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# Faraday Tower Demolition

## Environmental Statement

Volume I: Main Report

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The University of Manchester

**Faraday Tower Demolition**  
**Environmental Statement Volume I: Main Report**

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18 August 2025

Revision 00

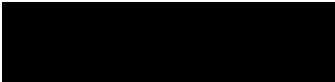
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| 00       | Environmental Statement Volume I:<br>Main Report | Maddie Adas | 18/08/2025 | Helen Lund |

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# 1 INTRODUCTION

## 1.1 PURPOSE OF THIS DOCUMENT

- 1.1.1 The University of Manchester (the “applicant”) is applying for detailed planning permission for the demolition of Faraday Tower, hereafter referred to as the “proposed project.” The proposed project falls within the administrative area of Manchester City Council (MCC). The formal planning description is as follows:
- ‘Demolition of Faraday Tower to ground floor slab level and works to remediate/make safe the retained structure, including the erection of a perimeter hoarding’.*
- 1.1.2 The planning application area (hereafter referred to as the “site”) occupies 0.24 ha and is centred on Ordnance Survey Grid Reference SJ 84533 97436 as shown in Figure 1-1.
- 1.1.3 The site is located to the west of Sackville Street, which also wraps around the south end of the site and meets up with Brook Street and the Mancunian Way. Drover Lane runs along the northern edge of the site directing east to join Sackville Street.
- 1.1.4 Further information about the site and the proposed project can be found in Chapter 2, ES Volume I.
- 1.1.5 This Environmental Statement (ES) reports on the findings of the Environmental Impact Assessment (EIA) process and has been prepared on behalf of the applicant to accompany the detailed planning application for the proposed project.



Figure 1-1 Red Line Boundary

## 1.2 ABOUT THE APPLICANT

- 1.2.1 The University of Manchester is a public research university in Manchester, founded in 2004. The university has over 44,000 students across undergraduate, master’s, and research courses and approximately 13,000 staff across academia and professional services.

## 1.3 REQUIREMENT FOR ENVIRONMENTAL IMPACT ASSESSMENT

- 1.3.1 The term “environmental impact assessment” describes a procedure that must be followed for certain types of projects before they can be given “development consent.” The procedure is a means of systematically assessing a project’s likely significant environmental effects. This helps to ensure that the importance of the predicted effects and the scope for mitigating them are properly understood by the public and the relevant competent authority before it makes a decision.
- 1.3.2 The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (hereafter referred to as “the EIA Regulations”) transposed, on 16<sup>th</sup> May 2017, the European Union (EU) Directive 2014/52/EU (‘2014 EIA Directive’).
- 1.3.3 Projects that require or may require an EIA are set out in Schedule 1 and 2 of the EIA Regulations. A Schedule 1 development automatically requires an EIA as these have the most potential to cause significant environmental effects. The proposed project is not considered a Schedule 1 development in accordance with the EIA Regulations.
- 1.3.4 According to the EIA Regulations, “Schedule 2 development” relates to development, other than exempt development, of a description mentioned in column 1 of the table in Schedule 2 where:
- (a) Any part of that development is to be carried out in a sensitive area; or
- (b) any applicable threshold or criterion in the corresponding part of column 2 of that table is respectively exceeded or met in relation to that development’.
- 1.3.5 According to the EIA Regulations, a “sensitive area” relates to any of the following:
- (a) “land notified under section 28(1) (sites of special scientific interest) of the Wildlife and Countryside Act 1981;
- (b) a National Park within the meaning of the National Parks and Access to the Countryside Act 1949;
- (c) the Broads;
- (d) a property appearing on the World Heritage List kept under article 11(2) of the 1972 UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage;
- (e) a scheduled monument within the meaning of the Ancient Monuments and Archaeological Areas Act 1979;
- (f) an area of outstanding natural beauty designated as such by an order made by Natural England under section 82(1) (areas of outstanding natural beauty) of the Countryside and Rights of Way Act 2000 as confirmed by the Secretary of State;
- (g) a European site.”
- 1.3.6 In certain cases, other statutory and non-statutory designations, which are excluded in the definition of “sensitive areas”, but which are nonetheless environmentally sensitive, may also be relevant in determining whether an EIA is required.

- 1.3.7The site itself does not contain any of the designations outlined above, nor are there any sensitive areas within the surroundings of the site.
- 1.3.8Regarding the second criteria for a Schedule 2 development, the proposed project falls under Category 10(b) in Column 1 of the table in Schedule 2. This refers to infrastructure projects in the form of urban development projects.
- 1.3.9The EIA Regulations include “exclusion thresholds and criteria”, above which an EIA is required if significant environmental effects are considered likely. As the proposed project is classified as an urban development project, the following criteria set out in Column 2 of Schedule 2 apply:

“a) The development includes more than 1 hectare of urban development which is not dwellinghouse development; or

b) The development includes more than 150 dwellings; or

c) The overall area of the development exceeds 5 hectares.”

1.3.10Although the proposed project falls below the thresholds identified in column 2 of the table, a 2011 ruling secured by SAVE Britain’s Heritage against the Secretary of State for Communities and Local Government, involved the decision by Lancaster City Council to authorise the demolition of the historic Mitchell’s Brewery building without prior approval. The Court of Appeal ruled that such demolitions must be subject to the EIA process if they are likely to have significant environmental effects.

1.3.11Therefore, MCC requested an EIA is undertaken for the proposed project due to the view that significant effects are likely (for air quality, noise & vibration and built heritage). An Environmental Statement, which summarises the EIA work undertaken, has therefore been prepared and submitted alongside the detailed planning application, considering these topic areas.
- 1.4STRUCTURE OF THE ENVIRONMENTAL STATEMENT
- 1.4.1This ES has been prepared to meet the requirements of Regulation 4 and Schedule 4 of the EIA Regulations. It is recognised within the EIA Regulations that the ES should report on the likely significant environmental effects of a proposed project. The structure of the ES and supporting documentation is outlined below in Table 1-1.
- Table 1-1 Structure of the Environmental Statement
- | Volume                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Volume I – Main Report           | This report introduces the proposed project description, alternatives considered, the methodology which has been followed in undertaking the EIA, the assessment of significant environmental effects (both beneficial and adverse) and consideration of cumulative and interactive effects, including effects arising because of other developments in proximity to the proposed project. Table 1-2 below provides a further description of the individual ES chapters. |
| Volume II – Technical Appendices | These technical appendices comprise specific supporting documents such as details of site surveys and calculations etc. which support the assessments in Volume I.                                                                                                                                                                                                                                                                                                       |
| Non-Technical Summary            | This provides a summary of the main ES in a non-technical language. The Non-Technical Summary is available as a separate document                                                                                                                                                                                                                                                                                                                                        |
- 1.4.2Volume I of the ES, the main report, is structured as outlined in Table 1-2.
- Table 1-2 Structure of the ES Volume I – Main Report
- | Chapter                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 Introduction                       | Comprises an introduction to the proposed project, an account of the environmental assessment requirements and an overview of the ES structure.                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 2 Project Description                | Describes the site location and surrounding area in terms of the existing physical and social characteristics and land uses. This chapter also outlines the demolition works that form the proposed project and considers the alternatives that have been considered by the applicant, as required by the EIA Regulations.                                                                                                                                                                                                                                                          |
| 3 Methodology                        | This chapter provides an overview of the approach undertaken to ensure that the requirements of the EIA Regulations are fulfilled. It indicates how key issues have been identified and addressed within the ES and the approach that has been taken for the EIA process.                                                                                                                                                                                                                                                                                                           |
| 4-6 Technical Assessments            | <p>Technical assessments for the following topics have been carried out as part of the EIA:</p> <ul style="list-style-type: none"><li>Air Quality;</li><li>Noise and Vibration; and</li><li>Built Heritage.</li></ul> <p>The chapters present the assessment of effects for each topic area in relation to the proposed project. The format of each chapter is generally as follows:</p> <ul style="list-style-type: none"><li>Introduction;</li><li>Baseline;</li><li>Prediction of impacts and assessment of effects;</li><li>Mitigation; and</li><li>Residual effects.</li></ul> |
| 7 Cumulative and Interactive Effects | Presents both the combined and cumulative effects resulting from the accumulation of effects generated by the proposed project on the same receptors. Additionally, presents the effects potentially arising from adjacent or nearby developments together with those predicted for the proposed project.                                                                                                                                                                                                                                                                           |
| 8 Residual Effects and Conclusions   | Identifies supplementary mitigation measures and summarises the residual effects of the proposed project once mitigation has been applied.                                                                                                                                                                                                                                                                                                                                                                                                                                          |
- 1.4.3A number of appendices support the technical assessments in Volume I of the ES. These are included in Volume II of the ES, as outlined in Table 1-3.
- Table 1-3 List of appendices included within ES Volume II
- | Appendix Number | Topic               | Description                                                |
|-----------------|---------------------|------------------------------------------------------------|
| 3-A             | Methodology         | EIA Scoping Report                                         |
| 3-B             |                     | EIA Scoping Opinion                                        |
| 4-A             | Air Quality         | Demolition Dust Risk Methodology                           |
| 4-B             |                     | Demolition Dust Mitigation Measures                        |
| 4-C             |                     | Demolition Programme and Non-Road Mobile Machinery Toolkit |
| 5-A             | Noise and Vibration | Demolition Noise Prediction Data                           |
| 5-B             |                     | PPG:N Noise Hierarchy Table                                |
| 6-A             | Built Heritage      | Policy Review                                              |
| 6-B             |                     | Faraday Tower: Archive Mapping                             |
| 6-C             |                     | Faraday Tower: Archive Photographic Plates                 |
| 6-D             |                     | Listed Buildings                                           |
| 6-E             |                     | Conservation Areas                                         |
| 6-F             |                     | Other Buildings                                            |
| 6-G             |                     | Heritage Assets Location Map                               |
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- 1.4.4
- The planning application will be supported by several stand-alone documents that are not part of the ES but referred to in the chapters where relevant. These documents are detailed below:
- Existing and Proposed Site Plans (including location, layout, floorspace, sections, elevations, and contextual);

Post-Demolition: Proposed Treatment of Site and Proposed Boundary Treatments;

Design and Access Statement (DAS);

Heritage Statement;

Walkover Ecological Report, including Bat Survey;

Demolition Methodology Note and Principles of Site Waste Management;

Tree Survey, Arboricultural Impact Assessment and Tree Protection Measures Reporting;

Land Contamination Report; and

Flood Risk Assessment.

1.5 TECHNICAL TEAM

- 1.5.1
- In line with Regulation 18(5) of the EIA Regulations, this ES has been prepared and coordinated by a team of experienced and qualified environmental consultants. All technical chapters have been reviewed and signed off by appropriately qualified consultants. The technical EIA coordination team and chapter contributors, and their relevant qualifications and experience, are listed in Table 1-4 and Table 1-5.

Table 1-4 EIA coordinators

| Buro Happold Consultant | Qualifications, experience, and memberships                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Helen Lund              | Helen is an Associate Director with 22 years’ experience in the delivery of EIA in the UK. Helen specialises in the coordination and management of all stages of the EIA process and has directed, managed, or contributed to over 50 EIAs for large scale regeneration and infrastructure projects. She is a Practitioner Member of institute of Sustainability and Environmental Professionals (ISEP) (formerly the Institute of Environmental Management and Assessment (IEMA)). |
| Maddie Adas             | Maddie is an Environmental Consultant with over 5 years’ experience in EIA. She is a Practitioner member of ISEP (formerly IEMA).                                                                                                                                                                                                                                                                                                                                                   |
| George Witts            | George is an Apprentice Environmental Consultant, holding a Student Membership of ISEP (formerly IEMA).                                                                                                                                                                                                                                                                                                                                                                             |

Table 1-5 EIA technical specialists

| Specialism        | Consultant       | Qualifications, experience, and memberships                                                                                                                                                                                                            |
|-------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Air Quality       | Rachael Harrison | Rachael is a Senior Air Quality consultant with over 7 years’ experience in Air Quality. She is a member of the Institute of Air Quality Management (IAQM) and Institute of Environmental Sciences (IES).                                              |
|                   | Irena Velcheva   | Irena is a Graduate Air Quality Consultant, holding an Associate Membership of the IES and IAQM.                                                                                                                                                       |
| Noise & Vibration | Chris Goff       | Chris is an Associate at Buro Happold with 13 years’ experience in acoustic consultancy, currently specialising in planning and EIA. He is a Member of the Institute of Acoustics (MIOA) and holds a MSc in Environmental and Architectural Acoustics. |
|                   | Ewan McAdam      | Ewan is a Graduate Acoustics Engineer in the UK Acoustics & AV team. He has an integrated master's (MEng) in Mechanical Engineering. He is currently studying the IOA Diploma in Acoustics and Noise Control.                                          |

| Specialism     | Consultant    | Qualifications, experience, and memberships                                                                                                                                                                                          |
|----------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Built Heritage | David Tye     | David is a Senior Director with over 33 years’ experience in Planning, Heritage, and Development. He is a fully accredited member of the Royal Town Planning Institute (RTPI).                                                       |
|                | Mark Clifford | Mark is a Principal Heritage Consultant with over 11 years’ experience in Heritage. He is a fully accredited member of the Institute of Historic Building Conservation (IHBC) and has worked across a diverse portfolio of projects. |

1.6 ENVIRONMENTAL STATEMENT AVAILABILITY

- 1.6.1
- This ES and all accompanying planning application documents are available for viewing online on MCC’s planning portal at: <https://pa.manchester.gov.uk/online-applications/>
- 1.6.2
- Comments on the planning application can also be made online during the applicable consultation period using the link above.
- 1.6.3
- A printed version of the ES (with an appropriate charge for printing costs) or an electronic version (free of charge) of the ES can be obtained by emailing [planning@manchester.gov.uk](mailto:planning@manchester.gov.uk)

1.7 REFERENCES

- 
- European Union (2014). Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.
- 
- Ministry of Housing, Communities and Local Government (2020). Planning Practice Guidance – Environmental Impact Assessment.
- 
- Stationery Office (2017). The Town and Country Planning (Environmental Impact Assessment) Regulations 2017.
- 
- UK Government (2018). The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018.

1.8 ABBREVIATIONS

| Term   | Definition                                                       |
|--------|------------------------------------------------------------------|
| DAS    | Design and Access Statement                                      |
| EIA    | Environmental Impact Assessment                                  |
| ES     | Environmental Statement                                          |
| EU     | European Union                                                   |
| IAQM   | Institute of Air Quality Management                              |
| IEMA   | Institute of Environmental Management and Assessment             |
| IES    | Institution of Environment Sciences                              |
| IHBC   | Institute of Historic Building Conservation                      |
| ISEP   | Institute of Sustainability and Environmental Professionals      |
| MCC    | Manchester City Council                                          |
| MIOA   | Member of the Institute of Acoustics                             |
| RTPI   | Royal Town Planning Institute                                    |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |



## 2 PROJECT DESCRIPTION

### 2.1 INTRODUCTION

- 2.1.1 This chapter of the Environmental Statement (ES) describes the site and its surroundings and summarises the proposed project, as relevant to the Environmental Impact Assessment (EIA) process. Further information can be found in the Design and Access Statement (DAS) and drawings that accompany the planning application.
- 2.1.2 The description of the demolition works in this chapter has been developed using information from the tendering demolition contractors. This information will be worked up in further detail once a contractor is appointed. It is expected that the detailed methodology for the demolition works will be secured via a planning condition.

### 2.2 THE SITE AND ITS SETTING

#### Location and Context

- 2.2.1 The site is located in central Manchester and falls within the administrative area of Manchester City Council (MCC). The site is located to the west of Sackville Street, which also wraps around the south end of the site and meets up with Brook Street and the Mancunian Way. Drover Lane runs to the north of the building and drops from east to west. The site is centred on Ordnance Survey Grid Reference SJ 84533 97436.
- 2.2.2 Some figures in this ES have used a slightly larger red line boundary than the one presented in Figure 2-1, as they include an additional small section of land to the south-east of the site, as per the boundary presented in the EIA Scoping Report (Appendix 3-A, ES Volume II). Whilst a slightly larger boundary is used in some figures throughout the report, Figure 2-1 presents the boundary for which planning permission is being sought and has been considered in the assessment.



Figure 2-1 Red line boundary

#### Site Description

- 2.2.3 The site is approximately 0.24 ha in size and is predominately occupied by Faraday Tower. The tower is 13 storeys in height and has two basement levels. The building was constructed in 1967 forming part of the campus of the former University of Manchester Institute of Science and Technology (UMIST).
- 2.2.4 Externally, a reduced level car park and basement are present in the west, accessed through Drover Lane from Sackville Street. Single storey service buildings are present in the south, at basement level. A retaining wall is present at the western boundary, adjacent to the George Begg Building. Retaining walls are also present in the north (car park access routes) and the basement wall along the east, north and south of the site. Managed grassed landscaping is present to the south of the site. Access to the site is from Sackville Street to the east and Drover Lane to the north.
- 2.2.5 Faraday Tower was closed in 2007, and in 2016 a partial demolition of the entrance foyer and the link bridge, was undertaken in preparation of the Construction of the Graphene Engineering Innovation Centre (Masdar Building), with the Faraday Tower remaining in situ. Since the building's vacancy, the University of Manchester has continued to maintain Faraday Tower ensuring a safe and secure building.

#### Surrounding Land Uses

- 2.2.6 The site is bound to the east and south by Sackville Street, running parallel to the A57(M), and bound to the north by Dover Lane. The site is largely surrounded by University of Manchester buildings.
- 2.2.7 The University of Manchester buildings surrounding the site include:
- George Begg Building;
  - Masdar Building (Graphene Engineering Innovation Centre);
  - Weston Hall/Echoes Day Nursery; and
  - Manchester Institute of Biotechnology (John Garside Building).
- 2.2.8 The non-university businesses / buildings surrounding the site include the Manchester Conference Centre and Pendulum Hotel (long term lease from Manchester University who owns the freehold of this site) and student accommodation.
- 2.2.9 104 Grade II and Grade II\* listed building and structures are located within close vicinity of the site, as shown in Figure 2-2.
- 2.2.10 The Greater Manchester local Heritage List does not show any locally listed assets within proximity of the site. MCC does not have an adopted local list of buildings, nor is MCC proposing to draft and adopt a local list as part of the ongoing Greater Manchester Local Heritage List Initiative, however a building can be identified as a Non-Designated Heritage Asset (NDHA) at any stage. Buildings and sites to be considered as potential NDHAs include Faraday Tower, Reynold Building, Jackson Street Mill and the Maths and Science Building.
- 2.2.11 There are two conservation areas within 1 km of the site, as shown in Figure 2-2, comprising:
- Whitworth Street and Princess Street, located 140 m north of the site; and
  - George Street, located 530 m to the north-west of the site.



**Figure 2-2 Surrounding Listed Buildings and Conservation Areas (Source: Historic England, 2025)**

### Site Baseline for the Purpose of EIA

- 2.2.12 The “assessment baseline” will be defined by the conditions on the site at the date of undertaking the assessment. Therefore, the baseline year for the purposes of the assessments reported in this ES is 2025.

## 2.3 THE PROPOSED PROJECT

### Overview of Proposed Works

- 2.3.1 The University of Manchester (the applicant) is applying for detailed planning permission for the following:
- ‘Demolition of Faraday Tower to ground floor slab level and works to remediate/make safe the retained structure, including the erection of a perimeter hoarding’*
- 2.3.2 The proposed project also includes the disconnection of utilities and services; and the removal of hazardous materials, with the purpose of leaving the site in a safe and secure condition.
- 2.3.3 The 13 storey building will be demolished to street level (ground floor level) only, with the extent of demolition/ excavation to the lower levels to be better defined when the future redevelopment of the site is established. The two basement levels will be left in a safe and secure condition. The existing and proposed elevations following demolition is shown in Figure 2-3 and Figure 2-4 respectively.
- 2.3.4 Following demolition of Faraday Tower, the site will be secured to prevent unauthorised access. Existing concrete boundary walls will be retained and edge protection provided where required. Hoarding will be installed to Sackville Street and Drover Lane and vehicular gates will prevent unauthorised vehicular access to the service yard to the rear of the building. Figure 2-5 shows the site following demolition of Faraday Tower.



Figure 2-3 Existing south and east street elevation



Figure 2-4 Proposed south and east street elevation following demolition

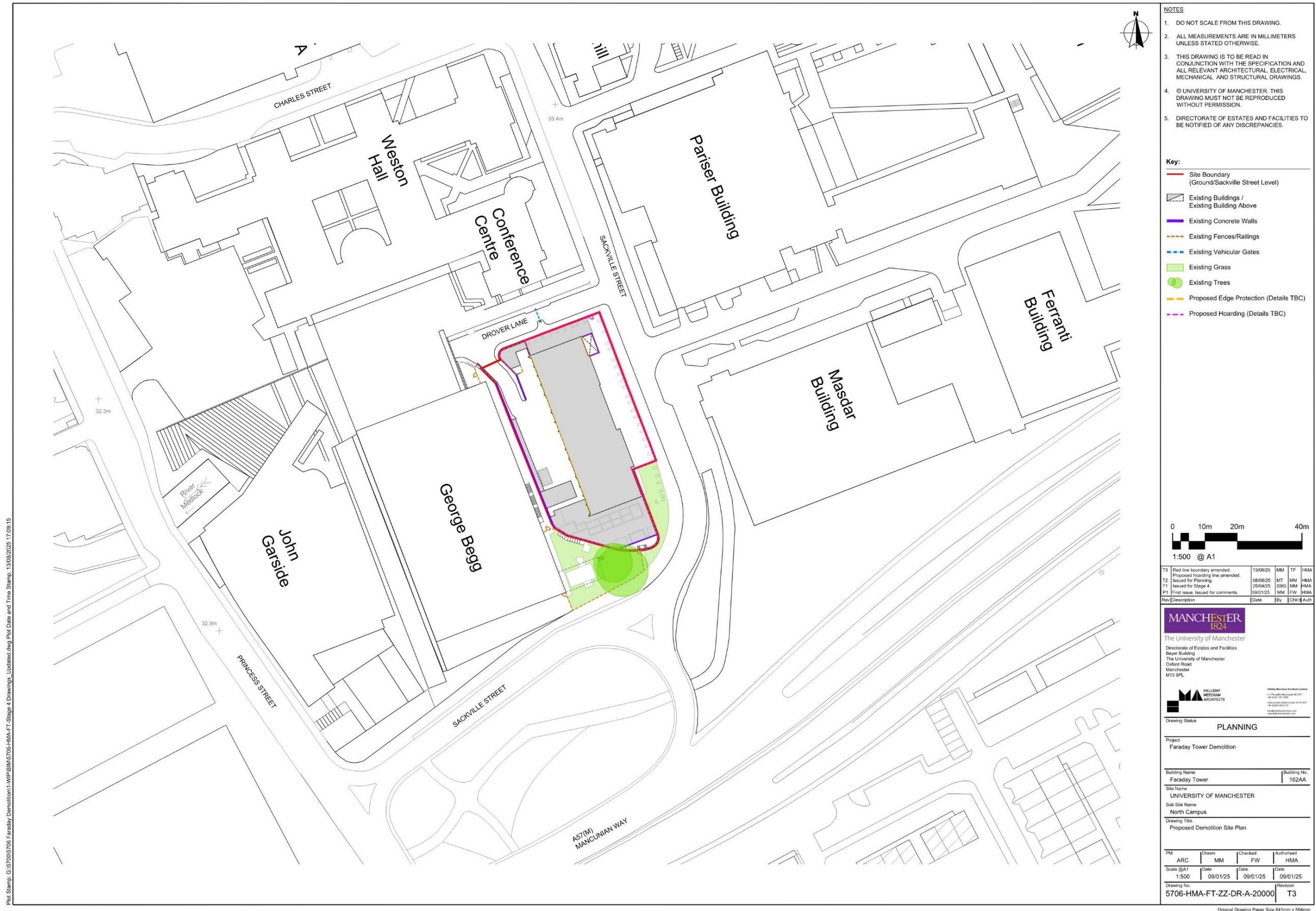


Figure 2-5 Plan of site following demolition of Faraday Tower

Proposed Plans

2.3.5 The proposed plans set out the layout, floorplans, elevations, and sections for the proposed project. They include:

- Proposed Demolition Plans - Basement;
- Proposed Demolition Plans - Sub-Basement;
- Proposed Demolition Plans - Ground Floor;
- Proposed Demolition Plans – Roof Plan;
- Proposed Demolition Site Plan;
- Proposed Demolition Plans - First, Second & Third Floors;
- Proposed Demolition Plans - Fourth, Fifth & Sixth Floors;
- Proposed Demolition Plans - Seventh, Eighth & Ninth Floors;
- Proposed Demolition Plans - Tenth, Eleventh & Twelfth Floors;
- Proposed Demolition Elevations - East;
- Proposed Demolition Elevations - South;
- Proposed Demolition Elevations - West;
- Proposed Demolition Elevations – North;
- Proposed Demolition Street Scene Context;
- Proposed Demolition Site Sections 1;
- Proposed Demolition Site Sections 2; and
- Proposed Site Hoarding.

2.3.6 These plans, alongside the demolition methodology described in this chapter allow an assessment of the likely significant environmental effects of the proposed project within this ES.

Indicative Demolition Programme

2.3.7 The current programme outlines the scheduling of various activities relevant to the enabling and demolition works for the proposed project. The overall indicative demolition programme is anticipated to start on 20<sup>th</sup> March 2026 and continue for 88 weeks until 23<sup>rd</sup> December 2027, presented in Table 2-1.

Table 2-1 Indicative Enabling & Demolition Works programme

| Activity                       | Duration | Commencement                  | Completion                     |
|--------------------------------|----------|-------------------------------|--------------------------------|
| Advanced Safety Measures       | 8 weeks  | 20 <sup>th</sup> March 2026   | 14 <sup>th</sup> May 2026      |
| Decontamination and Soft Strip | 32 weeks | 20 <sup>th</sup> March 2026   | 29 <sup>th</sup> October 2026  |
| Hard Demolition Works          | 60 weeks | 29 <sup>th</sup> October 2026 | 23 <sup>rd</sup> December 2027 |

Summary of Demolition Methodology

2.3.8 The demolition works will include the following key activities:

Site establishment:

- Site establishment, including necessary additional/relocation of hoarding/footpath closures and siting the welfare facilities;
- Erect hoarding fence onto Sackville Street footway to secure the site before works can commence;
- Welfare facilities will include site offices, segregated toilets, canteen, drying and changing rooms, and decontamination units;
- Mobile CCTV security towers will be used for site surveillance;
- Dedicated plant and materials storage areas will be set up;
- Fire safety arrangements will be implemented, including proper storage of flammable materials and hot works permits;
- Pedestrian walkways and Heras fencing will be installed to segregate work areas and ensure safe access;
- Traffic marshals will control delivery vehicle movements within the site area; and
- Delivery of site plant.

Asbestos removal:

- Identified Asbestos-Containing Materials (ACM) are limited to floor tiles, roof tiles, guttering, down-pipes, and fillet boards;
- All removal work will be carried out under controlled conditions by competent specialists;
- Live asbestos work areas and transit routes will be identified by appropriate signs and physical demarcation;
- A Decontamination Unit and sealed asbestos skips will be used;
- Fibre air monitoring will be carried out by a The United Kingdom Accreditation Service (UKAS) accredited Analyst; and
- All works will conform to the Control of Asbestos Regulations 2012 and associated Health and Safety executive (HSE) guidance.

Hazardous material clean/decontamination:

- Air conditioning units will require de-gassing by competent contractors to prevent accidental release of ozone-depleting substances;
- Environmental clean of the building will include removal of hypodermic needles, dead birds, and pigeon excrement; and
- Operatives will use appropriate Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE) and follow enhanced hygiene protocols.

Soft stripping of building:

- Soft stripping of building, removal of non-structural materials (excluding large plant items – removed during demolition works);

- Removal of all remaining furniture and fixtures, doors, frames, skirting, architraves, window boards, built-in units, and electrical fittings;
- Use of handheld tools including pry bars, crow bars, mallets, bolt croppers, reciprocating saws, and battery-powered grinders;
- Floor coverings assessed for asbestos content before removal;
- Use of internal lift shafts and designated drop zones for debris removal; and
- D-Rig excavator with selector grab will segregate and load waste into skips.

**Demolition of the former district heating:**

- Demolition of the former district heating redundant district heating buildings and cantilevered nib and storage cells; and
- This will be completed using standard demolition excavators (D-Rig) with rotating concrete and metal cutting jaws.

**Erection of scaffold wrap enclosure around the tower and edge protection at each lift:**

- Erection of scaffold wrap enclosure around the tower to minimise the risk of debris and dust falling outside the site boundary;
- Scaffold erected in 2m lifts;
- Scaffold will be fully encapsulated with debris fans and monoflex sheeting; and
- Edge protection will be provided at each lift and to the lift shaft debris chutes.

**Demolition of all structure above ground level, with retainment of existing concrete walls below ground level.**

- Demolition of the tower to ground level to Sackville Street;
- Top-down demolition method using tower crane, Brokk demolition robot, and D-Rig excavators. Internal walls and structural elements removed floor by floor;
- Tower crane used to lift Brokk demolition robot and equipment to roof and removal of structural elements;
- External panels and staircases lifted out;
- Pre-cast concrete walls, cladding panels, and floor slabs will be cut and lifted out using the tower crane;
- In-situ reinforced concrete elements will be demolished using Brokk or mini excavators;
- Debris will be placed down lift shaft chutes and removed by excavator for recycling;
- Scaffold will be progressively struck as demolition proceeds;
- Final 2–3 storeys will be demolished using high reach D-Rig;
- Segregation and processing of all arisings prior to removal off site to an approved recycling facility for further processing and re-use; and
- A pump within the basement of the tower will be used to ensure that the basement does not flood.

2.3.9 The aforementioned activities will be confirmed by the demolition contractor once on board.

**Plant and Equipment**

2.3.10 The following plant and equipment are anticipated to be used during the demolition works:

- D-Rig excavators with hydraulic attachments;
- Brokk demolition robots;
- Tower crane;
- Mini excavators and skid steers;
- Dust Boss suppression units;
- Two-way radios;
- Temporary lighting;
- CCTV towers;
- Dedicated skips with secure storage, and segregated waste streams;
- Dust suppression systems (water sprays);
- Mobile access platforms and scaffold towers; and
- Tipplers.

2.3.11 Based on the demolition works, Table 2-2 provides assumptions on the quantity of the plant and equipment and the estimated percentage of time they will be on during working hours.

**Table 2-2 Assumed quantity of equipment and time on during working hours**

| Equipment Type                | Estimated Quantity | Estimated % On-Time | Basis / Notes                                                                                          |
|-------------------------------|--------------------|---------------------|--------------------------------------------------------------------------------------------------------|
| Brokk Demolition Robot        | 1-2                | 60–75%              | Used intensively during top-down internal structural removal. Operates continuously with short breaks. |
| D-Rig Excavators              | 2-3                | 50–65%              | Used for soft strip waste handling, external demolition, and loading arisings.                         |
| Tower Crane                   | 1                  | 30–50%              | Intermittent use for lifting Brokk, panels, and large elements. Idle between lifts.                    |
| Mini Excavators / Skid Steers | 2-3                | 40–60%              | Used for internal debris handling and basement clearance.                                              |
| Dust Boss / Suppression Units | 2-4                | 70–90%              | Typically run continuously during demolition to control dust emissions.                                |
| Tipplers                      | 8                  | N/A                 | N/A                                                                                                    |

**Access and Demolition Traffic**

- 2.3.12 Current traffic estimates anticipate up to 1,800 total trips (primarily Heavy Goods Vehicles (HGVs) across the 88-week demolition works, equating to 20 a week or four a day.
- 2.3.13 It is anticipated that demolition traffic will be routed to and from A57 Mancunian Way to the south of the site as the closest major road providing routes in and out of the city centre.
- 2.3.14 The route for vehicles into the service yard at the rear of the building is via a left turn onto Drover Lane from Sackville Street, which is one-way. Sackville Street can be directly accessed from A57 Mancunian Way from the slip road to the south of the site, as shown in Figure 2-6.

- 2.3.15 The route for vehicles leaving the service yard is via Drover Lane, turning left onto Sackville Street. From Sackville Street, vehicles can be routed via Charles Street and A34 Princess Street to join A57 Manuncian Way, as shown in Figure 2-7.
- 2.3.16 Careful traffic management and co-ordination of users of Drover Lane will be required during the demolition of Faraday Tower.
- 2.3.17 Vehicular gates will be provided to the service yard at the rear of the building.

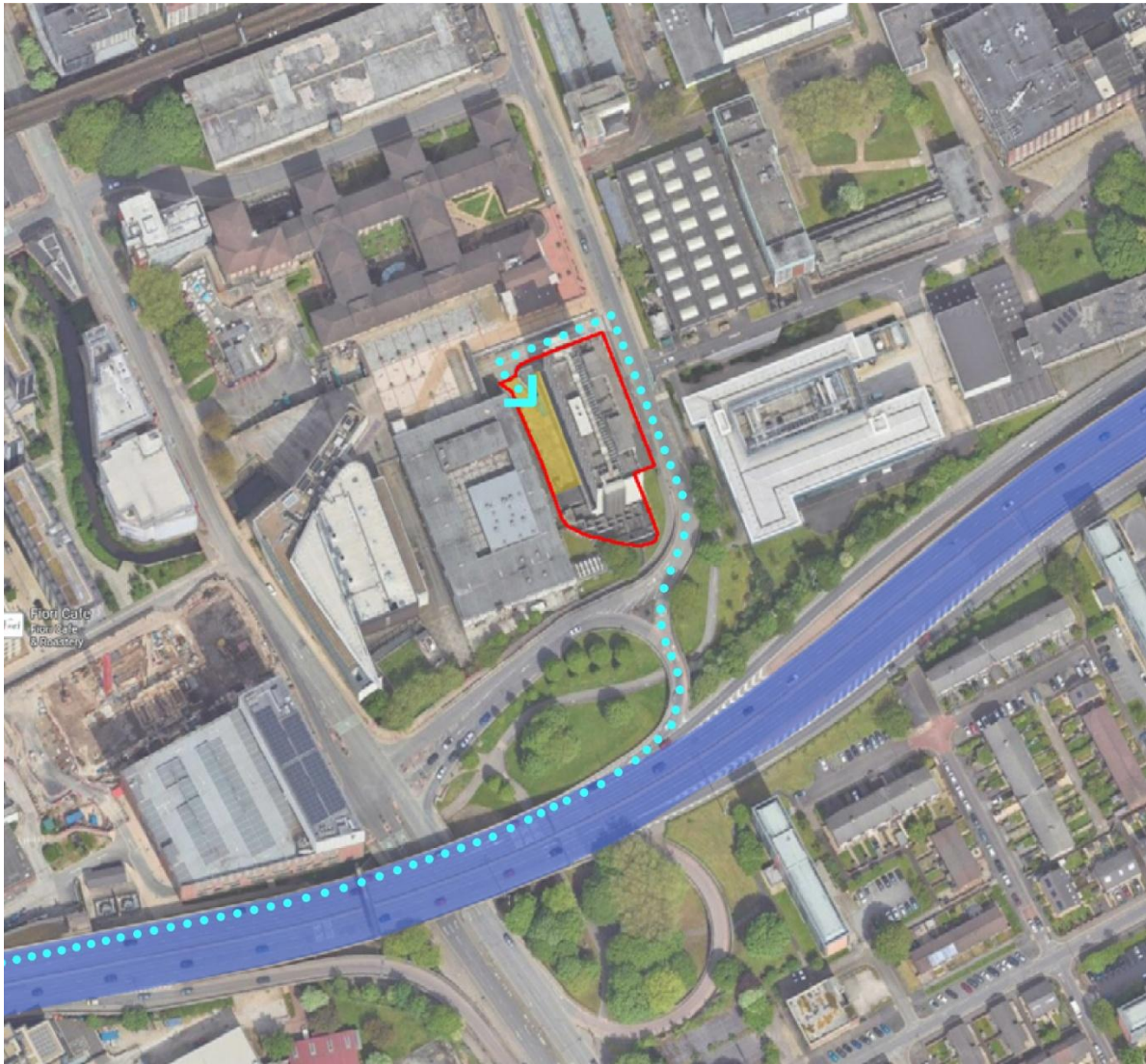


Figure 2-6 Anticipated demolition traffic route to the site

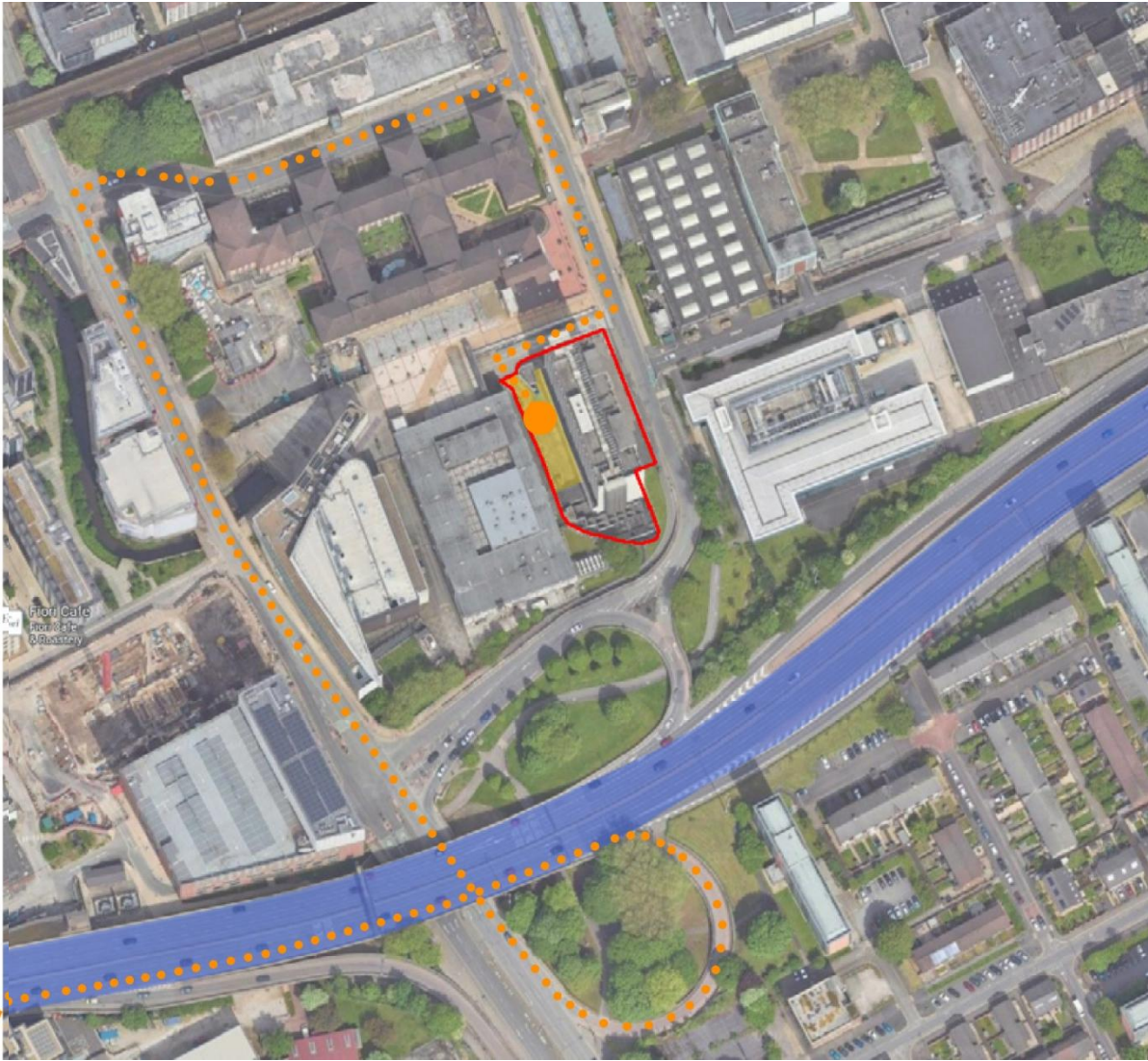


Figure 2-7 Anticipated demolition traffic route leaving the site

Working Hours

- 2.3.18 The anticipated working hours for the proposed project are presented below:
  - 07:00 to 18:00 Monday to Friday;
  - 08:00 to 13:00 Saturday; and
  - No work on Sundays or Bank Holidays.

Construction Environmental Management Plan.

- 2.3.19 Commitment to a detailed CEMP will be secured via condition, and its content will be agreed with MCC in its capacity as the local planning authority prior to the commencement of works. The detailed CEMP will be developed by the appointed contractor and will include roles and responsibilities, control measures and activities to be undertaken to manage environmental effects.
- 2.3.20 Relevant environmental commitments made within the ES will be incorporated into the detailed CEMP. A summary of all recommended measures is provided in Chapter 8 Residual Effects and Conclusions of this ES.

Flood Risk

- 2.3.21A Flood Risk Assessment (FRA) has been prepared to support the planning application in accordance with the National Planning Policy Framework (NPPF) (December, 2024) and the supporting Planning Practice Guidance (PPG). The site is located in Flood Zone 3 (high risk), However, the anticipated modelled flood levels and the ground floor level of the existing building indicates that it should not be affected. Given this, it is considered that the risk to the proposed project from fluvial (river) flooding is low. The FRA also indicates that the risk of flooding from pluvial sources, tidal waters, reservoirs, sewers, groundwater, or from other sources is not significant.
- 2.3.22It is understood that there is a culverted section of the River Medlock which runs around the southern and western boundaries of the site, this is expected to sit outside the boundary retaining walls and has been captured as part of the dimensional survey work for the site. A River Medlock culvert survey has been undertaken to clarify the position of the existing River Medlock culvert and inform any associated constraints in relation to the proposed demolition works.

Drainage

- 2.3.23The proposed project will not generate any foul drainage flows. The surface water drainage proposals for the development are based upon installing drainage channels, gullies and guttering that will collect the runoff from the ground floor and discharge this runoff via the existing below ground drainage system that serves the Faraday Tower in its existing form. It is anticipated that the proposed project will have a negligible impact on the below ground drainage systems in the permanent condition.

Waste Management

- 2.3.24As stated in the DAS, the University is a voluntary member of the Halving Waste to Landfill Construction Commitment with the Waste and Resources Action Programme (WRAP), aiming to reduce waste associated with construction, demolition, and excavation sent to landfill. The following target is outlined: *‘During the demolition of existing buildings, a Demolition Recovery Index (DRI) of at least 80% is achieved, with the aim of exceeding 90% (excluding asbestos and asbestos contaminated material removed from the existing building)’*. A Site Waste Management Plan has been prepared and included in the application documentation in line with this.

2.4 ALTERNATIVES AND DESIGN EVOLUTION

- 2.4.1Schedule 4 of the 2017 EIA Regulations requires that an ES includes *‘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’*.
- 2.4.2It is widely regarded as good practice to consider alternatives as it results in a more robust application for planning permission, and it facilitates the decision-making process.
- 2.4.3The approach to the consideration of alternatives for a project is to firstly consider the “do nothing” approach, identifying the environmental implications for the site and surrounding area should the site remain in its existing condition. Secondly, alternative sites and designs are considered.

The ‘Do Nothing’ Alternative

- 2.4.4The circa 50+ year old Faraday Tower has reached the end of serviceable life and following detailed structural inspections it has been established that the refurbishment or re-use of the building is not viable as the structural integrity cannot be relied upon. Therefore, demolishing the Faraday Tower has been determined to be the only suitable economically viable solution.

Alternative Sites

- 2.4.5When considering at what level of detail to consider alternatives, the recommendations are for only those alternatives which are practical i.e., those which fulfil the criteria of need and purpose. With this in mind, no alternative sites were considered for the proposed project due to the nature of the project.

Design Evolution

- 2.4.6Due to the nature of the proposed project, no alternative designs have been considered.

2.5 REFERENCES

- Stationery Office (2017). The Town and Country Planning (Environmental Impact Assessment) Regulations 2017.
- UK Government (2018). The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018.

2.6 ABBREVIATIONS

| Term   | Definition                                                   |
|--------|--------------------------------------------------------------|
| ACM    | Asbestos-Containing Materials                                |
| CEMP   | Construction Environmental Management Plan                   |
| DAS    | Design and Access Statement                                  |
| DRI    | Demolition Recovery Index                                    |
| EIA    | Environmental Impact Assessment                              |
| ES     | Environmental Statement                                      |
| FRA    | Flood Risk Assessment                                        |
| HGV    | Heavy Goods Vehicle                                          |
| HSE    | Health and Safety Executive                                  |
| MCC    | Manchester City Council                                      |
| NDHA   | Non-Designated Heritage Asset                                |
| NPPF   | National Planning Policy Framework                           |
| PPE    | Personal Protective Equipment                                |
| PPG    | Planning Practice Guidance                                   |
| RPE    | Respiratory Protective Equipment                             |
| UKAS   | United Kingdom Accreditation Service                         |
| UNMIST | University of Manchester Institute of Science and Technology |
| WRAP   | Waste and Resources Action Programme                         |



### 3 METHODOLOGY

#### 3.1 INTRODUCTION

3.1.1 This chapter provides an overview of the Environmental Impact Assessment (EIA) process. It outlines the EIA methodology undertaken to assess the potentially significant environmental effects of the proposed project, which are documented in this Environmental Statement (ES).

#### 3.2 APPROACH TO THE ENVIRONMENTAL IMPACT ASSESSMENT

- 3.2.1 The ES is a publicly available document. The ES will allow Manchester City Council (MCC), other statutory consultees and members of the public to understand the likely significant effects of the proposed project, ahead of the planning application being determined.
- 3.2.2 The ES has been prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (hereafter referred to as “the EIA Regulations”) and with due regard to the following good practice guidance:
- Ministry of Housing, Communities and Local Government (MHCLG), Planning Practice Guidance: Environmental Impact Assessment (MHCLG (formerly known as Department for Levelling Up, Housing and Communities DLUHC), 2014 (amended in 2024));
  - Institute and Environmental Management and Assessment (IEMA), Delivering Proportionate EIA: A Collaborative Strategy for Enhancing UK Environmental Impact Assessment Practice (IEMA, 2017);
  - IEMA, Environmental Impact Assessment Guide to Shaping Quality Development, (IEMA, 2015); and
  - IEMA, Guidelines for Environmental Impact Assessment, (IEMA, 2004 (amended 2006)).

#### 3.3 SCOPE OF THE ENVIRONMENTAL IMPACT ASSESSMENT

##### The EIA Regulations

- 3.3.1 An ES must meet the requirements specified in Regulation 18 of the EIA Regulations and contain the information specified in Schedule 4 that is relevant to the specific characteristics of the particular development and to the environmental features likely to be significantly affected.
- 3.3.2 Table 3-1 lists the information specified in Schedule 4, along with the section of the ES where this information is provided (where applicable). Further information on the ES scope is provided in the subsequent sections of this ES chapter.

Table 3-1 Information specified in Schedule 4 of the EIA Regulations for inclusion in an ES

| Item | Information specified in Schedule 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Section of this ES                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| 1    | A description of the development, including in particular: <ul style="list-style-type: none"><li>a. a description of the location of the development;</li><li>b. a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;</li><li>c. a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used; and</li></ul> | ES Volume I: Chapter 2<br>Project Description |

| Item | Information specified in Schedule 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Section of this ES                                                                                                                                           |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | d. an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                              |
| 2    | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ES Volume I: Chapter 2<br>Project Description                                                                                                                |
| 3    | A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ES Volume I: Chapter 4-6                                                                                                                                     |
| 4    | A description of the factors specified in Regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ES Volume I: Chapter 4-6                                                                                                                                     |
| 5    | <p>A description of the likely significant effects of the development on the environment resulting from, inter alia:</p> <ul style="list-style-type: none"><li>a. the construction and existence of the development, including, where relevant, demolition works;</li><li>b. the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;</li><li>c. the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;</li><li>d. the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);</li><li>e. the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;</li><li>f. the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;</li><li>g. the technologies and the substances used; and</li></ul> <p>The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the environmental protection objectives established at Union or Member State level which is relevant to the project, including in particular those established under Council Directive 92/43/EEC(a) and Directive 2009/147/EC(b).</p> | ES Volume I: Chapter 2<br>Project Description<br>ES Volume I: Chapter 4-6<br>ES Volume I: Chapter 7<br>Cumulative and<br>Interactive Effects                 |
| 6    | A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ES Volume I: Chapter 4-6                                                                                                                                     |
| 7    | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ES Volume I: Chapter 4-6<br>ES Volume I: Chapter 7<br>Cumulative and<br>Interactive Effects<br>ES Volume I: Chapter 8<br>Residual Effects and<br>Conclusions |

| Item | Information specified in Schedule 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Section of this ES                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8    | A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to EU legislation such as Directive 2012/18/EU(c) of the European Parliament and of the Council or Council Directive 2009/71/Euratom(d) or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies. | A dedicated assessment is not included. The proposed project is demolition works only, and the site will be left in a safe and secure condition and is unlikely to produce a significantly elevated risk of accidents or natural disasters. This topic was scoped out of the EIA during the EIA scoping process. See subsequent sections of this chapter for further details. A flood risk assessment (FRA) has been submitted alongside the application. |
| 9    | A non-technical summary of the information provided under Items 1 to 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ES Non-Technical Summary                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 10   | A reference list detailing the sources used for the descriptions and assessments included in the Environmental Statement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ES Volume I: Chapter 4-6                                                                                                                                                                                                                                                                                                                                                                                                                                  |

Consultation and Agreement of Technical Scope

- 3.3.3 Regulation 15 of the EIA Regulations indicates that an applicant may ask the relevant planning authority, in this case MCC, to state in writing an opinion as to the information to be provided in the ES (i.e. a “Scoping Opinion”).
- 3.3.4 A scoping exercise was undertaken to identify potentially significant environmental issues relating to the site and the proposed project. This ensured that these issues were subject to an appropriate level of assessment.
- 3.3.5 The EIA scoping report (Appendix 3-A, ES Volume II) summarised the findings of the scoping exercise and set out the proposed scope of the EIA. The scoping report was submitted to MCC on the 16<sup>th</sup> of May 2025, and MCC subsequently provided a scoping opinion on 17<sup>th</sup> June 2025 (Appendix 3-B, ES Volume II).
- 3.3.6 Through the EIA scoping process, the following disciplines were formally scoped into the EIA:
  - Air Quality;
  - Noise and Vibration; and
  - Built Heritage.
- 3.3.7 It was agreed that the topic of Human Health could be addressed across several ES chapters, as a cross-discipline issue.
- 3.3.8 Through the EIA scoping process, the following disciplines were formally scoped out of the EIA:
  - Major Accidents and/or Natural Disasters;
  - Waste Management;
  - Wind Microclimate;
  - Daylight, Sunlight, Overshadowing and Solar Glare;
  - Water Resources and Flood Risk;

- Ground Conditions;
- Archaeology;
- Traffic and Transportation;
- Ecology and Biodiversity;
- Landscape and Trees;
- Townscape and Views;
- Socio-Economics; and
- Climate Change and Greenhouse Gas Emissions.

Temporal Scope

Overview

- 3.3.9 The temporal scope of the EIA comprises the enabling works and demolition works for the proposed project. The EIA has considered the environmental effects arising from these activities.
- 3.3.10 The significance of the effects identified is based on the magnitude of any changes compared to the baseline and the importance or sensitivity of the resource or receptor affected by the changes.

Baselines Considered in the ES

Existing baseline (2025)

- 3.3.11 Environmental effects will be described in terms of the extent of change to the baseline assessment. This baseline is generally taken to mean the conditions that are prevalent at the time of the assessment, i.e. 2025.

Future baseline (2027)

- 3.3.12 A review of how the environmental baseline conditions could change, without the proposed project coming forward, has additionally been completed by each technical specialist. Consideration of a future baseline at the year of completion allows assessment authors to consider how the baseline conditions they describe could be expected to change over the time periods being assessed. This provides important context to the assessment of effects and is considered in determining likely effect significance, where necessary. 2027 is used as a benchmark for this review, as this is when the proposed project is scheduled to be completed.

Demolition Period and Completion Year

- 3.3.13 An indicative demolition programme has been produced for the proposed project. Demolition works for the proposed project will commence in March 2026 and be completed by December 2027. Detail on the demolition programme is provided in Chapter 2 Project Description.

Spatial Scope

- 3.3.14 The spatial extent of the EIA is defined by the geographical area potentially affected by the proposed project. The definition of the spatial scope has taken account of:
  - The footprint of the proposed project defined by the red line boundary;
  - The nature of the existing baseline environment;
  - The manner in which effects are likely to be propagated; and

- The wider area affected by the demolition works.
- 3.3.15 For the proposed project, the geographical extent of the assessment will include the site and its neighbours, as well as any sensitive receptors in the wider area. The spatial scope for each assessment has been defined based on a combination of desk study, existing survey data, surveys undertaken by the project team, consultation, and professional experience.

3.4 ASSESSMENT OF EFFECTS

Types of Effect

- 3.4.1 The identification of effects within the EIA process has been completed with reference to the EIA Regulations and good practice guidance. The following types of effects have been considered in undertaking the EIA for the proposed project:
- Direct effects – effects that arise from activities that form an integral part of the project (e.g., land take);
  - Indirect or secondary effects – effects that arise from activities not explicitly forming part of the project (e.g., noise changes due to an increase or decrease in road traffic flows on existing off-site roads);
  - Cumulative effects – these arise from the combination of the proposed project in conjunction with other development projects, or the interaction of a number of effects. These include effects of a different nature at a particular location; at different locations but affecting the same resource; of the same nature at different locations; reoccurring over a period of time. The cumulative effect of two or more effects, which may be non-significant by themselves, can be significant on one receptor;
  - Short-term, medium-term, and long-term effects, as defined below:
    - o Short-term effects are those that would be of short duration and would occur for up to 2 years;
    - o Medium-term effects are those that occur for a period of between 2-10 years; and
    - o Long-term effects are those that occur for 10 years or more and include permanent effects.
  - Permanent effects – effects that result from an irreversible change to the baseline environment or which persist for the foreseeable future;
  - Temporary effects – effects that persist for a limited period only and possibly reverts to an original or identified baseline state;
  - Beneficial and adverse effects – having a beneficial or adverse influence on receptors and resources; and
  - Spatial coverage / transboundary effects – spatial extent of effects, i.e. at a local (to the site & immediate surroundings) district (within local authority / borough), regional (north-west England) or national scale.

Determining Significance

- 3.4.2 The EIA Regulations require that the ES reports on the likely significant effects of a proposed project on the environment. Although there is no statutory definition of what constitutes a significant effect, it is clear that the principal purpose of identifying the significant effects of a project is to allow the decision maker to take the effects into account when considering whether or not permission should be granted.
- 3.4.3 For the purposes of this ES, an “impact” is a change to the baseline from the proposed project, while an “effect” is the result of that impact on the resource or the receptor (of a given sensitivity). The way in which the significance of an effect is determined will vary for each environmental topic area, but in broad terms it may be described as the magnitude of the impact and the value or sensitivity of the resource or the receptor affected.

- 3.4.4 In general, significance of effect has been defined as being major, moderate, minor, or negligible, whereby major and moderate are considered to be “significant” and minor or negligible considered “not significant” (Table 3-2). However, it should be noted that some technical assessments will adopt guidance relevant to their respective disciplines which may classify some minor effects as significant. As a result, each technical chapter includes a description of the adopted effect classification approach.

Table 3-2 Matrix for determining effect significance

|                      |            | Magnitude of change/impact |            |                |            |
|----------------------|------------|----------------------------|------------|----------------|------------|
|                      |            | Large                      | Medium     | Small          | Negligible |
| Receptor sensitivity | High       | Major                      | Major      | Moderate/Minor | Negligible |
|                      | Moderate   | Major                      | Moderate   | Minor          | Negligible |
|                      | Low        | Moderate/Minor             | Minor      | Minor          | Negligible |
|                      | Negligible | Negligible                 | Negligible | Negligible     | Negligible |

3.5 MITIGATION, RESIDUAL EFFECTS, AND MONITORING REQUIREMENTS

- 3.5.1 Where possible, a project will achieve environmental enhancement; however, where adverse effects exist, the reduction of effect significance through mitigation will take into consideration the following hierarchy:
- Avoidance of the significant effect;
  - Reduction of the impact and effects;
  - Finding a way to reverse or repair the effect; and, as a last resort; and
  - Compensation (or off-setting).
- 3.5.2 Residual effects (assuming mitigation options are applied) will then be classified by significance, as appropriate.

3.6 DEVELOPMENT ALTERNATIVES

- 3.6.1 Alternatives have been considered for the proposed project. These are discussed in Chapter 2 Project Description of this ES and include:
- The ‘do nothing’ option; and
  - Alternative sites and designs.

3.7 CUMULATIVE EFFECTS

- 3.7.1 Whilst effects that occur in isolation may not be significant, it is possible that significant effects could occur when a number of potential effects are combined. In light of this, the EIA process has considered the following potential cumulative effect scenarios:
- Inter-project cumulative effects – from the proposed project interacting with other existing and/or approved projects in the local area; and
  - Intra-project cumulative effects – generated as a result of the interaction of two or more predicted effects on a receptor/resource.
- 3.7.2 The cumulative schemes for assessment were formally agreed with MCC as part of the EIA Scoping process. The schemes to be addressed as part of the inter-project cumulative effects assessment are discussed in detail in Chapter 8 Cumulative and Interactive Effects.

3.8 LIMITATIONS AND ASSUMPTIONS

- 3.8.1 Limitations and assumptions are identified within each of the technical topic chapters, where relevant, to the assessments undertaken.
- 3.8.2 The following general assumptions have been made:
- Land uses adjoining the site remain unchanged, with exception of those developments identified as being cumulative schemes. Should there be a separate proposal in the future to change nearby land uses, they will be subject to their own approval for consent and environmental assessment as required;
  - Information provided by third parties, including publicly available information and databases, are correct at the time of publication. This includes baseline condition information which have been sourced from various parties/reports, including historical data and on-site surveys where appropriate;
  - Baseline conditions are considered accurate at the time of data collection; however, due to the dynamic nature of the environment, conditions have the potential to change by the time of demolition, and upon completion of the proposed project;
  - Impact assessments for each EIA topic are based on the most up to date guidance for that discipline at the time of the EIA being undertaken;
  - Assessments have been based on the plans and details submitted as part of the planning application; and
  - The assessment of cumulative effects has been reliant on the availability of information and planning documentation for each cumulative scheme identified during the EIA process.

3.9 REFERENCES

- IEMA (2004), (amended 2006) Guidelines for Environmental Impact Assessment.
- IEMA (2015) Environmental Impact Assessment Guide to Shaping Quality Development.
- IEMA) (2017) Delivering Proportionate EIA: A Collaborative Strategy for Enhancing UK Environmental Impact Assessment Practice.
- Ministry of Housing, Communities and Local Government (MHCLG, formerly DLUHC) (2014), (amended 2020) Planning Practice Guidance: Environmental Impact Assessment.

3.10 ABBREVIATIONS

| Term  | Definition                                                  |
|-------|-------------------------------------------------------------|
| DLUHC | Department for Levelling Up, Housing and Communities        |
| EIA   | Environmental Impact Assessment                             |
| ES    | Environmental Statement                                     |
| FRA   | Flood Risk Assessment                                       |
| IEMA  | Institute of Environmental Management and Assessment        |
| ISEP  | Institute of Sustainability and Environmental Professionals |
| MCC   | Manchester City Council                                     |
| MHCLG | Ministry of Housing, Communities and Local Government       |

3.11 LIST OF APPENDICES (VOLUME II)

| Reference | Title               |
|-----------|---------------------|
| 3-A       | EIA Scoping Report  |
| 3-B       | EIA Scoping Opinion |



# 4 AIR QUALITY

## 4.1 INTRODUCTION

- 4.1.1 This chapter of the ES assesses the likely environmental effects of the proposed project with respect to air quality. This chapter also describes the methods used to assess the effects; the baseline conditions currently existing at the site and surrounding area; the mitigation measures required to prevent, reduce or offset any significant adverse effects; and the likely residual effects after these measures have been adopted.
- 4.1.2 Cumulative effects associated with air quality have additionally been considered within the ES and can be found in Chapter 7 Cumulative and Interactive Effects.

## 4.2 METHODOLOGY AND ASSESSMENT CRITERIA

### EIA Scoping

- 4.2.1 An EIA Scoping Report was submitted to Manchester City Council (MCC) on 16<sup>th</sup> May 2025 which set out the assessment methodology and technical scope for this chapter. MCC’s Scoping Opinion received on 17<sup>th</sup> June 2025 confirmed agreement with the proposed methodology.

### Baseline Study Methodology

- 4.2.2 Baseline data has been gathered from the following sources:
  - Air quality data for MCC and Greater Manchester Combined Authority (GMCA), including a review of the most recent MCC air quality annual status report and Clean Air Plan monitoring data (GMCA, 2023);
  - Background pollution maps from Defra’s Local Air Quality Management (LAQM) website (Defra, 2021);
  - Environment Agency Pollution Inventory (EA, 2025) and;
  - Aerial photography from Google Maps.
- 4.2.3 A baseline year of 2023 has been used for this assessment. 2023 is considered the most representative typical baseline year as it is the latest year with fully ratified air quality monitoring data representing the post-pandemic baseline, following the Institute of Air Quality Management (IAQM) recommendation.

### Assessment Approach

- 4.2.4 For the purpose of this assessment the following sources of effects will be considered:
  - The source of demolition dust impacts on dust soiling and human health effects during the demolition activities of the proposed project has been assessed in line with the IAQM guidance on the assessment of dust from demolition and construction (IAQM, 2024);
  - Emissions from non-road mobile machinery (NRMM) vehicle exhausts during the demolition activities in line with the IAQM guidance; and
  - The emissions from vehicles associated with the proposed project during the demolition activities in line with the EPUK/IAQM guidance.

### Demolition Dust Assessment Methodology

- 4.2.5 Potential demolition dust effects have been assessed in accordance with the IAQM Guidance on the Assessment of Dust from Demolition and Construction (IAQM, 2024). The methodology recommended in the guidance in summarised below.
  - A screening assessment should be undertaken to identify the need for detailed assessment. A detailed assessment
    - will be required where there is:*
      - A human receptor within:
        - 250 m of the site boundary; or
        - 50 m of the route(s) used by construction vehicles (including demolition) on the public highway, up to 250 m from the site entrance(s).
      - An ecological receptor within:
        - 50 m of the site boundary; or
        - 50 m of the route(s) used by construction vehicles (including demolition) on the public highway, up to 250 m from the site entrance(s).
  - If detailed assessment is required, the risk of dust impacts and effects should be assessed by:
    - Defining the potential dust emission magnitude;
    - Defining the sensitivity of the area; and
    - Assessing the risk of impacts. Criteria for defining the dust impacts are shown in Appendix 4-A, ES Volume II.
  - Determine site-specific mitigation for each of the four possible construction activities; and
  - Examine residual effects to determine whether or not these are significant.
- 4.2.6 This assessment has focused on the demolition works only, as there are no construction works proposed. The IAQM guidance recommends that the significance of any adverse effects is reported post-mitigation, assuming all actions to avoid or reduce environmental effects are an inherently part of the proposed project.
- 4.2.7 Appendix 4-A, ES Volume II, provides the demolition assessment methodology in full.

### Demolition Traffic Emissions

- 4.2.8 A screening assessment has been undertaken with reference to the following EPUK and IAQM Air Quality Guidance for Planning (EPUK and IAQM, 2017) indicative criteria. As the site is located within an air quality management area (AQMA), a detailed assessment of the air quality impacts of demolition vehicles is required if the demolition traffic meets any of these criteria:
  - A change of Light Duty Vehicle (LDV) flows of more than 100 annual average daily traffic (AADT) (within an AQMA); and/or
  - A change of Heavy Duty Vehicle (HDV) flows of more than 100 AADT (within an AQMA).
- 4.2.9 Traffic generated by the proposed project during demolition activities has been provided by Curtins. There is anticipated to be an increase in AADT of 4 HDVs and less than 100 LDVs during the demolition works.

Demolition Plant Emissions

- 4.2.10
- NRMM refers to mobile machines, transportable industrial equipment or vehicles which are fitted with an internal combustion engine and are not intended for transporting goods or passengers on roads.
- 4.2.11
- Exhaust emissions of NOx and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) from NRMM associated with construction (including demolition works) sites, may have a significant adverse effect on local air quality. In line with the MCC Air Quality & Planning Technical Guidance there is a requirement for all NRMM associated with demolition works should meet EU Stage IV of EU directive 97/68/EC, and Stage IIIA as a minimum.

Assessment of Effects

Receptor Sensitivity

- 4.2.12
- The sensitivity of receptors has been determined following the IAQM guidance, with regard to the assessment of dust from demolition activities only. The receptor sensitivity methodology used in this assessment is presented in full in Table 4-A-1 of Appendix 4-A, ES Volume II.
- 4.2.13
- The first stage of the assessment involves screening to determine whether there are any sensitive receptors within the threshold distances defined by the IAQM guidance (paragraph 4.2.5).
- 4.2.14
- For the sensitivity of people and their property to soiling, the IAQM guidance recommends that the air quality practitioner uses professional judgement to identify where on the spectrum between high and low the sensitivity a receptor lies, taking into account the general principles set out in the guidance (presented in Table 4-A-1 of Appendix 4-A, Volume II). For the sensitivity of people to the health effects of Particulate Matter (PM<sub>10</sub>), the IAQM guidance recommends that the air quality practitioner assumes that there are three sensitivities (high, medium, low) based on whether or not the receptor is likely to be exposed to elevated concentrations over a 24-hour period, consistent with the Defra’s advice for local air quality management.
- 4.2.15
- Worst-case existing sensitive receptors within 250 m of the site boundary have been identified. These comprise high sensitivity receptors (residential) and medium sensitivity receptors (higher educational, commercial). To ensure the assessment is conservative, all existing sensitive receptors have been considered high sensitivity. The existing high sensitive receptors that have been identified are the following:
  - Weston Hall, student residential located 50 m north of the site:
  - Echoes day nursery located within Weston Hall, located approximately 95 m north-west of the site; and
  - Vita Student Residential, Circle Square student residential apartments located approximately 110 m west of the site.
- 4.2.16
- Visual representation is shown in Figure 4-1 and outlined within Table 4-7.
- 4.2.17
- With regards to ecological effects, there are no sensitive ecological designations within 250 m of the site. As such, impacts on ecological receptors have not been considered further.

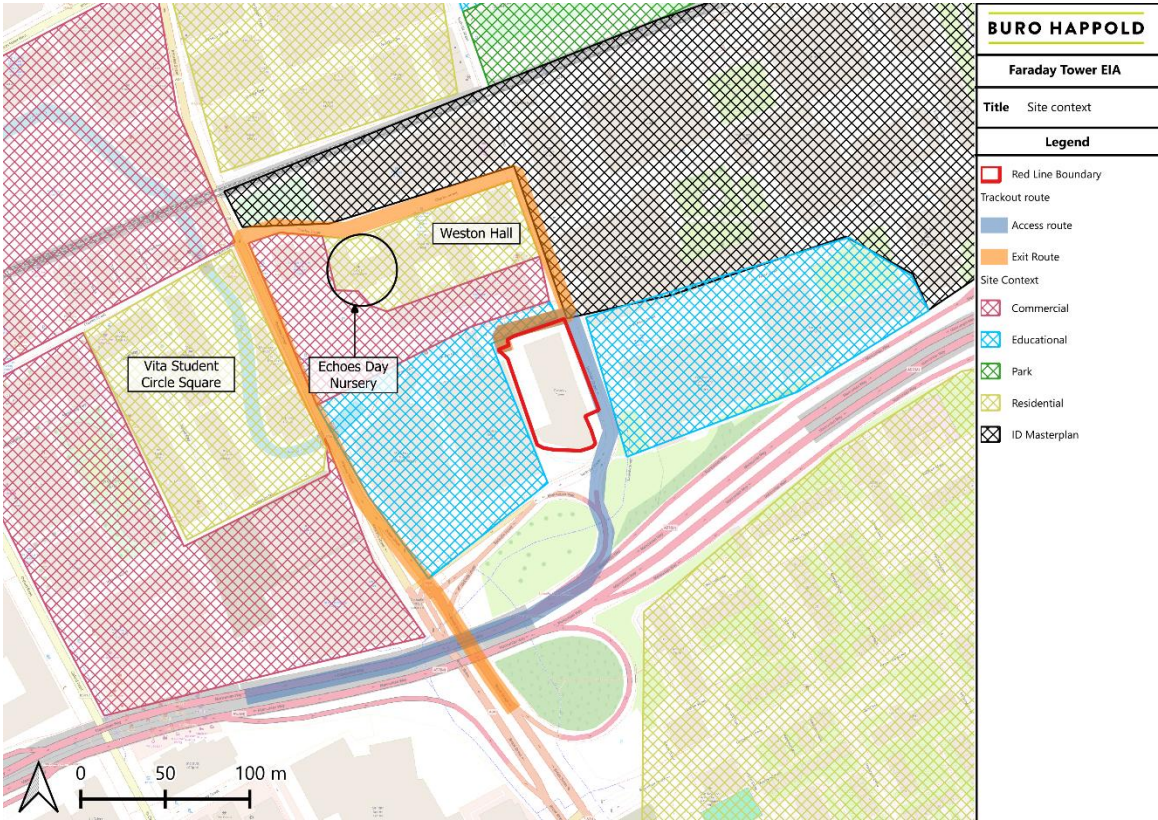


Figure 4-1 Existing surrounding site context

Magnitude of Change/Impact

Demolition Dust

- 4.2.18
- The IAQM guidance descriptors for impact and effect have been used throughout this ES chapter. An impact is the change in the concentration of an air pollutant, as experienced by a receptor. This may have an effect on the health of a human receptor, depending on the severity of the impact and other factors that may need to be taken into account.
- 4.2.19
- The impact magnitude (small, medium, large) of dust emissions for the demolition has been determined based on the IAQM guidance, indicative thresholds, information available relating to the proposed project, and expert judgement.
- 4.2.20
- The risk of dust effects arising (negligible, low, medium, high) has been based on the relationship between the dust emission impact magnitude and the sensitivity of the area (high, medium, low sensitivity). The risk of impact is then used to determine the mitigation requirements. Descriptors for magnitude of impact used in this assessment of demolition dust are given in the IAQM guidance on the assessment of dust from demolition and construction. The methodology is detailed in Appendix 4-A, ES Volume II.

Demolition Traffic

- 4.2.21
- For this assessment, the approach recommended in the EPUK/IAQM guidance (IAQM, 2017) has been used to describe the impacts and effects at individual existing sensitive receptors.
- 4.2.22
- In the first instance, the EPUK/IAQM guidance provides indicative criteria for when a detailed assessment is required as outlined within paragraph 4.2.8.

4.2.23 Where these criteria are exceeded and a detailed assessment is required (see paragraph 4.2.8), IAQM land use planning and development control guidance provides a framework for describing the degree of impact resulting from a change in air pollutant concentration. The magnitude of the potential impact is derived by considering both the total concentration and the change in concentration relative to the Air Quality Assessment Level AQAL at the receptor location, as demonstrated in Table 4-1.

Table 4-1 Long term impact magnitude descriptors for individual receptors

| Long term average concentration at receptor in assessment year | % Change in concentration relative to Air Quality Assessment Level (AQAL) |             |             |             |
|----------------------------------------------------------------|---------------------------------------------------------------------------|-------------|-------------|-------------|
|                                                                | 1                                                                         | 2-5         | 6-10        | >10         |
| 75% or less of AQAL                                            | Negligible                                                                | Negligible  | Slight      | Moderate    |
| 76-94% of AQAL                                                 | Negligible                                                                | Slight      | Moderate    | Moderate    |
| 95-102% of AQAL                                                | Slight                                                                    | Moderate    | Moderate    | Substantial |
| 103-109% of AQAL                                               | Moderate                                                                  | Moderate    | Substantial | Substantial |
| 110% or more of AQAL                                           | Moderate                                                                  | Substantial | Substantial | Substantial |

Significance Evaluation

Demolition Dust

4.2.24 IAQM guidance recommends that significance criteria are only assigned to the identified risk of dust impacts occurring from a specific construction activity, such as demolition, with appropriate mitigation measures in place. The demolition assessment has defined a risk of impact of dust soiling and human health during demolition and trackout. Mitigation has been recommended based on this level of risk.

Demolition Traffic Emissions

- 4.2.25 For each impact as defined within Table 4-1, a statement has been made as to whether the overall effect is 'Significant' or 'Not Significant'. In line with the EPUK/IAQM guidance, when considering the overall significance, the 'Moderate' or 'Major' ('Substantial') impacts will generally give rise to a significant effect and require mitigation. 'Negligible' or 'Minor' ('Slight') impacts will generally not have a significant effect and do not usually require mitigation, but this depends on a number of other factors including:
- Existing and future air quality in the absence of the proposed project;
  - The extent of current and future population exposure to the impacts;
  - The assumptions adopted when predicting impacts; and hence the likelihood of the identified impacts occurring; and
  - The likely duration of impacts.
- 4.2.26 The significance of effect descriptors use the same terminology as the impact magnitude descriptors as set out within Table 4-1.

4.3 LEGISLATION AND POLICY WHICH HAS INFLUENCED ASSESSMENT OR MITIGATION

National Legislation, Policy and Guidance

The Ambient Air Quality Directive (EU, 2008)

4.3.1 The 2008 Ambient Air Quality Directive (2008/50/EC) set legally binding limits for pollutant concentrations. This directive was made law in England through the Air Quality (Standards) Regulations 2010 (HM Government, 2010). The Regulations were subsequently updated in 2016 (The Air Quality Standards (Amendment) Regulations 2016).

Part IV of the Environment Act (HM Government, 1995)

- 4.3.2 Part IV of the Environment Act 1995 places a duty on the Secretary of State for the Environment to develop, implement and maintain an Air Quality Strategy (AQS) with the aim of reducing atmospheric emissions and improving air quality. The latest AQS for England was published in 2023 (Defra, 2023a) and provides the framework for ensuring the air quality limit values are complied with based on a combination of international, national and local measures to reduce emissions and improve air quality. This includes the statutory duty, also under Part IV of the Environment Act 1995, for local authorities to undergo a process of Local Air Quality Management (LAQM). This requires local authorities to regularly and systematically review and assess air quality within their boundaries against a series of objectives and appraise development and transport plans against these assessments.
- 4.3.3 In areas where air quality objectives are not likely to be met by the relevant target date, local authorities are required to declare an Air Quality Management Area (AQMA) and develop an air quality action plan in pursuit of the air quality objectives. The national air quality objectives relevant to this assessment are detailed in Table 4-2.
- 4.3.4 The Air Quality Objectives (AQOs) are the relevant assessment criteria in the planning process and have therefore been used in this assessment.

Table 4-2 National Air Quality Objectives relevant to the assessment

| Pollutant                               | Objective                                                                                    |
|-----------------------------------------|----------------------------------------------------------------------------------------------|
| Nitrogen dioxide (NO <sub>2</sub> )     | 200µg/m <sup>3</sup> measured as a 1-hour mean, not to be exceeded more than 18 times a year |
|                                         | 40µg/m <sup>3</sup> measured as an annual mean                                               |
| Particulate Matter (PM <sub>10</sub> )  | 50µg/m <sup>3</sup> measured as a 24-hour mean, not to be exceeded more than 35 times a year |
|                                         | 40µg/m <sup>3</sup> measured as an annual mean                                               |
| Particulate Matter (PM <sub>2.5</sub> ) | 20µg/m <sup>3</sup> measured as an annual mean                                               |

The Environment Act 1995, amended 2021 and The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023

- 4.3.5 The Environment Act was amended in 2021, requiring the government to set new targets for PM<sub>2.5</sub>. The subsequent Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 (HM Government, 2023) set the following targets:
- Annual mean PM<sub>2.5</sub> concentration of 10 µg/m<sup>3</sup> by 2040; and
  - At least a 35% reduction in population exposure of PM<sub>2.5</sub> by the end of 2040.

- 4.3.6 The Environment Act 2021 requires the publication of an Environmental Improvement Plan every five years, with progress against the set targets reported on annually. The Environmental Improvement Plan 2023 (Defra, 2023b) sets the following interim target for PM<sub>2.5</sub>:
- Annual mean PM<sub>2.5</sub> concentration of 12 µg/m<sup>3</sup> by 2028; and
  - At least a 22% reduction in population exposure of PM<sub>2.5</sub> by the end of 2028.
- 4.3.7 The PM<sub>2.5</sub> Targets: Interim Guidance was published in 2024 and outlines some actions to be taken by applicants and local authorities in addressing the new PM<sub>2.5</sub> target. Air quality assessment reports need to include evidence of identifying key pollution sources within their schemes and proof of actions taken to minimise PM<sub>2.5</sub> emissions.

**National Planning Policy Framework**

- 4.3.8 The National Planning Policy Framework (NPPF) (MHCLG, 2024) sets out the Government’s planning policy for England. The policies mandate that most new development should provide net gains for biodiversity, prevent waste and pollution, and take proactive action in mitigating and adapting to climate change.
- 4.3.9 With regard to air quality management, Section 9 of the NPPF advises that the environmental impact of transport and traffic should be identified and assessed, whilst mitigating adverse effects to bring about net environmental gains. The document states that the planning system should actively manage patterns of growth, offering a choice of transport modes to reduce air pollution:
- ‘Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health.’*
- 4.3.10 Section 15 of the NPPF states that planning policies should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of AQMAs and Clean Air Zones (CAZ), and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified. Additionally, the NPPF states that planning decisions should ensure that any new development in AQMAs and CAZs is consistent with the local air quality action plan.

**Planning Practice Guidance**

- 4.3.11 Planning Practice Guidance (PPG) (MHCLG, 2019) provides guiding principles on how the planning process can take account of the impact of new development on air quality (Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government, 2024). The PPG states:
- Whether air quality is relevant to a planning decision will depend on the proposed development and its location. Concerns could arise if the development is likely to have an adverse effect on air quality in areas where it is already known to be poor, particularly if it could affect the implementation of air quality strategies and action plans and/or breach legal obligations (including those relating to the conservation of habitats and species). Air quality may also be a material consideration if the proposed development would be particularly sensitive to poor air quality in its vicinity.’*

**Defra Local Air Quality Management Technical Guidance ('LAQM.TG22')**

- 4.3.12 Defra’s LAQM.TG22 (Defra,2022) was published for use by local authorities in their LAQM review and assessment work. The document provides key guidance in aspects of air quality assessment, including screening, use of monitoring data, and use of background data that are applicable to all air quality assessments.

**EPUK and IAQM Air Quality Guidance for Planning**

- 4.3.13 Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM) have published guidance to help ensure that air quality is properly accounted for in the development control process. It clarifies when an air quality assessment should be undertaken, what it should contain, and how impacts should be described and assessed including guidelines for assessing the significance of impacts.

**IAQM Guidance on the assessment of dust from demolition and construction (IA**

- 4.3.14 Guidance on the assessment of dust from demolition and construction has been published by the IAQM. The guidance provides a methodology to determine the dust emission magnitude and provides a series of matrices to determine the risk magnitude of potential dust sources associated with construction activities. This allows for the identification of appropriate mitigation measures that are defined within further IAQM guidance.

**Regional Policy and Guidance**

**The Greater Manchester Strategy (2021-2027)**

- 4.3.15 The Greater Manchester Strategy 2021-2027 (GMCA, 2021) is the GMCA’s plan for recovery and renewal following the pandemic. It provides a clear direction of travel for the city-region, focused on those areas where all parts of the conurbation need to work together to achieve the shared vision of Good Lives for All: that Greater Manchester is a great place to grow up, get on and grow old; a great place to invest, do business, visit and study.
- 4.3.16 With regards to improving the environmental conditions of Greater Manchester, particularly air quality, the following statement is made in the strategy:
- 4.3.17 Greater Manchester’s system-wide priorities:

*‘We will create a carbon neutral Greater Manchester by 2038, with better air quality and natural environment.’*

**Further Relevant Regional Guidance**

- 4.3.18 Further relevant regional guidance includes:
- Greater Manchester Transport Strategy 2040 (TfGM, 2021a) and Our Five-Year Transport Delivery Plan 2021-2026;
  - GMCA 5-year Environment Plan 2025-2030 (GMCA,2025);
  - GMCA Air Quality Action Plan (GMCA, 2021); and
  - GM Clean Air Plan (GMCA, 2023).

Local Policy and Guidance

Manchester Core Strategy (2012)

4.3.19 The Manchester Core Strategy Development Plan (MCC, 2012) is the primary strategic planning document in the City’s Local Development Framework. It outlines the council’s vision for Manchester from 2012 to 2027 and sets out planning policies that aim to help the city achieve the Local Development Framework’s vision.

4.3.20 The Manchester Core Strategy Development Plan has adopted a number of policies relevant to air quality, including the following:

Policy EN 16 (Air Quality)

*‘The Council will seek to improve the air quality within Manchester, and particularly within Air Quality Management Areas, located along Manchester’s principal traffic routes and at Manchester Airport. Developers will be expected to take measures to minimise and mitigate the local impact of emissions from traffic generated by the development, as well as emissions created by the use of the development itself, including from Combined Heat and Power and biomass plants.*

*When assessing the appropriateness of locations for new development, the Council will consider the impacts on air quality, alongside other plan objectives. This includes cumulative impacts, particularly in Air Quality Management Areas.’*

Policy DM 1 (Development Management

4.3.21 Policy DM 1 outlines the key parameters that should be addressed as part of the planning proposal, those relevant to Air Quality include:

*‘Effects on amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation. This could also include proposals, which would be sensitive to existing environmental conditions, such as noise.*

- *Design for health*
- *Vehicular access and parking*
- *Effects relating to biodiversity, landscape, archaeological or built heritage.*
- *Green infrastructure including open space, both public and private.’*

Addendum to Manchester Core Strategy (2024)

4.3.22 The GMCA launched the Places for Everyone Joint Development Plan Document (PfE) (GMCA, 2024) to create a comprehensive, long-term strategy for sustainable growth across nine Greater Manchester districts: Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford, and Wigan. This plan aims to promote sustainable development, support infrastructure development, provide housing and employment and protect environmental assets. The Manchester Core Strategy was updated in March 2024 to align with the Places for Everyone Plan. This ensures that local policies in Manchester are consistent with the regional strategy.

4.3.23 Amendments in Manchester Core Strategy that are relevant to Air Quality include:

CS Policy EN 16 Air Quality

4.3.24 Section to be replaced:

*’, and particularly within Air Quality Management Areas, located along Manchester’s principal traffic routes and at Manchester Airport’ from the first sentence:*

4.3.25 Replaced by PfE Policy JP-S5: Clean Air

1. *‘Policy JP-S5: Clean Air A comprehensive range of measures will be taken to support improvements in air quality, focusing particularly on locations where people live, where children learn and play, where there are impacts on the green infrastructure network and where air quality targets are not being met, including:*

[...]

2. *Determining planning applications having regard to the most recent development and planning control guidance published jointly by the Institute of Air Quality Management (IAQM) and Environmental Protection UK (EPUK), and the most recent IAQM Guidance on the Assessment of Dust from Demolition and Construction, or relevant successor guidance, including the requirement for developers to submit construction management plans as appropriate;*

4. *Requiring applications for developments that could have an adverse impact on air quality to submit relevant air pollution data so that adverse impacts on air quality can be fully assessed and development only permitted where they are acceptable and/or suitable mitigation can be provided;*

[...]

MCC Air Quality and Planning Technical Guidance

4.3.26 One of the actions outlined in the Greater Manchester air quality action plan is to develop air quality and planning guidance. The guidance document (MCC, 2022) aims to encourage developers to follow good practice and to mitigate impacts. It outlines the expectations of MCC with regards to air quality in the planning context for both the construction and operation of a development.

4.3.27 The guidance recommends following IAQM and EPUK guidance when assessing impacts associated with both construction and demolition. It also recommends use of Defra’s damage cost calculations (for additional pollutant population exposure emissions costs) for major developments and/or where there may be a cumulative impact.

4.4 ASSESSMENT LIMITATIONS

4.4.1 Potential effects during demolition are dependent on factors including weather conditions during specific demolition activities, therefore the IAQM methodology uses a risk based approach to identify appropriate mitigation measures to be implemented during the demolition activities of the proposed project. This is assumed to be implemented through appropriate measures such as a Demolition Management Plan (DMP) or equivalent.

4.4.2 There is always some uncertainty regarding the prediction of air quality. This is associated with both the difficulty in predicting the complex atmospheric processes that affect pollutant concentrations and the uncertainties in the input data. However, the professional judgement has been used, and the method for assessing air quality agreed to produce a robust assessment.

4.5 BASELINE CONDITIONS

Current Baseline

Air Quality Management Area

4.5.1 An AQMA has been declared across Manchester city centre and surrounding arterial roads owing to consistent exceedances of the AQO for the annual average concentration of NO2. These exceedances are predominantly due to pollution from road transport, which accounts for 65% of the total NO2 emission within Greater Manchester (GMCA , 2019). The entirety of the site is within the AQMA.

Local Authority Monitoring

- 4.5.2 GMCA has established an extensive monitoring network for Local Air Quality Management (LAQM) purposes and to support the Greater Manchester Clean Air Plan (GM CAP). According to the latest annual status report (ASR), GMCA has deployed 20 automatic monitoring sites and 368 non-automatic (diffusion tube) monitoring sites for LAQM. In addition, 503 non-automatic roadside monitoring sites have been operated for monitoring and evaluation purposes under the GM CAP.
- 4.5.3 Monitoring data from 2023 is considered the most appropriate year for determining baseline air quality conditions in the aftermath of the COVID-19 pandemic. The latest update (v1.1) of the IAQM position statement on the use of 2020 and 2021 monitoring datasets states that 2022 (or later) monitoring data should be used for model verification, as it represents a typical post-pandemic year (IAQM, 2023).
- 4.5.4 As shown in Table 4-3, air quality monitoring locations MA72NO, MA29ANO and the triplicate MA82NO are the closest passive diffusion tube sites near the site. The 2023 annual mean NO<sub>2</sub> concentration measured at sites MA29ANO and MA82NO are 49.6 µg/m<sup>3</sup> and 41.4 µg/m<sup>3</sup>, both exceeding the annual average AQO of 40 µg/m<sup>3</sup>. The concentrations at those sites have been consistently exceeding the AQO during 2021-2023. Site MA72NO recorded an annual mean NO<sub>2</sub> concentration of 24.3 µg/m<sup>3</sup>, 39% below the AQO. Figure 4-2 and Figure 4-3 present the CAP and LAQM monitoring sites in proximity to the site.
- 4.5.5 Figure 4-4 demonstrates the annual average NO<sub>2</sub> concentrations at all nearby monitoring sites during the 2019-2023 period. Overall, pollution concentrations have decreased over the five years. Among all monitoring sites that began operating before 2020, the lowest concentrations were recorded in 2020, attributed to behavioural changes during the COVID-19 pandemic. Slight concentration increases are observed in 2021 and 2022. Despite the increases, 2023 annual average NO<sub>2</sub> concentrations at all sites remain lower than the 2019 level.

Table 4-3 Monitoring results from CAP and LAQM monitoring sites in proximity to the site

| Site ID                | Distance from proposed project (m) | Site classification | Annual average NO <sub>2</sub> concentration (µg/m <sup>3</sup> ) |      |      |      |      |
|------------------------|------------------------------------|---------------------|-------------------------------------------------------------------|------|------|------|------|
|                        |                                    |                     | 2019                                                              | 2020 | 2021 | 2022 | 2023 |
| MCC Monitoring         |                                    |                     |                                                                   |      |      |      |      |
| MA29ANO                | 285                                | Roadside            | 55.4                                                              | 39.0 | 44.8 | 49.8 | 49.6 |
| MA72NO                 | 320                                | Urban Background    | 32.8                                                              | 24.5 | 27.5 | 26.3 | 24.3 |
| MA82NO, MA83NO, MA84NO | 305                                | Roadside            | 52.0                                                              | 34.1 | 40.7 | 42.6 | 41.1 |
| CAP Monitoring         |                                    |                     |                                                                   |      |      |      |      |
| 183                    | 271                                | Roadside            | -                                                                 | -    | -    | 54.4 | 54.1 |
| 184                    | 235                                | Roadside            | -                                                                 | -    | -    | 41.4 | 39.5 |
| 185                    | 275                                | Roadside            | -                                                                 | -    | -    | 49.7 | 48.5 |
| 186                    | 265                                | Roadside            | -                                                                 | -    | -    | 42.4 | 43.0 |
| 019                    | 290                                | Roadside            | -                                                                 | -    | -    | 44.4 | 41.3 |
| 006                    | 280                                | Roadside            | 42.7                                                              | 26.9 | 29.9 | 30.8 | 25.6 |
| 105                    | 261                                | Roadside            | -                                                                 | -    | -    | 38.5 | 36.4 |
| 106                    | 271                                | Roadside            | -                                                                 | -    | -    | 36.1 | 35.3 |
| 104                    | 297                                | Roadside            | -                                                                 | -    | -    | 38.3 | 37.6 |
| 022                    | 320                                | Roadside            | 49.5                                                              | 32.9 | 32.7 | 35.5 | 33.3 |
| 004                    | 375                                | Roadside            | 46.9                                                              | 28.4 | 31.2 | 33.4 | 33   |
| 002                    | 473                                | Roadside            | -                                                                 | 32.2 | 33.8 | 35.5 | 34.2 |

| Site ID | Distance from proposed project (m) | Site classification | Annual average NO <sub>2</sub> concentration (µg/m <sup>3</sup> ) |      |      |      |      |
|---------|------------------------------------|---------------------|-------------------------------------------------------------------|------|------|------|------|
|         |                                    |                     | 2019                                                              | 2020 | 2021 | 2022 | 2023 |
| 021     | 382                                | Roadside            | -                                                                 | 21.7 | 24.8 | 23.7 | -    |
| 167     | 466                                | Roadside            | -                                                                 | -    | -    | 48.1 | 49.1 |
| 166     | 531                                | Roadside            | -                                                                 | -    | -    | 38.6 | 37.1 |

\*Note: numbers highlighted in **bold** indicate exceedance of the annual average AQO (40 µg/m<sup>3</sup>).

- 4.5.6 Manchester Oxford Road (MAN1) is the closest automatic monitoring station to the site. The 2023 NO<sub>2</sub> annual mean concentration at this site is 41 µg/m<sup>3</sup>, exceeding the AQO level. The 1-hour mean NO<sub>2</sub> concentration at this site did not exceed the threshold of 200 µg/m<sup>3</sup> in 2023 although there were three recorded exceedances in 2022. This is less than the allowable exceedances defined in the AQO (18 times per year).
- 4.5.7 For particulate matter, the 2023 annual mean concentration of PM<sub>10</sub> measured at MAN1 is 18 µg/m<sup>3</sup>, which is below the annual average AQO (40 µg/m<sup>3</sup>). Hourly mean PM<sub>10</sub> concentrations exceeded the threshold of 50 µg/m<sup>3</sup> four times, which complies with the allowable 35 times. PM<sub>2.5</sub> concentrations were not available from any nearby stations.
- 4.5.8 Automatic monitoring results for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are shown in Table 4-4.

Table 4-4 Monitoring results at automatic monitoring sites in the vicinity of the site

| Site ID           | Distance from proposed project (m) | Site classification | Air Quality Objectives                                        | Annual average concentration (µg/m³) |      |      |      |      |
|-------------------|------------------------------------|---------------------|---------------------------------------------------------------|--------------------------------------|------|------|------|------|
|                   |                                    |                     |                                                               | 2019                                 | 2020 | 2021 | 2022 | 2023 |
| NO <sub>2</sub>   |                                    |                     |                                                               |                                      |      |      |      |      |
| MAN1              | 301                                | Kerbside            | Annual Mean (40 µg/m³)                                        | 59                                   | 36   | 44   | 43   | 41   |
|                   |                                    |                     | Number of hours with concentrations >200 µg/m³ (18 allowable) | 1                                    | 0    | 0    | 3    | 0    |
| MAN3              | 755                                | Urban Centre        | Annual Mean (40 µg/m³)                                        | 36                                   | 27   | 30   | 29   | 27   |
|                   |                                    |                     | Number of hours with concentrations >200 µg/m³ (18 allowable) | 0                                    | 0    | 0    | 0    | 0    |
| PM <sub>10</sub>  |                                    |                     |                                                               |                                      |      |      |      |      |
| MAN1              | 301                                | Kerbside            | Annual Mean (40 µg/m³)                                        | 26                                   | 18   | 18   | 18   | 18   |
|                   |                                    |                     | Number of hours >50 µg/m³ (35 allowable)                      | 18                                   | 5    | 2    | 8    | 4    |
| MAN3              | 755                                | Urban Centre        | Annual Mean (40 µg/m³)                                        | 20                                   | 15   | 15   | 17   | 15   |
|                   |                                    |                     | Number of hours >50 µg/m³ (35 allowable)                      | 7                                    | 1    | 2    | 4    | 1    |
| PM <sub>2.5</sub> |                                    |                     |                                                               |                                      |      |      |      |      |
| MAN3              | 755                                | Urban Centre        | Annual Mean (20 µg/m³)                                        | 12                                   | 8    | 9    | 10   | 9    |

\*Note: numbers highlighted in **bold** indicate exceedance of the annual average AQO (40 µg/m<sup>3</sup>).

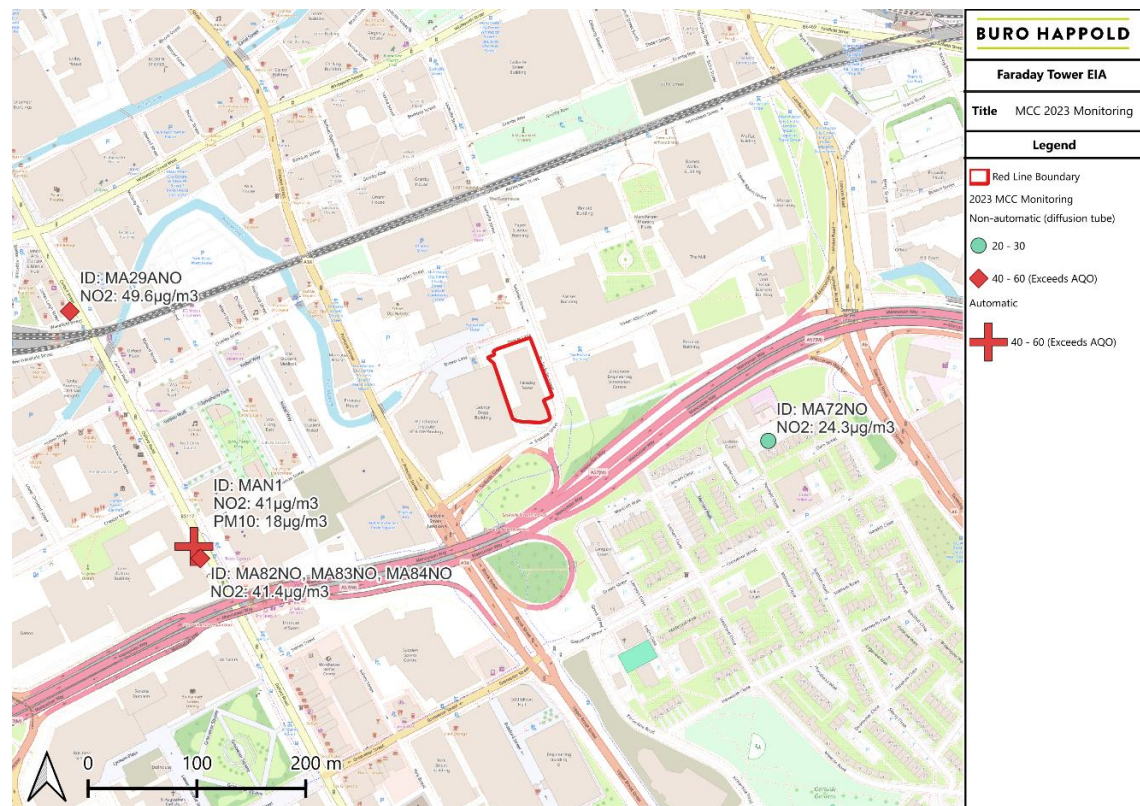


Figure 4-2 GMCA Local Air Quality Management automatic and diffusion tube monitoring sites in proximity to the site

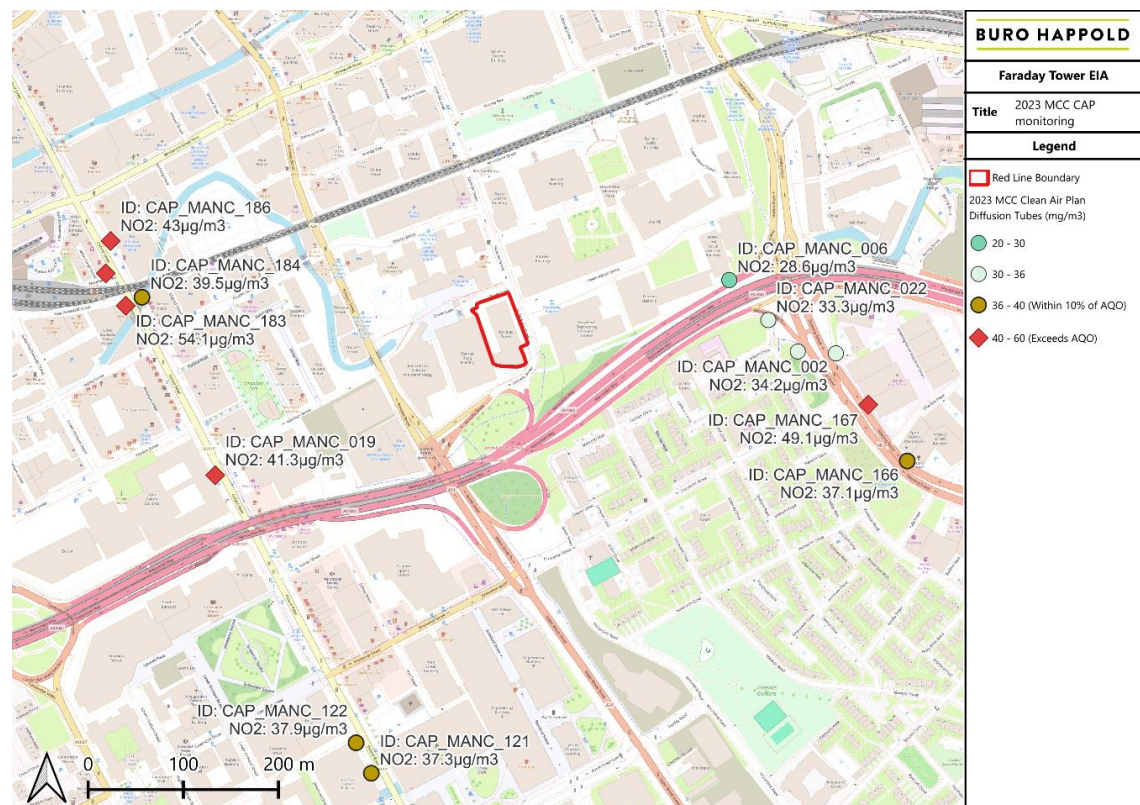


Figure 4-3 GMCA Clean Air Plan diffusion tube monitoring sites in proximity to the site

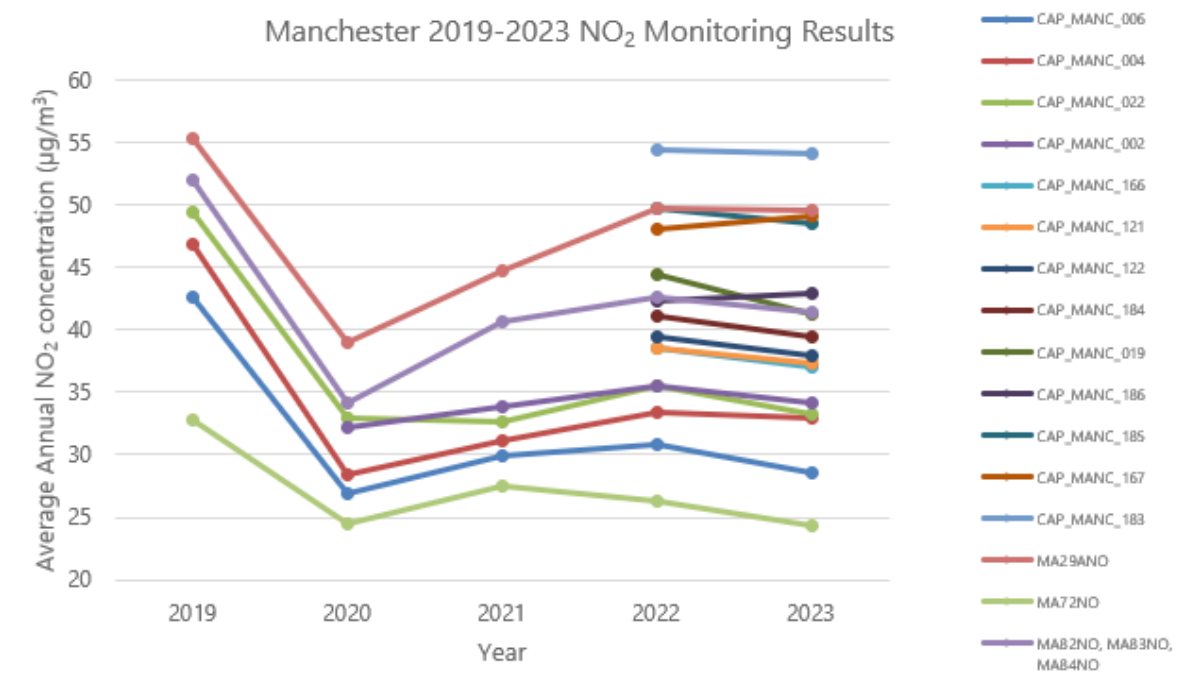


Figure 4-4 Variation of NO<sub>2</sub> annual average monitoring results from LAQM and CAP monitoring sites in proximity to the site

#### Background Air Quality Data

- 4.5.9 Background concentrations can be identified using two key sources: background monitoring and Defra predicted UK background concentrations.
- 4.5.10 Defra model background NO<sub>x</sub>, NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations for each 1km-by-1km OS grid square across the UK. Background pollutant concentrations are modelled from the reference year of 2021 based on ambient monitoring and meteorological data from 2021 and includes projections for future years up to 2040.
- 4.5.11 Predicted background concentrations for 2023 and 2025 in the grid square in which the site lies (centred at 384500, 397500) are set out in Table 4-5. Annual mean background concentrations of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are all below their relevant objectives.

Table 4-5 Current Defra modelled background concentrations at the site

| Year               | Annual Mean background Concentrations (µg/m <sup>3</sup> ) |                 |                  |                   |
|--------------------|------------------------------------------------------------|-----------------|------------------|-------------------|
|                    | NO <sub>x</sub>                                            | NO <sub>2</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| 2023 Baseline Year | 34.5                                                       | 23.4            | 15.1             | 8.2               |
| 2025 Current Year  | 31.5                                                       | 21.6            | 15.1             | 8.1               |

#### 4.5.12 Future Baseline (2027)

- 4.5.13 Background concentrations are predicted to reduce in the future. For example, the background concentrations at the site in 2027 during the Peak Demolition Year are presented in Table 4-6.

Table 4-6 Future Defra modelled background concentrations at the site

| Year                        | Annual Mean background Concentrations (µg/m <sup>3</sup> ) |                 |                  |                   |
|-----------------------------|------------------------------------------------------------|-----------------|------------------|-------------------|
|                             | NO <sub>x</sub>                                            | NO <sub>2</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| 2027 (Peak Demolition Year) | 30.2                                                       | 20.9            | 15.0             | 8.0               |

Identified Receptors and their Sensitivity

4.5.14 The identified receptors and their sensitivity for the purposes of this assessment are summarised in Table 4-7.

Table 4-7 Identified receptors and their sensitivity

| Receptor                                                                                                                                                                                                                                                                                                                                                  | Sensitivity | Justification                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Locations in the vicinity of demolition activities and trackout route that may be impacted by demolition dust and PM <sub>10</sub> emissions.<br>Receptors sensitive to demolition dust and PM <sub>10</sub> are presented in paragraph 4.2.15 and Figure 4-1 and include Weston Hall (student residential apartments) less than 50m north from the site. | High        | Sensitivity of the receptors is determined in line with the principles outlined in the IAQM guidance on assessment on the assessment of dust from construction and demolition (sensitive receptors within 50m of a routes used by demolition vehicles up to 250m from the site access).<br>Highest sensitivity receptors are considered where exposure to PM <sub>10</sub> will be greatest or where a high level of amenity or enjoyment can be expected. |

4.6 DEMOLITION EFFECTS

Relevant Aspects of the Proposed Project

- 4.6.1 The demolition dust impacts associated with the proposed project have been considered within this assessment. This includes activities associated with demolition and trackout.
- 4.6.2 Vehicle emissions from traffic generated as a result of the demolition activities on the local road network have the potential to impact local air quality.

Potential Effects of the Proposed Project and their Significance

Demolition Dust Emissions Effect

- 4.6.3 As previously stated, the IAQM guidance criteria used to assess the potential impacts from the demolition activities are provided in Appendix 4-A, ES Volume II. The following steps explain the site-specific assessment that has been undertaken in the context of the IAQM criteria.
- Step 1: Screen the need for detailed assessment
- 4.6.4 In accordance with screening criteria in the IAQM guidance, an assessment is required as sensitive human receptors are located within 250m of the site boundary.

Step 2A: Define the potential dust emissions magnitude

- 4.6.5 Dust emission magnitudes for relevant demolition activities, including trackout are shown in Table 4-8.

Table 4-8 Dust emission magnitudes

| Activity   | Dust emission magnitude | Justification                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Demolition | Large                   | Demolition activities are expected to occur at a height greater than 12m, with a total volume of between 12,000m <sup>3</sup> and 75,000m <sup>3</sup> (approx. 18,310m <sup>3</sup> ). The existing building is greater than > 12 m above ground level and is largely concrete and therefore has a high potential for dust release. An on-site crusher will be present during the demolition works. As such dust emission magnitude for demolition is deemed to be Large. |
| Trackout   | Small                   | It has been confirmed that there will be a maximum of 4 HDV outward movements in any one day. Access to the site is to be via a paved road which has a low potential for dust release. In line with IAQM guidance the dust magnitude is considered Small.                                                                                                                                                                                                                  |

Step 2B: Define the sensitivity of the area

- 4.6.6 The sensitivity of the surrounding area to potential demolition impacts is set out in Table 4-9.

Table 4-9 Area sensitivity to human health

| Potential impact | Sensitivity of surrounding area |          |
|------------------|---------------------------------|----------|
|                  | Demolition                      | Trackout |
| Dust soiling     | High                            | Medium   |
| Human health     | Low                             | Low      |

- 4.6.7 In determining the sensitivity of the surrounding area, the following have been taken into consideration:
- Figure 4-5 shows a summary of the demolition buffer zones, in which the following have been identified:
    - Sensitive receptors (more than 100) within 100 m to the site are a mix of educational, residential or places of work. South of the Mancunian Way and the site, there are further residential receptors (more than 100);
    - There are no designated ecological sites within 2 km from the site; and
    - The background PM<sub>10</sub> level in the existing baseline year (2023) at the site is 15.1 µg/m<sup>3</sup> as monitored by automatic station MAN3.
- 4.6.8 Taking the number of high sensitivity receptors in close vicinity to the site into account, the area sensitivity to dust soiling is determined to be high, in line with IAQM criteria presented in Table 4-A-2 of Appendix 4-A, ES Volume II.
- 4.6.9 Sensitivity to human health impacts also takes background PM<sub>10</sub> concentrations into account, with automatic monitoring at MAN 3 indicating PM10 concentration of 15.1 µg/m<sup>3</sup> (see Table 4-4 Monitoring results at automatic monitoring sites in the vicinity of the site. Based on criteria presented in Table 4-7, the sensitivity of the area to health impacts is low due to the background PM<sub>10</sub> being below 24 µg/m<sup>3</sup> and an estimated 10-100 high sensitivity receptors within 50 m of the site.
- 4.6.10 Mayfield Park is located more than 500 m away from the site and is therefore located outside of the 250 m radius for assessment screening criteria within the IAQM construction guidance. As such demolition dust effects are not considered to be significant.

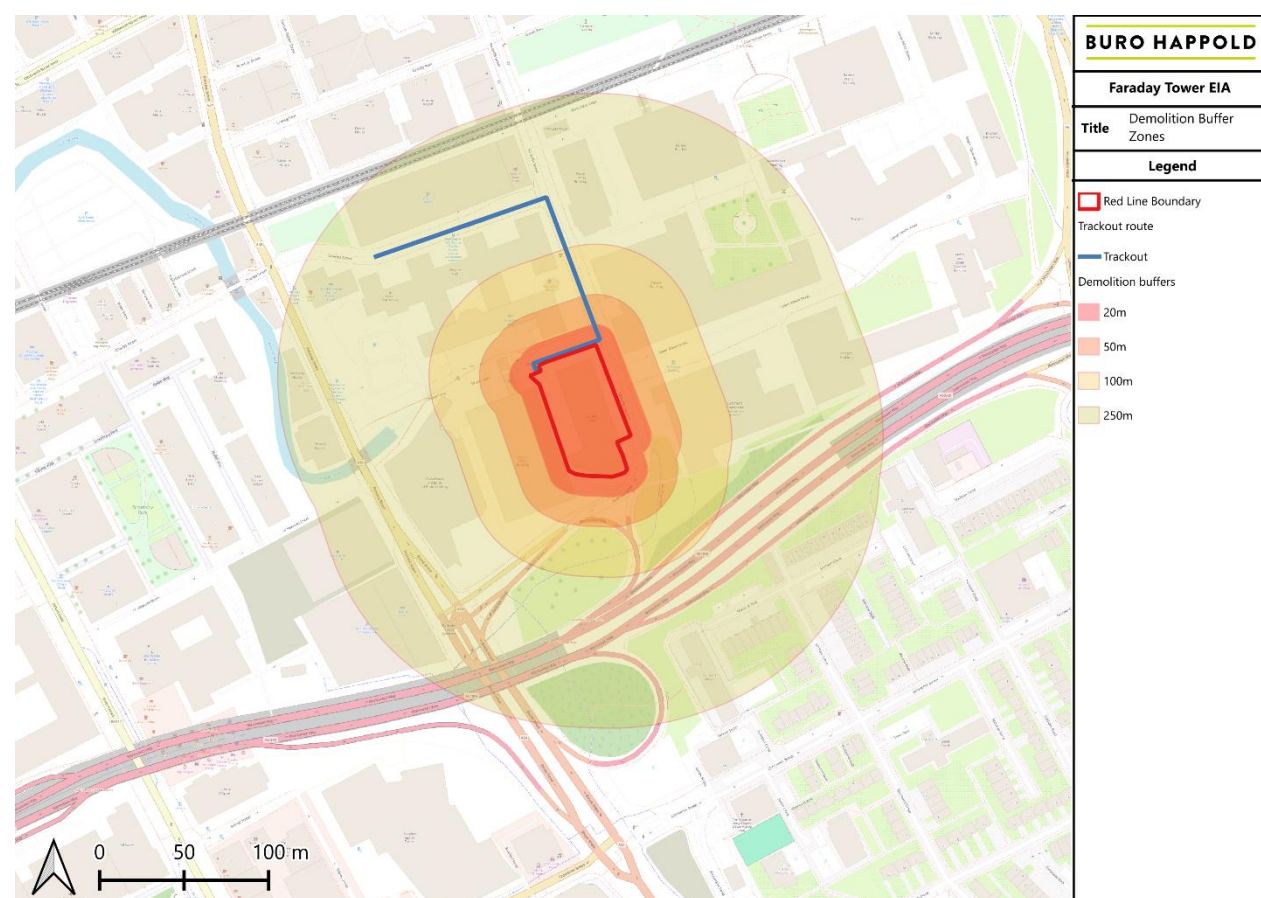


**Figure 4-5 Demolition dust buffers**

Step 2C: Define the risks of impacts

- 4.6.11 The risk of dust impacts without mitigation applied for relevant demolition activities are summarised in Table 4-10. These results take into account both the potential dust emission magnitude and the sensitivity of the area. It should be noted that activities on site will be temporary in nature, and mitigation appropriate to the level of risk and in line with good industry practices will be implemented across the site to ensure any adverse effects are minimised.

**Table 4-10 Summary of risk from dust impacts**

| Potential Impacts   | Risk       |          |
|---------------------|------------|----------|
|                     | Demolition | Trackout |
| <b>Dust Soiling</b> | High       | Medium   |
| <b>Human Health</b> | Medium     | Medium   |

**Non-Road Mobile Machinery Emissions Effect**

- 4.6.12 Based on information provided in Chapter 2 Project Description, the NRMM vehicles anticipated to be used on-site will adhere to requirements outlined within the MCC Air Quality & Planning Technical Guidance and therefore no further assessment is required.
- 4.6.13 Table 4-11 outlines the on-site NRMM that is anticipated to be utilised during the demolition works (to be confirmed following appointment of a contractor). It should be noted that the below list is not exhaustive and plant equipment will be provided as required. All plant will be inspected and recorded within the site plant register and operated in accordance with the manufacturers guidelines.

**Table 4-11 Summary of NRMM vehicles to be used during demolition works**

| Proposed Vehicle            | Activities                                                                                             | Approximate Time on-site |
|-----------------------------|--------------------------------------------------------------------------------------------------------|--------------------------|
| Brokk Demolition Robot      | Used intensively during top-down internal structural removal. Operates continuously with short breaks. | 60-75%                   |
| D-Rig Excavators            | Used for soft strip waste handling, external demolition, and loading arisings.                         | 50-65%                   |
| Tower Crane                 | Intermittent use for lifting Brokk, panels, and large elements. Idle between lifts.                    | 30-50%                   |
| Mini Excavators/Skid Steers | Used for internal debris handling and basement clearance.                                              | 40-60%                   |
| Dust Boss/Suppression Units | Typically run continuously during demolition to control dust emissions.                                | 70-90%                   |

- 4.6.14 Furthermore, the IAQM construction guidance states that *"Experience of assessing the exhaust emissions from on-site plant (also known as non-road mobile machinery or NRMM) and site traffic suggests that they are unlikely to make a significant impact on local air quality, and in the vast majority of cases they will not need to be quantitatively assessed."*
- 4.6.15 It is therefore considered the likely effects of demolition plant on local air quality would not be significant.
- 4.6.16 In addition to the information detailed within Table 4-11, an assessment of the predicted NO<sub>x</sub> and PM<sub>10</sub> emissions generated by the NRMM has been undertaken using the Arup construction emissions tool for construction emissions exemplar sites (Arup, 2023). This process indicates that the NO<sub>x</sub> emissions from NRMM used during demolition works are likely to fall below relevant construction emissions benchmarks.
- 4.6.17 A full overview of demolition activities (including NRMM vehicles) to be undertaken on site can be found within Chapter 2, ES Volume I and in Appendix 4-C, ES Volume II.

**Demolition Traffic Emissions Effect**

- 4.6.18 Vehicle emissions from road traffic generated as a result of the proposed project have the potential to result in local air quality effects on receptors.
- 4.6.19 The demolition traffic is to access the site via Sackville Street, routing through A57 Mancunian Way, due to height restrictions, using a one way system and is to exit via Princess Street, on which there are a limited number of sensitive receptors.
- 4.6.20 Demolition activities are anticipated to lead to an AADT increase of 4 HDVS and less than 100 LDVs on the surrounding road network, in line with the criteria outlined within EPUK/IAQM guidance for development within an AQMA. In accordance with the IAQM guidance, demolition road traffic emissions, principally HDV movements, have been screened out from further detailed assessment.
- 4.6.21 As such, the overall effect significance of demolition vehicle emission impacts from the proposed project on NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations will be not significant in line with EPUK and IAQM guidance.
- 4.6.22 The demolition programme is estimated to last 88 weeks and additional trips from demolition vehicles and associated emissions will be short term and temporary in nature. Visual representation of the proposed access is shown in Figure 4-5.

Demolition Mitigation Measures

- 4.6.23

In line with best practice, the IAQM guidance sets out the recommended mitigation measures to be implemented in order to mitigate the potential effects during the demolition works. The dust risk assessment results show that high risk mitigation measures are required to minimise potential dust impacts due to the proximity of high sensitive receptors. Examples of high risk general mitigation measures include but are not limited to:

  - Develop and implement a Dust Management Plan (DMP) within the detailed CEMP to be secured via a condition and developed by the demolition contractor, which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk, and should include as a minimum the highly recommended measures in this document. The desirable measures appropriate to the proposed project include, but are not limited to the following:
    - 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;
    - Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked;
    - Consider the implementation of dust deposition, dust flux, or real-time PM<sub>10</sub> continuous monitoring locations NO with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it is a large site, before work on a demolition commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction. This is likely to be requested as a planning condition and will be discussed with the local authority;
    - Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible;
    - Ensure all vehicles switch off engines when stationary - no idling vehicles; and
    - Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.
- 4.6.24

Table 4-B-1 in Appendix 4-B, ES Volume II sets out all the specific mitigation measures to be incorporated into the detailed Construction Environmental Management Plan (CEMP) secured by condition for the proposed project.
- Summary of Effects
- 4.6.25

The effects on air quality during the demolition works are presented in Table 4-12. In line with the IAQM guidance, the significance of effects of demolition dust and PM<sub>10</sub> emissions are only considered once mitigation measures are applied. The mitigation measures are considered an inherent part of the proposed project. Therefore, an effect significance pre-mitigation is not provided.

Table 4-12 Summary of effects during demolition

| Receptor                                                                                                                          | Sensitivity | Description of effect                                                                       | Magnitude of change/impact | Effect significance                  |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------|----------------------------|--------------------------------------|
| Surrounding sensitive uses including Weston Hall (student residential apartments) less than 50 m north from the proposed project. | High        | Loss of amenity due to dust deposition                                                      | High to Medium Risk        | Negligible, Short term and Temporary |
|                                                                                                                                   |             | Impacts on human health due to emission of PM during demolition.                            | Low Risk                   | Negligible, Short term and Temporary |
|                                                                                                                                   |             | Effects on human health due to changes in air quality as a result of the NRMM Vehicles      | Low Risk                   | Negligible, Short term and Temporary |
|                                                                                                                                   |             | Effects on human health due to changes in air quality as a result of the demolition traffic | Low Risk                   | Negligible, Short term and Temporary |

Supplementary Mitigation Measures

- 4.6.26

As no significant effects have been identified, no supplementary mitigation measures are recommended.

4.7 RESIDUAL EFFECTS AND CONCLUSIONS

- 4.7.1

The proposed project will result in negligible residual effects on air quality, once mitigation has been implemented. A summary of the residual effects is presented in Table 4-13.

Table 4-13 Summary of residual effects during demolition

| Receptor                                                                                                                         | Effect                                                                                      | Significance before mitigation | Supplementary mitigation                                                                                                                      | Residual effect significance        |
|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Surrounding sensitive uses including Weston Hall (student residential apartments) less than 50m north from the proposed project. | Loss of amenity due to dust deposition                                                      | N/A                            | Suite of demolition dust and PM mitigation measures, outlined in Appendix 4-B, ES Volume II to be incorporated into a detailed CEMP.          | Negligible Short term and Temporary |
|                                                                                                                                  | Impacts on human health due to emission of PM during demolition.                            | N/A                            | Suite of Suite of demolition dust and PM mitigation measures, outlined in Appendix 4-B, ES Volume II to be incorporated into a detailed CEMP. | Negligible Short term and Temporary |
|                                                                                                                                  | Effects of emissions arising from traffic generated by NRMM vehicles                        | N/A                            | NRMM vehicles should adhere to MCC technical guidance.                                                                                        | Negligible Short term and Temporary |
|                                                                                                                                  | Effects on human health due to changes in air quality as a result of the demolition traffic | N/A                            | N/A                                                                                                                                           | Negligible Short term and Temporary |

4.8 FUTURE MONITORING OF SIGNIFICANT RESIDUAL ENVIRONMENTAL EFFECTS

4.8.1 Construction dust monitoring during the demolition works is recommended as one of the mitigation measures outlined in Appendix 4-B, ES Volume II. This is recommended as part of a wider suite of mitigation measures to ensure that residual effects are not significant.

4.9 REFERENCES

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4.10 ABBREVIATIONS

| Term            | Definition                                                                                                                                                                                                  |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AADT            | Annual average daily traffic – the number of vehicles travelling along a road link averaged over a year                                                                                                     |
| AQAL            | Air Quality Assessment Level                                                                                                                                                                                |
| AQMA            | Air quality management area                                                                                                                                                                                 |
| AQO             | Air Quality Objective – legally binding limit values that must not be exceeded.                                                                                                                             |
| AQS             | Air Quality Strategy                                                                                                                                                                                        |
| ASR             | Annual Status Report                                                                                                                                                                                        |
| DMP             | Demolition Management Plan                                                                                                                                                                                  |
| EA              | Environment Agency                                                                                                                                                                                          |
| EPUK            | Environmental Protection UK                                                                                                                                                                                 |
| GMCA            | Greater Manchester Combined Authority                                                                                                                                                                       |
| HDV             | Heavy Duty Vehicle                                                                                                                                                                                          |
| IAQM            | Institute of Air Quality Management                                                                                                                                                                         |
| LAQM            | Local Air Quality Management                                                                                                                                                                                |
| LDV             | Light Duty Vehicle                                                                                                                                                                                          |
| LPA             | Local Planning Authority                                                                                                                                                                                    |
| MCC             | Manchester City Council                                                                                                                                                                                     |
| NO <sub>2</sub> | Nitrogen dioxide                                                                                                                                                                                            |
| NO <sub>x</sub> | Nitrogen oxides. This consists of nitrogen dioxide (NO <sub>2</sub> ) and nitric oxide (NO)                                                                                                                 |
| NAEI            | National Atmospheric Emissions Inventory                                                                                                                                                                    |
| NPPF            | National Planning Policy Framework                                                                                                                                                                          |
| NRMM            | Non-road mobile machinery                                                                                                                                                                                   |
| PfE             | Places for Everyone Joint Development Plan 2022 to 2039                                                                                                                                                     |
| PM              | Particulate matter. This is classified by size into PM <sub>10</sub> and PM <sub>2.5</sub> (i.e. PM <sub>10</sub> has a diameter of less than 10 micrometres, PM <sub>2.5</sub> less than 2.5 micrometres). |
| PPG             | Planning practice guidance                                                                                                                                                                                  |
| TG22            | Defra Local Air Quality Management Technical Guidance                                                                                                                                                       |

4.11 LIST OF APPENDICES (ES VOLUME II)

| Reference    | Title                                                      |
|--------------|------------------------------------------------------------|
| Appendix 4-A | Demolition Dust Risk Methodology                           |
| Appendix 4-B | Demolition dust mitigation measures                        |
| Appendix 4-C | Demolition programme and Non Road Mobile Machinery toolkit |



## 5 NOISE AND VIBRATION

### 5.1 INTRODUCTION

- 5.1.1 This chapter of the ES assesses the likely environmental effects of the proposed project with respect to noise and vibration. This chapter also describes the methods used to assess the effects; the baseline conditions currently existing at the site and surrounding area; the mitigation measures required to prevent, reduce or offset any significant adverse effects; and the likely residual effects after these measures have been adopted.
- 5.1.2 Cumulative effects associated with noise and vibration have additionally been considered within the ES and can be found in Chapter 7 Cumulative and Interactive Effects.

### 5.2 METHODOLOGY AND ASSESSMENT CRITERIA

#### EIA Scoping

- 5.2.1 An EIA Scoping Report was submitted to Manchester City Council (MCC), on 16<sup>th</sup> May 2025. In brief, an assessment of the potential effects of noise and vibration from the demolition of Faraday Tower was proposed. An assessment of the noise due to additional demolition related road traffic was scoped out as it is considered unlikely that the additional road traffic generated by the proposed project would result in any material changes in road traffic noise.
- 5.2.2 Table 5-1, presents the comments relating to noise and vibration from MCC's Scoping Opinion received on 17<sup>th</sup> June 2025, and, where required, how they have been addressed. Comments from MCC's pre-application email correspondence in March 2025 have also been included in Table 5-1.

Table 5-1 Summary of MCC comments and how they were addressed

| Source                                                                            | Comment                                                                                                                                                                           | Summary of how this has been addressed                                                                                         |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| MCC pre-application email correspondence (March 2025)                             | Acknowledges that the Pendulum Hotel and Weston Hall are the closest sensitive receptors to the site and state that these must be included in the noise and vibration assessment. | Pendulum Hotel and Weston Hall included in the scope of receptors where the noise and vibration assessment will be undertaken. |
| MCC EIA Scoping Opinion (17 <sup>th</sup> June 2025) (Appendix 3-B, ES Volume II) | Confirms agreement with the approach to the consideration of noise and vibration impacts from the proposed development as outlined in the EIA Scoping report                      | N/A                                                                                                                            |

#### Baseline Study Methodology

- 5.2.3 A series of short-term attended noise measurements were undertaken during daytime hours to characterise and quantify the baseline noise environment in the area around the site.

- 5.2.4 The baseline noise monitoring was completed on Thursday 3<sup>rd</sup> April 2025 at noise sensitive receptors (NSRs) surrounding the site, as agreed with MCC. The monitoring was undertaken between around 09:00 and 12:30 and as such is considered representative of the existing noise environment that will be present during demolition activities.
- 5.2.5 The noise survey was completed at five locations (as shown in Figure 5-1), all of which were short-term (i.e. 30 minutes) attended measurements. The survey was conducted to determine the baseline noise climate at locations representative of the NSRs, including residential dwellings and commercial buildings.
- 5.2.6 The measurements were undertaken using a Class 1 sound level meter (SLM) mounted on a tripod. The measurement microphone was positioned at a height of 1.5 m above local ground level and fitted with a windshield. All measurements were undertaken in free-field conditions (i.e., away from any reflecting surfaces that may influence the measured noise levels, other than the ground). The SLM was field calibrated prior to and following the measurements using a Class 1 acoustic calibrator, with no significant change in sensitivity noted. The SLM was tested by a calibration laboratory within the last two years, and the acoustic calibrator within one year.
- 5.2.7 Regarding weather during the survey period, following a review of observations made and data from local weather stations<sup>1</sup>, there were relatively low average winds (below 5 m/s) and no precipitation. On this basis, no noise data has been excluded due to adverse weather conditions

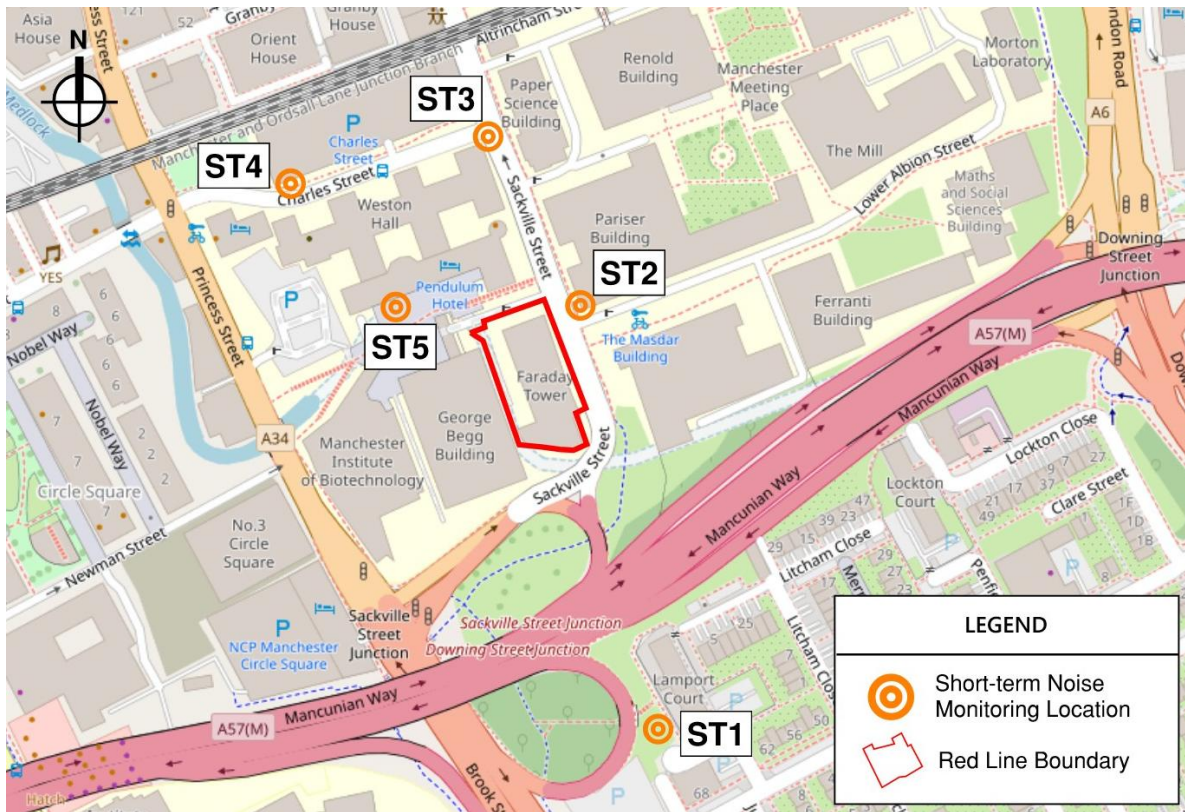


Figure 5-1 Noise measurement locations

<sup>1</sup> IMACHES66 <https://www.wunderground.com/dashboard/pws/IMACHES66/graph/2025-04-3/2025-04-3/daily>;

IMANCH125 <https://www.wunderground.com/dashboard/pws/IMANCH125/graph/2025-04-3/2025-04-3/daily>;

IMANCH 162 <https://www.wunderground.com/dashboard/pws/IMANCH162/graph/2025-04-3/2025-04-3/daily>

Assessment Approach

- 5.2.9 The overarching approach to the identification and assessment of adverse noise effects is based on the National Policy Statement for England (NPSE), the National Planning Policy Framework (NPPF) and the Planning Practice Guidance for Noise (PPG:N). Fundamental to this approach are the aims that potentially adverse effects on health and quality of life resulting from noise, including from activities like demolition, should be mitigated and minimised, and that significant adverse effects should be avoided.
- 5.2.10 Demolition noise and vibration has been predicted and quantitatively assessed based on the guidance from BS 5228. The assessment considers on site demolition activities and typical operations as set out in Chapter 2, ES Volume I. The assessment follows the guidance of BS 5228-1<sup>1</sup> and BS 5228-2.<sup>2</sup>
- 5.2.11 The assessment considers the works taking place during the daytime within the standard hours adopted for construction in the UK, as set out in Chapter 2, ES Volume I.
- 5.2.12 In the absence of a detailed demolition programme at this stage, the assessment assumes that the demolition works within each activity of the indicative demolition programme as detailed in Chapter 2, ES Volume I, take place simultaneously. This is considered to provide a reasonable worst-case assessment.

Demolition Noise

- 5.2.13 To inform the assessment of demolition noise levels, a detailed noise prediction exercise has been prepared for the site. This model has been prepared following the method of BS 5228-1 and extends to the nearest NSRs.
- 5.2.14 Demolition noise level predictions have been undertaken using acoustic modelling software, CadnaA, with the results of these predictions compared against the derived assessment criteria. The margin of compliance/ exceedance of the assessment criteria has been used to determine whether a significant effect would arise.
- 5.2.15 The methodology adopted for the prediction of construction noise levels follows that set out in BS 5228-1. The BS 5228-1 calculation methods allow noise levels to be determined for various demolition and construction activities.
- 5.2.16 The predictions are based on the main activities associated with the demolition works. The plant types, quantities and methods assumed within the predictions as detailed in Chapter 2, ES Volume I. This information is provided within Appendix 5-A, ES Volume II.

Demolition Vibration

- 5.2.17 The consideration of demolition vibration is based on the guidance contained within BS 5228-2, drawing upon the historic ground borne vibration measurement data and vibration prediction methods contained within this standard. However, these address a relatively low number of vibration sources, primarily focusing on piling activities and vibratory compaction.
- 5.2.18 Since the EIA Scoping process was undertaken, clarity on the demolition methodology and plant has been provided. Considering the data provided in BS 5228-2, there are no relevant methods of groundborne vibration prediction available for the activities to be undertaken. As such, it can be reasonably assumed that there are no significant sources of groundborne vibration as part of the proposed demolition activities. A predictive assessment of groundborne vibration has therefore not been undertaken.

<sup>1</sup> BSI Standards Limited (2014), BS 5228-1:2009+A1:2014 Code of Practice for noise and vibration control on construction and open sites, Part 1 Noise; <sup>2</sup> BSI Standards Limited (2014), BS 5228-2:2009+A1:2014 Code of Practice for noise and vibration control on construction and open sites, Part 2 Vibration;

- 5.2.19 However, vibration monitoring should be incorporated in the detailed Construction Environmental Management Plan (CEMP) and secured as a condition as a planned environmental control.

Assessment of Effects

- 5.2.20 The potential effects of noise and vibration from the proposed project and whether they are identified as significant in quantitative terms has been based on the methods described in BS 5228 and as advised by national noise policy (see section 0 of this chapter). This involves the definition of a level above which adverse effects are expected, termed the Lowest Observed Adverse Effect Level (LOAEL), and a level above which significant effects are possible, referred to as the Significant Observed Adverse Effect Level (SOAEL).
- 5.2.21 Indication of a significant effect usually involves the exceedance of the relevant SOAEL together with other factors, such as the duration of the effect or a certain change in noise level, depending on the source being considered.

Demolition Noise

- 5.2.22 The potential significance of demolition noise at the receptors has been based on the methods described in Annex E of BS 5228-1 and is expressed in terms of LOAEL and SOAEL thresholds together with the duration of any exceedance of SOAEL. The effect level thresholds and significance criteria are presented in Table 5-2.

Table 5-2 Effect level thresholds and significance criteria for demolition noise

| Effect Level                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Time Period (T) | Threshold Value (dB L <sub>Aeq,T</sub> ) <sup>1</sup> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------|
| LOAEL                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Working day     | 65                                                    |
| SOAEL <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Working day     | 75                                                    |
| <b>Identification of effect significance and other notes:</b><br><sup>1</sup> Values apply to a location one metre from a residential building façade containing a window, including the effect of the acoustic reflection from that façade. Usually referred to as a façade level.<br><br><sup>2</sup> A significant effect is indicated if the programme of works indicates that the SOAEL threshold value is likely to be exceeded for a period of at least one month. |                 |                                                       |

- 5.2.23 The criteria defined in Table 5-2 relate primarily to residential receptors, which are of high sensitivity. Therefore, they have also been used when assessing the potential effects of demolition noise on any other types of sensitive receptor, which is considered to be a cautious approach. Where predicted construction noise levels are above the LOAEL but below the SOAEL, then adverse (non-significant) effects are indicated.
- 5.2.24 To maintain consistency with the standard descriptors of effect significance typically used in EIA, the effect level thresholds and significance criteria have been equated to the “level” of significance in Table 5-3 for noise. Note that for demolition noise and vibration, all effects are considered to be adverse.

Table 5-3 EIA descriptors significance level for demolition noise

| Relationship of predicted demolition noise level to effect level | Duration of demolition noise | Level of significance (EIA) | Indication of significant effect |
|------------------------------------------------------------------|------------------------------|-----------------------------|----------------------------------|
| ≤ LOAEL                                                          | N/A                          | Negligible                  | No                               |
| Between LOAEL and SOAEL                                          | N/A                          | Low                         | No                               |
| > SOAEL                                                          | < one month                  | Moderate                    | No                               |
| > SOAEL                                                          | ≥ one month                  | Major                       | Yes                              |

5.3 LEGISLATION AND POLICY WHICH HAS INFLUENCED ASSESSMENT OR MITIGATION

National Policy and Guidance

National Planning Policy Framework (2024)

- 5.3.2 The potential impacts of noise in terms of national planning policy are addressed primarily in the following paragraphs of the National Planning Policy Framework (NPPF):
- Paragraph 187: *'Planning policies and decisions should contribute to and enhance the natural and local environment by: ...*
    - e) *preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.'* ...
  - Paragraph 198: *'Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should: ...*
    - a) *mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life'* ...
- 5.3.3 Paragraph 198a of the NPPF includes a direct reference to the Noise Policy Statement for England (NPSE) for further information regarding the potentially adverse and significant adverse impacts of noise.
- Noise Policy Statement for England (2010)**
- 5.3.4 The overarching Government policy on noise is set out in the NPSE. It seeks to clarify the underlying principles and aims in past and existing policy documents, legislation and guidance in relation to all forms of noise including environmental noise, neighbour noise and neighbourhood noise (but not noise in the workplace).
- 5.3.5 It uses the established concepts from toxicology of the No Observed Effect Level (NOEL) and the Lowest Observed Adverse Effect Level (LOAEL). As set out in the explanatory notes, the NPSE extends these by introducing Significant Observed Adverse Effect Level (SOAEL). This is the level above which significant adverse effects on health and quality of life occur.
- 5.3.6 The explanatory note to the NPSE states that it is not possible to identify a single objective value to define SOAEL for noise that is applicable to all sources of noise in all situations. It is likely to be different for different noise sources, for different receptors and at different times. The NPSE recognises that 'further research is required to increase understanding of what may constitute a significant adverse impact on health and quality of life from noise. However not having specific SOAEL values in the NPSE provides the necessary policy flexibility until further evidence and suitable guidance is available.' Consequently, the practitioner must determine the appropriate threshold values to be adopted for the sources and situations being assessed, based on the available evidence.

<sup>1</sup> "Avoid" here does not mean a significant adverse effect cannot ever exist. Instead, it means make every effort so that significant adverse impacts do not occur. The hierarchy set out in the PPG:N confirms this to be the case – see Appendix 5-B. The reason is that the NPSE covers all sources and for historical legal reasons, there are certain circumstances (e.g., statutory nuisance legislation) where a significant adverse impact is lawfully allowed to occur.

- 5.3.7 The NPSE's vision is to:
- 'Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.'*
- This long-term vision is supported by the following aims:*
- *Avoid<sup>1</sup> significant adverse impacts on health and quality of life;*
  - *Mitigate and minimise adverse impacts on health and quality of life; and*
  - *Where possible, contribute to the improvement of health and quality of life.*
- Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.'*
- 5.3.8 Within the NPSE, the phrase '*within the context of Government policy on sustainable development*' is used. This means that noise must not be treated in isolation. Instead, when implementing the aims of the policy, consideration should be given to the economic and social benefit of the activity causing the noise as well as the other environmental effects of the development.
- 5.3.9 The second aim of the NPSE refers to noise impacts that lie somewhere between LOAEL and SOAEL. The NPSE asserts that, while this means that all reasonable steps should be taken to mitigate and minimise adverse effects, this does not mean that such adverse effects cannot occur.
- Planning Practice Guidance for Noise (2019)**
- 5.3.10 Further government guidance on the consideration of noise for planning has been published as the Planning Practice Guidance for Noise (PPG:N), last revised in July 2019. The PPG:N supports the NPPF by providing a range of advice and includes a noise exposure hierarchy table, and again makes reference to the NPSE.
- 5.3.11 The hierarchy table (reproduced in Appendix 5-B, ES Volume II), provides descriptive (i.e., non-numerical) guidance on the potential effects of various degrees of noise exposure with reference to the effect levels referred to in the NPSE, i.e., where noise is above or below the NOEL, LOAEL and SOAEL, as well as featuring the additional effect level of No Observed Adverse Effect Level (NOAEL) and a description of unacceptable adverse effects that should be prevented. The table confirms that adverse effects (between LOAEL and SOAEL, where noise starts to cause small changes in behaviour or attitude) should be mitigated and reduced to a minimum. Increasing noise exposure will cause the SOAEL boundary to be crossed, with there being two levels of adverse effect above it:
- A significant observed adverse effect – noise causes a material change in behaviour, e.g., keeping windows closed or avoiding certain activities at certain times. The planning process should be used to avoid this effect occurring, for example through choice of sites and use of appropriate mitigation. It is undesirable for such exposure to be caused, but as mentioned in the footnote above, there are circumstances when such effects can occur. Decisions must take account of the economic and social benefit of the activity causing or affected by the noise caused; and
  - An unacceptable adverse effect – noise exposure would cause extensive and sustained adverse changes in behaviour and / or health without the ability to mitigate the effects of the noise. Under these circumstances, the impacts on health and quality of life are such that regardless of the benefits of the activity causing the noise this situation must be prevented from occurring.

Local Policy and Guidance

Manchester Core Strategy 2012 to 2027 (MCC, 2012)

- 5.3.12
- MCC’s local policies regarding planning are defined within the Core Strategy. In relation to noise, Policy DM 1 of the Core Strategy which deals with development management, states the following:  
  
“All development should have regard to the following specific issues for which more detailed guidance may be given within a supplementary planning document:  
  
• Effects on amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation. This could also include proposals which would be sensitive to existing environmental conditions, such as noise.”

Planning and Noise: Technical Guidance (MCC, 2022)

- 5.3.13
- Further guidance on MCC’s approach to the consideration of noise in a planning context is provided within its technical guidance document “Planning and Noise”. Regarding demolition and construction noise and vibration, the guidance contains no specific requirements, but suggests that any assessment should be based on BS 5228 Parts 1 and 2.

Other Relevant Policy and Guidance

- 5.3.14
- Other guidance, such as British Standards, has been referred to primarily in terms of suitable methods for the prediction of noise and vibration and the definition of suitable thresholds to indicate significant effects. These are referenced where required in section 5.2 of this chapter.

5.4 ASSESSMENT LIMITATIONS

- 5.4.1
- It is impracticable to measure the existing noise climate or predict and assess noise at every individual receptor. Monitoring locations used for the baseline noise survey have been selected to provide data considered representative of the wider areas of receptors around the site, and receptors have been chosen based on them being the most exposed to noise from the proposed development as a worst-case. Therefore, effects at other receptors would be no worse and generally lower than at those selected.
- 5.4.2
- The assumptions used for demolition plant and methodology are estimates and are subject to modification, but they are considered to allow assessment of the reasonable worst-case demolition effects.
- 5.4.3
- As discussed, based on the demolition activities detailed in Chapter 2, ES Volume II, there are no relevant prediction methods of groundborne vibration available for these sources. As such, a predictive assessment of groundborne vibration has not been undertaken.

5.5 BASELINE CONDITIONS

Current Baseline (2025)

- 5.5.1
- The 2025 baseline noise environment, as observed during the noise survey, was dominated by road traffic noise, primarily from roads adjacent to the measurement locations, and with a constant background noise dominated by the A57 (M). Other noise sources noted included occasional railway noise, some construction noise, and fixed plant noise.
- 5.5.2
- The results of the noise measurements are presented in Table 5-4. The measurement locations are shown in in Figure 5-1.

Table 5-4 Results of attended noise measurements (free-field)

| Location Ref. | Date       | Start Time | Ambient Sound Level, dB LAeq,30min | Nearest Receptors                                                                   |
|---------------|------------|------------|------------------------------------|-------------------------------------------------------------------------------------|
| ST1           | 03/04/2025 | 09:00      | 58                                 | Lampart Court                                                                       |
| ST2           | 03/04/2025 | 09:45      | 66                                 | Masdar Building, Pariser Building                                                   |
| ST3           | 03/04/2025 | 10:30      | 64                                 | Manchester Conference Centre, The Pendulum Hotel, Weston Hall Student Accommodation |
| ST4           | 03/04/2025 | 11:15      | 62                                 | Echoes Day Nursery                                                                  |
| ST5           | 03/04/2025 | 12:00      | 55                                 | George Begg Building, John Gardside Building                                        |

Future Baseline (2027)

- 5.5.3
- It is expected that the future baseline noise environment would continue to be dominated by those sources identified as dominant in the current baseline section above. In all cases, the dominant noise source is road traffic noise. It is considered unlikely that road traffic noise would experience a material change in level for the future baseline year compared to the current baseline year.

Identified Receptors and their Sensitivity

- 5.5.4
- The receptors selected for the assessment comprise a sample of those closest to the proposed project. Their proximity means that, in general, effects at other locations further from the relevant sources of noise and/or vibration would be no greater, and in most cases lower than those that have been assessed.
- 5.5.5
- Demolition noise has been assessed at multiple receptors at various distances from the site. These are primarily commercial and educational buildings owned by the University of Manchester, but also include residential dwellings, a hotel, and a nursery building.
- 5.5.6
- The receptors are listed in Table 5-5 and shown in Figure 5-2, along with the red line boundary for the proposed project.

Table 5-5 Receptors considered in the assessment

| Receptor ID | Description                       | Type                   |
|-------------|-----------------------------------|------------------------|
| R1          | Lampart Court                     | Residential block      |
| R2          | Litcham Close                     | Residential block      |
| R3          | Masdar Building                   | Commercial/Educational |
| R4          | Pariser Building                  | Commercial/Educational |
| R5          | Manchester Conference Centre      | Commercial             |
| R6          | The Pendulum Hotel                | Commercial/Educational |
| R7          | Weston Hall Student Accommodation | Residential            |
| R8          | Echoes Day Nursery                | Educational            |
| R9          | George Begg Building              | Commercial/Educational |
| R10         | John Gardside Building            | Commercial/Educational |

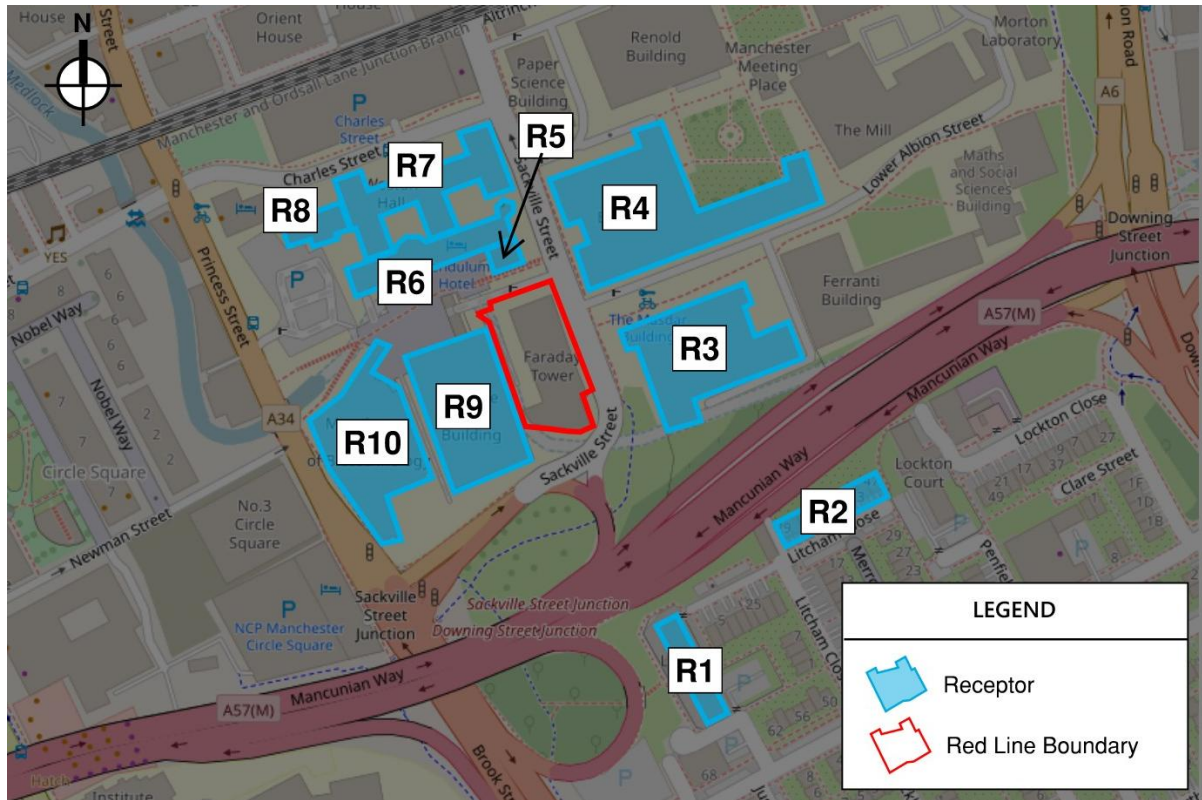


Figure 5-2 Receptor locations

## 5.6 DEMOLITION EFFECTS

### Relevant Aspects of the Proposed Project

- 5.6.1 As discussed in section 5.2 of this chapter, the noise assessment considers noise associated with the simultaneous use of demolition plant. This assessment is most relevant to the following stages of hard demolition works, which can be considered as the worst case for potential noise effects:
- Demolition of the former district heating; and
  - Demolition of the tower to ground level.
- 5.6.2 The assessment considers hard demolition works to be undertaken over a 60 week period, as per the indicative demolition programme, detailed in Chapter 2, ES Volume I.

### Potential Effects of the Proposed Project and their Significance

#### Demolition Noise

- 5.6.3 The predicted noise levels for the demolition works at each receptor and the subsequent assessment against the relevant LOAEL and SOAEL thresholds detailed in section 5.2 of this chapter are presented in Table 5-6.

Table 5-6 Predictions of demolition noise and comparison to LOAEL/SOAEL thresholds

| Receptor ID | Predicted noise level for demolition works (dB L <sub>Aeq,T</sub> façade) |               | Exceedances of LOAEL? | Exceedances of SOAEL? |
|-------------|---------------------------------------------------------------------------|---------------|-----------------------|-----------------------|
|             | District Heating                                                          | Faraday Tower |                       |                       |
| R1          | 67                                                                        | 67            | Yes                   | No                    |
| R2          | 68                                                                        | 68            | Yes                   | No                    |
| R3          | 75                                                                        | <b>76</b>     | Yes                   | Yes                   |
| R4          | 64                                                                        | 75            | Yes                   | No                    |

| Receptor ID | Predicted noise level for demolition works (dB L <sub>Aeq,T</sub> façade) |               | Exceedances of LOAEL? | Exceedances of SOAEL? |
|-------------|---------------------------------------------------------------------------|---------------|-----------------------|-----------------------|
|             | District Heating                                                          | Faraday Tower |                       |                       |
| R5          | <b>76</b>                                                                 | <b>78</b>     | Yes                   | Yes                   |
| R6          | 73                                                                        | 74            | Yes                   | No                    |
| R7          | 63                                                                        | 70            | Yes                   | No                    |
| R8          | 60                                                                        | 63            | No                    | No                    |
| R9          | <b>87</b>                                                                 | <b>86</b>     | Yes                   | Yes                   |
| R10         | 69                                                                        | 72            | Yes                   | No                    |

\*Predicted noise levels which are in exceedance against the LOAEL and SOAEL thresholds are in bold

- 5.6.4 As can be seen in Table 5-6, several of the predicted worst-case demolition noise levels exceed the SOAEL. As discussed in section 5.2 of this chapter, the final assessment of significance is based on the SOAEL being exceeded for a period of at least one month. At the time of writing, the indicative demolition programme suggests that hard demolition works will be undertaken over 60 weeks, exceeding the one month period after which SOAEL exceedance results in significant adverse effects.
- 5.6.5 However, as the noise levels represent the worst-case in terms of simultaneous noise generating activities, it is reasonable to assume that they would occur at this level for only a relatively short period of time, if ever, and be lower for the majority of the time. Nevertheless, based on the available information, it is considered that demolition noise is likely to result in significant adverse effects at three of the closest receptors: R3, R5 and R9. This equates to a major adverse level of significance (see Table 5-3).

### Summary of Effects

- 5.6.6 As previously discussed, the receptors selected represent a worst-case in terms of likely exposure to demolition noise from the proposed project. Table 5-7 provides a summary of the noise effects from the proposed project.

Table 5-7 Summary of effects during demolition

| Receptor ID | Type                    | Description of effect | Effect level <sup>1</sup>         | Effect significance   |
|-------------|-------------------------|-----------------------|-----------------------------------|-----------------------|
| R1          | Residential block       | Demolition noise      | Between LOAEL and SOAEL (adverse) | Low; temporary        |
| R2          | Residential block       | Demolition noise      | Between LOAEL and SOAEL (adverse) | Low; temporary        |
| R3          | Commercial/Educational  | Demolition noise      | Exceeding SOAEL (major adverse)   | Major; temporary      |
| R4          | Commercial/Educational  | Demolition noise      | Between LOAEL and SOAEL (adverse) | Low; temporary        |
| R5          | Commercial              | Demolition noise      | Exceeding SOAEL (major adverse)   | Major; temporary      |
| R6          | Commercial /Educational | Demolition noise      | Between LOAEL and SOAEL (adverse) | Low; temporary        |
| R7          | Residential             | Demolition noise      | Between LOAEL and SOAEL (adverse) | Low; temporary        |
| R8          | Educational             | Demolition noise      | Below LOAEL (non-adverse)         | Negligible; temporary |
| R9          | Commercial/Educational  | Demolition noise      | Exceeding SOAEL (major adverse)   | Major; temporary      |
| R10         | Commercial/Educational  | Demolition noise      | Between LOAEL and SOAEL (adverse) | Low; temporary        |

<sup>1</sup> See section 5.2 of this chapter for further details of the assessment criteria.

Supplementary Mitigation Measures

5.6.7 Table 5-8 describes the mitigation measures that will be adopted to avoid significant adverse effect and any additional measures that will be employed that will minimise non-significant effects.

Table 5-8 Summary of supplementary mitigation measures during demolition

| Adverse effect   | Mitigation measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Responsibility / mechanism for implementation                                   | Timing                                                                                                                                     |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Demolition noise | <p>A detailed CEMP will be developed, including details of measures to mitigate and manage noise from the demolition works based on the concept of best practicable means (BPM). Mitigation measures include:</p> <ul style="list-style-type: none"><li>Selection of plant producing lower levels of noise;</li><li>Use of localised screening and enclosures around noisy plant and activities; and</li><li>Scaffold sheeting providing some level of noise protection around the works.</li></ul> <p>It is anticipated that implementation of such measures would reduce noise levels by up to 10 dB. Consider the implementation of real-time noise monitoring with automatic alerts if LOAEL and SOAEL noise levels are reached.</p> | Detailed CEMP to be secured by planning condition and implemented by contractor | A detailed CEMP should be developed by the appointed contractor and agreed with MCC prior to the commencement of demolition works on site. |

5.7 RESIDUAL EFFECTS AND CONCLUSIONS

5.7.1 Table 5-9 summarises the likely residual effects of the proposed project, incorporating the anticipated reduction in noise levels due to mitigation.

Table 5-9 Summary of residual effects during demolition

| Receptor | Effect           | Significance before mitigation | Supplementary mitigation                                                             | Residual effect significance        |
|----------|------------------|--------------------------------|--------------------------------------------------------------------------------------|-------------------------------------|
| R1       | Demolition noise | Non-significant: low adverse   | Production of a detailed CEMP and implementation of mitigation measures during works | Non-significant: negligible adverse |
| R2       | Demolition noise | Non-significant: low adverse   |                                                                                      | Non-significant: negligible adverse |
| R3       | Demolition noise | Significant: major adverse     |                                                                                      | Non-significant: low adverse        |
| R4       | Demolition noise | Non-significant: low adverse   |                                                                                      | Non-significant: negligible adverse |
| R5       | Demolition noise | Significant: major adverse     |                                                                                      | Non-significant: low adverse        |

| Receptor | Effect           | Significance before mitigation      | Supplementary mitigation | Residual effect significance        |
|----------|------------------|-------------------------------------|--------------------------|-------------------------------------|
| R6       | Demolition noise | Non-significant: low adverse        |                          | Non-significant: negligible adverse |
| R7       | Demolition noise | Non-significant: low adverse        |                          | Non-significant: negligible adverse |
| R8       | Demolition noise | Non-significant: negligible adverse |                          | Non-significant: negligible adverse |
| R9       | Demolition noise | Significant: major adverse          |                          | Significant: major adverse          |
| R10      | Demolition noise | Non-significant: low adverse        |                          | Non-significant: negligible adverse |

5.7.2 Following the implementation of the supplementary mitigation, the residual demolition noise effect on receptors R3 and R5 is anticipated to reduce to non-significant low adverse effect.

5.7.3 Due to the proximity of receptor R9 to the site, and assuming the worst-case scenario approach that has been taken for this assessment (i.e., the predicted noise levels might only be expected for a far shorter duration, if at all), the significance of effect at R9 is expected to remain major adverse after the supplementary mitigation measures are put into place. Since R9 is owned by University of Manchester, it is expected that this can be effectively managed. The situation will be monitored and temporary relocation considered where feasible.

5.8 FUTURE MONITORING OF SIGNIFICANT RESIDUAL ENVIRONMENTAL EFFECTS

5.8.1 Noise monitoring during the demolition works is recommended as one of the mitigation measures outlined in Table 5-8. This is recommended as part of a wider suite of mitigation measures to reduce significant residual effects.

5.9 REFERENCES

- BSI Standards Limited (2014), BS 5228-1:2009+A1:2014 Code of Practice for noise and vibration control on construction and open sites, Part 1 Noise.
- BSI Standards Limited (2014), BS 5228-2:2009+A1:2014 Code of Practice for noise and vibration control on construction and open sites, Part 2 Vibration.
- Department for Environment, Food & Rural Affairs (DEFRA) (2010), Noise Policy Statement for England.
- Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2019), Planning Practice Guidance: Noise.
- Ministry of Housing, Communities and Local Government (2024), National Planning Policy Framework.
- Manchester City Council, 2012, Manchester’s Local Development Framework – Core Strategy and Development Plan Document.
- Manchester City Council, 2022, Planning and Noise Technical Guidance.
- Ministry of Housing, Communities & Local Government (2021), National Planning Policy Framework.
- The Association of Noise Consultants (2012), ANC Guidelines: Measurement & Assessment of Groundborne Noise & Vibration.

5.10 GLOSSARY

| Term                                              | Definition                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Best practicable means (BPM)                      | With respect to noise, in simple terms BPM requires measures to be taken to reduce noise as far as possible without those responsible for the noise suffering unreasonable financial or operational restraints.                                                                               |
| Façade Level                                      | The sound level at a position 1 m in front of a reflecting façade of a building. The façade noise level is assumed to be 3 dB(A) higher than the level measured or predicted at the same position but without the influence of the reflecting façade.                                         |
| Free-field Level                                  | The sound level in an open area well away from any buildings or other sound reflecting surfaces other than the ground. Generally, the minimum distance from building facades required for free-field measurements is 3.5 m.                                                                   |
| L <sub>Aeq,T</sub>                                | The equivalent continuous A-weighted sound or noise level over the time period (T). This is the A-weighted sound pressure level of a continuous, steady sound that, over the given time period (T), contains the same sound energy as the actual fluctuating sound over the same time period. |
| Lowest Observed Adverse Effect Level (LOAEL)      | This is the level above which adverse effects on health and quality of life can be detected.                                                                                                                                                                                                  |
| Significant Observed Adverse Effect Level (SOAEL) | This is the level above which significant adverse effects on health and quality of life occur.                                                                                                                                                                                                |

5.11 ABBREVIATIONS

| Term               | Definition                                                      |
|--------------------|-----------------------------------------------------------------|
| ANC                | Association of Noise Consultants                                |
| BPM                | Best Practicable Means                                          |
| BS                 | British Standard                                                |
| CadnaA             | Acoustic modelling software used for noise prediction           |
| CEMP               | Construction Environmental Management Plan                      |
| DEFRA              | Department for Environment, Food & Rural Affairs                |
| EIA                | Environmental Impact Assessment                                 |
| ES                 | Environmental Statement                                         |
| L <sub>Aeq,T</sub> | Equivalent continuous A-weighted sound level over time period T |
| LOAEL              | Lowest Observed Adverse Effect Level                            |
| MCC                | Manchester City Council                                         |
| NOAEL              | No Observed Adverse Effect Level                                |
| NOEL               | No Observed Effect Level                                        |
| NPSE               | Noise Policy Statement for England                              |
| NPPF               | National Planning Policy Framework                              |
| NSR                | Noise Sensitive Receptor                                        |
| PPG:N              | Planning Practice Guidance for Noise                            |
| SLM                | Sound Level Meter                                               |
| SOAEL              | Significant Observed Adverse Effect Level                       |

5.12 LIST OF APPENDICES (ES VOLUME II)

| Reference    | Title                            |
|--------------|----------------------------------|
| Appendix 5-A | Demolition Noise Prediction Data |
| Appendix 5-B | PPG:N Noise Hierarchy Table      |



6 BUILT HERITAGE

6.1 INTRODUCTION

- 6.1.1 This chapter of the ES assesses the likely environmental effects of the proposed project with respect to built heritage. This chapter also describes the methods used to assess the effects; the baseline conditions currently existing at the site and surrounding area the mitigation measures required to prevent, reduce or offset any significant adverse effects; and the likely residual effects after these measures have been adopted.
- 6.1.2 Cumulative effects associated with built heritage have additionally been considered within the ES, although none have been identified.

6.2 METHODOLOGY AND ASSESSMENT CRITERIA

EIA Scoping

- 6.2.1 Manchester City Council’s (MCC) scoping opinion letter received on 17<sup>th</sup> June commented with regard to ‘Heritage’ that:
- ‘The comments within your Scoping Report are noted and are acceptable in terms of their consideration in the ES’ and ‘It is important that the scope of the heritage chapter considers the loss of the Faraday building given its historical value associated with the former UMIST estate and its value as a building with a particular architectural style and use of materials’.*
- 6.2.2 These comments have been actioned by undertaking a review of the development of the UMIST Estate to assist the contextual assessment.

Baseline Study Methodology

- 6.2.3 In terms of identifying areas of particular sensitivity, in heritage terms, this will broadly be limited to a 500m zone due to the nature and location of sensitive receptors, the topography of the area and intervening development, as well as the approximate scale of Faraday Tower.
- 6.2.4 Historic England guidance (2006) states:
- ‘Baseline information that describes the current and future likely condition of the historic environment in terms of its significance, sensitivity and capacity to accommodate change can also help identify areas of particular sensitivity to development, sustainability issues, predict and monitor likely effects and in identifying alternative solutions.’*
- 6.2.5 Table 6-1 summarises completed background studies/available baseline information including the scope of the baseline desk/field study carried out, the date it was undertaken and who was consulted.

Table 6-1 Completed background studies/available baseline information

| Study/analysis             | Overview                                                                                                                                                                                                                                                                                                               | Date of completion |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Photographic survey        | Undertook site visit to Faraday Tower and took external and internal photographs. Refer to Heritage Statement submitted in support of application.                                                                                                                                                                     | 4th December 2024  |
| Contextual Heritage Survey | Undertook site visit to photograph buildings within 500m radius of Faraday Tower. Prepared photographic records. (Appendix 6-D Listed building descriptions, plates and contextual views where applicable, ES Volume II) and (Appendix 6-F Other buildings plates and contextual view where applicable, ES Volume II). | 28th – 29th July   |

| Study/analysis                                               | Overview                                                                                                                                                                                           | Date of completion                                                                                                                        |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Reviewed archive plans                                       | Reviewed archive plans and identified the chronological development of the site (Appendix 6-B Faraday Tower: Archive mapping, ES Volume II).                                                       | 4th April 2025                                                                                                                            |
| Reviewed archive photographs                                 | Reviewed desk based sources and identified images of the site during the five years following completion of Faraday Tower (Appendix 6-C Faraday Tower: Archive photographic plates, ES Volume II). | 4th April 2025                                                                                                                            |
| Reviewed listed buildings                                    | Identified all listed buildings within 500m radius of the site (Appendix 6-G Heritage Assets Location Map, ES Volume II)                                                                           | 8th April 2025 and July 2025                                                                                                              |
| Reviewed Conservation areas                                  | Identified all Conservation Areas within 500m radius of the site (Appendix 6-E Conservation area description, plates and contextual views where applicable, ES Volume II).                         | 8th April 2025                                                                                                                            |
| Reviewed locally listed buildings                            | Identified locally listed buildings within 500m radius of the site. None were identified.                                                                                                          | 8th April 2025                                                                                                                            |
| Consulted Greater Manchester Archaeological Advisory Service | Confirmed whether a Historic Environment Record (HER) entry existed for Faraday Tower.                                                                                                             | Response received from Greater Manchester Archaeological Advisory Service on 4th April 2025 confirming the site does not have a HER entry |

Assessment Approach

- 6.2.6 The baseline conditions have been determined via a combination of desktop research (including reference to best practice guidance), site visits, photography, and views analysis. This has enabled the identification of potential sensitive receptors, including listed buildings, conservation areas and selected Non Designated Heritage Assets (NDHAs).
- 6.2.7 The assessment approach relies upon professional judgement, with each asset analysed on a consistent basis. The assessment of the magnitude of impact seeks to be as objective and quantifiable as far as possible, and justification for the conclusions in terms of level of impact is provided.

Assessment of Effects

- 6.2.8 Where the proposed project may impact the surrounding built heritage receptors, a qualitative assessment has been undertaken of whether, how and to what degree setting of the heritage receptor is impacted.
- 6.2.9 The identified built heritage assets will be the receptors. The value of each receptor lies within its heritage significance, which will be partly confirmed by a classification (such as its listing), as well as additional analysis. Once the heritage significance of each asset is established, a “significance of effect” will be calculated for assets that are potentially affected by the proposed project, having regard to the magnitude of the impact/change.

Receptor Sensitivity

6.2.10 The criteria used to assess receptor sensitivity is described in Table 6-2.

Table 6-2 Criteria for determining receptor sensitivity

| Sensitivity | Criteria                                                                                                                                                                                                                                                                                               |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High        | <ul style="list-style-type: none"><li>Grade I/Grade II* Listed Buildings.</li><li>Buildings with exceptional design features or with historical significance which has not been reflected within the national Listing process.</li><li>Conservation Areas with highly significant buildings.</li></ul> |
| Moderate    | <ul style="list-style-type: none"><li>Grade II Listed Buildings.</li><li>Buildings with exceptional design features or with historical significance.</li><li>Conservation Areas with buildings which contribute significantly to its character.</li></ul>                                              |
| Low         | <ul style="list-style-type: none"><li>Locally Listed Buildings.</li><li>Historic buildings of modest quality or with modest historical association /significance.</li></ul>                                                                                                                            |
| Negligible  | <ul style="list-style-type: none"><li>Non historic buildings.</li></ul>                                                                                                                                                                                                                                |

Magnitude of Change/Impact

6.2.11 Potentially significant effects upon the identified sensitive receptors will either be as a result of direct physical change, or a visual indirect change. With regards to the proposed project, and in accordance with Historic England Advice Note 8 (REF Sustainability Appraisal and Strategic Environmental Assessment, Historic England Advice Note 8, December 2016), potential significant effects (both positive and negative) in relation to built heritage might include:

- Loss of, or damage to, heritage assets; and
- Loss of, or damage to, heritage assets’ settings.

6.2.12 In order to predict the magnitude of impact, and the subsequent significance of any effect, the following criteria have been considered:

- The sensitivity of receptors (both physically and in terms of setting);
- The proximity of receptors to the site;
- The nature of existing views;
- The extent of change to those views and the visibility/prominence of the proposed project; and
- The availability of alternative views of those receptors;

6.2.13 The magnitude of change on the potentially affected heritage assets and historic environment relies upon professional judgement, with each asset analysed on a consistent basis. The assessment of the magnitude of impact seeks to be as objective and quantifiable as far as possible, and justification for the conclusions in terms of level of impact is provided.

6.2.14 Change has been identified as beneficial, adverse or negligible/none. Where the proposed project has been considered to enhance the setting or appreciation of an affected heritage asset, the change to its significance within the view has been deemed to be beneficial. Where the proposed project has been considered to fail to sustain existing heritage values, the impact on significance has been deemed to be adverse. The different magnitudes of potential impact on the historic environment are identified within Table 6-2. The criteria used to assess how far an effect deviates from the baseline condition, i.e., the magnitude of change, are described in Table 6-3.

Table 6-3 Criteria for determining magnitude of change

| Magnitude                 | Criteria                                                                                                                                    |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Large beneficial          | Where the proposed project considerably enhances the heritage values of the heritage assets or the ability to appreciate those values.      |
| Medium beneficial         | Where the proposed project enhances the heritage values of the heritage assets or the ability to appreciate those values.                   |
| Small beneficial          | Where the proposed project enhances to a minor extent the heritage values of the heritage assets or the ability to appreciate those values. |
| Either None or Negligible | Where the proposed project does not affect the values of the heritage assets or the ability to appreciate those values.                     |
| Small adverse             | Where the proposed project erodes to a minor extent the heritage values of the assets or the ability to appreciate those values.            |
| Medium adverse            | Where the proposed project erodes the heritage values of the heritage assets or the ability to appreciate those values.                     |
| Large adverse             | Where the proposed project severely erodes the values of the heritage assets or the ability to appreciate those values.                     |

Significance Evaluation

6.2.15 The significance of a potential effect is derived by considering both the sensitivity of the feature and the magnitude of change, as demonstrated in Table 6-4.

Table 6-4 Matrix for determining effect significance

|                      |            | Magnitude of change/impact |            |                |            |
|----------------------|------------|----------------------------|------------|----------------|------------|
|                      |            | Large                      | Medium     | Small          | Negligible |
| Receptor sensitivity | High       | Major                      | Major      | Moderate/Minor | Negligible |
|                      | Moderate   | Major                      | Moderate   | Minor          | Negligible |
|                      | Low        | Moderate/Minor             | Minor      | Minor          | Negligible |
|                      | Negligible | Negligible                 | Negligible | Negligible     | Negligible |

6.2.16 Note that moderate and major effects are considered to be ‘significant’ in EIA terms.

6.2.17 Effects can also be described, for example, as:

- Beneficial or adverse;
- Direct or indirect/secondary;
- Permanent or temporary/reversible;
- Short term (effects that would be of short duration and would occur for up to 2 years);
- Medium term (effects that occur for a period of between 2-10 years);
- Long term (effects that occur for 10 years or more and include permanent effects); and
- Significant (major or moderate) or not significant (negligible or minor).

6.3 LEGISLATION AND POLICY WHICH HAS INFLUENCED ASSESSMENT

National Policy and Guidance

Town and Country Planning Act 1990

6.3.1 Section 38(6) of the Planning Act states that the determination of planning applications must be made in accordance with the Development Plan, unless other material considerations indicate otherwise. This establishes the Development Plan as the primary decision-making document when considering planning applications. In this instance the development plan currently comprises Places for Everyone (2024), the Manchester Core Strategy (2012) and saved policies of the Unitary Development Plan for Manchester (1995). The policies of these documents which provide the context for the decision maker with regard to built heritage are summarised below and described at Appendix 6-A.

Planning (Listed Buildings and Conservation Areas) Act 1990

6.3.2 The Planning Act (1990) defines a conservation area as '*an area of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance*'. Paragraph 72 states that '*special attention shall be paid to the desirability of preserving or enhancing the character or appearance of that area*'.

6.3.3 In considering development affecting Listed Buildings, special regard will be given to the desirability of preserving the building, its setting or any features of special architectural or historic interest (Section 66, Planning [Listed Buildings and Conservation Areas] Act 1990).

National Planning Policy Framework (NPPF)

6.3.4 The Revised NPPF which was published in July 2018 and most recently updated in December 2024, sets out the Government's planning policies regarding the conservation of the historic environment.

6.3.5 Section 16, Conserving and Enhancing the Historic Environment, and policies 202-221 of the NPPF sets out the heritage context. The NPPF states that heritage assets are '*an irreplaceable resource and should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations*' (Para 202).

6.3.6 Paragraphs 207 and 208 require applicants to describe the significance of any heritage assets affected, including any contribution made by their setting; and that the level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance; local planning authorities should take this assessment into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal.

6.3.7 Paragraph 203 sets out three considerations which local planning authorities should consider when determining applications:

- The desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
- The positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and
- The desirability of new development making a positive contribution to local character and distinctiveness.

6.3.8 Paragraph 212 notes that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. Paragraph 213 follows that any harm to, or loss of, the significance of a designated heritage asset should require clear and convincing justification.

6.3.9 Paragraph 214 identifies a series of criteria that must be met where substantial harm to or total loss of significance will be caused to a designated heritage asset; it has to be demonstrated that substantial loss or harm is necessary to achieve substantial public benefits that outweigh that harm or loss. Paragraph 215 states that where a development will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal.

6.3.10 The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset (para 216).

6.3.11 Paragraph 219 states that local planning authorities should look for opportunities for new development within the setting of heritage assets to enhance or better reveal their significance; and, that proposals that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset should be treated favourably.

National Planning Practice Guidance (NPPG)

6.3.12 The NPPG was published in March 2014 (updated 2023). The Guidance includes a section on the historic environment. Relevant paragraphs from the Guidance are set out below:

6.3.13 All heritage assets have a setting, irrespective of the form in which they survive and whether they are designated or not.

6.3.14 What matters in assessing whether a proposal might cause harm is the impact on the significance of the heritage asset. As the NPPF makes clear, significance derives not only from a heritage asset's physical presence, but also from its setting.

6.3.15 Proposed development affecting a heritage asset may have no impact on its significance or may enhance its significance and therefore cause no harm to the heritage asset. Where potential harm to designated heritage assets is identified, it needs to be categorised as either less than substantial harm or substantial harm (which includes total loss) in order to identify which policies in the NPPF apply.

6.3.16 An unlisted building that makes a positive contribution to a conservation area is individually of lesser importance than a listed building.

6.3.17 The NPPF requires any harm to designated heritage assets to be weighed against the public benefits of the proposal. Public benefits may follow from many developments and could be anything that delivers economic, social or environmental objectives.

6.3.18 Non-designated heritage assets are buildings, monuments, sites, places, areas or landscapes identified by plan-making bodies as having a degree of heritage significance meriting consideration in planning decisions, but which do not meet the criteria for designated heritage assets.

6.3.19 With regard to assessing substantial harm, National Planning Practice Guidance advises:

*‘Whether a proposal causes substantial harm will be a judgment for the decision taker, having regard to the circumstances of the case and the policy in the National Planning Policy Framework. In general terms, substantial harm is a high test, so it may not arise in many cases. For example, in determining whether works to a listed building constitute substantial harm, an important consideration would be whether the adverse impact seriously affects a key element of its special architectural or historic interest. It is the degree of harm to the asset’s significance rather than the scale of the development that is to be assessed. The harm may arise from works to the asset or from development within its setting.’ (Paragraph: 018 Reference ID: 18a-018-20190723).*

**Local policy and guidance**

**Places for Everyone Joint Development Plan (March 2024)**

6.3.20 The Places for Everyone Plan (2024) was adopted by MCC in March 2024. The policy relevant to heritage states (Policy JP-P2: Heritage):

*“We will proactively manage and work with partners to positively conserve, sustain and enhance our historic environment and heritage assets and their settings. Opportunities will be pursued to aid the promotion, enjoyment, understanding and interpretation of heritage assets, as a means of maximising wider public benefits and reinforcing Greater Manchester’s distinct character, identity and sense of place....*

- 1. This knowledge should be used to inform the positive management and integration of our heritage by:*
- 2. Setting out a clear vision that recognises and embeds the role of heritage in place-making;*
- 3. Ensuring that the heritage significance of a site or area is considered in accordance with national planning policy in the planning and design process and opportunities for interpretation and local engagement are optimised;*
- 4. Integrating the conservation and enhancement of heritage assets and their settings, with creative contextual architectural responses that contribute to their significance and sense of place;*
- 5. Delivering positive benefits that sustain and enhance the historic environment, as well as contributing to the economic viability, accessibility and environmental quality of a place, and to social wellbeing; and*
- 6. Exploring opportunities to reduce greenhouse gas emissions that restoration of historic buildings offer.*

*Particular consideration will be given to ensure that the significance of key elements of the historic environment which contribute to Greater Manchester’s distinctive identity and sense of place are protected from harm. These include historic town centres, places of worship, historic transport routes including the canal network, industrial buildings and structures including textile mills, farmsteads and other sites, buildings, and areas of identified archaeological, architectural, artistic and/or historic value.*

*Development proposals affecting designated and non-designated heritage assets and/or their settings will be considered having regard to national planning policy..*

*Proposals should be informed, as necessary, by the findings and recommendations of the appropriate heritage assessment(s) in the development plan evidence base and/or any updated heritage assessment submitted as part of the planning application process.”*

**Manchester Core Strategy Development Plan Document (July 2012)**

6.3.21 Manchester’s Local Development Framework Core Strategy Development Plan Document was adopted on 11<sup>th</sup> July 2012. Policy EN3 ‘Heritage’ advises that throughout the City, the Council will encourage development that complements and takes advantage of the distinct historic and heritage features of its districts and neighbourhoods including those of the City Centre.

**Saved Policies of the Unitary Development Plan (UDP) for the City of Manchester (adopted 1995)**

6.3.22 The UDP was superseded by the Core Strategy. However, a number of UDP policies were ‘saved’. Extant policies contained within the UDP include:

- Policy DC18 ‘Conservation Areas’ which states that the Council will seek to preserve and enhance the character of its designated conservation areas.
- Policy DC19 ‘Listed Buildings’ which states that the Council will have regard to the desirability of securing the retention, restoration, maintenance and continued use of such buildings.

**Other Guidance**

6.3.23 It has been confirmed that as of 8<sup>th</sup> April 2025, MCC does not have an adopted local list of buildings, nor is MCC proposing to draft and adopt a local list as part of the ongoing Greater Manchester Local Heritage List Initiative. This does not mean to say that no further assessment is required as a building can be identified as a NDHA at any stage in the process. This is a building (or monument/site/place/area or landscape) identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest.

6.3.24 In this instance, Faraday Tower will be assessed with regard to other buildings and sites within the local area which could be considered to have heritage interest. Buildings and sites to be considered as potential NDHAs include Faraday Tower, Renold Building, Jackson Street Mill and the Maths and Social Science Building.

**6.4 ASSESSMENT LIMITATIONS (technical deficiencies or lack of knowledge)**

6.4.1 Surveying identified heritage assets within the study area must be from publicly accessible areas, which will sometimes prevent full access to the exteriors of some heritage assets.

**6.5 BASELINE CONDITIONS**

**Current Baseline (2025)**

6.5.1 The site is understood not to be subject to any Tree Preservation Orders. There are no listed buildings on the site. The site is not included within a Conservation area. The closest conservation area is Whitworth Street and Princess Street Conservation Area which lies 100m north of the site and within which a number of listed buildings are located.

6.5.2 UMIST moved to the area at the end of the 19<sup>th</sup> century. The Main Building (now called the Sackville Street Building) was purpose-built between 1895 and 1902 by Spalding and Cross. Starting in 1927, plans were drawn up by the architects Bradshaw Gass & Hope for an extension which would approximately double the size of the original building. However, construction was delayed by the war and other factors, so that the extension was not fully completed until 1957.

6.5.3 In the 1960s the institution expanded rapidly to the south, growing from a single large building to an entire campus. Around a dozen modern buildings were constructed on the southern side of the railway viaduct from the Main Building. The new buildings were designed by Manchester architects and were generally built out of concrete. They included the George Begg Building (Mechanical Engineering), the Maths and Social Sciences Tower, the Faraday Building, the Renold Building, and the Barnes Wallis Building.

Future Baseline (2027)

6.5.4 If the proposed demolition did not go ahead, it is not considered that the conditions on site would change aside from pieces of concrete being likely to fall from the remnant building through continued spalling and concrete deterioration. The setting of Faraday Tower may decline further should proposals to demolish other former UMIST buildings be approved and implemented.

Identified Receptors and their Sensitivity

6.5.5 The remnants of the chemistry building (Faraday Tower) rise 13 storeys above the ground level of Sackville Street and due to its height is judged to be a building which has potential to impact beyond its immediate site. The demolition of the building has the potential to change the setting of nearby listed buildings, conservation areas and locally listed buildings. Potential receptors identified through the baseline review are listed in Table 6-5.

6.5.6 Listed building are identified and numbered as LB1, LB2, LB3 etc. Listed buildings are described and photographed at Appendix 6-D, ES Volume II, and their locations are shown by Appendix 6-G, ES Volume II. Conservation Areas are identified by the prefix C and are described and photographed in Appendix 6-E, ES Volume II. The location of the Conservation Area boundary is shown by Appendix 6-G, ES Volume II. Other buildings assess are identified and numbered as OB1, OB2, OB3 etc. Other buildings are described and photographed at Appendix 6-F, ES Volume II and their locations are shown by Appendix 6-G, ES Volume II.

Table 6-5 Identified receptors and their sensitivity

| Receptor                                                                                                                                                                                                         | Sensitivity | Justification                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------|
| Listed Buildings                                                                                                                                                                                                 |             |                                                                    |
| LB1 Manchester Oxford Road Station (including platform structures); Listed Building Grade II; LEN 1255053                                                                                                        | Moderate    | Sensitivity classification justified against criteria in Table 6-2 |
| LB2 Granby House; Listed Building Grade II; LEN 1218253                                                                                                                                                          | Moderate    |                                                                    |
| LB3 India House (Including attached wrought iron Gateway link to Lancaster House); Listed Building Grade II*; LEN 1254836                                                                                        | High        |                                                                    |
| LB4 Manchester House; Listed Building Grade II; LEN 1270897                                                                                                                                                      | Moderate    |                                                                    |
| LB5 The Place Theatre; Listed Building Grade II; LEN 1271227                                                                                                                                                     | Moderate    |                                                                    |
| LB6 Orient House; Listed Building Grade II; LEN1200838                                                                                                                                                           | Moderate    |                                                                    |
| LB7 Boundary Wall to Rochdale Canal Between Princess Street and Sackville Street Rochdale Canal Boundary Wall to Canal Street Between Princess Street and Sackville Street; Listed Building Grade II; LEN1247555 | Moderate    |                                                                    |
| LB8 101, Princess Street; Listed Building Grade II; LEN 1270899                                                                                                                                                  | Moderate    |                                                                    |
| LB9 109, Princess Street; Listed Building Grade II; LEN 1270914                                                                                                                                                  | Moderate    |                                                                    |
| LB10 Rochdale Canal Lock Number 86, to East of Chorlton Street; Listed Building Grade II; LEN 1247481                                                                                                            | Moderate    |                                                                    |
| LB11 9, Richmond Street; Listed Building Grade II; LEN1247476                                                                                                                                                    | Moderate    |                                                                    |
| LB12 27, Sackville Street; Listed Building Grade II; LEN 1247607                                                                                                                                                 | Moderate    |                                                                    |
| LB13 39, Chorlton Street; Listed Building Grade II; LEN 1283091                                                                                                                                                  | Moderate    |                                                                    |
| LB14 Brazil House; Listed Building Grade II; LEN 1270871                                                                                                                                                         | Moderate    |                                                                    |
| LB15 Former Goods Offices to Piccadilly Station; Listed Building Grade II; LEN 1197919                                                                                                                           | Moderate    |                                                                    |
| LB16 Asia House; Listed Building Grade II*; LEN 1247432                                                                                                                                                          | High        |                                                                    |
| LB17 Mintierna House; Listed Building Grade II; LEN 1197759                                                                                                                                                      | Moderate    |                                                                    |

| Receptor                                                                                                                                       | Sensitivity | Justification |
|------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|
| LB18 Minshull House; Listed Building Grade II; LEN 1283092                                                                                     | Moderate    |               |
| LB19 Former Warehouse; Listed Building Grade II; LEN 1431770                                                                                   | Moderate    |               |
| LB20 Police and Fire Station; Listed Building Grade II*; LEN 1197918                                                                           | High        |               |
| LB21 The Churchill Public House; Listed Building Grade II; LEN 1197758                                                                         | Moderate    |               |
| LB22 51 and 53, Richmond Street; Listed Building Grade II; LEN 1270835                                                                         | Moderate    |               |
| LB23 Bridgewater House; Listed Building Grade II; LEN 1270606                                                                                  | Moderate    |               |
| LB24 Former Refuge Assurance Company Offices; Listed Building Grade II*; LEN 1271429                                                           | High        |               |
| LB25 Institute of Science and Technology (University of Manchester); Listed Building Grade II; LEN 1247609                                     | Moderate    |               |
| LB26 Rochdale Canal Lock Number 87, to East of Princess Street, with Cast Iron Footbridge Beside Street; Listed Building Grade II; LEN 1247580 | Moderate    |               |
| LB27 46, Sackville Street; Listed Building Grade II; LEN 1247608                                                                               | Moderate    |               |
| LB28 Former Electricity Power Station; Listed Building Grade II; LEN 1255031                                                                   | Moderate    |               |
| LB29 Rhodesia House; Listed Building Grade II; LEN 1270911                                                                                     | Moderate    |               |
| LB30 3, Brazil Street; Listed Building; Grade II; LEN 1283077                                                                                  | Moderate    |               |
| LB31 Sculptural Wall; Listed Building; Grade II; LEN1400857                                                                                    | Moderate    |               |
| LB32 Lancaster House; Listed Building; Grade II*; LEN 1254887                                                                                  | High        |               |
| LB33 Regency House with Barclays Bank; Grade II; LEN 1254835                                                                                   | Moderate    |               |
| LB34 Rochdale Canal Lock Number 88, to east of Oxford Street; Listed Building Grade II; LEN 1270857                                            | Moderate    |               |
| LB35 Central House; Listed Building Grade II; LEN 1247389                                                                                      | Moderate    |               |
| LB36 Transact House; Listed Building Grade II; LEN 1247386                                                                                     | Moderate    |               |
| LB37 103, Princess Street; Listed Building Grade: II*; LEN 1247391                                                                             | High        |               |
| LB38 2, Harter Street; Listed Building Grade II; LEN 1200841                                                                                   | Moderate    |               |
| LB39 104, Bloom Street; Listed Building Grade II; LEN 1218476                                                                                  | Moderate    |               |
| LB40 Lass O Gowrie Public House; Listed Building Grade II; LEN 1293175                                                                         | Moderate    |               |
| LB41 New Union Public House; Listed Building Grade II; LEN 1247444                                                                             | Moderate    |               |
| LB42 Lionesse House; Listed Building Grade II; LEN 1247387                                                                                     | Moderate    |               |
| LB43 St James Buildings; Listed Building Grade II; LEN 1246571                                                                                 | Moderate    |               |
| LB44 Drill Hall; Listed Building Grade II; LEN 1207590                                                                                         | Moderate    |               |
| LB45 Grosvenor Building, Manchester Metropolitan University Faculty of Art and Design; Listed Building Grade II; LEN 1293192                   | Moderate    |               |
| LB46 94-98, Grosvenor Street; Listed Building Grade II; LEN 1218404                                                                            | Moderate    |               |
| LB47 Adult Deaf and Dumb Institute (Former); Listed Building Grade II; LEN 1200839                                                             | Moderate    |               |
| LB48 Dancehouse Theatre including Numbers 6-14; Listed Building Grade II; LEN 1384997                                                          | Moderate    |               |
| LB49 Chatham Mill; Listed Building Grade II; LEN 1293040                                                                                       | Moderate    |               |
| LB50 Former Town Hall Facade to Mabel Tylecote Building, Manchester Metropolitan University; Listed Building Grade II; LEN 1283062             | Moderate    |               |
| LB51 Former Manchester Ear Hospital; Listed Building Grade II; LEN 1197922                                                                     | Moderate    |               |
| LB52 Former Grosvenor Picture Palace; Listed Building Grade II; LEN1218431                                                                     | Moderate    |               |
| LB53 Dalton Statue in Forecourt of Dalton College; Listed Building Grade II; LEN1197791                                                        | Moderate    |               |

| Receptor                                                                                                                                                      | Sensitivity | Justification                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LB54</b> Oddfellows Hall; Listed Building Grade II; LEN 1200840                                                                                            | Moderate    |                                                                                                                                                                                                                                                                                                                                 |
| <b>LB55</b> Rochdale Canal Boundary Wall to Canal Between Chorlton Street and Minshull Street Grade II; LEN 1247478                                           | Moderate    |                                                                                                                                                                                                                                                                                                                                 |
| <b>LB 56</b> Rochdale Canal Boundary Wall to canal between Sackville Street and Chorlton Street, Grade II, LEN 1270837                                        | Moderate    |                                                                                                                                                                                                                                                                                                                                 |
| <b>LB57</b> 42 and 44 Sackville Street, Grade II, LEN 1270791                                                                                                 | Moderate    |                                                                                                                                                                                                                                                                                                                                 |
| <b>LB58</b> The Shena Simon Sixth Form College, Grade II, LEN 1270607                                                                                         | Moderate    |                                                                                                                                                                                                                                                                                                                                 |
| <b>LB59</b> Renold Building, UMIST campus. Grade II, LEN 1491623                                                                                              | Moderate    |                                                                                                                                                                                                                                                                                                                                 |
| <b>Conservation Areas</b>                                                                                                                                     |             |                                                                                                                                                                                                                                                                                                                                 |
| <b>CA1</b> Whitworth Street and Princess Street Conservation Area                                                                                             | High        | Sensitivity classification justified against criteria in Table 6-2                                                                                                                                                                                                                                                              |
| <b>Locally Listed Buildings</b>                                                                                                                               |             |                                                                                                                                                                                                                                                                                                                                 |
| Non identified                                                                                                                                                | N/A         | N/A                                                                                                                                                                                                                                                                                                                             |
| <b>Other Buildings Assessed</b>                                                                                                                               |             |                                                                                                                                                                                                                                                                                                                                 |
| <b>OB1</b> Faraday Tower                                                                                                                                      | Low         | The remnant tower has been regarded to be of some limited interest and is accorded low heritage significance. Refer to analysis within Heritage Statement prepared by Paul Butler Associates.                                                                                                                                   |
| <b>OB2</b> Moffat Building. The building has a Certificate of Immunity from listing.                                                                          | Low         | Former UMIST building of modest historical association with Faraday Tower. The Moffat building was a former confectionary warehouse converted to house UMIST’s Estates department, and subsequently the Department of Optometry.                                                                                                |
| <b>OB3</b> Morton Laboratory. The building has a Certificate of Immunity from listing)                                                                        | Low         | Former UMIST building of modest historical association with Faraday Tower. The Chemical Engineering Pilot Plant was built to house equipment. The building was later renamed after Professor Frank Morton. It was designed by Fairhursts, opening in 1966. It is four storeys and constructed of engineering brick and glazing. |
| <b>OB4</b> Butterfly Stairs and Walkway Bridge (formerly known as The Sir Hubert Worthington Stair). The structure has a Certificate of Immunity from listing | Low         | Former UMIST structure of modest historical association with Faraday Tower. Constructed to provide access from the main building to the front lawn. Designed by and named after Hubert Withington.                                                                                                                              |
| <b>OB5</b> Staff House (Manchester Meeting Place) The building has a Certificate of Immunity from listing)                                                    | Low         | Former UMIST building of modest historical association with Faraday Tower being the only campus building to be designed by Thomas Worthington and sons, who also designed the campus masterplan. Opened in 1960 it provided dining and recreational facilities for the academic staff.                                          |
| <b>OB6</b> Pariser Building                                                                                                                                   | Low         | Former UMIST building of modest historical association with Faraday Tower. The civil engineering building and opened in 1963. Designed by Fairhurst and Son and is eight storey’s high. Constructed from brick with copper cladding to the upper levels. It was extended in 1966/7 to provide extra laboratory space.           |

| Receptor                                                  | Sensitivity | Justification                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OB7</b> Mathematics and Social Science Building (MSSB) | Low         | Former UMIST building of modest historical association with Faraday Tower. The tallest building on the UMIST campus, which reflected the desire to expand beyond purely science and technology subjects. The MSSB was a grouping of connected blocks of varying heights. It was opened in 1970.                                                                            |
| <b>OB8</b> The Mill                                       | Low         | Former UMIST building of modest historical association with Faraday Tower. The Mill was reconstructed in the early 20th century from a cotton mill which stopped trading in 1955. It opened in May 1958 as the chemical engineering building. The Conversion was carried out by H S Fairhurst. Intended to be temporary but remained in use until the North Campus closed. |
| <b>OB9</b> George Begg Building                           | Low         | Former UMIST building of modest historical association with Faraday Tower. Opened in 1974, to accommodate mechanical engineering. Designed by Fairhurst and Son. This three storey building was intended to be a focal point for the second phase of the UMIST campus which was never fully completed                                                                      |
| <b>OB10</b> Ferranti Building                             | Low         | Former UMIST building of modest historical association with Faraday Tower. Housed the department of Electrical and electronic engineering and was situated between the MSSB and Faraday Tower. Designed by Cruickshank and Seward, the building accommodated a library.                                                                                                    |
| <b>OB11</b> Barnes Wallis and Wright Robinson Building    | Low         | Former UMIST building. The Wright Robinson building was a hall of residence completed in 1965. The Barnes Wallis building, which was the student union, was completed the year after, in 1966, and named after the famous inventor. The building provided a space for use outside of the '9-5' working day. It was designed by W. A. Gibbon of Cruickshank and Seward.     |

6.6 DEMOLITION EFFECTS

Relevant Aspects of the Proposed Project

- 6.6.1The proposal has two types of potential effect on heritage assets. Firstly, the actual demolition of the subject building is a direct effect and involves the Faraday Tower no longer being present. Secondly the demolition has the potential to have an indirect effect by the removal of the Faraday Tower which may potentially effect the setting of other heritage assets. The temporal significance of these direct and indirect effects will be permanent from the point of demolition, not temporary.
- 6.6.2The potential for noise and dust associated with the demolition activities themselves are excluded from the heritage assessment. The assessment of noise and dust, and the associated mitigation measures can be found in Chapter 5 Noise and Vibration, ES Volume I, and Chapter 4 Air Quality, ES Volume I.

Potential Effects of the Proposed Project and their Significance

Direct Change to Heritage Assets/Receptors by Removal of Fabric

Large Magnitude of Change

- 6.6.3
- The only direct effect of the development is the Faraday Tower being removed from Manchester. The significance of the Tower is identified by the Heritage Statement prepared by Paul Butler Associates and which forms part of the application. This report found that on completion in the building was described by Pevsner as *'concrete and quite extensive with abstract patterning by Anthony Holloway. There is a high slab, a bridge across Sackville Street, and a four storeyed part. The entrance opposite the Pariser building incorporates mosaics, The Alchemists Elements by Hans Tisdall, 1967'*.
- 6.6.4
- This brutalist building has been altered by selective demolition and its original landscaped setting removed. The Heritage Statement notes the four storeyed part of the building has been removed, the bridge link is demolished, the former landscaped area has been developed and the Hans Tisdall mural removed. The 'high slab' remains with textured concrete gables; however, these elevations are modified by the addition of ventilation shafts and can't be appreciated in the whole as the designers intended.
- 6.6.5
- Despite the selective demolitions and alterations, the remnant tower is regarded to be of limited interest; therefore, is accorded low sensitivity to the remnant building. Removal of the building is judged to have a large adverse magnitude of change since the proposed project removes remains of the asset and the ability to appreciate the remaining part of the Faraday complex. The demolition will fundamentally affect the significance of the building, having a moderate/minor effect which is deemed as significant in this assessment.) No mitigation has been identified which might alter this outcome.

Indirect Change in the Setting of Heritage Assets/Receptors

No Discernible Change

- 6.6.6
- The site visit assessments found there to be no intervisibility between the ground floor of the asset visited and Faraday Tower for a large number of assets within the 500m perimeter area. The proposed project is therefore judged to have no discernible change (not significant) on the following assets:
- LB1 Manchester Oxford Road Station Grade II;
  - LB3 India House Grade II\*;
  - LB4 Manchester House Grade II;
  - LB5 The Place Theatre Grade II;
  - LB6 Orient House Grade II;
  - LB7 Boundary Wall to Rochdale Canal Grade II;
  - LB8 101 Princess Street Grade II;
  - LB9 109 Princess Street Grade II;
  - LB10 Rochdale Canal Lock Number 86 Grade II;
  - LB11 9, Richmond Street Grade II;
  - LB12 27 Sackville Street Grade II;
  - LB13 39 Chorlton Street Grade II;

- LB14 Brazil House Grade II;
- LB15 Former Goods Offices to Piccadilly Station Grade II;
- LB16 Asia House Grade II\*;
- LB17 Mintierna House Grade II;
- LB18 Minshull House Grade II;
- LB19 Former Warehouse Grade II;
- LB20 Police and Fire Station Grade II\*;
- LB21 The Churchill Public House Grade II;
- LB22 51&53 Richmond Street Grade II;
- LB23 Bridgewater House Grade II;
- LB24 Former Refuge Assurance Company Offices Grade II\*;
- LB26 Rochdale Canal Lock Number 87 Grade II;
- LB27 46, Sackville Street Grade II;
- LB28 Former Electricity Power Station Grade II;
- LB29 Rhodesia House Grade II;
- LB30 3, Brazil Street Grade II;
- LB31 Sculptural Wall Grade II;
- LB32 Lancaster House Grade II\*;
- LB33 Regency House with Barclays Bank Grade II;
- LB34 Rochdale Canal Lock Number 88 Grade II;
- LB35 Central House Grade II;
- LB36 Transact House Grade II;
- LB37 103 Princess Street Grade: II\*;
- LB38 2 Harter Street Grade II;
- LB39 104 Bloom Street Grade II;
- LB41 New Union Public House Grade II;
- LB42 Lionesse House Grade II;
- LB43 St James Buildings Grade II;
- LB44 Drill Hall Grade II;
- LB45 Grosvenor Building Grade II;
- LB46 94-98 Grosvenor Street Grade II;

- LB47 Adult Deaf and Dumb Institute (Former) Grade II;
- LB48 Dancehouse Theatre Grade II;
- LB49 Chatham Mill Grade II;
- LB50 Former Town Hall Facade to Mabel Tylecote Building Grade II;
- LB51 Former Manchester Ear Hospital Grade II;
- LB52 Former Grosvenor Picture Palace Grade II;
- LB53 Dalton Statue in Forecourt of Dalton College Grade II;
- LB54 Oddfellows Hall Grade II;
- LB55 Rochdale Canal Boundary Wall Grade II;
- LB56 Rochdale Canal Boundary Wall Grade II;
- LB57 42&44 Sackville Street Grade II;
- LB58 The Shena Simon Sixth Form College Grade II;
- OB2 Moffat Building;
- OB4 Butterfly Stairs and Walkway Bridge;
- OB5 Staff House; and
- OB11 Barnes Wallis & Wright Robinson Building.

#### Negligible Magnitude of Change

- 6.6.7 The site visit assessments found there to be some intervisibility between the ground floor of the asset visited and Faraday Tower for a small number of assets within the 500m perimeter area where negligible magnitude of change was identified, these buildings being two unlisted buildings: OB8 The Mill; and OB10 Ferranti Building.
- 6.6.8 OB8 The Mill is an early 20th century mill that was renovated for student use in 1955. As the oldest building on the former UMIST campus, it existed well before Faraday Tower was built. The Mill architecture, although converted for educational use, is representative of the industrial phase of development in Manchester and whilst it has been altered and in use for education purposes for over 70 years it is not a purpose designed educational building and does not form part of the planned campus which was developed in the 1960s. The proposed project is therefore judged to have a negligible effect on the setting of the Mill (not significant).
- 6.6.9 OB 10 The now vacant Ferranti building constructed around 1970 was designed by the architect W. A. Gibbon of the architectural practice of Cruickshank and Seward. It is noted in Pevsner to be, 'A low three-storey reinforced concrete block, with at the western end a High Voltage Laboratory, a stark box clad in ribbed aluminium'. The concrete finish of Ferranti is shared by the Faraday complex. The setting of the Ferranti building, however, was greatly diminished in 2015 when Faraday House abutting Ferranti was demolished and subsequently replaced by the Masdar building. The Masdar building (formerly the Graphene building) is taller than the Ferranti building and views between the two are somewhat constrained. The glazed curtainwall finishes of the Masdar building provide a contemporary architectural break and buffer between the Faraday Tower and the Ferranti building. The proposed project is therefore judged to have a negligible magnitude of change on the Masdar building, resulting in a negligible effect (not significant).

#### Small Magnitude of Change

- 6.6.10 The site visit assessments found there to be some intervisibility between the ground floor of the asset visited and Faraday Tower for a small number of assets within the 500m perimeter area where small beneficial or small adverse magnitude of change were identified.
- 6.6.11 A small beneficial magnitude of change has been identified for the following assets:
- LB2 Granby House, Listed Building Grade II, LEN 1218253;
  - LB25 Institute of Science and Technology (University of Manchester), Listed Building Grade II, LEN 1247609;
  - LB40 Lass O Gowrie Public House, Listed Building Grade II, LEN 1293175; and
  - CA1 Whitworth Street and Princess Street Conservation Area.
- 6.6.12 A small adverse magnitude of change has been identified for the following assets:
- LB59 Renold Building, UMIST campus, Grade II, LEN 1491623;
  - OB3 Morton Laboratory (C.O.I);
  - OB6 Pariser Building;
  - OB7 Mathematics and Social Science Building; and
  - OB9 George Begg Building.
- 6.6.13 LB2 Granby House (Moderate Sensitivity) was built in 1911 by Goldsmith and Son as a warehouse and predates Faraday Tower. It is six storeys with basement and attic. When standing on Granby Row looking south toward the railway viaduct, a vista of Faraday Tower exists between 48-24 Granby Row and Granby House, both brick built buildings. Faraday Tower is the focal point of this vista and rises above the red brick railway viaduct. It dominates the vista and, to a degree, takes away from the setting that would have existed when the warehouse was first built in 1911. The demolition of Faraday Tower would result in this view being improved as currently, the gable and ventilation shafts of the tower are highly visible. Removing Faraday Tower would return the vista to a position more fitting for this important listed building. The proposed project is therefore judged to have a small beneficial magnitude of change on the setting of Granby House, resulting in a minor beneficial effect (not significant)
- 6.6.14 LB25 The Institute of Science and Technology (Moderate Sensitivity) was built in 1895-1902 by Spalding and Cross in a French renaissance style. When looking south down Sackville Street, from the pavement outside the Institute, there is intervisibility between the Institute and Faraday Tower. The vista is contained by medium rise red/orange brick buildings with ornate frontages and sandstone embellishment. The vista is spanned to the south by a red brick railway viaduct. To the rear of the railway viaduct the light grey gable of Faraday Tower juts out into this vista projecting beyond the placement of the late nineteenth/early twentieth century buildings which form the near part of this vista. The demolition of Faraday Tower will be positive for the Institute because it will restore the vista to containment by red brick buildings of a similar height to the Institute. Removing Faraday Tower would return the vista to a position more fitting for this important listed building. The proposed project is therefore judged to be a small beneficial magnitude of change to the setting of the Institute of Science and Technology, resulting in a minor beneficial effect (not significant).

- 6.6.15 LB40 Lass O Gowrie Public House (Moderate Sensitivity) dates back to the 1840s. Originally a Scottish pub named after a poem by Lady Caroline Nairne, it was later frequented by the predominantly Irish immigrant population in the area. The Lass O Gowrie is located on Charles Street and has an association with Manchester's industrial past. When looking south south-east from Charles Street there is intervisibility between the Lass O Gowrie and Faraday Tower. Faraday Tower has visibility as a skyline building and is considered to detract from the general setting of the public house. It is noted that there are a variety of more modern buildings within the setting of the public house and these have a greater negative influence than Faraday Tower, nonetheless the removal of Faraday Tower is judged to have a small beneficial magnitude of change on the setting of the public house, resulting in a minor beneficial effect (not significant)
- 6.6.16 LB59 Renold building was opened on 23 November 1962 for the Manchester College of Science and Technology (later UMIST) as part of a major expansion of its campus in the 1960s. The architect was W.A. Gibbon of Cruickshank and Seward. Like Faraday Tower the Renold building, is constructed in concrete and presents as a two-storey base supporting a six-storey tower. A large glass-sided stair tower projects on the side. Inside is an entrance hall on two levels with a large mural titled Metamorphosis, by Victor Pasmore. Unlike the Renold building, the alchemist mural at Faraday Tower has been relocated. Views of Faraday Tower, from the Renold building are largely obscured by the Pariser building, Madsar building and James Lighthill building. Faraday Tower is visible from a small number of positions at ground floor and likely from the upper floors of the Renold building, although views from the upper levels will be restricted to users of the building. The proposed demolition of the Faraday Tower is therefore judged to have a small adverse magnitude of change on the setting of the Renold building. The effect is regarded to be minor adverse and therefore is not significant.
- 6.6.17 CA1 Whitworth Street and Princess Street Conservation Area (High Sensitivity) lies to the north of Faraday Tower. The conservation area mainly derives its significance in the range of buildings which it accommodates, dating from between 1850-1920. These buildings are a record of the development of Manchester and highlight the evolving nature of the city during this period. Since Faraday Tower is not located within the conservation area, the potential changes considered during the site visits were views from within the conservation area looking toward Faraday Tower and consideration of how these might change. Analysis confirmed that although Faraday Tower is reasonably close to the conservation area, it can only be seen from a limited number of publicly accessible positions within the Conservation. The main views out of the conservation area include vistas looking south along Sackville street, south-south-east along Charles Street and from Whitworth Street. Removing Faraday Tower would return these views and vistas to a position more fitting for the historical period for which the Conservation Area were designated to protect. Whilst these views/vistas do not hold great significance for the conservation area as a whole, the proposed project is judged to have a small beneficial magnitude of change to setting of the Conservation Area. The effect is regarded to be minor beneficial and therefore is not significant.
- 6.6.18 OB3 Morton Laboratory (Low Sensitivity) was part of the stage one area of UMIST and was opened in 1966. The interest of this building arises from it being designed by Fairhurst's and its group value with the other buildings from the early stage of UMISTs expansion. The Morton Laboratory has intervisibility with Faraday Tower when viewed standing at the south-west corner of the building. The view from this location takes in the MSS, Ferranti Building and Madsar building before the Faraday Tower in the far distance. The demolition of Faraday Tower will have a small adverse magnitude of change to the setting of Morton Library. The effect on significance is regarded to be minor adverse and therefore is not significant.
- 6.6.19 OB6 Pariser Building (Low Sensitivity) was designed by H. M. Fairhurst in 1963. During its time as part of UMIST it was home to the Civil and Construction Engineering, as well as the Dalton Institute and the Joule Centre. The Pariser was designed and opened just before the completion of Faraday House and Faraday Tower in 1967 although the materiality of the two buildings is very different. The Pariser Building is constructed in red brick with extensive use of copper to the upper part of the building and is similar in terms of materiality to other Fairhurst buildings of the time including those on UMIST campus and others such as Simon Building on Oxford Road which forms part of the main University of Manchester Campus. With regard to appearance and design, the Pariser building displays greater modelling than the remnant Faraday Tower which presents a plainer and more functional aesthetic. Whilst the two buildings contrast in terms of design and appearance, the Pariser does date from a similar period to Faraday and the two were developed as part of the expansion of UMIST in the 1960s and are relatively tall constructions, the Pariser being eight storeys. Given the common historical connection with the expansion of UMIST the demolition of the remnant Faraday Tower will have a small adverse magnitude of change on the setting of the Parser building. The effect significance is regarded to be minor adverse and therefore is not significant.
- 6.6.20 OB7 The MSS) Building (Low Sensitivity) was constructed in 1969, as part of the expansion of the UMIST campus. It reaches 15 stories and like the Faraday Tower was constructed in reinforced concrete. The MSS building was designed by architects Cruikshank and Seward. MSS is sited just north of the Mancunian way and reaches an overall height of approximately 50 metres, making it the tallest building of the former UMIST campus. The MSS building is designed to have the appearance of several slabs of differing heights abutting one another with decorative towers to the north and south ends. The MSS and the remnant Faraday Tower look toward each other along an internalised campus service road which extends from the base of MSS to link to Sackville Street with this vista obstructed by the Masdar building and Ferranti building which both act to prevent an unobstructed view. The MSS and remnant Faraday Tower are both constructed in reinforced concrete and date from a similar period and today have weathered to show a similar colouration. Both were developed as part of the expansion of UMIST in the mid-late 1960s and are tall constructions visible from the vehicular deck of the Mancunian Way. Given the common historical connection with the expansion of UMIST, the proposed project is judged to have a small adverse magnitude of change to the setting of the MSS building, although this change is limited since the setting of MSS has already been diminished by redevelopment of Faraday House with the Masdar building. The effect on significance is regarded to be minor adverse and therefore is not significant.
- 6.6.21 OB9 George Begg Building. The Geoge Begg building (Low Sensitivity) is a functional building which lies directly to the west of Faraday Tower. It was designed by H. M. Fairhurst and Sons in 1974. Like the Faraday Tower, the George Begg building is relatively isolated from the main part of the campus which lies to the opposite side of Sackville Street and where UMIST buildings are purposefully sited to form courtyards with green spaces. Originally the George Begg building had large basement laboratories and drawing offices and lecture rooms on the upper floor. The George Begg building is a low-rise building and constructed in concrete. It lies in very close proximity to Faraday Tower which had already been completed when the George Begg building was completed. The George Begg building is one of the least inspiring buildings of the former UMIST campus and followed on a few years later than the Faraday Building. Both were developed as part of the expansion of UMIST and given this common historical connection with the proposed project, it is judged to be a small adverse magnitude of change to the setting of the Geroqe Begg Building. The effect on significance is regarded to be minor adverse and therefore is not significant.

Summary of Effects

6.6.22 The textual assessments above are summarised in Table 6-6.

Table 6-6 Summary of effects

| Receptor                                                                                                                                                                                                                | Sensitivity | Description of effect      | Magnitude of change/impact | Effect significance                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------|----------------------------|------------------------------------|
| <b>LB1</b> Manchester Oxford Road Station (including platform structures); Listed Building Grade II; LEN 1255053                                                                                                        | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB2</b> Granby House; Listed Building Grade II; LEN 1218253                                                                                                                                                          | Moderate    | Indirect impact on setting | Small Beneficial           | Minor Beneficial (Not Significant) |
| <b>LB3</b> India House (Including attached wrought iron Gateway link to Lancaster House); Listed Building Grade II*; LEN 1254836                                                                                        | High        | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB4</b> Manchester House; Listed Building Grade II; LEN 1270897                                                                                                                                                      | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB5</b> The Place Theatre; Listed Building Grade II; LEN 1271227                                                                                                                                                     | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB6</b> Orient House; Listed Building Grade II; LEN1200838                                                                                                                                                           | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB7</b> Boundary Wall to Rochdale Canal Between Princess Street and Sackville Street Rochdale Canal Boundary Wall to Canal Street Between Princess Street and Sackville Street; Listed Building Grade II; LEN1247555 | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB8</b> 101, Princess Street; Listed Building Grade II; LEN 1270899                                                                                                                                                  | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB9</b> 109, Princess Street; Listed Building Grade II; LEN 1270914                                                                                                                                                  | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB10</b> Rochdale Canal Lock Number 86, to East of Chorlton Street; Listed Building Grade II; LEN 1247481                                                                                                            | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB11</b> 9, Richmond Street; Listed Building Grade II; LEN1247476                                                                                                                                                    | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB12</b> 27, Sackville Street; Listed Building Grade II; LEN 1247607                                                                                                                                                 | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB13</b> 39, Chorlton Street; Listed Building Grade II; LEN 1283091                                                                                                                                                  | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB14</b> Brazil House; Listed Building Grade II; LEN 1270871                                                                                                                                                         | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB15</b> Former Goods Offices to Piccadilly Station; Listed Building Grade II; LEN 1197919                                                                                                                           | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB16</b> Asia House; Listed Building Grade II*; LEN 1247432                                                                                                                                                          | High        | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB17</b> Mintierna House; Listed Building Grade II; LEN 1197759                                                                                                                                                      | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB18</b> Minshull House; Listed Building Grade II; LEN 1283092                                                                                                                                                       | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB19</b> Former Warehouse; Listed Building Grade II; LEN 1431770                                                                                                                                                     | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |

| Receptor                                                                                                                                              | Sensitivity | Description of effect      | Magnitude of change/impact | Effect significance                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------|----------------------------|------------------------------------|
| <b>LB20</b> Police and Fire Station; Listed Building Grade II*; LEN 1197918                                                                           | High        | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB21</b> The Churchill Public House; Listed Building Grade II; LEN 1197758                                                                         | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB22</b> 51 and 53, Richmond Street; Listed Building Grade II; LEN 1270835                                                                         | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB23</b> Bridgewater House; Listed Building Grade II; LEN 1270606                                                                                  | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB24</b> Former Refuge Assurance Company Offices; Listed Building Grade II*; LEN 1271429                                                           | High        | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB25</b> Institute of Science and Technology (University of Manchester); Listed Building Grade II; LEN 1247609                                     | Moderate    | Indirect impact on setting | Small Beneficial           | Minor Beneficial (Not Significant) |
| <b>LB26</b> Rochdale Canal Lock Number 87, to East of Princess Street, with Cast Iron Footbridge Beside Street; Listed Building Grade II; LEN 1247580 | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB27</b> 46, Sackville Street; Listed Building Grade II; LEN 1247608                                                                               | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB28</b> Former Electricity Power Station; Listed Building Grade II; LEN 1255031                                                                   | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB29</b> Rhodesia House; Listed Building Grade II; LEN 1270911                                                                                     | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB30</b> 3, Brazil Street; Listed Building; Grade II; LEN 1283077                                                                                  | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB31</b> Sculptural Wall; Listed Building; Grade II; LEN1400857                                                                                    | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB32</b> Lancaster House; Listed Building; Grade II*; LEN 1254887                                                                                  | High        | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB33</b> Regency House with Barclays Bank; Grade II; LEN 1254835                                                                                   | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB34</b> Rochdale Canal Lock Number 88, to east of Oxford Street; Listed Building Grade II; LEN 1270857                                            | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB35</b> Central House; Listed Building Grade II; LEN 1247389                                                                                      | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB36</b> Transact House; Listed Building Grade II; LEN 1247386                                                                                     | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB37</b> 103, Princess Street; Listed Building Grade: II*; LEN 1247391                                                                             | High        | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB38</b> 2, Harter Street; Listed Building Grade II; LEN 1200841                                                                                   | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB39</b> 104, Bloom Street; Listed Building Grade II; LEN 1218476                                                                                  | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB40</b> Lass O Gowrie Public House; Listed Building Grade II; LEN 1293175                                                                         | Moderate    | Indirect impact on setting | Small Beneficial           | Minor Beneficial (Not Significant) |

| Receptor                                                                                                                                  | Sensitivity | Description of effect      | Magnitude of change/impact | Effect significance                |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------|----------------------------|------------------------------------|
| <b>LB41</b> New Union Public House; Listed Building Grade II; LEN 1247444                                                                 | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB42</b> Lionesse House; Listed Building Grade II; LEN 1247387                                                                         | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB43</b> St James Buildings; Listed Building Grade II; LEN 1246571                                                                     | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB44</b> Drill Hall; Listed Building Grade II; LEN 1207590                                                                             | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB45</b> Grosvenor Building, Manchester Metropolitan University Faculty of Art and Design; Listed Building Grade II; LEN 1293192       | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB46</b> 94-98, Grosvenor Street; Listed Building Grade II; LEN 1218404                                                                | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB47</b> Adult Deaf and Dumb Institute (Former); Listed Building Grade II; LEN 1200839                                                 | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB48</b> Dancehouse Theatre including Numbers 6-14; Listed Building Grade II; LEN 1384997                                              | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB49</b> Chatham Mill; Listed Building Grade II; LEN 1293040                                                                           | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB50</b> Former Town Hall Facade to Mabel Tylecote Building, Manchester Metropolitan University; Listed Building Grade II; LEN 1283062 | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB51</b> Former Manchester Ear Hospital; Listed Building Grade II; LEN 1197922                                                         | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB52</b> Former Grosvenor Picture Palace; Listed Building Grade II; LEN1218431                                                         | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB53</b> Dalton Statue in Forecourt of Dalton College; Listed Building Grade II; LEN1197791                                            | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB54</b> Oddfellows Hall; Listed Building Grade II; LEN 1200840                                                                        | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB55</b> Rochdale Canal Boundary Wall to Canal Between Chorlton Street and Minshull Street Grade II; LEN 1247478                       | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB56</b> Rochdale Canal Boundary Wall to canal between Sackville Street and Chorlton Street, Grade II, LEN 1270837                     | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB57</b> 42 and 44 Sackville Street, Grade II, LEN 1270791                                                                             | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB58</b> The Shena Simon Sixth Form College, Grade II, LEN 1270607                                                                     | Moderate    | Indirect impact on setting | None                       | Negligible (Not Significant)       |
| <b>LB59</b> Renold Building, Grade II, LEN 1491623                                                                                        | Moderate    | Indirect impact on setting | Small Adverse              | Minor Adverse (Not Significant)    |
| <b>Conservation areas</b>                                                                                                                 |             |                            |                            |                                    |
| <b>CA1</b> Whitworth Street and Princess Street Conservation Area                                                                         | High        | Indirect impact on setting | Small Beneficial           | Minor Beneficial (Not Significant) |

| Receptor                                                                                                    | Sensitivity | Description of effect              | Magnitude of change/impact | Effect significance                  |
|-------------------------------------------------------------------------------------------------------------|-------------|------------------------------------|----------------------------|--------------------------------------|
| <b>Locally Listed Buildings</b>                                                                             |             |                                    |                            |                                      |
| Nil                                                                                                         | N/A         | N/A                                | N/A                        | N/A                                  |
| <b>Other Buildings Assessed</b>                                                                             |             |                                    |                            |                                      |
| <b>OB1</b> Faraday Tower                                                                                    | Low         | Direct impact by removal of fabric | Large Adverse              | Moderate/Minor Adverse (Significant) |
| <b>OB2</b> Moffat Building (C.O.I)                                                                          | Low         | Indirect impact on setting         | None                       | Negligible (Not Significant)         |
| <b>OB3</b> Morton Laboratory (C.O.I)                                                                        | Low         | Indirect impact on setting         | Small Adverse              | Minor Adverse (Not Significant)      |
| <b>OB4</b> Butterfly Stairs and Walkway Bridge (formerly known as The Sir Hubert Worthington Stair) (C.O.I) | Low         | Indirect impact on setting         | None                       | Negligible (Not Significant)         |
| <b>OB5</b> Staff House (Manchester Meeting Place) (C.O.I)                                                   | Low         | Indirect impact on setting         | None                       | Negligible (Not Significant)         |
| <b>OB6</b> Pariser Building                                                                                 | Low         | Indirect impact on setting         | Small Adverse              | Minor Adverse (Not Significant)      |
| <b>OB7</b> Mathematics and Social Science Building                                                          | Low         | Indirect impact on setting         | Small Adverse              | Minor Adverse (Not Significant)      |
| <b>OB8</b> The Mill                                                                                         | Low         | Indirect impact on setting         | Negligible                 | Negligible (Not Significant)         |
| <b>OB9</b> George Begg Building                                                                             | Low         | Indirect impact on setting         | Small Adverse              | Minor Adverse (Not Significant)      |
| <b>OB10</b> Ferranti Building                                                                               | Low         | Indirect impact on setting         | Negligible                 | Negligible (Not Significant)         |
| <b>OB11</b> Barnes Wallis and Wright Robinson Building                                                      | Low         | Indirect impact on setting         | None                       | Negligible (Not Significant)         |

Supplementary Mitigation Measures

6.6.23 No supplementary mitigation measures are proposed.

6.7 RESIDUAL EFFECTS AND CONCLUSIONS

6.7.1 All adverse and beneficial residual effects of the proposed project are summarised in Table 6-7.

Table 6-7 Summary of residual effects

| Receptor                                                                                                          | Effect                     | Significance before mitigation     | Supplementary mitigation  | Residual effect significance       |
|-------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------------|---------------------------|------------------------------------|
| <b>LB2</b> Granby House; Listed Building Grade II; LEN 1218253                                                    | Indirect impact on setting | Minor Beneficial (Not Significant) | No mitigation is required | Minor Beneficial (Not Significant) |
| <b>LB25</b> Institute of Science and Technology (University of Manchester); Listed Building Grade II; LEN 1247609 | Indirect impact on setting | Minor Beneficial (Not Significant) | No mitigation is required | Minor Beneficial (Not Significant) |

| Receptor                                                                      | Effect                             | Significance before mitigation       | Supplementary mitigation  | Residual effect significance         |
|-------------------------------------------------------------------------------|------------------------------------|--------------------------------------|---------------------------|--------------------------------------|
| <b>LB40</b> Lass O Gowrie Public House; Listed Building Grade II; LEN 1293175 | Indirect impact on setting         | Minor Beneficial (Not Significant)   | No mitigation is required | Minor Beneficial (Not Significant)   |
| <b>LB59</b> Renold Building, Grade II, LEN 1491623                            | Indirect impact on setting         | Minor Adverse (Not Significant)      | No mitigation is required | Minor Adverse (Not Significant)      |
| <b>CA1</b> Whitworth Street and Princess Street Conservation Area             | Indirect impact on setting         | Minor Beneficial (Not Significant)   | No mitigation is required | Minor Beneficial (Not Significant)   |
| <b>OB1</b> Faraday Tower                                                      | Direct impact by removal of fabric | Moderate/Minor Adverse (Significant) | No mitigation is possible | Moderate/Minor Adverse (Significant) |
| <b>OB3</b> Morton Laboratory (C.O.I)                                          | Indirect impact on setting         | Minor Adverse (Not Significant)      | No mitigation is required | Minor Adverse (Not Significant)      |
| <b>OB6</b> Pariser Building                                                   | Indirect impact on setting         | Minor Adverse (Not Significant)      | No mitigation is required | Minor Adverse (Not Significant)      |
| <b>OB7</b> Mathematics and Social Science Building                            | Indirect impact on setting         | Minor Adverse (Not Significant)      | No mitigation is required | Minor Adverse (Not Significant)      |
| <b>OB9</b> George Begg Building                                               | Indirect impact on setting         | Minor Adverse (Not Significant)      | No mitigation is required | Minor Adverse (Not Significant)      |

- Manchester City Council, Manchester City Council Conservation Area Leaflets.
- UK Government, 2024, National Planning Policy Framework.
- UK Government, 2014, National Planning Practice Guidance.

6.8 FUTURE MONITORING OF SIGNIFICANT RESIDUAL ENVIRONMENTAL EFFECTS

6.8.1 As part of the 2017 EIA Regulations, Local Planning Authorities are obliged to comment on/condition monitoring as necessary for any significant residual environmental effects identified. No significant heritage effects are identified which could be monitored.

6.9 REFERENCES

- Hartwell, Pevsner Architectural Guides — Manchester, ISBN 0-14-071131-7.
- Historic England, 2016. Historic England Advice Note 8: Sustainability Appraisal and Strategic Environmental Assessment.
- Historic England, 2019. Historic England Advice Note 12: Statements of Heritage Significance: Analysing Significance in Heritage Assets.
- Historic England, 2016. Historic England Advice Note 2: Making Changes to Heritage Assets.
- Historic England, 2017. Historic England Advice Note 3: The Setting of Heritage Assets (2nd Edition).
- Historic England, 2015. Historic Environment Good Practice Advice 2: ‘Managing Significance in Decision-Taking in the Historic Environment’.
- Historic England, 2025. National Heritage List for England (NHLE). Available at: <https://opendata-historicengland.hub.arcgis.com/maps/historicengland::national-heritage-list-for-england-nhle/about>.
- Manchester City Council, 2024, Places for Everyone Joint Development Plan.
- Manchester City Council, 2012 Manchester Core Strategy Development Plan Document.
- Manchester City Council, 1995, Saved Policies of the Unitary Development Plan (UDP) for the City of Manchester.

6.10 GLOSSARY

| Term                                | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Archaeological interest             | Archaeological interest: There will be archaeological interest in a heritage asset if it holds, or potentially holds, evidence of past human activity worthy of expert investigation at some point. Source NPPF, December 2024.                                                                                                                                                                                                                                                                |
| Conservation (for heritage policy)  | Conservation (for heritage policy): The process of maintaining and managing change to a heritage asset in a way that sustains and, where appropriate, enhances its significance. Source NPPF, December 2024.                                                                                                                                                                                                                                                                                   |
| Designated heritage asset:          | Designated heritage asset: A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation.                                                                                                                                                                                                                                                                |
| Heritage Asset                      | Heritage asset: A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. It includes designated heritage assets and assets identified by the local planning authority (including local listing). Source NPPF, December 2024.                                                                                                                                         |
| Historic environment                | Historic environment: All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora. Source NPPF, December 2024.                                                                                                                                                                                    |
| Setting of a heritage asset:        | Setting of a heritage asset: The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral. Source NPPF, December 2024.                                                                                                             |
| Significance (for heritage policy): | Significance (for heritage policy): The value of a heritage asset to this and future generations because of its heritage interest. The interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting. For World Heritage Sites, the cultural value described within each site's Statement of Outstanding Universal Value forms part of its significance. Source NPPF, December 2024. |

6.11 ABBREVIATIONS

| Term  | Definition                                                   |
|-------|--------------------------------------------------------------|
| MCC   | Manchester City Council                                      |
| MSSB  | Maths and Social Sciences Building                           |
| NDHA  | Non Designated Heritage Asset                                |
| UMIST | University of Manchester Institute of Science and Technology |

6.12 LIST OF APPENDICES (ES VOLUME II)

| Reference    | Title                                                                       |
|--------------|-----------------------------------------------------------------------------|
| Appendix 6-A | Policy Review                                                               |
| Appendix 6-B | Faraday Tower: Archive mapping                                              |
| Appendix 6-C | Faraday Tower: Archive photographic plates                                  |
| Appendix 6-D | Listed building descriptions, plates and contextual views where applicable  |
| Appendix 6-E | Conservation area description, plates and contextual views where applicable |
| Appendix 6-F | Other buildings plates and contextual view where applicable                 |
| Appendix 6-G | Heritage Assets Location Map                                                |



7 CUMULATIVE AND INTERACTIVE EFFECTS

7.1 INTRODUCTION

- 7.1.1 This chapter describes the cumulative environmental effects for the proposed project alongside surrounding planned developments likely to come forward at a similar time.
- 7.1.2 Cumulative effects have been defined as:
- ‘The impacts on the environment which result from incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.’* (Council on Environmental Quality, 1970).
- 7.1.3 In other words, the impacts that may be considered to generate a non-significant effect in isolation may result in a significant effect when combined with other non-significant environmental effects from one or more projects.

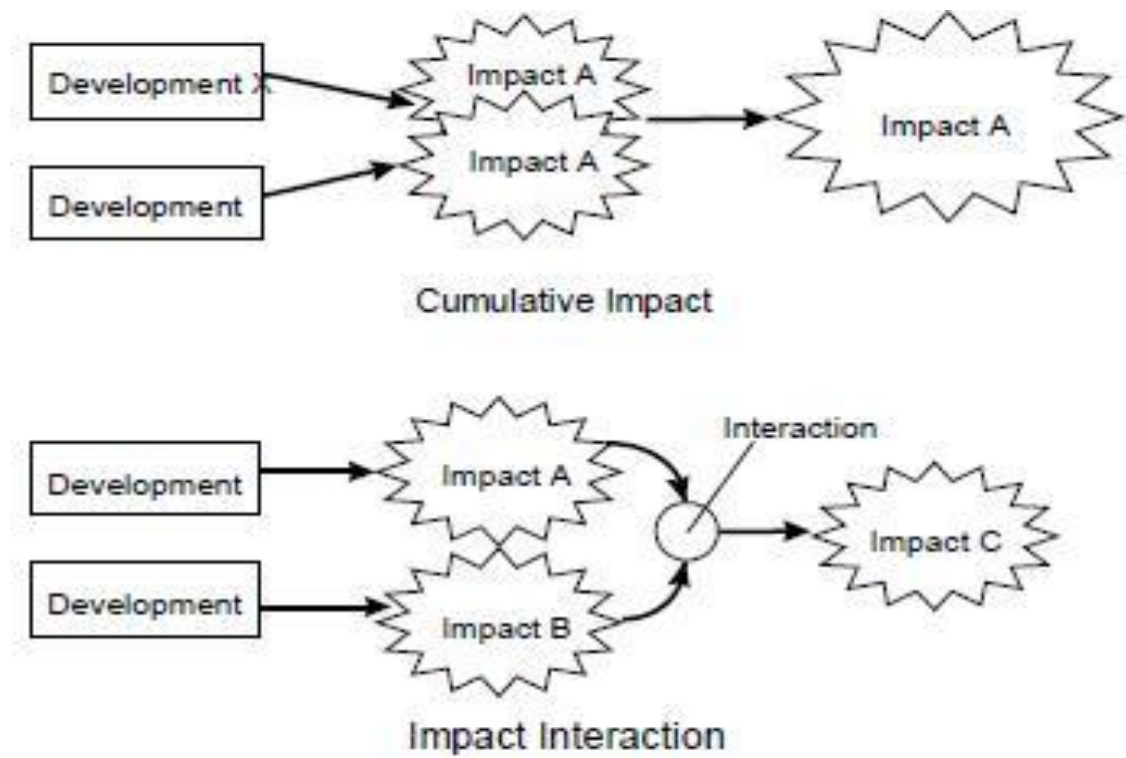


Figure 7-1 Types of cumulative effect (European Commission, 1999)

- 7.1.4 For the purposes of this Environmental Impact Assessment (EIA), cumulative effects are addressed in the context of the following:
- Interaction effects: the accumulation of different predicted effects generated by the proposed project upon the same sensitive receptors; and
  - In-combination effects: the combination of predicted effects from adjacent or nearby scheme(s) together with those predicted for the proposed project.

- 7.1.5 In terms of assessing the potential in-combination effects in relation to other relevant developments, the EIA Regulations specify that the following should be provided:
- “a description of the likely significant effects of the development on the environment resulting from the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources”.*
- 7.1.6 The EIA for the proposed project has adhered to this position.

7.2 INTERACTION EFFECTS

- 7.2.1 By considering the residual effects greater than negligible described in each technical assessment, and the receptors they act upon (Table 7-1), it is possible to identify a list of specific receptors at risk of interaction effects, i.e. receptors that may experience an accumulation of environmental effects from more than one source.

Table 7-1 Residual effects (greater than negligible) and the receptors they act upon

| Topic               | Residual effects                                              | Effect significance                | Receptor                                                                                              |
|---------------------|---------------------------------------------------------------|------------------------------------|-------------------------------------------------------------------------------------------------------|
| Air Quality         | No residual effects with significance greater than negligible |                                    |                                                                                                       |
| Noise and Vibration | Demolition noise                                              | Not significant: low adverse       | Masdar Building                                                                                       |
|                     |                                                               | Not significant: low adverse       | Manchester Conference Centre                                                                          |
|                     |                                                               | Significant: major adverse         | Users of George Begg Building                                                                         |
| Built Heritage      | Indirect impact on setting                                    | Not significant: minor beneficial  | Granby House; Listed Building Grade II; LEN 1218253                                                   |
|                     |                                                               | Not significant: minor beneficial  | Institute of Science and Technology (University of Manchester); Listed Building Grade II; LEN 1247609 |
|                     |                                                               | Not significant: minor beneficial  | Lass O Gowrie Public House; Listed Building Grade II; LEN 1293175                                     |
|                     |                                                               | Not significant: minor adverse     | Renold Building, Grade II, LEN 1491623                                                                |
|                     |                                                               | Not significant: minor beneficial  | Whitworth Street and Princess Street Conservation Area                                                |
|                     |                                                               | Not significant: minor adverse     | Morton Laboratory (C.O.I)                                                                             |
|                     |                                                               | Not significant: minor adverse     | Pariser Building                                                                                      |
|                     |                                                               | Not significant: minor adverse     | Mathematics and Social Science Building                                                               |
|                     |                                                               | Not significant: minor adverse     | George Begg Building                                                                                  |
|                     | Direct impact by removal of fabric                            | Significant moderate/minor adverse | Faraday Tower                                                                                         |

- 7.2.2 Many of the receptors highlighted in Table 7-1 are affected by single, isolated effects which are in some cases beneficial. However, the George Begg Building is subject to several environmental effects. Users of the George Begg Building will experience major adverse (significant) temporary demolition noise effects, and a minor adverse (not significant) permanent impact on setting. Due to the temporary and short-term nature of the demolition noise, and the absence of a synergistic or functionally reinforcing relationship between the effects, the interactive effects are not anticipated to increase the overall significance beyond that already assessed for the individual effects.
- 7.2.3 No other interactive effects have been identified.

**7.3 IN-COMBINATION/CUMULATIVE SCHEME ASSESSMENT**

**Schemes Considered**

- 7.3.1 The cumulative developments that have been considered in the technical assessments of this Environmental Statement (ES) are set out in Table 7-2and are presented in Figure 7-2.
- 7.3.2 Using standard EIA practice thresholds, the proposed projects that are considered within this assessment of cumulative effects are those that comprise:
- Known sites submitted for planning via a planning application, permitted/with a resolution to grant permission or under construction, located within approximately 1km of the site, and:
    - o Which are 10,000 square metres (m<sup>2</sup>) or greater Gross External Area (GEA);
    - o Schemes below the above thresholds but of more than 50 residential units;
    - o Major infrastructure schemes; or
    - o Schemes that may be below the above thresholds for quantum, but that were deemed to require an EIA in their own right.
- 7.3.3 The list of assessed cumulative schemes has been agreed with MCC via the EIA Scoping process.

**Table 7-2 Cumulative schemes within 1km of the site**

| Ref | Scheme                          | Application number | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Planning status                          | Anticipated construction phasing |
|-----|---------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|----------------------------------|
| 1   | Number 3 Circle Square          | 134288/FO/2022     | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Approved 4 <sup>th</sup> November 2022   | Under construction               |
| 2   | IQ Echo Street                  | 136874/FO/2023     | Erection of 3 interlinked towers ranging from 27, 21 and 16 storeys together with intermediary link buildings (15 and 11 storeys) to form Purpose Built Student Accommodation (Sui Generis) with associated amenity space and external landscaping and other associated works.                                                                                                                                                                                                                                                                                                                                                                                                                     | Approved 12 <sup>th</sup> September 2023 | Under construction               |
| 3   | London Road Fire Station        | 125712/FO/2019     | 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                                                                                                                                                                                                                                          | Approved 17 <sup>th</sup> April 2020     | Under construction               |
| 4   | Baring Street West              | 127486/FO/2020     | Construction of a 7,11,14 storey building with roof top plant area and basement, comprising office use (Use Class B1) with external terraces above ground floor commercial units (Use Classes A1 and A3); new public realm and landscaping, cycle parking; external plant, access, servicing and work to the highway (Baring Street) and other associated works                                                                                                                                                                                                                                                                                                                                    | Awaiting decision                        | Planning pending                 |
| 5   | Upper Brook Street              | 137399/FO/2023     | Erection of a 6 to 9 storey building for Sci-Tech use (Use Class E (g)(ii)) and 265sqm of a cafe/bar (Use Class E (b)), and a 9 to 23 storey building for Purpose Built Student Accommodation (PBSA) (Use Sui Generis), comprising 737 bedrooms and 293sqm of community use (Use Class F2 (b)) and 80sqm of commercial floorspace (Use Class E), alongside new public realm, access, parking, and associated works following demolition of existing buildings                                                                                                                                                                                                                                      | Approved 29 <sup>th</sup> November 2024  | Construction to commence         |
|     |                                 | 141897/NMC/2025    | Non Material Change to planning permission 137399/FO/2023 to make alterations building height, elevational alterations and alterations to landscaping                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Approved 7 <sup>th</sup> April 2025      |                                  |
| 6   | Upper Brook Street              | 137401/FO/2023     | Full planning application for the demolition of existing buildings and erection of three ground floor + 12/14/29 storey buildings to be used for Purpose Built Student Accommodation (Use Sui Generis), comprising 983 bedrooms in total and 506sqm of ground floor ancillary uses (café/commercial and convenience store - Use Classes E (a)/(b)/(c)), three buildings comprising ground floor + 5/7/9 storeys for Science and Innovation uses (Use Class E (g)(i) & (ii)) and 834sqm ground floor community uses (retail/cafés and medical facility (Use Classes E (a)/(b) and (e)), and the provision of new public realm, two new public squares, new access and parking, and associated works | Approved 29 <sup>th</sup> November 2024  | Construction to commence         |
|     |                                 | 142266/JO/2025     | Variation of planning condition 2 attached to planning permission 137401/FO/2023 to reconfigure the footprint of block B1 including removal of colonnade that fronted Kincardine Road, reduction in amenity area and other internal reconfigurations together with alterations to landscaping                                                                                                                                                                                                                                                                                                                                                                                                      | Awaiting decision                        |                                  |
| 7   | Kincardine Court extension      | 124472/FO/2019     | Erection of a part 4, part 5, part 6 storey extension to existing student accommodation building to form 25 additional student flats (comprising 100 bedrooms) (Use Class Sui Generis) to form 86 student flats in total (329 bedrooms) following removal, modification and reconfiguration of existing car parking, landscaping and boundary treatment together with the erection of a single storey water tank                                                                                                                                                                                                                                                                                   | Approved 6 <sup>th</sup> December 2019   | Construction to commence         |
|     |                                 | 134968/NMC/2022    | Non material amendment to planning permission 124472/FO/2019 to make elevational alterations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Approved 26 <sup>th</sup> September 2022 |                                  |
| 8   | Metropolitan University Library | 138424/FO/2023     | Part demolition and redevelopment of existing library building to form new library (Use Class F1) including a new 13 storey building, external amenity spaces, public realm, access and servicing arrangements and other associated works                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Approved 16 <sup>th</sup> February 2024  | Construction to commence         |
| 9   | Student Castle, Hulme Street    | 121252/FO/2018     | 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), including public realm improvements and other associated work                                                               | Approved 23 <sup>rd</sup> July 2021      | Construction to commence         |
| 10  | Jadebricks Student              | 138808/FO/2023     | Erection of 15-storeys plus plant level building to provide purpose-built student accommodation (PBSA - Sui Generis) along with site preparation works, works over the public highway and other associated works.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Approved 31 <sup>st</sup> July 2024      | Construction to commence         |

| Ref | Scheme                             | Application number | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Planning status                          | Anticipated construction phasing |
|-----|------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|----------------------------------|
| 11  | Mayfield Baring Street Car Park    | 124972/FO/2019     | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Approved 14 <sup>th</sup> February 2020  | Construction to commence         |
| 12  | Mayfield Phase 1 Manchester M1 2AD | 132255/JO/2021     | S73 application to vary conditions 2 (Approved Dwgs), 3 (Highways Works), 5 (Wayfinding), 6a (UXB), 7 (Contam), 8 (Archaeology), 9 (Coach drop off), 10 (Programme and Phasing), 11 (Park Levels), 12 (Japanese Knotweed), 13 (Remediation EA), 16 (SUDS 1), 18 (Local Economic and Social Benefit Plan), 21 (Phase A CMP), 22 (Phase A Hydrological Modelling), 23 (Bat Licence), 65 (a and b) (Materials Phases F, G, H and I), 66 (Phase F Medlock re-sectioning), 67 (Phase F Landscape and Ecology Management Plan), 71 (Phase F Circularity Management), 72 (Phase F Bird Nesting), 73 (Phase F Lighting), 74a-h (Phase F Landscape Programme and Details), 75 (Phase F Lighting Levels), 77(a and b) (Phase H Circularity Management), 78 (Phase H Lighting), 79 (a-h) (Phase H Landscape Programme and Details), 80 (Phase H Lighting Levels), 81 (Phase H Glare), 82 (Phase I Circularity Management), 83(a-i) (Phase I Landscape Programme and Details), 84 (Phase I Lighting), 85 (Phase I Glare), 86 (Safeguarding Bat Roost) attached to application ref no 124972 /FO/2019 and to discharge conditions 8 (Archaeology) and 19 (Flood Evacuation) (approval for Public Park, 9 storey office development above basement with mezzanine and plant level and 11 storey Multi-Storey Car Park with associated landscaping; highways and infrastructure works alongside enabling works) to agree changes to the final design of the park, including changes to park levels, flood compensation areas, tree planting, drainage, remediation and phasing of the development, to reflect the information discharged against 124972/FO/2019 between October 2020 and October 2021 and to add new conditions to allow for the timely submission of further details where areas are being retained on a temporary basis, such as Freight Island (Phase X) and to allow for the submission of detailed information relating to an Art Strategy for the Park. | Approved 29 July 2022                    | Construction to commence         |
| 13  | The Poulton                        | 137263/FO/2023     | Erection of 9 storey office development with mezzanine and plant level (Class E) with ground and basement floor retail, cafe and / or restaurant and / or gym (Use Class E) uses, rooftop amenity spaces and terrace levels, associated public realm and riverside walkway and associated works.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Approved 18 <sup>th</sup> September 2023 | Construction to commence         |
| 14  | The Republic                       | 125248/FO/2019     | 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, back of house functions and associated landscaping works.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Approved 14 <sup>th</sup> February 2020  | Construction to commence         |
| 15  | Sister Plot C Former UMIST Campus  | 143024/FO/2025     | Phased development comprising: Phase A - demolition of existing buildings and structures, erection of a basement (C1 Building and C2 Building) and a podium across lower ground and upper ground floors comprising flexible commercial space (Class E and/or Sui Generis drinking establishment), erection of a building (C1 Building) to form offices (Class E), landscaping works, highways, access, servicing, infrastructure and other associated works; Phase B: erection of a podium across lower ground and upper ground floors and a new building (C2 Building) to form offices (Class E) and flexible commercial and community uses (Class E, F2 and/ or Sui Generis drinking establishment), alterations to the existing Sculptural Wall (Hollaway Wall), relocation of existing art work, landscaping works, highways, access, servicing, infrastructure and other associated works; Phase C - change of use and associated works to railway Viaduct arches to form flexible commercial units (Class E, and/ or Sui Generis - drinking establishment) including highways, access and servicing arrangements, and other associated works.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Awaiting Decision                        |                                  |



Figure 7-2 Cumulative schemes within 1km of the site

Technical Assessment of Effects

Air Quality

- 7.3.4
- There is potential for cumulative demolition dust effects in combination with other developments in the vicinity of the proposed project should the demolition works overlap with the demolition or construction phases of other local developments.
- 7.3.5
- The Institute of Air Quality Management (IAQM) guidance advises that cumulative effects may occur from sites within 500 m of one another. In line with proposed mitigation measures, the contractor should hold regular liaison meetings with other high risk construction sites within 500 m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised.
- 7.3.6
- It is assumed that all local cumulative schemes will have a Construction Environmental Management Plan (CEMP), or suitable equivalent in place that will include construction and demolition dust mitigation measures. Mitigation for the proposed project will therefore compliment the mitigation secured for the other cumulative developments and ensure any cumulative effects are not significant. This is considered to be in line with IAQM guidance, which as stated previously, advises that with appropriate mitigation measures in place, the effects of construction dust will be not significant.

Noise and Vibration

- 7.3.7
- Potential cumulative effects from nearby developments have been considered based on the proximity of those developments to the site, the presence of notable high noise producing sources (such as the A57M to the south of the site and the railway line to the north of the site) and screening from buildings between those developments and the site.
- 7.3.8
- On this basis, it is considered that the Sister Plot C Former UMIST Campus scheme, if implemented, may result in cumulative effects due to simultaneous works as this scheme. The Sister Plot C Former UMIST Campus scheme proposes ground remediation and formation between July 2026 and December 2026, substructure works from January 2027 to November 2027 and superstructure works from November 2027 to July 2028. These coincide with the hard demolition works of Faraday Tower programmed from October 2026 to December 2027. There is one shared receptor referred to in Chapter 5, ES Volume I as R3 (Masdar Building) and in the Sister Plot C Former UMIST Campus scheme as NSR9 (Graphene Innovation Centre), although referenced differently, these are the same building.
- 7.3.9
- Chapter 5, ES Volume I concludes for R9 a major adverse level of significance after the supplementary mitigation measures are put into place. For the Sister Plot C Former UMIST Campus scheme, the same receptor, referred to as NSR9, is predicted a negligible magnitude of impact to noise level. The assessment identifies this as a direct, local, temporary, negligible adverse effect (not significant). On balance, it is not expected for the cumulative schemes to lead to a change in significance of effect on R9 then that already assessed for this proposed project. The proposed project significance of effect at R9 is expected to remain a major adverse, as identified in Chapter 5, ES Volume I. As it is owned by University of Manchester, it is expected that this can be effectively managed.
- 7.3.10
- Another consideration is Number 3 Circle Square that has the potential to result in cumulative effects due to its proximity to the site and receptors. However, it is understood that Number 3 Circle Square is approaching completion, and it is likely that the noisy aspects of the construction process will have been completed. Therefore, it can be reasonably assumed that the demolition noise levels as predicted will dominate at the relevant receptors, and there will be no additional cumulative effects.

Built Heritage

- 7.3.11
- Potential cumulative effects from nearby developments have been considered based on the effects on the setting of built heritage assets. The Sister Plot C Former UMIST Campus scheme. if implemented will result in the demolition of Morton Laboratory (OB3). This will remove the minor adverse effect on the setting of the Morton Laboratory identified in the built heritage assessment, as the building will no longer be present.
- 7.3.12
- Four other buildings considered in the built heritage assessment (Chapter 6, ES Volume I), are proposed to be demolished as part of the Sister Plot C scheme (i.e. the Moffat Building; Butterfly Stairs and Walkway Bridge; Staff House; and Barnes Wallis and Wright Robinson);.These receptors were all identified to have a negligible residual effect due to the proposed project, so no cumulative effects will arise.
- 7.3.13
- Approval and implementation of the Sister Plot C Former UMIST Campus scheme will likely diminish the overall interest/value of the former UMIST campus as there will be fewer former UMIST buildings remaining in the former campus group to the east of Sackville Street. The setting of Faraday Tower and the George Begg building as outlying buildings to the main campus lying at the opposite side of Sackville Street to the west are not unduly affected by these proposed removals compared with buildings lying in closer proximity. No cumulative effects are therefore deemed likely.

Summary of Significant Effects for the in-Combination Cumulative Scheme Scenario

- 7.3.14
- The in-combination cumulative effects in relation to the proposed project has been assessed. All topics have concluded that no significant in-combination cumulative effects are anticipated.

7.4 CONCLUSIONS

- 7.4.1
- An assessment has been undertaken of the potential for interactive cumulative effects to arise – that is, whether individual receptors could be subject to the interaction of more than one effect simultaneously, leading to more significant effects on those individual receptors.
- 7.4.2
- An assessment has also been undertaken, within each discipline, of the potential for the proposed project to give rise to cumulative effects when viewed “in-combination” with other developments.

Interactive cumulative effects

- 7.4.3
- Many of the receptors highlighted in Table 7-1 are affected by single, isolated effects. One receptor (George Begg Building) is subject to several environmental effects. However, the interactive effects are not anticipated to increase the overall significance beyond that already assessed for the individual effects. Therefore, no significant interactive effects have been identified.

In-combination cumulative effects

- 7.4.4
- No in-combination cumulative effects have been identified.

7.5 REFERENCES

- Council on Environmental Quality (1970) National Environmental Policy Act, as amended, part 1508: terminology and index.
- European Commission (1999) Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions.
- Stationery Office (2017). The Town and Country Planning (Environmental Impact Assessment) Regulations 2017.

7.6 ABBREVIATIONS

| Term | Definition                                 |
|------|--------------------------------------------|
| CEMP | Construction Environmental Management Plan |
| EIA  | Environmental Impact Assessment            |
| ES   | Environmental Statement                    |
| GEA  | Gross External Area                        |
| IAQM | Institute of Air Quality Management        |
| LPA  | Local Planning Authority                   |



# 8 RESIDUAL EFFECTS AND CONCLUSIONS

## 8.1 INTRODUCTION

- 8.1.1 This chapter summarises the potentially significant residual environmental effects resulting from the proposed project following adoption of the mitigation measures recommended in this Environmental Statement (ES). The significant residual effects have been derived from the assessments carried out in each of the technical chapters within this ES.
- 8.1.2 The supplementary mitigation measures have been summarised in Section 8.3 for reference. A summary of the significant residual effects, both adverse and beneficial, has been provided in tabular form in Section 8.4.

## 8.2 SUMMARY OF RESIDUAL EFFECTS

### Air Quality

- 8.2.1 The likely effects on air quality will arise from dust deposition, Particulate Matter (PM) emissions, Non Road Mobile Machinery (NRMM) emissions, and demolition-related traffic. No significant effects have been identified, and all effects are anticipated to be short term, temporary and negligible (not significant).
- 8.2.2 Demolition dust will be mitigated using best practicable means (BPM), including measures such as real-time PM<sub>10</sub> monitoring, site layout planning, non-idling vehicles, and mains electricity or battery-powered equipment. These measures will be implemented through a detailed Construction Environmental Management Plan (CEMP), secured via a planning condition.

### Noise and Vibration

- 8.2.3 The likely noise effects have been assessed at a range of sensitive receptors surrounding the site. The assessment was based on worst-case assumptions, including simultaneous operation of demolition plant. Predicted noise levels were compared against Lowest-observed-adverse-effect level (LOAEL) and Significant Observed Adverse Effect Level (SOAEL) thresholds.
- 8.2.4 Major adverse effects were predicted at three receptors—Masdar Building (R3), Manchester Conference Centre (R5), and George Begg Building (R9)—where demolition noise levels are expected to exceed the SOAEL for a duration of at least one month. All other receptors were predicted to experience either low adverse or negligible effects.
- 8.2.5 Demolition noise will be mitigated using BPM and implemented through the detailed CEMP secured by planning condition. Mitigation measures include:
- Selection of quieter plant and equipment;
  - Use of localised screening and scaffold sheeting; and
  - Consider the implementation of real-time noise monitoring with automatic alerts for LOAEL and SOAEL exceedances.
- 8.2.6 Following implementation of these mitigation measures, residual effects at most receptors are expected to reduce to non-significant (negligible or low adverse). However, at the George Begg Building (R9), the residual effect is expected to remain significant (major adverse) due to its proximity to the works. Since R9 is owned by University of Manchester, it is expected that this can be effectively managed.
- 8.2.7 No significant vibration effects are expected, as activities likely to generate groundborne vibration at levels of concern are not anticipated.

### Built Heritage

- 8.2.8 The proposed demolition of Faraday Tower will result in both direct and indirect effects on built heritage receptors. The direct effect involves the permanent removal of the remnant structure, which is assessed as having low heritage significance. This results in a moderate/minor adverse effect, which is considered significant, but unavoidable due to the nature of the scheme.
- 8.2.9 Indirect effects relate to changes in the setting of nearby heritage assets. These have been assessed through site visits and views analysis. Minor beneficial effects (not significant) to the receptor's settings are predicted for four identified sensitive receptors.
- 8.2.10 Similarly, minor adverse effects (not significant) to the settings are predicted for six identified sensitive receptors.
- 8.2.11 Negligible effects (not significant) are predicted at a large number of listed buildings and other assessed buildings due to lack of intervisibility or minimal change in setting.
- 8.2.12 No supplementary mitigation measures are proposed; therefore, there is one significant adverse residual effect on the removal of Faraday Tower, with no other significant residual effects identified.

### Cumulative Effects

#### Interactive Cumulative Effects

- 8.2.13 Most of the receptors are affected by single, isolated effects. However, the George Begg Building is subject to several environmental effects. Users of the George Begg Building will experience major adverse (significant) temporary demolition noise effects, and a minor adverse (not significant) permanent indirect impact on setting. Due to the temporary and short-term nature of the demolition noise, and the absence of a synergistic or functionally reinforcing relationship between the effects, the interactive effects are not anticipated to increase the overall significance beyond that already assessed for the individual effects.
- 8.2.14 No other interactive effects have been identified.

#### In-Combination Cumulative Effects

- 8.2.15 No in-combination cumulative effects have been identified.

## 8.3 SUMMARY OF REQUIRED SUPPLEMENTARY MITIGATION MEASURES

- 8.3.1 Where adverse effects have been predicted, supplementary mitigation measures have been proposed to reduce the effects where feasible; these are summarised in Table 8-1. Further details on mitigation measures can be found in the individual technical assessment chapters.
- 8.3.2 Due to Institute of Air Quality Management (IAQM) guidance, the air quality assessment only considers the significance of effects of demolition dust and PM<sub>10</sub> emissions once mitigation measures are applied. Therefore, the mitigation that has been considered within Air Quality assessment (Chapter 4, ES Volume II) has been identified in Table 8-1.

Table 8-1 Summary of supplementary mitigation measures required to limit demolition effects

| Topic                  | Adverse effect                                                                                                | Mitigation measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Responsibility/<br>mechanism for<br>implementation                              | Timing                           |
|------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|----------------------------------|
| Air<br>Quality         | Loss of amenity due to dust deposition<br><br>Impacts on human health due to emission of PM during demolition | Develop and implement a Dust Management Plan (DMP) including the following measures: <ul style="list-style-type: none"><li>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;</li><li>Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked;</li><li>Consider the implementation of dust deposition, dust flux, or real-time PM<sub>10</sub> continuous monitoring locations NO with the Local Authority.</li><li>Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible;</li><li>Ensure all vehicles switch off engines when stationary - no idling vehicles; and</li><li>Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.</li></ul> Further mitigation is provided in Appendix 4-B, ES Volume II. | Detailed CEMP to be secured by planning condition and implemented by contractor | Prior to and during construction |
|                        | Effects of emissions arising from traffic generated by NRMM vehicles                                          | NRMM vehicles should adhere to MCC technical guidance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Detailed CEMP to be secured by planning condition and implemented by contractor | Prior to and during construction |
| Noise and<br>Vibration | Demolition noise                                                                                              | Environmental noise controls following BPM, including: <ul style="list-style-type: none"><li>Selection of plant producing lower levels of noise;</li><li>Use of localised screening and enclosures around noisy plant and activities;</li><li>Scaffold sheeting providing some level of noise protection around the works; and</li><li>Consider the implementation of real-time noise monitoring with automatic alerts if LOAEL and SOAEL noise levels are reached.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Detailed CEMP to be secured by planning condition and implemented by contractor | Prior to and during construction |
| Built<br>Heritage      | No supplementary mitigation measures are proposed                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                 |                                  |

8.4 SUMMARY OF SIGNIFICANT RESIDUAL EFFECTS

Table 8-2 Summary of significant residual effects.

| Topic               | Receptor                                         | Effect                             | Residual significance               |
|---------------------|--------------------------------------------------|------------------------------------|-------------------------------------|
| Air Quality         | No significant residual effects were identified. |                                    |                                     |
| Noise and Vibration | George Begg Building                             | Demolition noise                   | Significant: major adverse          |
| Built Heritage      | Faraday Tower                                    | Direct impact by removal of fabric | Significant: moderate/minor adverse |

8.5 CONCLUSIONS

- 8.5.1 The majority of environmental effects associated with the proposed project are deemed to be non-significant with embedded and supplementary mitigation measures in place.
- 8.5.2 However, there are residual effects that are two significant with mitigation measures in place. This includes a major adverse demolition noise effect on the George Begg Building. Since George Begg Building is owned by University of Manchester, it is expected that this can be effectively managed. The second significant effect is a moderate/minor adverse effect identified in the built heritage assessment (Chapter 6, ES Volume II), due to the loss of Faraday Tower, which is considered unavoidable due to the nature of the project.

8.6 ABBREVIATIONS

| Term  | Definition                                 |
|-------|--------------------------------------------|
| BPM   | Best practicable means                     |
| CEMP  | Construction Environmental Management Plan |
| DMP   | Dust Management Plan                       |
| ES    | Environmental Statement                    |
| IAQM  | Institute of Air Quality Management        |
| LOAEL | Lowest-observed-adverse-effect level       |
| NRMM  | Non Road Mobile Machinery                  |
| PM    | Particulate Matter                         |
| SOAEL | Significant Observed Adverse Effect Level  |

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