Echo Street, Manchester

Environmental Impact Assessment (EIA)
Scoping Report

February 2023

Turley

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1. Introduction

Request for EIA Scoping Opinion

1.1 iQ Student Accommodation (the 'Applicant') are working with a project team to deliver a purpose built student accommodation (PBSA) development (the 'Proposed Scheme') at Echo Street in Manchester.

1.2 The EIA Study Area Boundary (hereafter referred to as the 'Site') is approximately 0.5 hectares (ha) and is bound by Vimto Park to the west, the Manchester Oxford Road-Manchester Piccadilly railway line to the south, the A6 London Road to the east, and Lambert House, Fairfield Hall and the Bulls Head pub to the north. The maximum boundary for the purpose of the Environmental Impact Assessment (EIA) Scoping Report is shown in **Figure 1.1**. This is considered to be the maximum extent of all temporary and permanent works required as part of the Proposed Scheme.

1.3 A previous application[1] was submitted on the Site in 2017 (the '2017 application'), supported by an ES, seeking permission for the following:

"Full planning permission for the demolition of existing buildings on site and their replacement with a mixed use (sui generis) development comprising 3 towers ranging in height (from 14, 20 and to 25 storeys (including lower ground floor level) and intermediary link buildings and providing: 403 units of Co-Living residential accommodation with associated shared amenity spaces; 94 units of purpose built student accommodation with associated shared amenity spaces; ground floor commercial floor space and children's day nursery together with cycle parking, recycling and refuse bin storage, associated plant and public realm enhancements to Granby Row, Echo Street, Cobourg Street and Back Acton Street."

1.4 This 2017 application was granted by Manchester City Council (MCC) 2018. The 2017 application was then subject to subsequent applications[2] in 2019, comprising two Section 73 (S73) minor material amendment applications. These two applications were granted in May 2019 and March 2020 respectively. An ES Addendum[3] (ESA) (the '2019 ESA') was provided as part of the first 2019 S73 application (MCC Ref: 122732/JO/2019). No ESA was provided for the second S73 application (MCC Ref: 125537/JO/2019).

1.5 The Applicant is now working towards the submission of a new detailed planning application (the 'Application') to MCC, as the Local Planning Authority for a PBSA development.

1.6 The Applicant has instructed Turley to lead, manage and control the EIA process. The project team have developed a description of the Proposed Scheme, which is outlined in **Chapter 4**. Whilst the Proposed Scheme continues to be refined and the development principles agreed upon, the description in **Chapter 4** aims to provide

[1] MCC Ref: 18267/FO/2017. Approved in June 2018.
[2] MCC Ref: 122732/JO/2019; and MCC Ref: 125537/JO/2019.
[3] Turley (2019) Echo Street – Environmental Statement Addendum, February 2019.

factual and sufficient information to inform the EIA Scoping process and the preparation of this EIA Scoping Report.

1.7 In accordance with Regulation 15 of The Town and Country Planning (EIA) Regulations 2017[4] (as amended), (the 'EIA Regulations'), Turley request a Scoping Opinion from MCC, informed by this EIA Scoping Report.

Next Steps: Receipt of MCC Scoping Opinion

1.8 Based on your receipt of the EIA Scoping Report and in accordance with Regulation 15, we are anticipating that statutory timescales will be met and that Turley will be in receipt of a Scoping Opinion no later than five weeks from the date of receipt of this request.

Structure of the EIA Scoping Report

1.9 The structure of the EIA Scoping Report is outlined in **Table 1.1**.

Table 1.1: Structure of this EIA Scoping Report

Chapter No.	Topic	Description
1	Introduction	Outlines the context in which Turley request a Scoping Opinion; provides an overview of the structure of this report; outlines our understanding of the requirements for EIA; and stakeholder engagement.
2	Approach to EIA	Outlines the objectives and strategy for the EIA to ensure consistency and clarity across the process. Also provides an indication of the methodology and skills adopted within the EIA and the anticipated format of the Environmental Statement (ES). Outlines the interaction with other documentation outside of the ES.
3	Site Context	Provides a high level description of the Site and the surrounding environment. Further details of the topic specific baseline environment are set out in **Chapter 5** and **Chapters 6 – 12**.
4	High Level Development Specification	Outlines the Proposed Scheme as currently understood by the project team. It is this description and supporting plans upon which this EIA Scoping Report is based.
5	Environmental Topics which are Unlikely to	Outlines the environmental topics for which no likely significant effects are anticipated to arise from

[4] The Town and Country Planning (EIA) Regulations 2017 No. 571 (as amended). Available at: http://www.legislation.gov.uk/uksi/2017/571/contents/made [Accessed 13/01/2023].

Chapter No.	Topic	Description
	be Significant	the Proposed Scheme. It is these environmental topics which will not be subject to assessment as part of the EIA.
6 – 12	Likely Significant Environmental Topics	Presents a number of likely significant effects across the following environmental topics: socio-economics and human health; climate change; built heritage; townscape and visual; daylight, sunlight, overshadowing and solar glare; wind microclimate; and noise and vibration. A separate Chapter is provided for each topic. The Chapters also provide detail on particular effects within each of the environmental topics for which no likely significant effects are anticipated to arise from the Proposed Scheme, which will not be subject to assessment as part of the EIA.
13	Approach to Assessment of Cumulative Effects	Outlines the proposed methodology for the assessment of cumulative effects, comprising both effect interactions and in-combination effects.
14	Summary	Provides a tabular summary of the effects which are not significant and the likely significant environmental effects identified at this stage of the EIA process.

Definition of EIA

1.10 The term 'EIA' has the meaning given by Regulation 4 of the EIA Regulations, as '*a process consisting of -*

(a) the preparation of an environmental statement;

(b) any consultation, public and notification required by, or by virtue of, these Regulations or any other enactment in respect of EIA development; and

(c) the steps required under regulation 26' (consideration of whether planning permission or subsequent consent should be granted)'.

1.11 Under Regulation 4, Paragraph 2 an EIA must *'identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following factors -*

(a) population and human health

(b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC(1) and Directive 2009/147/EC(2);

(c) land, soil, water, air and climate;

(d) material assets, cultural heritage and the landscape; and

(e) the interaction between the factors referred to in sub-paragraphs (a) to (d)'.

1.12 EIA is a procedure that must be followed for certain types of projects before 'development consent' can be given. The procedure is a means of drawing together, in a systematic way, an assessment of a project's likely significant environmental effects. This helps to ensure that the importance of the predicted effects and the scope for reducing or mitigating them are properly understood by the public and the relevant local planning authority (in this case, MCC) before it makes its decision.

1.13 The aim of EIA, as defined by national Planning Practice Guidance (PPG), is to *'protect the environment by ensuring that a local planning authority when deciding to grant planning permission for a project, which is likely to have significant effects on the environment, does so in the full knowledge of the likely significant effects, and takes this into account in the decision making process…. The aim… is also to ensure that the public are given early and effective opportunities to participate in the decision making procedures'*[5].

Requirement for EIA

1.14 The need for an EIA is recognised as the Proposed Scheme exceeds the thresholds and criteria within Schedule 2, Paragraph 10(b) 'Urban development projects' of the EIA Regulations (as over 150 units are proposed).

1.15 Whilst the applicable thresholds are met, this does not automatically determine the requirement for EIA, but requires a subsequent stage to determine '*likely significant effects on the environment by virtue of factors such as its nature, size or location*'.

1.16 At this stage, a number of likely significant effects have been identified. Therefore, an EIA will be undertaken, the outputs of which will be reported in an ES. The EIA is being used as a tool to identify and manage the environmental impacts and where possible avoid, reduce or offset them as part of the design process (see further details in **Chapter 2**). This approach is common to the 2017 application, which was subject to EIA.

Stakeholder Engagement

1.17 Consultation is an important part of the EIA process. It is the responsibility of MCC to undertake the appropriate level of consultation, including the identification of relevant and applicable statutory and non-statutory consultees, required to inform their IEA Scoping Opinion.

[5] Ministry of Housing, Communities and Local Government (MHCLG) (2020). Guidance: EIA. Available at: https://www.gov.uk/guidance/environmental-impact-assessment [Accessed: 13/01/2023].

1.18 It is anticipated that MCC will consult with the following stakeholders during the preparation of their EIA Scoping Opinion:

- MCC (including relevant officers);
- Environment Agency;
- Natural England;
- National Highways;
- Historic England;
- United Utilities; and
- Greater Manchester Police.

1.19 In advance of preparing the EIA Scoping Report, consultation with a number of the above consultees has already been undertaken and continues, to inform specifics of the design of the Proposed Scheme, baseline data collection and assessment methodologies. A summary of the project consultation undertaken prior to or during the preparation of the EIA Scoping Report is provided in **Appendix 1.1**.

2. Approach to EIA

Overview

2.1 This Chapter outlines the following:

- Objectives and regulatory compliance;
- Approach to consideration of alternatives;
- Iterative approach to scoping;
- Study boundaries for data collection;
- Baseline scenario for use in the EIA;
- Identification of sensitive receptors;
- Defining mitigation and how this will be controlled;
- Information to inform the assessments within the ES;
- Assessment scenarios;
- Level of effect and consideration of significance;
- Format of the ES;
- Competent expertise; and
- Interaction of the ES with other documents and plans.

Objectives and Regulatory Compliance

2.2 This EIA Scoping Report supports a formal request for an EIA Scoping Opinion from MCC as to the scope and methodology for assessment to be adopted in the EIA and reported in the ES. It aims to ensure that there is a clear and agreed scope for the EIA.

2.3 The EIA Scoping Opinion is sought on the technical breadth of the topics considered within the EIA and the specific environmental effects within each of these environmental topics (**Chapters 6 – 12**).

2.4 The Institute of Environmental Management and Assessment (IEMA) has issued guidance on the interaction of design and EIA as part of 'Shaping Quality Development'[6] and 'Delivering Quality Development'[7]. The principles of these documents have been adopted for the EIA.

[6] IEMA (2015). Environmental Impact Assessment Guide to: Shaping Quality Development.
[7] IEMA (2016). Environmental Impact Assessment Guide to: Delivering Quality Development.

2.5 In accordance with Regulation 15(2) of the EIA Regulations, this EIA Scoping Report contains the following:

- A plan sufficient to identify the land (**Figure 1.1**);
- A brief description of the Proposed Scheme, including its nature, purpose, location and technical capacity (**Chapter 4**). This includes an overview of the site preparation / enabling works, earthworks, remediation and construction (referred to collectively as 'construction'), development principles and timescales;
- An explanation of the likely significant effects of the development on the environment (**Chapters 6 – 12**); and
- Such other information or representations as the person making the request may wish to provide or make.

Approach to Consideration of Alternatives

2.6 Schedule 4, Paragraph 2 of the EIA Regulations states that an ES should include:

'*a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects*'.

2.7 PPG[8] states that where '*…alternative approaches to development have been considered, the Environmental Statement should include a description of the reasonable alternatives studied which are relevant to the proposed development and its specific characteristics and provide an indication of the main reasons for the choice made, including a comparison of the environmental effects'*.

2.8 The EIA Regulations and the PPG do not identify a specific methodology for the reporting of the alternatives considered nor the criteria to be used to inform the consideration of reasonable alternatives. Therefore, the methodology to be adopted for the purpose of the EIA will be based on professional experience of similar projects and an understanding of the Proposed Scheme and its characteristics, as well as focus on the delivery of a proportionate report, in line with PPG.

2.9 The consideration of alternatives within the ES will report the following:

- Consideration of 'factors'[9] that constitute alternatives; and

[8] MHCLG (2020). PPG – EIA Online Tool Paragraph: 041 Reference ID: 4-041-20170728 Available at: https://www.gov.uk/guidance/environmental-impact-assessment [Accessed 18/01/2023].

[9] These are anticipated to include alternative sites, alternative designs, alternative technology and a 'do nothing' scenario..

- Qualitative appraisal of the 'factors' for which alternatives have been considered and, where appropriate, a comparison of the environmental effects.

Iterative Approach to Scoping

2.10 Whilst this EIA Scoping Report seeks to establish the overall framework for the EIA in relation to the environmental topics and associated likely significant effects that will be subject to detailed assessment, iterative 're-scoping' will continue as the design and strategy are refined, plans and principles are developed and additional technical work is completed.

2.11 This iterative 're-scoping' process will continue up until the point when the assessments within the ES are in their first draft, in advance of submission.

2.12 Any deviation between the scope of effects considered within this EIA Scoping Report and the ES will be clearly communicated in the ES. This is in accordance with the PPG[10] which states that '*…where it becomes evident during the assessment process...that a particular environmental factor is absent or unlikely to be significantly affected by a proposed development, there should be no need for further assessment of that factor even though it was identified in the scoping process…*'.

Study Boundaries for Data Collection

2.13 The Site, upon which baseline data has been collected is defined in **Figure 1.1**. This is considered the maximum extent of all temporary and permanent works (including primary mitigation) for which planning consent is sought.

2.14 Where required, technical specific study areas (informed by relevant best practice and guidance) will be based upon the Site boundary (i.e. radius of searches will be from the Site boundary).

2.15 Off-site improvements / mitigation, if required, will be considered as secondary mitigation (refer to 'Defining Mitigation and how this will be Controlled') and appropriately considered within the assessment of residual effects. It is considered appropriate that secondary mitigation does not need to be within the Site boundary as any impact will be assessed and controlled as part of a separate approval process for such works, which will be subject to its own protocols to understand any environmental issues. However, where appropriate, such works will be considered as part of the cumulative assessment.

Baseline Scenario for Use in the EIA

2.16 Likely significant effects as a result of the Proposed Scheme will be described in the ES in relation to the deviation from the baseline environment within the Site and / or relevant technical study areas. The baseline environment will comprise the existing environmental characteristics and conditions, based upon surveys undertaken and information / data available at the time of the technical assessments.

[10] MHCLG (2020). PPG – EIA Online Tool, Paragraph: 038 Reference ID: 4-038-20170728.

2.17 The data used to inform the baseline conditions for the purpose of the ES (for those environmental topics scoped in, see **Chapters 6 – 12** for more details) will vary depending upon the timing of the survey or the date when data sources will have been accessed. The baseline conditions will be based upon surveys completed or information/data accessed in 2022/23.

2.18 Some data obtained from third parties may be older, though may still be relevant to the baseline scenario if there have been no significant changes or is the latest available information. The origin of all third-party data, the dates of surveys and the dates when data sources have been accessed will be clearly outlined within the ES alongside any limitations and assumptions.

Identification of Sensitive Receptors

2.19 Based on baseline information and data, a series of receptors or receptor groups are identified, which are subject to likely significant effects arising from a project. These receptors are then subject to detailed assessment within the EIA.

2.20 Details of the receptors which are considered likely to be affected at this stage are set out in **Chapters 6 – 12**.

Defining Mitigation and how this will be Controlled

2.21 Schedule 4, Part 7 of the EIA Regulations states that an ES should include:

'*a description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases'*.

2.22 Through the EIA process different types of mitigation have been / will be identified and developed and these are defined as:

- **Primary mitigation** – modifications to the location or design of the Proposed Scheme made during the pre-application phase that are an inherent part of the project;
- **Secondary mitigation** – actions that will require further activity in order to achieve the anticipated outcome and secured by planning condition / and or obligation; and
- **Tertiary mitigation** – actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects.

2.23 The design process has and will continue to be informed by baseline surveys, desktop reviews and preliminary technical analysis, so that environmental effects are well understood and primary and tertiary mitigation can be developed.

2.24 The assessment of effects of the Proposed Scheme within the ES will be based on the information contained within a 'Development Specification' which will include primary and tertiary mitigation. Examples of primary mitigation measures may include building heights and surface water drainage strategy. Examples of tertiary mitigation measures may include the adoption of best practice measures that can be controlled via a Construction Environmental Management Plan (CEMP) or other established legislative requirements (e.g. health and safety).

2.25 Primary and tertiary mitigation known at this stage have been considered within **Chapter 4**. These measures are also summarised in the Preliminary Environmental Management Plan (EMP) in **Appendix 2.1** (see further details below).

2.26 Within the ES, following the conclusion of the likely significant effects based on the Proposed Scheme (inclusive of primary and tertiary mitigation), any further mitigation (secondary mitigation) to further reduce an adverse effect or enhance a beneficial one will be identified.

2.27 Secondary or tertiary mitigation are only likely to avoid, reduce or enhance the residual effect if there is a high level of confidence in their mechanism for implementation (by the Applicant or third party).

2.28 An EMP will detail all mitigation identified within the EIA process and will form **Volume 3** of the ES (see 'Format of the ES'). This document will define all the environmental requirements of the Proposed Scheme to ensure that the impacts concluded through the EIA process can be relied upon. The view is that the EMP can be extracted by MCC to support the preparation of appropriate planning conditions / obligations attached to any planning permission, where necessary.

2.29 As noted above, a Preliminary EMP has been developed as part of this EIA Scoping Report to capture all primary and tertiary mitigation identified at this stage and is provided in **Appendix 2.1**.

Information to Inform the Assessments within the ES

2.30 The technical assessments reported in the ES will be based on a series of detailed plans and overarching description of the Proposed Scheme, captured as part of the 'Development Specification' to be provided as part of the ES. The Development Specification will provide sufficient information to meet the requirements of the EIA Regulations and to inform the technical assessments undertaken as part of the EIA and reported in the ES.

Assessment Scenarios

2.31 The EIA will assess the likely effects arising from the Proposed Scheme, taking account of the site preparation / enabling works, earthworks, remediation and construction (as noted above, collectively referred to as 'construction') and operational stages.

2.32 The following scenarios will be assessed where relevant to the environmental topic (and likely significant effects):

- **Peak construction** – this will vary across environmental topics and will not be attributed to a specific year, rather it will be determined at what point the worst-case effect could occur. Each technical assessment will clearly define this within their respective technical assessment in the ES; and

- **Operation (2026)** – this will consider environmental effects associated with the completion and full operation of the Proposed Scheme.

2.33 All scenarios will be considered against the existing baseline conditions as defined above.

2.34 It should be noted that the assessment scenarios set out above are for purposes of the EIA only. For a number of standalone technical assessments (see **Table 2.3**), alternative or additional scenarios may be considered and / or required.

Level of Effect and Consideration of Significance

2.35 A stepped approach will be adopted to define effects for the construction and / or operational stages of the Proposed Scheme, as outlined below.

2.36 The method for assessing the level of effect varies between environmental topics but in principle will be based on:

- **The environmental sensitivity (or value / importance) of a receptor** – including aspects such as adaptability, tolerance to change or recoverability from a change; and

- **The magnitude of change from the baseline conditions** – including aspects such as probability / likelihood of occurrence, geographical extent, complexity, duration, frequency and reversibility (i.e. temporary or permanent).

2.37 Sensitivity (or value / importance) will be assessed on a scale of high, medium, low and negligible and the magnitude of change will be assessed on a scale of large, medium, small and negligible.

2.38 Where relevant, other factors such as feedback from stakeholders, relevant legislation, international / national / regional / local standards and guidance and the inter-relationship between effects will also be considered.

2.39 The interpretation and use of the above criteria / factors will be set out within each Technical Chapter of the ES.

2.40 The assignment of the level of effect will be based on professional judgement with the support of the matrix below (**Table 2.2**), which is seen as a tool to assist with the process. Whilst the matrix within **Table 2.2** provides ranges, this is to guide the competent expert and a definitive level of effect will be provided, where possible, for each effect.

Table 2.1: Matrix to support determining level of effect

Magnitude of change / impact	Sensitivity (or value / importance)			
	High	Medium	Low	Negligible
Large	Major	Moderate to Major	Minor to Moderate	Negligible
Medium	Moderate to Major	Moderate	Minor	Negligible
Small	Minor to Moderate	Minor	Negligible to Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

2.41 As noted in **Table 2.2**, the following terms will be used to define the level of effects identified and these can be 'beneficial' or 'adverse':

- **Major effect** – where the Proposed Scheme is likely to cause a considerable change from the baseline conditions and the receptor has limited adaptability, tolerance or recoverability or is of the highest sensitivity;
- **Moderate effect** – where the Proposed Scheme is likely to cause either a considerable change from the baseline conditions at a receptor which has a degree of adaptability, tolerance or recoverability or a less than considerable change at a receptor that has limited adaptability, tolerance or recoverability;
- **Minor effect** – where the Proposed Scheme is likely to cause a small, but noticeable change from the baseline conditions on a receptor which has limited adaptability, tolerance or recoverability or is of the highest sensitivity or a considerable change from the baseline conditions at a receptor which can adapt, is tolerant of the change and / or can recover from the change; and
- **Negligible** – where the Proposed Scheme is unlikely to cause a noticeable change at a receptor, despite its level of sensitivity or there is a considerable change at a receptor which is not considered sensitive to a change.

2.42 For some environmental topics, relevant guidance or the nature of the effect requires that differing criteria or scales for determining level of effect are to be used. For consistency within the ES, the final 'level of effect' will be reported using the terminology and conclusions set out above. This enables the conclusions of assessments across all environmental topics to be understood (for the decision-making process, along with allowing robust analysis and appraisal as part of the assessment of cumulative effects.

2.43 For each effect, a binary judgement will be made as to whether the effect is 'Significant' or 'Not Significant'. This determination will be based on professional judgement and / or relevant guidance and standards, where applicable. Significance

will only be concluded for residual effects (i.e. following the identification of secondary mitigation or enhancement).

2.44 Effects will also be described in line with the requirements of the EIA Regulations (i.e. as direct or indirect; short (up to 1 year), medium (1 to 10 years) or long-term (over 10 years); and permanent or temporary).

2.45 Summary of effect tables that outline the likely significant effects, receptors, residual level of effect and whether this is considered to be 'Significant' or 'Not Significant' will be provided at the end of each Technical Chapter within the ES.

2.46 Cumulative effects will be considered as a single co-ordinated assessment as outlined in **Chapter 13**.

Format of the ES

2.47 The ES will comprise four volumes:

- **Volume 1: Primary Report and Supporting Graphics;**
- **Volume 2: Technical Appendices; and**
- **Volume 3: Environmental Management Plan;** and
- **Volume 4: Non-Technical Summary**.

2.48 The proposed format and structures of the ES is provided in **Appendix 2.2**.

Competent Expertise

2.49 Regulation 18, Paragraph 5(a) of the EIA Regulations requires the ES to be prepared by competent experts.

2.50 The EIA will be led by Turley. IEMA has awarded Turley the EIA Quality Mark in recognition of our technical quality and commitment to improvement in practice.

2.51 All technical assessments within the EIA will be undertaken by a suitably qualified project team, inclusive of a thorough technical review to assure technical credibility, followed by a subsequent procedural review by the EIA co-ordination team and EIA Project Director.

2.52 In line with the EIA Regulations, all contributors to the EIA are competent experts in EIA and this will be demonstrated in the ES with an overview of each key expert's qualifications, professional accreditations and experience.

Interaction of the ES with Other Documents and Plans

2.53 The Application and ES will be accompanied by a number of documents, some of which will inform the ES and therefore should be read in conjunction with the ES, whilst others will form standalone 'Application Documents' which provide a greater level of

detail of how the Proposed Scheme is likely to come forward or how it complies with policy. In addition, the ES will be supported by a range of technical appendices.

2.54 **Table 2.3** outlines the list of supporting documents, and whether they will form part of the ES.

Table 2.2: List of Anticipated Supporting Application Documents

Anticipated document title*	The report is required to support the ES and will either be appended or subsumed into an ES Chapter	The report will be provided as a standalone Application Document, though further detail is provided and should be read in conjunction with the ES[11]	There are no linkages between the ES and these Application Documents
Planning and Tall Building Statement			✓
Design and Access Statement		✓	
PBSA Assessment of Need			✓
Rights of Light Assessment		✓	
Blue Green Infrastructure Strategy		✓	
Waste Management Strategy		✓	
Broadband Connectivity Assessment			✓
TV Reception Survey			✓
Crime Impact Statement		✓	
Environmental Standards Statement		✓	
BREEAM Pre-Assessment Report		✓	
Circular Economy Statement		✓	

[11] Aspects which are committed to, which are part of the Proposed Scheme, will be outlined within the 'Development Specification' as part of the Proposed Scheme.

Anticipated document title*	The report is required to support the ES and will either be appended or subsumed into an ES Chapter	The report will be provided as a standalone Application Document, though further detail is provided and should be read in conjunction with the ES[11]	There are no linkages between the ES and these Application Documents
Facility Management Strategy			✓
Building Services Strategy			✓
Statement of Community Engagement		✓	
Fire Strategy Statement		✓	
Arboricultural Note		✓	
Overheating Study / Ventilation Strategy		✓	
Interim / Outline Construction Management Plan		✓	
Heritage Statement	✓		
Archaeological Desk-Based Assessment and Written Scheme of Investigation / Technical Note		✓	
Townscape and Visual Impact Assessment	✓		
Sunlight / Daylight Assessment	✓		
Wind Micro-climate Assessment	✓		
Noise and Vibration Impact Assessment	✓		
Air Quality Impact Assessment		✓	
Transport Assessment		✓	
Framework Travel Plan		✓	

Anticipated document title*	The report is required to support the ES and will either be appended or subsumed into an ES Chapter	The report will be provided as a standalone Application Document, though further detail is provided and should be read in conjunction with the ES[11]	There are no linkages between the ES and these Application Documents
Economic Impact Statement		✓	
Ground Investigation / Contaminated Land Reports		✓	
Detailed UXO Risk Assessment		✓	
Flood Risk Assessment and Drainage Strategy		✓	
Ecological Assessment		✓	

**Document titles are subject to change*

3. Site Context

Overview

3.1 This Chapter summarises the general location and setting of the Site. Technical baseline information is provided for each environmental topic in **Chapter 5** (for those topics for which no likely significant effects are identified) or in **Chapters 6 – 12** (for those topics where likely significant effects are identified at this stage).

Location and Setting

3.2 The Site is approximately 0.5ha and is bound by Vimto Park to the west, the Manchester Oxford Road-Manchester Piccadilly railway line to the south, the A6 London Road to the east, and Lambert House, Fairfield Hall and the Bulls Head pub to the north.

3.3 The Site is cleared of all buildings and trees, which has been implemented through the previous permission. Basement and piling works have also been implemented as part of the previous permission on Site. Additionally, previous archaeological investigations and ground remediation works have been undertaken as part of site enabling works, demolition and excavation.

3.4 The Site is currently accessed via Echo Street and Granby Row.

3.5 The wider surrounding area comprises; Manchester Piccadilly railway station to the east beyond A6 London Road, residential/commercial premises to the north, and a mix of residential, commercial and educational buildings to the south and west.

3.6 Historic mapping indicates that the Site was not occupied until the late 18th century. The Site was then occupied until the 1960's by a house and garden within the area of Chandos Hall, at which point the Site was cleared and redeveloped as student accommodation.

4. High Level Development Specification

Site

4.1 All temporary and permanent works will take place within the 'EIA Study Area Boundary' as defined on **Figure 1.1** and referred to as the 'Site'. The Site is approximately 0.5 hectares.

Overview of Site Preparation and Construction

4.2 Access during the enabling and construction stage will be from Echo Street and Granby Row, where road closures will be required.

4.3 In the event that contamination is identified, a programme of mitigation or remediation work will be carried out as part of the enabling works in line with a Remediation Strategy approved by the regulators and Manchester City Council (MCC).

4.4 The Site is already cleared, though some localised demolition to the existing foundations/pile caps may be required. Any natural seeding of vegetation that is present on Site since its clearance (currently limited to the edges of the Site) will be removed. Areas where rubbish has been dropped over time will also be cleared and cleaned with care. Root protection and temporary paving will be required to adjacent land in Vimto Park.

4.5 To obtain appropriate development plateau levels, it is anticipated there will be both areas where levels will reduce (areas of cut) and areas where level will increase (area of fill). At this stage it is assumed that there will be a requirement for surplus material to be transport off Site.

4.6 Local excavation and trenching works will be required to install services, drainage runs and foundations for structures. Any diversion or reinforcement of utilities will happen as part of the enabling works and any off-site works will be the responsibility of the utility provider.

4.7 The existing ground will be to be stripped and earthworks (excavation) undertaken to create a proposed basement area adjacent to Vimto Park (which will occupy approximately 3/5 of the Site). At this stage, it is anticipated excavation will be required to approximately +36.300, for a structural slab level of approximately +37.470.

4.8 There is already piling in place on Site. As a worst case at this stage whilst the foundations solution is developed, it is assumed that construction of the Proposed Scheme will require further piled foundations and remedial works to the existing foundations.

4.9 The proposed construction works will be carried out by a competent contractor that will comply with current legislation[12]. Furthermore, the proposed works will be carried out in accordance with current good environmental practice and guidance for construction. This will be captured by the Construction Environmental Management Plan (CEMP) for the project, the Contract Documents and method statements and risk assessments issued by the Contractor ahead of the works. The site security arrangements for the Proposed Scheme during the construction stage will be in line with the requirements set out in the Construction (Design and Management) Regulations 2015 and appropriate levels of security (personnel / CCTV) will be provided.

4.10 During construction, either a central compound and/or a number of satellite compounds will be required for the contractor and appointed subcontractors, located within the Site.

4.11 Construction working hours[13] (noisy work) will be 07:30 to 18:00 Monday to Friday; 08:30 to 14:00 on Saturday; and no noisy work on Sundays and Bank Holidays. Operations outside of these hours will be agreed with MCC.

Proposed Scheme

4.12 The Proposed Scheme is for up to 1,225 purpose built student accommodation units (Use Class Sui Generis).

4.13 Built form will be across three blocks which will be stepped in height, with height increasing away from Vimto Park to the west (up to the maximum height stated below).

4.14 The maximum building height on Site will be 28 storeys (excluding basement and platforms on roof) and 89.550m above the entrance level (which is at +41.300m AOD). The maximum height of the building will be at the top of the parapet, which will be up to +130.850m AOD.

4.15 Vehicular access will be from Echo Street. Pedestrian and cyclist access will be from Echo Street/Granby Row and Vimto Gardens.

4.16 As part of improvements to public realm, eight on street parking spaces will be provided along Granby Row, two of them being wheelchair accessible (down from 13 spaces at present). 610 private cycle spaces (covered and secure) will be provided. Short-term cycle spaces will also be provided at Sheffield stands within the public realm.

[12] This includes the Health and Safety at Work etc. Act 1974; the Control of Pollution Act 1974; and Construction (Design and Management) Regulations 2015.
[13] Manchester City Council. Tackle a noise problem – Noise from building sites. Available at: Noise from building sites | Tackle a noise problem | Manchester City Council [Accessed: 14/12/2022].

4.17 The basement will contain cycle parking, bin storage, generator, combined domestic water and sprinkler, and commercial sprinkler tank. There will be an access ramp into the basement.

4.18 The Proposed Scheme will be operational 24 hours a day/7 days a week.

4.19 Landscaping / open space will be provided in the private courtyards between the main blocks and the public realm surrounding the building (Granby Row and Echo Street). The works to the public realm focus on pedestrian use, including general resurfacing, with lowered kerbs, widening of the pavement and localized tree planting along Granby Row extending to the boundary with Vimto Park. The works to the courtyards will include multi stem shade tolerant species, on raised planters, complemented with lightweight furniture and catenary lights. In addition, one of the courtyards will provide means of escape from the central block, and feature a bike shed with a ramp leading to Echo Street.

4.20 The proposed surface water drainage will not increase the runoff rate and will include an allowance for climate change in accordance with relevant guidance[14]. Sustainable Drainage Systems (SuDS) will be incorporated into the surface water drainage network, in accordance with CIRIA 753 – The SuDS Manual[15] where practical.

4.21 All lighting installations will meet Institute of Lighting Professionals (ILP) Guidance Notes for the Reduction of Obtrusive Light 2021[16].

Timescales

4.22 Site preparation and construction of the Proposed Scheme is anticipated to commence in 2024, with the construction being completed over 2 years. The Proposed Scheme is anticipated to be fully operational in 2026, opening for the 2026/27 academic year.

[14] Flood risk assessments: climate change allowances (2022). Available at: Flood risk assessments: climate change allowances - GOV.UK (www.gov.uk)
[15] CIRIA (2015). The SuDS Manual C753. Available at: SuDS Manual C753 Chapter List (ciria.org)
[16] Institute for Lighting Professionals (2021). Guidance Note 01/21 for the Reduction of Obtrusive Light.

5. Environmental Topics which are Not to be Significant

Overview

5.1 As part of the EIA process and based on the information available to date, there are a number of environmental topics for which a further detailed assessment as part of the EIA is not justified and these topics (and related effects) will not be reported within the ES, as they are not considered to be significant.

5.2 For some technical topics which are proposed to be 'scoped out', a standalone application report will be prepared and submitted with the Application, though this is not the case for all topics. The anticipated application documents are set out in **Table 2.3**.

5.3 The environmental topics for which no likely significant environmental effects have been identified are:

- Archaeology;
- Biodiversity;
- Traffic and Access;
- Air Quality;
- Ground Conditions;
- Flood Risk, Drainage and Water Environment;
- Lighting;
- Waste;
- Major Accidents and/or Disasters; and
- TV Reception.

5.4 The environmental topics listed above are considered in turn below in this Chapter, with a factual evidence base provided. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

5.5 The other environmental topics outlined within this EIA Scoping Report also identify effects which are unlikely to be significant. These are reported in **Chapters 6 - 12**.

Archaeology

Technical Baseline

5.6 An archaeological desk-based assessment[17] was undertaken in 2017 to support the 2017 application[18]. Data for the archaeological desk-based assessment in 2017 was gathered for all heritage assets within the Site and a within a 250m buffer, from Historic England, the Manchester Historic Environment Record (HER) maintained by the Greater Manchester Archaeological Advisory Service (GMAAS), Manchester Central Library, and Lancashire County Record Office, and a site walkover (conducted at the time of the 2017 report). Whilst this section has been informed by the 2017 desk-based assessment, due to the nature of archaeological receptors, there is unlikely to be been any change. Furthermore, whilst the surrounding Echo Street and Granby Row are now included in the Site, these areas have been roads since the earliest historic mapping so it is unlikely that any remains would be located in these areas (intrusive works beyond surface level highways works are also not proposed in these areas). A full, up to date, desk-based assessment will be submitted with the Application.

5.7 The HER recorded 20 non-designated heritage assets within the study area. No non-designated heritage assets are recorded within or immediately adjacent to the Site.

5.8 Historic mapping indicates that the Site was not occupied until the late 18th century, when a house and garden are shown to be present. During the early 19th century, the house was subdivided into tenements, and workers housing, or 'back-to-backs', developed within the adjacent land. The Site was cleared and redeveloped as a student accommodation block (Chandos Hall) and 'depot' in the 1960s, later being used as a day nursery and garages.

5.9 It is likely the construction of Chandos Hall would have truncated any archaeological evidence from that part of the Site due to the ground floor of the building being lower than the existing ground level. It is also likely that heritage assets of archaeological interest relating to the 19th century workers housing were likely to survive within the area of the day nursery and garages, which had seen less truncation.

5.10 As a condition of planning consent for the 2017 application, an archaeological trial trench evaluation was conducted (**Appendix 5.1**)[19] during site clearance. The trial trench evaluation was undertaken in accordance with a written scheme of investigation (WSI) which had been approved by the Greater Manchester Archaeological Advisory Service (GMAAS), who also monitored the works on behalf of MCC.

5.11 The programme of evaluation trenching works comprised two trenches which were targeted on the footprint of the 18th and early 19th century buildings. Fragmentary structural remains of an 18th to 19th century building were recorded during the

[17] TEP (2017). *Echo Street, Manchester: Archaeological Desk-Based Assessment*, Document Ref 6441.001_v2.

[18] The Site extent in this Application has been expanded to include the surrounding Echo Street and Granby Row from what was considered in 2017.

[19] Note that this was for the 2017 application, so contains project related information that is superseded by this Proposed Scheme.

archaeological evaluation, which are considered to be of low archaeological interest. It was considered unlikely that further archaeological investigation would enhance understanding of the building and its development, and the Site had no potential to inform any of the research objectives for the industrial period as identified in the North West Regional Research Framework[20]. The evaluation also demonstrated that those remains of the most archaeological interest, including the workers housing, had been completely removed during the modern clearance of the Site.

Proposed Scope of Assessment

5.12 The below sets out the proposed scope of assessment based on an understanding of the characteristics of the Site, surrounding area and the Proposed Scheme (**Chapter 4**). Where environmental effects are considered unlikely to be significant, an appropriate evidence base has been provided to justify the 'scoping out' of these effects ensuring the EIA and ES only assess those effects considered 'likely' to be significant.

Effects Unlikely / Not Significant

5.13 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

Impact on archaeological remains [surviving 18th century building fragments]

5.14 Direct effects of the Proposed Scheme may arise from construction of the proposed building and associated groundworks. Construction activities are likely to result in direct impacts on archaeology where intrusive ground works interact with known or potential archaeological deposits.

5.15 The previous archaeological evaluation has shown that the archaeological resource within the Site is comprised of structural remains associated with the 18th to 20th century development of the Site. No earlier activity was recorded.

5.16 A brick wall and associated floor were recorded and represent the earliest archaeological remains at the Site. It was concluded that these remains corresponded with the footprint of the large 18th century house seen on historic mapping.

5.17 A brick-built well was also recorded, which appeared to be typical of 18th to 19th century domestic wells.

5.18 There were also fragments of a terraced house revealed in the Site, and it was assessed that these remains likely formed part of a cellar, their depth explaining the reason for their survival.

5.19 The mid-20th century redevelopment of the Site was evidenced to have destroyed most of the earlier buildings completely. The absence of evidence for the back-back housing implies that they did not have cellars.

[20] North West Regional Research Framework (2020). Available at: https://researchframeworks.org/nwrf/ [Accessed 12/01/23].

5.20 The survey confirmed that modern development within the Site resulted in considerable truncation of any earlier archaeological remains. It is considered that the Site has a low potential for archaeological remains pre-dating the 18th century and any such remains are likely to be of low heritage significance which would not require any mitigation, and piles are now in place across the Site.

5.21 Therefore, the impact on archaeological remains to the surviving 18th century building fragments is not considered to be significant and will not be considered further in the EIA or reported in the ES. These impacts (which are not considered to be significant) will be set out in a desk-based assessment to be submitted as part of the Application. No further survey work or mitigation is expected to be required.

Biodiversity

Technical Baseline

5.22 A Preliminary Ecological Appraisal (PEA) of the Site was completed by Penny Anderson Associates Ltd (PAA) on 18th January 2023. The PEA comprised a Phase 1 Habitat survey (JNCC 2010[21]) to map and describe any habitats within the Site and to compile a botanical species list using the 'DAFOR' (Dominant/ Abundant/ Frequent/ Occasional/ Rare) to describe relative abundance. The Phase 1 Habitat survey was 'extended' (IEA 1995[22]) to identify evidence of, or potential for, notable and protected species. The field survey was supplemented with a desk based study to obtain existing data for locally designated sites and protected/notable species within a 2km search area from the Site centroid. This data was requested from the Greater Manchester Ecology Unit (GMEU) in January 2023. Web based resources comprising the Defra Multi-Agency Geographic Information for the Countryside (MAGIC) database was also consulted for details of statutory designated sites, Priority Habitats within a 2km search zone and European Protected Species Licences within a 1km search zone. The desk study search distances are considered appropriate for the scale and type of development.

5.23 The results of the PEA are presented in a stand-alone report provided at **Appendix 5.2**.

5.24 In summary, the desk study confirms that there are no statutory designated sites within the desk study search zone. The Ashton Canal Site of Biological Importance (SBI) and Rochdale Canal Stott's Lane to Ducie Basin SBI are located approximately 370m – 390m, respectively, to the northeast of the Site at the nearest point and separated from the Site by existing urban development with no habitat connectivity.

5.25 Protected and notable species records within the desk study search area are summarised below:

- Badger – nearest record is 1.4km from the Site; details are confidential;
- Otter – three records dating 2013-2022, approximately 1.6km west of the Site and associated with Castlefield Canal;

[21] Joint Nature Conservation Committee (2010). Phase 1 Habitat Survey.
[22] Institute for Environmental Assessment (1995).

- Bats – a large number of roost records, with those nearest to the Site comprising mainly common pipistrelle and occasionally soprano pipistrelle, noctule and Myotis sp. (the closest known roost is for a Myotis sp. approximately 270m east). There are no bat roost records within or immediately adjacent to the Site;

- European hedgehog – 17 records dating from 2012-2020, the nearest being 420m northeast of the Site;

- Birds – a large number of records within the search area including black redstart, peregrine, kingfisher, dunnock and yellow wagtail within approximately 500m, of which dunnock was recorded on or adjacent to the Site;

- Invertebrates – cinnabar moth and white letter hairstreak dated 2012-2019 and located 500m and 1.5km northeast, respectively; and

- Notable plants – bee orchid dating from 2016-2022 170m to the east and floating water plantain dated 2001, located 1.1km north east.

5.26 There were no desk study records for water vole, white clawed crayfish, amphibians or reptiles.

5.27 The field survey identified that the Site comprises recently cleared hardstanding with small patches of species-poor ephemeral/short perennial vegetation and scattered Buddleia shrubs becoming established, mainly at the edges of the Site. Consideration has been given to the potential for the Site to support black redstart which is known to use brownfield sites in Manchester for nesting and foraging. In this instance, the Site is considered to small and lacking in suitable features such as ledges for roosting/nesting to be suitable for black redstart. There are no other features within the Site that could be used by protected or notable species (including those which are known to be present in the wider area such as hedgehog, bats, breeding birds and notable terrestrial invertebrates) and the Site is assessed as being of negligible ecological value. No further ecological surveys are required.

5.28 There are a number of urban parks located to the east and south of the Site, including Vimto Park immediately to the east, which provide green infrastructure in the wider area.

Proposed Scope of Assessment

5.29 The below sets out the proposed scope of assessment based on an understanding of the characteristics of the Site, surrounding area and the Proposed Scheme (**Chapter 4**). Where environmental effects are considered unlikely to be significant, an appropriate evidence base has been provided to justify the 'scoping out' of these effects ensuring the EIA and ES only assess those effects considered 'likely' to be significant.

Effects Unlikely / Not Significant

5.30 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this

judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

Harm / disturbance from Site clearance and construction activities [habitats and species]

5.31 Site clearance and construction will have no effect on biodiversity. This is due to the lack of any features of ecological value within the Site. A separate PEA has been prepared and is provided in **Appendix 5.2**, and confirms the lack of ecological features within the Site.

5.32 Therefore, site clearance and construction is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Landscape and habitat creation [habitats and species]

5.33 The inclusion of native and/or wildlife friendly planting to create new habitats as part of the Proposed Scheme has the potential to enhance biodiversity and contribute to the wider green infrastructure network. The new habitats will encourage wildlife, particularly invertebrates, birds and foraging bats, and facilitate the movement of these species between the Site and other greenspace within the wider area. The extent, type and condition of new habitats will be input to the Defra biodiversity net gain (BNG) metric Version 3.1 to calculate the net gain in habitat units, and the results will be presented in a BNG report. A copy of the metric will be included with the BNG report and submitted in support of the Application (as a stand alone application document).

5.34 Therefore, landscape and habitat creation is considered likely to have beneficial effect. Due to the relatively small scale of the Site, the magnitude of effect is anticipated to be minor beneficial and is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Traffic and Access

Technical Baseline

5.35 In line with the previous environmental reporting for transport in 2017, the study area encompasses the following highway links:

- A57(M) Mancunian Way;
- A6 London Road;
- B6460 Fairfield Street;
- Sackville Street;
- Whitworth Street; and
- Aytoun Street.

5.36 Baseline information has been collected through on-site observation and desk-based studies.

5.37 A series of on-site observations have been undertaken to establish the current characteristics of the existing highway network in the vicinity of the Site. The highway layout is fundamentally unchanged since the time of the previous environmental assessment that was undertaken in support of the 2017 application.

5.38 Traffic flows on the surrounding highway network have been reviewed making reference to Department for Transport (DfT) traffic data available from their Road Traffic Statistics website[23].

5.39 This review of traffic flows shows that annual average daily traffic flows have decreased since 2017. This reduction in traffic levels in the city centre is also evidenced through the Transport for Greater Manchester Key Centre Monitoring database, which shows that traffic levels entering the City Centre in 2021 were lower than those in 2017[24].

5.40 Some of this will be the result of the Covid-19 pandemic lockdowns that restricted movement in 2020 and 2021 however some is also likely to reflect a longer-term trend of increased home working and greater use of sustainable transport for access to the city centre.

5.41 For the assessment in 2017, traffic data was obtained from the TfGM traffic model of Greater Manchester. Using the DfT traffic data, those flows have been factored to 2022 to give the baseline flows shown in **Table 5.1**, and referenced in **Figure 5.1**:

Table 5.1: Baseline Annual Average Daily Traffic Flows

Link	AADT
A: A57(M)	49486
B: A6 London Road	14945
C: Fairfield Street	14165
D: Sackville Street	4851
E: Whitworth Street	15954
F: Aytoun Street	5178

5.42 A review of highway safety has been undertaken via reference to the TfGM accident database[25] and this shows that during the most recent 5-year period for which data is available (up to June 2022), there have been no accidents on the streets adjacent to

[23] Department for Transport. Road traffic statistics. Available at: https://roadtraffic.dft.gov.uk/#6/55.254/-6.053/basemap-regions-countpoints [Accessed: 23/01/2023].
[24] Transport for Greater Manchester/ Highways Forecasting and Analytical Services. Available at: Highways Forecasting and Analytical Services - Reports (gmtu.gov.uk) [Accessed: 23/01/2023].
[25] https://www.gmtu.gov.uk/gmaccidents/#

the Site including Granby Road and Echo Street, and no accident clusters in the wider area.

5.43 The sensitive receptors within this study area have been identified as follows:

- Drivers on the A57(M) Mancunian Way;
- Drivers on the A6 London Road;
- Drivers on Fairfield, Whitworth, Aytoun and Sackville Street;
- Bus users on A6 and B6460 corridors; and
- Pedestrians / cyclists on A6 and B6360 corridors.

5.44 The Site is currently cleared, in association with works implemented under the 2017 application, therefore the current arrangement of the Site generates no traffic.

5.45 The city centre location of the Site means that there are excellent sustainable transport links including Piccadilly Rail Station within a 5 minute walk, a range of bus services and good levels of walking and cycling infrastructure.

Proposed Scope of Assessment

5.46 The below sets out the proposed scope of assessment based on an understanding of the characteristics of the Site, surrounding area and the Proposed Scheme (**Chapter 4**). Where environmental effects are considered unlikely to be significant, an appropriate evidence base has been provided to justify the 'scoping out' of these effects ensuring the EIA and ES only assess those effects considered 'likely' to be significant.

Effects Unlikely / Not Significant

5.47 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

5.48 To inform this scoping assessment it is noted that the Proposed Scheme will provide no new on-site car parking and is located in close proximity to a wide range of frequent public transport services. The existing public on-street parking bays on Granby Row (which forms part of the Site boundary at **Figure 1.1**) will be reduced in number from 13 to 8 as part of the Proposed Scheme public realm works and two of the spaces will become disabled persons parking spaces. The Proposed Scheme is therefore forecast to generate very limited traffic flows, with those generated being associated primarily with servicing and delivery activity, taxis etc. This traffic has been forecast using the TRICS trip rate database and it is expected that the Proposed Scheme could generate in the order of 60-70 vehicles per day as a reasonable worst-case scenario, including one Heavy Goods Vehicle (HGV).

5.49 There may be additional traffic movements on specific days of the year when students arrive / depart at the beginning and end of term. The Applicant will have a management plan in place on these days to help control the movement of vehicles around the area to minimise the potential for any disruption to the operation of the highway. Such a strategy is already in place for the student accommodation opposite the Site that is also operated by the Applicant, and is effective in managing this activity.

5.50 Equally there will be times of the year where the Proposed Scheme will not be fully occupied, as many students will return home during holiday periods outside of term time. The level of vehicle activity generated by the Proposed Scheme during these times would be less than the forecast 60-70 vehicles per day, which is based on a full-occupancy scenario.

5.51 The 60-70 vehicles per day forecast is therefore a reasonable worst case in terms of accounting for the small number of days associated with the beginning and end of terms where activity is increased and the greater number of days during holiday periods where activity will be reduced.

5.52 Construction traffic has also been forecast and this is expected to be below 100 vehicle movements per day. The daily movements of Articulated HGVs could be expected to vary between 2 and 6 articulated HGVs per day, for certain phases of construction, for limited periods. The daily movement of construction vehicles can typically occur over a 10-12 hour period but the timeframe may extend depending on the type of activity occurring on site. In general, the strategy is to avoid vehicle activity during weekday peak traffic periods (0800-0900 and 1700-1800).

5.53 This construction traffic forecast is preliminary given that the details of construction traffic requirements will only be known once a contractor is appointed to undertake construction, however a robust approach has been taken as the forecasts have been based upon those used for a residential tower development in London (One Lansdowne Road, Croydon). This is a larger scheme than that proposed, involving the demolition of circa. 12,500 sq.m of development including a 9 storey tower block, 5 storey hotel and a 6 storey office block and the construction of two residential towers of 50 and 20 storeys. The development is therefore reasonably analogous to the Proposed Scheme albeit it is considerably larger than the Proposed Scheme and therefore the use of these figures can be viewed as a robust assessment.

5.54 Taking into account the forecasts of construction and operational phase traffic, the likely effect of any additional traffic generated by the Proposed Scheme upon the operation of the surrounding highway network in capacity terms is therefore negligible.

Driver delay as a result of construction stage traffic and/or operational stage traffic [drivers on the A57(M), A6 London Road, Fairfield Street, Aytoun and Sackville Street]

5.55 The traffic generated by the Proposed Scheme has the potential to affect the operation of the surrounding highway network in terms of driver delay, both in the construction and operational stage of development. The IEMA Guidelines for the Environmental Assessment of Road Traffic[26] set out the broad principles of how to assess the

[26] Institute of Environmental Management & Assessment (IEMA) (1993). Guidelines for the Environmental Assessment of Road Traffic.

magnitude of effect for driver delay, stating that such delays "*are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system*".

5.56 Based upon the forecast operational stage and construction stage traffic movements generated by the Proposed Scheme, the likely effect of any additional traffic generated by the Proposed Scheme upon the operation of the surrounding highway network in capacity terms is negligible and the surrounding highway network is not at or close to being at capacity. For example, the weekday peak hour traffic movements during the operational stage are forecast at one vehicle arrival and one departure in the morning peak hour and four arrivals and four departures in the evening peak hour. Such movements would have an imperceptible effect upon highway operation and driver delay on the surrounding highway network, for example representing a less than 1% change in traffic on Fairfield Street, robustly assuming all of the vehicle trips routed along this road on their arrival and departure journey.

5.57 Therefore, driver delay to drivers on the A57(M), A6 London Road, Fairfield Street, Aytoun and Sackville Street is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Severance as a result of construction stage traffic and/or operational stage traffic [pedestrians / cyclists on A6 and B6460 corridors]

5.58 The IEMA Guidelines for the Environmental Assessment of Road Traffic sets out that changes in traffic flow of 30%, 60% and 90% are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance respectively. The change in traffic as a result of the Proposed Scheme will be below 30% on any link therefore there will be no perceptible effect upon severance. For example there would be a less than 1% change in traffic on Fairfield Street in the operational stage, robustly assuming all of the vehicle trips routed along this road on their arrival and departure journey, and a less than 2% change in traffic during the construction stage, again robustly assuming that all construction traffic routed along Fairfield Street on their arrival and departure journeys.

5.59 Therefore, severance to pedestrians / cyclists on the A6 and B6460 corridors is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Pedestrian delay as a result of construction stage traffic and/or operational stage traffic [pedestrians on A6 and B6460 corridors]

5.60 The IEMA Guidelines for the Environmental Assessment of Road Traffic sets out that changes in the composition or speed of the traffic may affect the ability of people to cross the roads. The guidance suggests that assessors use their judgement to determine whether pedestrian delay is a significant impact. The change in traffic as a result of the Proposed Scheme will not significantly change the composition or speed of traffic on the surrounding highway network due to the limited number of additional vehicles. The construction traffic is expected to comprise of some HGVs for limited periods during the construction period. There will be a Construction Environmental Management Plan (CEMP) in place for the construction period and this will provide a mechanism for managing construction traffic in the area, seeking to minimise the

potential for disruption to other road users through measures such as vehicle booking systems. Therefore there will be no perceptible effect upon pedestrian delay.

5.61 Therefore, delay to pedestrians on the A6 and B6460 corridors is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Pedestrian amenity as a result of construction stage traffic and/or operational stage traffic [pedestrians on A6 and B6460 corridors]

5.62 The IEMA Guidelines for the Environmental Assessment of Road Traffic sets out that pedestrian amenity is affected by traffic flow, traffic composition and pavement width / separation from traffic. The guidance suggests a tentative threshold for judging the significance of changes in pedestrian amenity of where traffic flow (or its lorry component) is halved or doubled. The change in traffic as a result of the Proposed Scheme will not significantly change the flow or composition of traffic on the surrounding highway network due to the limited number of additional vehicles generated and the low numbers of Heavy Goods Vehicles (HGVs) comprising the forecast Development Scheme traffic. The construction traffic is expected to comprise of some HGVs for limited periods during the construction period. There will be a Construction Environmental Management Plan (CEMP) in place for the construction period and this will provide a mechanism for managing construction traffic in the area, seeking to minimise the potential for disruption to other road users through measures such as vehicle booking systems. There would also be no effect upon pedestrian separation from traffic, and therefore there will be no perceptible effect upon pedestrian amenity.

5.63 Therefore, pedestrian amenity for pedestrians on the A6 and B6460 corridors is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Fear and intimidation as a result of construction stage traffic and/or operational stage traffic [pedestrians / cyclists on A6 and B6460 corridors]

5.64 The impact of this is dependent upon the volume of traffic, its HGV composition, its proximity to people, or the lack of protection caused by such factors as narrow pavement width. The change in traffic as a result of the Proposed Scheme will not significantly change the flow or composition of traffic on the surrounding highway network in the construction or operational phase. The construction traffic is expected to comprise of some HGVs for limited periods during the construction period. There will be a Construction Environmental Management Plan (CEMP) in place for the construction period and this will provide a mechanism for managing construction traffic in the area, seeking to minimise the potential for disruption to other road users through measures such as vehicle booking systems. The change in traffic as a result of the Proposed Scheme during construction and operational phase will not affect pedestrian separation from traffic, and therefore there will be no perceptible effect upon fear and intimidation.

5.65 Therefore, fear and intimidation for pedestrians / cyclists on the A6 and B6460 corridors is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Accidents and safety as a result of construction stage traffic and/or operational stage traffic [bus users and pedestrians / cyclists on A6 and B6460 corridors, drivers on the A57(M), A6 London Road, Fairfield Street, Aytoun and Sackville Street]

5.66 The IEMA Guidance suggests that professional judgement will be needed to assess the implications of local circumstances, or factors, which may elevate or lessen risks of accidents e.g. junction conflicts.

5.67 The forecast operational and construction stage traffic flows are not significant in the context of existing traffic flows on the surrounding highway network and will not present any significant change to the safety of highway users in the area. The review of highway safety for the surrounding roads described in the Technical Baseline section of this chapter shows that there is no evidence of highway safety issues on the roads adjacent to the Site nor any accident clusters in the wider area that would cause particular concern in the context of the Proposed Scheme. The construction traffic is expected to comprise of some HGVs for limited periods during the construction period. There will be a Construction Environmental Management Plan (CEMP) in place for the construction period and this will provide a mechanism for managing construction traffic in the area, seeking to minimise the potential for disruption to other road users through measures such as vehicle booking systems.

5.68 Therefore, accidents and safety for bus users and pedestrians / cyclists on A6 and B6460 corridors, drivers on the A57(M), A6 London Road, Fairfield Street, Aytoun and Sackville Street is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Limitations and Assumptions

5.69 To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

- There will be no car parking provided on-site, with the vast majority of residents assumed to live car-free, although some may choose to keep a car in an off-site car park. The existing public on-street parking bays on Granby Row will be reduced in number from 13 to 8 as part of the Proposed Scheme public realm works and two of the spaces will become disabled persons parking spaces.

- Vehicle trips generated to the Site during the operational stage will therefore be limited to the activity generated by servicing / delivery vehicles and drop-off / pick-up activity.

- Operational stage traffic forecasts have been based upon a development of 1,462 residents, which is a robust scenario assuming that 40% of the studio apartments are dual occupied. In practice, the proportion of dual occupancy units is likely to be lower than this.

- At the time of writing, there are no forecasts of daily construction traffic movements available for the Proposed Scheme, therefore construction traffic forecasts have been based on those used for a residential tower development in London (One Lansdowne Road, Croydon). This is a larger scheme than that proposed, involving the demolition of circa. 12,500 sq.m of development including a 9 storey tower block, 5 storey hotel and a 6 storey office block and

the construction of two residential towers of 50 and 20 storeys. The development is therefore reasonably analogous to the Proposed Scheme albeit it is considerably larger than the Proposed Scheme and therefore the use of these figures can be viewed as a robust assessment.

Air Quality

Technical Baseline

5.70 A review of existing air quality information relating to pollutants of interest, nitrogen dioxide (NO_2) and particulate matter (PM_{10} and $PM_{2.5}$), has been completed. Background concentrations of NO_2, PM_{10} and $PM_{2.5}$ have been obtained from the Defra background maps[27]. Data has also been gathered from the 2021 Annual Status Report for Greater Manchester[28] which includes data from Manchester City Council (MCC) automatic monitoring stations for NO_2, PM_{10} and $PM_{2.5}$. The results, collated by Clean Air Greater Manchester[29], of NO_2 monitoring carried out close to the Site using diffusion tubes have also been reviewed. The location of areas of known poor air quality, in particular Air Quality Management Areas (AQMA), close to the study area have been identified using the Department of Environment Food and Rural Affairs (Defra) interactive map[30].

Defra Background Maps

5.71 The background maps provided by Defra[1] provide predicted background concentrations for NO_2, PM_{10} and $PM_{2.5}$. Predicted concentrations for 2019 and 2023 are shown in **Table 5.2.**

Table 5.2: Defra Background Levels of Pollutants

OS grid Reference	2019			2023		
	NO_2 ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)[j]	$PM_{2.5}$ ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)[j]	$PM_{2.5}$ ($\mu g/m^3$)
384500, 397500	28.25	14.38	9.13	23.95	13.67	8.64
384500, 398500	29.31	13.60	8.78	25.53	12.92	8.29

5.72 Predicted background levels for 2019 have been included in **Table 5.2** to allow comparison with MCC monitoring for that year to be completed. Comparison with

[27] Defra (2018). Background pollution concentration maps, Available at Background Mapping data for local authorities - 2018 - Defra, UK [Accessed 17/1/2023].
[28] GMCA (2022). 2021 Air Quality Annual Status Report for Greater Manchester, Available at GM_Air_Quality_Annual_Status_Report_2021pdf.pdf (ctfassets.net) accessed 17.1.2023
[29] GMCA diffusion tube monitoring results Diffusion Tubes | Clean Air Greater Manchester (cleanairgm.com) [Accessed 17/1/2023].
[30] Defra AQMA Maps Available at AQMAs interactive map (defra.gov.uk) [Accessed 17/1/2023].

2020 and 2021 would be flawed as the Covid-19 pandemic resulted in lower traffic flows than expected in these years. Hence predicted background levels for those years would be an overestimate.

Local Authority NO_2 Monitoring

5.73 The locations of automatic monitoring stations and diffusion tubes used by MCC to monitor NO_2 within 750 of the Site are shown in **Figure 5.2.** The results from these sites are shown below in **Table 5.3** and **Table 5.4**.

Table 5.3: Local Authority NO_2 Automatic Monitoring Station Results

Site ID	Type of site	OS Grid reference	Level of nitrogen dioxide (µg/m^3)				
			2017	2018	2019	2020	2021
Oxford Rd	Kerbside	384233, 397287	**65**	**62**	**59**	36	**44**
Manchester Piccadilly	Urban centre	384310, 398337	36	35	36	27	30

**the annual air quality objective for NO_2 is 40 µg/m^3*

Table 5.4: Local Authority NO_2 Diffusion Tube Results

Site ID	Type of site	OS Grid reference	Level of nitrogen dioxide (µg/m^3)				
			2017	2018	2019	2020	2021
MAN72 Lockton Close	Urban background	384761, 397384	34.6	33.4	32.8	24.5	27.5
MAN82-MAN 84 Oxford Rd co-located tubes	Roadside	384239, 397276	**56.2**	**54.0**	**52.0**	33.9	**40.7**
MAN59-61 Manchester Piccadilly co-located tubes	Urban background	384310, 398337	35.7	31.6	33.1	22.3	24.6
MAN29 A	Roadside	384119, 397503	**57.7**	**58.8**	**55.4**	39.0	**44.8**

**the annual air quality objective for NO_2 is 40 µg/m^3*

5.74 Monitoring by MCC indicates that annual average levels of NO_2 range from below the annual average air quality objective to well above it depending on proximity to road traffic emissions. 2020 results show the impact of Covid-19 and reduced traffic flows. In 2021, when lockdown restrictions began to be lifted in earnest, concentrations increased at all sites, although did not rise as high as concentrations measured in 2019.

Local Authority PM_{10} and $PM_{2.5}$ Monitoring

5.75 The locations of automatic monitoring stations used by MCC to monitor PM_{10} and $PM_{2.5}$ are also shown in **Figure 5.2.** The results from these sites are shown in **Table 5.5** and **Table 5.6.**

Table 5.5: Local Authority PM_{10} Automatic Monitoring Station Results

Site ID	Type of site	OS Grid reference	Level of PM_{10} ($\mu g/m^3$)				
			2017	2018	2019	2020	2021
Oxford Rd	Kerbside	384233, 397287	27	30	26	18	18
Manchester Piccadilly	Urban centre	384310, 398337	20	21	20	15	15

**the annual air quality objective for PM_{10} is 40 $\mu g/m^3$*

Table 5.6: Local Authority $PM_{2.5}$ Automatic Monitoring Station Results

Site ID	Type of site	OS Grid reference	Level of $PM_{2.5}$ ($\mu g/m^3$)				
			2017	2018	2019	2020	2021
Manchester Piccadilly	Urban centre	384310, 398337	8	11	12	8	9

**the annual mean target for $PM_{2.5}$ is $\mu g/m^3$*

5.76 Monitoring by MCC indicates that annual average levels of PM_{10} are well below the relevant annual air quality objective, even at the kerbside site located in Oxford Road, and that the general trend indicates decreasing concentrations since 2018.

5.77 Monitoring also indicates that annual average levels of $PM_{2.5}$ are below the Government's recently proposed annual mean target of 10 $\mu g/m^3$ to be met across England by 2040.

5.78 NO_2, PM_{10} and $PM_{2.5}$ levels measured by MCC at Manchester Piccadilly Automatic Station, shown in **Table 5.4**, **Table 5.5** and **Table 5.6,** are higher than those predicted by Defra background maps for the relevant grid square (384500, 398500). Similarly, NO_2 PM_{10} and $PM_{2.5}$ levels measured by MCC at Oxford Road Automatic Station are higher than those predicted by Defra background maps for the relevant grid square (384500, 397500). This is due to both stations being close to road traffic sources. Manchester Piccadilly co-located tubes, MAN59-61, are identified as 'urban background' in the 2021 Annual Status Report for Greater Manchester[28], but will be similarly affected by road traffic emissions and, thus, are not deemed to be representative of background concentrations at and around the Site.

Location of Air Quality Management Areas

5.79 The study area is located within the Manchester AQMA, designated due to likely exceedances of an annual mean NO_2 level of 35 micrograms per cubic metre ($\mu g/m^3$). This objective is more stringent than the annual mean objective of 40 $\mu g/m^3$ specified

in the Air Quality (England) Regulations 2000 (as amended)[31]. The location of the AQMA and its relationship to the Proposed Scheme and the study area is shown in **Figure 5.2.**

Summary of Existing Baseline Conditions

5.80 Baseline conditions in relation to NO_2 indicate that annual average levels of the pollutant are high close to busy kerbside locations but lie below the relevant air quality objectives at less trafficked locations such as the Site. Annual average levels of PM_{10} are well below the relevant annual air quality objective, even at the kerbside site located on Oxford Road. Annual average levels of $PM_{2.5}$ have been below the Government's proposed annual mean target concentration for the last two years.

Proposed Scope of Assessment

5.81 The below sets out the proposed scope of assessment based on an understanding of the characteristics of the Site, surrounding area and the Proposed Scheme (**Chapter 4**). Where environmental effects are considered unlikely to be significant, an appropriate evidence base has been provided to justify the 'scoping out' of these effects ensuring the EIA and ES only assess those effects considered 'likely' to be significant.

5.82 Consideration has been given to MCC's air quality guidance[32] in preparing this scope and will be considered within the EIA when considering air quality mitigation as part of the Environmental Management Plan.

Effects Unlikely / Not Significant

5.83 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

Changes to local air quality as a result of emissions from construction traffic [existing human receptors adjacent to roads used by construction traffic]

5.84 Emissions from road traffic associated with the construction stage of the Proposed Scheme have been considered in relation to impacts on local air quality. It is anticipated that, as with the 2017 application, most traffic and deliveries to the Site will arrive from the A6 and Fairfield Street, with access via the main entrance at Back Acton Street and egress via the main exit at Cobourg Street ie there will be a one-way system in place close to the Site.

5.85 In terms of traffic generation during the construction stage, the transport consultant for the project, Vectos, confirm that the form/mass of the Proposed Scheme is similar to the 2017 application and thus the construction programme and associated traffic generation is likely to be similar. Construction traffic has been forecast for the

[31] HMSO (2000). Air Quality (England) Regulations 2000 (as amended) Available at The Air Quality (England) Regulations 2000 (legislation.gov.uk) [Accessed 17/1/2023].
[32] MCC (august 2022) Air Quality & Planning Technical Guidance Available at Information for developers | Manchester City Council [Accessed 03/02/2023].

Proposed Scheme using the TRICS trip rate database and this is expected to be below 100 vehicle movements per day. EPUK and IAQM guidance[33] indicates that the likely effects of traffic generated during the construction stage of the Proposed Scheme on local air quality will not, therefore, be significant.

5.86 Therefore, the changes to local air quality as a result of emissions from construction traffic to human receptors close to roads along which development construction traffic will travel are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Changes to local air quality as a result of emissions from construction related non-road mobile machinery [existing human receptors adjacent to the Site]

5.87 Emissions from non-road mobile machinery (NRMM) associated with the construction stage of the Proposed Scheme have been considered in relation to impacts on local air quality. These emissions would be controlled through the implementation of a CEMP which could include measures such as the use of emission standards for NRMM based on engine size. These tertiary mitigation measures would be considered an integral part of the Proposed Scheme and considered as part of the Environmental Management Plan

5.88 Therefore, the changes to local air quality as a result of emissions from construction related non-road mobile machinery to human receptors adjacent to the Site is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Nuisance and disturbance as a result of dust from construction activities [existing human receptors located within 100m of the Proposed Scheme]

5.89 Construction activities have the potential to result in nuisance and or adverse health effects due to dust deposition arising from on-site construction activities, resulting in the soiling of surfaces; visible dust plumes and elevated PM_{10} concentrations because of dust generating activities on-site. It is anticipated that dust and particulate matter emission produced during construction activities would be controlled through the implementation of a CEMP. This CEMP will be informed by Institute of Air Quality Management (IAQM) guidance[34] and would include prevention measures, such as screening stockpiles of materials, deployment of windbreak netting and dampening exposed soils as appropriate and set out requirements for ongoing monitoring and liaison with the local community, and MCC. These tertiary mitigation measures would be considered an integral part of the Proposed Scheme and considered as part of the Environmental Management Plan. An example of a mitigation measure that would be implemented is "*Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken*".

[33] EPUK and IAQM (January 2017). Land Use Planning and Development Control: Planning for Air Quality (v1.2), Available at air-quality-planning-guidance.pdf (iaqm.co.uk) [Accessed 17/1/2023].

[34] IAQM (2014). Assessment of dust from demolition and construction v1.1 Available at construction-dust-2014.pdf (iaqm.co.uk) [Accessed 17/1/2023].

5.90 Therefore, nuisance and disturbance as a result of dust from construction activities to existing residential receptors are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Changes to local air quality as a result of emissions from operational traffic [existing human receptors located adjacent to roads along which operational road traffic travels]

5.91 Emissions from road traffic associated with the operational stage of the Proposed Scheme have the potential to have a significant impact on local air quality. However, the Proposed Scheme will provide only 8 car park spaces along Granby Row. Vectos confirm that traffic generation during the operational stage of the development has been forecast using the TRICS trip rate database and it is expected that the Proposed Scheme could generate in the order of 60-70 vehicles per day comprising delivery/servicing and pick-up/drop-off activity as a reasonable worst-case scenario. Therefore, there will not be:

- A change in Light Duty Vehicle (LDV) flows of more than 100 AADT on roads with relevant receptors; or
- A change in Heavy Duty Vehicle (HDV) flows of more than 25 AADT on roads with relevant receptors.

5.92 EPUK and IAQM guidance[35] indicates that the likely effects of traffic generated during the operational stage of the Proposed Scheme on local air quality will not, therefore, be significant. Therefore, the changes to local air quality as a result of emissions from operational traffic on human receptors close to roads along which operational development traffic will travel not considered to be significant and will not be considered further in the EIA or reported in the ES.

Combustion emissions during operation [existing human receptors around the Site]

5.93 In contrast to the 2017 application, the Proposed Scheme has no significant combustion sources associated with it. There will be an emergency diesel generator which will only be used for monthly testing and emergency use, and thus it is not anticipated to present a material source of combustion emissions.

5.94 Therefore, the effect of combustion emissions associated with the operational stage of the Proposed Scheme on human receptors close to the Site is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Effect of air quality on the Proposed Scheme [future users of the Proposed Scheme]

5.95 Within the 2017 ES, the effect of emissions from diesel trains travelling along the railway line adjacent to the Proposed Scheme and the effect of emissions from nearby road traffic sources on the Proposed Scheme were considered in a standalone assessment, i.e. the suitability of the Site for its intended use was assessed.

5.96 The detailed dispersion modelling undertaken indicated that the railway could cause certain locations to be close to or to exceed the annual mean NO_2 objective at the

[35] EPUK and IAQM (January 2017). Land Use Planning and Development Control: Planning for Air Quality (v1.2), Available at air-quality-planning-guidance.pdf (iaqm.co.uk) [Accessed 17/1/2023].

façade of some of the lower residential floors of the Proposed Scheme. It was, therefore, recommended that NO_X filters be installed in some rooms on the second, third and fourth floor levels, to ensure future residents of the Proposed Scheme are not exposed to poor air quality. These primary mitigation measures would be considered an integral part of the Proposed Scheme and with this primary mitigation in place, the effect of local air quality on the development is not considered to be significant.

5.97 Defra background concentrations and MCC monitoring indicate that air quality has improved within Manchester city centre. The 2017 assessment presents the worst case. Therefore, the effect of local air quality on the Proposed Scheme is not considered to be significant and will not be considered further in the EIA or reported in the ES.

5.98 An updated standalone assessment of site suitability will be undertaken which also considers the MCC guidance. This will be submitted as a standalone document outside of the ES.

Ground Conditions

Technical Baseline

Previous Intrusive Ground Investigation Surveys

5.99 Intrusive ground investigation surveys have previously been carried out on the Site for the previous scheme (as presented in Curtins historical Phase 2 Ground Investigation report[36]). A full review and re-appraisal of this report is programmed post EIA Scoping submission with respect to the new Application, however pertinent previous findings are summarised within this section for consideration within the subsequent assessment sections.

Site History

5.100 A review of the available historical mapping information for the Site (as presented within Curtins Phase 1 report[37] at **Appendix 5.3**) has been undertaken with specific reference to potential sources of contamination.

5.101 The earliest available historical mapping, in the late 19th Century, shows most of the Site is occupied by industrial/commercial buildings, including Printing Works, Battery Repairs and Window Cleaner. Surrounding the Site is London Road Railway Station (100m northeast) and a Fire Engine Station (90m north). By mid to late 20th Century major demolition has occurred on the Site and a depot/ garage (with a sunk petrol tank) noted is constructed in the northeast, hostel (later named Chandos Hall) in the west and garages in the southeast. During the 1990s to circa 2019 the depot/garage was converted to a nursery. The Site is shown to be clear of structures in 2022 mapping. Demolition, enabling and construction works (piling) are known to have been undertaken on the Site in 2019-2020.

[36] Curtins (2019). Phase 2 Ground Investigation Report Echo Street, Manchester. Report no. B065374-CUR-00-XX-RP-GE-002-V04.

[37] Curtins (2023). Preliminary Risk Assessment, Echo Street, Manchester. Report no. B065374-CUR-00-XX-RP-GE-80001-P01.

Geology

5.102 A study of the Envirocheck records and British Geological Survey (BGS) 1:50,000 mapping records (Bedrock and Superficial Editions) for Manchester (Sheet 85) indicates the following geological succession underlying the Site:

- Made Ground (Undivided) (Holocene);
- Till (Devensian); and
- Chester Pebble Beds Formation (Early Triassic).

5.103 Artificial Made Ground deposits are indicated to be present onsite; a thickness of approximately 3.00-5.00m bgl may be expected considering local BGS borehole records.

5.104 Superficial deposits are recorded as Till, comprising clay and boulders, suspended in a matrix of mud or sand, however soft Alluvial Deposits are expected to be present underlying the site, associated with the adjacent River Medlock. According to local BGS borehole records, the superficial deposits are expected to depths of 5.00-6.50m bgl.

5.105 Bedrock deposits are present as Chester Pebble Beds Formation, comprising mainly sandstone; fine to coarse grained, commonly pebbly, with conglomerates and sporadic siltstones and cross-stratified. The bedrock is expected to be initially highly weathered. There are no known faults within 100m of the Site boundary.

5.106 Previous Ground Investigation survey information[1] for the Site recorded ground conditions in line with those anticipated. Made ground was encountered at all exploratory hole locations from ground level to depths of 0.30-3.80m bgl. The Made Ground was underlain by Glacial Till deposits comprising Clay with interbedded sands and gravels. Clay was firm to very stiff, dark greyish-brown, sandy with frequent fine to coarse sub-angular gravel of mixed lithologies. Underlying this, from depths of between 2.90m – 6.50m bgl, was medium-dense to very dense, reddish-brown, slightly cobbly, gravelly, fine to coarse Sand, considered to be indicative of weathered bedrock deposits. Competent bedrock, associated with the Chester Formation, was encountered at 7.50-13.50m bgl, recorded as extremely weak to weak, reddish-brown, medium grained, arenaceous Sandstone, identified to a maximum depth of 25.50m bgl through coring. The sandstone is of very poor to poor rock quality.

Hydrogeology

5.107 Environment Agency data indicates that the Site, corresponding with the underlying bedrock geology, overlies a Principal Aquifer. This is overlain by a superficial Secondary A Aquifer. The Site is not situated within a designated groundwater Source Protection Zone (SPZ).

5.108 The closest groundwater abstraction recorded is 236m west of the Site for industrial/commercial/public service: non-evaporative cooling from a borehole origin. There are no potable groundwater abstractions within 500m of the Site.

Land Gas

5.109 UK Radon Mapping confirms the Site is situated in an area where <1% of homes are above the radon action level. As the development incorporates a basement, advice of a specialist Radon assessor must be obtained.

5.110 A programme of ground gas monitoring was undertaken during previous Ground Investigation survey[1]. A maximum carbon dioxide concentration was identified at 2.4% v /v with a maximum flow of 6.4l/hr recorded. Concentrations of methane (CH4) was recorded below the instruments limit of detection in all monitoring wells. The adopted Gas Screening Values (GSV) for the Site are 0.011l/hr for carbon dioxide. A Gas Characterisation Situation 1 (CS1) gas regime was concluded, not requiring gas protection measures for the previously proposed development. The risk to site end users from ground gases was considered to be Low.

Hydrology

5.111 The nearest surface water receptor is the Rochdale Canal 175m northwest of the Site; it was classed as General Quality Assessment (GQA) Grade B in 2000. The culverted River Medlock is around 200m south of the Site, flowing east to west; it was classed as General Quality Assessment (GQA) Grade E in 2000.

5.112 There are no surface water abstraction points within 250m of the Site. The closest discharge consent is 143m northwest comprising public sewage: storm sewage overflow into a freshwater stream/river to Dukes Tunnel.

5.113 There have been no pollution incidents within 250m of the Site within the last 10 years.

Potential Contamination Sources

5.114 The following potential contamination sources have been identified within Curtins Phase 1 Report[2] **(Appendix 5.3):**

- Uncontrolled deposition of Made Ground associated with the construction/demolition onsite;
- Potential contamination associated with battery, cleaner and printing works, with the above sources include a range of metals, organic petrol and diesel range hydrocarbons, and Poly-cyclic aromatic hydrocarbons (PAHs), and asbestos; and
- Potential contamination associated with fuel/oil spillages from depot/garage and sunk petrol tanks, with the above sources include a range of metals, organic petrol and diesel range hydrocarbons, and Poly-cyclic aromatic hydrocarbons (PAHs).

5.115 Any contamination present within the soils has the potential to leach into the ground and surface waters. Notwithstanding, superficial deposits of Glacial Till are encountered which may limit migration of contamination where predominantly cohesive soils.

5.116 Potential production of ground gas generating sources are likely from organic material within Made Ground. These could include, but are not limited to, carbon dioxide, methane, carbon monoxide and hydrogen sulphide.

5.117 Previous Ground Investigation survey information[1] recorded minor exceedances with respect to nominated screening criteria for soils and groundwater. The following risk ratings were identified:

5.118 A Moderate/Low risk rating was identified to end-users from direct contact, inhalation and ingestion of contaminants within Made Ground soils due to concentrations of PAHs and lead recorded above nominated GACs. A Low risk rating was identified to construction workers and adjacent residents from direct contact, inhalation and ingestion of contaminants associated with Made Ground soils. A Moderate/Low risk rating was determined to groundwater and a Piling Risk Assessment was recommended to determine suitable piling methods to mitigate the risk presented to the underlying Principal Aquifer.

Unexploded Ordnance

5.119 A review of available Manchester Bomb Damage mapping was undertaken; it indicated bombing ruins, as well as several fire bombs, high explosives ruins and damaged buildings surroundings the Site in 1940-1941.

5.120 A Detailed Unexploded Ordnance (UXO) Threat and Risk Assessment report is included in Curtins Phase 1 report (**Appendix 5.3)**. It was carried out for Curtins in 2017 to assess the risk during ground investigation works. The report recommended that there is a Medium risk from UXOs on the Site for ground investigation works.

5.121 Across most the Site, it is considered that ground cover should have been such that evidence of UXOs should have been noted and reported. However, an area of clearance is noted in the north-eastern corner of the Site. It is thought possible that this clearance was because of a bomb strike/fire damage. If rubble and debris was present in this area, there is a risk that evidence of UXO could easily have been overlooked.

5.122 Given that most the Site appears to have survived the war, shows no signs of damage and likely accessed frequently, this part of the Site has been given a Low Risk. The area within the northeast of the Site is shown as cleared on post-war aerial photography. Given the poor quality of the record set for Manchester, it has not proved possible to prove that this clearance was not due to bombing. Thus, this area, with a small buffer to account for the 'J-curve' effect, has been given a Medium Risk. A map showing details of the low and medium risk areas within the Site is included within the Detailed Unexploded Ordnance (UXO) Threat and Risk Assessment report in Curtins Phase 1 report (**Appendix 5.3**).

5.123 Given groundworks including piling works have also recently been undertaken across the Site as part of a previous consent with no evidence of buried UXO encountered, this reduces the likelihood of UXO remaining beneath the site further.

Proposed Scope of Assessment

5.124 The below sets out the proposed scope of assessment based on an understanding of the characteristics of the Site, surrounding area and the Proposed Scheme (**Chapter 4**). Where environmental effects are considered unlikely to be significant, an appropriate

evidence base has been provided to justify the 'scoping out' of these effects ensuring the EIA and ES only assess those effects considered 'likely' to be significant.

Effects Unlikely / Not Significant

5.125 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

Potential release of existing ground contamination and accidental release of new contamination during construction [construction workers and neighbours]

5.126 There is the potential that materials within the Made Ground may pose a risk to construction workers (through direct contact/ingestion and inhalation) and neighbours (through dust emissions), over a temporary short-term basis during the construction stage. Contamination sources potentially affecting existing soils have been identified, listed below.

- The uncontrolled deposition of Made Ground soils following historical construction and demolition works; and
- Potential contamination associated with historical industries both on Site and within the surrounding area.

5.127 There is also potential that construction activities cause accidental release of contaminating substances into the ground such as fuels and oils and chemicals.

5.128 During the redevelopment of the Site it will be necessary to implement measures to protect construction workers, neighbours and general public passing by from exposure to any contaminated material which is encountered. Measures may include but not be limited to; dust suppression methods, ensuring covered wagons transport material and ensuring suitable PPE is provided and worn on site. Fuels, oils and hazardous substances used in construction will need to be suitably stored and bunded containers with spill kits easily accessible.

5.129 These tertiary migration measures will be required of the Contractor under the Construction Design Management Regulations (CDM 2015) and will be incorporated into the Construction Phase Plan, Method Statements and Health and Safety Plans and the Construction Environmental Management Plan (CEMP).

5.130 Therefore, impact from ground contamination to construction workers and neighbours is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Potential release of existing contamination and accidental release of new contamination during construction [controlled waters]

5.131 There is the potential that materials within the Made Ground may pose a risk to controlled waters over a temporary short-term basis during the construction stage, during the disturbance and driving through Made Ground materials and through

spillages and leakages of fuels/oils/chemicals associated with construction plant and activities.

5.132 During the redevelopment of the Site it will be necessary to implement measures to protect controlled waters. Tertiary measures may include but not be limited to; ensuring fuels and chemicals are suitably stored on site and bunded, ensuring spill kits are easily accessible and ensuring any contaminated material excavated is suitably managed stored on and covered by impermeable membranes.

5.133 These measures will be required of the Contractor under the Construction Design Management Regulations (CDM 2015) and will be incorporated into the Construction Phase Plan, Method Statements and Health and Safety Plans and the Construction Environmental Management Plan (CEMP).

5.134 A Piling Risk Assessment is anticipated to be a required to discharge pre-commencement and pre-occupation planning conditions relating to preventing ground contamination being entrained to the Principal aquifer during any further piling works that are required. This was also recommended as part of Curtins previous ground investigation report[1]. This is therefore also considered a tertiary mitigation measure.

5.135 Therefore, impact of ground contamination to controlled waters during the construction stage is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Potential release of ground contamination during operation [Site end users, Site maintenance workers, neighbours]

5.136 There is the potential that materials within the Made Ground may pose a risk to Site end users, maintenance workers (through direct contact/ingestion and inhalation) and neighbours (horizontal migration followed by direct contact/ingestion and inhalation), over a permanent long-term basis. Potential contaminants of concern identified in the Curtins Phase 1 Report (**Appendix 5.3)** include a range of metals, organic petrol and diesel range hydrocarbons and poly-cyclic aromatic hydrocarbons (PAHs) and asbestos.

5.137 Quantitative risk assessments were undertaken as part of Curtins previous Phase 2 Ground Investigation report[1] which involved comparing soil contaminant concentrations against Generic Assessment Criteria and assessing Source-Pathway-Receptor Linkages. A Moderate/Low risk was identified to end users and remediation was recommended to comprise inclusion of an engineered capping layer of clean soils in soft landscaped areas to ensure the end users do not come into contact with contaminated soils.

5.138 Quantitative risk assessments will be reviewed and revised with respect to the new scheme accounting for the change in use, however broadly comparable outcomes and remedial measures are anticipated. Where revised quantitative risk assessments identify an elevated risk, design and implementation of any remedial measures will be required to discharge pre-commencement and pre-occupation planning conditions relating to ground contamination. Requirements would be detailed in a Phase 3 Remediation report Strategy and records of completion included in a Phase 4 verification report, also tertiary mitigation measures.

5.139 These tertiary mitigation measures will be a planning requirement to discharge pre-commencement planning conditions relating to ground contamination.

5.140 Therefore, the impact of ground contamination (construction stage) to Site end users, Site maintenance workers and neighbours is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Potential release of contamination affecting water supply pipes during operation [water supply pipes – United Utilities customers]

5.141 There is potential that potential contaminants in Made Ground soils may present a risk to water supply pipes (and the water within) over a permanent long-term basis through degradation of pipework and migration of contamination, this may lead to human health impacts through drinking contaminated water.

5.142 A United Utilities water supply pipe risk assessment will be undertaken to further assess the risk of contaminants entering the water supply prior to installation of water supply pipes. This needs to be carried out by a competent contaminated land risk assessor. Remediation measures where required would entail ensuring contaminant resistant water supply pipes are used (known as barrier pipe) to prevent migration of contamination into water supply pipes. This is expected to be a requirement of United Utilities and therefore considered a tertiary mitigation measure.

5.143 Therefore, the potential risk associated with the contamination of water supply pipes to United Utilities customers is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Potential release of contamination during operation [controlled waters]

5.144 There is the potential that contaminants within the Made Ground and potential spills/leaks of oil and fuel from any plant rooms, may pose a risk to controlled waters over a permanent long-term basis.

5.145 Quantitative risk assessments were undertaken as part of Curtins previous Phase 2 Ground Investigation report[1] which involved comparing soil contaminant concentrations against Generic Assessment Criteria and assessing Source-Pathway-Receptor Linkages. Exceedances were recorded in the groundwater for sulphate and Polycyclic Aromatic Hydrocarbons. The assessment stated that the presence of cohesive Glacial Till is likely to limit the migration of contamination into the Principal aquifer and it is likely that the contaminants are also indicative of the wider historic, industrial land use of the city centre. No groundwater remediation was considered to be required. Changes to groundwater recharge are not anticipated due to the Site being previously developed and water running offsite at present.

5.146 Quantitative risk assessments will be reviewed and revised with respect to the new scheme, however broadly comparable outcomes are anticipated, and any form of groundwater remediation is highly unlikely to be required. Where updated quantitative risk assessments do identify an elevated risk, design and implementation of any remedial measures will be required to discharge pre-commencement and pre-occupation planning conditions relating to ground contamination will be identified. Requirements would be detailed in a Phase 3 Remediation report and records of completion included in a Phase 4 verification report, also tertiary mitigation measures.

5.147 Plant rooms and equipment will be designed to contain any spills through bunds and prevent infiltration into ground. It is currently proposed that plant will be housed in the basement which will have a concrete floor.

5.148 Therefore, potential migration of contaminants to controlled waters is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Potential release of hazardous ground gases during operation [Site end users, Site maintenance workers, neighbours]

5.149 There is the potential that any organic materials within the Made Ground or natural soils may pose a risk to site end users, maintenance workers and neighbours though horizontal migration followed by direct inhalation, over a permanent long-term basis. Potential ground gases may be generated from the decomposition of organic / putrescible content present within the Made Ground.

5.150 Quantitative risk assessments were undertaken as part of Curtins previous Phase 2 Ground Investigation report[1] which involved undertaking a ground gas monitoring programme and comparing results with relevant guidance documents and assessment criteria to assess Source-Pathway-Receptor Linkages. Low concentrations of hazardous gases were recorded and the site was determined as Characteristic Situation 1 (CS1) not requiring gas protection measures.

5.151 Quantitative risk assessments will be reviewed and revised with respect to the new scheme, however comparable outcomes are anticipated and ground gas remediation/protection is highly unlikely to be required. Where updated quantitative risk assessments do identify an elevated risk, design and implementation of any gas protection measures (e.g gas resistant membrane) will be required to discharge pre-commencement and pre-occupation planning conditions relating to ground contamination will be identified. Requirements would be detailed in a Phase 3 Remediation report and records of completion included in a Phase 4 verification report, also tertiary mitigation measures.

5.152 Therefore, the impact of hazardous ground gases to Site end users, Site maintenance workers and neighbours (operational stage) is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Risk of unexploded ordnance (UXO) during construction [construction workers, Site users, neighbours]

5.153 There is a potential for buried UXO within Site soils to pose a risk to end users or neighbours where construction activities disturb UXO.

5.154 A detailed risk assessment report, enclosed within Curtins Phase 1 report (**Appendix 5.3)** recommended for inclusion of following mitigation measures for ground investigation works:

> ***"All Works*** *– Site Specific Unexploded Ordnance Awareness Briefings to all personnel conducting intrusive works.*
>
> ***Medium Risk Areas****:*

Open Intrusive Works (trial pits, service pits, open excavations, shallow foundations etc.) – UXO Specialist On-site Support and Site Specific Unexploded Ordnance Awareness Briefings to all personnel conducting intrusive works.

Boreholes– Intrusive Magnetometer Survey of all borehole and pile locations/clusters down to maximum bomb penetration depth."

5.155 The likelihood of encountering UXO is further reduced given much of the Site has been previously disturbed by recent piling activities.

5.156 Any risk mitigation required as part of any future developments will, such as the tertiary mitigation measures outlined above, be assessed as part of the Construction Design and Management Regulations 2015 and will be incorporated into the Construction Phase Plan, Method Statements and Health and Safety Plans and the Construction Environmental Management Plan (CEMP).

5.157 Therefore, the impact of Unexploded Ordnance (UXO) to site end users or neighbours during construction is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Limitations and Assumptions

5.158 To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

- This assessment uses desk-based research along with findings of previous ground investigation information for the site. Full reappraisal of existing ground investigation information is recommended with respect to the revised scheme, which may find varying conditions to those outlined herein.

- The assessment assumes that the historical maps reviewed provide a reasonable indication of the potential for ground contamination beneath the Site. However, it is possible that ground contamination may exist beneath the Site, arising from land uses or events not revealed on or adjacent to the Site by the available mapping.

Flood Risk, Drainage and Water Environment

Technical Baseline

5.159 The Site has been identified as within Flood Zone 1 from Environment Agency mapping[38], indicating that the risk of flooding from rivers and sea is low risk (less than 0.1% each year).

5.160 The Site is considered to be at low risk of groundwater flooding as defined in the Manchester, Salford and Trafford Strategic Flood Risk Assessment groundwater

[38] Flood Map for Planning - https://flood-map-for-planning.service.gov.uk/

flooding map [39]. This illustrates that the Site lies outside of areas considered to be at risk of groundwater flooding.

5.161 The Site is considered to be at low risk of reservoir flooding as defined by the Environment Agency long term flood risk maps[40].

5.162 The Site is considered to be at low risk of canal flooding as defined in the Manchester, Salford and Trafford Strategic Flood Risk Assessment canal hazard map [41]. This illustrates that the Site lies outside of areas considered to be at risk of canal breach or overtopping.

5.163 The Site is located within the Conurbation Core Critical Drainage Area (CDA), as defined in the Manchester, Salford and Trafford Strategic Flood Risk Assessment, Critical Drainage Areas map [42].

5.164 The Site is considered to be at low risk of surface water flooding as defined by the Environment Agency long term flood risk maps[43].

5.165 There is a surface water public sewer located to the north of the Site flowing west along Granby Row.

5.166 Manchester City Council records also suggest that there is a 'hidden watercourse' called Shooters Brook which flows in a westerly direction as a public surface water sewer via a 1560 x 1400mm brick culvert underneath Store Street to London Road which is approximately 170m north of the Site.

5.167 The River Medlock (which is a 'main river') is the nearest main river located approximately 200m south of the Site, where it is culverted until it re-emerges above ground approximately 360m south-west of the Site.

5.168 The Rochdale Canal is located approximately 250m north-west of the Site.

5.169 The United Utilities records suggest that the surface water sewer in Granby Row discharges into the Shooters Brook at Sackville Street which then in turn discharges into the River Medlock at the culverted section under Charles Street approximately 350m south-west of the Site.

Proposed Scope of Assessment

5.170 The below sets out the proposed scope of assessment based on an understanding of the characteristics of the Site, surrounding area and the Proposed Scheme (**Chapter 4**). Where environmental effects are considered unlikely to be significant, an appropriate

[39] Manchester, Salford and Trafford Strategic Flood Risk Assessment Mapping – Groundwater Flooding Map GW 2.1.
[40] Long Term Flood Risk - https://www.gov.uk/check-long-term-flood-risk
[41] Manchester, Salford and Trafford Strategic Flood Risk Assessment Mapping – Canal Hazard Zones Map MM 3.2B.
[42] Manchester, Salford and Trafford Strategic Flood Risk Assessment Mapping – Critical Drainage Areas Map SS 4.5.
[43] Long Term Flood Risk - https://www.gov.uk/check-long-term-flood-risk

evidence base has been provided to justify the 'scoping out' of these effects ensuring the EIA and ES only assess those effects considered 'likely' to be significant.

Effects Unlikely / Not Significant

5.171 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

Increased risk of flooding during construction [construction workers and neighbours]

5.172 The Site has been identified as within Flood Zone 1 and is considered to be at low risk of fluvial and tidal flooding. Generally, all sources of flooding to the Site are considered to be low risk.

5.173 During construction, flood risk can be increased due to temporary changes in ground levels and removal of the existing drainage system. As the Site is encompassed completely by Flood Zone 1, the risk of flooding to the Site will generally be limited to surface water flooding.

5.174 The Site will be subject to surface water collection during construction, and it is anticipated that any existing drainage networks on Site will be removed as part of the construction works; potentially temporarily increasing the risk of surface water flooding.

5.175 A Surface Water Management Plan (in accordance with best practice guidance such as The SuDS Manual (C753)[44] and BS8582:2013 Code of practice for surface water management for development sites[45]) will be required to be established on Site by the contractor to control and manage surface water run-off. This will include the installation of a temporary drainage system to collect and contain run-off including any discharge agreements with the local sewer authority. It may also be necessary to introduce perimeter cut off drains to prevent overland run-off and additional interceptors for pollution and debris collection.

5.176 The existing site appeared to discharge uncontrolled run off into the combined public sewer network and therefore it is not anticipated that a significant increase in volumes will accumulate on site during construction, which should be managed by the contractor's surface water management system.

5.177 The risk of flooding during to construction workers and neighbours is not considered to be significant and will not be considered further in the EIA or reported in the ES.

[44] CIRIA (2015). The SuDS Manual (C753).

[45] BSI (2013). BS8582:2013 Code of practice for surface water management for development sites. Available at: BS 8582:2013 | 30 Nov 2013 | BSI Knowledge (bsigroup.com)

Increased risk of flooding during operation [Site end users, Site maintenance workers, neighbours]

5.178 The Site has been identified as within Flood Zone 1 and less than 0.5 hectares in size. Based on consultations under the previous planning consultations MCC confirmed that a Flood Risk Assessment is not necessary based on the low-risk zoning. A Flood Risk Assessment will however be prepared for the Site to support the BREEAM assessment and the Flood Risk Assessment will assess all sources of potential flooding and provide mitigation where necessary.

5.179 A Drainage Strategy will also be prepared given the Site is considered as 'major' development and is located within the Conurbation Core CDA. The Drainage Strategy will demonstrate that the Proposed Scheme will not increase surface water flooding and will include proposals for a robust foul and surface water drainage system including assessment against the Sustainable Drainage hierarchy and necessary capacity to accommodate volumes generated including anticipated increases in rainfall due to climate change for the lifetime of the development.

5.180 In line with MCC guidance, The Proposed Scheme will seek to achieve a minimum reduction in surface water runoff rates of 50% for Brownfield sites, with an aim of reducing runoff to Greenfield rates up to a 1 in 100-year storm event, considering climate change.

5.181 The proposed surface water drainage system will be designed to comply with the minimum reduction of flows set by the Lead Local Flood Authority (MCC) and provide capacity to accommodate the volumes generated for up to the 100-year storm event with an allowance for 45% increase rainfall. Climate change allowances are in accordance with current requirements for the Irwell Management Catchment.

5.182 The strategy will also include any necessary mitigation for surface water flood risk to the Site, such as maintaining perimeter ground levels and ensuring the ground levels fall away from buildings to not encourage overland flows to be directed towards the buildings.

5.183 Therefore, the risk of flooding to Site end users, Site maintenance workers and neighbours is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Increase in potable water demand during construction and operation [United Utilities Infrastructure]

5.184 The construction site welfare facilities will require potable water, which are expected to be higher than the existing demand based on the Site currently being unoccupied. Demand will also be lower than the Proposed Scheme requirements. The operational Proposed Scheme will increase the potable water demand compared to the existing situation.

5.185 During construction, it is assumed that bowsers will be in place on Site until such a time that a permanent solution is in place. During the construction period when a connection to the permanent solution is made, water use will be less than for operation.

5.186 Regarding operational demand, the United Utilities Water Resources Management Plan[46] states that there is forecasted to be a surplus of water available from 2020 – 2040, which a very small deficit occurring from 2041 – 2045. This accounts for future economic and population growth and climate change. A resilience risk is identified for Manchester, associated with numerous single points of failure on the regional aqueduct system which supplies Manchester. Following identification of this risk, United Utilities have identified five solutions to remove this risk, with the option of rebuilding all tunnel sections, the preference which is included in their plan.

5.187 A new supply enquiry will be required with United Utilities to determine whether the existing infrastructure has sufficient capacity or whether reinforcements are required. United Utilities will adequately assess the needs of the network to ensure their infrastructure is sufficient to accommodate the needs of the existing supply chain and future demand.

5.188 On this basis the increase in potable water demand is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Increased foul water flows/flood risk during construction [construction workers and neighbours]

5.189 The construction site welfare facilities will generate foul water flows which are expected to be discharged in the local foul water sewerage network. The flow rates are expected to be higher than the existing discharge rates based on the Site currently being unoccupied. The proposed welfare facilities are anticipated to generate relatively low discharge rates which will be significantly lower than the proposed scheme design rates.

5.190 Therefore, the risk of flooding from increased foul flows during construction to construction workers and neighbours is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Increased foul water flows/flood risk during operation [Site end users, Site maintenance workers, neighbours]

5.191 The Proposed Scheme will increase the amount of foul water discharging to the sewerage system compared to the existing situation. This will result in an increase of foul water flow rates to the existing sewer Infrastructure.

5.192 The proposed drainage solution will remove 100% of the existing surface water flows discharging to the existing combined sewer network and discharge proposed surface water flows to the existing surface water sewer network at a maximum of 50% of existing flows. Proposed foul flows are anticipated to be significantly less than existing unrestricted surface water flows, which will reduce the overall flood risk on the wider network catchment.

5.193 Therefore, the risk of flooding from increased foul flows during operation to Site end users, Site maintenance workers and neighbours is not considered to be significant and will not be considered further in the EIA or reported in the ES.

[46] United Utilities (2019). Water Resources Management Plan. Available at: Water Resources Management Plan (unitedutilities.com)

Increased risk of pollution to the existing sewerage infrastructure during construction [United Utilities infrastructure, Shooters Brook, River Medlock and neighbours]

5.194 The existing site drainage connects to the existing combined public sewer network in Granby Row and Echo Street. The Proposed Scheme drainage is likely to discharge into the surface water sewer in Granby Row, which discharges into the Shooters Brook, which then discharges into the River Medlock. Therefore, the risk is dependent on the stage of construction.

5.195 The primary impact on off-site sewers and watercourses during construction is silt and other debris being washed into the pipework on site. Debris may accumulate over time and progressively reduce flow capacity within the pipeline which could lead to surcharging and possible flooding from the upstream system.

5.196 During construction, measures will be necessary to limit the amount of silt and other pollutants that are able to reach the existing sewer infrastructure. Silt will be controlled using traps and measures implemented to reduce the amount of material that could be washed into the Watercourse via overland flows. The use of cut off trenches to intercept the overland flow routes will also prevent pollution.

5.197 The risk of fuel and other oils entering the existing sewer infrastructure can be controlled by designating specific areas where refuelling and maintenance occurs. There should be spill kits located around the Site in easy reach and appropriate training included in the Site induction/toolbox talk on how to effectively use the kits.

5.198 Storage of materials will be located an appropriate distance away from the watercourse to ensure there is limited flow routes for contamination to use to get the existing sewer infrastructure.

5.199 All the proposed mitigation measures will be incorporated into the CEMP and recorded as part of the Construction Design and Management requirements.

5.200 Therefore, the risk of pollution during construction to United Utilities infrastructure, Shooters Brook, River Medlock and neighbours is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Increased risk of pollution to the existing sewerage infrastructure during operation [United Utilities infrastructure, Shooters Brook, River Medlock and neighbours]

5.201 The Proposed Scheme drainage is likely to discharge into the surface water sewer in Granby Row, which discharges into the Shooters Brook, which then discharges into the River Medlock.

5.202 Development has the potential to pollute the existing sewer infrastructure and river network, particularly where there are areas with regular vehicle movement located within the site.

5.203 The Proposed Scheme includes limited access for vehicle use and access is generally limited to the southern boundary along the servicing access ramp.

5.204 Servicing extents, frequency of servicing will need to be reviewed as part of the detailed design for the development. However, based on the current strategy, a petrol

interceptor or filter chamber will be required within the drainage system to serve the external access ramp prior to discharge off site.

5.205 Therefore, the risk of pollution during operation to United Utilities infrastructure, Shooters Brook, River Medlock and neighbours is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Limitations and Assumptions

5.206 To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

- The findings are limited to desk-based information only.

Lighting

Technical Baseline

5.207 There are not currently any lighting installations on Site. In the surrounding area, there is street lighting on Granby Row and Echo Street, where there will also be lighting associated with vehicles using these roads. The surrounding developments will also produce some lighting from external lighting and rooms being lit.

5.208 Given the city centre location of the Site, it is likely the Site would be classified as an E4 Environmental Zones (high ambient brightness) lighting environmental zone[47].

Effects Unlikely to be Significant

5.209 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (PEMP) provided in **Appendix 2.1**.

Disturbance due to obtrusive light during construction [nearby residents]

5.210 Light pollution (or obtrusive light) comprises any adverse effects of artificial lighting including glare[48], light trespass[49]/spill[50] and sky glow[51], occurring as a result of temporary construction activities associated with the Proposed Scheme. The nature of the effect and its significance is relative to the existing baseline conditions (i.e. lighting environment experienced by existing receptor) and general proximity to potential light

[47] NLIPI (2007). What are lighting environmental zones? Available at: https://www.lrc.rpi.edu/programs/NLPIP/lightingAnswers/lightPollution/environmentalZones.asp [Accessed 18/01/2023].

[48] The uncomfortable brightness of the light source against a dark background which results in dazzling the observer, which may cause nuisance to a specific receptor.

[49] The spilling of light beyond the boundary of a property, which may cause nuisance to others.

[50] The unwanted spillage of light onto adjacent areas which may affect sensitive receptors (particularly residential properties and ecological sites).

[51] The direct upward spill of light into the sky, which can cause a glowing effect and is often seen above cities when viewed from a dark area.

sources, where the greatest effect is felt by receptors adjacent to, or in close proximity to a light source (i.e. within 50m).

5.211 Lighting will be required during construction activities in order to provide a safe working environment, however this will be within the context of a high brightness city centre area. Nonetheless, potential adverse effects arising from temporary construction lighting will be controlled through a series of best practice measures, in line with lighting industry standards and guidance including the CIE publication 'Technical Report Document 129[52] and BS EN 12464-2:2014[53], incorporated as part of a CEMP. The following measures are proposed in order to control Light Spill, Glare and Sky Glow effects and thus manage light pollution:

- Where practicable, construction lighting in the Site would be designed to comply with Environmental Zone E4 in accordance with the ILP Guidance Note GN01[54];
- Illuminance levels arising from temporary lighting to be designed in accordance with BS EN 12464-2: 2014 and CIE 129;
- Placement of temporary lighting required to ensure safe working conditions and to maintain security, to have due regard of sensitive receptors (i.e. occupied residential premises);
- Lighting to be directed so as avoid unnecessary Light Spill outside of construction areas and to ensure that the light distribution is toward the task area;
- Lighting to be switched off when not required for safe working conditions and Site security;
- Use of light shields/baffles to control upward light to within the maximum 15% set out in the ILP Guidance Note GN01, where possible;
- Lighting to be kept at 0° tilt to avoid Sky Glow, where practicable; and
- Light dimming and automatic switch off would be used (where appropriate).

5.212 Therefore, disturbance to nearby residents due to obtrusive light during construction is considered unlikely to be significant and will not be considered further in the EIA or reported in the ES.

Disturbance due to obtrusive light during operation [nearby residents]

5.213 Operational lighting will be required for the Proposed Scheme to ensure a safe environment.

5.214 Obtrusive light can be avoided through appropriate lighting design in line with best practice, guidance and standards, including but not limited to: ILP's PLG04[55]; ILP

[52] CIE - Technical Report Document 129 (1998) Guide for Lighting Exterior Work Areas.
[53] British Standards (2014) BS EN 12464-2 – Lighting of Work Places – Part 2: Outdoor Work Places.
[54] Institute of Lighting Professionals (ILP) (2021) Guidance Notes for the Reduction of Obtrusive Light (GN01).

Guidance Note GN01[56]; British Standard 5489-1:2020[57]; BS EN 13201-2 – Road lighting[58],.and BS EN 12464-2 – Lighting of Work Places[59]. Measures to mitigate effects from obtrusive light, as set out in the identified guidance, include the selection of the correct type of luminaire, the use of shields, hoods (as required), as well as the design and positioning of lights (e.g. power, orientation, and height of the luminaire).

5.215 Overall, when considering the city centre location and baseline lighting, disturbance to residents due to obtrusive light during operation are considered unlikely to be significant and will not be considered further in the EIA or reported in the ES.

Waste

Technical Baseline

5.216 The Site is currently vacant, and so there is no existing waste generating uses on Site.

Effects Unlikely to be Significant

5.217 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

Waste generation during construction [waste facilities]

5.218 Sources of waste during the construction stage are assumed to relate to construction materials (including packaging) and surplus cut to create finished floor levels. The remedial solution may include the removal of soil (which may be contaminated). Such waste will be handled, processed and removed from Site by suitability qualified contractors, all being undertaken in line with The Hazardous Waste (England and Wales) Regulations 2005.

5.219 Using the anticipated total floorspace (41,794m^2 Gross External Area) multiplied by industry benchmarks[60] for construction waste arisings (10 tonnes per 100m^2 gross area[61]), it is anticipated that 4,179.4 tonnes of waste will be generated.

5.220 It is anticipated that generic waste produced during construction would be controlled through the implementation of a CEMP, secured by planning condition. The CEMP will

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[55] Institute of Lighting Professionals (ILP) PLG04 Guidance on Undertaking Environmental Lighting Impact Assessment (2013)
[56] ILP Guidance Note 01/21 The Reduction of Obtrusive Light (2021)
[57] British Standard (2020). 5489-1:2020 Design of road lighting. Lighting of roads and public amenity areas. Code of practice.
[58] BS EN 13201-2:2015 Road Lighting Performance Requirements (2016)
[59] BS EN 12464-2:2014 Light and Lighting – lighting of work places. Outdoor work Places (2014)
[60] BRE (2018). Home Quality Mark ONE, Technical Manual England. Available at: Home Quality Mark ONE
[61] This has been established using professional judgement and is based on good practice principles developed within the Home Quality Mark.

be informed by the waste provisions of the Environmental Protection Act 1990[62] and the Environmental Protection (Duty of Care) Regulations 1991[63] and will set out the principles and legal requirements relating to waste, including any hazardous waste that is encountered and required to be exported off-site for disposal.

5.221 The CEMP will also describe how materials will be managed efficiently and disposed of legally during construction. It will also outline the aims, objectives and on-going management responsibilities, including management practices, to be implemented during the construction stage, and will set targets for the reduction, diversion from landfill and reuse of waste.

5.222 Therefore, waste generated during construction is considered unlikely to be significant and will not be considered further in the EIA or reported in the ES.

Waste generated during operation [waste facilities]

5.223 Waste generated during the operational stage is anticipated to include generic waste streams arising from the residents.

5.224 British Standard (BS) 5906:2005 Waste Management in Building – Code of Practice suggests that the weekly waste arisings from an 'domestic' use is equal to the number of dwellings x [(70 litres x average number of bedrooms) +30]. At this stage it is assumed that there will be a mix of one beds and studios (some of which will be occupied on a dual occupancy basis). Whilst the studios may be occupied on a dual basis, they are assumed to be one beds for the purpose of this calculation (i.e. there will be 1225 dwellings each with one bedroom). On this basis the Proposed Scheme would be considered to generate approximately 122,500 litres (l) (circa 122.5.5m^3) a week, approximately 6,370,000l (circa 6,370m^3) per annum (assuming 52 weeks per year). It should be noted that this does not take account of any waste arising reused, recycled or diverted from landfill by another means.

5.225 The Proposed Scheme will be designed in order to take account of appropriate provision for waste storage and handling facilities/areas, inclusive of areas for segregation of waste and recycling. In addition, it is assumed that all waste storage/handling facilities will be designed in accordance with British Standard (BS) 5906:2005 Waste Management in Building – Code of Practice. The Application will include a Waste Management Strategy which will set out the principles, strategy and targets for the management and storage of waste and maximise recycling, in accordance with MCC established policy.

5.226 Therefore, effects related to operational waste are considered unlikely to be significant and will not be considered further in the EIA or reported in the ES.

[62] Environmental Protection Act 1990 No. 43 Available at: https://www.legislation.gov.uk/ukpga/1990/43/contents [Accessed: 18/01/2023].
[63] Environmental Protection (Duty of Care) Regulations 1991 No. 2839. Available at: https://www.legislation.gov.uk/uksi/1991/2839/made#:~:text=The%20duty%20requires%20such%20persons,person%20or%20to%20a%20person [Accessed: 18/01/2023].

Major Accidents and/or Disasters

Technical Baseline

5.227 The Site does not fall within any consultation distances for which the Health and Safety Executive needs to be consulted for.

Effects Unlikely to be Significant

5.228 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

5.229 As detailed within Schedule 4, Paragraphs 5 and 8 of the EIA Regulations, there is the requirement to consider the risk of major accidents and/or disasters relevant to the Proposed Scheme.

5.230 Although there is the potential for a wide range of major accidents and disasters that could occur, the probability, likelihood and frequency is very low, often due to the management of a risk under established legislative requirements.

5.231 The EIA Regulations do not specify the need for the consideration of natural disasters. However, for completeness, this has been considered.

5.232 The probability, frequency and likelihood of natural disasters arising from climatic occurrences (i.e. hurricanes) are considered to be very low due to the natural climatic condition of the UK within the global climate system. Specific geological events (i.e. earthquakes, tsunami, volcanic incidents etc.) are also considered to be very low due to the general absence of required geological conditions (i.e. area of tectonic plate interaction) within or in proximity to the UK. Although earthquakes have occurred within the UK, the magnitude of such events has generally been low.

5.233 Following a qualitative appraisal of major accidents and/or disasters that were relevant to the Proposed Scheme, the following have been considered further and are presented in **Table 5.1**. Based on the evidence provided within **Table 5.1**, the likelihood of events with a significant consequence is considered to be low/unlikely and will not be considered further in the EIA or reported in the ES.

Table 5.7: Appraisal of the Risk of Major Accidents and/or Disasters

Effect	Appraisal
A major accident caused by ground subsidence and associated structural/building collapse	All earthworks and foundation design will be in accordance with relevant industry guidance, including but not limited to CIRIA Report C572: Treated ground engineering properties and performance[64], British

[64] CIRIA (2002). Report C572: Treated ground engineering properties and performance.

Effect	Appraisal
	Research Establishment document FB75: Building on Fill - Geotechnical Aspects[65] and British Standard 6031:2009: Code of Practice for Earthworks[66], thereby negating the probability and likelihood of any significant effect.
Major flood event caused by an extreme weather event	As described under the 'Flood Risk and Drainage' above, the risk of flooding is not considered to be significant due to the drainage strategy to be implemented as part of the Proposed Scheme and the Site being in a Flood Zone 1 (so is at low risk of flooding). The Proposed Scheme has been designed and will be constructed in line with relevant industry standards and guidance. Adherence to such guidance, which accounts for possible extreme events, is considered sufficient to negate the probability and likelihood of any significant effect.
Major accidents on the local road network	The management of the road network and the enforcement of stringent safety standards reduce the risk, both in terms of the frequency and likelihood to a low level. The risk of accidents has also been scoped out under 'Transport and Access' above. This is not considered to be significant due to the limited traffic flows from the Proposed Scheme.
Accidents arising from vandalism, arson or terrorism	The risks associated with technological failures and accidents will be reduced through appropriate design of the Proposed Scheme, including the use of fire alarms. Target acts of vandalism, arson or terrorism cannot be fully mitigated, but the adoption of appropriate security measures at the construction and operational stages, such as security lighting, will help to minimise the likelihood of such events occurring. The final building management company will have in place the required emergency producers/practices (i.e. Fire Emergency Evacuation Plan (FEEP)) or apparatus/instruments (i.e. smoke detectors/sprinklers) required by law for these uses. In addition, the buildings will be designed, in line with Building Regulations Approved Document D: Fire Safety, with appropriate fire preventative measures

[65] British Research Establishment (2015). FB75: Building on Fill - Geotechnical Aspects. 3rd Edition.
[66] British Standard (2009). 6031:2009: Code of Practice for Earthworks.

Effect	Appraisal
	(i.e. fire doors, extinguishers etc.) and all external façades and materials will meet the necessary fire resistance standards set out within Building Regulations and by law. Given this, the potential risks will be very low.

TV Reception

5.234 TV reception is not an environmental topic that would usually be considered in an EIA. However, given the 2017 application considered this topic (it was scoped out of the 2017 ES), a high level appraisal has been included below.

Effects Unlikely to be Significant

5.235 The following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

Interference with TV reception [surrounding residents]

5.236 The 2017 application was supported by television baseline reception survey undertaken on 25/04/2017. This reported that:

- The television transmitter serving the area surrounding the Site is Winter Hill. This is a UK main transmitter, broadcasting local and national television channels;
- Interference would be most likely to occur within 1km of the Site. Within this distance, the recorded television signal strength and quality was defined as 'Low';
- In the majority of the area within 1km of the Site, main roads (A6, A57), industrial buildings and car-parks existed where television signals are not utilised;
- Where residential areas existed which had a terrestrial aerial of similar height or less than the Proposed Scheme, television interference could occur. This was because the recorded television signal strength and quality at the two survey locations within 1km was defined as, at best, 'Low';
- Television interference beyond 1km of the shadow of the Proposed Scheme was unlikely;
- In the event that television interference was reported following the commencement of construction of the Proposed Scheme, this would be investigated to establish whether the interference is attributable to the Proposed Scheme and to what extent. Should adverse effects attributable to the

Proposed Scheme be identified then mitigation would be implemented (the requirement for such being a cable, controlled through a conditional planning approval). Mitigation would include one or a combination of the following measures:

- Replacement of receiving aerial with a more directional or higher gain, aerial;
- Repositioning the receiving aerial so that the received signal is stronger; and
- Replacing terrestrial reception equipment with satellite or cable reception equipment.

5.237 This is considered to remain valid for the Proposed Scheme now, and therefore, interference with TV reception is not considered to be significant and will not be considered further in the EIA or reported in the ES. An updated TV reception survey report will be submitted with the Application.

6. Socio-Economics and Human Health

Technical Baseline

6.1 As of 2021, Manchester accommodated a total of 422,290 workforce jobs, which is approximately 30% of the 1.4 million jobs recorded in the Greater Manchester Combined Authority (GMCA) area as a whole[67]. Some 11,000 people were employed in the construction sector in Manchester; this equates to 3% of total employment, which is slightly lower than the sector's proportionate contribution to the total workforce in the wider GMCA region (5%). The key employment sectors in Manchester include professional, scientific & technical services (accommodating 59,000 jobs, 14% of employment); health (52,000, 12%); business administration & support services (47,000, 11%); and education (40,000, 10%).

6.2 Over the year to June 2022, the average economic activity rate amongst the working-age (aged 16-64) resident population of Manchester (at 75%) was slightly lower than estimated in the GMCA (at 76%); the rates in both areas were lower in turn than in England as a whole (79%)[68]. Working-age employment rates were also lower locally (69%) than GMCA (72%) and nationally (76%). However, it is noted that Manchester also accommodates a larger student population (34,100 students, accounting for 9% of the population) than GMCA (7%) and England (6%)[69].

6.3 As of November 2022, there were circa 22,325 people claiming out-of-work benefits in Manchester principally for the reason of being unemployed[70], accounting for 7.4% of economically active residents. Despite being lower at latest count than the peak recorded during the COVID-19 pandemic, claimant numbers remain 36% higher in the local area than recorded in January 2020. The number of claimants across both the GMCA and England also remain higher (though, to lesser extents – 29% and 30% respectively) than recorded pre-pandemic.

6.4 Analysis of ONS data regarding Jobseeker's Allowance (JSA) claimants[71] – a subset of the above – indicates that just over 300 people were specifically seeking employment in construction-related trades in Manchester in November 2022, rising to c. 1,700 at the scale of GMCA.

6.5 The NHS 'Find a GP' online search tool[72] identifies numerous GP surgeries which are accessible from the Site, the closest being The Docs, located on Bloom Street. A further 6 GP surgeries are identified within one mile of the Site, with additional provision existing slightly further afield. Ancoats Urban Village Medical Practice, a 0.6 mile walk from the Site, has capacity for approximately 7,600 extra patients[73].

[67] ONS via Nomis (2022). Business Register and Employment Survey: 2021.
[68] ONS via Nomis (2022). Annual Population Survey.
[69] Ibid.
[70] ONS via Nomis (2022). Claimant Count: November 2022.
[71] ONS via Nomis (2022). Jobseeker's allowance: November 2022.
[72] NHS (2022). 'Find a GP' [Online]. Available at: https://www.nhs.uk/service-search/find-a-gp
[73] NHS Digital (2022). General Practice Workforce, 30 November 2022.

6.6 Public Health England[74] report on various indicators regarding health outcomes in Manchester in comparison with the wider region and nationally. Life expectancies for both men (75.5 years) and women (79.9 years) in Manchester are lower than those recorded in the GMCA (respectively 77.5 and 81.3 years) and in England as a whole (79.4 and 83.1). A lower proportion of adults are classified as overweight or obese in Manchester (62%) than in the GMCA area (66%) and in England as a whole (64%). Childhood obesity is, however, more prevalent in Manchester (where 28% of Year 6 children are obese) than in the GMCA (25%) and England as a whole (23%). Whilst a higher percentage of adults are physically active[75] (63%) in Manchester in comparison with the GMCA (62%), the rate in both areas is lower than in England as a whole (66%). The rate of people being killed or seriously injured on roads is marginally higher in Manchester than in England[76]; and the rate of hospital admissions for alcohol-related conditions is higher in Manchester and the GMCA than nationally.

Proposed Scope of Assessment

6.7 The below sets out the proposed scope of assessment based on an understanding of the characteristics of the Site, surrounding area and the Proposed Scheme (**Chapter 4**). Where environmental effects are considered unlikely to be significant, an appropriate evidence base has been provided to justify the 'scoping out' of these effects ensuring the EIA and ES only assess those effects considered 'likely' to be significant.

Effects Unlikely / Not Significant

6.8 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

Access to primary healthcare facilities [Residents of the Proposed Scheme and patients at existing facilities]

6.9 Strong, vibrant, sustainable and cohesive communities require good quality, accessible public services and infrastructure. Access to primary healthcare facilities (e.g. GP services) has a direct beneficial effect on human health and is vital towards ensuring that health outcomes and priorities are achieved.

6.10 It is estimated that 1,225 new PBSA apartments will likely accommodate a maximum of 1,830 residents. As outlined within HUDU guidance[77], the Royal College of GPs recommend a ratio of one GP per 1,800 registered patients; this therefore suggests that the Proposed Scheme could generate demand for approximately one GP. As outlined in the Technical Baseline section, there are a number of primary healthcare

[74] Public Health England (2022). Local Authority Health Profiles: Manchester.
[75] Defined as undertaking a minimum of 150 minutes of moderate physical activity (e.g. brisk walking; cycling for travel or leisure; playing individual or team sports; gym exercises; gardening) per week.
[76] Data not available at Combined Authority level.
[77] Healthy Urban Development Unit (2009). HUDU Planning Contribution Model: Guidance Notes.

facilities accessible from the Site and it is anticipated that these will be able to meet the demand generated by the residential population of the Proposed Scheme. Ancoats Urban Village Medical Practice, for example, is a 0.6 mile walk from the Site and has capacity for approximately 7,600 extra patients when applying the Royal College of GPs recommended ratio.

6.11 Therefore, access to primary healthcare facilities for residents of the Proposed Scheme and patients at existing facilities is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Social cohesion and inclusive design [Residents of the Proposed Scheme and existing local communities]

6.12 Developments should connect with existing communities (e.g. through layouts and access points which avoid physical barriers and severance) and land-uses and spaces should encourage social interaction, taking into account principles of inclusive and age-friendly design.

6.13 The Site is already cleared. The Proposed Scheme will therefore result in no displacement of any existing residential communities. The Site's location within Manchester city centre will enable coherent integration with existing residential and commercial areas and transport links (including Manchester Piccadilly station in the immediate vicinity). The local provision of commercial, leisure and other amenity spaces will therefore be accessible for future Site users (i.e. residents, workers and visitors).

6.14 Landscaping / open space will be provided in the private courtyards between the main blocks and the public realm surrounding the building. This will involve general resurfacing, lowered kerbs, widening the pavement and tree planting. Lightweight furniture and catenary lights will also be introduced to the courtyard space. Overall, these features will contribute to the amenity of residents as place to socialise.

6.15 Therefore, social cohesion and inclusive design for residents of the Proposed Scheme and existing local communities is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Crime reduction and community safety [Residents of the Proposed Scheme and existing local communities]

6.16 Sites should be kept secure during demolition and construction to ensure that potential for crime and anti-social behaviour is minimised. Once operational, developments should incorporate design elements and site management measures to help 'design out' crime, to help people feel secure, again minimising the potential for crime and anti-social behaviour.

6.17 Site security arrangements during the construction stage will be in line with the requirements set out in the Construction (Design and Management) Regulations 2015[78]. The design of the Proposed Scheme will be informed by 'Secure by Design' principles and appropriate design and site management measures (including appropriate lighting and digital entry systems at each building) will be implemented to

[78] Secretary of State (2015). Construction (Design and Management) Regulations 2015.

ensure that the potential for crime and anti-social behaviour is minimised. Once operational, the Proposed Scheme will have on-site security staff, with staff present 24 hours a day.

6.18 Therefore, crime reduction and community safety for future residents is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Access to healthy food [Residents of the Proposed Scheme]

6.19 Access to healthy and nutritious food can improve diet and prevent chronic diseases related to obesity. Healthy food options should be available and easily accessible to those using and working at new developments to enable and promote healthy lifestyles.

6.20 Numerous existing healthy food options will also be accessible from the Site; a wide range of options in terms of supermarkets and foodstores are located in Manchester city centre and surrounds, including a small Sainsbury's Local at Manchester Piccadilly Station within 5 minutes' walk from the Site, and a larger Aldi supermarket on Great Ancoats Street, a 10-minute walk from the Site.

6.21 Therefore, access to healthy food for residents of the Proposed Scheme is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Access to active and sustainable travel options [Residents of the Proposed Scheme]

6.22 Active travel and sustainable travel options should be accessible to those living and working at and otherwise using new developments to enable and promote healthy and sustainable lifestyles, through facilitating physical activity and zero / low emissions transport, such as walking, cycling and public transport options.

6.23 The Proposed Scheme is within a very short walking distance to Manchester Piccadilly Station enabling travel to a wide range of local and national destinations. The station also has a Metrolink tram stop, which provides links across the GMCA area and numerous local bus routes are also accessible from the station. The Proposed Scheme will encourage travel by foot and bike by widening paths and through the provision of 610 private, covered and secure cycle spaces. The Site's accessible location and additional measures to maximise the residential population's access to active travel and sustainable travel options will be beneficial and enhance the health and wellbeing of future Site users (residents, workers and visitors).

6.24 Therefore, access to active and sustainable travel options for residents of the Proposed Scheme is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Access to open space and sports & recreation facilities [Residents of the Proposed Scheme]

6.25 Providing secure, convenient and attractive open / green space, public amenity space and facilities for sports and leisure activities can lead to increased levels of physical activity and reduce levels of heart disease, strokes and other ill-health problems that are associated with both sedentary occupations and stressful lifestyles. There is also a

growing body of evidence that access to open spaces and facilities for exercise is important in helping to maintain and/or improve mental health[79].

6.26 There are no existing open spaces which will be lost due to the Proposed Scheme. Whilst the specifics in terms of type and quantum of provision to be delivered on-Site are yet to be confirmed, the Proposed Scheme will include a mixture of new high quality public realm and open space. Public spaces will also incorporate much-needed green infrastructure to enhance 'biophillic city'[80] elements of the design.

6.27 A range of existing sports and recreation facilities and open spaces are located within the immediate locality of the Site – including gyms (e.g. the Gym Group and PureGym), small-sided football pitches (e.g. Ardwick Powerleague) and public green space such as Vimto Park, Sackville Gardens and the recently-opened Mayfield Park – which will be available for fitness, leisure and relaxation purposes by future Site users (including residents, visitors and workers).

6.28 Therefore, access to open space and sports & recreation for future residents is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Access to training opportunities [Local labour force]

6.29 Employment and income are key determinants of personal and societal socio-economic and physical and mental health and wellbeing, whilst unemployment is known to be a significant contributor to poverty, illness and a reduction in personal and social esteem. New development can improve people's access to training opportunities; for example, through delivering apprenticeships and other employment and training programmes during the construction phase and on-Site once operational.

6.30 Whilst the Proposed Scheme could deliver opportunities for people to access training (such as apprenticeships and/or placements during construction and at on-Site employment uses, which will be dependent on construction contractors and the Proposed Scheme's future occupiers) it is considered that these are likely to comprise only a limited proportion of the total jobs supported during the construction and operational stages. Whilst a beneficial effect which could help meet local needs for apprenticeship opportunities, their delivery is anticipated to be of a scale which would be unlikely to be significant.

6.31 Therefore, access to training opportunities for the local labour force is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Employment generated during the operational stage [Local labour force]

6.32 Sustained employment, such as that provided by the operation of businesses, is a key determinant of societal socio-economic health and provides wider physical and mental health benefits for the worker. Unemployment is known to be a significant contributor to poverty, illness and a reduction in personal and social esteem, and therefore the

[79] NHS Healthy Urban Development Unit (2019). Rapid Health Impact Assessment Tool (4th Edition).

[80] 'Biophilic' design refers to the practice of connecting people and nature within built environments and communities.

reduction in unemployment is often held as a key economic objective. New development can improve people's access to employment opportunities; for example, through the opening of new work opportunities at on-site occupiers once operational.

6.33 Whilst the operations of the Proposed Scheme could deliver new employment opportunities (for example, concierge, maintenance and security, which will be dependent on the Proposed Scheme's future occupiers), it is understood that the number of jobs created will be small in scale relative to recent employment trends locally. Whilst a beneficial effect which could contribute towards creating employment opportunities, their delivery is anticipated to be of a scale which would be unlikely to be significant.

6.34 Therefore, employment generated during the operational stage for the local labour force is not considered to be significant and will not be considered further in the EIA or reported in the ES.

New Homes Bonus and Council Tax revenue [Local authority revenue]

6.35 In the 2017 ES assessment, effects relating to the New Homes Bonus and Council Tax were considered. However, the former is in the process of being phased out and the latter not relevant as full-time students living in PBSA are Council Tax exempt.

6.36 Therefore, the New Homes Bonus and Council Tax and impact on local authority revenue is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Effects Likely / Significant

6.37 **Table 6.1** outlines the effects (and associated receptor[s]) that are considered to be likely and significant and therefore will be assessed within the EIA and reported in the ES.

Table 6.1: Potential Likely Significant Effects and Sensitive Receptors

Effect	Receptor(s)	Applicable Stage(s)
Employment generated during the construction stage	Local labour force	Construction
Provision of PBSA	Students requiring accommodation	Operation

Assessment Methodology of Effects Likely / Significant

6.38 The following background surveys/studies have/will be undertaken.

Table 6.2: Background Studies and Baseline Information

Study / Survey / Analysis / Evaluation	Overview	Date of Completion
Completed		

Study / Survey / Analysis / Evaluation	Overview	Date of Completion
Desk-based study of publicly accessible socio-economic and human health data	Data obtained to understand prevailing socio-economic and human health conditions	January 2023
Pending		
Further desk-based study of publicly accessible socio-economic and human health data related to effects scoped into the assessment	Data will be obtained to understand prevailing socio-economic and human health conditions	April 2023
Economic impact modelling	Exercise to determine net additional economic impact, thereby informing the magnitude of relevant effects	April 2023

6.39 In the absence of formal guidance, appropriate study areas will be defined, which will be based on an understanding of relevant local and wider economic geographies and a consideration of the extent to which socio-economic and human health effects are likely to be contained therein. A local impact area will be defined to cover the administrative area of Manchester, with a wider impact area then defined to draw in the surrounding GMCA area. These are established geographical areas that also reflect existing patterns of labour force containment[81].

6.40 Best practice and methodological guidance will be drawn upon as appropriate to inform key elements of the assessment, including the Homes and Communities Agency's (HCA, now known as Homes England) Additionality Guide[82] and Employment Density Guide[83]. Net additional economic impacts of employment will be presented, accounting for a range of economic additionality factors such as leakage[84], displacement[85] and multiplier effects[86]. Provision of PBSA will be considered in the context of current supply and demand for bedspaces in Manchester.

[81] ONS via Nomis (2022). Census 2021.
[82] Homes & Communities Agency (2014). Additionality Guide (4th Edition).
[83] Homes & Communities Agency (2015). Employment Densities Guide (3rd Edition).
[84] The measure of the extent to which impacts (such as employment) will occur outside of the defined local and wider impact areas.
[85] The measure of the extent to which the Proposed Scheme will lead to existing businesses or employees within the defined local and wider impact areas relocating activities to the Proposed Scheme, as opposed to the attraction of new investment and employment arising from the Proposed Scheme.
[86] The measure of further economic activity (such as employment, expenditure or income) associated with supply chain expenditure, additional local income (from employment) and longer-term expenditure effects.

6.41 The sensitivity of receptors will be determined by way of observed change in receptors locally compared to local, regional and national trends. Through observation of a receptor's capacity for change relative to wider comparator areas and/or national standards, the sensitivity of receptors locally will be observed. Consideration will also be given to the priority attributed to specific receptors in strategy and policy terms, particularly in the case of qualitative receptors and those where quantitative evidence is not available. The assignment of sensitivity will be based on professional judgement.

6.42 Once the sensitivity of the receptor has been identified, the change attributable to the Proposed Scheme will be benchmarked against the observed rate of change in the corresponding social, economic or health-related baseline. This will allow a relative assessment of the magnitude of change that is attributable to the Proposed Scheme to be conducted.

6.43 The assessment of likely significant effects to sensitive receptors will consider the sensitivity of the receptor (on a scale of high, medium, low and negligible) and the magnitude of change (on a scale of large, medium, small and negligible) to determine the level of effect on a scale of major, moderate, minor and negligible. Significant effects will be determined following this through professional judgment.

Limitations and Assumptions

6.44 To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

- The assessment is desk-based and therefore reliant on data and information obtained from a variety of official published sources (such as the ONS's 2011 and 2021 Censuses and Business Register and Employment Survey[87]). No further verification of these sources will be undertaken (unless otherwise stated in the ES). Each data source has methodological limitations related to data collection and surveys only represent the socio-economic context at a specific point in time.

- The future baseline will draw upon employment forecasts produced by Experian[88]. There are known uncertainties to using such trend-based forecasts (especially in the current context of economic uncertainty caused by factors such as the COVID-19 pandemic, Brexit and the war in Ukraine); however, the use of such forecasts is considered appropriate for drawing conclusions about how the economy and labour market might change in the future.

- Where necessary, professional and realistic assumptions will be made and applied, such as those relating to the economic additionality factors of leakage, displacement and multiplier effects.

[87] ONS via Nomis (2022). Business Register and Employment Survey: 2021.
[88] Experian (2023). Local Market Forecasts Quarterly: December 2022.

7. Climate Change

7.1 The UK Climate Change Projections (UKCP18)[89] set out that climate change is projected to lead to increasing annual temperatures, decreasing summer rainfall and increasing winter rainfall as a result of increasing global Greenhouse Gas (GHG) emissions. This applies to the UK, including the Site.

7.2 In this context the EIA regulations require the consideration of Climate Change, including how resilient development is to the effects of climate change, and how development mitigates its impact on climate change through GHG emissions.

7.3 IEMA has prepared guidance for EIA practitioners for both Climate Change Adaptation[90] and Mitigation[91] which will be used in the Climate Change assessment for the Proposed Scheme.

Technical Baseline

Climate Change Mitigation

7.4 The existing Site has been cleared in preparation for development. In this context current GHG emissions from the Site are considered to be zero.

7.5 Current local baseline conditions regarding greenhouse gas (GHG) emissions will be reported in the ES Chapter and established at the local authority (Manchester City Council) and national level from the latest (2020) UK Government local authority and regional carbon dioxide emissions national statistics: 2005 to 2020[92].

7.6 The future baseline conditions regarding GHG emissions will be established in the form of carbon budgets proposed for Manchester via the Tyndall Centre[93] and the UK[94]. These will be used to contextualise GHG emissions from the Development in order to establish the magnitude if its net GHG effect.

Climate Change Resilience

7.7 Current baseline climate conditions for the Site have been established from the Met Office's closest automatic weather station at Rochdale[95], approximately 16km to the north. The data provides average monthly conditions for the 1991-2020 period summarised in **Table 7.1** below to show summer maximum temperature and summer and winter rainfall.

Table 7.1: Current Climate Baseline

Description	Temperature / Rainfall

[89] https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/index
[90] IEMA (2020). Environmental Impact Assessment Guide to Climate Change Resilience and Adaptation.
[91] IEMA (2022). EIA Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance.
[92]: https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-to-2019
[93] Local and Regional Implications of the United Nations Paris Agreement on Climate Change (manchester.ac.uk)
[94] Carbon Budgets - GOV.UK (www.gov.uk)
[95] Greenwich Park (Greater London) UK climate averages - Met Office

Description	Temperature / Rainfall
Summer maximum temperature (°C)	19.3
Summer rainfall (mm per month)	93.3
Winter rainfall (mm per month)	118.4

7.8 Future baseline climate conditions for the Site have been established from the Met Office's latest climate projections UKCP18[96] for the 25km OS grid square within which the Site is located (384707, 397734).

7.9 The projections comprise forecast changes relative to 1991 to 2020 baseline conditions for annual and seasonal temperatures and rainfall as well as sea level rise and wind speed. In accordance with IEMA guidance, projections are taken from the "high" emissions scenario (known as "RCP8.5"), 50th percentile (i.e. median) scenario for the 2050s (the Works) and 2080s (Completed Development).

7.10 Projected changes to seasonal and annual temperature and rainfall relative to 1991-2020 conditions which could result in severe weather effects such as droughts, floods and heat waves are provided in **Table 7.2.**

Table 7.2: Future climate baseline

		2050s		2080s	
Description	Temperature / Rainfall baseline	Change to baseline	Future baseline temperature / rainfall	Change to baseline	Future baseline temperature / rainfall
Summer maximum temperature (°C)	19.3	2.4	21.7	4.8	26.5
Summer rainfall (mm per month)	93.3	-20%	74.7	32%	123.2
Winter rainfall (mm per month)	118.4	7%	126.7	14%	135.0

Effects of Climate Change

7.11 The UK Climate Projections provide guidance on the anticipated effects of climate change. Using these projections the UK Climate Change Risk Assessment (UKCCRA)[97], updated in 2021, identifies potential risks and impacts of climate change across a

[96] https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/about/what-is-ukcp

[97] https://www.theccc.org.uk/publication/independent-assessment-of-uk-climate-risk/

number of areas including Infrastructure, Health, communities and the Built Environment. Key risks from the UKCCRA which related to the Development are summarised below.

- N1 – Risks to species and habitats from climate change;
- I2 – Risks for infrastructure from flooding;
- I7 – Risks to infrastructure from subsidence;
- H1 – Risks to health and wellbeing form high temperatures;
- H3 – Risks to people, communities and buildings from flooding;
- H5 – Risks to building fabric;
- H10 – Risks to water quality and household water supplies;
- B1 – Risks to businesses from flooding;
- B3 – Risks to business from water scarcity; and
- B5 – Risks to business operations due to high temperatures.

7.12 Based on the Climate Projections and risks from the UKCCRA key likely receptors to be impacted by climate change include:

- The **Global Climatic System** from additional GHG emissions;
- **Construction Employees** and **Site Users** may be impacted due to overheating from increasing temperatures;
- **Site Infrastructure** may be impacted due to changing ground conditions and as a result of increased rainfall and flood risk;
- **Construction Operations** may be impacted by changing weather patterns leading to risks of flooding, pollution and impacts on **Air Quality;**
- **Site Habitats and Species** impacted by changing climate space; and
- **Site Operations, Infrastructure** and **Site Users** may be impacted by decreasing summer rainfall and water availability, as well as increased risks of flooding due to increasing winter rainfall.

Proposed Scope of Assessment

7.13 The below sets out the proposed scope of assessment based on an understanding of the characteristics of the Site, surrounding area and the Proposed Scheme (**Chapter 4**). Where environmental effects are considered unlikely to be significant, an appropriate evidence base has been provided to justify the 'scoping out' of these effects ensuring the EIA and ES only assess those effects considered 'likely' to be significant.

Effects Unlikely / Not Significant

7.14 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

Increasing summer mean and daily maximum temperatures during construction [construction employees]

7.15 Increasing summer temperatures may lead to health and safety risks for construction employees. A Construction Environmental Management Plan (CEMP) will be prepared to support the construction of the Proposed Scheme and will set out climate change adaptation and measures to reduce risks to human health from overheating such as provision of shaded refuges to reduce overheating risks, and potable water supplies to avoid dehydration during construction.

7.16 Therefore, increasing summer mean and daily maximum temperatures affecting construction employees is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Changing annual temperatures and rainfall patterns during construction [construction operations, site habitats and biodiversity, air quality]

7.17 Changing annual temperatures and rainfall patterns may lead to a reduction of water supply and increasing risk of flooding which may impact on site construction activities, increase the potential for construction site flooding and damage, and potential harm to nearby water courses and impact on air quality.

7.18 The CEMP will set out climate change adaptation and measures including:

- The monitoring and setting of targets to reduce water use during construction.
- Measures to protect the Site from increased risk of flooding during construction, for example compounds storage compounds with raised levels and temporary drainage; and drainage and pollution prevention systems.
- Enhanced dust suppression measures to reduce the risk of dust from increasing summer temperatures.

7.19 Therefore, changing annual temperatures and rainfall patterns affecting construction operations, site habitats and biodiversity, and air quality is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Changes to future climate including temperature and rainfall during operation [site infrastructure]

7.20 Changes to future climate including temperature and rainfall may cause ground conditions to change impacting on building foundations and structures. The Building

Regulations[98] require new development to consider the impact of ground movement in foundation design. Therefore the Proposed Scheme will be designed to consider changing climate on stability of the ground conditions, influencing foundation design as necessary.

7.21 Therefore, changes to future climate including temperature and rainfall to site infrastructure is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Changes to future climate including higher winter and summer temperatures and a decrease in summer rainfall during operation [site habitats and biodiversity]

7.22 Changes to future climate including higher winter and summer temperatures and a decrease in summer rainfall will affect climate space and could impact site habitats and species.

7.23 The landscaping proposals will seek to maximise the ecological value of the Site through the provision of native and/or wildlife friendly landscape planting. This will provide a green space within the site and will subsequently provide new and enhanced opportunities for faunal species. Overall, the green infrastructure strategy for the Site will seek to deliver net gains of at least 10% in biodiversity. This will help mitigate the anticipated impacts of climate change in accordance with the England Biodiversity Strategy[99] and Natural England Climate Change Adaptation Manual[100]. This will include the selection of climate change tolerant species as part of the projects' biodiversity strategy.

7.24 Therefore, changes to future climate including higher winter and summer temperatures and a decrease in summer rainfall to site habitats and biodiversity is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Increasing rainfall during operation [site operations, infrastructure and end users]

7.25 Increasing winter rainfall could increase the risk of surface water flooding impacting on site operations, site infrastructure and end users.

7.26 In accordance with national guidance the mitigation proposed in the Flood Risk Assessment will take into account the potential effects of climate change to minimise risk of flooding. This will include consideration of climate change effects on river levels and the design of the surface water drainage system which will take into account the 1 in 100 year storm event and required climate change allowances.

7.27 Therefore, increasing rainfall to site operations, infrastructure and end users is not considered to be significant and will not be considered further in the EIA or reported in the ES.

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[98] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/540328/BR_PDF_AD_L2A_2013_with_2016_amendments.pdf
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69446/pb13583-biodiversity-strategy-2020-111111.pdf

[100] http://publications.naturalengland.org.uk/publication/5679197848862720

Higher average summer mean and daily maximum temperatures during operation causing building overheating [end users]

7.28 Higher average summer mean and daily maximum temperatures may lead to building overheating, adversely affecting the health and well-being of occupants and end users.

7.29 As part of the detailed design a sample of units in buildings will undergo overheating assessment in line with the requirements of Part O of the Buildings Regulations[101] to assess and reduce the risk of summer overheating taking into account future climate scenarios. Where measures are provided to reduce the risk of overheating this will be done in accordance with the cooling hierarchy.

7.30 Therefore, higher average summer mean and daily maximum temperatures to end users is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Decreasing summer rainfall during operation [end users]

7.31 To reduce water use and provide resilience to reducing summer rainfall, the Proposed Scheme will incorporate measures to reduce water consumption, including the provision of water efficient fixtures and fittings, i.e. low flow taps and low water use WCs.

7.32 Therefore, decreasing summer rainfall to end users is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Effects Likely / Significant

7.33 **Table 7.3** outlines the effects (and associated receptor[s]) that are considered to be likely and significant and therefore will be assessed within the EIA and reported in the ES.

Table 7.3: Potential Likely Significant Effects and Sensitive Receptors

Effect	Receptor(s)	Applicable Stage(s)
GHG Emissions	Global climatic system	Construction and Operation

Assessment Methodology of Effects Likely / Significant

7.34 The following background surveys/studies have/will be undertaken.

Table 7.4: Background Surveys / Studies

Survey / Study / Analysis / Evaluation	Overview	Date of Completion
Completed		
Climate Change Analysis to inform EIA Scoping	A review of UKCP18 climate change projections and potential climate change risks	January 2022

[101] https://www.gov.uk/government/publications/overheating-approved-document-o

Survey / Study / Analysis / Evaluation	Overview	Date of Completion
Pending		
Review of potential GHG emissions	Estimate of the Proposed Scheme GHG emissions and contextualisation against local and national emissions and carbon budgets.	March 2022

Climate Change Mitigation

7.35 The assessment of climate change mitigation will be undertaken in accordance with IEMAs EIA Guide to Climate Change. The GHG emissions of the Proposed Scheme will consider both the construction and operational stage. As part of the assessment a Whole Life Carbon (WLC) assessment will be prepared, considering the construction and embodied carbon of the Proposed Scheme. In addition, an Energy Strategy is being prepared to consider the operational energy demand and emissions of the completed Proposed Scheme.

7.36 The GHG assessment will consider the net GHG emissions of the Proposed Scheme, including any emissions that may be associated with any existing site operation.

7.37 The Site will form the principal study area for the assessment, however the assessment will include off-site GHG emissions / savings such as those associated with the manufacture and transportation of construction materials, and those associated with the off-site generation (e.g. at a power station) of grid electricity consumed by the completed Proposed Scheme.

7.38 The significance of the Proposed Scheme's net GHG effect will then be determined by considering the magnitude of its net GHG emissions effect in conjunction with consideration of whether it makes an appropriate contribution to Manchester and the UK's net zero trajectory.

7.39 The assessment of likely significant effects to sensitive receptors will consider the sensitivity of the receptor (on a scale of high, medium, low and negligible), the magnitude of change (on a scale of large, medium, small and negligible), and the level of effect on a scale of major, moderate, minor and negligible. Significant effects will be determined from this evaluation and including professional judgment.

7.40 The global climate system is the receptor for GHG emissions and is considered highly sensitive in accordance with IEMA guidance.

Climate Change Adaptation

7.41 While potential effects to climate change adaptation have been scoped out at this stage, the Climate Change assessment will continue to review the UKCCRA for additional potential receptors and climate effects. Should further details and/or consideration necessitate its inclusion, this will be undertaken in the following manner.

7.42 As above, if required the assessment will be undertaken in accordance IEMAs EIA Guide to Climate Change Resilience and Adaptation. This will include establishing the baseline climate conditions and review of the UKCP18 projections as noted in this document to determine the extent of potential impacts, identifying any further effects not noted here.

7.43 As part of the ongoing design work the climate change projections and potential impacts will be considered as part of ongoing technical work, in particular to ensure the Proposed Scheme is resilient to the long-term effects of climate change given the likely lifespan of the proposals.

7.44 The assessment of likely significant effects to sensitive receptors will consider the sensitivity of the receptor (on a scale of high, medium, low and negligible), the magnitude of change (on a scale of large, medium, small and negligible), and the level of effect on a scale of major, moderate, minor and negligible. Significant effects will be determined from this evaluation and including professional judgment.

7.45 In accordance with the IEMA guidance the 2080s cRCP8.5 climate scenarios will be used as a worst case scenario.

Limitations and Assumptions

7.46 To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

Climate Change Mitigation

7.47 ***Activity Data –*** In estimating construction and operational stage GHG emissions, third party emissions factors and benchmarks may be applied to estimated parameters including energy demand. These factors and benchmarks may potentially not fully reflect the actual construction and operational performance of the Proposed Scheme however the proposed approach is nevertheless considered to represent the best available option at this pre-planning stage.

7.48 ***Emission Factors –*** The primary source of emission factors applied is UK Government conversion factors for company reporting. These factors are published annually by the Department for Business, Energy and Industrial Strategy (BEIS). The current factors (published July 2022) relate to the 2020 calendar year and may therefore not accurately reflect development construction and operational activities undertaken in future years.

7.49 BEIS also publishes annual projections of the future carbon intensity of electricity supplied by the national grid. These projections can used to estimate operational GHG over a 30 year period. The BEIS projections are based on various assumption including the continued uptake of renewable energy technologies and closure of fossil fuel power stations which may not fully reflect actual future conditions.

7.50 ***Transport Emissions –*** At this stage transport emissions have not been considered as there is no data available on the potential trips generated by the Proposed Scheme. Given the nature of the development the use of private cars is likely to be limited with the majority of trips utilising local public transport services. In this context it is likely

transport emissions are limited and likely to reduce in time in line with Government transport decarbonisation plans.

Climate Change Adaptation

7.51 The UK climate projections (UKCP18) are dependent on future GHG emission assumptions. UKCP18 uses scenarios for future GHGs that are based on assumptions on future population, economic development and the mitigation of GHG emissions towards international targets. The real world may follow a different pathway altogether and the scientific community cannot reliably place probabilities on which scenario of GHG emissions is most likely. For the purposes of scoping the 2080s RCP8.5 scenario has been considered as a worst case.

8. Built Heritage

Technical Baseline

8.1 An initial desk-based assessment has been made of designated heritage assets and non-designated heritage assets within a 250m radius around the Site (the Study Area). Heritage assets may include designated assets such as listed buildings, Registered Parks and Gardens, Scheduled Monuments and Conservation Areas and non-designated heritage assets such as those identified as part of a 'local list' maintained by a local authority (see **Figure 8.1** for Heritage Asset Plan).

8.2 The Site is located within the Whitworth Street Conservation Area. Within the wider area there are a number of heritage assets which are listed below.

Designated Heritage Assets within the Study Area

8.3 There are no Scheduled Ancient Monuments, World Heritage Sites, Registered Parks and Gardens or Registered Battlefields within the Study Area. There is one Conservation Area and seventeen Listed Buildings, these are as follows:

Table 8.1: Designated Heritage Assets within the Study Area

Asset Type	Designated Heritage Asset	Date of Original Designation:	Grade:
Conservation Area	Whitworth Street Conservation Area	01/09/1974 and later amended on 01/06/1985	N/A
Listed Building	London Road Police and Fire Station, London Road	03 October 1974	II*
Listed Building	The Shena Simon 6th Form College, Whitworth Street	06 June 1994	II
Listed Building	Institute of Science and Technology (University of Manchester), Sackville Street / Whitworth Street	03 October 1974	II
Listed Building	Manchester South Junction and Altrincham Railway Viaduct	06 June 1994	II
Listed Building	Granby House, 61-63 Granby Row	03 October 1974	II
Listed Building	Orient House, 65-67 Granby Row	20 June 1988	II
Listed Building	Sculptural Wall, London Road	10 June 2011	II
Listed Building	Former Goods Yard Offices to Piccadilly Station, London Road	06 June 1994	II
Listed Building	Train Shed and Undercroft at	06 June 1994	II

Asset Type	Designated Heritage Asset	Date of Original Designation:	Grade:
	Manchester Piccadilly Station, London Road		
Listed Building	Mintierna House	06 June 1994	II
Listed Building	46 Sackville Street	06 June 1994	II
Listed Building	42 and 44 Sackville Street	06 June 1974	II
Listed Building	Regency House with Barclays Bank	6 June 1994	II
Listed Building	Minshull House	8 May 1990	II
Listed building	Rochdale Canal Lock Number 86, to east of Chorlton Street	06-Jun-1994	II
Listed building	Rochdale Canal Boundary Wall to Canal Between Sackville Street and Chorlton Street	06-Jun-1994	II
Listed building	Rochdale Canal Boundary Wall to Canal Between Chorlton Street and Minshull Street	06-Jun-1994	II

8.4 These designated heritage assets were identified and confirmed through a search of the Historic England National Heritage List for England and information provided by Manchester City Council on their website.

Non-Designated Heritage Assets

8.5 Manchester City Council does not maintain a published list of 'locally interesting' buildings. However, in accordance with Historic England Good Practice Advice Note 2[102], a HER search was conducted on 27th January 2023 for an area extending 250 metres from the boundary of the Site.

8.6 The following non-designated heritage assets have been identified:

Table 8.2: Non-designated Heritage Assets located within the Study Area

Property Details:	HER Record Number:
The Monroe Public House, 36 London Road	12347.1.0
Jackson Street Mills (UMIST Campus) (now university of Manchester)	2078.1.0
Rochdale Canal	1386.2.0

[102] Historic England (2015). Good Practice Advice Note 2: Managing Significance in Decision Taking in the Historic Environment.

Proposed Scope of Assessment

8.7 The below sets out the proposed scope of assessment based on an understanding of the characteristics of the Site, surrounding area and the Proposed Scheme (**Chapter 4**). Where environmental effects are considered unlikely to be significant, an appropriate evidence base has been provided to justify the 'scoping out' of these effects ensuring the EIA and ES only assess those effects considered 'likely' to be significant.

8.8 Assigning value (sensitivity), magnitude of impact and significance of effect and reporting the significant effects of the Proposed Scheme on heritage assets will follow best practice guidance set out below and the application of professional judgement.

8.9 In line with best practice guidance set out in the Design Manual for Roads and Bridges, the effect on the cultural heritage resource is not significant when the impact does not substantially diminish the heritage interest of the heritage resource.[103]

Effects Unlikely / Not Significant

8.10 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

Change to the setting of identified listed buildings resulting in an impact to their heritage interests or significance [listed buildings identified below]

8.11 Construction and operation activities have the potential to impact the setting and significance of nearby listed buildings as a result of a change to the baseline situation and introduction of new built form. This has the potential to change local views and may affect appreciation of the building where the existing setting makes a contribution to the heritage interests or significance of the heritage asset.

8.12 A Built Heritage ES Chapter and Heritage Assessment was prepared for the 2017 application. As part of the EIA in 2017 a Built Heritage ES Chapter assessed the likely significant effects on identified receptors within an 250m Study Area[104]. This assessment concluded that a comparable development would not alter the appreciation or experience of the following listed buildings and their significance would be sustained.

8.13 Having considered and reviewed the variations to the Proposed Scheme when compared with the 2017 application and having also considered any changes to the baseline, it is concluded that the listed buildings set out in **Table 8.3** would not experience a significant environmental effect and will not be considered further in the EIA or reported in the ES.

[103] Design Manual for Roads and Bridges (DMRB), LA 106: Cultural heritage assessment (2019), Note 1

[104] Turley (2017). Heritage Statement, Echo Street, Manchester.

Table 8.3: Overview of Listed Buildings with Effects Unlikely / Not Significant

Listed Building	Overview	Potential Effect
The Shena Simon 6th Form College, Whitworth Street (Grade II)	The visibility of the Proposed Scheme would be largely screened by exiting built form. Where visible it will be legible as a modern addition to the streetscape in which the asset is already experienced. There will be no change to the appreciation of the architectural and historic special interest of the building and its significance would be sustained.	Neutral effect / Not Significant
Institute of Science and Technology (University of Manchester), Sackville Street / Whitworth Street (Grade II)	The Proposed Scheme may be partially visible in some views of the building. Where visible it would be legible as a modern addition to the urban streetscape in which the asset is already experienced. There will be no change to the appreciation of the architectural and historic special interest and its significance would be sustained.	Neutral effect / Not Significant
Manchester South Junction and Altrincham Railway Viaduct (Grade II)	The viaduct is experienced in the mixed and complex environment of Manchester City Centre; it is a large asset and has an extensive and varied setting. Where visible, the Proposed Scheme would not change the nature of this experience or impact the architectural and historic special interest and its significance would be sustained.	Neutral effect / Not Significant
Granby House, 61-63 Granby Row (Grade II) and Orient House, 65-67 Granby Row (Grade II)	Granby House and Orient House are experienced in a mixed context; whilst the south side of Granby Row is characterised by enclosure resulting from the row of warehouses, to the north side it has a more fragmentary character and modern developments have contributed to a mixed urban grain. Where visible, partial views of the Proposed Scheme would be consistent with the mixed urban surroundings of the buildings. There will be no change to the appreciation of the architectural and historic special interest and its significance of these listed buildings would be sustained.	Neutral effect / Not Significant
Sculptural Wall, London Road (Grade II)	The wall is positioned adjacent to London Road and is experienced in the context of the busy road frontage and large scale buildings associated with UMIST to the	Neutral effect / Not Significant

Listed Building	Overview	Potential Effect
	west, and Manchester Piccadilly and the Macdonald Manchester Hotel to the east. There will be no change to the appreciation of the architectural and historic special interest of the building as a result of the Proposed Scheme.	
Former Goods Yard Offices to Piccadilly Station, London Road (Grade II)	The Site is screened from the listed building by existing built form on the southern side of Fairhurst Street. The Proposed Scheme may be partially visible in some views of the building. Where visible it will be legible as a modern addition to the urban streetscape in which the asset is already experienced. There will be no change to the appreciation of the architectural and historic special interest and its significance would be sustained.	Neutral effect / Not Significant
Train Shed and Undercroft at Manchester Piccadilly Station, London Road (Grade II)	The building is a functional infrastructure asset and its setting makes a limited overall contribution to significance. It is experienced as part of a complex, high density cityscape of many periods and forms of building. The Proposed Scheme will be visible in this context from a number of positions in and around the station building. Whilst this will result in a change in the setting of the train shed, it will have no impact upon the legibility of the architectural and historic interest of the structure or the appreciation of its functional nature.	Neutral effect / Not Significant
46 Sackville Street (Grade II) and 42 and 44 Sackville Street (Grade II)	The Proposed Scheme may be partially visible when looking south-east, potentially rising above the roofline of existing built form. Where visible, due to the distances involved and scale and mass of intervening development it would be legible as a modern addition to the urban streetscape in which the asset is already experienced. There will be no change to the appreciation of the architectural and historic special interest and the significance of these listed buildings would be sustained.	Neutral effect / Not Significant
Regency House with Barclays Bank (Grade II)	The Proposed Scheme would be partially visible when looking south, rising above the	Neutral effect / Not Significant

Listed Building	Overview	Potential Effect
	roofline of the Institute of Science and Technology. Where visible it would be legible as a modern addition to the urban streetscape in which the asset is already experienced. There will be no change to the appreciation of the architectural and historic special interest and its significance would be sustained.	
Minshull House (Grade II) and Mintierna House (Grade II)	The Proposed Scheme would be partially visible when looking south, rising above the roofline of the Institute of Science and Technology. Where visible it would be legible as a modern addition to the urban streetscape in which the asset is already experienced. There will be no change to the appreciation of the architectural and historic special interest and its significance of these listed buildings would be sustained.	Neutral effect / Not Significant
Rochdale Canal Lock Number 86, to east of Chorlton Street (Grade II); Rochdale Canal Boundary Wall to Canal Between Sackville Street and Chorlton Street (Grade II); and Rochdale Canal Boundary Wall to Canal Between Chorlton Street and Minshull Street (Grade II)	The Proposed Scheme is unlikely to be visible from these listed buildings due to the distances involved and scale and mass of intervening built form and topography. If partially visible, it will be legible as a modern addition to the urban townscape in which the asset and canal is already experienced. There will be no change to the appreciation of the architectural and historic special interest and the significance of these listed buildings would be sustained.	Neutral effect / Not Significant

Change to the setting of the identified non-designated heritage assets, resulting in an impact to its heritage interests or significance [The Monroe Public House, 36 London Road and Rochdale Canal]

8.14 Construction and operation activities have the potential to impact the setting of nearby non-designated heritage assets as a result of a change to the baseline situation and introduction of new built form. This has the potential to change local views and may affect our appreciation of the building where the existing setting makes a contribution to the heritage interests or significance of the heritage asset.

8.15 Having considered and reviewed the Proposed Scheme, it is concluded that the non-designated heritage assets set out in **Table 8.4** would not experience a significant environmental effect and will not be considered further in the EIA or reported in the ES.

Table 8.4: Overview of Non-Designated Heritage Assets with Effects Unlikely / Not Significant

Listed Building	Overview	Potential Effect
Monroe Public House, 36 London Road (HER Ref: 12347.1.0)	The non-designated Monroe Public House, 36 London Road is located on the corner of Whitworth Street and London Road. Due to the building's location, it is screened from the Site by the mass of the London Road Police and Fire Station and also the properties that enclose the southern side of Fairfield Street. If partially visible, it would be legible as a modern addition to the urban townscape in which the asset and canal is already experienced. There will be no change to the appreciation of the architectural and historic special interest and its significance would be sustained.	Neutral effect / Not Significant
Rochdale Canal (HER Ref: 1386.2.0)	The Proposed Scheme is unlikely to be visible from the Rochdale Canal due to the distances involved and scale and mass of intervening built form and topography. If partially visible, it would be legible as a modern addition to the urban townscape in which the asset and canal is already experienced. There will be no change to the appreciation of the architectural and historic special interest and its significance would be sustained.	Neutral effect / Not Significant

Effects Likely / Significant

8.16 The assets identified at **Table 8.5** have potential to experience a significant environmental effect and therefore will be assessed within the EIA and reported in the ES.

Table 8.5: Potential Likely Significant Effects and Sensitive Receptors

Effect	Receptor(s)	Applicable Stage(s)
Change to the character and appearance of the conservation area	Whitworth Street Conservation Area	Construction / Operation
Change to the setting of a listed building	London Road Police and Fire Station (Grade II*)	Construction / Operation
Change to the setting of a	Jackson Street Mills (UMIST	Construction / Operation

Effect	Receptor(s)	Applicable Stage(s)
non-designated heritage asset	Campus, now university of Manchester) (HER Ref: 2078.1.0)	

Assessment Methodology of Effects Likely / Significant

8.17 The following background surveys/studies have been/will be undertaken.

Table 8.6: Background Surveys / Studies

Survey / Study / Analysis / Evaluation	Overview	Date of Completion
Completed		
Desk-Based Heritage Assessment	Identification of assets with potential to be affected (significant and not significant) confirmed through a search of the Greater Manchester Historic Environment Record.	January 2023
500m Search of the Historic Environment Record	To undertake an updated search of the local Historic Environment Record in order to identify any Heritage Assets additional to those identified within the 2017 ES baseline.	January 2023
Current or Pending		
Heritage Assessment	An NPPF compliant Heritage Assessment will be prepared in support of the Application. This will be carried out in light of the statutory duty of The Planning (Listed Buildings and Conservation Areas) Act 1990, relevant policies of the National Planning Policy Framework (NPPF) and national Planning Practice Guidance for the historic environment. The Heritage Assessment will identify heritage assets with potential to be affected, describe their significance and setting and	January to March 2023

Survey / Study / Analysis / Evaluation	Overview	Date of Completion
	assess the impact of the Proposed Scheme upon that significance. It will also consider other heritage assets unlikely to experience a significant effect. It will be appended to and inform the EIA as a Technical Appendix.	
Views Assessment	Contribution to identification of viewpoints (from a heritage perspective).	February 2023

8.18 The Built Heritage ES chapter will assess the potential for significant effects to heritage assets resulting from the Proposed Scheme following primary and tertiary mitigation, in accordance with IEMA guidance[105]. The Built Heritage ES Chapter will undertake the following:

- Assess the significance of the identified heritage assets and the contribution of setting to that significance;
- Identify those heritage assets with a potential to experience a significant effect at the construction and operational stages;
- Identify and define the magnitude of change arising from the Proposed Scheme and the severity of the effects on those identified assets;
- Identify mitigation to avoid or minimise adverse impact where possible in a way that meets the requirement of the NPPF;
- Assess the Proposed Scheme impact and its effect of the significance of heritage assets taking into consideration any mitigation proposed; and
- Assess the cumulative impacts of the Proposed Scheme in conjunction with other development.

8.19 The assessment will be guided by various published documents including:

- National Planning Practice Guidance (2014, updated 2019);
- Historic England Good Practice Advice in Planning (GPA) Note 2 ‘Managing Significance in Decision Taking in the Historic Environment’ (2015);

[105] IEMA (2015). Environmental Impact Assessment Guide to: Shaping Quality Development and IEMA (2016). Environmental Impact Assessment Guide to: Delivering Quality Development.

- Historic England GPA3 ‘The Setting of Heritage Assets’ 2dn Edition (2017);
- Historic England Advice Note 12: Statements of Heritage Significance (2019);
- Historic England: Advice Note 1: Conservation Area Designation, Appraisal and Management 2019 (2nd Edition);
- Historic England Advice Note 7: ‘Local Heritage Listing’ 2nd Edition (2021)
- Institute of Environmental Management & Assessment (IEMA): Principles for Cultural Heritage Impact Assessment (2021); and
- Design Manual for Roads and Bridges (DMRB), LA 106: Cultural heritage assessment (2019)
- Guidance issued by the Local Authority will also be consulted together with relevant legislation.

8.20 The assessment will utilise a matrix that measures both receptor sensitivity (value/ importance), this accounts for significance in the context of NPPF terminology, and magnitude of change/ impact to produce an assessment of the significance of the effect of the Proposed Scheme on cultural heritage receptors. The matrix follows the standard matrix included within the **Chapter 2** of the EIA Scoping Report.

8.21 Mitigation by design measures are likely to be integrated into the design of the Proposed Scheme, including associated landscaping.

8.22 The assessment of likely significant effects to sensitive receptors will consider the sensitivity of the receptor (on a scale of high, medium, low and negligible) and the magnitude of change (on a scale of large, medium, small and negligible) to determine the level of effect on a scale of major, moderate, minor and negligible. Significant effects will be determined following this through professional judgment.

8.23 The assessment of cultural heritage is a qualitative one, and the evaluation of importance and effect is ultimately a matter of professional judgement.

Limitations and Assumptions

8.24 To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

- The baseline assessment has been based on information readily available at the time of undertaking the assessment;
- The baseline assessment relies on the accuracy of secondary source data. There is always some degree of uncertainty in relation to these sources; and
- Inspection of the interior of historic buildings is not required as part of the baseline assessment.

9. Townscape and Visual

Technical Baseline

9.1 Due to the location of the Site within Whitworth Street Conservation Area, there are over 30 listed buildings within the study area (extent as shown in **Figure 10.1**), including the Grade II* Police and Fire Station. The Site lies within the North Campus Character Area within Manchester City Centre, as set out within Manchester City Centre Strategic Plan[106]. The area is currently characterised by a mix of building typologies and public spaces of varying quality.

9.2 There is a clear grain throughout the conservation area, created by the large goods warehouse buildings, which the Site does not conform to. The existing cleared Site has a poor relationship to the surrounding streets and urban pattern. A number of residential / student residential and university blocks are located in the immediately vicinity. Within the university campus are a number of open green spaces, including Vimto Park immediately to the west of the Site. To the north east is Piccadilly Station (a major rail hub) and city centre commercial / retail, entertainment and hotel uses in the wider area.

9.3 There is an established general height of approximately 6 storeys throughout the historic parts of the study area (extent of study area as shown in **Figure 9.1**), reflecting the prevalence of large warehouse buildings. Taller blocks of contemporary city centre development are located close to Piccadilly station. The underlying topography of the study area is generally flat with small level changes.

9.4 There are no formal designations affecting the Site. Adjacent is Vimto Gardens, primarily serving university students, along with a number of other open spaces within the campus. Sackville Gardens is located approximately 150m to the north west of the Site and is an important strategic green space in the city centre.

9.5 The Site is currently a construction site with hoarding to its edges. It is cleared of previous structures, planting and site features. It is set back from the main movement routes and is characterised by influences from the university campus and railway viaduct adjacent to it.

9.6 Visually, the Site is relatively well contained, with built form of the City Centre and its taller buildings restricting longer range views into the Site. Within the surrounding streets there are framed and glimpse views towards the site looking along the streets.

9.7 The adjacent Vimto Garden is an important City Centre green space has a more open aspect towards the Site, which provides a backdrop to the mature trees along its eastern edge. Views here are contained by the buildings around them, so new development becomes an important visual consideration.

[106] Manchester City Centre Strategic Plan 2015-2018. [Online] accessed via https://secure.manchester.gov.uk/downloads/file/24745/city_centre_strategic_plan

9.8 Piccadilly station is located to the east of the Site, with raised platform areas that have a clear, elevated view over the Site and surrounding townscape. These have the potential to be experienced by a large number of people whose attention is likely to be focused along the rail line towards the Site.

Proposed Scope of Assessment

9.9 The below sets out the proposed scope of assessment based on an understanding of the characteristics of the Site, surrounding area and the Proposed Scheme (**Chapter 4**). Where environmental effects are considered unlikely to be significant, an appropriate evidence base has been provided to justify the 'scoping out' of these effects ensuring the EIA and ES only assess those effects considered 'likely' to be significant.

Effects Unlikely / Not Significant

9.10 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

9.11 To establish likely non-significant effects, reference to the previous TVIA assessment produced in 2017 has been made. The 2017 assessment identified that only three Townscape receptors (Townscape Character, Topography & Site Levels and Site Character) and five Visual Receptors (Views 1,2,3,5&6 as shown in F**igure 9.2**) experienced effects during either construction, operation phases of the development that were considered to be significant.

9.12 Whilst the baseline condition of the Site and Study Area has continued to evolve since 2017, with the completion of developments such as Kampus, the overall baseline assessment is considered to still be valid, as these changes have minimal impact in the context of the wider study area and City Centre.

9.13 The Site itself has now been cleared of all features and structures, and as such is now considered to have the potential to have a lower baseline sensitivity than previously assessed in 2017.

9.14 As the Proposed Scheme is slightly taller, but similar in overall massing, and layout, is it considered appropriate that the following receptors identified as being 'Not Significant' in the 2017 report could be scoped out as part of this Application. These are set out below.

Changes to all townscape and visual receptors during construction [Heritage, Townscape character, Urban Grain, Land Use, Building Height, Topography, Movement & Access, Open Space and Site Character – Views 1, 2, 3, 5, 6, 7, 8 & 10]

9.15 There is the potential for direct impacts on all townscape and visual receptors within the study area (as shown in **Figure 9.1**). With reference to the 2017 TVIA assessment, no townscape or visual receptors were identified as having significant effects during construction.

9.16 The proposed Construction Environment Management Plan (CEMP) identified a number of mitigation measures to counter construction stage impacts including: restricted hours of operation, traffic management with off peak deliveries, 3m high Site hoarding lines, safe pedestrian routes maintained along Granby Row, Site exit managed to keep clear of debris, mud and materials, phased construction programme and reuse of materials on site to avoid traffic movements. These would be included in the CEMP for the Proposed Scheme.

9.17 In addition, the relatively minor change to the overall wider Townscape area, screening of lower areas of the site from the surrounding area and the temporary nature of the effects all combined to reduce the potential effects that would be experienced. As the baseline conditions of the Site are unchanged, other than a lowering of the sensitivity of the 'Site' townscape receptor, and the overall extent of construction works and building massing broadly the same as previously assessment, it is not anticipated that any additional construction effects would be experienced.

9.18 Therefore, construction stage impacts to townscape and visual receptors are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Change to visual amenity in construction [View 4,9,11,12&13]

9.19 The Proposed Scheme may potentially be viewed from public open space where views contribute to the townscape setting enjoyed by residents, users of public footpaths, users of the strategic movement network, and employees at their place of work. Whilst photomontages for these views within the 2017 assessment demonstrate that the Proposed Scheme will be visible, the change of effect was assessed as minor as the addition of built form would not materially alter the composition or appreciation of the overall view. View 11 from Sackville Gardens was demonstrated to be completely screened by existing built form and assessed as having 'no change'.

9.20 Therefore, visual effects to views 4,9,11,12 & 13 are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Changes to townscape Heritage receptors during operation [Heritage townscape receptors]

9.21 Potential direct and indirect impacts on Heritage assets within the study area (as shown in **Figure 9.1**). With reference to the 2017 TVIA assessment, Heritage townscape receptors were identified as having minor beneficial effects that were not significant. The previous scheme was assessed as potentially improving the quality of the townscape environment, which would cause a perceptible change to the setting of local heritage designations. As the Proposed Scheme design and layout is broadly unchanged from this, it is not anticipated that this assessment would change.

9.22 Therefore, operation stage impacts to Heritage townscape receptors are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Changes to Townscape Urban Grain receptor during operation [urban grain]

9.23 Potential direct impacts on the Urban Grain within the study area (as shown in **Figure 9.1**). With reference to the 2017 TVIA assessment, the townscape Urban Grain receptor were identified as having minor beneficial effects that were not significant. The

previous scheme was assessed as filling voids in the historic street pattern and relating well to the proposed emerging North Campus development. As the Proposed Scheme design and layout is broadly unchanged from this, it is not anticipated that this assessment would change.

9.24 Therefore, operation stage impacts to Townscape Urban Grain receptor are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Changes to Townscape Land Use receptor during operation [land use]

9.25 Potential direct impacts on the land uses within the study area (as shown in **Figure 9.1**). With reference to the 2017 TVIA assessment, the townscape land Use receptor were identified as having minor beneficial effects that were not significant. The previous scheme land uses was assessed as providing a good degree of fit within an emerging mixed use redevelopment of the area. As the Proposed Scheme Land Use is broadly unchanged from this, it is not anticipated that this assessment would change.

9.26 Therefore, operation stage impacts to Townscape Land Use receptor are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Changes to Townscape Building Height receptor during operation [townscape building height]

9.27 Potential direct impacts on the existing building height datum within the study area (as shown in **Figure 9.1**). With reference to the 2017 TVIA assessment, the townscape Building Height receptor was identified as having minor beneficial effects that were not significant. The previous scheme building heights introduced a new height datum to the area, but its stepping design related to different part of its context. As the Proposed Scheme building Height is broadly unchanged from this, it is not anticipated that this assessment would change.

9.28 Therefore, operation stage impacts to Townscape Building Height receptor are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Changes to Townscape Movement and Linkages receptor during operation [movement and linkages]

9.29 Potential direct impacts on the existing vehicular and pedestrian movement network within the study area (as shown in **Figure 9.1**). With reference to the 2017 TVIA assessment, the townscape Movement and Linkages receptor was identified as having minor beneficial effects that were not significant. The previous scheme was assessed a providing a good fit within its context and whilst not creating new routes, did improve pedestrian movement around it and into the adjacent park. As the Proposed Scheme design and layout is broadly unchanged from this, it is not anticipated that this assessment would change.

9.30 Therefore, operation stage impacts to Townscape Building Height receptor are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Changes to Townscape Environmental Designations & Public Open Space receptor during operation [townscape environmental designations and public open space]

9.31 Potential direct impacts on surrounding public open spaces within the study area (as shown in **Figure 9.1**). With reference to the 2017 TVIA assessment, the townscape Environmental Designations & Public Open Space receptor was identified as having minor beneficial effects that were not significant. The previous scheme was assessed as improving the setting, enclosure and connectivity to the adjacent Vimto Park. As the Proposed Scheme design and layout is broadly unchanged from this, it is not anticipated that this assessment would change.

9.32 Therefore, operation stage impacts to Townscape Environmental Designations & Public Open Space receptor are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Effects Likely / Significant

9.33 **Table 9.1** outlines the effects (and associated receptor[s]) that are considered to be likely and significant and therefore will be assessed within the EIA and reported in the ES. The representative view locations referred to the in the receptors column for visual effects are shown in **Figure 9.2**.

Table 9.1: Potential Likely Significant Effects and Sensitive Receptors

Effect	Receptor(s)	Applicable Stage(s)
Changes to townscape character within the site context	The Site and wider townscape character area of North Campus Townscape Character Area	Operation
Changes to Topography & Site Levels	Topography & Site Levels	Operation
Changes to the character, composition and amenity of views	Viewpoint 1: Piccadilly Station main entrance Viewpoint 2: Piccadilly Station taxi rank, Fairfield Street Viewpoint 3: Piccadilly Station platform 13 and 14 Viewpoint 5: Sculptural wall, London Road Viewpoint 6: View west along Granby Row Viewpoint 7: Vimto Park Viewpoint 8: University of Manchester, Altrincham Street Viewpoint 10: Granby Row,	Operation

Effect	Receptor(s)	Applicable Stage(s)
	Samuel Ogden Street	

Assessment Methodology of Effects Likely / Significant

Assessment Approach

9.34 The Townscape and Visual Impact Assessment will be carried out with reference to the Guidelines for Landscape & Visual Impact Assessment, 3rd Edition, 2013 (referred to hereafter as "the Guidelines") by Planit-IE Ltd, a registered practice of the Landscape Institute with considerable experience in landscape and visual assessment.

9.35 A detailed description of the assessment methodology is provided in **Appendix 9.1**.

9.36 A three-stage assessment process has been adopted. Firstly, the nature of receptors (sensitivity) will be assessed, and secondly, the nature of effects (magnitude) likely to result from the Proposed Scheme will be assessed. From this, the overall significance of the identified effects on receptors will be assessed.

9.37 Desk-based studies will be carried out to collate and map baseline townscape information, and a review of relevant policy and guidance will be used to inform the assessment.

9.38 A Principal Viewpoints plan has been produced as part of this scoping report (**Figure 9.2**). The viewpoints were selected through a process of desktop survey and site knowledge. A basic 3D block model reflecting the proposed height of the development was put into Google Earth and a basic Zone of Visual Influence was created using Google viewshed. The viewshed highlights areas in green that have the potential for a visual relationship with the site, taking into consideration factors such as surrounding building heights and topography. The viewshed has been used to inform viewpoint selection, in addition to detailed study of urban form, topography, site knowledge and professional experience. A total of 8 viewpoint have been selected, and are considered representative viewpoints from key visual receptors. Viewpoints were excluded where there is likely to be no significant impact beyond that which was already identified within the selected views.

9.39 For the purposes of the assessment, photographs of each of the principal viewpoints will be taken by a professional photographer in accordance with Landscape Institute's Advice Note 01/11, "Photography and Photomontage in Landscape and Visual Impact Assessment" (Ref. 1.7), which is in the process of being updated. The Guidance recommends a fixed 50 mm Focal Length (FL). This is considered the benchmark for landscape photography and should normally be used. The Guidance Note was produced in March 2011 and is currently in the process of being updated by the Landscape Institute.

9.40 Visually verified photomontages will be produced by Virtual Planit, a professional visualization studio with extensive experience in the production of photomontages, in accordance with the Landscape Institute's Technical Guidance Note 02/17 "Visual Representation of Development Proposals".

9.41 The proposed detailed design of the Proposed Scheme will be assessed, in order to assess 'worst case scenario', in accordance with the Guidelines.

9.42 In order to provide the most comprehensive, rounded and objective view of the Townscape and Visual Impacts of the proposed development, assessed effects will be agreed following round-table review by a team of individual assessors.

Significance of Effect

9.43 The objective of the assessment process would be to identify and evaluate the likely significant effects arising from the Proposed Scheme. Significance indicates the importance or gravity of the effect.

9.44 Whilst there would be a degree of professional judgement involved in determining the significance of townscape and visual effects, they can broadly be determined by the interaction of the sensitivity of the receptor and the magnitude of change. The resulting significance of effect matrix is set out in **Chapter 2**.

9.45 The likely significance of effects reflects judgements as to the importance or sensitivity of the affected receptor(s) and the nature and magnitude of the predicted changes. For example, a moderate negative effect on a feature or site of low importance will be of lesser significance than the same effect on a feature or site of high importance. Where a range of significance is given (e.g. Moderate to major), this allows for a degree of objectivity to be exercised within judgments, especially if ranges are recorded for either sensitivity or magnitude within the assessment.

9.46 The following terms have been used to define the significance of the effects identified:

- **Major effect:** where the Proposed Scheme could be expected to have a considerable effect (either positive or negative) on viewers or landscape receptors;
- **Moderate effect:** where the Proposed Scheme could be expected to have a noticeable effect (either positive or negative) on viewers or landscape receptors;
- **Minor effect:** where the Proposed Scheme could be expected to result in a small, noticeable effect (either positive or negative) on viewers or landscape receptors; and
- **Negligible:** where no discernible effect is expected as a result of the Proposed Scheme on viewers or landscape receptors (i.e. the effect is not significant).

9.47 Effects that are deemed to be significant for the purposes of this assessment are those that are described as being moderate to major beneficial / adverse. This approach is consistent with the 2017 TVIA assessment and takes into account the evolving City Edge context of this Site, and the significant city aspirations for change within the adjacent ID Manchester area.

9.48 The nature of effects may be positive or negative (beneficial or adverse) or neutral. Neutral effects recognise that there will be a change to the receptors, however this change is in keeping with the existing characteristics of the receptor. The table has

regard to guidance in the Guidelines for Landscape and Visual Impact Assessment, Third Edition, 2013, at paragraph 5.56, page 92 (significance of landscape effects) and paragraph 6.44, page 116 (significance of visual effects). This matrix will be used as a guide to determine significance, along with professional judgement.

Limitations and Assumptions

9.49 To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

- The assessment will rely on available data, and best endeavours will be made to ensure that the data are accurate and up to date. It is assumed that OS mapping information, topographic and 3D data and Historic England heritage mapping information are all up to date.

- The GLVIA methodology provides a robust and transparent process for assessment of townscape and visual effects and is used alongside visually verified photomontages which provide a high level of detail and technical accuracy. Significant effects will be determined through professional judgment, carried out by a team of assessors to provide scrutiny where this is relied upon.

10. Daylight, Sunlight, Overshadowing and Solar Glare

Technical Baseline

10.1 The BRE Guidelines suggest that residential properties have the highest requirement for daylight and sunlight and states that:

"the guidelines are intended for use for rooms in adjoining dwellings where light is required, including living rooms, kitchens and bedrooms."

10.2 There is no specific guidance relating to the extent of a study area. The scope of residential properties that have been assessed has been determined through professional judgement, considering their orientation and proximity to the Site.

10.3 Baseline studies are currently being undertaken by GIA. The baseline assessment will review the daylight and sunlight conditions within each of the surrounding residential properties in the Site area's present form, in accordance with BRE guidance.

10.4 The following sensitive receptors will be considered due to their residential use and proximity to the Site:

- Lambert House;
- Fairfield House;
- Warehouse One; and
- Stonebridge House.

10.5 Vimto Park will also be considered to understand whether there are any changes in sunlight amenity.

10.6 No buildings currently occupy the Site. As such, the Site is underdeveloped given the dense, urban location, and the surrounding receptors are therefore receiving higher levels of daylight and sunlight than would typically be expected in a city centre location.

10.7 For solar glare, the assessment is undertaken on the worst-case scenario. Solar Glare is not a comparative assessment; the fact it may occur in the baseline does not necessarily justify its occurrence as a result of the Proposed Development. Therefore, the assessment considers the effect of the Proposed Development in absolute terms.

10.8 However, it should be noted that the Proposed Development will be located on a cleared Site, thus there is no opportunity for instances of solar glare from the Site to be experienced. Solar glare from surrounding buildings is not assessed.

Proposed Scope of Assessment

10.9 The below sets out the proposed scope of assessment based on an understanding of the characteristics of the Site, surrounding area and the Proposed Scheme (**Chapter 4**). Where environmental effects are considered unlikely to be significant, an appropriate evidence base has been provided to justify the 'scoping out' of these effects ensuring the EIA and ES only assess those effects considered 'likely' to be significant.

Effects Unlikely / Not Significant

10.10 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

10.11 The scope of works will focus on the nearest sensitive receptors which are the residential receptors and public amenity space in the immediate vicinity of the Site. These have been determined in line with the reasonable expectation of daylight and sunlight as per the BRE guidelines. The BRE guidelines consider that residential properties have the highest requirement for daylight and sunlight. As such, daylight and sunlight effects to commercial buildings surrounding the Site, or residential buildings which are not in sufficient proximity to the Site, are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Reduced daylight and sunlight amenity during construction [surrounding residential receptors]

10.12 Owing to the evolving and changing nature of construction activities, the assessment of potential effects during construction of the Proposed Scheme on daylight and sunlight to surrounding properties will not be modelled.

10.13 Since the potential daylight and sunlight effects relating to construction works will vary throughout the construction programme and gradually increase to the potential effects identified for the completed Proposed Scheme, the interim construction effects will not be assessed quantitatively as it is considered that the completed Proposed Scheme represents the worst case assessment in terms of likely daylight and sunlight.

10.14 Therefore, reduced daylight and sunlight amenity during construction will not be reported separately on this basis that it will not be significant (or if it is, only on a parity with the completed Proposed Scheme).

Solar glare affecting residential amenity [surrounding residential receptors]

10.15 Regarding solar glare, BRE states that reflected sunlight can affect occupants of adjoining buildings. There are two types of glare: disability glare, which is a safety issue; and discomfort glare, which includes solar reflections impacting adjacent buildings. Discomfort glare does not impair the ability to see. Whilst it can be important where work involves continuous viewing of the outdoor space from a fixed vantage point, it can generally be managed where glare is an issue by using blinds of curtains for the periods of time where such glare occurs. For these reasons, residential

uses are classified as low-sensitivity receptors and do not require assessment as no significant adverse effects could occur.

10.16 Where analysis is undertaken, it would consider the total duration of time for which the sun can be reflected to the affected location per year. Durations of less than 50 hours per year are classified as being unlikely to lead to significant impacts. Some reflections from glazed buildings into surrounding buildings will inevitably occur in an urban context; however, it is highly unlikely that the Proposed Scheme would generate reflections that could impact any individual occupant in neighbouring buildings for 50 hours or more per year. Any discomfort glare that would occur would be entirely transient and short-lived as the sunpath moves past the Site and could be managed by residents using blinds or curtains for those short periods where necessary. This is considered to be typical of the Sites urban location and would potentially occur with any redevelopment proposal of the Site that includes areas of glazing.

10.17 It is therefore considered that any impact on residential amenity is not expected to be significant and an assessment of discomfort glare is not considered necessary. Therefore, solar glare effects to occupants of neighbouring buildings is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Effects Likely / Significant

10.18 **Table 10.1** outlines the effects (and associated receptor[s]) that are considered to be likely and significant and therefore will be assessed within the EIA and reported in the ES.

Table 10.1: Potential Likely Significant Effects and Sensitive Receptors

Effect	Receptor(s)	Applicable Stage(s)
Reduced daylight and sunlight amenity	Lambert House Fairfield House Warehouse One Stonebridge House	Operation
Reduced sunlight amenity	Vimto Park	Operation
Solar glare impacting visibility of road users at sensitive locations such as intersections and junctions	Selected viewpoints within 500m of the Site where the Proposed Scheme is visible, including: Hulme Street Charles Street Chorlton Street Minshull Street London Road Fairfield Street Travis Street Downing Street	Operation

Effect	Receptor(s)	Applicable Stage(s)
	Wadeson Road	
Solar glare impacting visibility of train drivers	Selected viewpoints within 500m of the Site where the Proposed Scheme is visible, including: Eastbound trains towards Piccadilly Westbound trains towards Oxford Road	Operation

Assessment Methodology of Effects Likely / Significant

10.19 The following background surveys/studies will be undertaken.

Table 10.2: Background Surveys / Studies

Survey / Study / Analysis / Evaluation	Overview	Date of Completion
Pending		
Daylight and sunlight assessment	An assessment of the potential impacts to daylight and sunlight on the surrounding sensitive receptors	April 2023

Legislative and Policy Context

10.20 There is no legislation, National or Local Planning Policy relevant to Solar Glare.

Legislation

10.21 There is no legislation that governs daylight and sunlight, with the criteria for assessment relating to daylight and sunlight covered by national and local policy in addition to BRE guidance as set out below.

National Planning Policy and Guidance

National Planning Policy

10.22 The following national planning policy is relevant to daylight and sunlight and will be referred to in the ES Chapter:

- Revised National Planning Policy Framework 2021[107]; and
- National Planning Policy Guidance 2021[108].

[107] Ministry of Housing, Communities & Local Government (2021). National Planning Policy Framework. 2021.

Local Planning Policy and Guidance

10.23 The following local planning policy is relevant to daylight and sunlight and will be referred to in the ES Chapter:

- Manchester Core Strategy (2012 – 2027)109; and
- Guide to Development in Manchester Supplementary Planning Document and Planning Guidance (Adopted April 2007)110.

Other Relevant Policy, Standards and Guidance

10.24 BRE 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice' (2022)[111i]; and

10.25 CIE 146:2002 & CIE 147:2002 Collection on glare[112ii].

Methodology for Determining Operational Effects

10.26 The following approaches are undertaken to assess the effect on the sensitive receptors of surrounding properties when the Proposed Scheme is completed and operational:

- Daylight
  - Vertical Sky Component (VSC); and
  - No Sky Line (NSL) Method.
- Sunlight
  - Annual Probable Sunlight Hours (APSH).
- Overshadowing
  - Sun Hours on Ground (SHOG).

Outline Approach for Daylight, Sunlight and Overshadowing Assessments

10.27 The technical analysis carried out to inform the daylight and sunlight assessment will be undertaken by creating a digital three-dimensional (3D) model of the existing Site and Proposed Scheme, based on measured survey data.

10.28 The 3D model uses Waldram Diagrams to establish the VSC and 3D geometric calculations for daylight distribution. This model (which is orientated to north by the

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[108] Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2021). National Planning Policy Guidance. 2021.
[109] Manchester City Council (2012). Manchester Core Strategy (2012 – 2027).
[110] Manchester City Council (2007). Guide to Development in Manchester Supplementary Planning Document and Planning Guidance Adopted April 2007.
[111] Building Research Establishment (BRE) (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice, Third Edition.
[112] Commission Internationale de L'Eclairage (CIE) (2002). 146:2002 & CIE 147:2002 Collection on glare

use of Ordnance Survey (OS) information) enables the path of the sun to be tracked throughout the year to establish the shadow cast by the existing and proposed buildings and thus calculate the sun hours on ground in each scenario.

10.29 In accordance with the BRE Guidance, only those surrounding properties which have windows facing towards the Site will be included in the assessment. If a nearby property has no windows facing the Site, these properties would not be affected by the Proposed Development in terms of light.

10.30 The following table provides a summary of the criteria set out within the BRE Guidelines for daylight and sunlight.

Table 10.3: Summary of Daylight and Sunlight Assessment Criteria

Method	BRE Criteria
VSC	A window may be adversely affected if its VSC measured at the centre of the window is less than 27% and less than 0.8 times is former value.
NSL	A room may be adversely affected if the daylight distribution (NSL) is reduced beyond 0.8 times its existing area.
APSH	A window may be adversely affected if a point at the centre of the window received for the whole year, less than 25% of the APSH including at least 5% of the APSH during the winter months (21 September to 21 March) and less than 0.8 times its former sunlight hours during either period, and for existing neighbouring buildings, if there is a reduction in total APSH which is greater than 4%.
SHOG	An amenity area may be adversely affected if less than 50% of its area receives less than 2 hours of direct sunlight on 21 March and less than 0.8 times its former value.

10.31 **Appendix 10.1** elaborates on each of the above assessment criteria and explains the appropriateness of their use.

10.32 When assigning significance criteria for daylight and sunlight effects, professional judgement will be used. Consideration will be given to the proportion of rooms/windows affected, as well as the percentage alterations, absolute changes, sensitivity of the receptor, and any other relevant factors. There may be mitigating factors such as location and nature of development, balconies, overhangs or design features which may also affect the determination of assigning the criteria.

10.33 When assigning significance criteria for sun hours on ground effects, consideration will be given to the nature of the adjoining amenity space, as well as the percentage alterations, absolute changes, sensitivity of the receptor, and any other relevant factors.

Approach for Solar Glare Assessments

10.34 For solar glare, the worst-case scenario is portrayed by the complete and operational Proposed Scheme, where all reflective facade materials have been installed and any covers, films or hoarding used during the construction period have been removed.

10.35 The assessment will consider potentially sensitive viewpoints for road and rail drivers surrounding the site. The viewpoints will generally be located at the minimum stopping distance for road users and at the driver's eye level with the focal point being a relevant traffic element, such as signals or incoming traffic. For rail drivers, viewpoints will be assessed where signals are visible or at representative intervals where the Proposed Scheme would be visible close to the direct line of sight for a substantial stretch of track.

10.36 Viewpoints within 500m of the Site, where the Proposed Scheme is visible within the driver's field of view will be assessed. At distances greater than 500m from the Proposed Scheme, instances of solar glare would be unlikely to occur. A review of the surrounding area has identified the following road junction and rail tracks as receptors sensitive to solar glare.

10.37 Drivers at each of the relevant road or rail viewpoints are considered the sensitive receptors, where there are multiple directions of travel potentially affected, each direction of travel at the junction is considered a separate receptor as their effect significance may differ. For train tracks, the train drivers on the stretch of track are considered to be the sensitive receptor. The effect significance will be determined using professional judgement taking into consideration the duration of solar reflections, location of these in relation to a driver's line of sight, type of junction control and the probability of reflections occurring. The effect significance is given on a per junction basis considering all viewpoints assessed for that junction as well as any viewpoints that would not be affected by the Proposed Scheme.

10.38 There are no quantitative criteria within the BRE Guidelines or elsewhere regarding acceptable levels of solar glare. When assessing the overall significance of effect, the following factors could influence the nature, scale and resultant significance of effect:

- Sunlight availability probability;
- Area of façade off which reflections are visible;
- Period of time when reflections are visible;
- Angle at which reflections are visible from line of sight;
- Views of the Proposed Scheme being obscured for example by trees; and/or
- The time of day at which the solar reflection will occur for example during peak traffic times.

10.39 The factors in **Table 10.4** will be used to ascertain the possible significance for each view and the factors listed above will then be taken into consideration to determine the overall significance for the designated viewpoint.

Table 10.4: Summary of Solar Glare Assessment Criteria

Scale of Effect	Possible Factors
Negligible	No reflections are visible or if visible all occur at angles greater than 30° from the driver's line of sight and so, as stated by the CIE, will be of "little significance".
Minor	Solar reflections are visible within 30° to 10° or between 10° to 5° of the driver's line of sight for a short period of time.
Moderate	Solar reflections are visible within 10° and 5° of the driver's line of sight occurring for a long period of time.
Major	Solar reflections are visible within 5° of a driver's line of sight.

10.40 All viewpoints assessed for solar glare are considered to be of high sensitivity.

10.41 The assessment of likely significant effects to sensitive receptors will consider the sensitivity of the receptor (on a scale of high, medium, low and negligible), the magnitude of change (on a scale of large, medium, small and negligible), and the level of effect on a scale of major, moderate, minor and negligible. Significant effects will be determined from this evaluation and including professional judgment.

Limitations and Assumptions

10.42 To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

- Where actual room layouts are available on the planning portal, these will be considered in regard to the modelling of the internal layouts within the existing surrounding properties. Where layout information is not available, assumptions will be made as to the use and internal configuration of the rooms (from external observations during a site inspection) behind the fenestration observed.

- Floor levels will be assumed for adjoining properties assessed, where access has not been obtained. This dictates the level of the working plane which is relevant for the NSL assessments.

- Façade details are not yet known however the façade design of the Proposed Development is anticipated to comprise large areas of glazing which have the potential for solar glare effects.

- Although great care has been taken in identifying typical viewpoints for solar glare, this does not guarantee that there are no additional sensitive locations where reflected solar glare could present a particular risk. For practical reasons, the area of the assessment has been limited to the area surrounding the Proposed Development. This area extends to a distance of approximately 500m around the site in all directions. At greater distances, the likelihood of solar reflections causing significant glare is reduced as the time that buildings will

reflect is reduced and the area of façade visible constitutes a reduced angle and so reduces the possibility of the whole sun disk being reflected.

11. Wind Microclimate

Technical Baseline

11.1 At this stage no assessment of the baseline has been conducted with respect to wind. The Site is currently cleared of structures.

11.2 The Baseline assessment will be carried out as a representation of the existing condition, i.e., existing condition of the Site within the existing surroundings. Any buildings under construction within a 500m distance from the Site will be considered as completed.

11.3 The Baseline assessment will be used as a reference from which the magnitude of change will be measured once the Proposed Scheme is assessed under equal conditions.

11.4 The information that will potentially be used to define the baseline conditions would be collected from available sources including drawings of the Proposed Scheme, information from the Manchester Planning Portal supported by mapping data and photographic data for the area

Proposed Scope of Assessment

11.5 The below sets out the proposed scope of assessment based on an understanding of the characteristics of the Site, surrounding area and the Proposed Scheme (**Chapter 4**). Where environmental effects are considered unlikely to be significant, an appropriate evidence base has been provided to justify the 'scoping out' of these effects ensuring the EIA and ES only assess those effects considered 'likely' to be significant.

Effects Unlikely / Not Significant

11.6 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the Preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

Potential effects on wind microclimate during the construction of the Proposed Scheme [sensitive receptors within 500m from the Site]

11.7 The effects on the wind microclimate of the Site and its surroundings are a function of the massing of the Proposed Scheme which would progressively vary during the construction stage. Wind speeds are likely to increase during periods of demolition as a site will become relatively free of obstructions and winds are likely to gather speed in open areas, though demolition has already taken place on Site. As construction develops, the potential effects during various stages of construction will vary and may be of lesser magnitude than those that will be experienced once the Proposed Scheme has been completed. Any undesirable wind conditions during construction are temporary and the areas within the immediate vicinity of the Site will not be open to the public. As construction of the Proposed Scheme proceeds, the wind conditions of

the Site and its surroundings would gradually vary, approaching those of the completed development. Therefore, the completed development represents the worst-case scenario.

11.8 Therefore, potential effects on wind microclimate during the construction of the Proposed Scheme to sensitive receptors within 500m from the Site will not be reported separately on this basis that they will not be significant (or if they are, only on a parity with the completed Proposed Scheme)

Potential effects on wind microclimate from the Proposed Scheme beyond 500m from the Site [areas beyond 500m from the Site]

11.9 Due to the distance from the Site, the wind effects on areas beyond 500m from the Site are considered to not be significant in line with best practice guidelines.

11.10 Therefore, the potential effects on wind microclimate from the Proposed Scheme beyond 500m from the Site are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Effects Likely / Significant

11.11 **Table 11.1** outlines the effects (and associated receptor[s]) that are considered to be likely and significant and therefore will be assessed within the EIA and reported in the ES.

Table 11.1: Potential Likely Significant Effects and Sensitive Receptors

Effect	Receptor(s)	Applicable Stage(s)
Potential changes to the wind microclimate from the Proposed Scheme outside of the Site	Existing pedestrian street-level and open amenity spaces receptors within 500m from the Site	Operation
Potential changes to the wind microclimate from the Proposed Scheme within the Site	Accessible balconies, roof terraces and new amenity spaces within the Proposed Scheme	Operation

Assessment Methodology of Effects Likely / Significant

11.12 The following background surveys/studies will be undertaken.

Table 11.2: Background Surveys / Studies

Survey / Study / Analysis / Evaluation	Overview	Date of Completion
Pending		
Baseline Wind Assessment	Assessment of the existing buildings on the Site with the existing surrounding context.	Pending - April 2023

Survey / Study / Analysis / Evaluation	Overview	Date of Completion
Proposed Scenario Wind Assessment	Assessment of the Proposed Scheme on the Site with the existing surrounding context.	Pending - April 2023
Cumulative Scenario Wind Assessment	Assessment of the Proposed Scheme on the Site with the existing surrounding context in combination with other future (consented) schemes.	Pending - April 2023

Relevant Guidance and Best Practice

11.13 There is no legislation relevant to this assessment although guidance exists, as shown in below.

- National:
  - National Planning Policy Framework, 2021[113];
- Local:
  - Core Strategy 2012-2027, 2012[114];
- Guidance:
  - The Lawson Criteria, 2001[115];
  - Best Practice Guidelines for Computational Fluid Dynamics Simulation of Flows in the Urban Environment, 2007[116]; and
  - Historic England Advice Note 4, Tall Buildings, 2015[117];

Proposed Assessment Methodology

11.14 The purpose of this study is to determine the likely significant effects of the Proposed Scheme on the local pedestrian wind environment within the Site and its surrounding areas as compared to the baseline conditions. The assessment will follow the guidance given in the Lawson Criteria[118] which is discussed below.

[113] Ministry of Housing, Communities and Local Government (2021). National Planning Policy Framework. Available at: National Planning Policy Framework - GOV.UK (www.gov.uk)
[114] Manchester City Council (2012). Core Strategy 2012 – 2027. Available at: Core Strategy 2012-2027 | Core Strategy 2012-2027 | Manchester City Council
[115] The Lawson Criteria, 2001
[116] Meteorological Inst. (2007). Best Practice Guidelines for Computational Fluid Dynamics Simulation of Flows in the Urban Environment.
[117] Historic England (2015). Tall Buildings Historic England Advice Note 4. Available at: Tall Buildings: Historic England Advice Note 4
[118] The Lawson Criteria, 2001

11.15 A three- dimensional computer model of the Proposed Scheme and adjacent areas will be constructed for the assessment and will comprise the following scenarios:

- Baseline Scenario: Assessment of the existing Site with the existing surrounding context;
- Proposed Scenario: Assessment of the Proposed Scheme on the Site with the existing surrounding context;
- Cumulative Effects (to be reported within the Cumulative Effects Assessment ES Chapter): This scenario will include the effects of the Proposed Scheme in combination with other future (consented) schemes.

11.16 The method for the study will combine the use of CFD to predict wind velocities and air flow patterns, the use of wind data from the nearest suitable meteorological station and the recommended comfort and safety standards set out in the Lawson Criteria. A full 3D model of the Site and its surrounding areas will be constructed for the assessment. The study will take the following factors into account:

- The effect of the geometry, height and massing of the development and existing surroundings on local wind speed and direction;
- The wind speed as a function of the local environment as topography, ground roughness and nearby obstructions (buildings, bridges, etc.);
- The effects of the built up urban around the site on the wind flow patterns;
- Orientation of the buildings relative to the prevailing wind direction; and
- The pedestrian activity to be expected (sitting, standing, or walking). It should be noted that effects on pedestrian comfort and safety are only considered externally to the building. No assessment will be made of the potential effects of the wind environment inside buildings, as microclimate studies are only intended to assess external conditions.

11.17 The results of the assessment will be presented in the form of wind velocity contours at a plane 1.5m above the ground level. This reference height is industry standard to assess comfort and safety at pedestrian level.

The Study Area

11.18 The study area modelled for this analysis will include the Site and the surrounding existing and permitted development likely to be affected by the Proposed Scheme (500m).

11.19 The extent of the 3D model for the wind assessment will include the built area within a radius of approximately 500m around the Site. Beyond this area, buildings and structures will be represented in the computational domain if their distance from the region of interest is less than six times their height, in line with the Best Practice Guidelines for CFD Simulation of Flows in the Urban Environment.

The Lawson Criteria[119]

11.20 The Lawson Comfort Criteria will be applied, and a comparison will be made between the modelled results of the CFD assessment in terms of the suitability for various pedestrian activities against the desired pedestrian activity in that location. The Lawson Comfort Criteria define a scale for assessing the suitability of wind conditions in the urban environment based upon threshold values of wind speed and frequency of occurrence.

11.21 The Lawson criteria are specifically designed for pedestrian activities and are related to pedestrian comfort and safety. Therefore, the assessment focuses on assessing the areas with pedestrians use only, including cyclists.

11.22 The frequency of occurrence is used as an indicator of the likely duration of wind speeds. The criteria provide ranges of acceptability to maintain pedestrian comfort for different activities and relate frequency of occurrence to the hourly average wind speed ranges. The criteria ranges are set out in **Table 11.3** below.

Table 11.3: Lawson's Comfort Assessment Criteria

Comfort Category	Threshold mean wind speed (5% exceedance)	Comfort Category
Sitting	4 m/s	Acceptable for outdoor seating and areas one can occupy comfortably for long periods.
Standing	6 m/s	Acceptable for entrances, bus stops, covered walkways or passageways beneath buildings.
Walking	8 m/s	Acceptable for external pavements, walkways.
Uncomfortable	>8 m/s	Not comfortable for regular pedestrian access.

11.23 The Lawson Criteria also identifies a safety criterion to identify those areas where someone could find walking difficult, or even stumble and fall. The Lawson Comfort Criteria define threshold wind speeds not to be exceeded for more than 0.025% of the year. These are particularly strong winds that could cause people to have difficulties while walking and also stumble or fall. The safety criterion is set out in **Table 11.4** below.

Table 11.4: Lawson's Safety Assessment Criteria (LDDC)

Safety Category	Threshold mean wind speed (0.025% exceedance)	Safety Category
Pedestrian Safety Limit	15 m/s	Presents a safety risk for pedestrians, especially to more vulnerable members of the public.

[119] The Lawson Criteria, 2001

General Target Wind Conditions

11.24 The wind assessment for each of these criteria will be tested taking into account the season and will inform the suitability for different activities on the Site based on the following general target wind conditions:

- Outdoor amenity and seating areas: 'Sitting' during the Summer season;
- Building entrances, bus stops, drop off areas: 'Standing' during all seasons;
- Pedestrian circulation routes: 'Walking' during all seasons; and
- Pedestrian thoroughfares (minor pedestrian routes): 'Walking' during all seasons.

Identification of Sensitive Receptors

11.25 Sensitive receptors for the wind assessment will be all pedestrian circulation routes, building entrances and leisure open areas within the Site and in neighbouring adjacent areas. Balconies and roof terraces within the Proposed Scheme where occupants are expected to use as outdoor spaces are also considered sensitive receptors.

Determining the Significance of Effect

11.26 EIA requires a description of the significance of wind effects at a particular location. This section is intended to provide consistency in these significance descriptors. Whether a condition is significant or not depends on whether the condition requires mitigation. The tables in the following sections also include a column that defines if mitigation measures are necessary.

11.27 To determine the significance of the effect of the Proposed Scheme on the wind environment, a comparison can be made with the existing conditions on the Site where applicable. However, because the pedestrian use of a Site can change between the existing and proposed uses, the assessment should also be based upon the suitability of the Site for the desired pedestrian use, where known. The likely significance of effects is therefore based on the following parameters:

- The magnitude of change of the wind environment in the Proposed Scenario from the Baseline; and
- Adherence to the Lawson Criteria[120].

On-site receptors

11.28 The significance of on-site measurement locations is defined by comparing the wind comfort/safety levels with the intended pedestrian activity at each location, using **Table 11.5** below.

[120] The Lawson Criteria, 2001

Table 11.5: Determining the Significance of effect - On-Site Receptors

Significance	Trigger	Mitigation required?
Major Adverse	Conditions are 'unsafe'	Yes
Moderate Adverse	Conditions are 'unsuitable' (in terms of comfort) for the intended pedestrian use.	Yes
Minor Adverse	Conditions are only locally 'unsuitable' (in terms of comfort) but most suitable for the intended pedestrian use.	No
Negligible	Conditions are 'suitable' for the intended pedestrian use.	No

Off-site receptors

11.29 The significance of off-site measurement locations is defined not only by comparing the wind comfort levels with the intended pedestrian activity, but also by comparing the conditions to those experienced prior to the introduction of the Proposed Scheme (baseline), using **Table 1.6** below.

Table 11.6: Determining the Significance of effect - Off-Site Receptors

Significance	Trigger	Mitigation required?
Major Adverse	Conditions that were 'safe' in the baseline scenario become 'unsafe' as a result of the Proposed Scheme. OR Conditions that were 'suitable' in terms of comfort in the baseline scenario become 'unsuitable' as a result of the Proposed Scheme. OR Conditions that were 'unsafe' in the baseline scenario are made worse as a result of the Proposed Scheme.	Yes
Moderate Adverse	Conditions that were 'suitable' in terms of comfort in the baseline scenario are made windier (by at least one comfort category) as a result of the Proposed Scheme but remain 'suitable' for the intended pedestrian activity.	No
Minor Adverse	Conditions that were 'suitable' in terms of comfort in the baseline scenario are made only locally windier as a result of the Proposed Scheme but remain mostly 'suitable' for the intended pedestrian activity.	No

Significance	Trigger	Mitigation required?
Negligible	Conditions remain the same as in the baseline scenario.	No
Major Beneficial	Conditions that were 'unsafe' in the baseline scenario become 'safe' as a result of the Proposed Scheme.	No
Moderate Beneficial	Conditions that were 'unsuitable' in terms of comfort in the baseline scenario become 'suitable' as a result of the Proposed Scheme. OR Conditions that were 'unsafe' in the baseline scenario are made better as a result of the Proposed Scheme (but not so as to make them 'safe').	No

11.30 Where the results of the assessments identify areas where the guidelines are not met or where the suitability exceeds that of the intended use, the need for mitigation measures to achieve the required wind condition for the designated uses and/or limit the adverse effect of the Proposed Scheme will be identified and an assessment of residual effects will be made.

11.31 A separate statement will be made as to whether the residual effect is 'Significant' or 'Not Significant', which will be based on the outcomes of the assessment in line with the approach above and professional judgement.

Limitations and Assumptions

11.32 To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

- The assessment will take into consideration all external wind effects at pedestrian level. Other potential wind effects including wind loads, structural response, natural ventilation and internal flows of buildings are not within the scope of this assessment.
- The assessment also excludes impacts on vehicles or waterways since the Lawson Criteria[121] focuses on impacts to pedestrians.
- The model for the base wind assessment will include all relevant buildings and structures in the surrounding area but as a worst-case scenario will exclude trees and landscape features. Where required, these could be added to test mitigation options.

[121] The Lawson Criteria, 2001

- It is not clear at this stage if the quantitative assessment of the mitigation measures will form a part of this EIA assessment or will be carried out in a later stage.

12. Noise and Vibration

Technical Baseline

12.1 A review of the existing noise environment has been undertaken based on survey data obtained for the 2017 application. Background noise surveys were completed in May and July 2017. Attended and unattended measurements of the existing background and ambient noise levels were taken externally, at 1m from the façade of the previously existing Chandos Hall building, which did occupy the Site but is now demolished, by projecting microphones out of appropriate windows. The surveys were undertaken on the southern elevation on the 2nd, 5th and 13th floor of the building and the 6th floor of the eastern elevation. The noise measurements highlighted noise levels on the south-facing elevation overlooking the railway were dominated by the railway line with a mixture of diesel and electric trains. There was a distant general road traffic hum dominant in between train movements. At upper levels the rail noise reduces a little and traffic hum becomes more noticeable. There is some noise at higher floors from fixed M&E plant on rooftops of University buildings.

12.2 The eastern elevation identified ambient noise levels increased with height, where there was a direct line of site to Piccadilly station. The western elevation had distant general road traffic noise which was dominant and louder at higher floors of the existing building. The noise levels on the western elevation were subjectively lower than those on the east facing elevation. Rail noise was audible and becoming more significant closer to the railway line.

12.3 **Table 12.1** provides a summary of the measured baseline noise levels.

Table 12.1: Summary of Noise Measurements

Location	Descriptor	Sound Pressure Level, dB at Octave-Band Centre Frequency (Hz)								dBA
		63	125	250	500	1k	2k	4k	8k	
Southern elevation 2nd Floor	Day L_{eq}	73.4	64.5	64.2	62.1	61.8	58.3	58.7	53.7	**66.8**
	Night L_{eq}	68.3	61.1	61.6	59.1	58.3	54.5	58.5	52.9	**64.4**
	*Typical Night L_{Max}	91.6	79.7	81.7	78.4	77.5	74.3	75.6	73.4	**83.3**
Southern elevation 5th Floor	Day L_{eq}	72.4	63.5	63.2	61.1	60.8	57.3	57.7	52.7	**65.8**
	Night L_{eq}	67.3	60.1	60.6	58.1	57.3	53.5	57.5	51.9	**63.4**
	*Typical Night L_{Max}	90.6	78.7	80.7	77.4	76.5	73.3	74.6	72.4	**82.3**

Location	Descriptor	Sound Pressure Level, dB at Octave-Band Centre Frequency (Hz)								dBA
		63	125	250	500	1k	2k	4k	8k	
Southern elevation 13th Floor	Day L_{eq}	71.5	64.7	62.3	60.9	62.1	56.3	51.2	45.3	**65.2**
	Night L_{eq}	67.0	60.8	59.2	57.9	59.1	53.7	51.4	44.8	**62.5**
	*Typical Night L_{Max}	88.6	78.5	74.6	74.8	72.5	70.1	68.0	62.8	**77.9**
Eastern elevation 6th Floor	Day L_{eq}	68.8	61.4	59.0	58.1	58.4	54.0	51.0	46.2	**62.3**
	Night L_{eq}	63.8	57.9	56.1	55.6	55.3	49.8	47.1	42.4	**59.0**
	*Typical Night L_{Max}	84.6	75.3	72.9	74.1	71.9	68.6	66.7	60.1	**76.8**
Western elevation 6th Floor	Day L_{eq}	67.6	61.9	56.8	56.1	55.9	51.6	48.0	44.6	**60.0**
	Night L_{eq}	61.8	57.7	52.9	52.6	51.6	46.3	41.2	36.3	**55.5**
	*Typical Night L_{Max}	81.9	74.5	70.3	71.5	69.6	66.4	62.2	57.3	**74.3**

*Typical Night L_{Max} is the 98th percentile of the $L_{Max,1min}$ measurements for the whole night time period (23:00 – 07:00)

Background Sound Levels

12.4 The results obtained during the noise survey were further analysed in order to determine the typical background sound levels at surrounding noise-sensitive receptors.

12.5 Representative Background Sound Levels were derived for two time periods of interest, as follows.

- Day time 07:00hrs to 23:00hrs; and
- Night time 23:00hrs to 07:00hrs.

12.6 The free-field representative background sound levels for the nearest residences, which are currently those student dwellings located on Granby Row are as follows:

- Day time 54 dB $L_{A90,1hour}$
- Night time 47 dB $L_{A90,15\ minute}$

Existing Vibration Levels

12.7 Vibration measurements were undertaken in August 2018. The surveys were undertaken within the basement of the existing Chandos Hall building over a 72-hour period. The results of the measurements are provided in **Table 12.2** below.

Table 12.2: Summary of Vibration Measurements

Date	Day (0700 – 2300) VDV ($m.s^{-1.75}$)	Night (2300 – 0700) VDV ($m.s^{-1.75}$)
17th August 2018	0.010*	0.010
18th August 2018	0.007	0.004
19th August 2018	0.007	0.016
20th August 2018	0.012*	N/A

** Data for daytime calculated for 16-hour assessment period from partial measurement.*

12.8 The measured vibration levels within the Chandos Hall building show that vibration levels are below the threshold for 'low probability of adverse comment' according to criteria set down in BS6472-1[122].

12.9 Updated noise and vibration surveys will be undertaken in February 2023. It is not expected that the levels will have changed significantly from those measured in the 2017 survey, since the main vibration source is from freight trains which are still operational on the line.

Proposed Scope of Assessment

12.10 The below sets out the proposed scope of assessment based on an understanding of the characteristics of the Site, surrounding area, and the Proposed Scheme (**Chapter 4**). Where environmental effects are considered unlikely to be significant, an appropriate evidence base has been provided to justify the 'scoping out' of these effects, ensuring the EIA and ES only assess those effects considered 'likely' to be significant.

Effects Unlikely / Not Significant

12.11 Based on the technical baseline and understanding of the Proposed Scheme (**Chapter 4**), the following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within the preliminary Environmental Management Plan (EMP) provided in **Appendix 2.1**.

[122] BSI Standards Publications (2008). BS6472: 2008. Available at https://vdocument.in/bs-6472-1-2008-vibration-sources.html?page=1 [Accessed:25/1/2023].

Nuisance and disturbance as a result of noise from construction activities [existing residential receptors located close to the Site]

12.12 Construction activities have the potential to result in nuisance and or adverse health effects due to noise emissions arising from on-site construction activities. It is anticipated that noise emissions produced during construction activities would be controlled through the implementation of a Construction Environmental Management Plan (CEMP). The CEMP will have controls implemented in accordance with BS5288-1:2014[123], such controls would include site hoardings, hours of operation, and the use of practicable measures to control noise at source. These tertiary mitigation measures would be considered an integral part of the Proposed Scheme and considered part of the EMP.

12.13 The effects of construction noise were fully assessed as part of the ES Chapter 13 (Noise and Vibration)[124] for planning application 118267/FO/2017. It can be seen from the results tabulated in **Table 12.3**, that some of the closest noise-sensitive receptors included in this assessment would be exposed to construction and demolition noise levels which are above the relevant threshold criteria. These receptors are located in Lambert and Fairfield halls which are owned and operated by IQ. The phase of construction which leads to the excess of the criteria includes; piled foundations, frame construction activities.

[123] BSI Standards Publications (2014). BS5228-1:A1:2014: available at https://knowledge.bsigroup.com/products/code-of-practice-for-noise-and-vibration-control-on-construction-and-open-sites-vibration/standard [Accessed 13/1/2023].

[124] Turley (2017). Environmental Statement, Echo Street, Manchester: Chapter 13: available at https://pa.manchester.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=OZRWJ8BCHYJ00 [Accessed 13/1/2023].

Table 12.3: Construction Noise Significance Assessment (ABC Method).

D	Receptor	Measured Existing Ambient Noise Level (L_{Aeq})	Rounded to nearest 5 dB	Activity 1 Demolition	Activity 2 Piled Foundations	Activity 3 Non-Piled Foundations	Activity 4 Building Construction	Worst Case Predicted Noise Level	Category	Threshold	Magnitude of Impact	Sensitivity of Receptor	Significance of effect
1	Barnes Wallis Building North	66	65	42	48	42	47	48	B	70	Negligible	Medium	None
2	Barns Wallis Building East (Ground Floor)	66	65	47	55	49	53	55	B	70	Negligible	Medium	None
3	Barns Wallis Building East (Middle Floor)	66	65	48	55	50	54	55	B	70	Negligible	Medium	None
4	Barns Wallis Building East (Top Floor)	66	65	51	57	54	55	57	B	70	Negligible	Medium	None
5	Barns Wallis Building West (Ground Floor)	66	65	51	60	50	58	60	B	70	Negligible	Medium	None
6	Barns Wallis Building West (Middle Floor)	65	65	52	58	54	55	58	B	70	Negligible	Medium	None
7	Barns Wallis Building West (Top Floor)	65	65	51	58	50	58	58	B	70	Negligible	Medium	None
8	**Echo Street Office**	**62**	**60**	**65**	**72**	**66**	**72**	**72**	**A**	**65**	**Moderate**	**Low**	**Minor**

D	Receptor	Measured Existing Ambient Nosie Level (L_{Aeq})	Rounded to nearest 5 dB	Activity 1 Demolition	Activity 2 Piled Foundations	Activity 3 Non-Piled Foundations	Activity 4 Building Construction	Worst Case Predicted Noise Level	Category	Threshold	Magnitude of Impact	Sensitivity of Receptor	Significance of effect
9	**Fairfield Hall (Ground Floor)**	**62**	**60**	**65**	**72**	**66**	**72**	**72**	**A**	**65**	**Moderate**	**High**	**Major**
10	**Fairfield Hall (Middle Floor)**	**62**	**60**	**64**	**73**	**66**	**72**	**73**	**A**	**65**	**Moderate**	**High**	**Major**
11	**Fairfield Hall (Top Floor)**	**62**	**60**	**63**	**71**	**65**	**70**	**71**	**A**	**65**	**Moderate**	**High**	**Major**
12	Joule Library (East)	60	60	58	63	60	63	63	A	65	Negligible	High	None
13	Joule Library (South)	60	60	55	62	58	61	62	A	65	Negligible	High	None
14	**Lambert Hall East (Ground Floor)**	**62**	**60**	**62**	**69**	**65**	**68**	**69**	**A**	**65**	**Low**	**High**	**Moderate**
15	**Lambert Hall East (Middle Floor)**	**62**	**60**	**65**	**74**	**67**	**71**	**74**	**A**	**65**	**Moderate**	**High**	**Major**
16	**Lambert Hall East (Top Floor)**	**62**	**60**	**64**	**71**	**67**	**70**	**71**	**A**	**65**	**Moderate**	**High**	**Major**
17	**Lambert Hall West (Ground Floor)**	**62**	**60**	**66**	**74**	**69**	**72**	**74**	**A**	**65**	**Moderate**	**High**	**Major**

D	Receptor	Measured Existing Ambient Nosie Level (L_{Aeq})	Rounded to nearest 5 dB	Activity 1 Demolition	Activity 2 Piled Foundations	Activity 3 Non-Piled Foundations	Activity 4 Building Construction	Worst Case Predicted Noise Level	Category	Threshold	Magnitude of Impact	Sensitivity of Receptor	Significance of effect
18	**Lambert Hall West (Middle Floor)**	**62**	**60**	**65**	**74**	**68**	**72**	**74**	**A**	**65**	**Moderate**	**High**	**Major**
19	**Lambert Hall West (Top Floor)**	**62**	**60**	**63**	**70**	**67**	**69**	**70**	**A**	**65**	**Moderate**	**High**	**Major**
20	London Road Fire Station	66	65	50	56	56	53	56	B	70	Negligible	High	None
21	Macdonald Hotel (Top Floor)	68	70	49	54	52	53	54	B	70	Negligible	High	None
22	Maths & Science Building East (Ground Floor)	65	65	27	34	30	32	34	B	70	Negligible	Medium	None
23	Maths & Science Building East (Middle Floor)	65	65	30	37	31	37	37	B	70	Negligible	Medium	None
24	Maths & Science Building East (Top Floor)	68	70	36	42	40	40	42	B	70	Negligible	Medium	None
25	Maths & Science Building West (Ground Floor)	68	70	42	49	44	49	49	B	70	Negligible	Medium	None

D	Receptor	Measured Existing Ambient Nosie Level (L_{Aeq})	Rounded to nearest 5 dB	Activity 1 Demolition	Activity 2 Piled Foundations	Activity 3 Non-Piled Foundations	Activity 4 Building Construction	Worst Case Predicted Noise Level	Category	Threshold	Magnitude of Impact	Sensitivity of Receptor	Significance of effect
26	Maths & Science Building West (Middle Floor)	68	70	46	51	50	50	51	B	70	Negligible	Medium	None
27	Maths & Science Building West (Top Floor)	68	70	45	53	46	52	53	B	70	Negligible	Medium	None
28	Pendulum Hotel	65	65	44	51	47	50	51	B	70	Negligible	High	None
29	Renold Building	62	60	53	61	57	60	61	A	65	Negligible	Medium	None
30	Staff House	60	60	37	42	37	42	42	A	65	Negligible	Medium	None
31	The Bulls Head Pub	65	65	56	66	60	64	66	B	70	Negligible	High	None
32	Velvet House	62	60	44	51	48	51	51	A	65	Negligible	High	None
33	Vimto Park	60	60	53	59	56	58	59	A	65	Negligible	Low	None

12.14 It should however be noted that the impact is for a relatively short duration, with the groundworks and foundations likely to take approximately 20 weeks and the frame construction likely to take approximately 55 weeks. Façade cladding is expected to take 60 weeks, however this activity is not considered likely to be a significant impact.

12.15 The assessment concluded (when considering the results of the ABC method, the conservative nature of the assessment, the magnitude of the effects, and the particularly when considering the temporary nature and short duration of the effects), that the overall magnitude of effect of the Proposed Scheme would be Low adverse.

12.16 Chandos Hall has already been demolished and the majority of the piling foundations have been installed. The construction activities as part of the Proposed Scheme are therefore considered to be reduced in comparison to what was assessed in 2017, and the baseline noise levels are not likely to have changed since the previous assessment. It is therefore considered that the likely magnitude of effect will be the same as the previous assessment.

12.17 Therefore, noise impacts on existing residential receptors are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Nuisance and disturbance as a result of vibration from construction activities [existing residential receptors located close to the Site]

12.18 Construction activities have the potential to result in nuisance and or adverse health effects due to vibration arising from on-site construction activities, mainly piling. The majority of the piling has been completed on Site, though there is potential for further piled foundations and works to the existing pile caps to be required. It is anticipated that vibration emissions produced during construction activities would be controlled through the implementation of a CEMP. The CEMP will have controls implemented in accordance with BS5288-2:2014[125], such controls would include the use of low-vibration working methods, such as continuous flight auger (CFA) and reasonable hours of working. These tertiary mitigation measures would be considered an integral part of the Proposed Scheme and considered part of the EMP.

12.19 The effects of construction vibration were fully assessed as part of the ES Chapter 13 (Noise and Vibration)[126] for planning application 118267/FO/2017. **Table 12.4** provides the results of the vibration assessment from the previous ES chapter.

[125] BSI Standards Publications (2014) BS5228-2:A1:2014: available at https://knowledge.bsigroup.com/product./code-of-practice-for-noise-and-vibration-control-on-construction-and-open-sites-vibration/standard [Accessed on 13/1/2023].

[126] Turley (2017). Environmental Statement, Echo Street, Manchester: Chapter 13: available at https://pa.manchester.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=OZRWJ8BCHYJ00 [Accessed 13/1/2023].

Table 12.4: Vibration Significance Assessment

ID	Receptor	Likely Levels of Vibration PPV (mms^{-1})	Magnitude of effect	Sensitivity of receptor	Significance of effect
8	Echo Street Office	0.4	Low	Low	None
9	**Fairfield Hall (Ground Floor)**	**0.4**	**Low**	**High**	**Moderate**

12.20 The assessment has indicated that the likely levels of vibration will have a **Low** magnitude of effect for all selected receptors. The sensitivity of receptors is high for the residential receptors and low for the office receptors which leads to impacts which are moderate adverse or no impact. These impacts are limited to periods of time when the piling plant is located close to residential receptors, as they move further away the impacts reduced. The duration of the proposed works is reduced from the previous assessment since the majority of the piling has been completed and period of 25 weeks for the groundworks and foundations, not all of this time will involve the CFA activities.

12.21 The assessment concluded that the overall magnitude of effect of the Proposed Scheme would be Low adverse for all selected receptors and not significant.

12.22 The majority of the piling has been undertaken and the building has been demolished. It is not considered that the baseline vibration environment will have changed. Therefore, vibration impacts on existing residential receptors are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Nuisance and disturbance as a result of increased noise from construction traffic [existing residential receptors located close to the Site]

12.23 Road traffic associated with the construction activities has the potential to result in nuisance and or adverse health effects due to noise and vibration arising from increased vehicular activities at the Site. Construction traffic has been forecast and this is expected to be below 100 vehicle movements per day. The likely effect of any additional traffic generated by the Proposed Scheme upon the operation of the surrounding highway network in capacity terms is therefore negligible.

12.24 As determined by the traffic assessment, the number of vehicles accessing and egressing the Site has been assessed to be low in number and consequently not likely to have a significant impact. The CEMP will have controls implemented, such controls would include maintaining suitable access arrangements, maintaining good road surfaces, and operating reasonable hours of working. These tertiary mitigation measures would be considered an integral part of the Proposed Scheme and considered part of the EMP.

12.25 Therefore, noise and vibration impacts from construction stage road traffic on existing residential receptors are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Nuisance and disturbance as a result of increased noise from operational traffic [existing residential receptors located close to the Site]

12.26 Road traffic associated with the operation of the Proposed Scheme has the potential to result in nuisance and or adverse health effects due to noise arising from increased vehicular activities to and from the Site. The traffic generation at the Site has been forecast using the TRICS trip rate database and it is expected that the Proposed Scheme could generate in the order of 60-70 vehicles per day as a reasonable worst-case scenario. The number of parking spaces is eight on street parking, therefore the number of vehicles accessing and egressing the Site has been assessed to be low in number and consequently not likely to have a significant impact.

12.27 Therefore, noise impacts from operational road traffic on existing residential receptors are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Nuisance and disturbance resulting from the impact of vibration from railway traffic [new receptors on the Site]

12.28 The levels vibration levels shown in **Table 1.2** are sufficiently low that the structural design of the proposed development does not need to include any vibration isolation or mitigation measures in order to mitigate the risk of the vibration levels exceeding the criteria set down in BS6472-1.

12.29 Therefore, vibration impacts from the railway line for the proposed site is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Effects Likely / Significant

12.30 **Table 12.5** outlines the effects (and associated receptor[s]) that are considered to be likely and significant and therefore will be assessed within the EIA and reported in the ES.

Table 12.5: Potential Likely Significant Effects and Sensitive Receptors

Effect	Receptor(s)	Applicable Stage(s)
Plant noise	Barnes Walls Building	Operation
	Fairfield Hall	
	Joule Library	
	Lambert Hall	
	MacDonald Hotel	
	Maths @ Science West Building	
	Pendulum Hotel	
	Renold Building	
	Vimto Park	

Effect	Receptor(s)	Applicable Stage(s)
	Receptors on the Site	

Assessment Methodology of Effects Likely / Significant

12.31 The following background surveys/studies have/will be undertaken.

Table 12.6: Background Surveys / Studies

Survey / Study / Analysis / Evaluation	Overview	Date of Completion
Completed		
Background noise assessment	Measurement of background and ambient noise levels at and around the Site.	May and July 2017
Pending		
Background noise assessment	Measurement of background and ambient noise levels at and around the Site.	February 2023

12.32 Where possible, prediction of the external noise levels from any plant, and equipment with the Proposed Scheme at existing noise sensitive-receptors will be completed in accordance with BS4142:2014[127]. The assessment will include use of CadnaA noise modelling software and measurement data collected during Site surveys.

12.33 The prediction methodology will be presented within the noise chapter of the ES, together with technical appendices, detailing:

- Noise measurements undertaken and the analysis of the results;
- Graphics from the noise model illustrating the noise contours across the Site;

12.34 Where data is not yet available (due to the timing of the assessment) to allow prediction of noise levels from plant, equipment and other noise sources associated with the Proposed Scheme, measurement data collected during Site surveys will be used for the setting of noise emissions limits.

12.35 The assessment of likely significant effects to sensitive receptors will consider the sensitivity of the receptor (on a scale of high, medium, low and negligible) and the magnitude of change (on a scale of large, medium, small and negligible) to determine the level of effect on a scale of major, moderate, minor and negligible. Significant effects will be determined following this through professional judgment.

[127] BSI Standards Publications (2014) BS4142:2014+A1:2019: available at https://knowledge.bsigroup.com/products/code-of-practice-for-noise-and-vibration-control-on-construction-and-open-sites-vibration/standard [Accessed on 13/1/2023].

Limitations and Assumptions

12.36 To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

12.37 The noise measurements cannot now be taken within the existing Chandos Hall due to the building being demolished. Access to the adjacent building, Bainbridge House, Granby Row is not likely to be available due to security issues. Measurements will therefore be undertaken at the ground level and compared with the previous assessment and validated noise model.

13. Approach to Assessment of Cumulative Effects

Overview

13.1 Cumulative effects comprise the combined effects of reasonably foreseeable human induced changes within a specific geographical area and over a certain period of time, and can be both direct and indirect. An assessment of the significance of cumulative effects needs to be undertaken in the context of the characteristics of the existing environment.

13.2 To accord with the EIA Regulations and best practice guidance, the following types of cumulative effects will be considered within the EIA:

- **Effect interactions**: Different effects within the project itself affecting the same receptor, either within the Site or in the local area; and
- **In-combination effects**: Effects with other projects planned in the wider area.

Assessment Methodology

13.3 At present, there is no widely accepted methodology or best practice for the assessment of cumulative effects, although there are a number of guidance documents available. The following approach that will be adopted is based on previous experience at Turley, the types of receptors being assessed and the nature of the Proposed Scheme being considered.

13.4 The assessment of cumulative effects, for both effect interactions and in-combination effects, will be largely qualitative in nature. For some environmental topics, quantitative data may be available (i.e. where modelling work is undertaken) facilitating a quantitative analysis of cumulative effects, which will be fully set out within the assessment within the ES. Where information is not available, assumptions will be made based on professional judgement and clearly stated alongside any uncertainty as part of the assessment.

Effect Interactions

13.5 The approach to the assessment of effect interactions considers the changes in baseline conditions at common sensitive receptors due to overlapping effects arising from the Proposed Scheme. The assessment is based upon residual effects only. The common sensitive receptors considered within this assessment are those which are assessed within two or more of the technical assessments within the ES.

13.6 A matrix of residual effect interactions will be formulated in the ES corresponding to the construction and operational stages of the Proposed Scheme.

13.7 An overall qualitative assessment of the cumulative effect on the common sensitive receptors identified will be made using professional judgement and informed by the technical information provided in the ES and supporting appendices.

13.8 A qualitative evaluation at the receptor level will be undertaken and will consider the following: combined magnitude of change; sensitivity/value/importance of the receptor/receiving environment to change; or/and duration and reversibility of effect.

In-Combination Effects

13.9 Assessment of in-combination effects within the EIA will be undertaken using the methodology outlined below.

Step 1: Identification of Projects for Consideration

13.10 In order to identify relevant projects (referred to as 'Approved Projects') that could give rise to in-combination effects within the Proposed Scheme, a review of the following databases was undertaken:

- MCC online planning portal;
- Planning Inspectorate online register of projects[128];
- Transport and Works Order Act online register of projects[129]; and
- Parliament Hybrid Bills online register[130].

13.11 In line with the EIA Regulations, this search was focused on projects and therefore is not inclusive of sites allocated within local plans, core strategy documents or supplementary planning documents.

13.12 To reach a proportionate list of relevant Approved Projects, the following criteria was used to identify projects for consideration:

- Applications dating from January 2018 onwards. It is anticipated that applications prior to this date will already have been built out (and therefore form part of the baseline) and / or where subsequent applications have been submitted these would be captured within the search dates;
- Applications with resolution to grant planning permission;
- Applications with planning permission, either under construction or not yet implemented (unless already considered as part of the baseline scenario);
- Applications submitted, which have the potential to be determined prior to the determination of the Proposed Scheme;
- Applications which have been refused but subject to an appeal not yet determined;
- The project being of a relevant scale: the threshold for consideration has been set as the Schedule 2 criteria in the EIA Regulations, at which there is a potential for 'likely significant effects' (however, it is recognised that this needs to be

[128] https://infrastructure.planninginspectorate.gov.uk/projects/register-of-applications/.
[129] https://www.gov.uk/government/collections/twa-inspector-reports-and-decision-letters.
[130] https://www.parliament.uk/business/bills-and-legislation/current-bills/hybrid-bills/.

applied with caution); Schedule 1 projects; and nationally significant infrastructure projects; and

- Projects within 1km of the Site boundary[131].

13.13 Other projects which have not been submitted at the point at which the search is undertaken have been excluded as there is insufficient information available to enable a robust appraisal.

13.14 A further search will be undertaken prior to the finalisation of the assessment of cumulative assessment as part of the ES.

13.15 The resulting Approved Project that will be considered in the assessment of cumulative effects using the methodology and criteria set out above is provided within **Table 13.1**.

[131] This is considered to be an appropriate study area to identify Approved Projects where there is a potential for in-combination effects.

Table 13.1: Approved Projects for Assessment of In-Combination Effects

ID	Planning Ref	Name	Description	Distance From Site	Status	EIA
1	124972/FO/ 2019	Mayfield	Phased creation of circa 2.4 ha (6 acres) of public park, including hard and soft landscaping and new bridges across the River Medlock; erection of 9 storey office development above basement with mezzanine and plant level (Class B1) with ground floor Class A1 (Shop), A2 (Financial and Professional Services), A3 (Café and Restaurant), A4 (Drinking Establishment) B1 (Office) uses, rooftop amenity spaces and terrace levels, associated public realm and riverside walkway; erection of 11 storey Multi-Storey Car Park to provide 581 car parking spaces with associated landscaping; highways and infrastructure works including the creation of new junction from London Road to provide access to the multi-storey car park (MSCP) (Use Class Sui Generis); works to Baring Street, stopping up of Bond Street and Nether Street (alongside associated Traffic Regulation Orders to manage unrestricted parking to Buxton Street, Berry Street and Travis Street (to be delivered and implemented prior to the MSCP becoming operational)) alongside enabling works comprising phased demolition and site clearance, earthworks including re-profiling and construction of retaining walls for the land bounded by the Mancunian Way to the south, Mayfield Depot to the north, Baring Street to the west and Hoyle Street to the east.	300m south east	Part completed / Under construction	Yes
2	125248/FO/ 2019	Baring Street Office 2	Erection of 13 storey building (including ground and mezzanine) comprising office space (Use Class B1) above flexible uses at ground and mezzanine levels (Class A1 (Shop), A2 (Financial and Professional Services), A3 (Café and Restaurant), A4 (Drinking Establishment)/D1 (Art Gallery, Museum and Conference & Training Centre)/D2 (Cinema)/ Theatre (Sui Generis)) with rooftop amenity spaces and external terrace levels, internal ancillary storage spaces for waste, cycles, rooftop plant,	340m south east	Under construction	Yes

ID	Planning Ref	Name	Description	Distance From Site	Status	EIA
			back of house functions and associated landscaping works.			
3	132626/FO/2022	M1 Piccadilly, Store Street	Erection of 15 storey building comprising 54 apartments (Use Class C3) with associated residential facilities (residents lounge and terrace and office space), 2 car parking spaces and 57 cycle parking spaces, landscaping, access and associated development.	430m north east	Approved	No
4	126608/FO/2020	Store Street	Erection of part 4, part 11 storey residential (Class C3) development (with roof top plant room) comprising 66 (Class C3) residential units (3 x 2 bed town houses, 46 x two bed apartments and 17 x one bed apartments) together with associated car parking (10 spaces including 5 EVC spaces), cycle parking (66 spaces) communal roof terrace (level 6), landscaping and ancillary infrastructure including rooftop PV panels, alterations to access onto Store Street.	520m north east	Under construction	No
5	125573/FO/2019	First St South	Construction of four buildings of heights varying from 10 storeys to 45 storeys together comprising Co-living bedspaces (use class sui generis) and associated amenity facilities, with ground floor commercial units (Use classes A3 (Café / Restaurant and D2 (Gym)), private amenity space and public realm comprising hard and soft landscaping, car parking and cycle facilities and other associated works.	920m south west	Under construction	Yes
6	121252/FO/2018	Student Castle, Hulme Street	Partial reconfiguration of existing Multi-Storey Car Park (MSCP), including temporary access off Great Marlborough Street, construction of 5 storey external ramps, closure of vehicular access to top level; and construction of new facade; and partial demolition of the surplus part of existing MSCP and erection of a part 55, part 11 storey, part 4 storey mixed-use building comprising 853 Purpose Built Student Accommodation units (sui generis), ancillary amenity space and support facilities, and 786sqm (GIA) SME incubator workspace (Use Class B1),	590m south west	Approved	No

ID	Planning Ref	Name	Description	Distance From Site	Status	EIA
			including public realm improvements and other associated work			
7	120635/FO/2018	Hotspur House	Part demolition and redevelopment and part retention and refurbishment of the former Hotspur Press Complex (Medlock Mill) to deliver 171 residential units (10 no. 1 bed, 1 person apartments, 49 no. 1 bed, 2 person apartments, 2no. 2 bed, 3 person apartments and 110 no. 2 bed 4 person apartments) - Use Class C3, within refurbished mill space and 28 storey building (including two levels of basement), commercial floorspace (Use Classes A1 (shop), A2 (financial and professional services), A3 (restaurants and cafes), B1 (office), D1 (medical clinic, health centre, art gallery and museum only) and / or D2 (gymnasium or bowling alley only) together with servicing, access, landscaping including a new public space and pedestrian route between Gloucester Street and First Street, and other associated works	800m west	Approved	Yes
8	125712/FO/2019	London Road Fire Station	Refurbishment, restoration, reconfiguration and extension of former London Road Fire Station site to create a mixed use development comprising of hotel (Use Class C1), workspace/office (Use Class B1, D1), commercial floorspace for shop and food and drink uses (Use Classes A1, A3 and A4), residential apartments (Use Class C3) and leisure (Use Class D2), together with access and highways works, servicing, rooftop plant and associated works	65m north	Under construction	No
9	121099/FO/2018	The Fairfax	Construction of two residential buildings (Use Class C3) comprising Block 1 (29 storeys) (224 apartments (4 x 1 bed 1 person, 52 x 1 bed 2 person, 64 x 2 bed 3 person and 104 x 2 bed 4 person) 25% 1 bed and 75 % 2 bed) Block 2 (23 storeys) (264 apartments 44 x1 bed 1 person, 44 x 1 bed 2 person, 92 x 2 bed 3 person and 84 x 2 bed 4 person) (33% 1 bed and 67%% 2 bed) with a linked central podium, to deliver 488 units, shared amenity space, 27 car parking spaces, 492 cycle spaces,	490m north east	Under construction	Yes

ID	Planning Ref	Name	Description	Distance From Site	Status	EIA
			landscaping (including new public park) , lighting, highways and associated works following demolition of existing buildings and structures.			
10	127317/FO/2020	The Castings	Erection of a part 25 part 21, part 14, part 7 storey building for 352 apartments comprising 39 Studios, 77x 1 bed, 227 x 2 bed and 9 x 3 bed (Use Class C3) with ground floor commercial space within 4 units (494m2) for Class A1 (Shop), A2 (Financial and Professional Services) A3 (Café and Restaurant), A4 (Drinking Establishment), A5 (Hot Food Take Away), B1 (Office) and D1-D2 uses, ancillary indoor and outdoor amenity space (including 1st and 21st floor external areas) car parking for 20 vehicles, cycle parking and associated hard and soft landscaping works, following demolition of existing buildings.	590m north east	Under construction	Yes
11	122000/FO/2018	Victoria House	Erection of a part 25 part 3 storey residential tower (Use Class C3) for 177 apartments comprising 59 x 1 bed (34 x 1 bed 1 person and 25 1 bed 2 person), 113 x 2 bed (44 x 2 bed 3 person and 69 x 2 bed 4 person) and 5 x 3 bed (3 bed 5 person) with ground floor commercial space (Use Class A1, A2, A3, A4 and D1) above partial basement level associated shared amenity spaces at 3rd floor level, realm enhancements following demolition of existing buildings.	660m north east	Under construction	Yes
12	132214/FO/2021	Ferrous	Erection of a 15 storey building to form 107 apartments (Use Class C3) at floors 1 to 15, residential amenity facilities including a roof terrace (level 14), associated ground floor cycle storage (68 spaces), two ground floor commercial units (Use Class E/ Sui Generis (Drinking Establishment), multipurpose events Pavilion (Use Class E/ Sui Generis (Drinking Establishment), associated landscaping to site perimeter and rooftop PV panels.	590m north east	Under construction	No

ID	Planning Ref	Name	Description	Distance From Site	Status	EIA
13	132489/FO/2021	Affinity Living Port Street	Erection of a part-33, part-11, part 9 part 7 storey residential building above semi-basement level, with associated residents' amenity space including gym (Use Class C3) (comprising 481 dwellings), commercial space (Use Class E), basement car parking (47 spaces), cycle parking (481 spaces) landscaping, and other associated works	700m north	Under construction	Yes
14	121375/FO/2018	20-36 High Street	Construction of a 22 storey building comprising 361 residential apartments (122 x 1 bed 2 person, 119 x 2 bed 3 person, 94 x 2 bed 4 person, 21 x 3 bed 5 person and 5 x 3 bed 6 person (34% 1 bed, 59% 2 bed and 7% 3 bed) ground floor commercial floorspace (Use Classes A1 (Shop), A3 (Restaurant and Cafe), A4 (Drinking Establishment) and A5 (Hot Food Take-away) associated landscaping, including new public realm and pedestrian route, together with servicing, cycle parking, access and other associated works following demolition of buildings at 20-22 and 24-26 High Street and 5 market stalls to Church Street.	850m north west	Approved	Yes
15	114664/FO/2016	St Michael's	Partial demolition of existing buildings. Development up to 171.6m AOD comprising residential (Use Class C3), offices (Use Class B1), hotels (Use Class C1), place of worship (Use Class D1) and leisure/food and drink uses (Classes A1, A3, A4, A5 and D2). Creation of public spaces and new public realm, provision of basement car parking, highway alterations, landscaping and associated works.	950m west	Under construction	Yes
16	134288/FO/2022	Number 3 Circle Square	Erection of 15 storey building comprising office space (Use Class E(g)(i)) and ancillary flexible commercial uses (Use Class E), rooftop terrace, highway works, landscaping, and other associated works.	370m south west	Under construction	Yes
17	125799/FO/2019	John Dalton West/John Dalton Tower,	Demolition of existing John Dalton West Building and associated structures, and erection of a new 7 storey education building (Use Class D1) for the Faculty of Science and Engineering (comprising teaching and	720m south west	Under construction	No

ID	Planning Ref	Name	Description	Distance From Site	Status	EIA
		Chester Street	research spaces, academic offices, social learning areas, catering/kitchen facilities and an energy centre), physical connections to and external refurbishment of the John Dalton Tower, hard and soft landscaping works, car and cycle parking and associated works.			
18	131859/FO/2021	50 Fountain Street	Full Planning Permission for the demolition of modern extension to Grade II Listed building, retention and refurbishment original Victorian facade, erection of commercial building (Use Class E) with landscaping, and other associated works.	760m north west	Approved	No
19	124495/FO/2019	Land at Great Ancoats Street, Manchester	Erection of a 12 storey building to create a 212-bedroom hotel (Use Class C1) with ancillary facilities at ground and first floor level and associated servicing, disabled car parking, drop-off area, public realm and hard landscaping works, with access from Pollard Street	770m north east	Approved	No
20	115178/FO/2017	Part Site Of Existing Car Park Bounded By Ducie Street, The Rochdale Canal, Peak Street, Tariff Street (Multi-Storey Car Park) And Remainder Of Surface Car Park	Erection of 2 linked buildings ranging in height from 8 to 10 storeys (plus roof top plant room) to provide residential accommodation (Use Class C3) comprising 18 x 1 bed, 84 x 2 bed, 15 x 3 bed, 2 x duplex (4 bed) and 9 townhouses (7 x 3 bed, 1 x 2 bed and 1 x 4 bed) (128 units in total) works to create provision for access and servicing, hard and soft landscaping (to include a secure external area and public realm linking Ducie Street to the Rochdale Canal) and associated works following the demolition of existing buildings. Development to include 128 cycle parking spaces.	500m north east	Approved	No

Step 2: Assessment of In-Combination Effects

13.16 The assessment of in-combination effects will take into consideration available documentation submitted in support of the application for the above Approved Projects, in order to conclude if common receptors are present between the Proposed Scheme and the Approved Projects and the extent of any in-combination effect. Where suitable information is not available, either professional judgement will be used to determine the cumulative effects or limitations will be set out.

13.17 The qualitative evaluation at the receptor level will consider the following:

- Combined magnitude of change;
- Sensitivity / value / importance of the receptor / receiving environment to change; and / or
- Duration and reversibility of effect.

13.18 Through a combination of the qualitative evaluation and mitigation identified in the EIA and presented in the ES, conclusions will be drawn as to the likelihood for in-combination environmental effects, whether these are significant or not and how such effects differ from those reported for the Proposed Scheme.

14. Summary

14.1 **Chapter 5** identified ten environmental topics for which no likely or significant effects have been identified and are proposed to be 'scoped out' of the EIA and not reported in the ES, based on the technical evidence base provided. These are as follows:

- Archaeology;
- Biodiversity;
- Traffic and Access;
- Air Quality;
- Ground Conditions;
- Flood Risk, Drainage and Water Environment;
- Lighting;
- Waste;
- Major Accidents and/or Disasters; and
- TV Reception.

14.2 The environmental topics proposed to be 'scoped in' are as follows:

- Socio-Economics and Human Health;
- Climate Change;
- Built Heritage;
- Townscape and Visual;
- Daylight, Sunlight, Overshadowing and Solar Glare;
- Wind Microclimate; and
- Noise and Vibration.

14.3 **Table 14.1** provides a summary of all the environmental topics and effects considered unlikely to be significant and therefore 'scoped out' as well as the topics and likely significant environmental effects 'scoped in' that will be considered further within the EIA and reported in the ES.

Table 14.1: Summary of Topics and Effects to be Considered in the Environmental Statement

Topic	Effects which are Not Significant and are Proposed to be Scoped out of the EIA	Likely Significant Environmental Effects to be Considered in the ES
Archaeology	Impact on archaeological remains [surviving 18th century building fragments]	
Biodiversity	Harm / disturbance from Site clearance and construction activities [habitats and species]	
	Landscape and habitat creation [habitats and species]	
Traffic and Access	Driver delay as a result of construction stage traffic and/or operational stage traffic [drivers on the A57(M), A6 London Road, Fairfield Street, Aytoun and Sackville Street]	
	Severance as a result of construction stage traffic and/or operational stage traffic [pedestrians / cyclists on A6 and B6460 corridors]	
	Pedestrian delay as a result of construction stage traffic and/or operational stage traffic [pedestrians on A6 and B6460 corridors]	
	Pedestrian amenity as a result of construction stage traffic and/or operational stage traffic [pedestrians on A6 and B6460 corridors]	
	Fear and intimidation as a result of construction stage traffic and/or operational stage traffic [pedestrians / cyclists on A6 and B6460 corridors]	
	Accidents and safety as a result of construction stage traffic and/or operational stage traffic [bus users and pedestrians /	

Topic	Effects which are Not Significant and are Proposed to be Scoped out of the EIA	Likely Significant Environmental Effects to be Considered in the ES
	cyclists on A6 and B6460 corridors, drivers on the A57(M), A6 London Road, Fairfield Street, Aytoun and Sackville Street]	
Air Quality	Changes to local air quality as a result of emissions from construction traffic [existing human receptors adjacent to roads used by construction traffic]	
	Changes to local air quality as a result of emissions from construction related non-road mobile machinery [existing human receptors adjacent to the Site]	
	Nuisance and disturbance as a result of dust from construction activities [existing human receptors located within 100m of the Proposed Scheme]	
	Changes to local air quality as a result of emissions from operational traffic [existing human receptors located adjacent to roads along which operational road traffic travels]	
	Combustion emissions during operation [existing human receptors around the Site]	
	Effect of Air Quality on the Proposed Scheme [future users of the Proposed Scheme]	
Ground Conditions	Potential release of existing ground contamination and accidental release of new contamination during construction [construction workers and neighbours]	
	Potential release of existing contamination and accidental	

Topic	Effects which are Not Significant and are Proposed to be Scoped out of the EIA	Likely Significant Environmental Effects to be Considered in the ES
	release of new contamination during construction [controlled waters]	
	Potential release of ground contamination during operation [Site end users, Site maintenance workers, neighbours]	
	Potential release of contamination affecting water supply pipes during operation [water supply pipes – United Utilities customers]	
	Potential release of contamination during operation [controlled waters]	
	Potential release of hazardous ground gases during operation [Site end users, Site maintenance workers, neighbours]	
	Risk of unexploded ordnance (UXO) during construction [construction workers, Site users, neighbours]	
Flood Risk, Drainage and Water Environment	Increased risk of flooding during construction [construction workers and neighbours]	
	Increased risk of flooding during operation [Site end users, Site maintenance workers, neighbours]	
	Increase in potable water demand during construction and operation [United Utilities Infrastructure]	
	Increased foul water flows/flood risk during construction [construction workers and neighbours]	
	Increased foul water flows/flood risk during operation [Site end users, Site maintenance workers,	

Topic	Effects which are Not Significant and are Proposed to be Scoped out of the EIA	Likely Significant Environmental Effects to be Considered in the ES
	neighbours]	
	Increased risk of pollution to the existing sewerage infrastructure during construction [United Utilities infrastructure, Shooters Brook, River Medlock and neighbours]	
	Increased risk of pollution to the existing sewerage infrastructure during operation [United Utilities infrastructure, Shooters Brook, River Medlock and neighbours]	
Lighting	Disturbance due to obtrusive light during construction [nearby residents]	
	Disturbance due to obtrusive light during operation [nearby residents]	
Waste	Waste generation during construction [waste facilities]	
	Waste generated during operation [waste facilities]	
Major Accidents and/or Disasters	A major accident caused by ground subsidence and associated structural/building collapse	
	Major flood event caused by an extreme weather event	
	Major accidents on the local road network	
	Accidents arising from vandalism, arson or terrorism	
TV Reception	Interference with TV reception [surrounding residents]	
Socio-Economics and Human Health	Access to primary healthcare facilities [Residents of the Proposed Scheme and patients at existing facilities]	Employment generated during the construction stage [local labour force]
	Social cohesion and inclusive	Provision of PBSA [students

Topic	Effects which are Not Significant and are Proposed to be Scoped out of the EIA	Likely Significant Environmental Effects to be Considered in the ES
	design [Residents of the Proposed Scheme and existing local communities]	requiring accommodation]
	Crime reduction and community safety [Residents of the Proposed Scheme and existing local communities]	
	Access to healthy food [Residents of the Proposed Scheme]	
	Access to active and sustainable travel options [Residents of the Proposed Scheme]	
	Access to open space and sports & recreation facilities [Residents of the Proposed Scheme]	
	Access to training opportunities [Local labour force]	
	Employment generated during the operational stage [Local labour force]	
	New Homes Bonus and Council Tax revenue [Local authority revenue]	
Climate Change	Increasing summer mean and daily maximum temperatures during construction [construction employees]	GHG emissions[132] [global climatic system]
	Changing annual temperatures and rainfall patterns during construction [construction operations, site habitats and biodiversity, air quality]	
	Changes to future climate including temperature and rainfall during operation [site infrastructure]	
	Changes to future climate including higher winter and	

[132] During construction and operation.

Topic	Effects which are Not Significant and are Proposed to be Scoped out of the EIA	Likely Significant Environmental Effects to be Considered in the ES
	summer temperatures and a decrease in summer rainfall during operation [site habitats and biodiversity]	
	Increasing rainfall during operation [site operations, infrastructure and end users]	
	Higher average summer mean and daily maximum temperatures during operation causing building overheating [end users]	
	Decreasing summer rainfall during operation [end users]	
Built Heritage	Change to the setting of identified listed buildings resulting in an impact to their heritage interests or significance [listed buildings identified below]	Change to the character and appearance of the conservation area [Whitworth Street Conservation Area]
	Change to the setting of the identified non-designated heritage assets, resulting in an impact to its heritage interests or significance [The Monroe Public House, 36 London Road and Rochdale Canal]	Change to the setting of a listed building [London Road Policy and Fire Station (Grade II*)]
		Change to the setting of a non-designated heritage asset [Jackson Street Mills (UMIST Campus, now university of Manchester) (HER Ref: 2078.1.0)]
Townscape and Visual	Changes to all townscape and visual receptors during construction [Heritage, Townscape character, Urban Grain, Land Use, Building Height, Topography, Movement & Access, Open Space and Site Character – Views 1, 2, 3, 5, 6, 7, 8 & 10]	Changes to townscape character within the site context [the Site and townscape character area of North Campus Townscape Character Area]
	Change to visual amenity in construction [View 4,9,11,12&13]	Changes to Topography & Site Levels [Topography & Site Levels]
	Changes to townscape Heritage receptors during operation	Changes to the character, composition and amenity of

Topic	Effects which are Not Significant and are Proposed to be Scoped out of the EIA	Likely Significant Environmental Effects to be Considered in the ES
	[Heritage townscape receptors]	views [Viewpoints 1, 2, 3, 5, 6, 7, 8, and 10]
	Changes to Townscape Urban Grain receptor during operation [urban grain]	
	Changes to Townscape Land Use receptor during operation [land use]	
	Changes to Townscape Building Height receptor during operation [townscape building height]	
	Changes to Townscape Movement and Linkages receptor during operation [movement and linkages]	
	Changes to Townscape Environmental Designations & Public Open Space receptor during operation [townscape environmental designations and public open space]	
Daylight, Sunlight, Overshadowing and Solar Glare	Reduced daylight and sunlight amenity during construction [surrounding residential receptors]	Reduced daylight and sunlight amenity [Lambert House, Fairfield House, Warehouse One, and Stonebridge House]
	Solar glare affecting residential amenity [surrounding residential receptors]	Reduced sunlight amenity [Vimto Park]
		Solar glare impacting visibility of road users at sensitive locations such as intersections and junctions [Selected viewpoints within 500m of the Site where the Proposed Scheme is visible, see **Table 10.1**]
Wind Microclimate	Potential effects on wind microclimate during the construction of the Proposed Scheme [sensitive receptors within 500m from the Site]	Potential changes to the wind microclimate from the Proposed Scheme outside of the Site [Existing pedestrian street-level and open amenity spaces receptors within 500m from the Site]
	Potential effects on wind	Potential changes to the wind

Topic	Effects which are Not Significant and are Proposed to be Scoped out of the EIA	Likely Significant Environmental Effects to be Considered in the ES
	microclimate from the Proposed Scheme beyond 500m from the Site [areas beyond 500m from the Site]	microclimate from the Proposed Scheme within the Site [Accessible balconies, roof terraces and new amenity spaces within the Proposed Scheme]
Noise and Vibration	Nuisance and disturbance as a result of noise from construction activities [existing residential receptors located close to the Site]	Plant noise [Barnes Walls Building, Fairfield Hall, Joule Library, Lambert Hall, MacDonald Hotel, Maths @ Science West Building, Pendulum Hotel, Renold Building, Vimto Park, Receptors on the Site]
	Nuisance and disturbance as a result of vibration from construction activities [existing residential receptors located close to the Site]	
	Nuisance and disturbance as a result of increased noise from construction traffic [existing residential receptors located close to the Site]	
	Nuisance and disturbance as a result of increased noise from operational traffic [existing residential receptors located close to the Site]	
	Nuisance and disturbance resulting from the impact of vibration from railway traffic [new receptors on the Site]	

Turley Office
1 New York Street
Manchester
M1 4HD

T 0161 233 7676

Figure 1.1: EIA Study Area Boundary

Turley

Manchester Metropolitan University
(Aytoun Campus)

The Business School

WHITWORTH STREET

TCB

LB

11

11a

MINSHULL STREET SOUTH

39.9m

39.9m

Cycle Way

2

3

4

5

MINSHULL STREET SOUTH

BACK ACTON STREET

COBOURG STREET

EBDEN STREET

Fairfield House

Sackville Street Building

Lambert Hall

GRANBY ROW

ECHO STREET

FB

38.1m

SP

Lighting Gantry

Wright Robinson Hall

FB

Barnes Wallis Building

ALTRINCHAM STREET

36.9m

Renold Building

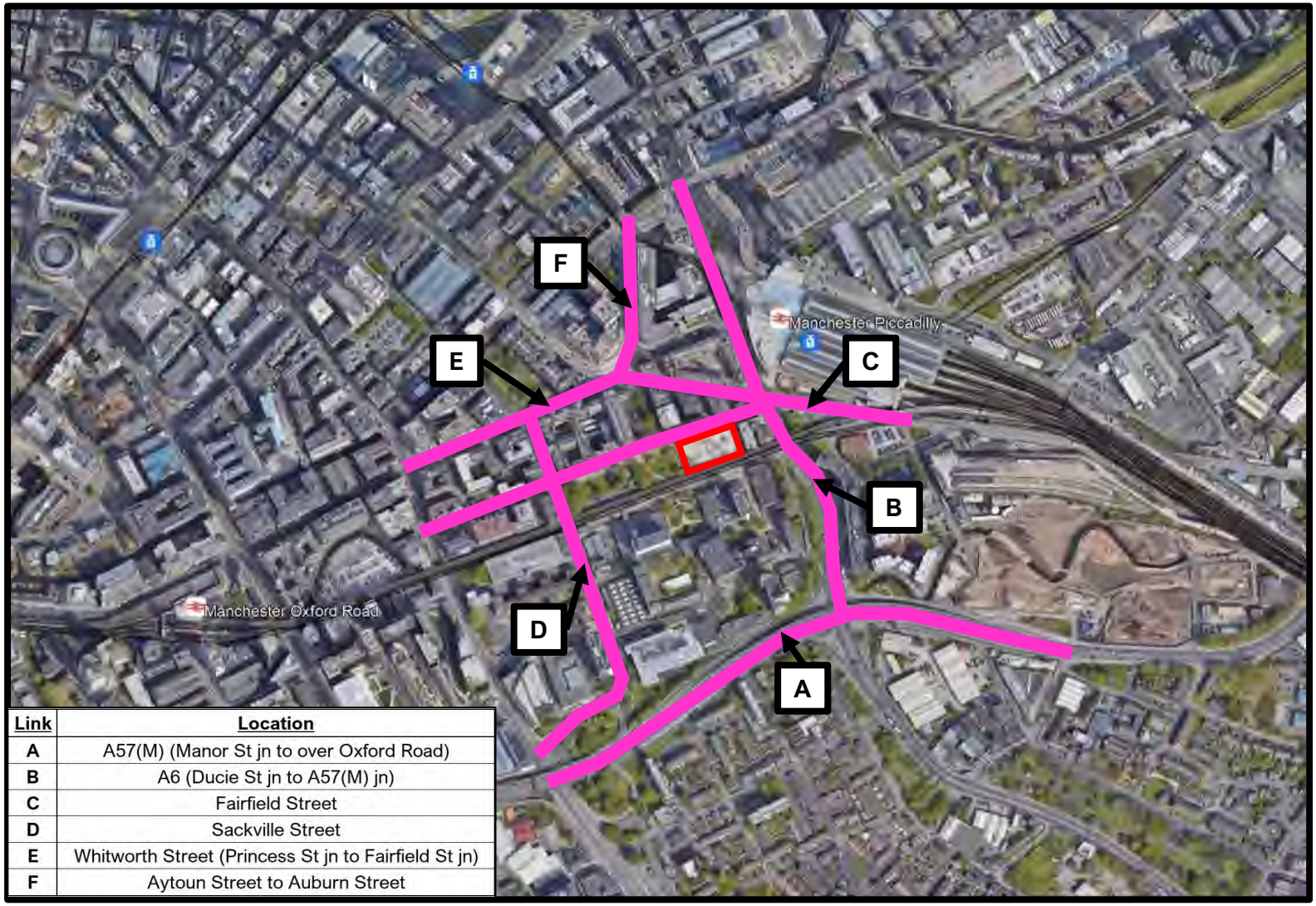
James Lighthill B

KEY

Application Boundary
4980m²

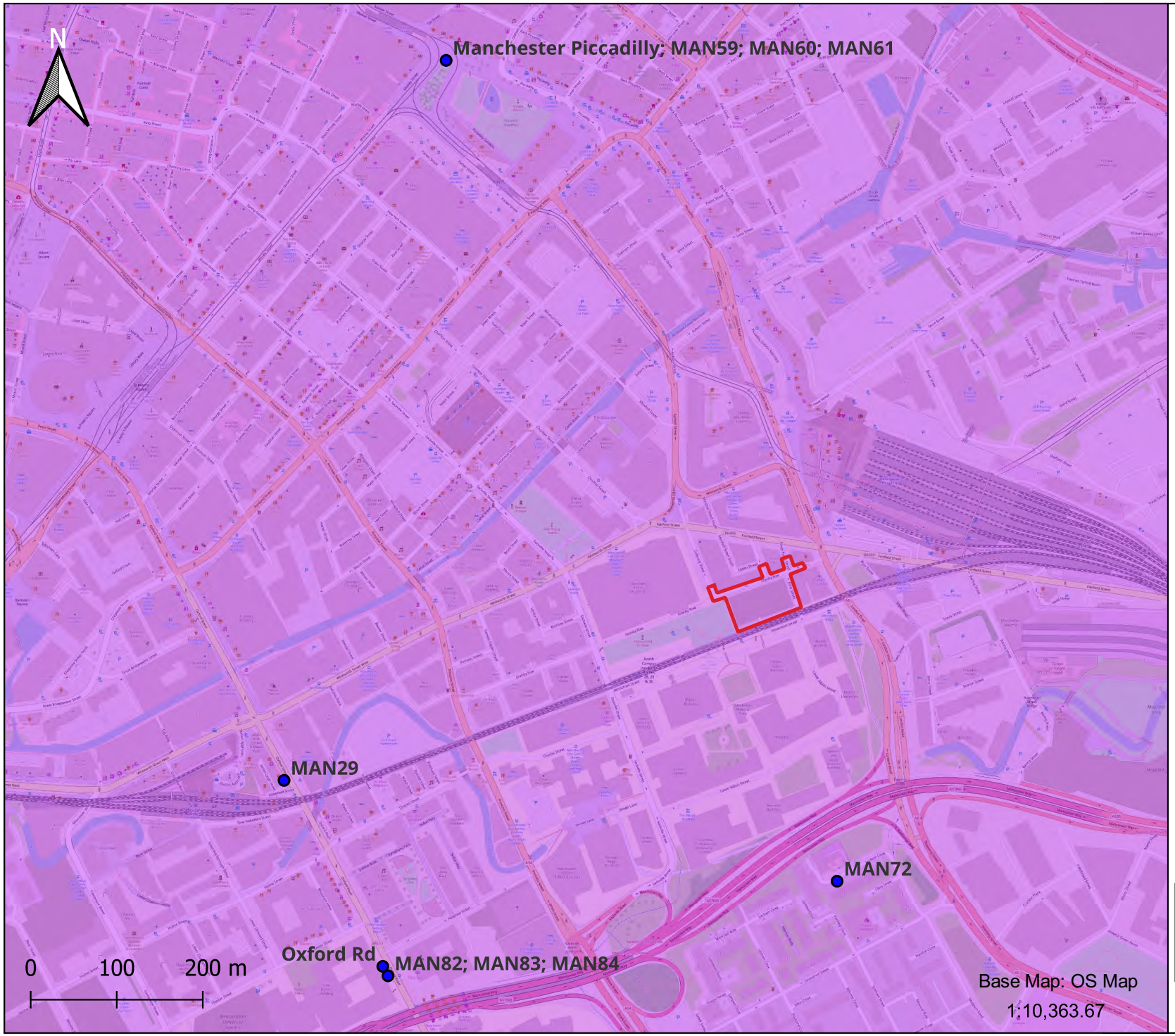
EIA Study Area
1:500 @ A1

Figure 5.1: Link Network Map



Link	Location
A	A57(M) (Manor St jn to over Oxford Road)
B	A6 (Ducie St jn to A57(M) jn)
C	Fairfield Street
D	Sackville Street
E	Whitworth Street (Princess St jn to Fairfield St jn)
F	Aytoun Street to Auburn Street

Figure 5.2: AQMA and MCC Monitoring



Legend

- Site
- AQMA
- MCC monitoring

Drawn by: MH

Project: Chandos

Report Number: 101532-2

Disclaimer: the scale is for indicative purposes only as the map may be skewed once it is an image, for instance during printing.

Date: 25/01/2023

Figure 8.1: Heritage Asset Plan

Ref	Listed Building	Grade
1	Police And Fire Station	II*
2	Former Goods Offices To Piccadilly Station	II
3	Sculptural Wall	II
4	Orient House	II
5	Granby House	II
6	Train Shed And Undercroft At Manchester Piccadilly Station	II
7	42 And 44, Sackville Street	II
8	46, Sackville Street	II
9	Institute Of Science And Technology (university Of Manchester)	II
10	Regency House With Barclays Bank	II
11	The Shena Simon Sixth-form College	II
12	Rochdale Canal Lock Number 86, To East Of Chorlton Street	II
13	Rochdale Canal Boundary Wall To Canal Between Sackville Street And Chorlton Street	II
14	Rochdale Canal Boundary Wall To Canal Between Chorlton Street And Minshull Street	II
15	Minshull House	II
16	Mintierna House	II
17	Manchester South Junction And Altrincham Railway Viaduct	II

Ref	HER Building
18	Monroes public house (36 London Road)
19	Jackson Street Mills (UMIST Campus) (now University of Manchester)
20	Rochdale Canal

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This drawing is for illustrative purposes only and should not be used for any construction or estimation purposes. To be scaled for planning application purposes only. No liability or responsibility is accepted arising from reliance upon the information contained within this drawing.

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Site Boundary

Study Area

Conservation Area

Listed Buildings

I

II*

II

HER Buildings

CLIENT:
IQSA Chandos Sarl

PROJECT:
Echo Street PBSA

DRAWING:
Heritage Asset Plan

PROJECT NUMBER:
IQSM3015

DRAWING NUMBER:
GIS_100

CHECKED BY:
JS

REVISION:
1.0

STATUS:
Draft

DATE:
January 2023

SCALE:
1:3,000 @ A3

0 100 200 m
1:3,000

Turley

Figure 9.1: Townscape and Visual Impact Assessment Study Area

Figure 1: Townscape & Visual Impact Assessment Study Area

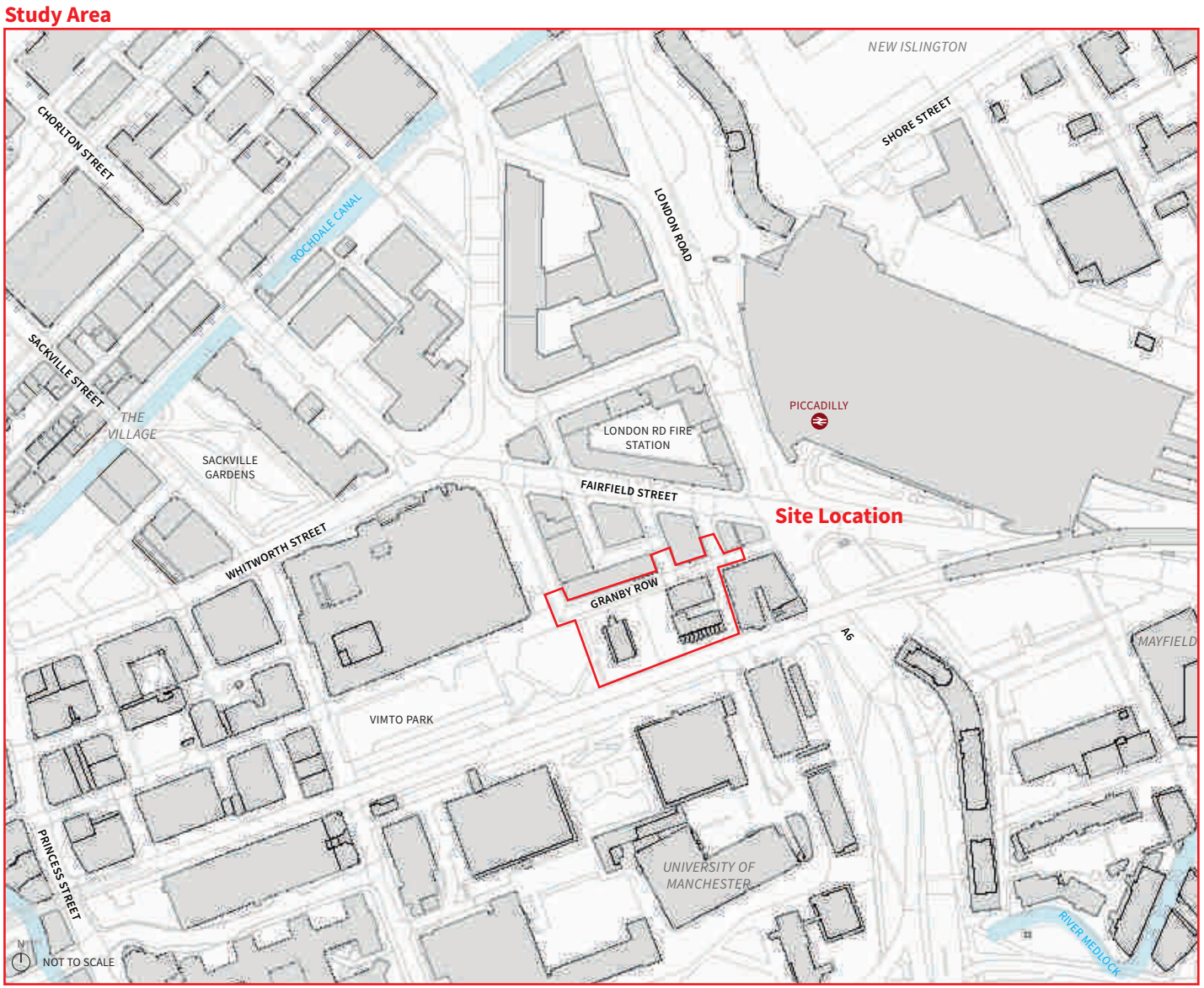


Figure 9.2: Google Viewshed - Viewpoint Selection

Figure 2: Google Viewshed - Viewpoint Selection

Diagram indicates a 89.55m tall structure located in the site - which represents the tallest proposed building.

Green shading indicates potential visibility of the structure in the surrounding context.

KEY

- Application Boundary
- Proposed View (Numbering aligned with previous 2017 assessment for clarity)
- Discounted viewpoint

PROPOSED VIEWPOINTS

1 Piccadilly Station main entrance

2 Piccadilly Station taxi rank, Fairfield Street

3 Piccadilly Station platform 13 and 14

5 Sculptural wall, London Road

6 View west along Granby Row

7 Vimto Park

8 University of Manchester, Altrincham Street

10. Granby Row / Samuel Ogden Street

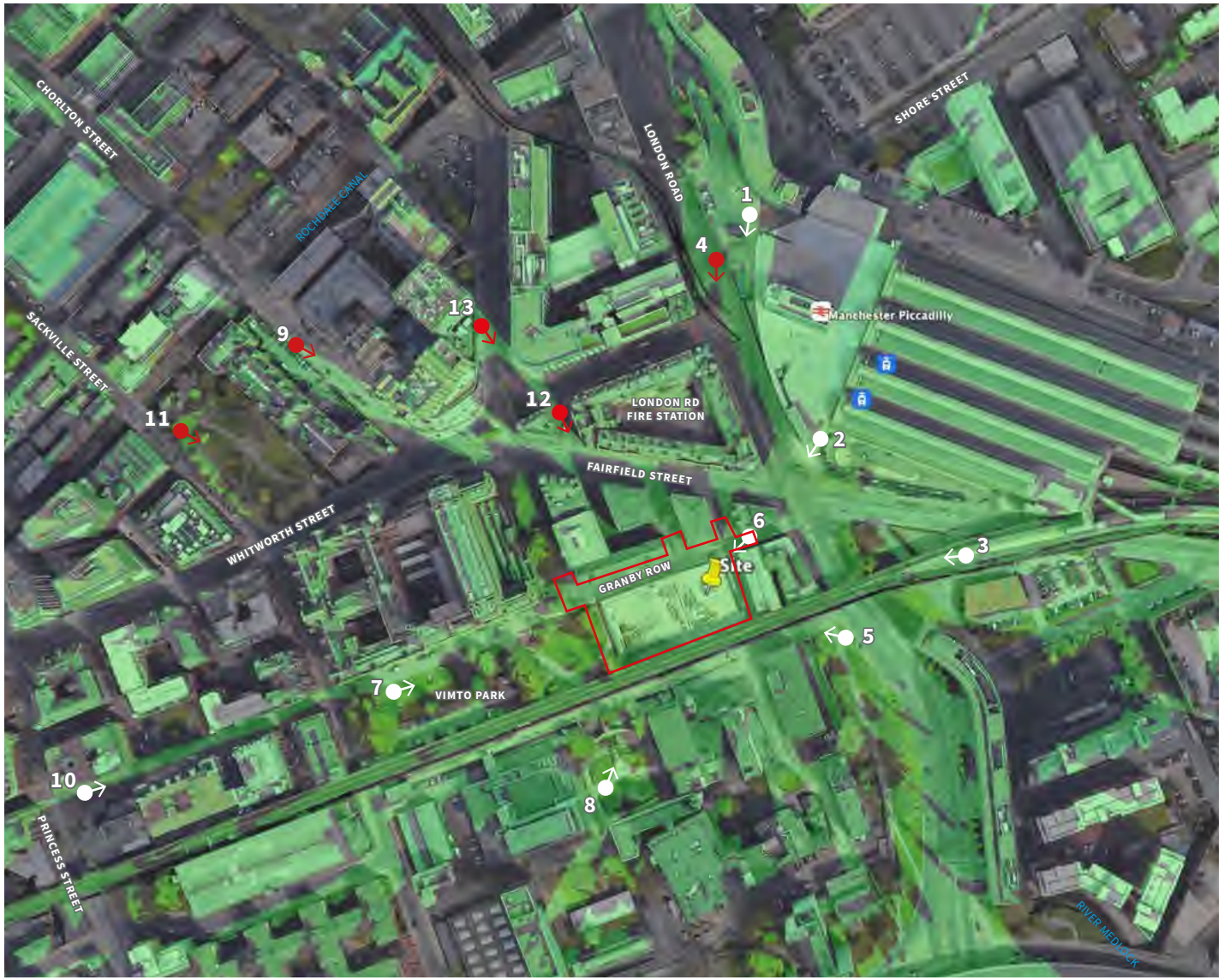


Figure - Zone of visual influence (ZVI) Mapping and viewpoint selection (source - Google Earth Pro Viewshed

Appendix 1.1: Record of Consultation

Consultee (Body / Organisation)	Date and Form of Consultation	Summary and Outcome of Consultation
Archaeology		
Greater Manchester Archaeological Advisory Service (GMAAS)	10/01/2023, email	Agreed Archaeology can be scoped out of ES, but expects a DBA to support the planning application.
Transport		
MCC Highways	17/01/2023, email	Scoping email issued to MCC Highways Officer setting out the principles of the Proposed Scheme and the proposed approach to transport assessment. Email response received 20/01/23 acknowledging the email and looking to set up a meeting to discuss the Proposed Scheme. Meeting to be arranged by MCC Highways Officer.
Noise and Vibration		
MCC	12/01/2023, email	Proposed methodology provided for the ES Chapter on noise and vibration impacts. Including: • Proposal to scope out construction noise assessment; • Proposal to scope out construction vibration; • Proposal to scope out operational traffic; • Proposed methodology for the plant and equipment assessment; and • Assessment for façade noise assessment. Awaiting response.
Air Quality		
MCC	31/01/2023, email	The consultation set out the apprach to the assessment as set out below which includes scoping out of the: • Effect of construction traffic; • Effect of construction dust • Effect of operational traffic; • Effect of combustion emissions; and • Impact of road traffic and the nearby

Consultee (Body / Organisation)	Date and Form of Consultation	Summary and Outcome of Consultation
		railway line on the Proposed Scheme. The Environmental Protection Officer at MCC responded to the consultation on 3 February 2023. She advised that she considered the proposals to be reasonable and pointed to MCCs air quality guidance, requesting that it be referred to in the assessment.

Appendix 2.1: Preliminary Environmental Management Plan

Project specific measures to avoid and / or prevent significant adverse environmental effects (i.e. mitigation measures) have been considered through the EIA Scoping process, when appraising likely environmental effects.

At this stage, this has focussed on 'primary mitigation' (i.e. inherent mitigation, comprising fundamental aspects of the project design) and 'tertiary mitigation' (i.e. standard environmental commitments / practices).

In order to support MCC and other stakeholders, the mitigation measures that have been identified at this stage have been collated into a single preliminary Environmental Management Plan set out below. This will be developed further as part of the ES.

It is envisaged that mitigation will be secured through suitably worded planning conditions or other mechanism, where appropriate, and the Environmental Management Plan will be utilised by the Applicant and appointed contractor(s) to control mitigation commitments and assurance over their implementation.

Preliminary Environmental Management Plan

Mitigation Measure	Description / Details of Measure
Primary Mitigation	
Building heights and layout	The maximum building height on Site will be 28 storeys (excluding basement and platforms on roof) and 89.550m above the entrance level (which is at +41.300m AOD). The maximum height of the building will be at the top of the parapet, which will be up to +130.850m AOD. Built form will be across three blocks which will be stepped in height, with height increasing away from Vimto Park to the west (up to a maximum height of +130.850m AOD).
Public realm and landscape strategy	Landscaping / open space will be provided in the private courtyards between the main blocks and the public realm surrounding the building (Granby Row and Echo Street). Works will focus on pedestrian use, including general resurfacing, with lowered kerbs, widening of the pavement and localized tree planting along Granby Row extending to the boundary with Vimto Park. Courtyards will include multi stem shade tolerant species, on raised planters, complemented with lightweight furniture and catenary lights. In addition, one of the courtyards will provide means of escape from the central block, and feature a bike shed with a ramp leading to Echo Street. The landscaping proposals will seek to maximise the ecological value of the Site through the provision of native and/or wildlife friendly landscape planting, including the selection of climate tolerant species.
Surface water drainage strategy	The proposed surface water drainage will not increase the runoff rate and will include an allowance for climate change in accordance with relevant guidance[133]. Sustainable Drainage Systems (SuDS) will be incorporated into the surface water drainage network, in accordance with CIRIA 753 – The SuDS Manual[134] where practical. This will include consideration of climate change effects on river levels and the design of the surface water

[133] Flood risk assessments: climate change allowances (2022). Available at: Flood risk assessments: climate change allowances - GOV.UK (www.gov.uk)
[134] CIRIA (2015). The SuDS Manual C753. Available at: SuDS Manual C753 Chapter List (ciria.org)

Mitigation Measure	Description / Details of Measure
	drainage system which will take into account the 1 in 100 year storm event and required climate change allowances. In line with MCC guidance, The Proposed Scheme will seek to achieve a minimum reduction in surface water runoff rates of 50% for Brownfield sites, with an aim of reducing runoff to Greenfield rates up to a 1 in 100-year storm event, considering climate change. The proposed surface water drainage system will be designed to comply with the minimum reduction of flows set by the Lead Local Flood Authority (MCC) and provide capacity to accommodate the volumes generated for up to the 100-year storm event with an allowance for 45% increase rainfall. Climate change allowances are in accordance with current requirements for the Irwell Management Catchment. It will include the necessary mitigation for surface water flood risk where required, such as perimeter ground levels and ensuring the ground levels fall away from buildings to not encourage overland flows to be directed towards the buildings. The Drainage Strategy will demonstrate that the Proposed Scheme will not increase surface water flooding and will include proposals for a robust foul and surface water drainage system including assessment against the Sustainable Drainage hierarchy and necessary capacity to accommodate volumes generated including anticipated increases in rainfall due to climate change for the lifetime of the development. The proposed drainage solution will remove 100% of the existing surface water flows discharging to the existing combined sewer network and discharge proposed surface water flows to the existing surface water sewer network at a maximum of 50% of existing flows. A petrol interceptor or filter chamber will be required within the drainage system to serve the external access ramp prior to discharge off site.
Lighting strategy	All lighting installations will meet Institute of Lighting Professionals (ILP) Guidance Notes for the Reduction of Obtrusive Light 2021[135], British Standard 5489-1:2020[136]; BS EN 13201-2 – Road lighting[137],.and BS EN 12464-2 – Lighting of Work Places[138].

[135] Institute for Lighting Professionals (2021). Guidance Note 01/21 for the Reduction of Obtrusive Light.
[136] British Standard (2020). 5489-1:2020 Design of road lighting. Lighting of roads and public amenity areas. Code of practice.
[137] BS EN 13201-2:2015 Road Lighting Performance Requirements (2016)

Mitigation Measure	Description / Details of Measure
Waste strategy	Appropriate provision for waste storage and handling facilities/areas, inclusive of areas for segregation of waste and recycling will be provided. It is assumed that all waste storage/handling facilities will be designed in accordance with British Standard (BS) 5906:2005 Waste Management in Building – Code of Practice.
Building safety	The final building management company will have in place the required emergency producers/practices (i.e. Fire Emergency Evacuation Plan (FEEP)) or apparatus/instruments (i.e. smoke detectors/sprinklers) required by law for these uses. In addition, the buildings will be designed, in line with Building Regulations Approved Document D: Fire Safety, with appropriate fire preventative measures (i.e. fire doors, extinguishers etc.) and all external façades and materials will meet the necessary fire resistance standards set out within Building Regulations and by law. The design of the Proposed Scheme will be informed by 'Secure by Design' principles and appropriate design and site management measures (including appropriate lighting and digital entry systems at each building). Plant rooms and equipment will be designed to contain any spills through bunds and prevent infiltration into ground. It is currently proposed that plant will be housed in the basement which will have a concrete floor.
Overheating strategy	As part of the detailed design a sample of units in buildings will undergo overheating assessment in line with the requirements of Part O of the Buildings Regulations[139] to assess and reduce the risk of summer overheating taking into account future climate scenarios. Where measures are provided to reduce the risk of overheating this will be done in accordance with the cooling hierarchy.
Water efficiency	Measures to reduce water consumption, including the provision of water efficient fixtures and fittings, i.e. low flow taps and low water use WCs.
Air quality	NO_X filters will be installed in some rooms on the second, third and fourth floor levels.
Tertiary Mitigation	
Construction Environmental	A CEMP will be prepared by the appointed contractor in advance of commencing construction works. The document will provide detailed measures / controls to avoid and manage potential adverse effects upon the

[138] BS EN 12464-2:2014 Light and Lighting – lighting of work places. Outdoor work Places (2014)

[139] https://www.gov.uk/government/publications/overheating-approved-document-o

Mitigation Measure	Description / Details of Measure
Management Plan (CEMP)	environment during the construction stage. Measures will include: <u>General Measures</u> • The proposed construction works will be carried out by a competent contractor that will comply with current legislation[140]. • The site security arrangements for the Proposed Scheme during the construction stage will be in line with the requirements set out in the Construction (Design and Management) Regulations 2015 and appropriate levels of security (personnel / CCTV) will be provided. • Construction working hours[141] (noisy work) will be 07:30 to 18:00 Monday to Friday; 08:30 to 14:00 on Saturday; and no noisy work on Sundays and Bank Holidays. Operations outside of these hours will be agreed with MCC. • Climate change adaptation measures will be set out to reduce risks to human health from overheating such as provision of shaded refuges to reduce overheating risks, and potable water supplies to avoid dehydration. • 3m high Site hoarding lines. <u>Traffic</u> • The CEMP will manage construction traffic in the area, seeking to minimise the potential for disruption to other road users through measures such as vehicle booking systems. • Safe pedestrian routes maintained along Granby Row.

[140] This includes the Health and Safety at Work etc. Act 1974; the Control of Pollution Act 1974; and Construction (Design and Management) Regulations 2015.

[141] Manchester City Council. Tackle a noise problem – Noise from building sites. Available at: Noise from building sites | Tackle a noise problem | Manchester City Council [Accessed: 14/12/2022].

Mitigation Measure	Description / Details of Measure
	• Site exit managed to keep clear of debris, mud and materials. • Reuse of materials on site to avoid traffic movements. • Most traffic and deliveries to the Site will arrive from the A6 and Fairfield Street, with access via the main entrance at Back Acton Street and egress via the main exit at Cobourg Street ie there will be a one-way system in place close to the Site. Air Quality • The CEMP will be informed by Institute of Air Quality Management (IAQM) guidance[142] and would include prevention measures, such as screening stockpiles of materials, deployment of windbreak netting and dampening exposed soils as appropriate and set out requirements for ongoing monitoring and liaison with the local community, and MCC. • Measures to control emissions from non-road mobile machinery, such as the use of emission standards for NRMM based on engine size. Noise and Vibration • Controls implemented in accordance with BS5288-1:2014[143], including site hoardings, hours of operation, and the use of practicable measures to control noise at source. • Controls implemented in accordance with BS5288-2:2014[144], including the use of low-vibration working methods, such as continuous flight auger (CFA) and reasonable hours of working (see hours above, under General Measures).

[142] IAQM (2014). Assessment of dust from demolition and construction v1.1 Available at construction-dust-2014.pdf (iaqm.co.uk) [Accessed 17/1/2023].
[143] BSI Standards Publications (2014). BS5228-1:A1:2014: available at https://knowledge.bsigroup.com/products/code-of-practice-for-noise-and-vibration-control-on-construction-and-open-sites-vibration/standard [Accessed 13/1/2023].

Mitigation Measure	Description / Details of Measure
	• Maintain good road surfaces. <u>Lighting</u> • Lighting will be controlled through a series of best practice measures, in line with lighting industry standards and guidance including the CIE publication 'Technical Report Document 129[145] and BS EN 12464-2:2014[146]. • The following measures are proposed in order to control Light Spill, Glare and Sky Glow effects and thus manage light pollution: – Where practicable, construction lighting in the Site would be designed to comply with Environmental Zone E4 in accordance with the ILP Guidance Note GN01[147]; – Illuminance levels arising from temporary lighting to be designed in accordance with BS EN 12464-2: 2014 and CIE 129; – Placement of temporary lighting required to ensure safe working conditions and to maintain security, to have due regard of sensitive receptors (i.e. occupied residential premises); – Lighting to be directed so as avoid unnecessary Light Spill outside of construction areas and to ensure that the light distribution is toward the task area; – Lighting to be switched off when not required for safe working conditions and Site

[144] BSI Standards Publications (2014) BS5228-2:A1:2014: available at https://knowledge.bsigroup.com/product./code-of-practice-for-noise-and-vibration-control-on-construction-and-open-sites-vibration/standard [Accessed on 13/1/2023].
[145] CIE - Technical Report Document 129 (1998) Guide for Lighting Exterior Work Areas.
[146] British Standards (2014) BS EN 12464-2 – Lighting of Work Places – Part 2: Outdoor Work Places.
[147] Institute of Lighting Professionals (ILP) (2021) Guidance Notes for the Reduction of Obtrusive Light (GN01).

Mitigation Measure	Description / Details of Measure
	security; – Use of light shields/baffles to control upward light to within the maximum 15% set out in the ILP Guidance Note GN01, where possible; – Lighting to be kept at 0° tilt to avoid Sky Glow, where practicable; and – Light dimming and automatic switch off would be used (where appropriate). <u>Waste</u> • The CEMP will be informed by the waste provisions of the Environmental Protection Act 1990[148] and the Environmental Protection (Duty of Care) Regulations 1991[149] and will set out the principles and legal requirements relating to waste, including any hazardous waste that is encountered and required to be exported off-site for disposal. • Hazardous waste will be handled, processed and removed from Site by suitability qualified contractors, all being undertaken in line with The Hazardous Waste (England and Wales) Regulations 2005. <u>Ground and Earthworks</u> • All earthworks and foundation design will be in accordance with relevant industry guidance,

[148] Environmental Protection Act 1990 No. 43 Available at: https://www.legislation.gov.uk/ukpga/1990/43/contents [Accessed: 18/01/2023].
[149] Environmental Protection (Duty of Care) Regulations 1991 No. 2839. Available at: https://www.legislation.gov.uk/uksi/1991/2839/made#:~:text=The%20duty%20requires%20such%20persons,person%20or%20to%20a%20person [Accessed: 18/01/2023].

Mitigation Measure	Description / Details of Measure

including but not limited to CIRIA Report C572: Treated ground engineering properties and performance[150], British Research Establishment document FB75: Building on Fill - Geotechnical Aspects[151] and British Standard 6031:2009: Code of Practice for Earthworks[152].

- Measures to protect construction workers, neighbours and general public passing by from exposure to any contaminated material which is encountered including (but not be limited to); dust suppression methods, ensuring covered wagons transport material and ensuring suitable PPE is provided and worn on site.
- Fuels, oils and hazardous substances used in construction will need to be suitably stored and bunded containers with spill kits easily accessible.
- A Piling Risk Assessment will be undertaken for any further piling works that are required.
- Site Specific Unexploded Ordnance Awareness Briefings to all personnel conducting intrusive works.
- In medium risk area of UXO the following will be undertaken:
  - Open Intrusive Works (trial pits, service pits, open excavations, shallow foundations etc.);
  - UXO Specialist On-site Support and Site Specific Unexploded Ordnance Awareness Briefings to all personnel conducting intrusive works; and
  - Boreholes – Intrusive Magnetometer Survey of all borehole and pile locations/clusters down to maximum bomb penetration depth.

[150] CIRIA (2002). Report C572: Treated ground engineering properties and performance.
[151] British Research Establishment (2015). FB75: Building on Fill - Geotechnical Aspects. 3rd Edition.
[152] British Standard (2009). 6031:2009: Code of Practice for Earthworks.

Mitigation Measure	Description / Details of Measure
	Water • The monitoring and setting of targets to reduce water use. • A Surface Water Management Plan (in accordance with best practice guidance such as The SuDS Manual (C753)[153] and BS8582:2013 Code of practice for surface water management for development sites[154]) will be established. This will include the installation of a temporary drainage system to collect and contain run-off including any discharge agreements with the local sewer authority and measures to protect the Site from increased risk of flooding during construction, for example compounds storage compounds with raised levels and temporary drainage; and drainage and pollution prevention systems. • Introduction of perimeter cut off drains to prevent overland run-off and additional interceptors for pollution and debris collection if required. • Bowsers to be in place for potable water requirements until a permeant solution is in place. • Measures to limit the amount of silt and other pollutants that are able to reach the existing sewer infrastructure. Silt will be controlled using traps and measures implemented to reduce the amount of material that could be washed into the Watercourse via overland flows. The use of cut off trenches to intercept the overland flow routes will also prevent pollution. • Designation of specific areas where refuelling and maintenance occurs. • Storage of materials will be located an appropriate distance away from the watercourse to ensure there is limited flow routes for contamination to use to get the existing sewer

[153] CIRIA (2015). The SuDS Manual (C753).
[154] BSI (2013). BS8582:2013 Code of practice for surface water management for development sites. Available at: BS 8582:2013 | 30 Nov 2013 | BSI Knowledge (bsigroup.com)

Mitigation Measure	Description / Details of Measure
	infrastructure.
Remediation strategy	In the event that contamination is identified, a programme of mitigation or remediation work will be carried out as part of the enabling works in line with a Remediation Strategy approved by the regulators and MCC. Recommended remediation is likely to comprise inclusion of an engineered capping layer of clean soils in soft landscaped areas to ensure the end users do not come into contact with contaminated soils. Quantitative risk assessments will be reviewed and revised in respect to contamination and ground gas. Where revised quantitative risk assessments identify an elevated risk, design and implementation of any remedial measures will be required to discharge pre-commencement and pre-occupation planning conditions relating to ground contamination. Requirements would be detailed in a Phase 3 Remediation report Strategy and records of completion included in a Phase 4 verification report. The implementation of any gas protection measures (e.g gas resistant membrane) will be required to discharge pre-commencement and pre-occupation planning conditions relating to ground contamination will be identified. A United Utilities water supply pipe risk assessment will be undertaken to further assess the risk of contaminants entering the water supply prior to installation of water supply pipes. Remediation measures where required would entail ensuring contaminant resistant water supply pipes are used (known as barrier pipe) to prevent migration of contamination into water supply pipes.
TV Reception	If TV interference is reported, one or a combination of the following measures would be implemented: • Replacement of receiving aerial with a more directional or higher gain, aerial; • Repositioning the receiving aerial so that the received signal is stronger; and • Replacing terrestrial reception equipment with satellite or cable reception equipment.

Mitigation Measure	Description / Details of Measure
Foundation design	Consideration of The Building Regulations[155] to consider the impact of ground movement in foundation design.

[155] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/540328/BR_PDF_AD_L2A_2013_with_2016_amendments.pdf

Appendix 2.2: Structure of the Environmental Statement

Volume 1: Primary Report and Supporting Graphics

Chapter 1: Introduction

Chapter 2: Approach to EIA

Chapter 3: Site Context

Chapter 4: Development Specification

Chapter 5: Consideration of Alternatives

Chapter 6: Socio-Economics and Human Health

Chapter 7: Climate Change

Chapter 8: Built Heritage

Chapter 9: Townscape and Visual

Chapter 10: Daylight, Sunlight, Overshadowing and Solar Glare

Chapter 11: Wind Microclimate

Chapter 12: Noise and Vibration

Chapter 13: Assessment of Cumulative Effects

Chapter 14: Summary of ES

Volume 2: Technical Appendices

Volume 3: Environmental Management Plan

Volume 4: Non-Technical Summary

Appendix 5.1: Archaeological Evaluation Report



Archaeological Evaluation

Echo Street, Manchester

Client:
The Environment Partnership Ltd

Planning Ref:
118267/FO/2017

Technical Report:
Andrew Radford

Report No:
SA/2019/63

Location: The Site is located along Echo Street and Granby Row, Manchester, M1 3QJ. The development Site comprises of Chandos Hall and the adjoining buildings currently leased as garages and a children's day nursery.

NGR: SJ 84660 97705

Project: Echo Street, Manchester

Planning Ref: 118267/FO/2017

Report No: SA/2019/63

Prepared for: The Environment Partnership Ltd

Document: Archaeological Evaluation Report

Version: Version 1

Author: Andrew Radford
Position: Archaeologist
Date: July 2019

Approved by: Ian Miller BA FSA **Signed:**
Position: Assistant Director
Date: July 2019

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Summary

IQSA Services Limited (IQ Student Accommodation) has obtained planning permission for a development located on Echo Street in Manchester city centre (NGR SJ 84660 97705). The proposals allow for the demolition of existing buildings on site and their replacement with a mixed-use development that is focused on three towers, together with associated plant and public realm enhancements (Planning ref 118267/FO/2017). Delivery of the proposal will necessitate ground-breaking works that have a potential to damage or remove any archaeological remains that may survive *in-situ*.

The site was occupied from the 18th century by a large house and gardens and, from the early 19th century, by back-to-back workers' housing and industrial buildings. Although the 18th- and 19th-century structures were demolished during the mid-20th century to make way for Chandos Hall, car garages, and a depot, an archaeological assessment that was prepared to support the planning application concluded that there was potential for archaeological remains of interest to survive below these structures.

Following consultation with the Greater Manchester Archaeological Advisory Service, Manchester City Council attached a condition (Condition 37) to the planning consent that required a programme of archaeological investigation to be undertaken in advance of development. It was recommended that in the first instance this should comprise a scheme of evaluation trenching to establish whether any archaeological remains survived below ground. In the light of this condition, The Environment Partnership Ltd commissioned Salford Archaeology to carry out the recommended programme of evaluation trenching, comprising the excavation of two trenches that were targeted on the footprint of the 18th- and early 19th-century buildings.

The fragmentary structural remains identified during the archaeological evaluation are considered to be of little archaeological interest. Whilst elements of probable 18th-century walls were found *in-situ*, almost certainly representing the large 18th-century house shown on historic mapping, it is unlikely that further investigation would enhance an understanding of the building and its development, and has no potential to inform any of the research initiatives for the industrial period that are laid out in the current Archaeological Research Framework for the Northwest. The evaluation also demonstrated that those remains of the most archaeological interest, including the early 19th-century back-to-back houses, had been removed completely during the mid-20th-century clearance of the site. Similarly, the intensive development of the site from the 18th century appears to have removed any earlier archaeological remains that may have existed.

The results obtained from the evaluation trenching indicate that the site has little archaeological potential, and that development will have a negligible impact on the below-ground archaeological resource.

1. Introduction

1.1 Background

IQSA Services Limited (IQ Student Accommodation) has obtained permission for a development located on Echo Street in Manchester city centre (Plate 1). The proposals allow for the demolition of existing buildings on site and their replacement with a mixed use development comprising three towers providing 403 units of residential accommodation with associated shared amenity spaces, 94 units of purpose-built student accommodation with associated shared amenity spaces; ground-floor commercial floor space and children's day nursery, together with associated plant and public realm enhancements (Planning ref 118267/FO/2017).



Plate 1: Recent aerial view across the Site, showing the development site boundary

Delivery of the development proposals will entail considerable earth-moving works, which will impact on any below-ground archaeological remains that survive *in-situ*. The historic interest in the development site was highlighted in an archaeological desk-based assessment that was produced to support the planning application (TEP 2017). This concluded that the site holds potential to contain buried remains of archaeological interest, relating to the 18th- and 19th-century development of the site. These potential buried remains primarily relate to a large 18th-century house, small-scale industrial works, and early 19th-century back-to-back workers' housing.

In light of the conclusions drawn from the desk-based study, and following consultation with Greater Manchester Archaeological Advisory Service (GMAAS) in their role as archaeological advisors to Manchester City Council, it was recommended that the development required an appropriate scheme of archaeological investigation to be undertaken in advance of development. Following this recommendation, Manchester City Council attached a condition (Condition 37) to the planning permission which stated:

'The programme of archaeological works for that phase shall be undertaken in accordance with the approved WSI, prepared by TEP.

Reason - To record and advance understanding of heritage assets impacted on by the development and to make information about the archaeological heritage interest publicly accessible pursuant to policy EN3 of the Manchester Core Strategy.'

The Written Scheme of Investigation (WSI), produced in consultation with GMAAS, proposed an initial programme of archaeological evaluation by trial trenching, followed by the production of this evaluation report and archive (TEP 2017). It was intended that the results of the evaluation would be used to inform any potential requirement for further investigation.

1.2 Aims and Objectives

1.2.1 Objectives

The principal aims of the project, as laid out in the WSI (TEP 2017), were as follows:

'The following programme has been designed to identify any archaeological deposits or features that may be present within the area of the proposed ground disturbance, where the potential for the survival of archaeological evidence is predicted to be high.

The programme of work is designed to then allow for the need for, and scope of, any further necessary archaeological mitigation to be designed and undertaken. This approach is in accordance with paragraph 141 of the National Planning Policy Framework'.

1.2.2 Academic Aims

The further aims of the projects, as laid out in the WSI (TEP 2017), were as follows:

'The research objectives of the programme of work will be determined by what, if any, archaeological remains are present within the development footprint. However, subsequent assessment and analysis will be in accordance with the research outlined in the *Archaeological Research Framework of the North-West of England* (2006).'

It is anticipated that the archaeological investigation will further address several of the initiatives for archaeological research of the industrial and modern periods stated in the current *Archaeological Research Framework for North West England* (Newman and McNeil 2007; McNeil and Newman 2007). Those considered of particular relevance are:

- Initiative 7.6: 'A study of the development of workers' housing in Greater Manchester should be undertaken to examine the development of different housing types…' (McNeil and Newman 2007, 139);
- Initiative 7.7: 'Study the material culture of industrial workers' households…'.

1.4 Location, Geology and Topography

The underlying solid geology of the Site, as mapped by the British Geological Survey at 1:50000, is comprised of the Chester Formation - Sandstone. To the north of the Site runs the West Manchester Fault line. Overlying the sandstone are glacial Devensian till deposits associated with Ice Age conditions (British Geological Survey, 2019).

Topographically, the Manchester Conurbation as a region lies within an undulating lowland basin, which is bounded by the Pennine uplands to the east and to the north. The region as a whole comprises the Mersey river valley, whilst the rivers Irwell, Medlock, and Irk represent the principal watercourses in Manchester (Countryside Commission 1998, 125).

2. Historical Background

2.1 Introduction

An overview of the archaeological and historical development of the area is presented below to provide a framework in which to consider the results obtained from the evaluation trenching. This has been compiled with reference to the archaeological and historical periods listed in Table 1.

Period		Date Range
Prehistoric	Palaeolithic	Pre-10000 BC
	Mesolithic	10000 – 3500 BC
	Neolithic	3500 – 2200 BC
	Bronze Age	2300 – 700 BC
	Iron Age	700 BC – AD 43
Romano-British		AD 43 – AD 410
Early Medieval		AD 410 – AD 1066
Medieval		AD 1066 – AD 1540
Post-Medieval		AD 1540 – AD 1750
Industrial Period		AD 1750 – 1914
Modern		Post- 1914

Table 1: Summary of British archaeological periods and date ranges

2.2 Prehistoric Periods

The current understanding of human activity in the Manchester region during the prehistoric period is relatively poor. However, it could be reasonable to assume that the study area was conducive for late prehistoric settlement on account of the natural topography and its location close to the River Medlock (Connelly 2002). Occasional prehistoric artefacts have been found around Manchester, especially around Castlefield on the south-western side of the city centre, but many of these remain without context (Nevell 2008, 11-2). No prehistoric finds are known to have come from the present site.

2.3 Romano-British Period

The first military occupation of Manchester was established during the governorship of Agricola (AD 77-84), and commenced with a five-acre wooden fort, known as *Mamucium* (Bruton 1909). Roads from the fort linked Manchester with Buxton to the south-east, Chester to the south, Wigan to the north-west, Ribchester to the north and Castleshaw, and York to the north-east. The total extent of the associated civilian settlement, located in the vicinity of Chester Road, is not known, though it is though unlikely that it extended as far eastwards as the current site boundary; there is no known evidence for any Romano-British activity within the vicinity of the site,

2.4 Early Medieval Period

There is scant archaeological evidence in the region as a whole that represents the period between the end of the Roman occupation and the Norman Conquest, although the area around Manchester is known to have come under the control of several kingdoms during this period. In AD 919, Edward the Elder established a *burh* at Manchester, which was then part of Northumbria. It has been suggested that the *burh* lay within the area around the cathedral and Hanging Ditch, which had certainly become a new focus for settlement by the late 11th century, and the site occupied presently by Chetham's School is thought to have been the site of a castle founded by Manchester's Norman barons.

2.5. Medieval and Post-medieval Periods

Post-Conquest Manchester was established around the manor house and parish church of St Mary, located over 1.2km to the north-west of the study site. In 1223, the right to hold an annual fair was obtained, and the town was important enough to be granted a charter in 1301 (Kidd 1993, 14). The area south of Manchester and the Medlock was a separate township, known as Chorlton Row and later, Chorlton-upon-Medlock. It is first recorded as 'Cherleton' in 1196 and was tenanted by a Gospatrick de Chorlton in 1202. At a later stage in the 13th century, the Grelleys acquired the lordship which in turn passed to the de Trafford family in 1334. Although Manchester developed into a moderately sized settlement during the post-medieval period, Chorlton still remained predominantly rural and in 1774, only 46 houses and 226 inhabitants were recorded (Arrowsmith 2012, 5).

2.6 Industrial Period and Later

The onset of the rapid industrialisation centred on Manchester from the 18th century resulted in a massive expansion of the town's population. It was during this period that some of the principal streets, including Deansgate, Market Street and Shude Hill were developed. By the 1780s, the national demand for textiles, particularly cotton, began to rise, resulting in a dramatic increase in mill and house building that transformed Manchester into a centre of the factory-based cotton manufacturing industry of international importance. In 1773, records suggest 22,481 people lived in Manchester, but this figure had more than tripled to 75,281 by 1801 (Lloyd-Jones and Lewis, 1993).

A commercial boom in 1800-02 saw the number of cotton-spinning firms in the township of Manchester double from 51 in 1799 to 111 in 1802, setting Manchester on its path to becoming the most highly concentrated centre of cotton spinning in the world.

Chorlton-upon-Medlock was transformed after the late 18th century by the rapid expansion of Manchester and eventually became part of the new municipal borough in 1838, along with Hulme and Ardwick. One of the first maps to show the area in detail is William Green's map of 1794, which shows that although the area remained predominantly rural, new streets had begun to be laid out (Plate 2). A number of industrial sites were visible at the time of Green's survey, and included Chorlton Old Mill and the nearby Garret Mill.

Back-to-back housing was constructed in large numbers in the vicinity of the site during the early to mid-19th century. These were needed to house the increasing numbers of workers arriving at Chorlton to work in the textile industry. Back-to-back housing was found at the nearby London Court, Sutcliffe Street, and many others, in addition to Albion Place, within the development boundary (Plates 3 and 4).

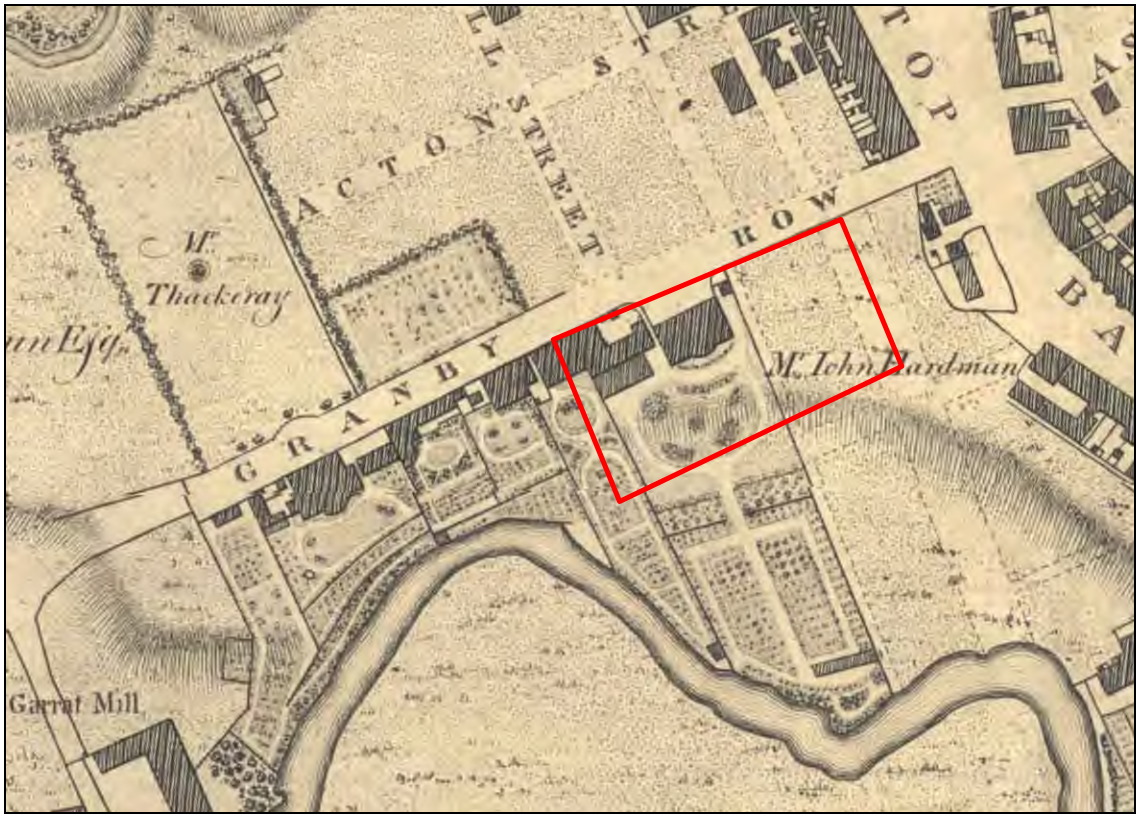


Plate 2: William Green's map of 1794, showing the approximate location of the site



Plate 3: Extract from Swire's map of 1824, showing the approximate site boundary



Plate 4: Extract from Bancks & Co's map of 1831, showing the approximate site boundary

Chorlton continued to expand though the early 19th century, and had been fully developed by the time of the Ordnance Survey Town Plan of 1851. Some areas had been cleared by the late 19th century to make room for larger more modern factories, such as the nearby London Road Iron Works.

Back-to-back housing began to be cleared around Chorlton from the early 20th century. By the time of the 1922 Ordnance Survey map, for instance, such dwellings had been demolished at London Court and Back Acton Street. Throughout the 20th century, the area in the vicinity of the study area slowly became less residential and began to be dominated by industrial and light industrial units, such as garages. By the 1950s, the greatly expanded College of Technology covered much of the area to the north of the site. From the 1960s onwards, the expansion of the university was particularly noticeable with the construction of the Barnes Wallis Building and the Renold Building, for example.

2.7 Development of the Site

It is unknown precisely when the buildings along the south side of Granby Row shown on William Green's map of 1794 were constructed. The land in the vicinity of the site boundary had remained mostly undeveloped by that time, though some streets appeared to have been laid out and awaiting development. The precise nature of the structures fronting Granby Row on Green's map is similarly unclear, although the presence of formal gardens suggests that they represented wealthy residential plots. Scholes' trade directory for 1794 lists several 'principal inhabitants' resident at Granby Row. These included a calico printer, a brewer, and cotton manufacturers.

Cole and Roper's map of 1801, though produced at a scale that precludes any analysis of individual buildings, indicates that the study area had changed little since 1794 (Plate 5). The eastern part of the site remained undeveloped, while the western part remained dominated by the house and gardens.



Plate 5: Cole and Roper's Map of 1801 showing the approximate location of the Site

Johnson's map of 1819 similarly lacks detail, although it indicates that more development had taken place within the site boundary. Terraced houses in the north-eastern part of the site, fronting onto Granby Row had been constructed, but the back-to-back houses which later cover much of the footprint of the development area had yet to be built.

Bancks & Co's map of 1831 indicates that back-to-back houses had been constructed by that time, and London Place had been established along the southern boundary of the site, together with Albion Street (known subsequently as Echo Street) along the eastern boundary. The map indicates that a total of 24 back-to-back houses had been constructed in the south-eastern part of the site, in two blocks of 12 dwellings. The large 18th-century house still stood in the centre of the site, with associated formal gardens located to its south-east up to London Place. The internal divisions of the building, which correlated to divisions within the formal gardens, suggested that by that time the house may have become a tenement of three separate dwellings.

The next available mapping of the area is provided by Joseph Adhead's plan of 1851, and the Ordnance Survey 1:1056 Town Plan of 1851. The most noticeable change since Bancks & Co's map of 1831 was the construction of Altrincham Street and the railway viaduct, which necessitated the demolition of the most southerly of the two blocks of back-to-back housing. Most of the site was dominated by residential buildings, including the remaining back-to-backs, and the large 18th-century house, which again appeared to have been used as three separate dwellings at that time.

Adshead identifies the 18th-century buildings that fronted Granby Row, and first mapped by Green in 1794, as business premises. The Ordnance Survey Town Plan of 1851 shows that the roadway to the west of the 18th-century house was named Lawton Street, the roadway to the north of the back-to-backs was named Albion Place while the houses themselves, or potentially out-of-view buildings within the viaduct, were named as Horsefield's Buildings. It is perhaps more likely that 'Horsefield's Buildings' referred to some of those back-to-back housing, as the 1861 Census lists residential properties of that name located at Albion Place.

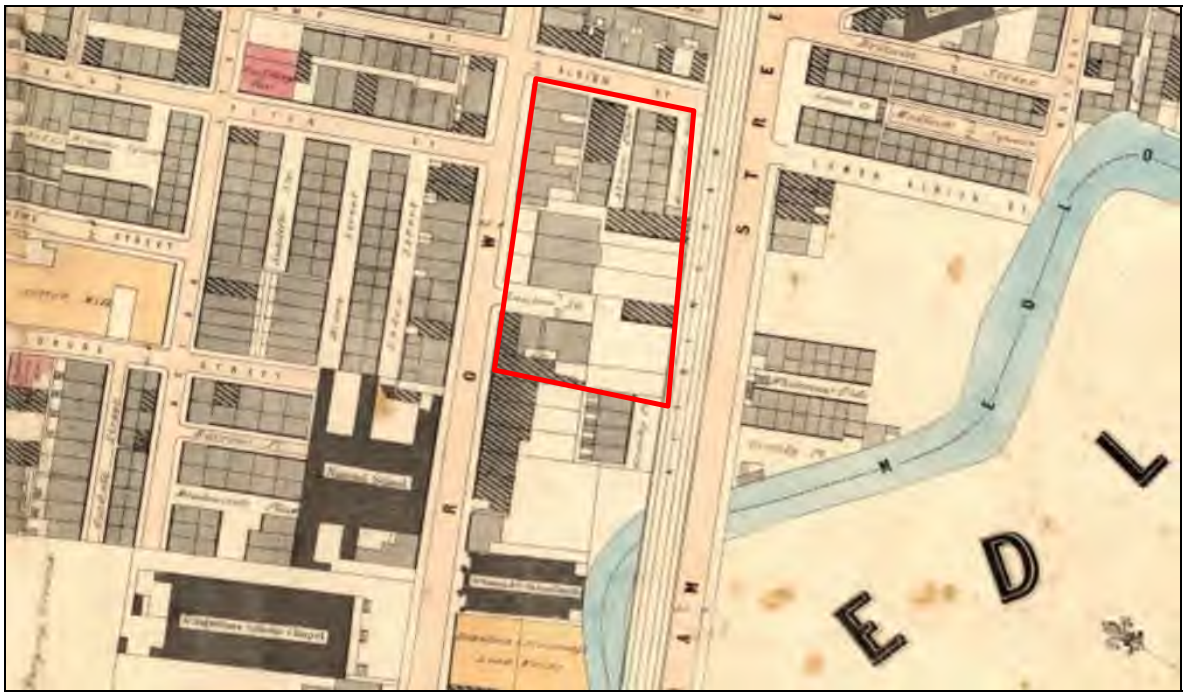


Plate 6: Adhead's Map of 1851, showing the approximate boundary of the Site

By the time of the survey for the Ordnance Survey 1:500 Town Plan of 1891, there had been little change within the site boundary. The south-centre of the site, in what had been the garden of the 18th-century house, several small structures had been built, as well as a 'tank'. It is likely that by that time the house was no longer used for residential purposes. Goad's Insurance Plan of 1893-6 (not reproduced) does not list any part of the 18th-century house as a dwelling, but partly as 'vacant' and 'warehouse', whilst the building built across the formal gardens is listed as a 'factory'. The buildings built over the earlier gardens between 1851 and 1891 are labelled as a 'factory', but it was unclear whether it remained in use at that time. Most of the back-to-back houses along Albion Place are also not listed as dwellings. Most had been converted for industrial works, and are labelled by Goad as 'Smithy' and 'A. Charlesworth Saddlers Ironmongery Works'. Only the north-western two properties of the back-to-back block of housing are listed as 'dwelling'. The north-eastern part of the site was still mostly dwellings, although a 'sign enameller' and 'stable' was also present.

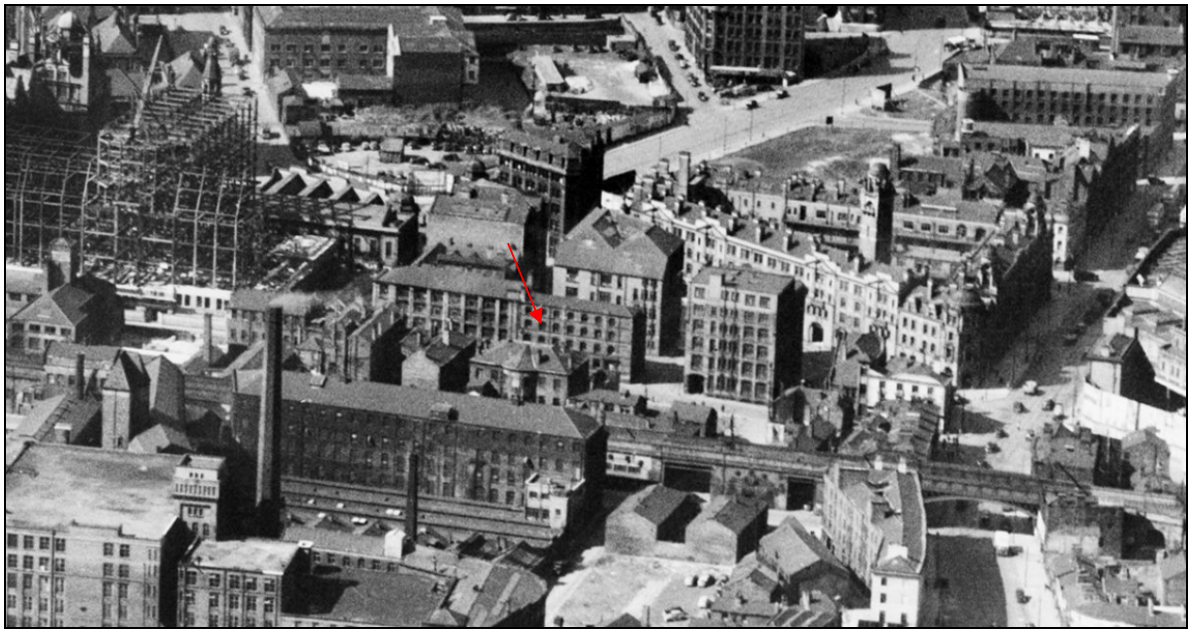


Plate 7: 1949 aerial photograph looking north across the site. Note the large 18th-century house with the terraced and back-to-back house on its right. The College of Technology can be seen under construction in the upper left

Little change was recorded throughout the first half of the 20th century in the available cartographic sources. Echo Street took on its current name, changed from Albion Street, from the Ordnance Survey map of 1908. The 1922 Ordnance Survey map indicates that a further industrial unit, 8 Echo Street, had been constructed to the south of the remaining back-to-back houses next to the viaduct. That new property was listed in Slater's trade directory for 1909 as Arthur Charlesworth, Son, & Co at 8 Echo Street, a chain maker. The converted back-to-back housing is listed in the same directory as belonging to Henry Baugh, 6 Echo Street, a manufacturer and dealer in packing materials.

Some photography of the site exists from the 1940s and 1950s, and shows the large 18th-century house and the back-to-back dwellings, most of which appeared to have been converted for industrial and business use, such as ironworks and glassworks (Plates 7 and 8). The glassworks visible in the 1950s photography was named Harling & Watson, whilst the sign enameller listed on Goad's Insurance Plan is also listed in Slater's trade directory for 1909 as a sign writers.

The Ordnance Survey map of 1964 shows that the entire site had been redeveloped. All the buildings within the site boundary had been demolished *c* 1954-64, between the surveys for those respective Ordnance Survey maps. All the 18th- and 19th-buildings along Granby Row had also been cleared to make way for the new College of Technology. Within the site boundary, Chandos Hall had been constructed in addition to a 'depot' to the north-east. The site had been further developed by the 1970s, and contained a series of garages and a tennis court. These buildings remained mostly extant until the programme of demolition works associated with the current redevelopment.



Plate 8: 1957 photograph of Echo Street with Albion Place in the Centre. Harling & Watson Glass Works is visible in the centre, in what had been back-to-back housing. Looking south-west

2.8 Previous Archaeological Work

No previous intrusive archaeological investigation has taken place within the site boundary, although a considerable amount of such work has been undertaken within the general vicinity. This work has tended to focus on 18th- and 19th-century remains, and has recently included a 19th or early 20th-century foundry at Charles Street (Radford 2019), a 19th-century engineering and finishing works at New Wakefield Street (Radford 2018), and 19th-century terraced housing at Higher Chatham Street (Harvey and Mottershead 2019).

3. Methodology

3.1 Archaeological Excavation

The principal aims of the evaluation were to establish the presence or absence of buried archaeological remains on the site and, if present, characterise the level of preservation and significance, and provide a good understanding of their potential.

General Methodology: all archaeological work was conducted following the CIfA Standards and Guidance for archaeological field excavation (Standards and Guidelines for an Archaeological Excavation CIfA 2014). Prior to the commencement of any excavation works, the location of the areas targeted for archaeological investigation were laid out accurately with respect to the Ordnance Survey national grid. Service plans were inspected and the area scanned for any live services using a cable avoidance tool. The excavations were regularly scanned as work progressed.

Bulk Excavation: this entailed mechanical excavation using a tracked machine of appropriate power to excavate the overburden, which was undertaken under close archaeological supervision. All material excavated was stockpiled away from the trench in a designated stockpile area and made safe. Any large obstructions encountered which were not of archaeological significance were only removed if necessary, to access archaeological remains beneath them. These were then stored away from the trench in a separate stockpile and not mixed into the main spoil stockpiles. Any large obstructions that were encountered which did not impede access to archaeologically significant remains were left *in situ*.

Archaeological Excavation: machine excavation was used to define carefully the extent of any surviving structures, features, and other remains. At this point any surviving structural remains were assessed for stability and any considered unsafe were reduced to foundation level and the trench edges battered to make safe. Any surviving cellars were emptied by machine and the contents stockpiled. Remains were cleaned manually to define their extent, nature, form and, where possible, date. Once the extent of buried archaeological remains was established, key remains were subject to detailed archaeological excavation and recording. Hand excavation was undertaken by trained professional archaeologists. All information identified in the course of the site works was recorded stratigraphically and was accompanied with sufficient pictorial record (plans, sections and photographs) to identify and illustrate individual features

Context Recording: a unique text-number site code was created prior to the commencement of the programme of works. Separate contexts were recorded individually and annotated onto drawings and sketches.

Photographic Archive: a comprehensive photographic archive was produced utilising a high-resolution digital camera. All frames, excluding general contextual views, incorporate a graduated metric scale. Photograph records were maintained on special photograph pro-forma sheets. All photography was carried out following the latest Historic England guidance (Digital Image Capture and File Storage: Guidelines for Best Practice HE 2015).

Planning: a 'site location plan' indicating the site north and based on the current Ordnance Survey 1:1250 map (reproduced with the permission of the Controller of HMSO) was prepared. This is supplemented by a trench plan, which shows the location of the areas investigated in relation to the investigation area and National Grid.

The precise location of all archaeological remains encountered was surveyed by GPS linked to a data-logging pen computer. This process generates scaled plans within AutoCAD, which were then subject to manual survey enhancement. The drawings were generated at an accuracy appropriate to the final output scale. All level information is tied in to Ordnance Datum, taken from either GPS or temporary benchmarks set out using GPS. All plan drawings are geo-referenced based on the Ordnance Survey National Grid.

4. Evaluation Results

4.1 Introduction

Following consultation with GMAAS and TEP, an evaluation plan was developed which intended to target the 18th- and 19th-century remains within the site boundary that had archaeological potential, comprising the back-to-back houses, the 18th-century house, and the terraced houses fronting Granby Row. Both trenches were aligned north-west/south-east and measured 25 x 1.8 m. Trench 1 was located in the centre of the site, in the area which had previously been a tennis court and nursery yard. Trench 2 was located at the east of the site in the area that had been covered by the nursery and garage buildings.

4.2 Trench 1

Trench 1 was located in the centre of the site, and was aligned north-west/south-east. It measured 25 x 1.8 m and was excavated to a maximum depth of 1.05m (Plate 9). The uppermost layer encountered was a general demolition and crushed concrete material, ***001***, which had a maximum thickness of 0.3m. Below this more recently disturbed material was layer ***002***, a mid-brown-orange compacted clay which contained a high frequency of brick fragments and had a maximum thickness of 0.25m. Below this layer was blue-brown clay, ***003***, which contained occasional small fragments of brick and was considered as disturbed natural drift geology and had a maximum thickness of 0.1m. A sondage was placed at the south of Trench 1, which was excavated to a depth of 1.05m and cut into the natural boulder clay, ***004***. The natural geology consisted of a hard, flaky, grey-blue clay which contained occasional small to mid-sized rounded stones.

In the centre-west of the trench, 7m from the southern limit of the excavation, was a small brick structure, ***005***. This feature measured 1.05 x 0.5m and was exposed at a depth of 0.45m below the modern ground surface. The bricks were hand-made, unbonded, and clearly disturbed. It continued beyond the limit of excavation to the west. Though disturbed, the vestiges of the structure contained a dark brown/black, silty organic fill, ***006***, which produced no finds. Due to the nature of structure ***005***, and fill ***006***, it was thought that this likely represented the remains of a drain system.

In the centre-east of the trench was a semi-circular single-coursed brick structure, ***007***, which almost certainly represented a well (Plate 10). The bricks were hand-made and unbonded. The well continued beyond the eastern limit of excavation. The exposed brick structure covered a maximum area of 2.4 x 0.9m and was exposed at a depth of 0.56m. The interior of well ***007*** was filled by ***008***, a somewhat loose demolition material, which was not excavated further.

At the northern end of the trench, at a depth of 1.4m, was a brick structure, ***009*** (Plate 11). This consisted of a four-coursed brick wall that was bonded with a soft, yellow, sandy mortar which had inclusions of small stones and charcoal. It was constructed of hand-made bricks. The wall was aligned north/south, and measured 5.4 x 0.48m. This returned to the west at the northern end, of which 0.85 x 0.48m of wall was visible. It continued beyond the limit of excavation to the west.

Contained within structure ***009*** was a flagstone floor, ***010,*** which covered an area of 1.65 x 0.85m. The flagstones abutted structure ***009*** and continued beyond the limit of excavation to the west. No complete flagstones were found within this surface. Brick wall ***009*** was somewhat disturbed and appeared to have been crushed, while flagstone surface ***010*** was heavily disturbed.



Plate 9: Trench 1, looking north-west



*Plate 10: Well **007**, looking east*



*Plate 11: The brick wall and flagstone floor, **009** and **010**, looking west*

4.3 Trench 2

Trench 2 was placed across the eastern part of the site, and was aligned north-west/south-east (Plate 12). It measured 25m x 1.8, and was excavated to a maximum depth of 3m. The uppermost layer was the concrete-pad floor the nursery and garage buildings, ***200***. This layer was up to 0.25m thick. Below layer ***200*** was a thick deposit of made ground, ***201***, which contained frequent brick and concrete rubble. This had a maximum thickness of 2.5m. Below this made-ground layer was the natural boulder clay, ***203***, which was exposed at a minimum depth of 1.1m.

The southern limit of excavation was formed by a north-east/south-west-aligned wall, which was constructed with machine-made bricks and hard, grey cement, indicative of a late 19th- or early 20th-century construction date. A sondage was placed adjacent to this wall to a depth of 3m. The wall was surrounded by loose rubble, ***201***, which contained a high-frequency of hand-made bricks. The base of that wall was not exposed during the course of the evaluation (Plate 13).

The centre of the trench was characterised by the remains of the mid-20th-century buildings, which had replaced the 19th-century structure that was demolished *c* 1954-64. These remains included two east/west-aligned walls, ***204*** and ***206***, that were exposed immediately beneath current ground level. They were reduced by *c* 1m during the course of the evaluation. A brick-built manhole, ***205***, lay between these walls. This was located in what had been the driveway between the garages and nursery, and Albion Place before that. The area to the north was characterised by a series of concrete foundations, ***207***, which had cut into the natural drift geology, ***203***. These remains consisted of a stanchion base and two wall foundations which based may have been associated with the 'depot' building visible on the Ordnance Survey map of 1964. None of these remains were of any archaeological interest.

Towards the northern end of the trench, however, were the remains of double-coursed brick wall, ***208***, which comprised hand-made bricks bonded with a soft, yellow, sandy mortar, consistent with an 18th- or early 19th-century construction date. This wall lay 6.5m from the northern limit of excavation, and was exposed at a depth of 0.65m. It was aligned north-east/south-west, and survived to a height of 0.3m.

Situated to the north of wall ***208*** was a brick surface, ***209***, which extended beyond the northern limit of excavation; a maximum area of 4.5 x 2.5m was exposed during the evaluation. The bricks were hand-made and were aligned north-east/south-west, parallel to the wall. The floor had been destroyed in some places, particularly around a ceramic drain which was located in the centre of the structure, 3m from the northern limit of excavation. The floor was noticeably uneven with difference of up to 0.1m from the highest to the lowest point. It was unclear whether this was intentional to facilitate drainage, or through later disturbance.

A single sandstone step, ***210***, was found at the east of brick floor ***209***. This step measured 1 x 0.45 x 0.075m, and was aligned to the brick floor and wall. It was found at a depth of 0.95m. Brick floor ***209*** was sealed beneath demolition material ***202***, which contained a high frequency of hand-made bricks and likely represented the demolition of the terraced houses.



Plate 12: Trench 2, looking south-east



Plate 13: Sondage excavated at the southern end of Trench 2, showing the 20th-century walls and building materials

5. The Finds

5.1 The Finds

No finds was recovered from either of the evaluation trenches, and none of the excavation deposits warranted palaeo-environmental sampling.

6. Discussion

6.1 Discussion

Various structural remains associated with the 18th-, 19th- and 20th-century development of the site were identified during the course of the evaluation, with no indication for any earlier activity. Brick wall ***009***, and its associated floor, ***010***, represented the earliest archaeological remains encountered across the site. The position of these features corresponds to the footprint of the large 18th-century house visible on historical mapping. Though the cartographic record suggests that the house had undergone several developments throughout its lifetime, no archaeological evidence of those changes was identified in the physical remains. This may suggest that the integral structure had remained the same, while superficial modifications had occurred within and around the building. This conclusion is supported by mid-20th-century photographs, which show that the building retained its distinctive shape.

The brick-built well, ***007***, was also of some archaeological interest. Its size and design appeared broadly typical of 18th- and 19th-century domestic wells that have been found across Manchester and Salford. The well is not recorded on any historic maps, suggesting that it had been located within the original private grounds of the 18th-century house, as shown on Green's map of 1794, but must have gone out of use by 1891 when the area is shown on Ordnance Survey mapping to have been covered by light industrial structures.

The vestiges of the terraced house revealed at the northern end of Trench 1 are likely to have derived from structures first visible on Swire's map of 1824. Though the remains were fragmentary, the depth at which they were exposed implies that they formed part of a cellar. This would explain why they were the only historic structural remains to survive in that part of the site, having escaped complete clearance during 20th-century redevelopment due to their depth.

The substantial concrete and brick remains found across Trench 2 all dated to the mid-20th-century redevelopment of the site. This activity had evidently largely destroyed most of the earlier buildings completely, and no physical remains of Albion Place, the back-to-back houses, their associated yards and/or ancillary buildings, survived *in-situ*.

The southernmost block of back-to-back houses visible on Bancks & Co's map of 1831 had been demolished by 1851 to make way for the viaduct, whilst the northern block of back-to-back houses, most of which had been converted to light industrial use by the early 20th century, were then destroyed to make way for the foundations of the garages. The complete absence of any remains of the back-to-back houses implies that they did not have cellars.

7. Conclusion

7.1 Conclusion

The fragmentary structural remains identified during the archaeological evaluation are considered to be of little archaeological interest. Whilst elements of probable 18th-century walls were found *in-situ*, almost certainly representing the large 18th-century house shown on historic mapping, it is unlikely that further investigation would enhance an understanding of the building and its development, and has no potential to inform any of the research initiatives for the industrial period that are laid out in the current Archaeological Research Framework for the Northwest.

The evaluation demonstrated that those remains of the most archaeological interest, which would have some potential to contribute to research initiatives, had been removed completely during the mid-20th-century clearance of the site. In particular, the early 19th-century back-to-back houses appeared from the historic mapping to be a type of workers' housing that merits new data from archaeological investigation. Similarly, the intensive development of the site from the 18th century appears to have removed any earlier archaeological remains that may have existed.

The results obtained from the evaluation trenching indicate that the site has little archaeological potential, and that development will have a negligible impact on the below-ground archaeological resource.

8. Archive and Dissemination

8.1 Archive

The results of the archaeological investigation will form the basis of a full archive to professional standards and in line with current CIfA guidelines updated 2014. The project archive represents the collation and indexing of all the data and material gathered during the course of the project. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the CIfA in that organisation's code of conduct. As part of the archiving process, the on-line OASIS (On-line Access to Index of Archaeological Investigations) form will be completed.

The site archive will be so organised as to be compatible with the other archaeological archives produced in the Northwest of England. All drawn records will be transferred to and stored in digital format, in systems which are easily accessible. The integrity of the site archive will be maintained upon completion of the archaeological works, with the archive ultimately being offered for deposition with Manchester Museum of Science and Industry (MoSI).

8.2 Dissemination

The results obtained from the evaluation will be placed in the public domain via an appropriate level of dissemination, as required by Condition 37. Given the largely negative results obtained from the evaluation, the deposition of this report with the Greater Manchester Historic Environment Record, with a digital copy being made available on OASIS, is considered to represent an appropriate level of dissemination.

Acknowledgments

Salford Archaeology would like to thank TEP for commissioning the archaeological works. Salford Archaeology would also like to thank Norman Redhead for providing monitoring support and advice through GMAAS.

The on-site excavations were conducted by Andrew Radford. The report was written by Andrew Radford, and illustrated by Sarah Mottershead. The report was edited by Ian Miller, who was also responsible for project management.

Sources

Cartographic Sources

Green's Map of 1794

Johnson's Map of 1818-19

Swire's Map of 1824

Bancks & Co's Map of 1831

Ordnance Survey 1:1056 (60":1 mile) Town Plan 1851

Ordnance Survey 1:500 Town Plan 1891

Historical Sources

1861 Census for England, Scotland and Wales

1794 Scholes' Manchester and Salford Directory

1909 Slater's Manchester, Salford, and Suburban Directory

Secondary Sources

Arrowsmith, P. (2012) *National Graphene Institute, Booth Street East, Manchester: An Archaeological Desk-Based Assessment*, unpublished report.

British Geological Survey. (2019). www.bgs.co.uk. Recovered July 2019.

Bruton, F. (1909). *The Roman Fort at Manchester*. Manchester.

Connelly, P.A. (2002). *Liverpool Road, Manchester: An Archaeological Excavation Within the Roman Vicus*. UMAU, unpublished report.

Harvey, K. & Mottershead, G. (2019). *School of Digital Arts, Higher Chatham Street, Manchester: Archaeological Excavation Report*. Salford Archaeology: University of Salford, unpublished report.

Kidd, A. (1993). *Manchester*. Keele: Ryburn Publishing

Lloyd-Jones, R., and Lewis, M. (1993). Housing Factory Works: Ancoats in the Early 19th Century, *Manchester Region Historical Review*, **7**, 33-6.

McNeil, R., and Newman, R. (2007). The Industrial and Modern Period Research Agenda, in M Brennand (ed) *The Archaeology of North West England: An Archaeological Research Framework for North West England: Volume 2*, CBA North West 9.

Nevell, M. (2008). *Manchester: The Hidden History*. The History Press.

Newman, R., and McNeil, R. (2007). The Industrial and Modern Period Research Agenda, in M Brennand (ed) *The Archaeology of North West England: An Archaeological Research Framework for North West England: Volume 1*, CBA North West 8.

Radford, A. (2018). *New Wakefield Street, Manchester: Archaeological Excavation Report. Salford Archaeology*: University of Salford, unpublished report.

Radford, A. (2019). *Charles Street, Manchester: Archaeological Evaluation Report*. Salford Archaeology: University of Salford, unpublished report.

TEP (2017). *Echo Street, Manchester: Archaeological Desk-based Assessment, V.2*. TEP, unpublished report.

TEP (2017). *Echo Street, Manchester: Written Scheme of Investigation for a Programme of Archaeological Work*. TEP, unpublished report.

Appendix 1: Figures

Figure 1: Site location map

Figure 2: Trench location plan

Figure 3: Trench location superimposed on William Green's map of 1787-94

Figure 4: Trench location superimposed on the Ordnance Survey Town Plan of 1851

Figure 5: Plan of Trench 1

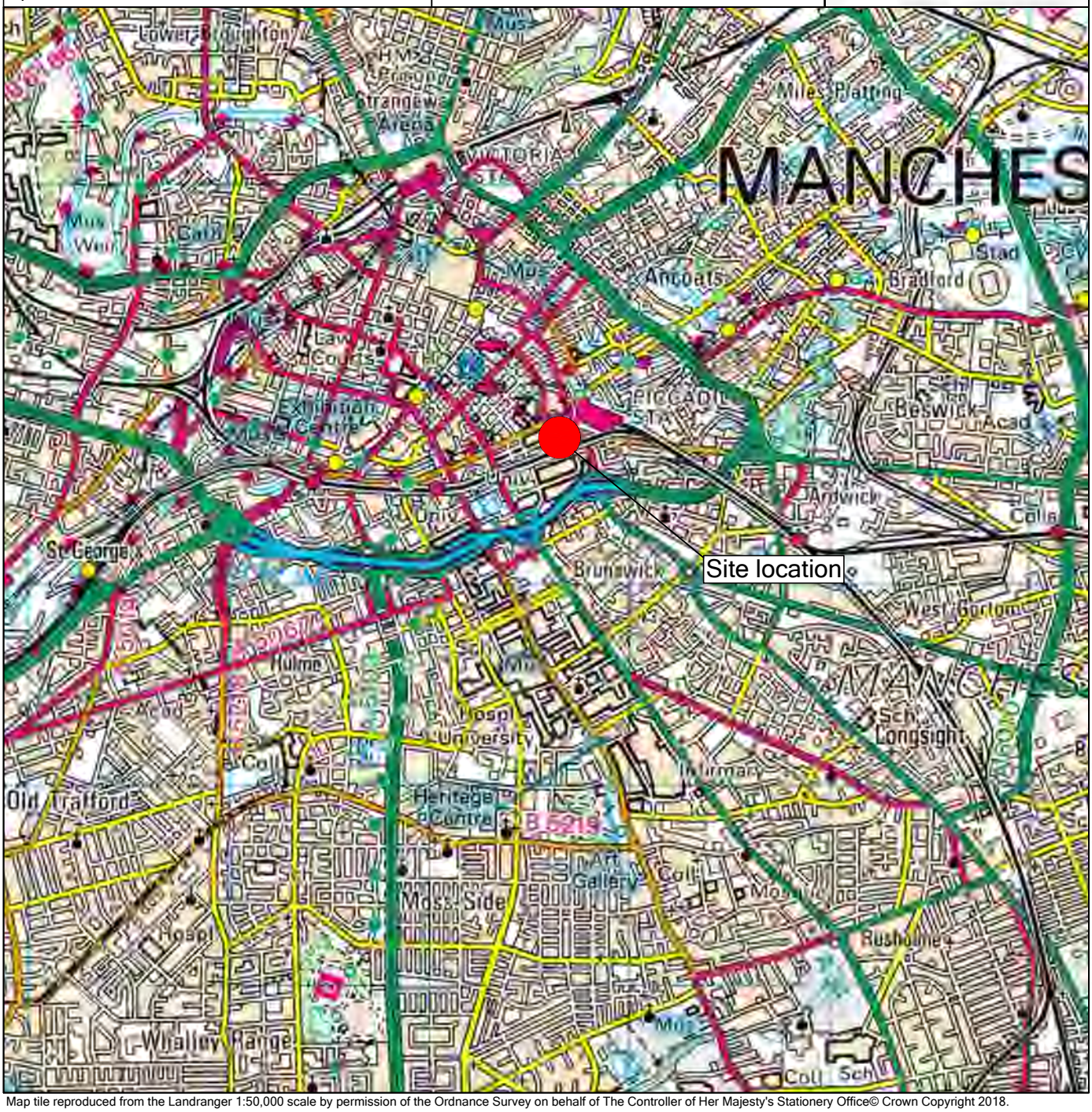
Figure 6: Plan of Trench 2





Figure 1:

Site location (centered on NGR SJ 84660 97705)



Map tile reproduced from the Landranger 1:50,000 scale by permission of the Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office© Crown Copyright 2018.

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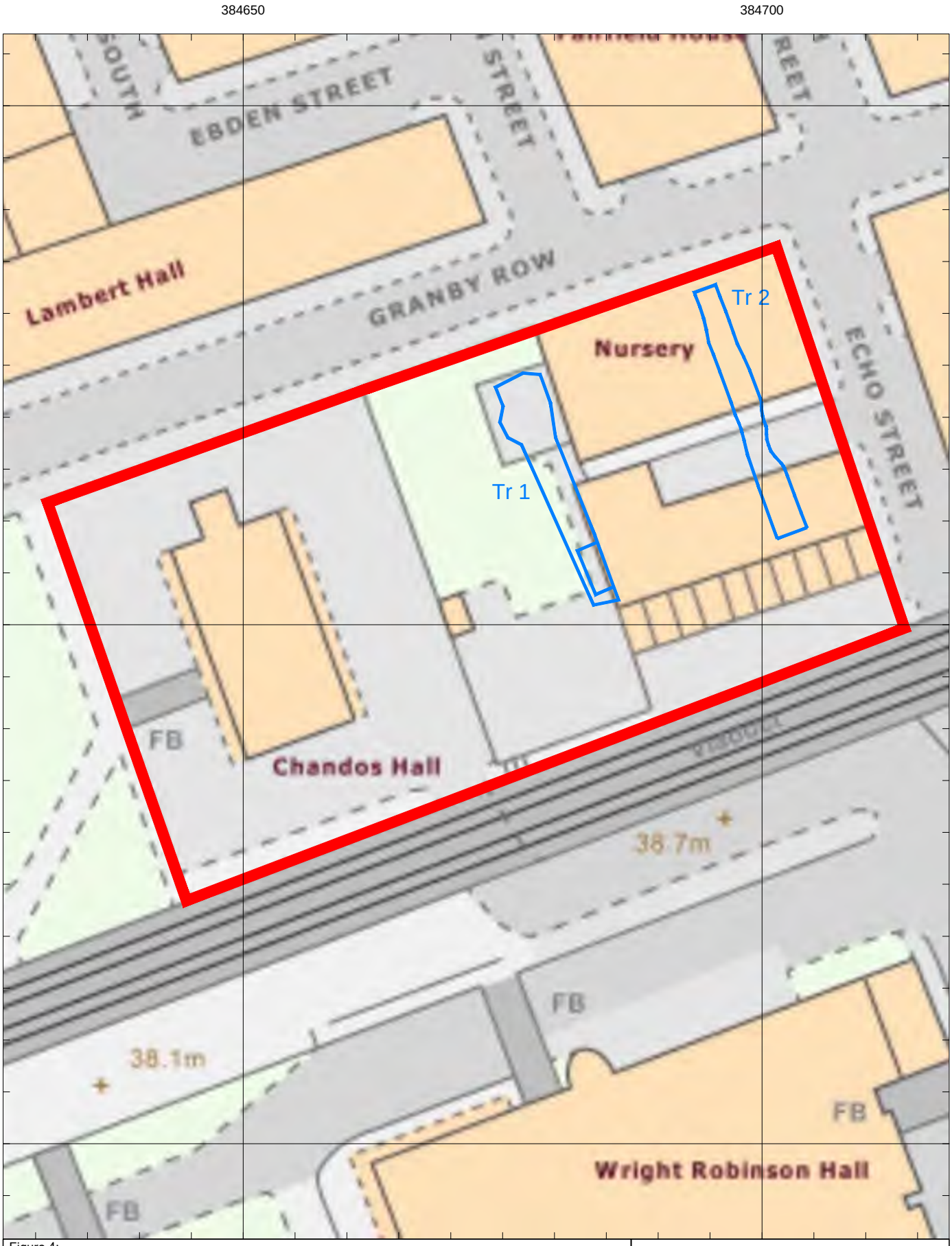


Figure 4:

Evaluation trenches superimposed onto Ordnance Survey 1:500 Town Plan 1851

N

Key:

Site boundary

Trench

0 20 m

Scale at A4 1:500

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Figure 3:

Evaluation trenches superimposed onto Green's Plan of Manchester and Salford 1787-94

N

Key:

Site boundary

Trench

0 20 m

Scale at A4 1:500

Salford Archaeology, Peel Building,The Crescent, Salford, M5 4WT

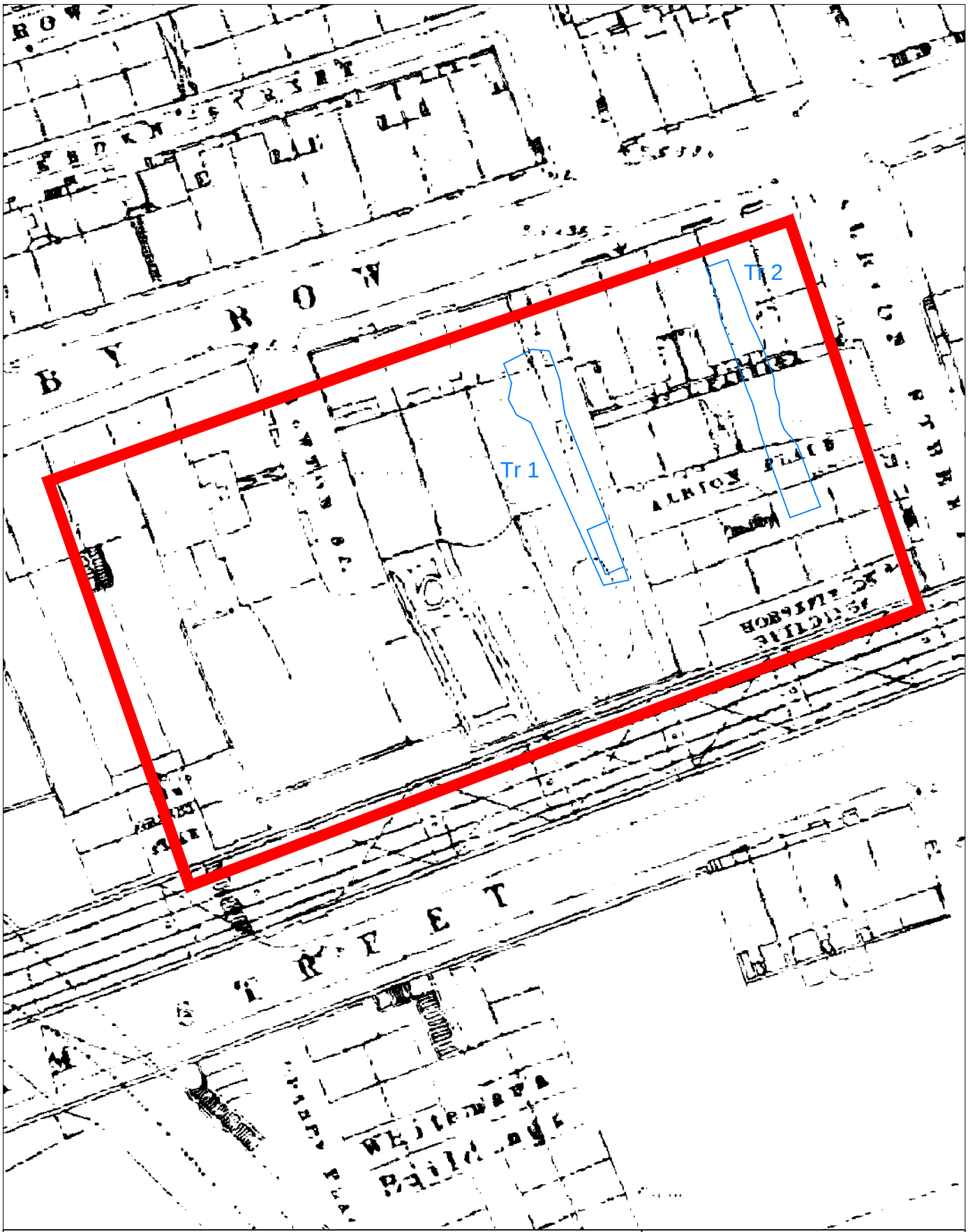


Figure 4:

Evaluation trenches superimposed onto Ordnance Survey 1:500 Town Plan 1851

N

Key:

Site boundary

Trench

0 20 m

Scale at A4 1:500

Salford Archaeology, Peel Building,The Crescent, Salford, M5 4WT

384670 384680 384690

397730 397720 397710 397700

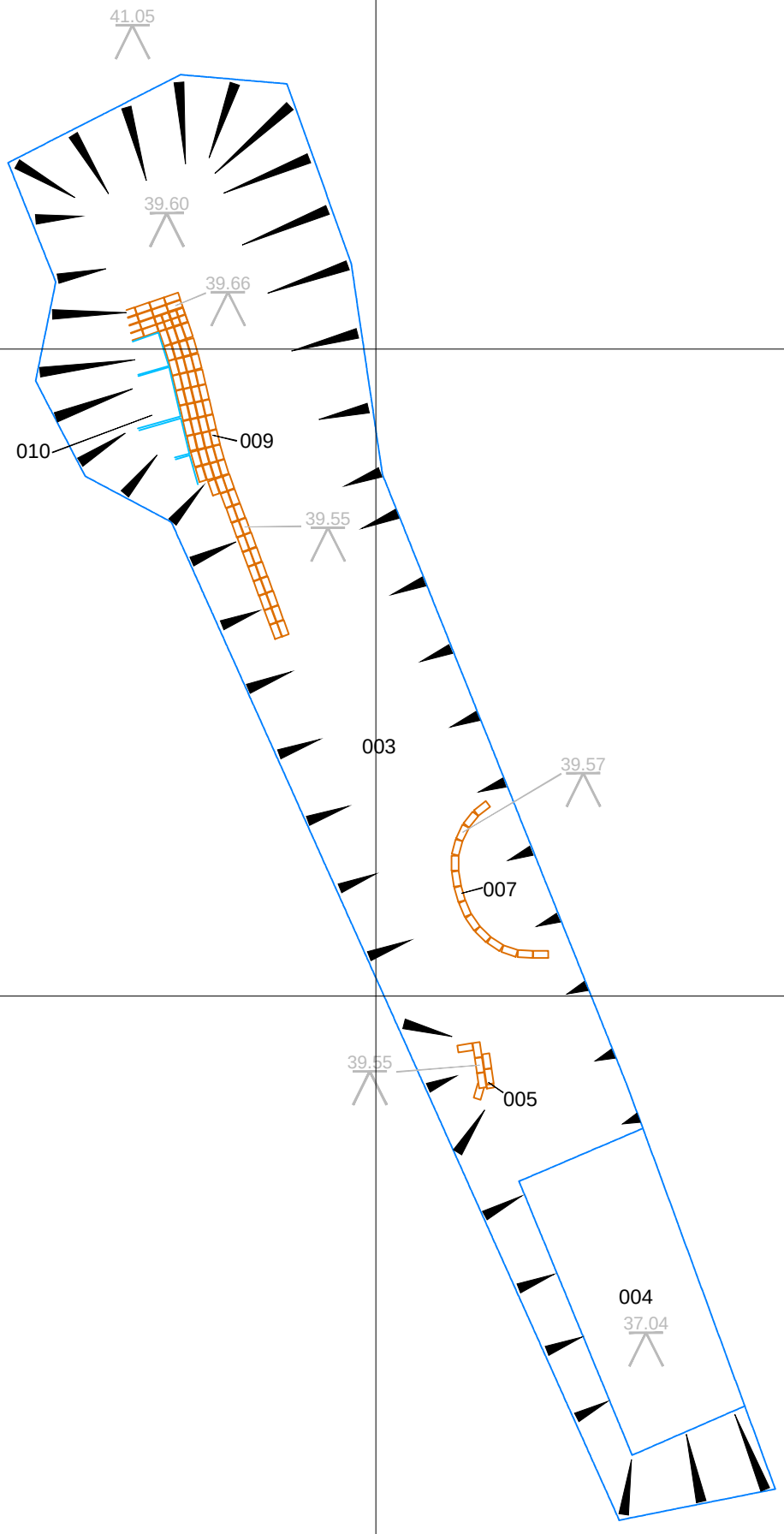


Figure 5:

Plan of evaluation trench 1 with contexts and levels annotated

N

0 5 m

Scale at A3 1:100

Key:

- Brick wall
- Brick surface
- Concrete
- Drain
- Stone
- Trench

Salford Archaeology, Peel Building, The Crescent, Salford, M5 4WT

384690 384700 384710

397730 397730

397720 397720

397710 397710

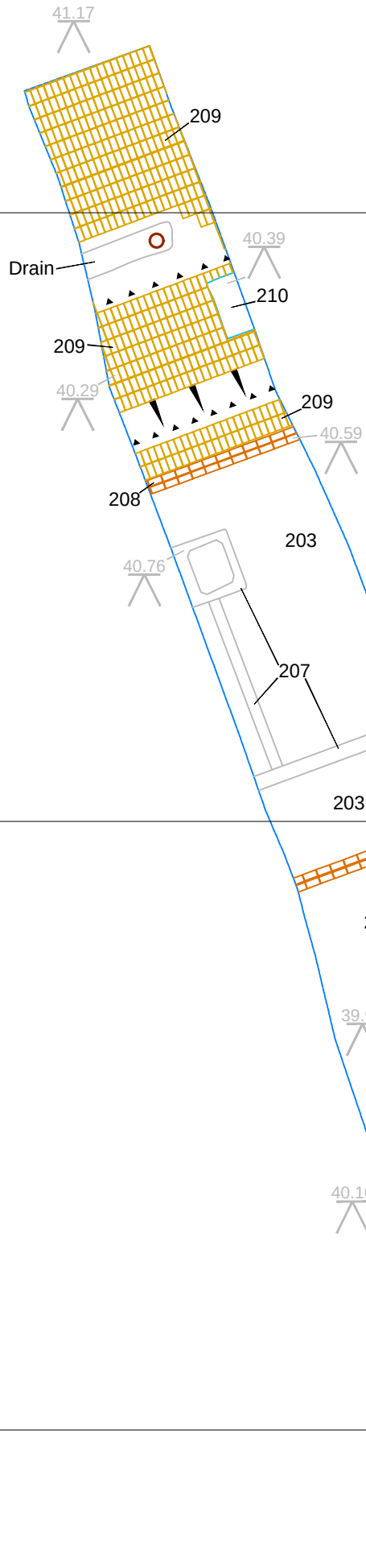


Figure 6:

Plan of evaluation trench 2 with contexts and levels annotated

N

0 5 m

Scale at A3 1:100

Key:

- Brick wall
- Brick surface
- Concrete
- Drain
- Stone
- Trench

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Appendix 2: Context List

Context No	Trench No	Description
001	1	Layer of crushed concrete levelling
002	1	Layer of compacted clay with rubble inclusions
003	1	Compacted orange clay – top of natural geology
004	1	Grey boulder clay – natural geology
005	1	Brick-built structure
006	1	Fill of brick-built structure *005*
007	1	Brick-built semi-circular structure – probable well
008	1	Demolition fill of probable well *007*
009	1	North end of wall
010	1	Flagstone floor abutting wall *009*
200	2	Concrete slab
201	2	Layer of modern demolition material
202	2	Layer of earlier demolition material
203	2	Natural clay geology
204	2	Modern wall
205	2	Modern man-hole structure
206	2	Modern wall
207	2	Modern foundations / concrete stanchions
208	2	Brick-built wall
209	2	Brick floor
210	2	Stone step

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CONSULTANCY



DESK BASED ASSESMENTS



WATCHING BRIEF & EVALUATION



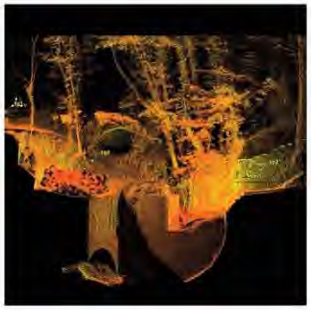
EXCAVATION



BUILDING SURVEY



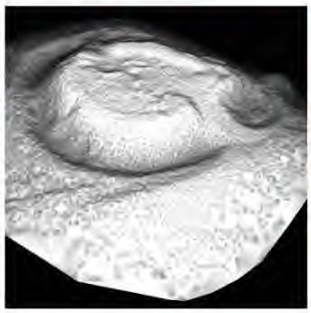
3D LASER SCANNING



COMMUNITY INVOLVEMENT



LANDSCAPE SURVEYS



GEOPHYSICAL SURVEYS



WORKSHOPS & VOCATIONAL TRAINING



RESEARCH PUBLICATIONS



SEMINARS, DAYSCHOOLS CPD EVENTS



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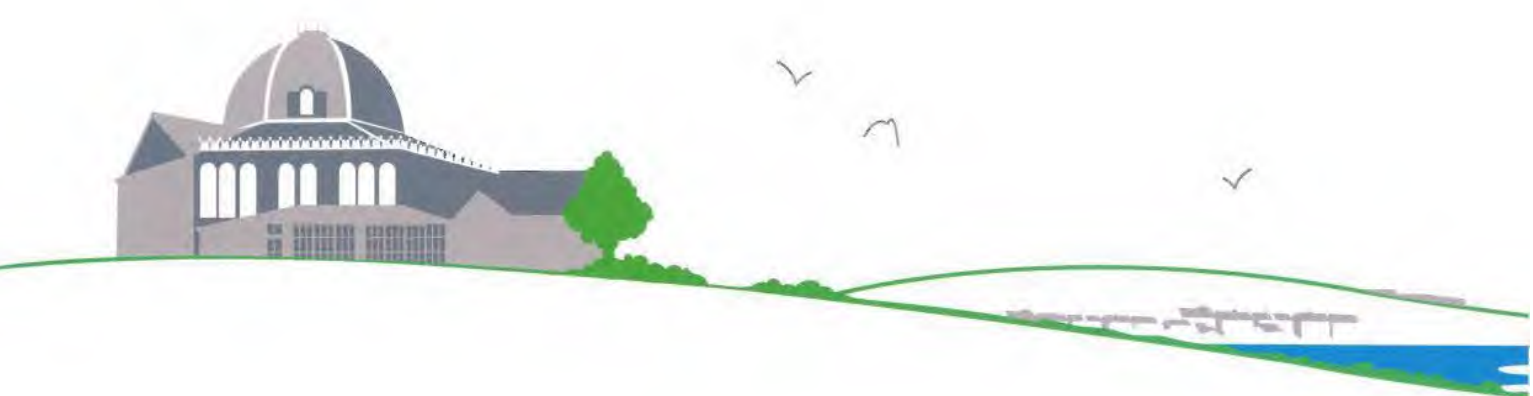
Appendix 5.2: Extended Phase 1 Habitat Survey

Penny Anderson Associates Ltd
CONSULTANT ECOLOGISTS

IQ STUDENT

ECHO STREET, MANCHESTER

EXTENDED PHASE 1 HABITAT SURVEY



IQ STUDENT

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January 2023

This project has been undertaken in accordance with PAA policies and Procedures on quality Assurance

Signed: 

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1 Botanical Species List
2 Photographs

1. INTRODUCTION

1.1. Penny Anderson Associates Ltd (PAA) was commissioned by IQ Student in January 2023 to undertake an extended Phase 1 habitat survey on an area of land at Echo Street, Manchester (hereafter referred to as the 'site'). The site is centred on grid reference SJ84679770.

1.2. The report has been requested to accompany a planning application for re-development of the site. This report details the results of the desk study, the site survey, and evaluates the results in the context of the proposed re-development of the site, making recommendations for any further survey work as required.

1.3. PAA previously carried out an extended Phase 1 habitat survey and bat inspection (PAA 2017a) in May 2017 of the site, with subsequent bat activity surveys following (PAA 2017b). The on-site buildings that were the subject of the bat inspections have since been demolished.

Site Location

1.4. Echo Street is an urban city centre site comprising hardstanding and bare ground with small patches of ephemeral/short perennial vegetation and introduced shrub. The wider surrounding land use is primarily urban development comprising roads, offices, and residential buildings.

1.5. The site is bound by student residential lots to the north, the A6 and Bainbridge house to the east, a small park and university building to the west, and a railway track to the south. Piccadilly train station is located 100m from the site.

Legislative Context

1.6. A range of international and national legislation has been established in the UK to protect important nature conservation sites and priority species. At the international level, European Union (EU) Directives require individual member states to implement their conservation provisions nationally for the benefit of Europe as a whole. These Directives have been transposed into UK law by the Conservation of Habitats and Species Regulations 2017 (amended).

1.7. Other international conventions include: the Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979), which requires the maintenance of populations of wild flora and fauna, giving particular protection to endangered and vulnerable species; and the Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979), which requires the protection of migratory species throughout their entire range. The above conventions are implemented in England and Wales via the Wildlife and Countryside Act (WCA), 1981 (as amended) and Countryside and Rights of Way (CRoW) Act 2000. This legislation also protects important habitats and sites such as Sites of Special Scientific Interest (SSSI).

1.8. At the national level, Biodiversity 2020 (Defra 2011) forms England's national biodiversity strategy. Building on the Natural Environment White Paper[1] published in 2011, this provides a means of delivering the UK's commitments to maintaining and protecting biodiversity. Under Biodiversity 2020, the Priority Species and Habitats referred to are those of 'Principal Importance' for the conservation of biodiversity in England as listed on Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006 (amended).

[1] *www.gov.uk/government/publications/the-natural-choice-securing-the-value-of-nature*

1.9. More recently, the Environment Act 2021 further supports this commitment to, and strengthens the legislation in respect of, maintaining and also enhancing biodiversity in England, and Part 6 Nature and Biodiversity includes the following key areas:

- Strengthened biodiversity duty for public authorities in England;
- Biodiversity net gain to ensure developments deliver at least 10% increase in biodiversity;
- Local Nature Recovery Strategies to support a Nature Recovery Network;
- Duty upon Local Authorities to consult on street tree felling;
- Strengthen woodland protection enforcement measures; and
- Protected Site Strategies and Species Conservation Strategies to support the design and delivery of strategic approaches to deliver better outcomes for nature.

1.10. Finally, the National Planning Policy Framework (NPPF 2021) provides guidance for local authorities on the content of the Local Plans and is a material consideration in determining planning applications. Briefly, with an overall focus on sustainable development, the NPPF states that developments should aim to engender positive outcomes for habitats and biodiversity, with a particular focus on the maintenance and creation of ecological networks.

1.11. The NPPF identifies the following principals that should be applied by local planning authorities when determining planning applications:

a. If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b. Development on land within or outside a SSSI, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSI;

c. Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons, and a suitable compensation strategy exists; and

d. Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

1.12. The NPPF states that the planning system should contribute to and enhance the natural environment through a range of actions, including:

- Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils;
- Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services; and
- Minimising impacts on biodiversity and providing net gains for biodiversity including establishing coherent ecological networks that are more resilient to current and future pressures.

1.13. To protect and enhance biodiversity and geodiversity, plans should:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of

importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and

- Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

Invasive Species

1.14. Certain non-native species that have been introduced into the UK are regarded as being a threat to native biodiversity. Legislative measures have, therefore, been put in place to prevent the spread of these invasive species in the wild.

1.15. Under section 14 of the WCA, 1981 (as amended), it is illegal to introduce plants listed under Part II of Schedule 9 of the WCA into the wild or sell these species. Offences include causing the spread of viable plant material or neglecting to contain or appropriately manage non-native species.

1.16. Commonly introduced Schedule 9 species include non-native cotoneaster species, specifically, small-leaved cotoneaster[2] (*Cotoneaster microphylla*) and wall cotoneaster (*C. horizontalis*), Himalayan balsam (*Impatiens glandulifera*) and Japanese knotweed (*Reynoutria japonica*).

[2] *Plant names follow Stace 2019*

2. METHODS

Desk Study

2.1. A request for details of protected and notable species and locally designated sites within 2km of the centre of the site was made to the Greater Manchester Ecology Unit (GMEU), with data returned in January 2023. Additionally, the Multi-Agency Geographic Information for the Countryside (MAGIC[3]) website was consulted for details of statutory designated sites and Priority Habitats within 2km of the site and details of European Protected Species (EPS) within a 1km search zone.

2.2. It is important to note that the desk study results provide an indication of the species present in and around the site, and do not confirm current presence or absence of any species. Protected species are often under-recorded in county wildlife databases.

Extended Phase 1 Habitat Survey

2.3. An extended Phase 1 habitat survey was undertaken by senior ecologist Rob Lamb (ACIEEM[4]) and assistant ecologist Stephen Griffith on 18th January 2023.

2.4. The extended Phase 1 habitat survey was undertaken in accordance with the best practice methodology as detailed by CIEEM (2017) and the Joint Nature Conservation Committee (JNCC 2010).

2.5. This entailed mapping, describing and collating plant species lists for habitats within the site boundary. The broad habitat types were mapped, with each habitat type coded according to the standard JNCC Phase 1 habitat survey methodology.

2.6. Each plant species was assigned abundance codes within each habitat. This was done using the 'DAFOR' scale (where: d = dominant; a = abundant; f = frequent; o = occasional; r = rare), which provides an indication of the relative abundance of each plant species present within a particular habitat. Common names and scientific names according to Stace (2019) are provided in the species list (Appendix 1) but common names only are referred to in the text.

2.7. The survey was 'extended' (Institute of Environmental Assessment 1995) to include notes on fauna and habitats which could potentially support protected or notable species. The presence of, or potential for, protected or notable species was noted during the survey.

Limitations

2.8. The site was fully accessible at the time of the survey and, given the lack of botanical interest at the site, was carried out at an appropriate time of year for this type of survey, and there were no significant constraints.

[3] *https://magic.defra.gov.uk/MagicMap.aspx (last accessed [24/01/2023])*

[4] *Associate member of the Chartered Institute of Ecology and Environmental Management (CIEEM).*

3. RESULTS

Desk Study

3.1. The desk study utilised data obtained from GMEU in January 2023, searching within a 2km radius of the site centre. The MAGIC[5] search engine was also used to obtain additional data on statutory designated site and Priority Habitats, as well as EPS licences within 1km of the site.

Statutory Protected Sites

European Sites

3.2. European protected sites include Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar wetland sites, possible SAC, potential SPA and proposed Ramsar sites.

3.3. No European protected sites are present within 2km of the site centroid.

Sites of Special Scientific Interest

3.4. SSSI represent a selection of this country's best wildlife and geological sites and cover approximately 7% of the terrestrial area of the country (with over 4,000 separate sites in England).

3.5. No SSSI are present within 2km of the site centroid.

National and Local Nature Reserves

3.6. No national or local nature reserves are present within 2km of the site centroid.

Non-Statutory Protected Sites

3.7. Two Sites of Biological Importance (SBI) were identified within the 2km search area:

- Ashton Canal (West) (approximately 360m north-east of site boundary) - The canal is an important wildlife corridor linking Ashton with Manchester via Openshaw and provides an important accessible natural greenspace in an otherwise urban landscape. Both floating water-plantain and grasswrack pondweed (*Potamogeton crompressus*) are UK Priority Biodiversity Species and have been recorded here; and
- Rochdale Canal: Stott's Lane to Ducie Street Basin (approximately 390m north of site boundary) - Statutory designations such as the Rochdale Canal SAC and the Rochdale Canal SSSI apply to the Oldham and Rochdale sections only and are, thus, not located within the 2km search area. Floating, emergent and marginal flora occurs along the Manchester section of the canal. This includes occasional emergent stands of bulrush (*Typha latifolia*), common reed (*Phragmites australis*), yellow iris (*Iris pseudacorus*) and purple-loosestrife (*Lythrum salicaria*). Marginal species also include occasional hard rush (*Juncus inflexus*), great willowherb (*Epilobium hirsutum*), hoary willowherb (*Epilobium parviflorum*), gypsywort (*Lycopus europaeus)* and water forget-me-not (*Myosotis scorpioides*). A small harbour connecting the Ashton canal and Rochdale canal, named the New Islington Marina, supports large shoals of perch and roach of various age classes, indicating this is now an important nursery for coarse fish. Water vole (*Arvicola amphibius*) and white-clawed crayfish (*Austropotamobius pallipes*) are known to be present in other sections of the canal.

[5] *Multi Agency Geographic Information for the Countryside*

Priority Habitats

3.8. Many records of Priority Habitat – deciduous woodland are present within the 2km search area. The closest of these records is located 750m south-east of the site boundary.

3.9. 26 records of priority habitat – open mosaic are present within the 2km search area. The closest of these records is located 740m south-west of the site boundary, at Cambridge Street.

Protected and Notable Species

Granted European Protected Species Application

3.10. Records for protected species licences were returned for ten locations within the 1km search area. These were all for Pipistrelle species (*Pipistrellus* sp.) and are displayed in Table 1 below.

Table 1 Bat European Protected Species Licenses

Species	License to Allow	Date License Granted	Date License Expires	Distance from Site Boundary
Common pipistrelle[6]	Destruction and damage of a resting place	2019	2021	205m SE
Common pipistrelle	Destruction of a resting place	2021	2022	325m SE
Common pipistrelle and Soprano pipistrelle[7]	Destruction of a resting place	2014	2017	285m NW
Common pipistrelle	Destruction and damage of a resting place	2018	2040	280m NW
Common pipistrelle	Damage of a resting place	2014	2015	880m SE
Common pipistrelle	Destruction of a resting place	2020	2025	850m NW
Common pipistrelle	N/A	2013	2016	950m SW
Common pipistrelle	Destruction of a resting place	2014	2020	930m NE
Common pipistrelle	Destruction of a resting place	2016	2018	970m N
Common pipistrelle	Destruction of a resting place	2013	2015	950m N

Badger

3.11. One record for a badger (*Meles meles*) sett was returned from the 2km data search, dating from 2011. This record was located 1.4km from the site boundary. Due to the confidential nature of this information, exact locations cannot be disclosed.

3.12. 17 other records for badger were also returned from the 2km data search, dating between 2011 and 2014.

Otter

3.13. Three records of otter (*Lutra lutra*) were returned from the 2km data search, dating between 2013 and 2022. The closest of these records is located 1.6km west of the site boundary, at Castlefield canals.

[6] *Pipistrellus pipistrellus*

[7] *Pipistrellus pygmaeus*

Water Vole

3.14. No records for water vole (*Arvicola amphibius*) were returned from the 2km data search.

Bats

3.15. A total of 70 records were returned for bat roosts from the 2km data search. These records are displayed in Table 2.

3.16. Other records for four species of bat were also returned from the 2km data search, including brown long-eared (*Plecotus auritus*), common pipistrelle, Daubenton's (*Myotis daubentonii)*, and soprano pipistrelle.

Table 2 Bat Roost Records

Common Name	Scientific Name	No. of roost records	Closest Record (approximate distance and direction from site boundary)
Bat species	*Chiroptera* sp.	1	1.8km W
Common pipistrelle	*Pipistrellus pipistrellus*	48	320m N
Daubenton's	*Myotis daubentonii*	1	1.8km W
Myotis species	*Myotis* sp.	1	270m E
Pipistrelle species	*Pipistrellus* sp.	17	270m E
Soprano pipistrelle	*Pipistrellus pygmaeus*	2	320m N

Other Mammals

3.17. 17 records of hedgehog (*Erinaceus europaeus*) were returned from the 2km data search, dating between 2012 and 2020. The closest of these records was located 420m north-east of the site boundary.

Birds

3.18. All nesting birds, their nests and eggs are protected from harm under the WCA, 1981 (as amended). In addition, species listed under Schedule 1 of the WCA are further protected against disturbance when breeding.

3.19. A number of bird species are listed under Section 41 in the NERC Act (2006, amended) as species 'of principal importance for the purpose of conserving biodiversity'. These species are often known as the 'S41 species'. There is a legal requirement for a public body to 'have regard to' these species in relation to maintaining biodiversity. The S41 list overlaps somewhat with the UK BAP[8] species, with national or local targets to maintain and enhance populations.

3.20. Furthermore, the Birds of Conservation Concern (BoCC) report lists those bird species that are classed as being of High (Red listed) and Medium (Amber Listed) conservation concern based on population monitoring (Stanbury *et al*. 2021). This Red and Amber classification helps guide the assessment of bird species of conservation interest on or near to a site, alongside legislative and policy requirements.

3.21. A small number of Schedule 1 species, including black redstart (*Phoenicurus ochruros*), hobby (*Falco subbuteo*) kingfisher (*Alcedo atthis*), little ringed plover (*Charadrius dubius*) and peregrine (*Falco peregrinus*) were recorded within the 2km search area; these records are classed as

[8] *Biodiversity Action Plan*

confidential. All other protected and notable bird species records within the 2km search area are listed in Table 3, along with their respective conservation status.

Table 3 Bird Species of Principal Importance

Common Name	Scientific Name	Amber[9] Listed	Red Listed	Section 41 Priority Species[10]
Bullfinch	*Pyrrhula pyrrhula*	x		x
Cuckoo	*Cuculus canorus*		x	x
Curlew	*Numenius arquata*		x	x
Dunnock	*Prunella modularis*	x		x
Greenfinch	*Carduelis chloris*		x	
Herring Gull	*Larus argentatus*		x	x
House Martin	*Delichon urbicum*		x	
House Sparrow	*Passer domesticus*		x	x
Lapwing	*Vanellus vanellus*		x	x
Lesser Redpoll	Acanthis caberet			x
Linnet	*Linaria cannabina*		x	x
Mistle Thrush	*Turdus viscivorus*		x	
Skylark	*Alauda arvensis*		x	x
Song Thrush	*Turdus philomelos*	x		x
Spotted Flycatcher	*Muscicapa striata*		x	x
Starling	*Sturnus vulgaris*		x	x
Tree Sparrow	*Passer montanus*		x	x
Woodcock	*Scolopax rusticola*		x	
Yellow Wagtail	*Motacilla flava*		x	x

Amphibians

3.22. No records for amphibians were returned from the 2km data search.

3.23. The river Medlock is located 230m south-east of the site before continuing below ground. This river is unlikely to provide suitable habitat for GCN and is separated from the site with no habitat connectivity. There are no other waterbodies present within the search area that would provide suitable habitat for amphibians. This is supported by the lack of records for the area.

Reptiles

3.24. No records for reptiles were returned from the 2km data search.

[9] *The UK's birds can be split in to three categories of conservation importance - red, amber and green. Red is the highest conservation priority, with species needing urgent action. Amber is the next most critical group, followed by green.*

[10] *Species of Principal Importance under Section 41 of the NERC Act 2006.*

Invertebrates

3.25. 15 records of cinnabar moth (*Tyria jacobaeae*) were returned from the 2km data search, dating between 2012 and 2019. The closest of these records is located 500m north of the site boundary.

3.26. One record of white-letter hairstreak (*Satyrium w-album*) was returned from the 2km data search, dating from 2019. This record is located 1.5km north-east of the site boundary.

White-clawed Crayfish and Notable Fish

3.27. No records for white-clawed crayfish or notable fish species were returned from the 2km data search.

Notable Plant Species

3.28. Five records for bee orchid (*Ophrys apifera*) were returned from the 2km data search, dating between 2016 and 2022. The closest of these records is located 170m north-east of the site boundary.

3.29. One record of floating water plantain (*Luronium natans*) was returned from the 2km data search, dating from 2001. This record is located 1.1km north-east of the site boundary.

Phase 1 Habitat Survey

3.30. Figure 1 presents the habitat map of the site. Botanical species lists for the habitats on-site are presented in Appendix 1, with illustrative photographs in Appendix 2.

Main Habitats Present

3.31. The site is dominated by hardstanding with small patches of ephemeral/short perennial vegetation scattered across the site (Figure 1). Introduced shrub lines the southern site boundary, with small sections also present to the north-west of site. Fencing borders the site on all sides and no buildings are present on-site.

Hardstanding and Bare Ground

3.32. The site is dominated by hardstanding and bare ground (including concrete and asphalt). These areas host very little vegetation; either due to recent use (for example heavy machinery) or because of the relatively intact nature of the hardstanding (Photograph 1). The site boundary extends onto Echo Street to the east and Granby row to the north.

Introduced Shrub

3.33. Stands of butterfly-bush (*Buddleja davidii*) were locally abundant across the entire southern site boundary (Photograph 2). Small patches were also present at the site boundary fencing to the north-west of the site and a single patch was present within the centre of the site.

Ephemeral/Short Perennial Grassland

3.34. Small patches of ephemeral/short perennial vegetation are present throughout the site (Photograph 3). All species present were common, widespread and typical of urban city centre sites. They included frequent willowherb species, with occasional annual meadow-grass, Yorkshire-fog, common ragwort, perennial sow-thistle and moss species. Rarely occurring species recorded on-site include ribwort plantain, groundsel, and aster species.

Invasive Non-Native Species

3.35. No invasive non-native plant species (as listed on Schedule 9 of the WCA, 1981 (as amended)) were recorded on-site.

Protected Species

3.36. The site is isolated from any larger areas of natural or semi-natural habitat.

3.37. The suitability of the site for black redstarts is considered to be very limited due to the dominance of intact hardstanding and lack of suitable features for foraging and nesting.

3.38. Due to the lack of shelter or suitable habitat for protected species, it was concluded that the only species relevant to this assessment are foraging bats.

Bats

3.39. The site contains no potential tree roost sites for bats as there are no mature or larger trees on or adjacent to the site. There are no buildings on the site for bats to potentially roost in.

3.40. The hardstanding provides no significant foraging habitat for bats. Street lighting, together with the lack of vegetation and connectivity to other semi-natural habitats, significantly diminishes its potential for bat foraging.

3.41. The GMEU data search revealed that the site is 270m from the closest known bat roost, belonging to a *Myotis* species, dating from 2015, situated on Fairfield Street.

3.42. Thus, development of the site is unlikely to significantly impact upon the local population of bats due to the lack of any suitable roost features, lack of foraging habitat and lack of connectivity with other nearby suitable habitats or roost sites.

4. DISCUSSION AND RECOMMENDATIONS

Designated Sites

4.1. The site contains no statutory nature conservation sites, and none are within 2km of the site, with those situated further afield considered unlikely to be impacted by the proposed development.

4.2. Non-statutory sites are of a sufficient distance to site that they are unlikely to be impacted by the proposed development.

Habitats

4.3. The habitats and plant species recorded within the site are widespread and common throughout Greater Manchester and the UK. None of the plant species recorded within the site are either Nationally Scarce or Nationally Rare (Hill *et al.* 2004) or of any other conservation significance (Cheffings and Farrell 2005, as amended; Stroh *et al*. 2014). Priority Habitats within 2km of the site were limited, with the closest an area of open mosaic habitat 740m from site.

Protected Species

Bats

4.4. The site provides no significant area of foraging habitat and is unlikely to be used by foraging bats. No potential roost features were identified on the site. The proposed development is, therefore, predicted to have a negligible impact on the conservation status of bats within the local area and Greater Manchester

Birds

4.5. The site is considered to provide a relatively limited foraging resource for local populations of birds. The site is unlikely, therefore, to form a key part of the foraging habitat for any local populations of bird such as black redstart.

4.6. There is no significant habitat suitable for nesting birds on-site. The patches of butterfly-bush are currently unlikely to provide a suitable nesting habitat due to the sparse and open character of the vegetation which does not provide sufficient cover or shelter for nesting birds, however, if shrub/scrub areas continue to develop on-site over time, these should be inspected by an Ecologist prior to removal if being removed within the nesting season (March to August inclusive).

Biodiversity Enhancement Opportunities

4.7. The site is currently of limited ecological value and development presents an opportunity to increase biodiversity. Potential enhancement measures comprise:

- Use of British native or pollinator-friendly tree, shrub and herbaceous species in any landscape planting, for example, inclusion of species that provide nectar for invertebrates or berries to provide a food source for birds;
- Inclusion of integrated bat roost features such as bat bricks or bat tubes to increase opportunities for roosting bats, coupled with a suitable lighting strategy to avoid unnecessary lighting of roost features; and
- Including a green/brown roof design would enhance/expand forage opportunities for any local populations of foraging birds, if the design allows.

5. REFERENCES

Cheffings, C., and Farrell, L., (eds), 2005. *The Vascular Plant Red Data List for Great Britain (revised 2006).* Joint Nature Conservation Committee.

CIEEM, 2017. *Guidelines for Preliminary Ecological Appraisal*. 2nd Edition. Technical Guidance Series. Chartered Institute of Ecology and Environmental Management.

Defra, 2011. *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*. Defra.

Hill, M.O., Preston, C.D. and Roy, D.B., 2004. *PLANTATT Attributes of British and Irish Plants: Status, Size, Life History, Geography and Habitats*. NERC Centre for Ecology and Hydrology.

Institute of Environmental Assessment, 1995. *Guidelines for Baseline Ecological Assessment*. E. & F.N. Spon.

JNCC, 2010. *Handbook for Phase 1 Habitat Survey – a technique for environmental audit*. Joint Nature Conservation Committee (revised edition 2010).

NPPF, 2021. *National Planning Policy Framework, updated July 2021*. Ministry of Housing, Communities and Local Government.

PAA 2017b. Bat Activity Surveys Chandos Hall Manchester. Report for IQ Student Accommodation.

PAA, 2017a. Ecological Assessment and Bat Inspection Chandos Hall Manchester. Report for IQ Student Accommodation.

Stace, C., 2019. *New Flora of the British Isles. Fourth Edition*. C&M Floristics.

Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. & Win, I. 2021. Birds of Conservation Concern 5: The Status of All Regularly Occurring Birds in the UK, Channel Islands and Isle of Man. *British Birds.* **114:** 723-747.

Stroh, P.A., Leach, S.J., August, T.A., Walker, K.J., Pearman, D.A., Rumsey, F.J., Harrower, C.A., Jay, M.F., Martin, J.P., Pankhurst, T, Preston, C.D., and Taylor, I., 2014. *A Vascular Plant Red List for England*. BSBI.

6. ABBREVIATIONS

BAP	Biodiversity Action Plan(s)
BoCC	Birds of Conservation Concern
CIEEM	Chartered Institute of Ecology and Environmental Management
CRoW	Countryside and Rights of Way
EPS	European Protected Species
EU	European Union
GMEU	Greater Manchester Ecology Unit
JNCC	Joint Nature Conservation Committee
MAGIC	Multi Agency Geographic Information for the Countryside
NERC	National Environment and Rural Communities
NPPF	National Planning Policy Framework
PAA	Penny Anderson Associates Ltd
SAC	Special Area(s) of Conservation
SPA	Special Protection Area(s)
SSSI	Site(s) of Special Scientific Interest
WCA	Wildlife and Countryside Act

FIGURE

384600 384650 384700

397750 397700

COBOURG STREET
3
5
HULL STREET SOUTH
EBDEN STREET
BACK ACTON STREET
Fairfield House
Lambert Hall
GRANBY ROW
ECHO STREET
FB



Legend

- Assessment area

Phase 1 Habitats

- J1.4, Introduced shrub
- J5, Hardstanding
- J1.3, Ephemeral/short perennial

British National Grid
Projection: Transverse Mercator
False Easting: 400000.000000
False Northing: -100000.000000
Central Meridian: -2.000000
Scale Factor: 0.999601
Latitude Of Origin: 49.000000

N

ISO A3

0 2.5 5 10 15 Metres

Penny Anderson Associates Ltd,
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Telephone 01298 27086

Project Name: Echo Street, Manchester

Discipline: Ecology

Title:

PRELIMINARY ECOLOGICAL APPRAISAL MAP

Scale	1:434	Drawing No.	Figure 1
Drawn By	CC	Originator: SG	Date: 23/01/2023
Grid Ref.	384,668 397,716	Revision	1.0

G:\IQSA02_Echo_Street\Maps\Figure 1 - PEA Map - Echo Street - IQSA02 CC 230123.mxd

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APPENDICES

APPENDIX 1

Botanical Species List

Appendix 1 Botanical Species List

Common Name	Scientific Name	DAFOR
Woody Species		
Butterfly-bush	*Buddleja davidii*	la
Herbs and Grasses		
Annual meadow-grass	*Poa annua*	o
Aster species	*Aster* sp.	r
Common ragwort	*Jacobaea vulgaris*	o
Groundsel	*Senecio vulgaris*	r
Moss species	*Bryum* sp.	o
Perennial sow-thistle	*Sonchus arvensis*	o
Ribwort plantain	*Plantago lanceolata*	r
Willowherb species	*Epilobium* sp.(annual)	f
Yorkshire-fog	*Holcus lanatus*	o

KEY

d - Dominant
a - Abundant
f - Frequent
o - Occasional
r - Rare
l - Locally

APPENDIX 2

Photographs



Photograph 1
Hardstanding and bare ground



Photograph 2
Butterfly-bush at southern site boundary



Photograph 3
Small patches of ephemeral / short perennial vegetation

Penny Anderson Associates Ltd

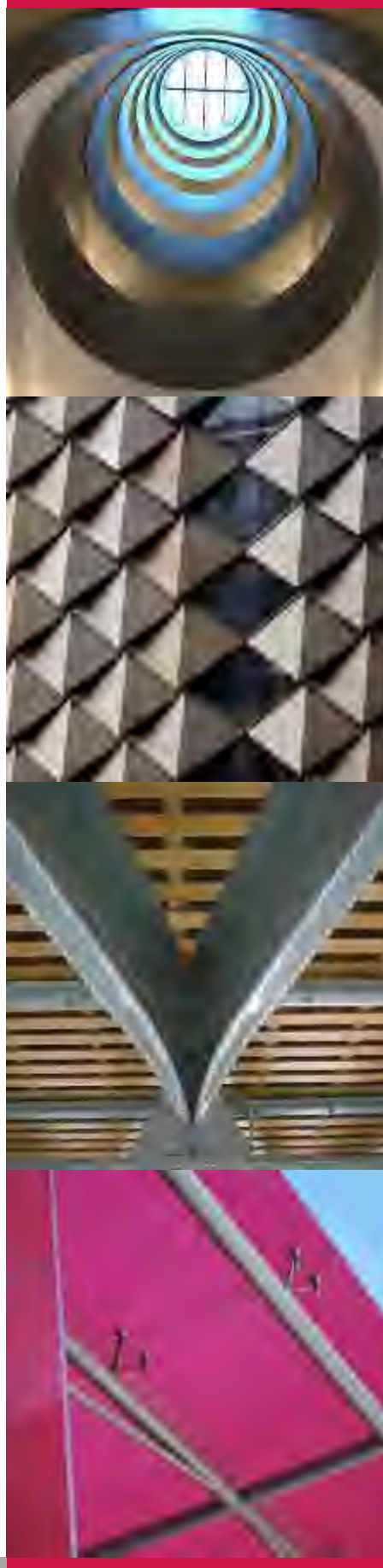
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Appendix 5.3: Phase 1 Preliminary Risk Assessment



Echo Street

Phase 1 Preliminary Risk Assessment

Curtins Ref: 065374-CUR-XX-XX-RP-GE-80001

Revision: P01

Issue Date: 01 February 2023

Client Name: IQ Student Accommodation

Client Address: Suite 8a, Manchester One, 53 Portland St, Manchester, M1 3LD

Site Address: Granby Row, Manchester, M1 7AB

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Rev	Description	Issued by	Checked	Date
P01	Report Issue	RBJ	NF	01/02/2023

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Executive Summary

Appointment	**In January 2023 Curtins have been instructed to undertake an updated Phase 1 Preliminary Site Assessment of a site at Echo Street, Manchester, M1 7AB.** **Curtins previously carried out a Phase 1 Preliminary Site Assessment for the site in January 2017. Construction commenced in 2019 however, project progression was halted in 2020 following the COVID 19 pandemic.** **This report has been undertaken in support of a new planning application and amendments to development proposals including building heights, internal layouts and change from mixed use to 100% purpose-built student accommodation. Limited updated development plans have been made available to Curtins at the time of writing.**
Current Site Status	The site is approximately 0.48Ha in size. The site is currently vacant following previous demolition and commencement of construction works. Piling has been completed and construction of pile caps and ring beams is complete in part. Gravel surfacing covers the site and some equipment and materials remain on site (barriers, cones, gravel etc). Access gates to the construction site are located on Echo Street.
Site History	Earliest historical mapping illustrates a mix of commercial developments including a printing works, window cleaner and battery cleaner, with an associated storage 'tank' noted. These were subsequently converted to a hostel/University accommodation, tennis courts and garages by 1965, with the tank no longer indicated as present and the garage towards the north converted to a nursey by 1994. By the present day, the site has undergone a various demolition and groundworks including piling on site.
Geology	The BGS maps records Made Ground across the site which is underlain by Glacial Till (Diamicton), overlying the Chester Pebble Beds Formation (sandstone). A BGS borehole 150m south recorded Made Ground to 5.48m bgl, underlain by gravel to 6.55m bgl. This is further underlain by hard red sandstone to 68.96m bgl. No BGS faults lines are recorded traversing the site, however the site is bound each side by 2 faults travelling in the south-east direction. The site is within an area which may be affected by coal mining. No identified coal outcrops or mine entries are located within 1km of the site. The site is not noted within an area that has been influenced by past shallow coal mine workings. There are no recorded mineral sites within 500m of the site.
Hydrogeology	The Glacial Till formation is designated as a Secondary Undifferentiated Aquifer, with the Chester Formation designated as a Principal Aquifer. There are nine groundwater abstraction points located within 1km of the site, the closest being 255m west for industrial/ commercial/public purposes. The site is not situated within a Groundwater Source Protection Zone (SPZ).
Hydrology	The nearest surface water feature is the Rochdale Canal located 175m north. The River Medlock is recorded 200m south-east of the site, flowing east to west. There is no surface water abstraction point recorded within 250m of the site. There are six discharge consents within 250m, the closest been 164m north-west of the site comprising storm sewage overflow.
Unexploded Ordnance	An elevated risk of encountering UXO on site as part of the ground investigation was initially assessed and so on this basis, a detailed UXO risk assessment has been procured from 1st Line Defence. The report has assessed the majority of the site as **Low** risk and the northeast of the site as **Medium** risk for Curtins ground investigation works.
Initial Ground Contamination Assessment	The risk, from Made Ground, posed to site end-users is considered to be **Moderate/Low**, accounting for the potential for localised contamination. The risk posed to groundwater is considered **Moderate/Low** and the risk to surface waters is considered **Low**. The risk posed to end-users from ground generating gases is considered to be **Moderate**.
Recommendations	In summary, the following recommendations are made: • Undertake an intrusive ground investigation; • Undertake a GQRA as part of the ground investigation; • Undertake Ground Gas Monitoring; and • Provide UXO risk mitigation for ground investigation works within the Medium Risk area. It is further recommended that this work is completed in advance of any development works taking place

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Appendices

Appendix A **Drawings**
Appendix B **Supporting Information**
Appendix C **Risk Assessment Rationale**

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1.0 Introduction

1.1 Project Background

In January 2023 Curtins have been instructed to undertake an updated Phase 1 Preliminary Site Assessment of a site at Echo Street, Manchester, M1 7AB.

Curtins previously carried out a Phase 1 Preliminary Site Assessment for the site in January 2017. Construction commenced in 2019 however, project progression was halted in 2020 following the COVID 19 pandemic.

This report has been undertaken in support of a new planning application and amendments to development proposals including building heights, internal layouts and change from mixed use to 100% purpose-built student accommodation. Limited updated development plans have been made available to Curtins at the time of writing, drawings provided are enclosed in Appendix A.

1.2 Scope of Services

The Preliminary Risk Assessment (PRA) is intended to provide an overview of the geo-environmental setting of the site. The report will develop a working preliminary conceptual ground model for the site as well as present an initial assessment of geo-environmental risks that could be presented to the future development of the site.

Specifically, the PRA provides an initial assessment of the site with regard to:

a) Potential contamination of the site from historical and/or current use.
b) The potential impact on the wider environment from historical and/or current use.
c) The potential impact from surrounding land uses and other environmental factors.
d) Potential risks associated with geological features such as faulting, mineral extraction, mining and land instability.
e) The location of apparent sub-surface structures that may affect the proposed redevelopment.
f) The location of above-surface features that may affect the proposed redevelopment.

The PRA is a desk-based exercise written using information provided from a desk based environmental study and any information made available to Curtins from the Client. The PRA can be utilised to inform the requirement for, and extent of, any future intrusive investigation work. Consideration of detailed flood risk, ecology and archaeological issues are outside of the scope of this report.

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2.0 Current Site and Surrounding Area Details

2.1 Site Location and Current Details

Site use, location and description are shown below in *Table 2.1* and *Figure 2.1*.

Table 2.1 – *Site Details*

Site Address	Echo Street, Manchester, M1 7AB
NGR	384670, 397720
Area of Site	Approximately 0.48Ha.
Current Site Use and Description	The site is currently vacant following previous demolition and commencement of construction works. Piling has been completed and construction of pile caps and ring beams is complete in part. Gravel surfacing covers the site and some equipment and materials remain on site (barriers, cones, gravel etc). Access gates to the construction site are located on Echo Street.

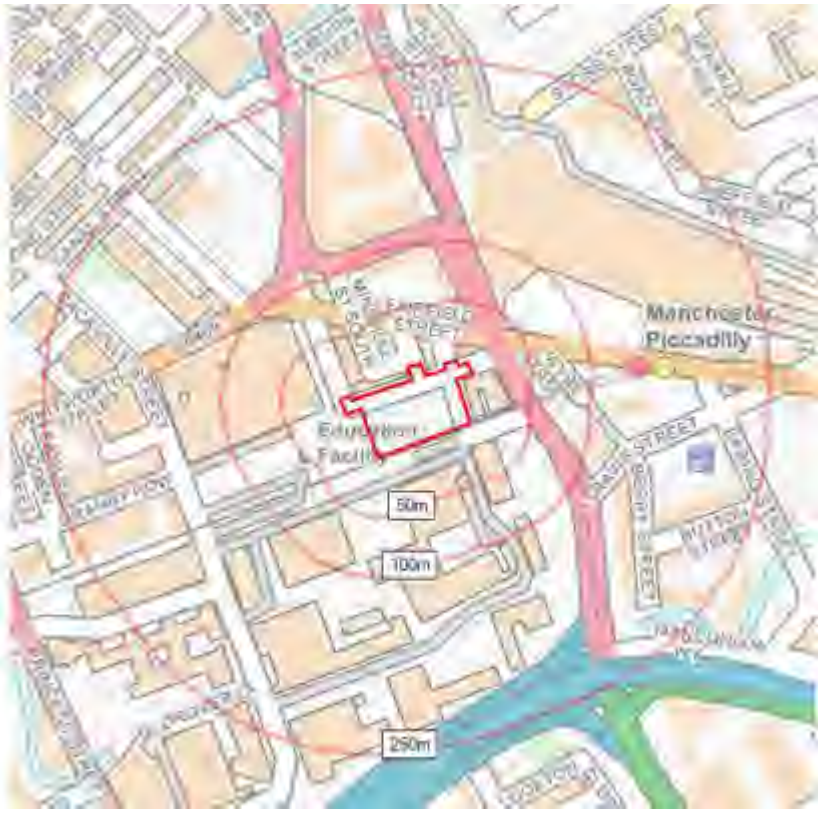


Figure 2.1 *– Site Location Plan (site boundary shown in red)*
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2.2 Surrounding Area Details

The following information was established through undertaking an environmental database search. The full Envirocheck report (Ref. 1) is included in *Appendix B*.

Table 2.2 – *Surrounding Land Uses*

Surrounding Area	**N**	Lambert House residential apartments, with Fairfield street beyond.
	E	Retail unit immediately to the east, with London Road beyond and Manchester Piccadilly Station to the North-East of the site.
	S	A railway line (viaduct) abuts the southern boundary of the site, with Altrincham street beyond, with University of Manchester campus buildings and communal garden beyond.
	W	Vimto park abuts the western boundary, and a mixed use residential and retail unit, Sackville Street Building, abuts the North-West site boundary.

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3.0 Site History

A review of the available historical mapping and other information for the site, as presented within the Envirocheck Report (Ref. 1), has been undertaken and is presented in *Table 3.0* below.

Table 3.0 – *Previous Site and Surrounding Area Uses and Potential Sources of Contamination.* ***Bold text refers to on-site activity.***

Date	Description	Potential Sources of Contamination
1848-1942	**During this period, the site is occupied by commercial developments notably; a window cleaner, print works, label punching works and battery repair works. Granby Street is recorded in the north and Echo Street in the East of the subject site. A sunk petrol tank is recorded in the centre of the site adjacent to Granby Street.** Several works and mills are recorded in the surrounding area (< 50m). The London Road railway station is recorded 100m north-east, with the main lines running in the south-east direction away from site, with a line 10m south, running west to east. Moreover, a Fire Engine Station is recorded 90m north. The River Medlock is recorded 30m south-west of the site, flowing westerly and the Rochdale Canal is recorded 250m north-west.	• Uncontrolled deposition of Made Ground from construction waste associated with on-site development. • Contamination associated with on-site industrial uses including battery repairs, printing works and window cleaner. • Potential fuel/oil spillages associated with sunk petrol tanks on site. • Potential coal tar contamination associated with road construction. • Potential ash deposition associated with coal fires. Potential contamination associated with works recorded in the surrounding area.
1960-1981	**During this period, the site undergoes significant demolition and a depot/ garage with a sunk petrol tank is constructed in the north-east corner. A hostel in the western portion of the site (later named Chandos Hall) and a tennis court in the centre by 1965. Additional development to the south-east by 1969 later marked as garages.** Manchester Nut & Bolt Works is demolished by 1965 (later developed 1969-1970 as college buildings). The River Medlock culverted and College of Science & Technology is constructed to the south-west.	• Potential fuel/oil spillages associated with depot/garage on site. • Uncontrolled deposition of Made Ground and contamination arising from demolition including ash, asbestos, fuels and oils.
1969	**No significant changes.** College buildings constructed 50m south and the construction of Mancunian Way 150m south-east.	No further sources noted.
1994- 2017	**The depot/ garage to the north-east is converted to a nursey.**	No further sources noted.
2017 - Present Day	**It is understood that during this period the site has undergone a myriad of construction works. Including the demolition of buildings on site as well as groundworks including piling.**	Uncontrolled deposition of Made Ground and contamination arising from demolition including ash, asbestos, fuels and oils.

Potential sources of onsite contamination are further discussed in *Section 6.0*.

4.0 Geology, Hydrogeology and Hydrology

4.1 Geology and Hydrogeology

A study of the Envirocheck (Ref. 1) Report and the British Geological Survey (BGS) 1:50,000 mapping records (Bedrock and Superficial Editions) for Manchester (Sheet 085) dated 2010 (Ref. 2) indicates the following geological and hydrogeological succession underlying the site:

Table 4.1 – *Geological/Hydrogeological Succession*

Geology	Associated Hydrogeological Classification
Made Ground deposits are recorded on geological mapping and are considered likely onsite due to the development and site history	N/A
Superficial deposits – **Till, Devensian**[1]	Secondary – Undifferentiated[3]
Bedrock deposits – **Chester Formation**[2]	Principal Aquifer[4]

Notes:

1. *These comprise a group of sediments laid down by the direct action of glacial ice, usually sandy, silty clay with pebbles, but can contain gravel-rich, or laminated sand layers; varied in colour and consistency.*
2. *Conglomerates and reddish brown, cross-bedded, pebbly sandstones with subordinate beds of red-brown mudstone. The conglomerates have a reddish brown sandy matrix and consist mainly of pebbles of brown or purple quartzite, with quartz conglomerate and vein quartz. The formation generally fines upwards, from dominantly conglomerates at the base, to interbedded conglomerates and sandstones, with sandstone and pebbly sandstone predominant in the upper part, and rare mudstones. The formation has subordinate lenticular beds of reddish brown mudstone or siltstone throughout; these are more common in Cumbria.*
3. Secondary undifferentiated are aquifers where it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the rock type. These have only a minor value.
4. Principal aquifers provide significant quantities of drinking water, and water for business needs. They may also support rivers, lakes and wetlands.

No BGS fault lines are recorded traversing the site, however the site is bound each side by 2 faults travelling in the south-east direction.

BGS online open-source borehole archives (Ref. 2) record a number of boreholes to the south and north of the site. These boreholes are likely associated with the installation of water wells and development by the University of Manchester. The nearest available borehole information is related to a cluster of borehole records approximately 150m to the north and south. Two of these boreholes are summarised in *Tables 4.1a and Table 4.1b*.

Table 4.1a - BGS borehole records approximately 150m south of site boundary

SD72NW519 –NGR 384684, 397602			
Main Unit	Description	Depth Range (m bgl)	Thickness (m)
Made Ground	Loose stone and soil fill	0.00 – 5.18	5.18
Sandstone	Gravel	5.18 – 6.55	1.37
Sandstone	Hard red sandstone	6.55m – 68.96	62.41

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Table 4.1b - BGS borehole records approximately 150m north of site boundary

SD72NW519 – NGR 384628, 397838			
Main Unit	Description	Depth Range (m bgl)	Thickness (m)
Made Ground	Loose stone and soil fill	0.00 – 3.35	3.35
Sandstone	Hard red sandstone	3.35 – 9.14	5.79

The site is not situated within a Groundwater Source Protection Zone (SPZ).

There are ten groundwater abstraction points located within 1000m of the site, the closest of which is 236m to the west used for industrial/commercial/public service: non-evaporative cooling.

4.1.1 Mining

The Coal Authority interactive mapping (Ref. 4) shows that the site is located within a coal mining reporting area. No coal outcrops and/or mine entries are located within 1 km of the site and it is not located within an area that has been influenced by past shallow coal mine workings.

As such, the risk to the development from coal mine workings is low and has not been considered further.

There are no recorded mineral sites within 1 km of the site.

4.1.2 Other Ground Stability Issues

The Envirocheck report (Ref. 1) confirms that there is Low to No Hazard from the following ground stability hazards on the site; collapsible and compressible ground, dissolution, landslide, running sand and shrinking or swelling clay.

4.1.3 Ground Gas

There are no registered landfills or active licensed wastes management facilities with within 500m of the site boundary. There is one historically infilled land (water) within 100m of the site which has been detailed in *Table 4.1.3 below*.

Table 4.1.3 – *Historically infilled land associated with water*

Map ID	Details	Date of Mapping	Distance from Site (m)
142	Potentially Infilled Land (water)	1956	22 SW

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The BGS Radon Mapping (Ref. 5) confirms the site is situated in a lower probability radon area where <1% of homes are at or above the radon action level. On this basis, radon protection measures are not considered necessary in the construction of new dwellings or extensions. If the new development incorporates a basement, the advice of a specialist Radon assessor must be obtained.

4.2 Hydrology

The nearest surface water is the Rochdale Canal located 175m north of the subject site; it was classed as General Quality Assessment (GQA) Grade B in 2000. The culverted River Medlock is recorded, approximately 200m south-east of the site, flowing east to west; classified as General Quality Assessment (GQA) Grade E in 2000.

There are eight discharge consents within 250m of the site. The closest to the site is 143m to the north-west comprising public sewage: storm sewage overflow into a freshwater stream/river to Dukes Tunnel.

No pollution incidents have been recorded within 250m of the site within the last 10 years.

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

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5.0 Unexploded Ordnance Risk Assessment

Military activities including those conducted as part of both the First and Second World Wars have resulted in a legacy of unexploded ordnance (UXO) being present within the shallow soils of the UK.

UXO result from various sources including both allied (military training) and German (bombing raids) with a guide figure of approximately 10% of all munitions failing to function as designed.

The likelihood of UXO being encountered on a development site is influenced by several factors including; the proximity to strategic targets, the nature of the development works being undertaken and evidence of local damage in the post-war periods amongst others. To determine the likelihood of UXO being present on a site, a step-wise risk assessment process is followed. This process is outlined within CIRIA C681 Unexploded Ordnance: A Guide for the Construction Industry (Ref. 6) with the following commentary considered to represent a Preliminary Risk Assessment intended to guide if and where there is a requirement for a Detailed Risk Assessment

5.1 Preliminary UXO Assessment

Risk mapping (Ref. 7) for UXO's has placed the site in a **Moderate**-risk area. Areas designated as moderate risk are those that show a high density of bombing hits (15-49 bombs per 1000 acres).

The area in and around Manchester generally escaped the worst of Britain's WWII bombing, particularly when compared with other major UK cities, such as Liverpool or London. The peripheries of Manchester were only bombed sporadically, with the major targets in the city consisting of the port, city centre and industry in Stretford.

Historical mapping shows a Wharf 110m and 200m north-west of the city centre site. A review of available Manchester Bomb Damage mapping (7) was also undertaken as indicated in *Figure 5.1.1* indicating bombing ruins (red shading), several fire bombs (red circles), high explosives (blue circles) ruins and damaged buildings (dashed shading) in the immediate surroundings of the site.

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Figure 5.1.1 *Map of bomb damage in Manchester from WWII. Site identified in red.*

Considering the above, the initial appraisal has identified an elevated risk of encountering potential UXO as part of future intrusive work. A Detailed UXO Risk Assessment was obtained from 1st Line Defence in 2017 to further establish the risk for Curtins ground investigation works presented in *Appendix B*.

The findings of the Detailed UXO Risk Assessment have been summarised below:

- Manchester bomb plot and damage mapping indicates the presence of bombing incidents in the surrounding area of the proposed site, but none within the site boundary. However, the mapping only covers raids in 1940 so does not record any bombs which fell from 1941 to 1944. Furthermore, no written bomb incident records are available for Manchester. It is understood from the local archive that they were destroyed during/post-war. It has therefore not been possible to ascertain with certainly whether or not the site was bombed.
- An area of clearance is noted in the north-eastern corner of the site. It is thought possible that this was as a result of a bomb strike/fire damage. If rubble and debris was present in this area, there is a risk that evidence of UXO. The rest of the site appears to have survived the war intact.
- The majority of the site does not appear to have sustained any significant bomb damage and which appear to have remained in regular use have been assessed as **Low Risk.** The small area of cleared structures within the northeast of the site is a cause for concern, as there is no evidence to suggest it was not a bomb strike that caused the clearance, therefore has been assessed as **Medium Risk**. While bomb strikes were recorded within these areas is not considered to be significant. The areas are shown in *Figure 5.1*.

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Figure 5.1: UXO Risk Map Zone. Green indicates low risk areas and orange indicate medium risk areas.

Based on the findings of the Detailed UXO Risk Assessment, 1st Line Defence provided the following risk mitigation measures for the site for Curtins Ground Investigation works:

- A UXO Risk Management Plan and Site Specific UXO Awareness Briefings must be provided to all personnel conducting intrusive works. All intrusive ground investigation within **Medium risk** northeast area of the site will require supervision by a UXO specialist with Intrusive Magnetometer Survey down to maximum bomb penetration depth.
- If unexploded ordnance is discovered during any works, stop immediately, prevent access to the area and inform the police.
- If the site boundary or location changes then the UXO risk should be reassessed.

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Any future works relating to the proposed development not covered by the scope of Curtins ground investigation will require procurement of a separate Detailed UXO Risk Assessment specific to the work being undertaken. Contractors undertaking their own excavations should undertake their own risk assessments with specialist input where required.

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6.0 Conceptual Site Model & Qualitative Risk Assessment

The Conceptual Site Model (CSM) and Qualitative Risk Assessment (QRA) are presented in the table within this section.

The CSM details the source-pathway-receptor linkages or potential pollutant linkages (PPL) that have been identified for the site. The QRA details the associated level of risk relating to these potential pollutant linkages.

The CSM and QRA concern risk to human health and water environment with additional, more specific risk assessment protocols contained within the main body of this reporting, as detailed in *Section 6.1* below.

The QRA follows the framework outlined within CIRIA C552 (Ref. 9) which is summarised within *Appendix B.*

The 'risk rating' within the QRA refers to the risk that the source, pathway, receptor linkage or PPL is complete. Unless specifically stated it does not necessarily refer to an immediate risk and is intended to be used as a tool to assess the necessity for further assessment/investigation.

6.1 Additional Risk Assessments

The following risk assessments, listed below, are not included within the main CSM and QRA but nonetheless can be of critical importance to the onward development of the site:

- The risk presented by Mining is discussed and assessed in *Section 4.1.1*.
- The risk presented by Radon is discussed and assessed in *Section 4.1.3*.
- The risk presented by Unexploded Ordnance is discussed and assessed in *Section 5.0*.

Under current health and safety legislation, employers are required to carry out their own appropriate risk assessments and mitigation to protect themselves and their employees, other human receptors and the environment from potential contamination. Such risks must be adequately mitigated by law, specifically the Construction Design Management (CDM) Regulations, 2015 (Ref. 10) which require that potential risks to human health and the environment from construction activities are appropriately identified and all necessary steps taken to eliminate / manage that risk. It has been assumed that any future construction works on site will be undertaken in compliance with these requirements.

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- The table below represents the first stage in the land quality risk assessment process: The Qualitative Risk Assessment.
- For a development site to be deemed 'suitable for use', the level of risk needs to be brought down to acceptable levels, i.e., low to very low risk. The purpose of each stage of risk assessment is ultimately to establish, if there is a requirement for additional levels of assessment to be made to have sufficient confidence to support a risk characterisation or management decision, e.g., remedial action.
- In the absence of specific site data, a Generic Quantitative Risk Assessment is invariably recommended.

Conceptual Site Model			Qualitative Risk Assessment			Recommended Actions
Source	**Pathway(s)**	**Receptor(s)**	**Consequence**	**Likelihood of Occurrence**	**Risk Rating**	
On-site sources of potential contamination: *Uncontrolled deposition of Made Ground associated with the construction/demolition onsite.* *Potential coal tar contamination associated with road construction immediately surrounding the site.* *Potential contamination associated with battery, cleaner and printing works, with the above sources include a range of metals, organic petrol and diesel range hydrocarbons, and Poly-cyclic aromatic hydrocarbons (PAHs), and asbestos.* *Potential contamination associated with fuel/oil spillages from depot/garage and sunk petrol tanks, with the above sources include a range of metals, organic petrol and diesel range hydrocarbons, and Poly-cyclic aromatic hydrocarbons (PAHs).* **Off-site sources of potential contamination:** *Uncontrolled deposition of Made Ground associated with historical construction/demolition off-site*	**Direct contact, ingestion, inhalation (dust and vapours)**	**End users of site** (Residential)	**Medium** Chronic health risk	**Low** Potential for contamination within the Made Ground across the site associated with historical construction/demolition on site. Vapour intrusion risk associated with fuel/oil spillages associated with historical depot/garage and the sunk petrol tank.	**Moderate / Low**	**Generic Quantitative Risk Assessment** Recommended as part of the ground investigation.
	Vertical migration through the superficial deposits (soils)	**Controlled Waters** (groundwater) Principal Aquifer (bedrock) Secondary Undifferentiated Aquifer (superficial deposits) Not within a designated Source Protection Zone.	**Medium** Pollution of sensitive water resources	**Low** Low permeability Superficial Secondary Undifferentiated Aquifer and a lack of water abstractions and SPZs limits the pathways-receptor linkage	**Moderate / Low**	**Generic Quantitative Risk Assessment** Recommended as part of the ground investigation.
	Horizontal migration over and through the superficial deposits (soils)	**Controlled Waters (surface water)** Nearest surface water feature is the Rochdale Canal 175m north. The River Medlock is recorded 200m southwest of the site.	**Medium** Pollution of sensitive water resources	**Unlikely** Considering the distance from the site to the nearest surface water receptor, this pathway is considered unlikely.	**Low**	No further action required.
On-site sources of potential ground gas: *Potential ground gas generation from Made Ground deposits containing organic/ putrescible content.*	**Vertical and horizontal migration through existing service corridors and Made Ground**	**End users of site** (Residential)	**Medium** Chronic health risk	**Likely** High potential for made ground deposits to be present beneath development. Potential for ground generated gases to migrate through superficial deposits.	**Moderate**	**Generic Quantitative Risk Assessment** Recommended as part of the ground investigation.

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7.0 Conclusion and Recommendations

The Qualitative Risk Assessment (QRA) determined an overall Low to Moderate level of risk to future site users and risk to controlled waters associated with the proposed development. The QRA concluded that further requirements comprising a Generic Quantitative Risk Assessment (GQRA) are required to determine the potential contamination risk on-site and to confirm ground conditions.

It is recommended that the GQRA are conducted as part of a ground investigation in support of the engineering design of the proposed development an outline scope for which is detailed in the section hereafter. In summary, the following recommendations are made:

- Undertake an intrusive ground investigation;
- Undertake a GQRA as part of the ground investigation
- Undertake ground gas monitoring; and
- Provide UXO risk mitigation for ground investigation works within the Medium Risk area.

It is further recommended that the site investigation works are completed in advance of any development works taking place.

7.1 Contaminants of Concern

Potential contaminants of concern associated with the sources identified within the Conceptual Site Model in *Section 6.0* of this reporting include but are not limited to: broad range aliphatic and aromatic hydrocarbons present within any fuel oils; polycyclic aromatic hydrocarbons (PAHs); inorganic compounds including heavy metals; and asbestos present in discarded building materials.

7.2 Other Considerations

There may be subsurface obstructions, voids and relic foundations associated with the former developments on site.

The requirement for additional surveys, e.g. arboricultural and ecological surveys, should be confirmed through advice from a suitably qualified and experienced professional.

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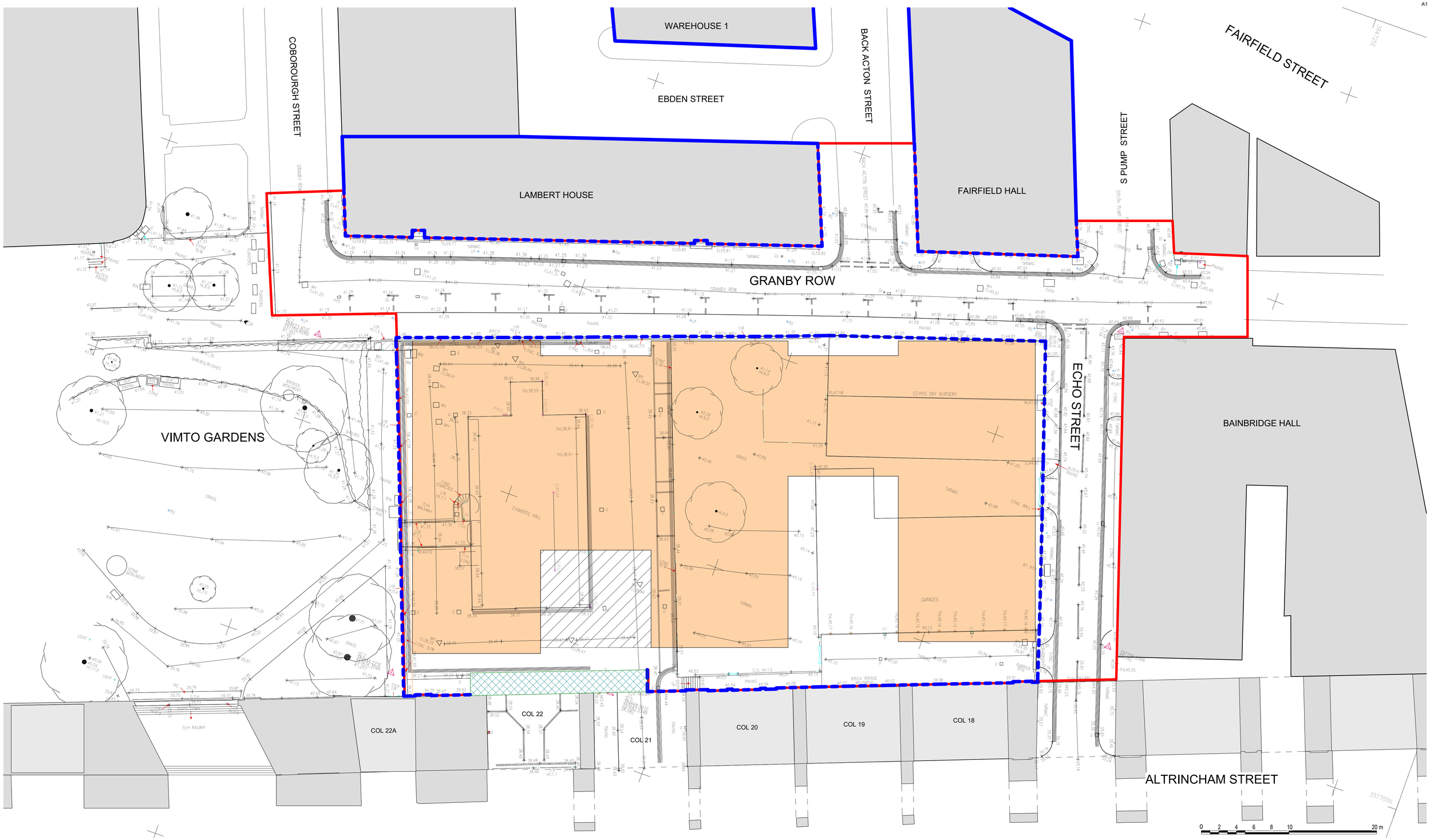
8.0 References

1. Landmark (2023) Envirocheck Report (report no. 306235410_1_1).
2. British Geological Survey (BGS) Solid and Drift Editions (2010) 1:50,000 mapping, Sheet No. 085 (Manchester)
3. BGS Geology of Britain Viewer [online], http://mapapps.bgs.ac.uk/geologyofbritain/home.html (accessed January 2023).
4. Coal Authority Interactive Map Viewer [online], http://mapapps2.bgs.ac.uk/coalauthority/home.html (accessed January 2023).
5. UK Maps of Radon [online], http://www.ukradon.org/information/ukmaps (accessed January 2023).
6. CIRIA (2009) Unexploded Ordnance: A Guide for the Construction Industry (report no. C681).
7. Zetica Regional Unexploded Bomb Risk map [online], https://zeticauxo.com/downloads-and-resources/risk-maps/ (accessed January 2023).
8. The University of Manchester Library, Online Map Collections: World War 2 aerial bomb maps (Manchester Blitz Maps) https://luna.manchester.ac.uk/luna/servlet/detail/maps002~1~1~342713~123265?sort=reference_number%2Ctitle&qvq=q:bomb%20damage;sort:reference_number%2Ctitle;lc:maps002~1~1&mi=22&trs=49 (accessed January 2023).
9. CIRIA (2001) Contaminated Land Risk Assessment. A guide to good practice (report no. C552).
10. Health and Safety Executive (2015) Construction (Design and Management) Regulations.

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Appendix A Drawings

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AREA MEASUREMENT
The areas are approximate and can only be verified by a detailed dimensional survey of the completed building. Any decisions to be made on the basis of these predictions, whether as to project viability, pre-letting, lease agreements or otherwise, should include due allowance for the increases and decreases inherent in the design development and building processes. Existing buildings may present anomalies in relation to surveyed/drawn plans that may also effect the stated areas. All areas are subject to Town Planning and Conservation Area Consent and detailed Rights to Light analysis.
Figures relate to the likely areas of the building at the current stage of the design and are calculated using one of the following (as stated in the accompanying areas schedule) IPMS1, IPMS2, IPMS 3, Gross External Area (GEA), Gross Internal Area (GIA) or Nett Internal Area (NIA) methods of measurement from the RICS Property Measurement 1st edition.

PLAN KEY

Site Boundaries

- Applicant Ownership
- Planning Application Boundary
- Network Rail Ownership
- Proposed Building Footprint
- Ground Floor Courtyard - Slab between ground floor and lower ground floor

REV.	DATE	AMENDMENT	KEYPLAN
P01	24/01/23	First Issue - For Information	

CLIENT

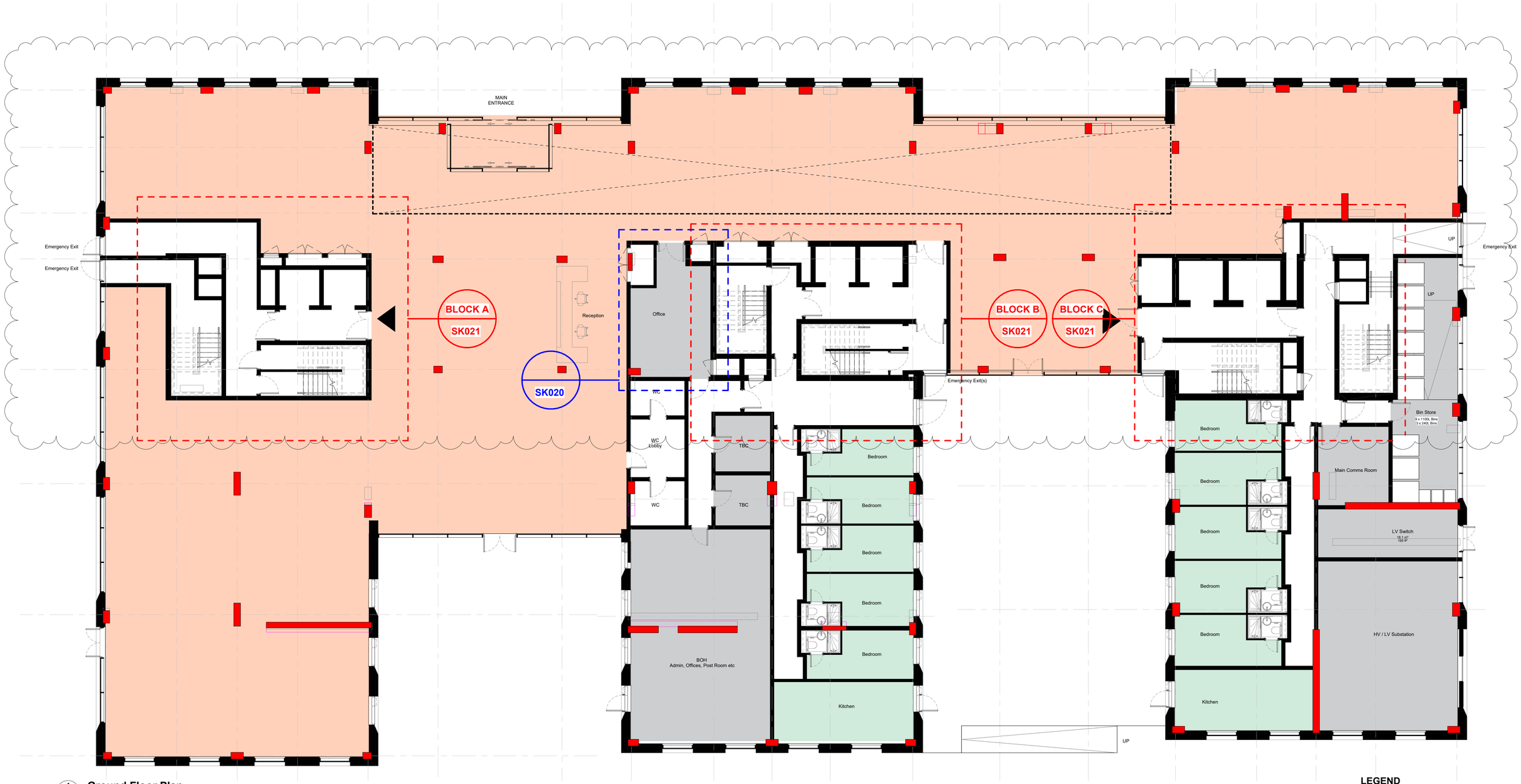
IQ Student Accommodation

SHEPPARD ROBSON
27th Floor City Tower Piccadilly Plaza Manchester M1 4BT
T: +44 (0)161 233 8900 E: manchester@sheppardrobson.com

SCALE@A1	DATE	ORIGINATOR	CHECKED	AUTHORISED
1 : 200	24/01/2023	LG	VC	RG

PROJECT
Echo Street
Existing Site Plan with Proposed Building Footprint

STATUS	PURPOSE FOR ISSUE	SR NO.	DRAWING NO.	REV.
S2	For Information	7054	ECHO-SRA-ZZ-XX-DR-A-00803	P01



1 02100 **Ground Floor Plan**
1 : 100

LEGEND

- GROUND FLOOR AMENITY = 1054m²
  LEVEL 09, 10 & 12 AMENITY = 46m²
  TOAL AMENITY = 1100m²
- BOH, MEP SERVICES
- CLUSTER BEDROOMS x 5 (+ KITCHEN / LIVING)
- PREFERRED STRUCTURAL LOCATION
  INDICATIVE ONLY

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NOTES:

Refer to SK020 for alternative layouts to multifunctional space adjacent to Block B core (ie accessible bedroom, comms, laundry, amenity, studio etc)

Refer to SK021 for Block A, B and C core layouts at Ground Floor Level

Refer to SK027 for Block A, B and C core layouts at Typical Floor Levels

Refer to SK025 for Block A, B and C core layouts at Roof Level

Layouts subject to change following comments by design team - fire, structural and MEP engineers

REV.	DATE	AMENDMENT
P01	18/01/23	First Issue - Issued for Information
P02	23/01/23	Cores updated following comments from fire engineer (as clouded)

KEYPLAN

CLIENT
IQ Student Accommodation

SHEPPARD ROBSON
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SCALE@A1	DATE	ORIGINATOR	CHECKED	AUTHORISED
1 : 100	**23/01/23**	**LK**	**VC**	**RG**

PROJECT
Echo Street
General Arrangement
Ground Floor Plan

SR NO.
7054

STATUS **S2**
PURPOSE FOR ISSUE **For Information**

DRAWING NO. **ECHO- SRA- ZZ- 00- DR - A - 02100**
REV. **P02**

Appendix B Supporting Information

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Envirocheck® Report:

Datasheet

Order Details:

Order Number:
306235410_1_1

Customer Reference:
065374

National Grid Reference:
384670, 397720

Slice:
A

Site Area (Ha):
0.48

Search Buffer (m):
1000

Site Details:

Flat at Old Garratt, 79
Granby Row
MANCHESTER
M1 7AB

Client Details:

Mr R Taylor
Curtins Consulting Ltd
Merchant Exchange
17-19 Whitworth Street West
Manchester
M1 5WG

Contents

Report Section	Page Number
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Agency & Hydrological	1
Waste	57
Hazardous Substances	-
Geological	63
Industrial Land Use	69
Sensitive Land Use	153
Data Currency	154
Data Suppliers	161
Useful Contacts	162

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.
In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes		Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1		8	38	41
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 23				1
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 23			2	12
Local Authority Pollution Prevention and Control Enforcements	pg 25			1	
Nearest Surface Water Feature	pg 25		Yes		
Pollution Incidents to Controlled Waters	pg 25		5	11	9
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances	pg 29		8		17
River Quality	pg 33		1	3	2
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points	pg 34				1
Substantiated Pollution Incident Register	pg 35				1
Water Abstractions	pg 35		2		8 (*49)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 49	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 49	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 49	Yes	n/a	n/a	n/a
Source Protection Zones	pg 50				1
Extreme Flooding from Rivers or Sea without Defences	pg 50		Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 50		Yes	n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 50		5	19	29

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 57				1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 57				6
Local Authority Landfill Coverage	pg 58	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)					
Potentially Infilled Land (Water)	pg 58		4	6	29
Registered Landfill Sites	pg 61				1
Registered Waste Transfer Sites	pg 61				1
Registered Waste Treatment or Disposal Sites	pg 62				2
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

curtins

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 63	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 63	Yes	Yes		Yes
BGS Recorded Mineral Sites					
BGS Urban Soil Chemistry	pg 65		Yes	Yes	Yes
BGS Urban Soil Chemistry Averages	pg 67	Yes			
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 67	Yes	n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities	pg 68				1
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 68	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 68	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 68	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 68	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 68	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 69		22	102	539
Fuel Station Entries	pg 126				4
Points of Interest - Commercial Services	pg 126		2	14	95
Points of Interest - Education and Health	pg 135			1	1
Points of Interest - Manufacturing and Production	pg 136			46	99
Points of Interest - Public Infrastructure	pg 148		7	5	31
Points of Interest - Recreational and Environmental	pg 151		1		8
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 153				1
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (SE)	0	1	384672 397718
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	277	1	385000 397718
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (E)	297	1	385000 397600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (E)	441	1	385150 397600
1	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Chorlton Street Cso 281j2 Chorlton Street, ., Manchester, Greater Manchester, M1 3hw Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0162 Permit Version: 2 Effective Date: 3rd September 2010 Issued Date: 3rd September 2010 Revocation Date: 4th February 2016 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Dukes Tunnel **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	143	2	384510 397820
1	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Chorlton Street Cso 281j2 Chorlton Street, ., Manchester, Greater Manchester, M1 3hw Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0162 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 2nd September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Into And/Or Watercourse Receiving Water: Dukes Tunnel **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A13NW (NW)	143	2	384510 397820
1	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Chorlton Street Cso 281j2 Chorlton Street, ., Manchester, Greater Manchester, M1 3hw Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0162 Permit Version: 4 Effective Date: 11th April 2018 Issued Date: 11th April 2018 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Shooters Brook Trib Rvr Medloc **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	151	2	384502 397823

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Chorlton Street Cso 281j2 Chorlton Street, ., Manchester, Greater Manchester, M1 3hw Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0162 Permit Version: 3 Effective Date: 5th February 2016 Issued Date: 5th February 2016 Revocation Date: 10th April 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Dukes Tunnel **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	151	2	384502 397823
2	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Minshull St/Whitworth St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0355 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 18th July 2014 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 100m	A13NW (NW)	151	2	384580 397870
2	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Aytoun St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982630 Permit Version: 1 Effective Date: 30th September 1994 Issued Date: Not Supplied Revocation Date: 30th October 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Shooters Brook **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 100m	A13NW (NW)	155	2	384580 397875
2	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Aytoun St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0318 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 1st January 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Shooters Brook **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A13NW (NW)	159	2	384580 397880

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mount St/Rutland St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0287 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A13SW (S)	243	2	384580 397440
3	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mount Street/Greek Street Cso Mancunian Way, (Opp To George Begg Building), Manchester, Greater Manchester, M1 7dn Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0187 Permit Version: 4 Effective Date: 10th July 2020 Issued Date: 10th July 2020 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A13SW (S)	289	2	384552 397401
4	**Discharge Consents** Operator: United Utilities Water Plc Property Type: Sewage Disposal Works - Water Company Location: Baring St(Late Stove St), Tipping Street, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0308 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 1st December 1994 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	259	2	384930 397550
4	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Baring St(Late Stove St), Tipping Street, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982729 Permit Version: 1 Effective Date: 28th November 1994 Issued Date: Not Supplied Revocation Date: 29th November 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Manually corrected supplier location	A13SE (SE)	259	2	384930 397550

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mancunian Way Cso Manc Way Slip Road, ., ., Manchester, M12 6hh Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982729 Permit Version: 2 Effective Date: 30th November 1999 Issued Date: Not Supplied Revocation Date: 28th March 2021 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	292	2	384940 397510
4	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mancunian Way Cso Manc Way Slip Road, ., ., Manchester, M12 6hh Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982729 Permit Version: 3 Effective Date: 29th March 2021 Issued Date: 29th March 2021 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock Via Sws **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A13SE (SE)	295	2	384944 397510
5	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Aytoun St/Auburn St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0370 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 27th March 2015 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 100m	A13NW (N)	267	2	384580 398000
6	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Store Street, Ancoats, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0371 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 5th December 2014 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	293	2	384860 398010

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**Discharge Consents** Operator: Factory Communications Ltd Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 112-116 Princess Street, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016991403 Permit Version: 1 Effective Date: 24th April 1989 Issued Date: Not Supplied Revocation Date: 31st March 1992 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	301	2	384400 397500
7	**Discharge Consents** Operator: Factory Communications Ltd Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 112-116 Princess Street, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016991403 Permit Version: 2 Effective Date: 1st April 1992 Issued Date: Not Supplied Revocation Date: 10th February 1993 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	301	2	384400 397500
8	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mount Street/Greek Street Cso Mancunian Way, (Opp To George Begg Building), Manchester, Greater Manchester, M1 7dn Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0187 Permit Version: 2 Effective Date: 3rd September 2010 Issued Date: 3rd September 2010 Revocation Date: 4th February 2016 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	307	2	384530 397390
8	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mount Street/Greek Street Cso Mancunian Way, (Opp To George Begg Building), Manchester, Greater Manchester, M1 7dn Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0187 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 2nd September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	307	2	384530 397390

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	**Discharge Consents** Operator: West Contracting Limited Property Type: Undefined Or Other Location: Gshp Serving Origin Development 56 Princess Street, Manchester, ., ., M1 6ja Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: Npswqd004449 Permit Version: 3 Effective Date: 1st April 2013 Issued Date: 28th October 2011 Revocation Date: 3rd October 2014 Discharge Type: Trade Discharges - Cooling Water Discharge Environment: Underground Water Receiving Water: Groundwater **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A12NE (W)	308	2	384306 397746
9	**Discharge Consents** Operator: West Contracting Limited Property Type: Undefined Or Other Location: Gshp Serving Origin Development 56 Princess Street, Manchester, ., ., M1 6ja Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: Npswqd004449 Permit Version: 2 Effective Date: 16th April 2009 Issued Date: 16th April 2009 Revocation Date: 31st March 2013 Discharge Type: Trade Discharges - Cooling Water Discharge Environment: Underground Water Receiving Water: Groundwater **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A12NE (W)	308	2	384306 397746
9	**Discharge Consents** Operator: West Contracting Limited Property Type: Undefined Or Other Location: Gshp Serving Origin Development 56 Princess Street, Manchester, ., ., M1 6ja Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: Npswqd004449 Permit Version: 1 Effective Date: 1st April 2009 Issued Date: 5th March 2009 Revocation Date: 15th April 2009 Discharge Type: Trade Discharges - Cooling Water Discharge Environment: Underground Water Receiving Water: Groundwater **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A12NE (W)	308	2	384306 397746
9	**Discharge Consents** Operator: West Contracting Limited Property Type: Undefined Or Other Location: Gshp Serving Origin Development 56 Princess Street, Manchester, ., ., M1 6ja Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: Npswqd004449 Permit Version: 3 Effective Date: 1st April 2013 Issued Date: 28th October 2011 Revocation Date: 3rd October 2014 Discharge Type: Trade Discharges - Cooling Water Discharge Environment: Underground Water Receiving Water: Groundwater **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A12NE (W)	323	2	384291 397734

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	**Discharge Consents** Operator: West Contracting Limited Property Type: Undefined Or Other Location: Gshp Serving Origin Development 56 Princess Street, Manchester, ., ., M1 6ja Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: Npswqd004449 Permit Version: 2 Effective Date: 16th April 2009 Issued Date: 16th April 2009 Revocation Date: 31st March 2013 Discharge Type: Trade Discharges - Cooling Water Discharge Environment: Underground Water Receiving Water: Groundwater **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A12NE (W)	323	2	384291 397734
9	**Discharge Consents** Operator: West Contracting Limited Property Type: Undefined Or Other Location: Gshp Serving Origin Development 56 Princess Street, Manchester, ., ., M1 6ja Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: Npswqd004449 Permit Version: 1 Effective Date: 1st April 2009 Issued Date: 5th March 2009 Revocation Date: 15th April 2009 Discharge Type: Trade Discharges - Cooling Water Discharge Environment: Underground Water Receiving Water: Groundwater **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A12NE (W)	323	2	384291 397734
10	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Brook St/Mount St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982723 Permit Version: 1 Effective Date: 28th November 1994 Issued Date: Not Supplied Revocation Date: 14th July 2000 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Manually corrected supplier location	A13SW (SW)	313	2	384450 397430
11	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mount Street/Greek Street Cso Mancunian Way, (Opp To George Begg Building), Manchester, Greater Manchester, M1 7dn Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0187 Permit Version: 3 Effective Date: 5th February 2016 Issued Date: 5th February 2016 Revocation Date: 9th July 2020 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	330	2	384541 397361

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Princess St/Granby Row Cs, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Upper Mersey Reference: 016982956 Permit Version: 1 Effective Date: 23rd June 1995 Issued Date: Not Supplied Revocation Date: 31st March 1998 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Consent revoked: Discharge ceased (Water Resources Act 1991, Schedule 10 & 6)** Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	345	2	384330 397520
12	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Princess St/Whitworth St Cso 282mn 67 Whitworth St, Manchester, ., Greater Manchester, M1 6lq Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982950 Permit Version: 1 Effective Date: 23rd June 1995 Issued Date: Not Supplied Revocation Date: 19th October 2020 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	345	2	384330 397520
12	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Princess St/Whitworth St Cso 282mn 67 Whitworth St, Manchester, ., Greater Manchester, M1 6lq Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982950 Permit Version: 2 Effective Date: 20th October 2020 Issued Date: 20th October 2020 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock Via Sws **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	349	2	384328 397516
12	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Charles St Princess St Cso 28116 106 Princess Street, ., ., Manchester, M1 6ng Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0166 Permit Version: 3 Effective Date: 1st April 2018 Issued Date: 21st March 2018 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	349	2	384330 397513

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Charles St Princess St Cso 28116 106 Princess Street, ., ., Manchester, M1 6ng Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0166 Permit Version: 2 Effective Date: 3rd September 2010 Issued Date: 3rd September 2010 Revocation Date: 31st March 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	351	2	384330 397510
12	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Charles St Princess St Cso 28116 106 Princess Street, ., ., Manchester, M1 6ng Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0166 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 2nd September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	351	2	384330 397510
12	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Whitworth St/Sackville St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0253 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 1st January 2017 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	351	2	384330 397510
12	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Charles Street Cso 7 Charles Street, ., ., Manchester, M1 7en Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0183 Permit Version: 3 Effective Date: 1st April 2018 Issued Date: 19th March 2018 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	365	2	384320 397500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Charles Street Cso 7 Charles Street, ., ., Manchester, M1 7en Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0183 Permit Version: 2 Effective Date: 3rd September 2010 Issued Date: 3rd September 2010 Revocation Date: 31st March 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	365	2	384320 397500
12	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Charles Street Cso 7 Charles Street, ., ., Manchester, M1 7en Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0183 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 2nd September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	365	2	384320 397500
12	**Discharge Consents** Operator: Factory Communications Ltd Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 112-116 Princess Street, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016991403 Permit Version: 1 Effective Date: 24th April 1989 Issued Date: Not Supplied Revocation Date: 31st March 1992 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	381	2	384300 397500
12	**Discharge Consents** Operator: Factory Communications Ltd Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 112-116 Princess Street, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016991403 Permit Version: 2 Effective Date: 1st April 1992 Issued Date: Not Supplied Revocation Date: 10th February 1993 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	381	2	384300 397500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	**Discharge Consents** Operator: Factory Communications Ltd Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 112-116 Princess Street, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016991403 Permit Version: 3 Effective Date: 11th February 1993 Issued Date: Not Supplied Revocation Date: 1st November 1994 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	381	2	384300 397500
13	**Discharge Consents** Operator: British Broadcasting Corporation Property Type: LAND TRANSPORT + VIA PIPELINES/FREIGHT Location: Bbc Vehicle Maintenance Base Swo, Pritchard Street, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016991346 Permit Version: 1 Effective Date: 22nd September 1994 Issued Date: Not Supplied Revocation Date: 22nd September 1994 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	368	2	384400 397400
14	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Store Street, Ancoats, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982994 Permit Version: 1 Effective Date: 23rd June 1995 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	440	2	384990 398100
15	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: York St/Charles St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0281 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 9th August 2019 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	486	2	384180 397500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mallard Street/Charles Street Cso Mallard Street, Manchester, ., Greater Manchester, M1 6ey Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982736 Permit Version: 1 Effective Date: 30th September 1994 Issued Date: Not Supplied Revocation Date: 9th July 2020 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	495	2	384170 397500
15	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Medlock St(Off Charles St), Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0343 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 1st January 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	495	2	384170 397500
15	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mallard Street/Charles Street Cso Mallard Street, Manchester, ., Greater Manchester, M1 6ey Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982736 Permit Version: 2 Effective Date: 10th July 2020 Issued Date: 10th July 2020 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	496	2	384169 397499
15	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Oxford Road/Grosvenor Street Cso 137 Oxford Road, Manchester, ., Greater Manchester, M1 7dz Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0189 Permit Version: 4 Effective Date: 29th March 2021 Issued Date: 29th March 2021 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock Via Sws **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	524	2	384159 397457

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Oxford Road/Grosvenor Street Cso 137 Oxford Road, Manchester, ., Greater Manchester, M1 7dz Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0189 Permit Version: 3 Effective Date: 5th February 2016 Issued Date: 5th February 2016 Revocation Date: 28th March 2021 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	531	2	384150 397460
15	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Oxford Road/Grosvenor Street Cso 137 Oxford Road, Manchester, ., Greater Manchester, M1 7dz Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0189 Permit Version: 2 Effective Date: 3rd September 2010 Issued Date: 3rd September 2010 Revocation Date: 4th February 2016 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	531	2	384150 397460
15	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Oxford/New Wakefild St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0165 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 31st March 1998 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	531	2	384150 397460
15	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Oxford Road/Grosvenor Street Cso 137 Oxford Road, Manchester, ., Greater Manchester, M1 7dz Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0189 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 2nd September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	531	2	384150 397460

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Oxford Rd, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0342 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 19th December 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Unknown Receiving Water: Not Supplied **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	541	2	384150 397440
16	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Oxford Rd, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982631 Permit Version: 1 Effective Date: 30th September 1994 Issued Date: Not Supplied Revocation Date: 19th December 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status:** **Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Manually corrected supplier location	A12SE (SW)	541	2	384150 397440
17	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Great Ancoats Street, Sso, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0023 Permit Version: 1 Effective Date: 15th September 1993 Issued Date: Not Supplied Revocation Date: 15th September 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Shooters Brook **Status:** **Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	635	2	385170 398200
18	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Chester Street Cso Junction Of Chester Street/, Lower Osmond Street, ., Manchester, M1 5qf Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016983278 Permit Version: 1 Effective Date: 1st December 1999 Issued Date: 19th February 1999 Revocation Date: 8th July 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The River Medlock **Status:** **New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	648	2	384080 397350

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Chester Street Cso Junction Of Chester Street/, Lower Osmond Street, ., Manchester, M1 5qf Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016983278 Permit Version: 2 Effective Date: 9th July 2018 Issued Date: 9th July 2018 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	649	2	384071 397362
18	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Lower Ormomd St/Hulme St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0282 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 9th August 2019 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	651	2	384070 397360
19	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Fairfield St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Upper Mersey Reference: 016982713 Permit Version: 1 Effective Date: 30th September 1994 Issued Date: Not Supplied Revocation Date: 23rd December 1996 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Manually corrected supplier location	A14SE (E)	669	2	385390 397670
19	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Raven Street, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0198 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 31st March 1998 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A14SE (E)	679	2	385400 397670

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Fairfield St/Crane St, Ardwick, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982727 Permit Version: 1 Effective Date: 28th November 1994 Issued Date: Not Supplied Revocation Date: 31st March 1998 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Consent revoked: Discharge ceased (Water Resources Act 1991, Schedule 10 & 6)** Positional Accuracy: Located by supplier to within 10m	A14SE (E)	691	2	385410 397640
19	**Discharge Consents** Operator: United Utilities Water Plc Property Type: Sewage Disposal Works - Water Company Location: Fairfield St/Crane St, Ardwick, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0300 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A14SE (E)	691	2	385410 397640
19	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Mancunian Way, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0192 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 18th July 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A14SE (E)	703	2	385420 397620
19	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Fairfield Street Cso Fairfield Street, ., Mancunian Way, Manchester, M12 6ej Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982730 Permit Version: 2 Effective Date: 1st April 2018 Issued Date: 19th March 2018 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A14SE (E)	712	2	385430 397630

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Fairfield Street Cso Fairfield Street, ., Mancunian Way, Manchester, M12 6ej Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0309 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 1st January 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A14SE (E)	712	2	385430 397630
19	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Fairfield Street Cso Fairfield Street, ., Mancunian Way, Manchester, M12 6ej Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982730 Permit Version: 1 Effective Date: 30th September 1994 Issued Date: Not Supplied Revocation Date: 31st March 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A14SE (E)	713	2	385430 397625
20	**Discharge Consents** Operator: Swinton Insurance Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Car Pk, Malborough St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016991176 Permit Version: 1 Effective Date: 8th September 1987 Issued Date: Not Supplied Revocation Date: 1st July 1991 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Lapsed (under Environment Act 1995, Schedule 23)** Positional Accuracy: Manually corrected supplier location	A12SE (SW)	692	2	384000 397400
21	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Great Ancoats Street, Sso, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0024 Permit Version: 1 Effective Date: 15th September 1993 Issued Date: Not Supplied Revocation Date: 15th September 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Shooters Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	723	2	385180 398310

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	**Discharge Consents** Operator: Manchester Metropolitan University Property Type: EDUCATION/NURSERY/SCHOOL/COLLEGE/UNI/TRAINING VENUE Location: Gshp At Manchester Metropolitan Uni Manchester Metropolitan Uni, Lower Chatham Street, ., Manchester, M15 6bh Authority: Environment Agency, North West Region Catchment Area: Medlock Reference: Eprdp3526gn Permit Version: 1 Effective Date: 1st April 2011 Issued Date: 23rd August 2010 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Cooling Water Discharge Environment: Land/Soakaway Receiving Water: Groundwaters **Status: New issued under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	784	2	384096 397114
22	**Discharge Consents** Operator: Manchester Metropolitan University Property Type: EDUCATION/NURSERY/SCHOOL/COLLEGE/UNI/TRAINING VENUE Location: Gshp At Manchester Metropolitan Uni Manchester Metropolitan Uni, Lower Chatham Street, ., Manchester, M15 6bh Authority: Environment Agency, North West Region Catchment Area: Medlock Reference: Eprdp3526gn Permit Version: 1 Effective Date: 1st April 2011 Issued Date: 23rd August 2010 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Cooling Water Discharge Environment: Land/Soakaway Receiving Water: Groundwaters **Status: New issued under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	824	2	384083 397072
23	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Cambridge Street Cso 282d9 1 Cambridge Street, ., Manchester, Greater Manchester, M1 5bw Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982721 Permit Version: 2 Effective Date: 15th November 1999 Issued Date: Not Supplied Revocation Date: 10th April 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A12SW (W)	825	2	383850 397410
23	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Cambridge Street Cso 282d9 1 Cambridge Street, ., Manchester, Greater Manchester, M1 5bw Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982721 Permit Version: 3 Effective Date: 11th April 2018 Issued Date: 11th April 2018 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A12SW (W)	847	2	383830 397400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Wilmott St At River St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0184 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 18th October 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A12SW (W)	847	2	383830 397400
23	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Lower Cambridge St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982721 Permit Version: 1 Effective Date: 30th September 1994 Issued Date: Not Supplied Revocation Date: 14th November 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Manually corrected supplier location	A12SW (W)	847	2	383830 397400
23	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Lower Cambridge St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0285 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 15th November 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A12SW (W)	849	2	383830 397395
24	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Great Bridgewater St Cso (281wi) 80 Great Bridgewater Street, Great Ancoats, Manchester, Greater Manchester, M1 5jg Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0163 Permit Version: 1 Effective Date: 15th September 1993 Issued Date: Not Supplied Revocation Date: 15th September 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Tib Culvert **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A12SW (W)	831	2	383790 397610

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Great Bridgewater St Cso (281wi) 80 Great Bridgewater Street, Great Ancoats, Manchester, Greater Manchester, M1 5jg Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982707 Permit Version: 2 Effective Date: 20th October 2020 Issued Date: 20th October 2020 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A12SW (W)	837	2	383819 397459
25	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Great Bridgewater St Cso (281wi) 80 Great Bridgewater Street, Great Ancoats, Manchester, Greater Manchester, M1 5jg Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0252 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 1st January 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A12SW (W)	845	2	383810 397460
25	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Great Bridgewater St Cso (281wi) 80 Great Bridgewater Street, Great Ancoats, Manchester, Greater Manchester, M1 5jg Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982707 Permit Version: 1 Effective Date: 30th September 1994 Issued Date: Not Supplied Revocation Date: 19th October 2020 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A12SW (W)	847	2	383810 397455
26	**Discharge Consents** Operator: Edwin Butterworth & Co Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Soho Works Site Swo, Pollard Street, Ancoats, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016991041 Permit Version: 1 Effective Date: 30th September 1985 Issued Date: Not Supplied Revocation Date: 1st July 1991 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Canal Receiving Water: Manchester & Ashton Canal **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	873	2	385400 398300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Blackett Street, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0194 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 18th July 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A14NE (E)	887	2	385610 397740
27	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Great Ancoats St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0257 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 13th June 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A14NE (E)	897	2	385620 397760
27	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Pin Mill Brow, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0193 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 17th August 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A14NE (E)	897	2	385620 397740
27	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Great Ancoats St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982711 Permit Version: 1 Effective Date: 30th September 1994 Issued Date: Not Supplied Revocation Date: 13th June 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Manually corrected supplier location	A14NE (E)	897	2	385620 397760

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
28	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Trumpet Street, Sso, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0168 Permit Version: 1 Effective Date: 15th September 1993 Issued Date: Not Supplied Revocation Date: 15th September 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Tib Culvert-Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A12SW (W)	910	2	383720 397550
29	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Albion Street/Hewitt St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0251 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 1st January 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A12SW (W)	948	2	383700 397470
29	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Albion Street/Hewitt St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982706 Permit Version: 1 Effective Date: 30th September 1994 Issued Date: Not Supplied Revocation Date: 13th November 2019 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 100m	A12SW (W)	949	2	383700 397465
30	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Newcastle St/Chester St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0361 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	952	2	383780 397260

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	**Integrated Pollution Prevention And Control** Name: Manchester Heat Network Tradeco Limited Location: Manchester Civic Quarter Energy Centre Epr/Jp3700bu, Manchester Civic Quarter Energy Centre, Off Lower Mosley Street, Manchester Authority: Environment Agency, North West Region Permit Reference: JP3700BU Original Permit Ref: Jp3700bu Effective Date: 20th August 2020 **Status:** **Effective** Application Type: Application App. Sub Type: New Positional Accuracy: Located by supplier to within 10m Activity Code: 25B (3) (1) (b) Activity Description: Tranche A SG permitting date 1st October 2019 Primary Activity: N Activity Code: 25A (a) Activity Description: New Medium Combustion Plant Primary Activity: Y	A12SW (W)	905	2	383710 397670
32	**Local Authority Pollution Prevention and Controls** Name: Central Taxi Spares Ltd Location: 31-35 Chapeltown Street, Ancoats, MANCHESTER, M1 2NN Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/02/91 Dated: 9th August 1991 Process Type: Local Authority Air Pollution Control Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input **Status:** **Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	350	3	384983 397984
33	**Local Authority Pollution Prevention and Controls** Name: Tj Stafford (Plant Hire) Ltd Location: Hoyle Street, Ardwick, Manchester, M12 6hg Authority: Manchester City Council, Environmental Health Department Permit Reference: PPCM89/96 Dated: 5th July 1996 Process Type: Local Authority Pollution Prevention and Control Description: PG3/16 Mobile screening and crushing processes **Status:** **Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A14SW (E)	490	3	385206 397632
34	**Local Authority Pollution Prevention and Controls** Name: Presbar Diecastings Ltd Location: Store Street/Ducie Street, Piccadilly Village, Ancoats, M1 2WD Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/B/38/05/AW Dated: 21st November 1991 Process Type: Local Authority Pollution Prevention and Control Description: PG2/1Furnaces for the extraction of non-ferrous metal from scrap **Status:** **Permitted** Positional Accuracy: Manually positioned to the address or location	A19SW (NE)	530	3	385024 398187
34	**Local Authority Pollution Prevention and Controls** Name: Presbar Diecastings Ltd Location: Store Street, MANCHESTER, Lancashire, M1 2WD Authority: Manchester City Council, Environmental Health Department Permit Reference: 34/92 Dated: 21st November 1991 Process Type: Local Authority Pollution Prevention and Control Description: PG2/1Furnaces for the extraction of non-ferrous metal from scrap **Status:** **Permitted** Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	557	3	385051 398201
34	**Local Authority Pollution Prevention and Controls** Name: Presbar Diecastings Ltd Location: Store Street, MANCHESTER, Lancashire, M1 2WD Authority: Manchester City Council, Environmental Health Department Permit Reference: 34/92 Dated: 13th January 1993 Process Type: Local Authority Air Pollution Control Description: PG2/6 Aluminium and aluminium alloy processes **Status:** **Authorised** Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	583	3	385100 398195
35	**Local Authority Pollution Prevention and Controls** Name: Ardwick Spares Location: 2 Hoyle Street, Ardwick, MANCHESTER, Lancashire, M12 6HG Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/30/92 Dated: 1st April 1994 Process Type: Local Authority Air Pollution Control Description: PG2/1Furnaces for the extraction of non-ferrous metal from scrap **Status:** **Authorisation revoked** Positional Accuracy: Manually positioned to the address or location	A14SW (E)	633	3	385319 397495

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
36	**Local Authority Pollution Prevention and Controls** Name: The Laundry Shop (Manchester Ltd) Location: Unit 5 Peter House, Oxford Street, Manchester Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/DC/RM/01/09 Dated: 1st February 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A12NW (W)	708	3	383915 397839
37	**Local Authority Pollution Prevention and Controls** Name: Tesco Express Ardwick Location: Ardwick Green, Ardwick, MANCHESTER, Lancashire, M13 9XF Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/PFS/RM/002/06 Dated: 3rd December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A9NW (SE)	807	3	385255 397098
38	**Local Authority Pollution Prevention and Controls** Name: Johnsons Cleaners Uk Ltd - Manchester Location: 24 High Street, Manchester Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/DC/RM/13/07 Dated: 1st February 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning **Status: Permitted** Positional Accuracy: Located by supplier to within 10m	A17NE (NW)	840	3	384254 398481
39	**Local Authority Pollution Prevention and Controls** Name: Dunlop LtdGrg Division Location: P O Box 151, MANCHESTER, Lancashire, M60 1PD Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/58/93 Dated: 2nd December 1993 Process Type: Local Authority Air Pollution Control Description: PG6/28 Rubber processes **Status: Authorisation revoked** Positional Accuracy: Manually positioned to the address or location	A7NW (SW)	841	3	383890 397289
40	**Local Authority Pollution Prevention and Controls** Name: Advent Manchester Location: 309 Great Ancoats Street, MANCHESTER, Lancashire, M4 7DF Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/105/01 Dated: 9th February 2001 Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles **Status: Authorisation revoked** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	878	3	385559 398012
41	**Local Authority Pollution Prevention and Controls** Name: Johnson Cleaners Uk Ltd - Manchester Location: 59 Cross Street, Albert Square, Manchester Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/DC/RM/12/07 Dated: 1st February 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning **Status: Permitted** Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	905	3	383845 398199
42	**Local Authority Pollution Prevention and Controls** Name: Express Printers Manchester Ltd Location: Henry Street, Ancoats, MANCHESTER, Lancashire, M60 4HB Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/56/93 Dated: 1st March 1995 Process Type: Local Authority Air Pollution Control Description: PG6/21 Hide and skin processes **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A18NE (N)	940	3	384738 398694

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	**Local Authority Pollution Prevention and Controls** Name: Jessop & Baird Ltd Location: Medlock House, Hulme Street, Hulme, MANCHESTER, Lancashire, M15 6AL Authority: Manchester City Council, Environmental Health Department Permit Reference: 41/93 Dated: 14th June 1993 Process Type: Local Authority Air Pollution Control Description: PG6/32 Adhesive coating **Status: Authorisation revoked** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	984	3	383796 397169
44	**Local Authority Pollution Prevention and Control Enforcements** Location: Store Street, MANCHESTER, Lancashire, M1 2WD Type: Air Pollution Control Enforcement Notice Reference: 34/92 Date Issued: 19th November 1998 Enforcement Date: Not Supplied Details: Failure To Update Furnace Emission Records Positional Accuracy: Automatically positioned to the address	A18SE (N)	312	3	384808 398052
	Nearest Surface Water Feature	A13NW (N)	175	-	384610 397913
45	**Pollution Incidents to Controlled Waters** Property Type: Private Sewage (Non-PLC): Sewerage Systems Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Unknown Sewage Note: Tributary River Mersey Incident Date: 1st March 1991 Incident Reference: 91510290 Catchment Area: Mersey - Non-Tidal Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 1 - Major Incident Positional Accuracy: Located by supplier to within 100m	A13NE (N)	146	2	384700 397900
46	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: None Affected Incident Date: 8th November 1996 Incident Reference: 96632315 Catchment Area: Medlock Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	162	2	384500 397600
47	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Oils - Other Oil Note: River Medlock; Diesel Incident Date: 26th June 1996 Incident Reference: 96631409 Catchment Area: Medlock Receiving Water: Not Given Cause of Incident: Miscellaneous/Other Pollution Type Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	206	2	384900 397600
48	**Pollution Incidents to Controlled Waters** Property Type: Pollution Found Source Not Determined Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Colour Note: Not Supplied Incident Date: 2nd February 1995 Incident Reference: 95630210 Catchment Area: Medlock Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	217	2	384800 397500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
49	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: None Pollution Found Incident Date: 8th November 1996 Incident Reference: 96632326 Catchment Area: Rochdale Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Unknown	A13NW (W)	227	2	384400 397800
50	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: Oil To Drains Incident Date: 10th July 1996 Incident Reference: 96631536 Catchment Area: Medlock Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NW (NW)	301	2	384500 398000
51	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Foam Note: River Medlock; Detergent Incident Date: 30th March 1995 Incident Reference: 95630655 Catchment Area: Medlock Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	301	2	384400 397500
52	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: River Medlock; None Pollution Found Incident Date: 6th October 1995 Incident Reference: 95632478 Catchment Area: Medlock Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	310	2	384500 397400
53	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: River Medlock Incident Date: 2nd July 1995 Incident Reference: 95631978 Catchment Area: Medlock Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	345	2	385001 397501
53	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Inert Suspended Solids Note: River Medlock; Silt Incident Date: 17th January 1996 Incident Reference: 96630110 Catchment Area: Medlock Receiving Water: Not Given Cause of Incident: In River Works Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	348	2	385001 397496

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
54	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: None Pollution Found Incident Date: 11th January 1996 Incident Reference: 96630052 Catchment Area: Medlock Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	381	2	384300 397500
55	**Pollution Incidents to Controlled Waters** Property Type: Transport, Storage, Communications: Road Location: North Western Street, ARDWICK, Greater Manchester Authority: Environment Agency, North West Region Pollutant: General Biodegradable : Tree Cuttings Note: Not Supplied Incident Date: 19th May 1999 Incident Reference: 29115 Catchment Area: Irwell Receiving Water: River Stretch (Freshwater) Cause of Incident: Unauthorised Activity : Unauthorised Burning Of Waste Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	430	2	385100 397500
56	**Pollution Incidents to Controlled Waters** Property Type: Pollution Found Source Not Determined Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Chemicals - Paints / Dyes Note: Ashton Canal; Flouroscein Incident Date: 31st October 1996 Incident Reference: 96632291 Catchment Area: Ashton Canal Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SE (N)	454	2	384800 398200
57	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: None Affected; Diesel Spill Incident Date: 22nd August 1996 Incident Reference: 96631887 Catchment Area: Irwell Receiving Water: Not Given Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Unknown	A12SE (SW)	468	2	384200 397500
57	**Pollution Incidents to Controlled Waters** Property Type: Private Sewage (Non-PLC): Sewerage Systems Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Crude Sewage Note: River Medlock; Crude Sewage Incident Date: 25th March 1996 Incident Reference: 96630555 Catchment Area: Medlock Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	470	2	384200 397495
58	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: Diesel Reported Incident Date: 6th June 1996 Incident Reference: 96631224 Catchment Area: Medlock Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	479	2	385200 397700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
59	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Princess Street , MANCHESTER Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Foam Note: Detergent Pollution; Medlock; Detergent Incident Date: 18th April 1997 Incident Reference: 97630663 Catchment Area: Medlock Receiving Water: Freshwater Stream/River Cause of Incident: Overfilling During Delivery Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	522	2	385200 397495
60	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Chemicals - Paints / Dyes Note: Ashton Canal; Tracing Dye Incident Date: 29th September 1995 Incident Reference: 95632439 Catchment Area: Ashton Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	676	2	385300 398100
61	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Oils - Waste Oil Note: Oil Entering Medlock From Outfall Up Stream Temperance Stream Incident Date: 10th July 1998 Incident Reference: SO981348 Catchment Area: Medlock Receiving Water: Freshwater Stream/River Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Unknown	A14SE (E)	678	2	385400 397700
62	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: None Affected Incident Date: 16th December 1996 Incident Reference: 96632549 Catchment Area: Rochdale Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NE (NE)	795	2	385001 398496
62	**Pollution Incidents to Controlled Waters** Property Type: Pollution Found Source Not Determined Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Foam Note: Ashton Canal; Foam Incident Date: 9th April 1996 Incident Reference: 96630678 Catchment Area: Ashton Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NE (NE)	799	2	385001 398501
63	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: None Pollution Found Incident Date: 24th April 1996 Incident Reference: 96630895 Catchment Area: Ashton Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	873	2	385400 398300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
64	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: None Affected; None Pollution Found Incident Date: 16th December 1996 Incident Reference: 96612549 Catchment Area: Rochdale Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	894	2	385001 398601
65	**Pollution Incidents to Controlled Waters** Property Type: Construction Location: Redhill Street, MANCHESTER, Greater Manchester Authority: Environment Agency, North West Region Pollutant: Contaminated Material : Soils & Sub-soils Note: Not Supplied Incident Date: 13th January 1999 Incident Reference: 751 Catchment Area: Rochdale Canal Receiving Water: Canal Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Manually positioned to the road within the address or location	A19NW (NE)	929	2	385100 398600
66	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: Not Supplied Incident Date: 3rd August 1996 Incident Reference: 96641712 Catchment Area: Medlock Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NE (SE)	967	2	385600 397300
67	**Registered Radioactive Substances** Name: The University Of Manchester Location: North Campus, Manchester, M1 3bu Authority: Environment Agency, North West Region Permit Reference: Bx8661 Dated: Not Supplied Process Type: Not Supplied Description: Not Supplied **Status: Application has been determined by the EA** Positional Accuracy: Located by supplier to within 100m	A13SW (S)	151	2	384600 397530
67	**Registered Radioactive Substances** Name: The University Of Manchester Location: North Campus, Manchester, M1 3bu Authority: Environment Agency, North West Region Permit Reference: Bx8645 Dated: Not Supplied Process Type: Not Supplied Description: Not Supplied **Status: Application has been determined by the EA** Positional Accuracy: Located by supplier to within 100m	A13SW (S)	151	2	384600 397530
68	**Registered Radioactive Substances** Name: Umist Location: Po Box 88, Sackville Street, MANCHESTER, M60 1QD Authority: Environment Agency, North West Region Permit Reference: Bk5380 Dated: 6th March 2001 Process Type: Registration under S7 RSA for the keeping and use of Radioactive materials (was RSA60 S1) Description: Substantial variation to a registration under the Act of an open source which is also the subject of an authorisation **Status: Authorisation either revoked or cancelled** Positional Accuracy: Manually positioned to the address or location	A13SW (S)	221	2	384612 397456

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
69	**Registered Radioactive Substances** Name: Umist Location: PO Box 88, MANCHESTER, Lancashire, M60 1QD Authority: Environment Agency, North West Region Permit Reference: Bq2154 Dated: 9th April 2002 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Substantial variation to authorisation under RSA **Status: Authorisation either revoked or cancelled** Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	227	2	384500 397500
69	**Registered Radioactive Substances** Name: Umist Location: PO Box 88, MANCHESTER, Lancashire, M60 1QD Authority: Environment Agency, North West Region Permit Reference: AC8878 Dated: 31st March 1991 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA **Status: Authorisation either revoked or cancelled** Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	227	2	384500 397500
69	**Registered Radioactive Substances** Name: Umist Location: Po Box 88, Sackville Street, MANCHESTER, M60 1QD Authority: Environment Agency, North West Region Permit Reference: AX0526 Dated: 30th January 1997 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Minor variation to authorisation under RSA **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A13SW (SW)	233	2	384478 397512
69	**Registered Radioactive Substances** Name: Umist Location: Po Box 88, Sackville Street, MANCHESTER, M60 1QD Authority: Environment Agency, North West Region Permit Reference: AP0143 Dated: 16th January 1995 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Minor variation to authorisation under RSA **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A13SW (SW)	233	2	384478 397512
69	**Registered Radioactive Substances** Name: Umist Location: Po Box 88, Sackville Street, MANCHESTER, M60 1QD Authority: Environment Agency, North West Region Permit Reference: AZ8692 Dated: 13th November 1997 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Minor variation to authorisation under RSA **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A13SW (SW)	234	2	384477 397512
70	**Registered Radioactive Substances** Name: Epistem Limited Location: The Incubator Building & University Of Manchester, Manchester South Campus, Grafton Street, Manchester, M13 9xx Authority: Environment Agency, North West Region Permit Reference: VB3130DX Dated: Not Supplied Process Type: Not Supplied Description: Not Supplied **Status: Application has been determined by the EA** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	712	2	385100 397100
71	**Registered Radioactive Substances** Name: Manchester Metropolitan University Location: John Dalton Building, Chester Street, MANCHESTER, Lancashire, M1 5GD Authority: Environment Agency, North West Region Permit Reference: Bw5861 Dated: 1st December 2003 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Minor variation to authorisation under RSA **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	731	2	384070 397222

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
71	**Registered Radioactive Substances** Name: Manchester Metropolitan University Location: John Dalton Building, Chester Street, MANCHESTER, Greater Manchester, M1 5GD Authority: Environment Agency, North West Region Permit Reference: AP8403 Dated: 9th March 1995 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Minor variation to authorisation under RSA **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	732	2	384070 397222
71	**Registered Radioactive Substances** Name: Manchester Metropolitan University Location: John Dalton Building, Chester Street, MANCHESTER, Greater Manchester, M1 5GD Authority: Environment Agency, North West Region Permit Reference: AO3155 Dated: 16th October 1994 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Substantial variation to authorisation under RSA **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	732	2	384070 397222
71	**Registered Radioactive Substances** Name: Manchester Metropolitan University Location: John Dalton Building, Chester Street, MANCHESTER, Greater Manchester, M1 5GD Authority: Environment Agency, North West Region Permit Reference: AC9718 Dated: 31st March 1991 Process Type: Registration under S7 RSA for the keeping and use of Radioactive materials (was RSA60 S1) Description: Registration under the Act of an open source which is also the subject of an authorisation **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	732	2	384070 397222
71	**Registered Radioactive Substances** Name: Manchester Metropolitan University Location: John Dalton Building, Chester Street, MANCHESTER, Greater Manchester, M1 5GD Authority: Environment Agency, North West Region Permit Reference: AC9688 Dated: 31st March 1991 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	732	2	384070 397222
71	**Registered Radioactive Substances** Name: Manchester Metropolitan University Location: John Dalton Building, Chester Street, Manchester, M1 5gd Authority: Environment Agency, North West Region Permit Reference: Ca1464 Dated: Not Supplied Process Type: Not Supplied Description: Not Supplied **Status: Application has been determined by the EA** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	732	2	384069 397222
71	**Registered Radioactive Substances** Name: Manchester Metropolitan University Location: John Dalton Building, Chester Street, Manchester, M1 5gd Authority: Environment Agency, North West Region Permit Reference: BI0324 Dated: Not Supplied Process Type: Not Supplied Description: Not Supplied **Status: Application has been determined by the EA** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	732	2	384069 397222

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
72	**Registered Radioactive Substances** Name: University Of Manchester Location: Oxford Road, Manchester, M13 9PL Authority: Environment Agency, North West Region Permit Reference: CB0137 Dated: 8th December 2006 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Minor variation to authorisation under RSA **Status: Application has been authorised and any conditions apply to the operator** Positional Accuracy: Automatically positioned to the address	A8SW (S)	850	2	384615 396824
72	**Registered Radioactive Substances** Name: University Of Manchester Location: Oxford Road, MANCHESTER, M13 9PL Authority: Environment Agency, North West Region Permit Reference: Bz3067 Dated: 28th June 2005 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Initial variation to an authorisation under RSA□ **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A8SW (S)	850	2	384615 396824
72	**Registered Radioactive Substances** Name: University Of Manchester Location: Oxford Road, MANCHESTER, Lancashire, M13 9PL Authority: Environment Agency, North West Region Permit Reference: Bx8548 Dated: 1st October 2004 Process Type: Registration under S7 RSA for the keeping and use of Radioactive materials (was RSA60 S1) Description: Registration under the Act of an open source which is also the subject of an authorisation **Status: Application has been authorised and any conditions apply to the operator** Positional Accuracy: Automatically positioned to the address	A8SW (S)	850	2	384615 396824
72	**Registered Radioactive Substances** Name: University Of Manchester Location: Oxford Road, MANCHESTER, Lancashire, M13 9PL Authority: Environment Agency, North West Region Permit Reference: Bx8564 Dated: 2nd September 2004 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A8SW (S)	850	2	384615 396824
72	**Registered Radioactive Substances** Name: Central Manchester University Hospitals Nhs Foundation Trust Location: Oxford Road, Manchester, Lancashire, M13 9PL Authority: Environment Agency, North West Region Permit Reference: Bm2918 Dated: 19th November 2001 Process Type: Registration under S7 RSA for the keeping and use of Radioactive materials (was RSA60 S1) Description: Substantial variation to a registration under the Act of an open source which is also the subject of an authorisation **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A8SW (S)	851	2	384615 396824
73	**Registered Radioactive Substances** Name: Victoria University Of Manchester Location: Williamson Building, Oxford Road, MANCHESTER, Greater Manchester, M13 9PL Authority: Environment Agency, North West Region Permit Reference: Bt9640 Dated: 3rd February 2003 Process Type: Registration under S7 RSA for the keeping and use of Radioactive materials (was RSA60 S1) Description: Substantial variation to a registration under the Act of an open source which is not the subject of an authorisation, or an application for an authorisation **Status: Authorisation either revoked or cancelled** Positional Accuracy: Manually positioned to the address or location	A3NW (S)	982	2	384645 396692

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
73	**Registered Radioactive Substances** Name: Victoria University Of Manchester Location: Williamson Building, Oxford Road, MANCHESTER, Greater Manchester, M13 9PL Authority: Environment Agency, North West Region Permit Reference: BG4739 Dated: 16th August 1999 Process Type: Registration under S7 RSA for the keeping and use of Radioactive materials (was RSA60 S1) Description: Substantial variation to a registration under the Act of an open source which is not the subject of an authorisation, or an application for an authorisation **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A3NW (S)	982	2	384645 396692
73	**Registered Radioactive Substances** Name: Victoria University Of Manchester Location: Williamsom Building, Oxford Road, MANCHESTER, Greater Manchester, M13 9PL Authority: Environment Agency, North West Region Permit Reference: AP8713 Dated: 20th February 1995 Process Type: Registration under S7 RSA for the keeping and use of Radioactive materials (was RSA60 S1) Description: Registration under the Act of an open source which is also the subject of an authorisation **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A3NW (S)	982	2	384645 396692
73	**Registered Radioactive Substances** Name: University Of Manchester Location: Williamson Building, Oxford Road, MANCHESTER, Greater Manchester, M13 9PL Authority: Environment Agency, North West Region Permit Reference: AD0155 Dated: 31st March 1991 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA **Status: Authorisation either revoked or cancelled** Positional Accuracy: Manually positioned to the address or location	A3NW (S)	982	2	384645 396692
	River Quality Name: Rochdale Canal GQA Grade: River Quality B Reach: Ashton Canal To Knott Mill Estimated Distance (km): 1.8 Flow Rate: Flow greater than 80 cumecs Flow Type: Canal Year: 2000	A13NW (NW)	224	2	384523 397931
	River Quality Name: Medlock GQA Grade: River Quality E Reach: Lords Bk To Irwell Estimated Distance (km): 9.5 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A13SW (S)	256	2	384635 397418
	River Quality Name: Ashton Canal GQA Grade: River Quality C Reach: Robertsons To Rochdale Canal Estimated Distance (km): 6.4 Flow Rate: Flow greater than 80 cumecs Flow Type: Canal Year: 2000	A18SE (NE)	374	2	384904 398079
	River Quality Name: Rochdale Canal GQA Grade: River Quality B Reach: Empress Processing To Ashton Canal Estimated Distance (km): .3 Flow Rate: Flow greater than 80 cumecs Flow Type: Canal Year: 2000	A18SE (N)	491	2	384859 398224

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	River Quality Name: Rochdale Canal GQA Grade: River Quality B Reach: Qsl At Summit To Empress Processing Estimated Distance (km): 27.6 Flow Rate: Flow greater than 80 cumecs Flow Type: Canal Year: 2000	A18NE (N)	732	2	384915 398458
	River Quality Name: Corn Bk GQA Grade: River Quality C Reach: Qsl At Openshaw To Msc Estimated Distance (km): 5.6 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A8SW (S)	742	2	384534 396941
74	**River Quality Chemistry Sampling Points** Name: Medlock Reach: Lords Brook To Irwell Estimated Distance: 9.50 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied	A15NW (E)	991	2	385714 397750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
75	**Substantiated Pollution Incident Register** Authority: Environment Agency - North West Region, South Area Incident Date: 16th August 2015 Incident Reference: 1365039 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Storm Sewage	A14NE (E)	875	2	385597 397772
76	**Water Abstractions** Operator: West Contracting Licence Number: Nw0690006001 Permit Version: 1 Location: Boreholes At Origin Developments, Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 May Authorised End: 30 September Permit Start Date: 19th January 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13NW (W)	236	2	384378 397733
76	**Water Abstractions** Operator: West Contracting Licence Number: Nw/069/0006/001 Permit Version: 1 Location: Boreholes At Origin Developments, Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 May Authorised End: 30 September Permit Start Date: 19th January 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13NW (W)	236	2	384378 397733
77	**Water Abstractions** Operator: North Western Electricity Board Licence Number: 2569006023 Permit Version: Not Supplied Location: Rochdale Canal, Dickinson Street, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 82 Yearly Rate (m3): 25230 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A12SE (W)	514	2	384100 397700
78	**Water Abstractions** Operator: Moseley Rubber Co Ltd Licence Number: 2569006001 Permit Version: 100 Location: Borehole At Premises, Broadie St, Ardwick, Manchester Authority: Environment Agency, North West Region Abstraction: Rubber: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 909 Yearly Rate (m3): 331858 Details: Premises At Broadie St., Ardwick Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 8th February 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14SW (E)	544	2	385240 397540

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
79	**Water Abstractions** Operator: British Telecommunications Plc Licence Number: 2569007069 Permit Version: 100 Location: Borehole At George St, Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 860 Yearly Rate (m3): 1100 Details: Premises At Rutherford Hse, York St Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A12NE (NW)	584	2	384100 398000
80	**Water Abstractions** Operator: Manchester Metropolitan University Licence Number: Nw/069/0006/003 Permit Version: 2 Location: Borehole 1 At Lower Chatham Street Authority: Environment Agency, North West Region Abstraction: Schools and Colleges: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 4th April 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	746	2	384180 397091
80	**Water Abstractions** Operator: Manchester Metropolitan University Licence Number: Nw/069/0006/003 Permit Version: 2 Location: Borehole 1 At Lower Chatham Street Authority: Environment Agency, North West Region Abstraction: Schools and Colleges: Heat Pump Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 4th April 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	746	2	384180 397091
80	**Water Abstractions** Operator: Manchester Metropolitan University Licence Number: Nw/069/0006/003 Permit Version: 1 Location: Borehole 1 At Lower Chatham Street Authority: Environment Agency, North West Region Abstraction: Schools and Colleges: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	746	2	384180 397091

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
80	**Water Abstractions** Operator: Manchester Metropolitan University Licence Number: Nw/069/0006/003 Permit Version: 1 Location: Borehole 1 At Lower Chatham Street Authority: Environment Agency, North West Region Abstraction: Schools and Colleges: Heat Pump Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	746	2	384180 397091
81	**Water Abstractions** Operator: Dunlop Rubber Co Limited Licence Number: 2569007027 Permit Version: Not Supplied Location: Borehole, Cambridge Street, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 1811 Yearly Rate (m3): 154564 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	801	2	384000 397200
	Water Abstractions Operator: Manchester Metropolitan University Licence Number: Nw/069/0004/003 Permit Version: 1 Location: Borehole At Manchester Metropolitan University Authority: Environment Agency, North West Region Abstraction: Schools and Colleges: Heat Pump Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st January 2015 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7SW (SW)	1314	2	383715 396746
	Water Abstractions Operator: Manchester Metropolitan University Licence Number: Nw/069/0004/003 Permit Version: 1 Location: Borehole At Manchester Metropolitan University Authority: Environment Agency, North West Region Abstraction: Schools and Colleges: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st January 2015 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7SW (SW)	1314	2	383715 396746

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: British Telecommunications Plc Licence Number: 2569007070 Permit Version: 101 Location: Borehole At Dial House Chapel Street Salford Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (High Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Dial House, Salford Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A17NW (NW)	1338	2	383700 398700
	Water Abstractions Operator: British Telecom Licence Number: 2569007070 Permit Version: 100 Location: Borehole At Dial House, Chapel St, Salford Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (High Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 30 Yearly Rate (m3): 45 Details: Premises At Dial House, Salford Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 27th January 1971 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A17NW (NW)	1338	2	383700 398700
	Water Abstractions Operator: G T Energy Uk Limited Licence Number: Nw/069/0004/005 Permit Version: 2 Location: Area Of Abstraction - Lower Carboniferous Limestone Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Heat Pump Abstraction Type: Water may be abstracted from any point within an area Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Devonshire Street, Manchester Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 11th June 2013 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10SW (SE)	1368	2	385729 396778
	Water Abstractions Operator: Gt Energy Limited Licence Number: Nw/069/0004/005 Permit Version: 1 Location: Area Of Abstraction - Lower Carboniferous Limestone Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Heat Pump Abstraction Type: Water may be abstracted from any point within an area Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 17th January 2013 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10SW (SE)	1368	2	385729 396778

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Her Majesty'S Court Service Licence Number: 2569007089 Permit Version: 2 Location: 2 Boreholes At Gartside Street Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Gartside Street Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th July 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16SE (NW)	1407	2	383335 398310
	Water Abstractions Operator: Bovis Lend Lease Ltd Licence Number: 2569007089 Permit Version: 1 Location: 2 Boreholes At Gartside Street Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Gartside Street Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 28th January 2005 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16SE (NW)	1407	2	383335 398310
	Water Abstractions Operator: Renaker Build Ltd Licence Number: Nw/069/0006/010 Permit Version: 1 Location: Borehole Pw9 Chester Formation At Crown Street Authority: Environment Agency, North West Region Abstraction: Construction:Dewatering Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 24th September 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NW (W)	1468	2	383223 397253
	Water Abstractions Operator: Renaker Build Ltd Licence Number: Nw/069/0006/010 Permit Version: 1 Location: Borehole Pw10 Chester Formation At Crown Street Authority: Environment Agency, North West Region Abstraction: Construction:Dewatering Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 24th September 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NW (W)	1472	2	383211 397276

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Renaker Build Ltd Licence Number: Nw/069/0006/010 Permit Version: 1 Location: Borehole Pw11 Chester Formation At Crown Street Authority: Environment Agency, North West Region Abstraction: Construction:Dewatering Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 24th September 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NW (W)	1472	2	383204 397298
	Water Abstractions Operator: Renaker Build Ltd Licence Number: Nw/069/0006/010 Permit Version: 1 Location: Borehole Pw8 Chester Formation At Crown Street Authority: Environment Agency, North West Region Abstraction: Construction:Dewatering Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 24th September 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NW (W)	1476	2	383224 397225
	Water Abstractions Operator: Renaker Build Ltd Licence Number: Nw/069/0006/010 Permit Version: 1 Location: Borehole Pw5 Chester Formation At Crown Street Authority: Environment Agency, North West Region Abstraction: Construction:Dewatering Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 24th September 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NW (W)	1503	2	383193 397230
	Water Abstractions Operator: Renaker Build Ltd Licence Number: Nw/069/0006/010 Permit Version: 1 Location: Borehole Pw6 Chester Formation At Crown Street Authority: Environment Agency, North West Region Abstraction: Construction:Dewatering Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 24th September 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NW (W)	1510	2	383171 397275

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Renaker Build Ltd Licence Number: Nw/069/0006/010 Permit Version: 1 Location: Borehole Pw7 Chester Formation At Crown Street Authority: Environment Agency, North West Region Abstraction: Construction:Dewatering Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 24th September 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NW (W)	1521	2	383184 397203
	Water Abstractions Operator: Renaker Build Ltd Licence Number: Nw/069/0006/010 Permit Version: 1 Location: Borehole Pw4 Chester Formation At Crown Street Authority: Environment Agency, North West Region Abstraction: Construction:Dewatering Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 24th September 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NW (W)	1542	2	383159 397210
	Water Abstractions Operator: Renaker Build Ltd Licence Number: Nw/069/0006/010 Permit Version: 1 Location: Borehole Pw3 Chester Formation At Crown Street Authority: Environment Agency, North West Region Abstraction: Construction:Dewatering Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 24th September 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NW (W)	1558	2	383140 397217
	Water Abstractions Operator: Manchester Quays Development (Mgy) Ltd Licence Number: Nw/069/0004/019 Permit Version: 1 Location: St Johns Manchester Authority: Environment Agency, North West Region Abstraction: Industrial, Commercial and Public Services: Transfer Between Sources (Post Water Act 2003) Abstraction Type: Water may be abstracted from any point within an area Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: St Johns, Manchester Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 13th September 2019 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16SW (W)	1566	2	383094 398099

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: British Waterways Licence Number: 2569006990 Permit Version: 100 Location: Ashton Canal, Manchester [Distillers, Ancoats] Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 0 Yearly Rate (m3): 750090 Details: (Lancashire Tar Distillers Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1969 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A25SW (NE)	1574	2	385900 398795
	Water Abstractions Operator: British Waterways Board Licence Number: 2569006030 Permit Version: Not Supplied Location: Manchester, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Not Supplied Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 0 Yearly Rate (m3): 0 Details: Ashton Canal Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A25SW (NE)	1578	2	385900 398800
	Water Abstractions Operator: Renaker Build Ltd Licence Number: Nw/069/0006/010 Permit Version: 1 Location: Borehole Pw2 Chester Formation At Crown Street Authority: Environment Agency, North West Region Abstraction: Construction:Dewatering Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 24th September 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NW (W)	1579	2	383113 397230
	Water Abstractions Operator: Renaker Build Ltd Licence Number: Nw/069/0006/010 Permit Version: 1 Location: Borehole Pw1 Chester Formation At Crown Street Authority: Environment Agency, North West Region Abstraction: Construction:Dewatering Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 24th September 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NW (W)	1600	2	383085 397249

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole Number 2 At Premises Strangeways Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1669	2	383820 399190
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole (No 2) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1669	2	383820 399190
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole Number 2 At Premises Strangeways Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1669	2	383820 399190
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole Number 2 At Premises Strangeways Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1669	2	383820 399190

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 101 Location: Borehole (No 2) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 682 Yearly Rate (m3): 194755 Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th May 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1669	2	383820 399190
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 101 Location: Borehole (No 2) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th May 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1669	2	383820 399190
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole Number 3 At Premises Strangeways Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1691	2	383830 399220
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole Number 3 At Premises Strangeways Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1691	2	383830 399220

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole Number 3 At Premises Strangeways Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1691	2	383830 399220
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole (No 3) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Borehole At Strangeways Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1691	2	383830 399220
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 101 Location: Borehole (No 3) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th May 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1691	2	383830 399220
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 101 Location: Borehole (No 3) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th May 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1691	2	383830 399220

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole Number 1 At Premises Strangeways Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1708	2	383850 399250
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole (No 1) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1708	2	383850 399250
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole (No 1) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Borehole At Strangeways, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1708	2	383850 399250
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole Number 1 At Premises Strangeways Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1708	2	383850 399250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 101 Location: Borehole (No 1) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th May 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1708	2	383850 399250
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 101 Location: Borehole (No 1) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th May 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1708	2	383850 399250
	Water Abstractions Operator: Threlfalls (Salford) Ltd. Licence Number: 2569006009 Permit Version: Not Supplied Location: Four Boreholes, Cook Street, SALFORD Authority: Environment Agency, North West Region Abstraction: Cooling & Manufacturing Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 977 Yearly Rate (m3): 227300 Details: Additional Purpose: Cooling; Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A21SW (NW)	1778	2	383200 398800
	Water Abstractions Operator: Heineken Uk Ltd Licence Number: 2569007007 Permit Version: 102 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: General Cooling (Existing Licences Only) (High Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 23rd November 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(SW)	1924	2	383900 395900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Heineken Uk Ltd Licence Number: 2569007007 Permit Version: 102 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 23rd November 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(SW)	1924	2	383900 395900
	Water Abstractions Operator: Scottish And Newcastle Uk Ltd Licence Number: 2569007007 Permit Version: 101 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: General Cooling (Existing Licences Only) (High Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(SW)	1924	2	383900 395900
	Water Abstractions Operator: Scottish And Newcastle Uk Ltd Licence Number: 2569007007 Permit Version: 101 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(SW)	1924	2	383900 395900
	Water Abstractions Operator: Scottish Courage Brewing Ltd Licence Number: 2569007007 Permit Version: 100 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: General Cooling (Existing Licences Only) (High Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 900 Yearly Rate (m3): 227000 Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 31st December 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(SW)	1924	2	383900 395900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Scottish Courage Brewing Ltd Licence Number: 2569007007 Permit Version: 100 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 31st December 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(SW)	1924	2	383900 395900
	Water Abstractions Operator: Heineken Uk Ltd Licence Number: 2569007007 Permit Version: 103 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 8th May 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(SW)	1930	2	383865 395909
	Water Abstractions Operator: Heineken Uk Ltd Licence Number: 2569007007 Permit Version: 103 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: General Cooling (Existing Licences Only) (High Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 8th May 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(SW)	1930	2	383865 395909
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: Low	A13NE (SE)	0	4	384672 397718
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	A13NE (SE)	0	4	384672 397718
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13NE (SE)	0	4	384672 397718

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	**Source Protection Zones** Name: Not Supplied Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	A7NE (SW)	634	2	384115 397324
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	184	2	384507 397554
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	207	2	384844 397536
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	218	2	384861 397535
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	242	2	384519 397467
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
83	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1011.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 2	A13NW (N)	144	5	384635 397889
84	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 536.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A13SE (SE)	202	5	384775 397505
85	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 340.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A13SE (SE)	221	5	384863 397533
86	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13NW (N)	231	5	384619 397975
87	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 310.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A13NW (NW)	240	5	384467 397918

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
88	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13NW (W)	279	5	384341 397779
89	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 23.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A13NW (NW)	282	5	384550 398004
90	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 589.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A13NW (W)	284	5	384336 397782
91	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 53.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A13NW (N)	288	5	384568 398018
92	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 80.9 Watercourse Level: Underground Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A13NW (N)	308	5	384609 398051
93	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 177.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A13SW (SW)	334	5	384422 397426
94	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 261.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A12SE (SW)	347	5	384317 397539
95	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.2 Watercourse Level: Underground Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A12SE (SW)	352	5	384324 397517
96	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 35.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A18SE (N)	354	5	384669 398106

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
97	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.8 Watercourse Level: Underground Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A18SE (N)	365	5	384701 398120
98	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 10.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A18SE (N)	371	5	384716 398126
99	**OS Water Network Lines** Watercourse Form: Lock or flight of locks Watercourse Length: 25.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A18SE (N)	377	5	384724 398132
100	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 260.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ashton Canal Catchment Name: Mersey Primacy: 1	A18SE (NE)	380	5	384841 398113
101	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 66.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A18SE (N)	394	5	384744 398147
102	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A14SW (E)	426	5	385116 397542
103	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 216.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A14SW (E)	427	5	385117 397543
104	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 219.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A18SE (N)	431	5	384803 398176
105	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 34.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 2	A18SE (NE)	441	5	384983 398107

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
106	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 250.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ashton Canal Catchment Name: Mersey Primacy: 1	A19SW (NE)	468	5	385017 398114
107	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A12SE (SW)	502	5	384167 397492
108	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 92.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A12SE (SW)	509	5	384163 397482
109	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 147.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A14SW (E)	567	5	385272 397568
110	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 236.6 Watercourse Level: Underground Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A12SE (SW)	589	5	384115 397404
111	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A18SE (N)	645	5	384892 398374
112	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 309.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A18SE (N)	645	5	384892 398374
113	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 81.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ashton Canal Catchment Name: Mersey Primacy: 1	A19SW (NE)	665	5	385252 398152
114	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 34.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ashton Canal Catchment Name: Mersey Primacy: 2	A19SW (NE)	665	5	385252 398152

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
115	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 299.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A14SE (E)	670	5	385391 397695
116	**OS Water Network Lines** Watercourse Form: Lock or flight of locks Watercourse Length: 25.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ashton Canal Catchment Name: Mersey Primacy: 2	A19SW (NE)	699	5	385282 398168
117	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 205.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A12SW (W)	718	5	383950 397447
118	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 20.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ashton Canal Catchment Name: Mersey Primacy: 2	A19SW (NE)	724	5	385305 398179
119	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 41.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ashton Canal Catchment Name: Mersey Primacy: 1	A19SW (NE)	744	5	385325 398184
120	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 125.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Islington Branch Catchment Name: Mersey Primacy: 1	A19SE (NE)	784	5	385358 398209
121	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 36.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ashton Canal Catchment Name: Mersey Primacy: 1	A19SE (NE)	784	5	385358 398209
122	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A14NE (E)	796	5	385514 397829
123	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1387.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A14NE (E)	801	5	385519 397825

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
124	**OS Water Network Lines** Watercourse Form: Lock or flight of locks Watercourse Length: 23.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ashton Canal Catchment Name: Mersey Primacy: 1	A19SE (NE)	820	5	385388 398229
125	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SW (W)	822	5	383806 397566
126	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 281.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A12SW (W)	825	5	383808 397543
127	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 231.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A12SW (W)	840	5	383817 397456
128	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 101.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ashton Canal Catchment Name: Mersey Primacy: 1	A19SE (NE)	843	5	385404 398246
129	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 193.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A19NE (NE)	902	5	385352 398395
130	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 119.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A19NW (NE)	913	5	385209 398524
131	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 139.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A19NW (NE)	913	5	385209 398524
132	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6195.1 Watercourse Level: Underground Permanent: True Watercourse Name: Corn Brook Catchment Name: Mersey Primacy: 1	A8SW (S)	916	5	384573 396761

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
133	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 569.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A19NW (NE)	925	5	385110 398591
134	**OS Water Network Lines** Watercourse Form: Lock or flight of locks Watercourse Length: 24.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ashton Canal Catchment Name: Mersey Primacy: 1	A19SE (NE)	944	5	385477 398316
135	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 1604.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ashton Canal Catchment Name: Mersey Primacy: 1	A19SE (NE)	968	5	385494 398333

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
136	**Historical Landfill Sites** Licence Holder: Peter Birse Limited Location: Great Ancoats Street, River Medlock, Ardwick, Manchester, Greater Manchester Name: Palmerston Street Landfill Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16530 First Input Date: 1st September 1986 Last Input Date: 31st December 1987 Specified Waste Type: Deposited Waste included Inert and Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4200/9162 BGS Ref: Not Supplied Other Ref: RD/LIC/440/86, F046	A14NE (E)	948	2	385667 397829
137	**Licensed Waste Management Facilities (Locations)** Licence Number: 53582 Location: 2 Hoyle Street, Ardwick, Manchester, M12 6HG Operator Name: Donnelly Mr A Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Metal Recycling Sites (Mixed) **Licence Status: Expired** Issued: 11th October 1996 Last Modified: Not Supplied Expires: Not Supplied Suspended: 25/01/2002 Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14SW (E)	520	2	385200 397500
137	**Licensed Waste Management Facilities (Locations)** Licence Number: 402157 Location: Hoyle Trading Estate, Hoyle Street, Manchester, M12 6HL Operator Name: E Delaney Demolition Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Treatment of waste to produce soil <75,000 tpy **Licence Status: Surrendered** Issued: 26th February 2015 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 18th October 2021 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14SW (E)	550	2	385235 397506
138	**Licensed Waste Management Facilities (Locations)** Licence Number: 402399 Location: Hoyle Street, Hoyle Trading Estate, Manchester, M12 6JL Operator Name: City Excavations Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Inert & excavation Waste TS + treatment **Licence Status: Surrendered** Issued: 1st June 2015 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 28th January 2021 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14SW (E)	587	2	385296 397583

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
139	**Licensed Waste Management Facilities (Locations)** Licence Number: 53583 Location: Temperance Street, Ardwick, Manchester, M12 6HS Operator Name: Pye Metals Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Metal Recycling Sites (Mixed) **Licence Status: Expired** Issued: 11th October 1996 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14SW (E)	610	2	385300 397510
140	**Licensed Waste Management Facilities (Locations)** Licence Number: 50191 Location: Little Ireland Phase B, Great Marlborough Street, Manchester, M1 5NN Operator Name: Terra Vac (uk) Ltd Operator Location: Strategic Business Centre, Blue Ridge Park, Thunderhead Ridge, Glasshoughton, Castleford, WF10 4UA Authority: Environment Agency - North East Region, Ridings Area Site Category: Mobile Plant **Licence Status: Issued** Issued: 17th June 2002 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	706	2	383998 397374
141	**Licensed Waste Management Facilities (Locations)** Licence Number: 105196 Location: 100 Barbirolli Square, Manchester, M2 3AB Operator Name: Hillhouse Remediation Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Mobile plant for reclamation, restoration **Licence Status: Issued** Issued: 22nd June 2011 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Manually positioned to the address or location	A12SW (W)	735	2	383879 397693
	Local Authority Landfill Coverage Name: Manchester City Council - Had landfill data but passed it to the relevant environment agency		0	6	384672 397718
142	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A13SW (SW)	22	-	384624 397663
143	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A13NW (NW)	112	-	384565 397823
144	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A13SE (SE)	196	-	384779 397515
145	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A13SE (S)	213	-	384753 397487
146	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A13NW (NW)	290	-	384533 398003
147	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A18SE (N)	439	-	384711 398194
148	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A12SE (W)	442	-	384172 397690

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
149	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12NE (W)	465	-	384151 397766
150	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A19SW (NE)	478	-	385063 398085
151	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12SE (W)	484	-	384132 397674
152	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A9NW (SE)	524	-	385061 397305
153	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A19SW (NE)	538	-	385123 398109
154	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A18SE (NE)	589	-	384925 398305
155	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1896	A12SE (SW)	591	-	384114 397402
156	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A19SW (NE)	613	-	385191 398145
157	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A18SE (N)	624	-	384755 398377
158	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A18SE (NE)	627	-	384997 398315
159	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1896	A12SW (W)	645	-	383971 397660
160	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A18SE (NE)	650	-	384966 398354
161	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A18SE (N)	654	-	384889 398385
162	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A12NW (W)	705	-	383909 397747
163	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A12SW (W)	773	-	383842 397671
164	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A12SW (W)	775	-	383890 397445
165	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A19SE (NE)	780	-	385363 398194
166	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1896	A12SW (W)	795	-	383874 397430
167	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A19SW (NE)	800	-	385287 398318
168	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A19NW (NE)	813	-	385121 398460
169	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1896	A12SW (W)	834	-	383817 397472

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
170	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12SW (W)	836	-	383777 397711
171	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A19NW (NE)	839	-	385135 398482
172	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A19NW (NE)	844	-	385139 398485
173	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A19NW (NE)	875	-	385149 398515
174	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A19SE (NE)	891	-	385434 398286
175	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A8SW (S)	910	-	384595 396766
176	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A19SE (NE)	910	-	385419 398336
177	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A19NW (NE)	913	-	385173 398545
178	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A8SE (S)	981	-	384956 396744
179	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A8SW (S)	990	-	384416 396711
180	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A9SW (SE)	995	-	385072 396772

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
181	**Registered Landfill Sites** Licence Holder: Peter Birse Ltd Licence Reference: 00440/86 Site Location: Palmerston Street./Great Ancoats Street, Ardwick, Manchester, Greater Manchester Licence Easting: 385700 Licence Northing: 397800 Operator Location: Clarence House, Mellor Road, Cheadle Hulme, STOCKPORT, Cheshire, SK8 5AT Authority: Environment Agency - North West Region, South Area Site Category: Landfill Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: Waste produced/controlled by licence holder Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st August 1986 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Ceramic Materials Construction Ind. Wastes Glass Metals O Similar Non Leachate Forming Materials Soil,Clay,Sand, Stone,Brick,Concrete,Slate Prohibited Waste: Animal Flesh Chemical Waste Of Any Nature Fibreglass Foodstuffs Liquid Wastes Paper/Cardboard Waste Plasterboard Plastics Sawdust Sludge Wastes Textiles Vegetable Matter Waste Forming Polluting Leachate Wood	A15NW (E)	979	2	385700 397800
182	**Registered Waste Transfer Sites** Licence Holder: W A Goddard (Sales) Ltd Licence Reference: 00853/92 Site Location: Mill Green Street, Ardwick, MANCHESTER, Greater Manchester, M12 6FA Operator Location: As Site Address Authority: Environment Agency - North West Region, South Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Site exempt from licenceExempt Dated: 1st February 1993 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Max.Storage In Licence Photographic Processing Waste Prohibited Waste: Asbestos Explosive Waste Gmwda Group 1 - Non/V.Slow Decomp.Wast Gmwda Group 2 - Slow Decomp./Slight So Gmwda Group 3 - Decomp./Soluble Waste In Pressurised Cont'Rs Waste N.O.S. - Pretreated Or Not Waste Violently Reactive With Water	A14SE (E)	865	2	385576 397566

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
183	**Registered Waste Treatment or Disposal Sites** Licence Holder: A Donnelly t/a Ardwick Autospares Licence Reference: 01073 Site Location: 2 Hoyle Street, Ardwick, MANCHESTER, Greater Manchester, M12 6HG Operator Location: Whitehouse Farm, Torkington Road, Hazel Grove, Stockport, Cheshire Authority: Environment Agency - North West Region, South Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 1st October 1996 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Max.Storage In Licence; Other Non-Ferrous Metal Scrap; Scrap Vehicles Prohibited Waste: Asbestos (Other Than Normal Part Veh.); Bulk Powders; Clinical Wastes; Explosive Waste; Pcbs; Pressurised Wastes Or Containers; Spec.Waste (Epa'90:S62/1996 Regs)N.O.S; Violently Reactive Wastes; Waste In Drums; Waste N.O.S.	A14SW (E)	562	2	385270 397580
184	**Registered Waste Treatment or Disposal Sites** Licence Holder: Pye Metals Ltd Licence Reference: 00937 Site Location: Temperance Street, Ardwick, MANCHESTER, Greater Manchester, M12 6HS Operator Location: Britannia Suite, International House, MANCHESTER, Greater Manchester, M3 2ER Authority: Environment Agency - North West Region, South Area Site Category: Scrapyard Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 1st October 1996 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Ferrous Metal Scrap; Max.Storage Ferrous Mat'L; Max.Storage Non-Ferrous Mat'L; Max.Waste Permitted By Licence; Non-Ferrous Metal Scrap Prohibited Waste: Asbestos (Other Than Parts Of Vehicle); Bulk Powders; Clinical Wastes; Explosive Waste; Pcbs; Pesrrurised Waste Or Containers; Spec.Waste (Epa'90:S62/1996 Regs)N.O.S; Violently Reactive Wastes; Waste In Drums; Waste N.O.S.	A14SE (E)	698	2	385400 397540

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	A13NE (SE)	0	1	384672 397718
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NE (SE)	0	1	384672 397718
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: <15 mg/kg	A13NW (N)	54	1	384649 397800
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: <15 mg/kg	A13SE (SE)	129	1	384793 397596
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A7NE (SW)	589	1	384142 397362
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NE (SW)	589	1	384166 397332
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A7NE (SW)	591	1	384209 397275

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12SW (W)	647	1	383985 397570
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 45 - 60 mg/kg	A8SW (S)	700	1	384457 397000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SE (E)	734	1	385437 397539
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 200 - 300 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14NE (E)	777	1	385500 397718
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A19SE (NE)	823	1	385401 398214
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8SW (S)	861	1	384661 396814

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 200 - 300 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14NE (E)	880	1	385564 398000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11NE (W)	969	1	383646 397777
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 384770, 397740 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 27.70 mg/kg Cadmium Measured Concentration: 1.00 mg/kg Chromium Measured Concentration: 94.40 mg/kg Lead Measured Concentration: 189.40 mg/kg Nickel Measured Concentration: 22.20 mg/kg	A13NE (E)	47	1	384770 397740
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 384430, 397810 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 34.90 mg/kg Cadmium Measured Concentration: 1.90 mg/kg Chromium Measured Concentration: 78.20 mg/kg Lead Measured Concentration: 339.10 mg/kg Nickel Measured Concentration: 32.10 mg/kg	A13NW (W)	204	1	384430 397810
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 384750, 397300 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 18.80 mg/kg Cadmium Measured Concentration: 0.60 mg/kg Chromium Measured Concentration: 81.30 mg/kg Lead Measured Concentration: 157.30 mg/kg Nickel Measured Concentration: 25.60 mg/kg	A8NE (S)	389	1	384750 397300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 384750, 398170 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 15.60 mg/kg Cadmium Measured Concentration: 0.50 mg/kg Chromium Measured Concentration: 83.30 mg/kg Lead Measured Concentration: 178.60 mg/kg Nickel Measured Concentration: 23.50 mg/kg	A18SE (N)	417	1	384750 398170
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 384430, 397270 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 12.70 mg/kg Cadmium Measured Concentration: 0.60 mg/kg Chromium Measured Concentration: 66.10 mg/kg Lead Measured Concentration: 64.40 mg/kg Nickel Measured Concentration: 18.50 mg/kg	A8NW (SW)	458	1	384430 397270
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 384380, 398240 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 2.50 mg/kg Cadmium Measured Concentration: 0.30 mg/kg Chromium Measured Concentration: 28.60 mg/kg Lead Measured Concentration: 20.10 mg/kg Nickel Measured Concentration: 5.40 mg/kg	A18SW (NW)	568	1	384380 398240
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 385210, 397220 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 37.30 mg/kg Cadmium Measured Concentration: 1.30 mg/kg Chromium Measured Concentration: 81.30 mg/kg Lead Measured Concentration: 433.10 mg/kg Nickel Measured Concentration: 34.30 mg/kg	A9NW (SE)	687	1	385210 397220
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 385290, 398180 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 32.90 mg/kg Cadmium Measured Concentration: 0.90 mg/kg Chromium Measured Concentration: 93.40 mg/kg Lead Measured Concentration: 438.40 mg/kg Nickel Measured Concentration: 37.30 mg/kg	A19SW (NE)	712	1	385290 398180

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 383880, 397770 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 11.90 mg/kg Cadmium Measured Concentration: 0.30 mg/kg Chromium Measured Concentration: 55.90 mg/kg Lead Measured Concentration: 102.20 mg/kg Nickel Measured Concentration: 17.80 mg/kg	A12NW (W)	735	1	383880 397770
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 385450, 397590 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 14.40 mg/kg Cadmium Measured Concentration: 0.30 mg/kg Chromium Measured Concentration: 45.80 mg/kg Lead Measured Concentration: 260.00 mg/kg Nickel Measured Concentration: 13.10 mg/kg	A14SE (E)	737	1	385450 397590
	BGS Urban Soil Chemistry Averages Source: British Geological Survey, National Geoscience Information Service Sample Area: Manchester Count Id: 300 Arsenic Minimum Concentration: 3.00 mg/kg Arsenic Average Concentration: 28.00 mg/kg Arsenic Maximum Concentration: 1008.00 mg/kg Cadmium Minimum Concentration: 0.30 mg/kg Cadmium Average Concentration: 1.40 mg/kg Cadmium Maximum Concentration: 80.30 mg/kg Chromium Minimum Concentration: 29.00 mg/kg Chromium Average Concentration: 92.00 mg/kg Chromium Maximum Concentration: 1252.00 mg/kg Lead Minimum Concentration: 20.00 mg/kg Lead Average Concentration: 270.00 mg/kg Lead Maximum Concentration: 2687.00 mg/kg Nickel Minimum Concentration: 5.00 mg/kg Nickel Average Concentration: 32.00 mg/kg Nickel Maximum Concentration: 137.00 mg/kg	A13NE (SE)	0	1	384672 397718
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13NE (SE)	0	7	384672 397718

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Man-Made Mining Cavities Easting: 384900 Northing: 397100 Distance: 627 Quadrant Reference: A8 Quadrant Reference: NE Bearing Ref: S Cavity Type: SHAFT ENTRY SANDSTONE WORKINGS Commodity: Sandstone Solid Geology Detail: BUNTER SANDSTONE MANCHESTER MARLS COLLYHURST SANDSTONE Superficial Geology Detail: Glacial Till	A8NE (S)	627	8	384900 397100
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	384672 397718
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	171	1	384742 397528
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	384672 397718
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	214	1	384786 397957
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	384672 397718
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	384672 397718
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	384672 397718
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	384672 397718
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	134	1	384803 397597
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	384672 397718
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	384672 397718

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
185	**Contemporary Trade Directory Entries** Name: Intertek Testing Services International Location: Bainbridge House, 86-90, London Road, Manchester, M1 2PW Classification: Corrosion Prevention & Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	11	-	384726 397734
185	**Contemporary Trade Directory Entries** Name: Capcis Location: Capcis House, 1, Echo Street, Manchester, M1 7DP Classification: Corrosion Prevention & Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	11	-	384726 397734
185	**Contemporary Trade Directory Entries** Name: Intertek Capcis Location: Bainbridge House, 86-90, London Road, Manchester, M1 2PW Classification: Corrosion Prevention & Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	11	-	384726 397734
186	**Contemporary Trade Directory Entries** Name: S A Car Services Location: 8 Wyre St, Manchester, M1 2PR Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13NE (E)	62	-	384785 397748
187	**Contemporary Trade Directory Entries** Name: The Clinco Ltd Location: 5, PICCADILLY PLACE, MANCHESTER, M1 3BR Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	128	-	384598 397854
187	**Contemporary Trade Directory Entries** Name: Quality Lab Location: 5, PICCADILLY PLACE, MANCHESTER, M1 3BR Classification: Engineers - General **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	128	-	384598 397854
188	**Contemporary Trade Directory Entries** Name: The Body Shop International Location: Unit 10, Piccadilly Station, Manchester, M1 2BN Classification: Cosmetic Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	142	-	384845 397819
189	**Contemporary Trade Directory Entries** Name: The Ralphs Group Location: 3, Piccadilly Place, Manchester, M1 3BN Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (N)	163	-	384646 397911
189	**Contemporary Trade Directory Entries** Name: Ove Arup & Partners Location: 3, Piccadilly Place, Manchester, M1 3BN Classification: Engineering Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (N)	163	-	384646 397911
189	**Contemporary Trade Directory Entries** Name: Scrap Cars Vans Caravans Buyer Location: 3, Piccadilly Place, Manchester, M1 3BN Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (N)	165	-	384650 397914
189	**Contemporary Trade Directory Entries** Name: Advanced Valve Solutions Uk Ltd Location: 3, Piccadilly Place, Manchester, M1 3BN Classification: Valve Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (N)	165	-	384650 397914
190	**Contemporary Trade Directory Entries** Name: The Leather Shop Location: Gateway House, Piccadilly South, Manchester, M1 2GH Classification: Leather Garments & Products **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (N)	186	-	384742 397938

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
191	**Contemporary Trade Directory Entries** Name: Archmate Ltd Location: Flat 15, Granby House, Granby Row, Manchester, M1 7AR Classification: Rubber & Plastic Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	197	-	384447 397612
192	**Contemporary Trade Directory Entries** Name: United Global Location: Minshull House, 47, Chorlton Street, Manchester, M1 3FY Classification: Road Haulage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	212	-	384479 397885
193	**Contemporary Trade Directory Entries** Name: Itfaq Knitwear Location: 27, Berry Street, Manchester, M1 2PP Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	222	-	384912 397590
193	**Contemporary Trade Directory Entries** Name: Flowplant Group Ltd Location: 27, Berry Street, Manchester, Lancashire, M1 2PP Classification: Pumps - Sales, Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	222	-	384912 397590
193	**Contemporary Trade Directory Entries** Name: Delprint Display Location: 26 Buxton St, Manchester, M1 2PT Classification: Screen Process Printers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SE (SE)	222	-	384912 397590
194	**Contemporary Trade Directory Entries** Name: Network Rail Location: First-Third Floor, Rail House, Store Street, Manchester, M60 7RT Classification: Railways **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	232	-	384831 397957
194	**Contemporary Trade Directory Entries** Name: Rail Passengers Committee Location: Rail House, Store Street, Manchester, M1 2RP Classification: Railways **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	232	-	384831 397957
195	**Contemporary Trade Directory Entries** Name: Transport For Greater Manchester Location: 2, Piccadilly Place, Manchester, M1 3BG Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (N)	233	-	384640 397981
195	**Contemporary Trade Directory Entries** Name: Transport For Greater Manchester Location: 2 Piccadilly Place, Manchester, Greater Manchester, M1 3BG Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (N)	233	-	384640 397981
195	**Contemporary Trade Directory Entries** Name: A & B Engineering Location: 5 Picadilly Pl, Manchester, Lancashire, M1 3BG Classification: Engineering Machine Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13NW (N)	238	-	384637 397986
196	**Contemporary Trade Directory Entries** Name: Forths Location: Amazon House, 3 Brazil Street, Manchester, Lancashire, M1 3PJ Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (W)	262	-	384358 397778
196	**Contemporary Trade Directory Entries** Name: Neat & Tidy Location: Amazon House, 3, Brazil Street, Manchester, M1 3PJ Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (W)	262	-	384358 397778

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
196	**Contemporary Trade Directory Entries** Name: Kdp (Uk) Ltd Location: 36, Canal Street, Manchester, M1 3WD Classification: Non-Ferrous Metals **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (W)	284	-	384346 397818
197	**Contemporary Trade Directory Entries** Name: Greater Manchester Electronic Booking Location: Gateway House, Piccadilly South, Manchester, Lancashire, M60 7LP Classification: Hospitals **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (N)	262	-	384706 398017
198	**Contemporary Trade Directory Entries** Name: Cozy Knitwear Location: 58, Baring Street, Manchester, M1 2PY Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	269	-	384969 397598
198	**Contemporary Trade Directory Entries** Name: Olympic Enterprises Location: 58, Baring Street, Manchester, Lancashire, M1 2PY Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SE (E)	269	-	384969 397598
199	**Contemporary Trade Directory Entries** Name: Fleet Angel Location: 29-31, SACKVILLE STREET, MANCHESTER, M1 3LZ Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NW (W)	285	-	384357 397847
199	**Contemporary Trade Directory Entries** Name: Samkou Export Co Location: 26, Richmond Street, Manchester, M1 3NB Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	297	-	384356 397870
199	**Contemporary Trade Directory Entries** Name: Sports Fashion Distribution Uk Ltd Location: 4th Floor Richmond House,15 Bloom Street, Manchester, Greater Manchester, M1 3HZ Classification: Distribution Services **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A13NW (NW)	298	-	384366 397887
200	**Contemporary Trade Directory Entries** Name: William Chitham Location: 121, Princess Street, Manchester, M1 7AD Classification: Photo & Digital Imaging Bureaus **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (W)	299	-	384333 397620
200	**Contemporary Trade Directory Entries** Name: Harris Darkrooms Location: 121, Princess Street, Manchester, M1 7AD Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (W)	299	-	384333 397620
200	**Contemporary Trade Directory Entries** Name: Subway Location: Second Floor, 121, Princess Street, Manchester, Lancashire, M1 7AG Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SW (W)	299	-	384333 397620
200	**Contemporary Trade Directory Entries** Name: Chamber Communication Ltd Location: 121, Princess Street, Manchester, Lancashire, M1 7AG Classification: Telecommunications Equipment & Systems **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SW (W)	299	-	384333 397620

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
200	**Contemporary Trade Directory Entries** Name: Northern Contract Cleaners Location: Asia House, 82, Princess Street, Manchester, M1 6NF Classification: Cleaning Services - Commercial **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	340	-	384288 397624
200	**Contemporary Trade Directory Entries** Name: Broomwell Healthwatch Ltd Location: 86, Princess Street, Manchester, Lancashire, M1 6NG Classification: Medical & Dental Laboratories **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12SE (W)	348	-	384297 397578
200	**Contemporary Trade Directory Entries** Name: Seba (Uk) Ltd Location: 84 Princess St, Manchester, Lancashire, M1 6NG Classification: Machine Tool Accessories & Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12SE (W)	349	-	384296 397577
201	**Contemporary Trade Directory Entries** Name: Principal Car Sales Location: 18, Sparkle Street, Manchester, M1 2NA Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	312	-	384919 397993
201	**Contemporary Trade Directory Entries** Name: Central Motor Services Location: 26-32, Store Street, Manchester, M1 2WD Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	322	-	384894 398024
202	**Contemporary Trade Directory Entries** Name: Track Brewing Co Location: Unit 5 Sheffield Street, Manchester, Greater Manchester, M1 2ND Classification: Brewers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A14NW (E)	318	-	385026 397839
203	**Contemporary Trade Directory Entries** Name: F & B Hosiery Location: 10, Nether Street, Manchester, M12 6HY Classification: Lingerie & Hosiery Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	328	-	384990 397514
203	**Contemporary Trade Directory Entries** Name: Ryder Towing Equipment Ltd Location: Mancunian Way, Manchester, Lancashire, M12 6HJ Classification: Trailers & Towing Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	357	-	385029 397521
204	**Contemporary Trade Directory Entries** Name: W H Hammond & Co (Manchester) Ltd Location: 58, Richmond Street, Manchester, M1 3WB Classification: Soft Furnishings - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	329	-	384296 397807
205	**Contemporary Trade Directory Entries** Name: Northwest Metrocab Uk Plc Location: 31-35, Chapeltown Street, Manchester, M1 2NN Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	349	-	384980 397985
205	**Contemporary Trade Directory Entries** Name: A & A Autos Location: 31-35, Chapeltown Street, Manchester, M1 2NN Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	349	-	384980 397985
206	**Contemporary Trade Directory Entries** Name: Dordaf & Partners Location: Flat 8, Roby Court, 14, Roby Street, Manchester, M1 3AG Classification: Bathroom Fixtures - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	360	-	384557 398090

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
206	**Contemporary Trade Directory Entries** Name: Sa Group Services Location: Stan, Lancashire, M1 3BL Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18SW (N)	383	-	384530 398105
207	**Contemporary Trade Directory Entries** Name: Crown Knitwear Ltd Location: 10-20, Grosvenor Street, MANCHESTER, M1 7JJ Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	362	-	384785 397340
207	**Contemporary Trade Directory Entries** Name: Le Missey Ltd Location: 10-20, Grosvenor Street, Manchester, Lancashire, M1 7JJ Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8NE (S)	362	-	384785 397340
208	**Contemporary Trade Directory Entries** Name: Manchester Carpet Cleaning Location: 111, Piccadilly, Manchester, M1 2HX Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	364	-	384648 398114
208	**Contemporary Trade Directory Entries** Name: Damp Pro Location: Rodwell Tower, 111, Piccadilly, Manchester, M1 2HY Classification: Damp & Dry Rot Control **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SW (N)	364	-	384647 398114
208	**Contemporary Trade Directory Entries** Name: Cash For Scrap Cars Location: 111, Piccadilly, Manchester, M1 2HX Classification: Scrap Yards **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	364	-	384648 398114
208	**Contemporary Trade Directory Entries** Name: 118 Cleaning Location: Piccadilly, Manchester, Lancashire, M1 2HX Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18SW (N)	364	-	384648 398114
208	**Contemporary Trade Directory Entries** Name: Scrap Yard In Anchester Htt Location: Rodwell Tower, 111, Piccadilly, Manchester, M1 2HY Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	364	-	384647 398114
208	**Contemporary Trade Directory Entries** Name: Balfour Beatty Rail Signalling Ltd Location: 111 Piccadilly, Manchester, M1 2HY Classification: Railways **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	364	-	384647 398114
208	**Contemporary Trade Directory Entries** Name: Piccadily Dry Cleaners Location: Unit B,Rodwell Tower,111 Piccadilly, Manchester, Lancashire, M1 2HY Classification: Dry Cleaners **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	364	-	384647 398114
208	**Contemporary Trade Directory Entries** Name: Ucarpia.Com Location: 111, Piccadilly, Manchester, M1 2HX Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	364	-	384648 398114

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
209	**Contemporary Trade Directory Entries** Name: Ireland & Hindley Ltd Location: Unit 8, Downing Street Industrial Estate, Charlton Place, Ardwick, Manchester, M12 6HH Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	365	-	384972 397438
209	**Contemporary Trade Directory Entries** Name: Olympus Coachcraft Location: Unit 7, Downing Street Industrial Estate, Charlton Place, Ardwick, Manchester, Lancashire, M12 6HH Classification: Car Customisation & Conversion Specialists **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	381	-	384980 397422
210	**Contemporary Trade Directory Entries** Name: Election Workshop Location: Unit 3, Sheffield Street, Manchester, M1 2ND Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (E)	366	-	385079 397827
211	**Contemporary Trade Directory Entries** Name: G A Armstrong Location: 81, Dale Street, Manchester, M1 2HG Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	368	-	384742 398122
212	**Contemporary Trade Directory Entries** Name: Spi Materials Location: 105 Princess St, Manchester, Lancashire, M1 6DD Classification: Electricity Companies **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12NE (W)	382	-	384240 397804
213	**Contemporary Trade Directory Entries** Name: Print Chain Location: Barlow House, Minshull Street, Manchester, Greater Manchester, M1 3DZ Classification: Printers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A13NW (NW)	391	-	384380 398036
214	**Contemporary Trade Directory Entries** Name: Speedy Location: Unit 1-3, Downing Street Industrial Estate, Charlton Place, Ardwick, Manchester, M12 6HH Classification: Lifting Equipment **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8NE (SE)	404	-	384953 397372
214	**Contemporary Trade Directory Entries** Name: Speedy Services Location: Unit 1-3, Downing Street Industrial Estate, Charlton Place, Ardwick, Manchester, M12 6HH Classification: Lifting Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	406	-	384943 397363
214	**Contemporary Trade Directory Entries** Name: The Studio Workshop Location: Downing Street Indust Est,Charlton Pl, Ardwick, Manchester, M12 6HH Classification: Photographic Equipment & Supplies - Wholesale **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SE (SE)	417	-	384995 397388
215	**Contemporary Trade Directory Entries** Name: Mayfield Press Location: The Mayfield Centre, Fairfield Street, Manchester, M1 2QF Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	404	-	385124 397665
216	**Contemporary Trade Directory Entries** Name: Hilclare Ltd Location: Unit 1, Bond Street Industrial Estate, Mancunian Way, Manchester, M12 6HW Classification: Lighting Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	405	-	385076 397508

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
216	**Contemporary Trade Directory Entries** Name: Klyne & Klyne Location: Unit 5, Bond Street Industrial Estate, Mancunian Way, Manchester, M12 6HW Classification: Do It Yourself Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	405	-	385076 397508
217	**Contemporary Trade Directory Entries** Name: Scrap A Car Manchester Location: Portland Tower,Portland Street, Manchester, Greater Manchester, M1 3LF Classification: Salvage Dealers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A12NE (NW)	409	-	384285 397965
217	**Contemporary Trade Directory Entries** Name: Leaflet Distribution Manchester Location: Portland Tower,Portland Street, Manchester, Lancashire, M1 3HU Classification: Distribution Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	412	-	384280 397963
217	**Contemporary Trade Directory Entries** Name: Scrap A Car For Cash Manchester Location: Portland Tower, Portland Street, Manchester, M1 3LD Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	412	-	384280 397963
217	**Contemporary Trade Directory Entries** Name: See-Av Location: Manchester One, 53 Portland Street, Manchester, Greater Manchester, M1 3LD Classification: Cinema Equipment **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A12NE (NW)	412	-	384280 397963
217	**Contemporary Trade Directory Entries** Name: Best Stairlift Company Reviews Location: Suite 473,53 Portland Street, Manchester, Greater Manchester, M1 3LD Classification: Stairlifts - Manufacturers & Installers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	412	-	384280 397963
217	**Contemporary Trade Directory Entries** Name: Debs Europe Liason Office Location: Portland Tower, Portland Street, Manchester, M1 3LD Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	412	-	384280 397963
217	**Contemporary Trade Directory Entries** Name: Beverley Clifton Morris Location: Portland Tower, Portland Street, Manchester, Lancashire, M1 3LF Classification: Mechanical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	412	-	384280 397963
217	**Contemporary Trade Directory Entries** Name: Scrap Cars For Cash Manchester Location: Portland St, Manchester, Lancashire, M1 3LF Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A12NE (NW)	412	-	384280 397963
218	**Contemporary Trade Directory Entries** Name: Unique Knitwear Ltd Location: 62, Chapeltown Street, Manchester, M1 2WQ Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	413	-	385054 397994
218	**Contemporary Trade Directory Entries** Name: Garsdale Knitwear Ltd Location: 64, Chapeltown Street, Manchester, M1 2WQ Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	432	-	385072 398003

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
218	**Contemporary Trade Directory Entries** Name: Abbey Knitwear Ltd Location: Manchester, M1 2WH Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	447	-	385088 398007
218	**Contemporary Trade Directory Entries** Name: Abbey Knitwear Ltd Location: 66-72, Chapeltown Street, Manchester, M1 2WH Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	447	-	385088 398007
218	**Contemporary Trade Directory Entries** Name: Euro Textiles Ltd Location: 66-72, Chapeltown Street, Manchester, M1 2WH Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	447	-	385088 398007
218	**Contemporary Trade Directory Entries** Name: Imperial Knitwear Ltd Location: 66-72, Chapeltown Street, Manchester, M1 2WH Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	451	-	385092 398008
218	**Contemporary Trade Directory Entries** Name: Abbey Knitwear (Manchester) Ltd Location: 66-72, Chapeltown Street, Manchester, M1 2WH Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	451	-	385092 398008
218	**Contemporary Trade Directory Entries** Name: Dream Knitwear Location: 66-72, Chapeltown Street, Manchester, Lancashire, M1 2WH Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	451	-	385092 398008
218	**Contemporary Trade Directory Entries** Name: A M S Manchester Location: 66-72, Chapeltown Street, Manchester, Lancashire, M1 2WH Classification: Boilers - Servicing, Replacements & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	451	-	385092 398008
218	**Contemporary Trade Directory Entries** Name: Samson Hosiery Ltd Location: 66-72, Chapeltown Street, Manchester, M1 2WH Classification: Leisure & Sportswear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	451	-	385092 398008
218	**Contemporary Trade Directory Entries** Name: Khalil Knitwear Location: 66-72, Chapeltown Street, Manchester, Lancashire, M1 2WH Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	451	-	385092 398008
218	**Contemporary Trade Directory Entries** Name: Celsius Air Conditioning Ltd Location: 56, Thomas Telford Basin, Manchester, M1 2NH Classification: Air Conditioning & Refrigeration Contractors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	453	-	385074 398035
219	**Contemporary Trade Directory Entries** Name: Scootabout International Location: 101, Princess Street, Manchester, Lancashire, M1 6DD Classification: Materials Handling Equipment **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12NE (W)	428	-	384208 397860
219	**Contemporary Trade Directory Entries** Name: Licence Trade Consultants Location: Imex House, 40, Princess Street, Manchester, Lancashire, M1 6DE Classification: Brewers' Equipment & Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12NE (W)	460	-	384170 397844

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
219	**Contemporary Trade Directory Entries** Name: Northern Consultancy Of Medical Management Ltd Location: Imex House, 40, Princess Street, Manchester, Lancashire, M1 6DE Classification: Medical & Dental Laboratories **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12NE (W)	460	-	384170 397844
219	**Contemporary Trade Directory Entries** Name: R S I S Projects Ltd Location: Imex House, 40, Princess Street, Manchester, Lancashire, M1 6DE Classification: Railways **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12NE (W)	460	-	384170 397844
219	**Contemporary Trade Directory Entries** Name: Patriot Advertising Solutions Location: Imex House, 40, Princess Street, Manchester, M1 6DE Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	460	-	384170 397844
219	**Contemporary Trade Directory Entries** Name: Dunbar & Boardman Partnership Location: Imex House, 40, Princess Street, Manchester, Lancashire, M1 6DE Classification: Lift Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	460	-	384170 397844
219	**Contemporary Trade Directory Entries** Name: London Global Location: 40 Princess Street, Manchester, Greater Manchester, M1 6DE Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	460	-	384170 397844
220	**Contemporary Trade Directory Entries** Name: M C C S Location: 6 Paton St, Manchester, Lancashire, M1 2BA Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18SW (N)	438	-	384618 398185
220	**Contemporary Trade Directory Entries** Name: N S Fashion Location: 64-66, Dale Street, Manchester, Lancashire, M1 2HR Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	462	-	384645 398213
221	**Contemporary Trade Directory Entries** Name: D C Motor Engineers Location: 45, York Street, Manchester, M1 7DE Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	442	-	384226 397506
222	**Contemporary Trade Directory Entries** Name: Pure Electric Location: 4-10 London Road, Manchester, Greater Manchester, M1 3AN Classification: Electric Motor Sales & Service **Status: Active** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	444	-	384547 398175
223	**Contemporary Trade Directory Entries** Name: Maronixardwick Location: 50 Downing St, Manchester, Lancashire, M1 7JE Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8NE (SE)	449	-	384911 397296
224	**Contemporary Trade Directory Entries** Name: Aecon Location: Bridgewater House 58-60, Whitworth Street, Manchester, M1 6LT Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	456	-	384165 397640
224	**Contemporary Trade Directory Entries** Name: First North Western Location: Bridgewater House, 58, Whitworth Street, Manchester, M1 6LS Classification: Railways **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	464	-	384158 397633

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
225	**Contemporary Trade Directory Entries** Name: Corstorphine & Wright Location: Paradise Wharf, Ducie Street, Manchester, Lancashire, M1 2JN Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	470	-	384962 398155
226	**Contemporary Trade Directory Entries** Name: Fine Shape (Clothing) Ltd Location: 19a Ducie St,Eidr Ho, Manchester, M1 2JE Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SE (N)	475	-	384865 398205
227	**Contemporary Trade Directory Entries** Name: Mels Location: 2, Stockland Close, Manchester, M13 9WY Classification: Ironing & Home Laundry Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	477	-	384713 397202
228	**Contemporary Trade Directory Entries** Name: Trevor Autos Location: 108d, North Western Street, Manchester, M1 2WS Classification: Mechanical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	478	-	385201 397732
228	**Contemporary Trade Directory Entries** Name: City Lubrication Services Location: 108c, North Western Street, Manchester, M1 2WS Classification: Mot Testing Centres **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A14NW (E)	492	-	385214 397723
229	**Contemporary Trade Directory Entries** Name: Lamb Bros Location: 4, Cakebread Street, Manchester, M12 6HF Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	480	-	385074 397377
229	**Contemporary Trade Directory Entries** Name: Euro Beds Location: Unit 1, Manor Street, Manchester, M12 6HE Classification: Bed & Mattress Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	480	-	385074 397377
229	**Contemporary Trade Directory Entries** Name: Grand Central Autos Location: 4, Cakebread Street, Manchester, Lancashire, M12 6HF Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SW (SE)	480	-	385074 397377
229	**Contemporary Trade Directory Entries** Name: Auto Care Manchester Location: 2, Manor Street, Manchester, M12 6HE Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	480	-	385074 397377
229	**Contemporary Trade Directory Entries** Name: Bench Location: Tanzaro House, Ardwick Green North, Manchester, M12 6FZ Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	481	-	385040 397343
229	**Contemporary Trade Directory Entries** Name: Equator Vegetarian Foods Location: Progress Centre, Charlton Place, Ardwick, Manchester, Lancashire, M12 6HS Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A9NW (SE)	481	-	385040 397343

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
229	**Contemporary Trade Directory Entries** Name: Blue Com Location: The Mews, Tanzaro House, Charlton Place, Ardwick, Manchester, Lancashire, M12 6HS Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status:** **Inactive** Positional Accuracy: Manually positioned to the address or location	A9NW (SE)	481	-	385040 397343
229	**Contemporary Trade Directory Entries** Name: City Traders Ltd Location: Progress Centre, Charlton Place, Ardwick, Manchester, M12 6HS Classification: Cosmetic Manufacturers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	481	-	385040 397343
229	**Contemporary Trade Directory Entries** Name: C S O Electronics Ltd Location: Unit 3,Progress Centre,Charlton Pl, Ardwick, Manchester, Lancashire, M12 6HS Classification: Electronic Engineers **Status:** **Inactive** Positional Accuracy: Manually positioned to the address or location	A9NW (SE)	482	-	385040 397342
230	**Contemporary Trade Directory Entries** Name: Cleaners (Manchester) Location: Apartment 725, 40, Hilton Street, Manchester, M1 2BL Classification: Cleaning Services - Domestic **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	483	-	384718 398238
231	**Contemporary Trade Directory Entries** Name: R Tech Group Ltd Location: Unit 5, Progress Centre, Charlton Place, Manchester, M12 6HS Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	486	-	385038 397334
232	**Contemporary Trade Directory Entries** Name: R & G Industrial Sewing Machines Ltd Location: Portugal Street East, Manchester, M1 2WX Classification: Sewing Machines - Industrial **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	490	-	385156 397975
233	**Contemporary Trade Directory Entries** Name: Hong Kong Printing Co Ltd Location: 41, Faulkner Street, Manchester, M1 4EE Classification: Printers **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	491	-	384224 398021
234	**Contemporary Trade Directory Entries** Name: Kama Services Ltd Location: GAINSBOROUGH HOUSE, 109, PORTLAND STREET, MANCHESTER, M1 6DN Classification: Cleaning Services - Domestic **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A12NE (W)	497	-	384129 397834
234	**Contemporary Trade Directory Entries** Name: V T G Location: Gainsborough House, 109, Portland Street, Manchester, Lancashire, M1 6DN Classification: Lift Manufacturers **Status:** **Inactive** Positional Accuracy: Manually positioned to the address or location	A12NE (W)	501	-	384124 397827
234	**Contemporary Trade Directory Entries** Name: Operations Abroad Ltd Location: Gainsborough House, 109, Portland Street, Manchester, M1 6DN Classification: Hospitals **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	501	-	384124 397827
234	**Contemporary Trade Directory Entries** Name: Feather Brooksbank Location: 117-119, Portland Street, Manchester, M1 6ED Classification: Tungsten Tool Manufacturers & Distributors **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	513	-	384105 397794

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
235	**Contemporary Trade Directory Entries** Name: Keppie Design Location: 1, Portland Street, Manchester, M1 3BE Classification: Mechanical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	499	-	384519 398224
236	**Contemporary Trade Directory Entries** Name: Impex Trading Co Location: Flat 23, Oxford Place, 7, Oxford Road, Manchester, M1 6EY Classification: Carpets & Rugs - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	503	-	384176 397471
237	**Contemporary Trade Directory Entries** Name: Van Kollem Location: Unit 4,Ducie House,37 Ducie St, Manchester, Lancashire, M1 2JW Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SE (NE)	503	-	384932 398209
237	**Contemporary Trade Directory Entries** Name: Powell Creative Products Location: Duplex 1, Ducie House, 37, Ducie Street, Manchester, M1 2JW Classification: Stationery Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	504	-	384933 398209
237	**Contemporary Trade Directory Entries** Name: Baked Goods Distribution Location: Unit 201, Ducie House, 37, Ducie Street, Manchester, M1 2JW Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	504	-	384933 398209
237	**Contemporary Trade Directory Entries** Name: Tlc Equipment (Europe) Location: Unit 215, Ducie House, 37, Ducie Street, Manchester, Lancashire, M1 2JW Classification: Engineering Machine Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	504	-	384933 398209
237	**Contemporary Trade Directory Entries** Name: Concept 3 Ltd Location: Unit 103, Ducie House, 37, Ducie Street, Manchester, Lancashire, M1 2JW Classification: Glass Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	504	-	384933 398209
237	**Contemporary Trade Directory Entries** Name: Gold Star Ions Location: 10, Pigeon Street, Manchester, M1 2JX Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	533	-	384955 398231
237	**Contemporary Trade Directory Entries** Name: I B S Manchester Engines Reconditioning Location: 10, Pigeon Street, Manchester, M1 2JX Classification: Mechanical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	533	-	384955 398231
238	**Contemporary Trade Directory Entries** Name: Jogo Associates Ltd Location: 49-51, Dale Street, Manchester, M1 2HF Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	506	-	384671 398259
239	**Contemporary Trade Directory Entries** Name: Honeyhull Ltd Location: 56, Dale Street, Manchester, M1 2HN Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	511	-	384616 398259
239	**Contemporary Trade Directory Entries** Name: Uk Fashion Wear Ltd Location: 56, Dale Street, Manchester, M1 2HN Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	511	-	384616 398259

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
239	**Contemporary Trade Directory Entries** Name: Fashionpulse Location: 56, Dale Street, Manchester, Lancashire, M1 2HN Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	511	-	384616 398259
239	**Contemporary Trade Directory Entries** Name: Iana Ltd Location: 47, Dale Street, Manchester, M1 2HF Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	526	-	384655 398278
239	**Contemporary Trade Directory Entries** Name: A Garstang & Co Ltd Location: 16, Newton Street, Manchester, M1 2AE Classification: Shirt Makers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	537	-	384614 398284
239	**Contemporary Trade Directory Entries** Name: Maximum Bright Services Location: Dale House,35 Dale St, Manchester, Lancashire, M1 2HF Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	559	-	384643 398310
239	**Contemporary Trade Directory Entries** Name: Mpg Ltd Location: Dale House, 35, Dale Street, Manchester, Lancashire, M1 2HF Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	560	-	384644 398311
239	**Contemporary Trade Directory Entries** Name: Slack & Andrews Location: Dale House, 35, Dale Street, Manchester, Lancashire, M1 2HF Classification: Jewellery Manufacturers & Repairers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	561	-	384644 398311
239	**Contemporary Trade Directory Entries** Name: Maximum Bright Services Location: Dale House, 35, Dale Street, Manchester, Lancashire, M1 2HF Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	561	-	384644 398311
240	**Contemporary Trade Directory Entries** Name: Final Print Location: Grosvenor Street,All Saints, Manchester, Greater Manchester, M1 7HL Classification: Printers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A8NW (S)	514	-	384509 397178
240	**Contemporary Trade Directory Entries** Name: Billington Foods Location: 39-44 Davy Close, Park Farm Industrial Estate, Wellingborough, Northamptonshire, NN8 6XX Classification: Food Products - Manufacturers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A8NW (S)	514	-	384509 397178
240	**Contemporary Trade Directory Entries** Name: Wildwood Charcoal & Coppice Products Location: 53 Warehead Cottages, Halnaker, Chichester, West Sussex, PO18 0NF Classification: Coal & Smokeless Fuel Merchants & Distributors **Status: Active** Positional Accuracy: Manually positioned to the address or location	A8NW (S)	514	-	384509 397178
240	**Contemporary Trade Directory Entries** Name: Fleetwood Agencies Location: Grosvenor House, 94-96, Grosvenor Street, Manchester, M1 7HL Classification: Rubber & Plastic Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (S)	516	-	384507 397176

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
240	**Contemporary Trade Directory Entries** Name: Euro Exim Ltd Location: 96-98, Grosvenor Street, Manchester, M1 7HL Classification: Chemicals - Distributors & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (S)	516	-	384506 397177
240	**Contemporary Trade Directory Entries** Name: Influx Design & Print Location: 98, Grosvenor Street, Manchester, M1 7HL Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (S)	517	-	384497 397179
241	**Contemporary Trade Directory Entries** Name: Bantuway Manchester Ltd Location: 105, Temperance Street, Manchester, M12 6HR Classification: Meat - Wholesale **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	518	-	385238 397655
242	**Contemporary Trade Directory Entries** Name: Shaheen Knitwear Ltd Location: 17, Manor Street, Manchester, M12 6HE Classification: Packaging & Wrapping Equipment & Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	526	-	385130 397372
242	**Contemporary Trade Directory Entries** Name: 2 Squared Agency Location: 27, Manor Street, Manchester, Lancashire, M12 6HE Classification: Footwear Manufacturers & Wholesale **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A9NW (SE)	532	-	385107 397337
243	**Contemporary Trade Directory Entries** Name: Transport For Greater Manchester Location: 2, Picadilly Place, Manchester, Lancashire, M1 3BG Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	526	-	384406 398205
244	**Contemporary Trade Directory Entries** Name: Norman Disney & Young Location: St. James House, 7, Charlotte Street, Manchester, Lancashire, M1 4DZ Classification: Mechanical Engineers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	526	-	384227 398079
244	**Contemporary Trade Directory Entries** Name: British Engineering Services Location: 5, New York Street, Manchester, M1 4JB Classification: Engineering Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	551	-	384233 398120
245	**Contemporary Trade Directory Entries** Name: Simone'S Bespoke Housekeeping Service Location: 32, Hilton Street, Manchester, M1 2EH Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	527	-	384708 398282
245	**Contemporary Trade Directory Entries** Name: Lanford Ltd Location: 30-32, Hilton Street, Manchester, M1 2EH Classification: Shirt Makers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	527	-	384708 398282
245	**Contemporary Trade Directory Entries** Name: Gio Goi Location: Fourways House,Hilton St, Manchester, Lancashire, M1 2EJ Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SE (N)	540	-	384741 398294
245	**Contemporary Trade Directory Entries** Name: Chowhan & Co Location: 14, Tariff Street, Manchester, M1 2FF Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	546	-	384701 398301

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
245	**Contemporary Trade Directory Entries** Name: T D S Fashions Location: Second Floor, 14, Tariff Street, Manchester, M1 2FF Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	546	-	384701 398301
245	**Contemporary Trade Directory Entries** Name: Complete Processing Location: 14, Tariff Street, Manchester, Lancashire, M1 2FF Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SE (N)	546	-	384701 398301
245	**Contemporary Trade Directory Entries** Name: Style House Manchester Ltd Location: Ground Floor, Fourways House, 16, Tariff Street, Manchester, Lancashire, M1 2FN Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SE (N)	560	-	384729 398314
245	**Contemporary Trade Directory Entries** Name: Local Map Co Location: Tariff St, Manchester, Lancashire, M1 2FF Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18SW (N)	572	-	384663 398325
245	**Contemporary Trade Directory Entries** Name: Priority Chauffeur Services Location: Hilton House, 26-28, Hilton Street, Manchester, M1 2EH Classification: Car Engine Tuning & Diagnostic Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	582	-	384682 398336
245	**Contemporary Trade Directory Entries** Name: B Y Form Location: 3, Tariff Street, Manchester, M1 2FF Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	585	-	384724 398340
245	**Contemporary Trade Directory Entries** Name: Minuteman Press Location: 27a Hilton st, Manchester, Greater Manchester, M1 1EL Classification: Printers **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A18SE (N)	595	-	384694 398350
246	**Contemporary Trade Directory Entries** Name: Rentokil Specialist Hygiene Location: Faulkner House, Faulkner Street, Manchester, M1 4DY Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	528	-	384264 398118
246	**Contemporary Trade Directory Entries** Name: Scrap Cars Vans Caravans Buyer Location: Faulkner House, Faulkner Street, Manchester, M1 4DY Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	528	-	384264 398118
246	**Contemporary Trade Directory Entries** Name: Arrow Electronics Uk Location: 5 New York Street, Manchester, Greater Manchester, M1 4JB Classification: Electronic Component Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	554	-	384245 398136
247	**Contemporary Trade Directory Entries** Name: Scrap That Car Location: 91, PRINCESS STREET, MANCHESTER, M1 4HT Classification: Salvage Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (W)	532	-	384129 397942

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
247	**Contemporary Trade Directory Entries** Name: Lewis Bookmakers Location: 48a, Faulkner Street, Manchester, M1 4FH Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	534	-	384143 397975
248	**Contemporary Trade Directory Entries** Name: K M Print Design Ltd Location: 52, HEYROD STREET, MANCHESTER, M1 2WW Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (E)	535	-	385220 397942
248	**Contemporary Trade Directory Entries** Name: Gorman Shorrock & Davies Ltd Location: 52, Heyrod Street, Manchester, M1 2WW Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (E)	536	-	385221 397942
249	**Contemporary Trade Directory Entries** Name: Max Spielmann Location: 63, Piccadilly, Manchester, Lancashire, M1 2AG Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	539	-	384534 398271
249	**Contemporary Trade Directory Entries** Name: Oil Colour Chemists Association Location: First Floor, 59, Piccadilly, Manchester, M1 2AQ Classification: Adhesives, Glues & Sealants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	549	-	384522 398277
249	**Contemporary Trade Directory Entries** Name: John Addley Ltd Location: Clayton House, 59, Piccadilly, Manchester, Lancashire, M1 2AQ Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	550	-	384518 398278
249	**Contemporary Trade Directory Entries** Name: Scotfax Location: Clayton House, 59, Piccadilly, Manchester, Lancashire, M1 2AQ Classification: Photocopiers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	550	-	384518 398278
249	**Contemporary Trade Directory Entries** Name: Scotfax Location: Clayton House, 59, Piccadilly, Manchester, Lancashire, M1 2AQ Classification: Photocopiers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	550	-	384518 398278
249	**Contemporary Trade Directory Entries** Name: Forward Bird Control Location: Clayton House, 59, Piccadilly, Manchester, Lancashire, M1 2AQ Classification: Pest & Vermin Control **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	550	-	384518 398278
249	**Contemporary Trade Directory Entries** Name: Oceanblue Logistics Location: Clayton House, 59, Piccadilly, Manchester, Lancashire, M1 2AQ Classification: Freight Forwarders **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	550	-	384518 398278
249	**Contemporary Trade Directory Entries** Name: Multitude Estates Ltd Location: Clayton House, 59, Piccadilly, Manchester, M1 2AQ Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	550	-	384518 398278
249	**Contemporary Trade Directory Entries** Name: Force C Location: 5 Newton St, Manchester, M1 1HW Classification: Jewellery Manufacturers & Repairers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	556	-	384542 398290

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
249	**Contemporary Trade Directory Entries** Name: P N H Location: St. Margarets Chambers, 5, Newton Street, Manchester, Lancashire, M1 1HL Classification: Jewellery Manufacturers & Repairers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	556	-	384543 398291
249	**Contemporary Trade Directory Entries** Name: Carr Manufacturing Co (Radcliffe) Ltd Location: First Floor, Clayton House, 59, Piccadilly, Manchester, M1 2AS Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	561	-	384529 398292
249	**Contemporary Trade Directory Entries** Name: Damp Aid Location: Clayton House, 59, Piccadilly, Manchester, M1 2AQ Classification: Damp & Dry Rot Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	561	-	384529 398292
249	**Contemporary Trade Directory Entries** Name: Kane Contracts Ltd Location: Third Floor,Clayton House,59 Piccadilly, Manchester, M1 2AQ Classification: Cleaning Services - Commercial **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	561	-	384528 398292
249	**Contemporary Trade Directory Entries** Name: Cherry Smart Services Ltd Location: Clayton House, 59, Piccadilly, Manchester, M1 2AQ Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	561	-	384529 398292
249	**Contemporary Trade Directory Entries** Name: Oxyrane Uk Location: Piccadilly House, 49, Piccadilly, Manchester, M1 2AP Classification: Laboratories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	575	-	384494 398296
249	**Contemporary Trade Directory Entries** Name: O C M Print Location: Piccadilly House, 49, Piccadilly, Manchester, M1 2AP Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	575	-	384494 398296
249	**Contemporary Trade Directory Entries** Name: Sudstech Location: Piccadilly House,49 Piccadilly, Manchester, Greater Manchester, M1 2AP Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	575	-	384494 398296
249	**Contemporary Trade Directory Entries** Name: Manchester Office Cleaners Location: Piccadilly House, 49, Piccadilly, Manchester, M1 2AP Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	576	-	384494 398297
250	**Contemporary Trade Directory Entries** Name: C H A Technologies Group Location: St. James Buildings, 79, Oxford Street, Manchester, M1 6FQ Classification: Knitting Yarn Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	540	-	384075 397678
250	**Contemporary Trade Directory Entries** Name: Soleheat Location: St. James Buildings, 79, Oxford Street, Manchester, M1 6HT Classification: Under Floor Heating **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	540	-	384075 397678
250	**Contemporary Trade Directory Entries** Name: Heatrise Location: St. James Buildings, 79, Oxford Street, Manchester, M1 6HT Classification: Under Floor Heating **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	540	-	384075 397678

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
250	**Contemporary Trade Directory Entries** Name: Soleheat Location: FOURTH FLOOR, ST. JAMES BUILDING, 79, OXFORD STREET, MANCHESTER, M1 6HT Classification: Under Floor Heating **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A12SE (W)	540	-	384075 397678
250	**Contemporary Trade Directory Entries** Name: Faupel Plc Location: St. James Buildings, 79, Oxford Street, Manchester, Lancashire, M1 6FQ Classification: Soft Furnishings - Manufacturers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	540	-	384075 397678
250	**Contemporary Trade Directory Entries** Name: Jany (Uk) Location: St. James Buildings, 79, Oxford Street, Manchester, Lancashire, M1 6FQ Classification: Commercial Vehicle Bodybuilders & Repairers **Status:** **Inactive** Positional Accuracy: Manually positioned to the address or location	A12SE (W)	540	-	384075 397678
251	**Contemporary Trade Directory Entries** Name: Manchester Van Hire Location: 7, Heyrod Street, Manchester, M1 2WW Classification: Garage Services **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	540	-	385211 397977
251	**Contemporary Trade Directory Entries** Name: Dalkeith Autos Location: 7, Heyrod Street, Manchester, M1 2WW Classification: Garage Services **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	540	-	385211 397977
251	**Contemporary Trade Directory Entries** Name: A J Crawford & Sons Location: 37, Longacre Street, Manchester, M1 2WN Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	543	-	385198 398009
251	**Contemporary Trade Directory Entries** Name: G B M Location: 2, Heyrod Street, Manchester, M1 2WW Classification: Printers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	587	-	385242 398021
252	**Contemporary Trade Directory Entries** Name: Royal Mail Logistics Location: Travis Street, Manchester, Lancashire, M1 2NG Classification: Distribution Services **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	544	-	385267 397755
253	**Contemporary Trade Directory Entries** Name: Hayes Of Manchester Location: 29, Wadeson Road, Manchester, M13 9UG Classification: Garage Services **Status:** **Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A8NE (SE)	546	-	384937 397201
253	**Contemporary Trade Directory Entries** Name: Motor Fix Auto Ltd Location: Unit 29b,Wadeson Road, Manchester, Greater Manchester, M13 9UG Classification: Mot Testing Centres **Status:** **Active** Positional Accuracy: Manually positioned within the geographical locality	A8NE (SE)	565	-	384950 397186
254	**Contemporary Trade Directory Entries** Name: Print Copy Shop Location: Mandela Buildings, 99, Oxford Road, Manchester, M1 7EL Classification: Copying & Duplicating Services **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	553	-	384328 397221

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
254	**Contemporary Trade Directory Entries** Name: Print Location: Mandela Buildings, 99, Oxford Road, Manchester, M1 7EL Classification: Copying & Duplicating Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	553	-	384328 397221
255	**Contemporary Trade Directory Entries** Name: Bookbind Location: 2-4, Oxford Road, Manchester, Lancashire, M1 5QA Classification: Bookbinders **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12SE (SW)	553	-	384146 397423
256	**Contemporary Trade Directory Entries** Name: Crescent Auto Centre Ltd Location: 29, Wadeson Road, Manchester, M13 9UG Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	555	-	384986 397215
256	**Contemporary Trade Directory Entries** Name: Halfords Autocentre Location: 22, Ardwick Green South, Manchester, M13 9XE Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	583	-	385025 397206
256	**Contemporary Trade Directory Entries** Name: Halfords Autocentre Manchester (Ardwick Green) Location: 22-24, Ardwick Green South, Manchester, M13 9XE Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	583	-	385025 397206
256	**Contemporary Trade Directory Entries** Name: Westwood Securities Shutters Ltd Location: 24, Ardwick Green South, Manchester, Lancashire, M13 9XE Classification: Roller Shutter Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	583	-	385025 397206
256	**Contemporary Trade Directory Entries** Name: Dainese D-Store Location: 22, Ardwick Green South, Manchester, M13 9XE Classification: Cycle Accessories, Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	597	-	385062 397213
257	**Contemporary Trade Directory Entries** Name: Logistica Fleet Services Location: St. Andrews Square, Manchester, M1 2NS Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	557	-	385265 397873
257	**Contemporary Trade Directory Entries** Name: Rockbar Location: St. Andrews Square, Manchester, M1 2NS Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	557	-	385265 397873
257	**Contemporary Trade Directory Entries** Name: T T Express Location: St. Andrews Square, Manchester, M1 2NS Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	557	-	385265 397873
258	**Contemporary Trade Directory Entries** Name: Nxgen Europe Ltd Location: City Tower,Piccadilly Plaza, Manchester, Greater Manchester, M1 4BT Classification: Cash Registers & Check-Out Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	563	-	384277 398173
259	**Contemporary Trade Directory Entries** Name: Gesco Location: Oxford Rd, Manchester, M1 7ED Classification: Plastics - Injection Moulding **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A7NE (SW)	564	-	384246 397276

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
260	**Contemporary Trade Directory Entries** Name: B G M Wire Products Ltd Location: 102, North Western Street, Manchester, M12 6JL Classification: Wire Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A14SW (E)	569	-	385290 397674
260	**Contemporary Trade Directory Entries** Name: Manchester Tyre Services Location: 101, Fairfield Street, Manchester, M1 2WG Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	595	-	385317 397709
260	**Contemporary Trade Directory Entries** Name: Greenwell Motors Location: 94-104, Fairfield Street, Manchester, M1 2WR Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	613	-	385334 397669
260	**Contemporary Trade Directory Entries** Name: Fletcher Garages Location: 94-104, Fairfield Street, Manchester, M1 2WR Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	613	-	385334 397669
261	**Contemporary Trade Directory Entries** Name: Davies Brothers Tyres Location: Unit 5, Chancel Place, Store Street, Manchester, M1 2WB Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	570	-	385116 398162
261	**Contemporary Trade Directory Entries** Name: Presbar Diecastings Location: Store Street, Manchester, M1 2WD Classification: Die-Casting Equipment & Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	600	-	385113 398206
262	**Contemporary Trade Directory Entries** Name: Best Rest Location: 120-122, Grosvenor Street, Manchester, M1 7HL Classification: Bed & Mattress Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	574	-	384426 397144
263	**Contemporary Trade Directory Entries** Name: S A S Fashions Ltd Location: 55-59, Ducie Street, Manchester, M1 2JQ Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	584	-	385015 398256
264	**Contemporary Trade Directory Entries** Name: Aesthetic Services Soda Blasting Location: Devonshire House, 36, George Street, Manchester, M1 4HA Classification: Blast Cleaning **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	586	-	384185 398122
264	**Contemporary Trade Directory Entries** Name: A D T Location: 1, New York Street, Manchester, M1 4HD Classification: Firefighting Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	623	-	384182 398170
265	**Contemporary Trade Directory Entries** Name: Zed Two Location: 131-133 Portland St, Manchester, Lancashire, M1 4PZ Classification: Toys, Games & Sporting Goods - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12NE (W)	587	-	384027 397732
266	**Contemporary Trade Directory Entries** Name: Oakland Fabrics Ltd Location: 44, George Street, Manchester, M1 4HF Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	589	-	384149 398085

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
266	**Contemporary Trade Directory Entries** Name: Sofas4u Location: George House, 48, George Street, Manchester, Lancashire, M1 4HF Classification: Furniture - Reproduction **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	589	-	384140 398073
266	**Contemporary Trade Directory Entries** Name: Hazexperts Location: International House,61 Mosley Street, Manchester, Greater Manchester, M2 3HZ Classification: Chemical Recycling & Disposal Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	625	-	384126 398113
266	**Contemporary Trade Directory Entries** Name: Prontaprint Location: 71a, Mosley Street, Manchester, M2 3JN Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	628	-	384105 398090
266	**Contemporary Trade Directory Entries** Name: Prontaprint Location: 71a, Mosley Street, Manchester, M2 3JN Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	629	-	384107 398094
266	**Contemporary Trade Directory Entries** Name: C F E S Location: Woolwich House, 61, Mosley Street, Manchester, M2 3HZ Classification: Ventilators & Ventilation Systems **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	633	-	384117 398115
266	**Contemporary Trade Directory Entries** Name: Prime Power Solution Location: Woolwich House, 61, Mosley Street, Manchester, M2 3HZ Classification: Electricity Generating & Distributing Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	633	-	384117 398115
266	**Contemporary Trade Directory Entries** Name: North West Lightning Protection Ltd Location: WOOLWICH HOUSE, 61, MOSLEY STREET, MANCHESTER, M2 3HZ Classification: Engineering Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	633	-	384117 398115
266	**Contemporary Trade Directory Entries** Name: Manchester House Cleaning Services Location: WOOLWICH HOUSE, 61, MOSLEY STREET, MANCHESTER, M2 3HZ Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	633	-	384117 398115
267	**Contemporary Trade Directory Entries** Name: William Hodgson & Co Location: Sixth Floor, Churchgate House, 56, Oxford Street, Manchester, Lancashire, M1 6EU Classification: Oils - Edible **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12SE (W)	590	-	384028 397647
268	**Contemporary Trade Directory Entries** Name: Harrison Motors Location: 51 New Wakefield St, Manchester, Lancashire, M1 5NP Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A12SE (SW)	595	-	384080 397457
269	**Contemporary Trade Directory Entries** Name: Urban Fabrication & Engineering Ltd Location: 100, Temperance Street, Manchester, Lancashire, M12 6HU Classification: Steel Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	595	-	385309 397610

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
269	**Contemporary Trade Directory Entries** Name: Bakewell Engineering Ltd Location: 99, North Western Street, Manchester, M12 6JL Classification: Metal Products - Fabricated **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	631	-	385349 397635
269	**Contemporary Trade Directory Entries** Name: Revolution It Location: 100, Fairfield Street, Manchester, Lancashire, M1 2WR Classification: Computer Recycling & Disposal **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	638	-	385357 397655
269	**Contemporary Trade Directory Entries** Name: Fairfield Motor Garage Location: 100, Fairfield Street, Manchester, M1 2WR Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	638	-	385357 397655
269	**Contemporary Trade Directory Entries** Name: Autocare Assist Location: 100, Fairfield Street, Manchester, M1 2WR Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	639	-	385359 397654
269	**Contemporary Trade Directory Entries** Name: Generation Clothing Location: 98 North Western St, Manchester, Lancashire, M12 6JL Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SE (E)	649	-	385366 397624
269	**Contemporary Trade Directory Entries** Name: Wander Beyond Brewing Location: 98 North Western Street, Manchester, Greater Manchester, M12 6JL Classification: Brewers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (E)	650	-	385366 397622
269	**Contemporary Trade Directory Entries** Name: Cristecuk Ltd Location: 102 Fairfield St, Manchester, Lancashire, M1 2WR Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SE (E)	654	-	385374 397654
269	**Contemporary Trade Directory Entries** Name: Cristecuk Garage Location: 102 Fairfield Street, Manchester, Lancashire, M1 2WR Classification: Breakdown and Recovery **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SE (E)	655	-	385375 397656
269	**Contemporary Trade Directory Entries** Name: The Cab Co Location: 102 Fairfield St, Manchester, Lancashire, M1 2WR Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SE (E)	662	-	385380 397638
270	**Contemporary Trade Directory Entries** Name: Arriva North West Ltd Location: St. Andrews Square, Manchester, M1 2NS Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	596	-	385312 397834
271	**Contemporary Trade Directory Entries** Name: Bodyguard Clothing Ltd Location: 33, Dale Street, Manchester, Lancashire, M1 2HE Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	604	-	384638 398354
271	**Contemporary Trade Directory Entries** Name: Zig Zag Clothing Ltd Location: 33, Dale Street, Manchester, Lancashire, M1 2HE Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	604	-	384638 398354

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
271	**Contemporary Trade Directory Entries** Name: Ben Sherman Location: 47, Newton Street, Manchester, Lancashire, M1 1FT Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	627	-	384618 398376
271	**Contemporary Trade Directory Entries** Name: Guy Foam Location: 10, Little Lever Street, Manchester, M1 1HR Classification: Photo & Digital Imaging Bureaus **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	635	-	384599 398382
271	**Contemporary Trade Directory Entries** Name: J & B Textiles Location: 14, Little Lever Street, Manchester, M1 1HR Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	644	-	384607 398392
271	**Contemporary Trade Directory Entries** Name: Print Pug Location: Suite 3b 22 Lever Street, Manchester, Greater Manchester, M1 1EA Classification: Printers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A18NW (N)	652	-	384556 398392
271	**Contemporary Trade Directory Entries** Name: Alert 2 Media Location: 24, Lever Street, Manchester, Lancashire, M1 1DZ Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	652	-	384580 398396
271	**Contemporary Trade Directory Entries** Name: Ax-S Global Location: 22, Lever Street, Manchester, M1 1EA Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	652	-	384556 398392
271	**Contemporary Trade Directory Entries** Name: Elert 2 Media Location: 24, Lever Street, Manchester, Lancashire, M1 1DZ Classification: Printers Textile **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	652	-	384580 398397
271	**Contemporary Trade Directory Entries** Name: Godske Group Location: 22, Lever Street, Manchester, M1 1EA Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	652	-	384556 398392
271	**Contemporary Trade Directory Entries** Name: Ax S Global Location: 22, Lever Street, Manchester, M1 1EA Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	652	-	384556 398392
271	**Contemporary Trade Directory Entries** Name: Stairlifts Manchester Location: Studio 18,18 Hilton Street, Manchester, Greater Manchester, M1 1FR Classification: Stairlifts - Manufacturers & Installers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	655	-	384620 398404
272	**Contemporary Trade Directory Entries** Name: Brian Winder G C C Ltd Location: Aeroworks, 5, Adair Street, Manchester, M1 2NQ Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	605	-	385280 397981
272	**Contemporary Trade Directory Entries** Name: P A Metals Location: 7, Adair Street, Manchester, Lancashire, M1 2NQ Classification: Scrap Metal Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	605	-	385280 397981

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
272	**Contemporary Trade Directory Entries** Name: Armstrongs Office Furniture Location: 1, Adair Street, MANCHESTER, M1 2NQ Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	605	-	385280 397981
272	**Contemporary Trade Directory Entries** Name: Intercity Group Ltd Location: Aeroworks, 5, Adair Street, Manchester, Lancashire, M1 2NQ Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	605	-	385280 397981
272	**Contemporary Trade Directory Entries** Name: Gorton Bros Ltd Location: Aeroworks, 5, Adair Street, Manchester, Lancashire, M1 2NQ Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	605	-	385280 397981
272	**Contemporary Trade Directory Entries** Name: Paragon Hygiene Services Ltd Location: Aeroworks, 5, Adair Street, Manchester, Lancashire, M1 2NQ Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14NW (NE)	605	-	385280 397981
272	**Contemporary Trade Directory Entries** Name: L P M Cleaning Location: Aeroworks, 5, Adair Street, Manchester, M1 2NQ Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	605	-	385280 397981
273	**Contemporary Trade Directory Entries** Name: Stratstone Jaguar Location: 19-21, Upper Brook Street, Manchester, M13 9XH Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	614	-	384691 397062
273	**Contemporary Trade Directory Entries** Name: Williams Jaguar Ltd Location: 19-21, Upper Brook Street, Manchester, M13 9XH Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	614	-	384690 397062
274	**Contemporary Trade Directory Entries** Name: Dee Wong Food Ltd Location: Unit 1, Hoyle Street, Manchester, M12 6HG Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	614	-	385298 397492
274	**Contemporary Trade Directory Entries** Name: Bearing Mart Location: Unit 1, Hoyle Street, Manchester, Lancashire, M12 6HG Classification: Engineering Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	614	-	385298 397492
274	**Contemporary Trade Directory Entries** Name: Ply-Lining (Northern) Ltd Location: Unit 1, Hoyle Street, Manchester, M12 6HG Classification: Commercial Vehicle Bodybuilders & Repairers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	616	-	385298 397487
274	**Contemporary Trade Directory Entries** Name: Ardwick Auto Spares Location: Unit 2, Hoyle Street, Manchester, M12 6HG Classification: Car Breakdown & Recovery Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	633	-	385320 397495
274	**Contemporary Trade Directory Entries** Name: Manchester Recovery Services Location: Unit 3, Hoyle Street, Manchester, M12 6HG Classification: Car Breakdown & Recovery Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	641	-	385328 397495

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
274	**Contemporary Trade Directory Entries** Name: Manmunian Garage Location: Unit 6, Hoyle Street, Manchester, M12 6HG Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	651	-	385329 397469
274	**Contemporary Trade Directory Entries** Name: Jemm Autos Location: Unit 4, Hoyle Street, Manchester, M12 6HG Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	651	-	385338 397495
275	**Contemporary Trade Directory Entries** Name: Weeshred Ltd Location: 13th Floor City Tower,Piccadilly Plaza, Manchester, Greater Manchester, M1 4BT Classification: Shredding Equipment & Services **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A17SE (NW)	615	-	384236 398207
276	**Contemporary Trade Directory Entries** Name: City Recovery & Storage Location: 50, Newton Street, Manchester, Lancashire, M1 2EA Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	617	-	384658 398370
277	**Contemporary Trade Directory Entries** Name: Tariff Street Motors Location: 43 Tariff St, Manchester, M1 2FF Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SE (N)	623	-	384902 398348
278	**Contemporary Trade Directory Entries** Name: Showerdrape Ltd Location: 3, Longacre Street, Manchester, M1 2WN Classification: Bathroom Fixtures - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	625	-	385257 398073
279	**Contemporary Trade Directory Entries** Name: Eric Brownbill Fashion Agencies Location: 20, Dale Street, Manchester, Lancashire, M1 1EZ Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	629	-	384527 398362
279	**Contemporary Trade Directory Entries** Name: Watts Bros (Manchester) Ltd Location: 20, Dale Street, Manchester, Lancashire, M1 1EZ Classification: Hats & Caps - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	629	-	384527 398362
279	**Contemporary Trade Directory Entries** Name: La Vie Facile Location: 20, Dale Street, Manchester, Lancashire, M1 1EZ Classification: Footwear Manufacturers & Wholesale **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	629	-	384527 398362
279	**Contemporary Trade Directory Entries** Name: Medusa 19 Ltd Location: 2nd Floor, Manchester, Greater Manchester, M1 1EZ Classification: Chemicals - Distributors & Wholesalers **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A18SW (N)	650	-	384524 398383
279	**Contemporary Trade Directory Entries** Name: K O Sports Location: Apartment 104, Chatsworth House, 19, Lever Street, Manchester, M1 1BY Classification: Sports Equipment Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	658	-	384491 398382

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
279	**Contemporary Trade Directory Entries** Name: Scrap Car Now Today Cash Manchester Town Location: Chatsworth House, 19, Lever Street, Manchester, M1 1AN Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	658	-	384492 398382
280	**Contemporary Trade Directory Entries** Name: Geek Fix Location: Manchester, Greater Manchester, M1 2jq Classification: Machinery - Industrial & Commercial **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A19SW (NE)	637	-	385077 398280
280	**Contemporary Trade Directory Entries** Name: I T Designs Location: 81, Ducie Street, Manchester, M1 2JQ Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	644	-	385084 398284
280	**Contemporary Trade Directory Entries** Name: Crime Scene Cleaning Services Location: 83, Ducie Street, Manchester, M1 2JQ Classification: Hygiene & Cleansing Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	649	-	385090 398286
280	**Contemporary Trade Directory Entries** Name: Network Print Support Ltd Location: 83, Ducie Street, Manchester, M1 2JQ Classification: Photocopiers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	649	-	385090 398286
280	**Contemporary Trade Directory Entries** Name: Car Scraping Scrap Yards In Manchester Location: 83, Ducie Street, Manchester, M1 2JQ Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	649	-	385090 398286
280	**Contemporary Trade Directory Entries** Name: Breeze Carpet Cleaners Ltd Location: 83, Ducie Street, Manchester, M1 2JQ Classification: Carpet, Curtain & Upholstery Cleaners **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: Bestbooze Location: 83 Ducie Street, Manchester, Greater Manchester, M1 2JQ Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: Energiea Limited Location: 83, Ducie Street, Manchester, M1 2JQ Classification: Energy Efficient Products and Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: Compare Parking Deals Location: 83, Ducie Street, Manchester, M1 2JQ Classification: Car Painters & Sprayers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: Cleanhappy Location: 83, Ducie Street, Manchester, M1 2JQ Classification: Cleaning Services - Domestic **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: Shutters & Blinds Uk Location: 83 Ducie Street, Manchester, Greater Manchester, M1 2JQ Classification: Blinds, Awnings & Canopies **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
280	**Contemporary Trade Directory Entries** Name: The Bizz Location: 83, Ducie Street, Manchester, M1 2JQ Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: Total Clean Manchester Location: Manchester, Greater Manchester, M1 2jq Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A19SW (NE)	650	-	385098 398281
280	**Contemporary Trade Directory Entries** Name: A R C Window Films Ltd Location: 83, Ducie Street, Manchester, M1 2JQ Classification: Window Film Manufacturers and Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: Network Print Support Location: 83, Ducie Street, Manchester, M1 2JQ Classification: Copying & Duplicating Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: M B Energy Location: 83 Ducie Street, Manchester, Greater Manchester, M1 2JQ Classification: Gas Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: S T Caravan Services Location: 83 Ducie Street, Manchester, Greater Manchester, M1 2JQ Classification: Caravans - Servicing & Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: Heros Carpet Clean Location: 83, DUCIE STREET, MANCHESTER, M1 2JQ Classification: Carpet, Curtain & Upholstery Cleaners **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: Come Around Clean Location: 83, DUCIE STREET, MANCHESTER, M1 2JQ Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: Cleared 4 U Rubbish Removals Location: 83 Ducie Street, Manchester, Greater Manchester, M1 2JQ Classification: Waste Disposal Services **Status: Active** Positional Accuracy: Manually positioned to the address or location	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: Kinderlee Cleaning Location: 83, DUCIE STREET, MANCHESTER, M1 2JQ Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: Ecolamp Recycling Ltd Location: 83, Ducie Street, Manchester, M1 2JQ Classification: Recycling Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286
280	**Contemporary Trade Directory Entries** Name: Sparkle Cleaning Services Location: 83 Ducie Street, Manchester, Greater Manchester, M1 2JQ Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	650	-	385091 398286

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
280	**Contemporary Trade Directory Entries** Name: J Cotton & Co Location: 126, Great Ancoats Street, Manchester, M4 6DE Classification: Car Breakdown & Recovery Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	651	-	385076 398298
280	**Contemporary Trade Directory Entries** Name: French Polisher Manchester Location: Rear Of 1b Great Ancoats Street, Manchester, Greater Manchester, M4 6DE Classification: French Polishing **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A19SW (NE)	651	-	385075 398298
280	**Contemporary Trade Directory Entries** Name: Golden Girls Cleaning & Laundry Services Location: 132-134, Great Ancoats Street, Manchester, M4 6DE Classification: Laundries & Launderettes **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	654	-	385092 398291
280	**Contemporary Trade Directory Entries** Name: Golden Girls Manchester Uk Ltd Location: 132-134, Great Ancoats Street, Manchester, M4 6DE Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	654	-	385092 398291
280	**Contemporary Trade Directory Entries** Name: Spirit Cleaning Location: 132-134, Great Ancoats Street, Manchester, M4 6DE Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	654	-	385092 398291
280	**Contemporary Trade Directory Entries** Name: M C Genesis Ltd Location: 132-134, Great Ancoats Street, Manchester, Lancashire, M4 6DE Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Manually positioned to the address or location	A19SW (NE)	654	-	385092 398290
280	**Contemporary Trade Directory Entries** Name: Ocean Design Uk Location: 132-134, Great Ancoats Street, Manchester, M4 6DE Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	655	-	385093 398291
280	**Contemporary Trade Directory Entries** Name: North West Cleaning Solutions Ltd Location: 132-134, Great Ancoats Street, Manchester, M4 6DE Classification: Cleaning Materials & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	655	-	385093 398291
280	**Contemporary Trade Directory Entries** Name: Online Building Supplies Location: 132-134, Great Ancoats Street, Manchester, M4 6DE Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	655	-	385093 398291
280	**Contemporary Trade Directory Entries** Name: Lush Carpet Cleaners Location: 132-134, Great Ancoats Street, Manchester, M4 6DE Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	655	-	385093 398291
280	**Contemporary Trade Directory Entries** Name: Castle Comfort Stairlifts Ltd Location: 132-134, Great Ancoats Street, Manchester, M4 6DE Classification: Stairlifts - Manufacturers & Installers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	655	-	385093 398291
280	**Contemporary Trade Directory Entries** Name: Damp Aid Uk Location: 132-134, Great Ancoats Street, Manchester, M4 6DE Classification: Damp & Dry Rot Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	655	-	385093 398291

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
280	**Contemporary Trade Directory Entries** Name: Currys Location: Unit 2a Currys Pc World Central Retail Park,Great Ancoats Street, Manchester, Greater Manchester, M4 6DL Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A19SW (NE)	678	-	385074 398331
281	**Contemporary Trade Directory Entries** Name: Euro-Industrial Engineering Ltd Location: 133, Grosvenor Street, Manchester, M1 7HE Classification: Pumps - Sales, Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	637	-	384404 397085
282	**Contemporary Trade Directory Entries** Name: Evans Textile (Sales) Ltd Location: Helmet Street, Manchester, M1 2NT Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	637	-	385360 397767
282	**Contemporary Trade Directory Entries** Name: Climate Center Location: 2, Helmet Street, Manchester, Lancashire, M1 2NT Classification: Refrigeration Equipment - Commercial **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	637	-	385360 397767
282	**Contemporary Trade Directory Entries** Name: Climate Centre Location: 2, Helmet Street, Manchester, Lancashire, M1 2NT Classification: Air Conditioning & Refrigeration Contractors **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	637	-	385360 397767
283	**Contemporary Trade Directory Entries** Name: Marco Trading Co Ltd Location: Marco House, Tariff Street, Manchester, M1 2FF Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	640	-	384806 398387
284	**Contemporary Trade Directory Entries** Name: Univick Ltd Location: Ardwick Green North, Manchester, M12 6FZ Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A9NW (SE)	644	-	385190 397262
285	**Contemporary Trade Directory Entries** Name: Indesign (Uk) Ltd Location: 104 Great Ancoats St, Manchester, Lancashire, M4 5BQ Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	647	-	385013 398330
286	**Contemporary Trade Directory Entries** Name: Fast Cash 4 Scrap Cars Manchester Aeg Location: 52, Newton Street, Manchester, M1 1ED Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	656	-	384689 398410
287	**Contemporary Trade Directory Entries** Name: Screwfix Manchester - Ancoats Location: Piccadilly Trading Estate,Great Ancoats Street, Manchester, Greater Manchester, M1 2NP Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	657	-	385343 397959
287	**Contemporary Trade Directory Entries** Name: The Studio Workshop Location: 9, Piccadilly Trading Estate, Manchester, Lancashire, M1 2NP Classification: Photographic Equipment & Supplies - Wholesale **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	690	-	385381 397950

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
287	**Contemporary Trade Directory Entries** Name: Cloudwater Brew Co Location: 7-8, Piccadilly Trading Estate, Manchester, M1 2NP Classification: Brewers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	700	-	385396 397936
288	**Contemporary Trade Directory Entries** Name: Total Hygiene Uk Location: 166-174, Great Ancoats Street, Manchester, M4 7AB Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	657	-	385189 398212
289	**Contemporary Trade Directory Entries** Name: Easy Wheels Location: 8, Lower Ormond Street, Manchester, M1 5QJ Classification: Confectionery Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	666	-	384078 397320
289	**Contemporary Trade Directory Entries** Name: Ormond Street Motors Location: 2-4, Lower Ormond Street, Manchester, M1 5QF Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	667	-	384078 397320
289	**Contemporary Trade Directory Entries** Name: Manchester Print Co Location: 8, Lower Ormond Street, Manchester, M1 5QF Classification: T-Shirts **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	667	-	384078 397320
290	**Contemporary Trade Directory Entries** Name: A & S Fashions Location: Brownsfield Mill, Binns Place, Manchester, M4 5BP Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	672	-	384889 398403
291	**Contemporary Trade Directory Entries** Name: Daisy Fashions Location: 25, Hilton Street, Manchester, M1 1EL Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	673	-	384646 398424
291	**Contemporary Trade Directory Entries** Name: Rawagencies Ltd Location: 22, Little Lever Street, Manchester, M1 1HR Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	683	-	384638 398434
291	**Contemporary Trade Directory Entries** Name: Moving Fashion Ltd Location: 11, Stevenson Square, Manchester, M1 1DB Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	702	-	384632 398453
292	**Contemporary Trade Directory Entries** Name: Wise Pharmaceuticals Ltd Location: Oxford House, 16, Oxford Street, Manchester, M1 5AE Classification: Pharmaceutical Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	675	-	383944 397803
292	**Contemporary Trade Directory Entries** Name: Cas Hire Location: Peter House, 1-2 Oxford Street, Manchester, Greater Manchester, M1 5AN Classification: Air Conditioning Equipment & Systems **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NW (W)	693	-	383930 397837
292	**Contemporary Trade Directory Entries** Name: Twistfix Location: Peter House, Oxford Street, Manchester, M1 5AN Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	700	-	383925 397847

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
292	**Contemporary Trade Directory Entries** Name: Joe Scrapping In Manchester Location: Peter House, Oxford Street, Manchester, M1 5AN Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	700	-	383925 397847
292	**Contemporary Trade Directory Entries** Name: Laundry Shop Location: Peter House, Oxford Street, Manchester, Lancashire, M1 5AN Classification: Dry Cleaners **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12NW (W)	700	-	383925 397847
292	**Contemporary Trade Directory Entries** Name: Energy Feat Location: Peter House, Oxford Street, Manchester, M1 5AN Classification: Energy Efficient Products and Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	700	-	383925 397847
292	**Contemporary Trade Directory Entries** Name: Pest Solutions Ltd Location: Peter House,Oxford Street, Manchester, Greater Manchester, M1 5AN Classification: Pest & Vermin Control **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NW (W)	701	-	383924 397846
292	**Contemporary Trade Directory Entries** Name: Scrap Yard In Manchester Htt Location: Peter House, Oxford Street, Manchester, M1 5AN Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	701	-	383924 397846
292	**Contemporary Trade Directory Entries** Name: Douglas Fir Ltd Location: Peter House, Oxford Street, Manchester, M1 5AN Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	701	-	383924 397846
292	**Contemporary Trade Directory Entries** Name: Feet & Spine Location: Peter House, Oxford Street, Manchester, M1 5AN Classification: Office Furniture & Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NW (W)	701	-	383924 397846
293	**Contemporary Trade Directory Entries** Name: Lowbend Location: 95, Temperance Street, Manchester, Lancashire, M12 6HU Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SE (E)	688	-	385393 397555
293	**Contemporary Trade Directory Entries** Name: Joe Farrell Location: 93, Temperance Street, Manchester, M12 6HU Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A14SE (E)	709	-	385412 397543
293	**Contemporary Trade Directory Entries** Name: Plastic Art Co Location: 92, Temperance Street, Manchester, M12 6HU Classification: Lamination & Encapsulation Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	714	-	385416 397539
294	**Contemporary Trade Directory Entries** Name: F D T Transport Ltd Location: 113, Fairfield Street, Manchester, Lancashire, M12 6EL Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	696	-	385417 397686
295	**Contemporary Trade Directory Entries** Name: We Print Group Location: Barnett House, 53, Fountain Street, Manchester, M2 2AN Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A17SE (NW)	698	-	384112 398208

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
295	**Contemporary Trade Directory Entries** Name: Msl Interiors Location: Barnett House, 53, Fountain Street, Manchester, M2 2AN Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	698	-	384112 398208
295	**Contemporary Trade Directory Entries** Name: Fast Carpet Cleaners Location: Barnett House, 53, Fountain Street, Manchester, M2 2AN Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	698	-	384112 398208
295	**Contemporary Trade Directory Entries** Name: Indie Cases Location: Barnett House, Manchester, Lancashire, M2 2AN Classification: Mobile Phone Accessories and Car Kits **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	698	-	384112 398208
295	**Contemporary Trade Directory Entries** Name: Scrap My Car Now For Money Manchester Kws Location: Barnett House, 53, Fountain Street, Manchester, M2 2AN Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	698	-	384112 398208
295	**Contemporary Trade Directory Entries** Name: Urban Icon Location: Barnett House, 53, Fountain Street, Manchester, M2 2AN Classification: Garden & Patio Furniture Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	698	-	384112 398208
295	**Contemporary Trade Directory Entries** Name: The Quantum Print Location: Barnett House,53 Fountain Street, Manchester, Greater Manchester, M2 2AN Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	699	-	384110 398206
295	**Contemporary Trade Directory Entries** Name: Atlantic Property Services Location: Barnett House,53 Fountain Street, Manchester, Greater Manchester, M2 2AN Classification: Cladding Suppliers & Installers **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	699	-	384110 398206
295	**Contemporary Trade Directory Entries** Name: Clean Corner Location: 20 York Street, Manchester, Lancashire, M2 3BB Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	702	-	384123 398224
296	**Contemporary Trade Directory Entries** Name: Klein Imaging Location: Studio 15a,8 Lower Ormond Street, Manchester, Greater Manchester, M1 5QJ Classification: Copying & Duplicating Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	698	-	384053 397300
296	**Contemporary Trade Directory Entries** Name: Danebridge Engineering Co Ltd Location: 3, Lower Chatham Street, Manchester, M1 5QL Classification: Air Conditioning Equipment & Systems **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	722	-	384044 397273
297	**Contemporary Trade Directory Entries** Name: Ops International Ltd Location: Brook House, 64-72, Spring Gardens, Manchester, M2 2BQ Classification: Oil Companies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	699	-	384072 398164
298	**Contemporary Trade Directory Entries** Name: Smiler Service Location: Flat 111, The Lock Building, 41, Whitworth Street West, Manchester, M1 5BD Classification: Freight Forwarders **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SW (W)	705	-	383933 397538

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
298	**Contemporary Trade Directory Entries** Name: Bandbox Laundry Premier Outlet Location: Unit C 41 Whitworth Street, Manchester, Greater Manchester, M1 5BE Classification: Laundry & Dry Cleaning Supplies **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SW (W)	705	-	383933 397538
298	**Contemporary Trade Directory Entries** Name: Graham'S Motors Location: 59, Whitworth Street West, Manchester, Lancashire, M1 5WW Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12SW (W)	711	-	383939 397495
299	**Contemporary Trade Directory Entries** Name: Taylor Edwards & Co Location: Royal Buildings, 2, Mosley Street, Manchester, Lancashire, M2 3AN Classification: Gas Companies **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	709	-	384259 398336
300	**Contemporary Trade Directory Entries** Name: Anexsys Location: 77 Newton Street, Manchester, Greater Manchester, M1 1EX Classification: Copying & Duplicating Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	714	-	384700 398469
301	**Contemporary Trade Directory Entries** Name: D & G Packaging Ltd Location: Afflecks Arcade 35-39, Oldham Street, Manchester, M1 1JG Classification: Paper & Cardboard Products & Packaging - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	728	-	384429 398435
301	**Contemporary Trade Directory Entries** Name: Glass Bottle Bottle Glass Location: Afflecks Arcade, 35-39, Oldham Street, Manchester, M1 1JG Classification: Glass Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	742	-	384423 398448
301	**Contemporary Trade Directory Entries** Name: The Bead Shop Location: Aflex Palace, 52, Church Street, Manchester, M4 1PW Classification: Jewellery Manufacturers & Repairers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	742	-	384423 398448
301	**Contemporary Trade Directory Entries** Name: Kustom Korner Location: Aflex Palace, 52, Church Street, Manchester, M4 1PW Classification: T-Shirts **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NW (N)	742	-	384423 398448
301	**Contemporary Trade Directory Entries** Name: Oblong Location: Aflex Palace, 52, Church Street, Manchester, Lancashire, M4 1PW Classification: Abattoirs **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	742	-	384423 398448
301	**Contemporary Trade Directory Entries** Name: Sentsations Location: Afflecks Arcade, 35-39, Oldham Street, Manchester, Lancashire, M1 1JG Classification: Perfume Suppliers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	742	-	384423 398448
302	**Contemporary Trade Directory Entries** Name: Proten Services Location: 35 Fountain Street, Manchester, Greater Manchester, M2 2AN Classification: Damp & Dry Rot Control **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	730	-	384159 398292
302	**Contemporary Trade Directory Entries** Name: Richard Conrad & Co Ltd Location: 36-38, Fountain Street, Manchester, M2 2BE Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	751	-	384114 398283

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
303	**Contemporary Trade Directory Entries** Name: Haadi Composite Woods Location: JOHN DALTON BUILDING, CHESTER STREET, MANCHESTER, M1 5GD Classification: Wood Products, Except Furniture - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	732	-	384069 397222
304	**Contemporary Trade Directory Entries** Name: Tyrewyse Service Centre Location: 8-10 Kale Street, Manchester, Greater Manchester, M13 9XG Classification: Mot Testing Centres **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A8SE (S)	734	-	384962 397009
305	**Contemporary Trade Directory Entries** Name: R Jaffay Location: 63, Houldsworth Street, Manchester, M1 2ES Classification: Furniture Manufacturers - Home & Office **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	736	-	384832 398480
305	**Contemporary Trade Directory Entries** Name: A Jeffay Location: 63, Houldsworth Street, Manchester, M1 2ES Classification: Furniture Manufacturers - Home & Office **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	736	-	384832 398480
305	**Contemporary Trade Directory Entries** Name: Jeffay Location: 63, Houldsworth Street, Manchester, Lancashire, M1 2ES Classification: Furniture Manufacturers - Home & Office **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	736	-	384832 398480
305	**Contemporary Trade Directory Entries** Name: Bec Digital Ltd Location: 47, Houldsworth Street, Manchester, M1 2ES Classification: Photocopiers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	761	-	384803 398510
306	**Contemporary Trade Directory Entries** Name: Printing.Com Location: 119, Great Ancoats Street, Manchester, M4 5AG Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	746	-	384923 398470
306	**Contemporary Trade Directory Entries** Name: Va Clean Manchester Ltd Location: 78, Pickford Street, Manchester, M4 5BT Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	756	-	384915 398483
307	**Contemporary Trade Directory Entries** Name: Flyers Group Location: 12, Hilton Street, Manchester, M1 1JF Classification: Children & Babywear - Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	747	-	384528 398483
307	**Contemporary Trade Directory Entries** Name: Sumayah Deria Ltd Location: 12 Hilton Street, Manchester, Greater Manchester, M1 1JF Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	747	-	384529 398483
307	**Contemporary Trade Directory Entries** Name: Bermona Ltd Location: 12, Hilton Street, Manchester, M1 1JF Classification: Hats & Caps - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	747	-	384528 398483
307	**Contemporary Trade Directory Entries** Name: Matrix Transport Location: Hilton Street, Manchester, Greater Manchester, M1 1JF Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	747	-	384529 398483

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
307	**Contemporary Trade Directory Entries** Name: Dynamik Designs Location: 1, Stevenson Square, Manchester, Lancashire, M1 1DN Classification: Car Accessories Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	754	-	384565 398497
307	**Contemporary Trade Directory Entries** Name: Pro Cleaners Ancoats Location: 19, Hilton Street, Manchester, M1 1JJ Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	760	-	384541 398499
307	**Contemporary Trade Directory Entries** Name: Launderette Location: 19, Hilton Street, Manchester, M1 1JJ Classification: Dry Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	760	-	384541 398499
307	**Contemporary Trade Directory Entries** Name: The Audiences Agency Location: 46-50, Oldham Street, Manchester, M4 1LE Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	782	-	384547 398522
308	**Contemporary Trade Directory Entries** Name: Williams Bmw Location: 45, Upper Brook Street, Manchester, M13 9WS Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SE (S)	750	-	384784 396937
308	**Contemporary Trade Directory Entries** Name: Citroen Manchester - Central Location: 53-57, Upper Brook Street, Manchester, M13 9TD Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SE (S)	789	-	384820 396905
308	**Contemporary Trade Directory Entries** Name: Robins & Day Manchester Location: 53-57, Upper Brook Street, Manchester, M13 9TD Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8SE (S)	790	-	384820 396904
309	**Contemporary Trade Directory Entries** Name: J F Haulage (Manchester) Ltd Location: 127, Fairfield Street, Manchester, M12 6EL Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	751	-	385472 397686
309	**Contemporary Trade Directory Entries** Name: Gilbert Albert & Son Ltd Location: 137, Fairfield Street, Manchester, M12 6FJ Classification: Commercial Vehicle Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	762	-	385483 397683
309	**Contemporary Trade Directory Entries** Name: John Grundy (Labels) Ltd Location: 137, Fairfield Street, Manchester, M12 6FJ Classification: Print Finishers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	762	-	385483 397683
309	**Contemporary Trade Directory Entries** Name: Car Clearence Location: 137, Fairfield Street, Manchester, Lancashire, M12 6FJ Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	762	-	385483 397683

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
309	**Contemporary Trade Directory Entries** Name: A W Allsop (Manchester) Ltd Location: Unit A, Aldow Enterprise Park, Blackett Street, Manchester, Lancashire, M12 6AE Classification: Lamination & Encapsulation Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	788	-	385510 397715
309	**Contemporary Trade Directory Entries** Name: Mr Clutch Location: Blackett Street, Manchester, M12 6EJ Classification: Brake & Clutch Service Centres **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (E)	809	-	385531 397703
309	**Contemporary Trade Directory Entries** Name: Mr Clutch Location: Blackett Street, Manchester, M12 6EJ Classification: Brake & Clutch Service Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	809	-	385531 397703
309	**Contemporary Trade Directory Entries** Name: Mr Clutch Location: Blackett Street, Manchester, M12 6EJ Classification: Brake & Clutch Service Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	809	-	385531 397703
310	**Contemporary Trade Directory Entries** Name: Price Location: Market St, Manchester, Lancashire, M60 1TA Classification: Cutlery Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17NE (NW)	761	-	384250 398390
310	**Contemporary Trade Directory Entries** Name: Belleek Pottery Ltd Location: Market St, Manchester, Lancashire, M60 1TA Classification: Pottery Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17NE (NW)	766	-	384244 398393
311	**Contemporary Trade Directory Entries** Name: Tetra Pak Business Services Ltd Location: The Chancery,58 Spring Gdns, Manchester, M2 1EW Classification: Boxes & Cartons **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	764	-	384010 398190
311	**Contemporary Trade Directory Entries** Name: Whitecliffs Group Location: 61-63, Brown Street, Manchester, Lancashire, M2 2JG Classification: Electrolysis **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	765	-	383995 398172
312	**Contemporary Trade Directory Entries** Name: The White Lab Location: 52, ARDWICK GREEN SOUTH, MANCHESTER, M13 9XF Classification: Laboratories **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	764	-	385227 397130
313	**Contemporary Trade Directory Entries** Name: Steelcase Solutions Location: 12, Booth Street, Manchester, M2 4AW Classification: Furniture Manufacturers - Home & Office **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	766	-	383975 398145
314	**Contemporary Trade Directory Entries** Name: Nisbets Location: 12 Booth Street, Manchester, Greater Manchester, M2 4AW Classification: Catering Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	767	-	383971 398140

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
314	**Contemporary Trade Directory Entries** Name: Frank Rostron Location: 39, Princess Street, Manchester, M2 4FN Classification: Shirt Makers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	802	-	383924 398130
314	**Contemporary Trade Directory Entries** Name: Cheshire Shirtmakers Ltd Location: 39, Princess Street, Manchester, Lancashire, M2 4FN Classification: Shirt Makers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	802	-	383924 398130
315	**Contemporary Trade Directory Entries** Name: The Color Co Location: 41, Spring Gardens, Manchester, M2 2BG Classification: Copying & Duplicating Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	770	-	384065 398263
315	**Contemporary Trade Directory Entries** Name: The Color Co Location: 41, Spring Gardens, Manchester, M2 2BG Classification: Copying & Duplicating Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	770	-	384065 398263
316	**Contemporary Trade Directory Entries** Name: Currys Location: Central Retail Park, Great Ancoats Street, Manchester, Lancashire, M4 6DL Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	771	-	385184 398369
317	**Contemporary Trade Directory Entries** Name: Residential Real Estate Management Location: Student Village, Lower Chatham Street, Manchester, M1 5SX Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	773	-	383973 397285
318	**Contemporary Trade Directory Entries** Name: The Dot Factory Ltd Location: Jubilee House, 10, Durling Street, Manchester, M12 6FS Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	781	-	385346 397234
319	**Contemporary Trade Directory Entries** Name: Autocare M O T & Engineers Ltd Location: 86-87, Temperance Street, Manchester, M12 6HU Classification: Mot Testing Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	783	-	385477 397498
319	**Contemporary Trade Directory Entries** Name: Big Tread Tyre Ltd Location: 86-87, Temperance Street, Manchester, M12 6HU Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	783	-	385477 397498
320	**Contemporary Trade Directory Entries** Name: Pulse Laser Hairaesthetics Location: 18-20, Fountain Street, Manchester, M2 2AA Classification: Electrolysis **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	784	-	384140 398346
320	**Contemporary Trade Directory Entries** Name: Eleven Sports Media Ltd Location: Eleventh Floor, Lowry House, 17, Marble Street, Manchester, M2 3AW Classification: Sports Equipment Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	811	-	384110 398358
320	**Contemporary Trade Directory Entries** Name: Orbit Card Services Location: Lowry House,17 Marble Street, Manchester, Greater Manchester, M2 3AW Classification: Cash Registers & Check-Out Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	811	-	384110 398358

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
321	**Contemporary Trade Directory Entries** Name: Goodwill Safe Boxes Location: 202 City View House,5 Union Street, Ardwick, Manchester, Greater Manchester, M12 4JD Classification: Safes & Vaults - Suppliers & Installers **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	790	-	385437 397369
321	**Contemporary Trade Directory Entries** Name: Proto Gold Marine Services Location: City View House, 5, Union Street, Ardwick, Manchester, M12 4JD Classification: Machinery - Industrial & Commercial **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	790	-	385437 397369
321	**Contemporary Trade Directory Entries** Name: Ici Caldaie Ltd Location: The Works,5 Union St, Ardwick, Manchester, Lancashire, M12 4JD Classification: Boiler Manufacturers **Status:** **Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A9NE (SE)	818	-	385467 397366
321	**Contemporary Trade Directory Entries** Name: Siptel Location: Union St, Ardwick, Manchester, Lancashire, M12 4JD Classification: Telecommunications Equipment & Systems **Status:** **Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A9NE (SE)	821	-	385464 397352
322	**Contemporary Trade Directory Entries** Name: Access Pest Control Location: 16, Peter Street, Manchester, M60 2DS Classification: Pest & Vermin Control **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	791	-	383833 397848
323	**Contemporary Trade Directory Entries** Name: I B B Builders Merchants Location: 24, Piccadilly Trading Estate, Manchester, M1 2NP Classification: Builders' Merchants **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	795	-	385501 397909
323	**Contemporary Trade Directory Entries** Name: Broadcasting Support Services Location: 24, Piccadilly Trading Estate, Manchester, M1 2NP Classification: Distribution Services **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	826	-	385532 397910
324	**Contemporary Trade Directory Entries** Name: K B K Meal Prep Location: 67, GREAT ANCOATS STREET, MANCHESTER, M4 5AB Classification: Food Products - Manufacturers **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	797	-	384863 398537
325	**Contemporary Trade Directory Entries** Name: Texaco Location: Hyde Road, Manchester, Greater Manchester, M18 7EE Classification: Petrol Filling Stations **Status:** **Inactive** Positional Accuracy: Manually positioned to the address or location	A9NW (SE)	799	-	385241 397096
325	**Contemporary Trade Directory Entries** Name: Esso Location: Ardwick Green South, Manchester, M13 9XF Classification: Petrol Filling Stations **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	800	-	385240 397094
325	**Contemporary Trade Directory Entries** Name: Esso Location: Ardwick Green Tesco Service Station, Ardwick Green South, Manchester, M13 9XF Classification: Petrol Filling Stations **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	801	-	385244 397096

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
325	**Contemporary Trade Directory Entries** Name: Tesco Petrol Station Location: Ardwick Green South, Manchester, Greater Manchester, M13 9XF Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Manually positioned to the address or location	A9NW (SE)	801	-	385241 397093
325	**Contemporary Trade Directory Entries** Name: Ardwick Green Service Station Location: Ardwick Green South, Manchester, M13 9XF Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	815	-	385252 397084
326	**Contemporary Trade Directory Entries** Name: Universal Utilities Location: Third Floor, Tootal House, 19-21, Spring Gardens, Manchester, M2 1FB Classification: Gas Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	801	-	384093 398331
326	**Contemporary Trade Directory Entries** Name: Calvin Assett Management Ltd Location: 19 Spring Gdns, Manchester, Lancashire, M2 1FB Classification: Meter Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	807	-	384088 398334
326	**Contemporary Trade Directory Entries** Name: Octapharma Location: The Zenith Building, 26, Spring Gardens, Manchester, Lancashire, M2 1AB Classification: Chemists' & Pharmacists' Suppliers & Wholesalers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	844	-	384054 398354
326	**Contemporary Trade Directory Entries** Name: M60 Rescue & Recovery Location: 406 St James Ct,Brown St, Manchester, Lancashire, M2 2JG Classification: Commercial Vehicle Breakdown & Recovery Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17SE (NW)	854	-	384026 398341
326	**Contemporary Trade Directory Entries** Name: Anywaste Uk Location: St. James Court, 30, Brown Street, Manchester, M2 1DH Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	868	-	384013 398350
326	**Contemporary Trade Directory Entries** Name: Wastelift Location: St. James Court, 30, Brown Street, Manchester, M2 1DH Classification: Waste Disposal Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	868	-	384013 398350
327	**Contemporary Trade Directory Entries** Name: Teese Ltd Location: Unit C, Aldow Enterprise Park, Blackett Street, Manchester, M12 6AE Classification: T-Shirts **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	804	-	385526 397785
327	**Contemporary Trade Directory Entries** Name: Hugo James Ltd Location: Unit D, Aldow Enterprise Park, Blackett Street, Manchester, M12 6AE Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	813	-	385536 397765
328	**Contemporary Trade Directory Entries** Name: Mafana Ltd Location: 65-71, Lever Street, MANCHESTER, M1 1FL Classification: Children & Babywear - Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	806	-	384650 398558
328	**Contemporary Trade Directory Entries** Name: Manchester Printing Co Ltd Location: 75, Lever Street, Manchester, M1 1FL Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	818	-	384667 398572

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
329	**Contemporary Trade Directory Entries** Name: Hunters Contracts Ltd Location: MacIntosh House, 4a, Cambridge Street, Manchester, M1 5GG Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	810	-	383916 397306
330	**Contemporary Trade Directory Entries** Name: George Woodhead & Co Ltd Location: 2, Gloucester Street, Manchester, M1 5GP Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SW (W)	815	-	383844 397455
330	**Contemporary Trade Directory Entries** Name: John Sherratt & Co Ltd Location: Hotspur House, 2, Gloucester Street, Manchester, M1 5QR Classification: Bookbinding & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SW (W)	815	-	383844 397455
330	**Contemporary Trade Directory Entries** Name: Aaa Location: 2, Gloucester Street, Manchester, M1 5GP Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SW (W)	815	-	383844 397455
330	**Contemporary Trade Directory Entries** Name: 24 Design Ltd Location: Hotspur House, 2, Gloucester Street, Manchester, Lancashire, M1 5QR Classification: Furniture Manufacturers - Home & Office **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12SW (W)	815	-	383844 397455
331	**Contemporary Trade Directory Entries** Name: Brenca Metals Ltd Location: Ship Canal House, 98, King Street, Manchester, M2 4WU Classification: Scrap Metal Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	818	-	383976 398234
331	**Contemporary Trade Directory Entries** Name: Nationwide Fuels Llp Location: Ship Canal House,98 King Street, Manchester, Greater Manchester, M2 4WU Classification: Lubricant Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	818	-	383976 398234
331	**Contemporary Trade Directory Entries** Name: Haughton Engineering Services Location: Ship Canal House, 98, King Street, Manchester, Lancashire, M2 4WU Classification: Engineering Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	818	-	383976 398234
332	**Contemporary Trade Directory Entries** Name: Carfinance 247 Location: Block B, 12, Pollard Street, MANCHESTER, M4 7AJ Classification: Car Component Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	822	-	385438 398153
333	**Contemporary Trade Directory Entries** Name: Kea Designer Sportswear Location: Unit 1, Dark Lane, Manchester, Lancashire, M12 6FA Classification: Leisure & Sportswear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	823	-	385534 397568
334	**Contemporary Trade Directory Entries** Name: Beehive Telecom Location: 79, Thomas Street, Manchester, M4 1LQ Classification: Telecommunications Equipment & Systems **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	827	-	384480 398554
335	**Contemporary Trade Directory Entries** Name: Corralls Location: 54-58, Great Ancoats Street, Manchester, M4 5AB Classification: Coal & Smokeless Fuel Merchants & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	827	-	384822 398574

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
335	**Contemporary Trade Directory Entries** Name: Spray Tech Location: Ground Floor, 16, Blossom Street, Manchester, M4 5AW Classification: Printers Textile **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	852	-	384859 398594
335	**Contemporary Trade Directory Entries** Name: Bhana Clothing Location: Ground Floor, 16, Blossom Street, Manchester, Lancashire, M4 5AW Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NE (N)	852	-	384859 398594
335	**Contemporary Trade Directory Entries** Name: Daisy Fashions Location: 16, Blossom Street, Manchester, Lancashire, M4 5AW Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	852	-	384859 398594
335	**Contemporary Trade Directory Entries** Name: Miroil Uk Ltd Location: 13, Blossom Street, Manchester, M4 5AF Classification: Catering Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	874	-	384820 398622
336	**Contemporary Trade Directory Entries** Name: A 2 Z Knitwear Ltd Location: 56, Lever Street, Manchester, M1 1FJ Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	828	-	384720 398582
336	**Contemporary Trade Directory Entries** Name: Silk Beauty Hair Removal Location: 10, Bradley Street, Manchester, M1 1EH Classification: Electrolysis **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	829	-	384673 398583
337	**Contemporary Trade Directory Entries** Name: The Studio Copy Shop Location: 89-95, Oldham Street, Manchester, M4 1LW Classification: T-Shirts **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	828	-	384532 398567
337	**Contemporary Trade Directory Entries** Name: T-Shirt Xpress Location: 89-95, Oldham Street, Manchester, M4 1LW Classification: T-Shirts **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NW (N)	828	-	384532 398567
337	**Contemporary Trade Directory Entries** Name: Stephs Manufacturing Location: 66 Tib St, Manchester, M4 1LG Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	829	-	384515 398564
337	**Contemporary Trade Directory Entries** Name: Fern Audio Ltd Location: 70-72, Tib Street, Manchester, M4 1LG Classification: Sound Equipment Systems Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	838	-	384522 398575
337	**Contemporary Trade Directory Entries** Name: Prime Direct Distribution Ltd Location: 99 Oldham St, Manchester, Lancashire, M4 1LW Classification: Record, Tape & CD Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	843	-	384544 398584
338	**Contemporary Trade Directory Entries** Name: F Dunn & Sons Location: Vesta St, Ancoats, Manchester, M4 6DS Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A19SW (NE)	832	-	385338 398310

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
339	**Contemporary Trade Directory Entries** Name: Manchester City Council Location: Town Hall, Albert Square, Manchester, Lancashire, M2 5DB Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	832	-	383867 398089
340	**Contemporary Trade Directory Entries** Name: J K Dairies Location: 83, North Western Street, Manchester, M12 6DY Classification: Dairies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	833	-	385527 397493
340	**Contemporary Trade Directory Entries** Name: Al-Arabia Cargo Ltd Location: 82 Temperance Street, Manchester, Greater Manchester, M12 6HU Classification: Cargo Handling Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (E)	834	-	385522 397468
340	**Contemporary Trade Directory Entries** Name: Baxter Diesel Service Location: 80, Temperance Street, Manchester, M12 6HU Classification: Fuel Injection Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	855	-	385540 397456
341	**Contemporary Trade Directory Entries** Name: Scott Group Location: Higher Ardwick, Manchester, Greater Manchester, M12 6DB Classification: Pallets, Crates & Packing Cases **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A9NE (SE)	836	-	385412 397231
342	**Contemporary Trade Directory Entries** Name: Best Laundrette Location: 40, Brunswick Street, Manchester, M13 9TQ Classification: Dry Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9SW (SE)	840	-	385122 396964
342	**Contemporary Trade Directory Entries** Name: Best Laundrette Location: 40, Brunswick Street, Manchester, M13 9TQ Classification: Laundries & Launderettes **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9SW (SE)	840	-	385122 396964
343	**Contemporary Trade Directory Entries** Name: Johnsons The Cleaners Location: 24, High Street, Manchester, M4 1QB Classification: Dry Cleaners **Status: Active** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	841	-	384256 398483
344	**Contemporary Trade Directory Entries** Name: Discovery Forensics Location: PALL MALL COURT 61-67, KING STREET, MANCHESTER, M2 4PD Classification: Laboratories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	850	-	383979 398287
344	**Contemporary Trade Directory Entries** Name: J M B Professional Location: Pall Mall Court,61-67 King Street, Manchester, Greater Manchester, M2 4PD Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	850	-	383979 398287
345	**Contemporary Trade Directory Entries** Name: Yating Lighting Location: Oxford Rd, Manchester, Lancashire, M13 9PL Classification: Lighting Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8SW (S)	851	-	384615 396824
346	**Contemporary Trade Directory Entries** Name: M Y Manchester Cleaners Location: 55 Turner Street, Manchester, Greater Manchester, M4 1DN Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18NW (N)	859	-	384389 398560

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
346	**Contemporary Trade Directory Entries** Name: New Deal Skates Location: 51 Turner St, Manchester, M4 1DN Classification: Leisure & Sportswear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	859	-	384389 398560
346	**Contemporary Trade Directory Entries** Name: True Brand International Location: 51, Turner Street, Manchester, Lancashire, M4 1DN Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	859	-	384389 398560
346	**Contemporary Trade Directory Entries** Name: Brookley Ltd Location: 43-45 Turner St, Manchester, M4 1DN Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	866	-	384380 398564
346	**Contemporary Trade Directory Entries** Name: Fashion Row Manchester Ltd Location: 43-45 Turner St, Manchester, M4 1DN Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	866	-	384380 398564
347	**Contemporary Trade Directory Entries** Name: Refuel Global Brands Location: Unit 12, Royal Mills, 17, Redhill Street, Manchester, M4 5BA Classification: Hats & Caps - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	866	-	385027 398562
347	**Contemporary Trade Directory Entries** Name: Ed Chapman Ltd Location: Union Mill, Redhill Street, Manchester, M4 5AU Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	898	-	385066 398582
348	**Contemporary Trade Directory Entries** Name: Awan Auto Tec Location: Unit 1 Mill Green Street, Manchester, Greater Manchester, M12 6FB Classification: Mot Testing Centres **Status: Active** Positional Accuracy: Manually positioned to the address or location	A14SE (E)	868	-	385577 397556
348	**Contemporary Trade Directory Entries** Name: Passion Knitwear Ltd Location: Dark Lane, Manchester, M12 6FA Classification: Knitwear Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (E)	871	-	385573 397521
348	**Contemporary Trade Directory Entries** Name: Choudhary Manufacturing Co Ltd Location: Dark Lane, Manchester, M12 6FA Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	871	-	385573 397521
348	**Contemporary Trade Directory Entries** Name: K H Cabs Repair & Servicing Location: Mill Green St, Manchester, Lancashire, M12 6FB Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A14SE (E)	874	-	385583 397556
349	**Contemporary Trade Directory Entries** Name: The Perfume Shop Manchester Arndale Centre Location: Unit 9a Cromford Court The Perfume Shop, Manchester, Greater Manchester, M4 2EA Classification: Perfume Suppliers **Status: Active** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	868	-	384160 398462

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
349	**Contemporary Trade Directory Entries** Name: Kiddycare International Location: Unit R30, Marsden Way South, Manchester, M4 3AT Classification: Children & Babywear - Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	868	-	384160 398462
350	**Contemporary Trade Directory Entries** Name: Strong Mechanical Services Location: Peter St, Manchester, Lancashire, M2 3NQ Classification: Mechanical Engineers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A12NW (W)	869	-	383770 397932
350	**Contemporary Trade Directory Entries** Name: Down Under Location: 47, Peter Street, Manchester, Lancashire, M2 3NG Classification: Abattoirs **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12NW (W)	903	-	383742 397958
351	**Contemporary Trade Directory Entries** Name: Wsc Cleaning Location: 82 King St, Manchester, Lancashire, M2 4WQ Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	873	-	383923 398256
351	**Contemporary Trade Directory Entries** Name: Firemart Location: 82, King Street, Manchester, M2 4WQ Classification: Firefighting Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	873	-	383923 398256
351	**Contemporary Trade Directory Entries** Name: Mxm Location: 82, King Street, Manchester, Lancashire, M2 4WQ Classification: Medical Equipment Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17SW (NW)	873	-	383923 398256
351	**Contemporary Trade Directory Entries** Name: New Brush Cleaning Services Location: Manchester, Greater Manchester, M2 4nh Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A17SW (NW)	905	-	383877 398248
351	**Contemporary Trade Directory Entries** Name: Alex Atkinson-Fletcher Ltd Location: 76 King Street, Manchester, Greater Manchester, M2 4NH Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	905	-	383877 398248
351	**Contemporary Trade Directory Entries** Name: Wardell Armstrong Llp Location: 76 King Street, Manchester, Greater Manchester, M2 4NH Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	905	-	383877 398248
351	**Contemporary Trade Directory Entries** Name: Incanthera Ltd Location: 76 King Street, Manchester, Greater Manchester, M2 4NH Classification: Laboratories **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	905	-	383877 398248
351	**Contemporary Trade Directory Entries** Name: Yourprintingsolutionltd.Co.Uk Location: 76, KING STREET, MANCHESTER, M2 4NH Classification: Office Furniture & Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	905	-	383877 398248
352	**Contemporary Trade Directory Entries** Name: Cannon Electrical Contractors (Manchester) Ltd Location: 8, Clarence Street, Manchester, M2 4DW Classification: Electrical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	873	-	383872 398182

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
352	**Contemporary Trade Directory Entries** Name: Inpeto Ltd Location: Northern Assurance Building, 9-21, Princess Street, Manchester, Lancashire, M2 4DN Classification: Pet Foods & Animal Feeds **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17SW (NW)	873	-	383872 398182
352	**Contemporary Trade Directory Entries** Name: Johnsons The Cleaners Location: 61, Cross Street, Manchester, M2 4JW Classification: Dry Cleaners **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	901	-	383842 398188
352	**Contemporary Trade Directory Entries** Name: Max Spielmann Location: 59a, Cross Street, Manchester, Lancashire, M2 4JW Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	902	-	383845 398194
353	**Contemporary Trade Directory Entries** Name: Advent Location: 309, Great Ancoats Street, Manchester, M4 7DF Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	879	-	385559 398014
354	**Contemporary Trade Directory Entries** Name: Blossom Motor Co Location: 27, Gun Street, Manchester, M4 5DN Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	880	-	384804 398630
354	**Contemporary Trade Directory Entries** Name: V A Clean Location: 46, Henry Street, Manchester, M4 5DD Classification: Cleaning Services - Domestic **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	888	-	384813 398637
354	**Contemporary Trade Directory Entries** Name: Best Knitwear Ltd Location: 24-28, George Leigh Street, Manchester, M4 5DQ Classification: Knitwear Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	928	-	384809 398678
354	**Contemporary Trade Directory Entries** Name: Al-Murid Pleating Co Location: 24-28, George Leigh Street, Manchester, M4 5DQ Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	928	-	384809 398678
354	**Contemporary Trade Directory Entries** Name: Sam Knitwear Ltd Location: 24-28, George Leigh Street, Manchester, M4 5DQ Classification: Knitwear Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	928	-	384809 398678
355	**Contemporary Trade Directory Entries** Name: Hartecast Location: Union Street, Ardwick, Manchester, Greater Manchester, M12 4JD Classification: Metal Products - Fabricated **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A9NE (SE)	884	-	385516 397316
356	**Contemporary Trade Directory Entries** Name: James Darby Location: The Deaprtment Store, 1-7, Oak Street, Manchester, Lancashire, M4 5JD Classification: Shirt Makers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	887	-	384437 398605

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
356	**Contemporary Trade Directory Entries** Name: The Print Room Location: 46, Edge Street, Manchester, M4 1HN Classification: Screen Process Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	897	-	384422 398611
356	**Contemporary Trade Directory Entries** Name: Taylor & Galvin Location: 46-48, Copperas Street, Manchester, M4 1HS Classification: Jewellery Manufacturers & Repairers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	934	-	384434 398652
356	**Contemporary Trade Directory Entries** Name: Seed Ceramics Location: Studio 14, Manchester Craft Centre, 17, Oak Street, Manchester, Lancashire, M4 5JD Classification: Ceramic Manufacturers, Supplies & Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	939	-	384454 398663
356	**Contemporary Trade Directory Entries** Name: Manchester Craft & Design Centre Location: Manchester Craft Centre, 17, Oak Street, Manchester, M4 5JD Classification: Ceramic Manufacturers, Supplies & Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	939	-	384454 398663
357	**Contemporary Trade Directory Entries** Name: Scrap My Car Now For Money Manchester Kws Location: Lawrence Buildings, Manchester, Lancashire, M2 5WQ Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A12NW (W)	891	-	383774 398020
357	**Contemporary Trade Directory Entries** Name: Mount Distribution Ltd Location: 2 Mount Street, Manchester, Greater Manchester, M2 5WQ Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	892	-	383773 398020
358	**Contemporary Trade Directory Entries** Name: Pdc Manchester Location: 129, Oldham Street, Manchester, M4 1LN Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	903	-	384605 398652
358	**Contemporary Trade Directory Entries** Name: Pdc (Manchester) Location: 129, Oldham Street, Manchester, M4 1LN Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	903	-	384605 398652
358	**Contemporary Trade Directory Entries** Name: Berwick Electronics Location: 53, Tib Street, Manchester, M4 1LS Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	904	-	384559 398648
358	**Contemporary Trade Directory Entries** Name: Print-Wear Ltd Location: 108 Tib Street, Manchester, Lancashire, M4 1LR Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	907	-	384590 398654
358	**Contemporary Trade Directory Entries** Name: Applique Apparel Ltd Location: 110-112, Tib Street, Manchester, M4 1LR Classification: T-Shirts **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NW (N)	913	-	384595 398661

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
358	**Contemporary Trade Directory Entries** Name: The White Peg Co Location: 110-112, Tib Street, Manchester, M4 1LR Classification: Laundries & Launderettes **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	913	-	384595 398661
359	**Contemporary Trade Directory Entries** Name: Total Location: 1-5, Hyde Road, Manchester, M12 6BQ Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	907	-	385404 397106
359	**Contemporary Trade Directory Entries** Name: New Ardwick Body Centre Location: 10-12, Harkness Street, Manchester, M12 6BT Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	917	-	385460 397159
359	**Contemporary Trade Directory Entries** Name: T N A Knitwear Ltd Location: 11, Dolphin Street, Manchester, M12 6BG Classification: Knitting Yarn Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	926	-	385438 397116
359	**Contemporary Trade Directory Entries** Name: T & A Location: 11, Dolphin Street, Manchester, M12 6BG Classification: Knitting Yarn Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	926	-	385438 397116
359	**Contemporary Trade Directory Entries** Name: Fashion Waves Ltd Location: 17, Dolphin Street, Manchester, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	936	-	385453 397119
359	**Contemporary Trade Directory Entries** Name: Echo Manchester Ltd Location: 17, Dolphin Street, Manchester, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	936	-	385453 397119
359	**Contemporary Trade Directory Entries** Name: Muizz Knitwear Ltd Location: 16 Dolphin Street, Manchester, Greater Manchester, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	936	-	385434 397096
359	**Contemporary Trade Directory Entries** Name: Goldenknit M C R Ltd Location: Rear Of, 16, Dolphin Street, Manchester, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	936	-	385434 397096
359	**Contemporary Trade Directory Entries** Name: Classic Knitwear (Uk) Ltd Location: 13, Dolphin Street, Manchester, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	936	-	385453 397119
359	**Contemporary Trade Directory Entries** Name: Mia Fashions (Manchester) Ltd Location: 13, Dolphin Street, Manchester, M12 6BG Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	936	-	385453 397119
359	**Contemporary Trade Directory Entries** Name: Khalil Knitwear Location: 11, Dolphin Street, Manchester, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	936	-	385453 397119

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
359	**Contemporary Trade Directory Entries** Name: Allied Knitwear Location: Ardwick Hall, 16, Dolphin Street, Manchester, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	937	-	385435 397096
359	**Contemporary Trade Directory Entries** Name: Axiom Knitwear Ltd Location: Ardwick Hall, 16, Dolphin Street, Manchester, Lancashire, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	937	-	385435 397096
359	**Contemporary Trade Directory Entries** Name: Omnifore Ltd Location: Ardwick Hall, 16, Dolphin Street, Manchester, Lancashire, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A9NE (SE)	937	-	385435 397096
359	**Contemporary Trade Directory Entries** Name: Awais Knitwear Ltd Location: 16, Dolphin Street, Manchester, M12 6BG Classification: Knitting Yarn Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	937	-	385435 397096
359	**Contemporary Trade Directory Entries** Name: A & I Manchester Ltd Location: 18b, Harkness Street, Manchester, M12 6BT Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	943	-	385487 397153
359	**Contemporary Trade Directory Entries** Name: Zam Zam Knitwear Location: 13, Dolphin Street, Manchester, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	945	-	385457 397111
359	**Contemporary Trade Directory Entries** Name: Yorkshire Trading Location: Unit 9,Dolphin St, Manchester, Lancashire, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A9NE (SE)	946	-	385453 397104
359	**Contemporary Trade Directory Entries** Name: Apollo Tyres Location: 23, Hyde Road, Manchester, M12 6BQ Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	972	-	385464 397076
359	**Contemporary Trade Directory Entries** Name: Apollo Tyre & Service Centre Ltd Location: 23, Hyde Road, Manchester, M12 6BQ Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	972	-	385464 397076
360	**Contemporary Trade Directory Entries** Name: Currys Pc World Location: Pin Mill Brow, Manchester, Greater Manchester, M12 6EH Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	910	-	385633 397729
361	**Contemporary Trade Directory Entries** Name: C G (Europe) Ltd Location: Enterprise House, 15, Whitworth Street West, Manchester, Lancashire, M1 5WG Classification: China & Glassware Manufacturers & Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12SW (W)	914	-	383721 397526

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
362	**Contemporary Trade Directory Entries** Name: Tuesdays Girl Ltd Location: 54, Higher Ardwick, Manchester, M12 6DA Classification: Cosmetic Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	916	-	385503 397226
362	**Contemporary Trade Directory Entries** Name: Dolphin Knitting Co Ltd Location: 54, Higher Ardwick, Manchester, M12 6DA Classification: Knitting Machine - Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	916	-	385503 397226
362	**Contemporary Trade Directory Entries** Name: Horizon Knitwear Location: Horizon House, Harkness Street, Manchester, M12 6BT Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	933	-	385510 397204
362	**Contemporary Trade Directory Entries** Name: Horizon Knitwear Ltd Location: Horizon House, Harkness Street, Manchester, M12 6BT Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	933	-	385510 397204
363	**Contemporary Trade Directory Entries** Name: Amc Graphics Location: Lynx House, 17, Cotton Street, Manchester, M4 6AA Classification: Lithographic Plate Makers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	919	-	384858 398662
363	**Contemporary Trade Directory Entries** Name: Appleyard Press Location: Lynx House, 17, Cotton Street, Manchester, M4 6AA Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	919	-	384858 398662
364	**Contemporary Trade Directory Entries** Name: Tom Blackburn Garage Ltd Location: 74 North Western Street, Manchester, Greater Manchester, M12 6DX Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	920	-	385603 397440
364	**Contemporary Trade Directory Entries** Name: Ventella & Harrison Location: 72, Temperance Street, Manchester, M12 6HU Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A14SE (E)	937	-	385611 397407
364	**Contemporary Trade Directory Entries** Name: A 2 B Logistics Location: 72 Temperance St, Manchester, Lancashire, M12 6HU Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SE (E)	937	-	385610 397406
364	**Contemporary Trade Directory Entries** Name: D C M Services Location: 72, Temperance Street, Manchester, Lancashire, M12 6HU Classification: Recycling Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	937	-	385611 397407
364	**Contemporary Trade Directory Entries** Name: Kendall & Roberts Location: 72, North Western Street, Manchester, M12 6DX Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	944	-	385623 397423
364	**Contemporary Trade Directory Entries** Name: Hosler Motors Location: 70-71, North Western Street, Manchester, M12 6DX Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	959	-	385635 397411

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
365	**Contemporary Trade Directory Entries** Name: Brucella Tait Location: First Floor, 40, Thomas Street, Manchester, M4 1ER Classification: Jewellery Manufacturers & Repairers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	920	-	384366 398617
365	**Contemporary Trade Directory Entries** Name: David Ellis Jewellery Location: First Floor, 40, Thomas Street, Manchester, M4 1ER Classification: Jewellery Manufacturers & Repairers **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NW (N)	920	-	384366 398617
365	**Contemporary Trade Directory Entries** Name: Why Publications Location: 40, Thomas Street, Manchester, Lancashire, M4 1ER Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	920	-	384366 398617
365	**Contemporary Trade Directory Entries** Name: Mehta & Mehta Ltd Location: 38, Thomas Street, Manchester, M4 1ER Classification: Children & Babywear - Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	925	-	384363 398621
365	**Contemporary Trade Directory Entries** Name: Manchester Gold Buyers Location: Thomas St, Manchester, Lancashire, M4 1NA Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18NW (N)	929	-	384390 398634
365	**Contemporary Trade Directory Entries** Name: Marc The Printers Location: 28-30, Edge Street, Manchester, M4 1HN Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	939	-	384399 398647
365	**Contemporary Trade Directory Entries** Name: Gyroscope Ltd Location: 30-32, Thomas Street, Manchester, Lancashire, M4 1ER Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	949	-	384349 398642
366	**Contemporary Trade Directory Entries** Name: N C S M Group Location: 3-9 Hyde Road, Manchester, Greater Manchester, M12 6BQ Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	924	-	385403 397078
366	**Contemporary Trade Directory Entries** Name: Global Facility Management Ltd Location: 3-9 Hyde Road, Manchester, Greater Manchester, M12 6BQ Classification: Cleaning Services - Domestic **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	924	-	385403 397078
367	**Contemporary Trade Directory Entries** Name: Gerards Ltd Location: William St, Ardwick, Manchester, M12 5FX Classification: Ice Cream Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A14SE (E)	924	-	385639 397593
368	**Contemporary Trade Directory Entries** Name: Corner House Publications Location: 2 Tony Wilson Place, Manchester, Greater Manchester, M15 4FN Classification: Distribution Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SW (W)	925	-	383726 397459
369	**Contemporary Trade Directory Entries** Name: The Offices Location: 53 King Street, Manchester, Greater Manchester, M2 4LQ Classification: Office Equipment Servicing & Maintenance **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	927	-	383885 398295

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
369	**Contemporary Trade Directory Entries** Name: Direct Service Solutions Location: 53 King Street, Manchester, Greater Manchester, M2 4LQ Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	927	-	383885 398295
370	**Contemporary Trade Directory Entries** Name: Dev Des I T Location: Jactin House,24 Hood Street, Manchester, Greater Manchester, M4 6WX Classification: Computer Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	928	-	384958 398650
370	**Contemporary Trade Directory Entries** Name: M A Quality Foods Location: Jactin House,24 Hood Street, Manchester, Greater Manchester, M4 6WX Classification: Food Products - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	928	-	384958 398650
371	**Contemporary Trade Directory Entries** Name: Serious Clean Location: 5 Luna Street, Manchester, Greater Manchester, M4 5LX Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	929	-	384736 398683
372	**Contemporary Trade Directory Entries** Name: Merseyside Metalworks Location: 81-97, Upper Brook Street, Manchester, M13 9TX Classification: Air Conditioning Equipment & Systems **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SE (S)	930	-	384888 396777
373	**Contemporary Trade Directory Entries** Name: Diamond Trading Co Location: 7-9, Swan Street, Manchester, M4 5JJ Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	937	-	384619 398687
374	**Contemporary Trade Directory Entries** Name: Pollard Vacforming Co Location: Vulcan Works, Pollard Street, Manchester, Lancashire, M4 7AN Classification: Packaging & Wrapping Equipment & Supplies **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	937	-	385536 398214
374	**Contemporary Trade Directory Entries** Name: Gina Fashions Location: Vulcan Works, Pollard Street, Manchester, Lancashire, M4 7AN Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	937	-	385536 398214
374	**Contemporary Trade Directory Entries** Name: Twentyfour Seven Vulcan Ltd Location: Vulcan Works, Pollard Street, Manchester, Lancashire, M4 7AR Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	937	-	385536 398214
374	**Contemporary Trade Directory Entries** Name: Arthur Henriques Ltd Location: Vulcan Works, Pollard Street, Manchester, M4 7AR Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	938	-	385536 398214
374	**Contemporary Trade Directory Entries** Name: Diamond Auto Salvage Location: 21 Pollard St, Manchester, M4 7AF Classification: Salvage Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A19SE (NE)	950	-	385534 398242
374	**Contemporary Trade Directory Entries** Name: Zolpidem Uk Location: 2 Malta Street, Manchester, Greater Manchester, M4 7BH Classification: Chemists' & Pharmacists' Suppliers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	985	-	385577 398238

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
374	**Contemporary Trade Directory Entries** Name: C H Cross & Son Ltd Location: Vulcan Works, Malta Street, Manchester, M4 7AP Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	986	-	385575 398242
375	**Contemporary Trade Directory Entries** Name: Ats Euromaster Ltd Location: 20, Wilmott Street, Manchester, Lancashire, M15 6BE Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	938	-	383881 397130
376	**Contemporary Trade Directory Entries** Name: Simon & Simon Location: Lock 90,Trumpet Street, Manchester, Greater Manchester, M1 5LW Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12SW (W)	942	-	383683 397574
376	**Contemporary Trade Directory Entries** Name: E F G Matthews Office Furniture Ltd Location: Albion Street, Manchester, M1 5LL Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SW (W)	964	-	383661 397574
377	**Contemporary Trade Directory Entries** Name: New Beach Retail Ltd Location: 75, Tib Street, Manchester, M4 1LS Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	944	-	384598 398692
377	**Contemporary Trade Directory Entries** Name: Quality Engineering Design Ltd Location: 77, Tib Street, Manchester, M4 1LS Classification: Mechanical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	944	-	384598 398692
377	**Contemporary Trade Directory Entries** Name: Quality Engineering Design Location: 77, Tib Street, Manchester, M4 1LS Classification: Mechanical Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NW (N)	944	-	384598 398692
377	**Contemporary Trade Directory Entries** Name: Unique Design Ltd Location: 19-23, Swan Street, Manchester, M4 5JJ Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	972	-	384578 398718
377	**Contemporary Trade Directory Entries** Name: Luton Engineering Services Location: 6 Swan St, Manchester, Lancashire, M4 5JN Classification: Engineering Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A23SW (N)	981	-	384624 398732
377	**Contemporary Trade Directory Entries** Name: Luton Engineering Services S W Ltd Location: 6, Swan Street, Manchester, M4 5JN Classification: Engineering Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A23SW (N)	982	-	384624 398733
378	**Contemporary Trade Directory Entries** Name: Auto Trader Location: 1, Tony Wilson Place, Manchester, M15 4FN Classification: Car Customisation & Conversion Specialists **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (W)	946	-	383735 397371
378	**Contemporary Trade Directory Entries** Name: Autotrader Location: 1, TONY WILSON PLACE, MANCHESTER, M15 4FN Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SW (W)	948	-	383729 397382

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
379	**Contemporary Trade Directory Entries** Name: Seven Brothers Bars Ltd Location: Apartment 802, Ice Plant, 39, Blossom Street, Manchester, M4 6AP Classification: Brewers **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	953	-	384907 398687
380	**Contemporary Trade Directory Entries** Name: Boda Skins Location: Lloyds House, 18-22, Lloyd Street, Manchester, M2 5WA Classification: Leather Garments & Products **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (W)	955	-	383718 398054
380	**Contemporary Trade Directory Entries** Name: Manchester Chemicals & Pigments Ltd Location: Lloyds House, 18-22, Lloyd Street, Manchester, Lancashire, M2 5WA Classification: Chemicals - Distributors & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17SW (W)	955	-	383718 398054
381	**Contemporary Trade Directory Entries** Name: Davidson Powell Design Location: 40, John Dalton Street, Manchester, M2 6LE Classification: Jewellery Manufacturers & Repairers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	955	-	383781 398190
382	**Contemporary Trade Directory Entries** Name: Emptymybins Location: 70, Temperance Street, Manchester, M12 6HU Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	957	-	385627 397393
382	**Contemporary Trade Directory Entries** Name: Mouse Kingdom Location: ARCH 70, TEMPERANCE STREET, MANCHESTER, M12 6HU Classification: Distilleries **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (E)	958	-	385628 397393
382	**Contemporary Trade Directory Entries** Name: Platting Pallets Location: North Western Street, Cressberry Street, Manchester, Greater Manchester, M12 6DX Classification: Pallets, Crates & Packing Cases **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A14SE (E)	984	-	385656 397395
382	**Contemporary Trade Directory Entries** Name: Mr Pigs Motorcycles Location: 67, Temperance Street, Manchester, M12 6DP Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (E)	986	-	385651 397373
383	**Contemporary Trade Directory Entries** Name: Lacamanda Ltd Location: EAGLE BUILDINGS, 64, CROSS STREET, MANCHESTER, M2 4JQ Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	957	-	383833 398276
383	**Contemporary Trade Directory Entries** Name: Pure Beauty Location: 49, King Street, Manchester, Lancashire, M2 7AY Classification: Toiletries **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17SW (NW)	978	-	383832 398310
383	**Contemporary Trade Directory Entries** Name: Thomas Pink Location: 58, King Street, Manchester, M2 4LY Classification: Shirt Makers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	987	-	383803 398286

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
383	**Contemporary Trade Directory Entries** Name: Jonathan Kaye Location: Third Floor, James Binney House, 52, Cross Street, Manchester, M2 7AR Classification: Jewellery Manufacturers & Repairers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	991	-	383826 398323
383	**Contemporary Trade Directory Entries** Name: Now Time Location: James Binney House, 52, Cross Street, Manchester, M2 7AR Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	991	-	383826 398323
383	**Contemporary Trade Directory Entries** Name: Harrisons Cleaning Specialists Location: National House, 36, St. Ann Street, Manchester, M60 8HF Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	993	-	383838 398343
384	**Contemporary Trade Directory Entries** Name: Fragrance Shop Location: 23, ARNDALE CENTRE, MARKET STREET, MANCHESTER, M4 3AB Classification: Perfume Suppliers **Status: Active** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	959	-	384079 398518
384	**Contemporary Trade Directory Entries** Name: Currys Location: 93 Halle Mall Arndale Shopping Centre Greater, Manchester, Greater Manchester, M4 2HU Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A17NE (NW)	959	-	384079 398518
384	**Contemporary Trade Directory Entries** Name: The Perfume Shop Location: Unit L2 Manchester Arndale, Manchester, Greater Manchester, M4 1AZ Classification: Perfume Suppliers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A17NE (NW)	964	-	384089 398531
384	**Contemporary Trade Directory Entries** Name: Currys Pc World Location: 93 Halle Mall, Arndale Shopping Centre, Manchester, M4 2HU Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A17NE (NW)	988	-	384075 398550
384	**Contemporary Trade Directory Entries** Name: Comet Location: 19a Arndale Centre, Manchester, Lancashire, M4 2HU Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A17NE (NW)	1000	-	384059 398554
384	**Contemporary Trade Directory Entries** Name: Currys Location: 165-166, Arndale Centre, Manchester, M4 3AB Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	1000	-	384059 398554
384	**Contemporary Trade Directory Entries** Name: Willie'S Location: 85, Arndale Centre, Manchester, Lancashire, M4 2HU Classification: Wallpapers & Wall Coverings **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	1000	-	384059 398554
384	**Contemporary Trade Directory Entries** Name: The Fast Picture Show Location: 142-143, Market Hall, Arndale Centre, Manchester, M4 2EB Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	1000	-	384059 398554

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
384	**Contemporary Trade Directory Entries** Name: Home Design Store Location: 136, Arndale Centre, Manchester, Lancashire, M4 2EA Classification: Gunsmiths **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	1000	-	384059 398554
384	**Contemporary Trade Directory Entries** Name: Bodycare (Health & Beauty) Location: 111-112, Arndale Centre, Manchester, M4 2EA Classification: Toiletries **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	1000	-	384059 398554
384	**Contemporary Trade Directory Entries** Name: The Sony Centre Location: 162, Arndale Centre, Manchester, Lancashire, M4 3AB Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	1000	-	384059 398554
384	**Contemporary Trade Directory Entries** Name: Image Gallery Location: Arndale House, Arndale Centre, Manchester, Lancashire, M4 3AQ Classification: Photo & Digital Imaging Bureaus **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17NE (NW)	1000	-	384059 398554
385	**Contemporary Trade Directory Entries** Name: Georgia Fashions Location: First Floor Suite 1.22, Waulk Mill, Bengal Street, Manchester, M4 6AQ Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	960	-	385090 398638
386	**Contemporary Trade Directory Entries** Name: Panache Autocentre Location: Panache House, 14, Hyde Road, Manchester, M12 6BW Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SE (SE)	965	-	385396 397013
386	**Contemporary Trade Directory Entries** Name: Anam Knitware Ltd Location: Unit 4 Apsley Grove Apollo Bussiness Park, Manchester, Greater Manchester, M12 6AW Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A9SE (SE)	987	-	385389 396976
386	**Contemporary Trade Directory Entries** Name: Unique Design Location: Apsley Gr, Manchester, Lancashire, M12 6AW Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A9SE (SE)	992	-	385384 396965
386	**Contemporary Trade Directory Entries** Name: Fashion Waves Location: 3 Apsley Gr, Manchester, Lancashire, M12 6AW Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A9SE (SE)	993	-	385385 396964
387	**Contemporary Trade Directory Entries** Name: Muprint Ltd Location: Liberty Central,28 Higher Cambridge Street, Manchester, Greater Manchester, M15 6AA Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	966	-	384164 396836
388	**Contemporary Trade Directory Entries** Name: Tshirts2print.Com Location: 49, High Street, Manchester, M4 3AH Classification: T-Shirts **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	969	-	384220 398608

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
388	**Contemporary Trade Directory Entries** Name: Bramhall Refrigeration Services Location: 23, Market Hall, Arndale Centre, Manchester, M4 3AW Classification: Refrigerators & Freezers - Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	969	-	384220 398608
388	**Contemporary Trade Directory Entries** Name: J J Nets Location: 49, High Street, Manchester, M4 3AH Classification: Homefurnishings - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	969	-	384220 398608
389	**Contemporary Trade Directory Entries** Name: R M R I Ltd Location: 44, Peter Street, Manchester, Lancashire, M2 5GP Classification: Materials Handling Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	975	-	383661 397930
389	**Contemporary Trade Directory Entries** Name: Kinnarps (Uk) Ltd Location: Colchester House, 38-40, Peter Street, Manchester, M2 5GP Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11NE (W)	993	-	383644 397937
390	**Contemporary Trade Directory Entries** Name: Gerards Ice Cream Ltd Location: William Street, Ardwick, Manchester, M12 5FX Classification: Ice Cream Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (E)	978	-	385695 397611
391	**Contemporary Trade Directory Entries** Name: An Knitwear Ltd Location: Dalberg House, 25, Dolphin Street, Manchester, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	981	-	385510 397119
391	**Contemporary Trade Directory Entries** Name: Classic Knitwear Location: Dalberg House, 25, Dolphin Street, Manchester, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	981	-	385510 397119
391	**Contemporary Trade Directory Entries** Name: A & N Knitwear Location: Dalberg House, 25, Dolphin Street, Manchester, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	981	-	385510 397119
391	**Contemporary Trade Directory Entries** Name: Unico Knitwear Ltd Location: 19, Dolphin Street, Manchester, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	981	-	385510 397119
391	**Contemporary Trade Directory Entries** Name: Super Knit Ltd Location: Dalberg House, 25, Dolphin Street, Manchester, M12 6BG Classification: Knitwear Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	981	-	385510 397119
391	**Contemporary Trade Directory Entries** Name: A & N Dalberg House Location: Dalberg House, 25, Dolphin Street, Manchester, M12 6BG Classification: Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	981	-	385510 397119
391	**Contemporary Trade Directory Entries** Name: Lyons Motors Location: A, 22, Dolphin Street, Manchester, M12 6BG Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	995	-	385494 397076

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
392	**Contemporary Trade Directory Entries** Name: Duha Trading Ltd Location: 24, Harkness Street, Manchester, M12 6BT Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	986	-	385530 397139
392	**Contemporary Trade Directory Entries** Name: Fashion Waves Ltd Location: 24, Harkness Street, Manchester, M12 6BT Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	986	-	385530 397139
392	**Contemporary Trade Directory Entries** Name: Shipping To China Location: 25-27, Harkness Street, Manchester, M12 6BT Classification: Freight Forwarders **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	993	-	385559 397170
393	**Contemporary Trade Directory Entries** Name: B J Products Shavers & Spares Location: 5, Nicholas Croft, Manchester, M4 1EY Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	987	-	384282 398656
394	**Contemporary Trade Directory Entries** Name: Laziz Bakery Ltd Location: UNIT 1, THAMES INDUSTRIAL ESTATE, HIGHER ARDWICK, MANCHESTER, M12 6DD Classification: Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	991	-	385622 397290
394	**Contemporary Trade Directory Entries** Name: Scott Pallets Location: Unit 2, Thames Industrial Estate, Higher Ardwick, Manchester, M12 6DD Classification: Pallets, Crates & Packing Cases **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	995	-	385635 397308
395	**Contemporary Trade Directory Entries** Name: Autolink Location: Chancellor Lane, Manchester, M12 6JZ Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (E)	996	-	385691 397476
395	**Contemporary Trade Directory Entries** Name: Total Location: Chancellor Lane, Manchester, M12 6JZ Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (E)	996	-	385691 397476
395	**Contemporary Trade Directory Entries** Name: Gatewear Location: 60, Temperance Street, Manchester, Lancashire, M12 6DP Classification: Gate Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (E)	996	-	385691 397476
395	**Contemporary Trade Directory Entries** Name: West Way Nissan Manchester Location: Chancellor Lane, Ardwick, Manchester, Lancashire, M12 6JZ Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A15SW (E)	996	-	385691 397476
396	**Contemporary Trade Directory Entries** Name: The Perfume Shop Location: 9a, Arndale Centre, Manchester, M4 3AB Classification: Perfume Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NW (NW)	997	-	383985 398496

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
396	**Contemporary Trade Directory Entries** Name: Klick Photopoint Location: 27, Market Street, Manchester, Lancashire, M1 1WR Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17NW (NW)	997	-	383985 398496
396	**Contemporary Trade Directory Entries** Name: Klick Location: 27 Market St, Manchester, Lancashire, M1 1WR Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17NW (NW)	998	-	383984 398496
397	**Fuel Station Entries** Name: Fletcher Garages Location: 100, Fairfield Street , , Manchester, Greater Manchester, M1 2WR Brand: Unbranded Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Manually positioned to the address or location	A14SE (E)	640	-	385359 397649
398	**Fuel Station Entries** Name: Ormond Street Motors Location: 2-4, Lower Ormond Street , , Manchester, Greater Manchester, M1 5QF Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	667	-	384078 397320
399	**Fuel Station Entries** Name: Ardwick Green Express Location: Ardwick Green South , , Manchester, Greater Manchester, M13 9XF Brand: Esso Premises Type: Petrol Station **Status: Open** Positional Accuracy: Manually positioned to the address or location	A9NW (SE)	801	-	385241 397094
400	**Fuel Station Entries** Name: Blossom Motor Company Location: 27, Gun Street , Ancoats , Manchester, Greater Manchester, M4 5DN Brand: OBSOLETE Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Approximate location provided by supplier	A18NE (N)	845	-	384700 398600
401	**Points of Interest - Commercial Services** Name: Manchester Pest Control Location: 50 London Road, Manchester, M1 2PH Category: Contract Services Class Code: Pest and Vermin Control Positional Accuracy: Positioned to address or location	A13NE (N)	68	9	384703 397822
402	**Points of Interest - Commercial Services** Name: United Global Location: 47 Chorlton Street, Manchester, M1 3FY Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A13NW (NW)	209	9	384471 397875
403	**Points of Interest - Commercial Services** Name: Park N Shine Location: 1-3 Gateway House, Piccadilly South, Manchester, M1 2GH Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A13NE (N)	273	9	384693 398028
404	**Points of Interest - Commercial Services** Name: Fleet Angel Location: 29-31 Sackville Street, Manchester, M1 3LZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NW (W)	285	9	384357 397847
404	**Points of Interest - Commercial Services** Name: Sports Fashion Distribution UK Ltd Location: Richmond House 15, Bloom Street, Manchester, M1 3HZ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A13NW (NW)	297	9	384377 397901

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
405	**Points of Interest - Commercial Services** Name: Central Motor Services Location: 26-32 Store Street, Manchester, M1 2WD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (NE)	322	9	384894 398024
405	**Points of Interest - Commercial Services** Name: Central Motor Services Location: 26-32 Store Street, Manchester, M1 2WD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (NE)	322	9	384894 398024
406	**Points of Interest - Commercial Services** Name: Manchester Towbar & Trailer Centre Ltd Location: Mancunian Way, Manchester, M12 6HJ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (SE)	357	9	385029 397521
406	**Points of Interest - Commercial Services** Name: Manchester Towbar Trailer & Roofrack Centre Ltd Location: Bond Street Industrial Estate, Mancunian Way, Manchester, M12 6HW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (SE)	405	9	385076 397508
407	**Points of Interest - Commercial Services** Name: Cash for Scrap Cars Location: 111 Piccadilly, Manchester, M1 2HX Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A18SW (N)	364	9	384648 398114
408	**Points of Interest - Commercial Services** Name: Scrap a Car Manchester Location: 53 Portland Street, Manchester, M1 3LF Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A12NE (NW)	412	9	384279 397963
408	**Points of Interest - Commercial Services** Name: Leaflet Distribution Manchester Location: 53 Portland Street, Manchester, M1 3LF Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12NE (NW)	412	9	384280 397963
409	**Points of Interest - Commercial Services** Name: D C Motor Engineers Location: Arch 45 at 5a, York Street, Piccadilly, Manchester, M1 7DE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12SE (SW)	441	9	384228 397504
410	**Points of Interest - Commercial Services** Name: London Global Location: Imex House 40, Princess Street, Manchester, M1 6DE Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A12NE (W)	460	9	384170 397843
410	**Points of Interest - Commercial Services** Name: Patriot Advertising Solutions Location: Imex House 40, Princess Street, Manchester, M1 6DE Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12NE (W)	460	9	384170 397844
411	**Points of Interest - Commercial Services** Name: 33 Joints Location: Tanzaro House, Ardwick Green North, Manchester, M12 6FZ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A9NW (SE)	481	9	385040 397343
411	**Points of Interest - Commercial Services** Name: 2 Squared Agency Ltd Location: 25 Manor Street, Manchester, M12 6HE Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A9NW (SE)	532	9	385117 397347

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
412	**Points of Interest - Commercial Services** Name: Scrap Yard Location: M12 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A14SW (E)	520	9	385228 397586
412	**Points of Interest - Commercial Services** Name: Scrap Yard Location: Not Supplied Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	524	9	385232 397583
413	**Points of Interest - Commercial Services** Name: Scrap That Car Location: 91 Princess Street, Manchester, M1 4HT Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A12NE (W)	532	9	384129 397942
414	**Points of Interest - Commercial Services** Name: McR Engines Location: 10 Pigeon Street, Manchester, M1 2JX Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18SE (NE)	533	9	384955 398231
415	**Points of Interest - Commercial Services** Name: Manchester Van Hire Location: Tanla Works, Heyrod Street, Manchester, M1 2WW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NW (NE)	540	9	385211 397977
415	**Points of Interest - Commercial Services** Name: Dalkeith Autos Location: 7 Heyrod Street, Manchester, M1 2WW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NW (NE)	540	9	385211 397977
415	**Points of Interest - Commercial Services** Name: Dalkeith Autos Location: 7 Heyrod Street, Manchester, M1 2WW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NW (NE)	540	9	385211 397977
415	**Points of Interest - Commercial Services** Name: P A Metals Location: 7 Adair Street, Manchester, M1 2NQ Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A14NW (E)	558	9	385248 397934
415	**Points of Interest - Commercial Services** Name: P A Metals Location: 7 Adair Street, Manchester, M1 2NQ Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A14NW (NE)	605	9	385280 397981
416	**Points of Interest - Commercial Services** Name: I T True Ltd Location: St. James Building 79, Oxford Street, Manchester, M1 6FQ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12SE (W)	540	9	384075 397678
416	**Points of Interest - Commercial Services** Name: Faupel Plc Location: St. James Buildings 79, Oxford Street, Manchester, M1 6FQ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12SE (W)	540	9	384075 397678
417	**Points of Interest - Commercial Services** Name: M 1 1st Call Locksmiths Location: Cobac House 14-16, Charlotte Street, Manchester, M1 4FL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17SE (NW)	545	9	384186 398060

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
417	**Points of Interest - Commercial Services** Name: Hazexperts Location: 61 Mosley Street, Manchester, M2 3HZ Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A17SE (NW)	625	9	384126 398113
417	**Points of Interest - Commercial Services** Name: Total Towing Location: 61 Mosley Street, Manchester, M2 3HZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17SE (NW)	633	9	384117 398114
418	**Points of Interest - Commercial Services** Name: Forward Bird Control Location: Clayton House 59, Piccadilly, Manchester, M1 2AQ Category: Contract Services Class Code: Pest and Vermin Control Positional Accuracy: Positioned to address or location	A18SW (N)	550	9	384518 398278
418	**Points of Interest - Commercial Services** Name: Oceanblue Logistics Location: Clayton House 59, Piccadilly, Manchester, M1 2AQ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A18SW (N)	550	9	384518 398278
418	**Points of Interest - Commercial Services** Name: Forward Bird Control - National Location: Clayton House 59, Piccadilly, Manchester, M1 2AQ Category: Contract Services Class Code: Pest and Vermin Control Positional Accuracy: Positioned to address or location	A18SW (N)	550	9	384518 398278
418	**Points of Interest - Commercial Services** Name: freightnet.com Location: Clayton House 59, Piccadilly, Manchester, M1 2AQ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A18SW (N)	550	9	384518 398278
419	**Points of Interest - Commercial Services** Name: Tyrewise Location: 8-10 Kale Street, Manchester, M13 9XG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NE (SE)	555	9	384986 397215
419	**Points of Interest - Commercial Services** Name: Crescent Auto Centre Ltd Location: 29 Wadeson Road, Manchester, M13 9UG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NE (SE)	555	9	384986 397215
419	**Points of Interest - Commercial Services** Name: Crescent Auto Centre Ltd Location: 29 Wadeson Road, Manchester, M13 9UG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NE (SE)	555	9	384986 397215
419	**Points of Interest - Commercial Services** Name: Tyrewyse Service Centre Location: 29 Wadeson Road, Manchester, M13 9UG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NE (SE)	555	9	384985 397215
419	**Points of Interest - Commercial Services** Name: Majestic Valeting Location: 29 Wadeson Road, Manchester, M13 9UG Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A8NE (SE)	555	9	384986 397215
419	**Points of Interest - Commercial Services** Name: Motor Fix Auto Ltd Location: Unit 29b, Wadeson Road, Manchester, M13 9UG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NE (SE)	564	9	384984 397204

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
419	**Points of Interest - Commercial Services** Name: Benz Automotive Location: Hanover House 29a, Wadeson Road, Manchester, M13 9UG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NE (SE)	571	9	384983 397196
419	**Points of Interest - Commercial Services** Name: Nationwide Autocentre Location: 24 Ardwick Green South, Manchester, M13 9XE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NW (SE)	583	9	385025 397206
419	**Points of Interest - Commercial Services** Name: Halfords Autocentre Location: 22 Ardwick Green South, Manchester, M13 9XE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NW (SE)	583	9	385025 397206
419	**Points of Interest - Commercial Services** Name: Halfords Autocentre Location: 22-24 Ardwick Green South, Manchester, M13 9XE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NW (SE)	583	9	385025 397206
419	**Points of Interest - Commercial Services** Name: Nationwide Autocentre Location: 22-24 Ardwick Green South, Manchester, M13 9XE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NW (SE)	583	9	385025 397206
419	**Points of Interest - Commercial Services** Name: Halfords Autocentre Location: 22-24 Ardwick Green South, Manchester, M13 9XE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NW (SE)	583	9	385025 397206
420	**Points of Interest - Commercial Services** Name: Ancoats Autos Ltd Location: Unit 1-5 Chancel Place, Store Street, Manchester, M1 2WB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SW (NE)	578	9	385128 398161
421	**Points of Interest - Commercial Services** Name: Wez Morrell Location: 101 Fairfield Street, Manchester, M1 2WG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (E)	595	9	385317 397709
421	**Points of Interest - Commercial Services** Name: Wez Morrell Towbars & Roofracks Location: 101 Fairfield Street, Manchester, M1 2WG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (E)	595	9	385317 397709
421	**Points of Interest - Commercial Services** Name: Kendek Ltd Location: 101 Fairfield Street, Manchester, Greater Manchester, M1 2WG Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A14SW (E)	595	9	385317 397709
421	**Points of Interest - Commercial Services** Name: Fletcher Garages Location: 94-104 Fairfield Street, Manchester, M1 2WR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (E)	613	9	385334 397669
421	**Points of Interest - Commercial Services** Name: City Centre Garage Location: 101 Fairfield Street, Manchester, M1 2WG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	636	9	385358 397701

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
421	**Points of Interest - Commercial Services** Name: Fletcher Garages Location: 100 Fairfield Street, Manchester, M1 2WR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	638	9	385357 397655
421	**Points of Interest - Commercial Services** Name: Revolution It Location: 100 Fairfield Street, Manchester, M1 2WR Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A14SE (E)	638	9	385357 397655
421	**Points of Interest - Commercial Services** Name: Fairfield Motor Garage Location: 100 Fairfield Street, Manchester, M1 2WR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	638	9	385357 397655
421	**Points of Interest - Commercial Services** Name: Manchester Motor Garage Location: 100 Fairfield Street, Manchester, M1 2WR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	638	9	385357 397655
421	**Points of Interest - Commercial Services** Name: Autocare Assist Location: 102 Fairfield Street, Manchester, M1 2WR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	654	9	385374 397653
421	**Points of Interest - Commercial Services** Name: Cristecuk Garage Ltd Location: 102 Fairfield Street, Manchester, Lancashire, M1 2WR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	657	9	385376 397642
421	**Points of Interest - Commercial Services** Name: The Cab Co Location: 102 Fairfield St, Manchester, Lancashire, M1 2WR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	662	9	385380 397638
421	**Points of Interest - Commercial Services** Name: The Cab Company Location: 102 Fairfield Street, Manchester, Lancashire, M1 2WR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	662	9	385380 397638
421	**Points of Interest - Commercial Services** Name: F D T Transport Ltd Location: 113 Fairfield Street, Manchester, M12 6EL Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A14SE (E)	696	9	385417 397686
422	**Points of Interest - Commercial Services** Name: Greenbrow Motors Location: 1 Great Marlborough Street, Manchester, M1 5NJ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12SE (SW)	628	9	384058 397426
423	**Points of Interest - Commercial Services** Name: Manmunian Garage Location: Unit 6 Hoyle Street Industrial Estate, Hoyle Street, Manchester, M12 6HG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (E)	653	9	385332 397471
424	**Points of Interest - Commercial Services** Name: Asha Freight Location: 132-134 Great Ancoats Street, Manchester, M4 6DE Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A19SW (NE)	655	9	385093 398291

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
425	**Points of Interest - Commercial Services** Name: Marco Location: 68-68a, Port Street, Manchester, M1 2EG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NE (N)	658	9	384787 398408
426	**Points of Interest - Commercial Services** Name: J E Gordon Ltd Location: 60 Whitworth Street West, Manchester, M1 5WW Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A12SW (W)	685	9	383963 397507
426	**Points of Interest - Commercial Services** Name: Smiler Service Location: Unit 3c the Lock Building, 41 Whitworth Street West, Manchester, M1 5BD Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12SW (W)	703	9	383932 397550
426	**Points of Interest - Commercial Services** Name: Graham's Motors Location: 59 Whitworth Street West, Manchester, M1 5WW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12SW (W)	711	9	383939 397495
427	**Points of Interest - Commercial Services** Name: Pest Solutions Ltd Location: Peter House, Oxford Street, Manchester, M1 5AN Category: Contract Services Class Code: Pest and Vermin Control Positional Accuracy: Positioned to address or location	A12NW (W)	701	9	383924 397846
428	**Points of Interest - Commercial Services** Name: Joe Farrell Location: 93 Temperance Street, Manchester, M12 6HU Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A14SE (E)	709	9	385412 397543
428	**Points of Interest - Commercial Services** Name: City Centre Tyresave Location: 86-87 Temperance Street, Manchester, M12 6HU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	783	9	385477 397498
428	**Points of Interest - Commercial Services** Name: Autocare M O T & Engineers Ltd Location: 86-87 Temperance Street, Manchester, M12 6HU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	783	9	385477 397498
428	**Points of Interest - Commercial Services** Name: Al-arabia Cargo Ltd Location: Arch 82, Temperance Street, Manchester, M12 6HU Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A14SE (E)	834	9	385521 397467
429	**Points of Interest - Commercial Services** Name: Matrix Transport Location: Hilton Street, Manchester, M1 1JF Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A18NW (N)	747	9	384529 398483
429	**Points of Interest - Commercial Services** Name: The Audience Agency Location: 46-50 Oldham Street, Manchester, M4 1LE Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A18NW (N)	806	9	384569 398551
430	**Points of Interest - Commercial Services** Name: D C Motor Engineers Location: 1-3 York Street, Manchester, M1 7DE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17SE (NW)	784	9	384082 398298

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
431	**Points of Interest - Commercial Services** Name: Mr Clutch Autocentres Location: 5-7 Blackett Street, Manchester, M12 6EJ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	809	9	385531 397703
431	**Points of Interest - Commercial Services** Name: Mr Clutch Location: Blackett Street, Manchester, M12 6EJ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	809	9	385531 397703
431	**Points of Interest - Commercial Services** Name: Mr Clutch Location: Blackett Street, Manchester, M12 6EJ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	809	9	385531 397703
431	**Points of Interest - Commercial Services** Name: Mr Clutch Autocentres Location: Blackett Street, Manchester, M12 6EJ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	809	9	385531 397703
432	**Points of Interest - Commercial Services** Name: Publicity Location: 2 Gloucester Street, Manchester, M1 5GP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12SW (W)	815	9	383844 397455
432	**Points of Interest - Commercial Services** Name: All About Audiences Distribution Location: Hotspur House 2, Gloucester Street, Manchester, M1 5QR Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12SW (W)	815	9	383843 397455
433	**Points of Interest - Commercial Services** Name: Brenca Metals Ltd Location: Ship Canal House 98, King Street, Manchester, M2 4WU Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A17SW (NW)	818	9	383976 398234
433	**Points of Interest - Commercial Services** Name: The Accident Group Location: 55 King Street, Manchester, M2 4LQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17SW (NW)	884	9	383933 398286
434	**Points of Interest - Commercial Services** Name: 2 Squared Agency Location: Unit 4 Royal Mills 17, Redhill Street, Manchester, M4 5BA Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A18NE (N)	824	9	384993 398530
435	**Points of Interest - Commercial Services** Name: Broadcasting Support Services Location: 24 Piccadilly Trading Estate, Manchester, M1 2NP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A14NE (E)	826	9	385532 397910
435	**Points of Interest - Commercial Services** Name: Broadcasting Support Services Location: 24 Piccadilly Trading Estate, Manchester, M1 2NP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A14NE (E)	826	9	385532 397910
436	**Points of Interest - Commercial Services** Name: Blossom Motor Co Location: 27 Gun Street, Manchester, M4 5DN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NE (N)	880	9	384804 398630

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
436	**Points of Interest - Commercial Services** Name: Blossom Motor Co Location: 27 Gun Street, Manchester, M4 5DN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NE (N)	880	9	384804 398630
437	**Points of Interest - Commercial Services** Name: Awan Auto Tec Location: Unit 1, Mill Green Street, Manchester, M12 6FB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	881	9	385590 397557
438	**Points of Interest - Commercial Services** Name: Mount Distribution Ltd Location: 2 Mount Street, Manchester, M2 5WQ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12NW (W)	892	9	383773 398020
439	**Points of Interest - Commercial Services** Name: New Ardwick Body Centre Location: 10-12 Harkness Street, Manchester, M12 6BT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NE (SE)	917	9	385460 397159
439	**Points of Interest - Commercial Services** Name: New Ardwick Body Centre Location: 10-12 Harkness Street, Manchester, M12 6BT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NE (SE)	917	9	385460 397159
440	**Points of Interest - Commercial Services** Name: Tom Blackburn Garage Ltd Location: Arch 74, North Western Street, Ardwick, Manchester, M12 6DX Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	919	9	385602 397439
440	**Points of Interest - Commercial Services** Name: Tom Blackburns Location: 74 North Western Street, Manchester, M12 6DX Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	925	9	385607 397436
440	**Points of Interest - Commercial Services** Name: Tom Blackburn Garage Ltd Location: 74 North Western Street, Manchester, M12 6DX Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	925	9	385607 397436
440	**Points of Interest - Commercial Services** Name: D C M Services Location: 72 Temperance Street, Manchester, M12 6HU Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A14SE (E)	937	9	385611 397407
440	**Points of Interest - Commercial Services** Name: Olympus Conversions Ltd Location: 69 Temperance Street, Manchester, M12 6HU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	970	9	385637 397384
440	**Points of Interest - Commercial Services** Name: Mr Pigs Motorcycles Location: Arch 67, Temperance Street, Manchester, M12 6DP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NE (E)	985	9	385650 397373
440	**Points of Interest - Commercial Services** Name: Mr Pigs Motorcycle Engineering Location: 67 Temperance Street, Manchester, M12 6DP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NE (E)	986	9	385651 397373

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
440	**Points of Interest - Commercial Services** Name: RAC Auto Windscreens Location: Unit 3 Thames Industrial Estate, Higher Ardwick, Manchester, M12 6DD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NE (E)	1000	9	385644 397317
440	**Points of Interest - Commercial Services** Name: RAC Auto Windscreens Location: Unit 3 Thames Industrial Estate, Higher Ardwick, Manchester, M12 6DD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NE (E)	1000	9	385644 397317
441	**Points of Interest - Commercial Services** Name: Corner House Publications Location: 2 Tony Wilson Place, Manchester, M15 4FN Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12SW (W)	926	9	383726 397459
441	**Points of Interest - Commercial Services** Name: Kickstart Motorcycles Location: Arch 77, Whitworth Street West, Manchester, M1 5WQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12SW (W)	939	9	383702 397495
442	**Points of Interest - Commercial Services** Name: New Beach Retail Ltd Location: 75 Tib Street, Manchester, M4 1LS Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A18NW (N)	949	9	384600 398697
442	**Points of Interest - Commercial Services** Name: Marco Services Ltd Location: 15-17 Swan Street, Manchester, M4 5JJ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A18NW (N)	964	9	384587 398711
443	**Points of Interest - Commercial Services** Name: Panache Motor Co Location: 14 Hyde Road, Manchester, M12 6BW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9SE (SE)	965	9	385396 397013
443	**Points of Interest - Commercial Services** Name: Panache Autocentre Location: 14 Hyde Road, Manchester, M12 6BW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9SE (SE)	966	9	385396 397012
444	**Points of Interest - Commercial Services** Name: Bauer Millett Location: 2 Dark Lane, Manchester, M12 6FA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A15SW (E)	976	9	385688 397569
445	**Points of Interest - Commercial Services** Name: Shipping to China Location: 25-27 Harkness Street, Manchester, M12 6BT Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A9NE (SE)	992	9	385558 397169
446	**Points of Interest - Education and Health** Name: Greater Manchester Electronic Booking Location: Gateway House, Piccadilly South, Manchester, M60 7LP Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A13NE (N)	262	9	384706 398017
447	**Points of Interest - Education and Health** Name: NHS Nightingale Hospital North West Location: Windmill Street, Manchester, M2 3GX Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A12NW (W)	929	9	383685 397748

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
448	**Points of Interest - Manufacturing and Production** Name: Mayfield Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	304	9	384972 397531
448	**Points of Interest - Manufacturing and Production** Name: Works Location: M1 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	304	9	384971 397529
448	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	329	9	384994 397519
448	**Points of Interest - Manufacturing and Production** Name: Factory Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A13SE (SE)	333	9	385003 397526
449	**Points of Interest - Manufacturing and Production** Name: Anchester House Management Location: Manchester House 86, Princess Street, Manchester, M1 6NG Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A12SE (W)	349	9	384296 397577
449	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12SE (SW)	407	9	384266 397506
449	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12SE (SW)	468	9	384215 397473
449	**Points of Interest - Manufacturing and Production** Name: Works Location: M1 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12SE (SW)	472	9	384211 397472
449	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12SE (SW)	486	9	384201 397461
449	**Points of Interest - Manufacturing and Production** Name: Manchester Business Centre Ltd Location: 60 Charles Street, Manchester, M1 7DF Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A12SE (SW)	488	9	384201 397458
449	**Points of Interest - Manufacturing and Production** Name: Works Location: M1 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12SE (SW)	490	9	384197 397460
450	**Points of Interest - Manufacturing and Production** Name: Gateway Industrial Estate Location: M1 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	364	9	384939 398043

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
450	**Points of Interest - Manufacturing and Production** Name: Gateway Industrial Estate Location: M1 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	371	9	384946 398047
451	**Points of Interest - Manufacturing and Production** Name: Mail Boxes Etc Location: 111 Piccadilly, Manchester, M1 2HX Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A18SW (N)	364	9	384648 398114
451	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SE (N)	377	9	384671 398130
452	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8NE (S)	365	9	384783 397336
452	**Points of Interest - Manufacturing and Production** Name: Factory Location: M1 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A8NE (S)	369	9	384786 397333
453	**Points of Interest - Manufacturing and Production** Name: Industrial Estate Location: M12 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	371	9	384952 397412
453	**Points of Interest - Manufacturing and Production** Name: Downing Street Industrial Estate Location: M12 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	413	9	385015 397412
453	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	442	9	384990 397352
453	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	444	9	384994 397352
453	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	452	9	384989 397339
453	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	452	9	384989 397339
453	**Points of Interest - Manufacturing and Production** Name: Progress Centre Location: Progress Centre, Charlton Place, Manchester, M12 6HS Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A9NW (SE)	486	9	385038 397334

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
454	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	375	9	385077 397583
454	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	378	9	385080 397584
455	**Points of Interest - Manufacturing and Production** Name: Bruntwood Location: Portland Tower, Portland Street, Manchester, M1 3LD Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A12NE (NW)	412	9	384280 397963
455	**Points of Interest - Manufacturing and Production** Name: Bruntwood Business Centres Location: Portland Tower, Portland Street, Manchester, M1 3LD Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A12NE (NW)	412	9	384280 397963
455	**Points of Interest - Manufacturing and Production** Name: Bruntwood Location: 53 Portland Street, Manchester, M1 3LD Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A12NE (NW)	413	9	384280 397965
456	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (NE)	418	9	385068 397984
456	**Points of Interest - Manufacturing and Production** Name: Works Location: M1 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (NE)	467	9	385120 397993
456	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (NE)	470	9	385124 397993
456	**Points of Interest - Manufacturing and Production** Name: Crusader Works No 1 Location: M1 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (NE)	471	9	385110 398016
456	**Points of Interest - Manufacturing and Production** Name: Crusader Works No 1 Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (NE)	491	9	385128 398025
456	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (NE)	547	9	385185 398040
456	**Points of Interest - Manufacturing and Production** Name: Factory Location: M1 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A14NW (NE)	548	9	385183 398046

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
457	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	421	9	384193 397717
457	**Points of Interest - Manufacturing and Production** Name: Works Location: M1 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	425	9	384189 397717
457	**Points of Interest - Manufacturing and Production** Name: China House Location: M1 Category: Extractive Industries Class Code: Sand, Gravel and Clay Extraction and Merchants Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	459	9	384155 397750
458	**Points of Interest - Manufacturing and Production** Name: Citibase Location: Imex House 40, Princess Street, Manchester, M1 6DE Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A12NE (W)	460	9	384170 397844
458	**Points of Interest - Manufacturing and Production** Name: Citibase Location: Imex House 40, Princess Street, Manchester, M1 6DE Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A12NE (W)	460	9	384170 397844
458	**Points of Interest - Manufacturing and Production** Name: Citibase Business Centres Location: Imex House 40, Princess Street, Manchester, M1 6DE Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A12NE (W)	460	9	384170 397844
459	**Points of Interest - Manufacturing and Production** Name: Junction Works Location: M1 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SE (NE)	470	9	384909 398183
459	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SE (NE)	510	9	384993 398183
459	**Points of Interest - Manufacturing and Production** Name: Works Location: M4 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	539	9	385029 398194
459	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	544	9	385035 398196
459	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SE (NE)	579	9	384982 398269
459	**Points of Interest - Manufacturing and Production** Name: Factory Location: M1 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A18SE (NE)	580	9	384982 398270

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
460	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	472	9	385171 397891
460	**Points of Interest - Manufacturing and Production** Name: Works Location: M1 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	473	9	385176 397881
460	**Points of Interest - Manufacturing and Production** Name: Works Location: M1 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A14NW (E)	475	9	385173 397894
460	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	476	9	385179 397879
461	**Points of Interest - Manufacturing and Production** Name: Tank Location: M12 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	495	9	385172 397499
461	**Points of Interest - Manufacturing and Production** Name: Tank Location: M12 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	539	9	385204 397463
461	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	551	9	385236 397507
461	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	553	9	385239 397508
461	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	567	9	385239 397471
461	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	567	9	385239 397471
461	**Points of Interest - Manufacturing and Production** Name: Hoyle Street Industrial Estate Location: M12 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	642	9	385325 397484
461	**Points of Interest - Manufacturing and Production** Name: Hoyle Street Industrial Estate Location: M12 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	643	9	385325 397482

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
462	**Points of Interest - Manufacturing and Production** Name: Works Location: M1 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	525	9	385213 397932
462	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	528	9	385215 397935
462	**Points of Interest - Manufacturing and Production** Name: Works Location: M1 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (NE)	586	9	385263 397972
462	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (NE)	590	9	385267 397973
463	**Points of Interest - Manufacturing and Production** Name: Think Power Ltd Location: Piccadilly House 49, Piccadilly, Manchester, M1 2AP Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A18SW (N)	575	9	384494 398296
463	**Points of Interest - Manufacturing and Production** Name: Piccadilly House Location: Piccadilly House 49, Piccadilly, Manchester, M1 2AP Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A18SW (N)	576	9	384494 398297
463	**Points of Interest - Manufacturing and Production** Name: Piccadilly House Location: Piccadilly House 49, Piccadilly, Manchester, M1 2AP Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A18SW (N)	576	9	384494 398297
464	**Points of Interest - Manufacturing and Production** Name: Works Location: M4 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	593	9	385080 398224
464	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	598	9	385087 398225
464	**Points of Interest - Manufacturing and Production** Name: Advantage Business Centre Location: 132-134 Great Ancoats Street, Manchester, M4 6DE Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A19SW (NE)	655	9	385093 398291
465	**Points of Interest - Manufacturing and Production** Name: City Tower Location: City Tower, Piccadilly Plaza, Manchester, M1 4HN Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A17SE (NW)	615	9	384236 398207
466	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	634	9	385262 398082

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
467	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8NW (S)	647	9	384420 397067
468	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	666	9	384007 397447
468	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12SE (SW)	670	9	384010 397430
468	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	716	9	383994 397360
468	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12SW (SW)	742	9	383943 397403
469	**Points of Interest - Manufacturing and Production** Name: Century House Commissionaire Location: Century Ho, 11 St Peters Sq, Manchester, M2 3DN Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A12NW (W)	670	9	383980 397940
469	**Points of Interest - Manufacturing and Production** Name: Century House Commissionaire Location: Century House, 11 St Peters Square, Manchester, Greater Manchester, M2 3DN Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A12NW (W)	670	9	383980 397940
470	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	687	9	384026 397362
471	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	687	9	384823 398432
472	**Points of Interest - Manufacturing and Production** Name: Regus Location: Barnett House 53, Fountain Street, Manchester, M2 2AN Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A17SE (NW)	698	9	384112 398208
472	**Points of Interest - Manufacturing and Production** Name: Abbey Business Centre Location: Barnett House 53, Fountain Street, Manchester, M2 2AN Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A17SE (NW)	698	9	384112 398208
472	**Points of Interest - Manufacturing and Production** Name: Abbey Business Centre Location: Barnett House 53, Fountain Street, Manchester, M2 2AN Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A17SE (NW)	698	9	384112 398208

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
472	**Points of Interest - Manufacturing and Production** Name: Abbey Business Centre Location: Barnett House 53, Fountain Street, Manchester, M2 2AN Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A17SE (NW)	698	9	384112 398208
473	**Points of Interest - Manufacturing and Production** Name: Regus Location: Peter House, Oxford Street, Manchester, M1 5AN Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A12NW (W)	700	9	383925 397847
473	**Points of Interest - Manufacturing and Production** Name: Regus Location: Peter House, Oxford Street, Manchester, M1 5AN Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A12NW (W)	700	9	383925 397847
473	**Points of Interest - Manufacturing and Production** Name: Nemesis Agency Ltd Location: 1 Oxford Court, Manchester, M2 3WQ Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A12NW (W)	716	9	383901 397789
474	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	751	9	385469 397636
474	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	754	9	385473 397637
474	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	758	9	385479 397677
474	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	762	9	385483 397677
475	**Points of Interest - Manufacturing and Production** Name: The Studio Location: The Hive 51, Lever Street, Manchester, M1 1FN Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A18NW (N)	768	9	384615 398517
476	**Points of Interest - Manufacturing and Production** Name: The Works Business Centre Location: M12 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	773	9	385411 397353
476	**Points of Interest - Manufacturing and Production** Name: City View House Location: The Works Business Centre 5, Union Street, Ardwick, Manchester, M12 4JD Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A9NE (SE)	789	9	385436 397367
476	**Points of Interest - Manufacturing and Production** Name: Anvic Development Location: City View House 5, Union Street, Ardwick, Manchester, M12 4JD Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A9NE (SE)	790	9	385437 397369

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
477	**Points of Interest - Manufacturing and Production** Name: Adlow Industrial Park Location: M12 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	791	9	385514 397747
477	**Points of Interest - Manufacturing and Production** Name: Adlow Industrial Park Location: M12 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	797	9	385520 397750
477	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	807	9	385529 397705
477	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	811	9	385533 397706
477	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	849	9	385571 397784
478	**Points of Interest - Manufacturing and Production** Name: Bruntwood Business Centres Ltd Location: Lowry House 17, Marble Street, Manchester, M2 3AW Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A17SE (NW)	811	9	384110 398358
479	**Points of Interest - Manufacturing and Production** Name: Tank Location: M1 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SW (W)	818	9	383867 397388
479	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	874	9	383845 397303
480	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	829	9	385530 397521
480	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	831	9	385533 397522
480	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	864	9	385572 397553
480	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	866	9	385575 397554

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
480	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	870	9	385570 397511
480	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	873	9	385573 397512
480	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	873	9	385569 397492
481	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	837	9	385450 398161
482	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	853	9	385575 397785
483	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	860	9	384850 398603
483	**Points of Interest - Manufacturing and Production** Name: Factory Location: M4 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A18NE (N)	863	9	384849 398607
483	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	908	9	384844 398653
483	**Points of Interest - Manufacturing and Production** Name: Works Location: M4 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	910	9	384841 398655
484	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	861	9	385367 398320
485	**Points of Interest - Manufacturing and Production** Name: Regus Location: 82 King Street, Manchester, M2 4WQ Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A17SW (NW)	873	9	383923 398256
485	**Points of Interest - Manufacturing and Production** Name: Orega Management Ltd Location: 76 King Street, Manchester, M2 4NH Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A17SW (NW)	905	9	383878 398248

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
485	**Points of Interest - Manufacturing and Production** Name: The Offices Location: Lloyds Bank Buildings, 53, King Street, Manchester, M2 4LQ Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A17SW (NW)	927	9	383885 398295
486	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9SW (SE)	873	9	385278 397031
487	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	881	9	385466 397232
487	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	882	9	385466 397231
488	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	894	9	385493 398202
488	**Points of Interest - Manufacturing and Production** Name: Vulcan Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	934	9	385535 398209
488	**Points of Interest - Manufacturing and Production** Name: Vulcan Works Location: M4 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	938	9	385540 398207
489	**Points of Interest - Manufacturing and Production** Name: 1 Marsden Street Business Centre Location: 1 Marsden Street, Manchester, M2 1HW Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A17SW (NW)	901	9	383974 398356
490	**Points of Interest - Manufacturing and Production** Name: Bruntwood Ltd Location: 2-10 Albert Square, Manchester, M2 6LW Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A17SW (NW)	925	9	383794 398151
491	**Points of Interest - Manufacturing and Production** Name: Factories Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	927	9	385054 398617
491	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	951	9	385108 398621
492	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	941	9	385462 397122

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
492	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	998	9	385514 397096
493	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	952	9	384761 398705
494	**Points of Interest - Manufacturing and Production** Name: Stone Superstore Location: 79 Tib Street, Manchester, M4 1LS Category: Extractive Industries Class Code: Stone Quarrying and Preparation Positional Accuracy: Positioned to address or location	A18NW (N)	958	9	384608 398707
495	**Points of Interest - Manufacturing and Production** Name: Works Location: M12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	963	9	385680 397610
495	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A15SW (E)	966	9	385683 397611
496	**Points of Interest - Manufacturing and Production** Name: Locus Properties Ltd Location: 19 Albion Wharf, Manchester, M1 5LN Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A12SW (W)	965	9	383660 397574
497	**Points of Interest - Manufacturing and Production** Name: Works Location: M4 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	980	9	384985 398696
497	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	982	9	384989 398697
497	**Points of Interest - Manufacturing and Production** Name: Works Location: M4 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19NW (N)	992	9	385006 398703
498	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	997	9	385498 398376
498	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	998	9	385492 398385
499	**Points of Interest - Manufacturing and Production** Name: Market Poultry Location: Arndale House, Arndale Centre, Manchester, M4 3AQ Category: Farming Class Code: Poultry Farming, Equipment and Supplies Positional Accuracy: Positioned to address or location	A17NE (NW)	1000	9	384059 398554

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
499	**Points of Interest - Manufacturing and Production** Name: Market Poultry Location: Arndale House, Arndale Centre, Manchester, M4 3AQ Category: Farming Class Code: Poultry Farming, Equipment and Supplies Positional Accuracy: Positioned to address or location	A17NE (NW)	1000	9	384059 398554
500	**Points of Interest - Public Infrastructure** Name: Manchester Piccadilly Rail Station Location: M1 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A13NE (NE)	140	9	384844 397818
500	**Points of Interest - Public Infrastructure** Name: Manchester Piccadilly Station Location: Nr Fairfield Street, M1 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A13NE (NE)	140	9	384844 397818
500	**Points of Interest - Public Infrastructure** Name: British Transport Police Location: Tower Block, Piccadilly Station, Manchester, M1 2BP Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A13NE (NE)	142	9	384845 397819
501	**Points of Interest - Public Infrastructure** Name: Weir Location: M1 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	228	9	384876 397535
501	**Points of Interest - Public Infrastructure** Name: Weir Location: M1 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	229	9	384879 397537
502	**Points of Interest - Public Infrastructure** Name: Transport for Greater Manchester Location: 2 Piccadilly Place, Manchester, M1 3BG Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A13NW (N)	233	9	384640 397981
502	**Points of Interest - Public Infrastructure** Name: Transport for Greater Manchester Location: 2 Piccadilly Place, Manchester, M1 3BG Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A13NW (N)	233	9	384640 397981
503	**Points of Interest - Public Infrastructure** Name: Coach Station Location: M1 Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to an adjacent address or location	A13NW (NW)	332	9	384346 397919
503	**Points of Interest - Public Infrastructure** Name: National Express Ltd Location: Central Coach Station, Chorlton Street, Manchester, M1 3JF Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A13NW (NW)	347	9	384347 397945
503	**Points of Interest - Public Infrastructure** Name: National Express Coach Station Location: Central Coach Station, Chorlton Street, Manchester, M1 3JF Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A13NW (NW)	347	9	384347 397945
503	**Points of Interest - Public Infrastructure** Name: Coach Station Location: M1 Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to an adjacent address or location	A13NW (NW)	350	9	384331 397928

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
504	**Points of Interest - Public Infrastructure** Name: M C R Recycling Ltd Location: 111 Piccadilly, Manchester, M1 2HX Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A18SW (N)	364	9	384648 398114
505	**Points of Interest - Public Infrastructure** Name: Gmpte Location: 2 Picadilly Place, Manchester, M1 3BG Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A18SW (NW)	526	9	384406 398205
505	**Points of Interest - Public Infrastructure** Name: Bus Station Location: M1 Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A17SE (NW)	574	9	384319 398214
506	**Points of Interest - Public Infrastructure** Name: Bus Station Location: M1 Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	590	9	384304 398224
507	**Points of Interest - Public Infrastructure** Name: Arriva North West Location: St. Andrews Square, Manchester, M1 2NS Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A14NW (E)	596	9	385312 397834
508	**Points of Interest - Public Infrastructure** Name: Manchester Oxford Road Rail Station Location: Great Marlborough Street, M1 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A12SE (W)	636	9	384029 397472
508	**Points of Interest - Public Infrastructure** Name: Manchester Oxford Road Station Location: Great Marlborough Street, M1 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A12SE (W)	636	9	384029 397472
509	**Points of Interest - Public Infrastructure** Name: Revolution It Location: 100 Fairfield Street, Manchester, M1 2WR Category: Infrastructure and Facilities Class Code: Recycling Centres Positional Accuracy: Positioned to address or location	A14SE (E)	638	9	385357 397655
510	**Points of Interest - Public Infrastructure** Name: Cleared 4 U Rubbish Removals Location: 83 Ducie Street, Manchester, M1 2JQ Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A19SW (NE)	650	9	385091 398286
511	**Points of Interest - Public Infrastructure** Name: Tanzo Passenger Services Ltd Location: Peter House, Oxford Street, Manchester, M1 5AN Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A12NW (W)	700	9	383925 397847
511	**Points of Interest - Public Infrastructure** Name: Tanzo Passenger Services Ltd Location: Peter House, Oxford Street, Manchester, M1 5AN Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A12NW (W)	700	9	383925 397847
512	**Points of Interest - Public Infrastructure** Name: Weir Location: M4 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	751	9	384971 398461

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
513	**Points of Interest - Public Infrastructure** Name: Bus Station Location: M1 Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to an adjacent address or location	A18NW (N)	786	9	384616 398535
514	**Points of Interest - Public Infrastructure** Name: Texaco Location: Hyde, Road, Manchester, M18 7EE Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A9NW (SE)	799	9	385240 397095
514	**Points of Interest - Public Infrastructure** Name: Esso Location: Ardwick Green South, Manchester, M13 9XF Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A9NW (SE)	800	9	385240 397094
514	**Points of Interest - Public Infrastructure** Name: Esso Location: Ardwick Green, Manchester, M13 9XF Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A9NW (SE)	800	9	385243 397096
514	**Points of Interest - Public Infrastructure** Name: Tesco Petrol Station Location: Ardwick Green South, Manchester, M13 9XF Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A9NW (SE)	801	9	385241 397094
514	**Points of Interest - Public Infrastructure** Name: Ardwick Green Express Location: Ardwick Green South, Manchester, M13 9XF Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A9NW (SE)	801	9	385241 397094
514	**Points of Interest - Public Infrastructure** Name: Ardwick Green Express Location: Ardwick Green South, Manchester, M13 9XF Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A9NW (SE)	815	9	385252 397084
515	**Points of Interest - Public Infrastructure** Name: Manchester City Council Location: Town Hall, Albert Square, Manchester, M2 5DB Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A17SW (NW)	832	9	383867 398089
516	**Points of Interest - Public Infrastructure** Name: Weirs Location: M1 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12SW (W)	832	9	383841 397412
516	**Points of Interest - Public Infrastructure** Name: Weirs Location: M1 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12SW (W)	836	9	383837 397411
517	**Points of Interest - Public Infrastructure** Name: Sluice Location: M4 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	847	9	385410 398244
517	**Points of Interest - Public Infrastructure** Name: Sluice Location: M4 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	852	9	385415 398245

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
518	**Points of Interest - Public Infrastructure** Name: Wastelift Location: 30 Brown Street, Manchester, M2 1DH Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A17SE (NW)	867	9	384013 398347
518	**Points of Interest - Public Infrastructure** Name: Anywaste UK Location: St. James Court 30, Brown Street, Manchester, M2 1DH Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A17SE (NW)	868	9	384013 398350
518	**Points of Interest - Public Infrastructure** Name: Tesco Petrol Filling Station Location: 58-66 Market Street, Manchester, M1 1PW Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A17NE (NW)	917	9	384046 398442
519	**Points of Interest - Public Infrastructure** Name: Total Location: 1-5 Hyde Road, Manchester, M12 6BQ Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A9NE (SE)	907	9	385404 397106
520	**Points of Interest - Public Infrastructure** Name: Bootle Street Police Station Location: Bootle Street, Manchester, M2 5GU Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A12NW (W)	929	9	383726 397997
521	**Points of Interest - Public Infrastructure** Name: D C M Services Location: 72 Temperance Street, Manchester, M12 6HU Category: Infrastructure and Facilities Class Code: Recycling Centres Positional Accuracy: Positioned to address or location	A14SE (E)	937	9	385611 397407
521	**Points of Interest - Public Infrastructure** Name: Dcm Services Location: 72 Temperance Street, Manchester, M12 6HU Category: Infrastructure and Facilities Class Code: Recycling Centres Positional Accuracy: Positioned to address or location	A14SE (E)	937	9	385611 397407
521	**Points of Interest - Public Infrastructure** Name: Emptymybins Location: 70 Temperance Street, Manchester, M12 6HU Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A14SE (E)	957	9	385627 397393
522	**Points of Interest - Recreational and Environmental** Name: Skatepark Location: M1 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	250	9	384875 397506
523	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8NE (S)	527	9	384825 397179
524	**Points of Interest - Recreational and Environmental** Name: Play Area Location: M13 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8NE (S)	581	9	384745 397102
524	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8NE (S)	597	9	384752 397087

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
525	**Points of Interest - Recreational and Environmental** Name: Play Area Location: M13 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	735	9	385258 397201
525	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	813	9	385330 397164
525	**Points of Interest - Recreational and Environmental** Name: Playground Location: Ardwick Green North, M13 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A9NW (SE)	813	9	385328 397162
526	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	990	9	384982 396743
526	**Points of Interest - Recreational and Environmental** Name: Playground Location: Glenbarry Close, M13 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A8SE (S)	990	9	384982 396743

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
527	**Nitrate Vulnerable Zones** Name: River Irk (Moston Brook To River Irwell) Nvz Description: Surface Water Source: Environment Agency, Head Office	A18NW (N)	705	4	384400 398400

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Environment Agency - Head Office	June 2020	Annually
Trafford Metropolitan Borough Council - Renewal and Environmental Protection	November 2013	Annual Rolling Update
Manchester City Council - Environmental Health Department	October 2017	Annual Rolling Update
Oldham Metropolitan Borough Council - Environmental Health Department	October 2017	Annual Rolling Update
Salford City Council - Environmental Health Department	October 2017	Annual Rolling Update
Stockport Metropolitan Borough Council - Environment Team (Land & Water)	October 2017	Annual Rolling Update
Tameside Metropolitan Borough Council - Environmental Health Department	October 2017	Annual Rolling Update
Bury Metropolitan Borough Council - Environmental Health Department	September 2017	Annual Rolling Update
Discharge Consents		
Environment Agency - North West Region	October 2022	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - North West Region	March 2013	
Integrated Pollution Controls		
Environment Agency - North West Region	January 2009	
Integrated Pollution Prevention And Control		
Environment Agency - North West Region	October 2022	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Bury Metropolitan Borough Council - Environmental Health Department	February 2015	Variable
Tameside Metropolitan Borough Council - Environmental Health Department	June 2015	Variable
Oldham Metropolitan Borough Council - Environmental Health Department	March 2015	Variable
Salford City Council - Environmental Health Department	March 2015	Variable
Stockport Metropolitan Borough Council - Environmental Health Department, EEDD	October 2014	Variable
Trafford Metropolitan Borough Council - Environmental Health Department	October 2014	Variable
Manchester City Council - Environmental Health Department	September 2014	Variable
Local Authority Pollution Prevention and Controls		
Bury Metropolitan Borough Council - Environmental Health Department	February 2015	Not Applicable
Tameside Metropolitan Borough Council - Environmental Health Department	June 2015	Annual Rolling Update
Oldham Metropolitan Borough Council - Environmental Health Department	March 2015	Annual Rolling Update
Salford City Council - Environmental Health Department	March 2015	Annual Rolling Update
Stockport Metropolitan Borough Council - Environmental Health Department, EEDD	October 2014	Annual Rolling Update
Trafford Metropolitan Borough Council - Environmental Health Department	October 2014	Annual Rolling Update
Manchester City Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Bury Metropolitan Borough Council - Environmental Health Department	February 2015	Variable
Tameside Metropolitan Borough Council - Environmental Health Department	June 2015	Variable
Oldham Metropolitan Borough Council - Environmental Health Department	March 2015	Variable
Salford City Council - Environmental Health Department	March 2015	Variable
Stockport Metropolitan Borough Council - Environmental Health Department, EEDD	October 2014	Variable
Trafford Metropolitan Borough Council - Environmental Health Department	October 2014	Variable
Manchester City Council - Environmental Health Department	September 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	October 2022	
Pollution Incidents to Controlled Waters		
Environment Agency - North West Region	January 2000	
Prosecutions Relating to Authorised Processes		
Environment Agency - North West Region	July 2015	
Prosecutions Relating to Controlled Waters		
Environment Agency - North West Region	March 2013	
Registered Radioactive Substances		
Environment Agency - North West Region	June 2016	As notified
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable

Agency & Hydrological	Version	Update Cycle
River Quality Biology Sampling Points Environment Agency - Head Office	April 2012	
River Quality Chemistry Sampling Points Environment Agency - Head Office	April 2012	
Substantiated Pollution Incident Register Environment Agency - North West Region - South Area	October 2022	Quarterly
Water Abstractions Environment Agency - North West Region	October 2022	Quarterly
Water Industry Act Referrals Environment Agency - North West Region	October 2017	
Groundwater Vulnerability Map Environment Agency - Head Office	June 2018	As notified
Groundwater Vulnerability - Soluble Rock Risk Environment Agency - Head Office	June 2018	As notified
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Source Protection Zones Environment Agency - Head Office	September 2022	Bi-Annually
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2022	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2022	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	August 2022	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	August 2022	Quarterly
Flood Defences Environment Agency - Head Office	August 2022	Quarterly
OS Water Network Lines Ordnance Survey	October 2022	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water Suitability Environment Agency - Head Office	February 2016	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	November 2002	As notified
Historical Landfill Sites		
Environment Agency - Head Office	November 2022	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - North West Region	January 2009	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - North West Region - South Area	October 2022	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - North East Region - Ridings Area	July 2022	Quarterly
Environment Agency - North West Region - South Area	July 2022	Quarterly
Local Authority Landfill Coverage		
Bury Metropolitan Borough Council	February 2003	Not Applicable
Manchester City Council - Planning Department	February 2003	Not Applicable
Oldham Metropolitan Borough Council	February 2003	Not Applicable
Salford City Council - Environmental Health Department	February 2003	Not Applicable
Stockport Metropolitan Borough Council - Environmental Health Department, EEDD	February 2003	Not Applicable
Tameside Metropolitan Borough Council	February 2003	Not Applicable
Trafford Metropolitan Borough Council - Environmental Health Department	February 2003	Not Applicable
Local Authority Recorded Landfill Sites		
Bury Metropolitan Borough Council	October 2018	
Manchester City Council - Planning Department	October 2018	
Oldham Metropolitan Borough Council	October 2018	
Salford City Council - Environmental Health Department	October 2018	
Stockport Metropolitan Borough Council - Environmental Health Department, EEDD	October 2018	
Tameside Metropolitan Borough Council	October 2018	
Trafford Metropolitan Borough Council - Environmental Health Department	October 2018	
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	
Registered Landfill Sites		
Environment Agency - North West Region - South Area	March 2006	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - North West Region - South Area	April 2018	
Registered Waste Treatment or Disposal Sites		
Environment Agency - North West Region - South Area	June 2015	

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	January 2022	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements		
Trafford Metropolitan Borough Council	April 2016	Variable
Bury Metropolitan Borough Council	February 2016	Variable
Manchester City Council - Planning Department	February 2016	Variable
Oldham Metropolitan Borough Council	February 2016	Variable
Stockport Metropolitan Borough Council - Environment and Economic Development	February 2016	Variable
Tameside Metropolitan Borough Council - Planning and Building Control	February 2016	Variable
Salford City Council	June 2016	Variable
Planning Hazardous Substance Consents		
Trafford Metropolitan Borough Council	April 2016	Variable
Bury Metropolitan Borough Council	February 2016	Variable
Manchester City Council - Planning Department	February 2016	Variable
Oldham Metropolitan Borough Council	February 2016	Variable
Stockport Metropolitan Borough Council - Environment and Economic Development	February 2016	Variable
Tameside Metropolitan Borough Council - Planning and Building Control	February 2016	Variable
Salford City Council	June 2016	Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2022	Bi-Annually
BGS Urban Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Urban Soil Chemistry Averages British Geological Survey - National Geoscience Information Service	December 2015	As notified
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	September 2022	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	September 2022	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	October 2022	Quarterly
Fuel Station Entries Catalist Ltd - Experian	January 2023	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Points of Interest - Commercial Services PointX	December 2022	Quarterly
Points of Interest - Education and Health PointX	December 2022	Quarterly
Points of Interest - Manufacturing and Production PointX	December 2022	Quarterly
Points of Interest - Public Infrastructure PointX	December 2022	Quarterly
Points of Interest - Recreational and Environmental PointX	December 2022	Quarterly
Underground Electrical Cables National Grid	May 2021	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	February 2021	Bi-Annually
Areas of Adopted Green Belt		
Bury Metropolitan Borough Council	July 2022	Quarterly
Manchester City Council	July 2022	Quarterly
Oldham Metropolitan Borough Council	July 2022	Quarterly
Salford City Council	July 2022	Quarterly
Stockport Metropolitan Borough Council	July 2022	Quarterly
Tameside Metropolitan Borough Council	July 2022	Quarterly
Trafford Metropolitan Borough Council	July 2022	Quarterly
Areas of Unadopted Green Belt		
Bury Metropolitan Borough Council	July 2022	Quarterly
Manchester City Council	July 2022	Quarterly
Oldham Metropolitan Borough Council	July 2022	Quarterly
Salford City Council	July 2022	Quarterly
Stockport Metropolitan Borough Council	July 2022	Quarterly
Tameside Metropolitan Borough Council	July 2022	Quarterly
Trafford Metropolitan Borough Council	July 2022	Quarterly
Areas of Outstanding Natural Beauty		
Natural England	August 2022	Bi-Annually
Environmentally Sensitive Areas		
Natural England	January 2017	
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	February 2021	Bi-Annually
Marine Nature Reserves		
Natural England	July 2019	Bi-Annually
National Nature Reserves		
Natural England	January 2021	Bi-Annually
National Parks		
Natural England	February 2018	Bi-Annually
Nitrate Sensitive Areas		
Natural England	April 2016	Not Applicable
Nitrate Vulnerable Zones		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	April 2016	
Environment Agency - Head Office	June 2017	Bi-Annually
Ramsar Sites		
Natural England	August 2020	Bi-Annually
Sites of Special Scientific Interest		
Natural England	February 2021	Bi-Annually
Special Areas of Conservation		
Natural England	July 2020	Bi-Annually
Special Protection Areas		
Natural England	February 2021	Bi-Annually

Data Suppliers

A selection of organisations who provide data within this report

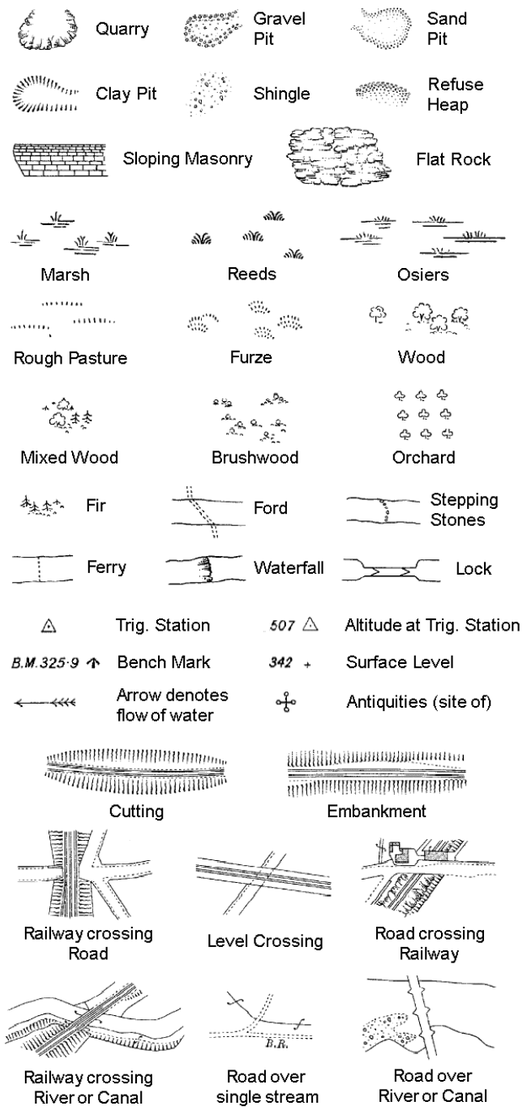
Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	**Manchester City Council - Environmental Health Department** PO Box 463, Town Hall Extension, Albert Square, Manchester, Greater Manchester, M60 3NY	Telephone: 0161 234 4884 / 234 4873. Fax: 0161 234 4508 Website: www.manchester.gov.uk
4	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**Manchester City Council - Planning Department** Town Hall, Manchester, Greater Manchester, M60 2LA	Telephone: 0161 234 5000 Fax: 0161 234 4508 Website: www.manchester.gov.uk
7	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
8	**Stantec UK Ltd** Caversham Bridge House, Waterman Place, Reading, RG1 8DN	Telephone: 0118 950 0761 Email: pba.reading@stantec.com Website: www.stantec.com
9	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

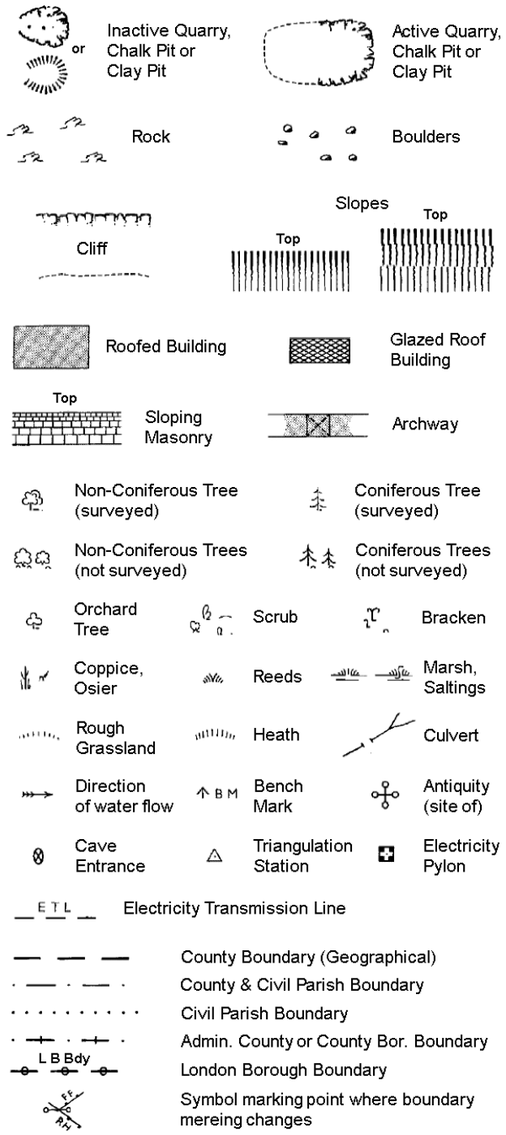
Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



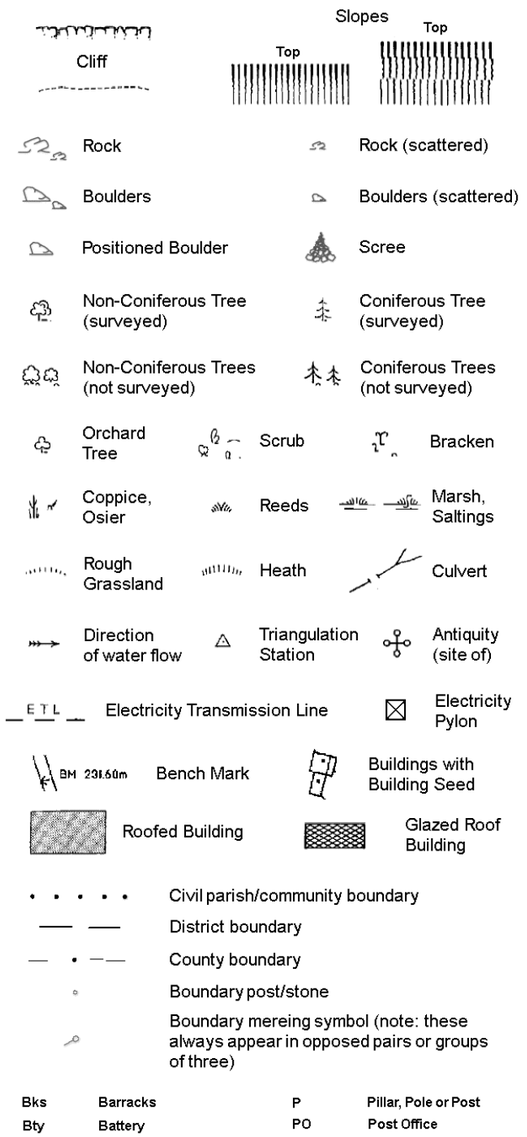
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



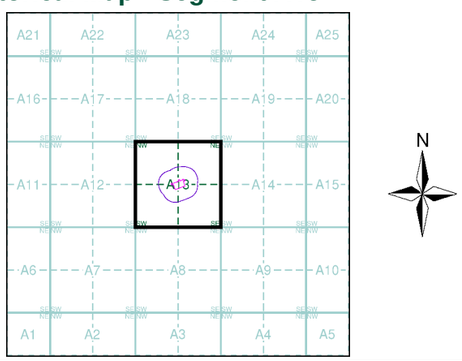
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

curtins

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:2,500	1893	2
Lancashire And Furness	1:2,500	1908	3
Lancashire And Furness	1:2,500	1932	4
Ordnance Survey Plan	1:1,250	1948	5
Ordnance Survey Plan	1:2,500	1950 - 1951	6
Ordnance Survey Plan	1:1,250	1951 - 1964	7
Ordnance Survey Plan	1:2,500	1953 - 1965	8
Ordnance Survey Plan	1:1,250	1960 - 1981	9
Ordnance Survey Plan	1:2,500	1965	10
Ordnance Survey Plan	1:2,500	1969 - 1970	11
Ordnance Survey Plan	1:1,250	1969 - 1989	12
Supply of Unpublished Survey Information	1:1,250	1974 - 1976	13
Additional SIMs	1:1,250	1978 - 1986	14
Additional SIMs	1:1,250	1985 - 1991	15
Ordnance Survey Plan	1:1,250	1987	16
Additional SIMs	1:1,250	1990 - 1991	17
Large-Scale National Grid Data	1:1,250	1992	18
Additional SIMs	1:1,250	1992	19
Large-Scale National Grid Data	1:1,250	1994 - 1995	20
Large-Scale National Grid Data	1:1,250	1996	21
Historical Aerial Photography	1:2,500	2000	22

Historical Map - Segment A13



Order Details

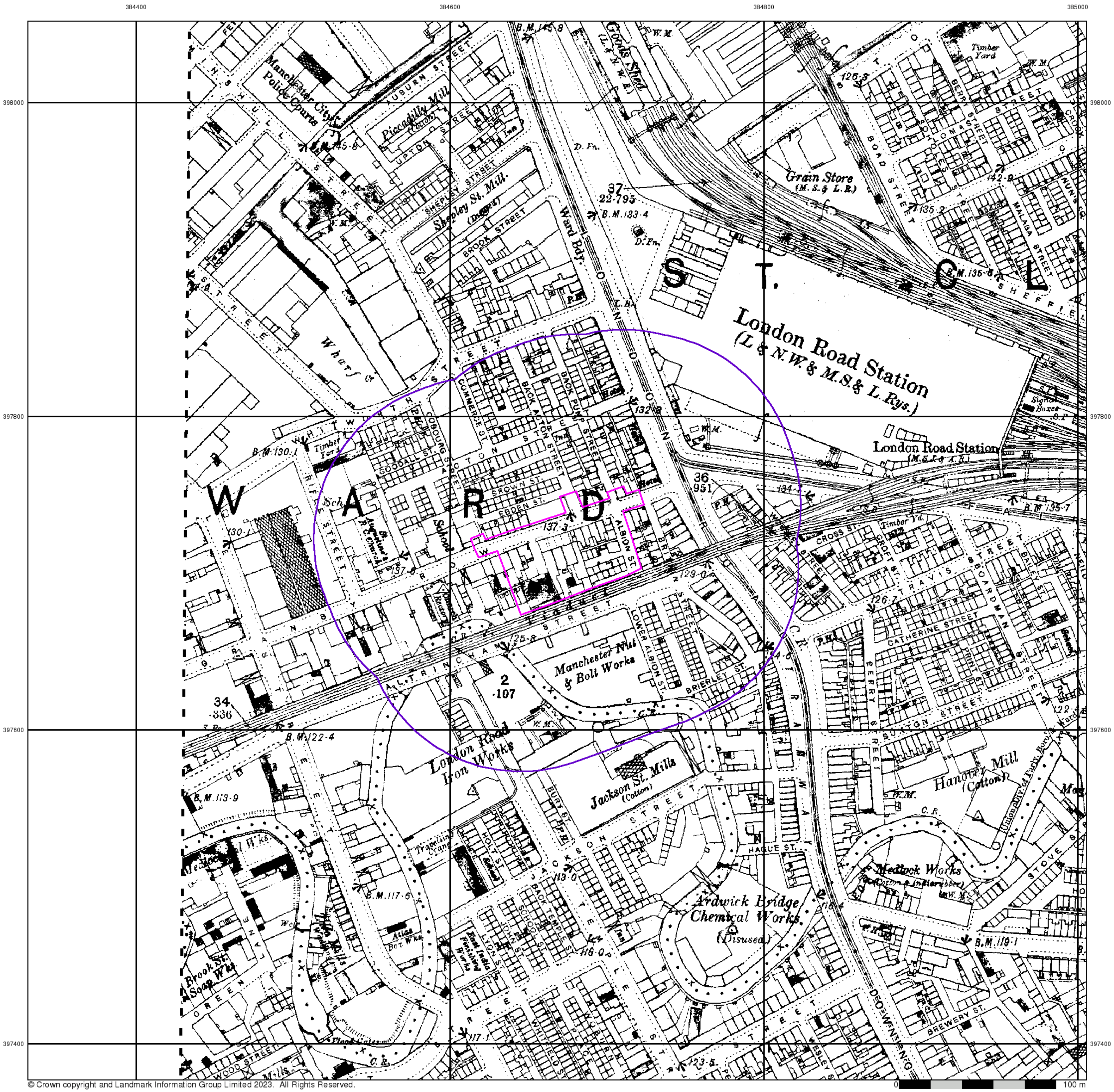
Order Number:	306235410_1_1
Customer Ref:	065374
National Grid Reference:	384670, 397720
Slice:	A
Site Area (Ha):	0.48
Search Buffer (m):	100

Site Details

Flat at Old Garratt, 79, Granby Row, MANCHESTER, M1 7AB

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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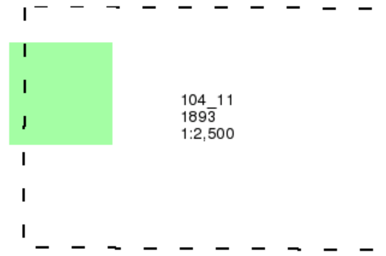
Lancashire And Furness

Published 1893

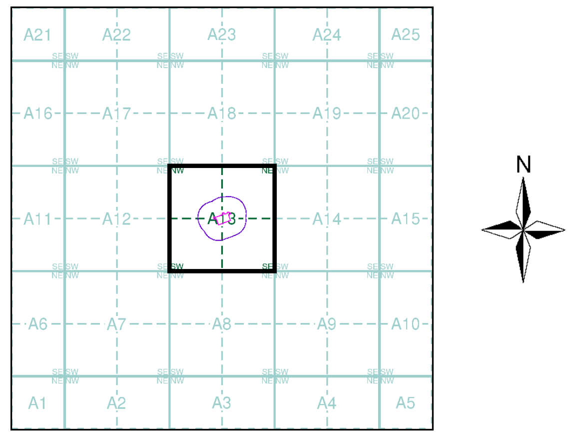
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

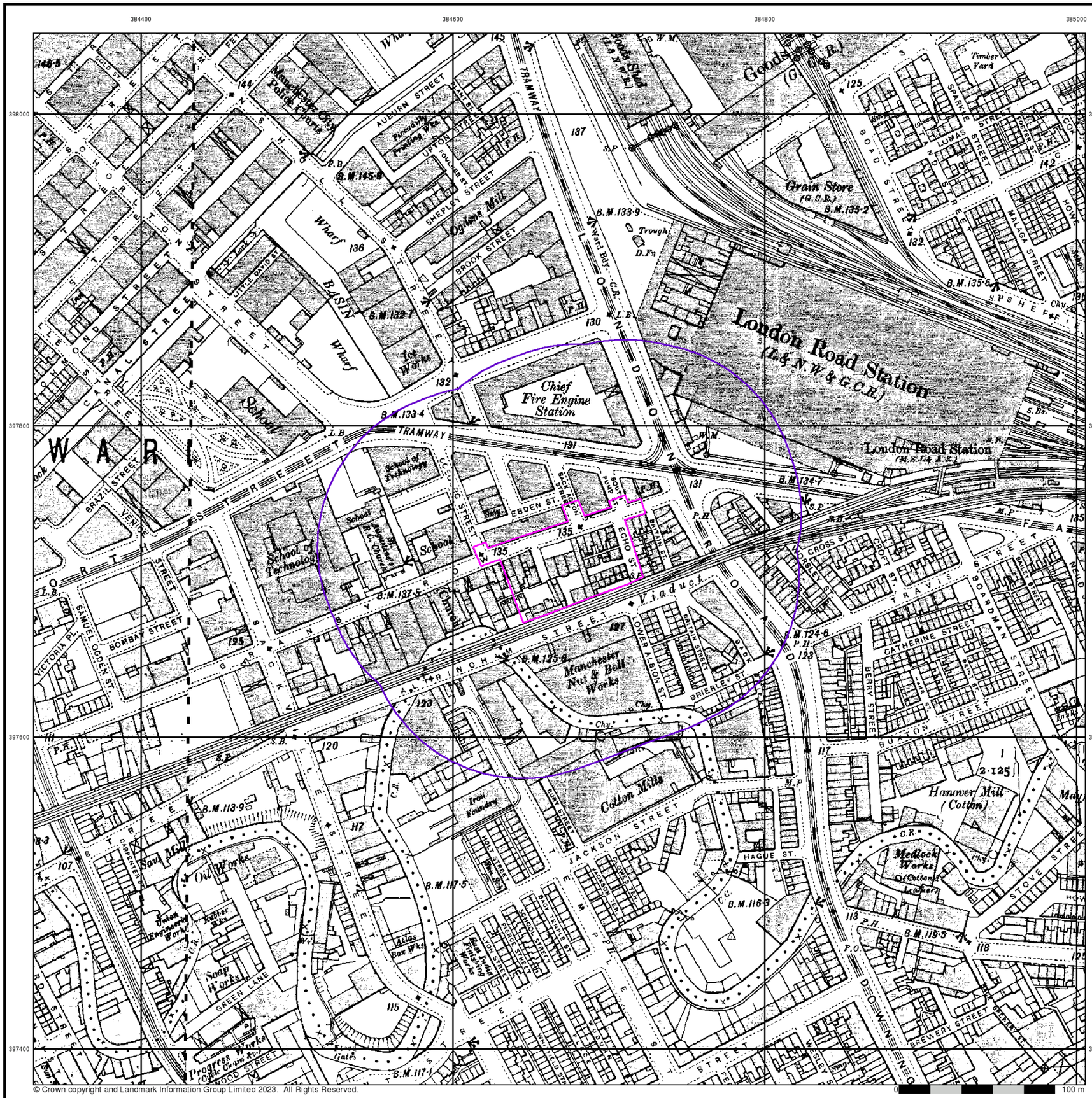
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Slice: A
Site Area (Ha): 0.48
Search Buffer (m): 100

Site Details

Flat at Old Garratt, 79, Granby Row, MANCHESTER, M1 7AB

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Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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curtins

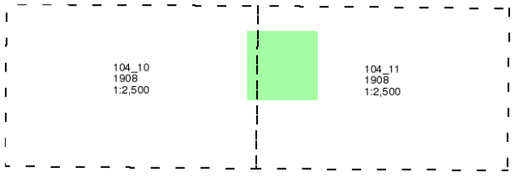
Lancashire And Furness

Published 1908

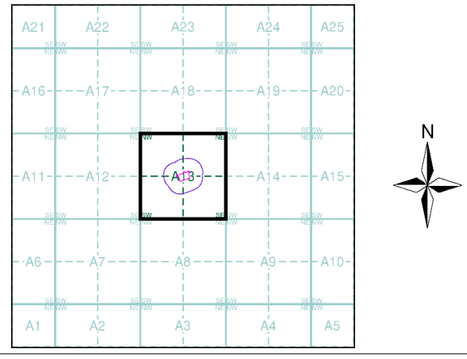
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

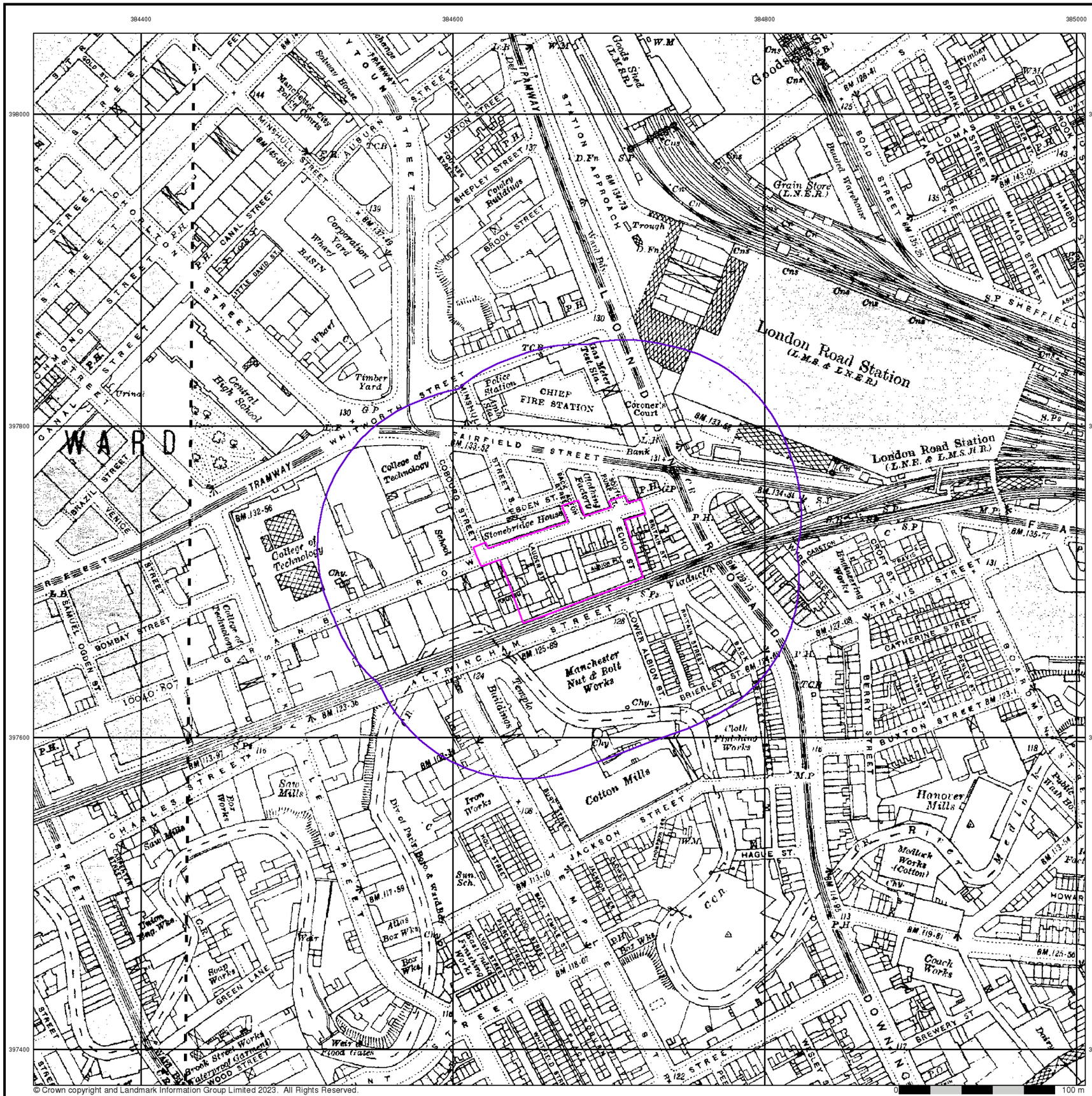


Order Details

Order Number:	306235410_1_1
Customer Ref:	065374
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Site Area (Ha):	0.48
Search Buffer (m):	100

Site Details

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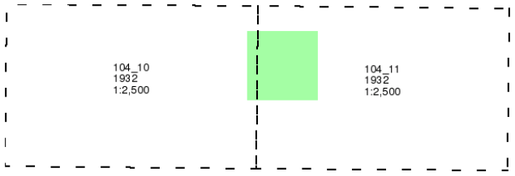
Lancashire And Furness

Published 1932

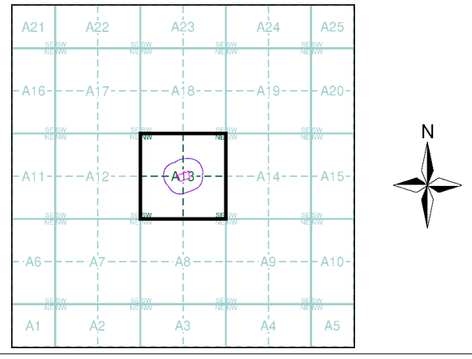
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

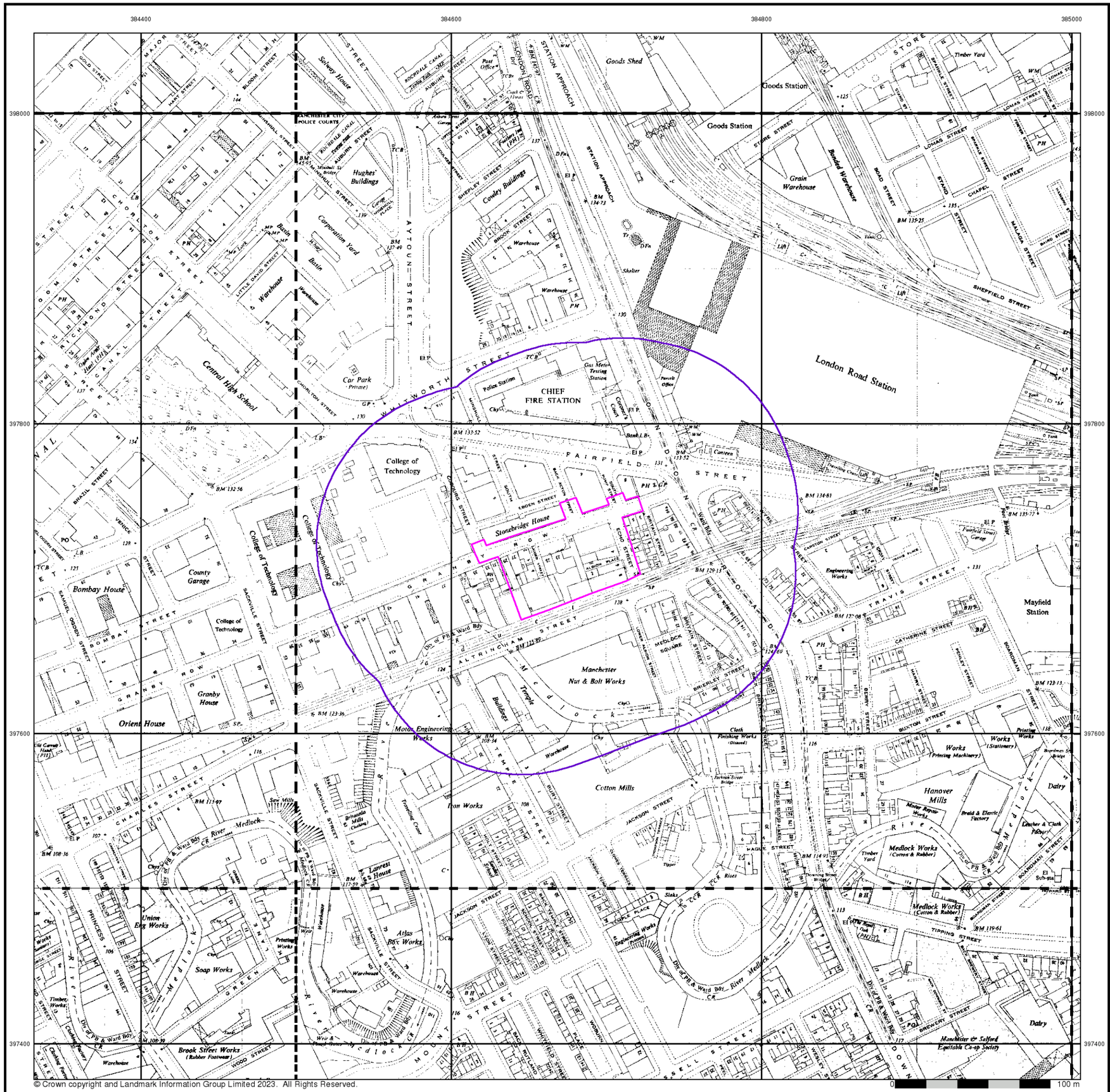


Order Details

Order Number:	306235410_1_1
Customer Ref:	065374
National Grid Reference:	384670, 397720
Slice:	A
Site Area (Ha):	0.48
Search Buffer (m):	100

Site Details

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0 100 m

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Ordnance Survey Plan

Published 1948

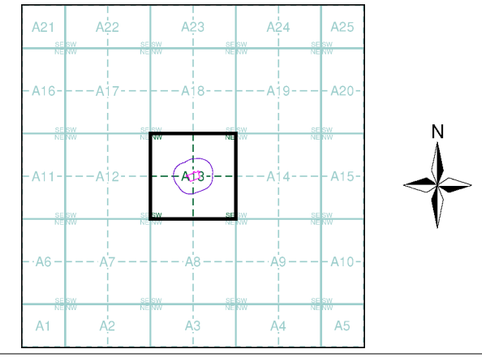
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SJ8498SW 1948 1:1,250	SJ8498SE 1948 1:1,250	
SJ8497NW 1948 1:1,250	SJ8497NE 1948 1:1,250	SJ8597NW 1948 1:1,250
SJ8497SW 1948 1:1,250	SJ8497SE 1948 1:1,250	SJ8597SW 1948 1:1,250

Historical Map - Segment A13



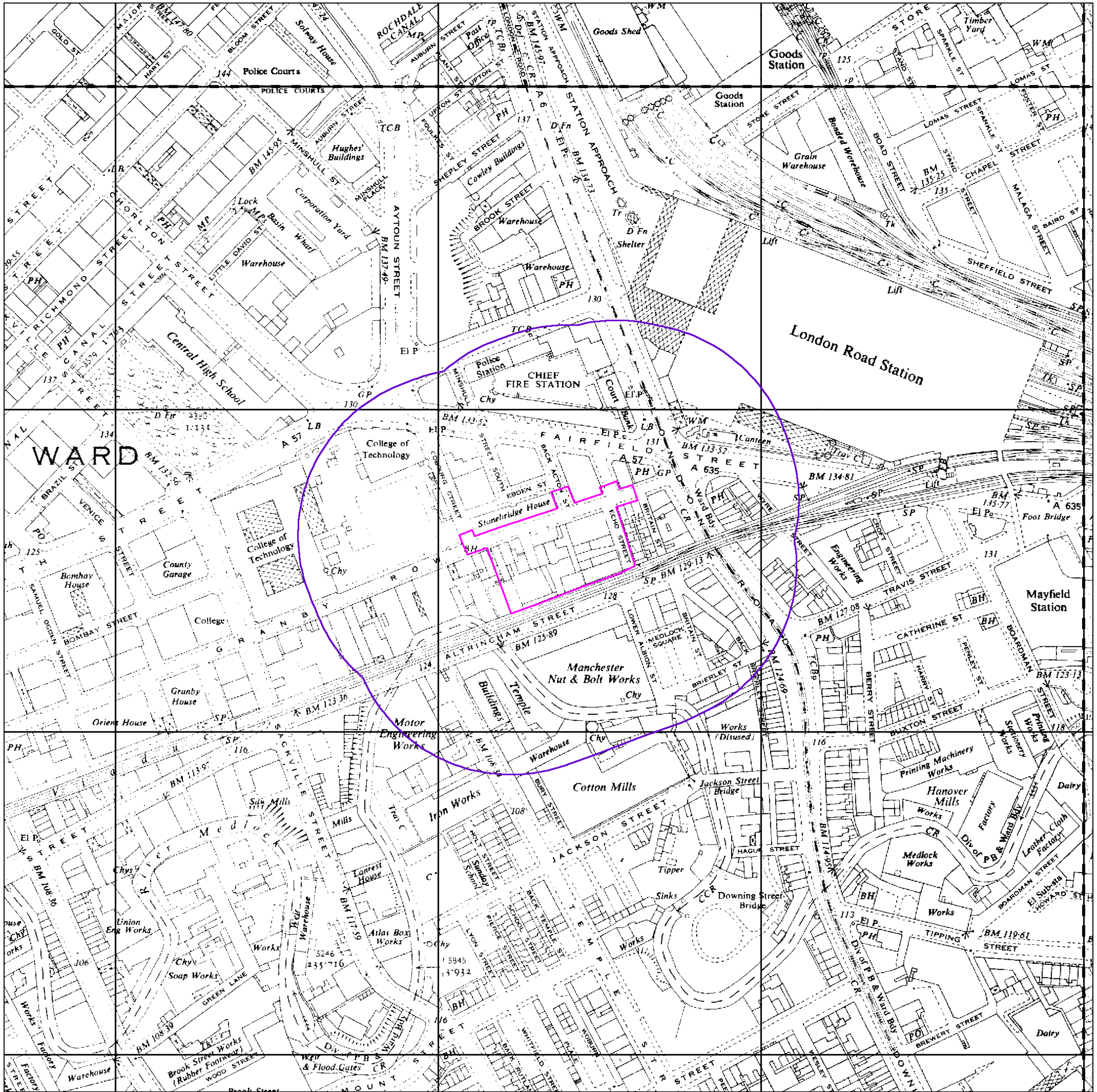
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National Grid Reference:	384670, 397720
Slice:	A
Site Area (Ha):	0.48
Search Buffer (m):	100

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Ordnance Survey Plan

Published 1950 - 1951

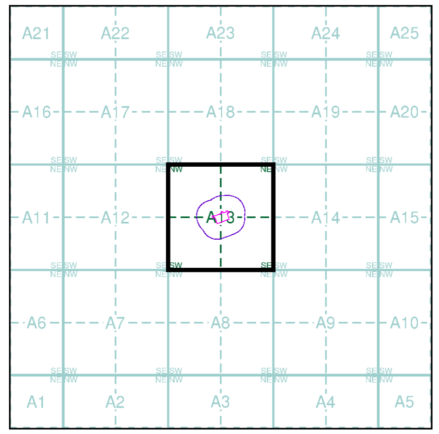
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SJ8498 1951 1:2,500	SJ8598 1951 1:2,500
SJ8497 1950 1:2,500	SJ8597 1950 1:2,500

Historical Map - Segment A13



N

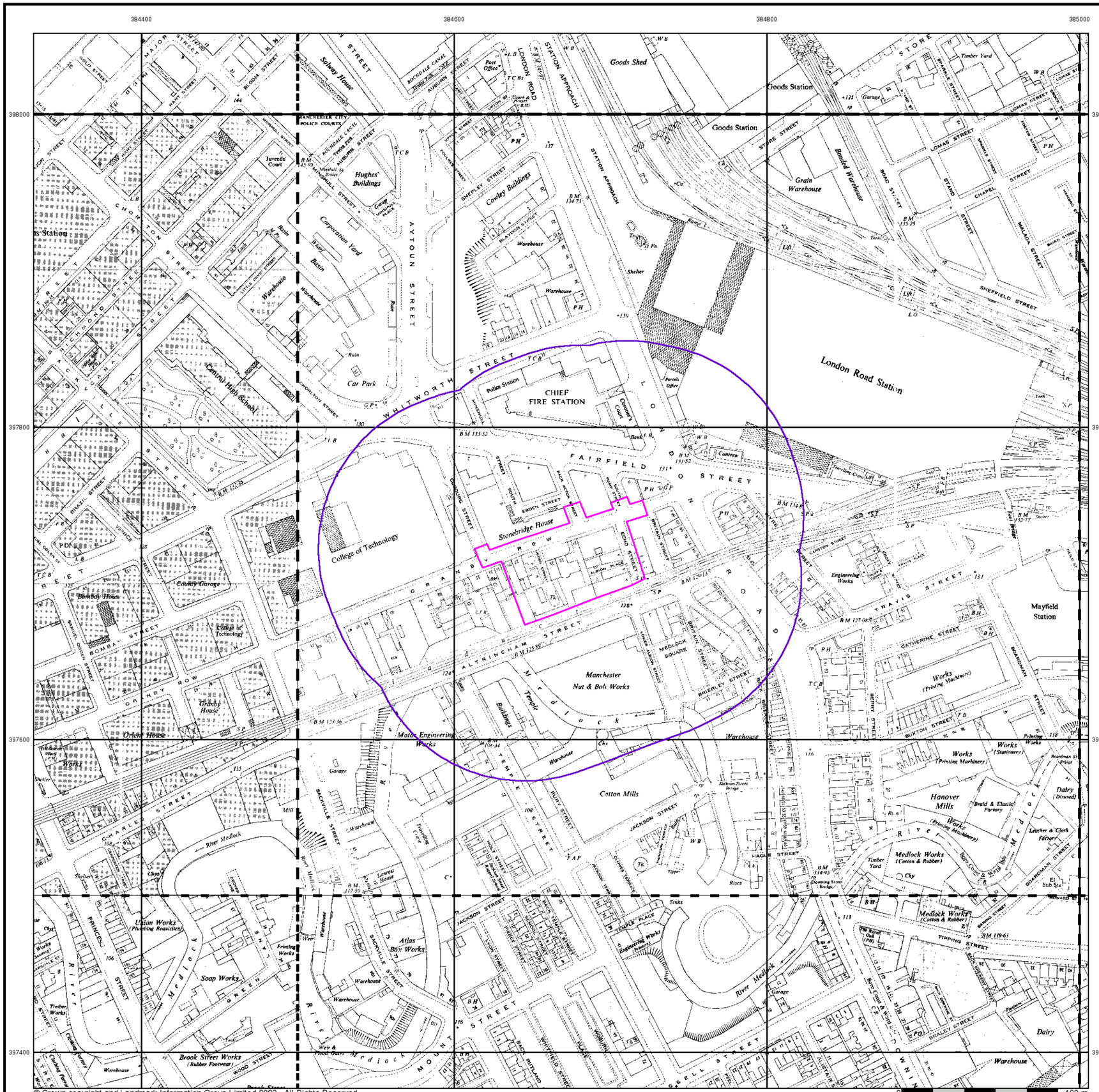
Order Details

Order Number: 306235410_1_1
Customer Ref: 065374
National Grid Reference: 384670, 397720
Slice: A
Site Area (Ha): 0.48
Search Buffer (m): 100

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Ordnance Survey Plan

Published 1951 - 1964

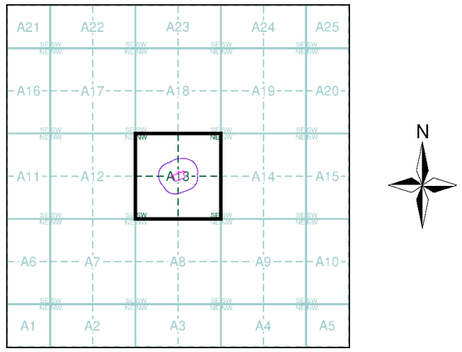
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SJ8498SW 1951 1:1,250	SJ8498SE 1954 1:1,250	SJ8598SW 1955 1:1,250
SJ8497NW 1964 1:1,250	SJ8497NE 1954 1:1,250	SJ8597NW 1963 1:1,250
SJ8497SW 1954 1:1,250	SJ8497SE 1955 1:1,250	SJ8597SW 1954 1:1,250

Historical Map - Segment A13

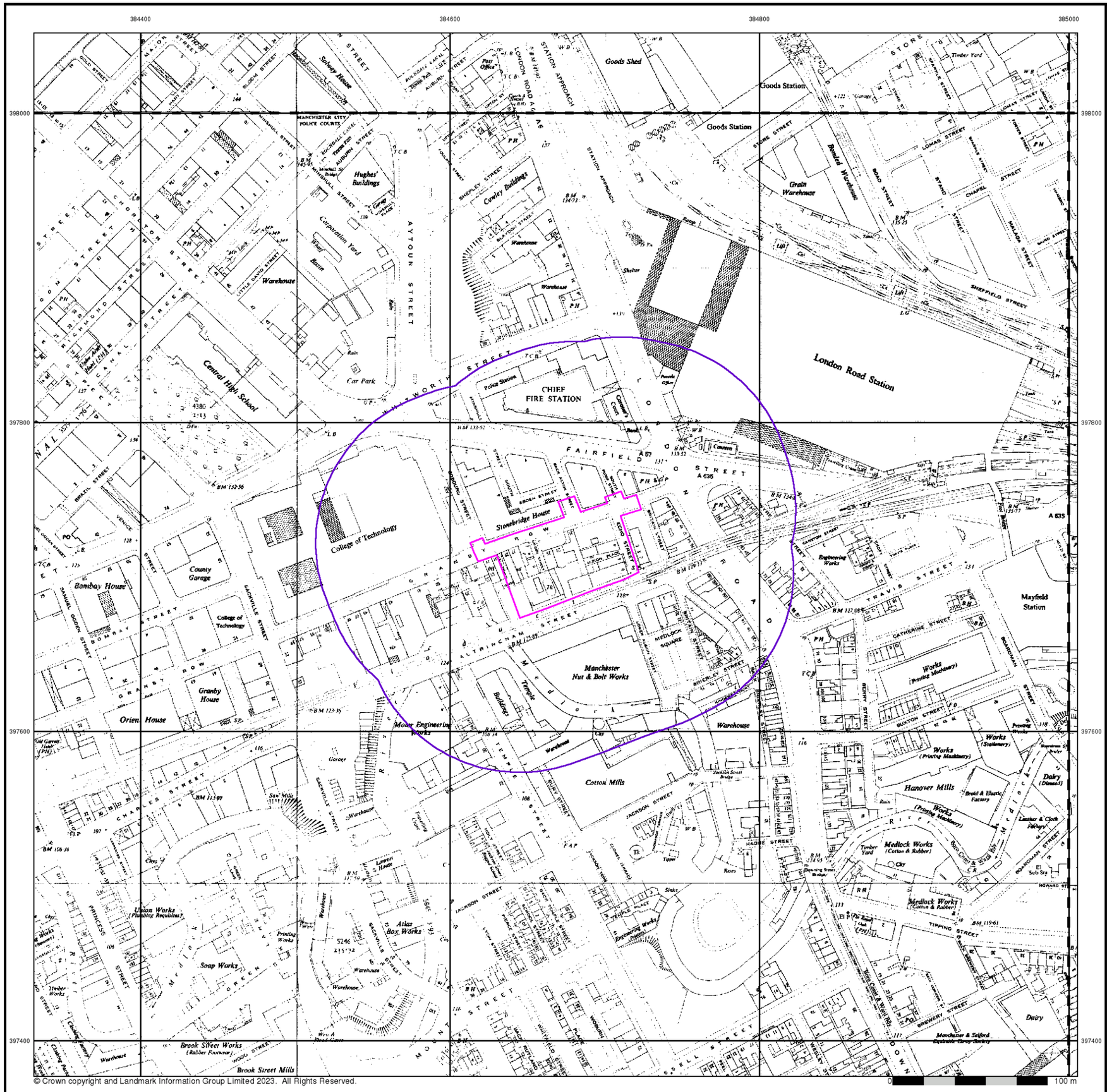


Order Details

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Site Area (Ha):	0.48
Search Buffer (m):	100

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Ordnance Survey Plan

Published 1953 - 1965

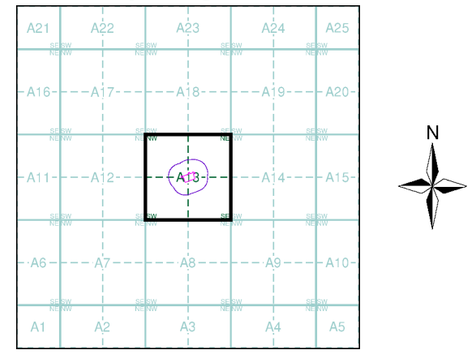
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SJ8498 1955 1:2,500	SJ8598 1953 1:2,500
SJ8497 1955 1:2,500	SJ8597 1965 1:2,500

Historical Map - Segment A13



Order Details

Order Number:	306235410_1_1
Customer Ref:	065374
National Grid Reference:	384670, 397720
Slice:	A
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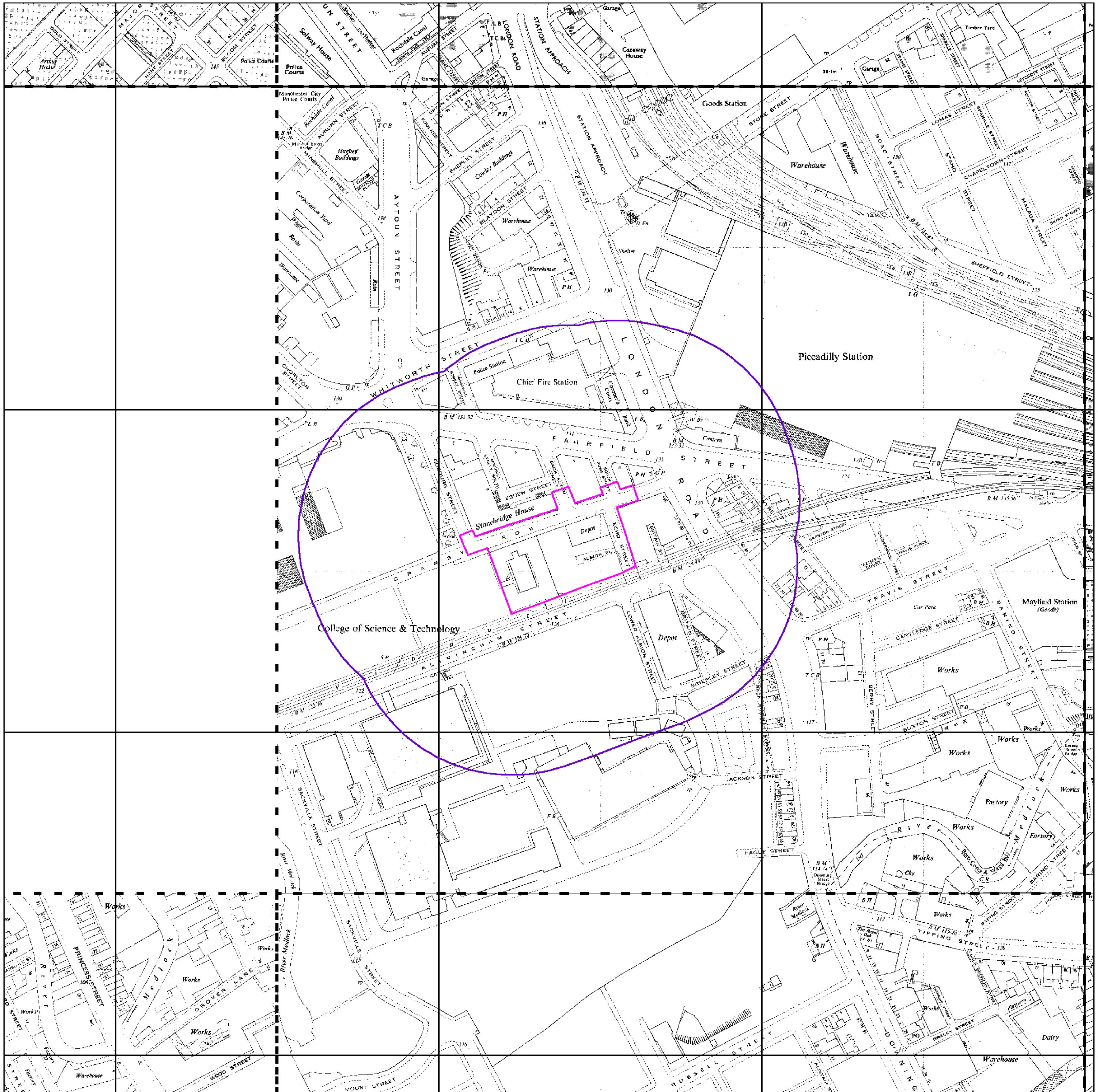
Site Details

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384400 384600 384800 385000



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0 100 m

Ordnance Survey Plan

Published 1960 - 1981

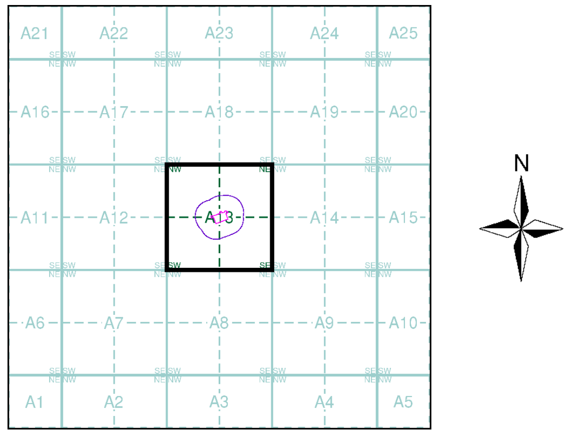
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SJ8498SW 1968 1:1,250	SJ8498SE 1971 1:1,250	SJ8598SW 1981 1:1,250
	SJ8497NE 1964 1:1,250	SJ8597NW 1977 1:1,250
SJ8497SW 1962 1:1,250	SJ8497SE 1964 1:1,250	SJ8597SW 1960 1:1,250

Historical Map - Segment A13



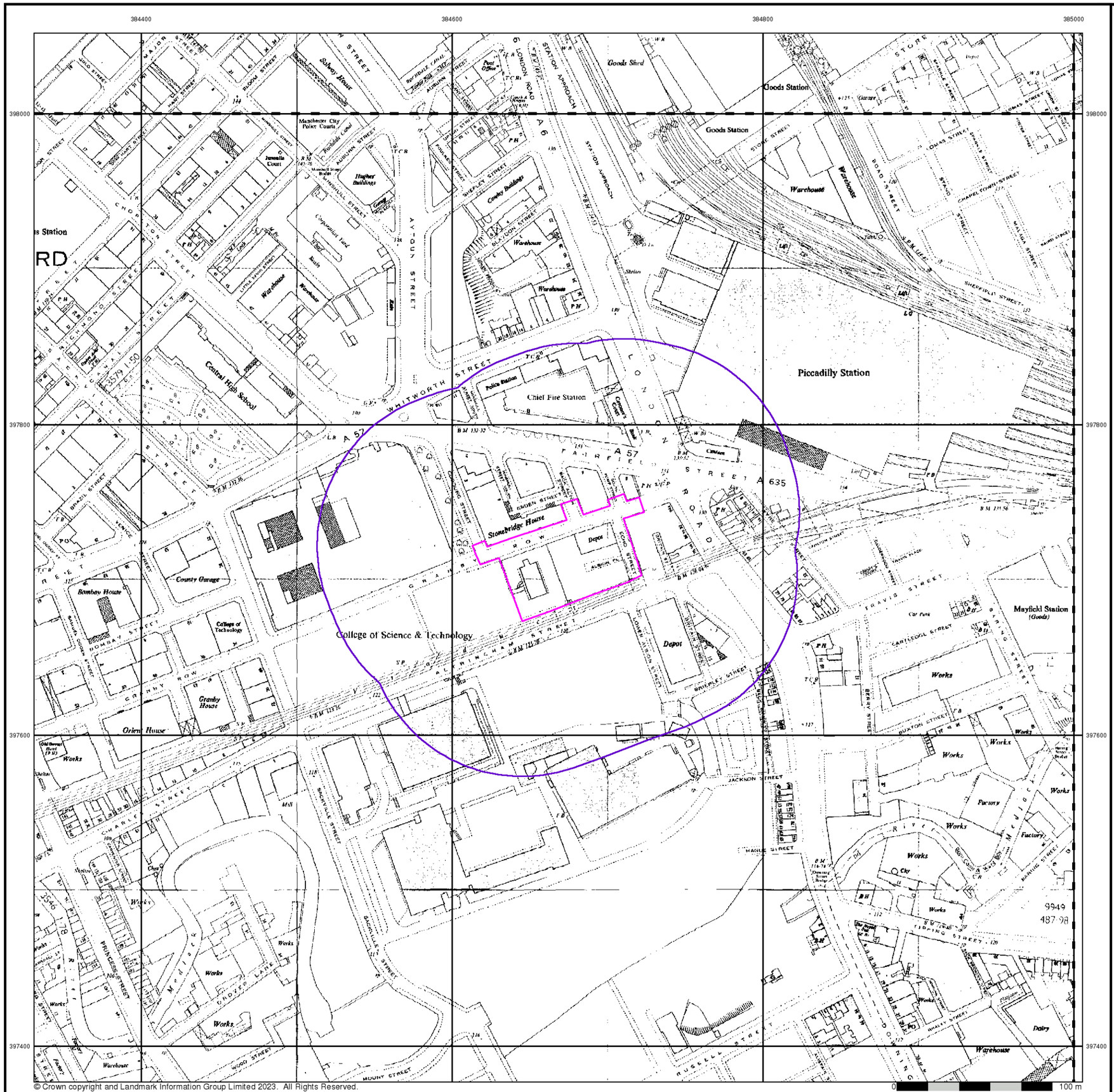
Order Details

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Site Area (Ha): 0.48
Search Buffer (m): 100

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Ordnance Survey Plan

Published 1965

Source map scale - 1:2,500

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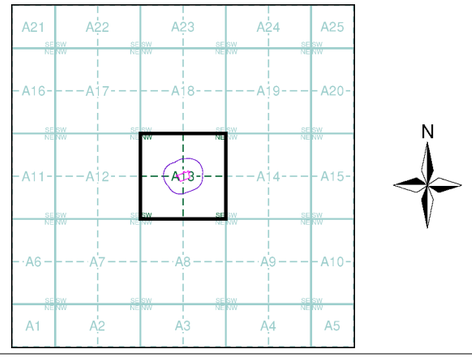
Map Name(s) and Date(s)

SJ8498 1965 1:2,500

SJ8598 1965 1:2,500

SJ8497 1965 1:2,500

Historical Map - Segment A13

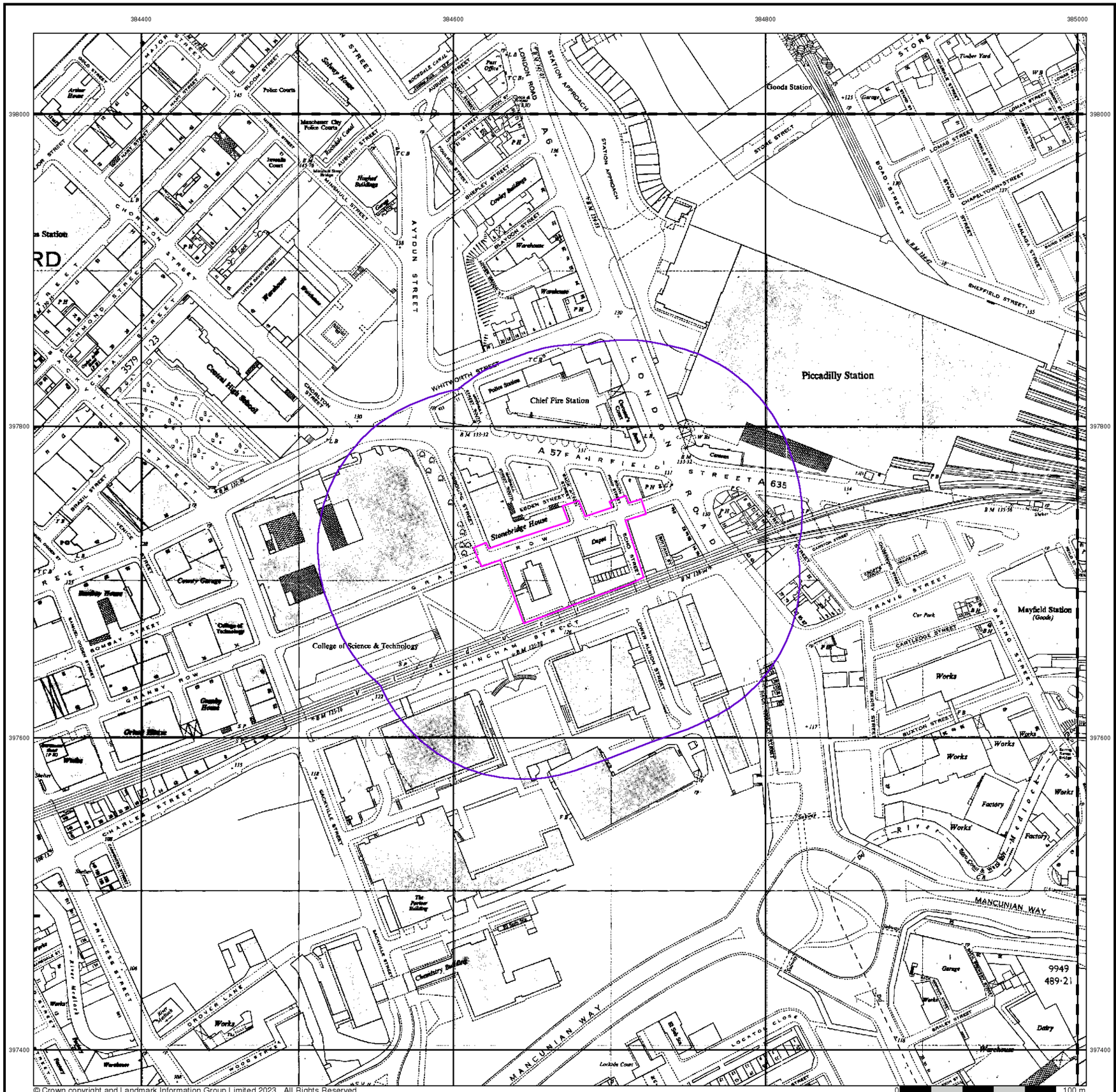


Order Details

Order Number:	306235410_1_1
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Site Area (Ha):	0.48
Search Buffer (m):	100

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Ordnance Survey Plan

Published 1969 - 1970

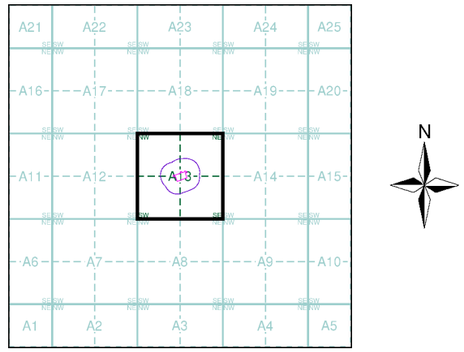
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SJ8498 1969 1:2,500	SJ8598 1969 1:2,500
SJ8497 1970 1:2,500	SJ8597 1970 1:2,500

Historical Map - Segment A13



Order Details

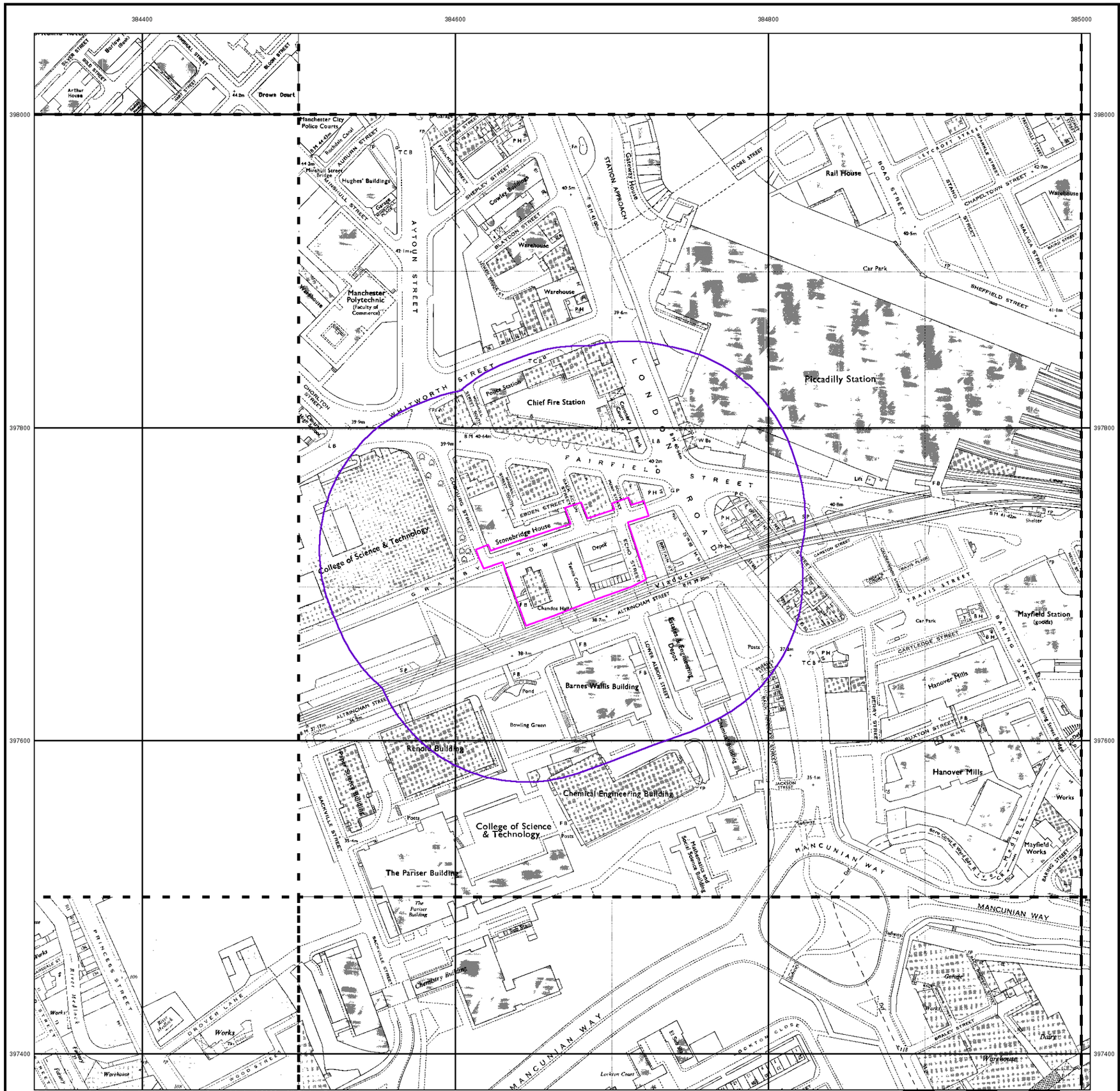
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Site Area (Ha):	0.48
Search Buffer (m):	100

Site Details

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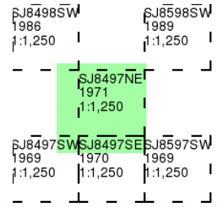
Ordnance Survey Plan

Published 1969 - 1989

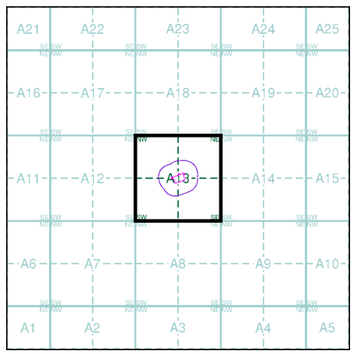
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



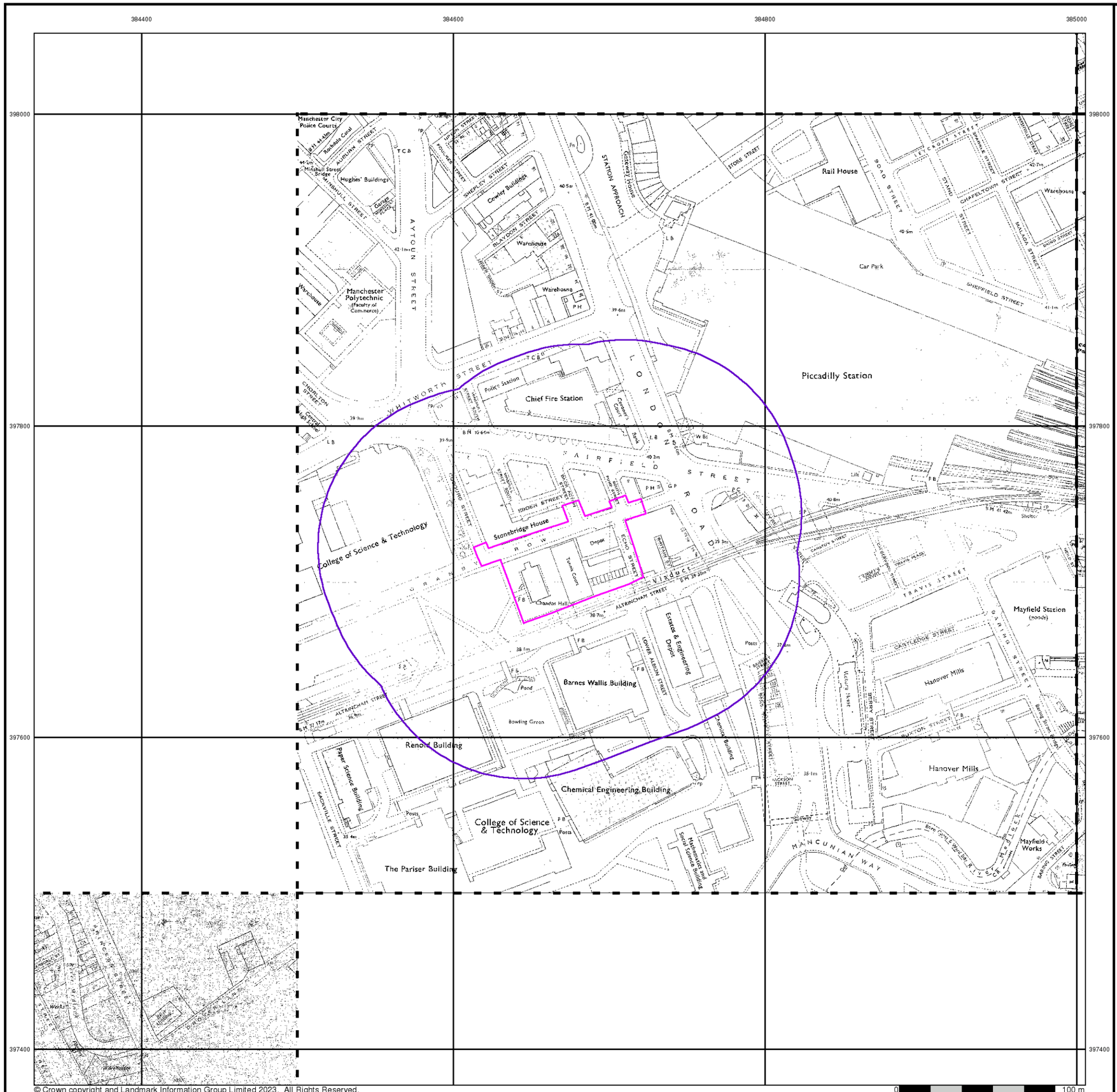
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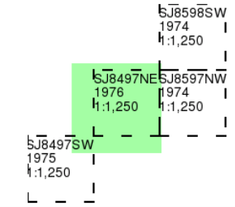
Supply of Unpublished Survey Information

Published 1974 - 1976

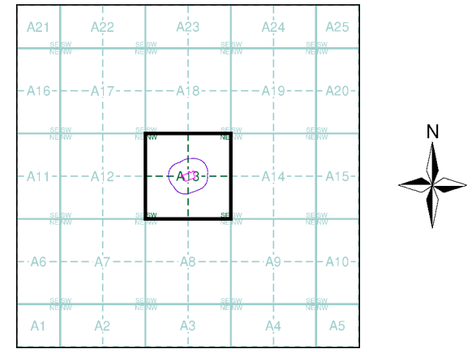
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

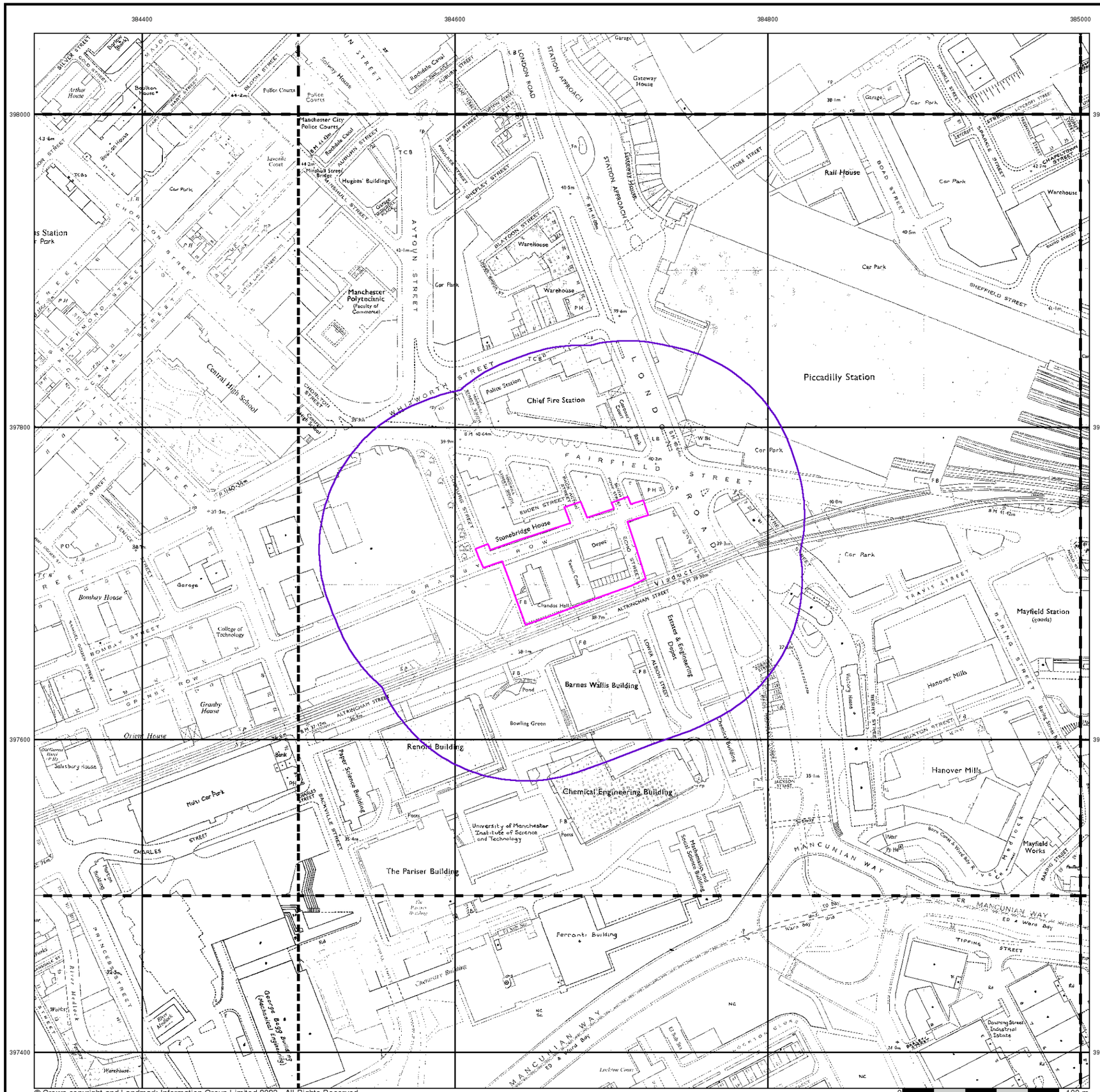
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Search Buffer (m):	100

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Additional SIMs

Published 1978 - 1986

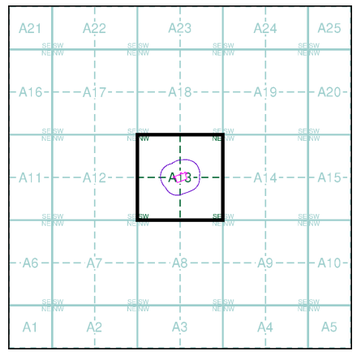
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SJ8498SW 1980 1:1,250	SJ8498SE 1985 1:1,250	SJ8598SW 1978 1:1,250
SJ8497NW 1985 1:1,250	SJ8497NE 1984 1:1,250	SJ8597NW 1985 1:1,250
SJ8497SW 1978 1:1,250	SJ8497SE 1984 1:1,250	SJ8597SW 1986 1:1,250

Historical Map - Segment A13



Order Details

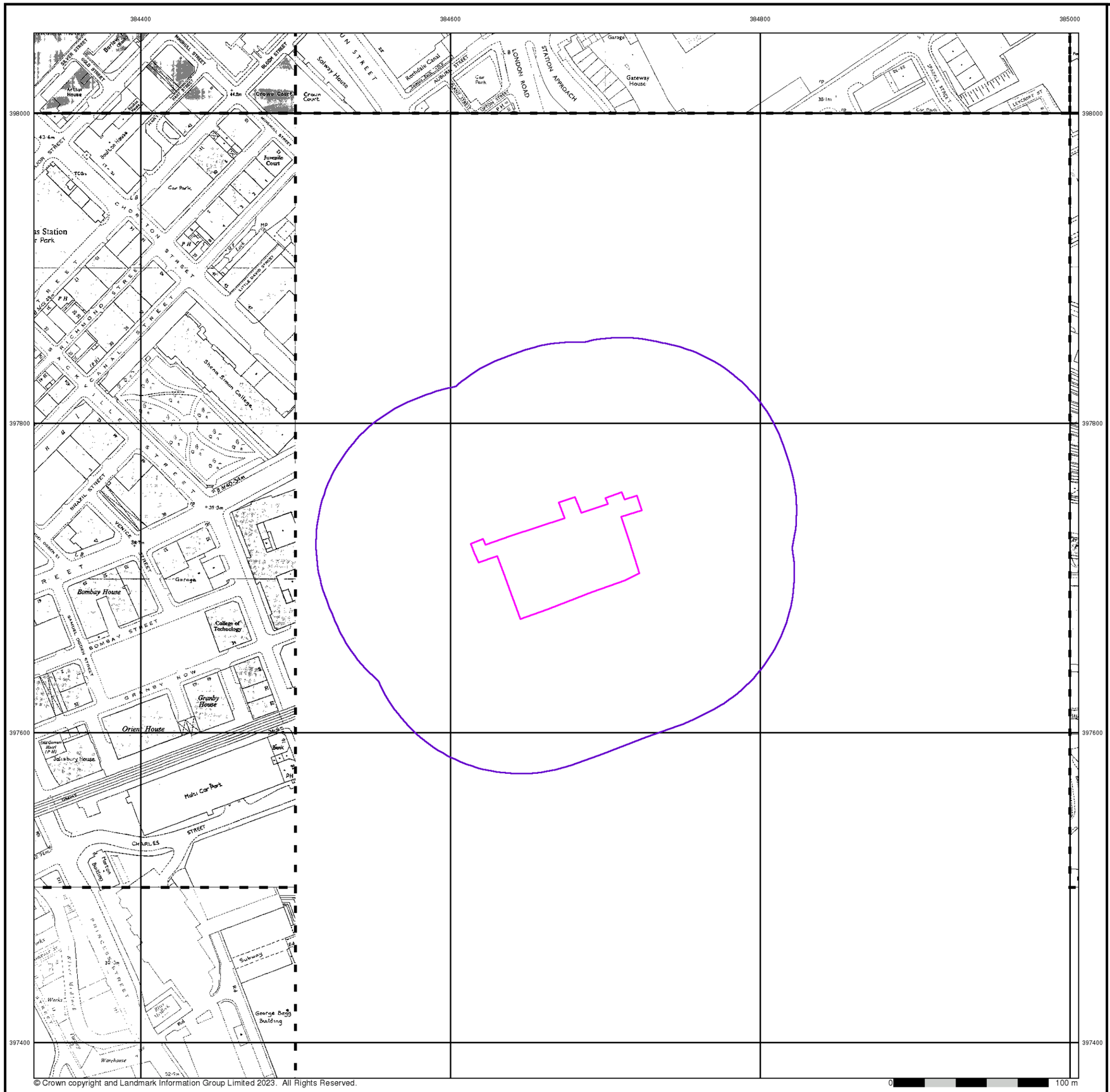
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National Grid Reference:	384670, 397720
Slice:	A
Site Area (Ha):	0.48
Search Buffer (m):	100

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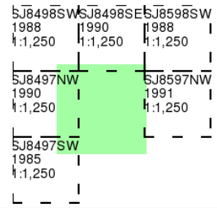
Additional SIMs

Published 1985 - 1991

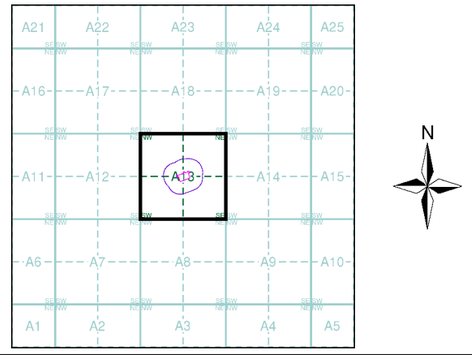
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13

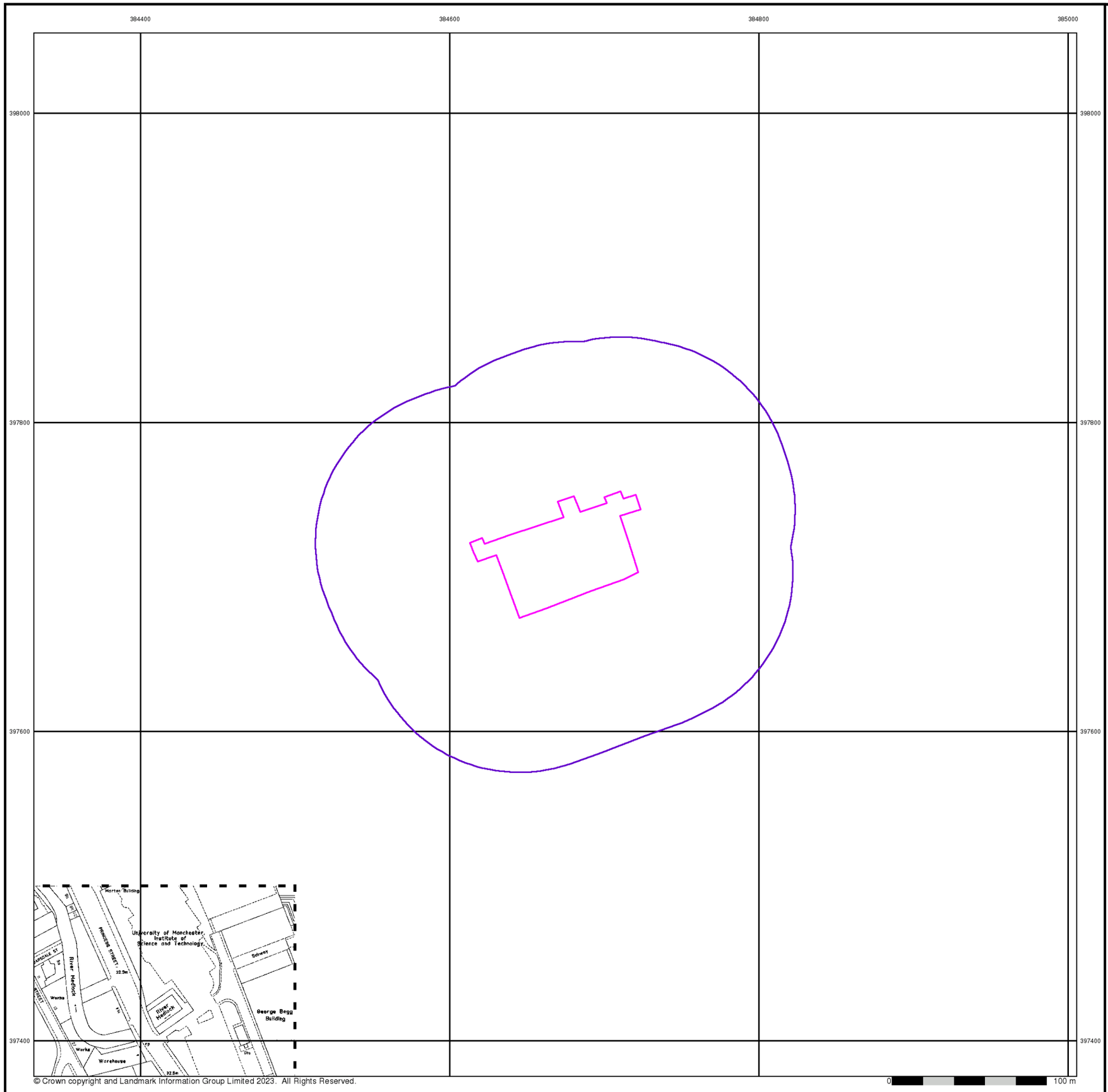


Order Details

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Site Area (Ha):	0.48
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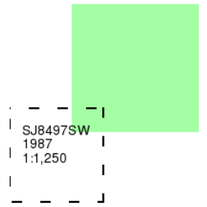
Ordnance Survey Plan

Published 1987

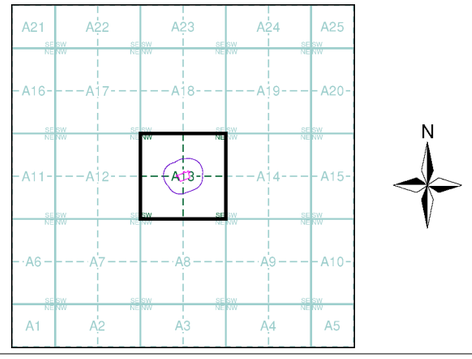
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



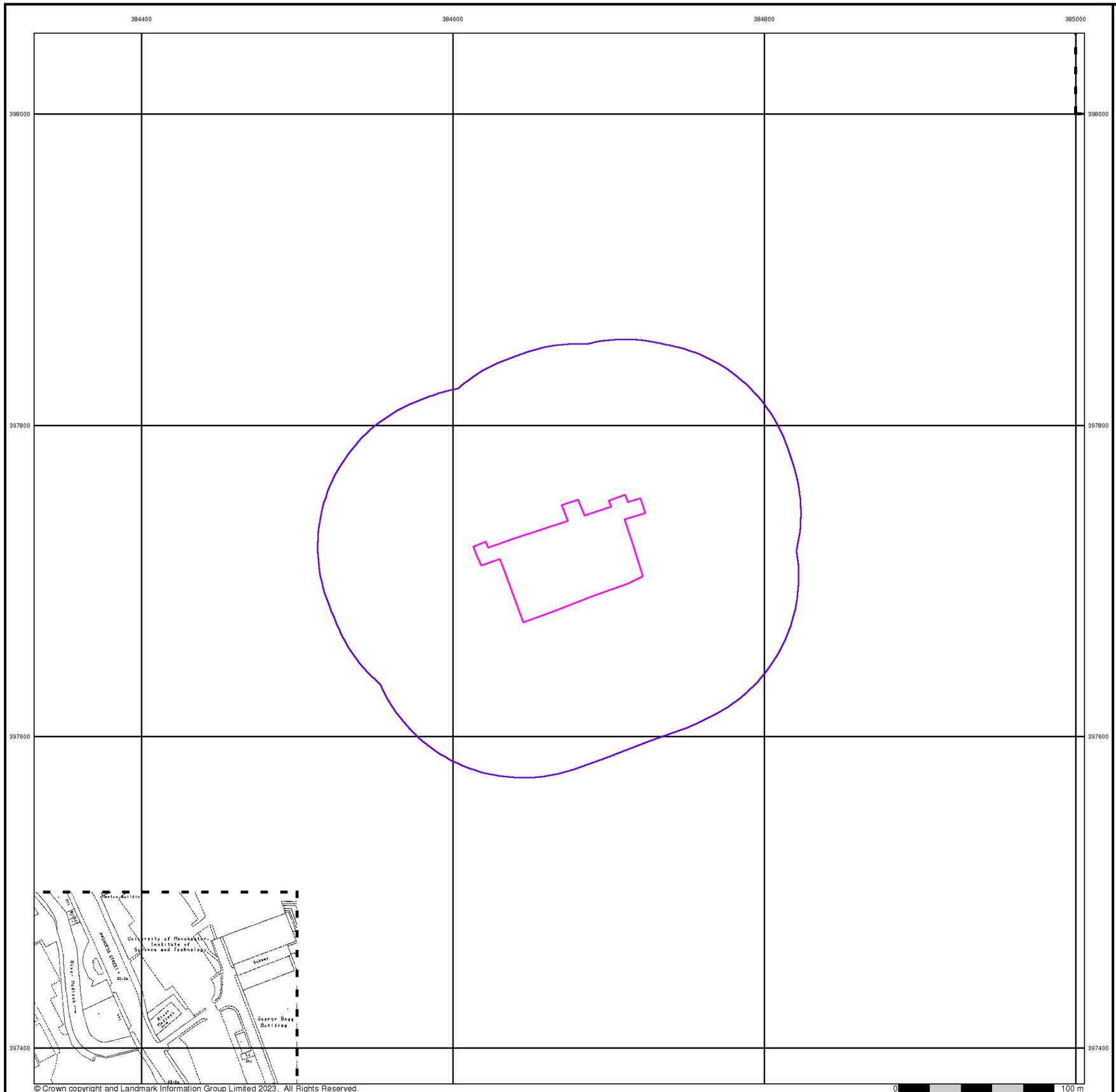
Order Details

Order Number:	306235410_1_1
Customer Ref:	065374
National Grid Reference:	384670, 397720
Slice:	A
Site Area (Ha):	0.48
Search Buffer (m):	100

Site Details

Flat at Old Garratt, 79, Granby Row, MANCHESTER, M1 7AB

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Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



curtins

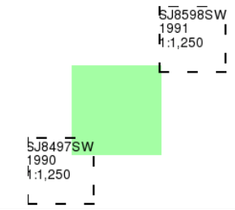
Additional SIMs

Published 1990 - 1991

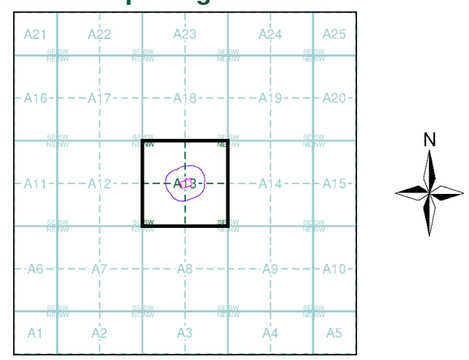
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



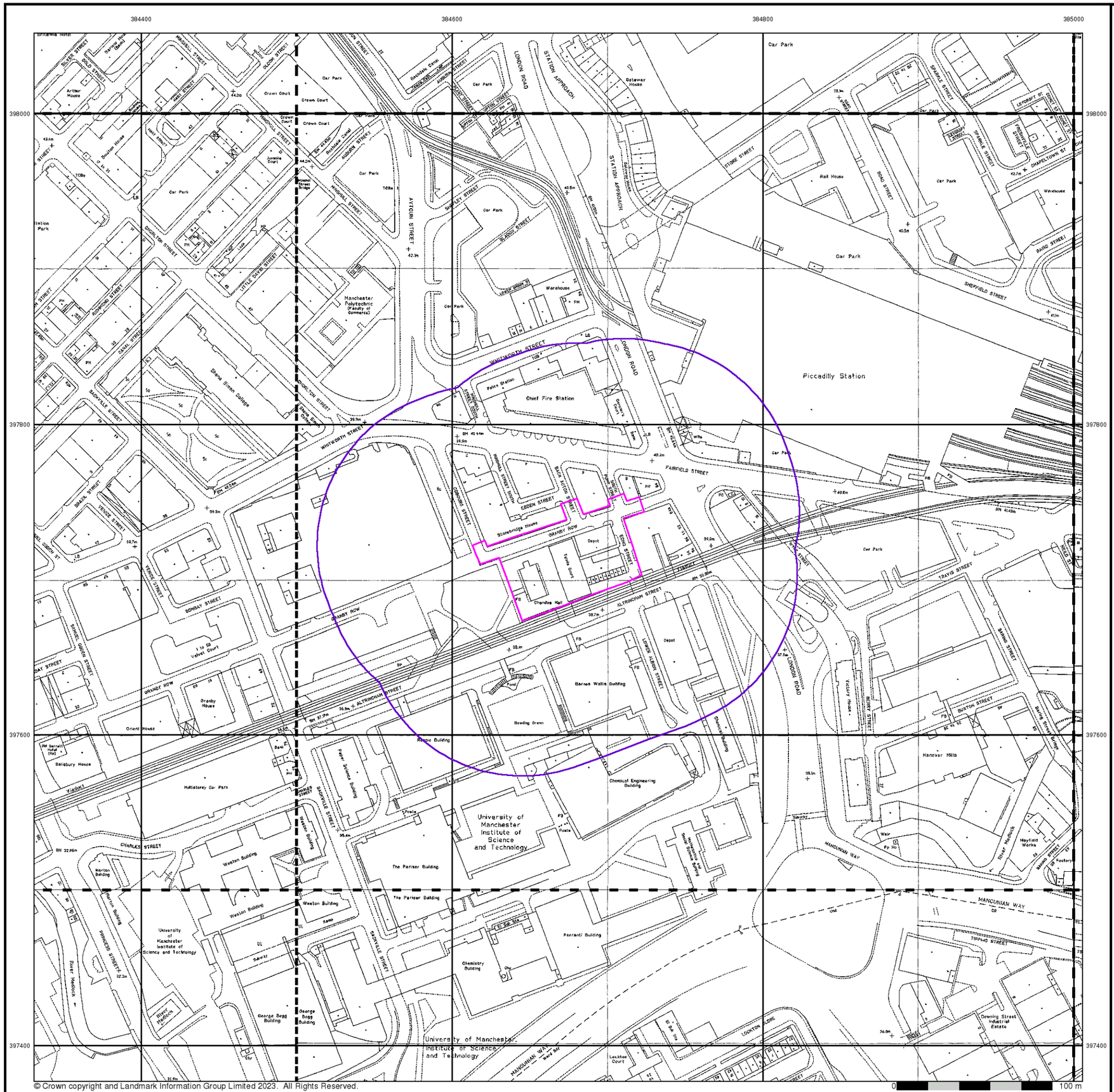
Order Details

Order Number:	306235410_1_1
Customer Ref:	065374
National Grid Reference:	384670, 397720
Slice:	A
Site Area (Ha):	0.48
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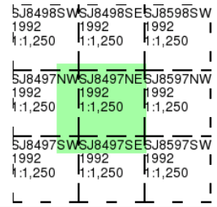
Large-Scale National Grid Data

Published 1992

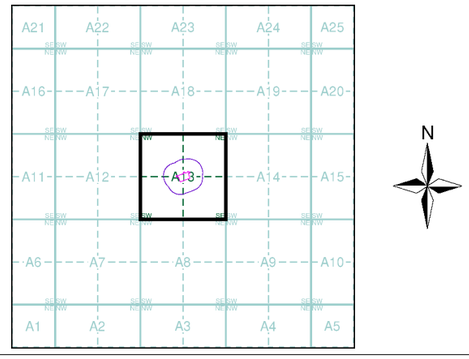
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



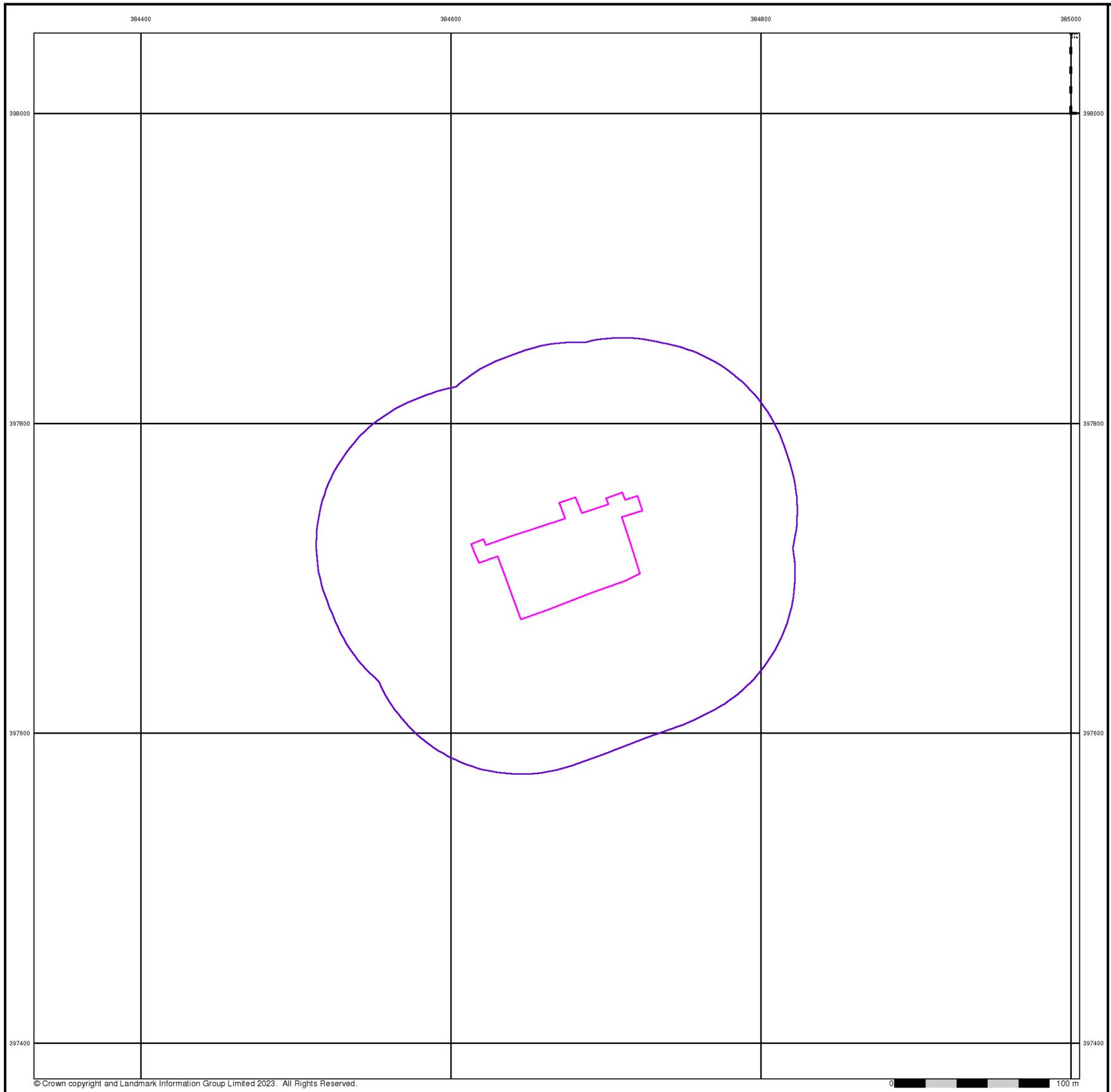
Order Details

Order Number:	306235410_1_1
Customer Ref:	065374
National Grid Reference:	384670, 397720
Slice:	A
Site Area (Ha):	0.48
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Site Details

Flat at Old Garratt, 79, Granby Row, MANCHESTER, M1 7AB

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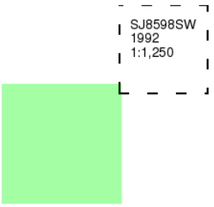
Additional SIMs

Published 1992

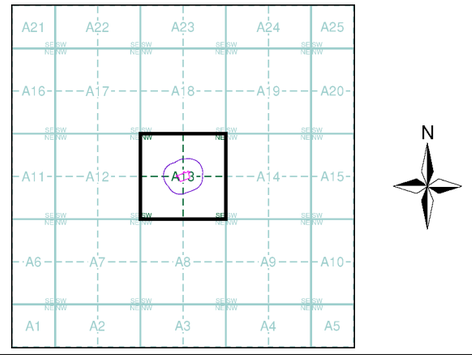
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

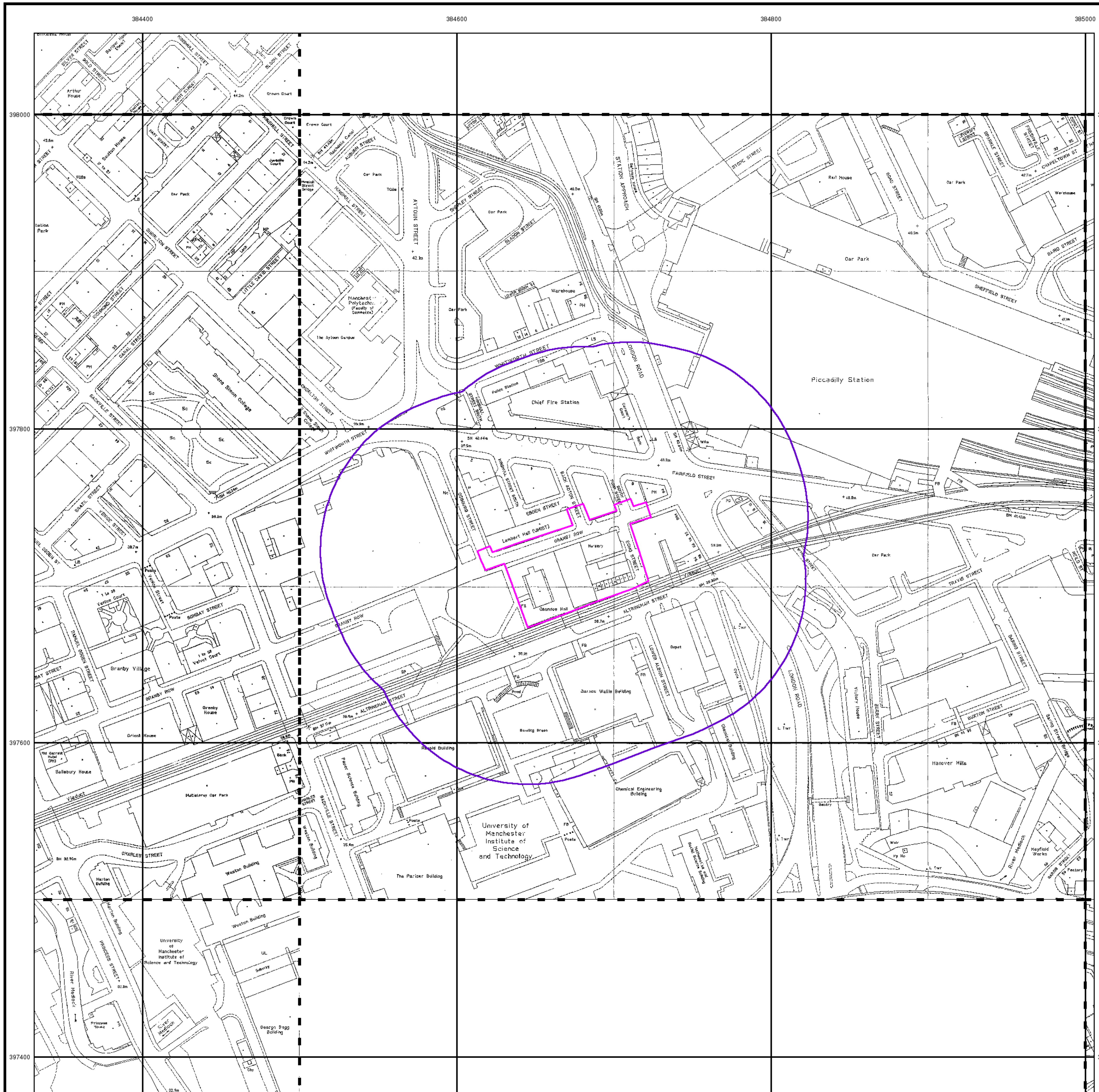
Order Number:	306235410_1_1
Customer Ref:	065374
National Grid Reference:	384670, 397720
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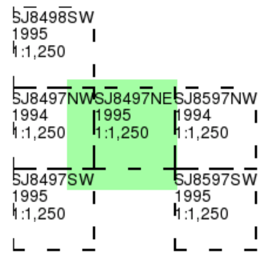
Large-Scale National Grid Data

Published 1994 - 1995

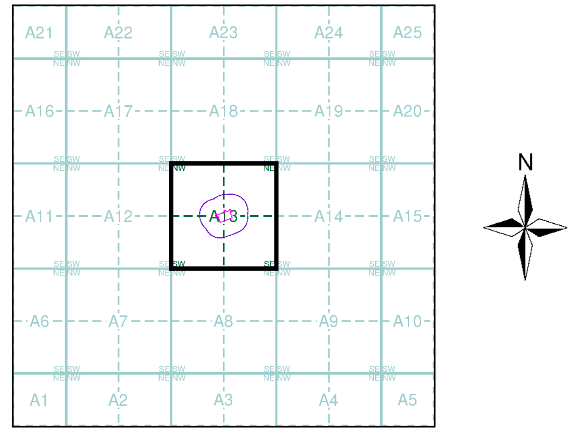
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

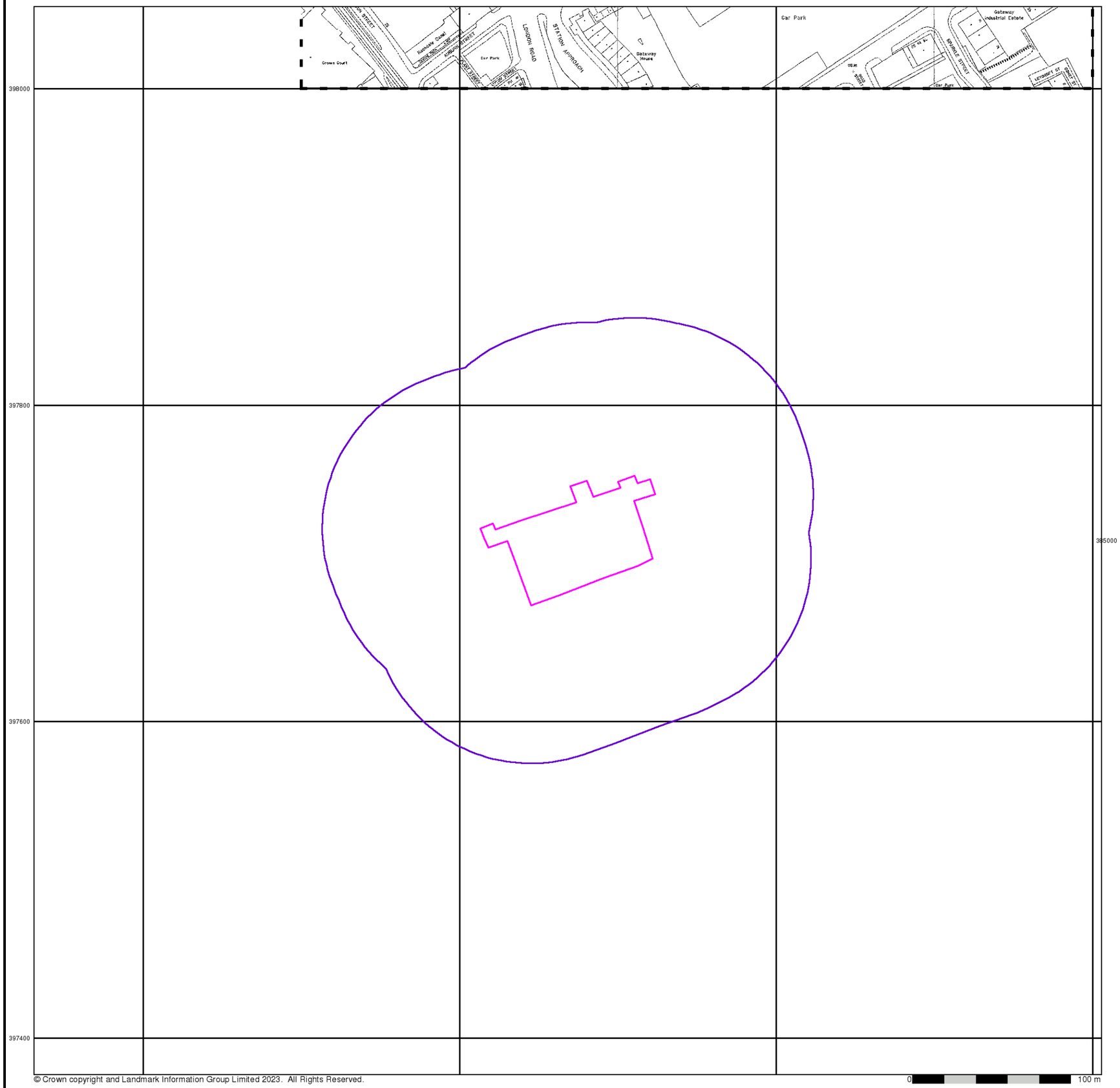
Order Number: 306235410_1_1
Customer Ref: 065374
National Grid Reference: 384670, 397720
Slice: A
Site Area (Ha): 0.48
Search Buffer (m): 100

Site Details

Flat at Old Garratt, 79, Granby Row, MANCHESTER, M1 7AB

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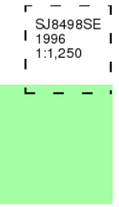
Large-Scale National Grid Data

Published 1996

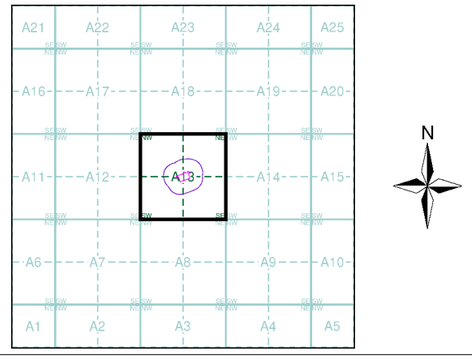
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

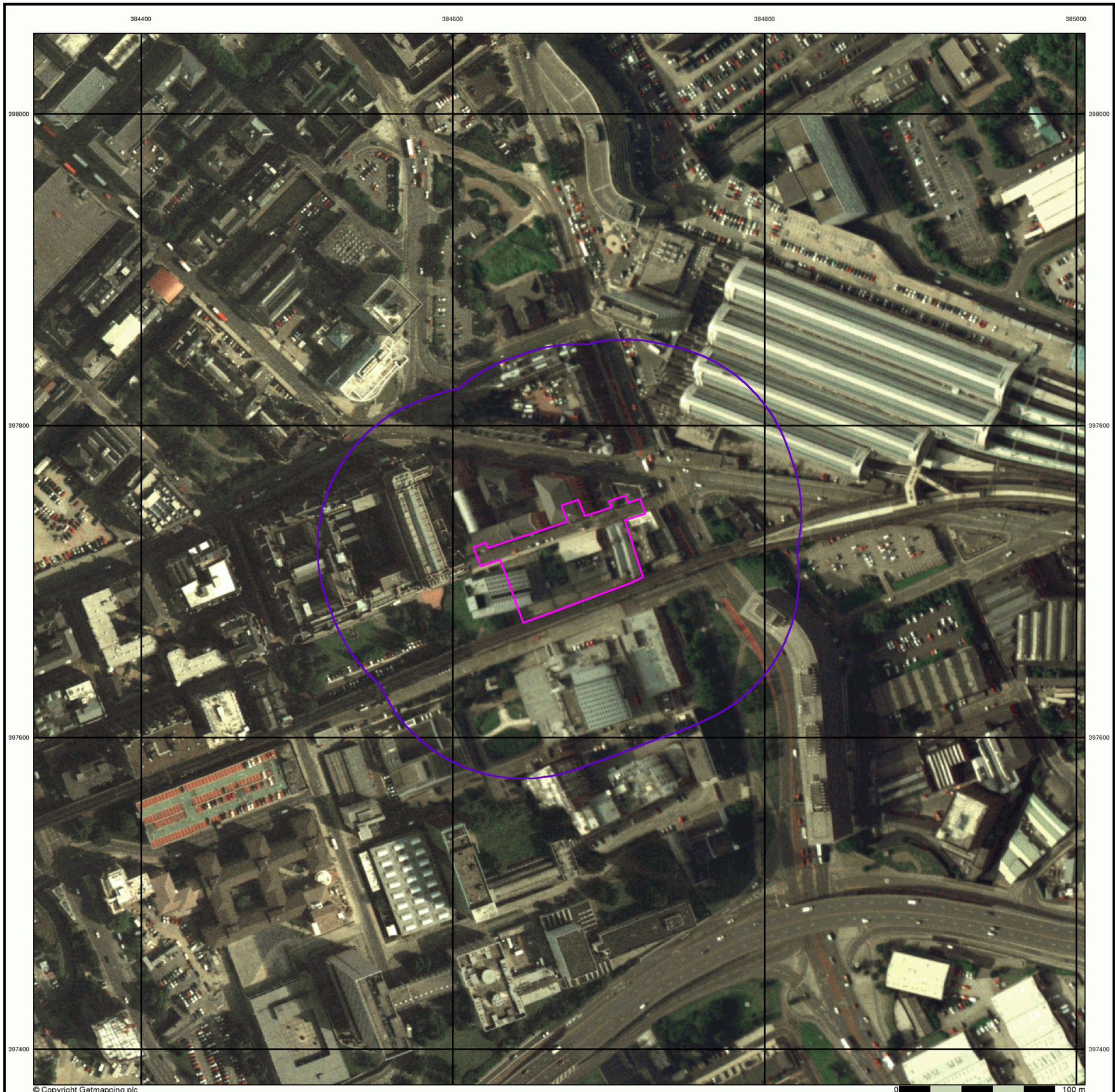
Order Number:	306235410_1_1
Customer Ref:	065374
National Grid Reference:	384670, 397720
Slice:	A
Site Area (Ha):	0.48
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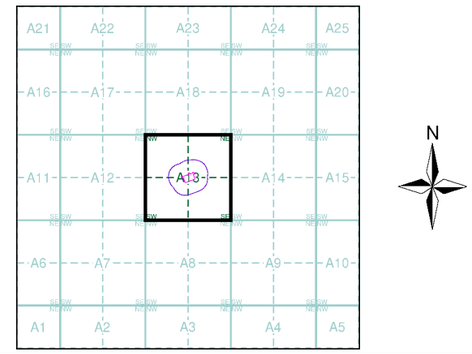
curtins

Historical Aerial Photography

Published 2000

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13



Order Details

Order Number:	306235410_1_1
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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
·285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
Sunken Road
Raised Road
Road over Railway
Railway over River
Railway over Road
Level Crossing
Road over River or Canal
Road over Stream
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Pylon
Electricity Transmission Line
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
Standard Gauge Single Track
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

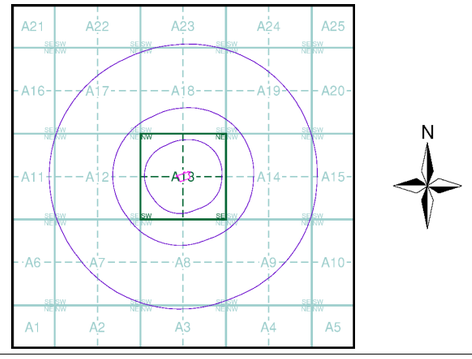
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Mud
Sand
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

curtins

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1848	3
Cheshire	1:10,560	1882	4
Lancashire And Furness	1:10,560	1894 - 1896	5
Lancashire And Furness	1:10,560	1909	6
Lancashire And Furness	1:10,560	1923	7
Lancashire And Furness	1:10,560	1931 - 1933	8
Lancashire And Furness	1:10,560	1938	9
Ordnance Survey Plan	1:10,000	1956	10
Ordnance Survey Plan	1:10,000	1968	11
Ordnance Survey Plan	1:10,000	1972	12
Manchester	1:25,000	1975	13
Ordnance Survey Plan	1:10,000	1980 - 1981	14
Ordnance Survey Plan	1:10,000	1985 - 1987	15
Ordnance Survey Plan	1:10,000	1989	16
Ordnance Survey Plan	1:10,000	1993 - 1994	17
10K Raster Mapping	1:10,000	1999	18
10K Raster Mapping	1:10,000	2006	19
VectorMap Local	1:10,000	2022	20

Historical Map - Slice A



Order Details

Order Number: 306235410_1_1
Customer Ref: 065374
National Grid Reference: 384670, 397720
Slice: A
Site Area (Ha): 0.48
Search Buffer (m): 1000

Site Details

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Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

- Government and Administrative Buildings
- Military and Industrial Buildings
- Military and Communication Areas
- Subway Entrance
- Fireproof Building
- Prominent Fireproof Building
- Non-fireproof Building
- Non-fireproof Building (non-dwelling)
- Factory, mill, and flour mill, with chimneys
- Factory, mill, and flour mill, without chimneys
- Power Station, drawn to scale
- Hydroelectric Power Station
- Radio Station, drawn to scale
- Telephone Station, drawn to scale
- Abandoned Open-pit Mine or Quarry
- Open-pit Salt Mine
- Pit
- Oil Deposit or Well
- Oil Seepage
- Tailings Pile
- Fuel Storage Tanks
- Natural Gas Tank
- Bench Mark
- Drill Hole
- Burial Mound
- Triangulation Point on Burial Mound
- Single-track Railroad
- Double-track Railroad and Station Building
- Coniferous Forest
- Deciduous Forest
- Mixed Forest
- Lawns
- Citrus Orchard
- Wet Ground
- Scattered Vegetation

243,8 — Values for prominent elevations

186.0 — Numbers for spot elevations, depth soundings, contour lines, etc.

0,2 — Velocity of the current, width of river bed, depth of river

Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	ъ (–)
Д д (D)	Л л (L)	У у (U)	ы (Y)
Е е (E)	М м (M)	Ф ф (F)	ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

- Government and Administrative Buildings
- Military and Industrial Buildings
- Military and Communication Areas
- Subway Entrance
- Partly Demolished Buildings
- Demolished Buildings
- Built-Up Area with Fireproof Buildings Predominant
- Built-Up Area with Non-Fireproof Buildings Predominant
- Individual Fireproof Building
- Prominent Industrial Building
- Individual Dwelling, Fireproof
- Ruins of an Individual Dwelling
- Factory or Mill Chimney
- Factory or Mill with Chimney
- Factory or Mill without Chimney
- Mine or Open Pit Mine
- Operating Shaft or Mine
- Non-Operating Shaft or Mine
- Salt Mine
- Tailings Pile
- Pit
- Stone Quarry
- Gas Pump or Service Station
- Fuel Storage or Natural Gas Tank
- Oil or Natural Gas Derrick
- Small Hydroelectric Power Station
- Power Station
- Transformer Station
- Cemetery
- Burial Mound (height in metres)
- Triangulation Point on Burial Mound
- Triangulation Point
- Bench Mark
- Bench Mark (monumented)
- Telegraph Office
- Telephone Station
- Radio Station
- Radio Tower
- Airfield or Seaplane Base
- Landing Strip
- Main Highway
- Highway under Construction
- Improved Dirt Road (former truck road)
- Double-track Railroad with First Class Station
- Dismantled Railroad
- Railroad Under Construction
- Shore Embankment
- River or Ditch with Embankment
- Well
- Water Reservoir or Rain Water Pit
- Spring
- Isobath with value
- Heavy (Index) Contour Line
- Contour Line and Value
- Half Contour Line
- Spot Elevation Value
- Coniferous
- Deciduous
- Mixed
- Scrub

Key to Numbers on Mapping

SJ89_Manchester

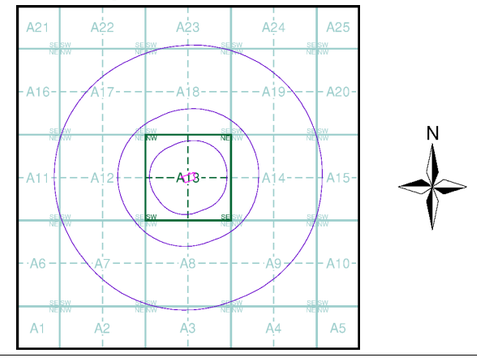
No.	Description
1	Airfield/Airport
6	Railway Station
66	Factory (Gas)
168	Post Office
169	Post Office

curtins

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1848	3
Cheshire	1:10,560	1882	4
Lancashire And Furness	1:10,560	1894 - 1896	5
Lancashire And Furness	1:10,560	1909	6
Lancashire And Furness	1:10,560	1923	7
Lancashire And Furness	1:10,560	1931 - 1933	8
Lancashire And Furness	1:10,560	1938	9
Ordnance Survey Plan	1:10,000	1956	10
Ordnance Survey Plan	1:10,000	1968	11
Ordnance Survey Plan	1:10,000	1972	12
Manchester	1:25,000	1975	13
Ordnance Survey Plan	1:10,000	1980 - 1981	14
Ordnance Survey Plan	1:10,000	1985 - 1987	15
Ordnance Survey Plan	1:10,000	1989	16
Ordnance Survey Plan	1:10,000	1993 - 1994	17
10K Raster Mapping	1:10,000	1999	18
10K Raster Mapping	1:10,000	2006	19
VectorMap Local	1:10,000	2022	20

Russian Map - Slice A



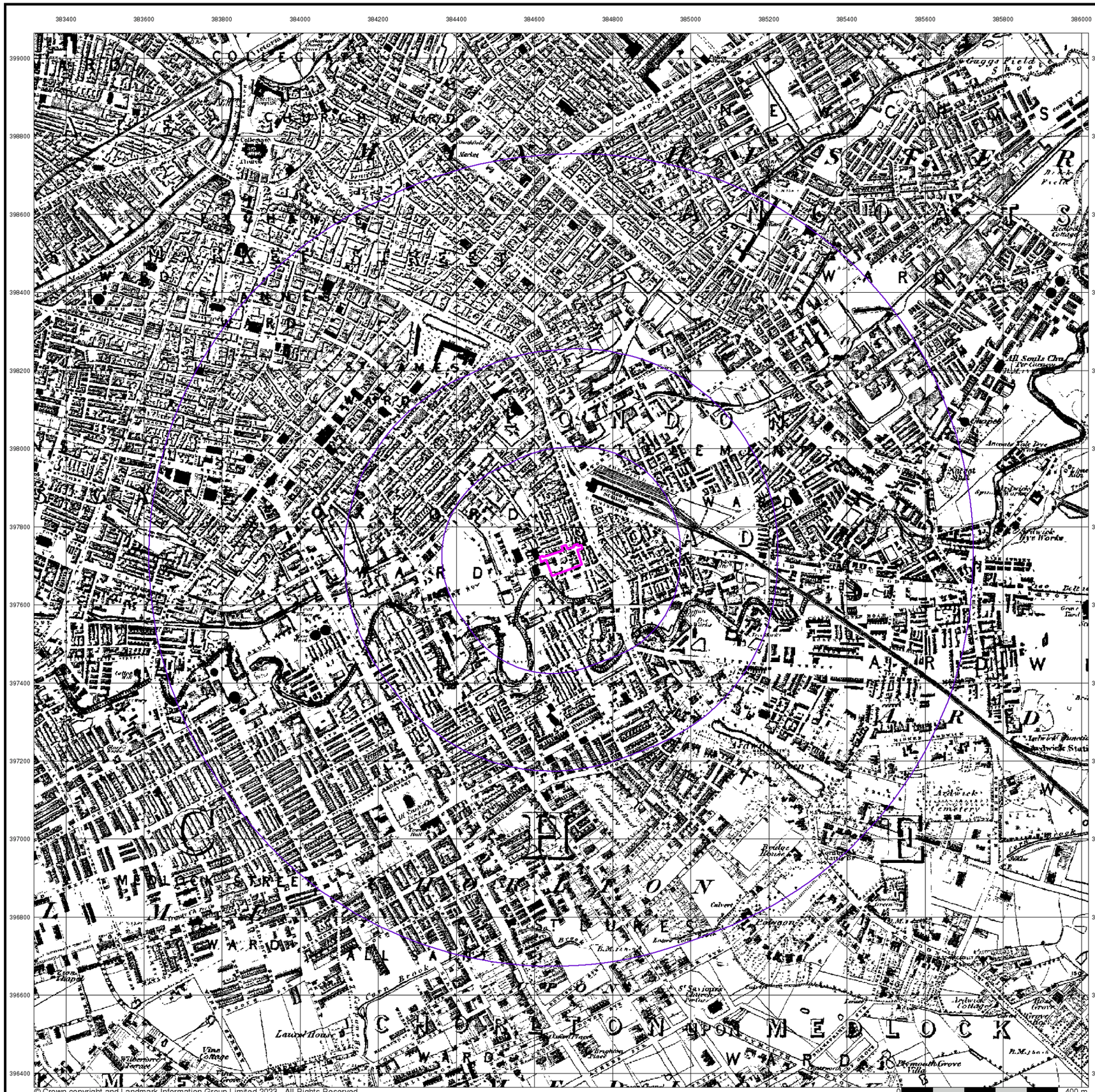
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Order Number: 306235410_1_1
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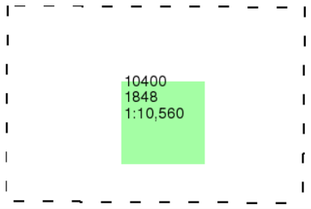
Lancashire And Furness

Published 1848

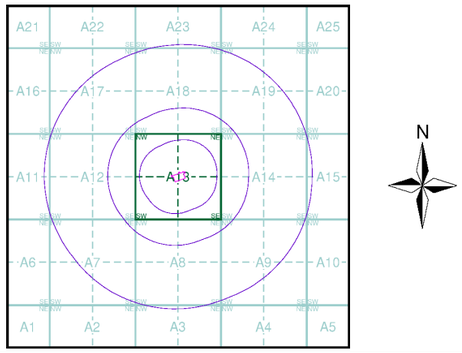
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



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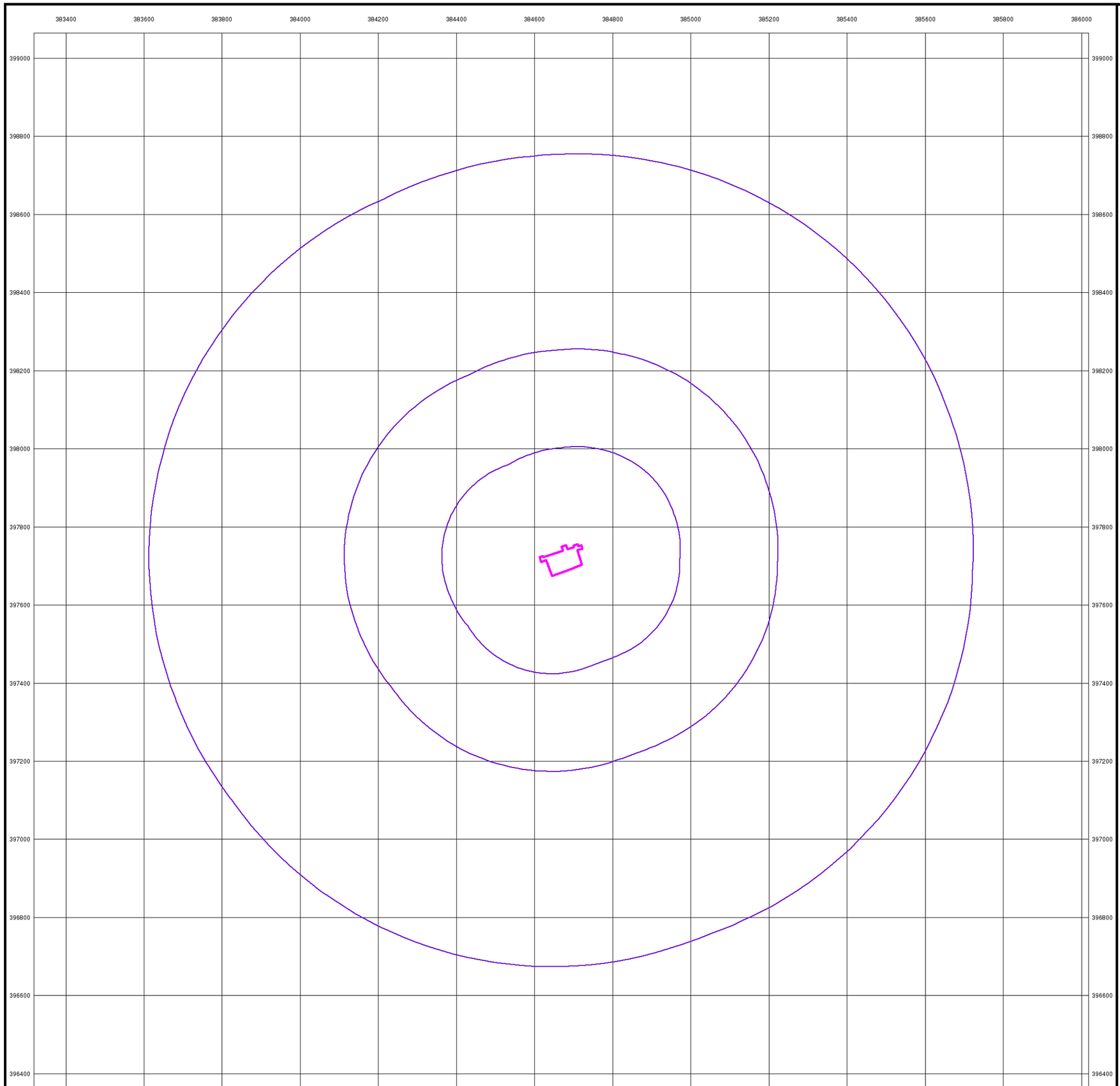
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Site Area (Ha):	0.48
Search Buffer (m):	1000

Site Details

Flat at Old Garratt, 79, Granby Row, MANCHESTER, M1 7AB

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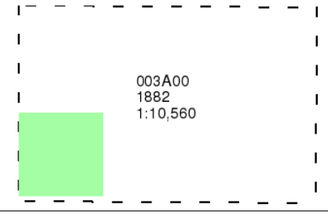
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Published 1882

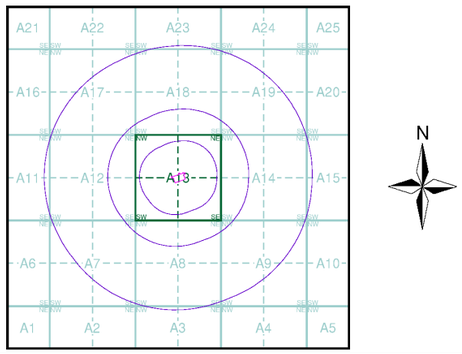
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Map Name(s) and Date(s)



Historical Map - Slice A



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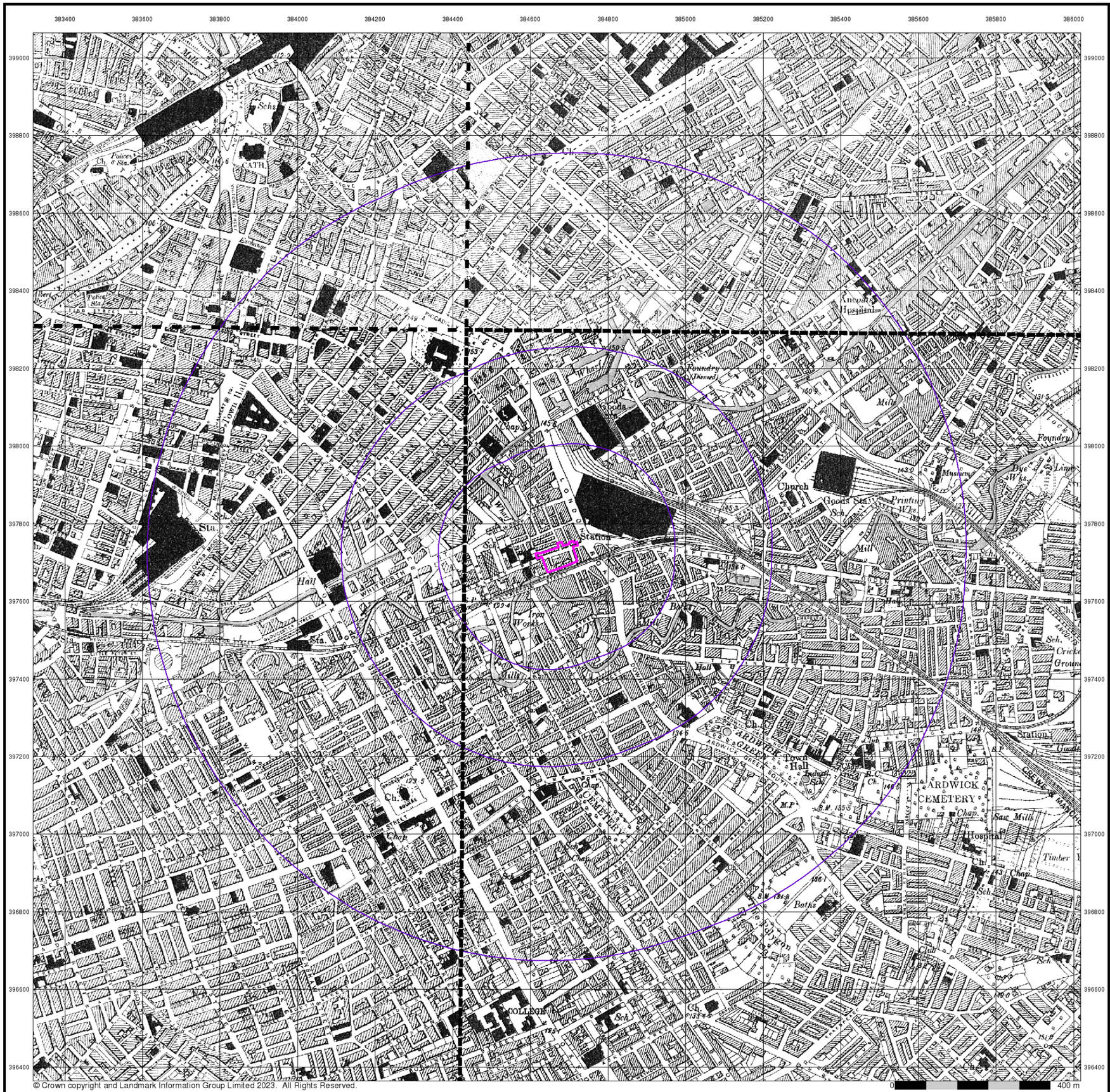
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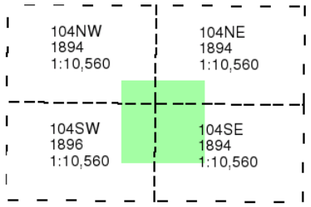
Lancashire And Furness

Published 1894 - 1896

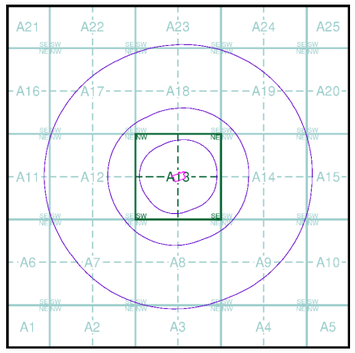
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Map Name(s) and Date(s)



Historical Map - Slice A



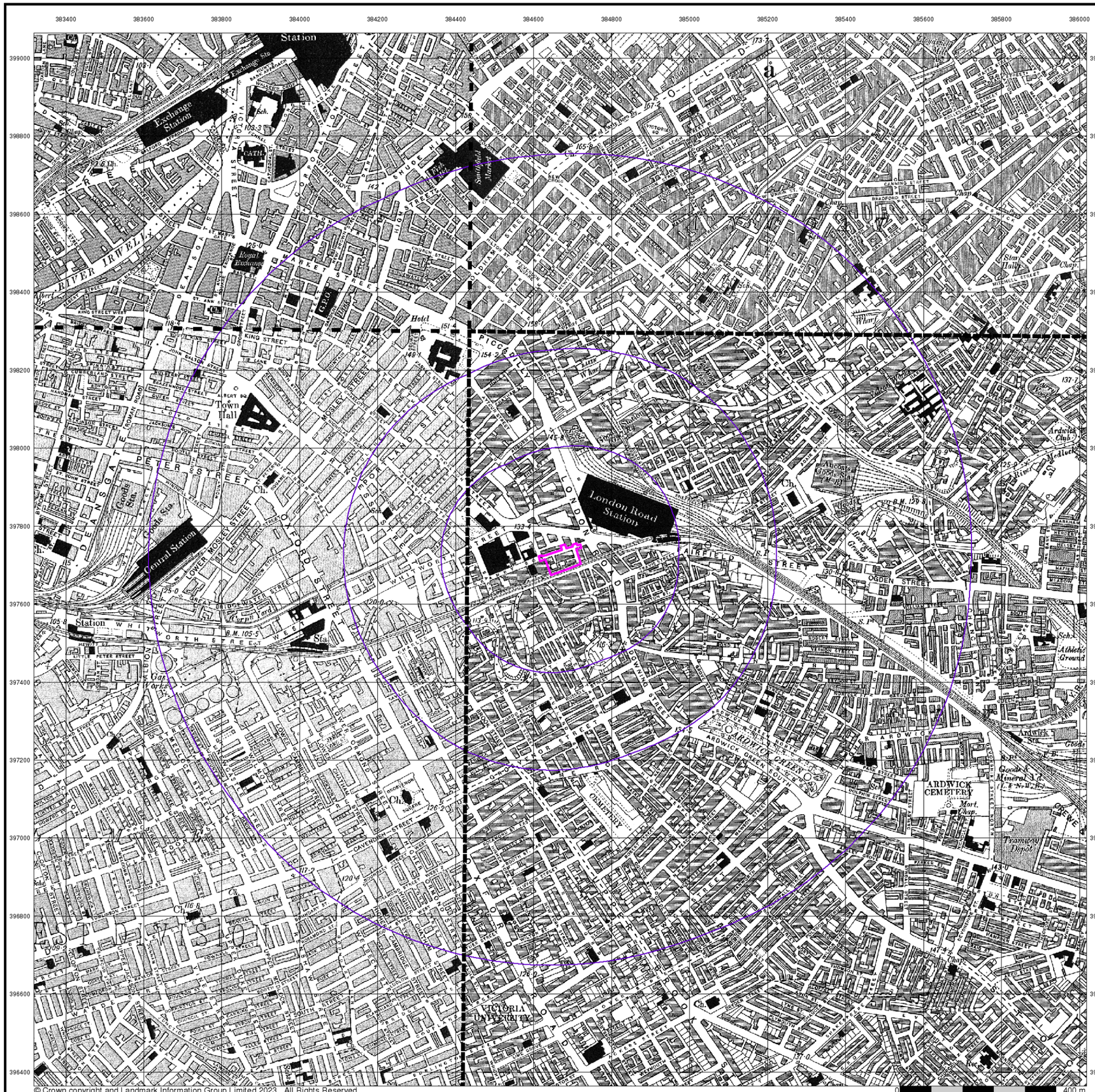
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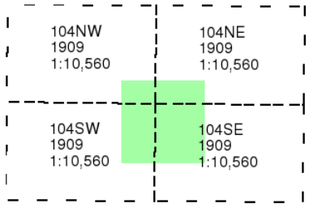
Lancashire And Furness

Published 1909

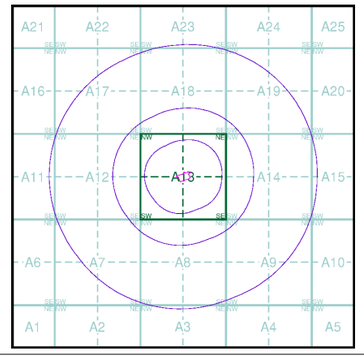
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Map Name(s) and Date(s)



Historical Map - Slice A



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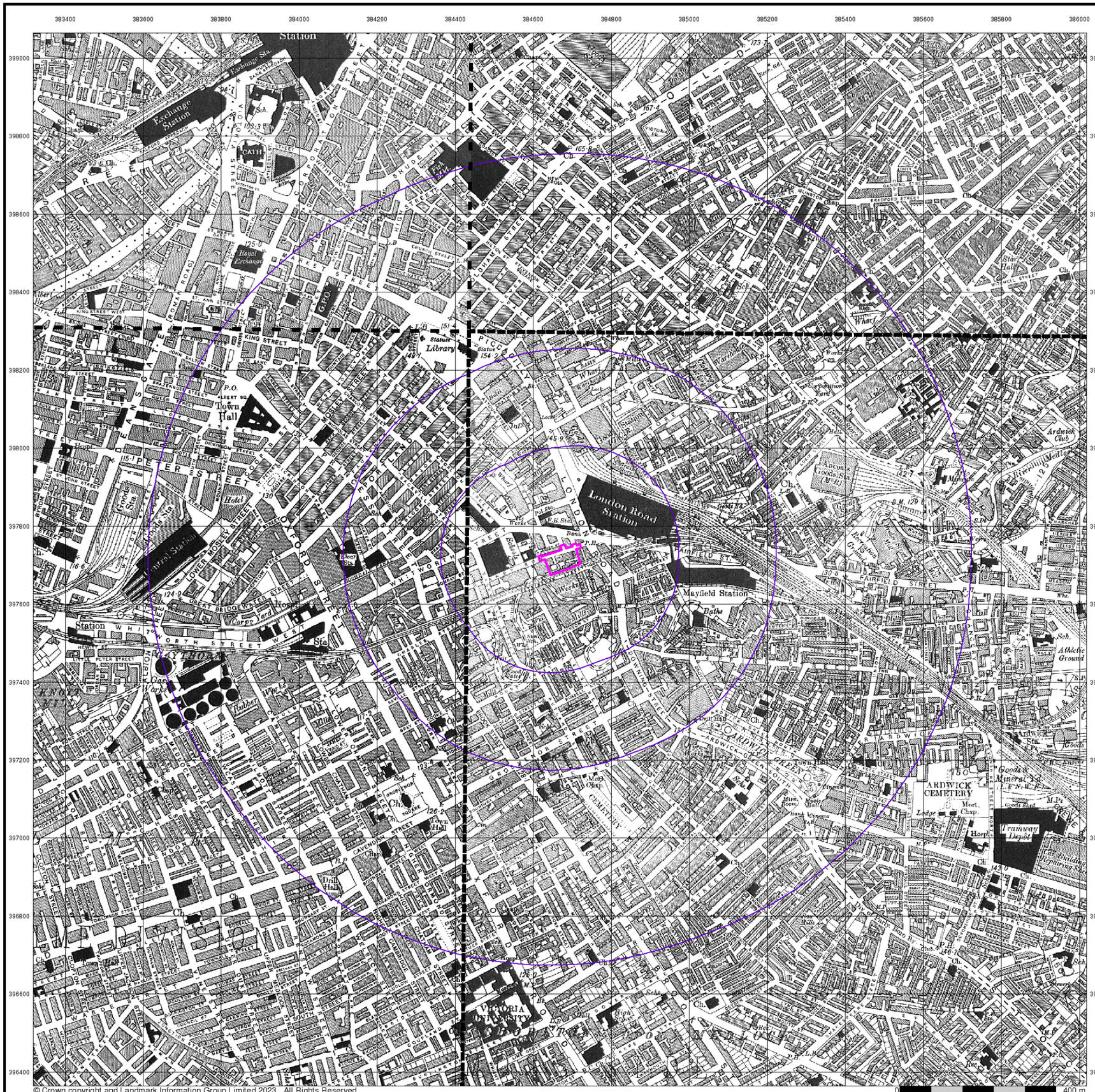
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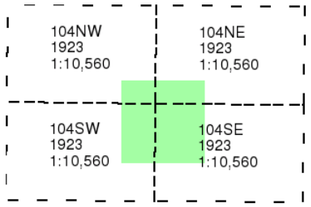
Lancashire And Furness

Published 1923

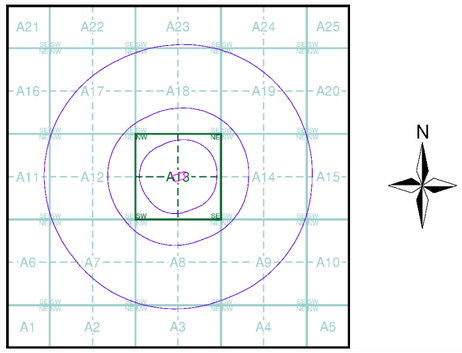
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Map Name(s) and Date(s)



Historical Map - Slice A



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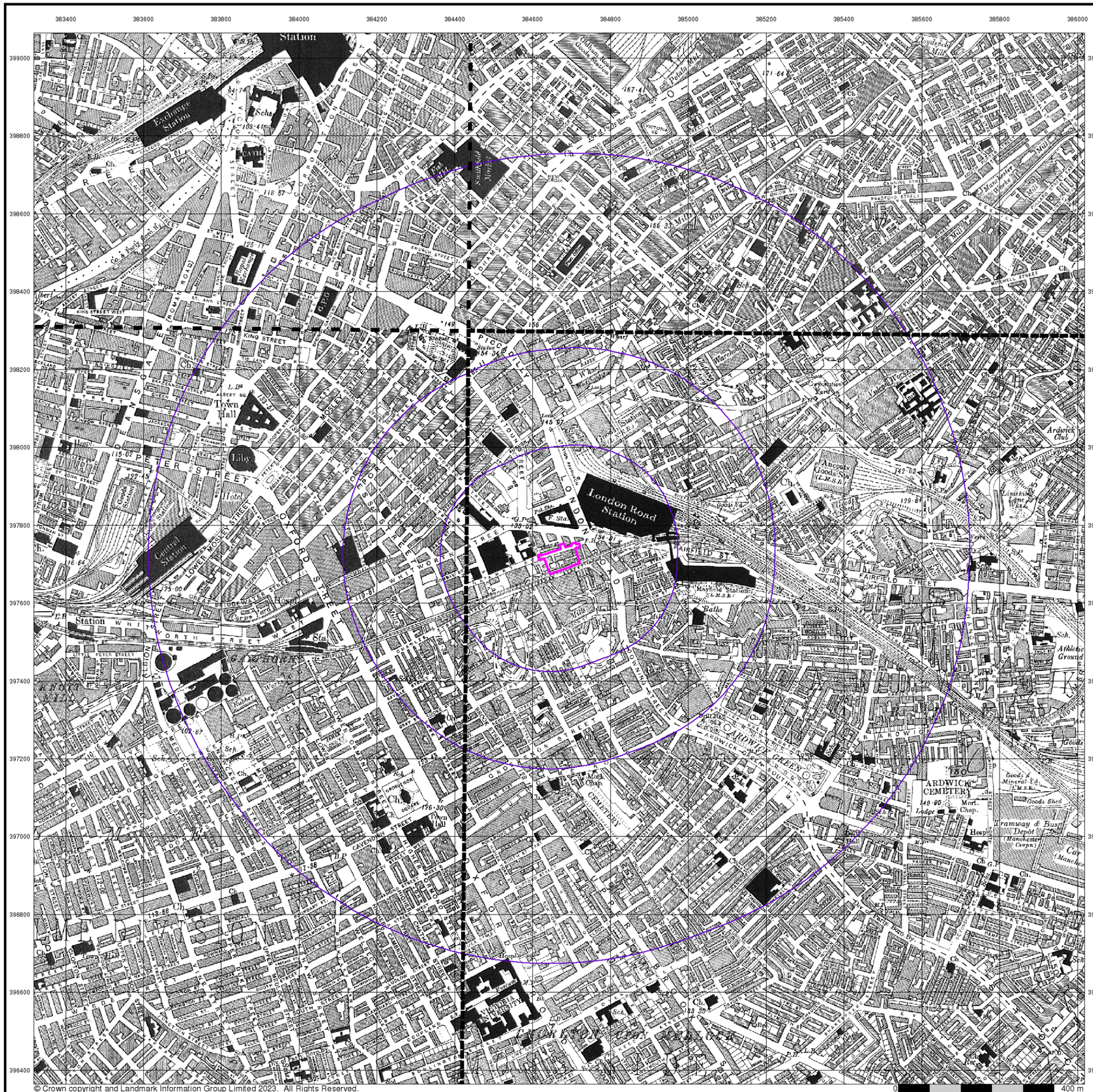
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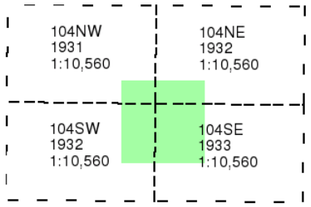
Lancashire And Furness

Published 1931 - 1933

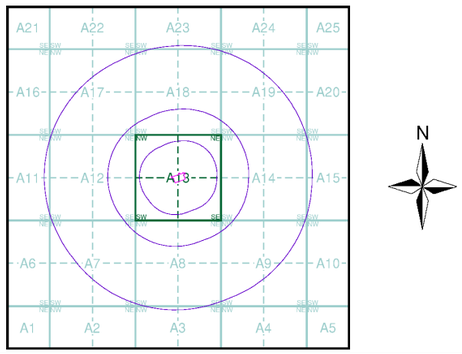
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Map Name(s) and Date(s)



Historical Map - Slice A



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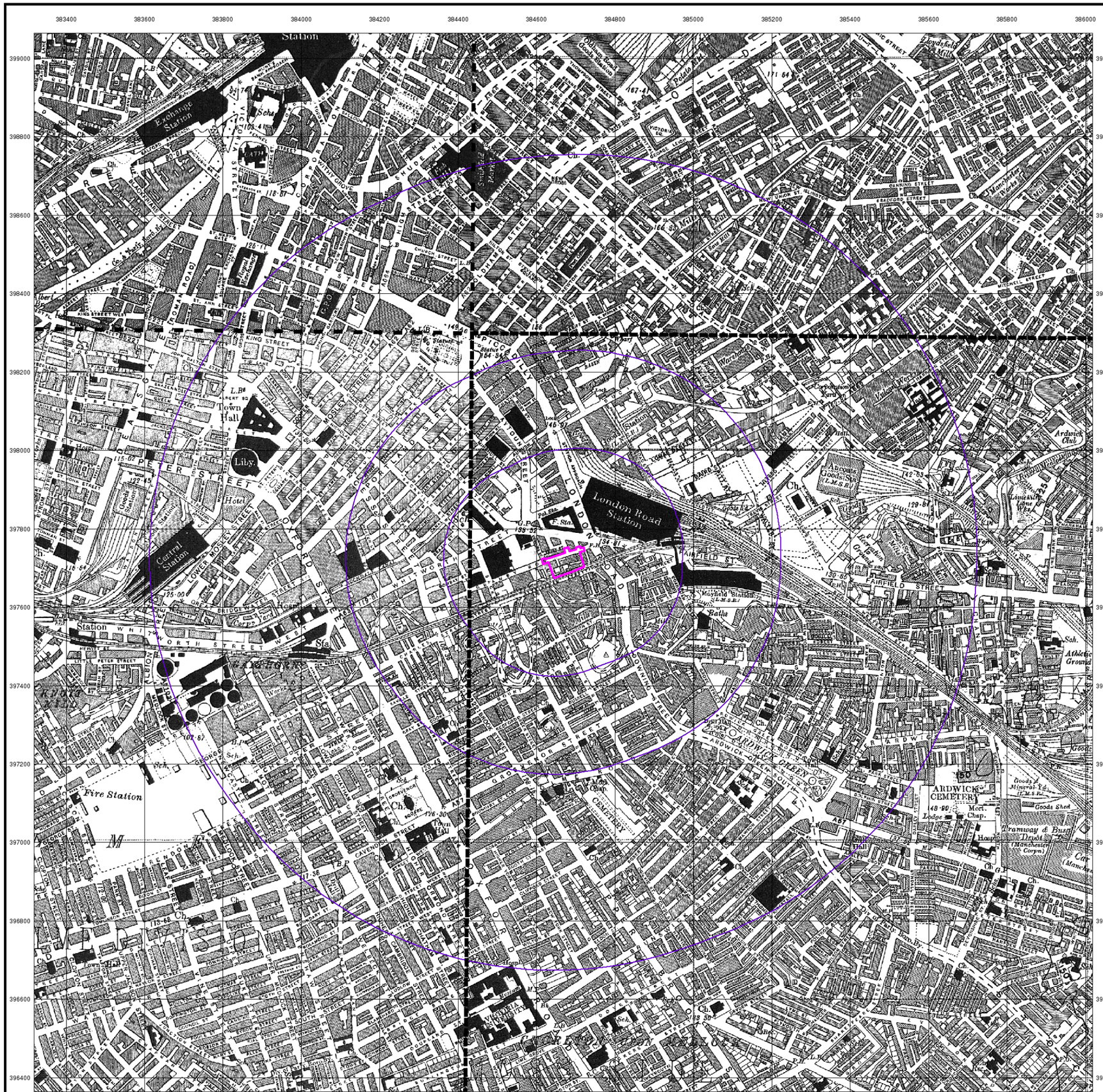
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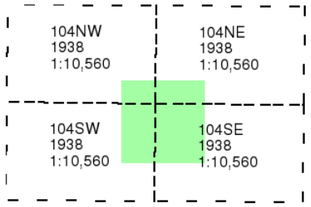
Lancashire And Furness

Published 1938

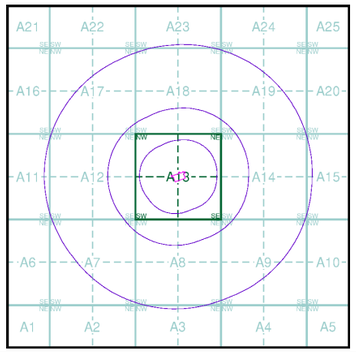
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Historical Map - Slice A



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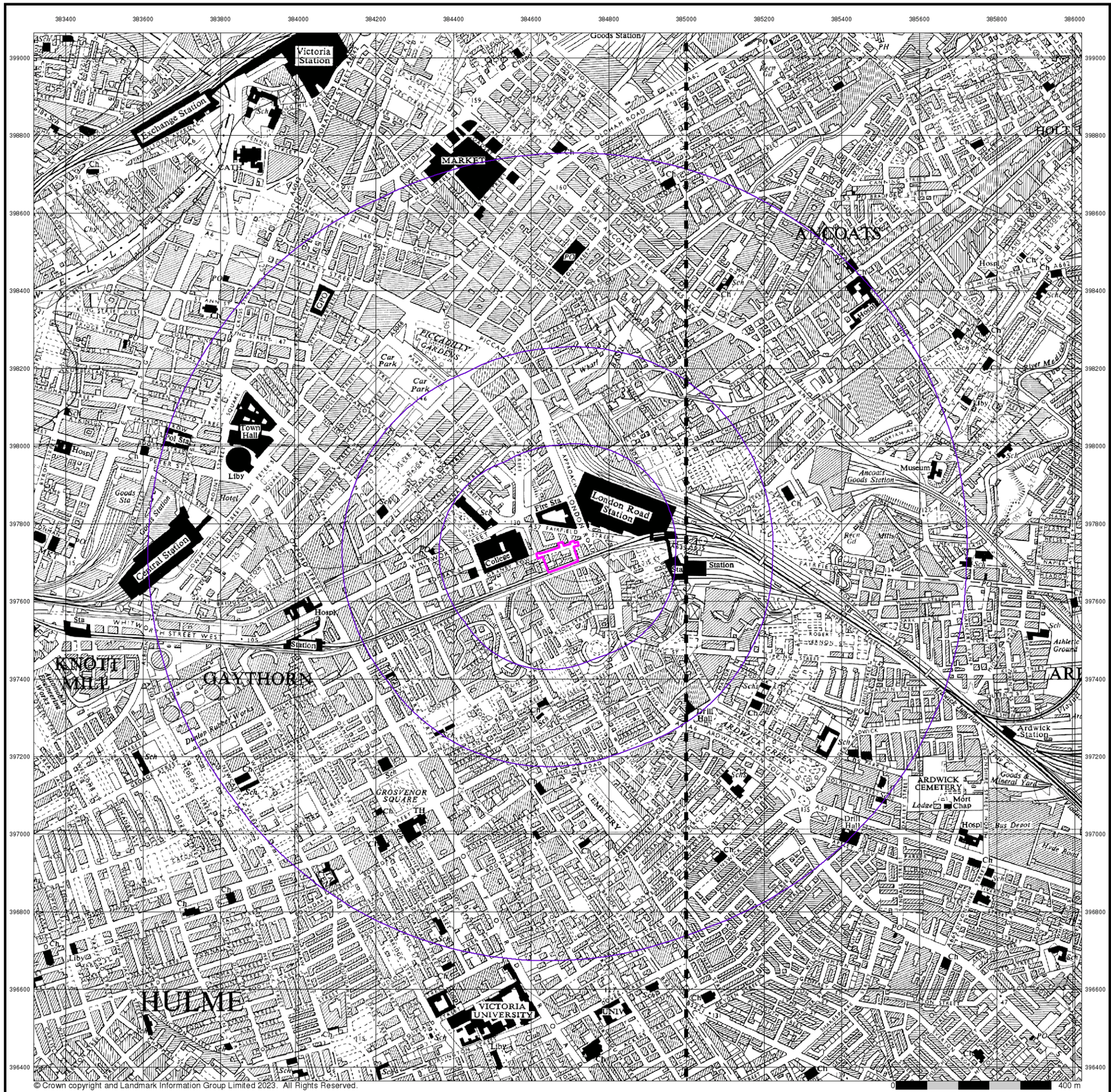
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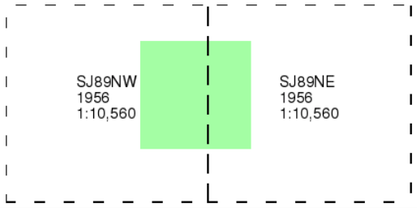
Ordnance Survey Plan

Published 1956

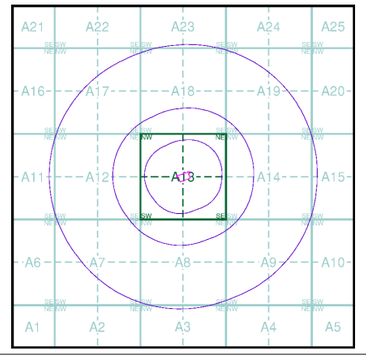
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Map Name(s) and Date(s)



Historical Map - Slice A



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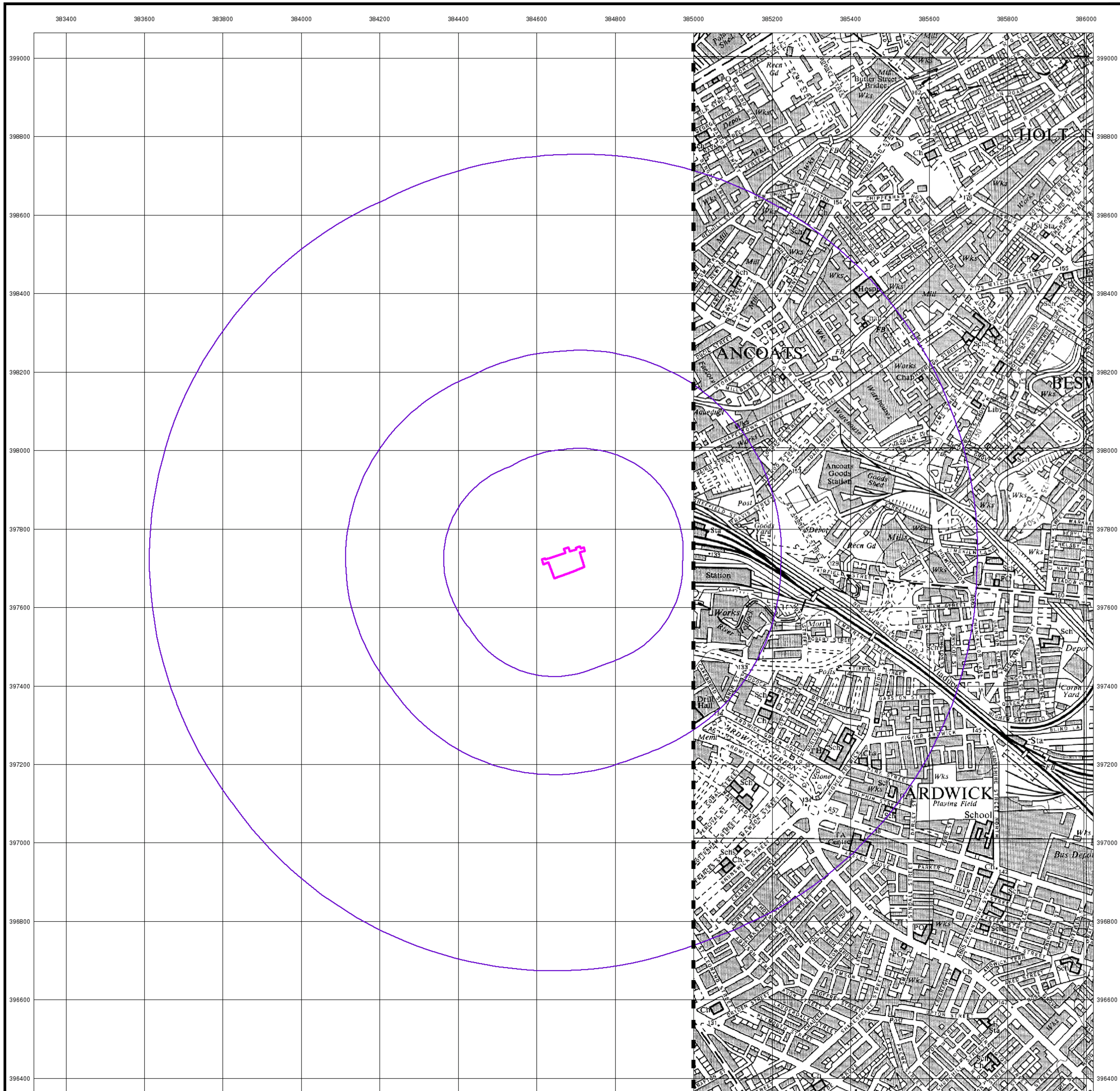
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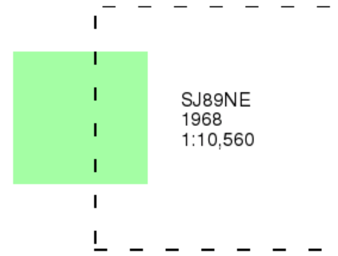
Ordnance Survey Plan

Published 1968

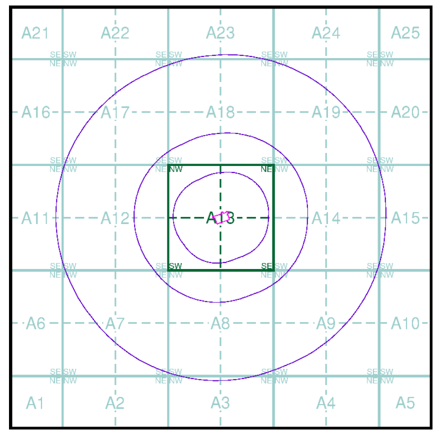
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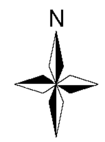
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Map Name(s) and Date(s)



Historical Map - Slice A





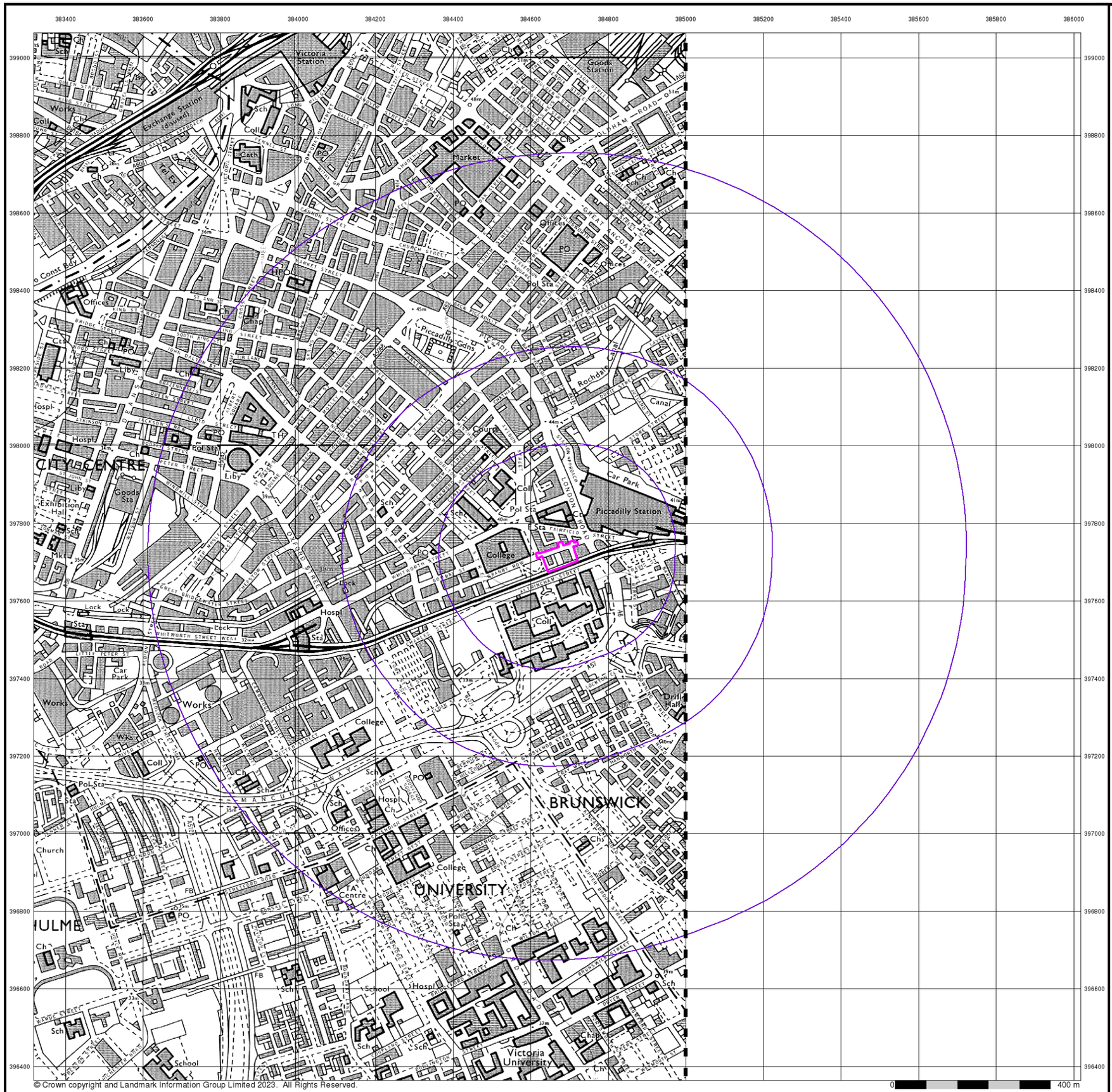
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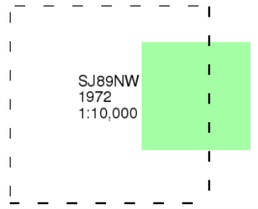
Ordnance Survey Plan

Published 1972

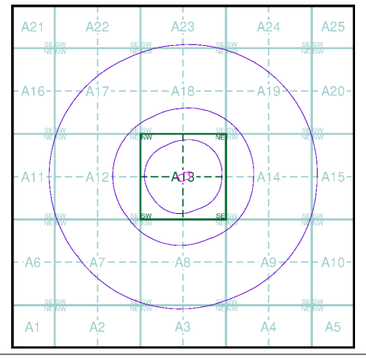
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Manchester

Published 1975

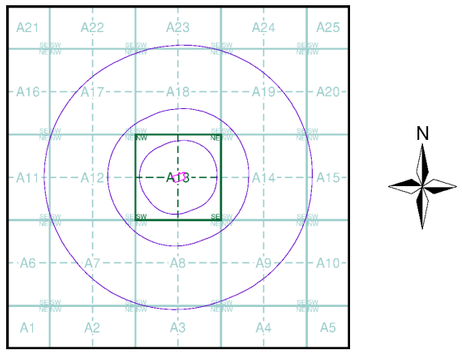
Source map scale - 1:25,000

These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.
They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)



Russian Map - Slice A



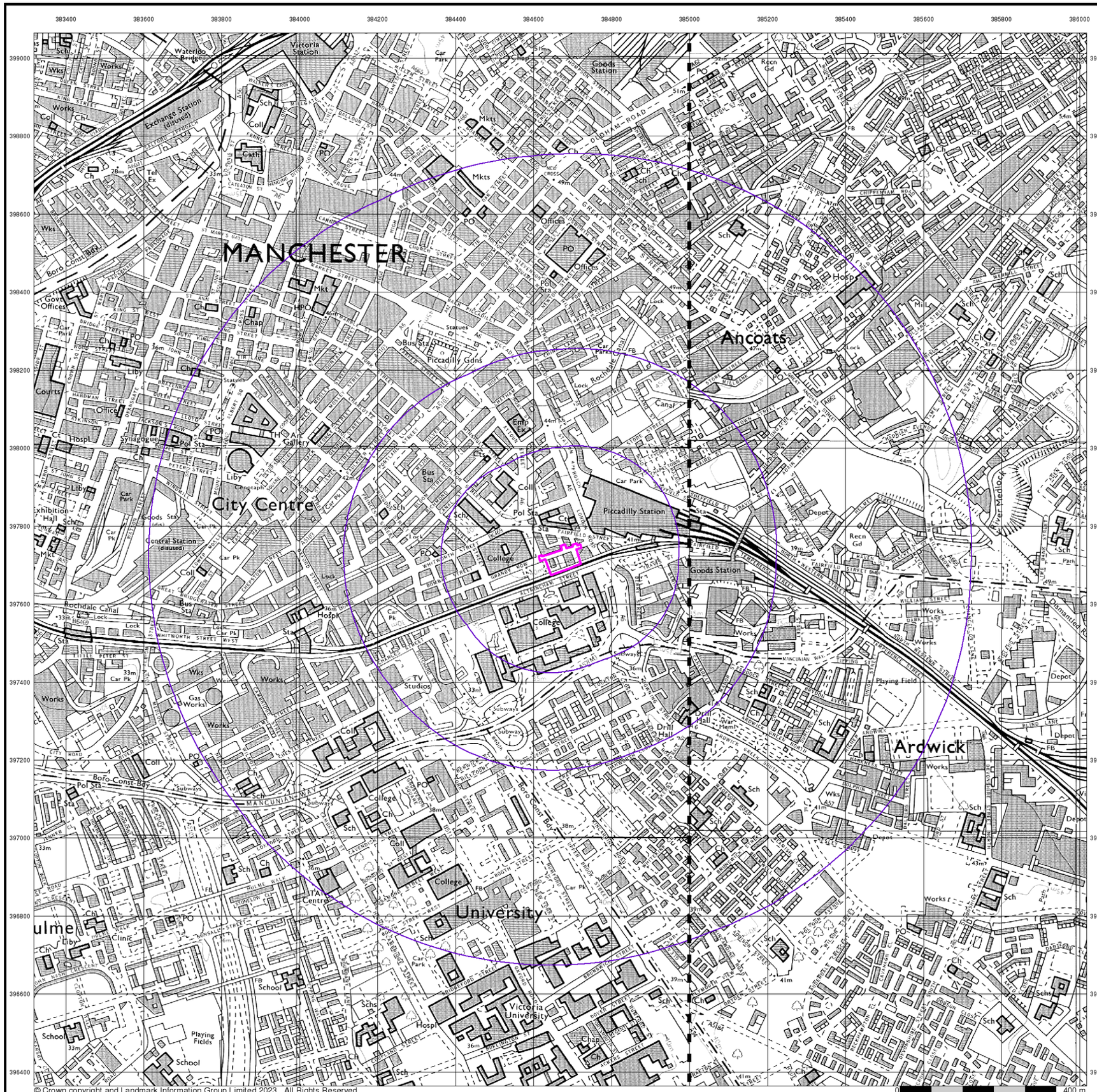
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Order Number:	306235410_1_1
Customer Ref:	065374
National Grid Reference:	384670, 397720
Slice:	A
Site Area (Ha):	0.48
Search Buffer (m):	1000

Site Details

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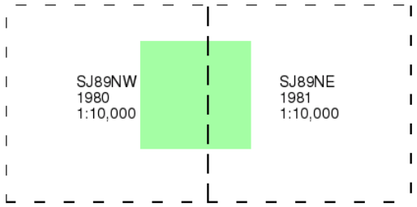
Ordnance Survey Plan

Published 1980 - 1981

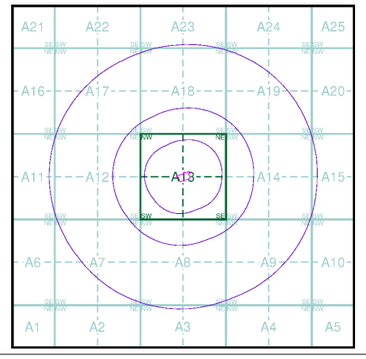
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



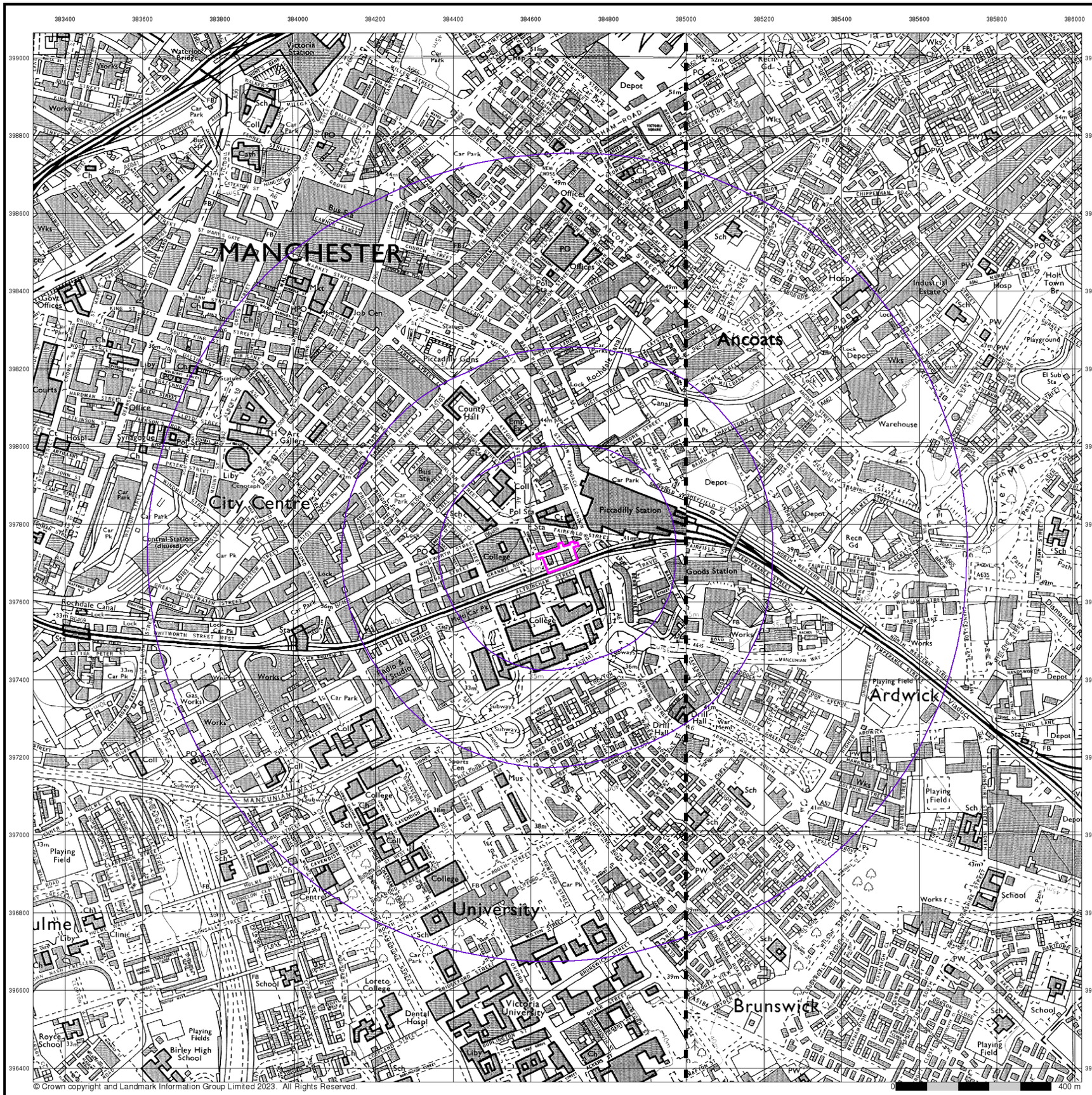
Order Details

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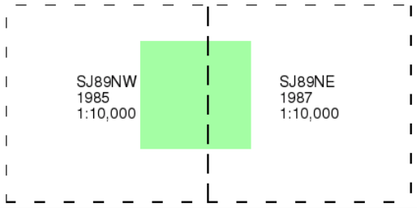
Ordnance Survey Plan

Published 1985 - 1987

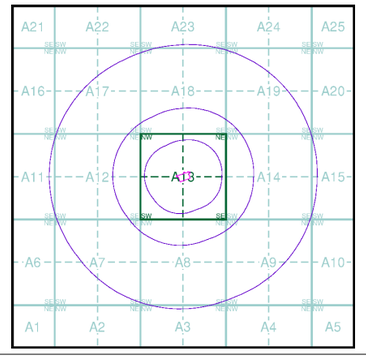
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

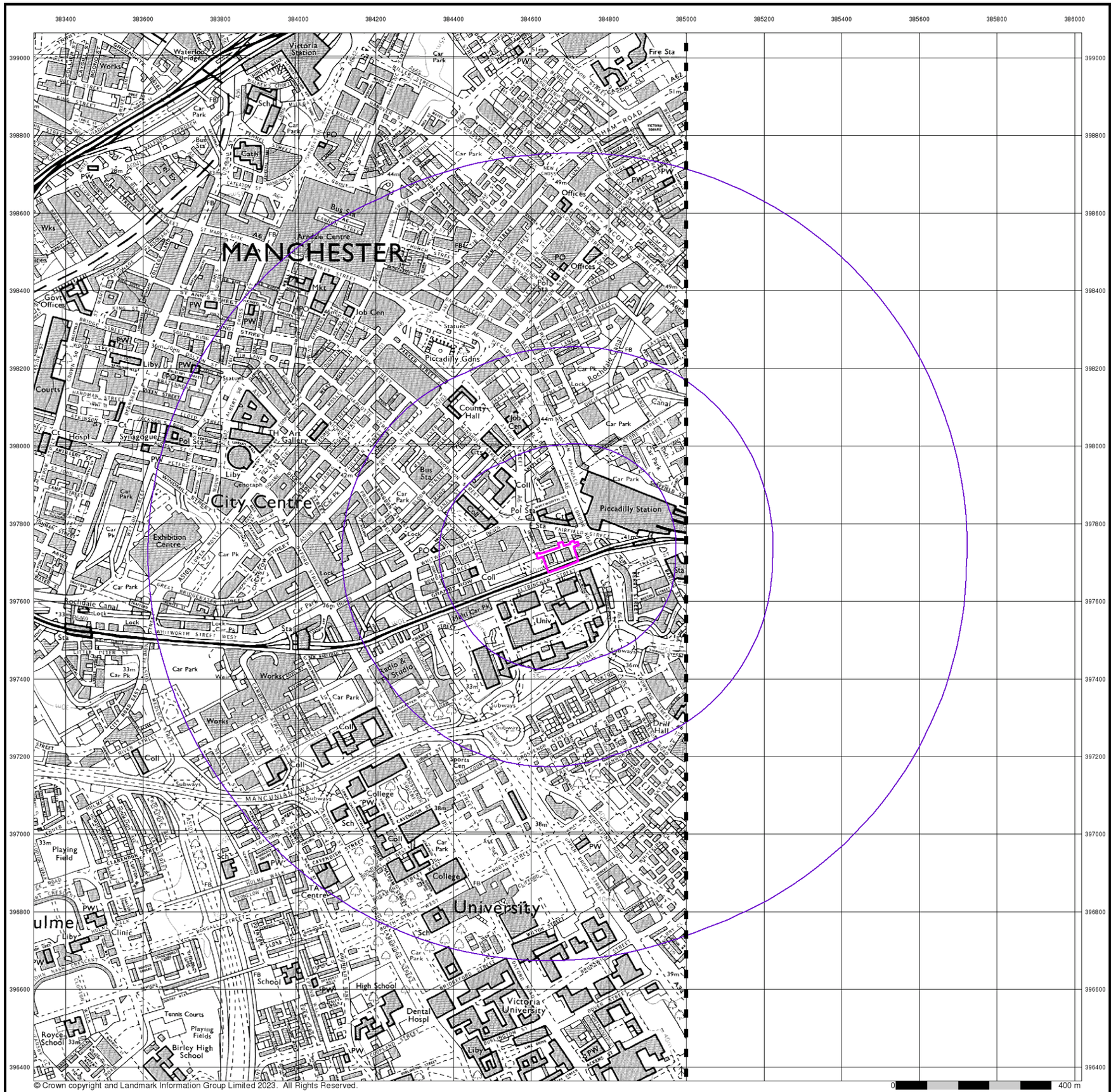
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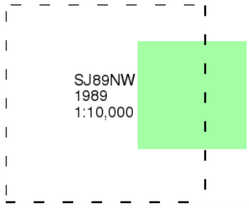
Ordnance Survey Plan

Published 1989

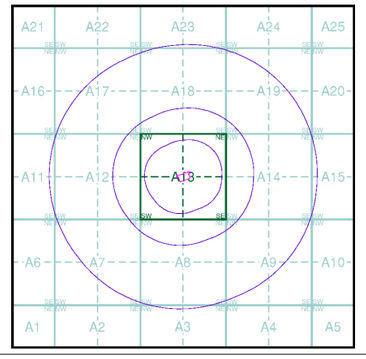
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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

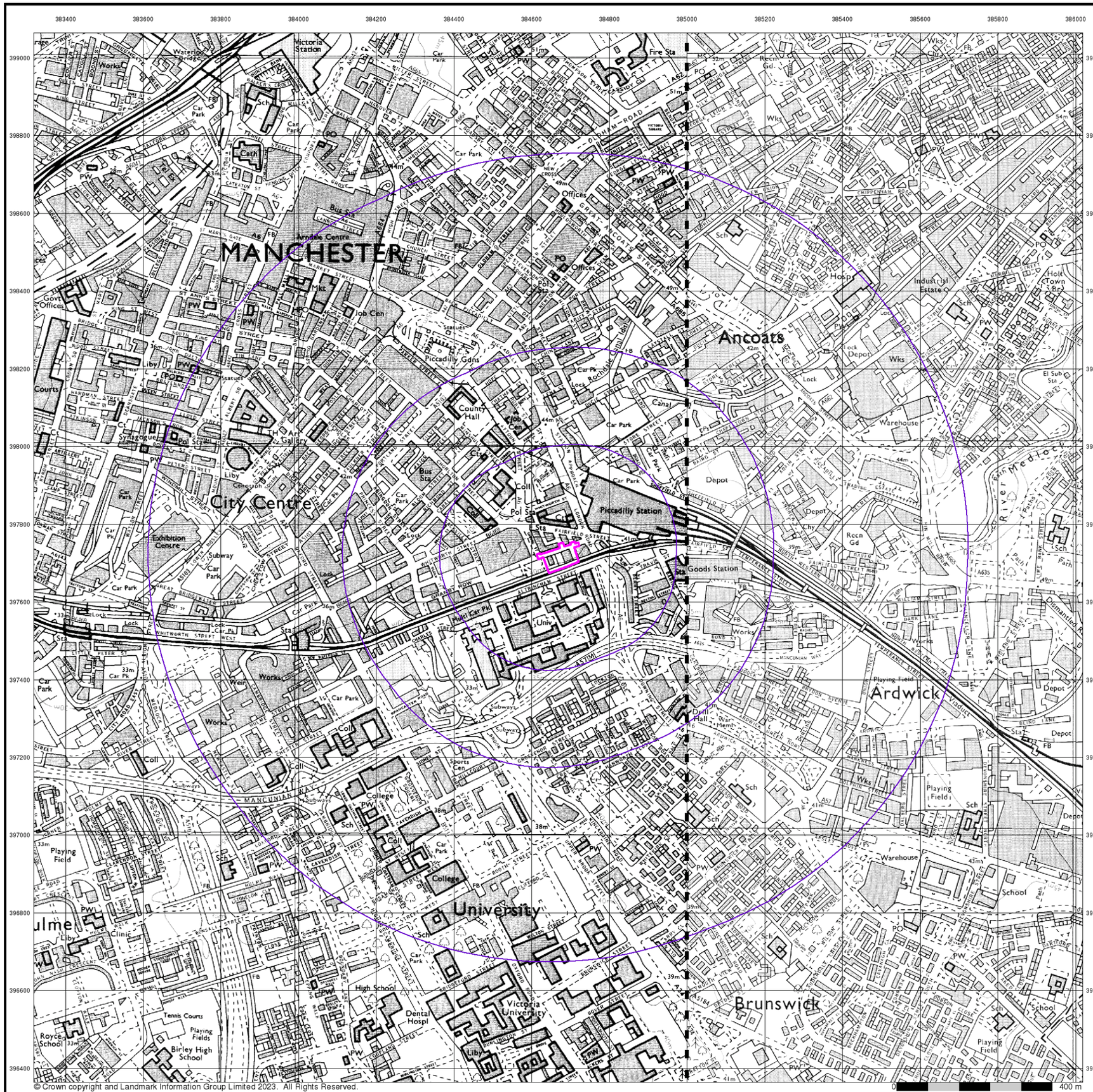
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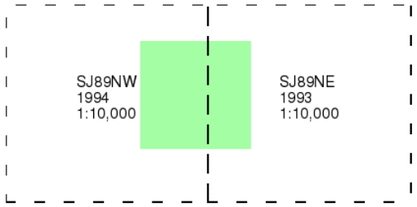
Ordnance Survey Plan

Published 1993 - 1994

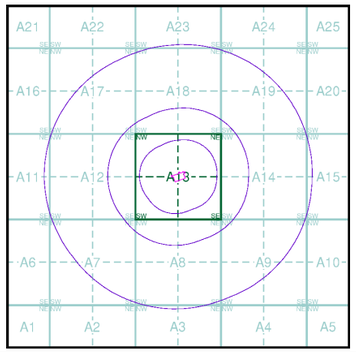
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	306235410_1_1
Customer Ref:	065374
National Grid Reference:	384670, 397720
Slice:	A
Site Area (Ha):	0.48
Search Buffer (m):	1000

Site Details

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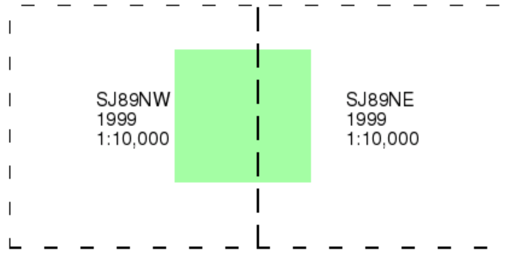
10k Raster Mapping

Published 1999

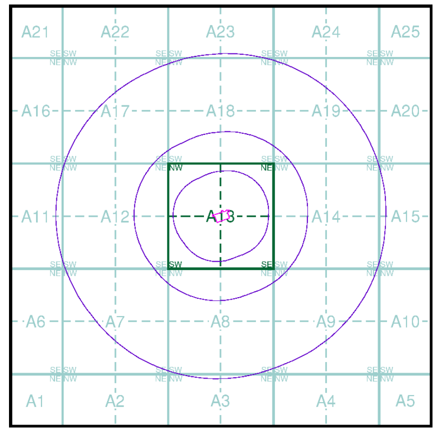
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

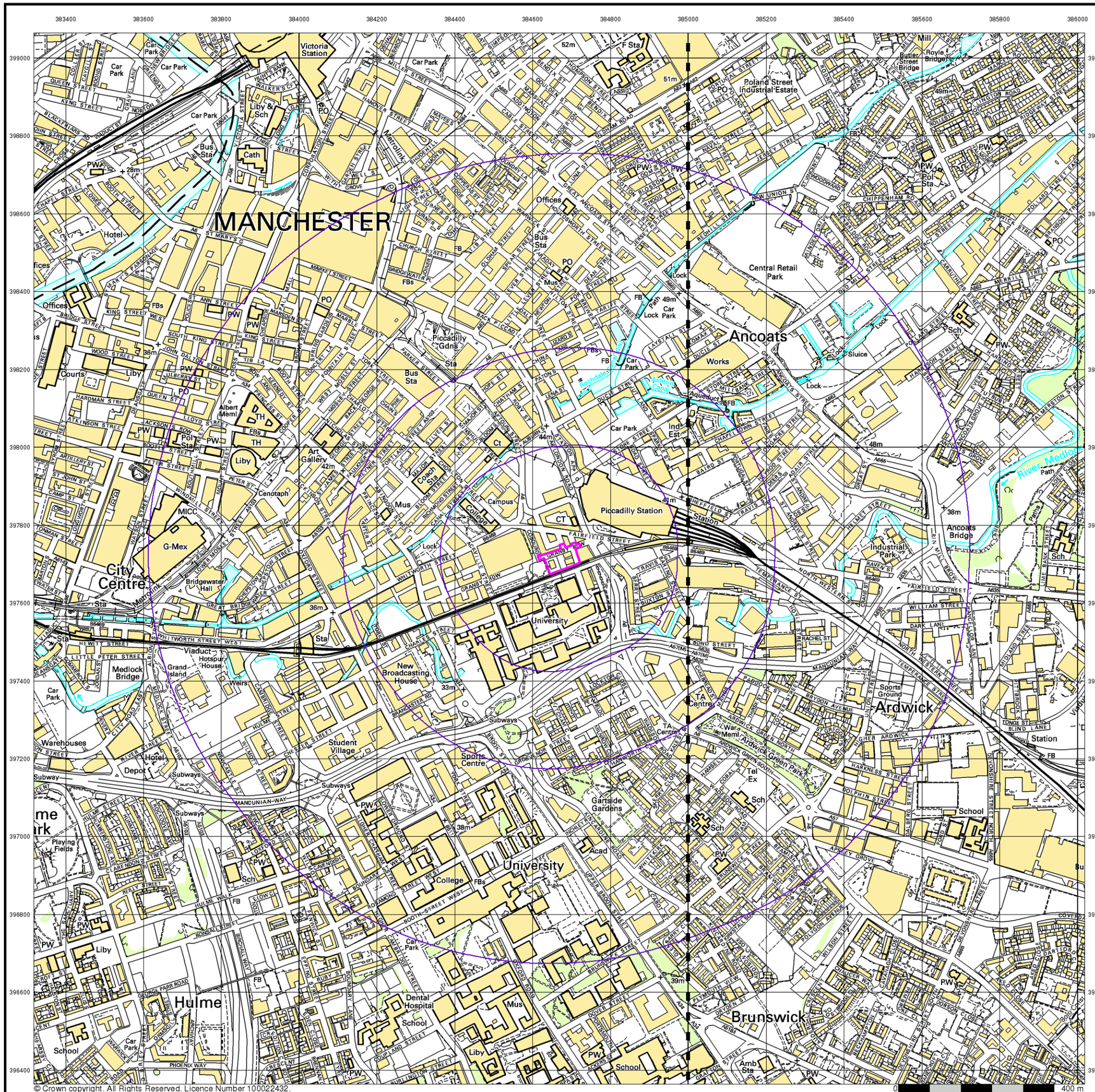
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Search Buffer (m): 1000

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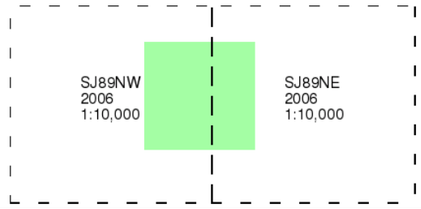
10k Raster Mapping

Published 2006

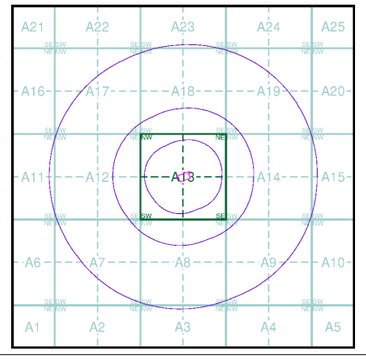
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

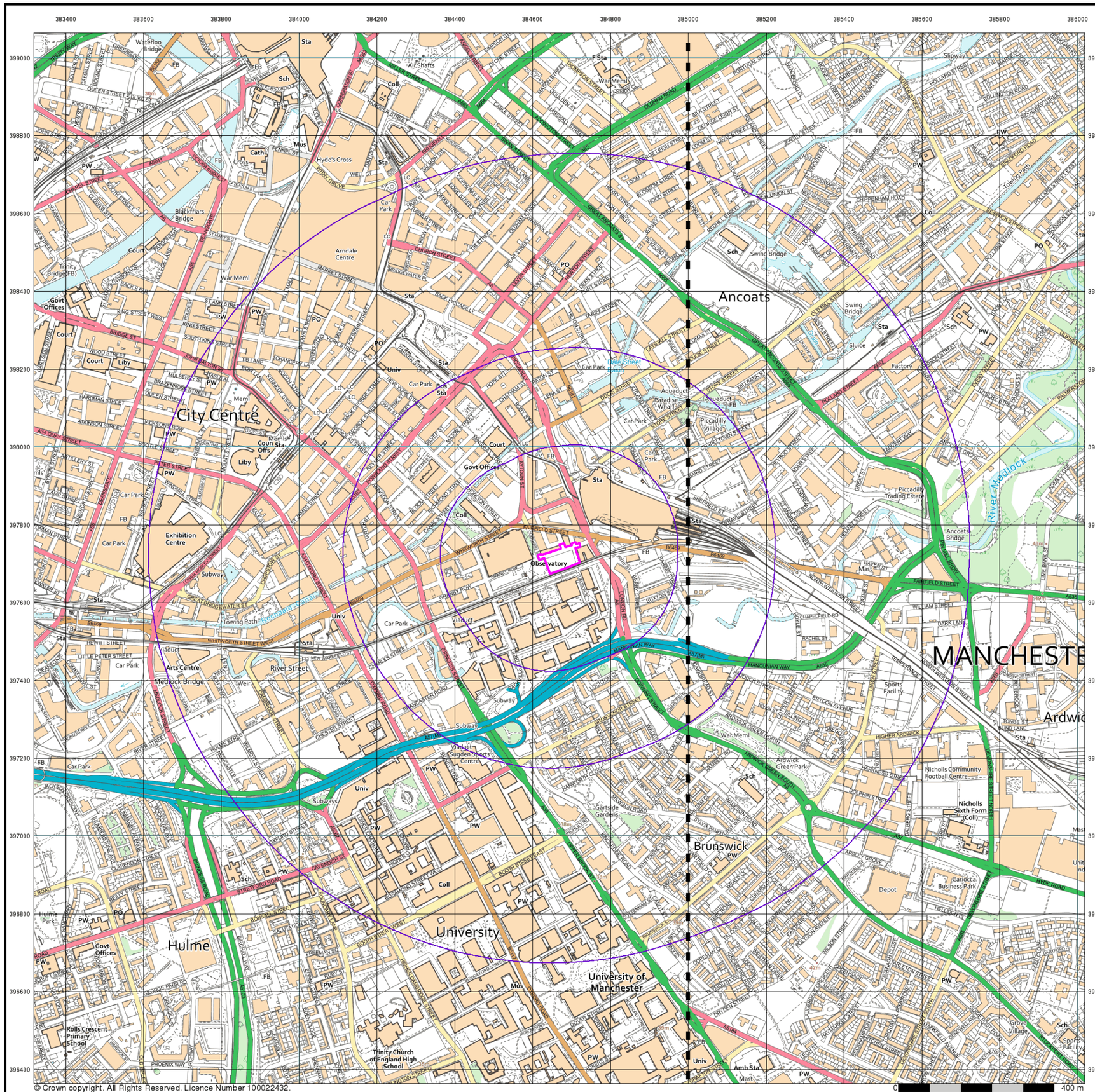
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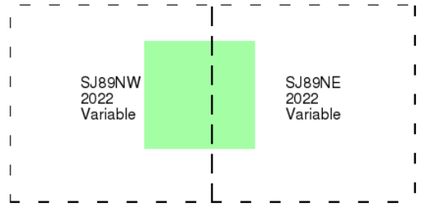
VectorMap Local

Published 2022

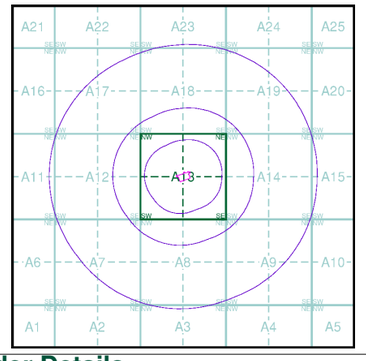
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	306235410_1_1
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Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene
	WMGR	Infilled Ground	Artificial Deposit	Not Supplied - Holocene

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
		Faults		
		Rock Segments		

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	TILLD	Till, Devensian	Diamicton	Not Supplied - Devensian
	GFSDD	Glaciofluvial Sheet Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	RTD1	River Terrace Deposits, 1	Sand and Gravel	Not Supplied - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	CHES	Chester Formation	Sandstone	Not Supplied - Olenekian
	WLSF	Wilmslow Sandstone Formation	Sandstone	Not Supplied - Early Triassic
	MM	Manchester Marls Formation	Mudstone	Not Supplied - GUADALUPIAN
	CS	Collyhurst Sandstone Formation	Sandstone	Not Supplied - Cisuralian
	HA	Halesowen Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	GML	Great Mine Limestone	Limestone	Not Supplied - Westphalian
	HTS	Holt Town Sandstone Bed	Sandstone	Not Supplied - Westphalian
	PUCM	Pennine Upper Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	OPS	Openshaw Sandstone	Sandstone	Not Supplied - Westphalian
	PMCM	Pennine Middle Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	ETM	Etruria Formation	Sandstone and Mudstone	Not Supplied - Westphalian

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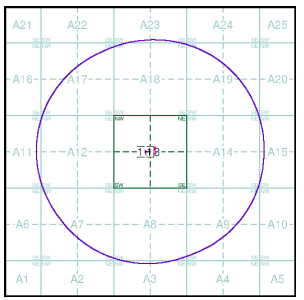
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID: 1
Map Sheet No: 085
Map Name: Manchester
Map Date: 2010
Bedrock Geology: Available
Superficial Geology: Not Available
Artificial Geology: Not Available
Faults: Not Supplied
Landslip: Not Available
Rock Segments: Not Supplied

Geology 1:50,000 Maps - Slice A



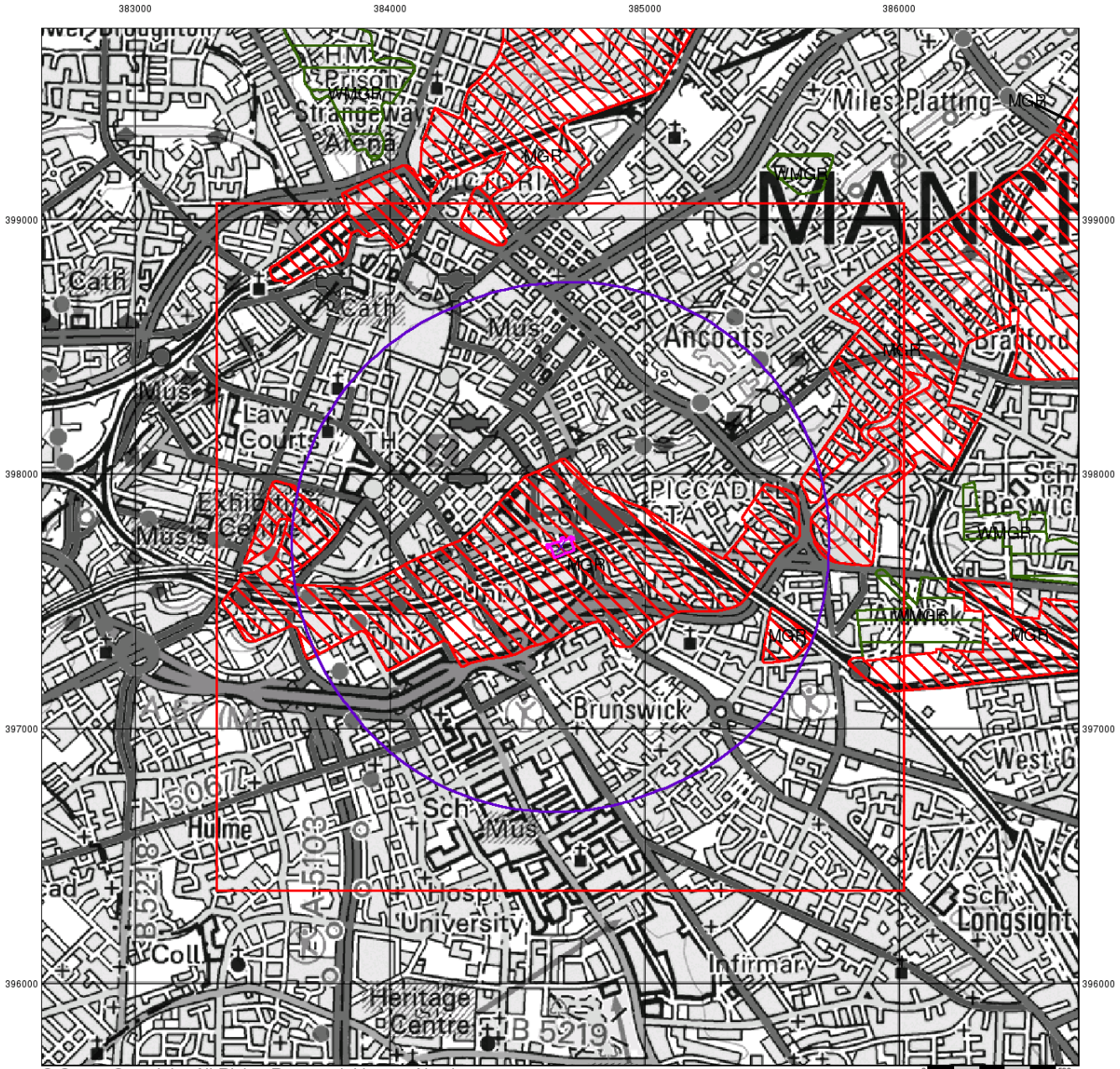
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National Grid Reference: 384670, 397720
Slice: A
Site Area (Ha): 0.48
Search Buffer (m): 1000

Site Details:

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Artificial Ground and Landslip

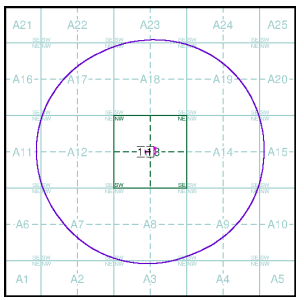
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



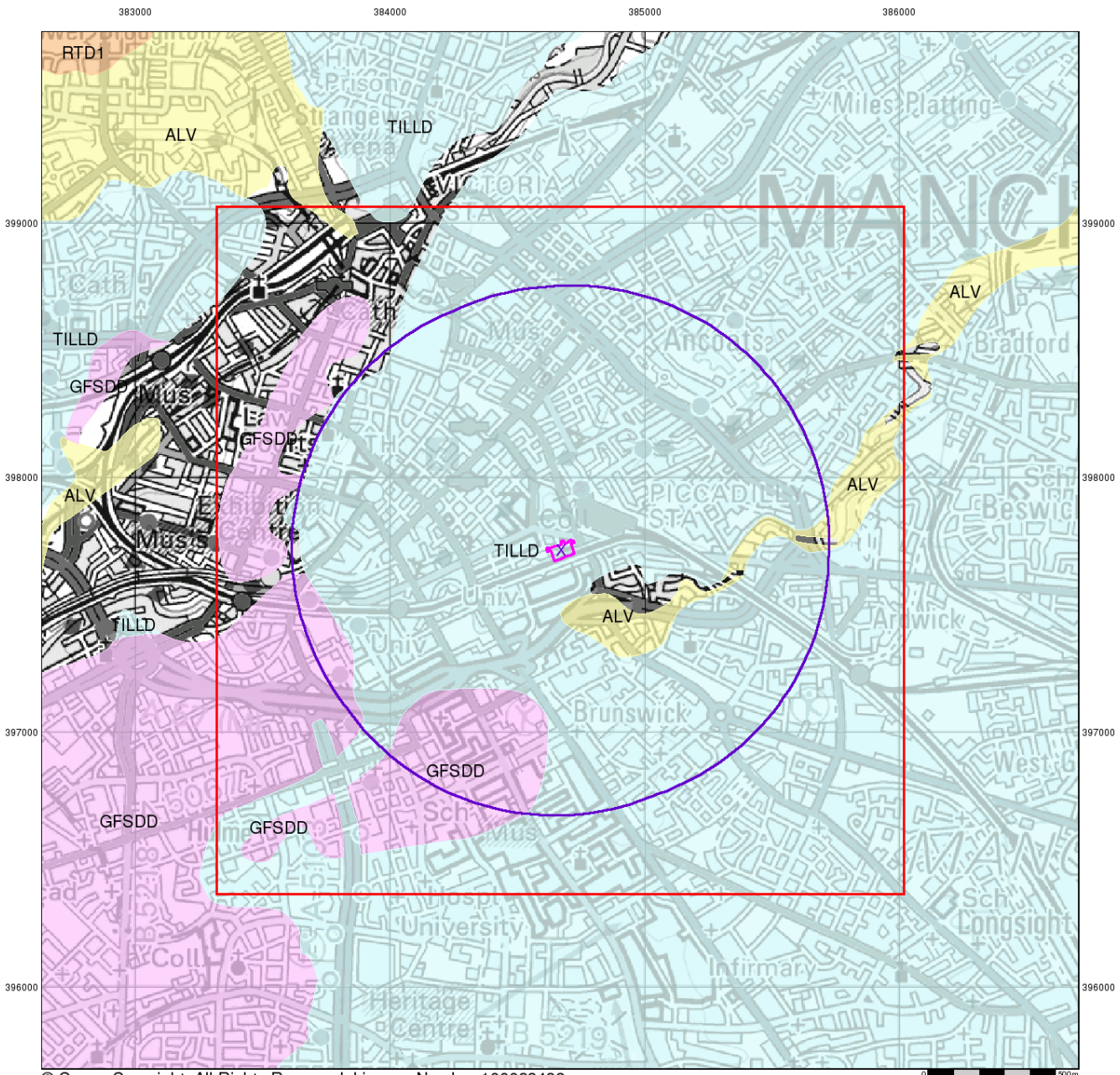
Order Details:

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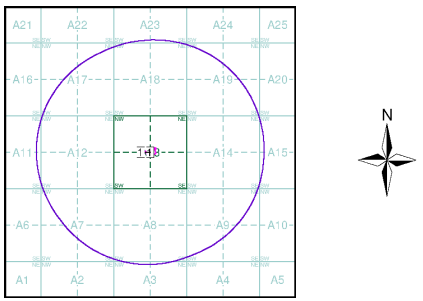
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



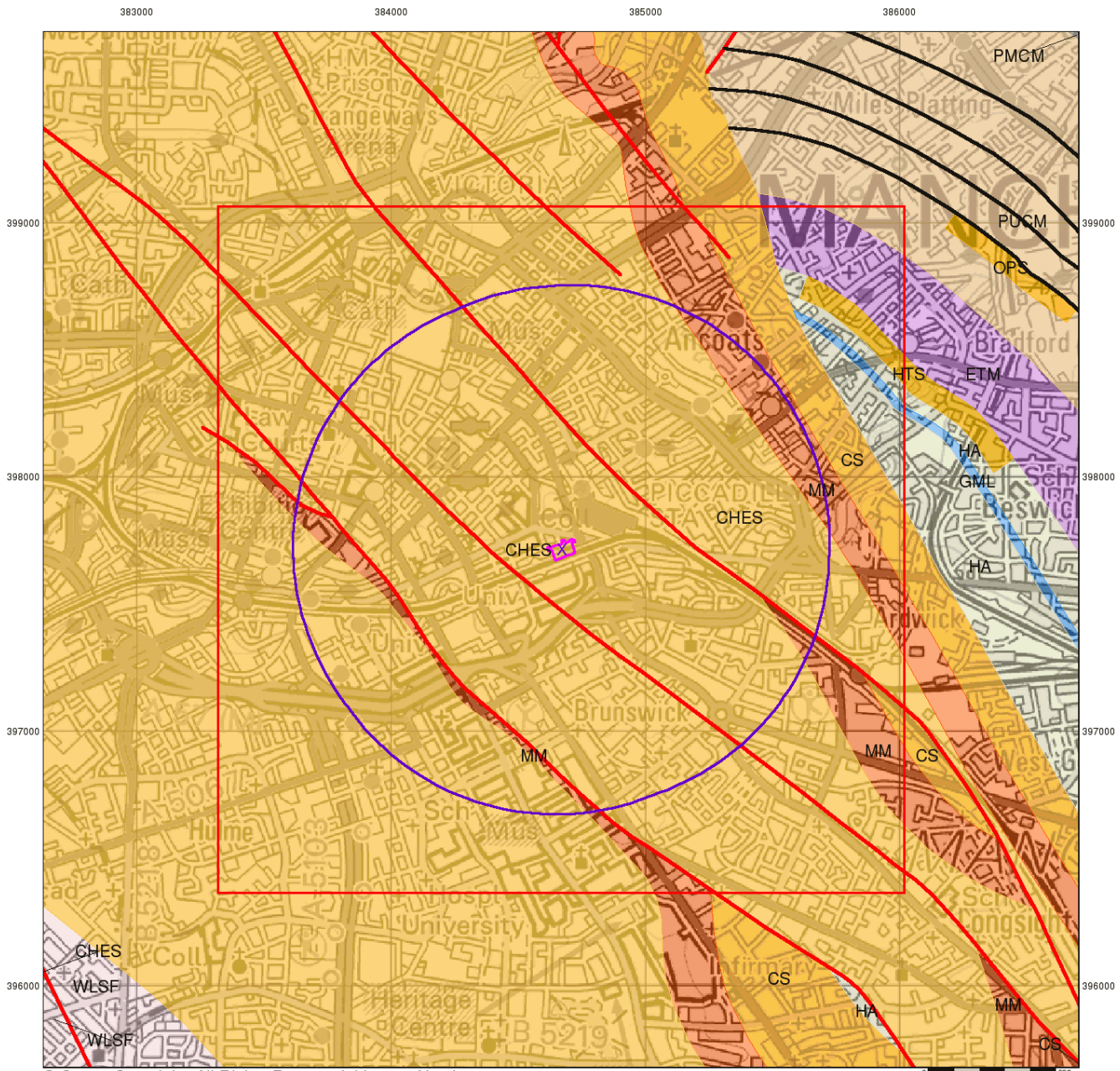
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Search Buffer (m):	1000

Site Details:

Flat at Old Garratt, 79, Granby Row, MANCHESTER, M1 7AB

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Bedrock and Faults

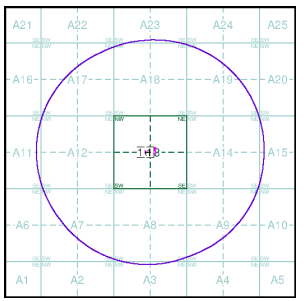
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



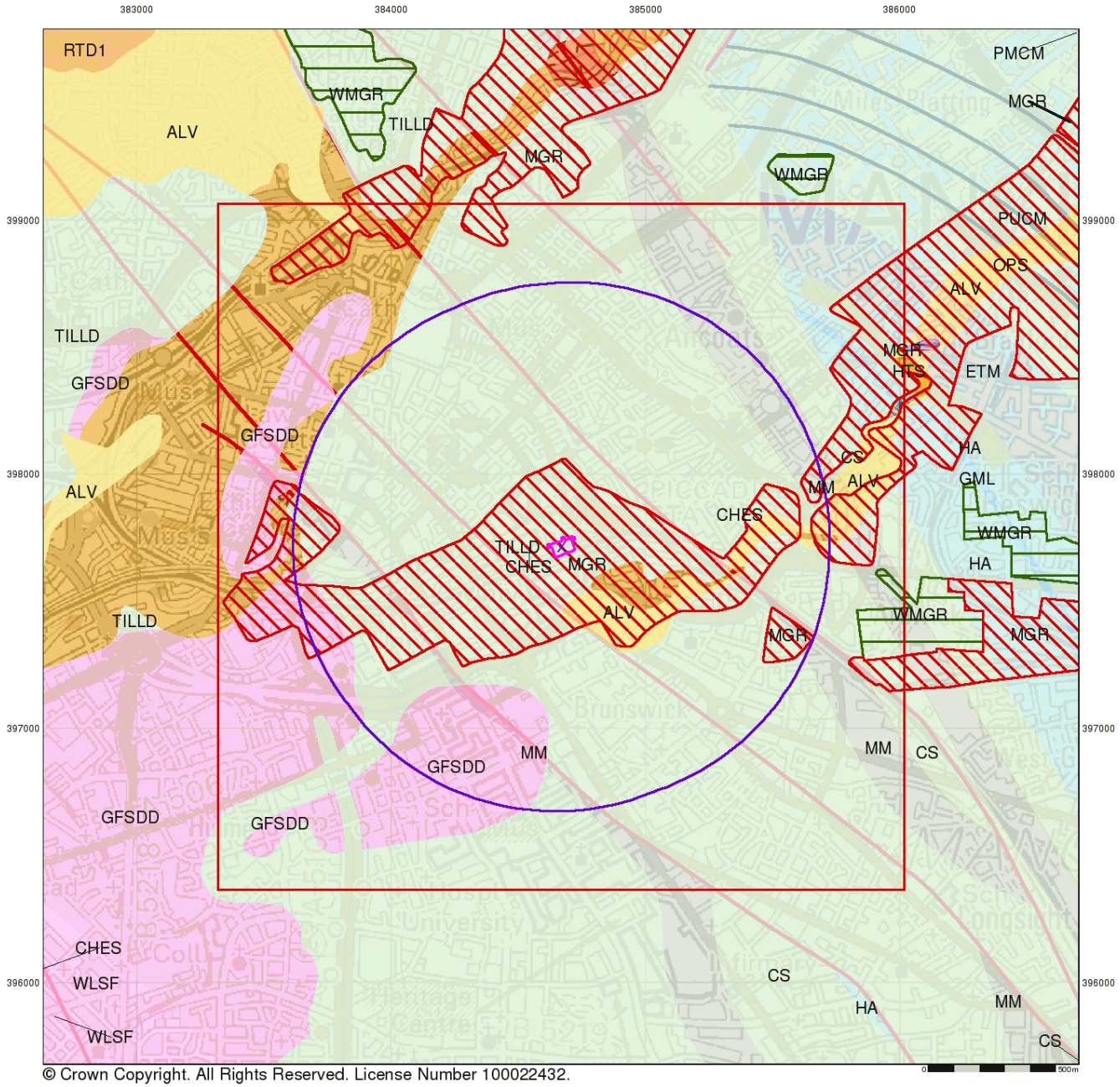
Order Details:

Order Number:	306235410_1_1
Customer Reference:	065374
National Grid Reference:	384670, 397720
Slice:	A
Site Area (Ha):	0.48
Search Buffer (m):	1000

Site Details:

Flat at Old Garratt, 79, Granby Row, MANCHESTER, M1 7AB

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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

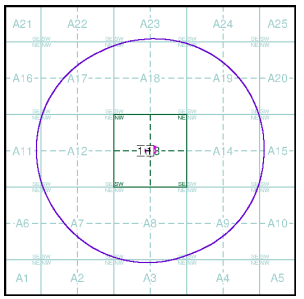
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A



Order Details:

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Flat at Old Garratt, 79, Granby Row, MANCHESTER, M1 7AB

1ST LINE DEFENCE
UXO SOLUTIONS



Detailed Unexploded Ordnance (UXO) Risk Assessment

Project Name	Chandos Hall
Client	Curtins
Site Address	Chandos Hall, Granby Row, Manchester, M1 3QJ
Report Reference	DA4989-00
Date	14th July 2017
Originator	CB

1ST LINE DEFENCE UXO SOLUTIONS

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Executive Summary

Site Location and Description

The site is located in the county borough of Manchester in Lancashire, north-west England. It is bordered by Granby Row to the north, Echo Street to the east, a section of railway and Altrincham Road to the south and Granby Row/Cobourg Street to the west. The site is located approximately 210m south-west of Manchester Piccadilly station and approximately 870m south-east of Manchester city centre.

The site is currently occupied by a high-rise apartment building and a single level building of an unknown purpose, possibly a day care centre, which is accompanied by a small section of open greenspace in the form of a playground.

The site is approximately centred on the OS grid reference: **SJ 8466597703**.

Proposed Works

The proposed works are understood to involve an intrusive ground investigation (drilling and excavating) for the pile design of a proposed multi storey student accommodation block.

Geology and Bomb Penetration Depth

Site specific geotechnical information was not available to 1st Line Defence at the time of the production of this report. An assessment of maximum bomb penetration depth can be made once such data becomes available, or by a UXO specialist during on-site support.

It should be noted that the maximum depth that a bomb could reach may vary across a site and will be largely dependent on the specific underlying geological strata and its density.

UXO Risk Assessment

1st Line Defence has assessed that there is a **Low Risk** from UXO across the majority of the site area, with a **Medium Risk** in the north-west of the site. This assessment is based on the following factors:

- The County Borough of Manchester was subject to a **Moderate** density of bombing with 27.1 bombs recorded per 1,000 acres. Manchester bomb plot and damage mapping indicates the presence of bombing incidents in the surrounding area of the proposed site, but none within the site boundary. However, the mapping only covers raids in 1940 so does not record any bombs which fell from 1941 to 1944. Furthermore, no written bomb incident records are available for Manchester. It is understood from the local archive that they were destroyed during/post-war. It has therefore not been possible to ascertain with certainly whether or not the site was bombed.
- At the start of the war, the site was almost entirely occupied by structures of a residential and commercial nature. Across the majority of the site, it is considered that ground cover should have been such that evidence of UXBs should have been noted and reported. However, an area of clearance is noted in the north-eastern corner of the site. It is thought possible that this was as a result of a bomb strike/fire damage. If rubble and debris was present in this area, there is a risk that evidence of UXO could easily have been overlooked. UXBs falling into 'bomb sites' was one of the most common scenarios for this going unnoticed and unrecorded.
- The proposed site was a housing and commercial entity. Should the site have suffered no damage throughout the war, it is anticipated that access levels would have been regular and frequent, and that post-raid checks for evidence of UXO would have been undertaken. Of concern is the north-eastern corner of the site where an area of cleared housing is noted post-war. It is not likely that access was reduced across the entirety of the site. However it cannot be discounted that potential bomb damage occurred in the north-eastern corner therefore lowering access levels and meaning UXO could have potentially fallen unnoticed.

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UXO Risk Assessment
• It is a distinct possibility that damage may have occurred on site due to the area of cleared housing in the north-eastern corner in post-war photography. If rubble and debris were present in this area, there is a risk that evidence of UXO could easily been unnoticed. The rest of the site appears to have survived the war intact. • Given that the majority of the site appears to have survived the war, shows no signs of damage and likely accessed frequently, this part of the site has been given a **Low Risk**. The area within the north-west of the site is shown as cleared on post-war aerial photography. Given the poor quality of the record set for Manchester, it has not proved possible to prove that this clearance was not due to bombing. Thus, this area, with a small buffer to account for the 'J-curve' effect, has been given a **Medium Risk**.

Recommended Risk Mitigation Measures
The following risk mitigation measures are recommended to support the proposed works at the Chandos Hall site: **All Works** • Site Specific Unexploded Ordnance Awareness Briefings to all personnel conducting intrusive works **Medium Risk Areas** **Open Intrusive Works (trial pits, service pits, open excavations, shallow foundations etc.)** • UXO Specialist On-site Support and Site Specific Unexploded Ordnance Awareness Briefings to all personnel conducting intrusive works **Boreholes and Piled Foundations** • Intrusive Magnetometer Survey of all borehole and pile locations/clusters down to maximum bomb penetration depth

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Risk Map



For indicative purposes – not to scale

Medium Risk

Low Risk

Low Risk Areas:

- Site Specific Unexploded Ordnance Awareness Briefings to all personnel conducting intrusive works

Medium Risk Areas:

- Unexploded Ordnance (UXO) Specialist presence on site to support open intrusive works
- Intrusive Magnetometer Survey of any borehole or pile locations/clusters down to an assessed maximum bomb penetration depth

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Glossary

Abbreviation	Definition
AA	Anti-Aircraft
AAA	Anti-Aircraft Ammunition
AFS	Auxiliary Fire Service
AP	Anti-Personnel
ARP	Air Raid Precautions
AWAS	Air Warfare Analysis Section
EOC	Explosive Ordnance Clearance
EOD	Explosive Ordnance Disposal
FP	Fire Pot
GM	G Mine (Parachute mine)
HAA	Heavy Anti Air
HE	High Explosive
IB	Incendiary Bomb
LAA	Light Anti Air
LCC	London County Council
LRRB	Long Range Rocket Bomb (V-2)
LSA	Land Service Ammunition
MOL	Molotov (Incendiary Bomb)
OB	Oil Bomb
PAC	Pilotless Aircraft (V-1)
PB	Phosphorous Bomb
PM	Parachute Mine
POW	Prisoner Of War
RAF	Royal Air Force
RCAF	Royal Canadian Air Force
RFC	Royal Flying Corps
RNAS	Royal Naval Air Service
ROF	Royal Ordnance Factory
SA	Small Arms
SAA	Small Arms Ammunition
SD1000	1000kg high explosive bomb
SD2	2kg incendiary
SIP	Self-Igniting Phosphorous
U/C	Unclassified bomb
UP	Unrotated Projectile (rocket)
USAAF	United States Army Air Force
UX	Unexploded
UXAA	Unexploded Anti Air
UXB	Unexploded Bomb
UXO	Unexploded Ordnance
V1	Vengeance Weapon 1
V2	Vengeance Weapon 2
WAAF	Women's Auxiliary Air Force
X	Exploded

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1st Line Defence Limited
Detailed Unexploded Ordnance (UXO) Risk Assessment

Site: Chandos Hall, Manchester
Client: Curtins

1. Introduction

1.1. Background

1st Line Defence has been commissioned by Curtins to produce a Detailed Unexploded Ordnance (UXO) Risk Assessment for the proposed works at Chandos Hall.

Buried UXO can present a significant risk to construction works and development projects. The discovery of a suspected device during works can cause considerable disruption to operations as well as cause unwanted delays and expense.

UXO in the UK can originate from three principal sources:

1. Munitions deposited as a result of military training and exercises.
2. Munitions lost, burnt, buried or otherwise discarded either deliberately, accidentally, or ineffectively.
3. Munitions resulting from wartime activities including German bombing in WWI and WWII, long range shelling, and defensive activities.

This report will assess the collective factors that may contribute to the risk of UXO contamination. If a potential risk is identified, this report will recommend appropriate mitigation measures, in order to reduce the risk to as low as is reasonably practicable. Detailed analysis and evidence will be provided to enable the client to understand the basis for the assessed risk level and any recommendations.

This report follows the guidelines outlined in CIRIA C681, 'Unexploded Ordnance (UXO) A Guide for the Construction Industry'.

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2. Method Statement

2.1. Report Objectives

The aim of this report is to conduct a comprehensive assessment of the potential risk from UXO at Chandos Hall. Every reasonable effort has been made to ensure that all available historical information has been accessed and checked. Where possible, evidence has been included in the report to enable the client to understand the basis of the risk assessment.

The report will recommend appropriate site and work-specific risk mitigation measures to reduce the risk from explosive ordnance during the envisaged works to a level that is as low as reasonably practicable.

2.2. Risk Assessment Process

1st Line Defence has undertaken a five-step process for assessing the risk of UXO contamination:

1. The risk that the site was contaminated with UXO.
2. The risk that UXO remains on the site.
3. The risk that UXO may be encountered during the proposed works.
4. The risk that UXO may be initiated.
5. The consequences of initiating or encountering UXO.

In order to address the above, 1st Line Defence has taken into consideration the following factors:

- Evidence of WWI and WWII German air-delivered bombing and the legacy of Allied occupation.
- The nature and conditions of the site during WWII.
- The extent of post-war development and UXO clearance operations on site.
- The scope and nature of the proposed works and the maximum assessed bomb penetration depth.
- The nature of ordnance that may have contaminated the proposed site area.

2.3. Sources of Information

To produce a thorough assessment of UXO risk, military records and archive material held in the public domain have been accessed. The following sources have been consulted for this report:

- The National Archives, Kew, and Greater Manchester County Record Office, Manchester.
- Historical mapping datasets.
- Historic England National Monuments Record.
- Relevant information supplied by Curtins.
- Available material from 33 Engineer Regiment (EOD) Archive.
- 1st Line Defence's extensive historical archives, library and UXO geo-datasets.
- Open sources such as published books and internet resources.

Research involved a visit to The National Archives.

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2.4. General Considerations of Historical Research

This desktop assessment is based largely upon analysis of historical evidence. Every reasonable effort has been made to locate significant and pertinent information, and the sources consulted have been presented in this report. 1st Line Defence cannot be held accountable for any changes to the assessed level of risk or risk mitigation measures, based on documentation or other data that may come to light at a later date, or which was not available to 1st Line Defence at the time of the report's production.

It is often problematic and sometimes impossible to verify the completeness and accuracy of WWII-era records. As a consequence, conclusions as to the exact location and nature of a UXO risk can rarely be quantified and are to a degree subjective. To counter this, a range of many sources and types of information have been consulted, analysed and presented. The same methodology is applied to each report during the risk assessment process. 1st Line Defence cannot be held responsible for inaccuracies or gaps in the available historical information.

3. Background to Bombing Records

During WWII bombing records were gathered by the police, Air Raid Precaution (ARP) wardens and military personnel. Records were maintained in the form of local and regional written records, maps depicting the locations of individual strikes, and maps indicating the levels of damage sustained by structures. Records typically noted when, where and what types of bombs had fallen during an air raid. Records of bomb strikes were made either through direct observation or by post-raid surveys. The immediate priority was frequently focussed on assisting casualties and minimising damage. As a result some records were incomplete and contradictory.

The quality, detail and nature of record keeping could vary considerably between boroughs and towns. No two areas were collated or recorded data in the same way. Some areas maintained bomb and damage mapping, some provided grid references of strikes, and some are too vague in detail to be able to ascertain exactly where bombs fell. Many records were even damaged or destroyed in subsequent bombing raids. Records of raids that took place on sparsely or uninhabited areas were often based upon third party or hearsay information and are therefore not always reliable. Furthermore, records of attacks on military or strategic targets were often maintained separately from the general records and have not always survived.

4. Background to Allied Records

During WWII considerable areas of land were requisitioned by the army for the purpose of defence, training, and the construction of airfields and facilities for munitions production. Records relating to military features vary and some areas may remain censored. Within urban environments datasets will be consulted detailing the location of munitions works and air and land defences. In rural locations it may be possible to obtain plans of airfields and military establishments, as well as training logs, personal memoirs, and operational plans.

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5. UK Regulatory Environment

5.1. General

There is no formal obligation requiring a UXO risk assessment to be undertaken for construction projects in the UK, nor is there any specific legislation stipulating the management or mitigation of UXO risk. However, it is implicit in the legislation outlined below that those responsible for intrusive works (archaeology, site investigation, drilling, piling, excavation etc.) should undertake a comprehensive and robust assessment of the potential risks to employees and that mitigation measures are implemented to address any identified hazards.

5.2. CDM Regulations 2015

The Construction (Design and Management) Regulations 2015 (CDM 2015) define the responsibilities of parties involved in the construction of temporary or permanent structures.

The CDM 2015 establishes a duty of care extending from clients, principle co-ordinators, designers, and contractors to those working on, or affected by, a project. Those responsible for construction projects may therefore be accountable for the personal or proprietary loss of third parties, if correct health and safety procedure has not been applied.

Although the CDM does not specifically reference UXO, the risk presented by such items is both within the scope and purpose of the legislation. It is therefore implied that there is an obligation on parties to:

- Provide an appropriate assessment of potential UXO risks at the site (or ensure such an assessment is completed by others).
- Put in place appropriate risk mitigation measures if necessary.
- Supply all parties with information relevant to the risks presented by the project.
- Ensure the preparation of a suitably robust emergency response plan.

5.3. The 1974 Health and Safety at Work etc. Act

All employers have a responsibility under the Health and Safety at Work etc. Act 1974 and the Management of Health and Safety at Work Regulations 1999, to ensure the health and safety of their employees and third parties, so far as is reasonably practicable and conduct suitable and sufficient risk assessments.

5.4. Additional Legislation

In the event of a casualty resulting from the failure of an employer/client to address the risks relating to UXO, the organisation may be criminally liable under the Corporate Manslaughter and Corporate Homicide Act 2007.

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6. Role of Commercial UXO Contractors and The Authorities

6.1. Commercial UXO Contractors

In the event that a risk of UXO contamination is detected at the proposed site, the support of a UXO specialist may be recommended. A UXO specialist may be able to avoid unnecessary call-outs to the authorities through the disposal or removal of low risk items. In addition a specialist will assist in the swift recognition of high risk items, and will thereafter co-ordinate with the local authority with the objective of causing minimal levels of disruption to site operations, whilst putting in place safe and appropriate measures.

For more information on the role of commercial UXO specialists, see *CIRIA C681*.

6.2. The Authorities

The police have a responsibility to co-ordinate the emergency services in the event of an ordnance-related incident at a construction site. Upon inspection they may impose a safety cordon, order an evacuation, and call the military authorities Joint Services Explosive Ordnance Disposal (JSEOD) to arrange for investigation and/or disposal. In the absence of a UXO specialist, police officers will usually employ such precautionary safety measures, thereby causing works to cease, and possibly requiring the evacuation of neighbouring businesses and properties.

The priority given to the police request will depend on JSEOD's judgement of the nature of the UXO risk, the location, people and assets at risk, as well as the availability of resources. They may respond immediately or it can take 1-2 days and often longer for the authorities to respond and deal with a UXB.

Depending on the on-site risk assessment the item of ordnance may be removed from the site and/or destroyed by a controlled explosion. The latter process is lengthy and may necessitate the establishment of addition cordons and evacuations.

Following the removal of an item of UXO, the military authorities will only undertake further investigations or clearances in high risk situations. If there are regular UXO finds on a site the JSEOD may not treat each occurrence as an emergency and will recommend the construction company puts in place alternative procedures, such as the appointment of a commercial contractor to manage the situation.

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7. The Site

7.1. Site Location

The site is located in the county borough of Manchester in Lancashire, north-west England. It is bordered by Granby Row to the north, Echo Street to the east, a section of railway and Altrincham Road to the south and Granby Row/Cobourg Street to the west. The site is located approximately 210m south-west of Manchester Piccadilly station and approximately 870m south-east of Manchester city centre.

The site is approximately centred on the OS grid reference: **SJ 8466597703**.

Site location maps are presented in **Annex A**.

7.2. Site Description

The site is currently occupied by a high-rise apartment building and a single level building of an unknown purpose, possibly a day care centre, which is accompanied by a small section of open greenspace in the form of a playground.

A recent aerial photograph and site plan are presented in **Annex B** and **Annex C** respectively.

8. Scope of the Proposed Works

8.1. General

The proposed works are understood to involve an intrusive ground investigation (drilling and excavating) for the pile design of a proposed multi storey student accommodation block.

9. Ground Conditions

9.1. General Geology

The British Geological Survey (BGS) map shows the bedrock geology of the site to be underlain by the Chester Pebble Beds Formation – sandstone, of the Early Triassic Epoch. The superficial deposits are comprised of Till, Devansian – Diamicton.

9.2. Site Specific Geology

Site specific geotechnical data was not available at the time of the production of this report.

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10. Site History

10.1. Ordnance Survey Historical Maps

Historical maps were obtained for this report and are presented in **Annex D**. These maps provide an indication of the composition of the site pre and post- WWII. See below for a summary of the site history on various mapping editions.

Pre-WWI		
Date	**Scale**	**Description**
1908	1:2,500	This map indicates the presence of several residential properties within the site boundary. A road intersects the western half of the site. There are some small areas of open ground, assumed to be hard standing in nature.

Pre-WWII		
Date	**Scale**	**Description**
1922	1:2,500	This map shows no significant change since the previous edition. The site remains occupied by residential properties.

Post-WWII		
Date	**Scale**	**Description**
1948	1:1,250	There is no significant change since the previous map edition across the majority of the site area. There is an area of clearance to the north-west of the site on the opposite side of Granby Row, and a row of missing houses in the north-eastern corner of the site.
1965	1:2,500	This map edition shows the site to have been cleared of the residential properties and is now occupied by a 'depot' and a structure of an unknown purpose. The road intersecting the site is now gone.

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10.2. Goad Fire Insurance Mapping

Available pre and post-WWII fire insurance plans for the site were obtained by 1st Line Defence. These are comprehensive street plans detailing the structure and uses of individual buildings. The plans were originally designed to assist the fire insurance industry. See **Annex E** for the mapping with the site boundary outlined accordingly.

WWII Period	
Date	**Description**
1942	This plan shows the majority of the buildings within the site footprint to be made of brick, stone or concrete. There is one wooden structure to the south. Some skylights are visible to the south-east. The majority of the buildings are marked as having been commercial units.

Post-WWII	
Date	**Description**
1962	This plans shows the majority of the buildings from the previous edition to have been demolished, save for the buildings on the far east of the site. A single structure labelled as 'College of Technology', built from brick, stone or concrete, has been erected in place of the former buildings.

10.3. Historical Aerial Photographs of the Site

Historical aerial photographs have been consulted from the Aerofilms collection available from Britain From Above. 1st Line Defence have inquired about obtaining historical air photographs of the site area from the Aerofilms collection. Unfortunately no relevant records could be found.

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11. Aerial Bombing Introduction

11.1. General

During WWI and WWII, many towns and cities across the UK were subjected to bombing which often resulted in extensive damage to city centres, docks, rail infrastructure and industrial areas. The poor accuracy of WWII targeting technology and bombing techniques often resulted in neighbouring areas to specific targets being bombed.

In addition to raids which concentrated on specific targets, indiscriminate bombing of large areas also took place – notably the London 'Blitz', but also affecting many other towns and cities. As discussed in the following sections, a proportion of the bombs dropped on the UK did not detonate as designed. Although extensive efforts were made to locate and deal with these UXBs at the time, many still remain buried and can present a potential risk to construction projects.

The main focus of research for this report will concern air delivered weapons dropped during WWII, although WWI bombing will also be considered.

11.2. Generic Types of WWII German Air-delivered Ordnance

An understanding of the type and characteristics of the ordnance used by the Luftwaffe during WWII allows an informed assessment of the hazards posed by any unexploded items that may remain in situ on a site. A brief summary of these characteristics is given in the table below. Examples of German air delivered ordnance are presented in **Annex F**.

Generic Types of WWII German Air Delivered Ordnance				
Type	Description	Size/Weight	Frequency	Likelihood of detecting Unexploded
High Explosive (HE) Bombs	A HE bomb typically has a strong metal casing, which provides a 'thick skin' that is designed to fragment on detonation. HE bombs possess a sufficient mass and velocity to enable penetration of the ground if they failed to explode. In addition the shape and fins are aerodynamic to keep the tip end of the bomb facing downward.	Most bombs were 50kg, 250kg or 500kg, although larger bombs of up to 1,800kg were also used. About half the weight of HE bombs comprised of explosive TNT or Amatol.	In terms of weight of ordnance dropped, HE bombs were the most frequent weapon deployed by the Luftwaffe during WWII.	Although efforts were made to identify the presence of unexploded ordnance following a raid, often the damage and destruction caused by detonated bombs made observation of UXB entry holes impossible. The entry hole of an unexploded bomb can be as little as 20cm in diameter and was easily overlooked in certain ground conditions (see **Annex G**). Furthermore, ARP documents describe the danger of assuming that damage, actually caused by a large UXB, was due to an exploded 50kg bomb. UXBs therefore present the greatest risk to present–day intrusive works.
Aerial or Parachute Mines (PM)	Luftmines (LMA-500kg and LMB-1000kg) were magnetic sea mines which were thin walled, cylindrical in shape with a hemispherical nose, deployed by parachute. For use on land, the mines were armed with a clockwork bomb fuze which caused the bomb to explode after impact. When operating as designed they caused considerable damage due to the high weight of explosive and their detonation at or near the surface.	PMs either weighed 500kg or 1000kg (approximately 2/3 of the overall weight was explosives) depending on the type of mine. Their length ranged from 1.73-2.64m.	PMs were deployed less frequently than HE and Incendiary bombs due to their size, cost and the difficulty of their deployment.	If functioning correctly, PMs generally would have had a slow rate of descent and were very unlikely to have penetrated the ground. Where the parachute failed, mines would have simply shattered on impact if the main charge failed to explode. There have been extreme cases when these items have been found unexploded. However, in these scenarios, the ground was either extremely soft or the munition fell into water.
1kg Incendiary Bombs (IB)	1kg IB devices had a magnesium shell and were filled with thermite; both components were designed to burn after igniting on impact. They were jettisoned from air-dropped containers.	1kg in weight and approximately 14 inches long.	In terms of the number of weapons dropped, small IBs were the most numerous. Millions of these weapons	IBs had very limited penetration capability and in urban areas would often have been located in post-raid surveys. If they failed to initiate and fell in water, on soft

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	Some variants had explosive heads presenting an increased risk if encountered during works.		were dropped throughout the war.	vegetated ground, or bomb rubble, they could have gone unnoticed.
Large Incendiary Bombs (IB)	Large IBs had various flammable fill materials (including oil and white phosphorus), and a small explosive charge. They were designed to explode and burn close to the surface. Although they were often the same shape as HE bombs, they were thin-skinned and did not generally penetrate the surface.	Large IBs Weighed up to 350kg.	Large IBs were not as common as the 1kg IBs, although they were more frequently deployed than the Parachute Mines and Anti-Personnel Bomblets.	If large IBs did penetrate the ground, complete combustion did not always occur and in such cases they could remain a risk to intrusive works.
Anti-personnel (AP) Bomblets	The SD2 'Butterfly Bomb' had an 8cm long, thin, cylindrical shaped, cast iron outer shell which hinged open when the bomblet deployed. A 15cm long steel cable was attached via a spindle to an aluminium fuze. They were generally lethal to anyone within a radius of 10 metres (33 ft) and could inflict serious shrapnel injuries.	The size and weight ranged depending on the type used. The SD2 weighed 2kg and contained 225 grams of TNT.	AP Bomblets were not commonly used and are generally considered to pose a low risk to most works in the UK.	SD2 bomblets were packed into containers holding between 6 and 108 submunitions. They had little ground penetration ability and should have been located by the post-raid survey unless they fell into water, dense vegetation or bomb rubble.

11.3. Failure Rate of German Air-Delivered Ordnance

It has been estimated that 10% of the German HE bombs dropped during WWII failed to explode as designed. There are a number of reasons why an air-delivered weapon might fail to function as designed:

- Malfunction of the fuze or gain mechanism (manufacturing fault, sabotage by forced labour or faulty installation).
- Many German bombs were fitted with a clockwork mechanism that could jam on impact.
- Failure of the bomber aircraft to arm the bombs due to human error or an equipment defect.
- Jettisoning of the bomb before it was armed or from a very low altitude. This was most likely if the bomber was under attack or crashing.

From 1940 to 1945 bomb disposal teams dealt with a total of 50,000 explosive items of 50kg, over, 7,000 anti-aircraft projectiles and 300,000 beach mines. Unexploded ordnance is still regularly encountered across the UK, especially in London; see press articles in **Annex H**.

11.4. V-Weapons

From mid-1944, Hitler's 'V-weapon' campaign began. It used newly developed unmanned cruise missiles and rockets. The V-1 known as the *Flying Bomb* or *Pilotless Aircraft* and the V-2, a long range rocket, were launched from bases in Germany and occupied Europe. A total of 9,251 V-1s and 1,115 V-2s were recorded in the United Kingdom.

Although these weapons caused considerable damage, their range was limited by their position of deployment across Europe and as a result the vast majority of V-weapon strikes were directed against targets in the south-east of England, predominantly in the London Boroughs and Home Counties. This limitation of capability meant targets in Manchester and north-west England were generally too far to be considered for V-weapon strikes by the Luftwaffe.

The risk from V-weapons in Manchester is therefore considered negligible and will not be further addressed in this report.

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12. UXB Ground Penetration

12.1. General

An important consideration when assessing the risk from a UXB is the likely maximum depth of burial. There are several factors which determine the depth that an unexploded bomb will penetrate:

- Mass and shape of bomb
- Height of release
- Velocity and angle of bomb
- Nature of the ground cover
- Underlying geology

Geology is perhaps the most important variable. If the ground is soft, there is a greater potential of deeper penetration. For example, peat and alluvium are easier to penetrate than gravel and sand, whereas layers of hard strata will significantly retard and may stop the trajectory of a UXB.

12.2. The J-Curve Effect

J-curve is the term used to describe the characteristic curve commonly followed by an air-delivered bomb dropped from height after it penetrates the ground. Typically, as the bomb is slowed by its passage through underlying soils, its trajectory curves towards the surface. Many UXBs are found with their nose cone pointing upwards as a result of this effect. More importantly however is the resulting horizontal offset from the point of entry. This is typically a distance of about one third of the bomb's penetration depth, but can be up to 15m.

12.3. WWII UXB Penetration Studies

During WWII the Ministry of Home Security undertook a major study on actual bomb penetration depths, carrying out statistical analysis on the measured depths of 1,328 bombs as reported by Bomb Disposal. Conclusions were made as to the likely average and maximum depths of penetration of different sized bombs in different geological strata.

For example, the largest common German bomb (500kg) had a likely concluded penetration depth of 6m in sand or gravel but 11m in clay. The maximum observed depth for a 500kg bomb was 11.4m and for a 1000kg bomb 12.8m. Theoretical calculations suggested that significantly greater penetration depths were probable.

12.4. Site Specific Bomb Penetration Considerations

When considering an assessment of the bomb penetration at the site of proposed works the following parameters have been used:

- WWII geology – Chester Pebble Beds Formation.
- Impact angle and velocity – 10-15° from vertical and 270 metres per second.
- Bomb mass and configuration – The 500kg SC HE bomb, without retarder units or armour piercing nose (this was the largest of the common bombs used against Britain).

It has not been possible to determine maximum bomb penetration capabilities at this stage due to the lack of site specific borehole geotechnical information. An assessment can be made once such information becomes available or by an UXO Specialist on-site.

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13. Initiation of Unexploded Ordnance

13.1. General

Unexploded ordnance does not spontaneously explode. All high explosive filling requires significant energy to create the conditions for detonation to occur. In the case of unexploded German bombs discovered within the construction site environment, there are a number of potential initiation mechanisms.

13.2. UXB Initiation Mechanisms

UXB Initiation	
Direct Impact	Unless the fuze or fuze pocket is struck, there needs to be a significant impact e.g. from piling or large and violent mechanical excavation, onto the main body of the weapon to initiate a buried iron bomb. Such violent action can cause the bomb to detonate.
Re- starting the Clock	A small proportion of German WWII bombs employed clockwork fuzes. It is probable that significant corrosion would have taken place within the fuze mechanism over the last 70+ years that would prevent clockwork mechanisms from functioning. Nevertheless, it was reported that the clockwork fuze in a UXB dealt with by 33 EOD Regiment in Surrey in 2002 did re-start.
Friction Impact	The most likely scenario resulting in the detonation of a UXB is friction impact initiating the shock-sensitive fuze explosive. The combined effects of seasonal changes in temperature and general degradation over time can cause explosive compounds to crystallise and extrude out from the main body of the bomb. It may only require a limited amount of energy to initiate the extruded explosive which could detonate the main charge.

Annex H details UXB incidents where intrusive works have caused UXBs to detonate, resulting in death or injury and damage to plant.

13.3. Effects of Detonation

When considering the potential consequences of a detonation, it is necessary to identify the significant receptors that may be affected. The receptors that may potentially be at risk from a UXO detonation on a construction site will vary depending on the site specific conditions but can be summarised as follows:

- People – site workers, local residents and general public.
- Plant and equipment – construction plant on site.
- Services – subsurface gas, electricity, telecommunications.
- Structures – not only visible damage to above ground buildings, but potentially damage to foundations and the weakening of support structures.
- Environment – introduction of potentially contaminating materials.

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14. The Risk from German Air Delivered UXBs

14.1. World War I

During WWI Britain was targeted and bombed by Zeppelin Airships as well as Gotha and Giant fixed-wing aircraft. A WWI map of air raids and naval bombardments across England is presented in **Annex I**.

Manchester escaped WWI bombing, with the only Zeppelin attack getting close to Manchester occurring on 25th September 1916. Damage was caused to buildings in the villages of Holcombe and Greenmount, north of Bury, and there were a number of civilian deaths in Bolton. There was one further, unsuccessful Zeppelin foray on Northwest England in April 1918 which reached the Widnes and Wigan area but not Manchester. Zeppelins more often than not did not have great navigational skills; one 1915 attack, claimed to have been on the port of Liverpool, in fact dropped its bombs on the very inland Black Country.

WWI bombs were generally smaller than those used in WWII and were dropped from a lower altitude. This resulted in limited UXB penetration depths. Aerial bombing was often such a novelty at the time that it attracted public interest and even spectators to watch the raids in progress. For these reasons there is a limited risk that UXBs passed undiscovered in the urban environment. When combined with the relative infrequency of attacks and an overall low bombing density the risk from WWI UXBs is considered low and will not be further addressed in this report.

14.2. World War II Bombing of Manchester

The Luftwaffe's main objective for the attacks on Britain was to inhibit the country's economic and military capability. To achieve this they targeted airfields, depots, docks, warehouses, wharves, railway lines, factories, and power stations. A**s** the war progressed the Luftwaffe bombing campaign expanded to include the indiscriminate bombing of civilian areas in an attempt to subvert public morale.

During WWII the site was located within the County Borough of Manchester, which sustained a moderate density of bombing as represented by bomb density data figures and maps. Manchester was not as targeted as other major northern British cities such as Liverpool and Coventry, but was still subject to numerous major raids. These raids tended to focus on Salford and Stretford, where the majority of Manchester industrial and dockland areas were found. The site was located approximately 4km south-east of Salford.

Manchester and Salford were mapped by the Luftwaffe when preparing for air raids. The mapping is presented in **Annex J**. The map obtained by 1st Line Defence covers Clayton, east Manchester, and highlights targets such as the gas works along Ashton New Road amongst others. Other specific Luftwaffe targets in the city included areas such as Spinningfields, Castlefield, and Ordsall, which lay west of the site. The targets in these areas were predominantly contained on the railway, which proved vital to the war efforts.

Manchester London Road station, or Manchester Piccadilly as it is known today, was marked as a target by the Luftwaffe. WWII bomb accuracy was inconsistent, meaning bombs often missed their targets causing destruction elsewhere. 'Tip and run' raids were frequent, whereby German pilots would empty their aircraft of any remaining bombs before returning to base. It is likely that the Luftwaffe would have used Manchester canal as a source of navigation, of which the nearest point to the site is approximately 1.3km north, and therefore it is probable that the area in general would have endured heavy bombing.

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Records of bombing incidents in the civilian areas of Manchester were collected by the Air Raid Precautions wardens and collated by the Civil Defence Office. Some other organisations, such as the London Port Authority and railways, maintained separate records. Records would be in the form of typed or hand written incident notes, maps and statistics. Bombing data was carefully analysed, not only due to the requirement to identify those parts of the country most needing assistance, but also in an attempt to find patterns in the Germans' bombing strategy in order to predict where future raids might take place.

Records of bombing incidents for Manchester are presented in the following sections.

14.3. Second World War Bombing Statistics

The following table summarises the quantity of German bombs (excluding 1kg incendiaries and anti-personnel bombs) falling on the County Borough of Manchester between 1940 and 1945.

Record of German Ordnance Dropped on the County Borough of Manchester		
Area Acreage		**27,321**
Weapons	High Explosive Bombs (all types)	712
	Parachute Mines	18
	Oil Bombs	7
	Phosphorus Bombs	0
	Fire Pot	0
	Pilotless Aircraft (V-1)	1
	Long Range Rockets (V-2)	0
Total		**738**
Number of Items per 1,000 acres		**27.1**

Source: Home Office Statistics
This table does not include UXO found during or after WWII.

Detailed records of the quantity and locations of the 1kg incendiary and anti-personnel bombs were not routinely maintained by the authorities as they were frequently too numerous to record. Although the risk relating to IBs is lesser than that relating to larger HE bombs, they were designed to inflict damage and injury and should therefore not be dismissed. Therefore, they should not be overlooked in assessing the general risk to personnel and equipment. Anti-personnel bombs were used in much smaller quantities and are rarely found today but are potentially more dangerous.

14.4. Manchester Blitz Air Raid Precautions Bomb Census and Damage Map

A local bomb census map compiled by Manchester City Council showing High Explosive (HE) and Incendiary Bomb strikes on the borough was obtained from Manchester Archives. The section showing the area of the site is described in the table below and presented in **Annex K**.

Manchester Consolidated Bomb Map – Annex K	
Date Range	**Comments**
Consolidated Bomb Plot Map: 1940 - 1945	This map was compiled post-war and depicts all of the strikes that occurred in Manchester during the 1940 Blitz. No strikes were recorded within the site boundary during these raids. No damage is recorded within the site boundary. The nearest damaged area is approximately 170m west of the site. It should be noted that this bomb mapping only covers the 1940 Manchester Blitz and not any subsequent bombing.

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14.5. Quality of Historical Record

The quality of the extant historical record set for Manchester is overall poor, with limited resources available. These limitations hinder the possibility of accurately determining a risk level of UXO being discovered on a site. Whilst more densely bombed areas such as Stretford and Salford have superior record sets, the records for Manchester are lacking in diversity and quality.

No complete written incident records could be found for Manchester. This could be due to them being lost or damaged since the end of WWII. Only one bomb plot map could be found which makes it problematic when attempting to corroborate incidents across several sources. Confirming dates and the extent of damage suffered is likely to be more accurate when done across more than one resource. Furthermore the available record, the Architect's Department map detailed above, has many issues. The mapping only covers a period of the war, 1940-1941, rather than the entirety, meaning that several bombing incidents that occurred in the later war years within the city aren't covered. Moreover, the dates presented next to the strikes are not known to correspond with the incidents. It is therefore incredibly difficult to confirm the exactness or presence of said incidents.

14.6. WWII-Era Aerial Photographs

A high resolution scan of WWII-era aerial photography for the site area was obtained from the National Monuments Record Office (Historic England). This photograph is dated 16th May 1948 and provides a record of the potential composition of the site during the war, as well as its condition immediately following the war (**see Annex M**).

On the whole the site appears to be in good condition, with the majority of the buildings remaining intact. However, an area of clearance is noted in the north-east of the site. The properties are apparent in 1942 GOAD mapping but are gone in the 1948 OS mapping edition. There is no evidence to suggest that bombing occurred on site during the war; however, it is a distinct possibility as the records available to 1st Line Defence were limited at the time of writing as the only bomb map available only covered the Manchester Blitz of 1940. Also, there is an area of lighter coloured earth/structures immediately north-west of the site which may be a sign of bomb damage. However the bomb map available to 1st Line Defence does not indicate any bombing in that particular area.
A view of the wider area is located in **Annex M2**.

14.7. Abandoned Bombs

A post air-raid survey of buildings, facilities, and installations would have included a search for evidence of bomb entry holes. If evidence of an entry hole was encountered, Bomb Disposal Officer Teams would normally have been requested to attempt to locate, render safe, and dispose of the bomb. Occasionally, evidence of UXBs was discovered but due to a relatively benign position, access problems, or a shortage of resources the UXB could not be exposed and rendered safe. Such an incident may have been recorded and noted as an 'Abandoned Bomb'.

Given the inaccuracy of WWII records and the fact that these bombs were 'abandoned', their locations cannot be considered definitive or the lists exhaustive. The MoD states that 'action to make the devices safe would be taken only if it was thought they were unstable'. It should be noted that other than the 'officially' abandoned bombs, there will inevitably be UXBs that were never recorded.

1st Line Defence holds no records of officially registered abandoned bombs at or near the site of the proposed works.

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14.8. Bomb Disposal Tasks

The information service from the Explosive Ordnance Disposal (EOD) Archive Information Office at 33 Engineer Regiment (EOD) is currently facing considerable delay. It has therefore not been possible to include any updated official information regarding bomb disposal/clearance tasks with regards to this site. A database of known disposal/clearance tasks has been referred to which does not make reference to such instances occurring within the site of proposed works. If any relevant information is received at a later date Curtins will be advised.

14.9. Evaluation of German Air Delivered UXB Risk

Factors	Conclusion
Density of Bombing *It is important to consider the bombing density when assessing the possibility that UXBs remain in an area. High levels of bombing density could allow for error in record keeping due to extreme damage caused to the area.*	The County Borough of Manchester was subject to a **Moderate** density of bombing with 27.1 bombs recorded per 1,000 acres. Manchester bomb plot and damage mapping indicates the presence of bombing incidents in the surrounding area of the proposed site, but none within the site boundary. However, the mapping only covers raids in 1940 so does not record any bombs which fell from 1941 to 1944. Furthermore, no written bomb incident records are available for Manchester. It is understood from the local archive that they were destroyed during/post-war. It has therefore not been possible to ascertain with certainly whether or not the site was bombed.
Ground Cover *The nature of the ground cover present during WWII would have a substantial influence on any visual indication that may indicate UXO being present.*	At the start of the war, the site was almost entirely occupied by structures of a residential and commercial nature. Across the majority of the site, it is considered that ground cover should have been such that evidence of UXBs should have been noted and reported. However, an area of clearance is noted in the north-eastern corner of the site. It is thought possible that this was as a result of a bomb strike/fire damage. If rubble and debris was present in this area, there is a risk that evidence of UXO could easily have been overlooked. UXBs falling into 'bomb sites' was one of the most common scenarios for this going unnoticed and unrecorded.
Access Frequency *UXO in locations where access was irregular would have a greater chance of passing unnoticed than at those that were regularly occupied. The importance of a site to the war effort is also an important consideration as such sites are likely to have been both frequently visited and subject to post-raid checks for evidence of UXO.*	The proposed site was a housing and commercial entity. Should the site have suffered no damage throughout the war, it is anticipated that access levels would have been regular and frequent, and that post-raid checks for evidence of UXO would have been undertaken. Of concern is the north-eastern corner of the site where an area of cleared housing is noted post-war. It is not likely that access was reduced across the entirety of the site. However it cannot be discounted that potential bomb damage occurred in the north-eastern corner therefore lowering access levels and meaning UXO could have potentially fallen unnoticed.
Damage *If buildings or structures on a site sustained bomb or fire damage any resulting rubble and debris could have obscured the entry holes of unexploded bombs dropped during the same, or later, raids. Similarly, a High Explosive bomb strike in an area of open agricultural land will have caused soil disturbance, increasing the risk that a UXB entry hole would be overlooked*	There is a distinct possibility that damage may have occurred on site due to the area of cleared housing in the north-eastern corner in post-war photography. If rubble and debris were present in this area, there is a risk that evidence of UXO could easily been unnoticed. The rest of the site appears to have survived the war intact.

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Bomb Failure Rate	There is no evidence to suggest that the bomb failure rate in the locality of the site would have been dissimilar to the 10% normally used.
Abandoned Bombs	1st Line Defence holds no records of abandoned bombs at or within the site vicinity.
Bombing Decoy sites	1st Line Defence could find no evidence of bombing decoy sites within the site vicinity.
Bomb Disposal Tasks	1st Line Defence could find no evidence of Bomb Disposal tasks within the site boundary and immediate area.

15. The Risk from Allied Ordnance

15.1. General

The potential risk of encountering Allied ordnance on construction sites is particularly elevated in areas previously associated with military activity. This includes munitions deposited by military training exercises, dumped as a result of poor working practices, or deliberately placed to prevent adversary occupation and from other home defence activities. For example, contamination from items of Land Service (LSA) and Small Arms Ammunition (SAA) may result from historic occupation of an area or its use for military training.

Urban areas, such as the location of the site, can be at risk from buried unexploded Anti-Aircraft projectiles fired during WWII – see below.

15.2. Defending Manchester from Aerial Attack

Both passive and active defences were deployed against enemy bombers attacking targets in the Manchester region.

Passive Defences	Active Defences
These included defence tactics: • To hinder the identification of targets, by using lighting blackouts at night and camouflaging strategic installations. • To mislead bomber pilots into attacking decoy sites located away from the city with the use of dummy buildings or lighting to replicate that of the city under attack. • To force attacking aircraft to higher altitudes with the use of barrage balloons.	These relied on a coordinated combination of a number of installations in order to actively engage and oppose attacking aircraft. Some of these installations were: • Fighter aircraft to act as interceptors. • Anti-aircraft gun batteries. • The use of rockets and missiles (later during WWII).

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15.3. Anti-Aircraft Artillery (AAA) and Projectiles

At the onset of WWII two types of Anti-Aircraft Artillery (AAA) guns were deployed:

- Heavy Anti-Aircraft Artillery (HAA), using large calibre weapons, such as the 3.7" QF (Quick Firing) gun
- Light Anti-Aircraft Artillery (LAA) using smaller calibre weapons, such as 40mm Bofors gun.

During the early war period there was a severe shortage of AAA available. Older WWI 3" and modified naval 4.5" guns were deployed alongside those available 3.7" weapons.

The maximum ceiling height of fire at that time was around 11,000m for the 3.7" gun and less for other weapons. As the war progressed improved variants of the 3.7" gun were introduced. From 1942, large 5.25'' weapons were brought into service. These had significantly improved ceiling heights of fire reaching over 18,000m.

The LAA batteries were intended to engage fast, low flying aircraft and were typically deployed around airfields or strategic installations. These batteries were mobile and could be moved to new positions with relative ease when required. The most numerous of these were the 40mm Bofors gun, which could fire up to 120 x 40mm HE shells per minute to over 1,800m.

The HAA projectiles were high explosive shells, usually fitted with a time delay or a barometric pressure fuze to make them explode at a pre-determined height. If they failed to explode or strike an aircraft they would eventually descend back to earth. Details of the most commonly deployed WWII AAA projectiles are shown below:

Gun type	Calibre	Shell Weight	Shell Dimensions
3.0 Inch	76mm	7.3kg	76mm x 356mm
3.7 Inch	94mm	12.7kg	94mm x 438mm
4.5 Inch	114mm	24.7kg	114mm x 578mm
40mm	40mm	0.9kg	40mm x 311mm

Although the larger unexploded projectiles could enter beneath the ground surface, they did not have a great penetration ability and are therefore likely to be found close to WWII ground level. Frequently, these shells are sometimes mistakenly identified as small German air-delivered bombs but are differentiated by the copper driving band found in front of the base. If encountered, the high explosive fill and fragmentation hazard of these items of UXO would present a significant risk.
The smaller 40mm projectiles are similar in appearance and effect to SAA and, although still dangerous, present a lower hazard due to its decreased explosive content. They are still dangerous because they were fitted with an impact initiated fuze, which was also a spin-decay self-destruct mechanism.

Numerous unexploded AAA shells were recovered during and following WWII and are still occasionally encountered on sites today.

The closest recorded HAA battery to the site was situated approximately 2.6km north in the vicinity of Cheetham Hill. It should be noted that the positions of mobile LAA gun batteries were generally not well recorded, if at all.

Illustrations of Anti-Aircraft artillery, projectiles and rockets are presented at **Annex N**.

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15.4. Evaluation of Allied Ordnance Risk

1st Line Defence has considered the following potential sources of Allied ordnance contamination:

Sources of Contamination	Conclusion
Military Camps	1st Line Defence could find no evidence of a military camp within the site.
Anti-Aircraft Defences	1st Line Defence could find no evidence of Anti-Aircraft defences in the site proximity.
Home Guard Activity	Evidence of Home Guard training areas and activities is difficult to obtain. 1st Line Defence has no evidence of any Home Guard activities on the site.
Defensive Positions	There is no evidence of any defensive structures in the vicinity of the site.
Training or firing ranges	No evidence of these could be found.
Defensive Minefields	No evidence of these could be found.
Ordnance Manufacture	No evidence of ordnance manufacture could be found.
Military Related Airfields	The site was not situated within the vicinity of a military airfield.
Explosive Ordnance Clearance Tasks	1st Line Defence holds no records of EOC operations on the site.

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16. Ordnance Clearance and Post-WWII Ground Works

16.1. General

It is important to consider the extent to which any explosive ordnance clearance (EOC) activities or extensive ground works have occurred on site. This may indicate previous ordnance contamination or reduce the risk that ordnance remains undiscovered.

16.2. UXO Clearance

1st Line Defence has no evidence that any official ordnance clearance operations have taken place on site. Note however that we have not received confirmation of this fact from 33 EOD Regiment.

16.3. Post war Redevelopment

Development has taken place on site post-war. The structures that remained on the western half of the site immediately following the war were demolished sometime before 1962 to make way for a technology college. In later years all structures were demolished and Chandos Hall was built along with another structure.

The development of any hard standing ground would have involved minimal excavation work. Where this development has taken place the risk of encountering shallow buried UXO, especially 1kg incendiaries and anti-aircraft projectiles will have been partly mitigated.

Construction of the structures on site will have most likely required some deeper foundations. The risk from deep-buried unexploded bombs is only considered mitigated at locations where post war piling or deep foundations have taken place.

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17. 1st Line Defence Risk Assessment

17.1. Risk Assessment Stages

Taking into account the quality of the historical evidence, the assessment of the overall risk from unexploded ordnance is based on the following five considerations:

1. That the site was contaminated with unexploded ordnance.
2. That unexploded ordnance remains on site.
3. That such items will be encountered during the proposed works.
4. That ordnance may be initiated by the works operations.
5. The consequences of encountering or initiating ordnance.

UXO Risk Assessment	
Quality of the Historical Record	The research has evaluated pre- and post-WWII Ordnance Survey maps, GOAD Fire Insurance mapping, WWI maps of air raids, Luftwaffe target imagery, Manchester Blitz bomb mapping, an interactive Manchester bomb map, high resolution post-war RAF aerial photography and comparative bombing statistics. The record sets available are of generally good quality. However, overall the quality of the historical record is poor due to its limited resources.
The Risk that the Site was Contaminated with UXO	1st Line Defence has assessed that there is a **Low Risk** that items of unexploded German air-delivered ordnance could have fallen unrecorded across the majority of the site area, with a **Medium Risk** in the north-west of the site. • The County Borough of Manchester was subject to a **Moderate** density of bombing with 27.1 bombs recorded per 1,000 acres. Manchester bomb plot and damage mapping indicates the presence of bombing incidents in the surrounding area of the proposed site, but none within the site boundary. However, the mapping only covers raids in 1940 so does not record any bombs which fell from 1941 to 1944. Furthermore, no written bomb incident records are available for Manchester. It is understood from the local archive that they were destroyed during/post-war. It has therefore not been possible to ascertain with certainly whether or not the site was bombed. • At the start of the war, the site was almost entirely occupied by structures of a residential and commercial nature. Across the majority of the site, it is considered that ground cover should have been such that evidence of UXBs should have been noted and reported. However, an area of clearance is noted in the north-eastern corner of the site. It is thought possible that this was as a result of a bomb strike/fire damage. If rubble and debris was present in this area, there is a risk that evidence of UXO could easily have been overlooked. UXBs falling into 'bomb sites' was one of the most common scenarios for this going unnoticed and unrecorded. • The proposed site was a housing and commercial entity. Should the site have suffered no damage throughout the war, it is anticipated that access levels would have been regular and frequent, and that post-raid checks for evidence of UXO would have been undertaken. Of concern is the north-eastern corner of the site where an area of cleared housing is noted post-war. It is not likely that access was reduced across the entirety of the site. However it cannot be discounted that potential bomb damage occurred in the north-eastern corner therefore lowering access levels and meaning UXO could have potentially fallen unnoticed. • It is a distinct possibility that damage may have occurred on site due to the area of cleared housing in the north-eastern corner in post-war photography. If rubble

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	and debris were present in this area, there is a risk that evidence of UXO could easily been unnoticed. The rest of the site appears to have survived the war intact. • Given that the majority of the site appears to have survived the war, shows no signs of damage and likely accessed frequently, this part of the site has been given a **Low Risk**. The area within the north-west of the site is shown as cleared on post-war aerial photography. Given the poor quality of the record set for Manchester, it has not proved possible to prove that this clearance was not due to bombing. Thus, this area, with a small buffer to account for the 'J-curve' effect, has been given a **Medium Risk**.
The Risk that UXO Remains on Site	Post-war development has occurred on site – between the 1942 and 1962 GOAD mapping editions the majority of the structures within the site footprint were demolished, leaving only a handful of structures in the western half of the site, with a *College of Technology* erected in place. More development took place in later years with the college being demolished and Chandos Hall erected in its place, along with another structure constructed in the west of the site. The risk of UXO remaining is considered to have been mitigated at the location of and down to the depth of post-war foundations and excavations.
The Risk that UXO may be Encountered during the Works	The most likely scenarios under which items of UXO could be encountered during construction works is during piling, drilling operations or bulk excavations for basement levels. The risk of encountering will depend on the extent of the works, such as the numbers of boreholes/piles (if required) and the volume of the excavations. An air-dropped bomb may come to rest at any depth between just below ground level and its maximum penetration depth. Consequently there is also a chance that such an item could be encountered during shallow excavations (for services or site investigations) into the original WWII ground level.
The Risk that UXO may be Initiated	The risk that UXO could be initiated if encountered will depend on its condition, how it is found, and the energy with which it is struck. Certain construction activities such as piling and percussive drilling pose a greater risk of initiating UXO in comparison to machine excavation, where the force of impact is generally lower and the item more likely to be observed. If a UXB is struck by piling or percussive drilling equipment, the force of the impact can be sufficient to detonate the main high explosive charge irrespective of the condition of the fuze or other components. Violent vibration might also impart enough energy to a chemical detonator for it to function, and there is a potential risk that clockwork fuzes could restart. If piling works are planned at Chandos Hall, there is a potential risk that a UXB, if present, could be initiated. The risk of initiation is assessed to be lower for any shallow intrusive works planned.
The Consequences of Encountering or Initiating Ordnance	The repercussions of the inadvertent detonation of UXO during intrusive ground works are potentially severe, both in terms of human and financial cost. A serious risk to life and limb, damage to plant and total site shutdown during follow-up investigations are potential outcomes. If appropriate risk mitigation measures are put in place, the chances of initiating an item of UXO during ground works is comparatively low. The primary consequence of encounter of UXO will therefore be economic. This would be particularly notable in the case of a high-profile site and sites where it is necessary to evacuate the public from the surrounding area. A site may be closed from a few hours to a week with potentially significant cost in lost time. It should be noted that even the discovery of suspected or possible item of UXO during intrusive works (if handled solely through the authorities), may also involve loss of

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	production. Generally, the first action of the police in most cases will be to isolate the locale whilst awaiting military assistance, even if this turns out to have been unnecessary.

17.2. Assessed Risk Level

Taking into consideration the findings of this study, 1st Line Defence has assessed that there is a **Low-Medium Risk** from unexploded ordnance at the site of proposed works.

Low Risk

This area of the site was occupied by undamaged structures and showed no obvious signs of ground disturbance. It is considered likely that this property and its surrounds would have been accessed throughout WWII and that checks would have been made for evidence of UXO.

Ordnance Type	Risk Level			
	Negligible	Low	Medium	High
German Unexploded Bombs		✓		
German 1kg Incendiary Bombs		✓		
Anti-Aircraft Artillery Projectiles		✓		
Allied Military Land Service Ammunition (Grenades, Mortars etc.)	✓			

Medium Risk

The small area of cleared structures is a cause for concern, as there is no evidence to suggest it was not a bomb strike that caused the clearance. Therefore this area has been given a medium risk due to the potential for conditions to have been such in this area that evidence of a UXB could easily have been overlooked.

Ordnance Type	Risk Level			
	Negligible	Low	Medium	High
German Unexploded Bombs			✓	
German 1kg Incendiary Bombs			✓	
Anti-Aircraft Artillery Projectiles			✓	
Allied Military Land Service Ammunition (Grenades, Mortars etc.)	✓			

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18. Proposed Risk Mitigation Methodology

18.1. General

The following risk mitigation measures are recommended to support the proposed works at Chandos Hall:

Type of Work	Recommended Mitigation Measure
All Works	• **Site Specific Unexploded Ordnance Awareness Briefings to all personnel conducting intrusive works.** As a minimum precaution, all personnel working on the site should be briefed on the basic identification of UXO and what to do in the event that a suspect item is encountered. This should in the first instance be undertaken by a UXO Specialist. Posters and information on the risk of UXO can be held in the site office for reference.
Shallow Intrusive Works/Open Excavations in Medium Risk Areas	• **Unexploded Ordnance (UXO) Specialist Presence on Site to support shallow intrusive works:** When on site the role of the UXO Specialist would include • Monitoring works using visual recognition and instrumentation, including immediate response to reports of suspicious objects or suspected items of ordnance that have been recovered by the ground workers on site. • Providing UXO awareness briefings to any staff that have not already received them and advise staff of the need to modify working practices to take account of the ordnance risk. • To aid Incident Management which would involve liaison with the local authorities and Police should ordnance be identified and present an explosive hazard. UXO Safety and Awareness briefings will be provided to all ground personnel by the UXO Specialist once on site.
Borehole/Piles in Medium Risk Areas	• **Intrusive Magnetometer Survey of all borehole and pile locations down to a maximum bomb penetration depth:** 1st Line Defence can deploy a range of intrusive magnetometer techniques to clear pile locations. The appropriate technique is influenced by a number of factors, but most importantly the site's ground conditions. The appropriate survey methodology would be confirmed once the enabling works have been completed.

In making this assessment and recommending these risk mitigation measures, if known, the proposed works outlined in the 'Scope of the Proposed Works' section were considered. Should the planned works be modified or additional intrusive engineering works be considered, 1st Line Defence should be consulted to see if a re-assessment of the risk or mitigation recommendations is necessary.

1st Line Defence Limited **14th July 2017**

This Report has been produced in compliance with the Construction Industry Research and Information Association (CIRIA) C681 guidelines for the writing of Detailed UXO Risk Assessments.

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Bibliography

- Bates, H. E., *Flying Bombs over England*, Frogletts Publications Ltd., 1994
- Clarke, N. J., *Adolf's British Holiday Snaps: Luftwaffe Aerial Reconnaissance Photographs of England, Scotland and Wales*, Fonthill Media Ltd., 2012
- Dobinson, C., *AA Command: Britain's Anti-Aircraft Defences of the Second World War*, Methuen., 2001
- Fegan, T., *The 'Baby Killers': German Air raids on Britain in the First World War*, Leo Cooper Ltd., 2002
- Fleischer, W., *German Air-Dropped Weapons to 1945,* Midland Publishing., 2004
- Jappy, M. J., *Danger UXB: The Remarkable Story of the Disposal of Unexploded Bombs during the Second World War*, Channel 4 Books., 2001
- Morris, F., *German Air Raids on Britain: 1914 – 1918*, The Naval & Military Press., 1993
- Price, A., *Blitz on Britain, The Bomber Attacks on the United Kingdom 1939 – 1945*, Purnell Book Services Ltd., 1977
- Ramsey, W., *The Blitz Then and Now, Volume 1*, Battle of Britain Prints International Ltd., 1987
- Ramsey, W., *The Blitz Then and Now, Volume 2*, Battle of Britain Prints International Ltd., 1988
- Ramsey, W., *The Blitz Then and Now, Volume 3*, Battle of Britain Prints International Ltd., 1990
- Scofield, J., *Modern Military Matters*., Council for British Archaeology., 2004
- Stone, K., et al., *Unexploded Ordnance (UXO) A Guide For The Construction Industry (C681)*., CIRIA, 2009
- Whiting, C., *Britain Under Fire: The Bombing of Britain's Cities 1940-1945*, Pen & Sword Books Ltd., 1999

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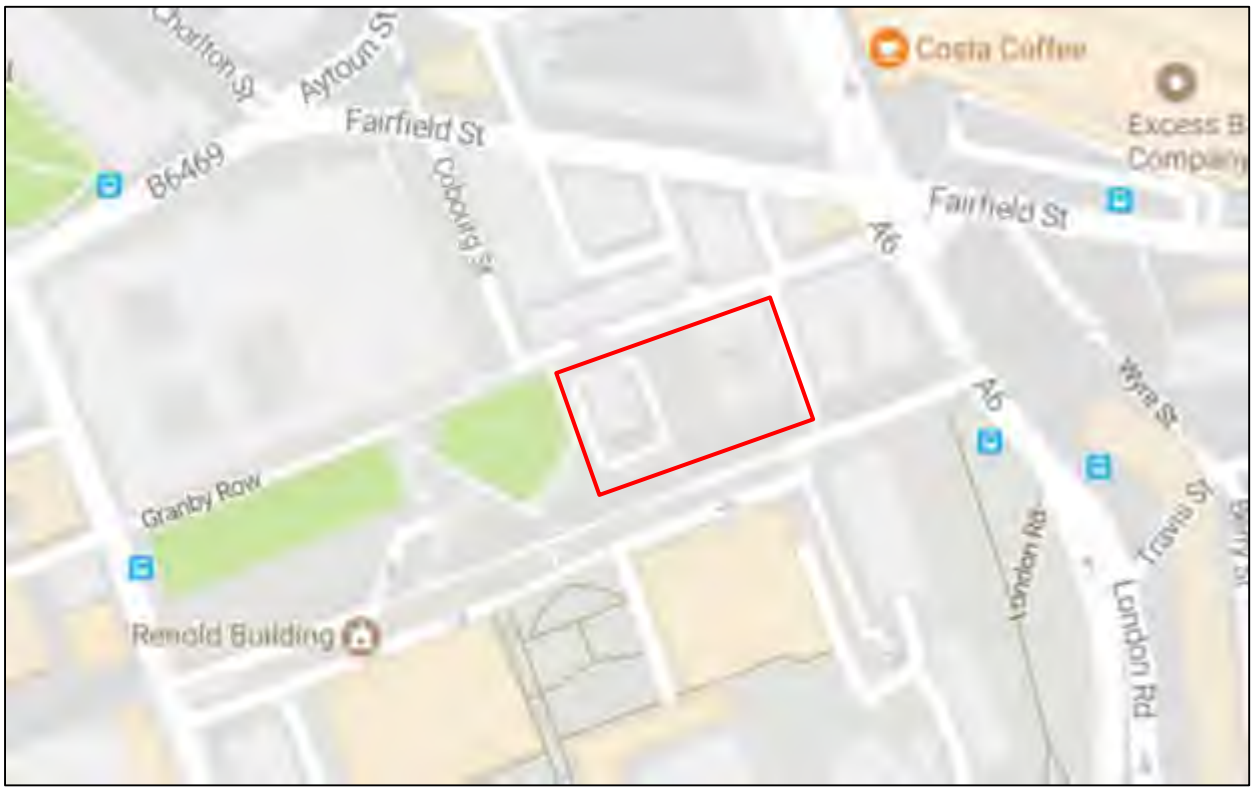
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Site Location Maps

Annex: **A**





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Hertfordshire. EN11 0EX
Email: info@1stlinedefence.co.uk
Tel: +44 (0)1992 245 020

Client:	**Curtins**	**Approximate site boundary**	N
Project:	**Chandos Hall, Manchester**		
Ref:	**DA4989-00**	Source: Google Maps	

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Recent Aerial Photography

Annex: **B**



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Approximate site boundary

Project: **Chandos Hall, Manchester**

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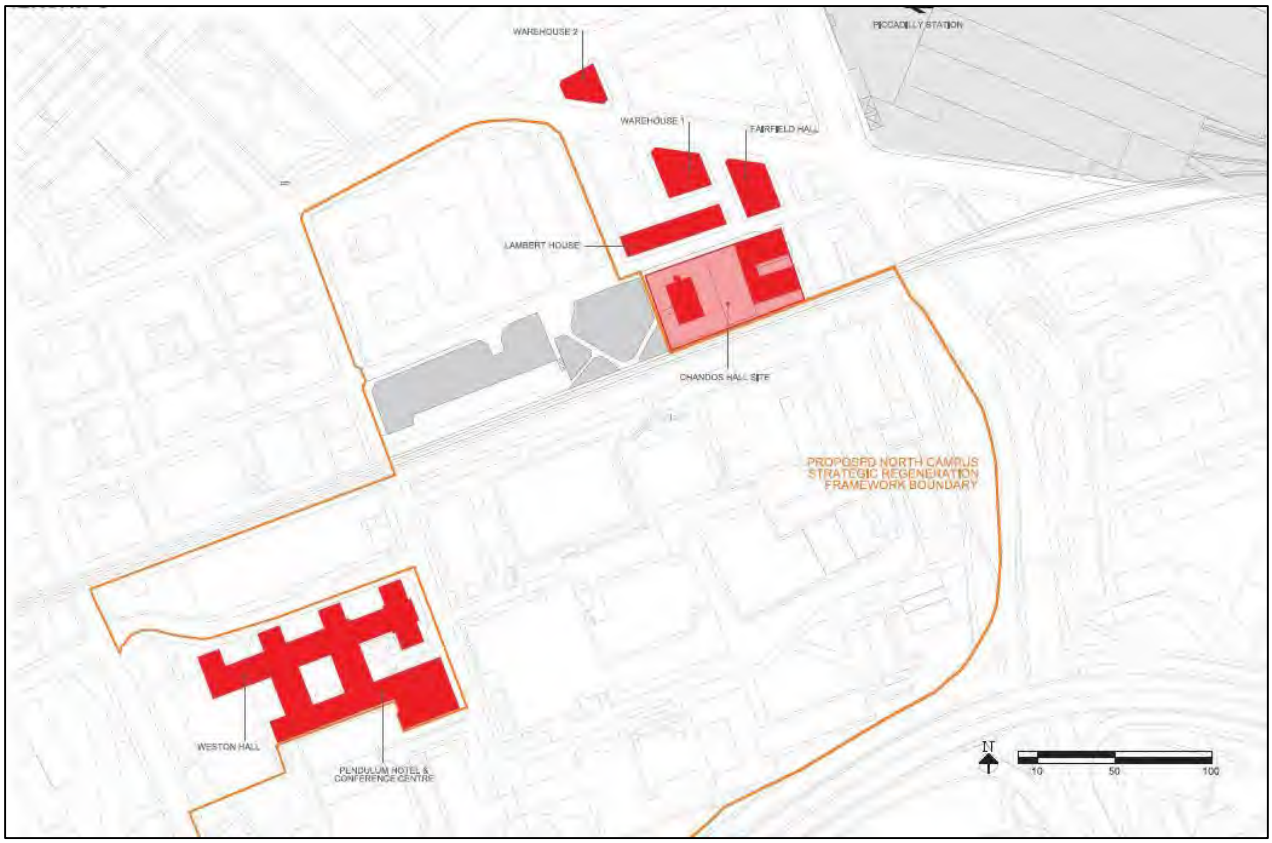
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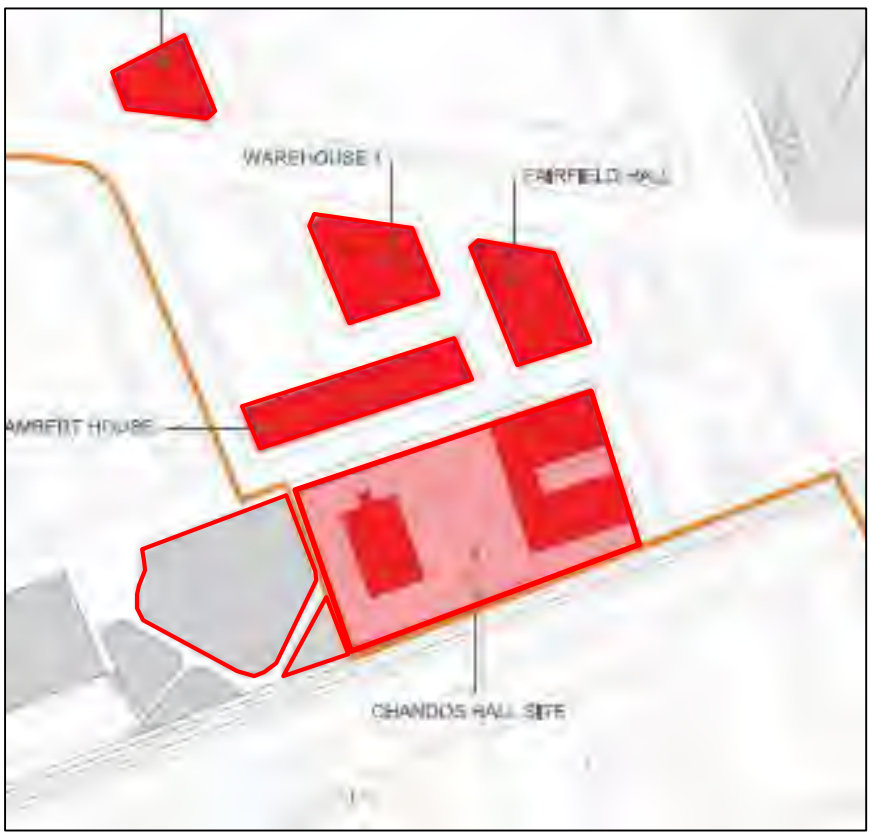
Source: Google Earth ™ Mapping Services

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Client Provided Site Plan

Annex: **C**





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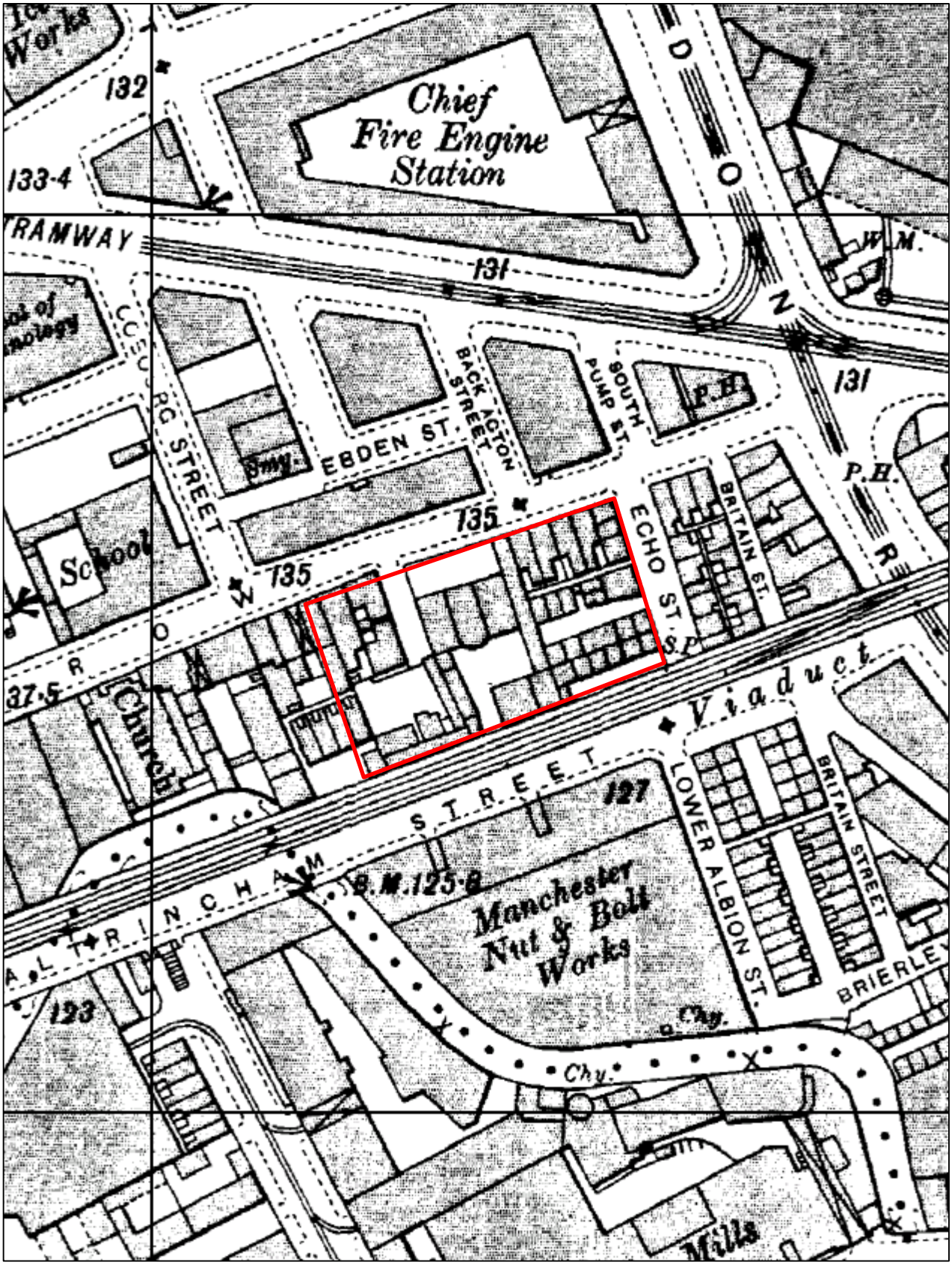
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1908 Historical Map

Annex: **D1**



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Source: Landmark Maps

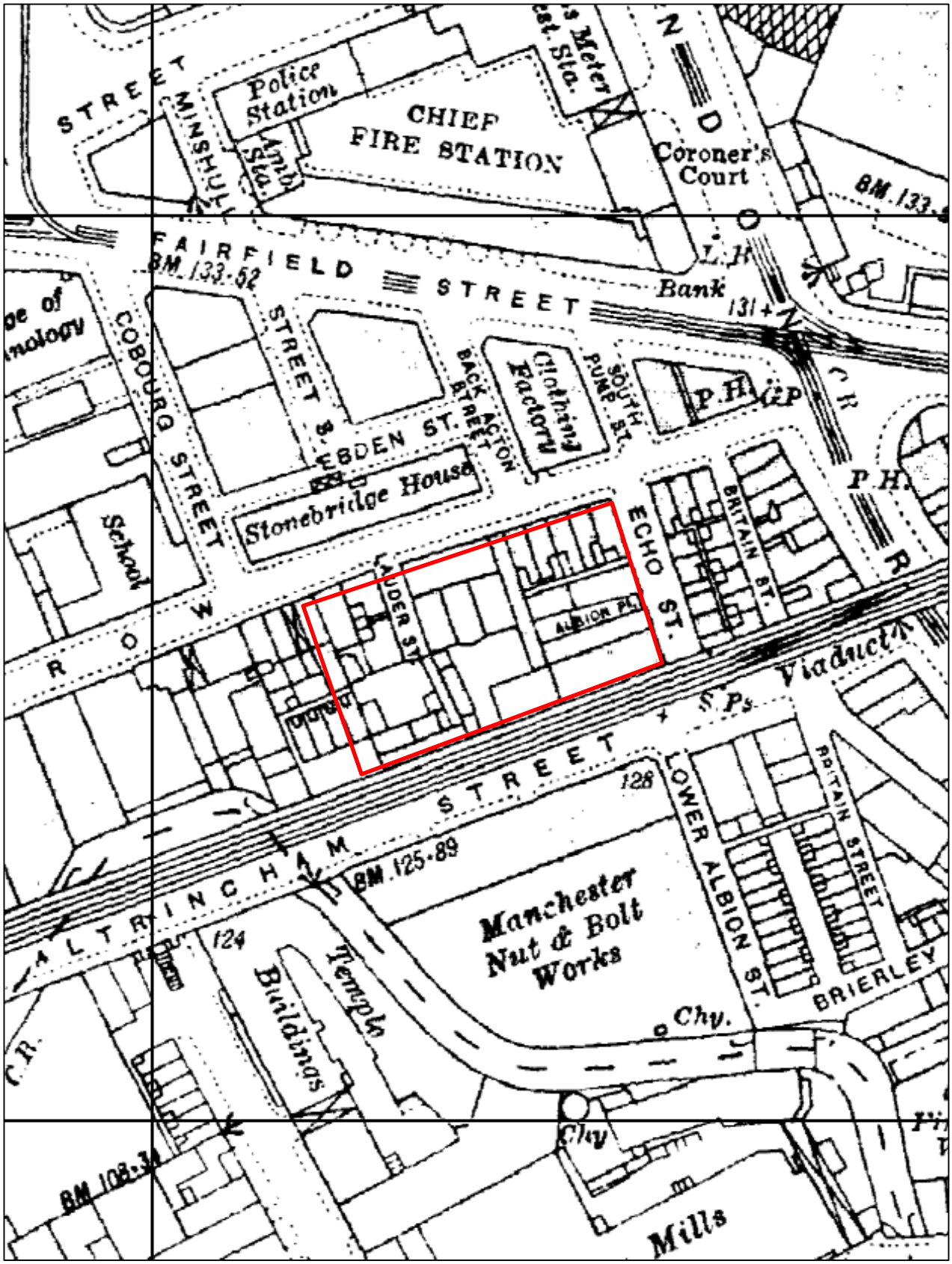
Approximate site boundary

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1922 Historical Map

Annex: **D2**



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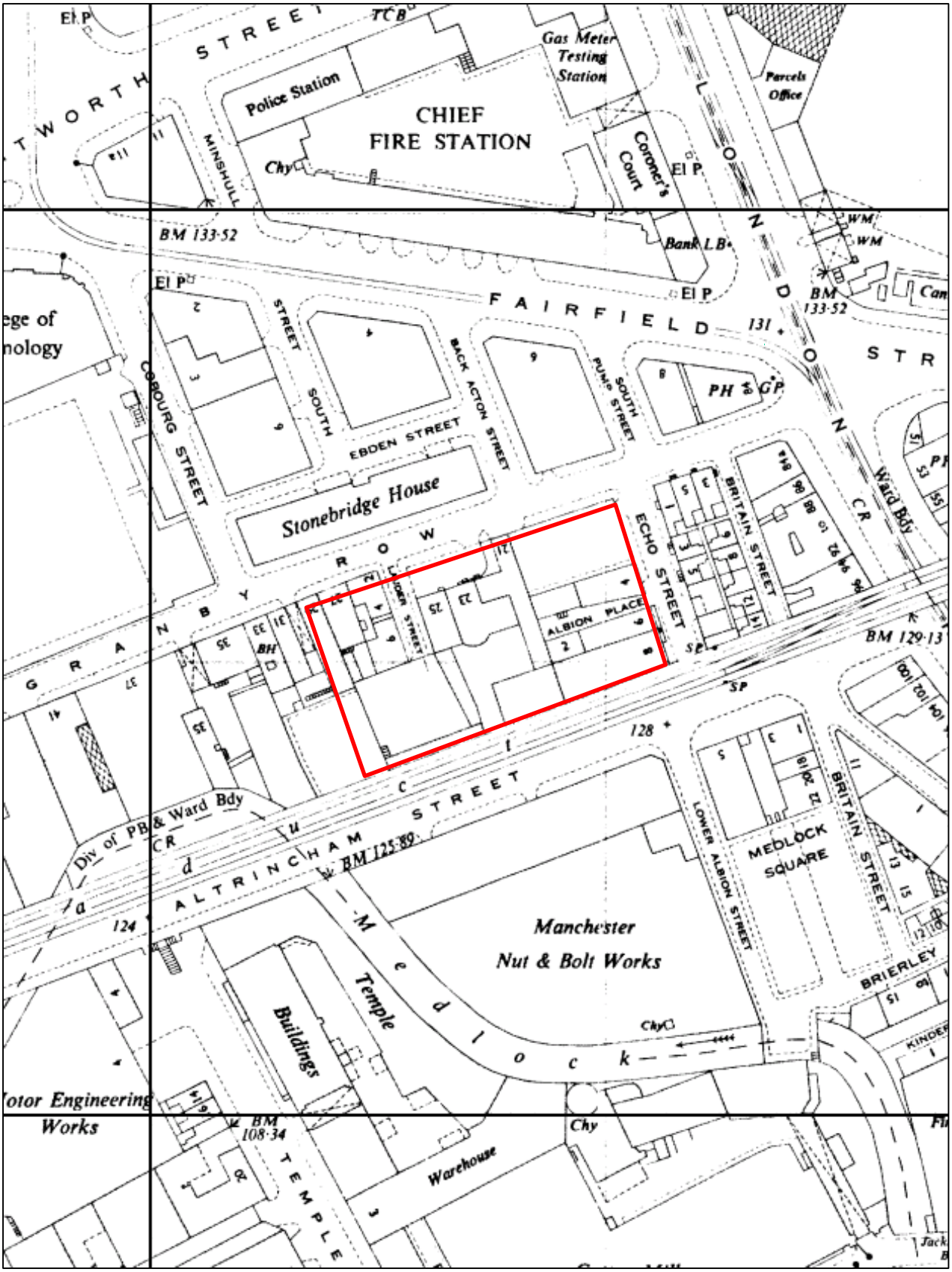
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Client: **Curtins**		**Approximate site boundary**	N
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1948 Historical Map

Annex: D3



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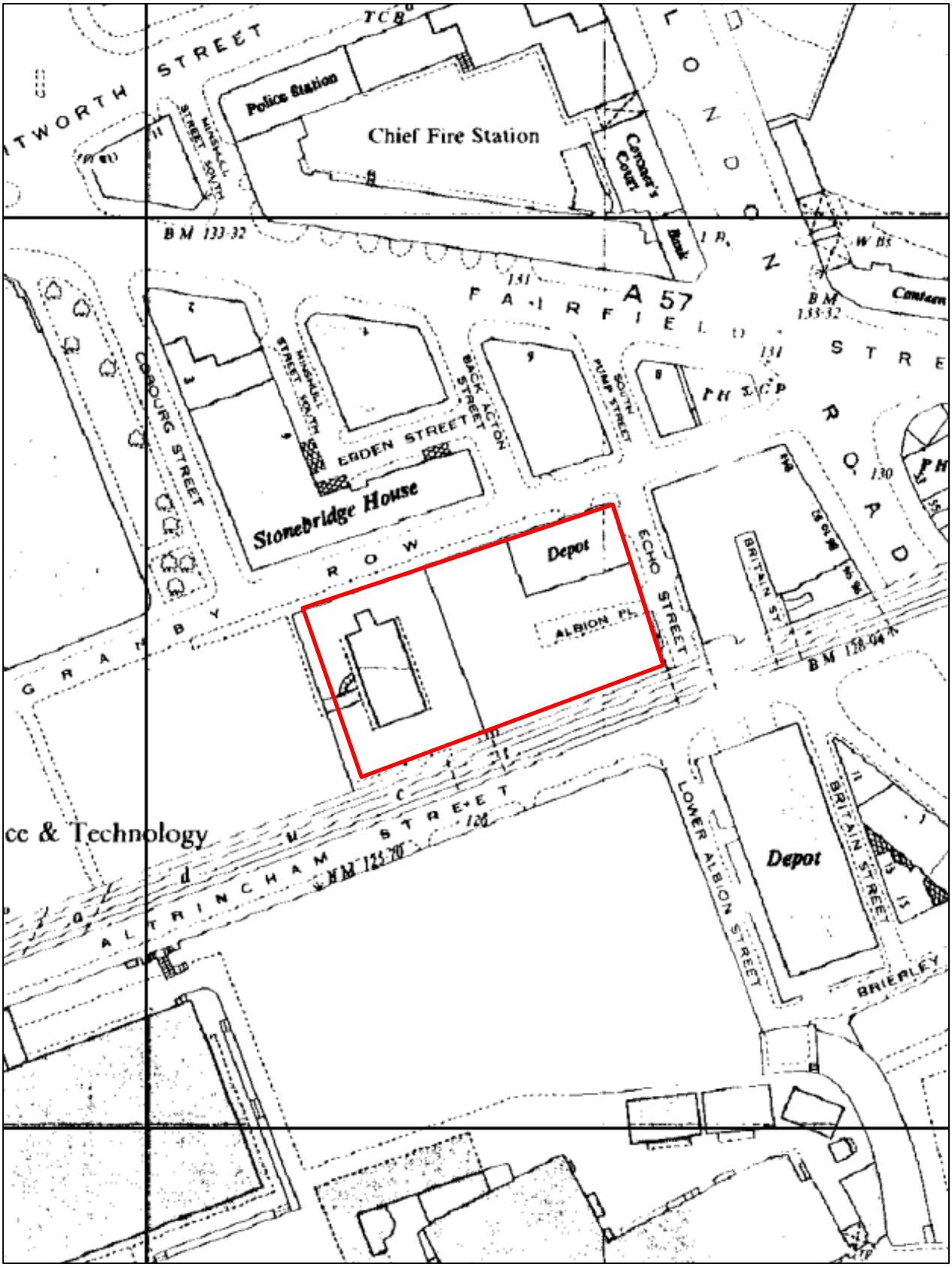
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1965 Historical Map

Annex: **D4**



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1942 GOAD Fire Insurance Mapping

Annex: E1



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1962 GOAD Fire Insurance Mapping

Annex: **E2**



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Project: **Chandos Hall, Manchester**			
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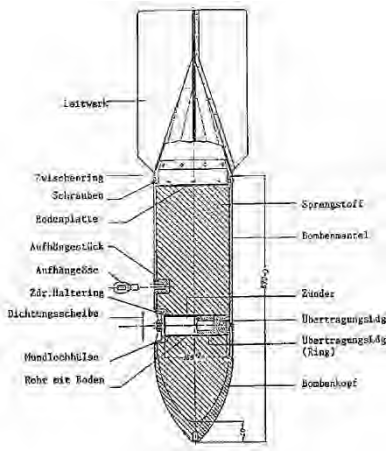
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Examples of German Air-Delivered Ordnance

Annex: **F1**

SC 50kg High Explosive Bomb

Bomb Weight	40-54kg (88-119lb)
Explosive Weight	c25kg (55lb)
Fuze Type	Impact fuze/electro-mechanical time delay fuze
Bomb Dimensions	1,090 x 280mm (42.9 x 11.0in)
Body Diameter	200mm (7.87in)
Use	Against lightly damageable materials, hangars, railway rolling stock, ammunition depots, light bridges and buildings up to three stories.
Remarks	The smallest and most common conventional German bomb. Nearly 70% of bombs dropped on the UK were 50kg.

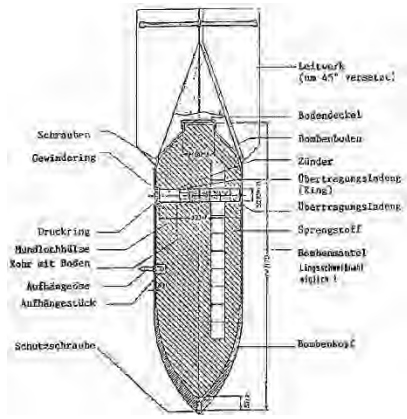






SC 250kg High Explosive Bomb

Bomb Weight	245-256kg (540-564lb)
Explosive Weight	125-130kg (276-287lb)
Fuze Type	Electrical impact/mechanical time delay fuze.
Bomb Dimensions	1640 x 512mm (64.57 x 20.16in)
Body Diameter	368mm (14.5in)
Use	Against railway installations, embankments, flyovers, underpasses, large buildings and below-ground installations.
Remarks	It could be carried by almost all German bomber aircraft, and was used to notable effect by the Junkers Ju-87 Stuka (Sturzkampfflugzeug or dive-bomber).



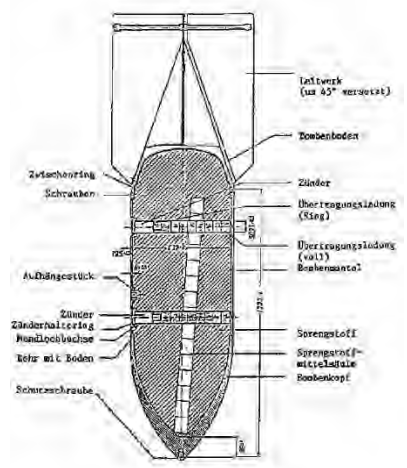


SC250 bomb being loaded onto German bomber



SC 500kg High Explosive Bomb

Bomb Weight	480-520kg (1,058-1,146lb)
Explosive Weight	250-260kg (551-573lb)
Fuze Type	Electrical impact/mechanical time delay fuze.
Bomb Dimensions	1957 x 640mm (77 x 25.2in)
Body Diameter	470mm (18.5in)
Use	Against fixed airfield installations, hangars, assembly halls, flyovers, underpasses, high-rise buildings and below-ground installations.
Remarks	40/60 or 50/50 Amatol TNT, trialene. Bombs recovered with Trialen filling have cylindrical paper wrapped pellets 1-15/16 in. in length and diameter forming







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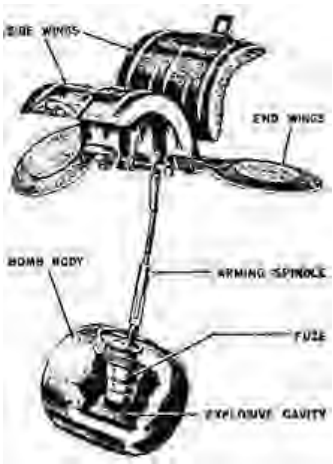
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Examples of German Air-Delivered Ordnance

SD2 Anti-Personnel 'Butterfly Bomb'

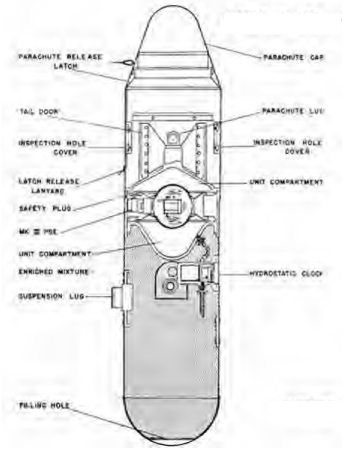
Bomb Weight	2kg (4.41lb)
Explosive Weight	7.5oz (225 grams) of Amatol surrounded by a layer of bituminous composition.
Fuze Type	41 fuze (time) , 67 fuze (clockwork time delay) or 70 fuze (anti-handling device)
Body Diameter	3in (7.62 cm) diameter, 3.1in (7.874) long
Use	Designed as an anti-personnel/ fragmentation weapon. They were delivered by air, being dropped in containers of 23-144 sub-munitions that opened at a predetermined height, thus scattering the bombs.
Remarks	Very rare. First used against Ipswich in 1940, but were also dropped on Kingston upon Hull, Grimsby and Cleethorpes in June 1943, amongst various other targets in UK. As the bombs fell the outer case flicked open by springs which caused four light metal drogues with a protruding 5 inch steel cable to deploy in the form of a parachute & wind vane which armed the device as it span.





Parachute Mine (Luftmine B / LMB)

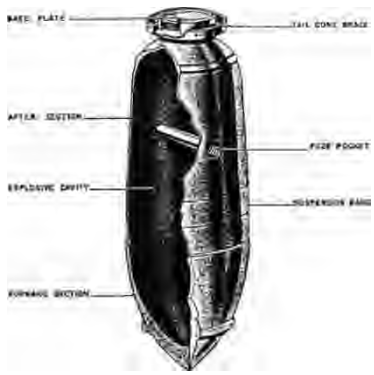
Bomb Weight	Approx. 990kg (2176lb)
Explosive Weight	Approx. 705kg (1,554lb)
Fuze Type	Impact/ Time delay / hydrostatic pressure fuze
Dimensions	2.64m x 0.64m (3.04m with parachute housing)
Use	Against civilian, military and industrial targets. Used as blast bombs and designed to detonate above ground level to maximise damage to a wider area.
Remarks	Deployed a parachute when dropped in order to control its descent. Had the potential to destroy a whole street of housing in a 100m radius.





SC 1000kg

Bomb Weight	993-1027kg (2,189-2,264lb)
Explosive Weight	530-620kg (1168-1367lb)
Fuze Type	Electrical impact/mechanical time delay fuze.
Filling	Mixture of 40% amatol and 60% TNT, but when used as an anti-shipping bomb it was filled with Trialen 105, a mixture of 15% RDX, 70% TNT and 15% aluminium powder.
Bomb Dimensions	2800 x 654mm (110 x 25.8in)
Body Diameter	654mm (18.5in)
Use	SC type bombs are General Purpose Bombs used primarily for general demolition work. Constructed of parallel walls with comparatively heavy noses. They are usually of three piece welded construction





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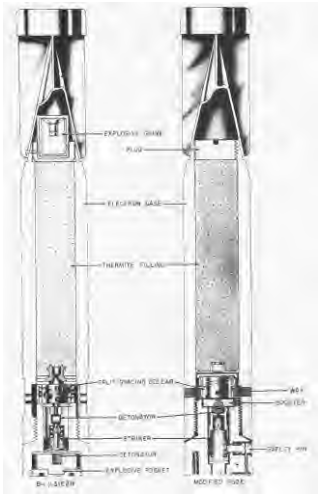
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German Incendiary Bombs

1kg Incendiary Bomb

Bomb Weight	1.0 and 1.3kg (2.2 and 2.9lb)
Explosive Weight	680g (1.3lb) Thermite 8-15gm Explosive Nitropenta
Fuze Type	Impact fuze
Bomb Dimensions	350 x 50mm (13.8 x 1.97in)
Body Diameter	50mm (1.97in)
Use	As incendiary – dropped in clusters against towns and industrial complexes
Remarks	Magnesium alloy case. Sometimes fitted with high explosive charge. The body is a cylindrical alloy casting threaded internally at the nose to receive the fuze holder and fuze.

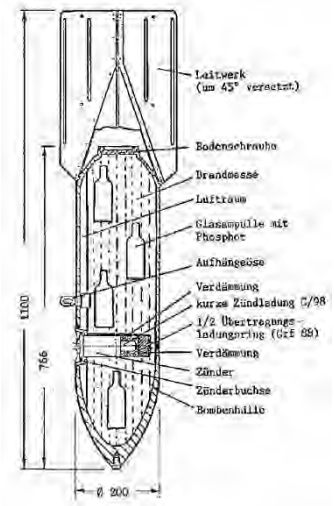


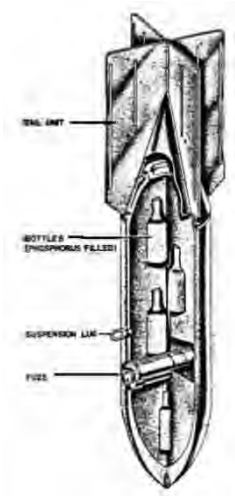




C50 A Incendiary Bomb

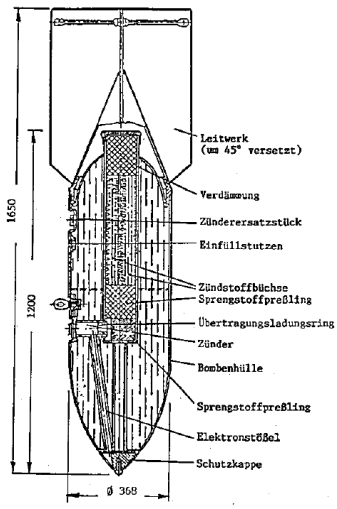
Bomb Weight	c41kg (90.4lb)
Explosive Weight	0.03kg (0.066lb)
Incendiary Filling	12kg (25.5lb) liquid filling with phosphor igniters in glass phials. Benzine 85%; Phosphorus 4%; Pure Rubber 10%
Fuze Type	Electrical impact fuze
Bomb Dimensions	1,100 x 280mm (43.2 x 8in)
Use	Against all targets where an incendiary effect is required
Remarks	Early fill was a phosphorous/carbon disulphide incendiary mixture





Flam C-250 Oil Bomb

Bomb Weight	125kg (276lb)
Explosive Weight	1kg (2.2lb)
Fuze Type	Super-fast electrical impact fuze
Filling	Mixture of 30% petrol and 70% crude oil
Bomb Dimensions	1,650 x 512.2mm (65 x 20.2in)
Body Diameter	368mm (14.5in)
Use	Often used for surprise attacks on ground troops, against troop barracks and industrial installations. Thin casing – not designed for ground penetration





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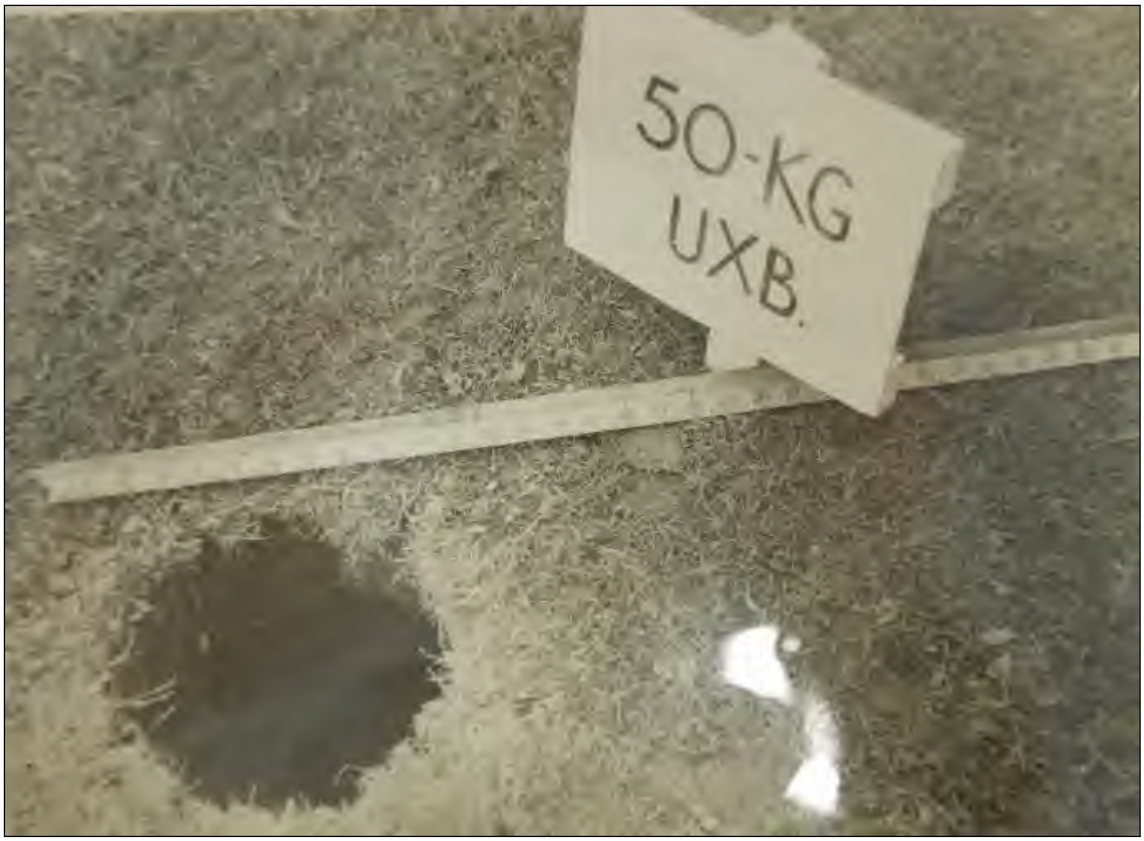
Ref: **DA4989-00**

Source: Various sources

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Unexploded Bomb Entry Hole Example

Annex: **G**





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Source: The National Archives

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Examples of Unexpected Detonation of WWII Bombs

Annex: **H1**

BASF has confirmed that an explosive device, most likely a World War II-era bomb, caused the blast that left one person injured Tuesday at a plant construction site in Germany.

The explosion was reported at BASF's Ludwigshafen toluene diisocyanate (TDI) plant, which recently broke ground for a 300,000 metric tons per year TDI production plant and other construction to expand its facilities.



1st March 2013

BASF is expanding their its Ludwigshafen location by expanding several plants and building a TDI plant, which was the site of an explosion on Tuesday (Feb. 28). One person was injured in the blast, which BASF believes was caused when excavation work detonated a bomb.

Early reports had speculated that excavation work had detonated a bomb from World War II. While the age of the bomb has not been confirmed, BASF has said that an explosive device was detonated.

BASF Provides Some Details

Responding to a request from *PaintSquare News* for more information on Wednesday (Feb. 27), BASF's manager of media relations and corporate communications Europe, Ursula von Stetten wrote in an email, "So here [are] the facts: The detonation took place at 10:00 a.m. One person was injured, the injury is not serious. He will be kept in the hospital for some days.

"Cause of the detonation was an explosive device, presumably a bomb deriving from the Second World War. The device detonated when grounding work was done. No details on [a] delay [are] available. At the moment, the exact circumstances of the incident are [being] evaluated."



19th September 2013

WWII bomb injures 17 at Hattingen construction site

Published: 19 Sep 08 16:53 CET

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Seventeen people were injured on Friday when a construction crew unwittingly detonated a buried World War II-era bomb in Hattingen.

- [redacted] (17 Mar 12)
- [redacted] (17 Mar 12)
- [redacted] (16 Mar 12)

An excavator apparently drove over a 250-kilogramme (550 pound) American bomb, damaging surrounding buildings. Most of the injured suffered auditory trauma from the blast, and the excavator operator suffered injuries to his hands, police in the German state of [redacted] said.

"The hole was astoundingly small for such a large bomb full of so many explosives," Armin Gebhard, head of the Arnsberg department for military ordnance removal, told The Local. "But of course it damaged all the surrounding buildings too. We are really happy it wasn't worse."

World War II Bomb Explodes on German Motorway

A highway construction worker in Germany accidentally struck an unexploded World War II bomb, causing an explosion which killed him and wrecked several passing cars.

Tweet 0 Recommend 1



23rd October 2006

A cutting machine lies wrecked by the side of the A3 motorway next to a small crater left by the explosion.

A World War II bomb has exploded during construction work on a German highway, killing one worker and injuring several motorists who were driving past, police said.

The worker had been cutting through the road surface near the south-western town of Aschaffenburg when his machine struck the bomb and triggered it. Police said they weren't sure yet what type of bomb it was. "The explosion seems to have been too small for it to have been an aircraft bomb," a police spokesman said.

The A3 Autobahn linking the cities of Frankfurt and Würzburg has been blocked in both directions.

More than 60 years since the end of World War II, construction workers still frequently unearth unexploded bombs and it is not uncommon for whole city districts to be cordoned off and even evacuated while bomb disposal experts defuse them.

Indeed, just last week, some 22,000 people were evacuated from their homes in Hanover when three World War II bombs were discovered.

Allied pilots rained nearly 2 million tons of explosives on Germany during the war. Landmines, hand grenades, mortar bombs and anti-tank devices from the fighting on German soil at the end of the war are also found, and authorities say it will take decades before the country is cleared of duds.

Between 400 and 600 bombs are discovered a year in the state of North Rhine-Westphalia alone, where the heavily industrialized Ruhr region was a major target for Allied bombers.

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2 June 2010 Last updated at 16:37

Share

World War II bomb kills three in Germany

Three people have been killed and six injured trying to defuse a World War II bomb in central Germany.



2nd June 2010

All the victims were involved in an operation to defuse the bomb

Workers building a sports stadium had earlier unearthed the bomb in the town of Goettingen.

It was not immediately clear why the bomb - reportedly weighing 500kg (1,100lb) - had detonated.

Unexploded WWII bombs dropped by Allied planes are frequently found in Germany, though it is unusual for them to explode unexpectedly.

A special commission is investigating the causes of the explosion, while prosecutors are considering whether the team leader should face charges of manslaughter through culpable negligence, the BBC's Oana Lungescu reports from Berlin.

The blast happened an hour before the defusing operation was due to start.

Officials said the three men who died were experienced sappers, or combat engineers, who over 20 years had defused up to 700 bombs.

More than 7,000 people were immediately evacuated when the 500kg bomb was found. Several schools, a kindergarten and local companies remain closed.



June 2006

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Project: **Chandos Hall, Manchester**

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Source: Various news sources

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Bermondsey bomb: World War Two device safely removed

24 March 2015 London Share



The bomb measured about 5ft (1.5m) in length

An unexploded World War Two bomb found in south London has been driven away safely under police and Army escort.

The 500lb (250kg) device was found on a building site in Grange Walk, Bermondsey on Monday.

250kg HE bomb found in Bermondsey March 2015

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Bethnal Green WW2 bomb: Experts remove unexploded device

11 August 2015 London Share



The MoD said the German WW2 air delivered bomb could have caused "mass destruction" if it had detonated

An unexploded World War Two bomb that prompted the evacuation of 700 people in east London has been made safe and removed by the military.

Families spent the night in a school hall after the 500lb bomb was found in the basement of a building site on Temple Street, in Bethnal Green, on Monday afternoon.

250kg HE bomb found in Bethnal Green, Aug 2016

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Bath WW2 bomb scare: Device defused, police say

13 May 2016 Somerset Share



The bomb was found on the site of a former school on Thursday

A 500lb World War Two bomb found on the site of a former school in Bath has been defused and made safe.

250kg HE bomb found in Bath, May 2016

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England Regions London

Wembley WW2 live bomb posed 'risk to life'

22 May 2015 London Share



A blast wall was put up around the bomb to minimise damage if it exploded

An unexploded World War Two bomb uncovered by builders near Wembley Stadium posed "a genuine risk to life", the Army has said.

50kg HE bomb found in Wembley, May 2015

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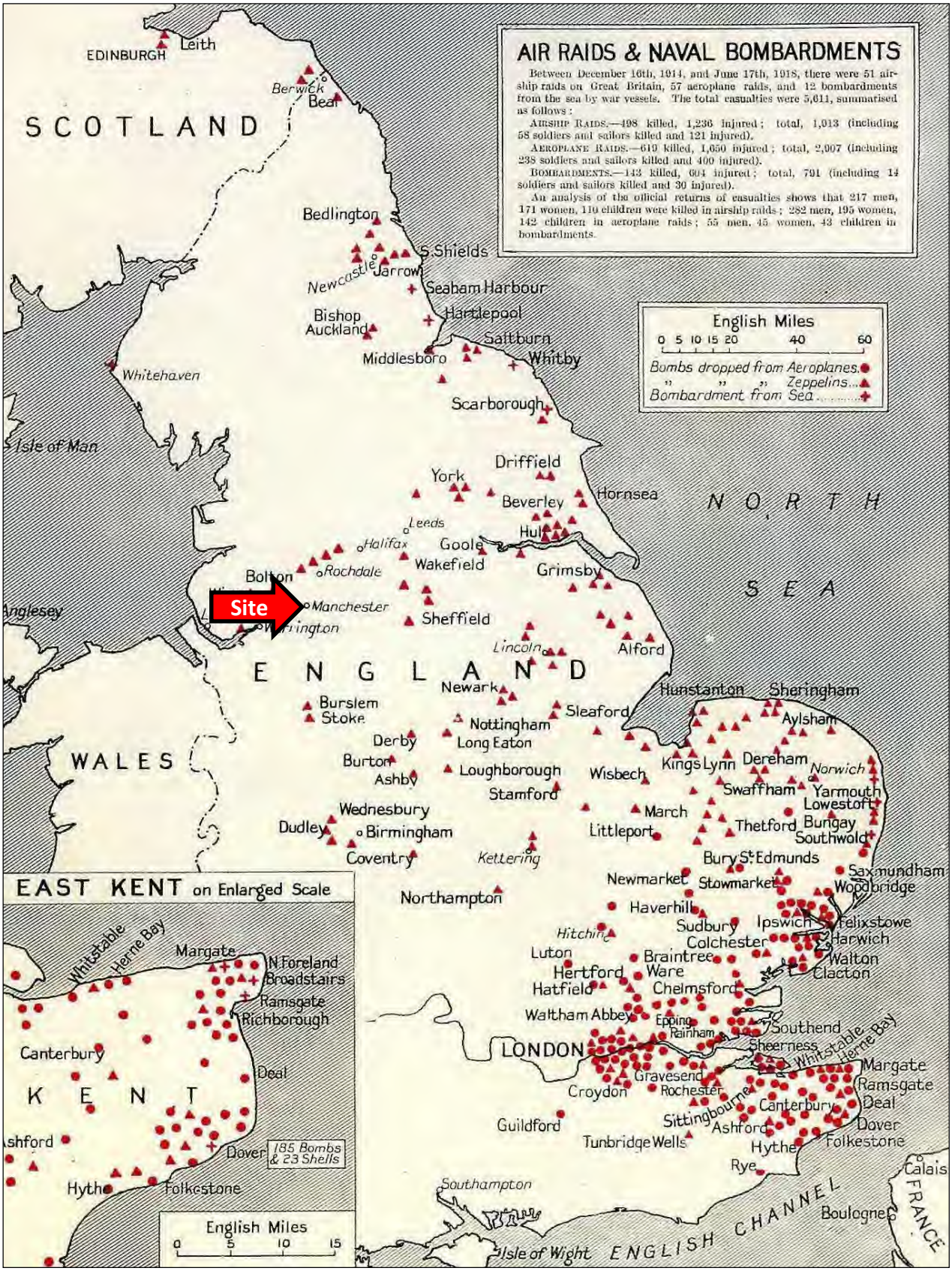
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Source: BBC News

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WWI Map of Air Raids and Naval Bombardments

Annex: I



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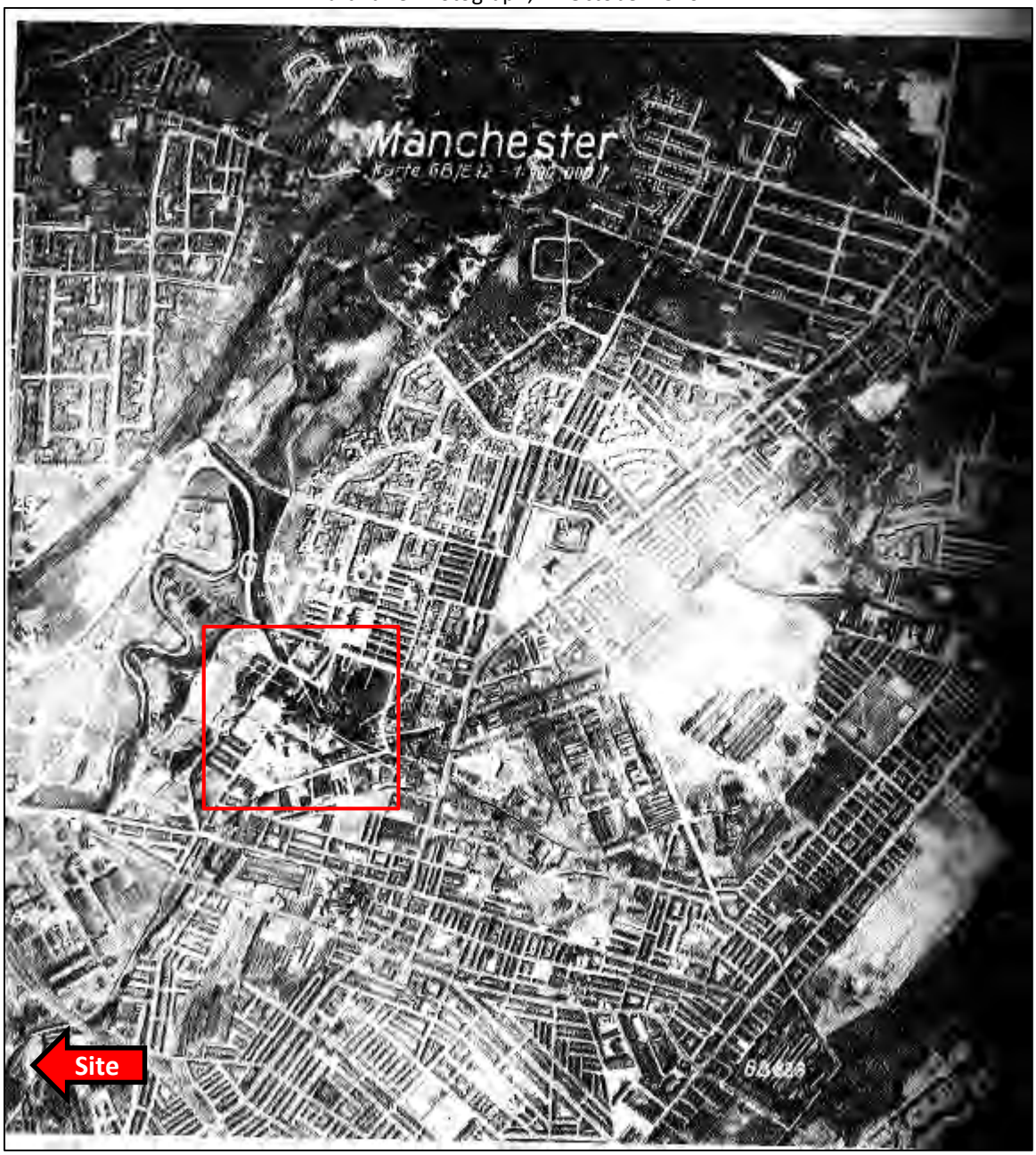
Project: **Chandos Hall, Manchester**

Ref: **DA4989-00**

Source: J. Morris, *German Air Raids on Britain*

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Luftwaffe Photograph, 1st October 1940



Manchester - Clayton
Red boxed area – gas works
GB 823 & GB 5083 – Designated Luftwaffe targets

The site located approximately 2.5km north-east of the arrow.

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Source: Nigel J. Clarke, "Adolf Hitler's Home Counties Holiday Snaps"

Approximate site boundary

N

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Manchester Blitz Bomb Mapping

Annex: **K**



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Source: The National Archives, Kew

Approximate site boundary

N

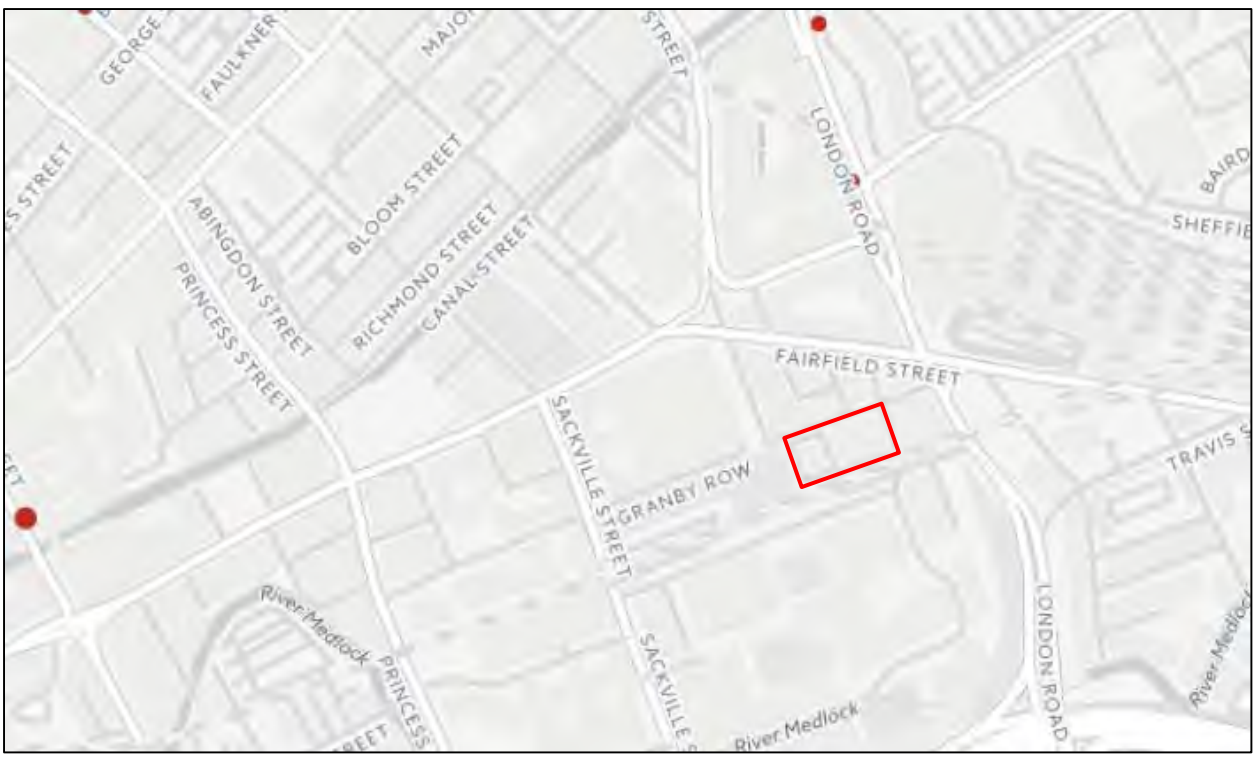
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Interactive Manchester Bomb Map

Annex: **L**

Night Bombing up to 7th October 1940





Recorded HE bomb strike
(colour refers to day of the week)

Recorded UXB strike
(colour refers to day of the week)

Incendiary bomb shower

Oil Bomb

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Project: **Chandos Hall, Manchester**

Ref: **DA4989-00**

Source: Manchester Evening News

Approximate site boundary

N

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RAF Aerial Photography 16th May 1948

Annex: **M1**



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Project: **Chandos Hall, Manchester**

Ref: **DA4989-00**

Source: National Monuments Record Office (Historic England)

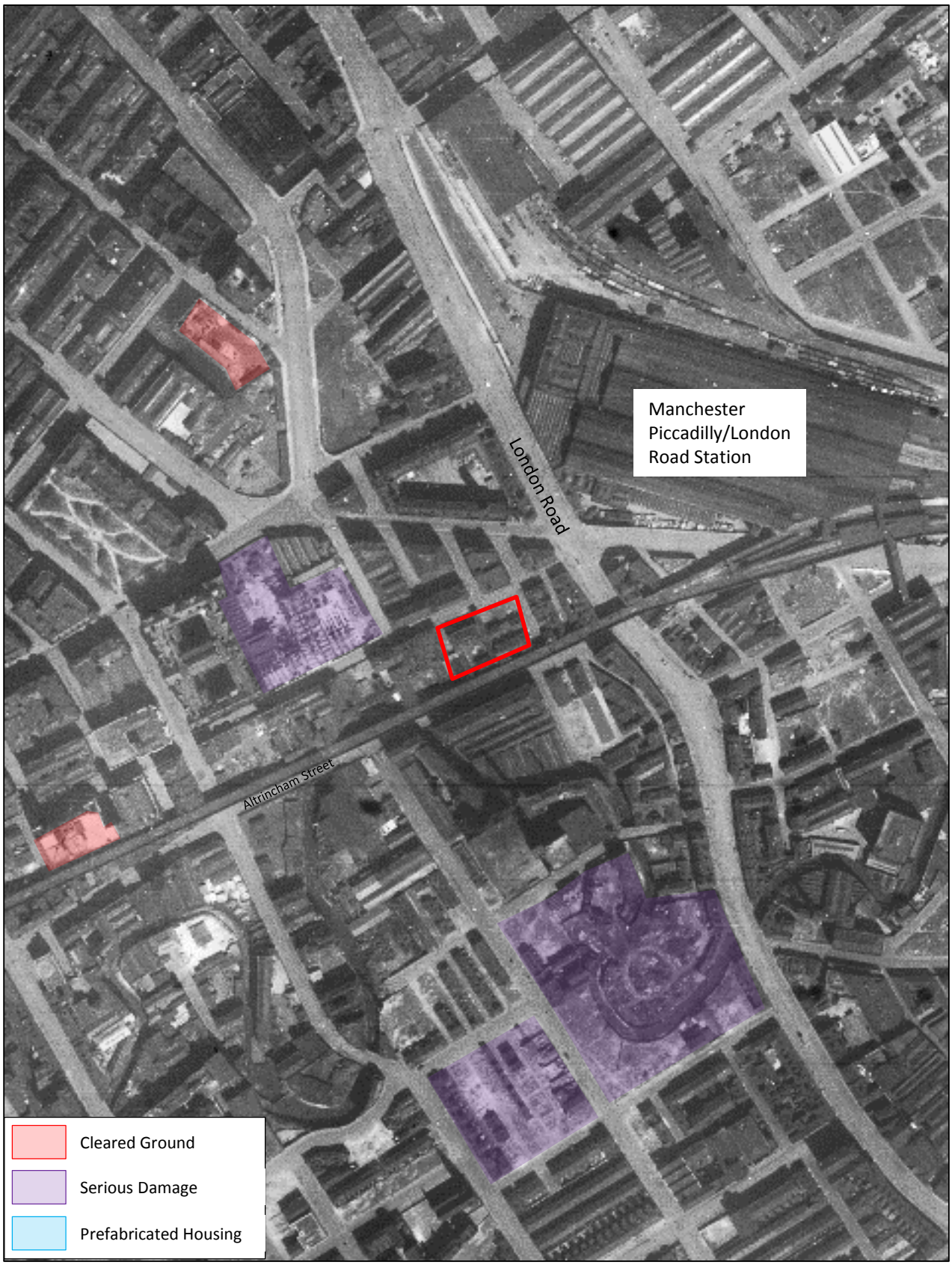
Approximate site boundary

N

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RAF Aerial Photography 16th May 1948

Annex: **M2**



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Approximate site boundary

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Project: **Chandos Hall, Manchester**

Ref: **DA4989-00**

Source: National Monuments Record Office (Historic England)

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Examples of Anti-Aircraft Projectiles

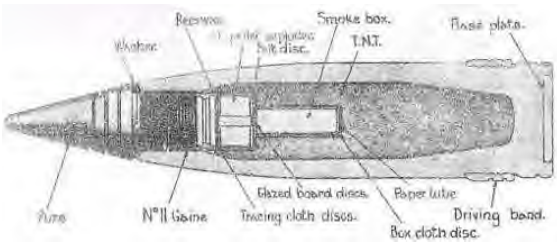
Annex: N

3.7 Inch QF Anti-Aircraft Projectile

Projectile Weight	28lb (12.6 kg)
Explosive Weight	2.52lbs
Fuze Type	Mechanical Time Fuze
Dimensions	3.7in x 14.7in (94mm x 360mm)
Rate of Fire	10 to 20 rounds per minute
Use	The 3.7in AA Mks 1-3 were the standard Heavy Anti-Aircraft guns of the British Army.
Ceiling	30,000ft to 59,000ft





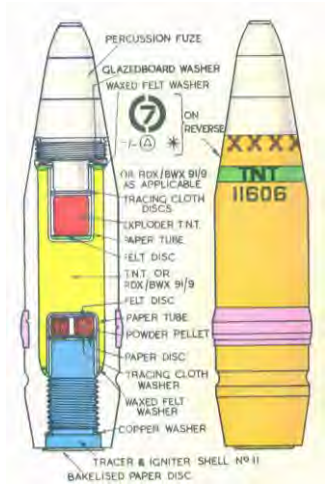


40mm Bofors Projectile

Projectile Weight	1.96lb (0.86kg)
Explosive Weight	300g (0.6lb)
Fuze Type	Impact Fuze
Rate of Fire	120 rounds per minute
Projectile Dimensions	40 x 180mm
Ceiling	23,000ft (7000m)
Remarks	Light quick fire high explosive anti-aircraft projectile. Each projectile fitted with small tracer element. If no target hit, shell would explode when tracer burnt out. Designed to engage aircraft flying below 2,000ft



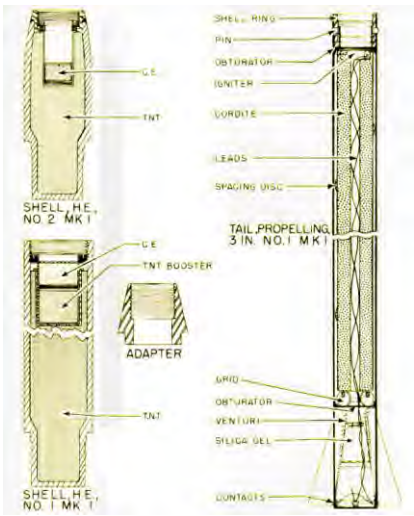




3in Unrotated Projectile (UP) Anti-Aircraft Rocket ("Z" Battery)

HE Projectile Weight	3.4kg (7.6lb)
Explosive Weight	0.96kg (2.13lb)
Filling	High Explosive – TNT. Fitted with aerial burst fuzing
Dimensions of projectile	236 x 83mm (9.29 x 3.25in)
Remarks	As a short range rocket-firing anti-aircraft weapon developed for the Royal Navy. It was used extensively by British ships during the early days of World War II. The UP was also used in ground-based single and 128-round launchers known as Z Batteries. Shell consists of a steel cylinder reduced in diameter at the base and threaded externally to screw into the shell ring of the rocket motor





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Source: Various sources

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Risk Map – 1948 Aerial Photography

Annex: **O**



Medium Risk

Low Risk

Low and Medium Risk Areas:

- Site Specific Unexploded Ordnance Awareness Briefings to all personnel conducting intrusive works

Medium Risk Area:

- Unexploded Ordnance (UXO) Specialist Presence on Site to support shallow intrusive works
- Intrusive Magnetometer Survey of all Borehole and pile locations down to a maximum bomb penetration depth

For indicative purposes – not to scale

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Risk Map – Aerial Photography Overlay

Annex: **P**



Medium Risk

Low Risk

Low and Medium Risk Areas:

- Site Specific Unexploded Ordnance Awareness Briefings to all personnel conducting intrusive works

Medium Risk Area:

- Unexploded Ordnance (UXO) Specialist Presence on Site to support shallow intrusive works
- Intrusive Magnetometer Survey of all Borehole and pile locations down to a maximum bomb penetration depth

For indicative purposes – not to scale

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Appendix C Qualitative Risk Assessment Rationale

The site-specific risk assessment, presented in this report, follows the principle of establishing whether there is a viable linkage between a contaminant source to a potential receptor, via an exposure pathway.

The risk assessment corresponds with the total site area and incorporates both descriptive (qualitative) and, where available, numerical (quantitative) lines of evidence.

Risk assessment is the process of collating known information on a hazard or set of hazards to estimate actual or potential risk to receptors. The receptor may be humans, a water resource, a sensitive local ecosystem or future construction materials. Receptors can be connected to the source by one or several exposure pathways such as direct contact for example. Risks are generally managed by isolating the receptor or intercepting the exposure pathway or by isolating or removing the hazard.

Without the three essential components of a source, pathway and receptor there can be no risk. Therefore, the presence of contaminant source on a site does not necessarily mean there is a risk.

The risk assessment considers the likelihood of an event taking place (accounting for the presence of the source and receptor and the viability of the exposure pathway) in conjunction with the severity of the potential consequence (accounting for the potential severity of the hazard and the sensitivity of the receptor).

In the risk assessment, the consequence of the hazard has been classified as severe or medium or mild or minor and the probability (likelihood) of the circumstances occurring classified as high likelihood or likely or low likelihood or unlikely.

The consequences and probabilities are subsequently cross correlated to give a qualitative estimation of the risk using Department of the Environment risk classifications as detailed in the table below and as referenced in CIRIA C552.

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability (Likelihood)	**High Likelihood**	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely	High Risk	Moderate Risk	Moderate/Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate/Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate/Low Risk	Low Risk	Very Low Risk	Very Low Risk

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In accordance with DoE guidance, the following categorisation of **consequence** has been developed.

Classification	Definition	Examples
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 an ecosystem or organisation forming part of such ecosystem.	High concentrations of cyanide on the surface of an informal recreation area. Major spillage of contaminants from site into controlled water. Explosion, causing building collapse (can also equate to a short-term human health risk if buildings are occupied).
Medium	Chronic damage to Human Health. Pollution of sensitive water resources. A significant change in an ecosystem or organism forming part of such ecosystem.	Concentration of a contaminant from site exceeds the generic or site-specific assessment criteria. Leaching of contaminants from a site to a Principal or Secondary A aquifer. Death of a species within a designated nature reserve. Lesser toxic and asphyxiate effects
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings/structures/services or the environment.	Pollution of non-classified groundwater (inc. Secondary B aquifers). Damage to building rendering it unsafe to occupy (e.g., foundation damage resulting in instability).
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.	The presence of contaminants at such concentrations that protective equipment is required during site works. The loss of plants in a landscaping scheme. Discoloration of concrete.

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In accordance with DoE guidance, the following categorisation of **probability** has been developed.

Classification	Definition
High Likelihood	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.
Likely	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 Likelihood	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.
Unlikely	There is a pollution linkage, but circumstances are such that it is improbable that an event would occur even in the very long term.

In accordance with DoE guidance, the following categorisation of **risk** has been developed.

Classification	Definition
Very High Risk	There is a *high probability* that *severe harm* could arise to a designated receptor from an identified hazard at the site without appropriate further action.
High Risk	*Harm* is *likely to arise* to a designated receptor from an identified hazard at the site without appropriate further action.
Moderate Risk	*It is possible* that without appropriate further action *harm could arise* to a designated receptor. It is relatively *unlikely* that any such harm would be *severe,* and if any harm were to occur it is *more likely* that such harm would be *relatively mild.*
Low Risk	*It is possible* that *harm could arise* to a designated receptor from an identified hazard. It is *likely* that, at worst, if any harm was realised any effects would be *mild.*
Very Low Risk	The presence of an identified hazard does not give rise to the potential to cause harm to a designated receptor.

The term ‘risk’ in this instance refers to the risk that the source, pathway, receptor linkage for a given source of contamination is complete. It does not refer to immediate risk to individuals or features present on the site from potential contaminants and is intended to be used as a tool to assess the necessity of further investigation.

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Appendix 9.1: Townscape and Visual Assessment Methodology

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Appendix 9.1: Townscape and Visual Assessment Methodology

Assessment Methodology of Effects Likely / Significant

Assessment Approach

1.1 The methodology will be collated into a tabulated format where possible to provide structure for a consistent and methodical approach. Desk based studies will be carried out to collate and map baseline townscape information and carry out a review of policy and guidance to inform the assessment. Potential viewpoints have been identified by inserting a simple massing model into Google Earth Pro to identify key locations where the proposed building may be visible.

1.2 In addition to the desk-based studies, a site photographic survey will be undertaken to confirm viewpoint selection.

1.3 Informed by the desk-based studies 8 viewpoints have been selected to provide a thorough and robust assessment. Viewpoints have been excluded where there was likely to be no significant impact beyond that which was already identified within the selected views.

Table 1.1: Background Surveys/ Studies

Survey / Study / Analysis / Evaluation	Overview	Date of Completion
Completed		
Desk Top Review	Initial review of existing baseline information and preliminary desk-top review.	January 2023
Pending		
Site visit and preliminary photographic and field assessment of 12 potential viewpoints.	Inform viewpoint selection	February 2023

1.4 The Townscape and Visual Impact Assessment will be carried out with reference to the Guidelines for Landscape & Visual Impact Assessment, 3rd Edition, 2013 (referred to

hereafter as "the Guidelines")[1] by Planit-IE Ltd, a registered practice of the Landscape Institute with considerable experience in landscape and visual assessment.

1.5 In line with GLVIA 3, the methodology to be used for this assessment will have three key stages:

- Establishment of the baseline conditions relating to townscape character and views and the quality, value and sensitivity to change of these resources;
- An assessment of the magnitude of change likely to result from the Proposed Scheme; and
- An assessment of the significance of townscape and visual effects considering the sensitivity of resources and the magnitude of change.

Legislation, Policy and Good Practice

1.6 In addition to the GLVIA 3 (referenced above) the assessment will be undertaken having regard to the following relevant legislation, policy and guidance.

- National Planning Policy (The National Planning Policy Framework (NPPF)[2];
- Local Planning Policy – Manchester Core Strategy 2012-2027;[3]
- Saved UDP policies;
- Guidance:
  - Whitworth Street Conservation Area Assessment *(Manchester City Council)[4];*
  - Historic England Advice Note 4: Tall Buildings[5]; and
  - Manchester Residential Quality Guidance[6].

The Study Area

1.7 The study area is shown in **Figure 9.1** and extends to approximately 300m radius from the Site but weighted predominantly to the northwest to incorporate the important heritage and city centre context. This encompasses the Site itself as well as the immediate surrounding context, extending to incorporate key infrastructure, heritage assets, features and character

[1] Landscape Institute and IEMA (2013). Guidelines for Landscape & Visual Impact Assessment, 3rd Edition. Routledge.
[2] National Planning Policy Framework, July, (2021). [Online] accessed via https://www.gov.uk/government/publications/national-planning-policy-framework--2
[3] The Manchester Local Plan. Core Strategy 2012-2027. [Online] accessed via https://secure.manchester.gov.uk/info/200074/planning/6572/local_plan
[4] Whitworth Street Conservation Area. [Online] accessed via https://www.manchester.gov.uk/info/511/conservation_areas/970/whitworth_street_conservation_area
[5] Historic England Advice Note 4 Tall Buildings. [Online] accessed via https://historicengland.org.uk/images-books/publications/tall-buildings-advice-note-4/
[6] Residential Quality Guide. [Online] accessed via https://www.manchester.gov.uk/downloads/download/6682/residential_quality_guide

areas which relate to the Site. The area extends as far as the intersection of London Road and Mancunian Way in the south, the intersection of Princess Street and Canal Street in the west, the intersection of Aytoun Street and Auburn Street in the north and to the rear of Piccadilly Station in the east.

1.8 The study area incorporates a number of key features, including Piccadilly Station in the east, the former UMIST university campus to the south of the railway viaduct, a large part of Whitworth Street Conservation Area and Rochdale Canal. It also incorporates key green spaces including Vimto Park and Sackville Gardens and surrounding heritage assets, notably the Grade II* Listed London Road Fire Station.

1.9 The study area is relatively compact due to the dense nature of the surrounding city centre townscape which limits relationships to and views of the Site, with predicted impacts expected to be localised.

Assessment Criteria

1.10 Based on the likely effects identified, the following scenarios are proposed for assessment:

- Construction stage activities;
- Existing baseline + Proposed Scheme
- Existing baseline + Proposed Scheme + Committed Developments

Defining Significance of Effect

1.11 The assessment of likely significant effects to sensitive receptors will consider the sensitivity of the receptor (on a scale of high, medium, low and negligible) and the magnitude of change (on a scale of large, medium, small and negligible) to determine the level of effect on a scale of major, moderate, minor and negligible. Significant effects will be determined following this through professional judgment.

Townscape: Sensitivity of Receptor

1.12 The sensitivity of a townscape receptor is an expression of its ability to accommodate the Proposed Scheme. Sensitivity is a judgement based on a combination of the susceptibility of the type of change or development proposed and the value attached to the townscape, as set out below.

1.13 Susceptibility indicates the ability of a defined townscape receptor to accommodate the proposed development “without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies.” (GLVIA, 3rd version, para 5.40). A description of how susceptibility would be evaluated for each receptor type is included below:

Susceptibility	Criteria for assessing Impact
High	Little ability to accommodate the Proposed Scheme without undue harm.

Susceptibility	Criteria for assessing Impact
Medium	Some ability to accommodate the Proposed Scheme without undue harm.
Low	Substantial ability to accommodate the Proposed Scheme without undue harm.
Negligible	No harm to the baseline situation.

Landscape Value is 'the relative value that is attached to different landscapes by society' (GLVIA, 3rd version, page 157). It is assessed on the following scale along with assessment of various undesignated townscape attributes:

Value	Description
High	Sites, features or areas of national or international importance with settings of high quality such as World Heritage Site, AONB, National Parks, Grade I and Grade II* Listed buildings or Registered Parks and Gardens.
Medium	Sites, features or areas of local or regional importance with intact character such as Grade II* and Grade II Listed Buildings or Registered Parks and Gardens, Conservation Areas, Scheduled Monuments, local nature site, long distance recreational routes. Tree Preservation Orders (TPO) and local designations that exhibit wider geographic, cultural or townscape significance.
Low	Areas or features of local importance such as Tree Preservation Orders (TPO), Public Right of Way (PROW) and locally listed buildings.
Negligible	No features of value.

The overall sensitivity of each townscape receptor would be rated within the range of High-Medium-Low and Negligible and would be informed by combining the susceptibility and value as described above.

Townscape: Magnitude of Effect

1.14 The magnitude of a townscape effect is assessed in terms of its size or scale, the geographical extent of the area influenced by that effect, and its duration and degree of reversibility and would be rated within the range of Large-Medium-Small-Negligible set out below.

Category	Criteria
Large adverse townscape effect	The proposals will result in a total change in the key characteristics of townscape character; will introduce elements totally uncharacteristic to the attributes of the receiving townscape; and/or will result in a substantial or

Category	Criteria
	total loss, alteration or addition of key elements/features/characteristics.
Medium adverse townscape effect	The proposals will result in a partial change in the key characteristics of townscape character; will introduce elements partially uncharacteristic to the attributes of the receiving townscape; and/or will result in partial loss, alteration or addition of key elements/features/characteristics.
Small adverse townscape effect	The proposals will result in a small change in the key characteristics of townscape character; will introduce elements that are not uncharacteristic to the attributes of the receiving townscape; and/or will result in a minor loss, alteration or addition of elements/features/characteristics.
Negligible townscape effect	The proposals will result in no change or a just discernible change to townscape character/elements/features/characteristics.
Small beneficial townscape	The proposals will achieve a degree of fit with the townscape character/elements/features/characteristics and go some way towards improving the condition or character of the townscape.
Medium beneficial townscape	The proposals will achieve a good fit with the townscape character/elements/features/characteristics, or would noticeably improve the condition or character of the townscape.
Large beneficial townscape	The proposals will totally accord with the townscape character/elements/features/characteristics, or would restore, recreate or permanently benefit the condition or character of the townscape.

1.15 The size and/or scale of change in the townscape takes into consideration the following factors:

- The extent/proportion of townscape elements lost or added;
- The contribution of that element to townscape character and the degree to which aesthetic/perceptual aspects are altered; and
- Whether the effect is likely to change the key characteristics of the townscape, which are critical to its distinctive character.

1.16 The geographical extent of effects relates to:

- The area over which townscape effects are likely to be experienced, i.e. this could be at the site level, the immediate setting of the site, or townscape character type or area; and

- The area over which visual effects are likely to be visible; and duration.

Visual: Sensitivity of Receptor

1.17 In terms of assessing the baseline visual sensitivity, key factors to consider are the type of view and the likely numbers of viewers (the visual receptors). The type of view and the number of viewers are described in the following terms

- Glimpsed (i.e. in passing)/Filtered/Oblique/Framed/Open Views; and

- Few/Moderate/Many Viewers.

1.18 The value attached to views has regard to a number of factors, including:

- Recognition through planning designations or heritage assets; and

- The popularity of the viewpoint, its appearance in guidebooks, literature or art, on tourist maps and the facilities provided for its enjoyment.

1.19 The GLVIA identifies that the susceptibility of visual receptors to changes in views and visual amenity is a function of:

- The occupation or activity of people experiencing the view at a particular location; and

- The extent to which their attention or interest may therefore be focused on the views and visual amenity they experience at particular locations.

1.20 The assessment of receptor sensitivity is rated on the scale High-Medium-Low and Negligible and combines judgements on the susceptibility of the receptor to the specific type of development proposed and the value attributed to that receptor, determined from the criteria below.

Susceptibility	Type of Receptor
High	Users of public space, including users of public rights of way, whose attention is likely to be focussed on the townscape and on particular views; Visitors to heritage assets or other attractions where views of the surroundings are an important part of the experience; Communities where views contribute to the townscape setting enjoyed by residents; and Travellers on scenic routes.
Medium	Travellers on road, rail or other transport routes, where the view is moderately important to the quality of the journey; and

Susceptibility	Type of Receptor
	Users of public space, where the view is part of the wider experience of the place.
Low	People at their place of work, where the setting is not important to the quality of working life; Travellers on road, rail or other transport routes, where the view is fleeting and incidental to the journey; and People engaged in outdoor sport or recreation, or users of a public space, which does not involve appreciation of views.
Negligible	No visual receptors.

Value	Criteria
High	Views from townscapes/viewpoints of national importance, or highly popular visitor attractions where the view forms an important part of the experience, or with important cultural associations. An example may be where the viewpoint features a nationally important designated asset as the main focus of the view.
Medium	Views from townscapes/viewpoints of regional/district importance or moderately popular visitor attractions where the view forms part of the experience, or with local cultural associations. The viewpoint may be a good location to view a designated asset of regional/ local importance, or where a nationally important designated asset is not the main focus of the view.
Low	Views from townscapes/viewpoints with limited designations, not particularly popular as a viewpoint and with minimal or no cultural associations. The viewpoint may include designated assets of regional/local importance which do not form the main focus of the view.
Negligible	No identified visual value criteria.

Visual: Magnitude of Effect

1.21 The magnitude of a visual effect is assessed in terms of its size or scale, the geographical extent of the area influenced and its duration and degree of reversibility and will be rated within the range of Large-Medium-Small-Negligible set out below.

Category	Criteria
Large adverse or beneficial visual effect	The proposals will cause a dominant or complete change or contrast to the view, resulting from the loss or addition of substantial features in the view and will substantially alter the appreciation of the view.

Category	Criteria
Medium adverse or beneficial visual effect	The proposals will cause a clearly noticeable change or contrast to the view, which would have some effect on the composition, resulting from the loss or addition of features in the view and will noticeably alter the appreciation of the view.
Small adverse or beneficial visual effect	The proposals will cause a perceptible change or contrast to the view, but which would not materially affect the composition or the appreciation of the view.
Negligible adverse or beneficial visual effect	The proposals will cause no change or a barely perceptible change or contrast to the view, which would not affect the composition or the appreciation of the view.

1.22 The size or scale of change in the view relates to the degree of contrast or integration likely to result from the Proposed Development and is influenced by the relative time over which a view is experienced and whether it is a full, partial or glimpsed view.

Significance of Effect

1.23 The objective of the assessment process would be to identify and evaluate the likely significant effects arising from the Proposed Scheme. Significance indicates the importance or gravity of the effect.

1.24 Whilst there would be a degree of professional judgement involved in determining the significance of townscape and visual effects, they can broadly be determined by the interaction of the sensitivity of the receptor and the magnitude of change. The resulting significance of effect matrix is set out below:

		Sensitivity (or value/importance)			
		High	Medium	Low	Negligible
Magnitude of change	Large	Major	Moderate to Major	Minor to Moderate	Negligible
	Medium	Moderate to Major	Moderate	Minor	Negligible
	Small	Minor to Moderate	Minor	Negligible to Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

1.25 The likely significance of effects reflects judgements as to the importance or sensitivity of the affected receptor(s) and the nature and magnitude of the predicted changes. For example, a moderate negative effect on a feature or site of low importance will be of lesser significance than the same effect on a feature or site of high importance. Where a range of significance is given (e.g. Moderate to major), this allows for a degree of objectivity to be exercised within

judgments, especially if ranges are recorded for either sensitivity or magnitude within the assessment.

1.26 The following terms have been used to define the significance of the effects identified:

- **Major effect:** where the Proposed Scheme could be expected to have a considerable effect (either positive or negative) on viewers or landscape receptors;
- **Moderate effect:** where the Proposed Scheme could be expected to have a noticeable effect (either positive or negative) on viewers or landscape receptors;
- **Minor effect:** where the Proposed Scheme could be expected to result in a small, noticeable effect (either positive or negative) on viewers or landscape receptors; and
- **Negligible:** where no discernible effect is expected as a result of the Proposed Scheme on viewers or landscape receptors (i.e. the effect is not significant).

1.27 Effects that are deemed to be significant for the purposes of this assessment are those that are described as being moderate to major beneficial / adverse. This approach is consistent with the 2017 TVIA assessment and takes into account the evolving City Edge context of this Site, and the significant city aspirations for change within the adjacent ID Manchester area.

1.28 The nature of effects may be positive or negative (beneficial or adverse) or neutral. Neutral effects recognise that there will be a change to the receptors, however this change is in keeping with the existing characteristics of the receptor. The table has regard to guidance in the Guidelines for Landscape and Visual Impact Assessment, Third Edition, 2013, at paragraph 5.56, page 92 (significance of landscape effects) and paragraph 6.44, page 116 (significance of visual effects). This matrix will be used as a guide to determine significance, along with professional judgement.

Photography and Photomontage

1.29 A Principal Viewpoints plan has been produced as part of this Scoping Report. The viewpoints were selected through a process of desktop survey and site knowledge. A basic 3D block model reflecting the proposed height of the development was put into Google Earth and a basic Zone of Visual Influence was created using Google viewshed **(Figure X.2).** The viewshed highlights areas in green that have the potential for a visual relationship with the Site, taking into consideration factors such as surrounding building heights and topography. The viewshed has been used to inform viewpoint selection, in addition to detailed study of urban form, topography, site knowledge and professional experience. A total of 12 viewpoint have been selected and are considered representative viewpoints from key visual receptors. Viewpoints were excluded where there is likely to be no visual impact.

1.30 Visually verified photomontages will be produced by Virtual Planit, a professional visualization studio with extensive experience in the production of photomontages, in accordance with the Landscape Institute's Technical Guidance Note 06/09 (2019) Visual Representation of Development Proposals[7]. The Photomontages will be fully rendered to

[7] Landscape Institute Technical Guidance Note 06/09 (2019). Visual Representation of Development Proposals. Available at: https://www.landscapeinstitute.org/visualisation/.

accurately reflect building height and massing and architectural detail as well as public realm where relevant. This will represent ‘worst case scenario’, in accordance with the Guidelines.

Appendix 10.1: Principles of Daylight, Sunlight and Overshadowing

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PRINCIPLES OF DAYLIGHT, SUNLIGHT & OVERSHADOWING

The Building Research Establishment (BRE) have set out in their handbook 'Site Layout Planning for Daylight & Sunlight: A Guide to Good Practice 3rd edition (2022)', guidelines and methodology for the measurement and assessment of daylight, sunlight and overshadowing.

1 BACKGROUND & CONTEXT

The quality of daylight and sunlight amenity as well as the overshadowing of open spaces is often stipulated within planning policy for protection or enhancement and a concern for adjoining owners and other interested parties.

The BRE Guidelines provide advice on site layout planning to determine the quality of daylight and sunlight both within buildings and reaching open spaces.

The BRE Guidelines note that the document is intended to be used in conjunction with the interior daylight recommendations found within the British Standard Daylight in buildings, BS EN 17037 and the CIBSE Publication LG 10 Daylighting – a guide for designers.

Whilst the BRE Guidelines are typically referred to for daylight sunlight and overshadowing matters within the planning process, they were not intended to be used as an instrument of planning policy, nor were the figures intended to be fixedly applied to all locations.

In the introduction of 'Site Layout Planning for daylight and sunlight (2022)', section 1.6 (page 7), states that:

"The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and this document should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design (see Section 5). In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or in an area with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings".

Paragraph 2.2.3 (page 14) of the document states:

"Note that numerical values given here are purely advisory. Different criteria may be used based on the requirements for daylighting in an area viewed against other site layout constraints".

The numerical criteria suggested by the BRE are therefore designed to provide industry advice/ guidance to plan/design with daylight in mind. Alternative values may be appropriate in certain circumstances such as highly dense urban areas. The BRE approach to creating alternative criteria is detailed within Appendix F of the Document.

Paragraph 2.2.2 (page 14) of the document states:

The BRE Guidelines state that they are:

"intended for use for rooms in adjoining dwellings where daylight is required, including living rooms, kitchens, and bedrooms. Windows to bathrooms, toilets, storerooms, circulation areas, and garages need not be analysed."

Although primarily designed to be used for residential properties, the BRE Guidelines continue to state that they may be applied to any existing non-residential buildings where there may be a reasonable expectation of daylight including; schools, hospitals, hotels and hostels, small workshops, and some offices.

Many Local Planning Authorities consider daylight and sunlight an important factor for determining planning applications. Policies refer to both the protection of daylight and sunlight amenity within existing properties and areas of amenity as well as the creation of proposed dwellings and spaces with high levels of daylight and sunlight amenity.

Although Local Authorities will look to the BRE Guide to understand impacts it is their Planning Policies that will determine whether the changes in light should be a reason for refusal at planning.

It is an inevitable consequence of the built-up urban environment that daylight and sunlight will be more limited in dense urban areas. It is well acknowledged that in such situations there may be many other conflicting and potentially more important planning and urban design matters to consider other than just the provision of ideal levels of daylight and sunlight.

The following sections extract relevant sections from the Guide.

2 EFFECTS TO DAYLIGHT

The BRE Guidelines provide two methodologies for daylight impact assessment, namely;

1 The Vertical Sky Component (VSC); and
2 The No Sky Line (NSL).

Vertical Sky Component (VSC)

The Vertical Sky Component (VSC) method is described in the Glossary of BRE Guidelines as the:

"Ratio of that part of illuminance, at a point on a given vertical plane, that is received directly from a CIE standard overcast sky, to illuminance on a horizontal plane due to an unobstructed hemisphere of this sky. Usually the 'given vertical plane' is the outside of a window wall. The VSC does not include reflected light, either from the ground or from other buildings"

Put simply, the VSC provides an assessment of the amount of skylight falling on a vertical plane (generally a window) directly from the sky, in the circumstance of an overcast sky (CIE standard).

The national numerical value target "ideal" for VSC is 27%. The BRE Guidelines advise that upon implementation of a development, a window should retain a VSC value of 27% or at least 0.8 of its former value (i.e. no more than a 20% change) as per paragraph 2.2.23 of the Guide.

This form of assessment does not take account of window size, room use, room size, window number or dual aspect rooms. The assessment also assumes that all obstructions to the sky are 100% non-reflective thereby omitting the consideration of reflection and considering only the light coming directly from the sky.

The VSC calculation is undertaken in both the existing and proposed scenarios so as to make a comparison.

The image in Figure 01 depicts a Waldram Diagram which can be used to calculate the VSC. The existing buildings are solidly pictured with the proposed scheme semi-transparent in the foreground.

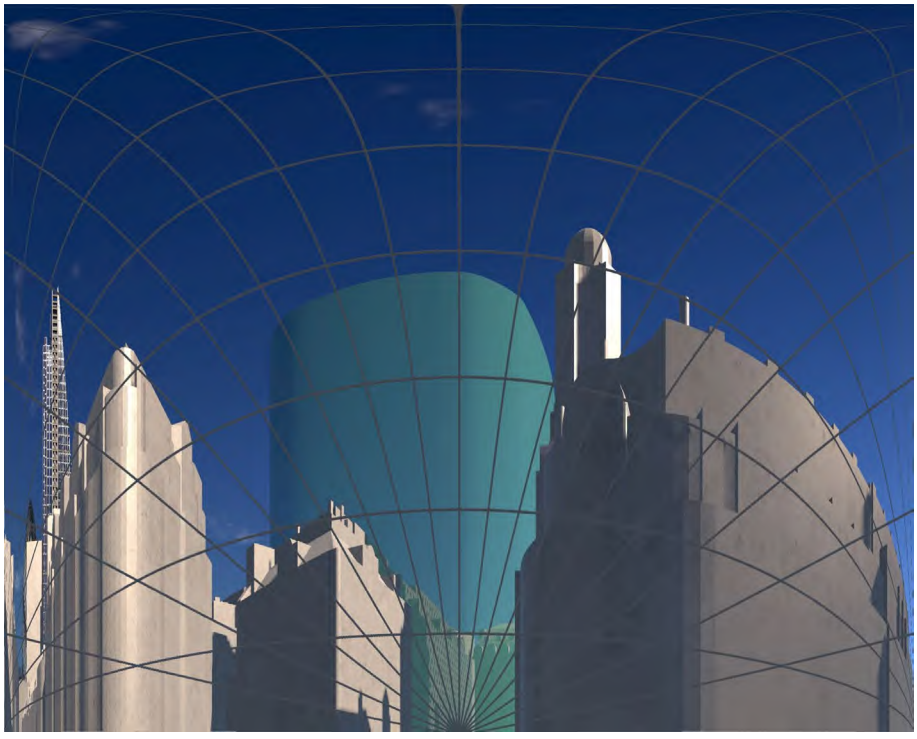


Fig. 01: Waldram diagram

No Sky Line (NSL)

In addition to the VSC, the BRE recommends the NSL method of assessment where internal layouts are known. Whilst the VSC provides information on the quantum of light reaching a window, the NSL seeks to provide information on how well this light is distributed within the room. The NSL is sometimes also referred to as 'Daylight Distribution' for this reason.

The NSL in the Glossary of the Guide as *"the outline on the working plane of the area from which no sky can be seen."* and so the NSL is effectively an assessment of sky visibility within a room. As stated already, the calculation is undertaken across the working plane which in accordance with paragraph 2.2.10 *"in houses [...] is assumed to be horizontal and 0.85m high"*.

Again, both the existing and proposed positions are calculated and presented alongside any change in position of the NSL. The results can then be presented in table format or else illustrated on a contour plot if required, an example of which can be found in Figure 02 below.

The BRE Guidelines state at paragraph 2.211 that:

"If, following construction of a new development, the no sky line moves so that the area of the existing room, which does receive direct skylight, is reduced to less than 0.8 times its former value this will be noticeable to the occupants, and more of the room will appear poorly lit. This is also true if the no sky line encroaches on key areas like kitchen sinks and worktops."

In accordance with the strict application of the national numerical values, therefore the change in daylight would be noticeable to the occupants should the NSL experience a loss of NSL greater than 20%.

It is relevant to note that this assessment takes the number and size of windows serving a room into account as well as the shape of the room but, being concerned only with sky visibility and the distribution of light, does not consider the quantum of light reaching the room.

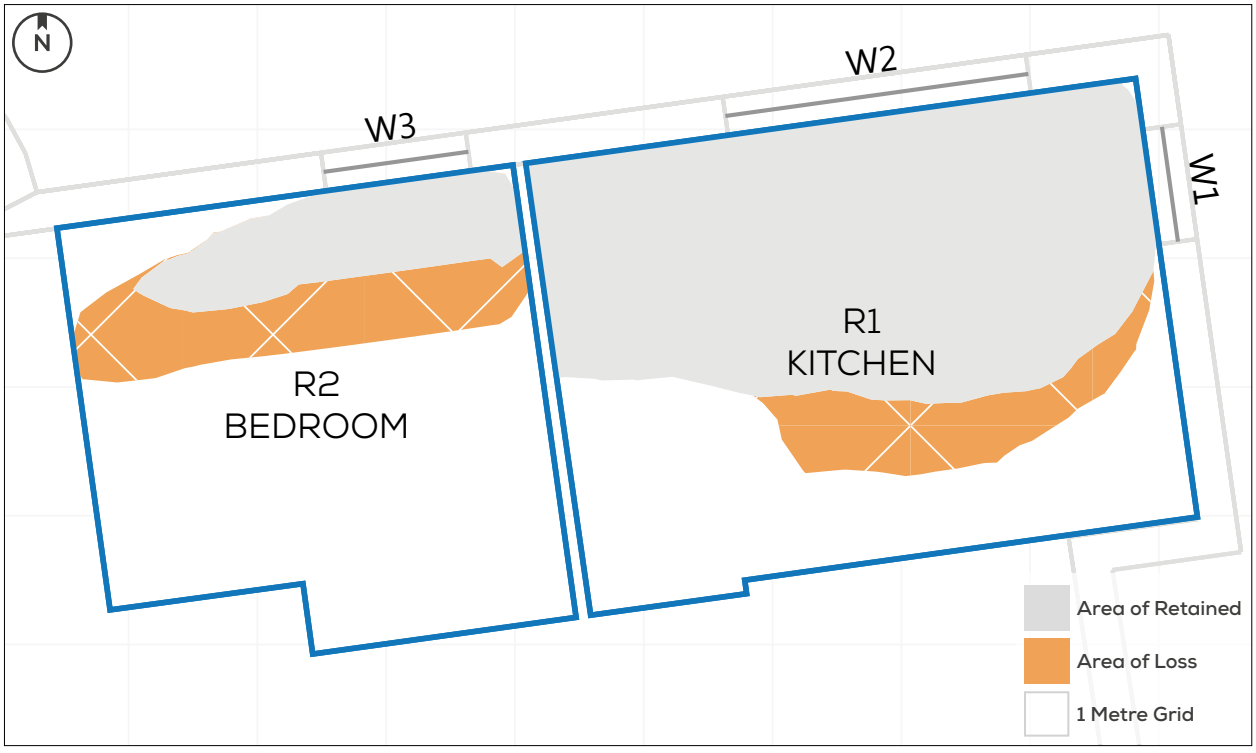


Fig. 02: Example NSL diagram

Decision Chart (Figure 20 of the BRE Guide)

The flowchart in Figure 03 illustrates the steps and criteria outlined within the BRE Guidelines to understand whether the daylighting (VSC and NSL) may be significantly affected.

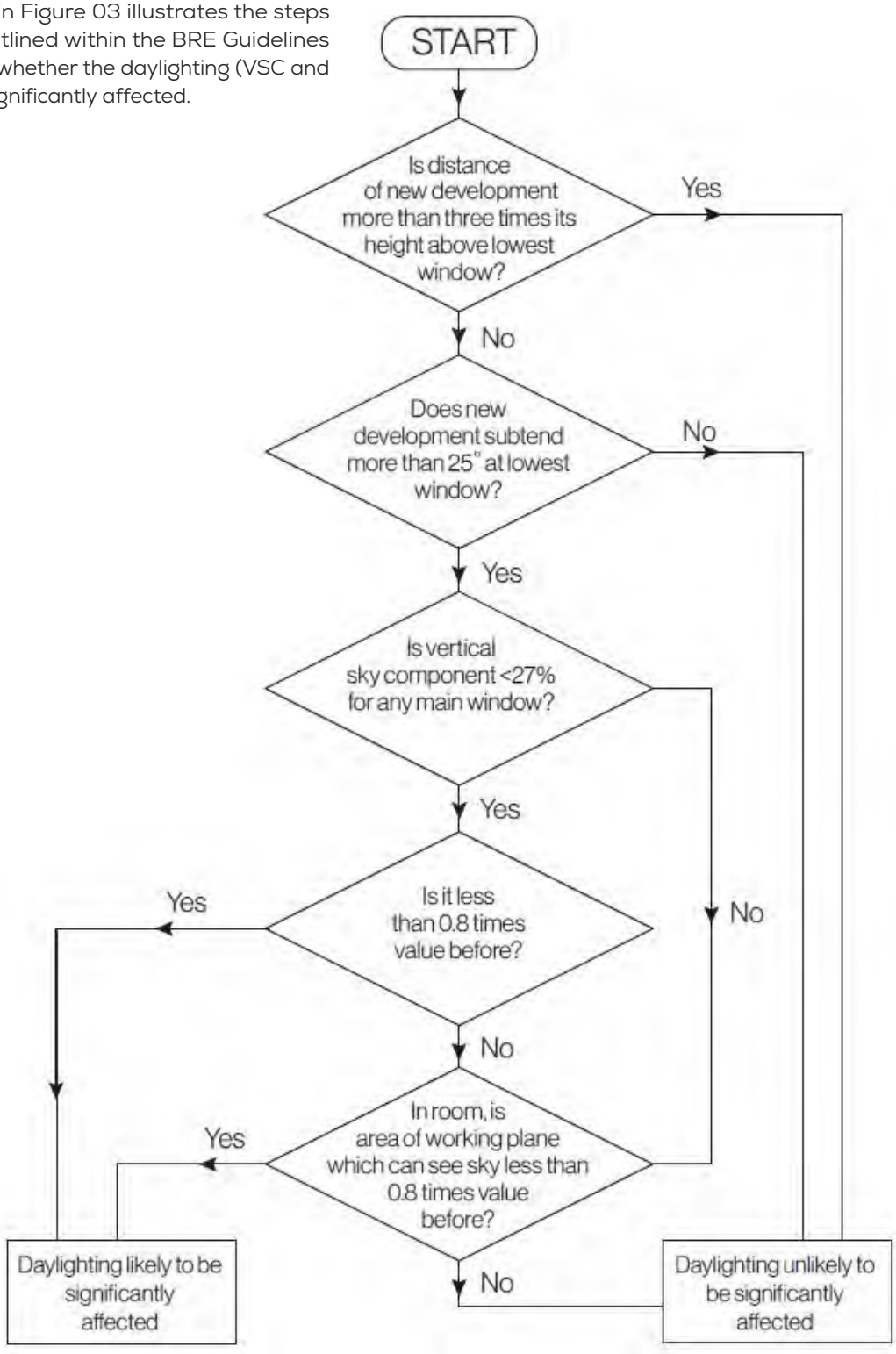


Fig. 03: BRE Decision Chart (Figure 20): *diffuse daylight in existing buildings. This does not include an assessment of rights to light issues, which a developer may need to consider separately*

3 EFFECTS TO SUNLIGHT

Annual Probable Sunlight Hours (APSH)

The BRE Guidance suggests that to understand sunlight impacts to a property, an assessment of Annual Probable Sunlight Hours (APSH) is undertaken. The APSH is defined in the Glossary as:

"the long-term average of the total number of hours during a year in which direct sunlight reaches the unobstructed ground (when clouds are taken into account)"

Expanding on the above, long-term averages were used to position 100 spots in the sky, representative of sunlight over the whole year. Correlating to the probability of the sun to shine, the majority of these (70) are at times to the six-months containing summer (from spring equinox to autumn equinox) which 30 are the 'winter' months from autumn equinox to spring. The APSH is calculated though calculating how many of these 'spots' can be seen from a location (normally a window) both overall and how many of these are during the winter months.

To understand the potential sunlight impacts therefore, all windows facing within 90 degrees of due south and overlooking the development are generally assessed for APSH.

The BRE Guidelines set out the overall methodology and criteria for the assessment of Sunlight in Chapter 3. The BRE Guidelines state in paragraph 3.2.3 and 3.2.5:

"To assess loss of sunlight to an existing building, it is suggested that all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90 degrees of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun."

"A point at the centre of the window on the outside face of the window wall may be taken."

In interpreting the results, the BRE Guidance states in summary 3.2.13 that:

"If a living room of an existing dwelling has a main window facing within 90° of due south, and any part of a new development subtends an angle of more than 25° to the horizontal measured from the centre of the window in a vertical section perpendicular to the window, then the sunlighting of the existing dwelling may be adversely affected. This will be the case if the centre of the window:

- *receives less than 25% of annual probable sunlight hours, or less than 5% of annual probable sunlight hours between 21 September and 21 March, and*
- *receives less than 0.8 times its former sunlight hours during either period; and*
- *has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours."*

The image in Figure 04 depicts the APSH sun spots overlaid on a Waldram Diagram. The existing buildings are solidly pictured with the proposed scheme semi-transparent in the foreground. The yellow spots indicate summer sun and the blue spots indicate winter sun.

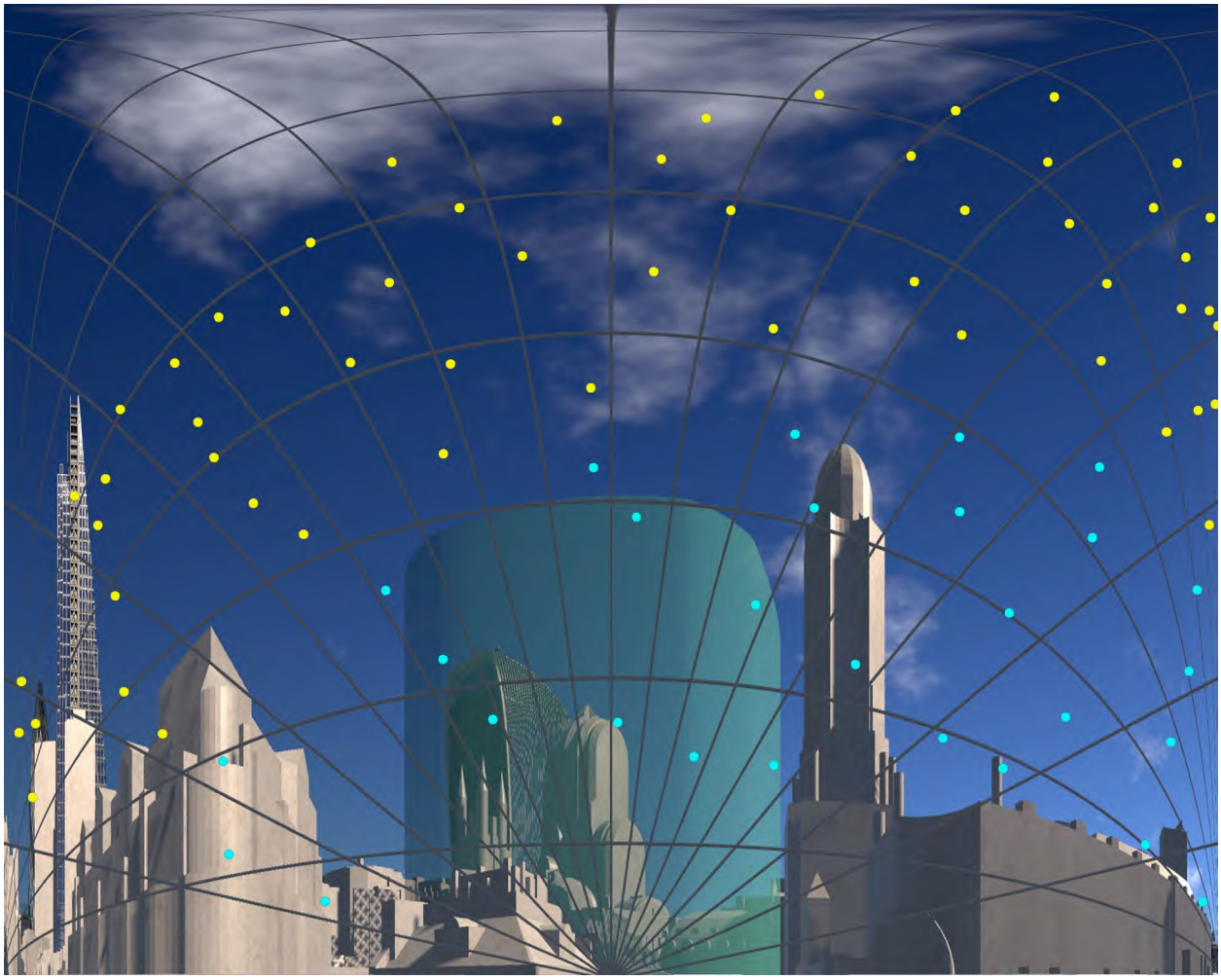


Fig. 04: Waldram diagram

4 EFFECTS TO OVERSHADOWING

The BRE guidance in respect of overshadowing of amenity spaces is set out in section 3.3.1 of the handbook. Here it states as follows:

"Sunlight in the spaces between and around buildings has an important impact on the overall appearance and ambiance of a development. It is valuable for a number of reasons, to:

- *provide attractive sunlit views (all year)*
- *make outdoor activities like sitting out and children's play more pleasant (mainly warmer months)*
- *encourage plant growth (mainly spring and summer)*
- *dry out the ground, reducing moss and slime (mainly in colder months)*
- *melt frost, ice and snow (in winter)*
- *dry clothes (all year)."*

It must be acknowledged that in urban areas the availability of sunlight on the ground is a factor which is significantly controlled by the existing urban fabric around the site in question and so may have very little to do with the form of the development itself. Likewise, there may be many other urban design, planning and site constraints which determine and run contrary to the best form, siting and location of a proposed development in terms of availability of sun on the ground.

Sun Hours on Ground & Transient Overshadowing

The Sun Hours on Ground method of overshadowing assessment uses specialist software to determine the sunlight exposure across an area of amenity.

The BRE Guidelines suggest that the Spring Equinox (21 March), being the year's midpoint, is a suitable date for the assessment. Paragraph 3.3.17 states:

"It is recommended that for it to appear adequately sunlit throughout the year, at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on 21 March is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable."

The Transient Overshadowing study is recommended where large buildings are proposed which may affect a number of gardens or open spaces or where an area is particularly sensitive at certain times of day or year. For the purpose of this assessment, the additional shadow cast is mapped and highlighted at hourly intervals from sunrise to sunset on the following dates:

- 21 March (Spring equinox)
- 21 June (Summer solstice)
- 21 December (Winter solstice)

The BRE guidelines do not provide any suggested criteria for Transient Overshadowing, rather it is a qualitative assessment to aid understanding.

5 BRE GUIDELINES: ADDITIONAL DAYLIGHT AND SUNLIGHT TESTS

Daylight - VSC and APSH to Rooms

As outlined within the BRE Guidelines (paragraph 2.2.6), the VSC value is calculated for each window; however:

"If a room has two or more windows of equal size, the mean of their VSCs may be taken".

Where a room is served by two or more windows of the same or different sizes, the VSC value to the room can be calculated by applying an average weighting calculation to understand the VSC value to the room. The formula used is as follows;

Σ(Vn*An) / ΣAn

Where:

V = window VSC
A = window area
n = the number of windows

The BRE provide a methodology to calculate APSH in relation to the room and window, paragraph 3.1.12 states:

"If a room has multiple windows, the amount of sunlight received by each can be added together provided they occur at different times and sunlight hours are not double counted."

The above extract of the BRE is in relation to proposed units rather than existing buildings. It does, however, make sense to apply this methodology to existing rooms as well, when room layouts are known as a room served by multiple windows could receive the benefit of sunlight from all windows and not just one.

GIA calculate the APSH room assessment in the following way:

1 The sunlight hours (both winter and annual) are calculated for each window. Instead of simply returning the overall per cent pass rate, i.e. one figure for winter, and one for the whole year, the yes/no result of each of the 100 sun spots is tracked. For this accounting to work, each sun dot needs to be assigned a unique identifier, e.g. from 1 to 100;

2 The sets of 100 sun spots are combined for each room using Boolean logic, i.e. conjunctions of yes/no values. The outcome of this step is a set of 100 yes/no values corresponding to the 100 sun spots, but on a per-room basis. Each per-room dot is counted if it is unobstructed for at least one of its windows; and

3 The unobstructed sun dots for the room are summed up and expressed as a percentage of the total number of annual and winter spots.

Balconies/Overhangs

The BRE recognises that existing architectural features on neighbouring buildings such as balconies and overhangs inherently restrict the quantum of skylight to a window. The BRE Guidelines note on page 11, paragraph 2.1.17 and page 16, paragraph 2.2.13:

"This is a particular problem if there are large obstructions opposite; with the combined effect of the overhang and the obstruction, it may be impossible to see the sky from inside the room, and hence to receive any direct skylight or sunlight at all."

"Existing windows with balconies above them typically receive less daylight. Because the balcony cuts out light from the top part of the sky, even a modest obstruction opposite may result in a large relative impact on the VSC, and on the area receiving direct skylight. One way to demonstrate this would be to carry out an additional calculation of the VSC and the area receiving direct skylight, for both the existing and proposed situations, without the balcony in place."

As noted by the BRE Guidelines, where there are existing overhanging features, larger reductions in skylight and sunlight may be unavoidable and alternative criteria can be used. The guidance suggests that in such situations a calculation is carried out that excludes the balcony or the obstruction.

6 DAYLIGHT - MIRROR MASSING & ADJOINING DEVELOPMENT LAND

Alternative target Values for Skylight and Sunlight Access "Mirror Massing"

The BRE Guidelines provide a calculation for the VSC and APSH analysis to quantify an appropriate alternative value based on the context of an environment. This approach is known as the 'mirror image' analysis (see Figure 05).

The BRE notes in paragraph F5:

"where an existing building has windows that are unusually close to the site boundary and taking more than their fair share of light. Figure F3 shows an example where side windows of an existing building are close to the boundary. To ensure that new development matches the height and proportions of existing buildings, the VSC and APSH targets for these windows could be set to those for a 'mirror-image' building of the same height and size, an equal distance away on the other side of the boundary."

This analysis is used to understand the levels of Daylight (VSC) and Sunlight (APSH) that would be experienced by an extant neighbouring property if there were a building of the same height and extent opposite.

The mirror image assessment is fairly simplistic and is not, therefore, easily applied to large and complex site footprints which are not all built at equal distances from the site boundary or of the same footprint.

Adjoining Development Land

The "Adjoining Development Land" analysis provided within the BRE Guidelines is a simple test to ensure that a proposal is a reasonable distance from the boundary so as to "enable future nearby developments to enjoy a similar access to daylight." (2.3.1)

The BRE comments in paragraphs 2.3.3, 2.3.6 and 2.3.7 that:

"The diffuse daylight coming over the boundary may be quantified in the following way. As a first check, draw a section in a plane perpendicular to the boundary (Figure 21). If a road separates the two sites then the centre line of the road

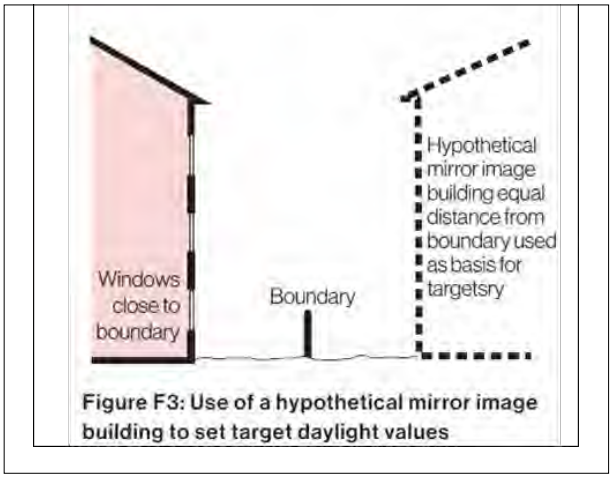


Image © BRE Guidelines

Fig. 05: Littlefair, P. (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice. Hertfordshire: HIS BRE Press p 87 Figure F3

should be taken. Measure the angle to the horizontal subtended at a point 1.6 metres above the boundary by the proposed new buildings. If this angle is less than 43 ° then there will normally still be the potential for good daylighting on the adjoining development site (but see Sections 2.3.6 and 2.3.7)."

"The guidelines above should not be applied too rigidly. A particularly important exception occurs when the two sites are very unequal in size and the proposed new building is larger in scale than the likely future development nearby. This is because the numerical values above are derived by assuming the future development will be exactly the same size as the ·proposed new building (Figure 22). If the adjoining sites for development are a lot smaller, a better approach is to make a rough prediction of where the nearest window wall of the future development may be; then to carry out the 'new building' analysis in Section 2.1 for this window wall."

"The 43° angle should not be used as a form generator, to produce a building which slopes or steps down towards the boundary. Compare Figure 23 with Figure 22 to see how this can result in a higher than anticipated obstruction to daylight. In Figure 23 the proposed building subtends 34° at its mirror image, rather than the maximum of 25° suggested here. In cases of doubt, the best approach is again to carry out a new building analysis for the most likely location of a window wall of a future development."

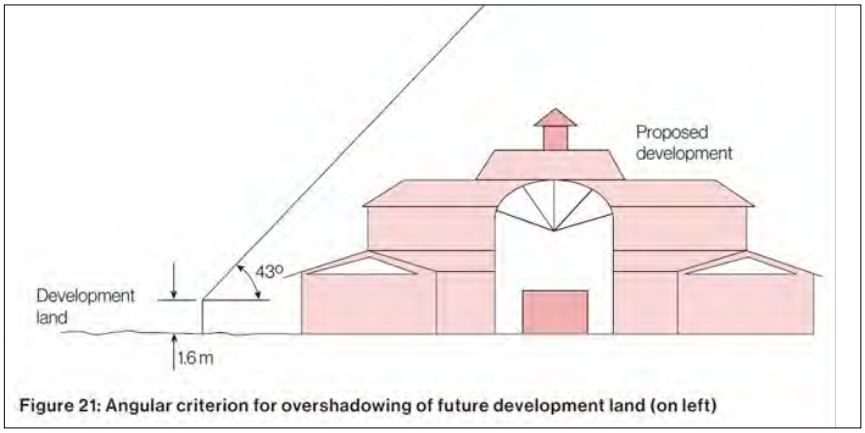


Figure 21: Angular criterion for overshadowing of future development land (on left)

Image © BRE Guidelines

Fig. 06: Littlefair, P. (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice. Hertfordshire: HIS BRE Press p 19 Figure 21

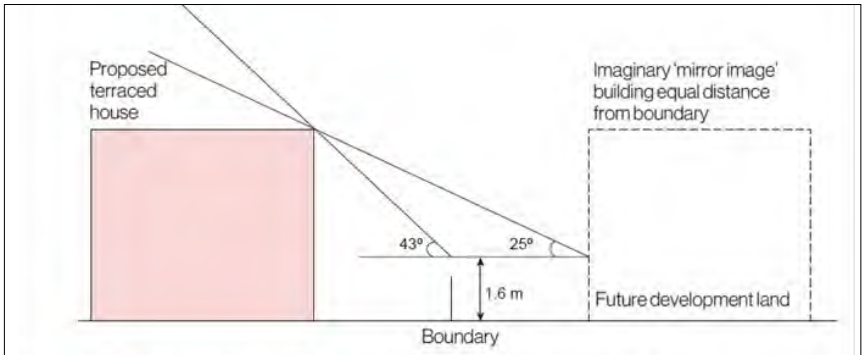


Figure 22: Derivation of an angular boundary criterion to safeguard future development of adjoining land

Image © BRE Guidelines

Fig. 07: Littlefair, P. (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice. Hertfordshire: HIS BRE Press p 20 Figure 22

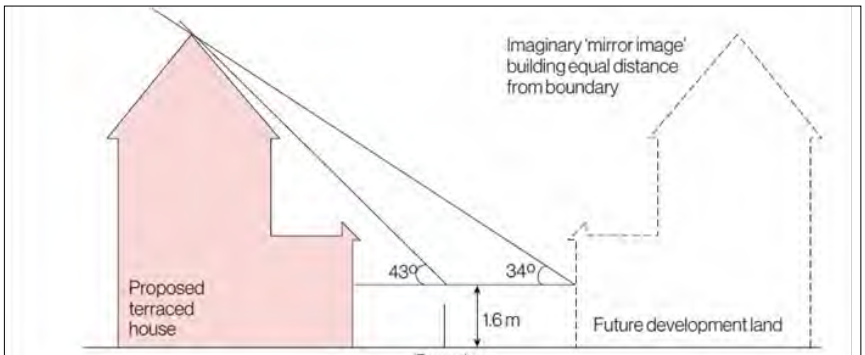


Figure 23: Problems with the boundary criterion can occur when a stepped façade overlooks adjoining land

Image © BRE Guidelines

Fig. 08: Littlefair, P. (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice. Hertfordshire: HIS BRE Press p 20 Figure 23

As outlined above, the Adjoining Development Land analysis is predicated on ensuring that a proposal next to future development land is not negatively impacting the ability to develop in consideration of light matters.

7 PHOTOVOLTAICS

Paragraph 4.5.2 states that *"where a proposed development may result in loss of radiation to existing solar panels (either photovoltaic or solar thermal), an assessment should be carried out."*

Paragraph 4.5.8 states that *"Where the annual probable sunlight hours received by a solar panel with the new development in place is less than 0.90 times the value before, a more detailed calculation of the loss of solar radiation should be undertaken. This is a specialist type of assessment and expert advice should be sought. The assessment should include both direct solar and diffuse sky radiation; over a whole year, around 60% of the radiation received on a horizontal roof comes from the sky. However, reflected radiation from the ground and obstructions need not be included. The modelling should take account of the effects of cloud in reducing direct solar radiation at different times of year, and include a realistic simulation of the way that incoming solar radiation varies from different parts of the sky."*

Paragraph 4.5.9 states that *"if over the whole year the ratio of total solar radiation received with the new development, to the existing value is less than the values given in Table 2, then the loss of radiation is significant."*

Table 2. Recommended minimum ratios of solar radiation received.

Slope of solar panel in degrees to horizontal	Recommended minimum ratio of radiation received after/before
0-30	0.90
30.01-59.99	0.85
60-90	0.80

Image © BRE Guidelines

Fig. 09: Table 2 from BRE Guidance Section 4, page 36

Finally, paragraph 4.5.10 notes that *"numerical values given are purely advisory. Different criteria may be used based on the requirements for solar energy in an area viewed against other site layout constraints. Another important issue is whether the existing solar panels are reasonably sited, at a sensible height and distance from the boundary. A greater loss of solar radiation may be inevitable if panels are mounted close to the ground and near to the site boundary."*

8

9 OTHER AMENITY CONSIDERATIONS

Daylight and sunlight is one factor among many under the heading of residential amenity considerations for any given development design or planning application; others include:

- View;
- Privacy;
- Security;
- Access;
- Enclosure;
- Microclimate;
- Solar Dazzle; and
- Solar Convergence.