1954

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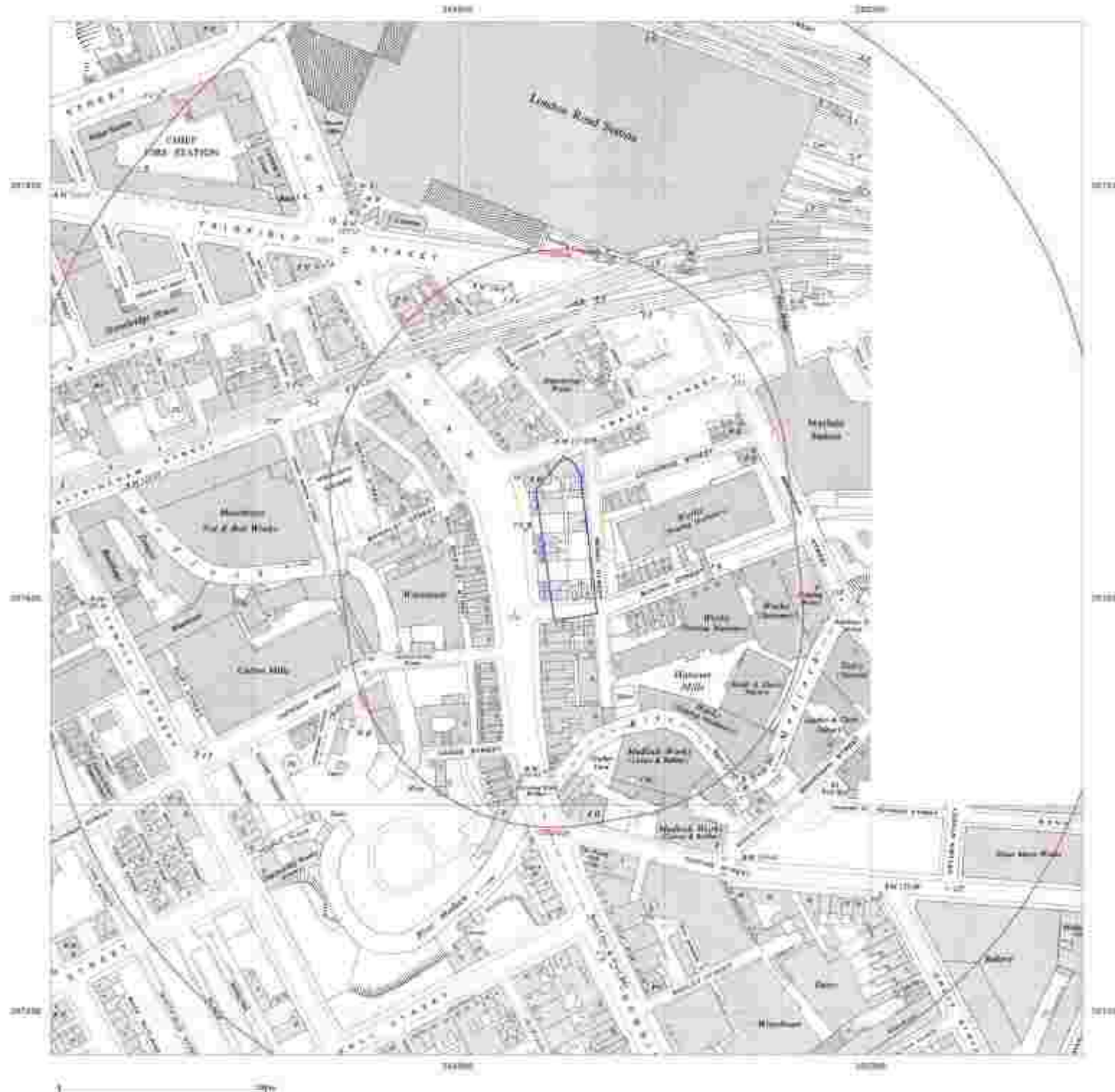


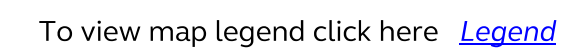
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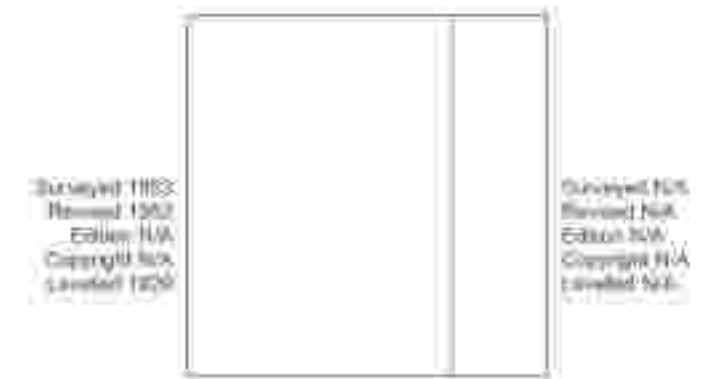
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Map Name: National Grid

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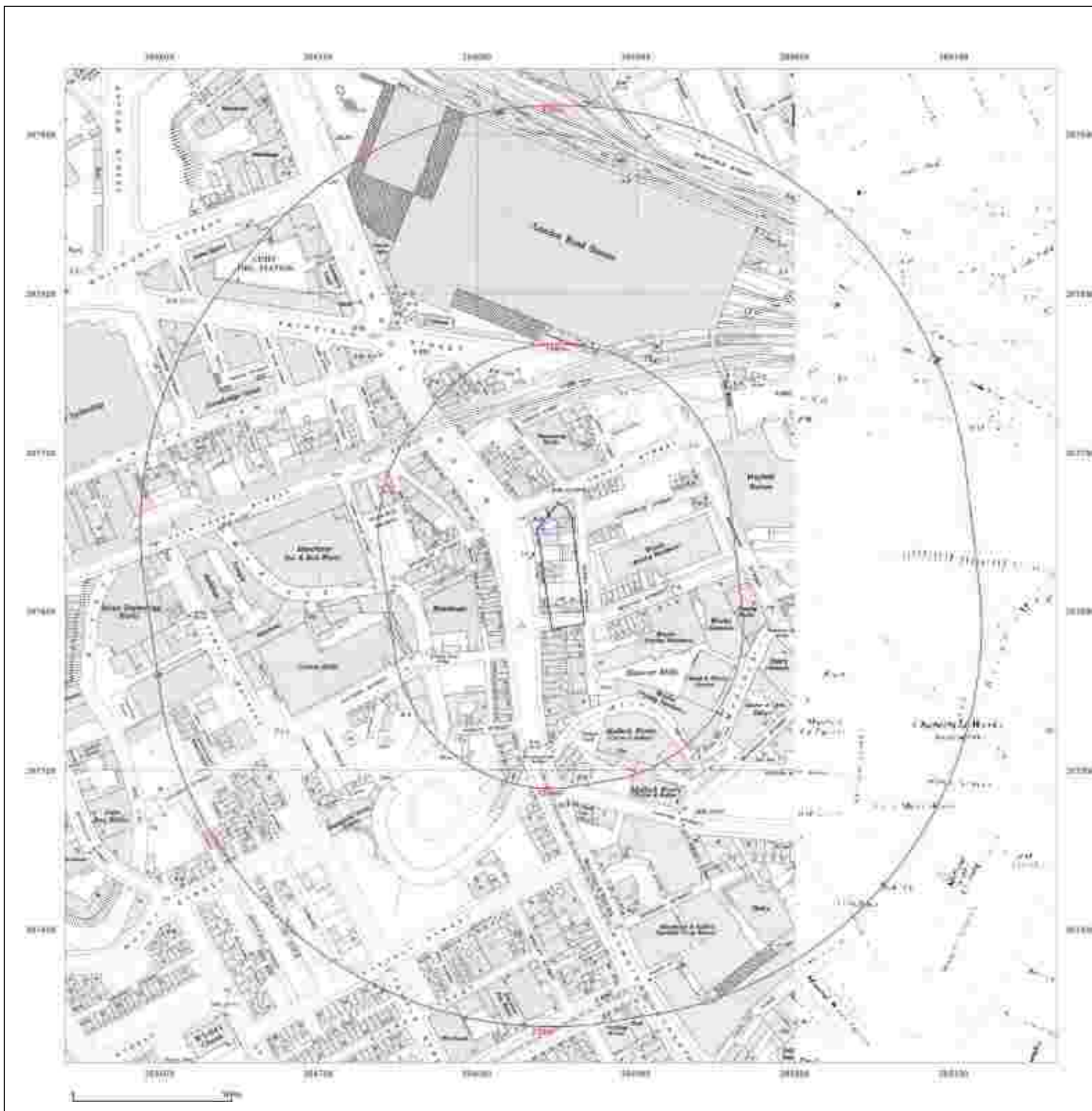


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Map Name: National Grid

Map date: 1960-1964

Scale: 1:1,250

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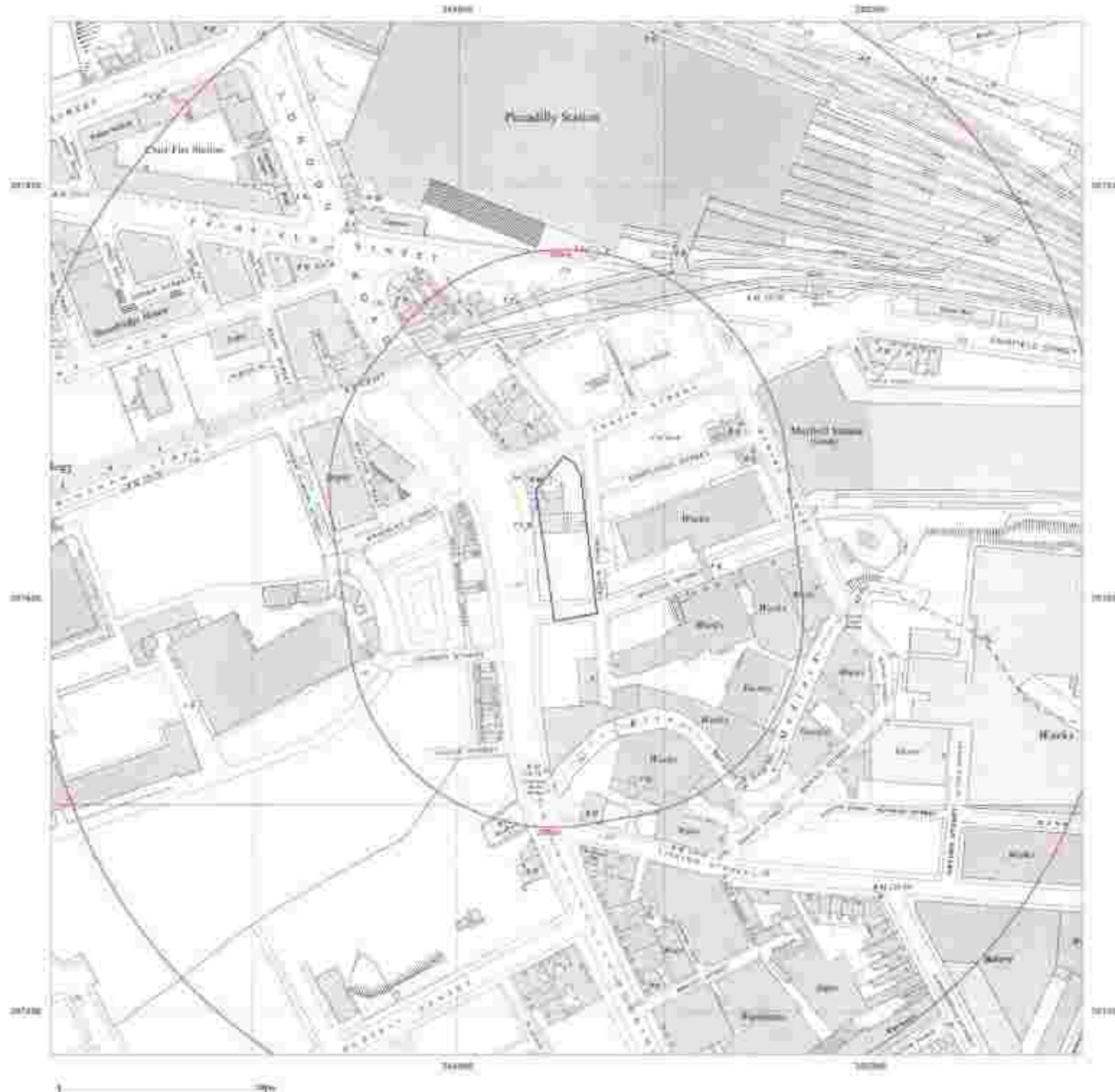


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Map Name: National Grid

Map date: 1965

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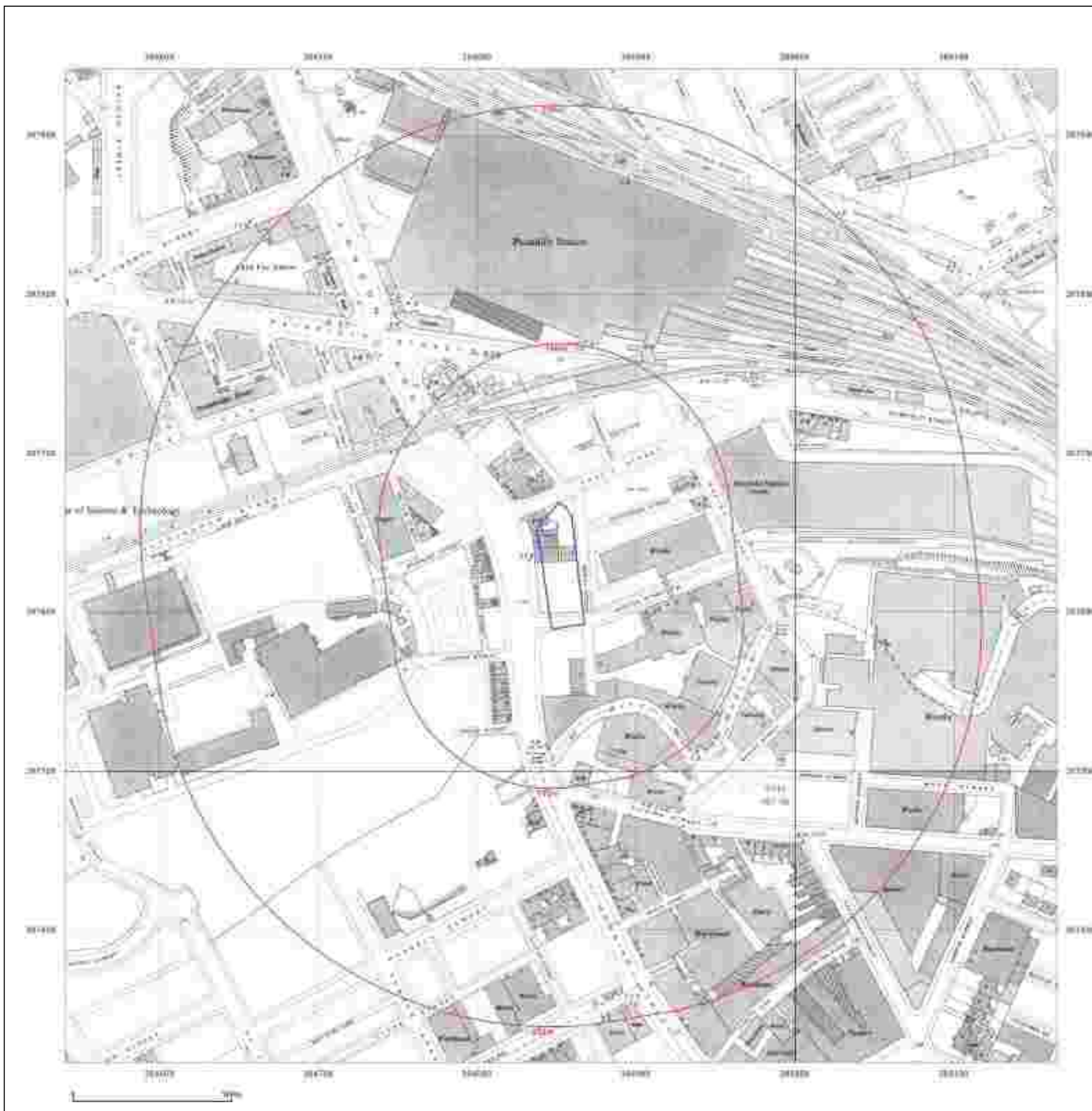


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Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 1968

Scale: 1:2,500

Printed at: 1:2,500

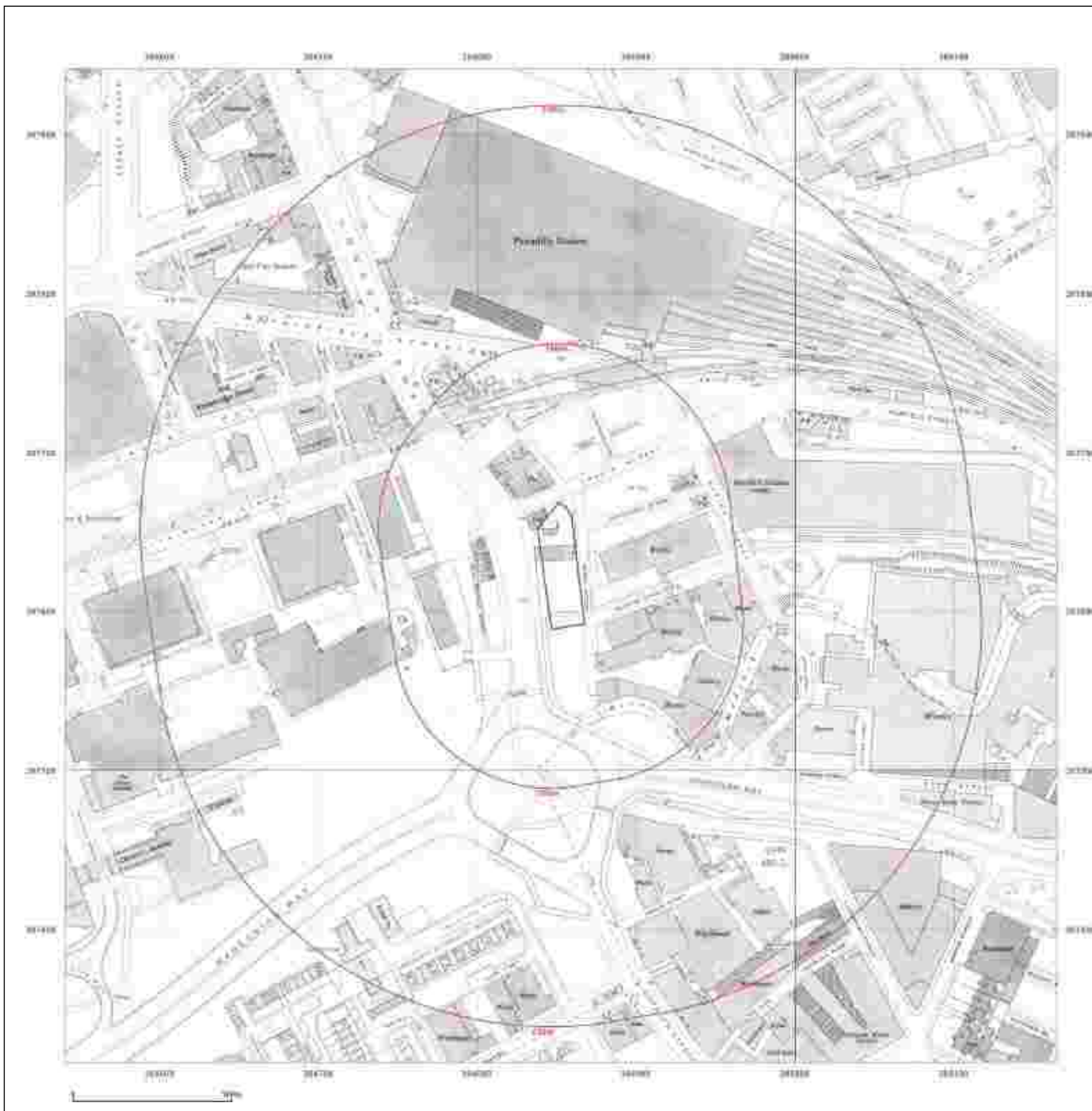


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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 1970

Scale: 1:2,500

Printed at: 1:2,500

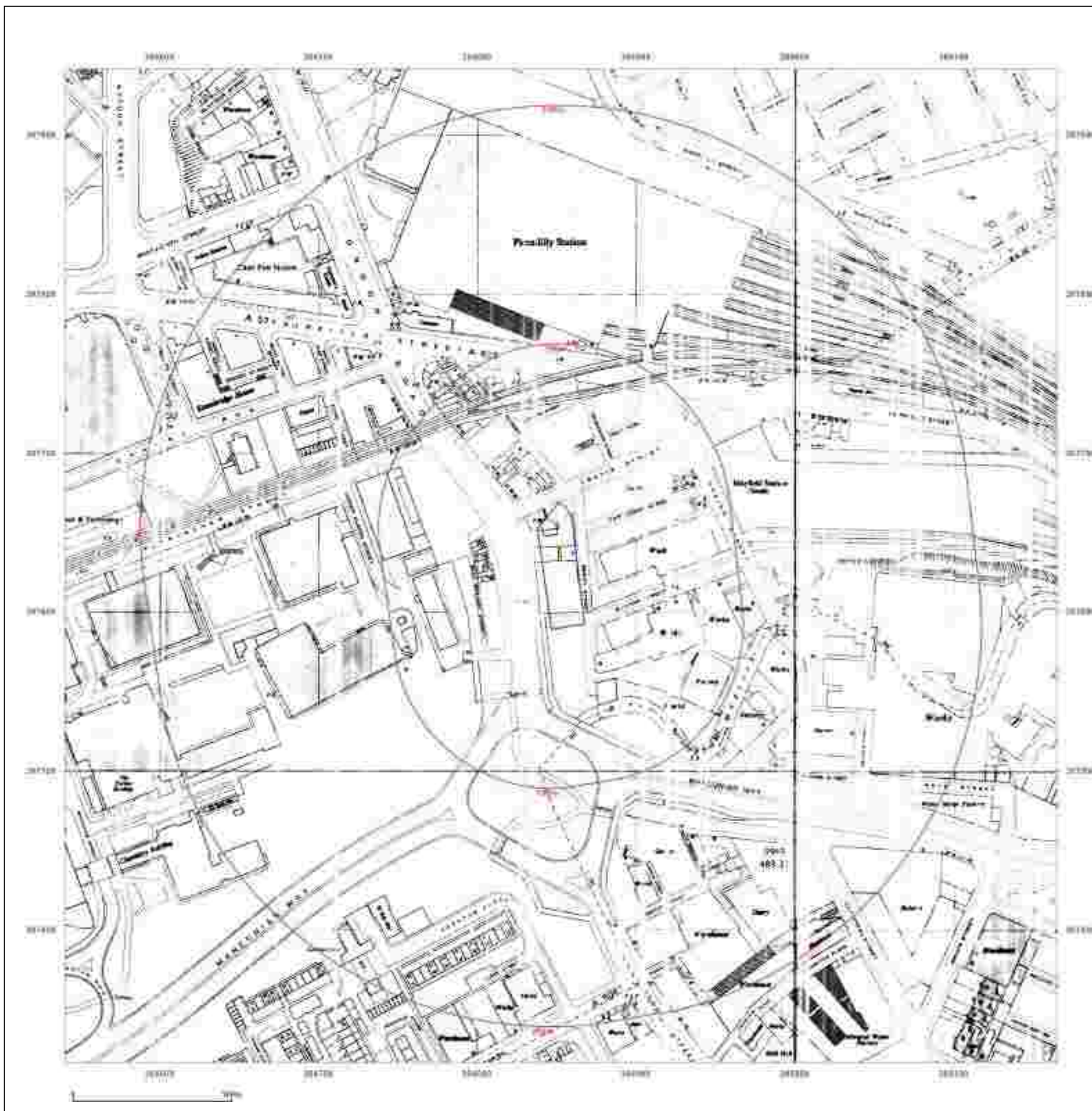


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MANCHESTER, M1 2PG

Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 1969-1974

Scale: 1:1,250

Printed at: 1:2,000



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Surveyed 1948 Revised 1988 Edition N/A Copyright 1971 Licensed 1998	Surveyed 1968 Revised 1988 Edition N/A Copyright 1971 Licensed 1998

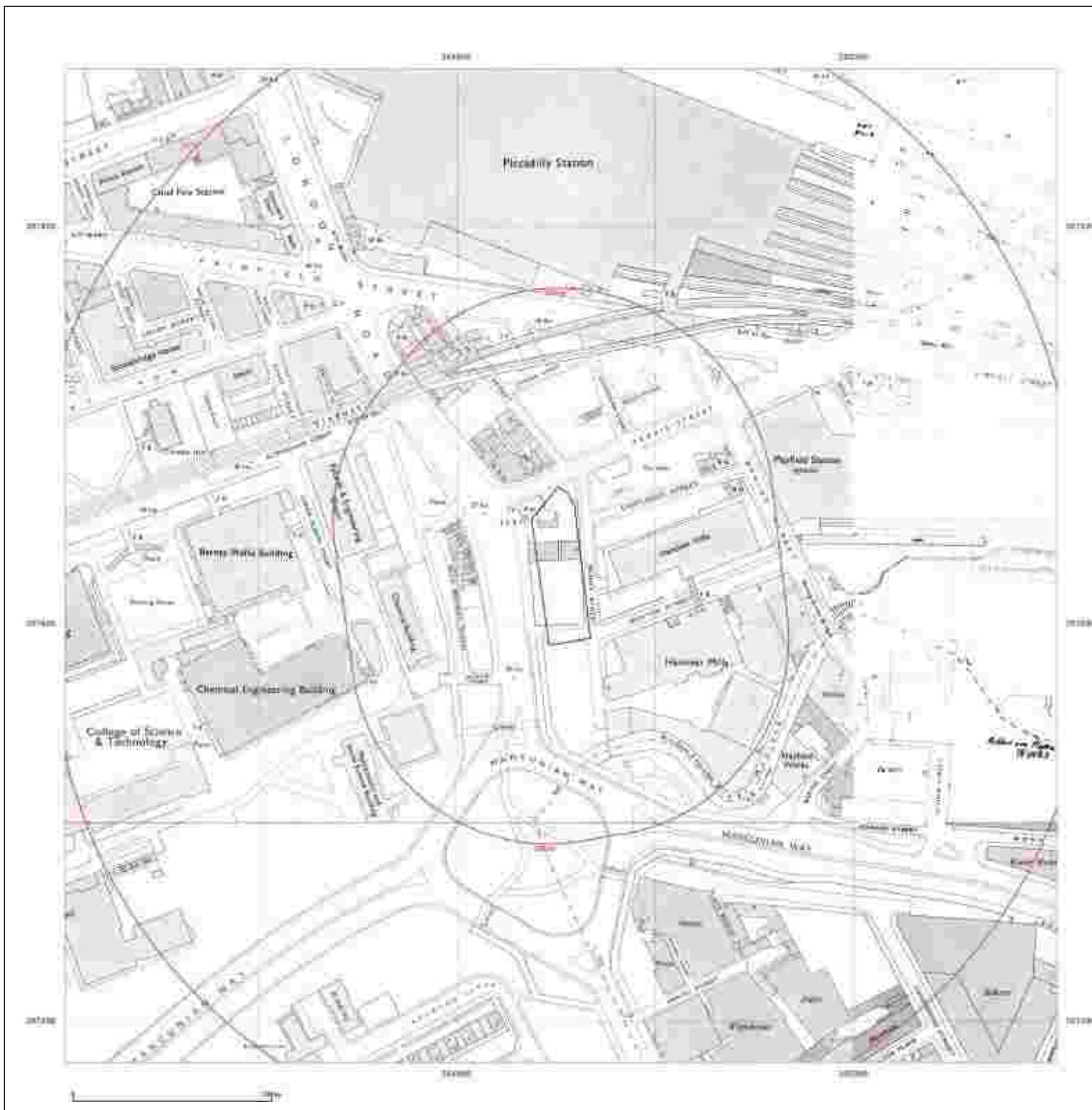


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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 1976-1977

Scale: 1:1,250

Printed at: 1:2,000

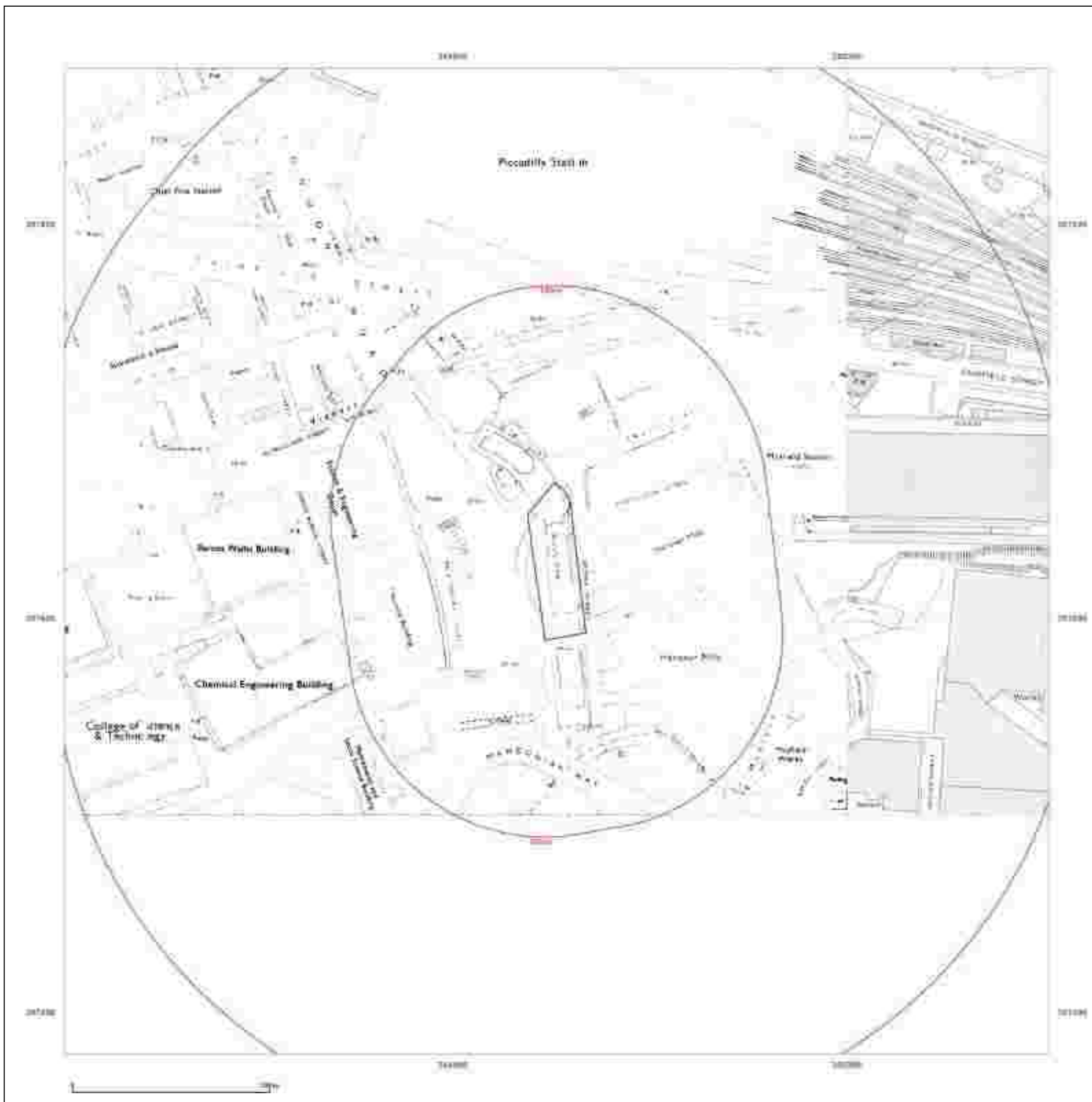


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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 1984-1986

Scale: 1:1,250

Printed at: 1:2,000

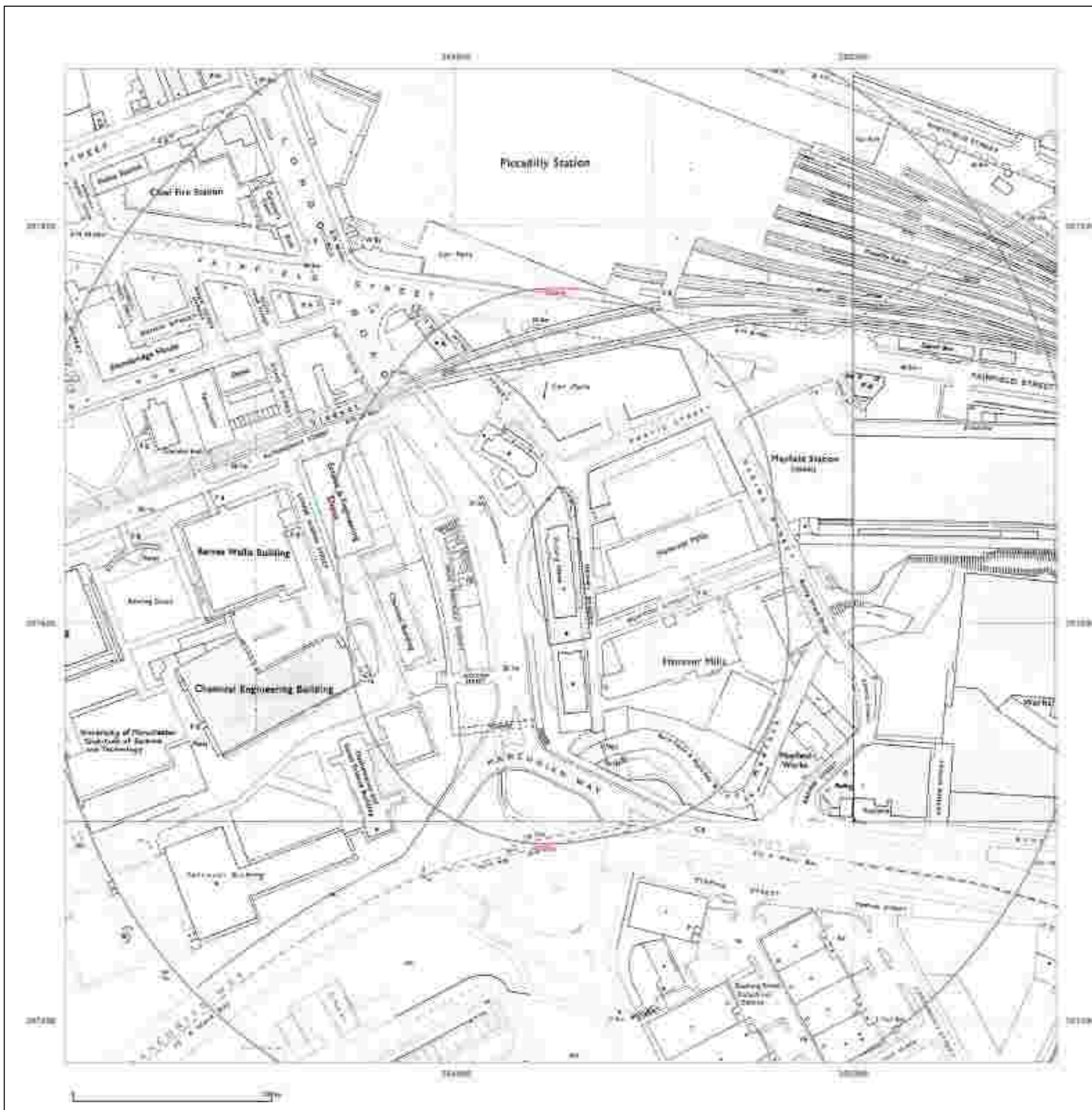


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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 1991-1992

Scale: 1:1,250

Printed at: 1:2,000



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Surveyed 1982 Revised 1992 Edition N/A Copyright 1992 Limited N/A	Surveyed 1982 Revised 1992 Edition N/A Copyright 1992 Limited N/A

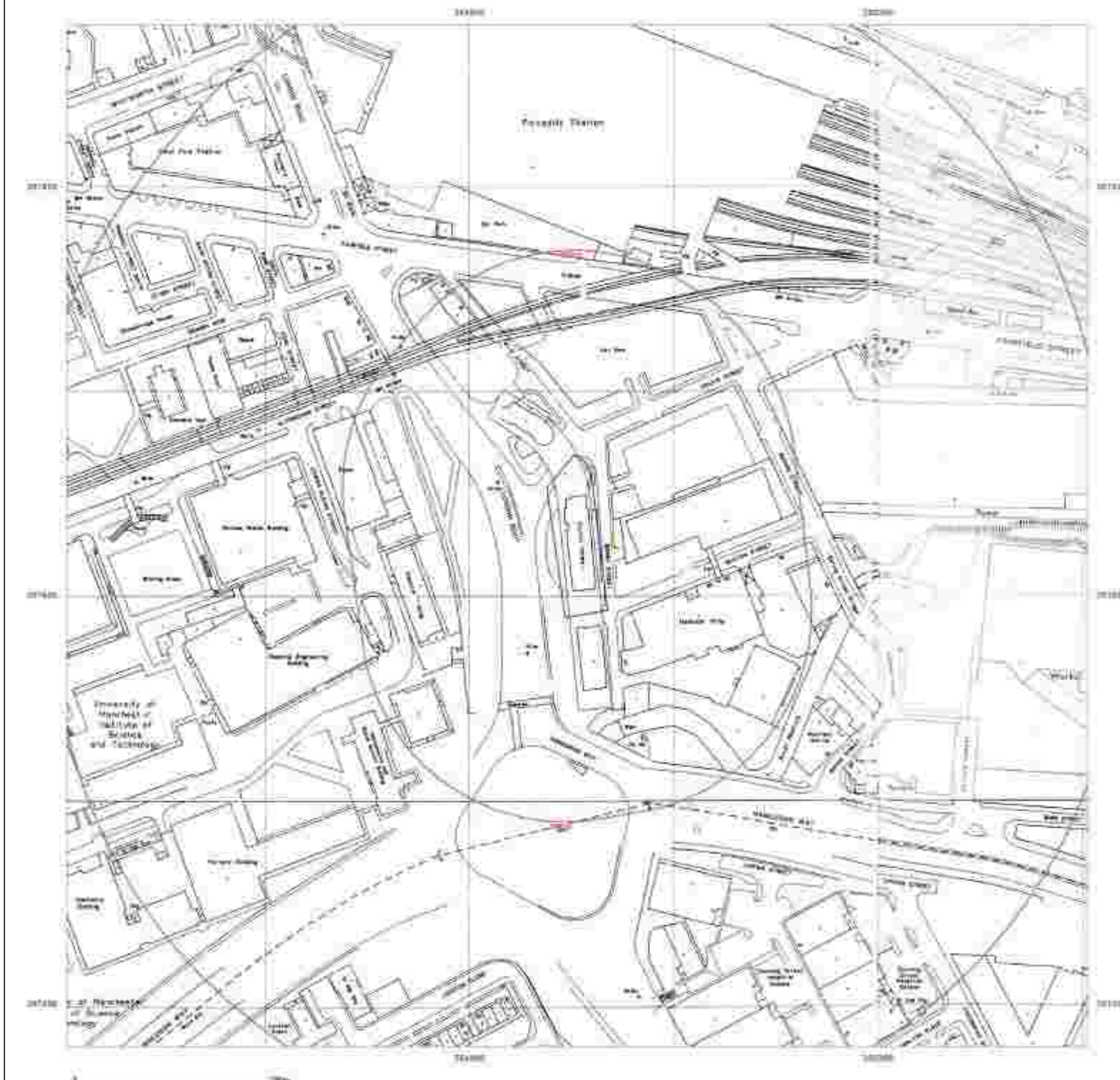


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Client Ref: JobRef_7759_PO_3599
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Grid Ref: 384853, 397629

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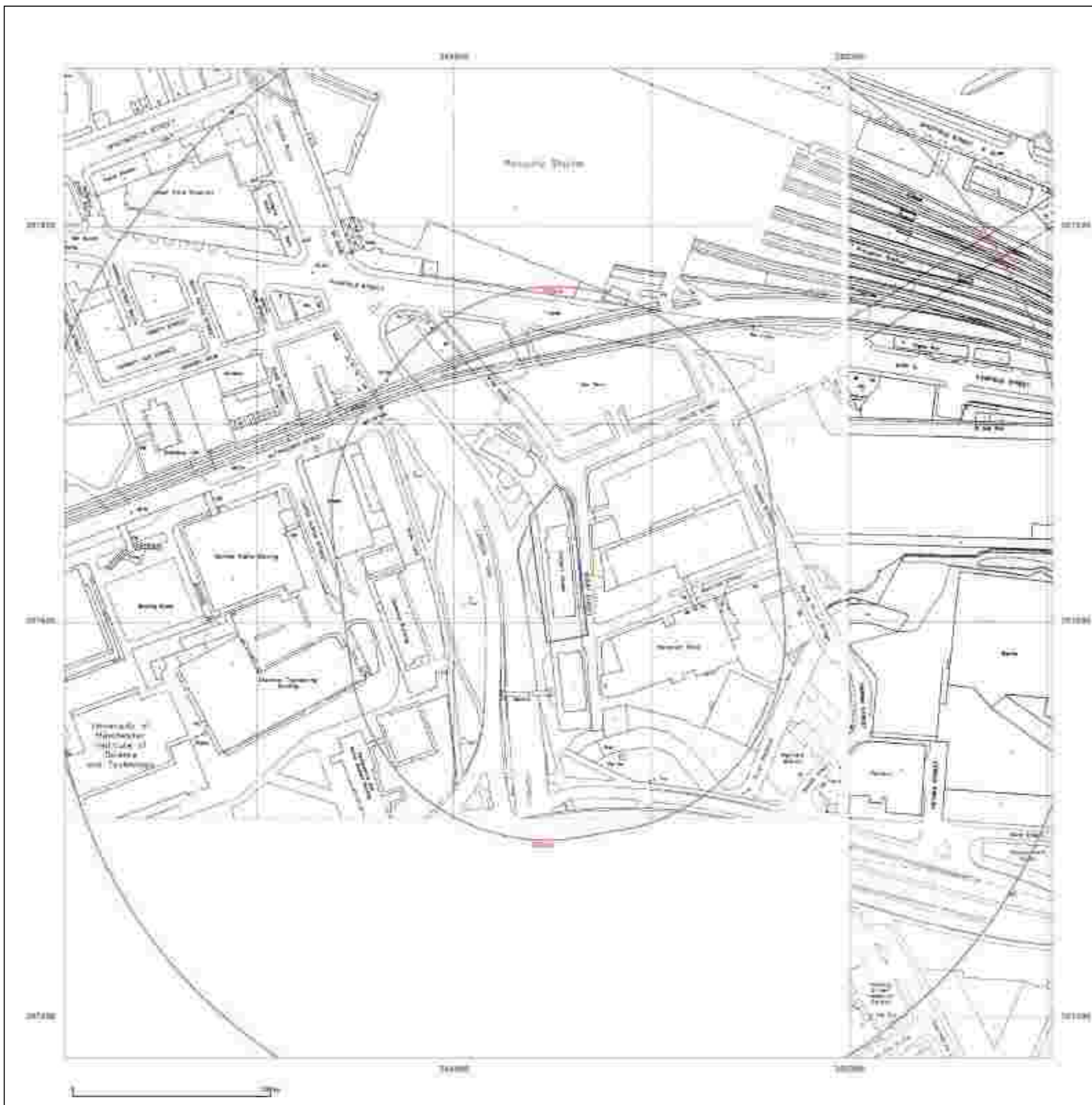


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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 1994-1995

Scale: 1:1,250

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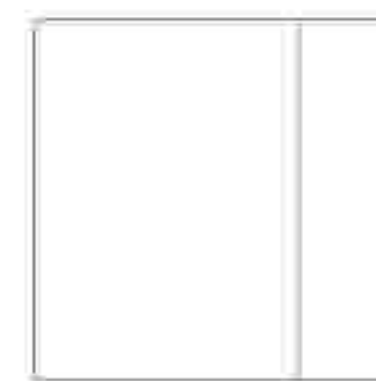
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Map Name: National Grid

Map date: 1995

Scale: 1:2,500

Printed at: 1:2,500



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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: County Series

Map date: 1848

Scale: 1:10,560

Printed at: 1:10,560

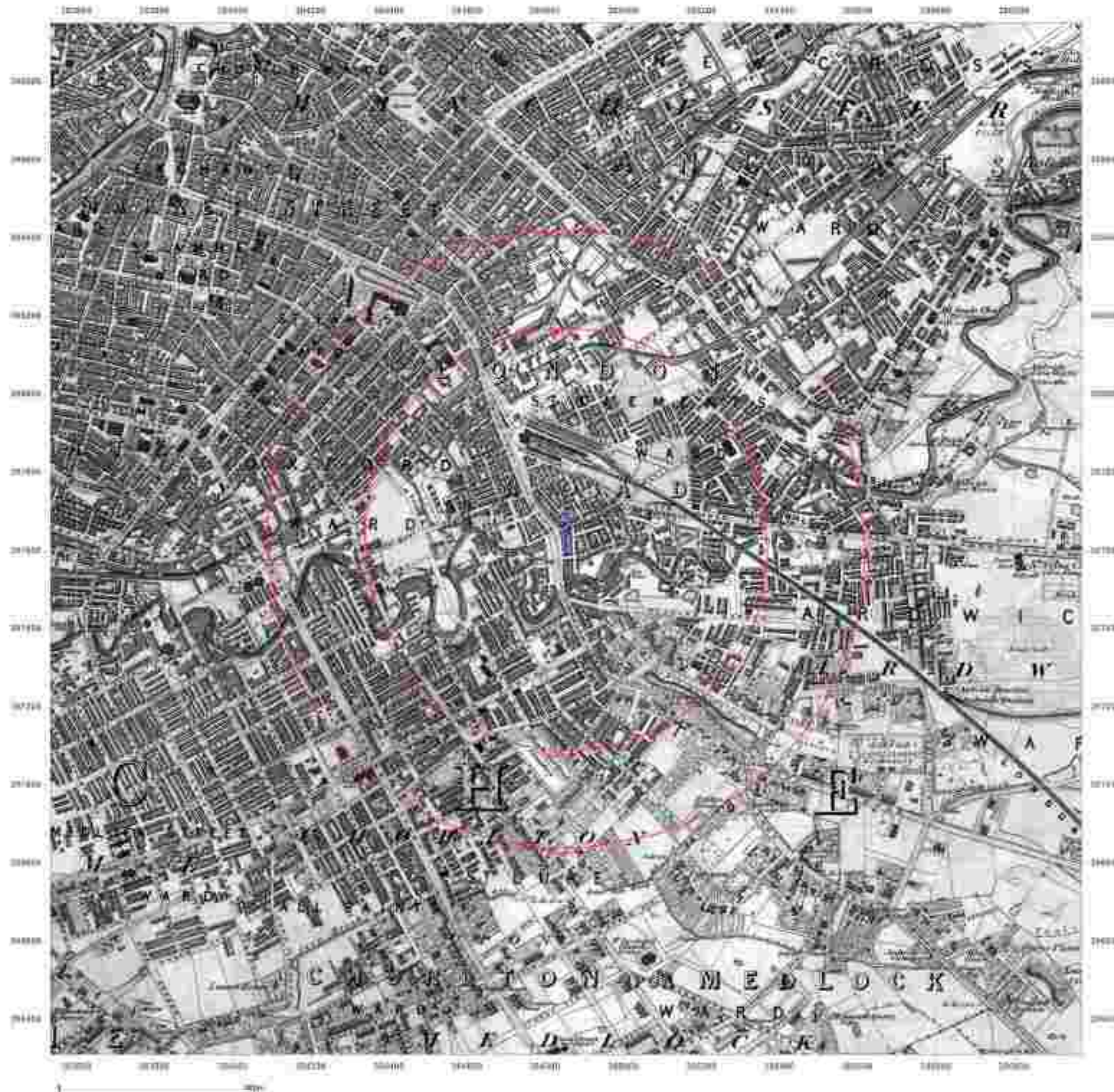


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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: County Series

Map date: 1890-1894

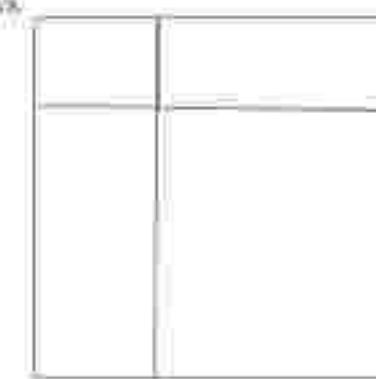
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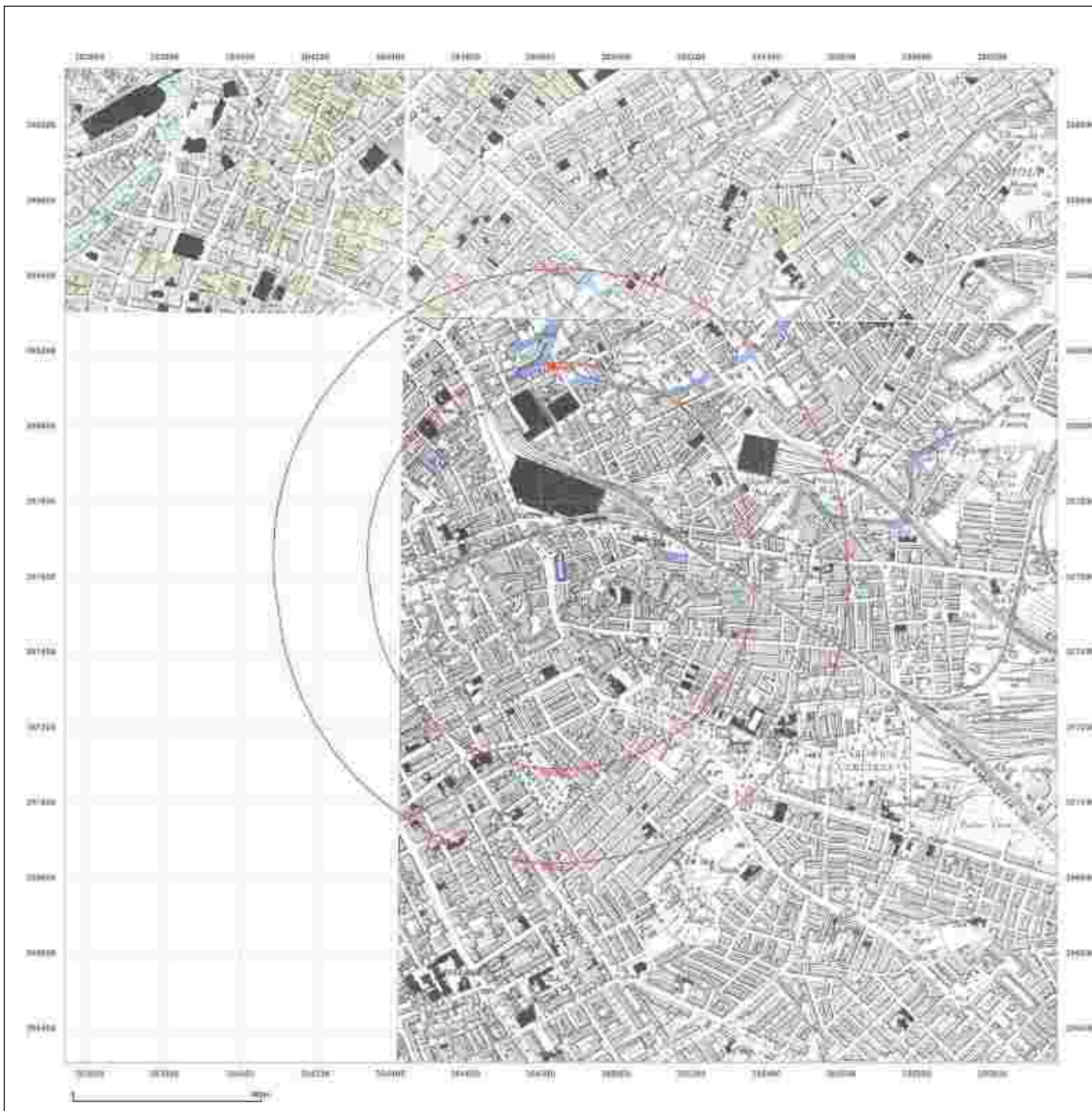


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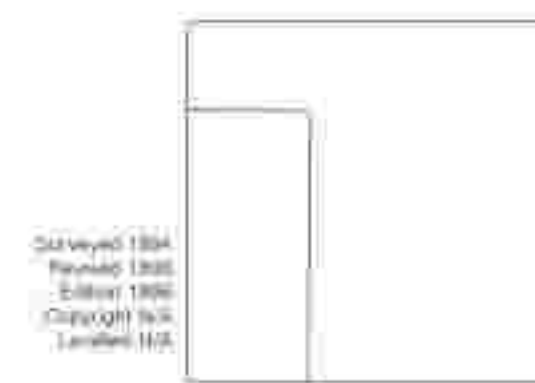
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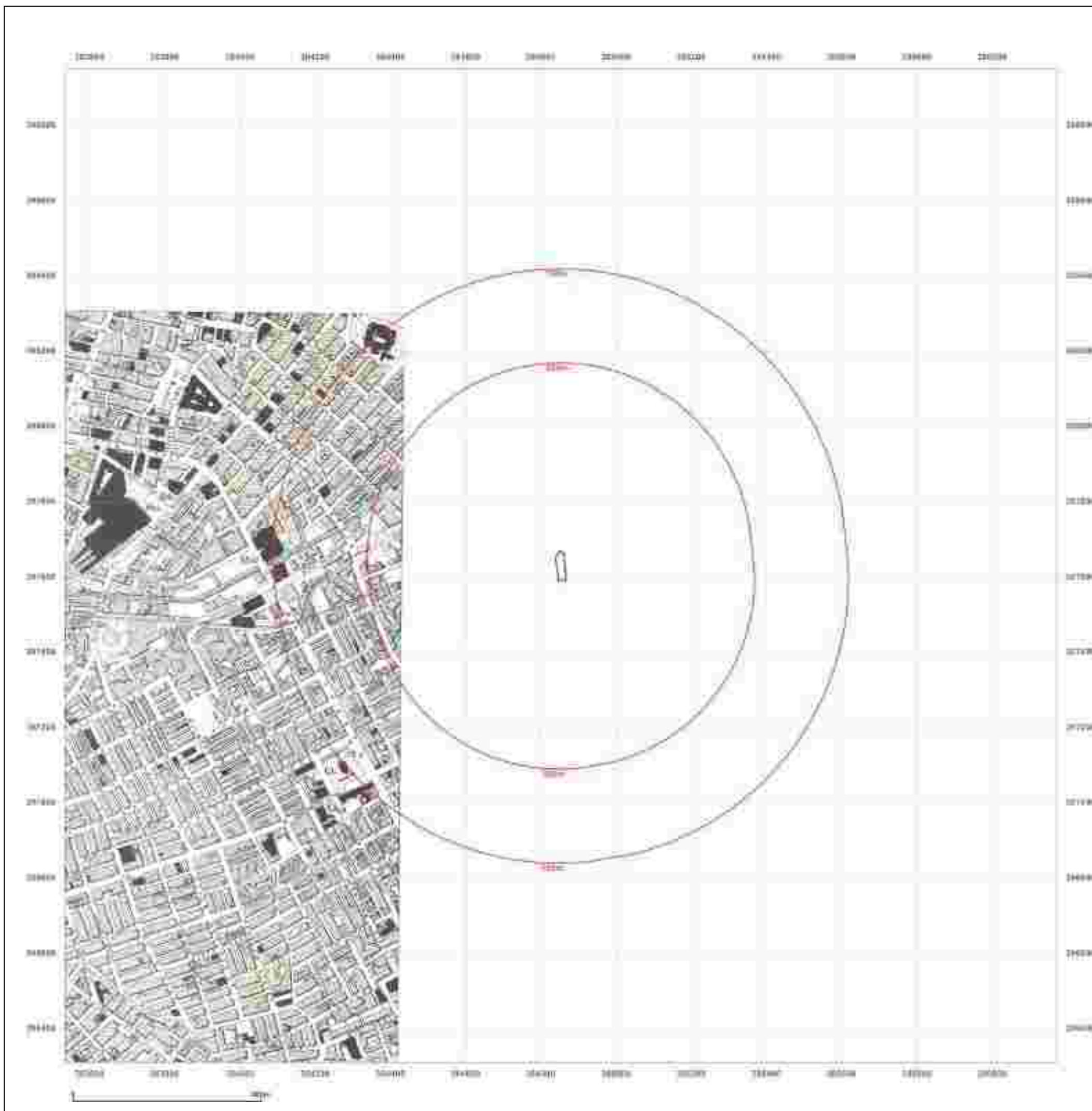


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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: County Series

Map date: 1905-1906

Scale: 1:10,560

Printed at: 1:10,560



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Edition 1900,
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Edition 1900,
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Edition 1900,
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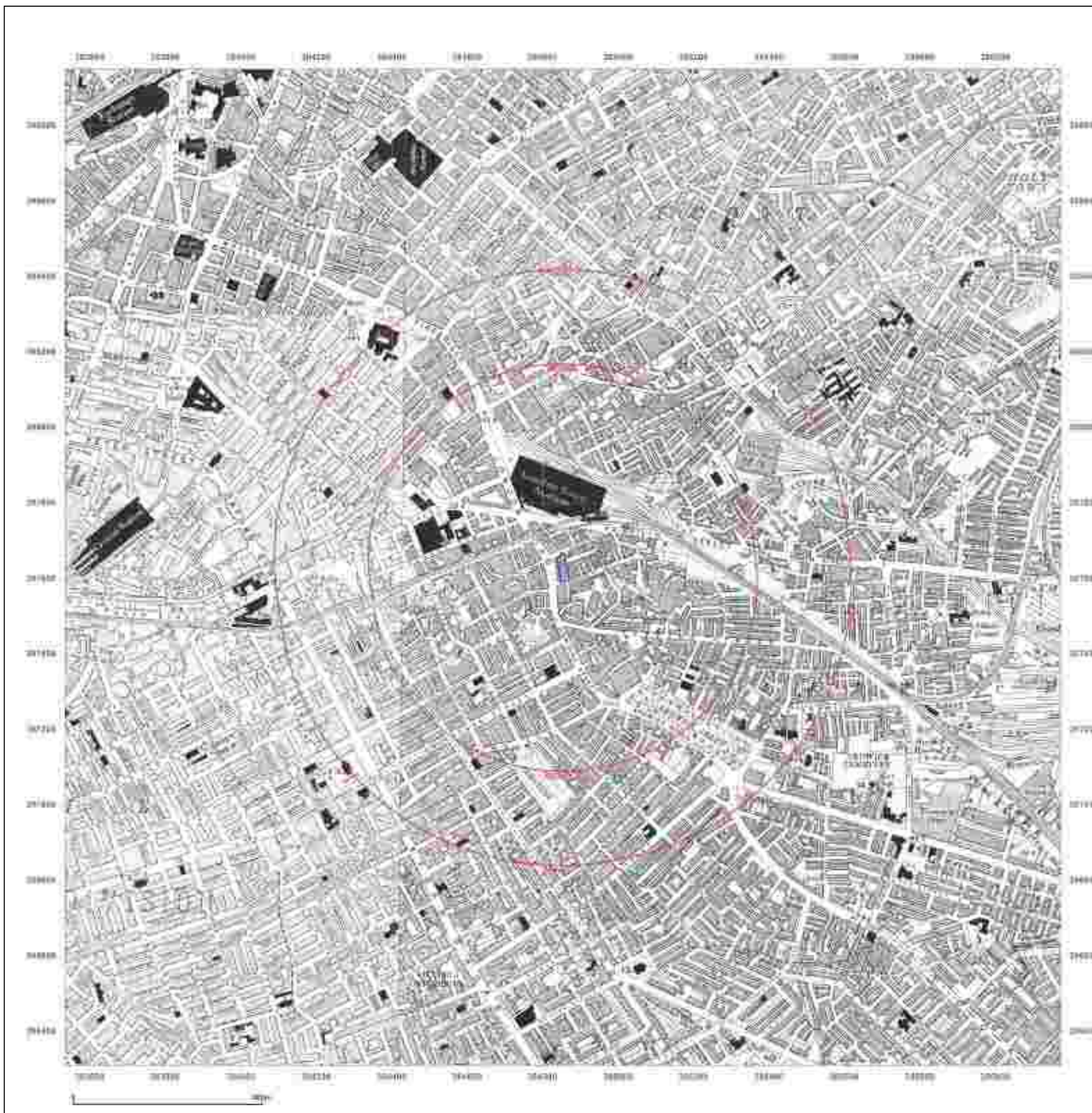


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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: County Series

Map date: 1923

Scale: 1:10,560

Printed at: 1:10,560



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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: County Series

Map date: 1923

Scale: 1:10,560

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Map date: 1931-1934

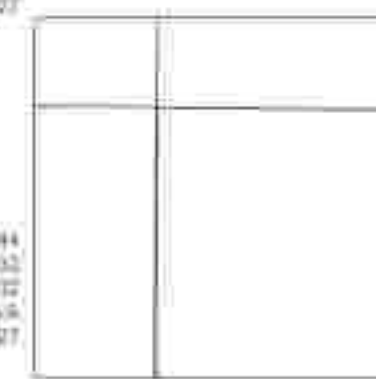
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Edition 1901
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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



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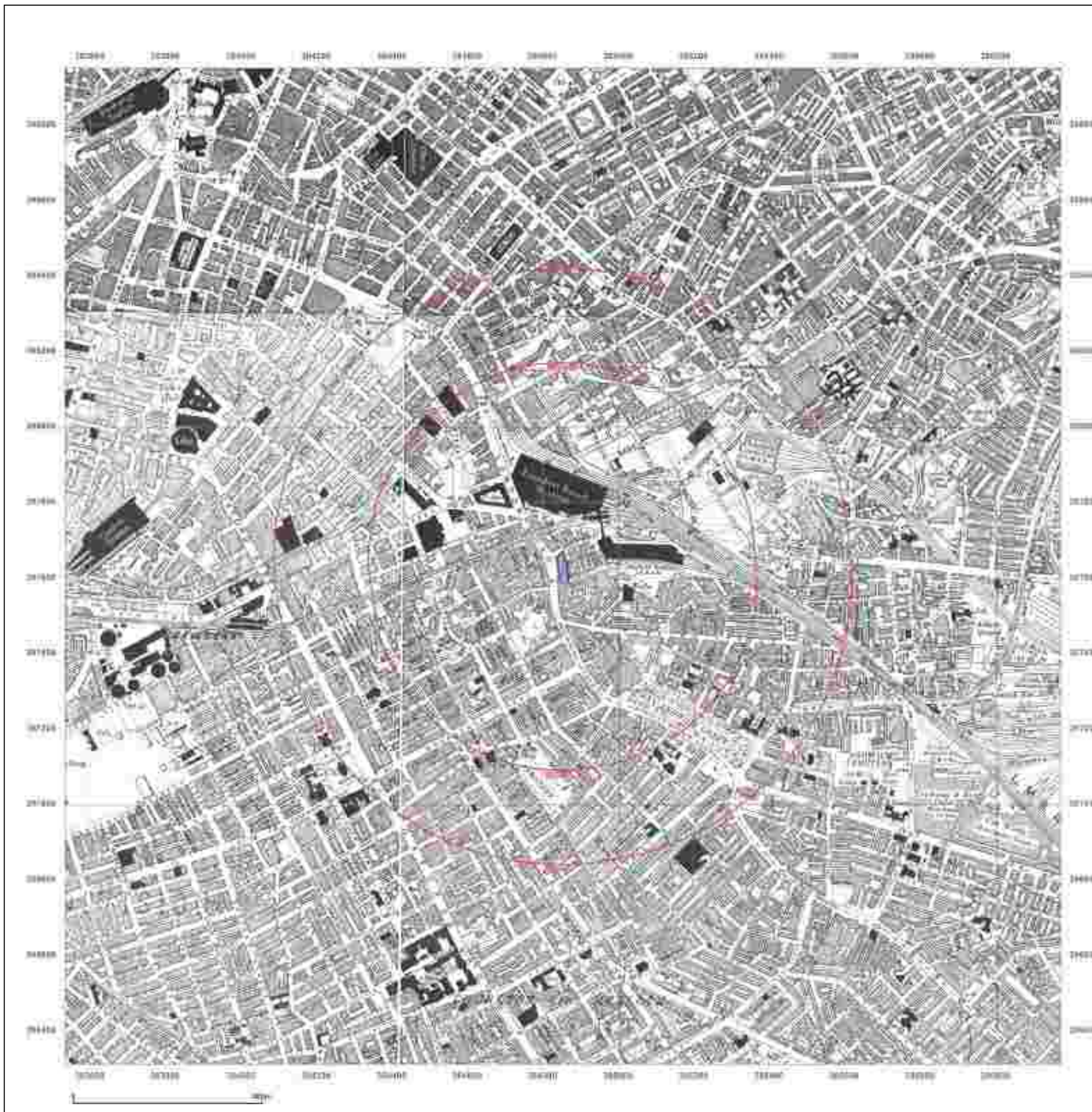


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MANCHESTER, M1 2PG

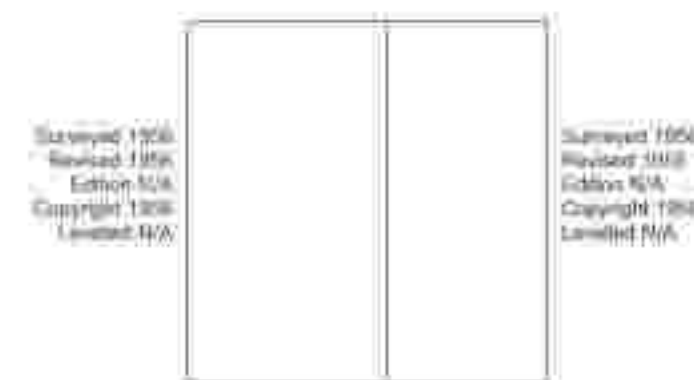
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Grid Ref: 384853, 397629

Map Name: Provisional

Map date: 1956

Scale: 1:10,560

Printed at: 1:10,560



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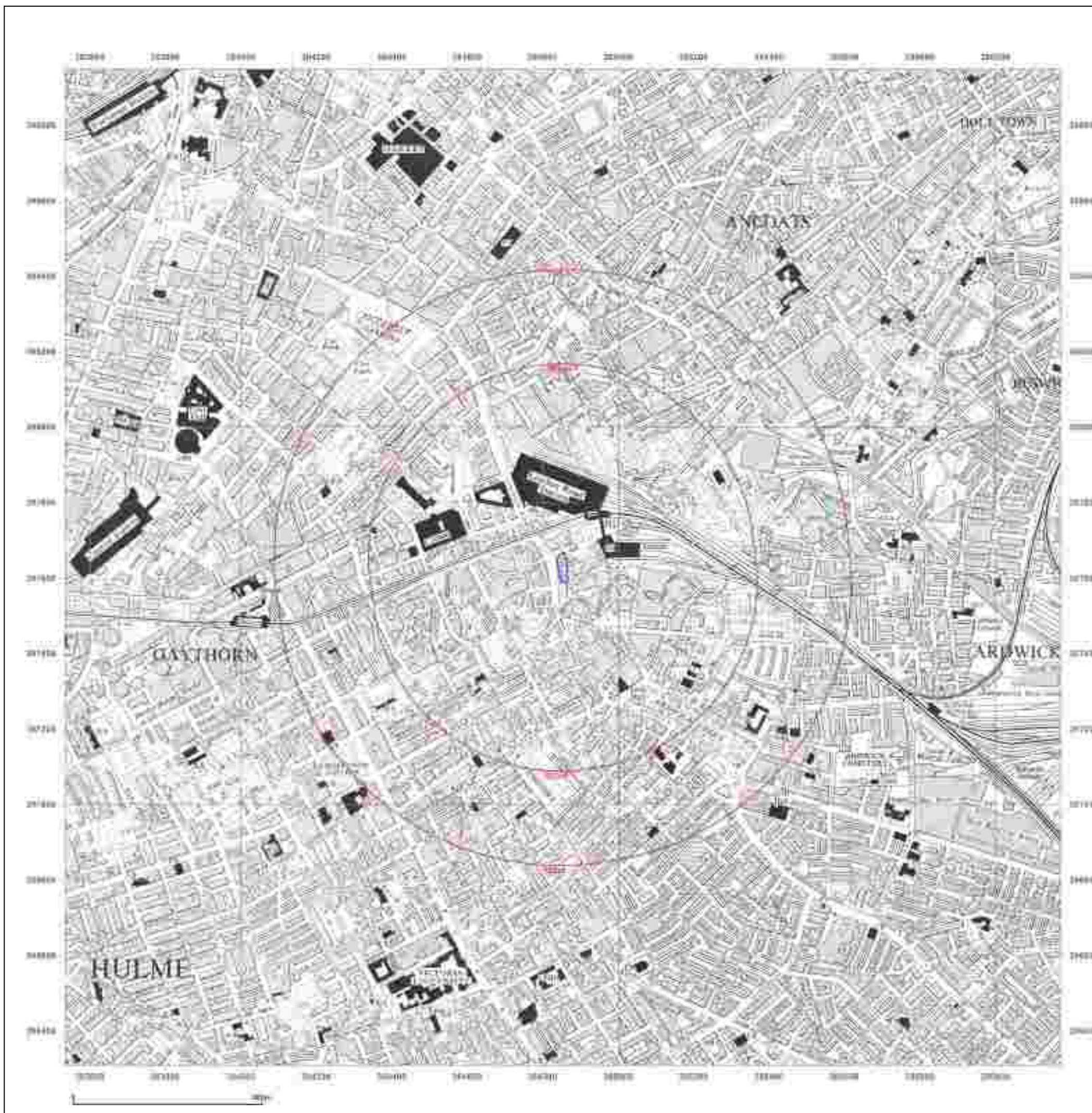


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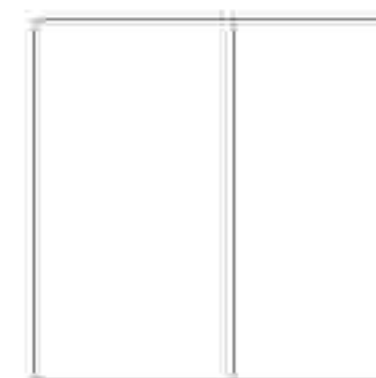
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Grid Ref: 384853, 397629

Map Name: Provisional

Map date: 1968

Scale: 1:10,560

Printed at: 1:10,560



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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 1972

Scale: 1:10,000

Printed at: 1:10,000



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Revised 1972
Edition 1/24
Copyright 1972
Landed 1972

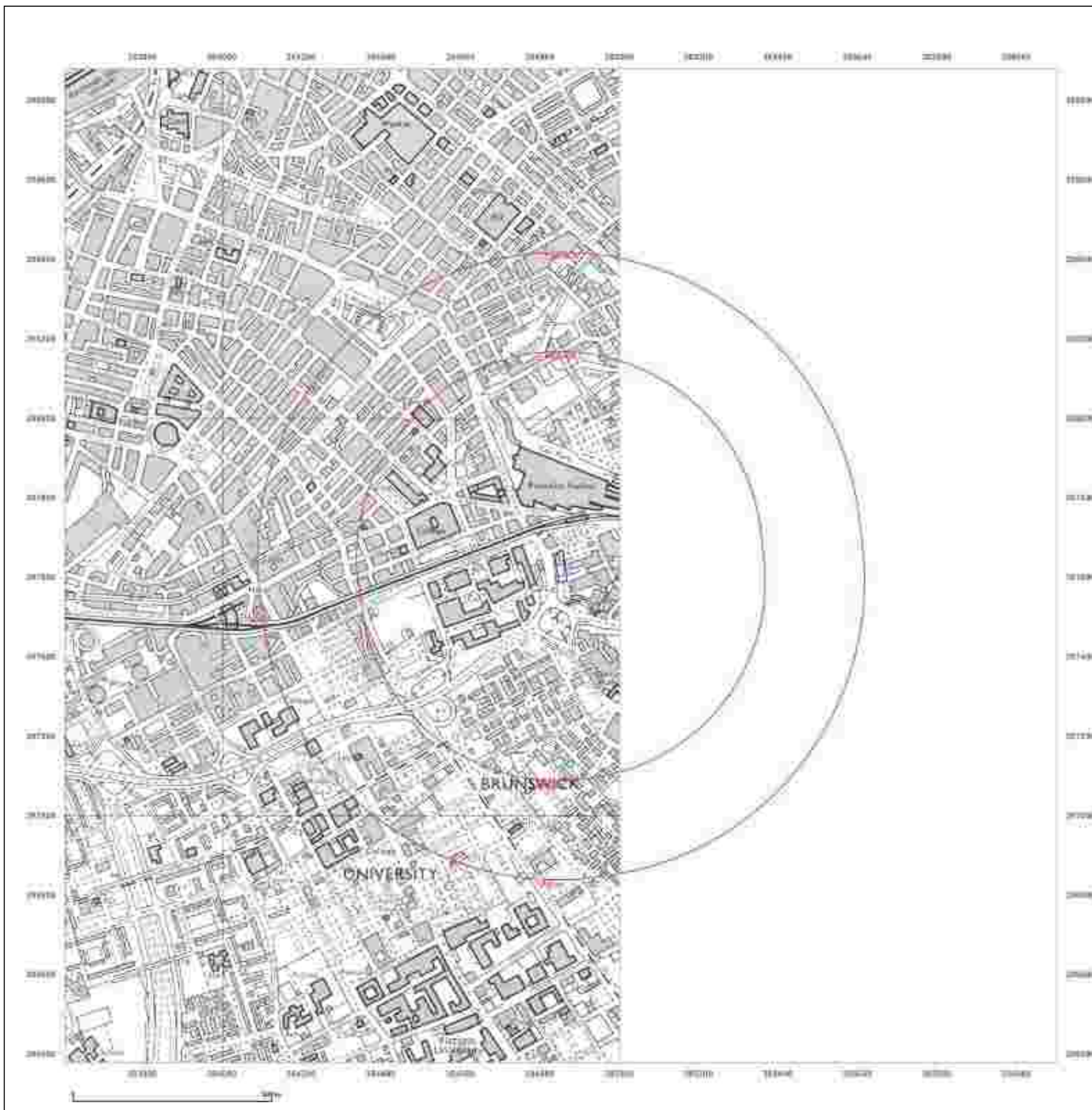


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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 1980-1981

Scale: 1:10,000

Printed at: 1:10,000

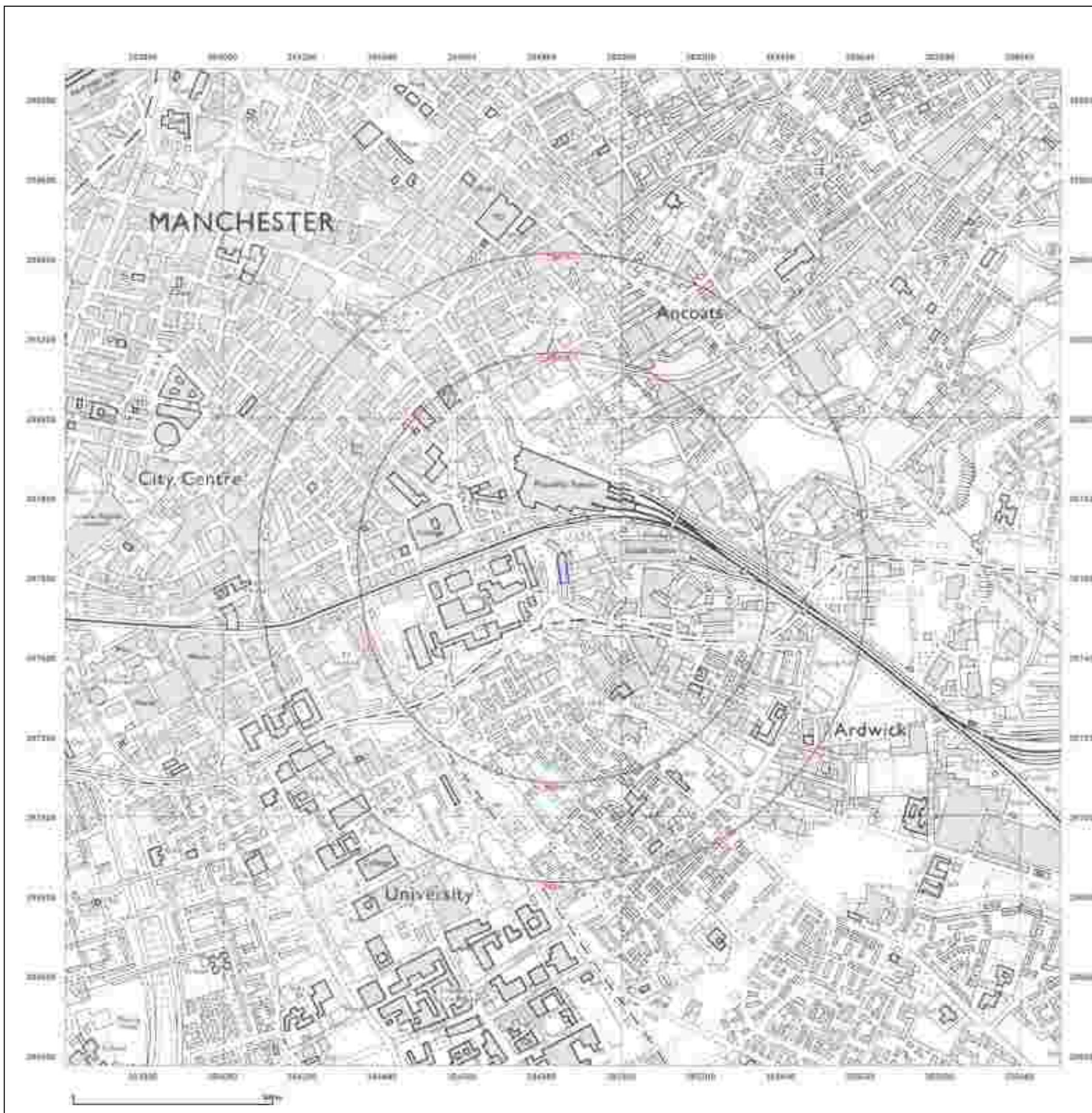


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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 1985

Scale: 1:10,000

Printed at: 1:10,000

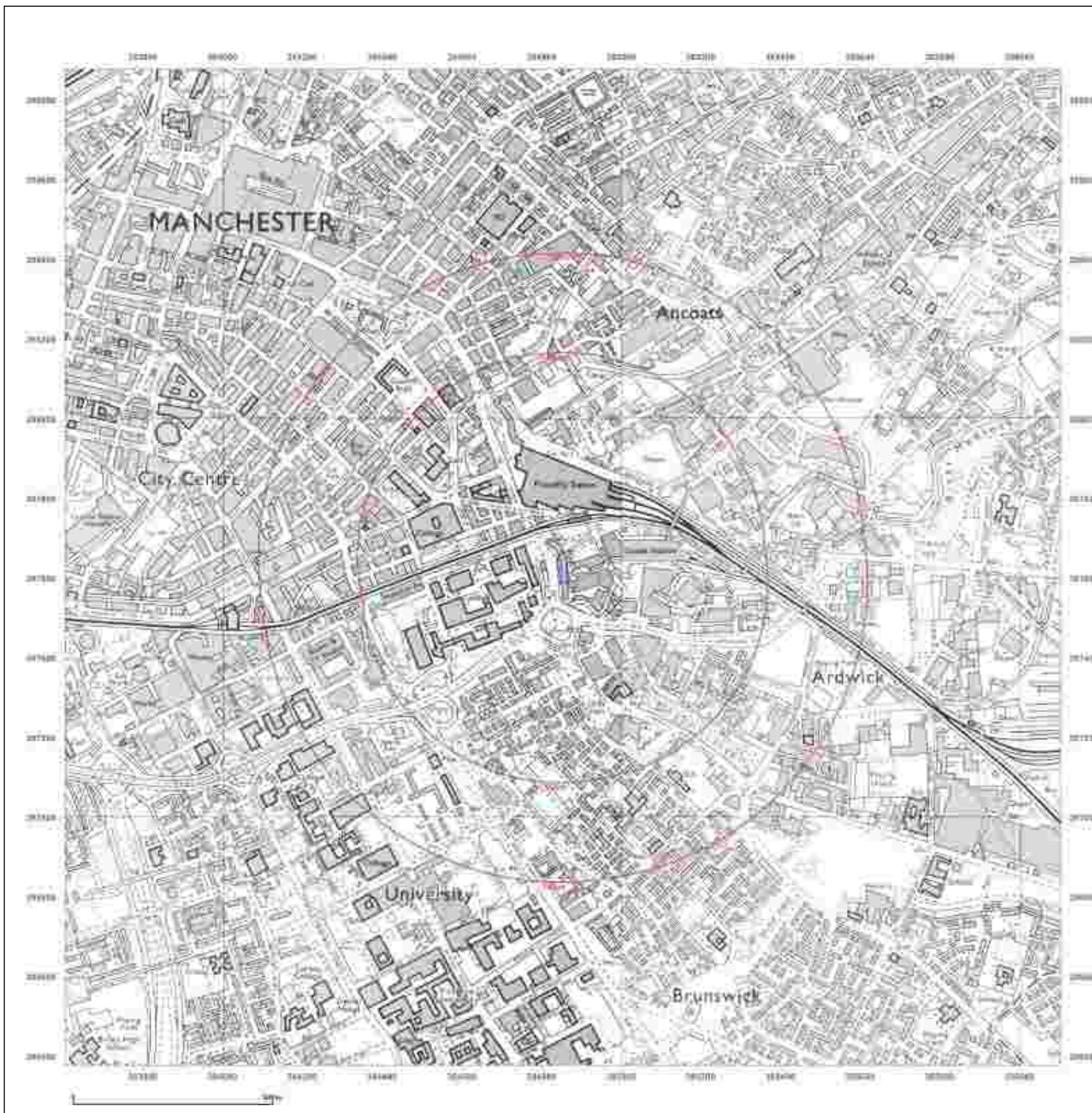


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Client Ref: JobRef_7759_PO_3599
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Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 1988-1991

Scale: 1:10,000

Printed at: 1:10,000

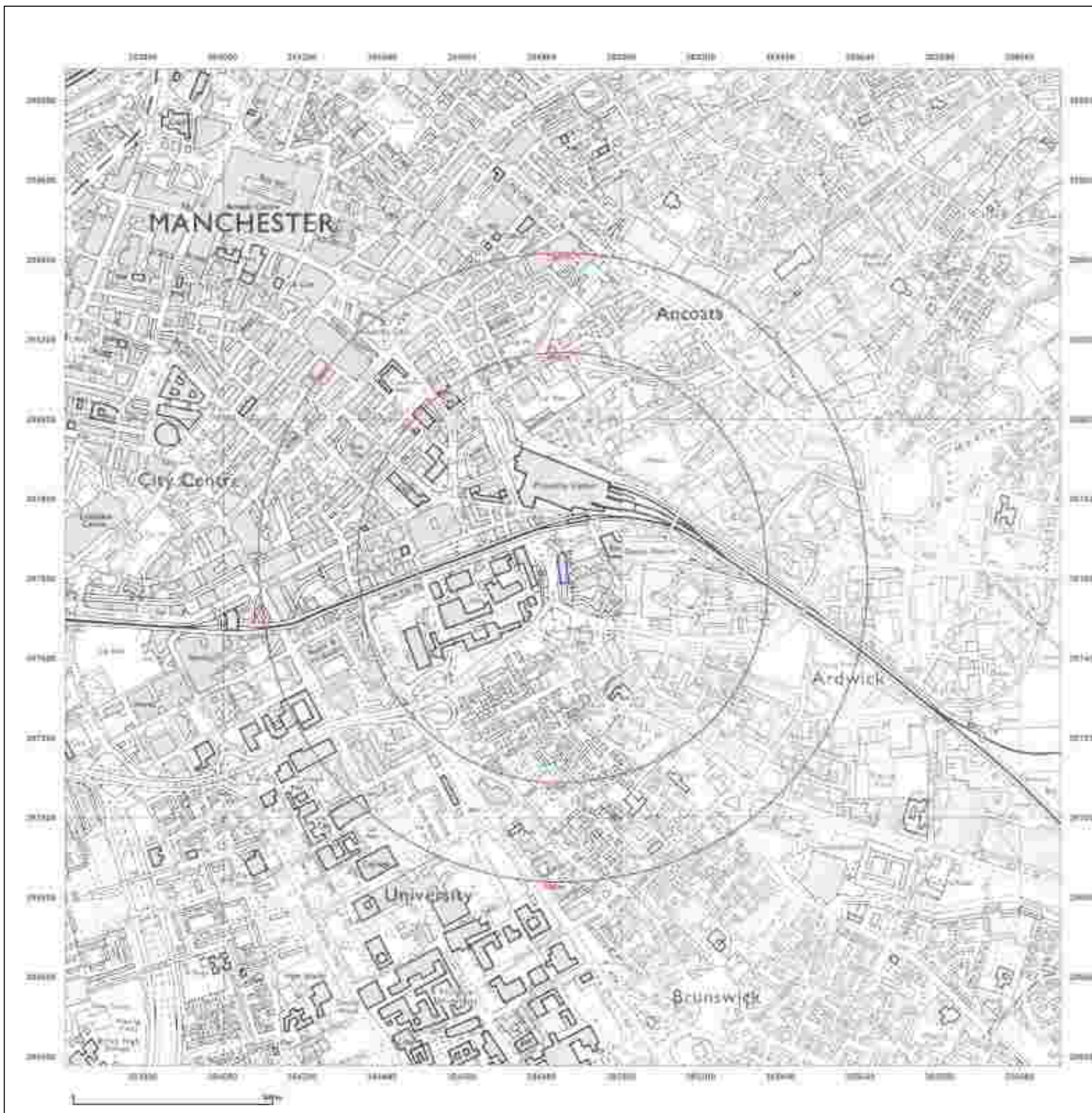


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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 1994

Scale: 1:10,000

Printed at: 1:10,000



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Revised 1994
Edition 40/5
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Landed 1997

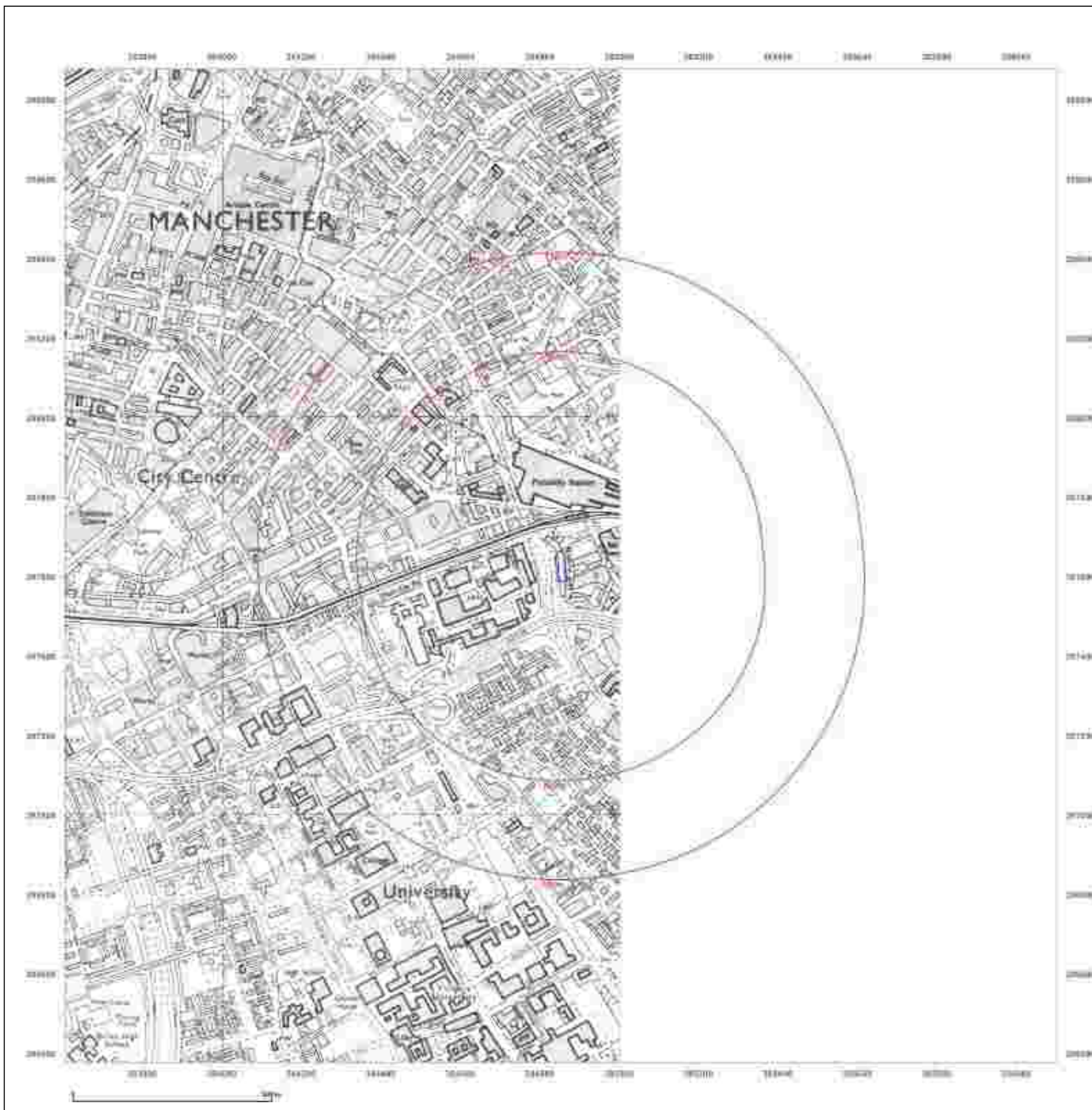


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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: 1:10,000 Raster

Map date: 2002

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Printed at: 1:10,000

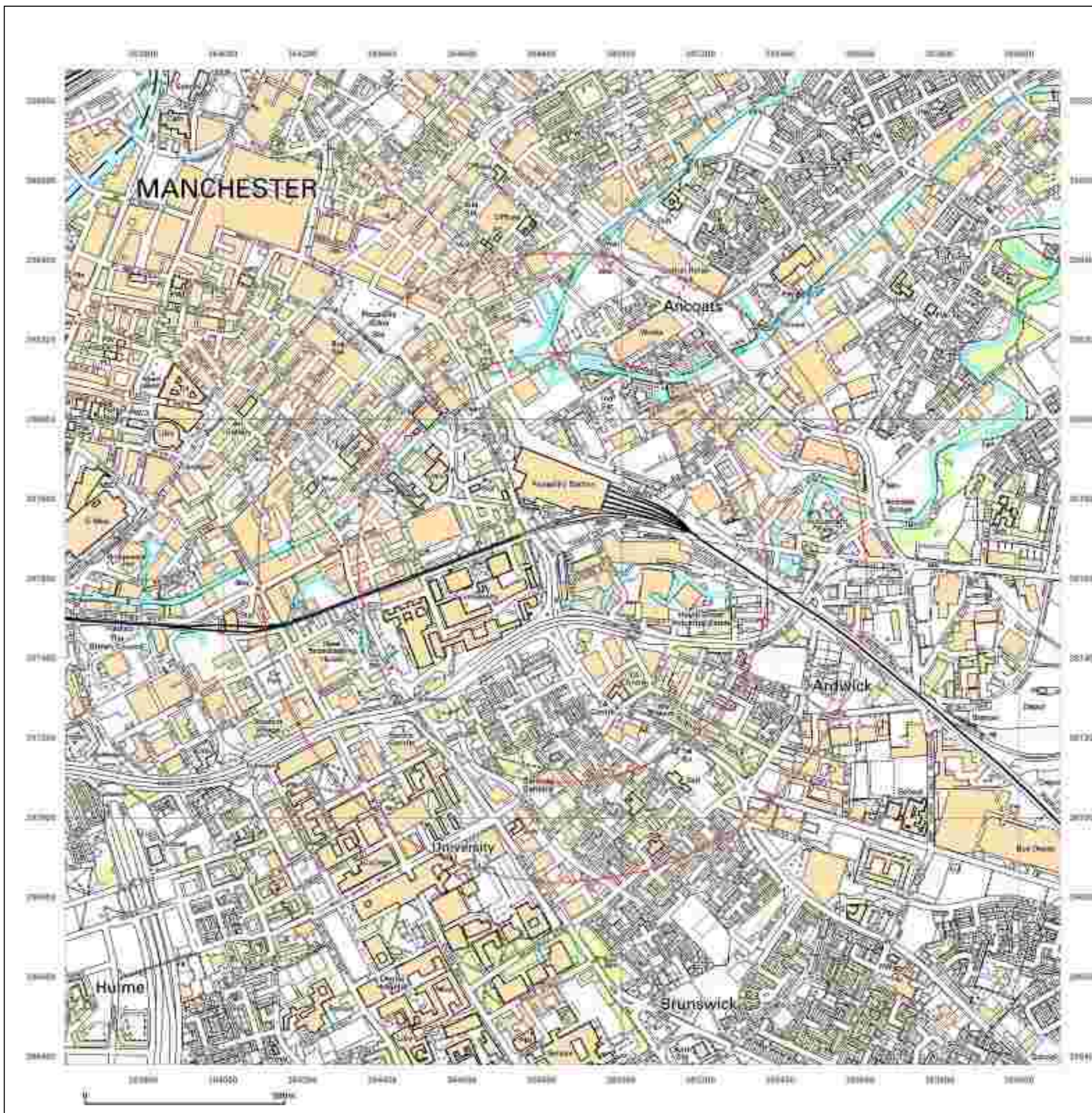


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MANCHESTER, M1 2PG

Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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Client Ref: JobRef_7759_PO_3599
Report Ref: GS-4655729
Grid Ref: 384853, 397629

Map Name: National Grid

Map date: 2014

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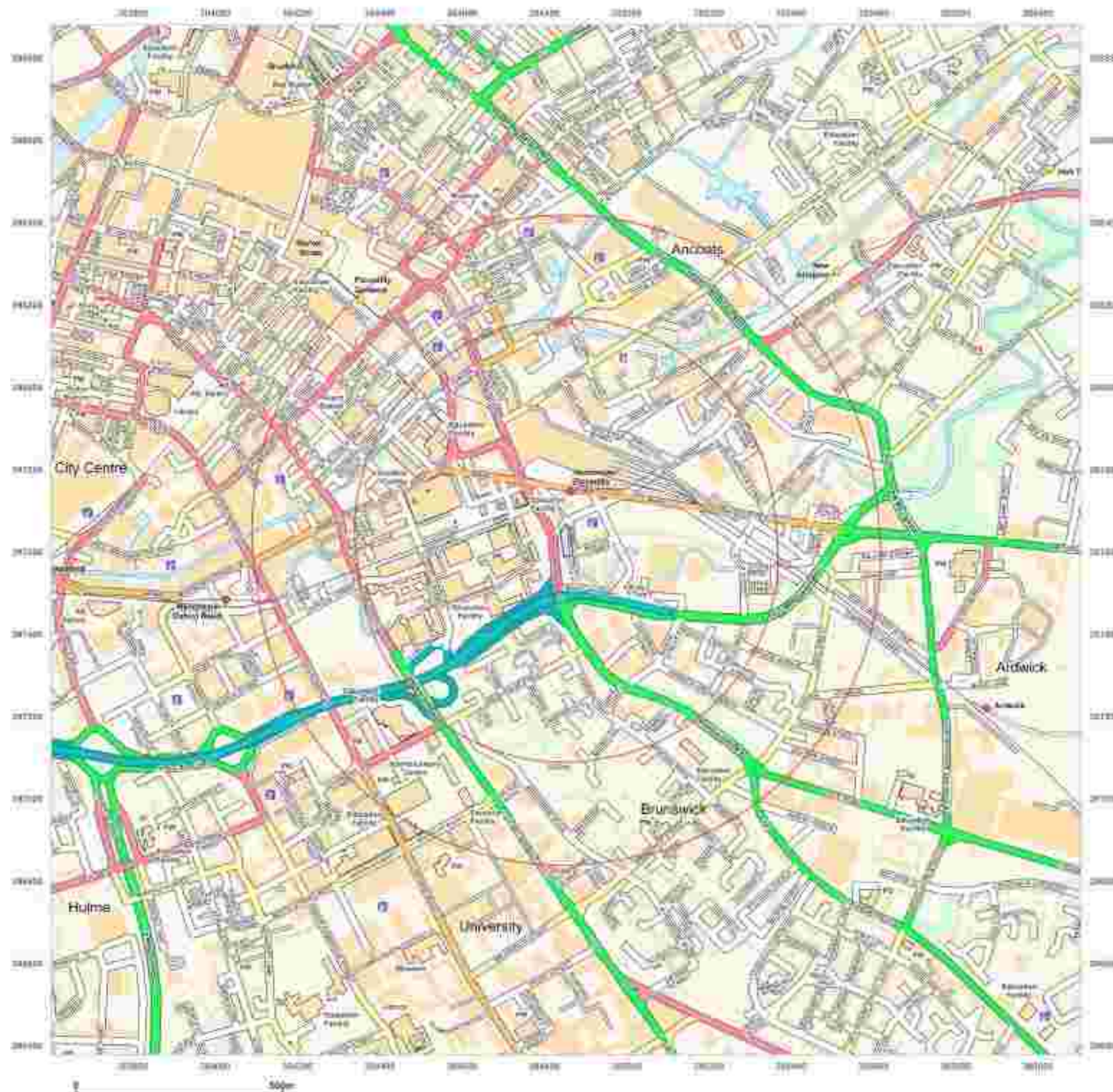


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Appendix C

Qualitative Risk Assessment

Qualitative Risk Assessment: Macdonald Manchester Hotel, London Road, Manchester

The assessment of risk has been carried out using the risk matrix presented in the following table. Classifications of likelihood, severity and risk are provided in subsequent tables.

Table C1 Risk Assessment Matrix – Comparison of severity and likelihood

	Likelihood of significant impact				
Severity of potential impact (hazard)		Very Low	Low	Moderate	High
	Very Minor	Negligible	Very Low	Low	Low/Moderate
	Minor	Very Low	Low	Low/Moderate	Moderate
	Moderate	Low	Low/Moderate	Moderate	High
	Severe	Low/Moderate	Moderate	High	Very High

Table C2 Classification of Likelihood

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

Table C3 Classification of Severity (hazard)

Severity Classification	Definition
Severe	Short term (acute) risk to human health likely to result in "significant harm" as defined by the Environment Protection Act 1990, Part IIA. Short term risk of pollution of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem or organisation forming part of such ecosystem.
Moderate	Chronic damage to Human Health "significant harm". Pollution of sensitive water resources. A significant change in a particular ecosystem or organism forming part of such ecosystem.
Minor	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services "significant harm". Damage to sensitive buildings/structures/services or the environment.
Very Minor	Harm, although not necessarily significant harm, which may result in a financial loss or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing, etc). Easily repairable effects of damage to buildings, structures and services.

Table C4. Classification of Risk

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

The risk assessment has been carried out based on the site continuing to be a hotel. Should the proposed end use be altered, a revised risk assessment may be required.

Table C5 Qualitative Risk Assessment: Macdonald Manchester Hotel, London Road, Manchester.

Potential contamination sources related to industry	Pathway	Receptor	Hazard classification	Likelihood classification	Risk classification
Historical use of the site: As pub, residential properties and an office block.	Dermal contact, inhalation uptake, leaching migration, groundwater migration.	Current users of the site or adjacent land.	Minor	Low	Low
		Construction workers on the site.	Minor	Low	Low
		Future users of the proposed site.	Minor	Low	Low
	Leaching migration through the concrete /open ground.	Controlled water bodies in/on/under and close to the site (surface water).	Minor	Low	Low
		Controlled water bodies close to the site (ground water).	Minor	Low	Low
	Chemical attack.	Current physical structures on and adjacent to the site.	Minor	Low	Low
		Future physical structures on the site, including services.	Minor	Low	Low
Current and future use of the site: a hotel.	Dermal contact, inhalation uptake, leaching migration, groundwater migration.	Current users of the site or adjacent land.	Minor	Very Low	Very Low

Potential contamination sources related to industry	Pathway	Receptor	Hazard classification	Likelihood classification	Risk classification
	Soil ingestion, dermal contact, inhalation uptake	Construction workers on the site.	Minor	Very Low	Very low
	Leaching migration through the concrete /open ground.	Controlled water bodies in/on/under and close to the site (surface /ground water).	Minor	Very Low	Very Low
	Chemical attack from observed stains.	Current physical structures on and adjacent to the site, including services.	Very Minor	Very Low	Negligible
Historic and current offsite uses. Including; sources which predate the maps, printworks, nut and bolt factory, engineering works, residential housing, student apartments, university buildings, car parks.	Dermal contact, inhalation uptake, leaching migration, groundwater migration.	Current users of the site or adjacent land.	Minor	Low	Low
		Construction workers on the site.	Moderate	Moderate	Moderate
		Future users of the proposed site.	Moderate	Moderate	Moderate
	Leaching migration into the controlled water bodies.	Controlled water bodies in/on/under and close to the site (surface water).	Minor	Low	Low
		Controlled water bodies close to the site (ground water).	Minor	Low	Low

Potential contamination sources related to industry	Pathway	Receptor	Hazard classification	Likelihood classification	Risk classification
	Chemical attack.	Current physical structures on and adjacent to the site.	Minor	Low	Low
		Future physical structures on the site, including services.	Minor	Low	Low
Asbestos (Asbestos is included as a risk whilst it is not known if asbestos is present in the materials on site. It is assumed that the risk will be assessed and mitigated against by best practice management during the site works).	Inhalation uptake.	Current user, construction worker, future users.	Severe	High	Very High