



Environmental Statement: Volume 1

Plot H (Demolition), Sister

August 2025

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1. Introduction

- 1.1. This Environmental Statement ('ES') has been prepared in respect of a full planning permission application for the demolition of an existing multi-storey car park together with three commercial units (retail (Use Class E) and bar (sui generis) uses) located on land bounded by Charles Street and Sackville Street in Manchester City Centre (the 'Site').
- 1.2. Plot H falls under within Zone H of the ID Manchester Strategic Regeneration Framework (2023) ('the SRF') and will be hereby referred to solely as Plot H. ID Manchester has since been rebranded as 'Sister' and shall be referred to as such throughout this Statement. Sister is a Strategic Regeneration Area transforming the former UMIST campus into a 4 million sq. ft. globally competitive innovation district, encompassing approximately 2 million sq. ft. of commercial and retail space and over 1,500 homes.
- 1.3. The Applicants are ID Manchester Ltd and the University of Manchester ('the Applicants'). ID Manchester Ltd is a joint venture ('JV') between Bruntwood SciTech Ltd and the University of Manchester formed to deliver Sister.
- 1.4. The full planning application submitted to Manchester City Council ('MCC') and which form the 'Proposed Demolition' has the following formal description of development:

“ Full Planning Permission for demolition of existing multi-storey car park and associated commercial units (retail and sui generis bar uses), to facilitate future redevelopment.”
- 1.5. The purpose of the application is to facilitate redevelopment of the Site, as envisioned by the Sister (ID Manchester) SRF where it is identified as Plot H. In this regard, the Proposed Demolition will act as an initial phase of works. At the time of preparing this report, detailed proposals for the site's redevelopment are being prepared.
- 1.6. Detailed EIA Screening and Scoping will be undertaken with respect to the redevelopment proposals to determine whether an EIA is required and the scope of that assessment.

The Site

- 1.7. Figure 1.1 shows the location of the Site in its local context as well as the application boundary edged in red alongside the Applicants' wider ownership identified in blue. The Site is currently vacant, having been largely used as a multi-storey car park which has reached the end of its economic life.
- 1.8. The Site is bound by Charles Street to the south, Manchester South Junction and Altrincham Railway Viaduct and Granby Row to the north, Sackville Street to the east and Princess Street to the west. It extends to c. 0.528 Ha.
- 1.9. Please refer to Chapter 4 of this Environment Statement for further details on the Site Context.
- 1.10. This ES sets out the findings of an Environmental Impact Assessment ('EIA') carried out in respect of the Proposed Demolition of the Site.

Requirements for EIA

- 1.11. The EIA process is the mechanism by which development proposals are appraised in terms of their likely environmental effects, in addition to engineering and technical considerations.
- 1.12. The purpose of the EIA is to establish the nature of the Proposed Demolition and the environment in which it is likely to take place, during the demolition phase and operational phase, as to identify the likely significant effects on the environment. The assessment compares the existing situation at the start of the work (baseline) with the situation during demolition and operation.

- 1.13. The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the ‘EIA Regulations’) require that any Proposed Demolition falling within the description of a ‘Schedule 3 development’ (as defined within the meaning of the EIA Regulations), will be subject to an EIA where such development is likely to have ‘significant’ effects on the environment by virtue of such factors as its characteristics, location, types and characteristics of its potential impact (Regulations 5(4)).
- 1.14. The Proposed Demolition is assessed for its likely significant effects on the environment based on Schedule 3 criteria, considering that the Site covers an area of approximately 0.5 ha, and will produce demolition debris and has the potential to cause air and noise pollution. In addition, given the location of the development it is also expected to give rise to effects on townscape and visual impacts., An EIA is therefore considered appropriate to test the likely significant effects of the Proposed Demolition
- 1.15. The Local Planning Authority was contacted via email on 18th July 2025 requesting their opinion on the proposed scope of the EIA required in respect of the Proposed Demolition. The LPA confirmed via email on 1st August 2025. A copy of the EIA Screening and Scoping Letter and the Scoping Opinion is included in Appendix 2.1 and 2.2 of this ES.
- 1.16. In accordance with the EIA Regulations, this ES sets out the following information:
- A description of the Proposed Demolition comprising information on the Site, design, size and other relevant features of the development;
 - A description of the likely significant effects of the Proposed Demolition on the environment;
 - A description of any features of the Proposed Demolition or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;
 - A description of the reasonable alternatives studied by the developer, which are relevant to the Proposed Demolition and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment;
 - A non-technical summary of the information, of the information specified above; and
 - Any additional information specified in Schedule 4 relevant to the specific characteristics of the development or type of development and to the environmental features likely to be significantly affected.

Project Team

- 1.17. Deloitte has significant experience and expertise in managing the EIA process and hold the IEMA EIA Quality Mark. Details of the Project Team, EIA Technical Team and qualifications are set out in Table 1.1 and Table 1.2 below.

Table 1.1: Project Team and Technical Discipline

Consultant	Technical Disciplines
Deloitte	Planning and EIA Co-ordinator
Hodders and Partners	Architecture and design
Layer Studios	Townscape and Visual Impact
Stephen Levrant Heritage Architecture	Heritage
Buro Happold	Air Quality
Blackbird Acoustics and Heyda	Noise and Vibration
Tyler Grange	Ecology

Elford Demolition and Remediation Ltd	Demolition and Waste
Roscoe	Ground Conditions
Civic	Traffic and Transport
Tyler Grange	Ecology

Table 1.2 EIA Technical Team

Topic	EIA Consultant	Qualifications
EIA Coordinator	Deloitte	IEMA, MRTPI, MPlan, BA (Hons) IEMA Quality Mark Registered
Construction and Demolition	RG Group	MCIQB, HNC/ONC Building Studies, BSc (Hons), MRICS
Townscape and Visual Impact	Layer Studios	Chartered Member of Landscape Institute
Air Quality	Buro Happold	BSc MIAQM
Noise and Vibration	Blackbird Acoustic	BSc Music Systems Engineering, BSc Acoustics and Music, MIOA

Organisation of the Environmental Statement

- 1.18. This ES comprises 10 Chapters and is supported by figures (located at the back for each Chapter within Volume 1) and technical appendices (within a separate Volume 2). A non-technical summary (NTS) of the full ES is provided as a separate standalone document.
- 1.19. Figures have been referenced using the Chapter number as a prefix followed by the number of the figure within a given Chapter. Appendices have been referenced in the same way but due to their size they are contained separately in Volume 2. Table 1.3 sets out the structure of the ES.

Table 1.3: Structure of this Environmental Statement

Chapter No.	Chapter Title	Description
VOLUME 1		
1.	Introduction	Introduction to the ES, EIA requirements, details of the project team, ES organisation and availability.
2.	EIA Methodology	Methods used to prepare each Chapter, description of ES structure and content, generic significance criteria, scoping and consultation.
3.	Alternatives and Design Evolution	Outline of the main alternatives considered by the Applicants.
4.	Site and Description of Development	Site description and details of the proposal.

Chapter No.	Chapter Title	Description
5.	Construction Management – Programme and Methodology	Details of anticipated programme for demolition methodology.
6.	Townscape and Visual Impact	To assess the likely significant effects of the Proposed Demolition in relation to townscape and visual impact.
7.	Air Quality	To assess the potential air quality impacts associated with the Proposed Demolition due to changes in traffic flows, construction etc. It also includes a cumulative assessment of impacts.
8.	Noise and Vibration	To assess the likely significant effects of the Proposed Demolition in relation to noise and vibration.
9.	Summary of Residual Effects	Summary of residual effects of the Proposed Demolition (including cumulative impacts alongside other committed developments).
10.	Type 1 Cumulative Effects	An assessment of the combined effects arising from the Proposed Demolition upon a set of defined sensitive receptors.
VOLUME 2	Technical Appendices	Technical data and reports to support the Chapters in Volume 1.
	Non-Technical Summary	A short concise document written in a non-technical language, necessary to meet the requirements of the EIA Regulations, to make the ES accessible to a non-technical audience.

Other Documents

- 1.20. Together with this ES and its appendices, the following documents will be submitted to MCC in support of the planning application:

Table 1.4: Planning Application Supporting Documents

Application Documentation	Author
Application Form	Deloitte
Covering letter	Deloitte
Site Location Plan	Hodders and Partners
Existing Site Plans and Elevations	Hodders and Partners
Proposed Plans, Elevation and Sections	Hodders and Partners
Planning Statement (incl. Statement of Community Involvement)	Deloitte

Application Documentation		Author
Ecology Report		Tyler Grange
Heritage report		Stephen Levrant Heritage Architecture
Demolition Environmental Management Plan incl. Demolition Method Statement and Waste Management		Elford Demolition and Remediation Ltd
Transport Technical Note		Civic
Ground Conditions Note		Roscoe
Tree Survey		Tyler Grange
Tree Constraints Plan and Protection Plan		Tyler Grange
Environmental Statement		
Volume 1: Environmental Statement including:		EIA team
<ul style="list-style-type: none"> • Introduction • Methodology • Alternatives and Design Evolution • Site and Description of Development • Construction Management – Programme and Methodology • Townscape and Visual Impact • Air Quality • Noise and Vibration • Summary of Residual Effects • Type 1 Cumulative Effects 		
Volume 2: Technical Appendices		EIA team
Volume 3: Non-Technical Summary		Deloitte

1.21. The ES is available for public viewing on MCC's Public Access website at the following address:
<http://pa.manchester.gov.uk/online-applications/> once the application has been submitted and validated.

1.22. The ES may be purchased in volumes, the costs for which are set out below:

- Volume 1: ES Main Text and Figures - £150;
- Volume 2: ES Appendices - £150;
- Volume 3: Non-Technical Summary (NTS) - £15;
- Full Copy (Volumes 1 and 2, and NTS) of the ES on CD - £15.

1.23. For copies of any the above, please contact the Manchester Planning Team at Deloitte:

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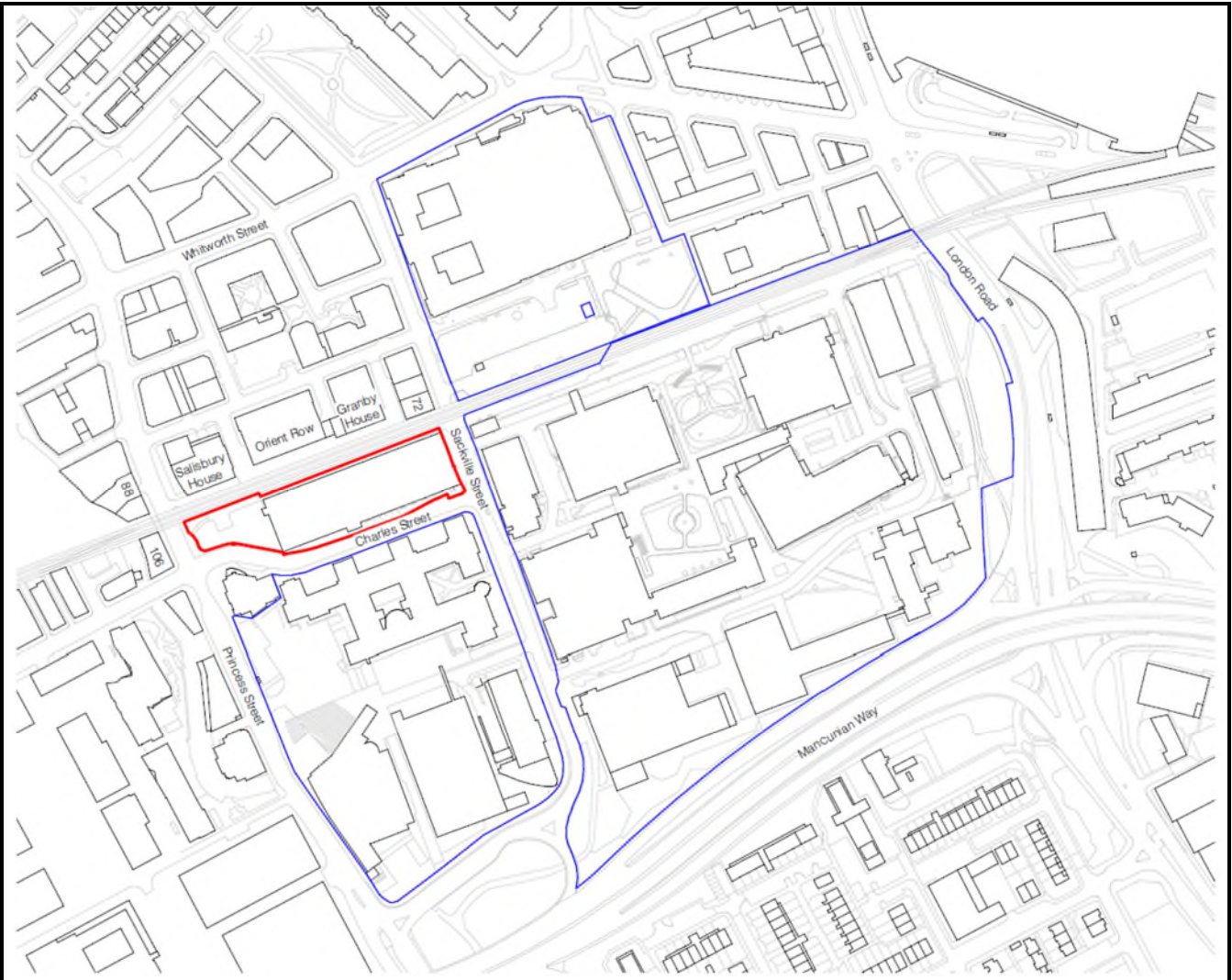


	Figure:	1.1		
	Title:	Site Location Plan (Source: Hodder and Partners)		
	Project:	Plot H, Sister, Manchester		
	Date:		Scale:	NTS

2. EIA Methodology

Introduction

- 2.1. This Chapter sets out the methodology used to prepare each Chapter of the ES and describes its structure and content. In particular, it sets out the process of identifying and assessing the likely significant effects of the Demolition on the environment as defined in Chapter 1 and described in detail in Chapter 4.

Legislation and Guidance

- 2.2. The ES has been prepared to comply with EIA Regulations, which implement European Council Directive No. 85/337/EEC as amended by Directive 2014/52/EU and entered into force on 17 May 2017. The EU legislation as it applied to the UK on 31 December 2020 is now a part of UK domestic legislation, under the control of the UK's Parliaments and Assemblies. The European Union (Withdrawal) Act 2018 introduced "retained EU law" which provides that EU-derived domestic legislation continues to have effect.
- 2.3. Reference has also been made to currently available good practice guidance in EIA including:
- Circular 02/99: Environmental Impact Assessment
 - The European Commission's numerous EIA guidance documents available here: <http://ec.europa.eu/environment/eia/eia-support.html>
 - Guidance on EIA Scoping, European Commission, June 2001
 - Guidance on Transport Assessment, DCLG and DfT, March 2007
 - National Planning Practice Guidance – Department for Communities and Local Government (March 2014 and continuously updated as a 'live' resource)
 - Reference has been made to the Institute of Environmental Management and Assessment (IEMA) publications, including:
 - IEMA ES Review Criteria
 - IEMA Guidelines for Environmental Impact Assessment (2004)
 - IEMA Special Report into the State of Environmental Impact Assessment Practice in the UK (2011)
 - IEMA Shaping Quality Development (2015)
 - IEMA Delivering Quality Development (2016)
 - IEMA Delivering a Proportionate EIA (2017)
- 2.4. The ES has also had regard to the National Planning Policy Framework 2024 (NPPF). The NPPF sets out the Government's economic, environmental and social planning policies for England, articulating the Government's aspiration for sustainable development. The NPPF has been considered where it is relevant to EIA.
- 2.5. As relevant to the ES technical chapter's scope, methodology and assessment of effects, key local planning policy and guidance documents have been considered. These include:
- Places for Everyone (Pfe) (2024)
 - Manchester City Council Core Strategy (2012)
 - Saved Unitary Development Plan Policies (1995)

2.6. Any additional planning policy or guidance documents considered relevant have been identified within the relevant technical chapters.

Screening and Scoping

- 2.7. Further to Scoping exercise as noted in Chapter 1, following Chapters have been scoped into the EIA:
- Townscape and Visual Impact
 - Air Quality
 - Noise and Vibration

EIA Scenarios

Scenarios

- 2.1. The scenarios to be tested within the EIA take into the account the project specifics and are proportionate to the scale of development proposed.
- 2.2. The scenarios are as follows:

Table 2.1: Scenarios

Scenario 1	Baseline Conditions (existing Site as of June 2025 including developments defined within the Baseline section of the committed development schedule in Appendix 2.3)
Scenario 2	Baseline + Demolition
Scenario 3	Baseline + Demolition + Operation (i.e. cleared Site)

- 2.3. The Committed Developments have been considered by the technical team and the technical consultants have advised that given the nature of the proposed development no propensity for cumulative effects has been identified. Therefore, Committed Developments have not been included as part of the scenarios to be assessed.

Table 2.2 EIA Scenarios to be assessed

Topic	Scenarios Assessed
Townscape and Visual Impact	1,2,3
Air Quality	1, 2
Noise and Vibration	1,2

Consultation

- 2.4. The Proposed Demolition has been prepared in consultation with MCC Planning Authority who were also consulted upon as part of the EIA Scoping exercise.
- 2.5. Prior to submission of the application, engagement has taken place with the Local Planning Authority to agree the principle of the works and the scope of the application documentation and EIA required to accompany the application. Engagement has also been facilitated with local neighbours and local Ward

Councillors prior to submission of the application. In addition, discussions have taken place with Network Rail. The Proposed Demolition has also benefited from broader stakeholder engagement. Further details are provided in the Planning Statement that accompanies the application. Considerations of any reasonable alternative proposals are set out in Chapter 4 of this ES.

Non-Significant Effects

2.6. It has been confirmed via the Scoping opinion that the following disciplines will not give rise to likely significant effects on the environment and therefore do not require inclusion in the Environmental Statement. An explanation for scoping out each discipline set out below is provided in the EIA Scoping email in Appendix 2.1:

- Agricultural Circumstances.
- Aviation.
- Archaeology.
- Broadband Connectivity.
- Ecology.
- TV Reception.
- Water resources, flood risk and drainage.
- Traffic and transport.
- Heritage.
- Climate Change.
- Human Health.
- Wind.
- Daylight, Sunlight, and Overshadowing.
- Solar Glare.
- Ground Conditions.

Approach to Technical Studies

- 2.7. Various technical studies were commenced at an early stage in the process. The findings of the baseline environmental studies played an important role in the design of the Proposed Demolition by defining the environmental sensitivities, constraints and opportunities associated with the Site.
- 2.8. Project team reviews, attended by members of the project team, were held throughout the pre-application process. These reviews provided a valuable forum for the exchange of information and ensured that the project team was fully aware of the environmental constraints and opportunities and of the interactions between disciplines. Pre-application engagement was also undertaken with MCC as the Local Planning and Highway Authority.
- 2.9. The technical studies have been undertaken in accordance with current best practice. Specific guidance used is referenced within each of the respective assessment Chapters.
- 2.10. The majority of assessments involved consultations with statutory and non-statutory bodies, desk-based research, Site inspections and surveys, impact prediction and mitigation.
- 2.11. The assessment and conclusions of the ES are based on the description of the Proposed Demolition provided in Chapter 4.

Structure of Technical Chapters

- 2.12. Each technical Chapter of the ES has been set out broadly in line with Table 2.2. Where chapters differ from the structure set out below, the reasons for that have been clearly articulated within the chapter introduction.

Table 2.3: Structure of the ES Technical Chapters

Technical Chapter Subheading	Summary of information
Introduction	Each of the technical Chapters begins with an introduction providing context to the EIA completed.
Policy Context	This section includes a summary of legislation and of national and local policies relevant to the environmental discipline and explains its purpose in the context of the Proposed Demolition and the ES.
Assessment Methodology and Significance Criteria	This section describes the method or approach employed in the assessment of impacts, the criteria against which the significance of effects has been evaluated, the sources of information used and any technical difficulties encountered. Relevant legislation is also identified.
Baseline Conditions	This section describes and evaluates the baseline environmental conditions i.e. the current situation and anticipated changes over time assuming the Site remains unchanged. This is a critical part of the EIA process as it provides a measure against which potential environmental effects can be assessed.
Identification and Evaluation of Key Impacts	<p>This section identifies the likely significant effects on the environment resulting from the Proposed Demolition. A description of the likely effects of the Proposed Demolition and an assessment of their predicted significance is provided.</p> <p>The assessment of effect significance has been undertaken using appropriate national and international quality standards. Where no such standards exist, the judgments that underpin the attribution of significance are described. The guidelines, methods and techniques used in the process of determining significance of effects are contained within each of the technical Chapters presented.</p>
Mitigation Measures	<p>One of the main aims of the EIA process is to develop suitable mitigation measures to avoid, reduce or compensate for any significant adverse effects of a project.</p> <p>This section of each technical Chapter describes the measures which would be implemented to mitigate potential adverse effects. Where possible, enhancement measures have also been proposed.</p>
Residual Effects	<p>The residual effects, i.e. the remaining effects of the Proposed Development assuming implementation of the proposed mitigation measures, have been estimated and presented.</p> <p>The methods used to make these estimates are described and proposed methods of treatment for any residual effects have been identified and quantified where possible.</p>
Summary	Each technical Chapter concludes with a brief summary outlining the potential residual effects of the Proposed Development.

- 2.13. Chapter 5 provides information to allow the construction phase of the Proposed Development to be assessed by the disciplines set out in Chapter 1.

Magnitude

- 2.14. The methodology for determining the scale, or magnitude, of effect is set out in Table 2.3.

Table 2.4 Methodology for Assessing Magnitude

Magnitude of Impact	Criteria for Assessing Effect
Major	Total loss or major/substantial alteration to key elements/features of the baseline conditions such that the post development character/composition/attributes will be fundamentally changed.
Moderate	Loss or alteration to one or more key elements/features of the baseline conditions such that post development character/composition/attributes of the baseline will be materially changed.
Minor	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible/detectable but not material. The underlying character / composition / attributes of the baseline condition will be similar to the pre-development circumstances/situation.
Negligible	Very little change from baseline conditions. Change barely distinguishable, approximating to a 'no change' situation.

Sensitivity

- 2.15. The sensitivity of a receptor is based upon the relative importance of the receptor using the scale in Table 2.4.

Table 2.5: Methodology for Assessing Sensitivity

Sensitivity	Examples of Receptor
High	The receptor/resource has little ability to absorb change without fundamentally altering its present character, or is of international or national importance.
Medium	The receptor/resource has moderate capacity to absorb change without significantly altering its present character, or is of high importance.
Low	The receptor/resource is tolerant of change without detriment to its character, is of low or local importance.

Significance

- 2.16. The significance of an environmental effect is determined by the interaction of magnitude and sensitivity, whereby the impacts can be positive or negative. Table 2.5 below shows how magnitude and sensitivity interact to derive effect significance.

Table 2.6: Methodology for Assessing Significance

Magnitude	Sensitivity		
	High	Medium	Low
Major	Major Adverse/Beneficial	Major - Moderate Adverse/Beneficial	Moderate or Minor Adverse/Beneficial
Moderate	Major - Moderate Adverse/Beneficial	Moderate Adverse/Beneficial	Minor Adverse/Beneficial
Minor	Moderate or Minor Adverse/Beneficial	Minor Adverse/Beneficial	Minor Adverse/Beneficial - Negligible
Negligible	Negligible	Negligible	Negligible

- 2.17. The above magnitude and significance criteria have been provided as a guide for technical specialists to assess impact significance. Where discipline specific methodology has been applied that differs from the generic criteria above, this has been clearly explained within the given Chapter under the heading of 'Assessment Methodology and Significance Criteria'.
- 2.18. For the purposes of this Environmental Statement, an effect will be potentially 'significant' if it is classed as either 'moderate' or 'major' (bold text in Table 2.5).

Baseline Conditions

- 2.19. Each technical Chapter includes a section which describes and evaluates the baseline environmental conditions (i.e. the current situation and anticipated changes over time assuming the Site remains unchanged). Baseline data has been obtained from a variety of sources, including published documents, maps, historical information and Site survey data. Given the complex nature of the Site and surroundings, each technical Chapter (Chapters 6 to 8) includes a clear description of what is assumed as the baseline against which the assessment is being made.
- 2.20. The method used to obtain baseline information, where relevant and possible, has been clearly identified within each technical Chapter and agreed in advance with statutory consultees.

Mitigation

- 2.21. Any adverse environmental effects have been considered for mitigation at the design stage and, where practicable, specific measures have been put forward. Measures have been considered based on the following hierarchy of mitigation:
- Avoidance;
 - Reduction;
 - Compensation;
 - Remediation; and
 - Enhancement.
- 2.22. Where the effectiveness of the mitigation proposed has been considered uncertain, or where it depends upon assumptions of operating procedures, data and/or professional judgement has been introduced to support these assumptions.

- 2.23. Mitigation recommended during the construction phase would be set out in the Construction Management Plan (CMP) to be agreed with MCC prior to the commencement of work and implemented throughout the duration of the works. Outline mitigation measures to be included in a future CMP are set out in Chapter 5: Construction Methodology and Programme and are cross referred to in the relevant chapters. It is anticipated that a condition be attached to any subsequent consent that requires submission and approval of a CMP.
- 2.24. Mitigation to be implemented during the operational phase would be secured through planning conditions and obligations, which are explicitly referenced in each chapter.

Residual Effects

- 2.25. The likely significant effects on the environment, assuming the successful implementation of mitigation measures proposed, have been estimated within each Chapter. These are termed 'residual effects' and are considered in Chapter 9 of this Statement.

Cumulative Effects

- 2.26. A search of MCC's planning applications database and knowledge of the area has identified schemes for which cumulative effects are considered more likely, this includes other reasonably foreseeable schemes, i.e. those contained within the Development Plan or other material considerations. A full list, as of June 2025 is contained within the Scoping Email at Appendix 2.1, to which agreement has been provided from the Local Planning Authority as part of the Scoping Opinion process.
- 2.27. As part of the Scoping process the technical consultants reviewed the Committed Development and advised that these are not of relevance to the Proposed Development and have therefore been scoped out of the assessments.
- 2.28. Chapter 10 assesses the Type 1 Cumulative effects. Type 1 cumulative effects are also known as 'inter-project' effects, which are the combined effects arising from the development upon a set of defined sensitive receptors.

Assumptions and Limitations

- 2.29. The principal assumptions that have been made and any limitations that have been identified in preparing the ES are set out in each technical Chapter. General assumptions include the following:
- All of the principal land uses adjoining the Site remain. Where redevelopment proposals have been granted planning permission, the effect of those proposals are considered as part of the Cumulative Impacts;
 - Information received from third parties is complete and up to date;
 - The various stages of the Proposed Development will satisfy minimum environmental standards, consistent with contemporary legislation, practice and knowledge;
 - Assessments are based upon, and conclude, the 'worst case' effects that would arise from the application as defined by the description of development set out in Chapter 4, Site Surroundings and Description of the Proposals;
 - Construction and demolition methods and phasing will follow the timetable and methods set out in Chapter 5, Construction Management;
 - Conditions will be attached to the planning permission that will control disturbance during the Proposed Development; and
 - Necessary off-site services infrastructures for the Proposed Development will be provided by statutory undertakers.

Objectivity

- 2.30. The technical studies undertaken with the ES have been progressed in a transparent, impartial, and unbiased way with equal weight attached, as appropriate, to beneficial and adverse effects. Where possible, this has been based upon quantitative and accepted criteria together with the use of value judgements and expert interpretations.
- 2.31. The assessment has been explicit in recognising areas of limitation within the ES and any difficulties that have been encountered, including assumptions upon which the assessments are based. Where appropriate, the assessment of significance has been given confidence levels.

3. Alternatives and Design Evolution

Introduction

- 3.1. Regulation 18(3) and Paragraph 2 of Schedule 4 of the EIA Regulations requires the Applicants to provide an outline of the main alternatives studied and an indication of the main reasons for the choice made, considering the environmental effects.
- 3.2. Additionally, Schedule 4, Paragraph 2 of the EIA Regulations¹ states that an ES should include: “a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects”. In considering the evolution of the Proposed Demolition, all aspects have been evaluated in response to several longstanding strategic objectives and established principles, embedded in local planning policy and guidance, as well as within the suite of planning applications and major development proposals that have come forward within the Site overall to date. This Chapter considers the following two options in the context of these requirements and the existing Development Brief: The ‘do nothing’ alternative where the Proposed Demolition is not progressed and the use of ‘Alternative Technologies’ for the demolition process.
 - No Demolition on Site.
 - Alternative Technologies.
- 3.3. The Proposed Demolition has been detailed out in Chapter 4 of the Planning Statement. The design and planning team has engaged closely with MCC and other key stakeholders throughout this period to ensure that the optimum development proposal was produced on Site.

The “do nothing” Alternative

- 3.4. The “do nothing” scenario refers to the option of leaving the Site in its current use. The Site is brownfield land in Manchester City Centre. The Site currently contains a multi-storey car park and three ancillary retail uses. The car park is no longer fit for purpose and therefore has reached the end of its economic life. The car park closed on 20 October 2024. The newsagent and coffee shop vacated in December 2024, and July 2024 respectively. Retro Bar closed on 30th June 2025.
- 3.5. The buildings within the Site, and across the broader SRF Area, are no longer needed for their originally intended use. The University of Manchester decanted their education and research facilities to the newly developed Engineering Campus and wider estate in 2022. Since the car park closure in October 2024, it has lain vacant and has been subject to vandalism and graffiti. The Applicants are investing heavily in the estate to maintain security and bring early activity to the area through the repurposing of the Renold Building in close proximity to Plot H, which is now open and operational; however, the further degradation of the buildings is inevitable where they continue to lie vacant.
- 3.6. The SRF Area has been identified as a development opportunity for almost ten years. MCC endorsed the North Campus SRF in 2017, which envisaged wholesale redevelopment of the Site.
- 3.7. The vision and objectives for the SRF Area were updated within the ID Manchester SRF, endorsed in December 2023. This SRF recognises that Sister presents a significant strategic opportunity to transform a

currently underutilised and underperforming area of the City Centre into the flagship commercial innovation hub for the city region. It supports development opportunities to increase densities across the SRF area, whilst delivering against essential placemaking objectives. The SRF describes Sister as the ‘final piece in the regeneration jigsaw’ within the southern arc of Manchester that stretches from Great Jackson Street in the west through to Mayfield. The Site has been identified for bespoke residential options, hotel and purpose-built student accommodation, as shown in Illustrative Masterplan in the SRF. It also identifies the potential for creating a new space on the Site within the existing mature maple trees, accessible via a generous colonnaded walkway beneath new residential or student accommodation.

- 3.8. Given that the car park is currently lying vacant with no prospect of its previous use being re-activated and that the Site forms part of an area identified as a strategic priority for regeneration and redevelopment, the “do nothing” alternative has been discounted.

Alternative Technologies

- 3.9. The contractor has proposed to use the most appropriate demolition technologies for the Site which are in accordance with best practice regulations.
- 3.10. A complete structural survey will be completed prior to any works commencing. The working sequence will require the deconstruction of the north elevation, and 'End Block' followed by mechanical demolition of the rest of the car park with a high reach excavator. Further detail is contained within the accompanying Demolition Environmental Management Plan (DEMP) (Appendix 5.1) and the Demolition Methodology (Appendix 5.2).
- 3.11. The technologies included with the Proposed Development are therefore considered to represent the most appropriate for the proposals.

Summary

- 3.12. Where possible, alternative options have been considered throughout the proposed demolition process. The above has set out why the Site is considered suitable for the Proposed Demolition.
- 3.13. This process has been informed by the SRF, site constraints and opportunities, and the desire to facilitate the next phase of development at Sister, helping to realise the vision for the masterplan as a thriving destination where academia and commercial business come together.
- 3.14. The Proposed Demolition has been influenced by pre-application consultation with key stakeholders including local landowners, residents, businesses, statutory consultees, as well as with MCC. On this basis, Regulation 18(3) and Paragraph 2 of Schedule 4 of the EIA Regulations has been considered.

4. Site Surroundings and Description of Proposals

Site Location

- 4.1. The Site is located in Manchester City Centre. It forms the north-western corner of the former UMIST Campus. The Site is bound by Charles Street to the south, Manchester South Junction and Altrincham Railway Viaduct and Granby Row to the north, Sackville Street to the east and Princess Street to the west. As described within previous sections of this report, the Site lies within the Sister (ID Manchester) Strategic Regeneration Area, aligned to Plot H as indicated in Figure 4.1 below.

Surrounding Land Uses

- 4.2. Land to north and northwest, beyond the viaduct arches on Granby Row, comprises the following residential buildings: Uncle; Granby House; and Salisbury House. Land to the north-east comprises green public space at Vimto Park and the now vacant Sackville Building, which also form part of the Sister masterplan.
- 4.3. To the east lies the Paper Science Building and Renold Building. Renold Building has recently undergone works to re-activate the building for commercial uses and collaboration spaces related to Sister and, beyond Renold, Plot C for which planning applications have been recently submitted for a commercial development and new civic square. Further north-east lies Piccadilly Station, Manchester's primary rail hub.
- 4.4. Land to the south comprises Weston Hall which is purpose-built student accommodation building. Land to the south-west comprises the former UMIST Campus.
- 4.5. The southern boundary of the SRF Area is the Mancunian Way, beyond which lies the predominantly residential areas of Ardwick, Brunswick, and Hulme.

Site Description

Site Area

- 4.6. The Site extends to circa 0.528 Ha.

Existing Buildings, Structures and Spaces

- 4.7. The Site principally was used as a multi-storey car park which closed in October 2024. The car park is no longer fit for purpose and therefore has reached the end of its economic life.
- 4.8. The building also accommodates three ancillary commercial uses (2 x retail (Use class E) and 1 x Sui Generis Bar), all of which are now vacant.
- 4.9. There is evidence of anti-social behaviour at the Site with the existing car park subject to vandalism and graffiti.

Trees

- 4.10. There are 11 trees on Site in total. Of these 6 are in B2 category, which is characterised by moderate quality and value, and 5 in C1 category, which is characterised by low quality and value. For completeness, all trees are to be retained and protected during the works. The application is accompanied by a Tree Survey.

Access and Topography

- 4.11. The Site is currently accessed via Charles Street from the south which runs between Princess Street and Sackville Street. Access to the Site is also via Sackville Street from the east.
- 4.12. There is a difference in level change of 3m across the Site from Sackville Street in the east to Princess Street in the west.

Connectivity

- 4.13. The Site is in a highly accessible location in Manchester City Centre and enjoys a range of excellent transport links and proximity to similar and necessary establishments. Numerous bus and tram stops are located along the Oxford Road Corridor, as well as railway stations, providing further sustainable transport options, all conveniently close to the Site. Access to the inner ring road by private car is immediately south of the Site. See below for accessibility breakdown by sustainable transport modes.

Rail

- 4.14. Manchester Piccadilly is located just over 355m away from the Site, meaning access to the wider city region and major cities such as London and Birmingham are situated only a seven-minute walk away. 310m to the west of the Site is Manchester Oxford Road, another key transport link offering commuters access to the wider city region, and UK towns and cities such as Liverpool, Leeds, and Birmingham. There are several pedestrian routes connecting commuters from Oxford Road Station to the Site, all of which are between 7 to 9 minutes.

Metrolink

- 4.15. Piccadilly Station Tram Stop, a 10 -minute walk away from the Site offers multiple services taking commuters from the centre of Manchester to a variety of towns and neighbourhoods across the City Region, including Eccles, Ashton-under-Lyne, Altrincham and Bury.

Bus

- 4.16. Bus routes also run along Charles Street, Sackville Street, Whitworth Street, London Road and Oxford Road. There is a BeeWay off-road cycleway on London Road, and bus stops adjacent to the Site on Sackville Street in both directions. The Site has a GMAL (measure of public transport accessibility) of 8, which is the highest possible score.
- 4.17. Manchester's Free Bus is a free of charge bus service linking all the main destinations across Manchester City Centre. The nearest Free Bus stop from the Site is 6 mins away at Palace Theatre. Free Bus buses are accessible by users with disabilities and run on a 10-minute daytime frequency. The Free Bus service covers most of the City Centre and provides convenient access to major activity centres in the City. In particular, it completes the City's integrated public transport service and gives the Site quick and convenient public transport connections to all mainline railway stations, principal car parks and retail centres.
- 4.18. Manchester Coach station is an 8-minute walk away from the Site, offering national and regional services at affordable prices.

Walking

- 4.19. The Site benefits from excellent pedestrian connectivity, with readily accessible transport infrastructure and a range of amenities within comfortable walking distance.
- 4.20. The Site's adjacency to academic institutions around Oxford Road is ideal for students residing at the Proposed Development. The presence of numerous green spaces, including Sackville Gardens and Vimto Park, contributes to a pleasant and healthy living environment.

Site Specific Environmental Designations

Air Quality

- 4.21. The Site is located within the Greater Manchester Air Quality Management Area (AQMA), referring to an area where air pollution levels are, or are likely to, exceed national air quality objectives. This means that the NO₂ is monitored, and the local authority has a strategy in place to manage and improve air quality in these areas.

Ecology

- 4.22. There are no Sites of Special Scientific interest or Special Areas of Conservation ('SAC') located on or immediately adjacent to the Site. The closest, the Rochdale Canal SAC designation is 5.4km to the north-east of the Site. Two Special Biological Interest ('SBI') are located within 2 km of the Site.
- 4.23. Although there are protected and notable flora and fauna and other species within Central Manchester (where the Site is located), however there are no records of such species on the Site.
- 4.24. The Site is largely hard standing the building, with small areas of overgrown vegetation which are of negligible ecological importance. As noted within the Ecology report, the Site is of negligible ecological importance for bats and no suitable bat roosting features were recorded. No evidence of other protected species have been found on the Site either.

Flood Risk and Drainage

- 4.25. According to The UK Governments Flood Map (Figure 4.2), the Site is located within Flood Zone 2 defined as having a medium probability of flooding, meaning there is between a 0.1% and 1% annual probability of river or sea flooding.
- 4.26. As with the majority of the Regional Centre, the Site is located within the Conurbation Core Critical Drainage Area, as defined in the Manchester, Salford, Trafford Strategic Flood Risk Assessment (SFRA).

Heritage

- 4.27. While the Site is not located within a Conservation Area, the Site's northern boundary lies adjacent to the Whitworth Street Conservation Area. George Street Conservation Area is located 430m to the north-west of the Site and Peter Street is located 484m to the north-west of the Site.
- 4.28. Whilst the Site does not contain any heritage assets, it is within the immediate setting of the Grade II Listed Manchester and Altrincham Railway Viaduct and Grade II Listed Buildings along Granby Row, all located to the north.
- 4.29. The Renold Building, located east of the Site, has also now been designated as a Grade II listed building by Historic England.
- 4.30. There are 101 Listed Buildings located within 500m of the Site (see Figure 4.3), with the following in the immediate vicinity in order of distance from the Site:

Table 4.1- Historic England Listed Asset List

Map No.	Location	Grade	List Entry Number
1	Granby House	II	1218253
2	Orient House	II	1200838
3	Renold Building, UMIST Campus	II	1491623
4	Institute Of Science and Technology	II	1247609
5	Lass O Gowrie Public House	II	1293175
6	Manchester House	II	1270897
7	Asia House	II*	1247432
8	Lancaster House	II*	1254887

9	India House (Including Attached Wrought Iron Gateway Linked to Lancaster House)	II*	1254836
10	Central House	II	1247389
11	Regency House with Barclays Bank	II	1254835
12	Sculptural Wall	II	1400857

Planning History

- 4.31. A search of the Site's planning history has been undertaken using MCC's Public Access system and those of relevance to the Site have been summarised below:

Table 4.2: Planning History

Reference	Description of Development	Status
F17029	Use of car park on Saturdays and Sundays for the sale of motor vehicles by the public to public	Temporarily Approved
F/AD03579	Removable painted sign boards at 1st, 2nd, and 3rd floor levels on Charles Street elevation of car park.	Approved
073558/FO/2004/C3	Change Of Use from vacant unit to B1 (office) for a temporary period of 2 years	Approved
128535/FO/2020	Installation of galvanised wire mesh panels to infill open balconies and staircases and the provision of electrically operated galvanised roller shutters to the vehicle's entrances; new anti-climb fencing installed around the plant roof; and new external doors are to be installed to staircases 001 and 004.	

The Proposed Demolition

- 4.32. The proposal is demolition of the existing building on-site containing the multi storey car park and three ancillary retail units.
- 4.33. Once demolished the cleared Site will facilitate the next phase of development at Sister, helping to realise the vision for the masterplan as a world-leading innovation district in Manchester, fostering collaboration between academia and industry while delivering a vibrant, sustainable community including over 1,500 new homes.
- 4.34. The demolition works will be supported by the appointment of traffic management installations, full height hoarding (2.4m high), full height wrapped protection scaffold to the north, east and partial west elevations. Following the implementation of scaffolding and protective installations, the building will be soft stripped and all asbestos containing material will be removed.
- 4.35. The top three floors of the multi storey car park will be demolished in a top-down, floor by floor sequence. The remaining structure is then proposed to be demolished on a structural bay-by-bay basis and the foundations removed up to a depth of 2m.
- 4.36. The whole demolition process, including the soft strip and asbestos removal, is anticipated to take circa 20 weeks. The Demolition Method Statement prepared by Elford Demolition and Remediation sets out the detailed method in more detail.

Table 4.3- Proposed Quantum of Proposed Demolition

Measurement / Detail	Proposed Development
Total Site Area	0.528 Ha
Demolition Area	0.3405 Ha

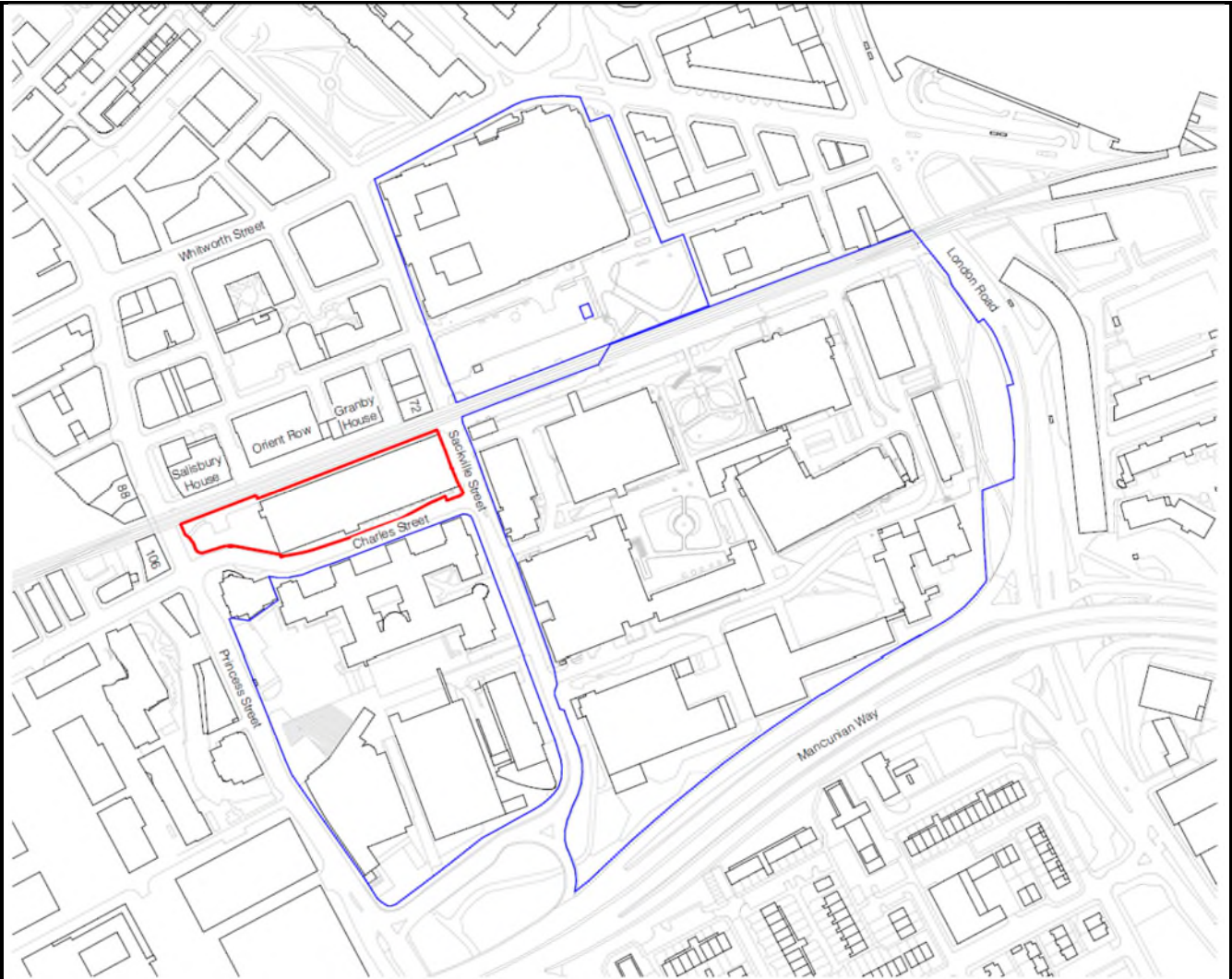


	Figure:	4.1		
	Title:	Site Plan with existing buildings and structures annotated (source: Hodder and Partners)		
	Project:	Plot H, Sister, Manchester		
	Date:	07/07/2025	Scale:	Not To Scale

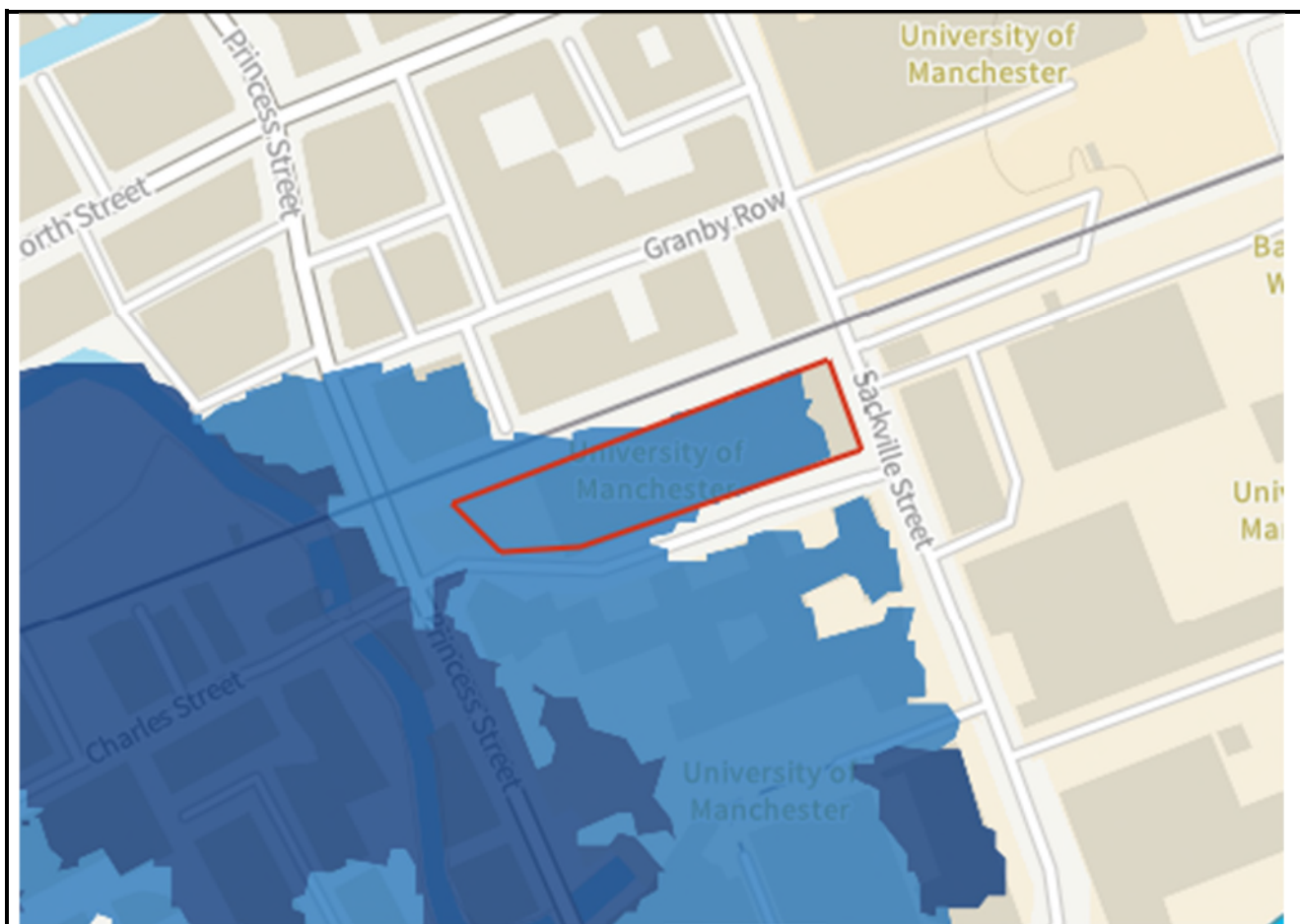


	Figure:	4.2		
	Title:	UK Government Flood Map		
	Project:	Plot H, Sister, Manchester		
	Date:	07/07/2025	Scale:	Not To Scale

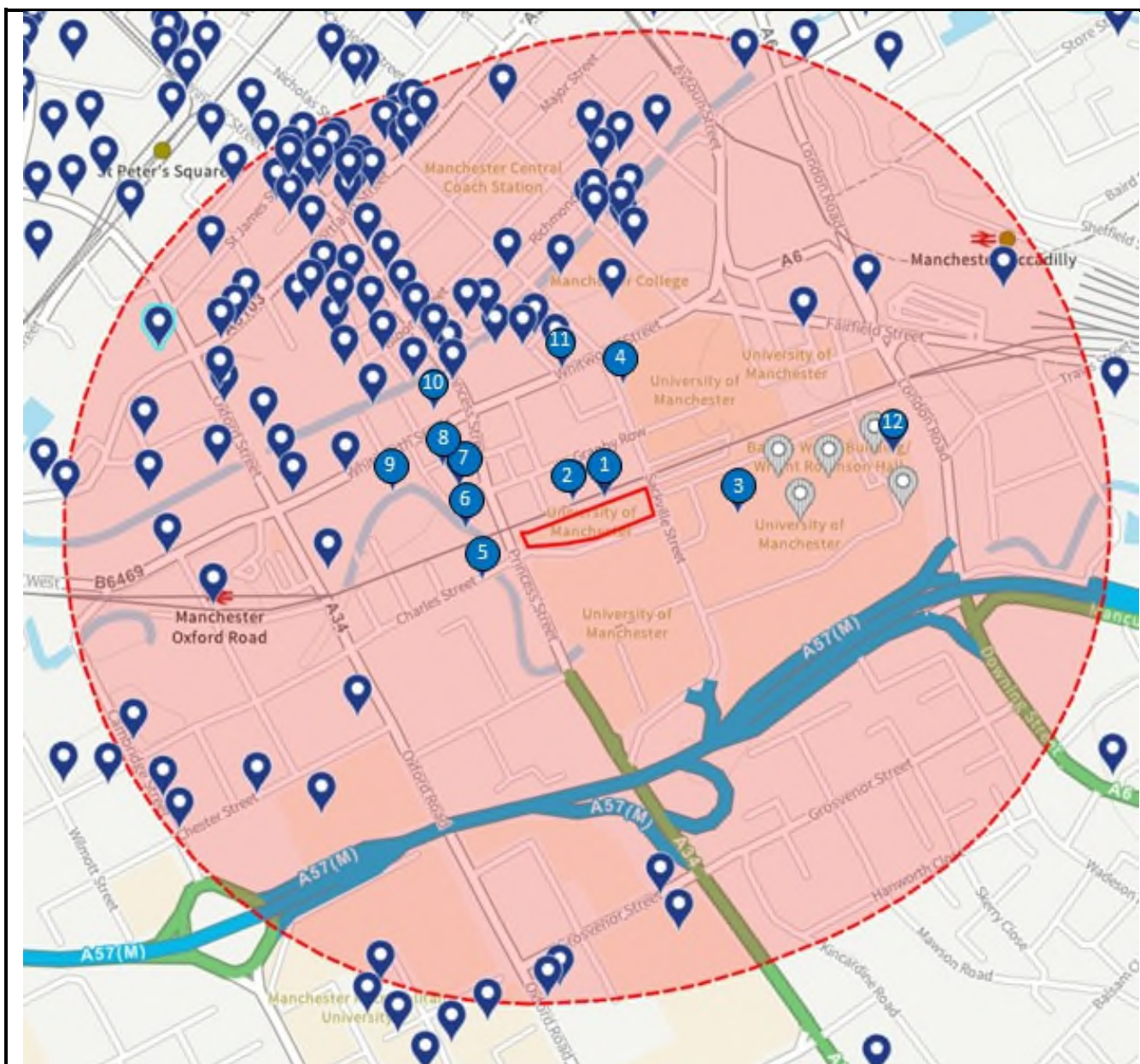


	Figure:	4.3		
	Title:	Historic England Listed Asset Map		
	Project:	Plot H, Sister, Manchester		
	Date:	07/07/2025	Scale:	Not To Scale

5. Demolition

Introduction

- 5.1. This has been prepared by RG Group / EDR and describes the proposed Demolition programme and the likely key activities that will be undertaken. Detailed consideration of potential impacts during the demolition process and any necessary mitigation measures are provided in each relevant chapter. It should be read in conjunction with appendices 5.1- 5.4 (5.1 - Site Phasing Plan, 5.2 – Logistics Plan, 5.3 – Traffic Plan, 5.4 – Programme).
- 5.2. The main aim throughout the Demolition period is to minimise the impact on the surrounding properties and roadways for the duration of the work. Close collaboration with all project teams of all projects will be maintained at all times to achieve this aim.
- 5.3. The following narrative explains this methodology and timescales envisaged at the time of the planning application. More detailed proposals will be developed prior to commencement on Site. This will include preparation of detailed plans to incorporate demolition Management, Demolition Phase Health and Safety, Environmental Management as well as Site Waste Management, Logistics and Traffic Management.

Table 5.1: EIA Chapter authors

	Lead Author	Reviewer
Name	Robert Nissen	Chris Lambourn
Company	RG Group	RG Group
Qualifications/Accreditations relevant to technical area inc. IEMA	MCIQB HNC/ONC Building Studies	BSc(Hons) MRICS
Years technical experience (in technical area)	31 Years	25 Years
Number of EIA's delivered to date	Only Contributions to 15Nr	

Programme

- 5.4. Subject to planning permission, the total Demolition programme will span a period of approximately 20 weeks incorporating the Pre-Commencement duration (c6 weeks) and main works duration (c14 weeks) Refer to Appendix 5.4. Whilst there are several points that will determine the final programme and sequencing at the Proposed Development. The target plan is to split the demolition into phases subject to Planning Permission being granted the proposed key dates and durations are shown below.

Demolition

- 5.5. Demolition includes removal of all asbestos containing materials then careful deconstruction of buildings located on Plot H namely: Charles Street Multi-Storey Car Park, retro, The Nu Beat Club and Lookey News Agent. The works are estimated to progress between November – April.
- 5.6. Demolition works will be phased to limit disruption to the site and surrounding areas. Top-down demolition to the structure adjacent to the railway bridge (Network rail asset) and then a phased approach for demolition to the remaining block down to ground floor slab. Following demolition of the buildings, works will continue with removal of the ground floor slab and basement elevations and slab along with grubbing up of all foundations and substructures, including existing services. Crushing of all hard arisings to 6F2, 6F2 is a versatile recycled material made from crushed demolition waste, including bricks, concrete, and hardcore, will take place on site, following this, all arisings from demolition will be removed from site.

Hours

- 5.7. The programme has been developed based upon normal working hours in line with Manchester City Council guidance of 0730hrs to 1800hrs Monday to Friday and 0800hrs to 1400hrs on Saturday. Outside of these hours, any works that takes place will have been agreed in advance with the Council. Access to Site will be permitted within the site hours prescribed above with noise kept to a minimum for the first hour of each shift.
- 5.8. The proximity of the neighbouring residents is noted and as such this methodology will be followed ensuring that the programme and working hours are adhered to in order to protect residential amenity.

Demolition Methodology

- 5.9. The following is a brief overview of the methodology to be adopted for the demolition of the existing building. This section also considers general logistics as well as traffic management for the movement of material for the disposal of waste.
- 5.10. To allow the safe demolition of all structures on site, various demolition methods will be adopted to allow the works to be carried out safely within a busy city centre environment. Mechanical demolition methods using conventional demolition high reach machines, excavators and attachments will be used to carry out the low- level structures where it is safe to do so, and 'top down' floor by floor methods will be adopted to remove the taller and more high-risk areas of the structures on site.
- 5.11. Top down, floor by floor demolition is the preferred method when carrying out the demolition of the structure adjacent to the Network rail viaduct, where space is limited. The building will be wrapped in a fully Mono- flexed scaffold system around its perimeter. Once erected, the working sequence will require a 4t Brokk 260 Excavator for the deconstruction of the north elevation and 'End Block' followed by mechanical demolition of the rest of the car park with a high reach excavator. At least two floors should be de-built on the North side of the car park and end block to bring the structure well below the NR viaduct top level and thus reduce risk associated with demolition near the NR running line and equipment. A requirement to install Internal propping may be directed by the appointed structural engineers. The propping will be installed in compliance of BS 5975 Temporary works Category 3. The appointed engineers will produce and issue calculations and drawings detailing the propping arrangement. Category 3 compliant checks will be undertaken and temporary works certificate issued. Prop locations shall be set out on site prior to erection and adjustments made to the dimensions to ensure the propping system is installed a per design The nominated temporary works co-ordinator (TWC) shall ensure that the props are correctly installed to the approved design, checked and maintained. Refer to Appendix 5.1.
- 5.12. During the delivery and collection of demolition plant and equipment, all loading and unloading activities will be carried out within the footprint of the site, and away from the public highway to minimise disruption to the road users and local residents. In circumstances when abnormal loads are required to site, these vehicle movements will be planned and agreed with effected parties in advance of the work.

Site Logistics

- 5.13. For the duration of the project, site offices and welfare will be located within the red line boundary. The offices and welfare are in close proximity to site and provide ample accommodation for site staff, operatives, and visitors. Access to the site will be through a secure gate to enter the site or access the welfare accommodation. Refer to Appendix 5.2.
- 5.14. Access to the Site will be controlled by Gatesman. They will not only monitor operatives' movements but also prevent unauthorized public access during and out of working hours. The main gates will be locked secure at all times with the exception of when a delivery is being made. The gates will be manned by a qualified banksman who will co-ordinate traffic, as well as ensure the road and associated pavement areas are kept clear from debris and materials. Refer to Appendix 5.3.

- 5.15. It is envisaged that demolition vehicle access will utilise a one-way delivery system for access and egress on the Site. Accessing the site via Footpath closures that will be implemented on Charles Street, Sackville Street. Pedestrians on Charles Street and Sackville Street will be diverted to the opposite side of the road
- 5.16. Material storage will be contained within the Site boundary. All supply chain members will co-ordinate their respective needs with the site gateway and deliveries team. All deliveries will need to be booked in on an online delivery system. This will help alleviate construction traffic in the surrounding area. Materials will be offloaded from the vehicle directly to the point of use wherever possible.
- 5.17. A permanent solid hoarding around the full perimeter of the Site will be erected prior to the start of the construction works proper.
- 5.18. The Site will operate a one-way system with traffic exiting in the same direction as they entered.
- 5.19. A detailed traffic plan will be agreed with the Highways Authority in advance of starting works on the site.
- 5.20. It is envisaged that the temporary site establishment and welfare space will be located within the red line boundary, please see Appendix 5.1. The welfare facilities will be suitably sized to suit the anticipated number of operatives.
- 5.21. Any temporary public road or footpath closures associated with the construction phase will be agreed with Manchester City Council highways department and relevant diversion signage will be put in place.
- 5.22. Where required, appropriate wheel and vehicle wash facilities will be in place to ensure delivery wagons leave the Site clean and tidy with regular cleaning of adjacent roads using road sweepers.
- 5.23. Loading and unloading material deliveries will occur within the site boundary unless exceptional circumstances require special measures to be instigated.
- 5.24. The Site will employ security guards as appropriate to prevent and discourage nuisance. Regular patrols take place throughout the shift. As an additional measure, CCTV will be installed to elements of the Site and compound to aid early identification of potential issues.

Demolition Scope

- 5.25. The demolition works generally comprise the following:
- Site establishment including site hoardings and site welfare
 - Soft strip and asbestos removal
 - Temporary works installation
 - Road & Footpath Closures
 - Top-down demolition of the structure adjacent to the railway bridge (NR asset).
 - Demolition of the remaining main block down to ground floor slab.
 - Demolition of the basement car park.
 - Lift Concrete slabs and foundations.
 - Crush all hard arisings to 6f2 grading.
 - Removal of demolition arisings from site.

- Clean and clear site.

Traffic Management Plan

- 5.26. It is envisaged that construction vehicles will approach site via Charles Street and egress via Charles Street during the demolition phase. Refer to Appendix 5.3.
- 5.27. A full traffic management plan will be developed to address the following issues:
- Access, egress, drop off and turning areas
 - Temporary and/or permanent alterations to local traffic routes (both vehicular and pedestrians). It is currently assumed that a one-way road closure on Charles Street is required to facilitate logistics and vehicles during the demolition phase. Shown in Appendix 5.4.
 - Additions, alterations and positions of any temporary signage, road markings or protection barriers.
 - Pedestrian access around the site and relevant protection, lighting and signage schemes.
 - Segregation of plant, materials and pedestrians on site and safe access routes between welfare and site areas.
 - There is no provision of car parking, off and on site, and public transport strategy for staff and operatives.
 - Any other measures to ensure the safe integration of pedestrians, cyclists and road users both on, off and surrounding the development.
- 5.28. In preparation of the above document, the contractor will incorporate a policy of timed and booked deliveries, off-peak deliveries and prefabrication to minimise local disruption and normal workings of the surrounding properties.
- 5.29. The Applicant will continue to consult with MCC Highways to identify opportunities to minimise any temporary highways disruption during the construction period.

Deliveries

- 5.30. Delivery routes for the major materials and items of plant will be as per the above section. Deliveries will endeavour to be delivered outside of peak traffic hours to minimise local disruption and the normal workings of the surrounding properties. Demolition traffic routes will be specified and agreed with MCC as part of a Demolition Management Plan to be prepared ahead of commencement of development. As set out above, deliveries will be undertaken via Site access and within the Site boundary.

Parking

- 5.31. Parking is available at the nearest, Euro car park Pritchard Street (2-minute walk). Site personnel will be encouraged to utilise the extensive public transport options available to them and will be asked to avoid parking in nearby residential areas.

Health & Safety

- 5.32. The project will be carried out in accordance with the Construction (Design and Management) Regulations 2015 and all other relevant legislation and guidance.
- 5.33. The Principal Contractor has not yet been Appointed. Notwithstanding, the appointed Principal Contractor will have appropriately trained management resources and procedures in place to oversee the activities of a complex, city centre construction project.
- 5.34. The Principal Contractor will produce a Construction Phase Health and Safety Plan prior to works commencing on site that will be reviewed and signed off by the client and their Principal Designer. This document will form the basis of the procedure for managing health and safety during the construction phase and will be periodically reviewed as

the work progresses. This will address, amongst other things, flood risk, control of pollution, any required oversailing licences and relevant permits / consents required to complete the works.

Site Security and Safety

- 5.35. Protecting the public from risks to their health and safety arising from the construction work is a high priority. Every care will be exercised to prevent risk to members of the public and appropriate action, including dust and noise control and the erection of perimeter fencing to a specified standard, will be taken.
- 5.36. Site securement will be achieved through a combination of secure fencing, barriers or hoarding, depending on the exact requirements and proximity to specific works. In addition, the principal contractor will be responsible for the provision of construction staff at key interfaces between the Site (and working areas) and retained accesses to public areas at key stages of demolition and construction activities.
- 5.37. Vandalism and theft of plant, equipment, materials and fuel is possible throughout the duration of the demolition. The Contractor will take appropriate action, as described in previous sections, to ensure the site is always secure from unauthorised access. As described previously, the Site will have Gateman and security.
- 5.38. The provision of CCTV would be considered if required to main site points and compound areas to assist in the prevention of unauthorised activities.

Environmental Management

- 5.39. An Environmental Plan will be developed to address and monitor the following issues on site and to the surrounding area:
- Applicable environmental legislation
 - Pollution
 - Nuisance (noise, vibration, dust, emission and light)
 - Public relations

Environmental Legislation

- 5.40. Applicable environmental legislation will be identified in a register, to ensure that appropriate systems are put in place in order to comply with the legal requirements in question.

Pollution

- 5.41. Procedures will be established to ensure the prevention of water and ground pollution relating to the following risk activities:
- Soil contamination remediation:
 - Earthworks (including piling, spoil movement and removal, and movement of contaminated soils)
 - Concrete works (including washing out concrete delivery vehicles and pumps)
 - Storage and movement of fuels, oils, chemicals and other such fluids
 - Cleaning (including plant, machinery and wheel washing)
 - De-watering of the site (if required)

Nuisance (Noise, Vibration & Dust)

Noise & Vibration

- 5.42. The principal concerns relating to the nuisances of noise and vibration come from construction activities such as demolition, excavation, cutting, breaking out and plant movements. Mitigation measures will be considered to include low noise options, noise attenuation techniques and carrying out certain activities during agreed hours of the day.
- 5.43. In order to minimise the noise, the Contractor will likely provide the following:
- EDR uses the most innovative plant with the most environmentally friendly specifications. Any plant, machinery and vehicles will be switched off when not in use, as this minimises unnecessary air pollution.
 - All current legislation, noise abatement orders, guidance notes and codes of practice will be consulted and strictly adhered to.
 - Where necessary noise levels will be monitored and noise assessments carried out.
 - Noisy plant and equipment will be located to provide minimum disturbance.
 - Plant, wherever practicable, will be electrically powered.
 - All plant and machinery will be fitted with efficient exhausts, silencers and mufflers and maintained in good condition.
 - All compressors used on site shall have 'sound reduced' units fitted with acoustic linings or enclosures and all ancillary pneumatic percussive tools will be fitted with mufflers or silencers of the type recommended by the manufacturer.
 - Acoustic screens / barriers will be erected around excessively noisy plant.
 - In order to minimise the vibration, the Contractor will likely provide the following:
 - If suitable, drop mats and machine pads can be positioned to reduce plant, vehicle and process vibration.
 - Regular resident liaison to confirm that vibration levels are acceptable and not impacting on the environment.
 - Use of modern intrinsically compliant plant and equipment ensuring vibration levels are minimised.
 - Utilisation of the right machine for the right job ensuring that plant is not under-powered to carry out the task and hence, generating more vibration than necessary. Also maintaining modern equipment with intrinsic vibration reduction designed in.

Dust

- 5.44. The principal concerns relating to air quality and emissions from construction activities are in the form of dust and fumes. The degree of dust deposition is usually dependent on the nature of the works. Increased levels of dust are most likely to occur during site activities related to demolition and moving construction traffic.
- 5.45. In order to minimise the dust and fumes, the Contractor will likely provide the following:
- Providing a hard surface where vehicle movements occur
 - Control measures and dust suppression techniques.
 - Where dust is observed this will be managed with a review of the work methods and the implementation of dust suppression such as screening, covering over or dampening down. Emissions will be monitored and recorded at

various positions along the boundary of the site using static dust monitoring devices e.g., frisbees, this will allow us to assess the potential impacts from our activities beyond the site boundary.

- Minimising stock piling and positioning in a manner that reduces risk of dust arising through wind action.
- Measures such as screening and covering.
- Installation of appropriate wheel and body wash facilities.
- Keeping of adjacent roads and pavements clean.
- Ensure plant is turned off and not left running when not in use.
- Selection of electrically powered plant where possible in lieu of diesel or petrol plant.
- Off-site manufacture of façade panels.

Public Relations

- 5.46. To align with the strategic regeneration framework objectives, the Contractor will ensure that regular contact is made with local residents and community groups to ensure they are kept up to date with general progress on the Site. This is especially important for major work elements such as main demolition due to the close proximity of adjacent residential schemes. The Contractor will display a contact number on hoardings which will be operational 24/7.
- 5.47. The Contractor will meet regularly to discuss upcoming significant activities on Site which would impact on traffic management and cause any other significant nuisance works with a view to reducing the effects to a minimum.
- 5.48. The Contractor will be obliged to follow the Considerate Constructor's Scheme.

Waste Management Strategy

- 5.49. In line with the "Site Waste Management Plan Regulations 2013", a Site Waste Management Plan (SWMP) will be developed by the principal contractor and agreed with Manchester City Council.

Operational Waste Removal

- 5.50. EDR are experienced in the compilation of Site Waste Management Plans (SWMP) and the NFDC Demolition & Refurbishment Information Data Sheet Programme (DRIDS), which ensures high standards of material handling, re-use, recycling, remanufacture, reduction and disposal on a project-by-project basis. In line with the Sustainable demolition strategy and the Site Waste Management Regulations 2008, EDR Ltd shall implement a SWMP for the project. Its full and proper implementation by the Designers, EDR Ltd and Supply Chain will bring benefits to all parties involved. These benefits include but are not limited to:
- Full attention to the waste minimisation hierarchy – eliminate, reduce, reuse, recycle & dispose.
 - Environmental benefits such as reduction in vehicular movements to and from site.
 - Cost benefits to both the Client and EDR Ltd.
 - Meeting the requirements of EDR Ltd quality & environmental systems.
 - Greater control over risks in relation to materials and waste on site, good housekeeping assists with safety.
 - A demonstration of waste minimisation and compliance with relevant legislation including duty of care and statutory licences.
 - EDR Ltd responsibilities throughout the duration of the Project:

- A waste champion is appointed for the project to drive the waste minimisation culture on the project.
- All waste removed from the site is dealt with in accordance with the waste Duty of Care in Section 34 of the Environmental Protection Act 1990, and the Environmental Protection (Duty of Care) Regulations 1991, that materials are handled efficiently to minimise wastage and that all waste arising from site will be managed appropriately.
- All different type of wastes & waste streams likely to be produced are identified and shall arrange for appropriate storage and disposal measures in line with Duty of Care.
- An estimation of quantities involved for each proposed waste stream is provided.
- Targets and measurement criteria for the waste streams are set at the start of the project.
- A record will be kept of who removes the waste, what type of waste are removed, and where the waste goes off site.
- Any waste produced during the construction process is either re-used, recycled or disposed of correctly.
- The SWMP will be monitored on a regular basis to ensure that the plan reflects the progress of the works.
- The Client is informed upon the progress of the SWMP at regular meetings.
- The SWMP is reviewed upon completion of the project to learn any lessons where things could be done better, regarding amount of recycling undertaken and costs involved.
- The SWMP is kept on file for a period of two years after practical completion.
- All personnel will be made aware of the relevant requirements of the SWMP at the initial site induction and in subsequent toolbox talks. The SWMP will be made available in the site office for inspection at any time.

6. Townscape & Visual Impact

Introduction

6.1. This chapter of the ES has been prepared by Layer.studio to assess the likely townscape and visual impacts of The Proposed Demolition upon The Site and surrounding area. This chapter also describes the methods used to assess these impacts, the existing baseline conditions, the proposed mitigation measures required to prevent, reduce or offset any significant negative impacts and the likely residual impacts after these methods have been adopted.

6.2. This Chapter is accompanied by the following appendices:

- 6.1 Methodology and Criteria Tables
- 6.2 Visual Baseline and Assessment
- 6.3 Townscape Baseline and Assessment

6.3. The authors of this chapter having the following qualifications and experience.

Table 6.1: EIA Chapter authors

	Lead Author	Reviewer
Name	Cath Lester	Matt Warner
Company	Layer.studio	Layer.studio
Qualifications/Accreditations relevant to technical area incl. IEMA	BA (Hons), PgDip Landscape Architecture. Chartered Member of the Landscape Institute	BA (Hons), PgDip Landscape Architecture
Years technical experience (in technical area)	20+ years	20+ years
Number of EIA's delivered to date	30+ TVIA/LVIAs, of which 5% were part of EIA	10+

Assumptions and Limitations

6.4. Photos are taken in July 2025 from publicly accessible locations.

6.5. Viewpoints are representative. They have been selected to represent the experience of different types of visual receptor as documenting every viewpoint in a built up urban area is unfeasible.

6.6. Photography is taken in summer when trees are in leaf. The assessment commentary therefore describes how views may change when vegetation loses foliage during winter.

6.7. As noted in the "Guidance" section below, the assessment follows industry best practice guidance. Where subjective judgments are required, they are discussed between the author and other qualified professionals to cross check approach and outcome. This prevents working in isolation and makes for well-considered, robust reporting.

6.8. Scenario 3 is assessed using output from VuCity whereby the existing multi storey car park is removed from the digital model, therefore enabling an understanding of magnitude of change against baseline photos. This approach is appropriate and proportionate to the type and scale of development.

6.9. Having completed demolition operations, The Site will be hoarded off and existing pedestrians routes retained.

- 6.10. It is anticipated that once cleared, The Site will be subject to further development expected to come forward later in 2025 and therefore a temporary/meanwhile use for the public realm is not proposed.

Relevant Legislation, Policy and Guidance

- 6.11. Relevant legislation, policies and guidance have been reviewed to understand the context for development and establish the baseline townscape. An understanding of policy requirements supports the iterative design process and can feed into the evolution of strategies for mitigation, if required. Extracts from key documents are listed below along with a reflection on the relevance to this application.

European

The European Landscape Convention

- 6.12. The European Landscape Convention provides a foundation for closer co-operation on landscape issues across Europe and was ratified in the UK on the 21st November 2006, and became binding on 1st March 2007. The convention identifies the need to recognise landscape in law; to develop and promote landscape policies dedicated to the protection, management and creation of landscapes; and to establish procedures for the participation of the general public and other stakeholders in the evolution and implementation of landscape policies. It also encourages the integration of landscape into all relevant areas of policy, including cultural, economic and social policies.
- 6.13. The ELC defines landscape as ‘an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors’. It recognises that landscape has important cultural, ecological, environmental and social dimensions and is a key element of achieving sustainable development. In paragraph 2.5 GLVIA3 notes that the definition above applies to “the landscape of villages, towns and cities (townscapes)”.

National

National Planning Policy Framework (2024)

- 6.14. The National Planning Policy Framework sets out the Government’s planning policies for England and how these should be applied. In ensuring the planning system contributes to achieving sustainable development paragraph 9 of the Framework states that “Planning policies and decisions should play an active role in guiding development towards sustainable solutions but in doing so should take local circumstances into account, to reflect the character, needs and opportunities of each area”.
- 6.15. Section 8 Promoting healthy and safe communities, paragraph 96 states that planning policies and decisions should ensure that developments should aim to achieve healthy, inclusive and safe places which “promote social interaction” and “are safe and accessible”.
- 1.1. Section 12 paragraph 137 refers to the need to consider “design quality” throughout the evolution and assessment of proposals and in paragraph 139 states that “Development that is not well designed should be refused, especially where it fails to reflect local design policies and government guidance on design”...”. In addition paragraph 132 states that plans should “set out a clear design vision and expectations.”
- 6.16. Furthermore, Section 12 paragraph 136 highlights the important contribution of trees “to the character and quality of urban environments, and can also help to mitigate and adapt to climate change”

National Planning Practice Guidance

- 6.17. Planning Practice Guidance (PPG) is provided by the Government under a number of categories including Design, Historic Environment, Light Pollution, Natural Environment and EIA. The National Design Guide sets out 10 characteristics of good design namely: context; identity; built form; movement; nature; public spaces; uses; homes and building; resources; and lifespan.

Regional

Places for Everyone (2024)

- 6.18. Places for Everyone is a long-term plan of nine Greater Manchester districts (Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan) for jobs, new homes, and sustainable growth. It has been published by the GMCA on behalf of the nine districts. Policies of relevance are as follows:
- 6.19. Policy JP-Strat2: City Centre, references that "The City Centre will continue to provide the primary focus for business, retail, leisure, culture and tourism activity in Greater Manchester, but the increasingly important residential role of the City Centre will be expanded. Development will generally be high density [...] Improvements in the public realm, walking and cycling facilities, and green infrastructure will help to enhance the local character and environmental quality of the City Centre"
- 6.20. Policy JP-S1: Sustainable Development, notes that "development should aim to maximise its economic, social and environmental benefits simultaneously, minimise its adverse impacts, utilise sustainable construction techniques and actively seek opportunities to secure net gains across each of the different objectives".
- 6.21. Policy JP-S5: Clean Air, states that streets should be designed to "avoid trapping air pollution at ground level, including through the appropriate location and scale of buildings and trees".
- 6.22. Policy JP-G6: Urban Green Space, outlines the value of urban green spaces and infrastructure. "Existing urban green space will be protected and enhanced in balance with other considerations"
- 6.23. Policy JP-P1 Sustainable Places, promotes the aim to become one of the most liveable city regions in the world. The policy notes that places should be "visually stimulating, creating interesting and imaginative environments which raise the human spirit through the use of green space, public art and quality design", "socially inclusive", "resilient", "adaptable", "durable", "resource-efficient", "safe", "supported by critical infrastructure", "functional and convenient", "incorporating [of] inclusive design", "legible", "easy to move around for those of all mobility levels", "well-connected to other places", "comfortable and inviting", "incorporating [of] high quality and well managed green infrastructure and quality public realm", and "well-served by local shops, services and amenities".
- 6.24. Policy JP-P2 Heritage highlights the need to conserve, sustain and enhance the historic environment and promotes interpretation of heritage assets as beneficial to public health and sense of place.
- 6.25. Policy JP-C8: Transport Requirements of New Development, states that new development will be required to "be located and designed to enable and encourage walking, cycling and public transport use, to reduce the negative effects of car dependency, and help deliver high quality, attractive, liveable and sustainable environments", "ensuring that the layout, design and landscaping of development priorities the provision of safe, secure and attractive access to local services and facilities for pedestrians, cyclists and people with a disability".

Local

Manchester City Council Core Strategy (2024)

- 6.26. Manchester's Core Strategy was adopted on the 11 July 2012 and is the key document in the Manchester Local Plan. It was updated in March 2024, after the Places for Everyone joint development plan was adopted. It sets out the long-term strategic policies for Manchester's future development and will form the framework that planning applications will be assessed against. Relevant policies are:
- SP1 Spatial Principles
 - CC 9 Design and Heritage
 - CC 10 A Place for Everyone
 - EN1 Design Principles and Strategic Character Areas
 - EN2 Tall Buildings
 - EN3 Heritage

- EN8 Adaption to Climate Change
- EN9 Green Infrastructure

Guide to Development in Manchester – Supplementary Planning Document and Planning Guidance (SPD)

- 6.27. The Supplementary Planning Document brings together development principles that assist with the creation of Manchester as the greenest, most inclusive, most accessible city in the UK.
- 6.28. The SPDs aims to ensure that developments taking place throughout Manchester enhance and contribute to this unique identity and that Manchester's many neighbourhoods retain and develop their own sense of place.
- 6.29. Guidance, as outlined in section 2.2, sits under the following seven key principles, which together create successful places:
- Character and Context: A place with its own identity
 - Continuity and Enclosure: A place where public and private spaces are clearly distinguished
 - Legibility: A place that has a clear image and is easy to understand
 - Ease of Movement: A place that is easy to get to and move through
 - Quality of the Public Realm: A place with attractive and successful public areas
 - Diversity: A place with variety and choice
 - Adaptability: A place that can accommodate change and innovation
- 6.30. UDP Part 1 Policy E3.8, which is referred to in section 2.6, states that new developments should acknowledge the character of the 35 Conservation Areas in the City and will only be acceptable if they preserve or enhance the special nature of these varied parts of the City.
- 6.31. Section 2.36 references UDP Part 1 Policies E2.6 which states that the City Council wishes to prevent the loss of existing trees. Proposed development should retain mature trees and hedges wherever possible and where this is not possible, an appropriate replanting scheme should be agreed with Development Control Case Officers.
- 6.32. Section 11.45 notes that new development in conservation areas should not be designed in isolation and must be informed by wider context with local streets and spaces, building traditions, materials and ecology.
- 6.33. Importance is placed on the relationship between new and existing buildings (particularly historic) in section 12.7, with older buildings contributing to delivering a sense of place.

ID Manchester Strategic Regeneration Framework (2023)

- 6.34. The SRF sets out the ambition for a world-class innovation district with the aim to attract head-quarter anchor tenants in buildings that act as key gateways into Sister.
- 6.35. Proposals outlined in the SRF align with the outcomes of the Manchester Strategy including:
- A thriving and sustainable city: supporting a diverse and distinctive economy that creates jobs and opportunities
 - A highly skilled city: world class and home-grown talent sustaining the city's economic success
 - A progressive and equitable city: making a positive contribution by unlocking the potential of our communities
 - A liveable and low carbon city: a destination of choice to live, visit, work
 - A connected city: world class infrastructure and connectivity to drive growth

Assessment Methodology and Significance Criteria

Scenarios Tested

6.36. The following scenarios are tested in this report.

Table 6.2: Scenarios Tested

Scenario 1	Baseline Conditions
Scenario 2	Baseline + Demolition
Scenario 3	Baseline + Demolition + Operation

The Study Area

6.37. The study area has been derived through data analysis involving:

- Review of existing townscape character studies and policy;
- Review of planning designations around The Site;
- Generation of a Zone of Theoretical Visibility (ZTV) using VUCITY software;
- Identification of transit corridors, cycling routes and public rights of way;
- Exploration into urban grain, land use and building heights.

6.38. A study area of 500m measured from the centre of The Site is deemed to be appropriate for this TVIA and is shown in the appendices. This decision is based on Layer.studio's experience writing TVIAs and their knowledge of Manchester. In accordance with guidance in GLVIA3 paragraph 5.2, the study area includes *“the site itself and the full extent of the wider landscape around it which the proposed development may influence in a significant manner.”*

Source of Effect

6.39. The Proposed Demolition sees the demolition of an existing building that could open up local views towards and across The Site. This may have an impact on visual receptors (people) who observe the change as a resident, person at work or visitor to the city as a pedestrian, cyclist or motorist.

6.40. Hoarding/fencing used to secure The Site could impact townscape character.

Significance Criteria

6.41. As recognised by GLVIA3, the effects of the Proposed Demolition have been examined in terms of:

- Effects on the townscape: Meaning the assessment of the potential effects of development upon the physical nature and features of the townscape as well as townscape character and quality; and
- Effects on visual amenity: Examined through a selection of representative viewpoints to demonstrate the experience of different types of visual receptor.

6.42. The assessment provides a series of tables setting out the criteria and definitions used to assist in assessing the landscape and visual effects and to make the process as transparent as possible. These can be found in Appendix 6.1 but for ease of reference, the Significance of Townscape or Visual Effects Matrix is extracted and included below as Table 6.3:

Table 6.3: Significance of Townscape or Visual Effects Matrix

		Sensitivity		
		Low	Medium	High
Magnitude	Negligible	Negligible/minor	Minor	Minor/moderate
	Minor	Minor	Minor/moderate	Moderate
	Moderate	Minor/moderate	Moderate	Moderate/major
	High	Moderate	Moderate/major	Major
	Substantial	Moderate/major	Major	Substantial

6.43. Ultimately, however, the assessment relies on professional judgement and the tables and matrices utilised are a tool to assist in this process. Through experience, Layer.studio have determined that the author should not consider the effects of the Proposed Demolition in isolation based solely on their own judgement, but instead debate the extent of effects as part of an open forum with colleagues. This promotes well rounded decision making in terms of assessing the impact on townscape character and visual receptors.

6.44. The main objectives of the TVIA are to:

- Identify and describe the current townscape of the study area;
- Determine the sensitivity of the townscape and identify potential effects;
- Identify potential visual receptors to the Proposed Demolition;
- Evaluate the degree of change and the sensitivity to the type of changes proposed;
- Identify likely adverse or beneficial townscape and visual effects;
- Identify likely significant townscape and visual effects distinguishing between those that are temporary or permanent, short, medium or long term;
- Consider how any adverse effects may be mitigated; and
- Consider any remaining residual effects

6.45. To achieve these objectives, the assessment is undertaken in three key stages consisting of:

- A thorough desktop study covering an overview of the relevant planning policy context from European, national to local level, plus a more detailed review of the topography and surrounding features to determine the potential visibility of the Proposed Demolition. The establishment of baseline townscape and visual conditions including any changes likely to occur independently of the Proposed Demolition, as well as determining the value attached to the different resources.
- Initial desktop findings are then tested in the field to further understand the receiving townscape and to reassess the effect upon visual receptors from viewpoints.
- The assessment is then undertaken to determine the potential townscape and visual effects of the Proposed Demolition. The assessment considers impacts during demolition and on completion, once operational. Residual effects consider the effects post completion with mitigation in place.

6.46. A comprehensive methodology is set out within Appendix 6.1.

Baseline Conditions

- 6.47. Please refer to Appendix 6.2 and 6.3 for a description of receptors that could be impacted by the Proposed Demolition. Judgements on value and susceptibility are also noted.

Townscape (refer to Appendix 6.3)

- 6.48. Receptors are:
- Urban Grain (refer to Appendix 6.3, figure 1.3)
 - Land Use (refer to Appendix 6.3, figure 1.4)
 - Building Heights (refer to Appendix 6.3, figure 1.5)
 - Public Realm and Street Scape (refer to Appendix 6.3, figure 1.2 & 1.3)
 - Site Character (refer to Appendix 6.3, figure 1.1)

Visual Amenity (refer to Appendix 6.2)

- 6.49. Given its city centre location, many people pass by and through The Site and experience a transient view of Plot H. The Proposed Demolition is also located in proximity to a number of listed buildings and structures frequently visited by visitors. Receptors subject to this reporting are:

1. Granby Row at Orient House
2. Granby Row at Granby House
3. Vimto Park
4. Altrincham Street
5. Sackville Street
6. Charles Street at Lass O'Gowrie pub

Identification and Evaluation of Likely Significant Effects

- 6.50. A summary of effects is provided below with detailed commentary provided in Appendix 6.2 and 6.3.

Demolition Phase

- 6.51. The Proposed Demolition will include the following activities that could have an impact on townscape and visual receptors that were identified in the previous section:
- Site clearance including demolition of the multi storey car park and adjoining buildings
 - Erection of site hoardings to The Site perimeter
 - Changes to ground level public realm
 - The coming and going of construction traffic
 - Lighting to enable works to continue after dark
- 6.52. Potential visual effects are outlined in Appendix 6.2 and townscape effects detailed in Appendix 6.3. The assessment is also summarised in Table 2 at the end of this section. Key findings are as described below:
- 6.53. Demolition phase townscape impacts are of minor significance and neutral effect. Existing structures will be demolished and the site cleared meaning that building height reduces and urban grain is temporarily fragmented in

advance of the Sister Masterplan being realised. The Site will be secured by perimeter hoardings and aligned so as to not disrupt established routes for pedestrians and motorists. Impact on the neighbouring Whitworth Street Conservation Area will be limited due to the physical presence of the railway viaduct and the low rise nature of proposed works.

- 6.54. At worst, the effect on visual receptors is minor negative as there will be a degree of disruption to views. This is a temporary effect.

Operational Phase

- 6.55. On completion of the demolition phase, the following may have an impact on townscape and visual receptors:
- A vacant site
 - Hoarding to The Site perimeter
- 6.56. Potential visual effects are outlined in Appendix 6.2 and townscape effects detailed in Appendix 6.3. The assessment is summarised in Table 2 at the end of this section. Key findings are described below.
- 6.57. Once demolition has concluded, The Site will be cleared and secured and hoarding fencing retained. Plot H will be left as a vacant site until development guided by the Sister Masterplan can be implemented. There will be a short term gap in urban grain and an openness created by the flattening of a 4-5 storey building however, the poor quality and inactive facades that fronted Sackville Street and Charles Street will have been removed which is seen as a positive change.
- 6.58. Impact on visual receptors will be localised and in the instance of public viewpoints, receptors will experience a transient view of The Site. From locations to the north of The Site (Granby Row and Vimto Park), effects will be limited because the railway viaduct and mature trees provide a good degree of screening.

Table 6.4: Summary Table

Townscape					
Receptor	Scenario 1: Baseline			Scenario 2: Demolition	Scenario 3: Operation
	Value	Susceptibility	Sensitivity	Magnitude Significance Nature	Magnitude Significance Nature
Urban grain	Low	Low	Low	Minor Minor Neutral	Minor Minor Neutral
Land use	Low	Low	Low	Minor Minor Neutral	Minor Minor Neutral
Building height	Low	Low	Low	Minor Minor Neutral	Minor Minor Neutral
Public realm & streetscape	Low	Low	Low	Minor Minor Neutral	Minor Minor Neutral
Site character	Medium	Low	Low/Medium	Minor Minor Neutral	Minor Minor Neutral
Visual					
Receptor	Scenario 1: Baseline			Scenario 2: Demolition	Scenario 3: Operation
	Value	Susceptibility	Sensitivity	Magnitude Significance Nature	Magnitude Significance Nature
Viewpoint 1) Granby Row at Orient House	High	Low	Medium	Negligible Minor Negative	Negligible Minor Neutral
Viewpoint 2) Granby Row at Granby House	High	Low	Medium	Negligible Minor Negative	Negligible Minor Neutral
Viewpoint 3) Vimto Park	High	Low	Medium	Negligible Minor Neutral	Negligible Minor Neutral

Viewpoint 4) Altrincham Street	Medium	Low	Low/Medium	Minor Minor Negative	Minor Minor Neutral
Viewpoint 5) Sackville Street	Low	Low	Low	Minor Minor Negative	Minor Minor Positive
Viewpoint 6) Charles Street at Lass O’Gowrie pub	Low	Low	Low	Minor Minor Negative	Minor Minor Positive

Mitigation Measures

Demolition Phase

6.59. In advance of a demolition phase management plan, it is expected that the following operations and activities will be:

- Solid site hoarding will screen the workings of a construction site from view.
- Lighting will be strategically placed to minimise "spill" towards sensitive receptors
- Working hours will be limited to a timeframe agreed in advance of commencement on site.

Operational Phase

6.60. Once demolition activity has ceased, The Site will be left vacant and secured by solid hoarding to the perimeter

Residual Effects

6.61. As required by the EIA Regulations (2017), “moderate or above” are deemed to be significant. There are no receptors that will experience this degree of impact.

Monitoring

6.62. Not required

Reference List

- Guidelines for Landscape and Visual Impact Assessment, third edition, Landscape Institute and the Institute for Environmental Management and assessment, 2013.
- Technical Advice Note 06/19 Visual Representation of Development Proposals, The Landscape Institute.
- Technical Advice Note 05/17 Townscape Character Assessment, The Landscape Institute.

7. Air Quality

Introduction

- 7.1. This Chapter of the ES has been prepared by Buro Happold and assesses the likely significant air quality impacts associated with the construction phase of the Proposed Demolition and the surrounding area. This Chapter also describes the methods used to assess these effects, the existing baseline conditions, the proposed mitigation measures required to prevent, reduce or offset any significant negative effect associated with demolition activities and the likely residual effects after these methods have been adopted. For the purpose of this assessment, the construction phase refers to the impact of demolition activities only.
- 7.2. The authors of this Chapter have the following qualifications and experience as shown in Table 7.1.

Table 7.1 Technical competence of chapter authors

	Lead Author	Reviewer
Name	Rachael Harrison	Kathryn Woolley
Company	Buro Happold	Buro Happold
Qualifications/Accreditations relevant to technical area inly. IEMA	BSc MIAQM	BSc MIAQM
Years technical experience (in technical area)	7	11
Number of EIA's delivered to date	30	Over 100

Assumptions and Limitations

- 7.3. Potential effects during the Construction (demolition) Phase are dependent on a number of factors including weather conditions during specific construction activities, therefore the IAQM methodology uses a risk based approach to identify appropriate mitigation measures to be implemented during the construction phase. This is assumed to be implemented through appropriate measures such as a Construction Environmental Management Plan (CEMP) or equivalent
- 7.4. There is always some uncertainty regarding the prediction of air quality. This is associated with both the difficulty in simulating mathematically the complex atmospheric processes that affect pollutant concentrations and the uncertainties in the input/prediction data. However, the professional judgement and experience of the consultants preparing this Air Quality ES Chapter have been used, and the method for assessing air quality agreed to produce a robust assessment.

Relevant Legislation, Policy and Guidance

Legislation

- 7.5. This section appraises the current legislation used to inform the Air Quality Assessment;
- Air Quality Standards Regulations 2010 (HM Government, 2010); and
 - The Environment Act 1995, amended 2021.
 - Environmental Targets (Fine Particulate Matter) (England) Regulations 2023
- 7.6. Full details of relevant legislation are provided within Appendix 7.1

Air Quality Objectives

- 7.7. This air quality assessment has been conducted to assess the likely air quality effects of the Proposed Demolition, based on the extent to which it complies with the UK air quality objectives (AQO). The air quality objectives relevant to this assessment are presented in Table 7.2. The air quality objectives are numerically consistent with the 2008 EU limit values detailed within the Air Quality Standards Regulations (HM Government, 2000), however, differ in terms of compliance dates, locations where the limit values apply, and the legal responsibility for ensuring compliance.

Table 7.2 National Air Quality Objectives relevant to the assessment

Pollutant	Concentration ($\mu\text{g}/\text{m}^3$)	Averaging Period	Number of allowable exceedances per calendar year
Nitrogen dioxide (NO_2)	40	Annual mean	N/A
	200	Hourly mean	18
Particulates <10 μm in diameter (PM_{10})	40	Annual mean	N/A
	50	Daily mean	35
Particulates <2.5 μm in diameter ($\text{PM}_{2.5}$)	20	Annual mean	N/A

- 7.8. The Environment Act was amended in 2021, requiring the government to set new targets for fine particulate matter ($\text{PM}_{2.5}$). The subsequent Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 (HM Government, 2023) set the following targets:
- Annual mean $\text{PM}_{2.5}$ concentration of 10 $\mu\text{g}/\text{m}^3$ by 2040; and
 - At least a 35% reduction in population exposure of $\text{PM}_{2.5}$ by the end of 2040 (compared to base year of 2018).
- 7.9. 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, 2023) sets the following interim target for $\text{PM}_{2.5}$:
- Annual mean $\text{PM}_{2.5}$ concentration of 12 $\mu\text{g}/\text{m}^3$ by 2028; and
 - At least a 22% reduction in population exposure of $\text{PM}_{2.5}$ by the end of 2028.
- 7.10. The $\text{PM}_{2.5}$ Targets: Interim Guidance was published in 2024 (Department for Environment Food & Rural Affairs, 2024) and outlines some actions to be taken by applicants and local authorities in addressing the new $\text{PM}_{2.5}$ target. Air quality assessment reports would need to include evidence of identifying key pollution sources within their schemes and proof of actions taken to minimise $\text{PM}_{2.5}$ emissions.
- 7.11. This report outlines qualitative actions taken to address the interim guidance in Appendix 7.1.

Policy

National Planning Policy

- 7.12. 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.
- 7.13. With particular regard to air quality management, Section 9 of the NPPF advises that the environmental impact of transport and traffic should be identified and assessed, while 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.
- 7.14. 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, such as through traffic and travel management, and green infrastructure provision and enhancement. As far as possible, these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. 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.

Local

7.15. The following local policy has been used to inform this Air Quality ES chapter:

- Manchester Core Strategy (MCC, 2012);
- Addendum to Manchester Core Strategy (MCC, 2024)

7.16. Full details of relevant policy are provided within Appendix 7.1

Guidance

National Guidance

7.17. Planning Practice Guidance (PPG) (MHCLG, 2019) provides guiding principles on how the planning process can consider the impact of developments (including demolition) on air quality. The guidance outlines when air quality considerations could be relevant to the development management process. Full details of the PPG are outlined within Appendix 7.1.

7.18. The following national guidance documents have also been used to inform the Air Quality ES chapter:

- IAQM land-use planning & development control: planning for air quality (IAQM, 2017);
- IAQM Guidance on the assessment of dust from demolition and construction (IAQM, 2024);
- Defra Local Air Quality Management Technical Guidance ('TG22') (Defra, 2022); and
- PM_{2.5} Interim Targets Guidance Department for Environment Food & Rural Affairs, 2024).

Local and Regional Guidance

7.19. The following regional and local guidance has been used to inform this ES chapter:

- MCC Air Quality and Planning Technical Guidance (MCC, 2022);
- The Greater Manchester Strategy 2021-2027 (GMCA, 2021);
- GMCA 5-year Environment Plan 2025-2030 (GMCA, 2024);
- GMCA Air Quality Action Plan (GMCA / TfGM, 2016); and
- GM Clean Air Plan (GMCA, 2023)

7.20. Full details of relevant national and local guidance are provided within Appendix 7.1.

Assessment Methodology and Significance Criteria

Scenarios Tested

7.21. The following scenarios have been assessed for the purposes of this ES Chapter:

- 2023 Baseline Scenario: Establish existing baseline conditions;
- 2025 peak construction year Do Minimum ('DM'): future baseline traffic flows for the peak construction year, with cumulative developments only;

- 2025 peak construction year Do Something ('DS'): future baseline traffic flows for the peak construction year, with cumulative developments and traffic flows associated with the Proposed Demolition.

7.22. 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 (IAQM, 2017).

The Study Area

7.23. The study area for this assessment includes the Site and the area that can potentially experience air quality impacts from the construction (demolition) phase of the Proposed Demolition.

7.24. The study area has been determined based on the scale of the proposed demolition activities at the Site (receptors within 250m from site boundary). The study area has also been determined based on potential air quality effects from any road links on which there is an increase in traffic volume resulting from the Proposed Demolition that exceeds the criteria outlined in IAQM/EPUK guidance on land-use planning and development control (IAQM, 2017) (human receptors within 50m from construction routes, up to 250m from site access).

7.25. Worst-case existing sensitive receptors within 250 m of site boundary have been identified and the high sensitive receptors areas (Residential) and medium sensitivity (higher educational, commercial) receptors have been identified within the surrounding site context. For the purpose for this assessment, when assessing the overall sensitivity of receptors there is no distinction in the sensitivity of different human receptors to air quality and all existing sensitive receptors are considered high sensitivity. The Study Area and existing site context is shown in Figure 7.5 within Appendix 7.3.

Surveys and Data Sources

7.26. This Chapter is accompanied by the following technical appendices:

- Appendix 7.1 - Air Quality Legislation, Policy, and Guidance.
- Appendix 7.2 – Construction Dust Risk Methodology and Mitigation Measures.
- Appendix 7.3 – Air Quality Figures.

7.27. A baseline air quality review has been undertaken to determine the existing air quality in the vicinity of the Site. This baseline study has been undertaken using the following sources:

- Air quality data for MCC and GMCA, including a review of the most recent MCC air quality annual status report and Clean Air Plan monitoring data (GMCA, 2024);
- Background pollution maps from Defra's Local Air Quality Management (LAQM) website (Defra, 2024)
- Environment Agency Pollution Inventory (Environmental Agency, 2024); and
- Aerial photography from Google Maps (Google, 2024).

Source of Effect

- The source of construction dust impacts on dust soiling and human health effects during the demolition activities of the Proposed Demolition has been assessed in line with the IAQM guidance on the assessment of dust from demolition and construction (IAQM, 2024) which recommends that significance criteria are only assigned to the identified risk of dust impacts occurring from a construction activity with appropriate mitigation measures in place. A construction dust risk assessment (demolition phase only) has been carried out to inform the appropriate mitigation measures.
- Emissions from non-road mobile machinery (NRMM) vehicle exhausts during the demolition activities in line with the IAQM guidance.
- The emissions from vehicles associated with the Proposed Demolition during the demolition activities in line with the EPUK/IAQM guidance.

Significance Criteria

Effects of emissions generated by demolition dust

- 7.28. For the assessment of the impact of construction (demolition) dust on dust soiling and human health effects, the IAQM guidance on the assessment of dust from demolition and construction (IAQM, 2024) has been used.
- 7.29. The risk of dust emissions has been assessed for the construction (demolition) phase with respect to:
- Potential loss of amenity due to dust soiling; and
 - The risk of health effects due to a significant increase in exposure to PM₁₀.
- 7.30. 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. A detailed assessment of the impact of dust from demolition sites is required where:
- A 'human receptor' is located within 250 m of the boundary of the Site or within 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the Site entrance; and/or
 - An 'ecological receptor' is located within 50 m of the boundary of the Site or within 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the Site entrance.
- 7.31. The magnitude (small, medium, large) of dust emission for the demolition is determined based on the guidance, indicative thresholds, information available relating to the project and expert judgement. The risk of dust effects (negligible, low medium, high) arising is based on the relationship between the dust emission 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 and effect significance used in this assessment of construction phase dust are given in the IAQM guidance on the assessment of dust from demolition and construction.
- 7.32. A full construction (demolition only) dust risk assessment methodology is outlined within Appendix 7.2.

Effects of emissions generated by non-road mobile machinery vehicle exhausts during demolition activities

- 7.33. Non-Road Mobile Machinery (NRMM) refers to mobile machines, transportable industrial equipment or vehicles which are fitted with an internal combustion engine and not intended for transporting goods or passengers on roads. NRMM emissions have been screened following IAQM guidance.

Effects of emissions generated by demolition traffic

- 7.34. Traffic generated by the Proposed Demolition during demolition activities has been provided by Civic and is outlined within the supporting Transport Statement. For this assessment, the approach in the EPUK/IAQM guidance (IAQM, 2017) has been used to describe the impacts and effects at individual existing sensitive receptors. This is based on the percentage change in concentration (magnitude of change) relative to the AQO and with the total long-term average concentration with the Proposed Demolition as shown in Table 7.3.
- 7.35. In the first instance, the EPUK/IAQM guidance (IAQM, 2017) provides indicative criteria for when a detailed assessment is required. Within an AQMA, this is when a development will lead to:
- a change of Light Duty Vehicle (LDV) flows of more than 100 AADT; and/or
 - a change of Heavy-Duty Vehicle (HDV) flows of more than 25 AADT.
- 7.36. The magnitude of change is determined quantitatively by establishing the change in pollutant concentration at each existing sensitive receptor as predicted by the dispersion modelling.
- 7.37. The impact magnitude with regards to exposure of future site users to air pollution is determined by comparing the predicted pollutant concentrations to the relevant AQO.

Table 7.3 IAQM Air quality vehicle emissions Impact magnitude descriptors

Long Term Average Concentration at Receptor Location	Change in concentration relative to AQO				
	0%	1%	2-5%	6-10%	>10%
75% or less of AQO	Negligible	Negligible	Negligible	Slight	Negligible
76-94% of AQO	Negligible	Negligible	Slight	Moderate	Moderate
95-102% of AQO	Negligible	Slight	Moderate	Moderate	Substantial
103-109% of AQO	Negligible	Moderate	Moderate	Substantial	Substantial
110% or more of AQO	Negligible	Moderate	Substantial	Substantial	Substantial

* Throughout the rest of the chapters, 'Slight' is equal to 'Minor' and 'Substantial' is equal to 'Major' in this ES methodology.

7.38. For each impact, 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 requires 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 Demolition;
- 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.

7.39. The determination of the significance of the likely effects includes elements of professional judgement and the professional experience of the consultants preparing this chapter is set out in Table 7.1. The significance of effect descriptors use the same terminology as the impact magnitude descriptor as outlined within Table 7.3.

Baseline Conditions

7.40. An Air Quality Management Area (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.

7.41. GMCA has established an extensive monitoring network for LAQM purposes and to support the Greater Manchester Clean Air Plan (GM CAP). According to the latest 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 of GM CAP.

7.42. 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).

7.43. Figure 7.1 and Figure 7.2 within Appendix 7.3, present the CAP and LAQM monitoring sites in proximity to the Site. Monitoring data from the recent five years are presented in Table 7.4.

Table 7.4 Monitoring results from CAP and LAQM monitoring sites in proximity to the Site.

Site ID	Distance from the Site (m)	Site type	Annual average NO ₂ concentration (µg/m ³)				
			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
021	382	Roadside	-	21.7	24.8	23.7	-
167	466	Roadside	-	-	-	48.1	49.1
166	531	Roadside	-	-	-	38.6	37.1
Notes: Figures in bold indicate an exceedance of the long-term air quality objective (40 µg/m ³). Owing to the influence of lockdown measures implemented in response to the COVID-19 pandemic, monitoring data from 2020 and 2021 should be treated with caution as it may not represent typical conditions.							

- 7.44. The Manchester Oxford Road site (MAN1) is the closest automatic monitoring site to the Site, approximately 550m to the southwest of the Site. The annual average NO₂ levels at the MAN1 were above the AQO level of 40 µg/m³ in the past five years, except for 2020, in which traffic flows were reduced considerably due to policies in response to the COVID-19 pandemic.
- 7.45. The 1-hour averages at the MAN1 exceeded the 200 µg/m³ threshold for no more than three times in each of the past five years, in compliance with the permitted 18 allowable exceedances outlined in the AQO's (Table 7.5).
- 7.46. Figure 7.3, within Appendix 7.3 demonstrates the annual average NO₂ concentrations at all nearby monitoring sites during 2019-2023. 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 NO₂ concentrations at all sites remain lower than the 2019 level.
- 7.47. Similar to NO₂, the MAN1 site recorded higher annual average PM₁₀ concentrations and greater number of short-term exceedances, compared to the MAN3 site (Table 7.5). Despite this, long-term and short-term AQOs for PM₁₀ have been achieved at both sites since 2018, and a general decrease in annual average concentration has been observed in the recent five years.
- 7.48. MAN3 is the only nearby automatic monitoring site that monitors PM_{2.5}. Results at this location have not exceeded the annual average PM_{2.5} AQO (20 µg/m³) since 2018 (Table 7.5).

Table 7.5 Monitoring results at automatic monitoring sites in the vicinity of the Site

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

Defra Predicted Concentration

7.49. Defra model gridded background concentrations across the UK on 1km x 1km grid squares, utilising a base year of 2021 (Defra, 2024). Table 7.6 presents the Defra Modelled background pollution concentrations for NO₂, PM₁₀ and PM_{2.5} for the grid square in which the majority of the Site lies (384500,397500) for the existing baseline year 2023 and peak construction year for demolition, alongside the 2023 monitored data recorded at automatic monitoring site MAN 3. Monitored and modelled annual mean background concentrations of NO₂, PM₁₀, and PM_{2.5} across the study area are all below their relevant AQOs.

Table 7.6 Defra modelled background concentrations for the baseline year (2023) and peak construction year for demolition (2025)

Year	Defra modelled annual average background concentration (µg/m ³) (Grid square: 384500,397500)				Monitored annual average concentrations at Urban Centre monitoring site (MAN3) (µg/m ³)		
	NO ₂	NO _x	PM ₁₀	PM _{2.5}	NO ₂	PM ₁₀	PM _{2.5}
Baseline 2023	23.4	34.5	15.1	8.2	27.0	15.0	9.0
Peak Construction (demolition) Year 2025	21.6	31.5	15.1	8.1	-	-	-

7.50. It can be seen from Table 7.6 that background concentrations at the Site are anticipated to reduce over time, with an improvement in concentrations predicted in 2025 when compared against the background concentrations for 2023.

- 7.51. However, it is important to note that these future baseline concentrations are only predictions and there remains some uncertainty regarding future concentrations of NO₂ as emissions from diesel vehicles have not declined as expected. Therefore, the future year background concentrations are provided for information only and 2023 background concentration from MAN3 are considered to be most representative of the pollutant concentrations at the Site. This is considered a conservative approach.

Summary of Baseline

- 7.52. The baseline assessment has shown that monitored baseline concentrations at monitoring locations along the Mancunian Way, adjacent to the Site, are in compliance with the UK NO₂ AQOs. Defra predicted background concentrations for NO₂, PM₁₀ and PM_{2.5} are predicted to be in compliance with the relevant air quality objectives at the Site in 2023.
- 7.53. Annual average NO₂ 2023 concentrations measured at the nearest background air quality monitoring locations, MAN 3 are ~13% higher than the Defra modelled concentrations. Annual average PM₁₀ concentrations remain comparable to the Defra background, whilst PM_{2.5} concentrations are 8% higher. This suggests that Defra background modelling may underpredict background concentrations in this location and concentrations from MAN3 would provide a worst case baseline for all pollutants.

Identification and Evaluation of Likely Significant Effects

Construction Phase

Effects of emissions generated by demolition dust

Step 1: Screen the need for a detailed assessment

- 7.54. In accordance with the screening criteria in the IAQM guidance, an assessment is required as there are sensitive human or ecological receptors in proximity to the Site. For human receptors within 250 meters of the Site, there is student accommodation and hotels, university buildings to the east and west and southeast of the Site, and residential properties to the south of the Site. Cumulative schemes will also introduce offices to the east and west of the Site. Therefore, the screening indicates the need for a construction dust assessment.
- 7.55. There are no designated ecological sites in the vicinity of the Site, hence ecological impacts are screened out from detailed construction dust assessment.

Step 2A Define the potential Dust Emission Magnitude

- 7.56. Dust emission magnitudes for construction activities and relevant justification are summarised in Table 7.7.

Table 7.7 Dust magnitude and justification

Activity	Dust emissions magnitude	Justification
Demolition	Large	The planned building demolition volume falls within the medium impact range (12,000 m ³ – 75,000 m ³) stated in the IAQM guidance. Demolition activities will occur at a height of >12 m above ground level. An onsite crusher will be onsite during the construction (demolition) phase. As such dust emission magnitude for demolition is deemed to be Large.
Trackout	Medium	The current number of HDV movements is currently unknown, however it is considered that there would be between 20-50 HDV outward movements per day. The subsoil is variable clay, silt and gravel, with light, medium and heavy textures present (UK Soil Observatory 2024). Therefore, both small (with higher dust potential) and large (with lower dust potential) soil particles are present. Overall, the emission magnitude is deemed to be Medium.

Step 2A Define the sensitivity of the area

- 7.57. Figure 7.4 within Appendix 7.2 presents an overview of identified construction dust receptors within 250 m (as the of the Site boundary and 50 m of the trackout route from up to 250 m from the Site entrance).
- 7.58. In determining the area sensitivity, the following has been considered:
- Sensitive receptors (more than 100) within 100m 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.
 - The background PM₁₀ level in the existing baseline year (2023) at the Site is 15.1 µg/m³ as monitored by automatic station MAN3 (Table 7.6).
- 7.59. Mayfield park is located more than 500m away from the Site and is therefore located outside of the 250 m for assessment screening criteria within the IAQM construction guidance and construction dust effects are not considered to be significant.
- 7.60. Considering the number and sensitivity of receptors, the sensitivity of the surrounding area to potential construction impacts is presented in Table 7.8, which is in line with the IAQM criteria.

Table 7.8 Sensitivity of surrounding

Potential Effect	Sensitivity of surroundings	
	Demolition	Trackout
Dust soiling	High	High
Human health	Medium	Medium

Step 2C Define the risks of impacts

- 7.61. The risks of dust impacts for relevant construction activities are summarised in Table 7.9. These results consider both the potential dust emission magnitude and the sensitivity of the area.
- 7.62. 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 Proposed Demolition to ensure any adverse effects are minimized. The mitigation measures to be applied are presented below.

Table 7.9 Risk of dust soiling and human health impacts associated with construction activities.

Potential Effect	Risk associated with construction activities	
	Demolition	Trackout
Dust soiling	High	Medium
Human health	High	Medium

Effects of emissions generated by from non-road mobile machinery vehicle exhausts during demolition activities

- 7.63. Exhaust emissions of NO_x and fine particulate matter (PM₁₀ and PM_{2.5}) from NRMM associated with construction 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 to demolition works should meet EU Stage IV of EU directive 97/68/EC, and Stage IIIA as a minimum. Based on the information provided by the demolition contract (outlined within Appendix 7.2) the NRMM vehicles anticipated to be used onsite will adhere to requirements outlined within the MCC Air Quality & Planning Technical Guidance and therefore no further assessment is required.
- 7.64. Table 7.10 outlines the onsite NRMM confirmed by the contractor that is to be utilised during the construction (demolition) phase.

Table 7.10 NRMM to be used during construction (demolition) phase.

Plant Specification	Weeks on Site
6-ton excavator with concrete cracker jaws x 2	3
Devlon 235 - 20-ton demolition rig with grab and breaker	14
Liebherr 100-ton demolition high reach with concrete cracker	5
CAT 252 - 50-ton demolition rig with grab and breaker	8
Devlon 380 - 30 ton demolition rig with grab and breaker	8
Crusher	3
Cat D6 Dozer	2
13ton vibration roller	2

- 7.65. 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.”*
- 7.66. It is therefore considered the likely effects of construction plant on local air quality would not be significant.
- 7.67. In addition to the above, an assessment of the predicted NO_x and PM₁₀ emissions generated by the NRMM has been undertaken using the Arup Construction Emissions tool for Construction emissions Exemplar sites. This process indicates that the NO_x emissions from NRMM used during the demolition of the Proposed Demolition are likely to fall below relevant construction emissions benchmarks.
- 7.68. A full overview of demolition activities (demolition dust, traffic and onsite plant) to be undertaken on site can be found within Appendix 7.2 and in Chapter 5.

Effects of emissions generated by demolition traffic

- 7.69. Vehicle emissions from road traffic generated as a result of the construction (demolition) phase of the Proposed Demolition have the potential to results in local air quality effects on local receptors.
- 7.70. The demolition traffic is to access the Site via Sackville Street onto Charles Street using a one way system and is to exit via Princess Street, on which there are a limited number of sensitive receptors.
- 7.71. Demolition activities are anticipated to lead to an AADT increase of 12 LDVs and 6 HDVS on the surrounding road network in line with the criteria outlined within EPUK/IAQM guidance for development within an AQMA. In accordance to the IAQM guidance construction phase road traffic emissions, principally HDV movements, have been screened out for further detailed assessment.
- 7.72. As such, the overall significance of construction vehicle emission impacts from the Proposed Demolition on NO₂ PM₁₀ and PM_{2.5} concentrations will be not significant in line with EPUK and IAQM guidance.
- 7.73. The demolition programme is estimated to last 20 weeks and additional trips generation from demolition vehicles and associated emissions will be short term in nature. Visual representation of the proposed access is shown within Figure 7.4 within Appendix 7.3.

Cumulative Effects

- 7.74. The list of cumulative schemes that have been scoped into the EIA are outlined within Appendix 7.2.

Construction

- 7.75. Two of the cumulative schemes fall within 250m of the Proposed Demolition as such, there is potential for cumulative effects on construction dust impacts from these schemes should the construction phases overlap for each scheme.

- 7.76. IAQM guidance indicates that with appropriate mitigation measures in place, the impact from construction dust will be not significant. As such no further detailed assessment of the air quality effects from cumulative schemes is required. Guidance also suggests that cumulative effects may occur from sites within 500m of one another. In line with proposed mitigation measures, the contractor should hold regular liaison meetings with other high risk construction sites within 500m of the Site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. Additionally, a construction traffic management plan should also be in place to minimise potential cumulative effects from construction vehicle emission associated within cumulative schemes.
- 7.77. It is assumed that an CEMP will have been carried out to minimise the potential construction effects at cumulative schemes and necessary mitigation will have been identified. Mitigation for this Proposed Demolition will therefore compliment the mitigation identified for the other cumulative developments and ensure overall impacts are negligible.

Mitigation Measures

Construction Phase

- 7.78. In line with best practice, the IAQM construction guidance sets out the recommended mitigation measures to be implemented in order to mitigate the potential effects during the construction (demolition) phase. Table A2.11 within Appendix 7.2 outline the specific mitigation measures to be incorporated into the Demolition Management Plan (DMP) for the Proposed Demolition. 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.
- 7.79. The following dust control measures will be implemented onsite:
- Any plant, machinery and vehicles will be switched off when not in use, as this minimises unnecessary air pollution;
 - Regular physical observation by key members of staff and the Environmental Team audit process is carried out;
 - Local engagement to keep residents informed on progress and if works producing excess dust are due to commence;
 - Lorries are sheeted before leaving site and damping down measures implemented;
 - Minimising stockpiling on site where practicable - stockpiles and demolition activities will be dampened down to minimise windborne emissions;
 - Vehicle movements on site will be restricted to prevent any additional exhaust fumes along with the implementation of a Traffic Management Plan to prevent unnecessary movement of plant or vehicles.
 - Dust monitoring will be carried out at site perimeters on a weekly basis. A specific Environmental Management Plan (EMP) will be put in place prior to project commencement to denote monitoring points at the site boundary, monitoring will be carried out periodically via hand-held devices with readings logged, reported and maintained on site for reference
- 7.80. A full list of required mitigation measures is outlined within Table A2.11 of Appendix 7.2 and should be read in conjunction with this chapter.

Residual Effects

Construction Phase

- 7.81. The residual effects for the construction (demolition) phase are presented in Table 7.11.

Table 7.11 Summary of Construction Phase Residual Effects

Likely Significant Effect	Receptor	Mitigation Measure	Means of Mitigation Implementation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Demolition and Construction Phase				
Effects of emissions arising from dust generated during the demolition of existing building on the Site on human health	Surrounding sensitive uses, e.g. residential properties(high) and higher education (medium*)	Recommended mitigation measures has been outlined within Appendix 7.2.	Mitigation measures typically implemented through a Demolition environmental Management Plan (DEMP) to be secured by planning condition.	Negligible, short-term and temporary
Effects of emissions arising from traffic generated by onsite NRMM during demolition of existing building on the Site on human health	Surrounding sensitive uses, e.g. residential properties(high) and higher education (medium*)	Recommended mitigation measures has been outlined within Appendix 7.2.	Mitigation measures typically implemented through a Demolition environmental Management Plan (DEMP) to be secured by planning condition.	Negligible, short-term and temporary
Effects of emissions arising from traffic generated by the demolition of existing building on the Site on human health	residential properties(high) and higher education (medium*)	No mitigation is required	N/A	Negligible, short-term and temporary
*All existing sensitive receptors have been considered as high sensitivity receptors to provide a robust assessment.				

Monitoring

- 7.82. As no significant air quality effects have been identified during the demolition activities of the Proposed Demolition, monitoring is not deemed a requirement.

Reference List

- 7.83. This ES Chapter has been prepared in reference to the following:
- Defra. (2022). *Local Air Quality Management Technical Guidance (TG22)*. Retrieved from <https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf>
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8. Noise and Vibration

Introduction

- 8.1. This Chapter of the Environmental Statement (ES) has been prepared by Heyda Ltd, with input from Blackbird Acoustics, on behalf of the Applicants, ID Manchester Ltd and The University of Manchester. It reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Development in relation to noise and vibration.
- 8.2. The Proposed Development comprises the demolition of an existing multistorey car park located on Charles Street within Plot H of the Sister site, in Manchester City Centre. The Site forms part of the ID Manchester Strategic Regeneration Framework (SRF) area and is being brought forward to facilitate its future redevelopment as part of a major mixed-use innovation district. This assessment focuses solely on the demolition phase, as the operational phase of the future development is not part of the current planning application.
- 8.3. This Chapter sets out the scope of the noise and vibration assessment and details the methodology used to identify and evaluate potential significant effects. It provides a summary of the baseline noise environment, identifies likely receptors, and describes any mitigation measures that are embedded in the design or proposed through best practice demolition management.
- 8.4. In accordance with Chapter 2: EIA Methodology, the assessment identifies and evaluates the likely significant effects of the Proposed Development during the demolition phase only, and outlines any additional mitigation measures required to prevent, reduce or offset any significant adverse effects, or enhance beneficial ones. The findings of the assessment are presented as residual effects, with commentary on whether these are considered significant in EIA terms.
- 8.5. This Chapter is informed by the iterative EIA Scoping process and any relevant consultation undertaken to date (Appendices 2.1 and 2.2). It should be read in conjunction with the overarching chapters of the ES (Chapters 1–5), and with reference to supporting information presented in Figure 8.1 and Appendices 8.1 – 8.2, as applicable.
- 8.6. Note that cumulative effects have been scoped out of this discipline, as confirmed through the agreed EIA approach, and are instead considered within Chapter 10: Type 1 Cumulative Effects.
- 8.7. This ES Chapter was written by Sam Laws and reviewed by James Williams, with details presented in Table 8.1.

Table 8.1: ES Chapter Authors

	Lead Author	Reviewer
Name	Sam Laws	James Williams
Company	Heyda Ltd	Heyda Ltd
Qualifications/Accreditations relevant to technical area incl. IEMA	BSc Music Systems Engineering, MIOA	BSc Acoustics and Music, MIOA
Years technical experience (in technical area)	18 years	14 years
Number of EIA's delivered to date	5+	15+

Summary of Consultation

- 8.8. No consultation beyond the Scoping Report has been carried out or is planned. The assessment reports are based on relevant standards, guidance and national and local policies.

Scope of the Assessment

- 8.9. An EIA Scoping Report was submitted to MCC on [TBC], as presented as Appendix 2.1. The EIA Scoping Opinion was received in [TBC] (Appendix 2.2). This section provides confirmation on the scope of the assessment presented within this Chapter following submission of the EIA Scoping Report.

Effects Not Considered to be Significant

- 8.10. The following effects were not considered significant as part of the EIA Scoping Report and are not considered further in this Chapter:
- **Temporary Road Traffic Noise Increase during Construction:** Due to the site being located close to busy roads and the size of the building to be demolished, it is considered unlikely that the additional road traffic generated by the works would result in any material changes in road traffic noise, and therefore this has been scoped out of the assessment. Please refer to the above Traffic and Transport details to support this conclusion.

Effects Considered Potentially Significant

- 8.11. The following effects were considered likely to be significant and are reported within this Chapter:
- **Noise Disturbance from Demolition Activities:** There are noise sensitive receptors near to the proposed demolition works and therefore noise produced during the works has the potential to result in significant effects.
 - **Vibration Disturbance from Demolition Activities:** There are vibration sensitive receptors near to the proposed demolition works and therefore vibration produced during the works has the potential to result in significant effects.

Assumptions and Limitations

Assumptions

- 8.12. **Equipment Usage and Activity Patterns**
- Plant and equipment noise levels are based on BS 5228-1:2009+A2:2014 published data and/or manufacturer information.
 - Assumes typical plant usage factors (i.e., the percentage of time equipment is operating).
 - Assumes normal operating conditions, with plant properly maintained and fitted with standard noise control (e.g., silencers, mufflers).
- 8.13. **Programme and Phasing**
- Construction phases, durations, and activities are based on the preliminary or indicative construction programme.
 - Assumes worst-case simultaneous operation of equipment for each phase unless otherwise specified.
 - Working hours are assumed based on standard or proposed site hours (e.g., weekday daytime, Saturdays).
- 8.14. **Prediction Methodology**
- Predictions follow BS 5228-1 methods for calculating noise at receptor locations, including:
 - Standardised source noise data (L_{Aeq} at 10 m reference distance)
 - Distance attenuation using hemi-spherical and/or spherical spreading (–20 dB per decade)
 - Corrections for soft ground, barrier effects, or façade reflections where applicable.

8.15. **Site Layout**

- Plant locations are assumed to be representative worst-case locations, typically at the site boundary closest to receptors or evenly distributed across the site where specific details are unknown.

8.16. **Environmental Conditions**

- Calculations assume worst-case atmospheric conditions (i.e., light downwind propagation).
- Ambient noise measurements are considered representative of typical conditions during the assessment period.

Limitations

8.17. **Programme Uncertainty**

- Actual construction activities may vary in terms of duration, intensity, plant selection, and methodology, which could lead to higher or lower noise levels than predicted.

8.18. **Plant Specifications**

- Actual plant used may differ from those assumed in the assessment; in particular, noise levels could vary due to age, maintenance, and manufacturer variations.

8.19. **Noise Mitigation**

- Predictions are made without detailed mitigation measures applied unless specific controls are already committed (e.g., acoustic barriers, enclosures).
- Where generic mitigation is assumed, the effectiveness of measures is estimated based on standard assumptions.

8.20. **Ambient Noise Variability**

- Ambient noise levels can fluctuate due to seasonal, weather-related, or temporary local factors. Measurements are a snapshot in time and may not capture the full range of variation.

Relevant Legislation, Policy and Guidance

- 8.21. The noise and vibration assessment for the Proposed Development has been undertaken in accordance with the legislative, policy and guidance frameworks outlined below. These frameworks define the criteria, standards, and methodologies for evaluating the potential for significant effects during the demolition phase of the scheme.

Legislation

- 8.22. The following legislation informs the assessment of demolition-related noise and vibration:

- Environmental Protection Act 1990: Establishes statutory nuisance provisions under Section 79, including noise and vibration emitted from premises and construction sites.
- Control of Pollution Act 1974: Provides control measures for managing noise and vibration from demolition and construction activities. Section 61 allows developers to apply for prior consent for proposed works to agree noise and vibration controls in advance with the local authority.

Policy

National

- 8.23. The following national planning policy informs the assessment of demolition-related noise and vibration:
- National Planning Policy Framework (NPPF, 2025): Requires that developments avoid significant adverse impacts, and mitigate and minimise adverse noise impacts on health and quality of life. The NPPF supports sustainable development while ensuring appropriate consideration of noise effects in planning decisions.
 - Noise Policy Statement for England (NPSE, 2010): Provides a framework for noise management, including three key aims: avoiding significant adverse effects, mitigating adverse effects, and improving health and quality of life through effective noise control.

Regional

- 8.24. The following regional planning policy informs the assessment of demolition-related noise and vibration:
- Places for Everyone Joint Development Plan (2024): This strategic plan for Greater Manchester includes policy support for mitigating environmental impacts from development, including noise. It specifically highlights the importance of:
 - Ensuring Construction Management Plans are produced for developments, where appropriate, to mitigate construction logistics and environmental impacts including air quality and noise on the surrounding area, and to encourage sustainable deliveries. This reinforces the need to manage demolition-related noise proactively through site-level planning controls and good practice mitigation measures.

Local

- 8.25. The following local planning policy informs the assessment of demolition-related noise and vibration:
- Manchester Core Strategy (Adopted 2012, updated 2024): Policy DM 1, Development Management, states that all development should have regard to effects on amenity (including noise) but does not provide specific requirements in terms of impacts or effects. It states that more detailed guidance is provided in supplementary planning guidance.
 - Manchester City Council Planning and Noise Technical Guidance (October 2022): Sets out expectations for assessing and managing noise and vibration impacts during demolition and construction. Does not set specific thresholds for adverse impacts or effects but recommends assessment in accordance with BS 5228:2009+A1:2014, and states that Best Practicable Means (BPM) for noise reduction should be adopted as a minimum.

Guidance

- 8.26. The assessment has drawn on relevant standards and technical guidance, including:
- BS 5228-1:2009+A1:2014 and BS 5228-2:2009+A1:2014 – Code of Practice for Noise and Vibration Control on Construction and Open Sites: Key reference documents for predicting and mitigating demolition noise and vibration.
 - BS 7445-2:1991 – Description and Measurement of Environmental Noise – Guide to the Acquisition of Data Pertinent to Land Use: Provides guidance for environmental noise monitoring and baseline assessment.
 - IEMA Guidelines for Environmental Noise Impact Assessment (2014): Recommends good practice for identifying, evaluating and reporting noise impacts within an EIA context.

Assessment Methodology and Significance Criteria

- 8.27. This section sets out the approach taken to assess the likely significant effects of the Proposed Development in relation to noise and vibration. The methodology aligns with relevant British Standards, industry best practice guidance, and the EIA Regulations.

Scenarios Tested

- 8.28. In line with the overall Environmental Impact Assessment (EIA) methodology presented in Chapter 2 of this ES, the assessment considers the following two scenarios for noise and vibration:
- Scenario 1 – Baseline: This scenario characterises the existing noise and vibration environment at the Site and surrounding area in the absence of the Proposed Development. It provides a reference point against which the potential effects of demolition activities can be assessed.
 - Scenario 2 – Baseline + Demolition: This scenario assesses the likely changes in noise and vibration levels during the demolition phase of the Proposed Development. It identifies potential impacts arising from site clearance, structure removal, and associated demolition plant, including any significant effects on surrounding receptors.
- 8.29. No operational or cumulative scenarios have been assessed for noise and vibration, consistent with the scoping approach agreed for this discipline, as the Proposed Development relates solely to demolition and the subsequent operational use has not yet been defined.

The Study Area

- 8.30. The study area for the noise and vibration assessment has been defined to ensure a proportionate and robust evaluation of potential significant effects on nearby noise/vibration-sensitive receptors (NSRs) during the demolition phase of the Proposed Development. The Site is located within a dense, mixed-use urban environment in Manchester City Centre, where a variety of residential and commercial receptors (including hotels) are situated in close proximity.
- 8.31. For this project, the study area has been set to include all NSRs within approximately 100 metres of the Site boundary. This extent is illustrated in Figure 8.1 and has been selected based on the following considerations:
- A 100 m radius ensures the inclusion of the vast majority of receptors with direct line of sight to the demolition works, capturing those most likely to be affected by noise and vibration.
 - Receptors located outside the 100 m boundary are typically either more distant or acoustically screened by intervening buildings or structures, meaning any effects are likely to be significantly attenuated.
 - The selected boundary supports a worst-case assessment that remains proportionate to the scale and duration of the demolition activity, and is expected to capture all locations where significant effects could realistically occur.
- 8.32. This approach provides confidence that the assessment will effectively identify and evaluate the potential for adverse effects, without unnecessarily extending the study area into zones where noise and vibration impacts are likely to be negligible.

Surveys and Data Sources

- 8.33. The following studies and technical evaluations have been undertaken to inform the noise and vibration assessment presented in this chapter. These studies establish the baseline noise and vibration conditions, identify sensitive receptors, and evaluate potential impacts arising from the Proposed Scheme during demolition. Each study provides key data and analysis to inform the Environmental Statement (ES) and supports the conclusions presented in this chapter.

Table 8.2: Data Sources

Study / Survey / Analysis / Evaluation	Overview	Date of Completion
Environmental Noise Survey (Appendix 8.1)	Baseline noise levels at the Site were monitored to establish prevailing noise conditions. Conducted by Blackbird Acoustics.	July 2025
Demolition Noise and Vibration Impact Assessment (Appendix 8.2)	Establishes prevailing baseline noise levels at the Site (as measured by Blackbird Acoustics) and provides an evaluation of the potential noise and vibration impacts arising from demolition activities, using predicted data and modelling techniques. Conducted by Heyda Ltd.	July 2025

Source of Effect

- 8.34. The assessment of likely significant effects of noise and vibration for the Proposed Scheme has been conducted in accordance with relevant legislation, standards, and guidance. Baseline conditions were established through an environmental noise survey, with further assessments carried out for each likely significant effect during the construction stages as presented in Appendix 8.2. The methodology has been tailored to address specific impacts with consideration of magnitude of change/impact thresholds, prediction methods, and possible mitigation measures.

Demolition Stage

- 8.35. Noise Disturbance from Demolition Activities:

- **Assessment Overview:** Noise disturbance from demolition activities was assessed to identify potential impacts on nearby noise-sensitive receptors (NSRs) for each demolition stage of the Proposed Scheme. The assessment was conducted in accordance with BS 5228-1:2009+A1:2014.
- **Magnitude of Change/Impact Thresholds:** Noise thresholds were determined using the 5 dB method, and thresholds for noise insulation and temporary re-housing, as outlined in BS 5228-1, reflecting the existing ambient noise environment at identified NSRs.
- **Prediction Method:** A noise model of the Site and surrounding area was created to predict demolition and construction noise levels in accordance with ISO 9613:2024. Noise sources were selected based on an assumed plant list, with appropriate plant noise levels referenced from BS 5228. The predictions considered the likely average operating conditions for each demolition/construction stage.
- **Mitigation Methods:** Specific noise mitigation measures, such as localised barriers, were trialled where possible. Where such measures were not feasible, it was demonstrated that Best Practicable Means (BPM) for noise reduction have been implemented. Good community liaison has been recommended to manage and minimise adverse noise impacts during demolition. Further details are provided in Appendix 8.2.

- 8.36. Vibration Disturbance from Demolition Activities

- **Assessment Overview:** Vibration disturbance from demolition activities was assessed to identify potential impacts due to human perception at NSRs. The assessment was conducted in accordance with BS 5228-2:2009+A1:2014.
- **Magnitude of Change/Impact Thresholds:** Thresholds were defined based on BS 5228-2 for human perception.
- **Prediction Method:** Vibration predictions were carried out for the likely worst-case vibration-emitting plant, including excavators and breakers, using available calculation methods and historical reference data.
- **Mitigation Methods:** Alternative methods were investigated where necessary to ensure that Best Practicable Means (BPM) are employed. Monitoring and good community liaison are recommended to manage potential adverse impacts. Further details are provided in Appendix 8.2.

- 8.37. This detailed methodology ensures that each likely significant effect of noise and vibration is rigorously assessed, with appropriate measures identified to reduce impacts to acceptable levels in accordance with relevant regulations and guidance.

Significance Criteria

- 8.38. The assessment of likely significant environmental effects resulting from the Proposed Scheme has taken into account the demolition stage only. The following sections define the approach adopted within the assessment for the determination of sensitivity (or value/importance), magnitude of change (or impact), the level of effect and significance.

Determining the Sensitivity of the Receptor

- 8.39. The sensitivity of affected receptors has been considered on a scale of high, medium or low. The sensitivity of a receptor is based on its ability to tolerate changes in noise and vibration levels, as well as its importance or value in terms of function and use.
- 8.40. Table 8.3 provides the definitions and examples of receptor sensitivity for noise and vibration based on receptor type and function.

Table 8.3: Noise and Vibration Sensitivity Criteria

Sensitivity	Examples of Receptor
High	The receptor/resource has little ability to absorb change without fundamentally altering its present character or is of international or national importance. Examples include, residential dwellings, schools, healthcare buildings with sleeping facilities (e.g. hospitals), concert halls, recording studios.
Medium	The receptor/resource has moderate capacity to absorb change without significantly altering its present character or is of high importance. Examples include, hotels, healthcare buildings without sleeping facilities (e.g. GP surgeries), education buildings, museums, libraries, places of worship.
Low	The receptor/resource is tolerant of change without detriment to its character, is of low or local importance. Examples include commercial buildings (e.g. retail units, offices), research buildings, light industrial premises.

- 8.41. This sensitivity classification has been applied consistently throughout the assessment to determine the level of effect on each receptor during both the construction and operational phases of the Proposed Scheme.

Determining the Magnitude of Change/Impact

- 8.42. The magnitude of change or impact has been determined based on thresholds specific to each likely significant effect during the construction phase of the Proposed Scheme. The magnitude of change is categorised as Major, Moderate, Minor, or Negligible, reflecting the degree of deviation from baseline conditions or relevant criteria. The methods for determining magnitude for each effect are set out below.
- 8.43. An overview of impact classifications is presented in Table 8.4.

Table 8.4: Magnitude of Impact Classifications

Magnitude of Impact	Criteria for Assessing Effect
Major	Total loss or major/substantial alteration to key elements/features of the baseline conditions such that the post development character/composition/attributes will be fundamentally changed.
Moderate	Loss or alteration to one or more key elements/features of the baseline conditions such that post development character/composition/attributes of the baseline will be materially changed.

Minor	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible/detectable but not material. The underlying character / composition / attributes of the baseline condition will be similar to the pre-development circumstances/situation.
Negligible	Very little change from baseline conditions. Change barely distinguishable, approximating to a 'no change' situation.

8.44. The methods for determining magnitude for each effect that is relevant to this assessment are set out below.

Construction Stage Magnitude of Impact Classifications – Demolition Noise

8.45. The magnitude of impact for demolition noise has been determined by comparing the predicted noise level at noise-sensitive receptors (NSRs) against thresholds derived using the 5 dB change method from BS 5228-1:2009+A1:2014. The thresholds also account for levels at which an offer of noise insulation or temporary re-housing may be required (>75 dBA), as outlined in BS 5228.

8.46. The magnitude of impact thresholds for demolition noise during the week and at weekends are presented in Tables 8.5 and 8.6 respectively.

Table 8.5: Magnitude of Impact Classifications – Demolition Noise – Weekdays

Magnitude of Impact	Demolition Noise Level ($L_{Aeq,10hours}$ dB)	
	Receptors to North	Receptors to South/East/West
Major	> 75	> 75
Moderate	69 – 75	65 – 75
Minor	59 – 68	55 – 64
Negligible	< 59	< 55

Table 8.6: Magnitude of Impact Classifications – Demolition Noise – Weekends (Saturdays)

Magnitude of Impact	Demolition Noise Level ($L_{Aeq,5.5hours}$ dB)		
	Receptors to North	Receptors to South/East	Receptors to West
Major	> 75	> 75	> 75
Moderate	68 – 75	64 – 75	63 – 75
Minor	58 – 67	54 – 63	53 – 62
Negligible	< 58	< 54	< 53

Construction Stage Magnitude of Impact Classifications – Demolition Vibration

8.47. The magnitude of impact for vibration during demolition activities has been determined in terms of Peak Particle Velocity (PPV) in accordance with BS 5228-2:2009+A1:2014, as presented in Table 8.7.

Table 8.7: Magnitude of Impact Classifications – Demolition Vibration

Magnitude of Impact	Demolition Vibration Level (PPV, mm/s)
Major	> 10.0
Moderate	1.0 – 10.0
Minor	0.3 – 1.0
Negligible	< 0.3

Determining the Level of Effect

- 8.48. The level of effect has been informed by the magnitude of impact due to the Proposed Scheme and the evaluation of the sensitivity of the affected receptor. The level of effect has been determined using professional judgement and Table 8.8 has been a tool which has assisted with this process.
- 8.49. Whilst Table 8.8 provides ranges, the level of effect is confirmed as a single level and not a range, informed by professional judgement. For each effect, it has been concluded whether the effect is 'beneficial' or 'adverse', and 'temporary' or 'permanent'.

Table 8.8: Matrix to Support Determining the Level of Effect

Magnitude of Impact	Sensitivity		
	High	Medium	Low
Major	Major	Major - Moderate	Moderate or Minor
Moderate	Major - Moderate	Moderate	Minor
Minor	Moderate or Minor	Minor	Minor or Negligible
Negligible	Negligible	Negligible	Negligible

- 8.50. The following terms have been used to define the level of the effects identified and these can be 'beneficial' or 'adverse':
- **Major effect:** where the Proposed Scheme is likely to cause a considerable change from the baseline conditions and the receptor has limited adaptability, tolerance or recoverability or is of the highest sensitivity;
 - **Moderate effect:** where the Proposed Scheme is likely to cause either a considerable change from the baseline conditions at a receptor which has a degree of adaptability, tolerance or recoverability or a less than considerable change at a receptor that has limited adaptability, tolerance or recoverability;
 - **Minor effect:** where the Proposed Scheme is likely to cause a small, but noticeable change from the baseline conditions on a receptor which has limited adaptability, tolerance or recoverability or is of the highest sensitivity; or where the Proposed Scheme is likely to cause a considerable change from the baseline conditions at a receptor which can adapt, is tolerant of the change or/and can recover from the change; and
 - **Negligible:** where the Proposed Scheme is unlikely to cause a noticeable change at a receptor, despite its level of sensitivity or there is a considerable change at a receptor which is not considered sensitive to a change.
- 8.51. The duration of the effect has been assessed as either 'short-term', 'medium-term' or 'long-term'. Short-term is considered to be up to 1 year, medium-term is considered to be between 1 and 10 years and long-term is considered to be greater than 10 years.

Determining Significance

- 8.52. For each effect, a statement has been made as to whether the level of effect is 'Significant' or 'Not Significant'. This determination has been based on professional judgement and/or relevant guidance/legislation where applicable.
- 8.53. Significance has only been concluded for residual effects (i.e. following the identification of secondary mitigation).

Baseline Conditions

- 8.54. The baseline conditions for the noise and vibration assessment were established through an environmental noise survey conducted in accordance with BS 7445:2003 and the ANC Environmental Noise Measurement Guide. The survey results provide a robust understanding of the prevailing noise environment at the Site and inform the assessment of likely significant effects during demolition.

Site Context

- 8.55. The Site is located within a predominantly urban environment in Manchester, surrounded by a mix of uses including residential properties, hotels, purpose-built student accommodation (PBSA), educational buildings, commercial premises, and entertainment venues. Key noise sources in the area include:
- Road traffic along Sackville Street to the east, Charles Street to the south, Princess Street (A34) to the west, and the A57(M) motorway which is approximately 230m to the south of the development site at its nearest point;
 - Rail traffic noise from the tracks to the north which link Manchester Oxford Road station to Manchester Piccadilly Station.
 - Pedestrian activities associated with nearby uses, including hotels and pubs/bars; and
 - Other local sources, such as occasional activities at nearby commercial premises and public areas.

Noise Survey

- 8.56. An environmental noise survey was conducted over a weekday and weekend period from 16:15 on Friday 4th July 2025 to 12:30 on Tuesday 8th July 2025 to capture representative daytime conditions. All noise monitoring was carried out using Type 1 Norsonic 140 sound level meters, calibrated both before and after the survey to ensure accuracy, with no significant calibration drift observed.

Measurement Locations

- 8.57. Measurements were undertaken at three positions around the Site:
- **Position 1 (P1):** Unattended sound measurement position near the north-eastern corner of the site. The microphone was attached to an extension pole and extended from the third floor of the existing car park (approximately 9 meters above the street level), directly overlooking the adjacent railway line.
 - **Position 2 (P2):** Unattended sound measurement position near the south-eastern corner of the site. The microphone was attached to an extension pole and extended from the second floor of the existing car park (approximately 5 meters above the street level), overlooking Charles Street and Sackville Street.
 - **Position 3 (P3):** Unattended sound measurement position near the south-western corner of the site. The microphone was attached to an extension pole and extended from the second floor of the existing car park (approximately 8 meters above the street level), overlooking Charles Street and Princess Street. The sound climate was dominated by road traffic noise from the surrounding road network.
- 8.58. All microphones were placed in free-field conditions, at least 1.5m from any reflecting surfaces. Further details on the monitoring positions can be found in Appendix 8.1.

Summary of Measured Noise Levels

The measured noise levels relevant to this assessment are summarised in Table 8.9.

Table 8.9: Summary of Measured Noise Levels

Measurement Position	Period	Equivalent continuous SPL $L_{Aeq,T}$ (dB)
Pos 1	Weekday Daytime (07:30 – 18:00)	66
	Saturday Daytime (08:30 – 14:00)	65
Pos 2	Weekday Daytime (07:30 – 18:00)	62
	Saturday Daytime (08:30 – 14:00)	61
Pos 3	Weekday Daytime (07:30 – 18:00)	62
	Saturday Daytime (08:30 – 14:00)	60

- 8.59. Key observations from the survey include:
- Noise levels at Position 1 (Rail) were dominated by railway traffic noise, as well as partially screened road traffic noise from the surrounding road network.
 - Noise levels at Position 2 (Charles/Sackville Street) were dominated by road traffic noise from Charles Street, Sackville Street and the surrounding road network.
 - Noise levels at Position 3 (Charles/Princess Street) were dominated by road traffic noise from Charles Street, Princess Street and the surrounding road network.
- 8.60. Detailed monitoring results, including time-history graphs are provided in Appendix 8.1.

Vibration Conditions

- 8.61. Baseline vibration conditions at the Site were not monitored as part of the initial surveys used to inform this assessment because the assessment of demolition vibration is independent of the existing vibration levels; the magnitude of impact is determined based on the predicted demolition vibration levels only. The adjacent railway line is a source of vibration that is adjacent to the site, however it is raised, and therefore vibration levels are unlikely to be perceptible at ground level, or in nearby buildings.

Identification and Evaluation of Likely Significant Effects

Noise Disturbance from Demolition Activities

- 8.62. The demolition noise impact assessment has been segmented into two primary phases, each with four sub-phases, as detailed in Section 4.2 and Figures 2 and 3 of the Demolition Noise and Vibration Impact Assessment, which is included in Appendix 8.2.
- 8.63. Sub-phases P1A, P1B, P1C and P1D will comprise on-slab top-down demolition and debris clear-up, whilst sub-phases P2A, P2B, P2C and P2D will comprise the demolition of remaining structures and debris clear-up using a high reach.
- 8.64. The assessment first identifies the nearby sensitive receptors, including residential dwellings, hotels, purpose-built student accommodation (PBSA), and educational buildings. These are listed in Table 8.10 below and identified in Figure 8.1.

Table 8.10: Identification of Sensitive Receptors

Receptor	Type	Sensitivity
90 Princess Street	Residential	High
Salisbury House	Residential	High
Orient House	Residential	High
Granby House	Residential	High
Fairbairn Building	Residential	High
1 Samuel Ogden Building	Residential	High
Granby Village	Residential	High
Montana House	Residential	High
121 Princess Street	Hotel/PBSA Residences	Medium
Pendulum Hotel and Weston Halls	Hotel/PBSA Residences	Medium
Ibis Hotel	Hotel/PBSA Residences	Medium
Vita Students	Hotel/PBSA Residences	Medium
Sackville Street Building	Educational/Research	High
James Lighthill Building	Educational/Research	High
Parisier Building	Educational/Research	High
Reynold Building	Educational/Research	High

- 8.65. Predicted noise levels for each sub-phase are summarised for these receptors, with the magnitude of impact determined based on the thresholds defined in Tables 18.5 and 18.6.

Table 8.11: Predicted Demolition Noise Levels – 90 Princess Street (Residential) Receptor (P1)

Phase	Predicted Noise Levels (dB $L_{Aeq,10hours}$)	Magnitude of Impact (Weekday/Weekend)
P1A	60	Minor/Minor
P1B	56	Negligible/Negligible
P1C	57	Negligible/Negligible
P1D	61	Minor/Minor
P2A	70	Moderate/Moderate
P2B	66	Minor/Minor
P2C	64	Minor/Minor
P2D	63	Minor/Minor

Table 8.12: Predicted Demolition Noise Levels – Salisbury House (Residential) Receptor (P1)

Phase	Predicted Noise Levels (dB $L_{Aeq,10hours}$)	Magnitude of Impact (Weekday/Weekend)
P1A	68	Minor/Moderate
P1B	63	Minor/Minor
P1C	63	Minor/Minor
P1D	67	Minor/Minor
P2A	77	Major/Major
P2B	73	Moderate/Moderate
P2C	70	Moderate/Moderate
P2D	69	Moderate/Moderate

Table 8.13: Predicted Demolition Noise Levels – Orient House (Residential) Receptor (P1)

Phase	Predicted Noise Levels (dB $L_{Aeq,10hours}$)	Magnitude of Impact (Weekday/Weekend)
P1A	70	Moderate/Moderate
P1B	67	Moderate/Minor
P1C	66	Moderate/Minor
P1D	67	Minor/Minor
P2A	77	Major/Major
P2B	77	Major/Major
P2C	75	Moderate/Moderate
P2D	72	Moderate/Moderate

Table 8.14: Predicted Demolition Noise Levels – Granby House (Residential) Receptor (P1)

Phase	Predicted Noise Levels (dB $L_{Aeq,10hours}$)	Magnitude of Impact (Weekday/Weekend)
P1A	71	Moderate/Moderate
P1B	70	Moderate/Moderate
P1C	68	Minor/Moderate

P1D	69	Moderate/Moderate
P2A	77	Major/Major
P2B	78	Major/Major
P2C	78	Major/Major
P2D	76	Major/Major

Table 8.15: Predicted Demolition Noise Levels – Fairbairn Building (Residential) Receptor (P1)

Phase	Predicted Noise Levels (dB $L_{Aeq,10hours}$)	Magnitude of Impact (Weekday/Weekend)
P1A	64	Minor/Minor
P1B	71	Moderate/Moderate
P1C	68	Minor/Moderate
P1D	64	Minor/Minor
P2A	71	Moderate/Moderate
P2B	74	Moderate/Moderate
P2C	78	Major/Major
P2D	79	Major/Major

Table 8.16: Predicted Demolition Noise Levels – 1 Samuel Ogden Street (Residential) Receptor (P1)

Phase	Predicted Noise Levels (dB $L_{Aeq,10hours}$)	Magnitude of Impact (Weekday/Weekend)
P1A	60	Minor/Minor
P1B	48	Negligible/Negligible
P1C	49	Negligible/Negligible
P1D	60	Minor/Minor
P2A	70	Moderate/Moderate
P2B	63	Minor/Minor
P2C	54	Negligible/Negligible
P2D	50	Negligible/Negligible

Table 8.17: Predicted Demolition Noise Levels – Granby Village (Residential) Receptor (P1)

Phase	Predicted Noise Levels (dB $L_{Aeq,10hours}$)	Magnitude of Impact (Weekday/Weekend)
P1A	52	Negligible/Negligible
P1B	63	Minor/Minor
P1C	63	Minor/Minor
P1D	51	Negligible/Negligible
P2A	56	Negligible/Negligible
P2B	62	Minor/Minor
P2C	73	Moderate/Moderate
P2D	69	Moderate/Moderate

Table 8.18: Predicted Demolition Noise Levels – Montana House (Residential) Receptor (P3)

Phase	Predicted Noise Levels (dB $L_{Aeq,10hours}$)	Magnitude of Impact (Weekday/Weekend)
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P1A	57	Minor/Minor
P1B	57	Minor/Minor
P1C	58	Minor/Minor
P1D	56	Minor/Minor
P2A	65	Moderate/Moderate
P2B	65	Moderate/Moderate
P2C	66	Moderate/Moderate
P2D	66	Moderate/Moderate

Table 8.19: Predicted Demolition Noise Levels – 121 Princess Street (Hotel/PBSA Residences) Receptor (P1)

Phase	Predicted Noise Levels (dB L _{Aeq,10hours})	Magnitude of Impact (Weekday/Weekend)
P1A	58	Negligible/Minor
P1B	50	Negligible/Negligible
P1C	51	Negligible/Negligible
P1D	58	Negligible/Minor
P2A	68	Minor/Moderate
P2B	63	Minor/Minor
P2C	59	Minor/Minor
P2D	53	Negligible/Negligible

Table 8.20: Predicted Demolition Noise Levels – Pendulum Hotel and Weston Halls (Hotel/PBSA Residences) Receptor (P2)

Phase	Predicted Noise Levels (dB L _{Aeq,10hours})	Magnitude of Impact (Weekday/Weekend)
P1A	69	Moderate/Moderate
P1B	69	Moderate/Moderate
P1C	71	Moderate/Moderate
P1D	72	Moderate/Moderate
P2A	79	Major/Major
P2B	79	Major/Major
P2C	79	Major/Major
P2D	79	Major/Major

Table 8.21: Predicted Demolition Noise Levels – Ibis Hotel (Hotel/PBSA Residences) Receptor (P3)

Phase	Predicted Noise Levels (dB L _{Aeq,10hours})	Magnitude of Impact (Weekday/Weekend)
P1A	69	Moderate/Moderate
P1B	66	Moderate/Moderate
P1C	66	Moderate/Moderate
P1D	70	Moderate/Moderate
P2A	79	Major/Major
P2B	76	Major/Major
P2C	73	Moderate/Moderate
P2D	72	Moderate/Moderate

Table 8.22: Predicted Demolition Noise Levels – Vita Students (Hotel/PBSA Residences) Receptor (P3)

Phase	Predicted Noise Levels (dB L _{Aeq,10hours})	Magnitude of Impact (Weekday/Weekend)
P1A	60	Minor/Minor
P1B	58	Minor/Minor
P1C	56	Minor/Minor
P1D	58	Minor/Minor
P2A	68	Moderate/Moderate
P2B	66	Moderate/Moderate
P2C	65	Moderate/Moderate
P2D	65	Moderate/Moderate

Table 8.23: Predicted Demolition Noise Levels – Sackville Street Building (Educational/Research) Receptor (P1)

Phase	Predicted Noise Levels (dB L _{Aeq,10hours})	Magnitude of Impact (Weekday/Weekend)
P1A	53	Negligible/Negligible
P1B	57	Negligible/Negligible
P1C	59	Minor/Minor
P1D	56	Negligible/Negligible
P2A	62	Minor/Minor
P2B	65	Minor/Minor
P2C	67	Minor/Minor
P2D	70	Moderate/Moderate

Table 8.24: Predicted Demolition Noise Levels – James Lighthill Building (Educational/Research) Receptor (P2)

Phase	Predicted Noise Levels (dB L _{Aeq,10hours})	Magnitude of Impact (Weekday/Weekend)
P1A	64	Minor/Moderate
P1B	69	Moderate/Moderate
P1C	69	Moderate/Moderate
P1D	64	Minor/Moderate
P2A	70	Moderate/Moderate
P2B	73	Moderate/Moderate
P2C	77	Major/Major
P2D	80	Major/Major

Table 8.25: Predicted Demolition Noise Levels – Parisier Building (Educational/Research) Receptor (P2)

Phase	Predicted Noise Levels (dB L _{Aeq,10hours})	Magnitude of Impact (Weekday/Weekend)
P1A	58	Minor/Minor
P1B	63	Minor/Minor
P1C	63	Minor/Minor
P1D	57	Minor/Minor
P2A	65	Moderate/Moderate
P2B	67	Moderate/Moderate

P2C	72	Moderate/Moderate
P2D	73	Moderate/Moderate

Table 8.26: Predicted Demolition Noise Levels – Reynold Building (Educational/Research) Receptor (P2)

Phase	Predicted Noise Levels (dB L _{Aeq,10hours})	Magnitude of Impact (Weekday/Weekend)
P1A	60	Minor/Minor
P1B	64	Minor/Moderate
P1C	64	Minor/Moderate
P1D	60	Minor/Minor
P2A	68	Moderate/Moderate
P2B	70	Moderate/Moderate
P2C	72	Moderate/Moderate
P2D	74	Moderate/Moderate

Discussion

Residential Receptors

- 8.66. Based on the predicted demolition noise levels presented in Tables 1.11 to 1.18, the following conclusions have been drawn for the most-exposed façades of the worst-affected residential receptors:
- 8.67. **90 Princess Street**
- Predicted noise levels during seven phases of work are expected to result in negligible to minor magnitudes of impact for this private residential receptor during the week and on Saturdays.
 - During phase P2A, predicted levels are expected to result in moderate magnitudes of impact during the week and on Saturdays.
 - The sensitivity of this receptor is high. The magnitude of impact across phases ranges from negligible to moderate. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is negligible to moderate.
- 8.68. **Salisbury House**
- Predicted noise levels during four phases of work are expected to result in minor magnitudes of impact for this private residential receptor during the week and minor/moderate magnitudes of impact on Saturdays.
 - During phases P2A to P2D, predicted levels are expected to result in moderate to major magnitudes of impact during the week and on Saturdays.
 - The sensitivity of this receptor is high. The magnitude of impact across phases ranges from minor to major. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is minor to major.
- 8.69. **Orient House**
- Predicted demolition noise levels during three phases of work are expected to result in minor to moderate magnitudes of impact for this private residential receptor during the week and minor magnitudes of impact on Saturdays.
 - Predicted demolition noise levels during five phases of work are expected to result in moderate to major magnitudes of impact during the week and on Saturdays.

- The sensitivity of this receptor is high. The magnitude of impact across phases ranges from minor to major. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is minor to major.

8.70. **Granby House**

- Predicted demolition noise levels during one phase of work are expected to result in minor magnitude of impact for this private residential receptor during the week and moderate magnitude of impact on Saturdays.
- Predicted demolition noise levels during all other phases of work are expected to result in moderate to major magnitudes of impact during the week and on Saturdays.
- The sensitivity of this receptor is high. The magnitude of impact across phases ranges from minor to major. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is minor to major.

8.71. **Fairbairn Building**

- Predicted demolition noise levels during three phases of work are expected to result in minor magnitude of impact for this private residential receptor during the week and minor to moderate magnitude of impact on Saturdays.
- Predicted demolition noise levels during five phases of work are expected to result in moderate to major magnitudes of impact during the week and on Saturdays.
- The sensitivity of this receptor is high. The magnitude of impact across phases ranges from minor to major. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is minor to major.

8.72. **1 Samuel Ogden Street**

- Predicted demolition noise levels during seven phases of work are expected to result in negligible to minor magnitudes of impact for this private residential receptor during the week and on Saturdays.
- Predicted demolition noise levels during one phase of work are expected to result in moderate magnitudes of impact during the week and on Saturdays.
- The sensitivity of this receptor is high. The magnitude of impact across phases ranges from negligible to moderate. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is negligible to moderate.

8.73. **Granby Village**

- Predicted demolition noise levels during six phases of work are expected to result in negligible to minor magnitudes of impact for this private residential receptor during the week and on Saturdays.
- Predicted demolition noise levels during two phases of work are expected to result in moderate magnitudes of impact during the week and on Saturdays.
- The sensitivity of this receptor is high. The magnitude of impact across phases ranges from negligible to moderate. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is negligible to moderate.

8.74. **Montana House**

- Predicted demolition noise levels during four phases of work are expected to result in minor magnitudes of impact for this private residential receptor during the week and on Saturdays.
- Predicted demolition noise levels during four phases of work are expected to result in moderate magnitudes of impact during the week and on Saturdays.

- The sensitivity of this receptor is high. The magnitude of impact across phases ranges from minor to moderate. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is minor to moderate.

8.75. **Summary**

- All assessed residential receptors are predicted to experience temporary, direct, short-term adverse effects from demolition noise, with the most significant impacts occurring during phases P2A to P2D. The magnitude of impact varies by location and work phase, but overall findings are summarised below:
 - Salisbury House, Orient House and Fairbairn Building are predicted to experience moderate to major adverse effects, particularly during phases P2A to P2D. Granby House is predicted to experience major adverse effects for most phases of work. These effects are potentially significant and the findings suggest a potential requirement for noise mitigation, such as temporary noise insulation works (e.g., secondary glazing), at the worst-affected properties.
 - 90 Princess Street, 1 Samuel Ogden Street, Granby Village, and Montana House are predicted to experience negligible to moderate adverse effects. The worst-case effects occur primarily during P2A, and for Granby Village, also during P2B.
 - While the impacts are temporary and short-term, the predicted effects range from negligible to major, depending on receptor location and demolition phase and are therefore potentially significant in some cases. The findings highlight the importance of targeted mitigation for the most-affected properties to reduce potential disruption.

Hotel/PBSA Receptors

8.76. Based on the predicted demolition noise levels presented in Tables 1.19 and 1.22, the following conclusions have been drawn for the most-exposed façades of the affected hotel/PBSA receptors:

8.77. **121 Princess Street**

- Predicted demolition noise levels during all phases of work are expected to result in negligible to moderate magnitudes of impact during the week and on Saturdays.
- The sensitivity of this receptor is medium. The magnitude of impact across phases ranges from negligible to moderate. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is negligible to moderate.

8.78. **Weston Halls/Pendulum Hotel**

- Predicted demolition noise levels during all phases of work are expected to result in moderate to major magnitudes of impact during the week and on Saturdays.
- The sensitivity of this receptor is medium. The magnitude of impact across phases ranges from moderate to major. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is moderate to major.

8.79. **IBIS Hotel**

- Predicted demolition noise levels during all phases of work are expected to result in moderate to major magnitudes of impact during the week and on Saturdays.
- The sensitivity of this receptor is medium. The magnitude of impact across phases ranges from moderate to major. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is moderate to major.

8.80. **Vita Students**

- Predicted demolition noise levels during four phases of work are expected to result in minor magnitudes of impact during the week and on Saturdays.

- Predicted demolition noise levels during four phases of work are expected to result in moderate magnitudes of impact during the week and on Saturdays.
- The sensitivity of this receptor is medium. The magnitude of impact across phases ranges from minor to moderate. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is minor to moderate.

8.81. **Summary**

- All assessed hotel/PBSA receptors are predicted to experience direct, temporary, short-term adverse effects from demolition noise, with the magnitude of impact varying by location and work phase. The overall findings are summarised below:
 - Weston Halls/Pendulum Hotel and the IBIS Hotel are predicted to experience moderate to major adverse effects during all phases of work which are potentially significant. This indicates the potential requirement for noise mitigation, such as secondary glazing or other temporary noise insulation measures, at these worst-affected properties.
 - Vita Students is predicted to experience minor to moderate adverse effects.
 - 121 Princess Street is predicted to experience negligible to moderate adverse effects.

Educational/Research Receptors

8.82. Based on the predicted demolition noise levels presented in Tables 1.23 to 1.26, the following conclusions have been drawn for the most-exposed façades of the worst-affected Educational/Research receptors:

8.83. **Sackville Street Building**

- Predicted demolition noise levels during one phase of work are expected to result in a moderate magnitude of impact during the week and on Saturdays.
- During all other work phases, noise levels are predicted to result in negligible to minor magnitudes of impact during the week and on Saturdays.
- The sensitivity of this receptor is high. The magnitude of impact across phases ranges from negligible to moderate. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is negligible to moderate.

8.84. **James Lighthill Building**

- Predicted demolition noise levels during six phases of work are expected to result in moderate to major magnitudes of impact during the week and on Saturdays.
- During all other work phases, noise levels are predicted to result in minor magnitudes of impact during the week and moderate impacts on Saturdays.
- The sensitivity of this receptor is high. The magnitude of impact across phases ranges from minor to major. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is minor to major.

8.85. **Parisier Building**

- Predicted demolition noise levels during four phases of work are expected to result in moderate magnitudes of impact during the week and on Saturdays.
- During all other work phases, noise levels are predicted to result in minor magnitudes of impact during the week and on Saturdays.
- The sensitivity of this receptor is high. The magnitude of impact across phases ranges from minor to moderate. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is minor to moderate.

8.86. Reynold Building

- Predicted demolition noise levels are expected to result in moderate magnitudes of impact during the week and on Saturdays.
- During all other work phases, noise levels are predicted to result in minor to moderate magnitudes of impact during the week and on Saturdays.
- The sensitivity of this receptor is high. The magnitude of impact across phases ranges from minor to moderate. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is minor to moderate.

8.87. Summary

- The assessed educational and research receptors are predicted to experience direct, temporary, short-term adverse effects from demolition noise, with the magnitude of impact varying across receptors and demolition phases.
- The James Lighthill Building is predicted to experience the highest impacts, with demolition noise levels expected to result in moderate to major adverse effects as a worst-case, which is potentially significant.
- The Sackville Street Building is predicted to experience moderate adverse effects during one work phase only, with all other phases resulting in negligible to minor adverse effects.
- The Pariser Building and Reynold Building are predicted to experience minor to moderate adverse effects.

Vibration Disturbance from Demolition Activities

8.88. The demolition and construction vibration impact assessment, detailed in Appendix 8.2, evaluates the potential vibration impacts on sensitive receptors, including private residences, hotels, PBSA, and educational buildings, across multiple construction phases. Predicted vibration levels, summarised below, are based on BS 5228-2:2009+A1:2014 and the Federal Transit Administration (FTA) guide.

8.89. Table 8.27 presents predicted vibration levels for key vibration-producing equipment, including vibratory rollers, lorries, and excavators. Impact magnitudes are assigned based on thresholds from Table 1.6.

Table 8.27: Predicted Demolition Vibration Levels at Nearest Receptors

Receptor	Distance (m)	Predicted Construction Vibration Levels (PPV mm/s)			Magnitude of Impact
		High Reach	Lorry	Excavator	
Nearest Residential Receptor	13	1.0	0.9	0.9	Minor – Moderate
Nearest Hotel/PBSA Receptor	10	1.5	1.3	1.3	Moderate
Nearest Educational/Research Receptor	16.5	< 1.0	< 1.0	< 1.0	Minor

8.90. The results are summarised as follows:

- Nearest Private Residential Receptors: Predicted vibration levels from demolition activities correspond to a minor to moderate impact.
- Nearest PBSA Residences: Predicted vibration levels from demolition activities correspond to a moderate impact.
- Nearest Educational/Research Buildings: Predicted vibration levels from demolition activities correspond to a minor impact.

- 8.91. The sensitivity of the residential receptors is high. The magnitude of impact ranges from minor to moderate. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is minor to moderate.
- 8.92. The sensitivity of the PDSA receptors is medium. The magnitude of impact is moderate. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is moderate.
- 8.93. The sensitivity of the Educational/Research buildings is high. The magnitude of impact is minor. Therefore, there is likely to be a direct, temporary, short-term adverse effect, which is minor.

Mitigation Measures

Primary Mitigation

Demolition Stage

- 8.94. The Proposed Scheme will incorporate Best Practicable Means (BPM) in accordance with BS 5228-1:2009+A1:2014 and BS 5228-2:2009+A1:2014 to control noise and vibration at source during demolition activities. These will be included in the Construction Environment Management Plan (CEMP) and secured by condition. Key measures include but are not limited to:
- Use of quieter equipment and methods where practicable;
 - Erection of acoustic barriers or temporary screens around the Site perimeter and near sensitive receptors to reduce airborne noise emissions;
 - Phasing of high-noise activities to minimise their duration and ensure sensitive receptors are not exposed to prolonged periods of intrusive noise;
 - Regular servicing and maintenance of construction plant and equipment to reduce noise emissions.
 - Construction traffic will be routed away from sensitive receptors where practicable, and site access points will be located to minimise noise intrusion into residential areas.
- 8.95. The following standard measures will be implemented to ensure compliance with regulatory controls and best practice. These will be detailed in the CEMP and secured by condition:
- Working Hours: Noisy activities will be restricted to the following core hours:
 - Monday–Friday: 07:30–18:00
 - Saturday: 08:30–14:00
 - No works on Sundays or Bank Holidays.
 - Continuous noise and vibration monitoring at key sensitive receptor locations during high-impact activities, such as demolition, to ensure compliance with agreed thresholds.
 - Implementation of a Community Liaison Strategy to maintain open communication with residents and stakeholders. This will include advance notifications of noisy activities, complaints management processes, and the establishment of a contact point for concerns.

Secondary Mitigation

Demolition Phase

- 8.96. In instances where demolition activities are predicted to result in potentially significant adverse noise effects, primarily those assessed as major in magnitude, additional secondary mitigation measures will be implemented to reduce potential impacts.
- 8.97. As an enhancement to the liaison strategy outlined within the primary mitigation measures, targeted engagement will be undertaken with occupants of buildings identified as potentially subject to significant noise levels. This engagement will aim to determine the actual sensitivity of those occupants to the predicted effects, taking into account relevant factors such as daytime occupancy patterns.

- 8.98. Where it is confirmed that individuals are likely to be significantly affected, for example, where properties are occupied during the noisiest periods of demolition works, bespoke mitigation will be offered. This may include the provision of noise insulation measures, or, where such mitigation is not practicable or effective, the offer of temporary re-housing during the periods of highest impact.
- 8.99. By implementing this approach, all instances where noise levels are predicted to result in a major adverse effect will be addressed through direct mitigation or avoidance. As such, the residual magnitude of impact in these cases is reduced to no greater than moderate. Given the temporary and short-term nature of the demolition phase, and the mitigation measures available to those affected, these moderate residual effects do not meet the duration thresholds typically associated with a “significant” effect in recognised guidance; are not considered significant. Under DMRB LA 111 (para 3.19), a construction noise effect is only considered significant if it persists for 10 or more days in any 15-day period, or for over 40 days in any six-month period. Similarly, BS 5228-1:2009+A1:2014 (Annex E.3.3) notes that a 5 dB change is generally only regarded as significant when it lasts for a month or more, unless exceptional circumstances apply.
- 8.100. It is also relevant to note that, while such impacts may be deemed potentially significant under the classification methodology, BS 5228 only recommends the consideration of additional mitigation measures where predicted noise levels exceed 75 dB $L_{Aeq,T}$ at the affected receptors. In this case, predicted levels are generally below this threshold, and the impacts:
- Are of relatively short duration and do not approach the time-based thresholds;
 - Are partly associated with receptors that may not be occupied during the works; and
 - Could only be further reduced by adopting disproportionate and unrealistic construction methods (e.g., manual handling or “hand-balling” of materials), which are not practicable or proportionate given the temporary nature of the works.
- 8.101. On this basis, while the magnitude of change may be classified as *moderate*, the combination of duration, receptor sensitivity, guidance thresholds, and practical limitations means that these residual effects should not be considered “significant” for the purposes of the Environmental Statement.
- 8.102. Accordingly, with these secondary mitigation measures in place, no significant residual noise effects are anticipated during the demolition phase.

Residual Effects

Demolition Phase

- 8.103. When accounting for the mitigation measures identified above, the residual effects for the receptors are adjusted from those reported in the pre-mitigation scenario. The assessments are summarised below and confirm that no significant residual adverse effects are expected. Please note the tables below present a combined range of “negligible–moderate” for the post-mitigation effects as it covers two assessment periods (weekday and weekend), and three different receptors, which experience different impacts. This is why the range spans both significant (moderate) and non-significant (minor/negligible) effects.

Table 8.28: Summary of Residual Effects

Likely Significant Effect	Receptor	Unmitigated Effect – Significance and Duration (Temporary/Permanent)	Primary/Secondary Mitigation Measures	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Demolition Phase				
Noise Disturbance from	90 Princess Street (Residential)	Direct, temporary, short-term adverse effect, which is negligible to moderate.	BMP	Direct, temporary, short-term adverse effect, which is negligible to moderate.

Demolition Activities	Salisbury House (Residential)	Direct, temporary, short-term adverse effect, which is minor to major.	BPM & Noise Insulation/Relocation	Direct, temporary, short-term adverse effect, which is minor to moderate.
	Orient House (Residential)			
	Granby House (Residential)			
	Fairbairn Building (Residential)			
	1 Samuel Ogden Street (Residential)	Direct, temporary, short-term adverse effect, which is negligible to moderate	BMP	Direct, temporary, short-term adverse effect, which is negligible to moderate.
	Granby Village (Residential)			
	Montana House (Residential)	Direct, temporary, short-term adverse effect, which is minor to moderate.	BMP	Direct, temporary, short-term adverse effect, which is minor to moderate.
	121 Princess Street (Hotel/PBSA Residences)	Direct, temporary, short-term adverse effect, which is negligible to moderate.	BMP	Direct, temporary, short-term adverse effect, which is negligible to moderate.
	Pendulum Hotel and Weston Halls (Hotel/PBSA Residences)	Direct, temporary, short-term adverse effect, which is moderate to major.	BMP & Noise Insulation/Relocation	Direct, temporary, short-term adverse effect, which is moderate.
	Ibis Hotel (Hotel/PBSA Residences)			
	Vita Students (Hotel/PBSA Residences)	Direct, temporary, short-term adverse effect, which is minor to moderate	BMP	Direct, temporary, short-term adverse effect, which is minor to moderate.
	Sackville Street Building (Educational/Research)	Direct, temporary, short-term adverse effect, which is negligible to moderate.	BMP	Direct, temporary, short-term adverse effect, which is negligible to moderate.
	James Lighthill Building (Educational/Research)	Direct, temporary, short-term adverse effect, which is minor to major.	BMP & Noise Insulation/Relocation	Direct, temporary, short-term adverse effect, which is minor to moderate.
Vibration Disturbance from Demolition Activities	Parisier Building (Educational/Research)	Direct, temporary, short-term adverse effect, which is minor to moderate	BMP	Direct, temporary, short-term adverse effect, which is minor to moderate.
	Reynold Building (Educational/Research)			
	Salisbury House (Residential)	Direct, temporary, short-term, minor to moderate adverse effect	BMP	Direct, temporary, short-term, minor to moderate adverse effect
	Orient House (Residential)			
	Granby House (Residential)			
	Fairbairn Building (Residential)			
	Pendulum Hotel and Weston Halls (Hotel/PBSA Residences)	Direct, temporary, short-term, moderate adverse effect	BMP	Direct, temporary, short-term, moderate adverse effect
	Ibis Hotel (Hotel/PBSA Residences)			

	James Lighthill Building (Educational/Research)	Direct, temporary, short-term, minor adverse effect	BMP	Direct, temporary, short-term, minor adverse effect
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Monitoring

- 8.104. As discussed in Appendix 8.2, owing to the predicted impacts of the proposed works, in line with Manchester City Council's 2022 Noise and Planning Technical Guidance, a programme of noise and vibration monitoring is recommended for the duration of the demolition works.
- 8.105. Full details of the proposed monitoring locations and appropriate trigger levels are included in Appendix 8.2.

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- Blackbird Acoustics (2025). Environmental Noise Survey Report.
- Heyda Ltd (2025). Demolition Noise and Vibration Impact Assessment.
- International Organization for Standardization (2024). EN ISO 9613-2:2024: Acoustics – Attenuation of Sound during Propagation Outdoors.



	Figure:	8.1		
	Title:	Noise & Vibration Study Area		
	Project:	Sister Plot H, Manchester		
	Date:	18/07/2025	Scale:	NTS

9. Summary of Residual Effects

Introduction

9.1. This chapter summarises the residual effects that are set out in each individual relevant chapter.

Townscape and Visual Impact

Residual Effects

As required by the EIA Regulations (2017), “moderate or above” are deemed to be significant. The TVIA Chapter has identified that there are no receptors that will experience this degree of impact. For completeness the summary table as presented within the chapter is presented below. As a result of no significant effects, no mitigation is required and there are no residual effects – i.e. effects are the same with /without mitigation.

A summary of the effects is provided below:

Demolition Phase: Townscape impacts are of minor significance and neutral effect. Existing structures will be demolished and the site cleared meaning that building height reduces and urban grain is temporarily fragmented in advance of the Sister Masterplan being realised. The Site will be secured by perimeter hoardings and aligned so as to not disrupt established routes for pedestrians and motorists. Impact on the neighbouring Whitworth Street Conservation Area will be limited due to the physical presence of the railway viaduct and the low rise nature of proposed works. At worst, the effect on visual receptors is minor negative as there will be a degree of disruption to views. This is a temporary effect.

Operational Phase: On completion of the demolition phase, the vacant site and hoarding to the site perimeter may have an impact on townscape and visual receptors. Once demolition has concluded, The Site will be cleared and secured and hoarding fencing retained. Plot H will be left as a vacant site until development guided by the Sister Masterplan can be implemented. There will be a short term gap in urban grain and an openness created by the flattening of a 4-5 storey building however, the poor quality and inactive facades that fronted Sackville Street and Charles Street will have been removed which is seen as a positive change. Impact on visual receptors will be localised and in the instance of public viewpoints, receptors will experience a transient view of The Site. From locations to the north of The Site (Granby Row and Vimto Park), effects will be limited because the railway viaduct and mature trees provide a good degree of screening.

Table 9.1: Summary Effects

Summary Table					
Townscape					
Receptor	Scenario 1: Baseline			Scenario2: Demolition	Scenario 3: Operation
	Value	Susceptibility	Sensitivity	Magnitude Significance Nature	Magnitude Significance Nature
Urban grain	Low	Low	Low	Minor Minor Neutral	Minor Minor Neutral

Land use	Low	Low	Low	Minor Minor Neutral	Minor Minor Neutral
Building height	Low	Low	Low	Minor Minor Neutral	Minor Minor Neutral
Public realm and streetscape	Low	Low	Low	Minor Minor Neutral	Minor Minor Neutral
Site character	Medium	Low	Low/Medium	Minor Minor Neutral	Minor Minor Neutral

Visual

Receptor	Scenario 1: Baseline			Scenario 2: Demolition	Scenario 3: Operation
	Value	Susceptibility	Sensitivity	Magnitude Significance Nature	Magnitude Significance Nature
Viewpoint 1- Granby Row at Orient House	High	Low	Medium	Negligible Minor Negative	Negligible Minor Neutral
Viewpoint 2- Granby Row at Granby House	High	Low	Medium	Negligible Minor Negative	Negligible Minor Neutral
Viewpoint 3- Vimto Park	High	Low	Medium	Negligible Minor Neutral	Negligible Minor Neutral
Viewpoint 4- Altrincham Street	Medium	Low	Low/Medium	Minor	Minor

				Minor Negative	Minor Neutral
Viewpoint 5- Sackville Street	Low	Low	Low	Minor Minor Negative	Minor Minor Positive
Viewpoint 6- Charles Street at Lass O'Gowrie pub	Low	Low	Low	Minor Minor Negative	Minor Minor Positive

Air Quality

Construction Phase

9.2. The residual effects for the construction (demolition) phase are presented in Table 9.2.

Table 9.2: Summary of Construction Phase Residual Effects

Likely Significant Effect	Receptor	Mitigation Measure	Means of Mitigation Implementation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Demolition and Construction Phase				
Effects of emissions arising from dust generated during the demolition of existing building on the Site on human health	Surrounding sensitive uses, e.g. residential properties(high) and higher education (medium*)	Recommended mitigation measures has been outlined within Appendix 7.2.	Mitigation measures typically implemented through a Demolition environmental Management Plan (DEMP) to be secured by planning condition.	Negligible, short-term and temporary
Effects of emissions arising from traffic generated by onsite NRMM during demolition of existing building on the Site on human health	Surrounding sensitive uses, e.g. residential properties(high) and higher education (medium*)	Recommended mitigation measures has been outlined within Appendix 7.2.	Mitigation measures typically implemented through a Demolition environmental Management Plan (DEMP) to be secured by planning condition.	Negligible, short-term and temporary
Effects of emissions arising from traffic generated by the	residential properties(high) and higher	No mitigation is required	N/A	Negligible, short-term and temporary

demolition of existing building on the Site on human health	education (medium*)			
*All existing sensitive receptors have been considered as high sensitivity receptors to provide a robust assessment.				

Noise and Vibration

Construction Phase

9.3. Residual effects during the construction phase after implementing the mitigation measures are provided below in Table 9.3

Table 9.3: Construction Residual Effects

Likely Significant Effect	Receptor	Unmitigated Effect – Significance and Duration (Temporary/Permanent)	Primary/Secondary Mitigation Measures	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Demolition Phase				
Noise Disturbance from Demolition Activities	90 Princess Street (Residential)	Direct, temporary, short-term adverse effect, which is negligible to moderate.	BMP	Direct, temporary, short-term adverse effect, which is negligible to moderate.
	Salisbury House (Residential)	Direct, temporary, short-term adverse effect, which is minor to major.	BPM & Noise Insulation/Relocation	Direct, temporary, short-term adverse effect, which is minor to moderate.
	Orient House (Residential)			
	Granby House (Residential)			
	Fairbairn Building (Residential)			
	1 Samuel Ogden Street (Residential)	Direct, temporary, short-term adverse effect, which is negligible to moderate	BMP	Direct, temporary, short-term adverse effect, which is negligible to moderate.
	Granby Village (Residential)			
	Montana House (Residential)	Direct, temporary, short-term adverse effect, which is minor to moderate.	BMP	Direct, temporary, short-term adverse effect, which is minor to moderate.

	121 Princess Street (Hotel/PBSA Residences)	Direct, temporary, short-term adverse effect, which is negligible to moderate.	BMP	Direct, temporary, short-term adverse effect, which is negligible to moderate.
	Pendulum Hotel and Weston Halls (Hotel/PBSA Residences)	Direct, temporary, short-term adverse effect, which is moderate to major.	BMP & Noise Insulation/Relocation	Direct, temporary, short-term adverse effect, which is moderate.
	Ibis Hotel (Hotel/PBSA Residences)			
	Vita Students (Hotel/PBSA Residences)	Direct, temporary, short-term adverse effect, which is minor to moderate	BMP	Direct, temporary, short-term adverse effect, which is minor to moderate.
	Sackville Street Building (Educational/Research)	Direct, temporary, short-term adverse effect, which is negligible to moderate.	BMP	Direct, temporary, short-term adverse effect, which is negligible to moderate.
	James Lighthill Building (Educational/Research)	Direct, temporary, short-term adverse effect, which is minor to major.	BMP & Noise Insulation/Relocation	Direct, temporary, short-term adverse effect, which is minor to moderate.
	Parisier Building (Educational/Research)	Direct, temporary, short-term adverse effect, which is minor to moderate	BMP	Direct, temporary, short-term adverse effect, which is minor to moderate.
	Reynold Building (Educational/Research)			
Vibration Disturbance from Demolition Activities	Salisbury House (Residential)	Direct, temporary, short-term, minor to moderate adverse effect	BMP	Direct, temporary, short-term, minor to moderate adverse effect
	Orient House (Residential)			
	Granby House (Residential)			
	Fairbairn Building (Residential)			
	Pendulum Hotel and Weston Halls (Hotel/PBSA Residences)	Direct, temporary, short-term, moderate adverse effect	BMP	Direct, temporary, short-term, moderate adverse effect

	Ibis Hotel (Hotel/PBSA Residences)			
	James Lighthill Building (Educational/Research)	Direct, temporary, short-term, minor adverse effect	BMP	Direct, temporary, short-term, minor adverse effect

Planning Conditions

- 9.4. The above includes reference to a mitigation measure that will be required to be secured on any subsequent planning approval. To further assist, the below provides a summary of potential mechanisms to secure the proposed mitigation measures identified as part of the ES.
- 9.5. The submitted Demolition Environmental Management Plan and Method Statement details how the effects of the Proposed Demolition will be mitigated. It is anticipated that these measures will be reflected in suitably worded conditions attached to any planning permission.
- 9.6. Additionally and more specifically, it is anticipated that suitably worded planning conditions or obligations may be required where necessary in relation to the following measures:
- Chapter 6 (TVIA) – Mitigation measures: Solid site hoarding will screen the workings of a construction site from view; lighting will be strategically placed to minimise "spill" towards sensitive receptors; and working hours will be limited to a timeframe agreed in advance of commencement on site.
 - Chapter 7 (Air Quality) – Mitigation measures implemented through a Demolition Environmental Management Plan (DEMP), including the dust control measures as outlined within the chapter.
 - Chapter 8 (Noise and Vibration) – Incorporate Best Practicable Means (BPM) in accordance with BS 5228-1:2009+A1:2014 and BS 5228-2:2009+A1:2014
 - Chapter 8 (Noise and Vibration) – Working Hours: Noisy activities will be restricted to core hours:
 - Chapter 8 (Noise and Vibration) – Continuous noise and vibration monitoring at key sensitive receptor locations during high-impact activities, such as demolition, to ensure compliance with agreed thresholds.
 - Chapter 8 (Noise and Vibration) – Implementation of a Community Liaison Strategy to maintain open communication with residents and stakeholders. This will include advance notifications of noisy activities, complaints management processes, and the establishment of a contact point for concerns.

10. Type 1 Cumulative Effects

Introduction

- 10.1. This Chapter gives consideration to 'Type 1' cumulative effects. The assessment is informed by the results of the technical assessments as set out in Chapters 6 to 8 inclusive of the ES.
- 10.2. Type 1 cumulative effects are also known as 'inter-project' effects, which are the combined effects arising from the Proposed Demolition upon a set of defined sensitive receptors.
- 10.3. Type 2 cumulative effects are considered within the ES technical chapters. The technical chapters also had regard to the potential for Type 1 cumulative effects, however for robustness the results of a standalone assessment of these are provided below.

Legislation Policy and Guidance

Legislation

- 10.4. There is no legislation outlining how cumulative effects should be assessed or determined as significant. However, there is a requirement in Part 1, Schedule 4 of the EIA Regulations to consider cumulative effects. Cumulative is not defined in the EIA Directive or Regulations however a dictionary definition is 'increasing by one addition after another'.
- 10.5. The EIA Regulations require 'a description of the likely significant effects', including cumulative effects.
- 10.6. In the context of this assessment, 'cumulative effects' refers to the interactions between different likely residual effects resulting from the Proposed Demolition (Type 1). Both positive and negative effects are considered across the construction and operational phases.

Policy

- 10.7. As this Chapter considers the cumulative effects of the technical areas within the ES, all relevant policy has already been reviewed within the individual technical chapters.

Guidance

- 10.8. A number of guidance documents which relate to assessing cumulative effects have been used to inform the assessment and include:
- European Commission (EC) Environment DG (May 1999), 'Study on the Assessment of Indirect and Cumulative Impacts as well as Impact Interaction', Hyder Consulting; and
 - Institute of Environmental Management and Assessment (1992), Guidelines for the Environmental Assessment of Road Traffic.
- 10.9. The EC guidelines 'are not intended to be formal or prescriptive but are designed to assist EIA practitioners in developing an approach which is appropriate to a project'.
- 10.10. Paragraph 24 of the National Planning Practice Guidance (NPPG) (Reference ID: 4-024-20170728) outlines the consideration to be given to cumulative effects in the context of EIA:

“Each application (or request for a screening opinion) should be considered on its own merits. There are occasions, however, when other existing or approved development may be relevant in determining whether significant effects are likely as a consequence of a Proposed Development. The local planning authorities should always have regard to the possible cumulative effects arising from any existing or approved development.”

Assessment Methodology and Significance Criteria

Methodology

- 10.11. This assessment is primarily concerned with where there is a likelihood of significant Type 1 cumulative effects occurring, in accordance with EIA practice and the NPPG guidance.
- 10.12. The assessment is based on experience and professional judgement, drawing upon relevant guidance set out above and the residual environmental effects identified within the results of the EIA technical assessments. The assessment has been undertaken by suitably qualified and experienced EIA practitioners.
- 10.13. The assessment has primarily focused on sensitive receptors identified within close proximity to the Site (e.g. local residents and businesses located in close proximity to the Site), likely cumulative effects, and their capacity to accommodate changes that will occur as a result of the combined residual environmental effects.
- 10.14. Relevant guidance has been reviewed, and an approach has been developed which uses the residual environmental effects identified within the ES. An exercise which tabulates the residual effects against receptors or receptor groups has then been carried out in order to identify the potential for Type 1 cumulative effects.
- 10.15. Negligible or neutral residual effects have been excluded from the assessment as, by their nature, they are considered to be imperceptible. Therefore, only minor, moderate or major effects have been given consideration during the assessment.
- 10.16. For the purposes of the assessment, receptor groups have been identified as those surrounding the Site and those identified within the individual technical assessments.

Significance Criteria

- 10.17. The following terms have been used to define the significance of the effects identified:
- Major effect: where the Proposed Demolition could be expected to have a very significant effect (either positive or negative) cumulatively;
 - Moderate effect: where the Proposed Demolition could be expected to have a noticeable effect (either positive or negative) cumulatively;
 - Minor effect: where the Proposed Demolition could be expected to result in a small, barely noticeable effect (either positive or negative) cumulatively; and
 - Negligible: where no discernible effect is expected as a result of the Proposed Demolition cumulatively.
- 10.18. The significance level attributed to each effect has been assessed based on the magnitude of change due to the combination of residual effects and the sensitivity of the affected receptor/receiving environment to change, as outlined in Chapter 2 of the ES. Magnitude of change is assessed on a scale of major, moderate, minor and negligible and the sensitivity of the affected receptor/receiving environment is assessed on a scale of high, medium, low and negligible.

Limitations and Assumptions

- 10.19. Due to the reliance on qualitative data and subjective opinion, there are limitations related to the range and depth in which the cumulative effects have been investigated. It must be realised that analysing the cumulative effects of developments is often speculative and cannot be predicted as clearly as individual effects such as the effects upon traffic of a development, which relies heavily upon quantitative data to inform the assessment.
- 10.20. As a result, a number of assumptions have been made throughout in terms of the outcome of the accumulation of effects and based upon professional judgement. This section and the assessment process of identifying the likely significant Type 1 cumulative effects have, however, provided a reasoned consideration of and insight into the potentially significant Type 1 cumulative effects of the Proposed Demolition.

Identification of Likely Significant Type 1 Cumulative Effects

Demolition

- 10.21. Based on the methodology detailed above, Table 10.1 presents the results of the review of the potential for interactions of individual effects during the construction phase of development. The potential effect interactions are then discussed further.

Table 10.1: Type 1 Cumulative Effects Construction Phase

Sensitive Receptor Group	Demolition Phase Residual Effects	Likely Significant Cumulative Effects
Humans	<p><u>Noise and vibration:</u> Construction noise for existing local residents/users of the site and surroundings . Negligible to Minor adverse (Not significant) Temporary and Short-Term</p> <p><u>Air Quality:</u> Effects of emissions arising from dust generated during the demolition of existing building on the Site on human health. Negligible, short-term and temporary.</p>	No likely significant Type 1 cumulative effects
Views, Visual Setting Townscape	<p><u>TVIA:</u> Temporary adverse effects on visual setting during the construction period from identified viewpoints. Minor adverse (Not significant)</p>	No likely significant Type 1 cumulative effects

- 10.22. Table 10.1 shows that there is unlikely to be in-combination operational phase Type 1 cumulative effects to arise.

Operational Phase

- 10.23. Based on the methodology detailed above, Table 10.2 presents the results of the review of the potential for interactions of individual effects during the operational phase of development. The potential effect interactions are then discussed further.

Table 10.2: Type 1 Cumulative Effects – Operational Phase

Sensitive Receptor Group	Operational Phase Residual Effects	Likely Significant Cumulative Effects
Views, Visual Setting Townscape	<u>TVIA</u> : Minor adverse (Not significant).	No likely significant Type 1 cumulative effects

10.24. Table 10.2 shows that there is unlikely to be in-combination operational phase Type 1 cumulative effects to arise.

Mitigation Measures

10.25. Where relevant, the individual residual effects which contribute to the potential cumulation have been considered within the ES and mitigated where necessary and feasible.

10.26. No mitigation is proposed for the identified Type 1 cumulative effects.



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